City of Peterborough

FINAL REPORT - *October 2012*

PUBLIC TRANSIT OPERATIONS REVIEW

The Route Ahead

Submitted by:

DILLON CONSULTING

EXECUTIVE SUMMARY

The City of Peterborough has a strong history of supporting public transit services for all members of the community. Over the past decade ridership has grown by 62 percent on conventional services and with a current mode share of 4.5 percent, the City is on target to achieve its goal of having 6 percent of all trips within Peterborough to be on public transit by 2021.

The Dillon Consulting team was engaged by the City to conduct an operational review of current conventional and Handi-Van services and provide advice on strategies to improve efficiency, increase ridership and ensure that all residents and visitors have effective transit access to employment, school, shopping, services, recreation and cultural activities within the community.

There are many positive aspects to the current transit services and in a comparison with a peer group of Ontario municipalities, the performance of Peterborough Transit ranks high. The revenue/cost (R/C) ratio is 49 percent, transit ridership per capita is 37.92 and the average number of boardings per revenue vehicle hour is 29.23. This suggests a system that is meeting financial performance targets and is effective in capturing a reasonable share of the travel market.

Service innovations include the use of TransCab for areas of low demand, employment specials, and express services to post-secondary institutions. The City has developed an effective partnership with the Student Association at Trent University which has resulted in a strong base of transit customers and transit service levels which benefit the entire community.

The conventional transit system is based on route running times of 40 or 80 minutes with 12 routes operating in a radial pattern focused on the downtown bus terminal. There is a service frequency of 40 minutes between buses during all hours of operation. While the service is effective, this is considered a long wait between buses during peak periods and some crowding and schedule adherence issues have resulted. An exception is the Trent express routes which provide 20 minute service between the downtown and the University at certain periods as warranted by demand.

The bus terminal was constructed many years ago as part of a municipal parking structure when the City operated 35 foot buses. The design requires the current 40 foot buses to back out of their bays in groups of four and this reversing operation creates major problems for system operational efficiency and user security. Modern bus terminal designs feature ‘drive through’ operation and are capable of providing lower station dwell times which allows for enhanced transit productivity.

A key study recommendation is for the City to initiate the necessary planning activities to develop a future transit terminal as a mobility hub and catalyst for downtown intensification plans. Recognizing that such a facility will require funding support from senior governments and will take several years to realize, the transit options for the next five years assume continued use of the downtown terminal.

It is also noted that the construction of a new Municipal Operations Centre has not yet been approved. A modern well equipped maintenance facility with the proper space for the storage and maintenance of the entire fleet of conventional and specialized vehicles is urgently required. Another study recommendation is for staff to bring forward a report seeking approval for this facility.

The study has recommended a number of efficiency improvements with the resulting savings in bus hours applied to improving the frequency of service during peak periods on four of the twelve routes. Key efficiency measures are the combination of the Trent East Bank Express service with the Route 9 Nichols Park; the conversion of Route 12 Major Bennett to a peak period employment special service for the industrial area; and the elimination of the first run on Saturday mornings for all routes.

The 40 minute frequency between buses is a significant deterrent to ridership growth and it is proposed that 20 minute service be introduced on four of the twelve routes for 6 peak period hours weekdays. A fifth route (Route 9) will also operate at a 20 minute frequency during the school year with its integration with the West Bank Express service. This strategy is proposed to be extended to all routes over the 5 year life of this plan, providing the capacity and level of service needed to reach the City's transit mode share target of 6 percent by 2017. This will be subject to achieving financial and ridership growth targets established by the City. It is also proposed that bus routes be interlined at the terminal to improve the convenience of passenger transfers and the reliability of the bus schedules.

Peterborough Transit has had considerable success in making its conventional service fully accessible and in encouraging registered Handi-Van users to make use of this service. Nevertheless, increased pressures on the expensive door-to-door service can be anticipated with the aging of the population (and the increased incidence of disability as people age), Peterborough's attraction as a retirement destination, and the requirements of Accessibility for Ontarians with Disabilities (AODA) legislation.

The study proposes that the City augment its dedicated vans with a limited increase in the use of taxi's which are less costly per trip (particularly in the shoulder periods) and also consider the introduction of a taxi scrip program which has been used by several municipalities to increase spontaneous trip making by persons with disabilities. It is further proposed to introduce a new Community Bus service which will benefit both Handi-Van registrants and the general population of seniors.

Two Community Bus routes have been designed to operate Monday through Saturday from 8:40am until 4:40pm on routes that will serve large numbers of seniors and persons with disabilities. Productivity targets are established for this new service and it is suggested that one Community Bus route be introduced for a one year trial and the service be continued/expanded based on the success in meeting these targets.

The Route Ahead for Peterborough involves building on the existing success of the system. Ridership has been growing over the past few years on conventional transit and the service modifications and move towards some 20 minute peak period service will accelerate this trend. This strategy will also be important in helping to further migrate some existing Handi-Van trips to the accessible low-floor system and to manage rising costs on Handi-Van that will occur with an aging population. The introduction of a new Community Bus option further adds to an efficient 'family of services' approach to public transit in Peterborough.

Based on the efficiency improvements outlined in the report and the anticipated ridership growth, it is expected that the 2013 budget requirements for Peterborough Transit (with service implementation) will be similar to 2012 levels. Recognizing that the last general fare increase occurred in 2009 and that service level improvements are being implemented with this plan, an increase of $0.25 on the cash fare is suggested along with adjustments for passes.

Throughout the life of this plan, it is recommended that the City continue to implement additional 20 minute peak frequency services by adding two routes per year (subject to ridership performance targets being achieved). Ridership performance should be monitored and the number of hours when 20 minute service is available should be increased in response to demand. This will help the City achieve its 2021 transit mode share target early by providing the capacity and service level required to accommodate over a million additional passengers. Table E-1 and Table E-2 below illustrates the forecasted ridership, operating cost, revenue and financial performance for the recommended plan assuming a January 1, 2013 implementation for the conventional and Handi-Van services respectively.

For the introduction of Community Bus, a capital expense will be incurred; however, it is recommended that the hours to operate this service be allocated from the existing Handi-Van operation. If the proposed one year trial is successful, a second community bus route should be implemented, and this will require new service hours being added to the system. An increase in the use of taxi services for Handi-Van trips will help mitigate the budget impacts.

Table E-1 - Five-Year Service Plan for Peterborough Conventional Transit

Performance Measures	2011	2012	2013	2014	2015	2016	2017
Revenue Service Hours	106,714	106,714	107,552	110,540	113,528	116,516	120,062
Total Operating Costs	$8,970,200	$9,149,602	$9,397,582	$9,821,912	$10,259,456	$10,710,573	$11,222,476
Total Revenues	$4,181,832	$4,321,032	$4,687,130	$4,947,448	$5,229,729	$5,482,745	$5,730,024
Cost Recovery	47%	47%	50%	50%	51%	51%	51%
Net Operating Cost	$4,788,368	$4,828,570	$4,710,452	$4,874,463	$5,029,728	$5,227,828	$5,492,453
Gas Tax[3]	$805,078	$813,129	$821,260	$829,473	$837,767	$846,145	$854,607
Municipal Investment	$3,983,290	$4,015,441	$3,889,191	$4,044,991	$4,191,960	$4,381,683	$4,637,846
Service Area Population	78,700	79,230	79,760	80,290	80,820	81,350	81,880
Municipal Investment per Capita	$50.61	$50.68	$48.76	$50.38	$51.87	$53.86	$56.64
Ridership	3,186,271	3,307,444	3,397,869	3,587,027	3,793,370	3,982,315	4,172,717
Ridership Growth		3.8%	2.7%	5.6%	5.8%	5.0%	4.8%
Ridership per Capita	40.49	41.74	42.60	44.68	46.94	48.95	50.96
Ridership per Service Hour	29.86	30.99	31.59	32.45	33.41	34.18	34.75

Note: 2011 budget used as base service for hours, operating costs, revenue and ridership
Note: All operating costs are increased by 2 percent per year to reflect rising fuel and cost of living
Note: One-time fare increase averaging 10 percent was assumed for 2013

Table E-2 - Five-Year Service Plan for Peterborough Handi-Van and Accessible Services

Performance Measures	2011	2012	2013	2014	2015	2016	2017
Revenue Service Hours	14,600	14,815	14,730	17,050	17,106	17,315	17,365
Total Operating Costs	$1,017,000	$1,052,706	$1,009,850	$1,192,727	$1,214,419	$1,247,792	$1,264,132
Total Revenues	$73,100	$74,276	$81,632	$107,185	$117,558	$128,799	$129,386
Cost Recovery	7%	7%	8%	9%	10%	10%	10%
Net Operating Cost	$943,900	$978,430	$928,218	$1,085,542	$1,096,862	$1,118,993	$1,134,747
Gas Tax[2]	$169,400	$170,247	$171,098	$171,954	$172,813	$173,678	$174,546
Municipal Investment	$774,500	$808,183	$757,119	$913,588	$924,048	$945,315	$960,201
Service Area Population	78,700	79,230	79,760	80,290	80,820	81,350	81,880
Passenger Trips *(minus conventional transit)*	34,800	35,360	40,329	52,388	57,877	63,742	63,996
Municipal Investment per Passenger Trip	$22.26	$22.86	$18.77	$17.44	$15.97	$14.83	$15.00
Municipal Investment per Capita	$9.84	$10.20	$9.49	$11.38	$11.43	$11.62	$11.73
Passenger Trips per Capita	0.44	0.45	0.51	0.65	0.72	0.78	0.78
Passenger Trips per Service Hour	2.38	2.39	2.74	3.07	3.38	3.68	3.69

(this page left intentionally blank)

TABLE OF CONTENTS

List of Figures

List of Tables

Appendices

(this page left intentionally blank)

PART A: INTRODUCTION

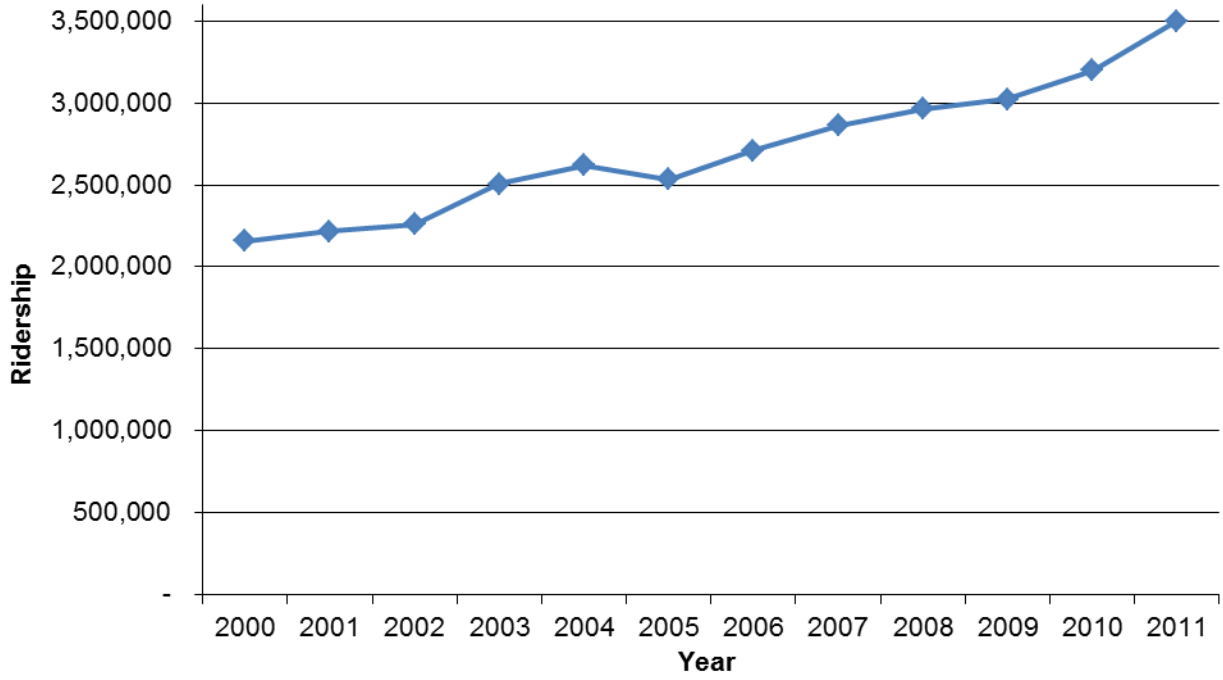
1.0 THE ROUTE AHEAD

The Route Ahead is a Public Transit Operations Review conducted by Dillon Consulting for the City of Peterborough. The purpose of this study is to comprehensively review Peterborough's transit services and develop a Service Plan covering the period 2012-2017. This will include an assessment and recommendations on the conventional transit, TransCab and Handi-Van services. The study objectives are to:

- Identify opportunities to increase transit ridership;
- Improve mobility and accessibility within the community; and
- Improve the effectiveness of transit service delivery.

Peterborough Transit currently operates a conventional transit system using 49 buses along routes focused on the downtown area. Over the past decade, Peterborough Transit has seen ridership growth during most years and a 62 percent increase between 2000 and 2011. This is illustrated in Figure 1.

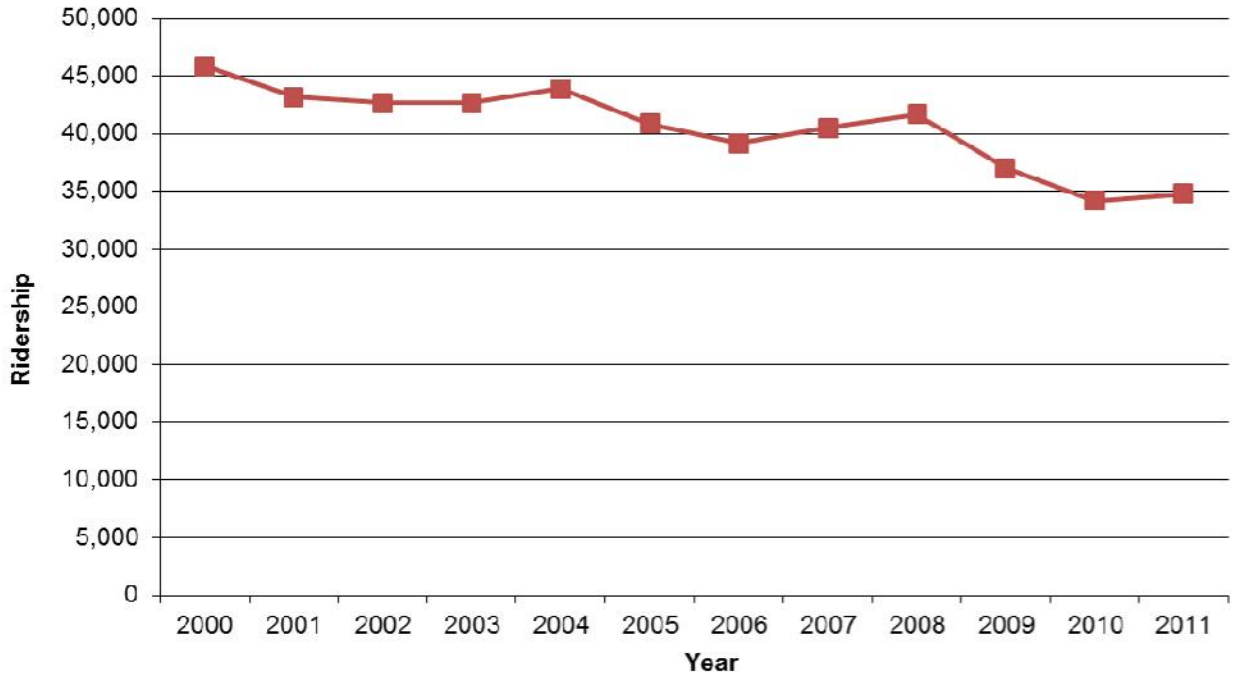
Figure 1 – Peterborough Transit Ridership Trends



The City of Peterborough strongly supports public transit and some residents have identified a need for increased service. The 2021 transit daily mode share target of 6 percent (and 4 to 5 percent of peak period trips) will require an increase of 1.29 million passengers within 10 years. Given existing ridership growth trends, Peterborough Transit is on target to meet that goal; however, further investment in transit services may be required to attract additional passengers and to have the available capacity for additional riders. Currently, many peak period services are operating at standing capacity, and an increase of 1.29 million passengers will require a higher frequency or the addition of peak tripper buses to alleviate passenger crowing issues.

For Handi-Van services, responding to an aging population and addressing the requirements of the Accessibility for Ontarians with Disabilities Act (AODA) legislation will be a significant challenge moving forward. Unlike conventional transit ridership, the number of trips on the Handi-Van service has been declining over the past 10 years, with a slight increase in 2011. This is partially a result of the increased accessibility of the conventional system and the number of registered Handi-Van customers migrating to this service for some or all of their trips. This trend is illustrated in Figure 2.

Figure 2 – Handi-Van Ridership Trends



Nonetheless, with an aging population and the increased requirements of the AODA legislation, this trend is expected to reverse and developing the most cost effective methods of accommodating this important market is a key objective of this plan.

The Route Ahead is a five year plan that will put Peterborough Transit on the path to achieving its ridership goals while at the same time ensuring that municipal contributions are manageable and funds are being used effectively.

(this page left intentionally blank)

PART B: BACKGROUND AND PLANNING CONTEXT

The success of transit (both conventional and Handi-Van services) is tied to various City policies, plans and practices as well as legislative requirements governing transit operations. This section of the report outlines the key policy and planning documents that form part of the strategic planning context, provides an assessment of transit market potential; outlines existing and future (2017) travel demand; and summarizes key consultation activities as well as perceptions of transit within the community. This material is used to guide the development of a strategic plan for transit, which will then be operationalized into a specific 5-year plan and medium-term strategy.

2.0 POLICIES, LEGISLATION AND PLANNING CONTEXT

There is a direct relationship between transit and community development. Successful transit systems require community development that is transit supportive and allows transit to operate efficiently and effectively. Similarly, key components of quality of life such as accessibility, mobility and environmental sustainability rely on strong public transit systems being available in the community.

Transit forms only one component of the municipal fabric and therefore the transit Vision and strategic directions must be integrated into the broader community planning context. This includes consideration of policies and plans at the provincial and municipal level, as well as the implications of current and upcoming provincial legislation. The following section presents a review of existing policies, plans and legislation that impact Peterborough Transit and which served as input to the transit Vision and the development of specific strategies for conventional and Handi-Van Services.

2.1 Provincial Policies, Legislation and Planning Context

The Province guides overall policy planning for municipalities and strives to achieve cohesiveness and continuity among municipalities in their planning and development activities. Provincial policies, plans and legislation help guide population and employment growth as well as investments in infrastructure to support this growth. Below is a list of Provincial plans and legislation that provide guidance for this transit study:

- 2005 Provincial Policy Statements (PPS);
- 2006 Provincial Growth Plan (Places to Grow);
- 2008 Metrolinx Regional Transportation Plan (The Big Move);
- 2011 Transit Supportive Development Guidelines; and

- 2005 Accessibility for Ontarians with Disabilities Act (AODA).

The Provincial Policy Statements were last updated in 2005. This document guides all planning related activities in Ontario and sets the principles of "good planning". Transit has a major role to play in working towards the policies contained within these statements. Some of the relevant policies are outlined below as well as the role of transit in satisfying these policies:

- "1.1 Managing and directing land use to achieve efficient development and land use patterns" – transit supports compact and dense development;
- "1.6.5.1 Transportation systems should be provided which are safe, energy efficient, facilitate the movement of people and goods, and are appropriate to address projected needs" – one well utilized transit bus can replace as many as 50 cars on the road;
- "1.6.5.3 Connectivity within and among transportation systems and modes should be maintained and, where possible, improved including connections which cross jurisdictional boundaries" – service and fare integration between transit systems allows passengers to cross municipal boundaries seamlessly; and
- "1.6.5.5 Transportation and land use considerations shall be integrated at all stages of the planning process" – transit supports land use planning goals of mixed use compact development.

Population and employment growth in the Greater Golden Horseshoe is guided by the Places to Grow Plan released by the Province in June 2006. This strategy builds on the Greenbelt Plan in an attempt to manage growth and reduce urban sprawl. Regional and single tier municipalities were provided with population and employment growth projections that were to be incorporated in municipal planning tools and used as a basis for subsequent planning. The City of Peterborough is identified within the "outer ring" of municipalities that make up the Greater Golden Horseshoe.

Urban Growth Centres were also identified throughout the study area with accompanying minimum density requirements. Downtown Peterborough is identified as an Urban Growth Centre. As such, Downtown Peterborough is required to have 150 residents and jobs combined per hectare by 2031. This density and the urban form being recommended will be supportive of a higher level of transit service in Peterborough.

In November 2008, Metrolinx released the Big Move: Regional Transportation Plan recognizing the mobility constraints of the increasing population. Peterborough is located outside of the Regional Transportation Plan's (RTP) geographic area. However, the RTP recognizes the importance of connecting such outlying communities into the rapid transit network. Most communities at the periphery of the Greater Toronto and Hamilton Area (GTHA) are primarily dependent on driving for residents to travel between home and work, school, shopping and other activities. The RTP will extend rapid transit service to more of these communities, giving

residents a viable alternative to driving or opportunities to shorten their auto trips, taking more cars off congested highways. As such the RTP identified in the long term 'Possible Regional Rail Extension' from the GTHA to Peterborough. This infrastructure initiative complements the identification of Downtown Peterborough as an Urban Growth Centre in the Regional Growth Plan (Places to Grow).

The Province also updated its Transit Supportive Development Guidelines in 2011. The guidelines stress the need for creating transit supportive communities to address the overall transportation objectives and policies identified in the Provincial Policy Statements and The Big Move Transportation Plan. These guidelines are important considerations for Peterborough's Planning and Transportation Services Departments in setting local policies and reviewing development applications.

While Places to Grow is aimed at accommodating and providing mobility for the growing population and employment, the recently enacted AODA legislation is concerned specifically with accommodating and providing mobility for the growing population of persons with disabilities. The goal of the AODA is for a fully accessible Ontario by 2025. Standards will affect goods, services, facilities, accommodation, buildings, structures, policies, employment practises, including training, and marketing/communications. Both public and private sector service providers are required to comply.

On January 1, 2011, the AODA "Customer Service Standard' became enforceable for public sector entities and the Integrated Standards became law on July 1, 2011. The Integrated Standards include "General", "Information and Communications", "Employment" and "Transportation" Standards. The only current Standard that is still in draft form is "Built Environment".

Earlier accessibility legislation, enacted in 2001, called the "Ontarians with Disabilities Act", or ODA, is still in force. Under the ODA legislation, municipalities, transit systems, and other public entities must update their Accessibility Plans annually and make them available to the public. Once the AODA legislation comes into full effect (e.g. including the Built Environment Standard), the ODA legislation will be phased out.

All of the Standards will affect Peterborough Transit in one form or another, however, the Transportation Standard will have the most impact on the service. This Standard affects conventional transit, specialized transit and all services that are brokered by Transit, such as taxis.

Public transit must comply with the following aspects of the AODA legislation that was enacted in July 2011.

- Non-functioning accessibility equipment must be repaired as soon as possible on transit vehicles;

- Passengers with a disability cannot be charged a higher fare than passengers without a disability;
- Passengers with a disability cannot be charged a fee for the storage of mobility aids;
- Pre-boarding verbal announcements of the route, direction, destination or next major stop must be made, upon request;
- Verbal on-board announcements of destination points or route stops must be made while the vehicle is being operated;
- Reasonable steps must be taken to accommodate people with disabilities when accessibility equipment on a vehicle is not functioning and equivalent service cannot be provided; and
- Peterborough Transit must provide services that take into account the abilities of passengers with disabilities, which could include accessible conventional transit.

If unable to meet these requirements, Peterborough Transit may open itself up to Human Rights complaints. However, the requirements are primarily worded in such a way as to give transit systems some flexibility in how to accommodate them. Compliance with the AODA is addressed in Section 15 of this report.

2.2 The City's Official Plan, Transportation Plan, Local Policies and Planning Context

Local policies tend to have a very direct effect on transit services including determining the exact timing and location of growth, setting local funding priorities and hopefully ensuring that development is implemented in a form that is most supportive of transit. There are two key planning documents that will shape transit service provision in Peterborough:

- 2009 City of Peterborough Official Plan; and
- 2002 Peterborough Comprehensive Transportation Plan.

The City of Peterborough is currently undertaking an Official Plan Review in order to update the planning principles and policies that will determine how the City grows and develops over the next 20 years. Peterborough is focused on being a city for all people and ensuring that equal attention is given to the social development of the community as well as to the creation of the physical structure of the community. The City wants all facilities and services to be accessible by all age groups, by persons with disabilities and by those who are socially and economically disadvantaged.

Peterborough's location, at the eastern edge of the Greater Toronto Area, is subject to comparatively less growth pressure than municipalities closer to Toronto. In accordance with the Provincial Growth Plan for the Greater Golden Horseshoe, the City of Peterborough is

forecast to reach a population of 88,000 by 2031 with employment of 42,000, as agreed with the County of Peterborough. This represents a 10 percent growth in population and 2 percent increase in employment from 2011 levels (See Table 1). These forecasts will be used as the basis for planned growth within the City and will be reviewed and revised on a five-year basis in accordance with local and provincial requirements.

Table 1 - City of Peterborough Population and Employment

	2001	2011	2021	2031
Population	74,000	80,000	84,000	88,000
Employment	37,000	41,000	42,000	42,000

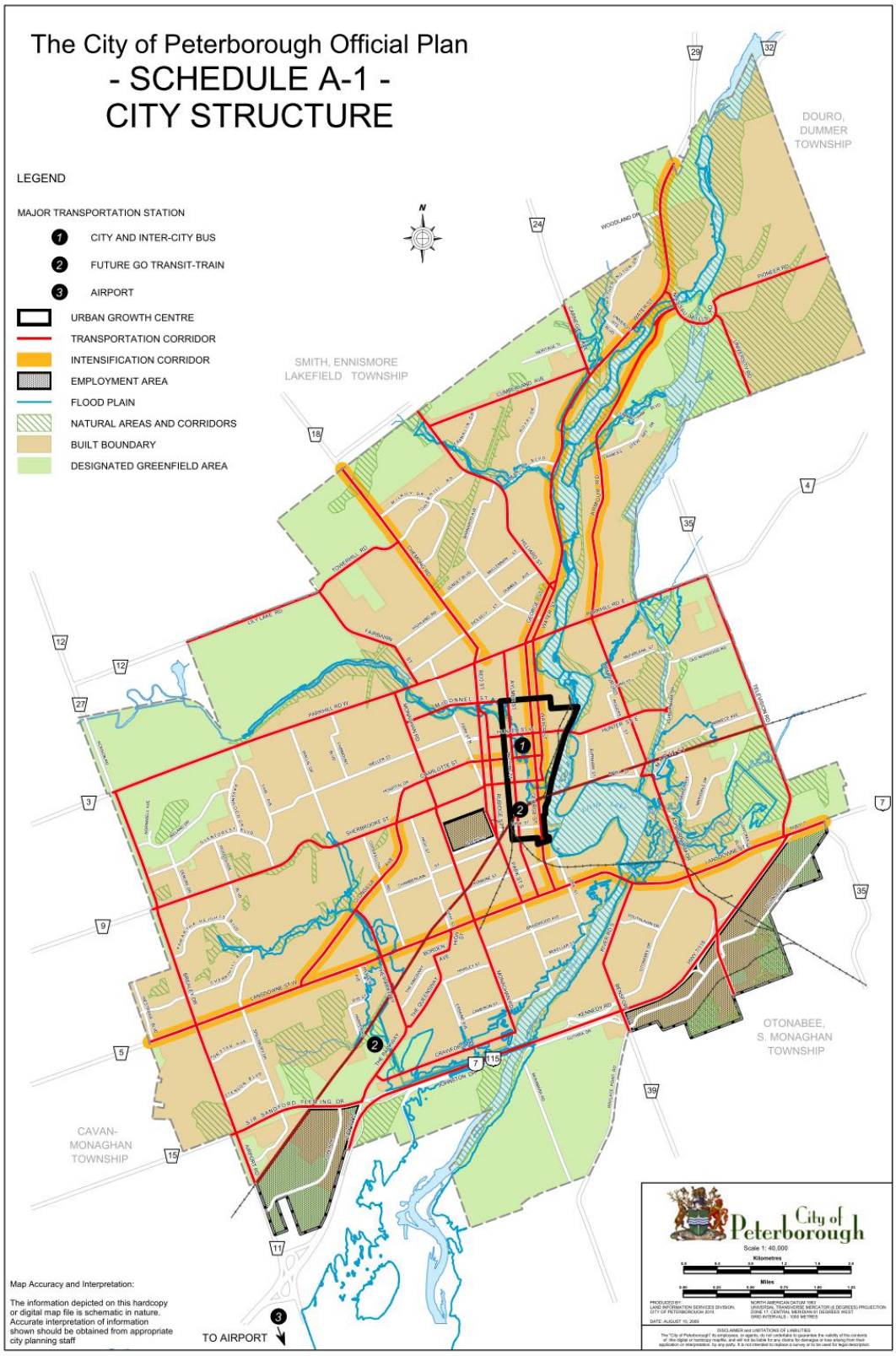
A significant portion of future growth will be directed to areas within the Built Boundary of the City, through infill or appropriate intensification. Growth will be planned in locations where infrastructure capacity exists or can be readily improved, and where additional development can be compatibly integrated with existing built form, land use patterns and natural heritage features. Higher levels of intensification will be directed to Intensification Corridors and Major Transit Station Areas as illustrated in Schedule A-1 of the Official Plan (See Figure 3 below).

Section 5.0 of the Official Plan outlines various Transportation policies and principles for the City of Peterborough. The intent of the transportation policies is to "encourage the use and development of all modes of transportation, considering such factors as land use, economics, growth and urban form, economic development, affordability and energy conservation to provide access to services and facilities within the City". Emphasis is also placed on "implementing a Transportation System that includes the management of transportation demand within the City, through the application of appropriate, selective Transportation Demand Management (TDM) measures in order to affect how, when and by what mode travel is conducted within the City."

Specific transportation policies in the Official Plan include:

- Plan for a more balanced Transportation System to accommodate increased use of public transit, cycling and pedestrian facilities.
- Have regard for the overall Quality-of-Life of all City residents in the provision of transportation services and facilities.
- Provide a transportation system with appropriate connections between City, regional and provincial transportation systems.

Figure 3 – Intensification Corridors and Major Transit Station Areas



Section 5.5 of the Official Plan outlines specific objectives for transit services. These are:

- The City shall continue to operate and improve a public transit system to provide adequate and equitable transportation to all residents, in direct response to the public's need for and use of the public transit system. Public transit is intended to provide an alternative to private automobile use in the City, and thereby relieve or delay some of the need for roadway system improvement and off-street parking demands.
- The City will follow performance guidelines for scheduled fixed route and Dial-A-Bus (TransCab) transit service to provide access to these services within a maximum 500 metres walking distance over 95 percent of the City's developed urban area.
- Council, through Peterborough Transit, will reconsider the continuation of any schedule fixed route service on any transit route proven to continually provide for less than 10 trips per revenue hour.
- The City will require that development proposals be designed to facilitate for easy access to public transit by:
    - ensuring that all new development forms and street patterns support the use of transit in accordance with established transit and transportation planning principles;
    - requiring that collector and arterial street patterns support the extension of transit routes in areas of new development;
    - requiring that sidewalks and other pedestrian facilities connect major traffic generators to public transit;
    - ensuring that the design and maintenance of transit facilities take user comfort and safety into consideration; and
    - ensuring the appropriate design of streets to accommodate public transit use.
- The City will work in association with local school boards to minimize any duplication of service between the boards and Peterborough Transit, and to determine where greater overall efficiencies can be achieved through coordination of services.
- The City will continue to upgrade regular transit service to full accessibility, and maintain a parallel, specialized service for those persons unable to utilize the regular service.

These types of policies and service standards are appropriate to be included in an Official Plan document as it sets the stage for transit services and links it into other municipal departments; promoting a shared responsibility for achieving Transit's goals and objectives.

In 2002, the City of Peterborough adopted a Comprehensive Transportation Plan. This plan guides transportation priorities within Peterborough. The Transportation Plan identifies needs and priorities within the transportation system from 2002-2021 and the first review of the

Transportation Plan is currently underway. To date Council has approved a 6 percent daily mode share target for transit to be achieved by 2021. As noted in the Nov. 7, 2011 report to Council recommending the adoption of the implementation plan for the comprehensive transportation plan update, the cost implications associated with achievement of this target include:

Item	Description	Cost Impact (2011 Dollars)
Capital Costs	10 additional peak buses	+ $5.1 million
Additional Operating Costs	22,000 revenue hours plus additional overhead	+ $2.6 million annually
Additional Passenger Revenue	Revenue related to ridership increase of 1.29 million trips	- $1.2 million annually
Additional Net Operating Costs		+ $1.4 million annually

The following transit strategies were also recommended:

- Continue to collaborate with GO Transit, Metrolinx and others to work towards interregional commuter rail;
- Pursue recommendations arising from the 2011 Peterborough Public Transport Operations Review;
- Maintain and seek new partnerships with post-secondary institutions (enter into a Student Pass agreement with Sir Sanford Fleming College);
- Provide integration with a potential inter-regional transit system and explore entering into a Fare Integration Agreement with GO Transit;
- Implement transit priority treatments at intersections to improve transit service;
- Adopt aggressive Transportation Demand Management programs at public and large private employers;
- Achieve a fully accessible conventional transit service and provide parallel specialized services for those unable to use the conventional system;
- Ensure that land-use policies are supportive of public transit and that all new development can be served by public transit; and
- Explore funding opportunities to support the introduction of commuter transit service to outlying communities.

2.3 Peterborough Transit Vision, Goals and Objectives

The Vision for Peterborough Transit as documented by the Comprehensive Transportation Plan is:

> *"Peterborough's transit system shall provide an efficient, reliable, convenient and affordable form of mobility throughout the city for all users which offers an attractive alternative to the automobile, particularly to the Downtown, Trent University, Fleming College and other major activity centres around the City."*

It is common for public transit systems to follow up their Vision statement with a set of Goals and Objectives which are then translated into specific performance measures and design standards for the transit service. These measures then form the basis for an annual monitoring program and report to Council. The following performance guidelines are found in the City of Peterborough's Official Plan:

- The City will follow performance guidelines for scheduled fixed route and Dial-A-Bus (TransCab) transit service to provide access to these services within a maximum 500 metres walking distance over 95 percent of the City's developed urban area.
- Council, through Peterborough Transit, will reconsider the continuation of any schedule fixed route service on any transit route proven to continually provide for less than 10 trips per revenue hour.

2.4 Audit of the 2006 Public Transit Operations Review

The City of Peterborough conducted a transit operations review in 2006 in response to recommendations that came out of the 2002 Comprehensive Transportation Plan Update. This update included over fifty recommendations directly related to the delivery of public transit services and there was a need for further guidance to ensure that transit service planning and delivery was aligned to the goals and objectives of the City's transportation plan.

In 2004, Peterborough Transit delivered 2.6 million passengers and was achieving strong ridership growth. The system operated on 11 conventional fixed routes incorporating hourly and half hour service during the day, Dial-a-bus during the evening periods and TransCab to remote difficult to service areas. Charters were also provided to Trent University and Fleming College.

The Handi-Van service delivered 43,900 passengers per year (in 2004), higher than the 33,600 recorded in 2010.

A number of key issues were noted in both systems:

- Existing routes were stretched to their limits which resulted in poor on-time performance and often in missed trips;
- The service did not run late enough and the dial-a-bus system was not favourably viewed;
- There was a desire and demand for Sunday service;
- The frequency of the buses needed to be improved during peak periods;
- More transit shelters were requested at bus stops;
- More direct routes (that do not always go through the terminal) were desired;
- There was a high unaccommodation rate for Handi-Van trips (over 2 percent); and
- There was a need for shorter booking times for Handi-Van.

Overall, it appears the 2006 study followed a logical and transparent process with a number of opportunities to engage the public and various stakeholders. This included the collection of comment cards, workshops with key stakeholder groups and surveys (both onboard and by telephone).

A number of recommendations were made to address the key issues identified by the public and respond to the goals and objectives noted in the 2002 Transportation Plan update. Phase 1 includes a replacement of dial-a-bus with hourly fixed route service, the move to a common start time for all buses on weekdays and Saturdays and the introduction of a new peak period route to Technology Drive.

All of these recommendations were implemented and have been successful. Evening service ridership has been performing well (in terms of expected boardings per revenue vehicle hour) and morning services have been performing well on all routes, with the exception of the first two runs on Saturdays. The new Technology Drive service is also considered a success and a good strategy to service low density and low demand industrial areas.

The Phase 2 recommendations were more comprehensive and included:

Recommendation	Response and Assessment
The implementation of Sunday service;	This was completed and the operation of transit service seven days a week is considered appropriate for a city the size of Peterborough. Currently, Sunday service is operating at acceptable performance levels based on industry standards. It has also likely led to increased use of the transit system on other days of the week as access to transit on all days can lead to decisions being made about household car ownership and greater commitment to transit by residents.

Recommendation	Response and Assessment
Extension of service hours on evenings (weekdays and Saturdays)	This recommendation was completed and has been successful. With this recommendation, Peterborough service hours are now in line with its peers. Overall ridership during these periods is acceptable on most routes and achieving minimum utilization targets. As mentioned above, providing service during evening periods can also help Peterborough increase ridership during the peak periods and is in line with achieving the modal share targets.
Adjustment of service to base of 40 minutes with some 20 minute peak service	The introduction of 40 minute frequency service was implemented by readjusting all routes to run on a 40 minute or 80 minute round trip time (rather than 30 or 60 minutes run times). By increasing the run times on a number of routes, this change addressed the significant schedule adherence and missed trip issues that were occurring. For a number of years, on-time performance improved significantly as a result of this change. While a 40 minute schedule is not the most effective (in terms of ease of understanding), passengers have become used to the service. In this current Operational Review, a routing concept was developed and assessed that brought the system back to 30 minute and 60 minute run times. This would provide an improved level of service for passengers, improve the understanding of schedules and the flexibility of the system to modify frequency based on demand. It was determined, however, that moving back to a 30/60 minute run time would reduce overall coverage of the system or lead to schedule adherence issues. This is partially due to the time lost in the existing terminal operation. As such, maintaining a 40/80 minute run time is recommended in this report (Section 8.6) and is in line with the changes made from the 2006 Operational Review. The 2006 review also recommended moving to some 20 minute peak period service frequencies on a select number of routes. Approval for additional service hours and vehicles to implement this recommendation was not received. Some 20 minute service is provided on the Trent Express routes which are fully funded as part of a specific agreement between Transit and the Trent students association. Providing a more frequent service on the base routes during the peak periods should be considered one of the top priorities for transit. This will help address existing capacity issues on certain routes and lead to

Recommendation	Response and Assessment
	ridership growth in line with the targets identified in the Transportation Plan update.
Extension of hours of operation for the Handi-Van service	Service hours on Handi-Van were addressed and are currently in line with the existing hours of operation for the conventional transit system. Operating consistent hours between Handi-Van and conventional transit is important to address the quality of life for persons with disabilities and is a requirement of the AODA legislation.
Increase in service delivery for Handi-Van	The number of hours of service for Handi-Van were also increased to reduce the number of unaccommodated trips. With the continued introduction of accessible fixed route services, there has been a migration of Handi-Van trips to conventional transit, which has resulted in a decrease in ridership on the van service and an improvement in the accommodation rate. Moving forward, adding capacity to the door-to-door van service is not recommended in the short-term. Instead, it is recommended that a 'family of services' approach be followed that increases capacity for Handi-Van trips cost effectively by providing a broader range of service delivery options (see Section 12.3).
An upgrade of the computerized scheduling system for Handi-Van	A new scheduling software system was purchased called TransView. While purchasing a new scheduling software package is appropriate to better coordinate Handi-Van trips, there has been some mixed reaction regarding the package itself, particularly regarding the technical support function. Additional staff training on trouble shooting or discussions with the vendor may be required to make the most of this software package.
The revision of the Lansdowne Route which doesn't go through the terminal and new service in the southwest	The implementation of a Lansdowne route that does not go to the downtown terminal was not implemented. This was meant to occur later in the route redesign, but was not carried through. In a system the size of Peterborough, one of the challenges in moving away from the radial system is that it can force multiple transfers on the system. This can be a challenge for passengers, particularly if transfers are not timed and route frequencies are greater than 10 minutes. Moving to more corridor based services was explored in this current study.
A policy to interline routes	Interlining routes is an effective strategy to increase customer convenience and improve schedule adherence (by interlining routes that have reliable run times with routes that have occasional schedule adherence issues). While this recommendation has not been

Recommendation	Response and Assessment
	implemented, the rationale is still sound and it is recommended in Section 9.2 as part of this current Operations Review to achieve the above noted objectives (passenger convenience and improved schedule adherence).
Revised customer service standards	A number of customer service standards were enhanced as a result of the previous review. This includes a renewed emphasis on on-time performance. While this operational review did not review customer service policies such as cleanliness of the terminal and buses, security, pass sale locations and snow clearing, customer service does form an integral part of transit service operation and should be emphasized.
Adjustment of the transit fare structure	The transit fare structure was revised as shown in the plan. Moving towards a single cash fare is an appropriate strategy as well as the implementation of regular (annual) adjustments to the fares and fare categories. Fare adjustments were made again in 2009 and a further adjustment will be proposed for this current operations review. Regular, small fare increases are important to keep up with rising operational costs and this was a sound recommendation in the 2006 Operational Plan (particularly with proposed service improvements).
Expansion of use of technologies such as GPS and Transit signal priority	The City invested in a new farebox system which better allows for accurate data collection and monitoring of ridership by route and time of day. The City has also recently invested in GPS technology, however, this is not being used to communicate real time arrivals at bus stops. An upgrade to this system should be developed as well as the implementation of transit signal priority. Both these strategies are becoming popular in cities the size of Peterborough and should be addressed in more detail as a method of maintaining good on-time performance and enhancing customer service.
Review opportunities to expand service to school boards and neighbouring municipalities.	Addressing opportunities to expand service to neighbouring communities is important to address inter-municipal travel patterns. Given the rural nature of much of Peterborough County and neighbouring Kawaratha Lakes, extending transit service to neighbouring municipalities in the short-term may not be cost effective and the priority should be on improving local service in the short-term. Extending service beyond the municipal boundary is typically done on a full cost recovery basis.

Recommendation	Response and Assessment
	A good strategy would be to better connect with GO Transit through fare and service integration. This would need to involve discussions with GO Transit. Better integration of local transit with the school boards is often suggested and makes sense where it is feasible for public transit to accommodate specific high school trips that are required under board policy. After discussions with the school board transportation consortium, there appears to be limited opportunity for Peterborough Transit to take on the full service which would have to occur through a response to tender. This is due to the competitive rates provided by the private sector and the need to tailor service delivery to bell times (which can be in conflict with the existing Peterborough Transit schedule). Use of Peterborough Transit for some specific programs offered at only one school, for some coverage areas and perhaps for some special needs students should be further discussed with the consortium. An effective strategy is to focus on specific high school specials and the general market of students who can be attracted to public transit for after school activities, work placements, community service requirements and social/recreational travel as an important component of Peterborough Transit's current and future ridership.

3.0 TRANSIT MARKET ASSESSMENT

An assessment of existing and future markets for conventional transit was conducted to better understand the operating environment and ridership growth opportunities in Peterborough. Key markets for transit services include students, employees, and seniors. Population and employment growth opportunities were also assessed.

3.1 Population and Employment Growth Forecasts

The current population of Peterborough is approximately 80,000 and is forecasted (Places to Grow planning) to increase to 84,000 by 2021 and 88,000 by 2031. This represents a 5 percent increase from the current population to 2021 and 10 percent to 2031.

Similarly, the Places to Grow Plan projects employment of 42,000 in 2021 and continuing at this level to 2031. This is an increase of 1,000 jobs above current employment. Table 2 illustrates the breakdown of population and employment growth for the City of Peterborough.

Table 2 – Current and Projected Population and Employment

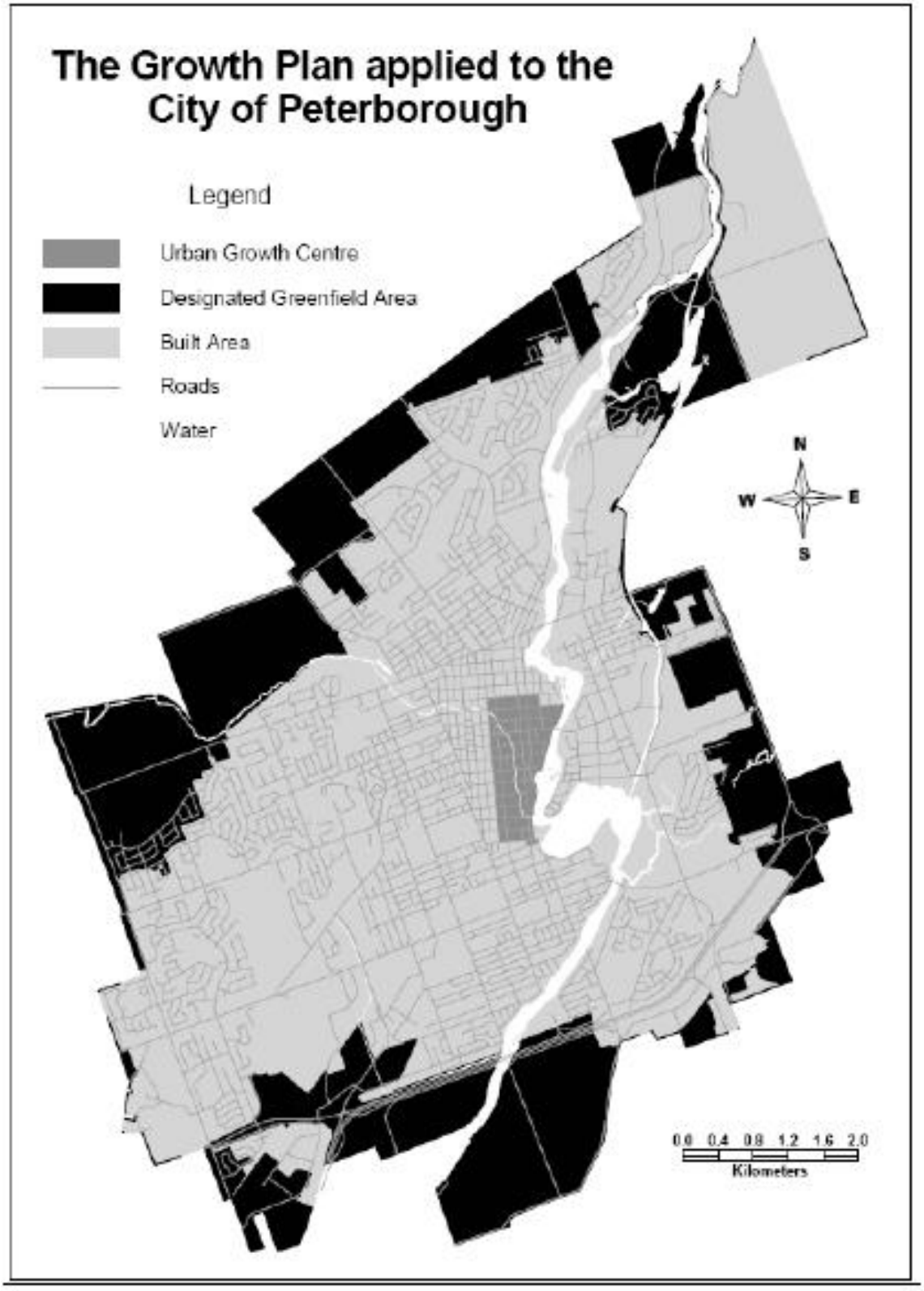
	2011	2021	2031
Population	80,000	84,000	88,000
Employment	41,000	42,000	42,000

For Peterborough Transit, this will require changes in service level, routing and service strategies to accommodate the growing population and employment on public transit services, particularly in greenfield development areas.

3.2 Intensification and Growth Areas

Official Plan Amendment No. 142 and Planning Peterborough 2031 are documents that outline the City's response to the Places to Grow Plan. The City of Peterborough has the following designated areas under the Growth Plan: Urban Growth Centre, Built Area, and Designated Greenfield Area. Each area has a numerical target that the City is expected to incorporate into its Official Plan and to achieve as part of the Growth Plan's overall vision of creating more compact and complete communities. Figure 4 identifies these areas within the City of Peterborough.

Figure 4 – City of Peterborough Growth Plan

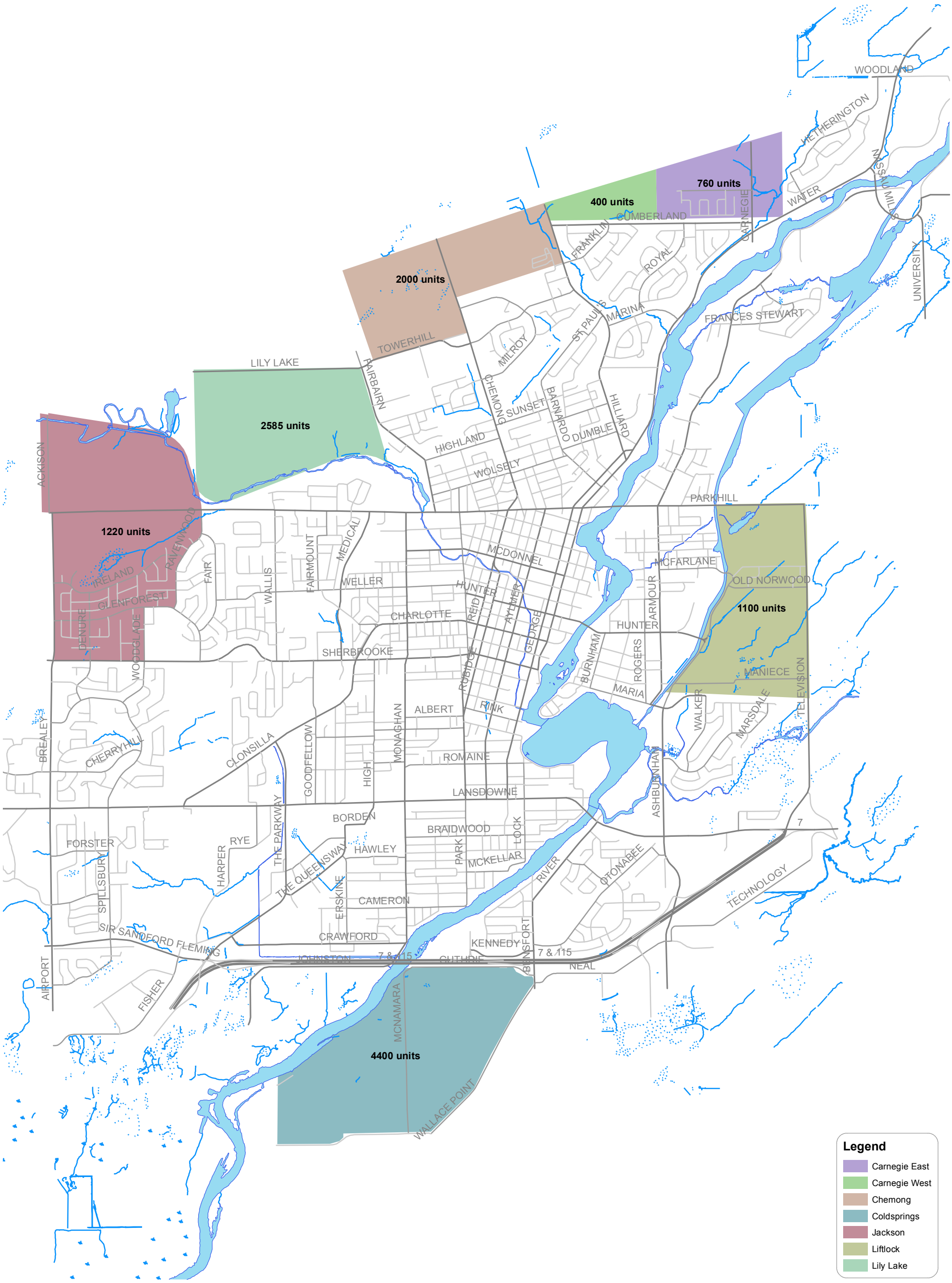


A significant portion of future growth will be directed to areas within the Built Boundary of the City, through infill or appropriate intensification. This will occur in locations where infrastructure capacity exists or can be readily improved, and where additional development can be compatibly integrated with existing built form, land use patterns, natural heritage features and natural hazards. Higher levels of intensification will be directed to Intensification Corridors and Major Transit Station Areas, as illustrated on Schedule A-1 (Figure 3). In order to meet the recommended density of 150 jobs and residents per hectare, 4,800 new residents and jobs are required in the Urban Growth Centre. This represents a 50 percent increase over the present situation. Of the 14,300 new residents and jobs forecast for the City of Peterborough between 2006 and 2031, the City will need to plan for approximately 33 percent of this growth to occur in the Urban Growth Centre, if this target is to be achieved by 2031. Therefore, the redevelopment and revitalization of Downtown Peterborough will be a central part of the City's future growth strategy and also this Transit Master Plan.

New residential growth will also be targeted for sites within the Built Boundary located within the Urban Growth Centre, along identified intensification corridors and major transit station areas as illustrated in Schedule A-1 (Figure 3 of this report). Based on the Growth Plan's population projections and on 2006 Census data, approximately 8,800 new residential units will be required within the City by 2031. Of these units, approximately 3,500 will need to be built within the Built Area boundary at an average of approximately 139 units per year for the entire planning period.

The City will be required to optimize the land use within its existing built areas by strategically intensifying growth through both infill and redevelopment. This will be a significant shift in Peterborough's traditional growth patterns. To achieve the intensification and density targets, more multi-unit residential developments that include row housing and multi-storey buildings will need to be constructed. The City will need to shift its development patterns to a more compact, transit-supportive urban form.

As illustrated on Schedule A-1 (Figure 3), the City has a significant inventory of land within the Greenfield Areas to accommodate a portion of future residential and employment opportunities. It is not anticipated that all of these lands will be developed during the term of the Official Plan and no municipal boundary expansion is anticipated within the timeframe of the Official Plan. Development of Greenfield Areas will be planned as compact, transit-supportive areas through Secondary Plans. It is estimated that approximately 5,300 units will be built in the Designated Greenfield Area at an average of 212 units per year from 2006 to 2031. This will require approximately 250 hectares of designated Greenfield land. Figure 5 outlines the designated growth areas and the projected number of units in each area.



City of Peterborough
Peterborough Public Transit Operations Review - The Route Ahead

FIGURE 5
DESIGNATED GROWTH AREAS

Peterborough Transit

DILLON CONSULTING

MAP DRAWING INFORMATION:
DATA PROVIDED BY THE CITY OF PETERBOROUGH

MAP CREATED BY: SLS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: G:\CAD\2011\115470 20\Design_GIS\MXDs

N W E S

0 0.425 0.85 1.7 Km

PROJECT: 11-5470 STATUS: DRAFT DATE: 06/22/12

The intensification within the Urban Growth Centre and along identified corridors will increase the potential for transit ridership. The compact form planned for the Greenfield areas will also support active transportation and public transit. This type of development will allow the City of Peterborough to expand and improve transit services throughout the City.

3.3 Potential New and Expanded Transit Markets

Several key transit markets were identified in this study. These include the inter-regional commuters, high school students, post-secondary students along with faculty and staff, downtown residents/employees, seniors, shoppers and major local employers.

SENIORS (AGING POPULATION)

As birth rates continue to decline and the baby boom generation continues to age, the senior population is becoming an increasingly prominent transit market. In Canada, approximately 12 percent of the current population are seniors (65 year or older) and estimates by Health Canada show that by 2026, 20 percent of the Canadian population will be seniors.

Based on the 2006 Census, the Peterborough Census Metropolitan Area (CMA)[1] is Ontario's oldest with a median age of 42.8. This also makes it the fifth oldest CMA in Canada. The Peterborough CMA also has the highest proportion of seniors in the country at 18.2 percent, which make this a significant market for transit.

In the City of Peterborough, seniors account for about 19.4 percent of the total population (80,000) and are projected to account for 28.6 percent of the 88 000 population in 2031. This translates into approximately 25,000 seniors in the community (from approximately 15,000 in 2000). There are concentrations of seniors living along the Water Street corridor, in the downtown core and at apartment complexes and homes identified in Section 10. In 2011, approximately 3.3 percent of all ridership on Peterborough Transit were seniors which suggested that this market has the opportunity to grow.

Some seniors are very dependent on transit as they may not have access to private automobiles (or may no longer want to drive at night or in poor weather conditions) and require transit or paratransit to make shopping, medical, entertainment or leisure trips. The locations of interest for the senior travel market include retail areas, community centres, banks and medical clinics (hospitals).

The Government of Ontario is providing considerable funding and attention to keeping the increasing senior population 'aging-at-home' and self-sufficient for as long as possible. It is important to ensure that this market is addressed and that transit market share is increased beyond the current 3.3 percent, particularly as the population ages.

[1] Includes the City of Peterborough and the Townships of Cavan-Monaghan, Douro-Dummer, Otonabee-South Monaghan and Smith-Ennismore-Lakefield.

As illustrated in Table 3, the incidence of mobility impairment increases dramatically with age. This chart is based on data from the Participation and Activity Limitation Survey (PALS) collected by Statistics Canada. It is noted that in the PALS survey, a disability is defined as a condition that limits everyday activities because of a condition or health problem. It is recognized that this is a broad definition of disability and would include many individuals who do not require specialized transit for travel. However, it important to note that the Ontario Human Rights Commission defines a disability as covering a broad range and degree of conditions, some visible and some not visible. A disability may have been present from birth, caused by an accident, or developed over time. There are physical, mental and learning disabilities, mental disorders, hearing or vision disabilities, epilepsy, drug and alcohol dependencies, environmental sensitivities, and other conditions. The Ontario Human Rights Code protects people from discrimination because of past, present and perceived disabilities. The OHRC definition is the one also used in the AODA legislation.

This PALS data clearly indicates the increasing incidence of disability among older population groups, with the incidence of disability among persons 75 and older being approximately four times that of the total population. This trend, along with the growth in the senior's population will generate a significant increase in demand for the City's Handi-Van service. Developing a range of cost effective transportation alternatives for seniors will be an important consideration.

Table 3 – Incident of Disability by Age Group (2006)

Age Group	Total Disability Rate
0 to 14 years	3.7%
15 to 64 years	11.5%
65 to 74 years	33.0%
75 + years	56.3%
Total Population	14.3%

HIGH SCHOOL STUDENTS

The secondary school student population is another major transit market. Students often are too young to drive or do not have access to a private automobile and are therefore very dependent on transit. The Kawartha Pine Ridge District School Board has four secondary schools and the Peterborough Victoria Northumberland and Clarington Catholic District School Board has two secondary schools within the City. The locations of these secondary schools are illustrated Figure 6. There are a total of 12,000 secondary school students in Peterborough.

For students who are eligible for transportation under the walking distance criteria (3.2km), service is arranged through a consortium and is delivered by 30 different contractors. All of the high schools, except St. Peter's Secondary School on Medical Drive, are currently located along

existing transit routes. The consortium arranges for some eligible secondary students to have passes for Peterborough Transit. The majority of current students using transit passes are students who attend Peterborough Collegiate and Vocational School (PCVS) on McDonnel Street. However, the school board recently decided that it would close PCVS.

Where possible, the existing route structure and frequency should be designed to accommodate this high school market. High school specials can also provide an effective tool to deliver 'non eligible' students between home and school, particularly where capacity on regular routes is an issue. This will be further discussed in the development of a route structure.

The opportunity for Peterborough Transit to provide transportation for 'eligible' secondary school students is limited to specific situations where conventional service is conveniently available at the appropriate bell times (the 40 minute service frequency is a problem). The transportation consortium also provides the transportation of some special needs students and the opportunity to utilize Handi-Van service should be pursued with the Student Transportation Services of Central Ontario.

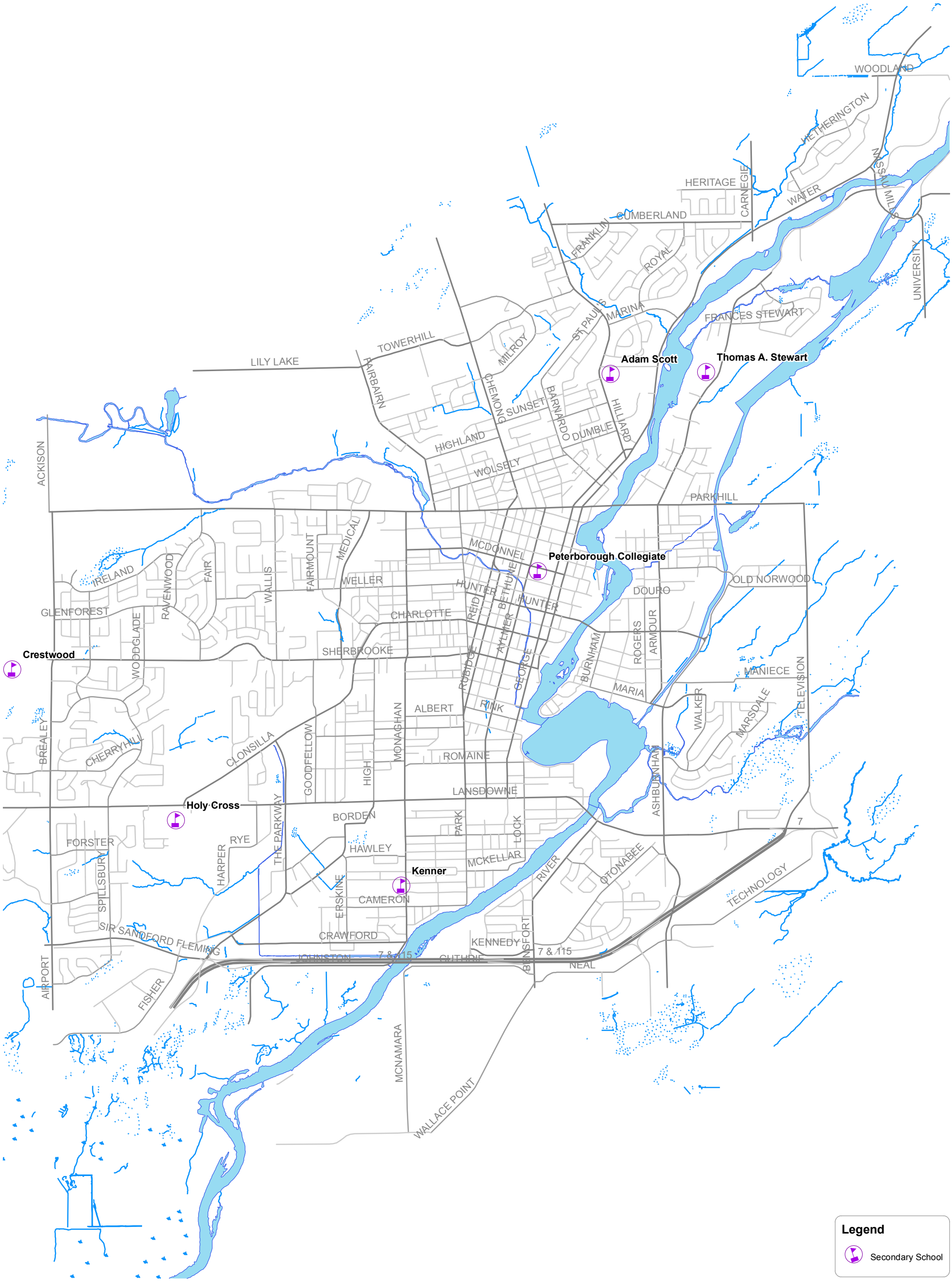
The general market of high school students who can be attracted to public transit for after school activities, work placements, community service requirements and social/recreational travel is an important component of Peterborough Transit's current and future ridership.

POST-SECONDARY STUDENTS

Peterborough is home to Trent University and Sir Sandford Fleming College. Trent University is located on West Bank Drive and East Bank Drive on both sides of the Otonabee River and currently enrolls just over 6,000 full time students. University students are an important transit market as many live in Peterborough when they are attending University and often do not have access to a private automobile.

A Universal Bus Pass (U-Pass) program is in place at Trent University and gives all full time Undergraduate students (excluding School of Education students) unlimited year round usage of Peterborough Transit services.

The University is well served by two *Trent University Express* transit routes that connect the downtown with the University. The West Bank Express route runs along the west bank of the Otonabee River connecting to the main campus while the East Bank Express Route runs on the east bank connecting to the DNR Building. Both routes operate every 20 minutes and extra buses are also dispatched during peak periods to accommodate demand.



Legend

Secondary School

City of Peterborough
Peterborough Public Transit Operations Review - The Route Ahead

FIGURE 6
SECONDARY SCHOOL LOCATIONS

Peterborough Transit

DILLON CONSULTING

MAP DRAWING INFORMATION:
DATA PROVIDED BY THE CITY OF PETERBOROUGH

MAP CREATED BY: SLS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: G:\CAD\2011\115470 20\Design_GIS\MXDs

N W E S

0 0.425 0.85 1.7 Km

PROJECT: 11-5470 STATUS: DRAFT DATE: 06/22/12

In addition to the express services, a regular base route (Route 1) provides service to the West Bank of the campus. This service is not included as part of the U-Pass agreement but all regular transit routes can be used at no charge by U-Pass holders.

The Express services are provided at 100 percent cost recovery and the service levels and route/stop design are agreed to with the student association. The cost is divided by the number of Trent students and paid as part of their overall tuition fees to obtain the pass. Currently, the U-Pass costs approximately $230 per year for each student. The U-Pass allows each student to ride the Express Services and all other Peterborough Transit routes. Peterborough Transit is doing an excellent job of servicing Trent Undergraduate Students. In 2010, approximately 34 percent of all ridership was made up of Trent students.

Sir Sandford Fleming College has two campuses located in Peterborough, the Sutherland Campus on Brealey Drive and the McRae Campus on Bonnacord Street. Two regular routes connect to Fleming College: Routes 6 and 7. Both routes are 80 minutes long (two-way), which means it takes approximately 40 minutes to get to Fleming College from the downtown terminal. The *Fleming College Express* transit route also connects the downtown with the College, providing a shorter run time. This service is only provided for weekday peak periods during the school year.

While Peterborough Transit currently offers a discounted rate for a transit pass ($200 per semester) to college students, it is at a higher rate than the Trent U-Pass with a lower level of service. Implementing a U-Pass with Fleming College is recommended as a major transit growth strategy; however, this will require support and approval from the student union.

Some of the challenges to creating such a program are the high number of students who commute daily from outside the transit service area and high availability of inexpensive parking at the College. It is relatively easy to arrange a parking spot on campus and the parking pass fees are lower than the cost of a transit pass. It is important that any solutions for capturing this market have regard for these challenges.

DOWNTOWN RESIDENTS AND EMPLOYEES

Provincial and local policy directions underline the importance of Downtown Peterborough as a transit market. The Places to Grow Plan has set out projections for the Downtown Peterborough Urban Growth Centre to achieve an average density of 150 residents and jobs per hectare by 2031. Thirty three percent of the total population and employment growth forecast for the City to the year 2031 will have to be directed to this area which will result in an additional 4,800 residents and jobs in Downtown Peterborough.

Currently all of Peterborough's Transit routes connect to the downtown terminal and this route structure provides relatively direct transit service between the Downtown and all areas of the City without the need to transfer. However, the bus terminal is an old design with operational

and productivity limitations. Its potential redevelopment as a Transit Hub is strongly recommended and this initiative could be a catalyst for residential and employment intensification in the downtown.

As residential, retail, commercial and employment activity intensifies in the downtown, it is important to optimize transit routes, provide good service levels seven days a week and ensure frequent and timely connections to other activity centres and neighbourhoods throughout the City.

RETAIL AND MIXED USE NODES

Retail and mixed use nodes are centres of activity and significant destinations for shopping, services and work trips. It is important to capture the transit ridership potential attracted to these areas. Currently there are major activity corridors along Chemong Road; Lansdowne Street West; and Lansdowne Street East. One of the biggest activity centres is Lansdowne Place Mall, which has 100 tenants and 1,000 employees. It is open from 9:30am to 9:00pm and bus services are important for both customers and employees. A second major retail node is Walmart and Portage Place located along the northern section Chemong Road.

These two activity centres are currently served by transit Routes 7, 8 and 12 (Lansdowne) and Routes 2 and 3 (Chemong), with connections to downtown and residential areas. Transit service levels, including the availability of transit on weekends and Holidays, are a concern for retailers, employees and shoppers.

Along with the Downtown, these retail/commercial nodes and corridors will be areas of significant intensification and compact mixed use development in upcoming decades. It is important to be proactive and have a transit network and service level in place that provides efficient access between these areas and surrounding residential communities throughout the City.

INDUSTRIAL AREA EMPLOYMENT

The City has two primary industrial areas; along the Parkway corridor and along Technology Drive. Industrial areas are traditionally difficult to serve with fixed route transit. This is due to low densities, staggered shift times and auto-oriented development. Currently, the Technology Drive Express serves the Technology Drive industrial area and Route 12 serves the Parkway corridor. The Technology Drive route currently operates between 5:55am and 7:55am and between 2:15pm and 4:00pm. Custom designed employment specials can be an effective way of providing service to these areas and creating partnerships (financial support for employee passes and service enhancements) with large employers in the area should be pursued.

OTHER MAJOR EMPLOYERS

The ability to serve 'home to work' trips is an opportunity to expand transit ridership. There is an opportunity to explore transit pass programs and to develop partnerships with key employers. Some employers recognize that good transit service will help them attract and retain employees while others have an Environmental mandate or are seeking Leeds accreditation which may be the rationale for a partnership program. From an employee perspective, affordability is a key issue and good transit may enable people to make an economic choice of reducing by one car in the household.

Some employers are joining Transportation Demand Management programs which include ride share, active transportation and 'guaranteed ride home' programs along with transit as travel options for staff. Participating in innovative and customized services for different markets allows Peterborough Transit to operate as a mobility manager and work with other community partners in reducing the reliance on single occupant private automobiles.

HOSPITAL MARKET

The Peterborough Regional Health Centre (PRHC) is located at 1 Hospital Drive. PRHC has a capacity of 494 beds, one of the busiest Emergency Departments in Ontario, and an extensive range of services. It is the region's largest employer with over 2,000 staff. As such, it is a major destination in Peterborough and presents a major transit market that should be well serviced.

GO TRANSIT COMMUTERS

GO Transit currently operates bus service between the Peterborough GO Bus Station and the Oshawa GO Station. The service stops at the Peterborough Transit terminal in addition to the South Carpool Lot (just east of Sir Sanford Fleming College). Weekday southbound service runs between 4:52am and 9:43pm. Total trip time is approximately 1 hour and 30 minutes. There are 10 departures from Peterborough on typical weekdays with 3 additional express runs on Fridays. In the reverse direction, there are 10 departures destined to Peterborough, with 2 additional express runs on Fridays. Service is also provided on weekends with 6 departures from Peterborough and 7 runs destined to Peterborough.

The Big Move: Regional Transportation Plan identified in the long term 'Possible Regional Rail Extension' beyond the Greater Toronto Area to Peterborough. While the time frame is beyond the scope of this plan, this infrastructure initiative complements the identification of Downtown Peterborough as an Urban Growth Centre in the Regional Growth Plan (Places to Grow).

There is also a group of stakeholders that have joined together to develop the Shining Waters Railway Concept. This concept looks to restore passenger and improve freight service from Toronto to Peterborough, Havelock, Blue Mountain, Perth and Smiths Falls. The SWR plan is supported by a Government of Canada capital commitment of $150 million and an equal amount from the Government of Ontario, for a total of $300 million. Key supporters include

five federal Cabinet Ministers, four Members of Parliament, every municipality along the route, the Eastern Ontario Wardens, the Greater Peterborough Chamber of Commerce, the Greater Peterborough Economic Development Corporation and the CPR.

4.0 CONSULTATION STRATEGY

The study involved a review of the existing conventional and Handi-Van services and an extensive public consultation process to understand current issues and receive comments on both the transit services being provided and any proposed future directions. Study recommendations are based on consultation with the public, municipal staff and councillors, transit users, drivers and system personnel, major stakeholders, consideration of best practices from other systems, and technical assessments by the project team. The various elements of the stakeholder and public consultation process are presented below.

4.1 Public Notification / Study Web Page

Several public information activities were conducted to ensure maximum opportunity for public participation in the process. At the beginning of the study, a public notification was sent out via the City website and the local newspapers. Ads were also posted on the study web site and used to communicate information and receive comments. The study website was linked to the City's website at www.peterboroug.ca.

The website provided the public with information on the objectives of the study, consultation notices, presentation material, invitations to participate in focus group activities and an opportunity for input and feedback via a study email address.

The various notifications provided contact information for the public to connect with the study team and enquire further about the study or put themselves on the study mailing list. Project notifications were also sent out for the Public Information Centres.

4.2 "Let's Talk Transit" Drop-In Centre

During the first visit of the study team a session was held at the Evinrude Centre on October 25, 2011. This session titled "Let's Talk Transit" was attended by over 50 residents (mostly users of the conventional and special services) who participated actively in a discussion of the current state of transit in Peterborough, their user experiences and expectations as well as issues to be resolved and opportunities for the future.

Having this session at the outset of the study allowed the public the opportunity to shape the direction of the work and identify issues that required detailed analysis. The comments received are summarized in Appendix A and some of the key points raised included:

- Users find the transit service affordable with reasonable fares;
- Users generally like that the system is designed around a central terminal;
- Service frequency should be improved;

- Need to expand transit service into new areas;
- Conflict on buses between strollers and wheelchairs needs resolution;
- Handi-Van reservation process can be improved; and
- More bus shelters are needed.

4.3 Stakeholder Interviews

Stakeholder consultations were conducted throughout the study. The consultation format consisted of focused, one-on-one discussions with individuals or small groups comprising representatives of various stakeholders in Peterborough. These discussions covered the existing operation of Peterborough Transit, suggestions for improvements, and the identification of issues and opportunities to be addressed in the study. The relationships between public transit and land use, retail activity, home building, economic development, school transportation, community access and regional travel were explored.

Representatives from the following stakeholder groups were consulted during the study and notes from these meetings are contained in Appendix A:

- Bus drivers and passengers (while riding transit routes in Peterborough);
- City Staff:
  - Transit supervisors;
  - Transit union executive;
  - Community Services;
  - Community Design and Development Services;
  - Engineering;
  - Traffic;
  - Accessibility;
  - TDM coordinator;
- Transportation Accessibility Committee;
- School Board Transportation;
- Trent University and Fleming College;
- Public Library;
- Public Health;
- Chamber of Commerce / Lansdowne Place Mall;
- Activity Haven;
- Capitol Taxi;
- Home Builders Association;

- Social Services;
- OLG Kawartha Downs; and
- Downtown Business Association.

The study team also received considerable input and direction from the Steering Committee (SC) consisting of key staff from the City of Peterborough as well as three Councillors.

4.4 Focus Groups

Two focus groups were conducted as part of this study. A good cross section of transit users was obtained and the format permitted an in depth discussion on a variety of topics.

The first was held on October 26, 2011 and attracted 20 participants, primarily users of the conventional and Handi-Van service. Discussion involved what users liked and didn't like about current transit services, experiences using transit in other communities which might be relevant in Peterborough, improvements desired for current users and to attract new ridership, priorities for moving forward and finally a long term Vision for Peterborough Transit. Details are contained in Appendix A and some key comments received included the following:

- Improve route frequency during peak periods;
- Provide faster and more direct service to Fleming College; and
- Improve service reliability.

The second focus group was held on January 31, 2012 with 20 participants. Discussion involved the evaluation of current service strategies and possible new service strategies for the City of Peterborough. Details are contained in Appendix A and some key comments received included the following:

- Improve the downtown terminal;
- Improve communications with passengers; and
- Community Bus concept was well received.

4.5 Public Information Centres (PICs)

A Public Information Centre (PIC) was held on May 24, 2012 and was very well attended by approximately 150 people. The purpose of the PIC was to present the preliminary findings and recommendations of the study. Display boards were available for review and participants were able to provide feedback directly to members of the study team. Details are contained in Appendix A and some key comments received included the following:

- Ensure that key Handi-Van locations are served on the Community Bus route;
- Route 11 should continue to service the high density residential developments along Middlefield Road;
- Route 10 should continue to service Willowcreek Plaza;
- Concern with how the interlining of routes will be communicated to passengers;
- Support for the Community Bus concept;
- Support for 20 minute peak service starting with Routes 8, 7, 5 and 2;
- Support for fare increase if service improvements are made;
- The conflict between strollers and wheelchairs should be resolved;
- Bike racks should be added to the buses;
- More bus shelters and winter maintenance is required; and
- Trip booking policies for Handi-Van services should be reviewed.

4.6 Committee of the Whole Presentation

The recommendations from the Transit Operations Review were presented to the Committee of the Whole on September 19th, 2012. Following the presentation, delegations where heard from members of the public that attended. These are included in Appendix D.

PART C: CONVENTIONAL SERVICE REVIEW & 5-YEAR PLAN

5.0 EXISTING OPERATIONS

Conventional transit services in Peterborough have been provided for over 100 years starting with the Peterborough and Ashburnham Street Railway Company. Today Peterborough operates a radial fixed route transit system centered on a downtown terminal on Simcoe Street between George Street and Aylmer Street. Service is provided on 12 routes and special services using 49 buses and attracts an annual ridership of 3.5 million (2011 statistics). Some innovations in a city of this size include the operation of express services for specific markets (Trent University, Fleming College, Technology Drive industries) and the use of TransCab to provide service to areas which are hard to reach with fixed routes.

5.1 Downtown Terminal

The downtown terminal is in an appropriate location however, the design and operation of the terminal can sometimes cause problems. Constructed over 40 years ago as part of a parking garage, the transit terminal was designed for 35 foot buses and is configured such that buses are required to back out of their designated bays when leaving the terminal. There is no room to accommodate the Trent Express services at the terminal; as such, these buses stop on street to board/unload passengers.

The 12 buses departing the terminal for each route cycle leave in three groups of four under the direct supervision of transit staff, supported by cameras.

Modern transit terminals feature a 'drive through' design so that buses are never backing up and a single platform is often used to facilitate passenger movements and transfers. The current transit terminal gives rise to both safety and productivity issues and several users also mentioned security concerns particularly during the evenings.

5.2 Route Structure and Operations

Peterborough Transit uses conventional 40 foot buses and the average age of the fleet is 4.3 years (accessible buses). Of the 49 buses, 34 are low floor fully accessible vehicles and the peak weekday service requires 31 buses to be in operation. The conventional service structure includes base routes, express routes and TransCab services as described below.

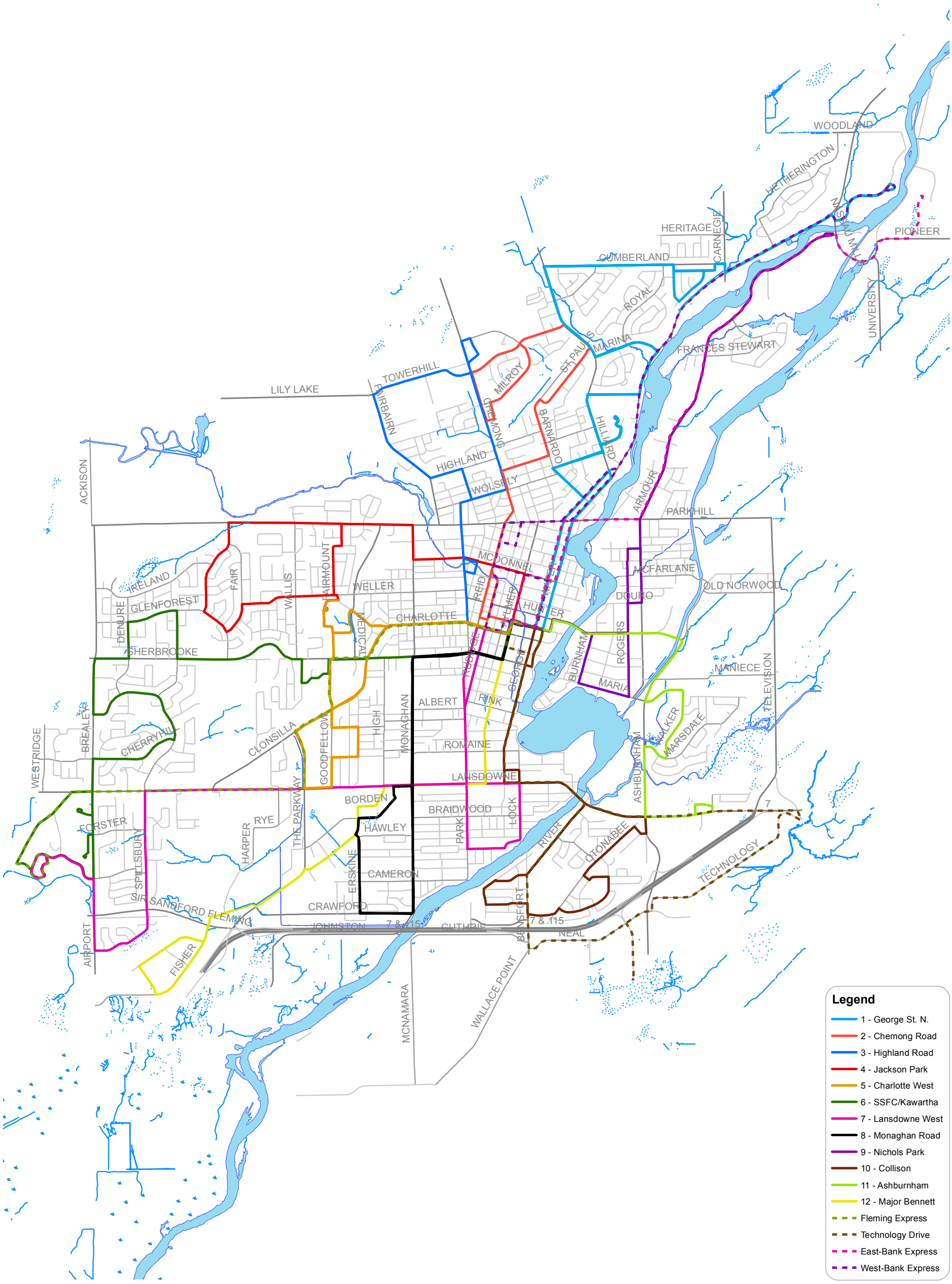
- Base Routes: There are 12 Base Routes connecting Peterborough's neighbourhoods and key nodes (i.e. Trent University, Fleming College, Peterborough Regional Health Centre, Lansdowne Place) with the downtown. Service is available seven days a week, and is

always at a 40 minute frequency. Routes are designed with either 40 minute or 80 minute run times.

Transit service is provided Monday to Friday from 6:00am to 11:20pm, Saturday from 6:40am to 11:20pm and Sunday from 8:00am to 7:20pm. Route 12 has reduced service hours on Saturday and Sunday. Regular routes do not run on any Statutory Holidays.

- Express Routes: These services are designed for special markets but are available to everyone and run on the same fare structure as the regular routes.
    - *Trent University Express* – There are two express routes that connect the downtown with Trent University. The West Bank Express runs along the west bank of the Otonabee River connecting to the main campus while the East Bank Express runs on the east bank connecting to the DNR Building. These routes run on weekdays during the school year (September to April) every 20 minutes from 7:10am to 12:30am (West Bank) and 7:20am to 10:20pm (East Bank). One combined route runs on a reduced schedule on weekends and holidays. Three late night pub runs are also provided from Wednesday to Saturday. Extra buses are assigned to the peak periods and all Trent Express buses stop on street at the downtown terminal.
    - *Fleming College Express* – There is one express route that connects the downtown terminal with Fleming College. There are four runs in the AM Peak and four runs in the PM Peak running on a 60 minute frequency. This service is only provided on weekdays during the school year.
    - *Technology Drive Express* – This express route connects the industrial areas along Technology Drive, Pond Road, and Neal Drive with the downtown. There are three weekday morning runs and three weekday afternoon runs.
- TransCab – This service is provided in four areas of the City that are not served by Base Routes. A taxi will take the passenger between home and the nearest designated TransCab stop for a $2.75 fare that includes the bus fare (i.e. an extra $0.50 is charged for TransCab users). When accessing a TransCab via a regular route, the full fare ($2.75) is paid on the bus and the driver will arrange for the taxi and provide a transfer. When accessing a regular route via TransCab, the full fare has to be paid to the taxi driver and a call has to be placed at least one hour in advance of travel.

The existing service is illustrated in Figure 7.



Legend

- 1 - George St. N.
- 2 - Chemong Road
- 3 - Highland Road
- 4 - Jackson Park
- 5 - Charlotte West
- 6 - SSFC/Kawartha
- 7 - Lansdowne West
- 8 - Monaghan Road
- 9 - Nichols Park
- 10 - Collison
- 11 - Ashburnham
- 12 - Major Bennett
- Fleming Express
- Technology Drive
- East-Bank Express
- West-Bank Express

City of Peterborough
Peterborough Public Transit Operations Review - The Route Ahead

FIGURE 7
EXISTING PETERBOROUGH TRANSIT SERVICE

Peterborough Transit

DILLON CONSULTING

MAP DRAWING INFORMATION:
DATA PROVIDED BY THE CITY OF PETERBOROUGH

MAP CREATED BY: SLS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: G:\CAD\2011\115470 20\Design_GIS\MXDs

N W E S

0 0.5 1 2 Km

PROJECT: 11-5470 STATUS: DRAFT DATE: 06/22/12

The City of Peterborough provides a specialized service, Handi-Van, for people that cannot take the conventional transit service due to mobility impairments. The service is provided door to door on an appointment basis for registered users. A passenger can register to use the service by filling out an application form and having it signed by their doctor. The service is available for the entire city area from 7:00am to 11:20pm on weekdays and Saturdays, and 8:00am to 7:20pm on Sundays. The same fares and fare media used on the conventional transit service are applied to Handi-Van users. Trips can be booked up to one week in advance. Same day bookings may be accommodated if space is available. Trips booked with the same time and destination each week are treated as reserved. All other trips are booked on a "first come, first serve" basis. Handi-Van services are more fully discussed in Part C of this report.

5.3 On-Time Performance

On-time performance of Peterborough Transit buses is imperative to ensure a high level of customer satisfaction. Since all regular routes are coordinated at the downtown terminal, buses that arrive late mean some transit users may miss connections. If buses are held at the terminal to accommodate late transfers, other schedules can be impacted. During the public consultation sessions, several comments were received concerning late buses and sometimes entire runs are being cancelled without notification.

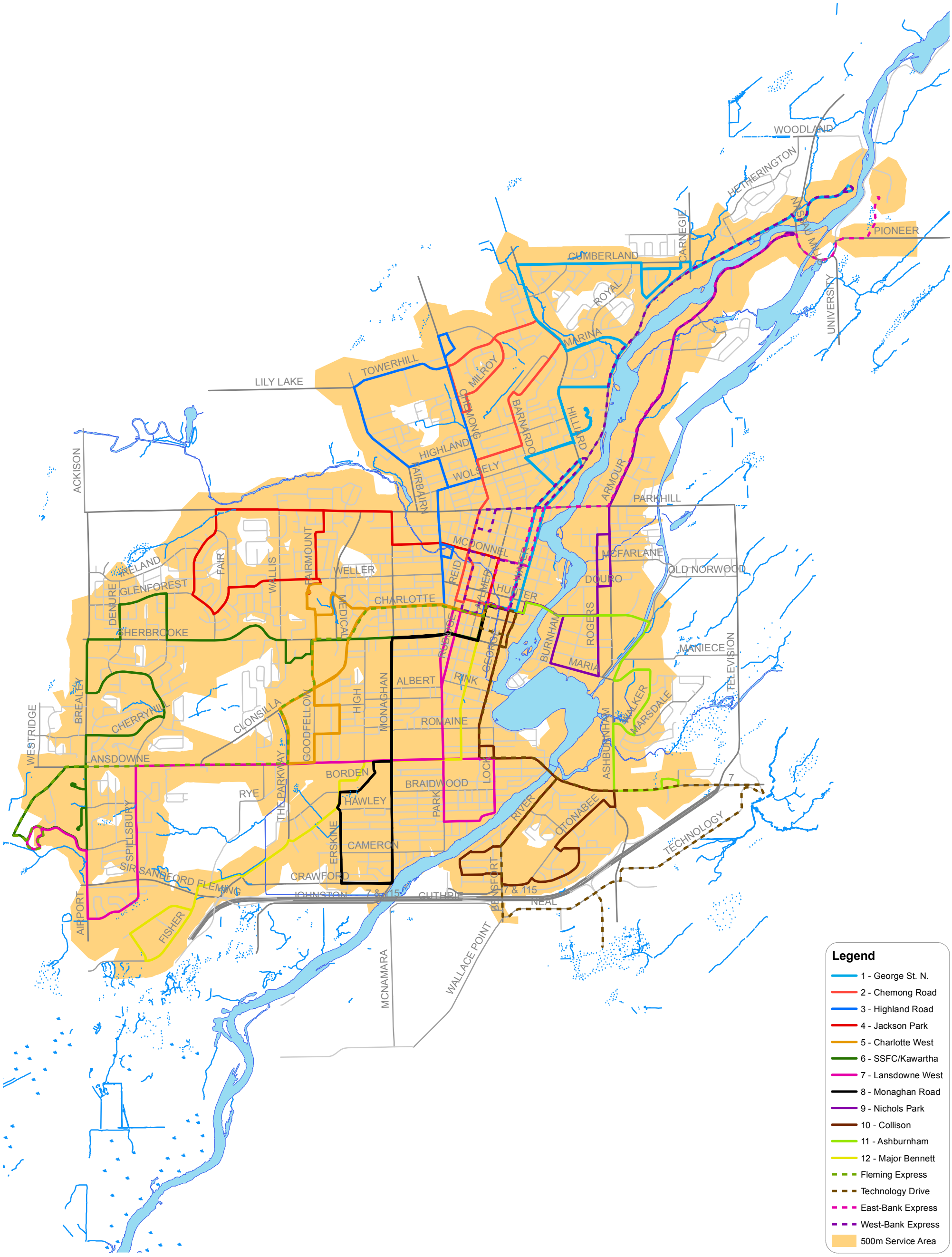
5.4 Service Coverage

As mentioned above, the City has set a target in the Official Plan that states:

- The City will follow performance guidelines for scheduled fixed route and Dial-A-Bus (TransCab) transit service to provide access to these services within a maximum 500 metres walking distance over 95 percent of the City's developed urban area.

The Peterborough Transit service area is comprised of the developed areas within the City of Peterborough. As seen on Figure 8, the majority of the developed area within the city limits is within 500 metres of a bus route (approximately a 5 minute walk). The TransCab service is used to provide a transit option for areas that cannot be efficiently reached with fixed route transit. Overall there appears to be a good level of coverage.

As the population continues to age, it is recommended that Peterborough Transit revise this target so that the measure is based on a 450 metre walking distance instead of a 500 metre walking distance. This is more reflective of a 5 minute walk, particularly for an older demographic.



Legend

- 1 - George St. N.
- 2 - Chemong Road
- 3 - Highland Road
- 4 - Jackson Park
- 5 - Charlotte West
- 6 - SSFC/Kawartha
- 7 - Lansdowne West
- 8 - Monaghan Road
- 9 - Nichols Park
- 10 - Collison
- 11 - Ashburnham
- 12 - Major Bennett
- Fleming Express
- Technology Drive
- East-Bank Express
- West-Bank Express
- 500m Service Area

City of Peterborough
Peterborough Public Transit Operations Review - The Route Ahead

FIGURE 8
TRANSIT COVERAGE (WITHIN 500M OF A TRANSIT ROUTE)

Peterborough Transit

DILLON CONSULTING

MAP DRAWING INFORMATION:
DATA PROVIDED BY THE CITY OF PETERBOROUGH

MAP CREATED BY: SLS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: G:\CAD\2011\115470 20\Design_GIS\MXDs

N W E S

0 0.5 1 2 Km

PROJECT: 11-5470 STATUS: DRAFT DATE: 06/22/12

5.5 Ridership and Performance

In 2006, Peterborough Transit implemented 40 minute service frequency (formerly 30 minute service) and this improved the system's on-time performance. The City also implemented Sunday and late night service; and added some additional routes. These changes resulted in an increase in ridership, revenue vehicle hours, revenue and operating costs between 2006 and 2007, but a reduction in revenue/cost ratio. In 2009, the financial performance of the system began to improve, partially due to a service reduction and a slight ridership increase. In 2011, financial performance was reduced slightly, primarily due to rising costs (i.e. fuel). These trends are illustrated in Table 4.

Table 4 – Trends in Ridership, Service Hours and Financial Performance

Year	Service Area Population	Ridership		Revenue Vehicle Hours		Financial Performance		
		Total	/Capita	Total	/Capita	Revenue	Operating Cost	R/C
2005	76,800	2,342,100	30.50	76,500	1.00	$2,481,500	$5,571,600	45%
2006	74,898	2,513,100	33.55	86,100	1.15	$3,151,500	$6,458,700	49%
2007	78,000	2,688,300	34.47	107,800	1.38	$3,319,800	$7,780,700	43%
2008	80,000	2,782,400	34.78	107,300	1.34	$3,684,100	$8,676,100	42%
2009	80,000	2,836,700	35.46	100,000	1.25	$3,996,800	$8,136,900	49%
2010	80,000	3,033,700	37.92	103,800	1.30	$4,096,937	$8,304,611	49%
2011	80,000	3,498,367	39.77	106,700	1.33	$4,207,500	$8,949,500	47%

Ridership and performance measures were evaluated by route and day of the week to assess the effectiveness of each route. Peterborough Transit collects ridership data through the electronic farebox and from ticket and monthly pass sales. Farebox statistics are collected by drivers keying in boardings and the fare media used for each passenger.

Figure 9, Figure 10, Figure 11 and Figure 12 illustrate the average 2011 daily passenger boardings per revenue vehicle hour which is the standard productivity measure in the transit industry. The existing service standard outlined in the Official Plan states that:

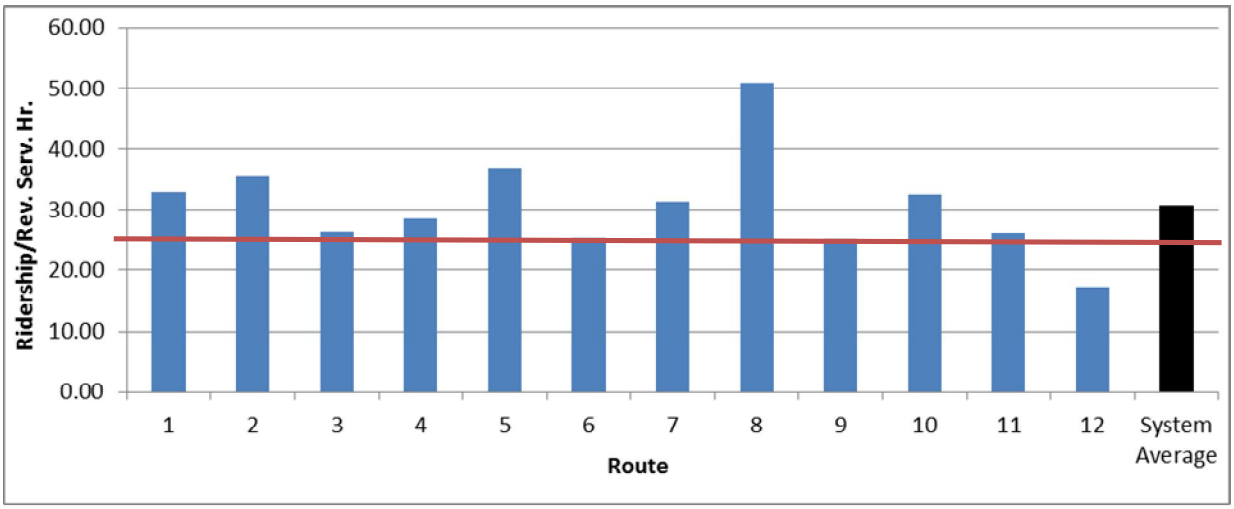
> *Council, through Peterborough Transit, will reconsider the continuation of any schedule fixed route service on any transit route proven to continually provide for less than 10 trips per revenue hour.*

It was felt that this standard was too low in measuring overall route productivity. As such, it is recommended the standard be modified to state that:

> *Each transit route should achieve the following minimum utilization levels, i.e. passengers per vehicle hour:*
>
> - *Weekday: Base Routes: 25 boardings per revenue vehicle hour*
> - *Saturday Base Routes: 15 boardings per revenue vehicle hour*
> - *Sunday Base Routes: 10 boardings per revenue vehicle hour*
> - *Express Routes: 25 boardings per revenue vehicle hour*

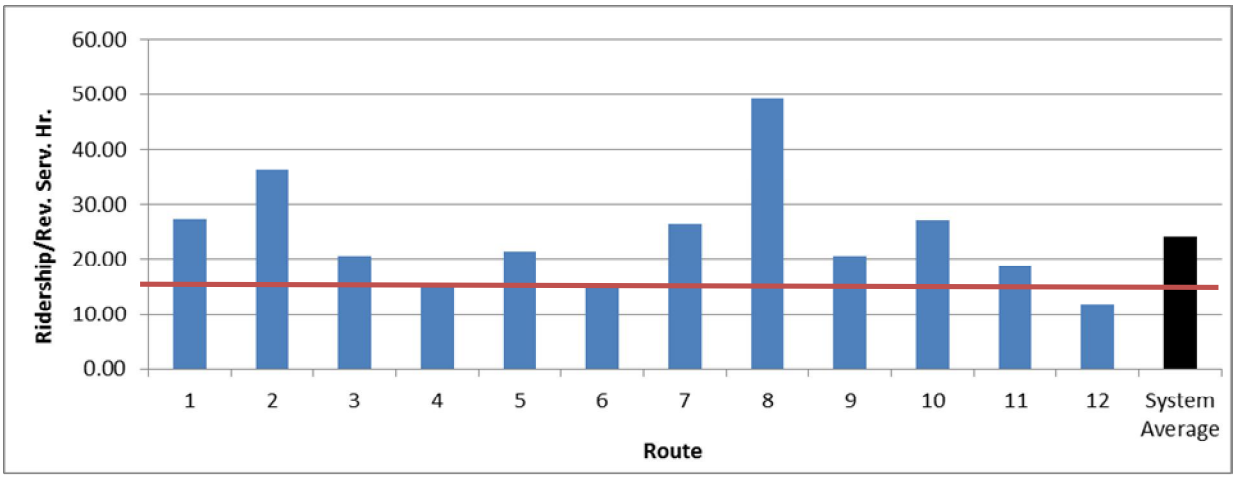
The above revised standard was deemed to be appropriate for a system the size of Peterborough and is in line with its peers.

Figure 9 – Average 2011 Weekday Boardings by Revenue Service Hour (Base Routes)



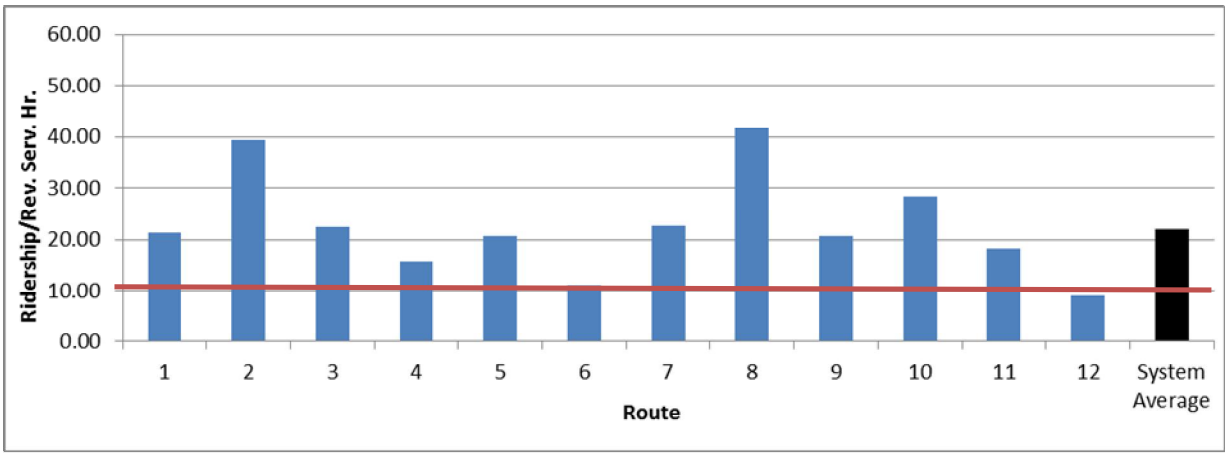
As illustrated above, all routes with the exception of Route 12 are performing above the weekday utilization target of 25 passengers per revenue vehicle hour.

Figure 10 – Average 2011 Saturday Boardings by Revenue Service Hour



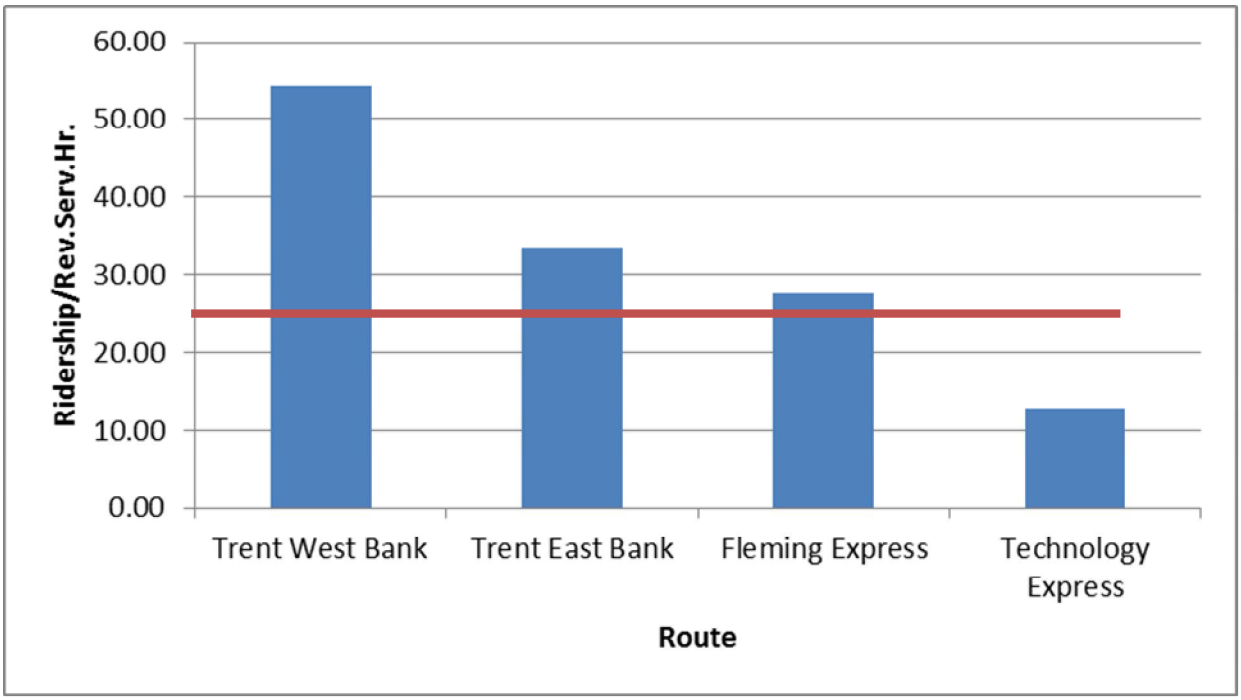
As illustrated above, all routes with the exception of Route 12 are performing above the Saturday utilization target of 15 passengers per revenue vehicle hour.

Figure 11 – Average 2011 Sunday Boardings by Revenue Service Hour



As illustrated above, all routes with the exception of Route 12 are performing above the Sunday utilization target of 10 passengers per revenue vehicle hour. Route 12 is only slightly below this standard.

Figure 12 – Average 2011 Weekday Express Service Boardings per Revenue Service Hour

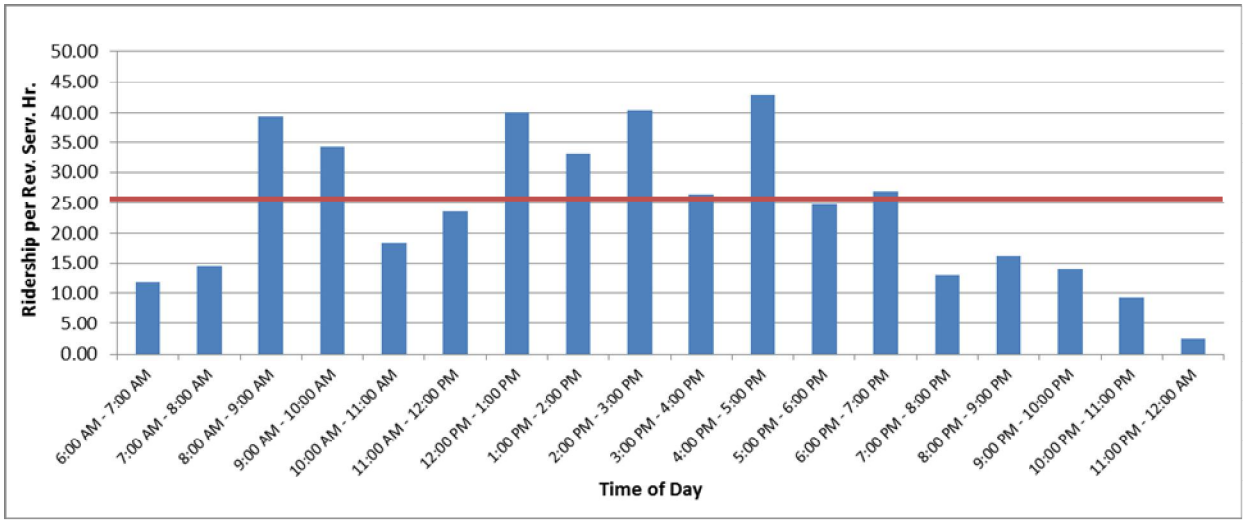


As illustrated above, the Trent Express and Fleming Express routes are performing above the utilization target of 25 passengers per revenue vehicle hour. For the Technology Drive special, it is performing under the target, but also provides coverage to a large employment area during the peak periods. Further marketing and potentially partnerships with key employers could help alleviate this.

5.6 Transit Ridership by Time of Day

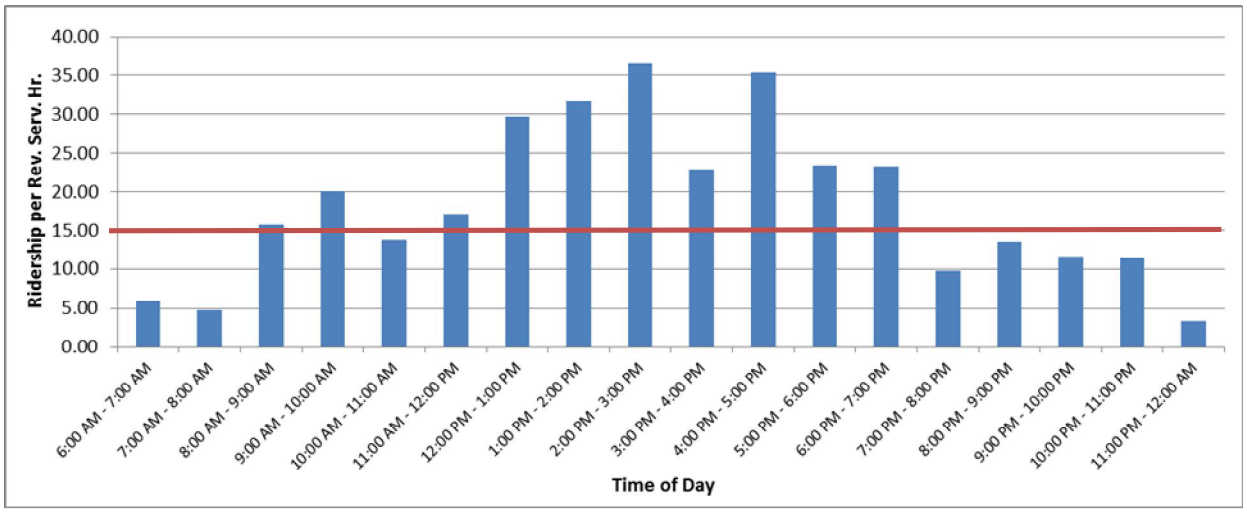
Figure 13, Figure 14 and Figure 15 illustrate the average 2011 passenger boarding's per revenue vehicle hour by time of day. The graphs represent the summary of riders on all Base Routes during the month of September, 2011.

Figure 13 – Average 2011 Base Route Ridership by Time of Day (Weekday)



As illustrated above, the peak periods are performing above the utilization target of 25 passengers per revenue vehicle hour. For the early morning and late evening periods, it is to be expected that routes will not perform at the same level as during the peak periods. A typical standard is to achieve a minimum of 10 boardings/revenue vehicle hour during these periods. Only the last run (11:00pm to 12:00am) does not achieve this (on average), however, this is partially due to how the data is measured (with service only operating between 11:00pm and 11:20pm on all base routes).

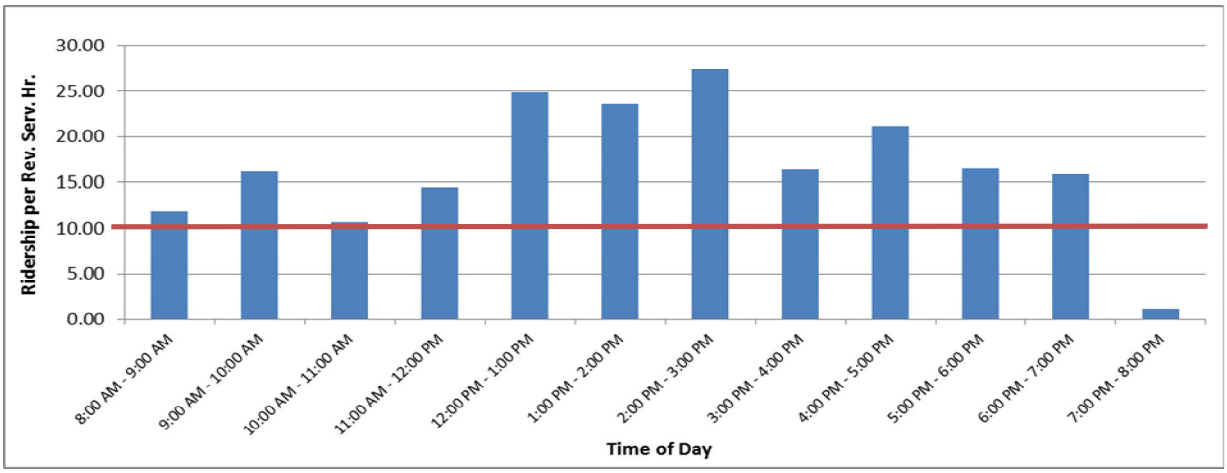
Figure 14 – Average 2011 Base Route Ridership by Time of Day (Saturday)



The majority of service time on Saturday performs above the utilization target of 15 passengers per revenue vehicle hour. The first two service hours in the morning are well under the utilization target, with service starting at 6:40am. It is recommended that Saturday service be

reduced by one run, with service starting at 7:20am (see Section 9.3). Evening service hours are just under the minimum performance target and are considered acceptable.

Figure 15 – Average 2011 Base Route Ridership by Time of Day (Sunday)



All of the service hours on Sunday are performing above the utilization target except for the period between 7:00pm and 8:00pm. However, this only represents 20 minutes of service, with the last run on Sunday's ending at 7:20pm.

5.7 Fare Structure and System Usage

The 2011 fare structure for Peterborough Transit is presented in Table 5. The average fare is $1.33 and the fares were last increased in 2009.

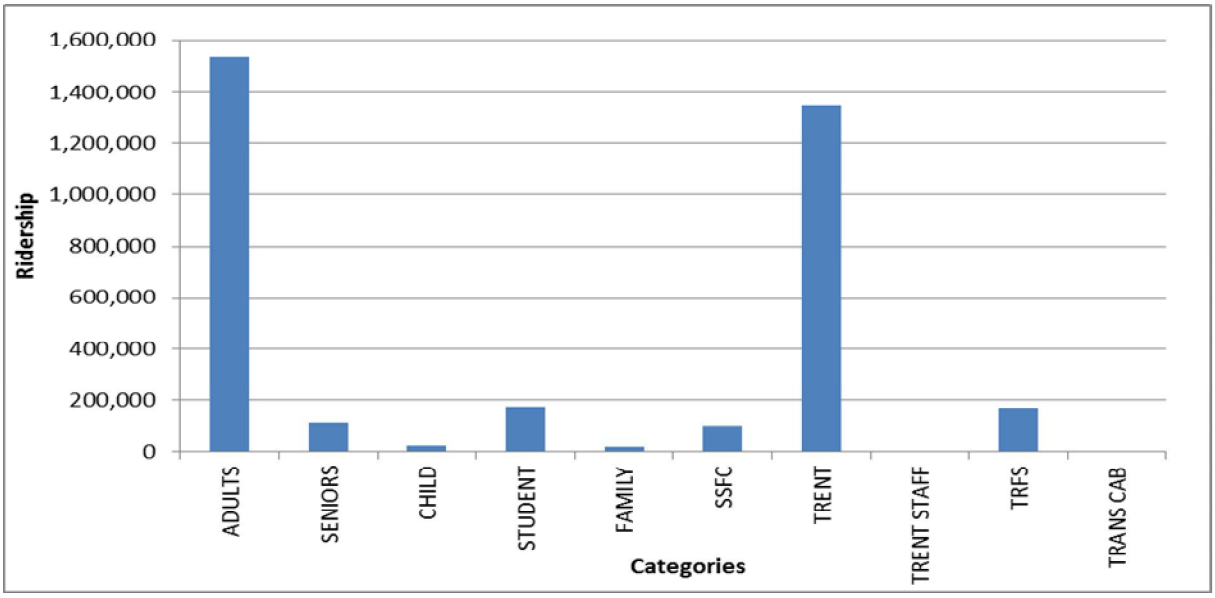
Table 5 – Peterborough Transit Fare Structure (2011)

Category	Cash	Day Pass	10 Ride Pass	30 Day Pass	Season Passes
Adult	$2.25	$7	$20	$55	N/A
High School Student	$2.25	$7	$20	$50	N/A
Senior	$2.25	$7	$20	$33	$120/semi-annual, $200/annual
Child (2-12 years)	$2.25	$7	$20	$33	N/A
Fleming College Student	$2.25	$7	$20	$55	$200/ semester
Trent University Student*	$2.25	$7	$20	$55	$241.75 (12 month U-Pass)

**Note U-Pass is only available for full time undergraduate students at Trent University. Students, faculty, and staff that are not automatically eligible have the option of a 12 month pass for $261.75, an 8 month pass for $174.50, or a 4 month pass for $87.25.*

Figure 16 illustrates the transit ridership breakdown for 2011 for all users. As illustrated, approximately 44 percent of all Peterborough Transit passengers are adults; Trent students form the next highest number of passengers at approximately 39 percent.

Figure 16 – 2011 Transit Ridership by Categories



6.0 PEER REVIEW

A comparison of Peterborough Transit's performance with a peer group (municipalities of similar size with comparable transit systems) was conducted. City staff provided guidance on communities Peterborough regularly uses for such comparisons. Table 6, Table 7 and Table 8 outline key performance measures for Peterborough Transit and seven other Ontario transit systems extracted from the 2010 CUTA Canadian Transit Fact Book.

The information presented suggests some general conclusions regarding the amount of service, transit utilization, and financial performance which are outlined below. Each municipality is unique and there are many factors which account for the differences noted below. The presence of large enrollment, post-secondary institutions for which transit systems have arranged U-Passes, is a major factor in understanding the data.

AMOUNT OF SERVICE

In 2010, for the eight peer group systems, Peterborough ranked:

- The fifth highest in service area population;
- Average for weekday and weekend hours of service;
- Lowest for peak period service frequency;
- Average for off peak and weekend service frequency;
- Somewhat behind in % of accessible buses in fleet;
- The fourth highest in revenue vehicle service hours/capita; and
- One of two systems that does not provide some Holiday service.

Most transit systems offer greater frequency of service during weekday peak periods than during off peak periods to accommodate home to work commuters. Peterborough Transit offers a poorer peak period frequency (with most peers at 30 minutes), but a generally better off-peak weekday and weekend frequency (with many peer systems operating 60 service on a number of routes). With the 20 minute express service to Trent University and the tailoring of the service levels to demand, the university student market in Peterborough seems generally well served. The amount of service provided per capita is higher than the peer group average, but it is slightly lower than most systems that have a comparable U-Pass arrangement with a University (Guelph, Kingston, Thunder Bay).

Table 6 – Amount of Service (Conventional systems)

Transit System	Service Area Population	Frequency	Service Hours	Total Active Buses	Revenue Vehicle Hours/ Capita	Total Vehicle Hours
Brantford	94,493	30 min (peak) 60 min (off-peak)	Monday-Friday 6:00-01:00 Saturday 6:00-01:00 Sunday/Holiday 8:30-18:30	30 (30 Accessible)	0.77	73,156
Guelph	120,000	15 min peak, 30 min off-peak 30 min weekends	Monday-Saturday 5:40-01:00 Sunday/Holiday 9:00-19:00	65 (65 Accessible)	2.02	245,954
Kingston	112,088	30 min (peak) 30-40 min (off-peak)	Monday-Saturday 6:00-24:00 Sunday/Holiday 8:30-20:30	51 (48 Accessible)	1.34	160,430
Niagara Falls	80,000	30-60 min	Monday-Saturday 5:45-24:00 Sunday/Holiday 7:00-19:30	28 (14 Accessible)	0.82	65,800
Peterborough	80,000	40 min all day	Monday - Saturday 6:00-23:30 Sunday 8:00-19:20	49 (34 Accessible)	1.3	107,000
Sarnia	71,919	30 min (peak) 60 min (off-peak)	Monday - Friday 6:30-22:45 Saturday 8:00-22:45 Sunday 8:30 -18:15	24 (20 Accessible)	N/A	N/A
Sault Ste Marie	69,900	30 min peak, 60 min evening 60 min weekend	Monday - Friday 5:45-24:05 Weekend/Holiday 5:45 -24:05	30 (22 Accessible)	1.19	83,853
Thunder Bay	109,000	30 min peak, 40 min evening 30 min Saturday peak; 40 min evening 40 min Sunday	Monday - Friday 6:00-24:30 Saturday 6:00 - 24:30 Sunday/Holiday 8:00-23:30	49 (49 Accessible)	1.39	156,662
Average	92,175	30 min (peak) 60 minutes (off-peak)	N/A	41 (28 Accessible)	1.18	127,551

SERVICE UTILIZATION

In 2010, Peterborough ranked very high in service utilization with:

- the highest passengers/revenue vehicle hour; and
- the second highest ridership/capita.

Peterborough's transit service attracts a high number of passengers per capita when compared to its peers, trailing only Guelph which has a very large university enrollment relative to the municipal population and a U-Pass program which has been in effect since the early 1990's.

The ridership per hour of service provided is highest in the peer group which indicates the services offered are well utilized. A concern remains that the transit service levels (especially frequency) may not be sufficiently attractive to generate the ridership growth targeted by the City.

Table 7 – Service Utilization (Conventional systems)

Transit System	Annual Passenger Trips	Passengers/Revenue Vehicle Hour	Passengers/Capita
Brantford	1,417,977	19.38	15.01
Guelph	6,158,245	25.45	51.32
Kingston	3,478,610	23.09	31.03
Niagara Falls	1,478,100	22.46	18.48
Peterborough	3,033,700	29.23	37.92
Sarnia	1,107,614	N/A	15.40
Sault Ste Marie	1,962,881	23.63	28.08
Thunder Bay	3,465,012	22.94	31.79
Average	2,762,767	25	30

FINANCIAL PERFORMANCE

In 2010, Peterborough was below average among peer municipalities in terms of fares and municipal contribution per capita toward operating costs. The revenue to cost ratio which measures the amount that users contribute toward operating cost was well above average at 49 percent.

While users are paying less for transit in Peterborough than in most other municipalities, studies indicate that transit riders are often willing to pay more if service levels can be increased. This will be discussed further in the report. It is also important to consider what affordability programs are available to assist people in need.

The City of Peterborough is contributing less per capita to the operation of transit than peer systems, and when the provincial gas tax ($1,421,330 in 2010) is removed from consideration the ridership is contributing 59 percent toward operating costs and the municipal tax base is contributing 41 percent.

The high R/C ratio of 49 percent is the envy of many municipalities Peterborough's size. A major factor in this performance relates to the arrangement with Trent University students, whereby Peterborough Transit offers two express routes to the University which are 100 percent cost recovered. The students benefit from access to the total system and a high quality of service designed specifically around their needs.

The combination of low municipal operating contribution per capita and low average fare suggests there may be an opportunity to finance service growth to attract new ridership.

Table 8 – Financial Performance

Transit System	Adult Cash Fare	Average Fare	Municipal Operating Contribution/Capita	Revenue/Cost Ratio
Brantford	$2.25	$1.68	$55.02	34%
Guelph	$2.75	$1.36	$102.96	48%
Kingston	$2.25	$1.48	$56.13	43%
Niagara Falls	$2.35	$1.62	$41.56	50%
Peterborough	$2.25	$1.33	$35.15	49%
Sarnia	$2.25	$1.20	$38.04	33%
Sault Ste Marie	$2.00	$1.10	$64.43	28%
Thunder Bay	$2.50	$1.41	$79.30	35%
Average	$2.33	$1.52	$62.20	41%

7.0 DIAGNOSTIC FOR CONVENTIONAL TRANSIT

The following presents a diagnostic of the existing service structure. This is based on stakeholder and public consultation, discussions with staff and an assessment of the existing service by the consultant team.

Peterborough Transit currently offers a wide variety of transit services for the community. There are a number of innovative services already in place that cater to specific transit markets such as, TransCab for low demand and remote areas, employee specials and post-secondary express services. The overall performance of the transit system is quite successful and Peterborough Transit is either at or above average when compared to its peers. While there are a number of positive aspects to the current services, there is still room for improvement. A summary of key issues and opportunities that need to be addressed over the short and long-term are identified below.

7.1 Adjusting Transit Service to Match Demand

One of the significant issues identified in the review of existing services was service frequencies. Providing 40 minute all day service on the base conventional routes is a lower standard than service that is being provided in comparison municipalities. A service frequency of 40 minutes during the peak periods is not considered adequate and limits the opportunity for ridership growth. A resident using transit to and from work may have to arrive early and wait a long time for a bus after work. With a 40 minute service this (on average) means 20 minute waits/early arrivals.

The 40 minute service frequency during the off peak times is more in keeping with peer municipalities where off peak service is typically at 30 minutes or 60 minutes. As discussed in Section 7.6, it would be preferred to design routes with 30 and 60 minute run times which would provide more flexibility in adjusting service frequency to demand. However, this change should not be undertaken until a modern downtown terminal is implemented.

As a result, it is recommended that Peterborough Transit adjust route frequencies on as many routes as possible, starting with at least four high ridership routes to better respond to peak demand and attract new ridership. Moving to a 20 minute peak and 40 minute off peak service will have the following benefits, relative to the current 40 minute all day service:

- 50 percent greater capacity during peak periods on the 20 minute routes;
- More effective integration between base routes and Trent Express services operating at 20 minute frequency;
- Off-peak frequency tailored to demand; and

- Immediate ridership growth and a signal to prospective new users that a continuous improvement in service levels is planned subject to achieving financial targets.

This recommendation is detailed more fully in Section 9.2.

7.2 Routing and Scheduling Inefficiencies

While a number of routes provide direct service to and from the downtown area, there are other routes that can be characterized as less direct and somewhat circuitous. For example, Route 1 and Route 6 are less direct as they are required to deviate from main roads (primarily to access senior's residences). These deviations lengthen the trip time for all other users on the route and limit the ability to attract new ridership. The introduction of a Community Bus route, targeted to the senior's market, will allow Peterborough Transit to straighten out these routes and provide more direct service on the base system.

Route 4 provides service to the hospital; however, the route is structured with a large one way loop. From a passenger's perspective, such large loops are a disincentive to using transit as one half of the two-way trip becomes long and inconvenient (i.e. a traveler heading west hates to be on a bus travelling east). This situation is also found on other routes, including Route 10 and Route 3. Part of the reason for these larger indirect loops is the 40 minute run times and the need to provide greater coverage to meet the travel time requirements. The layout of the road network can also be a prime cause of the circuitous routing patterns.

Route 1 currently provides service between the downtown and Trent University. It is generally avoided by students due to the lengthy travel time. By redesigning Route 1 and Route 2 it would be possible to provide a direct connection between the University and the Chemong corridor which will benefit students and merchants with improved shopping and employment opportunities.

There is some overlap in the existing route structure that should also be addressed. While some overlap can be beneficial to the passengers and in serving major destinations, it does cause some inefficiency in the system particularly during off peak periods. Reducing overlap can lead to better allocation of resources to areas that are not serviced or are under served. There is a significant service overlap between Route 9 and the East-Bank Express service. This overlap of routes should be addressed in any redesign of services.

Currently Route 12 has the lowest ridership performance of all base routes as illustrated in Figure 9. Schedule adjustments to this route would allow Peterborough Transit to invest bus hour savings in service enhancements for other areas of the system. It was also noted that the first two transit runs on Saturdays have low utilization and that adjustments to the service start time could be made to save resources.

These three specific efficiency improvements (elimination of first run on Saturdays, conversion of Route 12 to peak service only, combining East Bank express and Route 9) will generate bus hour savings that can be used to start the move toward 20 minute frequency in peak periods.

7.3 Downtown Terminal

A downtown terminal will continue to be the heart of the Peterborough Transit system. This location serves as both a major destination, an opportunity for timed transfers between base routes, a location where local transit users can move to Express and special services and a convenient opportunity to transfer to interregional and intercity services.

While a downtown terminal is effective for a system this size, the existing terminal is outdated and a modern 'flow through' design should be planned as a capital project, hopefully attracting federal and provincial funding support. A 'flow though' design means that buses are never required to back up which greatly improves system productivity (reduced dwell time, less supervision required) and public safety. Appendix B contains some illustrations of modern transit terminal designs.

The existing terminal design creates an inefficient operation which makes it difficult to shorten the travel time of routes to 30 minutes without sacrificing coverage or schedule reliability. Peterborough previously operated 30 minute routes and the schedule became very unreliable. This study investigated routing options involving 30/60 minute run times and found coverage would be compromised and productivity would be reduced.

As a result, the current 40/80 minute route run times should be maintained until a new downtown terminal can be implemented. A new terminal, integrated with transit supportive land uses can function as a Mobility Hub, be a catalyst for downtown intensification and attract new ridership. A modern design will help to minimize delays and improve schedule reliability for transit customers.

7.4 Other Issues

BIKE RACKS ON BUSES

Cycling is becoming a very popular form of transportation for both recreation and utilitarian purposes and Peterborough has clear goals and programs to increase cycling usage. Providing bike racks on all buses has become common on most transit systems and would help facilitate multi-modal travel. Bike racks are mounted on the front of the bus and typically accommodate two bicycles.

In systems with bike racks, it is becoming more common for residents to transport a bike on the bus for one direction of a work or recreational trip. Also persons who regularly commute on bicycles to work or school, are attracted to become regular transit users during the winter or on days when the weather is inclement. Having transit well integrated with active transportation

modes enables some residents to choose to reduce the number of cars required by their household.

Currently, there is no room to accommodate buses with bike racks at the transit garage. This is an old facility, originally designed for 35 foot buses, and providing indoor storage for buses after cleaning and servicing is an important practice to ensure reliable and attractive service.

In addition, the Downtown Terminal is not designed for buses with bike racks. The turning radius into a number of bus bays is too tight and will result in the bike rack coming into contact with the vehicle in the adjacent bay.

Recognizing these conflicts and the fact that a new garage or Downtown Terminal may not be built for a long time, implementing bike racks on buses is not recommended at this time.

WHEELCHAIRS AND STROLLERS

The Peterborough Transit base routes are 100 percent operated with wheelchair accessible low floor buses during the peak hours. While the transition to low floor buses has been a success for Peterborough, sometimes success creates problems. The number of Handi-Van registrants, including wheelchair users, on conventional buses has been increasing which benefits both the users who now have a more spontaneous travel option and the transit service with a lower cost delivery method (see Section 10.7).

Unfortunately this situation has also resulted (very infrequently) in a conflict between people who have strollers and are occupying designated spaces on the buses and Handi-Van registrants waiting at the stop who require the availability of the designated space. This issue needs to be addressed to continue the desired migration of Handi-Van trips onto the accessible fixed route system.

WINTER MAINTENANCE

Another significant issue identified during the stakeholder consultations was the maintenance of bus stops, particularly during the winter months. It was suggested that many bus stops and sidewalks around the stops are not accessible or cleared of snow in a timely manner during the winter.

Encouraging people to use transit in a winter climate can be a particular challenge and if a potential user finds a transportation alternative for the winter, they may well abandon transit during the balance of the year. Conversely, many people are uncomfortable with winter driving and are attracted to transit during the winter but only if the bus stops are accessible.

With the new routing plan proposed, it is timely for the City to review its priority setting mechanism for snow clearing at bus stops. Various municipalities use outside labour if required to ensure an adequate level of service.

8.0 STRATEGIC DIRECTIONS

Based on the assessment of current services and the desire to create further transit ridership growth with an efficient routing design, this section of the report answers some of the questions raised during the consultation process and sets the background for the development of the preferred routing strategy.

8.1 Is a Grid Route Structure Appropriate?

In most large bus transit systems, routes are designed according to a grid structure as opposed to the radial route design used in Peterborough where all routes are focused on the downtown terminal. A grid structure means that buses are routed along major arterial roads that generally follow a grid pattern.

There are several reasons why a transit route grid structure is not considered an appropriate design for Peterborough. First, the road network has some excellent arterial roads but they do not necessarily form a grid. East-West arterials (Lansdowne, Sherbrooke and Parkhill) combine with North-South arterials (Brealey, Monaghan, Park, Aylmer, George/Water, Ashburnham/Armour) in a reasonable grid but the spacing is not uniform, large areas of the city are not served by grid roads and some key destinations (e.g. the Hospital) are not on the grid arterials. As well there are major roads like Clonsilla which are diagonal to the grid. In some areas (e.g. north of Parkhill) the east-west roads are not continuous and the walking distance from some neighbourhoods (e.g. south of Lansdowne) to grid arterials would be excessive.

Grid transit systems can require one or more transfers to permit people to travel between their origins and destinations. When the service frequency is high, as it is in Peterborough with a time between buses of 40 minutes, these transfers at grid arterials can result in long waiting times. For example a bus travelling along Lansdowne would connect passengers to services operating on Ashburnham, George, Aylmer, Park, Monaghan, the Parkway, Brealey and the wait time for connections would range from 0 (ideal coordination) up to 39 minutes (just missed the bus). The average wait time would be 20 minutes and this is not considered acceptable, especially in a winter climate. Grid systems are typically applied only when service frequencies are less than 10 minutes.

While the radial route design in Peterborough often requires a transfer to complete a trip, the transfers are timed to coincide at the downtown terminal with minimum waiting time in a sheltered environment. While some routes can be indirect and travel time is longer off the arterials, the walking distances to and from bus stops are much shorter than in an arterial grid system.

The proposed route design should ensure the routes are as direct as possible and the major arterial corridors should have excellent transit service but for the reasons noted above, a grid design is not considered appropriate for Peterborough Transit at this time.

8.2 Is a Multi-Nodal Route Design Appropriate?

While recognizing that the downtown is a major destination for many transit riders, a concern with the radial route design is that all trips go through the downtown terminal and service to other major destinations is not direct. For instance, a resident in the south east of the city on Collison Avenue and destined for Lansdowne Mall or Fleming College will have to travel north to the downtown terminal (and transfer buses) and then back south to their destination.

Another route design model is to create two or more nodes in the municipality at major destinations, feed these nodes with transit routes and link the nodes so that people have more options for direct travel. In Peterborough, the major concentrated destinations in addition to the downtown are Trent University, Fleming College and Lansdowne Mall.

Unlike the downtown which is relatively central to the service area, Trent and Fleming are located in the extreme north east and south west respectively. While these locations require excellent transit service, neither lends itself to being a second node which could support a radial route structure.

Lansdowne Mall is in the central south area and can support a nodal route structure. A problem with this model using the above example is that a resident living on Collison Avenue and destined for the downtown would first travel to the Mall then transfer to get to the downtown. If the resident were destined for Trent or the Hospital, a second transfer would be required.

A fundamental issue with the multi-nodal model versus the pure radial model is that there will be more trip patterns where a second transfer is required. In Peterborough, there is at most one transfer required. For travelers, the need to transfer is a significant disincentive due to both the inconvenience involved and the concern that the connection might not be made. In general, requiring one transfer is considered acceptable but requiring two transfers is not.

For the above reasons, a multi-nodal route design is not considered appropriate for Peterborough. The proposed routing should ensure good transit access to major destinations outside the downtown which is addressed by Express buses to Trent and Fleming and by linking Lansdowne Mall with more than one route.

8.3 Service to Areas of Low Demand and Remote Areas

The productivity of transit operations is challenged when a fixed route, fixed schedule bus service is applied to areas with a low population density or to a residential development sufficiently remote from the urbanized area that significant ‘deadheading’ is required to access

the area. Deadheading occurs when buses travel along corridors where there is no adjacent development and hence no opportunity for passenger revenue to offset the cost of operation.

In a system where all buses are timed to meet at the downtown terminal, the fixed routes often cannot be stretched to serve low density areas and still maintain a reliable schedule. Peterborough Transit has addressed this situation through the innovative use of a TransCab service which provides residents in these low density/remote areas of the municipality with access to the conventional transit system. TransCab service is described in Section 5.2 and is considered an effective and efficient way of ensuring affordable transit coverage to all areas of the City.

8.4 Partnership Opportunities and Service to Low Density Employment Areas

Partnership opportunities can be used to service low density areas or areas outside of the City. There are two specific situations where a partnership would apply.

SERVICE TO LOW DENSITY EMPLOYMENT AREAS

The design of the conventional transit routes can be thought of as a service which collects customers from all residential areas of the City and delivers them to major destinations in an efficient manner. Major destinations are characterized by a concentration of employees, students or services and the higher the density of such concentrations, the more efficient the transit service will be. The downtown, post-secondary institutions, high schools, major malls and power centres, the Hospital are easily identified as major destinations to be addressed in the route design.

Sometimes lower density employment is located along transit routes established under the rationale above and the employees benefit by having a good transit alternative. However the low density employment areas, such as on Technology Drive or along the Parkway, are difficult to serve effectively and efficiently with fixed route, fixed schedule bus transit systems.

Difficulties include the lack of coordination of shift times such that a bus on a 40 minute schedule might be excellent for the start time at one employer but require staff to get to work 20 or 30 minutes early at an adjacent employer. In other cases, it is possible that the schedule might work well for an individual's arrival at work but mean waiting 20 or 30 minutes after work for the bus home.

A second problem involves the growing spread in work place schedules. Traditional 9:00am to 5:00pm weekday employment may still be relatively common in the downtown area but in the low density employment areas the trend is to operating six or seven days per week, multiple shifts and a variety of shift durations. It is not uncommon that employees may be able to use transit to access work but then require a ride share or taxi to get home. Alternatively transit may be an option when working day shift but not afternoon or weekend shift.

A third issue with low density employment areas is the lack of pedestrian amenities, particularly noticeable in the winter when access between the bus stop and the plant door can be a major challenge. These issues are not unique to Peterborough and providing good transit access to low density employment areas is a common challenge for all municipalities.

A potential solution is to pursue a more customized service design and Peterborough Transit has used this approach with the Technology Drive special services. Three runs are provided in the early morning and three runs in the early afternoon (weekdays only) to capture the majority of workers during peak shift times. These types of Employment Specials are structured to provide more direct and specialized service to larger industrial areas. Designing such services typically involves conducting a survey of employers, including shift times and employee's residential locations and designing a tailored service to meet anticipated transit demands. The Technology Drive route provides an example of a base level of service that should be applied to all single purpose large employment areas that may be difficult to service by transit. Minimum ridership performance targets should be set during these peak periods of 15 boardings per revenue vehicle hour.

For Peterborough, it is recommended that a base service level be provided (i.e. weekday peak periods) to accommodate the majority of shift times based on a minimum 10 boardings per hour being achieved. If employers want service outside of this base level of service (i.e. later in the evenings, in the mid afternoon or on weekends), a partnership approach is recommended.

The benefit of this strategy for the employer and employees is that for difficult to service periods or days of the week, they are provided a service that is uniquely tailored to fit their needs (i.e. matching shift times, including late shifts and weekends and potentially providing more direct service to the plant door). Specials can be designed to run express between collection points and the industrial area, thereby increasing the attractiveness of the service. The employment special can also be designed to operate during periods when it may not be feasible for Peterborough Transit to operate the service (due to lower ridership demand). By having employers contribute to the operation and promotion of the service, minimum financial targets can be set which will allow Peterborough Transit to test new markets and will provide targeted transit services to participating employers.

For the operator, the operation of the service can be structured to match demand, thereby increasing the efficiency and effectiveness of the service. Specific employment runs may also provide the opportunity to minimize split shifts for bus drivers.

Since employment specials typically involve a contract and/or partnerships with industrial employers, flexibility for employees can be addressed by introducing Transportation Demand Management initiatives outside of transit times and during 'emergencies'. This could include a Guaranteed Ride Home program, where employees that use transit are given a set number of taxi rides a year that can be used in case of an emergency to take them home or to the nearest bus transfer point during periods when the special service is not operating. This can be a low

cost 'insurance package' for transit riders when their service offering is limited to specific hours of operation. Applying this strategy would involve discussions with the City's TDM Coordinator.

For this strategy to have a dramatic influence on employee travel habits it is essential to have proactive support by employers. Employers may have a corporate Environmental Sustainability mandate, be motivated by the desire for LEED accreditation or simply recognize the impact that transit access will have on work force acquisition and retention. The recommended option involves developing a partnership and specific agreement between Peterborough Transit and the industrial area employers. The concept is to design an effective dedicated service in cooperation with employers and obtain a minimum financial commitment from them (through the advance purchase of transit passes) before initiating the service.

The benefit of this strategy for the employer and employees is that:

- Employees can use the transit pass to access all Peterborough Transit services;
- If desired, employers can sell or discount the transit passes to employees to recover some of their cost of service;
- Provision of transit services will help attract and retain the necessary labour pool for employers;
- The special employment service can be designed if required to operate during days and hours where regular transit is not provided; and
- Transit passes are tax deductible, which provides a further financial incentive.

The benefit of this strategy for the City is that:

- A specific cost recovery target can be set before the service begins operation and the revenue contribution from employers is guaranteed;
- The strategy is incentive-based for the employer and puts more responsibility on them to encourage the use of transit;
- The strategy allows Peterborough Transit to test out new markets with a minimum financial performance commitment;
- The service can be operated on a trial basis and discontinued only by employers opting out. If successful the service is easily expanded under the same principles;
- Capital costs (new vehicles) may not be required, but if they are, the city can incorporate this as part of their cost recovery target; and
- The employment special can be used to provide extra capacity for the conventional system during its return trip (i.e. the morning special to Technology Drive could provide some trips to the downtown on its return trip).

To implement the above service concept, Peterborough Transit would work initially with the Chamber of Commerce and one or two large employers in each major business park to spearhead the initiative. Service hours for the base peak service would be confirmed based on existing shift times and a decision would be made regarding whether to implement a partnership program for service hours during other time periods. Passes would be sold at the Adult Monthly Pass rate, with the number that employers would be required to purchase dependent on the number of service hours involved and the required cost recovery standard (i.e. 50 or 60percent R/C ratio) as adopted by Council. For service during periods when Peterborough Transit is not in operation, a 100 percent cost recovery model is recommended.

INTERREGIONAL SERVICE

There has been some demand for interregional service outside the existing transit service area to support targeted destinations such as the OLG Kawartha Downs, located off Highway 28 about 20 kilometres from the downtown transit terminal. The OLG Slots are open 24 hours a day, 365 days a year and Harness racing is a year round activity (Thursday and Saturdays).

OLG represent a significant attraction. Since opening in November 1999, there have been 9.7 M visits. OLG employs 175 staff year round, with most employees and about 35 percent of visitors from Peterborough. No public transportation option is available for employees or visitors. There appears to be a market for public transportation to/from Peterborough, however, given the long travel time and location outside of Peterborough, this should be done under a partnership or contract with OLG/Kawartha Downs and the Township. Service might include coverage to the regional airport and Millbrook as well as Kawartha Downs.

Since service is operated outside of the City, it should be based on a 100 percent cost recovery. Peterborough Transit provides the expertise in vehicle operation, maintenance and customer service. Fare integration can also be provided so that customers using this service have full access to all Peterborough Transit local services. The availability of such interregional services may also help in obtaining student support for the U-Pass opportunity at Fleming College.

8.5 The Use of Smaller Buses

A frequent comment by those concerned with the efficiency of the transit service is the observation that forty foot buses are often seen with only a few passengers and why not operate smaller buses at these times. Smaller buses would be less expensive in terms of both capital and operating costs.

Forty foot transit buses are very common and an industry standard. Larger systems use higher capacity articulated buses and some small systems have adopted thirty foot transit buses for some of their services. Even smaller buses are available as are buses built on a school bus chassis but such vehicles are not designed for a heavy duty transit operating cycle and any capital cost saving is offset by a shorter life.

In Peterborough, the question is whether there would be an advantage to acquiring some thirty foot transit buses and deploying these vehicles on low demand routes or during low demand periods. The passenger boardings on the current services are described in Section 5.5. There are times during the weekday morning and afternoon peak periods when the capacity of the forty foot bus is clearly required on all routes. Peak loads on some routes also occur during midday periods.

Changing out a forty foot bus for a thirty foot bus while maintaining the service schedule and accommodating the provisions of the collective agreement could be unproductive, especially if the change out occurs multiple times in response to shifts in demand. Potentially there are some routes, particularly on weekends, that might operate a full day with thirty foot buses but then the question becomes whether such limited operation justifies maintaining two fleets, two sets of spares and training staff appropriately for both driving and maintenance.

If the City adopts the proposed strategies for Community Buses and Employment Specials that are outlined in this study, then there may be a need to consider whether fleet replacement and acquisition plans should be adjusted to introduce a minimum number of thirty foot transit-designed buses into the fleet.

8.6 Design Principles for Routes and Service Levels

For the City of Peterborough, the conventional transit service should continue to be delivered with forty foot buses using a fixed route, scheduled service focused on a downtown terminal/transfer location. The current route and service structure was reviewed with a view toward improving efficiency/effectiveness and providing a foundation for transit ridership growth.

In a radial system, the customer service commitment is that any trip within the service area can be completed with at most one transfer and that transfers will be timed so that the user can move conveniently between buses if required. An exception in Peterborough is for areas designated for TransCab service where potentially a second transfer between bus and taxi may be required.

Transit routes are then required to have running times (the time from terminal to farthest point and back to terminal, including an allowance for platform time at the terminal) which are consistent and can be reliably achieved. Typically, for cities this size, the choice is between route running times of 30 and 60 minutes or 40 and 80 minutes.

Route running times of 30 and 60 minutes are preferred as this permits greater flexibility in setting the service frequency (time between successive buses on a route) and makes schedules easier to understand for users when buses change between peak and off-peak frequencies. For example, with route run times of 30 or 60 minutes, bus frequencies can be set in response to

demand at 10, 15, 30 and 60 minutes whereas in a 40/80 minute system the choices are limited to frequencies of 10, 20, 40 and 80 minutes.

Also in a 30/60 minute system, users can more easily remember their stop times. For example if the service is 15 minutes in the peak and 30 minutes off-peak then the schedule can be set for buses leaving the terminal on the hour and half hour during off-peak and on the quarter hour during peaks. A comparable 20 minute peak and 40 minute off peak system might have buses leaving the terminal on the hour, 20 minutes after and 20 minutes to the hour for peaks but shifting to off-peak the schedule is not easy to remember.

For the above reasons, designing the Peterborough routes for 30 and 60 minute run times is preferred and bus routing options were developed. Several years ago the routes were set up with 30 and 60 minute run times but the schedule became very unreliable and users were frequently missing connections at the terminal. The underlying problem, as discussed in Section 7.2, is the design of the terminal which forces a large allowance for platform time. Compared to a modern 'flow through' design, there is an approximate 10 percent to 15 percent productivity penalty on route running times with this terminal in addition to the operational and safety concerns.

<u>The recommended design for the routes therefore is based on running times of 40 or 80 minutes until such time as a replacement for the current terminal can be implemented.</u>

Currently the service frequency on the base conventional system is 40 minutes between buses at all times the system is in operation. To increase ridership, it would be desirable during weekday peak periods to have a higher service level (e.g. 20 minute frequency). The system was examined for efficiency improvements which might be re-invested in such a service improvement. Three efficiency measures were identified involving the combining of the East Bank Express and Route 9; the conversion of the Major Bennett route (Route 12) to peak period service only and the elimination of the first run on all routes for Saturday mornings. Further details are provided in the Section 7.1.

<u>Recommendations in 8.0</u>

The following lists a summary of strategic directions that should be followed over the next five years:

8.6.1 That Peterborough Transit continue to operate a radial based system with a secondary emphasis on other key nodes including the Lansdowne Mall and Chemong corridor;

8.6.2 That Peterborough Transit continue to operate on running times of 40 or 80 minutes until such time as a replacement for the current terminal can be implemented.

8.6.3 That the following design principles guide the development of the proposed route structure:

- Continue the agreement with the Trent Student Association to provide express services;
- Continue to utilize TransCab to provide transit coverage to remote areas and areas of low demand;
- Provide express service to Fleming College while working with the student association on the adoption of a Universal pass program;
- Provide employment specials to low density employment areas beyond the reach of conventional routes. Provide a basic weekday peak period level of service (with a performance target of 10 boardings per hour or more) and seek partnership agreements with key employers for any service outside of this base; and
- Adjust routes to provide more direct service where possible and support intensification plans along the Lansdowne and Chemong corridors.

8.6.4 That Peterborough Transit only provide service outside the City based on a 100 percent cost recovery basis;

8.6.5 That Peterborough Transit initiate discussions with approach GO Transit on a service and fare integration strategy to better accommodate interregional to/from Peterborough; and

8.6.6 That Peterborough Transit continue to operate transit services using 40 ft buses with the exception of Community Bus or Employment Specials.

(this page left intentionally blank)

9.0 RECOMMENDED CONVENTIONAL SERVICE STRATEGY

This section of the report describes the recommended service strategy for the conventional transit system over the next five years.

9.1 Service Standards

While service standards were not reviewed as part of this operational review, two existing standards in the Official Plan are recommended for modification as discussed in Sections 5.4 and 5.5 to improve reflect the needs of an aging population and to monitor system performance. For this to occur, Express routes focused on post-secondary institutions should be separated from express routes focused on industrial areas due to the difference in ridership demand.

New routes and services should be monitored to ensure that performance targets are achieved. For changes in service frequency or route design, it is recommended that the route be given 6 to 12 months to reach the minimum performance target. Forward progress should be made between the 6 month and 12 month period to maintain the service change.

<u>Recommendations in 9.1:</u>

9.1.1 That Peterborough Transit revise its service coverage standard to be based on a 450 metre walking distance to better reflect a 5 minute walking time of an aging population.

9.1.2 That Peterborough Transit separate the Express Route classification into two separate route types: Post-Secondary Express (routes focused on Trent University and Fleming College) and Employment Express (routes focused on large industrial/employment areas).

9.1.3 That Peterborough Transit revise is utilization standard in the Official Plan to reflect the following:

Each transit route should achieve the following minimum utilization levels, i.e. passengers per vehicle hour:

- *Weekday: Base Routes: 25 boardings per revenue vehicle hour*
- *Saturday Base Routes: 15 boardings per revenue vehicle hour*
- *Sunday Base Routes: 10 boardings per revenue vehicle hour*
- *Post-Secondary Express Routes: 25 boardings per revenue vehicle hour*
- *Employment Express Routes: 15 boardings per revenue vehicle hour*

9.1.4 That new routes or routes with improved frequency be given 6 to 12 months to reach to minimum performance targets.

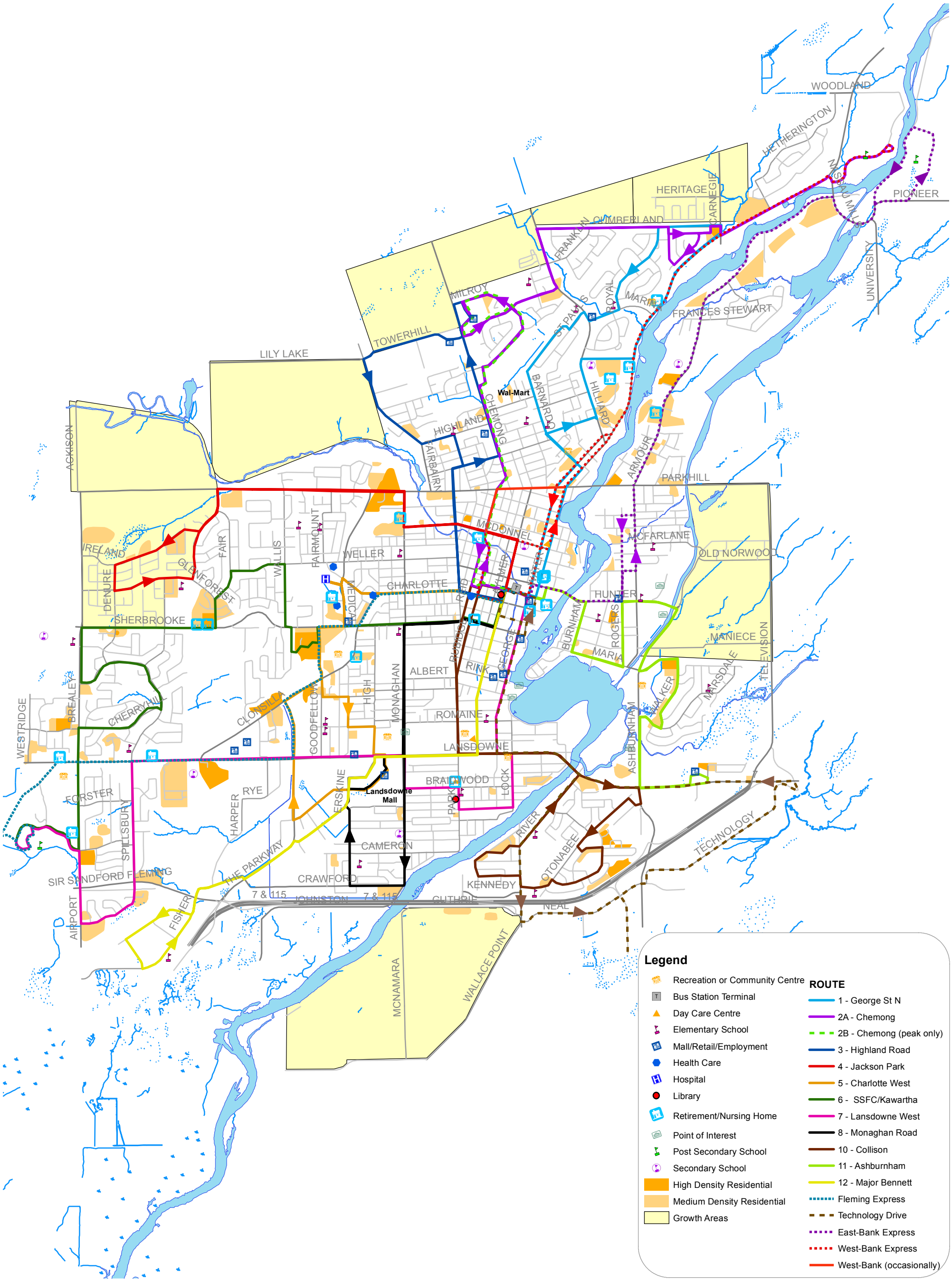
9.2 Weekday Service Strategy

ROUTE RESTRUCTURING

Based on the strategic directions presented in Section 8.0 a new route structure was designed to better service the needs of Peterborough residents, employees and visitors. The five-year service plan retains the existing service structure as a core; with some modifications to existing routes to reduce travel time and improve transfers. The recommended route structure is illustrated in Figure 17.

Highlights of the new route and service structure consist of the following elements:

- Route 1 was modified to a 40 minute run time to provide more direct service to neighbourhoods (Hilliard, Royal, Water, etc.);
- Route 2 was extended to Trent University to provide improved service along the Chemong corridor and a direct connection for Trent students to employment and retail opportunities along Chemong Road. Changes in Route 2 also allow Route 3 to eventually shift and service the growing residential area west of Fairbairn Street;
- Route 4 was modified to provide new service to the growing residential area on Ireland Drive and to provide more direct two-way service on Parkhill Road;
- Route 5 was modified to provide two-way service to the hospital and an additional connection to Lansdowne Mall;
- Route 6 was modified to service Weller Street;
- Route 7 was modified to extend service to the residential area on Braidwood Avenue and provide service on George Street instead of Park Street;
- Route 9 and the East Bank Express were combined into one route which will improve frequency for current Route 9 users during the school year and extend East Bank service for Trent students during the summer;
- Route 10 was modified to service Park Street instead of Water Street. This will help with schedule adherence due to the faster travel time along Park Street;
- Route 11 was modified to service Maria Street as a result of the removal of this coverage from Route 9; and
- Route 12 was reduced to operate during the weekday AM and PM peak periods only due to lower productivity of service. Based on existing ridership patterns, this should occur between 6:40am and 9:40pm and between 2:40pm and 6:40pm. Service hours saved were invested in other areas of the system.



Legend

- Recreation or Community Centre
- Bus Station Terminal
- Day Care Centre
- Elementary School
- Mall/Retail/Employment
- Health Care
- Hospital
- Library
- Retirement/Nursing Home
- Point of Interest
- Post Secondary School
- Secondary School
- High Density Residential
- Medium Density Residential
- Growth Areas

ROUTE

- 1 - George St N
- 2A - Chemong
- 2B - Chemong (peak only)
- 3 - Highland Road
- 4 - Jackson Park
- 5 - Charlotte West
- 6 - SSFC/Kawartha
- 7 - Lansdowne West
- 8 - Monaghan Road
- 10 - Collison
- 11 - Ashburnham
- 12 - Major Bennett
- Fleming Express
- Technology Drive
- East-Bank Express
- West-Bank Express
- West-Bank (occasionally)

City of Peterborough
Peterborough Public Transit Operations Review - The Route Ahead

FIGURE 17
RECOMMENDED 5-YEAR ROUTE STRUCTURE

Peterborough Transit

DILLON CONSULTING

MAP DRAWING INFORMATION:
DATA PROVIDED BY THE CITY OF PETERBOROUGH

MAP CREATED BY: SLS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: G:\CAD\2011\115470 20\Design_GIS\MXDs

N W E S

0 0.5 1 2 Km

PROJECT: 11-5470 STATUS: DRAFT DATE: 06/22/12

FREQUENCY OF SERVICE

Based on the preferred direction outlined in Section 6.0, it is recommended that the base routes described above and illustrated in Figure 17 should continue to operate at a minimum 40 minute frequency at all times. It is also recommended that Route 2, 7, 8 and 10 run at a 20 minute frequency during the weekday AM and PM peak periods. This is defined as between the hours of 7:00am to 9:00am and between 2:00pm and 6:00pm.

For Route 2, the peak service will only run between the downtown terminal and Portage Place on Milroy Drive. This will require two routes that are off-set from one another – Route 2A which runs on an 80 minute runtime between the downtown, Portage Place and Trent University and Route 2B which runs on a 40 minute run time between the downtown and Portage Place. By offsetting these two routes, a 20 minute frequency is achieved between the downtown and Portage Place.

In addition to this, Route 9/East Bank Express will operate at a 20 minute frequency all day as determined by the University student association during the school year. Outside of University hours, the service will operate at a 40 minute frequency.

The four routes selected as a first priority are based on the high ridership demand, access to major destinations (e.g. the Chemong corridor, Lansdowne Mall, the Lansdowne corridor, Fleming College) and the ability to resolve schedule adherence issues due to crowding (i.e. Routes 8 and 10). For this later point, spreading the ridership out by improving the frequency will help speed up buses in service.

The peak hours selected for 20 minute frequency service also reflect the peak ridership periods. Ridership on most Peterborough Transit routes is highest during the midday and afternoon peak. For this reason, the afternoon peak was extended with four hours of 20 minute frequency service (2:00pm – 6:00pm). While ridership during the AM peak (7:00am to 9:00am) is not as high as the afternoon peak, it is important to service this period to better capture work and school related trips and help meet the mode share target of 6 percent identified in the Transportation Plan Update.

POST-SECONDARY EXPRESS SERVICES

Express services are currently operated to provide additional capacity to Trent University and Fleming College. Fleming College is provided with a weekday express route from September to April and no change is proposed for the Fleming Express. Route 6 and Route 7 also provide service to the College and it is recommended that Peterborough Transit continue discussions with the Student Association to establish a U-Pass program similar to the Trent program. Many Colleges in Ontario have adopted similar programs which benefit the students with lower transportation costs and improved access to accommodations.

Trent University offers an East-Bank Express route and a West-Bank Express Route. Minor route modifications are proposed for the West-Bank Express route.

It is recommended that the Route 9 service be blended with the East-Bank Trent Express services to reduce duplication and allow resources to be more effectively utilized elsewhere in the system (improving service frequency to 20 minutes for peak periods). For current Route 9 passengers located north of Hunter Street, a 10 minute wait at the terminal may be required to accommodate schedules at Trent University for the East Bank Express. This is because the schedule is oriented towards meeting class times at Trent University as opposed to transfer times at the terminal. This issue should be further discussed with the students as coordinated transfers at the terminal would benefit students transferring to/from local routes.

A benefit for current Route 9 riders is that these passengers will now be provided some 20 minute frequency service (current Trent East bank express schedule). During the summer months when the University is not in session, the service will revert back to a 40 minute frequency with timed with transfers at the terminal.

Funding for this route is proposed to be split between the University and the City of Peterborough. Trent University students should pay the full costs for this service during the existing period that it operates (Monday to Friday during the school year). The City of Peterborough should pay for the service during the weekends, late evenings and the summer period when the service is provided at the same hours and frequency as other base routes (40 minutes).

During the public delegations on September 19th, 2012, concerns were expressed that the combining of these routes would lead to overcrowding and reliability issues. An option may be to operate an "A" run and a "B" run on alternate route cycles and adjust the bus stops according to passenger demand and schedule requirements.

There are significant benefits to residents, students and transit system productivity of a combined route (for the East Bank Express and Route 9) and it is recommended that detailed route planning continue with this objective. There is a fallback position, the status quo, but this would impact on the resources required to continue the move to 20 minute peak service on base routes.

INDUSTRIAL EXPRESS

No service changes are proposed for the Technology Drive Express route during the short-term. Moving forward, it is recommended that Peterborough Transit look to develop partnerships with key employers in industrial areas to provide custom designed employment specials as outlined in Section 8.4 for any additional service hours outside of this base offering.

Ridership on this route should continue to be monitored to make sure it is meeting minimum performance targets (at least 15 boardings/revenue vehicle hour). If this target is not being

achieved, it is recommended that Peterborough Transit approach employers in the area to find ways to better market the service or alter it to better fit the needs of employees.

TRANSCAB

TransCab is both an innovative and effective way of serving low demand areas and areas for which an extension of the fixed route service is difficult. Current services will be maintained in existing areas; with a potential expansion of TransCab in the Major Bennett Drive area when fixed route service is not in operation. As new areas at the periphery of the City develop, TransCab should be used as a strategy to provide early service as a precursor to fixed route service.

TRANSFERS

It is recommended that all base routes continue to provide timed transfers at the downtown terminal. Departures from the downtown would then be every 40 minutes (with some routes at 20 minutes during the weekday peak periods). The increase in service to 20 minute frequencies on four routes will continue to allow timed transfers among these routes and some Trent Express services. Timed transfers are essential to maximize passenger convenience by minimizing waiting times when passengers need to transfer onto a second bus to reach their final destination.

It is recommended for the convenience of passengers and to support local merchants that an extended time transfer of 90 minutes be established (up from 60 minutes today). A transit rider would be able to briefly interrupt their trip, typically for shopping, and then continue without paying a second fare. A simplified, extended time transfer of 90 minutes should have minimal impact on revenue and is a preferred strategy to establishing reduced off-peak fares which can be challenging to administer. It also facilitates commercial activity near transfer points and helps deal with affordability issues. It will allow people to shop briefly after work without paying an additional fare and should be well received by both users and merchants.

INTERLINING STRATEGY

It is recommended that under the proposed route structure, bus routes are interlined at the downtown terminal. Interlining eliminates the need for some passengers to disembark buses when transferring at the terminal by having the bus change routes when entering the terminal.

Once the new routing strategy is finalized, it is recommended that Peterborough Transit conduct a transfer trace of existing routes to determine which route pairs have a high number of passengers transferring between them. Interlined pairs should be selected to maximize passenger convenience (by minimizing physical transfers), obtain productivity in driver scheduling and balance routes with high and low run times to enhance system reliability.

HOURS OF SERVICE

Current weekday hours of service provided by Peterborough Transit are fairly consistent with its peer group. Service begins at 6:00am and ends at 11:20pm. The consultation conducted during the course of this study did not indicate a strong desire to increase the weekday hours of service provided by Peterborough Transit. The end of the service day should continue to be 11:20pm.

There continues to be a need to provide late evening service to employment areas as well as for entertainment purposes (restaurants, bars and movies). Extending transit hours of service beyond 11:20pm should be considered as a medium term improvement and subject to exceeding triggers for ridership on the last run.

SERVICE HOUR AND OPERATING COST IMPLICATIONS

The proposed new route structure will require five additional buses to operate during the peak periods. However, total daily revenue vehicle hours required to operate the service provided is only slightly higher than the existing service, with 92,000 annual revenue service hours provided by the City of Peterborough (up from 88,000 under the existing route structure). Productivity improvements by combining Route 9 and Trent Express, eliminating the first run on Saturdays and adjusting Route 12 to a peak period service have been re-invested in the system.

While the total revenue service hours will be slightly higher (5 percent), the service will be better tailored to passenger demands (providing greater frequencies during peak periods when demand is highest) and overall system productivity should be improved. This strategy is expected to yield an increase in overall transit ridership which will help off-set the increase in operating costs and will set the stage for further service improvements in response to growth within Peterborough (Section 9.4).

Recommendations in 9.2

9.2.1 That Peterborough Transit restructure its routes and services based on the proposed service alignment identified in Figure 17;

9.2.2 That Peterborough Transit initiate negotiations with Trent University students association to seek a cost sharing and service level agreement for combing the East Bank Express and Route 9;

9.2.3 That Peterborough Transit operate at a 20 minute frequency during the weekday AM peak period (7:00am and 9:00am) and PM peak period (2:00pm and 6:00pm) on the four base routes (Route 2, 7, 8 and 10);

9.2.4 That Peterborough Transit operate a minimum 40 minute frequency service on all routes during all hours of operation;

9.2.5 That Peterborough Transit continue its U-Pass program with the Student Association at Trent University and seek to extend a similar program to faculty and staff;

9.2.6 That Peterborough Transit continue to operate a Fleming College express service and pursue any further service improvements through negotiation of a U-Pass arrangement with the Student Association;

9.2.7 That Peterborough Transit continue to operate TransCab services to low-demand areas;

9.2.8 That Peterborough Transit continue to operate the Technology Drive Express and identify partnership approaches for any additional service hours outside the base weekday peak periods;

9.2.9 That Peterborough Transit maintain the existing weekday start and end time of 6:00am and 11:20pm;

9.2.10 That Peterborough Transit offer an extended time transfer of 90 minutes; and

9.2.11 That Peterborough Transit interline routes at the downtown terminal.

9.3 Saturday Service Strategy

Currently, the route structure on Saturdays is the same as the structure on weekdays, operating at a 40 minute frequency (all day). The Fleming Express and Technology Drive services are not in operation on Saturdays.

Operating a 40 minute all day service is considered appropriate and it is recommended that this strategy be continued under this new 5-year plan.

Under the new strategy, Route 12 will only be in operation during six hours of the day. There are currently two ridership peaks on the existing Route 12: from 12:00pm to 2:00pm and from 3:00pm to 5:00pm. Most of this demand is likely travel to Lansdowne Mall (which is serviced by Routes 5, 7 and 8) as opposed to the employment areas along Major Bennett Drive. At other times, the route performance is at or under 10 boardings per revenue vehicle hour. It is suggested that Peterborough Transit contact major employers in this area to determine the optimal service hours. Based on existing ridership and the need to service employee shift times, this will likely occur between 7:20am and 9:20am and between 2:20pm and 6:20pm.

The Fleming Express and Technology Drive service will continue to not be in operation on Saturdays.

The East-Bank Express/Route 9 combined service will be in operation, with this service provided by the City and operating at a 40 minute frequency.

It is recommended that service start at 7:20am on Saturdays (versus current 6:40am start time) to reflect the current low utilization on the first two transit runs on Saturdays.

The proposed new route structure for Saturdays will require fourteen buses to operate (includes all base routes and Route 9/East-Bank combined service), and will reduce the revenue vehicle hours by 1,557 annually.

Recommended service hours on Saturday's are between 7:20am and 11:20pm. The late night service on the West-Bank Express also provides service and is paid for by the Trent University.

Recommendations in 9.3

9.3.1 That Peterborough Transit adopt the weekday route structure for Saturdays;

9.3.2 That Peterborough Transit operate on Saturdays between 7:20am and 11:20pm;

9.3.3 That Peterborough Transit operate base routes at 40 minute frequencies all day Saturday; and

9.3.4 That Peterborough Transit operate Route 12 for six hours only on Saturdays.

9.4 Sunday/Holiday Service

Currently, the route structure on Sunday is the same as the structure on Saturday, with service hours reduced to between 8:00am and 7:20pm. It is recommended that the hours of service remain unchanged. Based on the proposed Route Structure, Route 12 will not operate on Sundays due to low utilization of the service.

Recommendations in 9.4

9.4.1 That Peterborough Transit adopt the weekday base route structure on Sundays; and

9.4.2 That Peterborough Transit operate base routes at 40 minute frequencies all day Sunday between 8:00am and 7:20pm.

9.5 Medium-term Routing and Service Strategies

Given the constraints of operating from the current downtown terminal and the high ridership experienced on the system, the proposed routing changes have been minimal. Once a new central and convenient location has been selected and a modern terminal design implemented, a fundamental re-routing of the entire system is recommended. At this time, the City should consider the feasibility of implementing a route structure with 30 or 60 minute run times. This structure provides greater scheduling and routing flexibility and will help improve the overall performance of the system to better match capacity with demand.

If the proposed increase in frequency during the peak period is successful on the initial four base routes, it is recommended that the City progressively stage the implementation of 20 minute peak period service on additional route pairs until the entire system is upgraded. This will mean balancing the need for acceptable financial performance with the desired service improvements, including consideration of annual fare increases. Extending the 20 minute service frequency during the midday periods should also be considered in response to demand.

Peterborough Transit should monitor ridership on the first and last runs on all service days and look to extend the existing hours of service in response to increases in demand. Sunday service should also be applied to selected statutory holidays. It is recommended that service be extended on holidays in which retail and employment areas are open in order to meet potential demand on those days.

The implementation of Community Bus routes will allow Peterborough Transit some flexibility in base route adjustments. As the Community Bus service becomes more successful, minor route adjustments on the conventional routing structure should be made to reduce duplication of service and allow for more direct routing. Adjustments can also be made to the Community Bus routing structure (or by introducing new routes subject to meeting financial targets) to provide direct service to major origins and destinations. Community Bus is discussed in Part D of this report.

The City should also consider implementing Employment Specials as part of their TDM programs with key employers within the City. A ‘guaranteed ride home’ program should be incorporated with this strategy.

As the City continues to grow, so must transit service coverage. The City has identified several future development areas at the northern end of the City. As these areas mature, transit service will need to be implemented. Some of the existing routes should be modified (without compromising reliability of run times) with minor adjustments to service these areas. Route 3 and Route 4 may need minor adjustments to service the growth areas to the north.

Recommendations in 9.5

9.5.1 That Peterborough Transit progressively stage the implementation of 20 minute peak period service on additional route pairs until the entire system is upgraded;

9.5.2 That Peterborough Transit consider extending the 20 minute service frequency during the midday periods in response to demand;

9.5.3 That Peterborough Transit monitor ridership on the first and last runs on all service days and look to extend the existing hours of service in response to increases in demand; and

9.5.4 That Peterborough Transit extend service on holidays in which retail and employment areas are open in order to meet potential demand on those days.

9.6 Transit Fare Structure

The last general fare increase for Peterborough Transit was implemented in May 2009. Table 5 in Section 5.7 outlines the current fare structure.

The Universal pass for Trent University students is covered by a separate agreement between the transit service and the student association and this has been a successful arrangement befitting both parties. Discussions between Transit and the Student Association are required to finalize the arrangements for the new route and service structure proposed in this study.

As noted in Section 5.8, the fares for the general public are somewhat less than typical within the peer group. In consideration of the time since the last increase (3 years) and the improvements proposed (i.e. 20 minute peak period service frequency on four routes; introduction of new community bus service; extended time transfer), a general fare increase is recommended at the same time as the service improvements are introduced.

The practice of having a single cash fare for all passenger categories is effective and appropriate. This reduces the number of cash riders and cash handling costs and encourages the purchase of discounted tickets and monthly passes, which should in turn increase the overall usage of the system. It is recommended that cash fares be adjusted only in 25 cent increments and $2.50 is the next appropriate level.

Providing discounts for 10 ride and 30 day passes is appropriate to reward and provide incentives for frequent users. Table 9 updates the current fare schedule by applying a nominal 10 percent increase to current fares. An exception is the Senior's 30 day pass fare which is from $33 and brought closer to the high school student pass fare.

Table 9 – Proposed Fare Structure

Category	Cash	Day Pass	10 Ride Pass	30 Day Pass
Adult	$2.50	$8	$22	$60
High School Student	$2.50	$8	$22	$55
Senior	$2.50	$8	$22	$40
Child (2-12 years)	$2.50	$8	$22	$40
Fleming College Student	$2.50	$8	$22	$60
Trent University Student	$2.50	$8	$22	$60

The City of Peterborough has established an R/C target for the transit service to recover 50 percent of annual operating costs from user fares. Within the general fare schedule, providing discounts to one user group such as seniors, means that other users must cross subsidize this discount if the 50 percent R/C target is to be maintained. It is recommended that the price of 30 Day pass for Seniors be increased to $40 and gradually brought into line with the modest discount applied to high school students ($55 pass) over a period of three years. Semi-Annual and Annual passes for seniors (currently priced at $120 and $200 respectively) should be eliminated.

New services such as Community Bus are targeted toward the senior's market and to be as successful from a financial perspective a reasonable fare is required. Peterborough's demographic is shifting toward an older population profile and many new seniors have adequate income to afford transit services.

Some municipalities are adopting a Transit Affordability program (beyond the current Ontario Works and ODSP supports that exist in most communities). Typically, based on established income thresholds for single and multi-person households, a 50 percent discount for monthly transit passes is offered and applied for by those below the low income thresholds. The Transit system is provided the full value of the Pass and the subsidy is administered and budgeted by the social service department.

Transit affordability issues for low income seniors or any other members of the community are then dealt with under the Transit Affordability program. There is no revenue impact for Transit as it recovers the full value of any Passes issued and social service agencies can exert budget control by adjusting the discount and/or limiting the number of passes that are made available. It is recommended that the City develop and implement a Transit Affordability program for Peterborough residents.

The strategy proposed for a general fare increase is expected to increase the average fare from the current $1.44 to $1.58 (minus Trent fares) which has been used in the summary of cost and revenues for the five year plan.

During the public delegations on September 19, 2012 several concerns were raised about increasing the Senior's monthly pass to $40 and eliminating the semi-annual and annual passes with the associated large discounts. Council may want to defer the implementation of the recommended adjustments to Senior's Passes until a Transit Affordability program is in place.

FUTURE FARE ADJUSTMENTS

Fare increases, no matter how small, are viewed negatively by passengers especially if they perceive that the service they are receiving has not improved. However, fare increases are needed to keep up with the rising costs of operating and maintaining the system (e.g. fuel, wages, etc.).

It is recommended that small fare increases should be implemented annually during the municipal budgeting process to avoid large one-time increases to "catch up". Larger fare increases should be tied to the introduction of new services, extended service hours or improved frequency of service, provision of new equipment or in response to extraordinary circumstances (e.g. sudden, dramatic increase in fuel costs). This approach will give customers the impression that they are getting appropriate value from the increased fare.

U-PASS OPPORTUNITIES

One of the most exciting, transit developments in the past decade has been the introduction of U-Passes at many Canadian Universities and Community Colleges. The U-Pass results from a specific negotiation typically conducted among the transit system, the administration of the post-secondary institution and the student association. When implemented all students have full access to transit on a semester or annual basis.

The Trent University program for undergraduates has been very successful. Opportunities to implement similar U-Pass agreements in other institutions (Fleming College) or with major employers should also be identified.

For Fleming College, there is a desire among College administration to be more sustainable and to implement a U-Pass program. The challenge is that about half of the students live and commute from outside the transit service area. There is also a high availability of parking which is rarely full and less expensive than a semester transit pass.

A U-Pass program at Fleming College is an important initiative that should be pursued by Peterborough Transit staff. For this program to be successful, the existing parking rate may need to be revisited by the College and Peterborough Transit may wish to explore an arrangement based on only residents that live within the Peterborough Transit service area.

This is not a common practice among other post-secondary institutions which typically require all students to have a U-Pass (based on a successful vote achieved through a referendum with the student union).

To address the interregional issue (students living outside of the transit service area), Peterborough staff could design (as part of a U-Pass agreement) a new route that connects to the GO Bus stop at the South Park and Ride lot on The Parkway with Fleming College. This would provide direct access to the College for a number of students that live in the Greater Toronto Area.

Trent University faculty/staff are also a logical extension of the U-Pass program. There is already a very high level of transit service to the University, parking areas on campus are an unproductive use of land and the institution has a strong environmental mandate. Since Peterborough Transit contracts this service at full cost recovery to the University students, this would not increase Peterborough's revenue unless the demand increased by a rate to warrant additional service.

Employee U-Passes are on the leading edge of development, targeting companies that have a specific commitment to environmental sustainability and public institutions that can be expected to take a leadership position for sustainable communities. Hospitals, schools and government offices in their employer role fit this description.

<u>Recommendations in 9.6</u>

9.6.1 That Peterborough Transit implements a general fare increase at the same time as the service improvements are introduced;

9.6.2 That Peterborough Transit adjust cash fares in 25 cent increments only;

9.6.3 That small fare increases be completed annually in line with municipal budget processes to avoid large 'one-time increases' or catch-up;

9.6.4 That the City of Peterborough develop and implement a Transit Affordability program for Peterborough residents; and

9.6.5 That Peterborough Transit Staff continue to approach Fleming College administration and the Student Union to implement a U-Pass program similar to the Trent University Program.

PART D: HANDI-VAN SERVICES REVIEW & 5-YEAR PLAN

10.0 EXISTING OPERATIONS

The Peterborough Handi-Van service is a specialized public transit service that is designed to provide mobility for persons unable to use regular Peterborough Transit services. The service is operated by the transit department which also delivers the conventional transit service and is financed the City.

10.1 Overview of Services

Peterborough Transit operates the following services to accommodate the travel needs of persons with disabilities. These services currently include the following:

- Pre-booked, door-to-door, wheelchair-accessible van services operated by Peterborough Transit drivers. This service is usually referred to as the "Handi-Van";
- Pre-booked, door-to-door taxi service operated by a local taxi company under contract to Peterborough Transit (a small number of Handi-Van trips are provided by the taxi service when there is no capacity on the regular system); and
- Wheelchair-accessible, low floor buses are used on all base routes in the regular transit service. These buses can accommodate 2 wheelchair users at one time. It is the intent of the City that by the end of 2016, the conventional bus fleet will be 100 percent fully accessible.

A more detailed description of these current services is provided in the sections below.

10.2 Customer Eligibility Policy

The current customer eligibility policy is:

"The Handi-Van is a door-to-door public transit service for persons with a disability who are physically unable to;

1. *Climb or descend the steps of a conventional public transit bus*
2. *Walk unassisted a distance of 175 m (600 ft.)"*

This guideline is based upon an individual's physical functional mobility (ability to move around the community) with the view to assist those individuals with the greatest need.

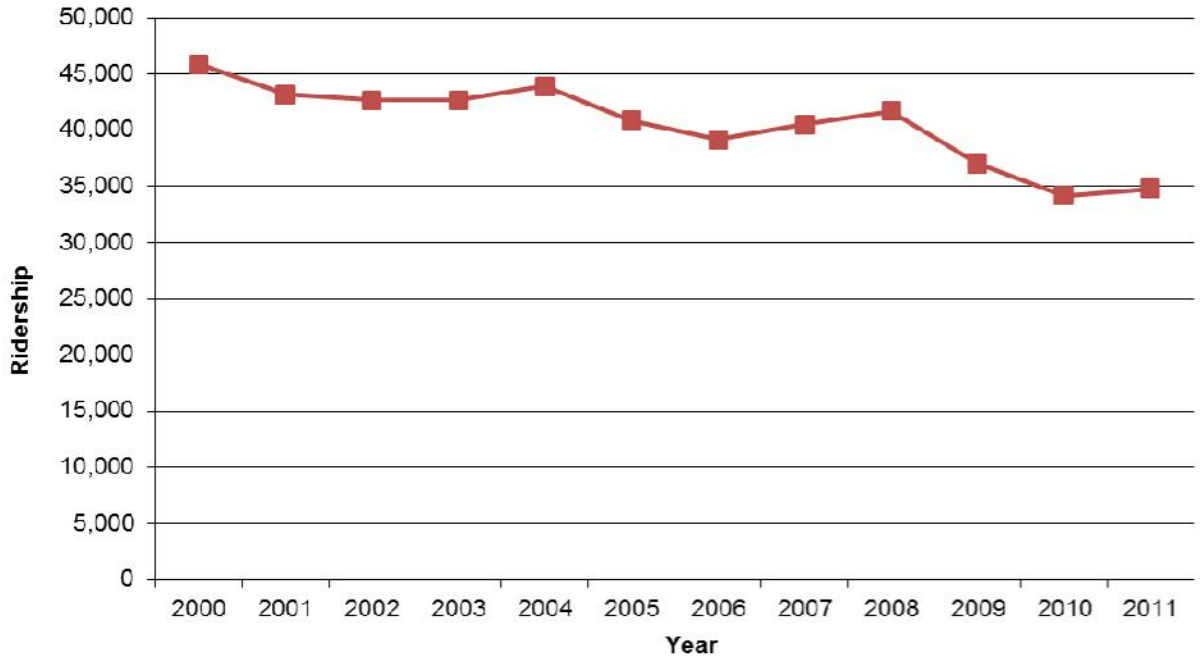
Elderly frail individuals, those with cognitive impairments, the blind or those with invisible disabilities are not eligible if they are able to access and use conventional public transit services. The eligibility guideline refers to "functional mobility" whereby an individual's eligibility depends upon the ability to perform the specified functional tasks of climbing or descending steps used on conventional public transit facilities, or walking a distance of 175 metres.

The functional definition is becoming the more common approach in specialized transit service in North America as opposed to a medical approach where an individual's eligibility hinges upon specified health problems or medical conditions. The functional approach to eligibility does not discriminate arbitrarily on the basis of medical health and avoids the problems associated with identifying specific conditions which in practice may have little or no bearing on mobility problems. The application form has a section to be filled out by a physician that enables the physician to indicate if the applicant is eligible. In 2010 there were 1,811 registered clients of the Handi-Van service in Peterborough.

10.3 Ridership

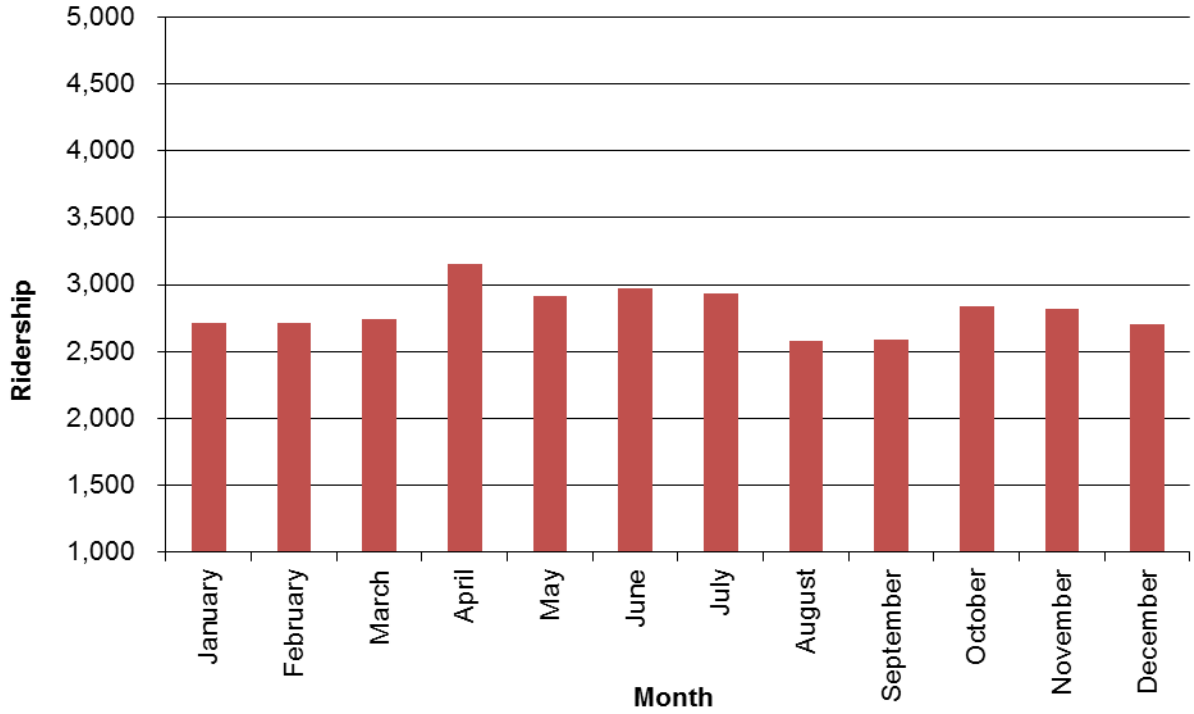
Over the past ten years, ridership on the Handi-Van service has declined. This is partly due to the availability and use of low-floor accessible buses on Peterborough Transit's fixed route services. It was also indicated during the consultation that the decline may also be related to the inconvenience of the service (limited capacity, long booking times).

Figure 18 – Peterborough Handi-Van Trips



The monthly use of Handi-Van services was also assessed to identify whether there was any seasonal variation in Handi-Van use. This is illustrated in Figure 19 below.

Figure 19 – Handi-Van Ridership by Month (2010 data)



The data provided indicates that there are no significant variations in the pattern of trips from month to month. The number of trips being accommodated averages around 2,800 passengers per month. Table 10 provides a breakdown of the 2010 Handi-Van trip statistics.

In 2010, there were 41,786 Handi-Van trips requested. Of these requested trips 10.5 percent were cancelled and approximately half of these were late cancellations. In addition, there were 841 no-shows. This is a relatively high number of cancelled and no-show trips. The typical industry cancellation rate is about 5 percent of the total trips provided. Higher cancellations rates often occur when it is difficult to book trips and customers tend to book more trips then they need and then cancel unneeded trips later. This practice reduces the efficiency of the Handi-Van service if cancellations are made close to the service day and the available time is not filled with another trip.

Table 10 – 2010 Handi-Van Trip Statistics

Month/Year	Requested Trips	Total Cancelled Trips	Late Cancels	% of Trips Cancelled	No Show	Not Accommodated	Completed Trips	Attendants	Calls to Cab	Revenue Trips
Jan 10	3,356	740	344	10.25%	52	6	2,558	156	5	2,719
Feb 10	3,152	465	527	16.72%	78	17	2,592	145	6	2,743
Mar 10	3,738	650	358	9.58%	50	5	3,033	157	2	3,192
Apr 10	3,449	598	308	8.93%	61	2	2,788	124	1	2,913
May 10	3,548	637	309	8.71%	67	8	2,836	136	8	2,980
June 10	3,598	722	346	9.62%	68	8	2,800	121	4	2,925
Jul 10	3,296	774	366	11.10%	70	3	2,449	119	6	2,574
Aug 10	3,143	610	291	9.26%	49	5	2,479	126	3	2,608
Sept 10	3,459	621	320	9.25%	70	8	2,760	86	3	2,849
Oct 10	3,573	731	383	10.72%	101	9	2,732	123	13	2,868
Nov 10	3,799	751	383	10.08%	86	6	2,956	86	10	3,052
Dec 10	3,675	1018	454	12.35%	89	2	2,566	131	13	2,710
TOTALS	41,786	8,317	4,389	10.50%	841	79	32,549	1,510	74	34,133

NOTE: Percentage of late cancelled trips are listed as percentage of total booked trips
Total cancelled Trips column includes late cancelled calls.

Based on feedback at the public consultation sessions, the number of 'no-shows' is a problem for the Handi-Van service. It is estimated that there are approximately 1 to 2 'no-shows' a day per driver shift. Some registrants are on subscription trips and repeatedly do not show up for the scheduled trip. This takes away a potential trip for someone else who may need it. Currently, there are no consequences for people that do not show up for their trip. This issue adds to the cost of the service and may deny others the capacity to travel.

As illustrated in the table, very few trips were provided by the taxi service (74 in 2010). Taxis can be used to provide a more cost effective service, particularly during the shoulder periods (i.e. early mornings, late evenings). Several Ontario systems have moved to contracting out more trips to accessible taxis to help reduce overall costs.

From the data provided, there were very few trips that were unaccommodated (a total of 79 trips or less than 1 percent). This low rate is a positive situation for Handi-Van and is likely due to the high number of registered users moving to the conventional fixed route system.

10.4 Handi-Van Operations

The Handi-Van buses are operated by a select group of Peterborough Transit drivers with the assistance of dispatchers. There are three full time employees who work in the administration division and share responsibilities between conventional and Handi-Van services. Their primary functions are taking reservations and dispatching for Handi-Van services, payroll, cashier and transit secretary.

The Handi-Van service is available for the entire area of the City of Peterborough from 7:00am to 11:20pm on weekdays and Saturdays, and from 8:00am to 7:20pm on Sundays. The fare is the same as the Peterborough Transit fare, with the same fare media offered (passes, tickets and cash).

The peak demand occurs between 8:30am and 10:00am; 12:00pm and 1:00pm; and 5:00pm and 6:30pm. Seven vans operate during the peak service. Between 11:15am and 1:00pm there are 5 vans in service, due to the lunch break. Generally, there are 1 or 2 vans in service after 5:00pm. The number of vans in service during the evening reflects the average demand. Peterborough Transit will send out a third van if demand warrants it.

Dispatch and trip booking services are available for customers on weekdays from 9:00am to 4:00pm. The trip scheduling function is performed by a dispatcher utilizing the TransView Scheduling software. Based on consultation with staff, the scheduling software could be improved.

Scheduling is allowed up to one week in advance. A recent policy change allows bookings two weeks in advance, however, this has not been advertised. Passengers who cannot be

accommodated at the time of their call are put on a waiting list. Typically, 90 percent of the people who get put on a waiting list are accommodated.

10.5 Handi-Van Service Standards

The Handi-Van service standards are outlined in the service brochure. The key standards are as follows:

- Eligibility policy as noted in Section 9.2 above;
- Trips may be booked up to 14 days in advance including same day bookings if there is availability;
- Booking hours are 9:00am to 4:00pm, Monday to Friday and trips must be booked and confirmed by telephone;
- Cancellations must be made at least 24 hours before the scheduled pick-up time; otherwise the cancelled trip is deemed to be a late cancellation;
- A qualified attendant may travel with a registered passenger upon payment of the regular fare, and must be booked at the same time as the passenger;
- Service hours are from 7:00am to 11:20pm on weekdays and Saturdays, and 8:00am to 7:20pm on Sundays;
- Service is operated such that passengers are required to be ready 15 minutes before the scheduled pick up time. Pick-ups will occur within 15 minutes before or after the requested pick-up time;
- Drivers are not required to wait for clients for more than 5 minutes after notifying of their arrival;
- If a client is not at the pick-up location at the scheduled time, they are considered a “no show” trip;
- Handi-Van Service always tries to minimize the travel time, however, it is possible that a trip could be a maximum of 60 minutes on any one-way trip; and
- Driver assistance is provided to passengers from accessible door to accessible door. Drivers do not enter buildings beyond a second set of doors at a vestibule. Drivers are not required to help with parcels or baggage. Only items passengers can carry on as they board are permitted.

These standards are typical of the service standards in similar sized systems.

10.6 Financial Performance

The financial performance of the Handi-Van Service has been summarized in Table 11:

Table 11 - Trends in Ridership, Service Hours and Financial Performance

Year	Revenue Vehicle Hours*	Peak Veh	Registrants		Ridership**			Financial Performance		
			Total	/Capita	Total	/Service Hour	/Capita	Revenue	Operating Cost	R/C
2005	16,000	7	2,069	0.0269	40,900	2.56	0.533	$58,800	$850,200	7%
2006	15,390	7	1,310	0.0175	39,200	2.55	0.523	$58,000	$893,200	6%
2007	14,500	7	1,420	0.0182	40,500	2.79	0.519	$57,800	$967,940	6%
2008	14,600	7	1,629	0.0204	41,700	2.86	0.521	$61,100	$937,000	7%
2009	15,400	7	1,652	0.0207	37,000	2.40	0.463	$60,300	$964,500	6%
2010	12,600	7	1,811	0.0226	34,200	2.71	0.428	$71,800	$994,100	7%
2011	14,600	7	1,499	0.0787	34,800	2.38	0.435	$73,100	$1,017,000	7%

*Dedicated
**Dedicated and Non-Dedicated

As illustrated in the table, over the last five years there have been no significant changes in the financial performance of the Handi-Van Service. Seven percent is considered a somewhat low revenue to cost ratio relative to Peterborough's peers.

10.7 Accessible Conventional Transit

In addition to the pre-booked door-to-door Handi-Van Services (i.e., vans and contracted taxis), Peterborough Transit accommodates persons with disabilities on conventional transit services.

The regular Peterborough Transit base services are 100 percent operated with wheelchair accessible low floor buses during the peak hours. The regular routes that serve Trent University and Fleming College have accessible buses, but some of the express routes still have high-floor vehicles.

The low floor buses accommodate passengers in wheelchairs or with other mobility devices, using a powered ramp at the front door. Two wheelchair spaces are available on each bus by flipping up the regular seats and these positions are equipped with mobility device restraints and passenger seatbelts. While on the bus, arrangements are designed to enable passengers to serve themselves independently and drivers will provide assistance on request with mobility device securement or with seat belts. Passengers with mobility devices using low floor buses are required to pay the regular transit fares.

While the transition to low floor buses has been a success for Peterborough Transit, sometimes success creates problems. Based on input from the public consultation sessions, often the wheelchair spaces are occupied (by persons using strollers) and this can result in some people being left at the conventional bus stop.

(this page left intentionally blank)

11.0 PEER REVIEW

To provide an assessment of a particular public service, it is useful to conduct a peer review that compares the service to the services in similar municipalities. A peer review has been carried out for Peterborough's Handi-Van service using seven other specialized transit services in similar sized cities across Ontario. The data for this comparison has been taken primarily from the CUTA Specialized Transit Services Fact Book for 2010.

The peer cities and their estimated population are shown in Table 12. As indicated, the populations varied from 70,000 to 150,000 persons with an overall average of about 84,000, compared to 80,000 persons in Peterborough in 2010.

Table 12 - Peer Review Community Population

Transit System	Population	Registrants	Ridership (Dedicated Service)	Ridership (Non Dedicated Service)	Total Ridership
Brantford	93,000	1,549	67,160	N/A	67,160
Guelph	120,000	1,426	48,059	13,613	61,672
Kingston	152,358	2,518	61,345	3,122	64,467
Niagara Falls	80,000	1,192	23,394	23	23,417
Peterborough	80,000	1,811	34,200	100	34,300
Sarnia	71,919	1,458	33,252	N/A	33,252
Sault Ste Marie	69,900	3,088	47,171	13,020	60,191
Thunder Bay	110,000	8,582	83,449	12,102	95,551
Average	97,147	2,703	49,754	6,997	55,001

11.1 Operating Characteristics

Table 13 provides some detail on the number of registrants, the number of trips made and the effectiveness of the service. 'Registrants per capita' indicates the number of people eligible to use the service; for Peterborough, this is in line with the peer group average.

Trips per capita and per registrant provide an indication of the use and availability of trips. While Peterborough is below the peer group average, this may be an indication of the high use of accessible fixed route services on Peterborough Transit.

Table 13 also provides an indication of the efficiency of the system, based on the number of trips per hour of service. As illustrated, Peterborough lies just below the peer group average.

Table 13 - Annual Specialized Trips per Capita

Transit System	Registrants per Capita	Trips per Capita	Trips per Registrant	Trips per Hour (Dedicated service)	Total Ridership
Brantford	0.02	0.72	43.36	2.96	67,160
Guelph	0.01	0.40	33.70	2.65	61,672
Kingston	0.17	0.42	25.60	2.49	64,467
Niagara Falls	0.01	0.28	19.63	2.41	23,417
Peterborough	0.02	0.43	18.88	2.71	34,300
Sarnia	0.02	0.46	22.81	2.54	33,252
Sault Ste Marie	0.04	0.67	15.28	1.96	60,191
Thunder Bay	0.08	0.87	11.13	2.48	95,551
Average	0.02	0.44	20.73	2.83	55,001

Table 14 summarizes the frequency for each type of trip booking that occurs for the specialized transit systems. Subscription trips are re-occurring trips (such as work) while reservation trips are occasional trips that are made at least 1 day in advance. On demand trips are made the day of the trip request. There is no significant variation in the spread of trip booking types among the peers. The higher percentage of 'on-demand' trips versus 'reservation' trips in Brantford may due to a difference in how these types of trips are defined.

Table 14 – Trip Booking

Transit System	Subscription	Reservation	On-Demand
Brantford	45%	2%	53%
Guelph	19%	80%	1%
Kingston	52%	48%	0%
Niagara Falls	N/A	N/A	N/A
Peterborough	40%	59%	1%
Sarnia	50%	48%	2%
Sault Ste Marie	48%	51%	1%
Thunder Bay	46%	50%	4%
Average	43%	48%	9%

Table 15 summarizes the dispatch and delivery of trips for all of the specialized transit systems. Overall, Peterborough has a high rate of cancelled trips and no-shows. The high rate of 'no shows' is problematic because it takes away the ability for other passengers to use the system. Peterborough's Hand-Van service has about 2 percent 'no-shows', which is double the peer

group average. While the number appears small, it is important to reduce this to a 1 percent target. Appropriate penalties and enforcement for 'repeat offenders' is important for this target to be achieved.

On a positive note, most trips on the Handi-Van service appear to be accommodated, indicating that Peterborough is providing a high level of service and is having success in transitioning registrants to the accessible conventional system.

Table 15 – Dispatch/Delivery

Transit System	Total Passengers	Cancelled in advance*	No-Shows *	Unaccommodated*
Brantford	67,160	10,066 (15%)	551 (1%)	190 (<1%)
Guelph	48,059	9,166 (19%)	402 (1%)	N/A
Kingston	64,467	18,209 (28%)	1,152 (2%)	2,607 (4%)
Niagara Falls	23,394	2,708 (12%)	130 (1%)	180 (1%)
Peterborough	34,200	7,000 (20%)	800 (2%)	80 (<1%)
Sarnia	33,252	2,604 (8%)	141 (<1%)	124 (<1%)
Sault Ste Marie	47,171	2,198 (5%)	394 (1%)	870 (2%)
Thunder Bay	95,551	17,078 (18%)	1,257 (1%)	4,568 (5%)
Average	51,657	8,629 (17%)	603 (1%)	1,231 (2%)

**Note: included total number and percent of total passengers (in brackets)*

11.2 Financial Performance

Table 16 illustrates the cost of the Handi-Van service and the overall financial performance of Peterborough and the peer municipalities. The level of expenditure on specialized transit is an indicator of a community's commitment to provision of this particular service. Table 16 also shows the annual expenditure per capita and per passenger on specialized transit services.

This data indicates that the expenditures on specialized transit vary considerably among the communities with Peterborough above average in municipal operating contribution per capita. The City is contributing the second highest amount per capita of the peer group.

The operational performance of the specialized transit services can be assessed by considering the average cost per trip of providing the service and also by considering the revenue to cost ratio. The average cost per passenger for dedicated services in Peterborough is about $25.59 and the average cost per passenger for non-dedicated service is approximately $9.00. The overall peer community averages are $21.03 and $7.39 respectively. Peterborough costs are above the average in both cases and as noted in Table 16, several communities make greater use of the less expensive non-dedicated (taxi) delivery model.

The City also has one of the lowest revenue to cost ratios. A low R/C is common for a service that is door to door, transports small volumes of users or has limited ride sharing (passengers per vehicle).

Table 16 – Financial Performance

Transit System	Average Cost per Passenger (Dedicated)	Average Cost per Passenger (Non Dedicated)	Municipal Operating Contribution/ Capita	Revenue/Cost Ratio
Brantford	$13.97	N/A	$13.75	14%
Guelph	$17.76	$9.51	$5.86	10%
Kingston	$25.35	$10.20	$11.36	9%
Niagara Falls	$20.88	$21.61	$4.86	22%
Peterborough	$25.59	$9.00	$11.53	7%
Sarnia	$18.21	N/A	$9.01	9%
Sault Ste Marie	$26.62	N/A	$12.25	6%
Thunder Bay	$21.54	$12.21	$14.61	25%
Average	$21.03	$7.39	$10.47	16%

12.0 DIAGNOSTIC OF EXISTING HANDI-VAN SERVICES

Based on the review of the existing Handi-Van services and stakeholder consultation, an assessment of the service is provided in this section to identify areas where changes and improvements should be considered.

12.1 Decreasing Ridership

Over the past several years ridership has been declining on Handi-Van services. This is largely due to the improvements made on conventional buses to accommodate Handi-Van registrants on the base route system. The provision of low floor buses with accessibility for wheelchairs and mobility devices has greatly improved the ability of Handi-Van users to ride on conventional routes for some or all of their travel requirements. Peterborough Transit staff have been successful in encouraging this transition.

12.2 Service Concerns

In the consultation with Handi-Van clients and stakeholders, a number of concerns were identified with the current Handi-Van Services. The primary areas of concern related to difficulty in booking trips, lack of scheduling flexibility, late arrival of vans and not enough service. The feedback did however indicate a high level of satisfaction with the drivers and other staff involved with service delivery.

Most of the concerns appear to be related to trip booking requirements. Users are required to book a trip sometimes a week in advance. This feedback does indicate that some of the service operating standards or guidelines such as trip booking should be reviewed and possibly refined.

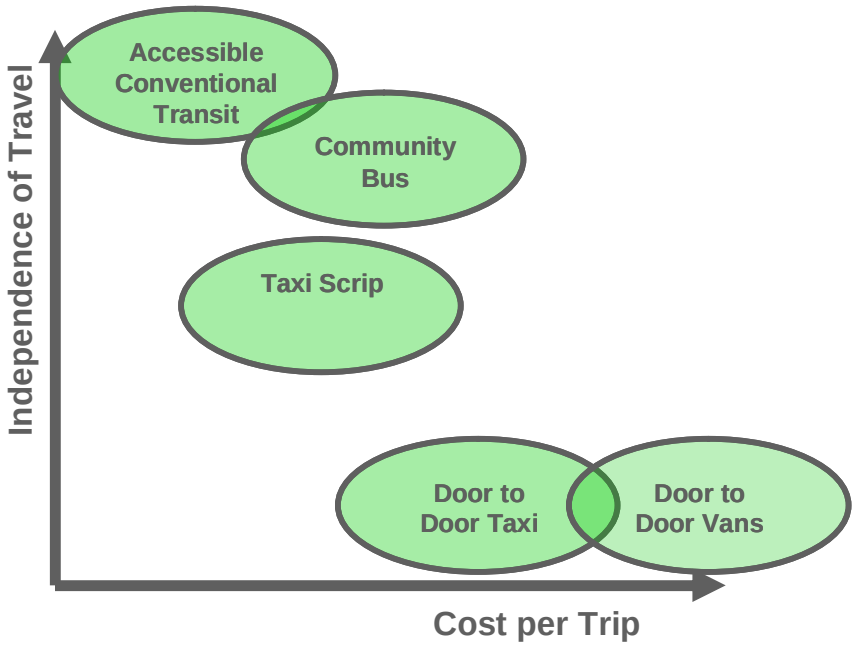
12.3 Family of Services Approach

To accommodate the growing travel needs of seniors and persons with disabilities, a 'family of services' approach is being recommended. This will mean making better use of municipal resources and providing more flexibility in trip making options for many registered Handi-Van users. The City of Peterborough has already developed some of the key components of a "family of services" approach. These components include a pre-scheduled, door-to-door van service, some contracted taxi service and low floor buses on all regular scheduled conventional services. This approach to developing a range of services for persons with disabilities helps to accommodate a wider range of mobility needs while also providing trips in a more efficient manner in comparison to only operating a prescheduled, door-to-door van service.

Figure 20 provides a conceptual illustration of the advantages of the family of services approach in terms of providing greater independence of travel to persons with disabilities while reducing the overall average cost per trip. In Figure 20 service components such as

accessible conventional transit, Community Bus and taxi scrip have higher levels of independence of travel and lower cost per trip in comparison to the door-to-door taxi and Handi-Van service with lower levels of independence of travel and higher costs per trip.

Figure 20 – Family of Service Concept



The current family of services in Peterborough provides an excellent basis on which to further develop and expand services to more efficiently meet the mobility needs in the community. Areas where the service delivery components could be further improved are as follows:

- 'Door to Door' Brokered Taxi - Many specialized transit services in Ontario use contracted taxi service for provision of some specialized transit service. Peterborough has been using a private taxi company for a number of years to accommodate some emergency trips. Through this contract, the taxi company has been encouraged to provide some wheelchair accessible licensed taxis which are also directly available to the general public. This has helped to improve the overall mobility within the community for persons with disabilities. In terms of the current use of contracted taxis, the Peterborough Transit practice could be considered an industry best practice with the provision of wheelchair accessible licensed taxis in the community. In Peterborough Transit's peer group, on average, approximately 12 percent of paratransit trips are brokered to the taxi industry.

  With the proposal to introduce Community Bus and Taxi Scrip programs to enhance spontaneous trip making by persons with disabilities, there is an opportunity to increase the number of Handi-Van taxi trips from the current 1 percent to 10 to 12 percent and

use the savings generated to support the new initiatives.

It is recommended that Handi-Van arrange more trips on local taxis, particularly during 'shoulder' periods to improve the scheduling of the municipal vans. The cost savings from this strategy can be re-invested for improvements elsewhere in the system.

- Use of Conventional Transit - A number of Ontario communities have been very active in increasing the use of conventional transit by persons with disabilities. In addition to the widespread use of wheelchair accessible low floor buses, measures taken have included no charge for specialized service clients to use conventional transit (for perhaps a 6 month trial period), extensive promotion of accessible conventional transit, introduction of conditional eligibility policies, sensitivity training for drivers and travel training for customers.

  Travel training to assist persons to use conventional transit is now being carried out in several communities such as London, York Region, Toronto, Hamilton and Peel Region. The use of conventional transit offers considerable potential to increase mobility in the community. For example, Waterloo Region reported over 80,000 trips in 2008 on conventional transit by registered clients of the specialized service.

  In Peterborough, there has been a fairly strong move to conventional fixed route services. This should continue to be supported through travel training, policies to resolve priority seating capacity issues on buses and improvements to the accessibility of bus stops.

- Taxi Scrip – Taxi Scrip programs are used in various municipalities, such as Hamilton, Guelph, Waterloo Region and Ottawa, to supplement specialized transit services. Most Taxi Scrip programs require the clients to pay a portion of the value of the cost of the taxi trip through a pre-paid coupon arrangement. Typically, in a community the size of Peterborough, the average meter cost of a taxi trip is about $10.00 per trip. A 50 percent subsidy would mean that the cost to the client is about $5.00 per trip and the net cost to the City is about $5.00 per trip. The City is able to control its costs by setting an annual budget limit for taxi scrip and a maximum amount that can be purchased by any one individual. The program offers clients greater flexibility for unplanned trips that can't be pre-booked. Providing a Taxi Scrip service for all registered Handi-Van clients would provide substantial extra service at a relatively low cost.

- Community Bus – Community Bus is a transit strategy that uses a small accessible vehicle operating on a fixed route that is designed to emphasis accessibility over travel time. This means that the bus stops are brought close to key origins and destinations to minimize walking distance. A Community Bus is targeted to seniors and persons with disabilities, typically linking major origins and destinations of interest to this market (senior's residences, the downtown, malls, apartment buildings, medical facilities, personal services, recreation facilities, activity centres, etc.). The advantage of this service model is that it provides greater accessibility for residents, particularly for seniors and persons with disabilities by minimizing walking distance to the stop. The

trade-off is that routes may not be as direct or frequent as conventional services and typically the hours of service are less. When Community Bus is provided alongside the Handi-Van, it can help manage demand and allow more efficient trip-making. Ridership per hour should be in the range of 8 to 12 versus the 2 to 3 passengers per hour on Handi-Van. Implementing Community Bus may also permit adjustments to conventional routes to make them more direct.

The existing pre-scheduled door-to-door service operated by vans is operating efficiently and is well utilized. In the short-term, expanding the other service components noted above is the most efficient and effective strategy to meet unmet travel needs. However, the door-to-door service will always be needed for many client trips and may need to be expanded in the longer term given the demographic trends of an 'aging' society with increased incidence of mobility impairments.

It is expected that 5 to 10 years into the future, the population aging trends will significantly increase the demand for specialized transit services. It is important to develop a framework for service delivery now that is efficient and flexible, to enable the City to respond to these longer term needs. In that regard, the family of services approach has the important advantages of lower overall costs per trip and the flexibility of several different service components that can be adjusted in future to meet changing needs.

12.4 Client Eligibility

The Client eligibility process will need to be updated to conform with the AODA legislation and reflect the accessibility of the conventional fleet.

Some communities in Ontario have shifted eligibility policy for specialized services away from specific physical functional criteria related to the use of conventional transit (i.e., ability to climb three steps, ability to walk 175 metres). An approach being considered in some communities is to develop a conditional eligibility policy under which clients would be considered for registration only for those conditions under which they are unable to use conventional transit. Typically these conditions could cover situations such as:

- Frail ambulatory and visually impaired persons might be able to use conventional transit during non-winter months but would be eligible to use the specialized transit during winter months only.
- Visually impaired persons might be eligible to use conventional transit during day-time hours but would be eligible to use specialized transit during night time hours.
- Physically disabled persons might be able to use conventional transit with low floor buses to destinations that have highly accessible bus stops but would be eligible for specialized transit service to other destinations.
- Persons unable to use public transit for specific trips such as kidney dialysis treatment would be eligible for specialized transit for those trips.

The newest form of eligibility policy being considered by several Ontario systems is as follows: Only applicants (for specialized service) that do not pass the travel training program for conventional transit will be accepted. While this eligibility process is still in its draft stages, if travel training becomes a service of Peterborough Transit, Transit may wish to consider this option.

12.5 Addressing No-Shows

No-shows are an issue that will need to be addressed through a stronger policy and enforcement. A pre-payment of specialized transit fares has been used for several years in Peel Region and is being adopted or considered in some other communities. Under the Peel Region approach, clients pre-pay for trips on the transit service and each time they make use of the service, a single trip fare is deducted from their account. This eliminates the need for both the client and the operator to handle cash or tickets during the boarding process, improving the efficiency of the on-street operations. This may be something that should be considered for Peterborough.

(this page left intentionally blank)

13.0 RECOMMENDED IMPROVEMENT PLAN FOR HANDI-VAN SERVICES

Based on the study investigations and findings, a recommended transit improvement plan has been developed for Peterborough residents who are seniors and/or Handi-Van users. The recommended improvements are discussed below.

13.1 Accessible Conventional Bus Service

A number of steps are recommended to promote and facilitate the use of the conventional bus services by Handi-Van clients as well as persons who are potential clients. The availability of wheelchair accessible low floor buses provides a resource that can accommodate trips at a low cost and provide a high level of independence for persons with disabilities. It is recognized that conventional services cannot accommodate all clients with a disability, are not suitable for all trips and are not currently easy to use during certain seasons (i.e. in winter it may be difficult to access the conventional transit bus stops). Also, trips by persons with a disability on conventional transit may occasionally impact service schedules to some degree. However, overall this is a low cost travel mode and investment in encouraging and facilitating use of this mode is recommended.

To address the capacity issues for persons with disabilities that require priority seating, two practices are recommended. A policy is now available that clarifies the definition and intended usage of 'priority' seating and 'courtesy' seating on conventional transit buses. This policy should help resolve the issue of who gets priority for these designated seats, but it may not resolve a capacity issue if use of 'priority seating' continues to rise. In the event that it does not, a policy that some transit systems employ has been adapted and is recommended for Peterborough as follows:

> *"If a person with a disability (identified by the driver or self-identified) is waiting at a bus stop (other than the downtown terminal) and is unable to board the bus because the priority seating location is occupied, the bus driver will notify dispatch. If the next bus at that stop is not expected within 20 minutes, the dispatcher will arrange to pick up the waiting person using a Handi-Van vehicle, if available, or a local accessible taxi."*

While there may be a small cost associated with this policy, it continues to reinforce the migration of registered Handi-Van users to the more cost effective accessible fixed route system.

Recommendations in 13.1

13.1.1 That Peterborough Transit continue to promote the use of the conventional services to existing and potential clients of Handi-Van services as a short-term measure. This would include:

- *Updating all Handi-Van information to provide a section on the current accessibility features of conventional transit including information on how to use the services;*
- *Expanding and enhancing the accessibility information on the Transit Map and City Transit web site and, over time, adding communications elements which are more directly focused on seniors;*
- *Taking steps to ensure updated and current information is available on general service accessibility (e.g., any change in availability of accessible buses, bus shelter locations and bus stop conditions);*
- *Conducting occasional demonstrations of low floor bus accessibility for groups of seniors and persons with disabilities;*

13.1.2 That Peterborough Transit expand the current program for the ongoing upgrading of high volume and other important bus stops to improve accessibility. Improvements include landing pads, paved connections to sidewalks, benches, shelters or other accessibility enhancements. In conjunction with this program, an accessibility inventory of all bus stops should be developed to guide improvements as well as to be able to provide information to customers. The bus stop improvement program is proposed as a medium to long-term measure;

13.1.3 That Peterborough Transit provide an incentive to Handi-Van service clients to use conventional transit service under conditions (e.g., non-winter seasons, daylight hours, accessible bus stops at origin and destination) in which they are able to use the service. The incentive could be in the form of free passage for clients who have a time limited (e.g., six months) photo identification pass issued by Peterborough Transit. This incentive is suggested as a short -term measure;

13.1.4 That Peterborough Transit offer a travel training program to encourage and assist persons with disabilities to use conventional transit. It is suggested that this be a medium to long-term measure so more experience can be gained from others in the industry. It is also suggested that opportunities to provide this service through partnerships with external agencies should be explored. A generic version of Travel Training may become available in 2012 or 2013, through the Province for use by Ontario Transit systems; and

13.1.5 That Peterborough Transit clarify through signage definition between priority and courtesy seating and adopt a policy of picking up a person with a disability if they cannot be accommodated on a fixed route service due to capacity issues and when the next bus will arrive over 20 minutes later.

13.2 Taxi Scrip Program

Implementing a Taxi Scrip program offers an opportunity to provide additional trips in the very short-term with minimal related requirements. A reasonable target in Peterborough would be about 5,000 to 8,000 annual trips in the short-term increasing to about 15,000 annual trips in the long-term. The availability of wheelchair accessible taxis also means that this program can be used by some clients who use a wheelchair. The net cost to the City of the Taxi Scrip program is expected to be about $5.00 per trip in the short-term.

It is recommended that the eligibility for the taxi scrip program include all registered clients and that this new travel option be promoted to the clients. An initial annual budget of $40,000 is suggested which would translate at a 50 percent cost share to $80,000 in taxi vouchers providing for approximately 8,000 potential trips. Using books of $20.00, it is suggested that a registered user be eligible to purchase a maximum of one book per month, and that sales would continue until the annual supply was exhausted. It would be appropriate to have a discussion with the City taxi industry to refine the approach, confirm the average taxi fare and to identify/resolve any possible problems.

Recommendations in 13.2

13.2.1 That Peterborough Transit initiate a taxi scrip program based on a 50 percent cost share with a municipal contribution limit of $40,000 annually for up to 8,000 trips using taxi vouchers. Handi-Van users would be able to purchase $20.00 in taxi vouchers once per month subject to the municipal budget limit; and

13.2.2 That Peterborough Transit consult with all licensed taxi companies concerning program design.

13.3 Community Bus Service

It is recommended that a Community Bus service be introduced in Peterborough in addition to Handi-Van services and the accessible base route system. Community Bus would be designed to serve as a route primarily oriented to serving seniors and people with a mobility related disability but would be open to all potential users. The focus would be senior's apartments, assisted living centres, clinics, shopping and personal service areas and other activity centres.

This service would be closely integrated with the conventional transit services, providing some local transit coverage and the opportunity to transfer between Community Bus and conventional routes at the downtown terminal. The final design of the Community Bus service should include extensive consultation with seniors groups and representatives of senior's residences in Peterborough as well as persons using the current Handi-Van service and transit staff involved with the Handi-Van service. It is suggested that the design concept would be as follows:

- There would one route on the north side of the City and one route in the central-south area of the City. Additional routes would be considered based on the service achieving specific financial and performance targets;
- The design of the community bus services should be coordinated with the conventional transit services to support local transit coverage where required as well as serving the seniors and persons with disabilities market;
- Each route would directly serve as many seniors apartment buildings, assisted living centres and retirement homes as possible within the service area with connections to the primary shopping and service destinations, recreation centres, clinics and the downtown. Connections to the hospital should also be made, but this is not considered the priority as Handi-Van registrants will likely prefer the dedicated van for medical appointments. The design should be to directly connect origins with destinations with short travel times while recognizing that need for service close to the entrance at both origins and destinations;
- Handi-Van dispatchers should inform registrants of the availability of Community Bus and provide positive guidance on how this service might be used to accommodate some of the registrants trip requirements;
- To further encourage the use of community bus by Handi-Van registrants, it is suggested that one pre-scheduled Handi-Van trip be accommodated on each route cycle of the Community Bus. Typically this would require a small deviation from the fixed route operated by Community Bus;
- The route(s) should operate on a 40 minute cycle to provide the opportunity for timed transfers at the downtown terminal with the base system;
- If two routes are operated, the buses should be interlined to maximize convenience for passengers;
- The buses and bus stops would be branded with unique community bus identification; and
- The current Handi-Van service vans could continue to be used but consideration should be given to the potential use of small low floor buses.

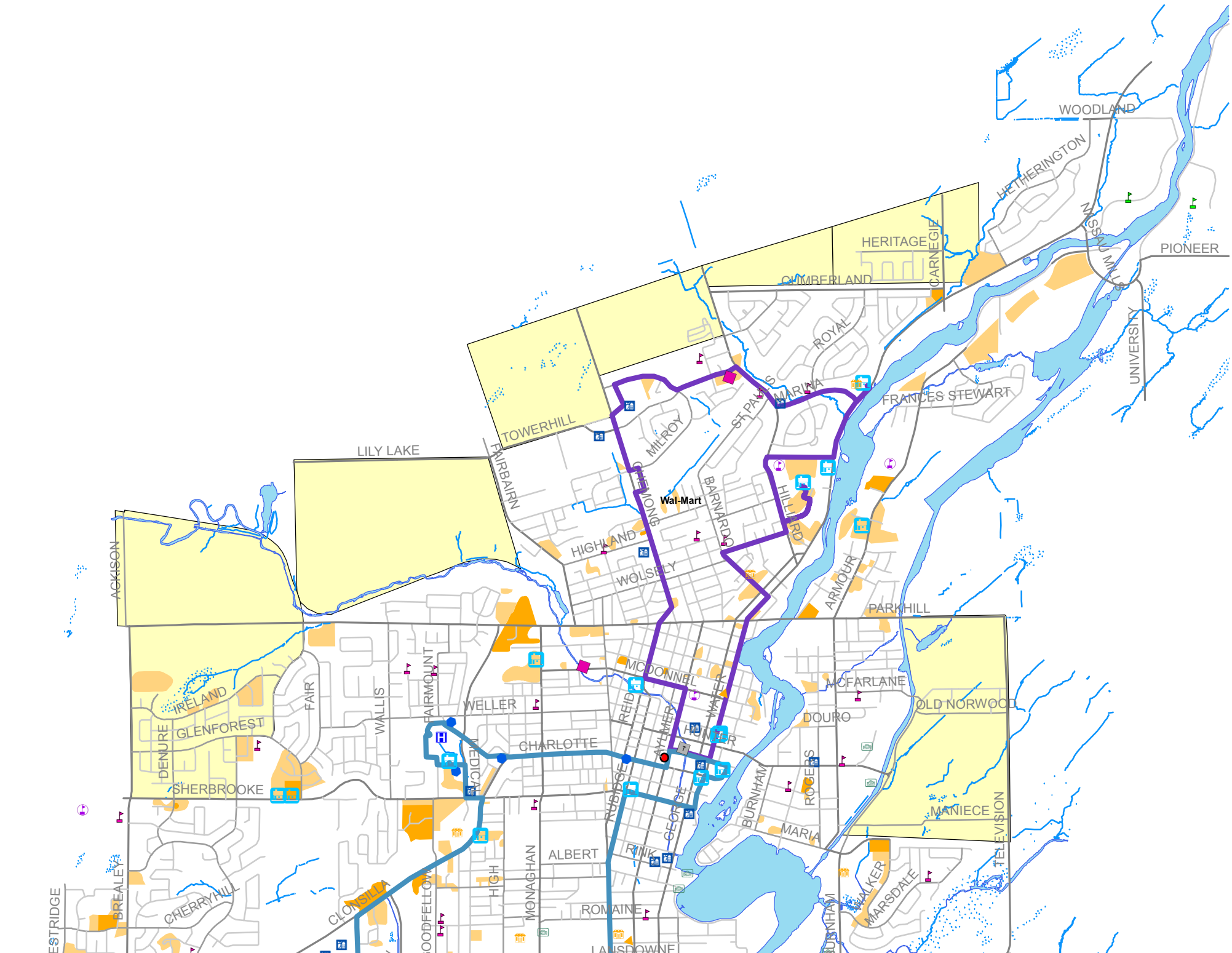
It is recommended that businesses such as the malls, supermarkets and retirement centres be asked to participate in the program by providing public information on Community Bus routes

and schedules, providing bus stop amenities and by providing some sponsorship funding. Local service organizations should also be approached for sponsorship particularly toward the acquisition costs of an appropriate bus. Experience in other systems has demonstrated that discussion with the various seniors groups and Handi-Van registrants is important for the final design of the service and also to increase awareness of the service.

With consideration for the above recommendations, two Community Bus routes were designed as illustrated in Figure 21. It is recommended that this routing concept be used as a starting point for further discussions with various stakeholders and current users.

The characteristics of the service design are as follows:

- A 40 minute north route that:
    - Provides service along the Chemong corridor;
    - Connects to Wal-Mart and Portage Place;
    - Provides direct service to Riverview Manor, Fairhaven Retirement Home, 77 Towerhill and St. John's Retirement Home; and
    - Connects to high density residential development along Hilliard Street and Water Street.
- A 40 minute central-south route that:
    - Provides service to the hospital;
    - Captures all of the major health facilities (for clinics and visiting);
    - Provides service to Lansdowne Mall;
    - Provides direct service to Princess Gardens, Empress Gardens, Rubidge Retirement Residence, Retirement Home on Alexander Court, Royal Gardens, and Retirement Home on Park Street;
    - Connects to high density residential development along Clonsilla; and
    - Connects to senior's homes in the downtown area.
- Use of two low-floor mobility buses and drivers specially trained and oriented for dealing with the target market;
- Routes would be interlined so that users could travel between areas of the City without physically transferring between buses;
- Service would operate between 9:20 am and 4:40 pm on weekdays and Saturday and provide timed transfers with the base conventional system; and
- Bus bay(s) would be allocated for the Community Bus in the area of the downtown terminal.



Legend

- Popular HandiVan ODs
- Recreation or Community Centre
- Bus Station Terminal
- Day Care Centre
- Elementary School
- Mall/Retail/Employment
- Health Care
- Hospital
- Library
- Retirement/Nursing Home
- Point of Interest
- Post Secondary School
- Secondary School
- Community Bus North Loop
- Community Bus South Loop
- High Density Residential
- Medium Density Residential
- Growth Areas

City of Peterborough
Peterborough Public Transit Operations Review - The Route Ahead

FIGURE 21
PROPOSED COMMUNITY BUS ROUTING

Peterborough Transit

DILLON CONSULTING

MAP DRAWING INFORMATION:
DATA PROVIDED BY THE CITY OF PETERBOROUGH

MAP CREATED BY: SLS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: G:\CAD\2011\115470 20\Design_GIS\MXDs

N W E S

0 0.5 1 2 Km

PROJECT: 11-5470 STATUS: DRAFT DATE: 06/22/12

To be most effective, it is recommended that the City purchase a small low-floor accessible vehicle (i.e. an Arboc) rather than operate with a high-floor lift equipped Handi-Van vehicle. This will help speed up the service and increase the overall accessibility.

Recommendations in 13.3

13.3.1 That Peterborough Transit introduce the Community Bus service in consultation with seniors groups, persons with disabilities, other stakeholders and Handi-Van services staff;

13.3.2 That in the short term a first Community Bus route be established on a one year trial basis and if a performance target of 7 rides per hour is achieved that a second route be introduced;

13.3.3 That the Community Bus service be promoted to the target market, that dispatchers provide positive guidance and encouragement for registrants to use the service and that staff also adopt a target of one prescheduled Handi-Van Services trip being accommodated on each route cycle of the Community Bus;

13.3.4 That Peterborough Transit pursue partnership and sponsorship opportunities for Community Bus capital acquisitions and operations;

13.3.5 That Peterborough operate the first route using resources from the existing Handi-Van service; and

13.3.6 That Peterborough purchase a small low floor accessible vehicle (i.e. Arboc) for use in the Community Bus service; and that, as demand grows for Community Bus, Peterborough Transit should consider increasing the number of routes and operating at lower frequencies as well as potentially operating with conventional accessible buses of higher capacity (i.e. use of 30 foot transit buses).

13.4 Pre-Scheduled Door-to-Door Service

The pre-scheduled door-to-door service, generally referred to as the Handi-Van Service consists of the vans operated by Peterborough Transit staff and the contracted taxi services that have trips scheduled and assigned by Peterborough Transit. This service is currently accommodating about 32,800 annual client trips, including escorts. Less than 1 percent of these trips are carried on the contracted taxi service with the remaining trips being carried on the van service.

As a general strategy, the mix of in-house vans and contracted taxi service offers an efficient and flexible arrangement. The contract taxi service with both sedan and wheelchair accessible vehicles can be utilized for off peak (early morning, late evening, weekends) or remote trips when it is less efficient to have the vans scheduled to provide services. During the peak periods,

the efficiency of the van operations is higher due to larger passenger loads but the contracted taxis can also be utilized to supplement peak service if required.

The review of peer municipalities suggests that a target for contracted taxi services could be set at between 10 percent and 15 percent of Handi-Van trips. Ideally, a competitive situation can be developed whereby all local taxi operators can participate in the delivery of this service. Peterborough Transit staff already has a TransCab arrangement with the local industry and there are some Handi-Van trips being delivered by taxis. It is suggested that discussions with the local operators commence immediately with a view toward achieving the ridership target over the next three years. This strategy will also free up some resources (drivers, vehicles) for the implementation of the Community Bus routes recommended in the previous section of the report.

The pre-scheduled door-to-door service will continue to be required by many clients who are unable to make use of the other travel options and it will remain a core service within the family of services. As the population ages and the mobility needs in the community grow, this service will need to be expanded. For discussion purposes, one extra van operating 40 hours per week is expected to accommodate about 5,000 annual trips at current productivity levels. Therefore, when this component of the service is expanded by more than 5,000 annual trips, an additional van could be added to the service. For expansions of service of less than 5,000 annual trips, the additional trips can be provided more efficiently by contracted taxi service.

In the short-term, a minor expansion of the pre-scheduled door-to-door service is recommended through the increased use of the contracted taxi service, providing an additional 3,000 to 4,000 client trips in about three years. In the long-term, as Peterborough Transit gains more experience with Handi-Van registrants use of Community Bus, Accessible conventional services and a taxi scrip program, the ridership and financial performance targets for the prescheduled door to door service should be reviewed and updated.

<u>Recommendations in 13.4</u>

13.4.1 That Peterborough Transit improve the efficiency and expand the delivery of pre-scheduled door-to-door service through increased use of contracted taxi's in the short-term with a target of providing an additional 3,000 to 4,000 annual trips and accommodating 10 percent to 15 percent of all Handi-Van trips on taxi's within 3 years; and

13.4.2 That Peterborough Transit initiate discussions with all local taxi operators to seek their input and participation in the provision of scheduled door to door services.

13.5 Eligibility and Registration

The current eligibility guidelines indicate that persons with physical disabilities are eligible to use the service and persons with other disabilities are not automatically eligible to use the service. In practice, applicants who are assessed as needing the service are accommodated. The assessment process is conducted by Peterborough Transit staff.

In the future, as the specialized transit services are improved, a review of the eligibility guidelines should be undertaken with a view to ensuring that the service is being provided to those persons who need it because of their inability to use the conventional public transit service and to provide staff with clearer guidelines to follow in assessing applicants for registration. This review should address the following matters:

1. Confirming that the intent of the eligibility policy is to make the specialized services available to persons who are unable to use conventional public transit due to a disability;
2. Determining if there are certain conditions (e.g. winter months, night time) under which specialized service would be available to individuals who would not be eligible to use the service under other conditions; and
3. Establishing a third-party assessment process to accurately and fairly assess applicants.

In carrying out this review, the recent experience in Waterloo Region, London, Peel Region and other Ontario systems that have carried out major reviews of eligibility policy and registration procedures would be useful. It is recommended that this review be undertaken in the short to medium-term and that potential AODA standards be considered in the process.

The AODA legislation regarding Eligibility Criteria is worded in such a way that municipalities can interpret the legislation to best suit the needs of their municipality's resources, the local demographics and partnerships with other services. This means that municipalities across Ontario may implement various versions of eligibility criteria which would still all meet the AODA legislation.

The Canadian Urban Transit Association (CUTA) is conducting a national study on eligibility criteria, and the hope is to achieve more eligibility commonality across Canada. Metrolinx is communicating with both OPTA and CUTA on this topic, hopefully with the result that transit systems will have a clear direction for preferred eligibility criteria that will meet the 2014 and the 2017 AODA Regulations.

It is therefore recommended that Peterborough Transit continue to communicate CUTA, with the Ontario Public Transit Association (OPTA) and to watch the Metrolinx Web Site to determine if certain sets of eligibility criteria are emerging as Best Practices in the industry.

Recommendations in 13.5

13.5.1 That Peterborough Transit revise its eligibility criteria by introducing three categories of eligibility: Conditional, Unconditional and Temporary. These should be based on a Family of Services concept.

13.5.2 That Peterborough Transit work with a contracted health care practitioner once a week (or as needed) to review applications and make decisions on eligibility.

13.5.3 That Peterborough Transit ask more detailed questions in its application form regarding the ability to use the Family of Services and the need for an attendant.

13.5.4 That Peterborough Transit prepare for the 2014 AODA legislation by having policies and procedures in place that:

- *always ensure that its Eligibility Application Process is completed within 14 days of receipt of each application;*
- *allow temporary access to its service after 14 days of an application, if a decision has not been made;*
- *has an independent appeal process in place; all appeal decisions must be made within 30 days of receipt of each appeal;*
- *has a policy with respect to the collection, use and disclosure of personal information; and*
- *has a procedure relating to the provision of temporary access to the service on compassionate grounds (prior to the 14 day eligibility assessment period).*

13.5.5 That Peterborough Transit continue to communicate CUTA, with the Ontario Public Transit Association (OPTA) and to watch the Metrolinx Web Site to determine if certain sets of eligibility criteria are emerging as Best Practices in the industry.

13.6 Advisory Committee on Transit for Seniors and Persons with Disabilities

The recommendations in this report will lead Peterborough Transit toward the adoption of a complete 'Family of Services' approach for the transportation of seniors and persons with disabilities throughout the community. City Council sets the broad range of policies governing these services and transit staff is accountable for implementing, monitoring and providing feedback to Council.

It is useful to work with an Advisory Committee that will assist both staff and customers to understand, interpret and implement the policies and Council directions; provide a sounding board for any complaints; and assist all parties in reviewing communications materials before they are released to the public.

It will be helpful for Peterborough Transit to work with the municipality to encourage the following types of representatives to volunteer for the Transit sub-committee, if at all possible: a health care provider (doctor, occupational therapist), one or two transit customers, a caregiver, an agency representative and a citizen at large. The Committee term should have defined time limits so that an independent and fresh set of eyes is always available to provide advice.

Recommendations in 13.6

13.6.1 That Peterborough continue to work with the Transportation Sub-Committee of the municipal Accessibility Advisory committee, for the purposes of assisting staff in the implementation of the 'family of services' delivery model.

13.7 No-Show Policy and Enforcement

To address the issue of a high rate of no-shows, it is recommended that the existing policy be re-introduced and enforced by Peterborough Transit staff.

The previous practice was that when a 'no show' occurred, a warning letter was sent. If the practice continued, a fee was charged followed by a suspension of service. The difficulty was that the penalties were not enforced when there were significant complaints by customers that received notification letters.

A review of transit systems across Canada shows that most do not, as yet, have a strong 'no-show' policy. This includes large systems such as Ottawa, York Region, London, Edmonton and BC Transit. It is likely the concern that negative feedback and publicity may outweigh any gains made by implementing a punitive 'no-show' policy that has pre-empted transit systems from doing so. An exception is Peel TransHelp, which offers service across Mississauga, Brampton and parts of Caledon. Its policy is that it charges the client for "no-shows", however, TransHelp clients have accounts with the service provider and are automatically deducted the cost of each trip that they take. "No-show" trips are also deducted. TransHelp, as a result of AODA legislation, must offer fare parity with Mississauga and Brampton Transit. This could affect the current handling of fares and pre-paid accounts, which may mean that TransHelp can no longer automatically deduct for 'no-shows'.

TTC Wheel-Trans works to educate its clients and their caregivers regarding the damage caused by 'no-shows'. Information to its clients and on its public web site includes the fact that clients book and then cancel approximately 15 percent of all scheduled trips each year, which is over 400,000 lost trips a year. TTC informs its clients that late trip cancellations limit the ability of Wheel-Trans to provide trips for other customers and that late cancellations and no-shows result in delays to customers on the vehicles and make subsequent trips late.

This is a good policy for Peterborough. In Peterborough, the practice of charging a fare and eventually suspending service for repeat behavior should be reintroduced. This should be supplemented by an education program similar to the one conducted by the TTC. A third party review committee (i.e. the Transit Sub-Committee of the municipal Accessibility Advisory Committee) should be charged with providing advice on any challenges to a 'no-show' penalty made by a customer.

Recommendations in 13.7

13.7.1 That Peterborough Transit re-establish its 'No-show' policy and enforce penalties based on consistent violation of the policy;

13.7.2 That Peterborough Transit initiate an education program to inform registered Handi-Van users about the implications of consistent no-shows and late cancellations to the availability of service to others; and

13.7.3 That the Transit Sub-Committee of the municipal Accessibility Advisory Committee be charged with addressing and providing advice to Transit management on customer complaint and issues including the 'no-show's'.

13.8 Customer Information

Peterborough Transit's web site includes a section entitled "Accessible Services", which informs readers that bus routes and schedules are now available in accessible HTML format in the "Bus Routes and Schedules" section of the site.

Peterborough Transit offers riders a brochure (also available through their web site) informing them of the Courtesy and Priority Seating policies (these policies, developed through a committee of OPTA, are now being used by transit systems across Ontario).

The web site also offers information about accessible conventional buses, including details about vehicles on the Express university and college routes that are not yet fully accessible. It provides readers a number to call to determine if the vehicles on their route are accessible, or if there any service issues for the low-floor buses.

Information about the Handi-Van service includes operating hours, service area, fares, trip booking information (including cancellation policies), information about how to register and more.

Of special note is the list of wheelchair and scooter models that can be accommodated on the Peterborough Transit buses. This resulted from Peterborough Transit staff meeting with the local mobility aid vendor to obtain a list of all of the models of wheelchairs and scooters available, including models not necessarily carried by the local vendor. The local vendor

created a list of wheelchairs and scooters that should fit the parameters of the Peterborough Transit vehicles. This resulted in a definitive list. The mobility aid vendor places a "transit friendly" sticker on mobility aids that will fit on the local transit vehicles. The vendor also gives purchasers a copy of the list of transit-friendly mobility aids. A by-product of the communication between Transit and the mobility aid vendor was that the vendor now attends the City's Accessibility Advisory Committee Meetings. This helps the vendor to better understand and communicate with clients and their needs.

Peterborough Transit also includes basic information about its accessible services and its Handi-Van services on its printed routes map/schedule.

Not yet available is a listing of stops that are identified as being fully accessible. Transit must first devise a policy of what makes a stop fully accessible, by working with an accessibility advisory committee. Guidance for elements of an accessible stop can be gleaned from the "Design Guidelines for Accessible Transit Stops and Facilities in Ontario" found in Appendix C.

Also not yet available is a Travel Training Program to help riders with disabilities to make good and safe use of the conventional services as often as possible. While ridership on the Handi-Van service has been reduced, it may begin to grow as the population ages and as local expectations change. Even if Handi-Van ridership remains stable, a Travel Training program could help transit to make bring more riders to its conventional services in the off-peak hours.

<u>Recommendations in 13.8</u>

13.8.1 That Peterborough Transit designate fully accessible stops and note these on its print and web information materials; and

13.8.2 That Peterborough Transit offer a Travel Training Program, to be delivered through the local service agencies.

(this page left intentionally blank)

PART E: RESOURCE REQUIREMENTS, ADMINISTRATIVE REVIEW AND IMPLEMENTATION PLAN

The review of existing services and preparation of a ridership growth plan has recommended some changes in transit routing and service levels for conventional and specialized service for the next 5 year period. If approved, implementation of service changes would begin in January 2013.

These changes provide a sound basis for building ridership and integrating transit with other sustainable modes to address the broader community objectives for energy conservation, economic development, land use intensification and overall quality of life improvements. Key recommendations include:

- Improving service frequency to 20 minutes during peak periods on four selected routes;
- Improving the efficiency of the base route network;
- Providing more direct routes to improve travel times to the downtown and university nodes;
- Improving transit services for Trent students with a direct connection between campus and the Chemong corridor and combining the East bank express with a local base service route;
- Improving transit service along the Chemong and Lansdowne corridors;
- Promoting a Family of Services approach to address the travel requirements of seniors and persons with disabilities;
- Introducing a new Community Bus service; and
- Implementing innovative strategies for employment services and services to low demand and remote areas.

Implementing these changes will be challenging for the dedicated but small management team at Peterborough Transit. Change for existing transit users will also be difficult, even if the service is being improved, because riders have established trip patterns and have adapted their travel requirements to fit existing service levels. Therefore, it is important that the changes in routing and service levels be implemented at the same time. If possible, this should be done in a relatively less demanding period (e.g. summer of 2013 or during winter break 2012/2013) so that any required adjustments can be made before the much busier fall season.

The majority of these changes can be implemented within the existing transit funding envelope and this, coupled with suggested improvements to the organizational structure outlined in Section 16.0, will lead to more productive use of existing resources.

14.0 5-YEAR OPERATING COST AND REVENUE IMPLICATIONS

14.1 Conventional Transit Services

REVENUE SERVICE HOURS

Revenue service hours were calculated based on the recommendations contained in Part C of this report. This includes service for base routes, specials, Trent services, school specials and TransCab. This is illustrated in Table 17.

Community Bus is reported in the Handi-Van services budget due to its significance in attracting Handi-Van customers and in the family of services approach. It should be noted, however, that Provincial reporting requirements identify community bus as part of the conventional service and this may need to be addressed when performance statistics are reported annually. The year 2011 is used as a base and 2012 results were projected. No service hour improvements were made in 2012.

It was assumed that not all proposed changes would be implemented in the first year of the plan. Based on the various service changes listed, the following staging plan is recommended:

Year 1 (2013):

- Introduction of new route structure and 20 minute peak service all year on Routes 2B, 7, 8 and 10;
- Elimination of the first run on all routes in the early morning on Saturdays;
- Modification of East Bank Trent Express service in combination with Route 9 (service integration); and
- Reclassification of Route 12 to a peak period employment special service.

Year 2 (2014):

- Introduction of 20 minute peak service on Routes 1 and Route 5.

Year 3 (2015):

- Introduction of 20 minute peak period service on Routes 4 and 11.

Year 4 (2016):

- Introduction of 20 minute peak period service on the entire Route 2 corridor (to Trent University) and on Route 3.

Year 5 (2017):

- Introduction of 20 minute peak period service on Routes 6 and during the summer period of Route 9 (East Bank Express).

Not Included:
A number of service recommendations were not included as part of the overall revenue vehicle hour calculations. This is due to the uncertainty of these recommendations moving forward and the timing of associated development. These include:

- Introduction of a U-Pass program with Fleming College and potential new route to connect to the GO Bus stop on the Parkway;
- Introduction of service to OLG Kawartha Downs; and
- Introduction of partnerships with key employers to expand service on the Employment Specials.

It should also be noted that moving to 20 minute peak service should be assessed on an annual basis and continued/extended to additional routes if performance targets outlined in Section 9.1 are being met. The decision to phase one route ahead of another should also be revisited on a an annual basis considering a number of factors, including capacity issues, ridership growth potential and other factors (i.e. Route 6 could be pushed ahead in conjunction with a potential U-Pass agreement with Fleming College).

OPERATING COSTS

Operating costs for the various service strategies were calculated using a rate of $83.66 per revenue service hour (based on actual 2011 costs). A marginal cost rate of $72.31 was used for additional service hours above the base. This operating cost was increased on an annual basis by 2 percent based on the Consumer Price Index average over a 5 year period. Hourly costs were applied to all service hours provided, including auxiliary hours when buses go in and out of service. Auxiliary hours were calculated using 3.1 percent of revenue service time.

Community Bus costs are included in the Handi-Van assessment. Forecasted operating costs for the next 5 years are presented in Table 17.

RIDERSHIP GROWTH

The primary objective in implementing the recommended service changes outlined above is to increase transit ridership, move towards the Transportation Plan Update's mode share target and improve the cost effectiveness of the service. To calculate the expected changes in ridership (and hence revenue) resulting from the 5-year service strategy, several methods were used.

The 2011 base year ridership was 3.18 million revenue passengers. Elasticity formulas provided an estimate of the impact that frequency and service hour changes would have on conventional transit ridership. Service elasticity is the term used to describe the degree to which changes in transit service level (positive or negative) will result in ridership growth or decline. A percent increase in ridership was also used to estimate the positive ridership impact due more direct service on certain routes and improved transit coverage in the service area. A four (4) percent increase in ridership per annum was also included based on the recent rate of transit ridership growth that has been occurring in the community.

Community Bus ridership growth was based on the recommendations contained in the Handi-Van Services Review (Part D). It was assumed that community bus would achieve between 8 and 14 passengers per hour over the 5 year life of this plan. Based on experience in other systems, half of this ridership is expected to be registered Handi-Van users and the balance are passengers generally seniors that are not registered for the Handi-Van service (this ridership is shown in the Table below) Ridership on the community bus by registered Handi-Van users is included in Section 14.2.

Trent student U-Pass ridership was expected to increase by 3.5 percent a year based on the trend over the past few years and improvements to the base system. The ridership increase does not impact the revenue stream, but may slightly improve provincial gas tax contributions. Revenue from Trent does increase on an annual basis based on increases in operating costs (calculated at 2 percent per year).

Total projected ridership growth for conventional transit is presented in Table 17. Significant ridership growth beyond these estimates could be expected from the introduction of a U-Pass at Fleming College and other strategies/factors outlined in this report. It should be noted that for Peterborough to reach its 6 percent mode share target, it will require an increase in capacity (i.e. more service hours) to accommodate the additional 1 million passengers needed to achieve the 6 percent target. These additional hours will be required during the peak operating periods to prevent bus over-crowding and the move to 20 minute peak frequency is the means to achieve this extra capacity.

REVENUE

The average fare used to calculate passenger revenue is $1.31 per passenger (based on 2011 revenue and ridership). To calculate the average fare for all users except Trent students, U-Pass revenue was separated out of the total revenue base and the remaining total passenger revenue was divided by non U-Pass passengers. This average fare was calculated at $1.44.

Passenger fares were assumed to increase in 2013 to yield an average fare of $1.58 based on the fare schedule adjustment recommended in Section 9.5 and ridership was adjusted to account for fare elasticity effects. After 2013, the average fare was assumed to remain constant over the 5 year span of the service plan. This is a conservative feature of the estimate and Council should consider the regular implementation of small fare adjustments annually to

reflect cost escalation (wages, fuel) and any service level improvements. Revenue from advertising, charters and other revenue was also included as part of the calculation. These revenues were assumed to grow by 1 percent per year from 2011 values.

Total projected revenue is presented in Table 17.

FINANCIAL PERFORMANCE

Overall financial performance was calculated to determine ongoing municipal contributions and anticipated provincial gas tax. Ongoing municipal contribution (or municipal investment in transit) is calculated as the overall operating cost minus revenues and gas tax contributions.

The increase in revenue reflects a projected increase in ridership to just under 4.2 million over the 5-year period (2017). This ridership increase is due primary to an increase in peak period service on all 12 routes and to natural growth in transit usage as the costs of travel alternatives continue to increase.

Operating costs increase due primarily to a slight increase in revenue service hours and the increase in annual cost per hour assumed each year of the plan. Ridership growth will result in an increase in revenue and an improvement in financial performance over 5 years.

Overall, the cost recovery ratio is anticipated to reach 51 percent during year 5 of the plan. This is higher than the peer group average. Municipal investment over the 5-year period will increase gradually to $4,638,000 from $3,983,000 in 2011. It should be noted that this is due to the assumed 2 percent increase in hourly operating costs on an annual basis. If operating costs were held at 2011 rates, the overall municipal investment would be lower in 2017 than it is in 2011 (due to the expected increase in fare revenue and provincial gas tax contributions).

Gas Tax contribution was estimated based on average provincial ridership and population growth, however, this is simply an estimate. A summary of financial performance is presented in Table 17.

Table 17 – Projected Conventional Transit Implementation and Financial Performance

Revenue Service Hours	2011	2012	2013	2014	2015	2016	2017
Base Routes	85,684	85,684	84,569	87,557	90,545	93,533	97,079
Special Services	2,203	2,203	4,156	4,156	4,156	4,156	4,156
Trent Routes	18,142	18,142	18,142	18,142	18,142	18,142	18,142
High School Specials	685	685	685	685	685	685	685
TransCab							
Community Bus[1]							
Total	*106,714*	*106,714*	*107,552*	*110,540*	*113,528*	*116,516*	*120,062*
Growth in Hours from 2011		*0%*	*1%*	*4%*	*6%*	*9%*	*13%*

Direct Operating Cost	2011	2012	2013	2014	2015	2016	2017
Operating Cost	*$83.64*	*$85.32*	*$87.02*	*$88.76*	*$90.54*	*$92.35*	*$94.20*
Marginal Cost	*$72.31*	*$73.76*	*$75.23*	*$76.74*	*$78.27*	*$79.84*	*$81.43*
Deadhead time	*3.09%*	*3.09%*	*3.09%*	*3.09%*	*3.09%*	*3.09%*	*3.09%*
Base Routes	$7,388,589	$7,536,360	$7,600,604	$7,988,995	$8,389,881	$8,803,606	$9,277,370
Special Services	$189,945	$193,744	$349,090	$356,072	$363,193	$370,457	$377,866
Trent Routes	$1,311,896	$1,338,134	$1,364,897	$1,392,195	$1,420,039	$1,448,439	$1,477,408
High School Specials	$59,068	$60,250	$61,455	$62,684	$63,937	$65,216	$66,520
TransCab	$0	$0	$0	$0	$0	$0	$0
Community Bus[1]							
Sub-Total	*$8,949,500*	*$9,128,488*	*$9,376,046*	*$9,799,945*	*$10,237,050*	*$10,687,719*	*$11,199,165*
Other Costs							
Charters	$20,700	$21,114	$21,536	$21,967	$22,406	$22,854	$23,312
Other Costs							
Sub-Total	*$20,700*	*$21,114*	*$21,536*	*$21,967*	*$22,406*	*$22,854*	*$23,312*
Total	*$8,970,200*	*$9,149,602*	*$9,397,582*	*$9,821,912*	*$10,259,456*	*$10,710,573*	*$11,222,476*

Revenue Passengers[2]	2011	2012	2013	2014	2015	2016	2017
Base Routes	1,863,166	1,937,693	1,964,582	2,103,574	2,257,997	2,393,204	2,527,987
Special Services	67,519	70,219	88,800	91,908	95,124	98,454	101,900
Trent Routes	1,230,699	1,273,773	1,318,355	1,364,498	1,412,255	1,461,684	1,512,843
High School Specials	24,888	25,759	26,133	27,047	27,994	28,974	29,988
TransCab	0	0	0	0	0	0	0
Community Bus[1]			9,407	15,051	18,813	22,576	22,576
Total	3,186,271	3,307,444	3,397,869	3,587,027	3,793,370	3,982,315	4,172,717

Revenue (Fares)	2011	2012	2013	2014	2015	2016	2017
Average Fare	*$1.31*	*$1.31*	*$1.31*	*$1.31*	*$1.31*	*$1.31*	*$1.31*
Average Fare (minus Trent)	*$1.44*	*$1.44*	*$1.58*	*$1.58*	*$1.58*	*$1.58*	*$1.58*
Base Routes	$2,682,684	$2,789,991	$3,072,542	$3,289,922	$3,531,434	$3,742,894	$3,953,690
Special Services	$97,217	$101,105	$138,880	$143,741	$148,771	$153,978	$159,368
Trent Routes	$1,311,896	$1,338,134	$1,364,897	$1,392,195	$1,420,039	$1,448,439	$1,477,408
High School Specials	$35,835	$37,090	$40,871	$42,301	$43,782	$45,314	$46,900
TransCab	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000
Community Bus[1]			$14,712	$23,539	$29,424	$35,308	$35,308
Sub-Total	*$4,130,632*	*$4,269,320*	*$4,634,901*	*$4,894,697*	*$5,176,450*	*$5,428,933*	*$5,675,674*
Other Revenues							
Charters	$6,500	$6,565	$6,631	$6,697	$6,764	$6,832	$6,900
Advertising	$19,100	$19,291	$19,484	$19,679	$19,876	$20,074	$20,275
Other Revenues	$25,600	$25,856	$26,115	$26,376	$26,639	$26,906	$27,175
Sub-Total	*$51,200*	*$51,712*	*$52,229*	*$52,751*	*$53,279*	*$53,812*	*$54,350*
Total	*$4,181,832*	*$4,321,032*	*$4,687,130*	*$4,947,448*	*$5,229,729*	*$5,482,745*	*$5,730,024*

Performance Measures	2011	2012	2013	2014	2015	2016	2017
Revenue Service Hours	106,714	106,714	107,552	110,540	113,528	116,516	120,062
Total Operating Costs	$8,970,200	$9,149,602	$9,397,582	$9,821,912	$10,259,456	$10,710,573	$11,222,476
Total Revenues	$4,181,832	$4,321,032	$4,687,130	$4,947,448	$5,229,729	$5,482,745	$5,730,024
Cost Recovery	47%	47%	50%	50%	51%	51%	51%
Net Operating Cost	$4,788,368	$4,828,570	$4,710,452	$4,874,463	$5,029,728	$5,227,828	$5,492,453
Gas Tax[3]	$805,078	$813,129	$821,260	$829,473	$837,767	$846,145	$854,607
Municipal Investment	$3,983,290	$4,015,441	$3,889,191	$4,044,991	$4,191,960	$4,381,683	$4,637,846
Service Area Population	78,700	79,230	79,760	80,290	80,820	81,350	81,880
Municipal Investment per Capita	$50.61	$50.68	$48.76	$50.38	$51.87	$53.86	$56.64
Ridership	3,186,271	3,307,444	3,397,869	3,587,027	3,793,370	3,982,315	4,172,717
Ridership Growth		3.8%	2.7%	5.6%	5.8%	5.0%	4.8%
Ridership per Capita	40.49	41.74	42.60	44.68	46.94	48.95	50.96
Ridership per Service Hour	29.86	30.99	31.59	32.45	33.41	34.18	34.75

[1] *Community Bus Service Hours, Operating Cost and Ridership/Revenue from Registered Handi-Van users included in the Handi-Van Summary*

[2] *Includes reduction in Ridership due to proposed 2013 fare increase*

[3] *Based on 2011 contribution to operating costs*

14.2 Handi-Van Services

Forecasted ridership, revenue and operating costs for Handi-Van services over a five-year period are presented in this section of the report.

RIDERSHIP TARGETS

The primary objective in implementing the recommended service changes outlined in this plan is to improve mobility for persons with disabilities in Peterborough. The current services are providing about 34,800 annual trips on Handi-Van door to door services with many registered customers also using the accessible conventional service. The majority of trips are accommodated on Handi-Van and there is an opportunity to increase the number of trips per hour with the existing scheduling software.

While trips by Handi-Van registrants on the conventional service is not tracked, an estimate of 2,000 trips per year was assumed based on the ridership declines on Handi-Van since the introduction of accessible services and industry practices. This represents less than 0.5 percent of all conventional transit trips. This can increase to approximately 4,000 trips per year over the life of the plan with continual improvements to accessibility on the fixed route service, travel training and service level improvements (i.e. increased frequency).

With the population growth being experienced in Peterborough and an aging population, it is expected that there will be a need to increase from the current 35,000 door to door trips to between 40,000 and 50,000 annual trips by 2017. This is based on population growth trends, including the aging population and based on the existing rate of use for the service. The plan presented below allows Peterborough to accommodate a higher number of trips using a family of services approach, with various mobility options including increased use of the accessible fixed route transit service. A decrease in Handi-Van hours of service for door to door vans is recommended and offset with an increase in service hours for door-to-door contracted taxi, the introduction of community bus and the implementation of a taxi scrip program.

Based on the recommended service improvement plan, some preliminary ridership estimates and goals are suggested as shown in Table 18.

It is recommended that the actual ridership on the different service components be monitored each year and the ridership targets updated as appropriate.

SERVICE HOURS

Table 18 also identifies the service hours allocated to each component of the family of service. Door-to-Door van service hours are reduced by moving a certain percent of the trips to a door-to-door taxi contract, particularly during the off-peak periods. It is estimated that this would begin at 10 percent and increase to 15 percent of door to door trips over 5 years.

The first community bus is recommended for trial implementation in 2013 and this will use existing resources from the Handi-Van service. It is recommended that additional service hours be allocated for the second community bus, to be implemented in 2014, after a successful trial.

COST AND REVENUE ESTIMATES

The 2011 Council approved annual operating expenditures related to the Peterborough Handi-Van services is $1,016,200 with total revenues of approximately $73,000. The services provided a total of 34,800 passenger trips on vans and a few taxi trips. As noted above there were additional trips on the accessible conventional transit services which are estimated at about 2,000 trips annually.

The costs for the recommended service improvements have been estimated for the five year targets based on the hourly operating cost reported for Peterborough Handi-Van services in 2011, including a 2 percent escalation per year. Door to door services contracted to the taxi industry were estimated at $9.00 per trip based on the current 2011 rate. For estimating purposes, the following assumptions have been made:

- The variable costs of the services on a per trip basis are as follows:
    - Handi-Van service van costs $28.00 to $29.00 per trip;
    - Handi-Van taxi service costs average $9.00 per trip;
    - Taxi Scrip costs $10.00 per trip ($5.00 by Peterborough, $5.00 from user);
    - Community Bus service operating costs are at the same hourly operating rate used by Peterborough Transit for conventional service. Assumed 8 growing to 14 trips per hour and 50 percent of trips by registered Handi-Van customers, it would operate at $24.00 to $12.00 per trip for each Handi-Van customer (or $9.00 to $5.00 per trip including seniors that are not registered for Handi-Van); and
    - Accessible conventional transit will not have an additional cost per trip but ongoing marketing and incentive costs and potential taxi dispatch cost of $20,000 annually are assumed with increased ridership.

Service revenues are assumed to be $2.10 per trip for Handi-Van, taxis and community bus (based on 2011 average fare for Handi-Van customers). This was also increased by 10 percent in 2013 with the fare increase that was applied to the system. Taxi Scrip revenues are assumed to be $5.00 per trip (i.e., 50 percent of the average trip cost).

The estimated costs are shown in Table 18. The increase to 64,000 annual trips (68,000 including conventional transit) is expected to require an increase in annual municipal investment on Handi-Van services by about $186,000 in year 5 of the strategy. It should be noted that this also includes an allowance for a 2 percent annual increase in cost per hour to

account for inflation and rising costs. If all operating costs were kept at 2011 rates, the 5 year increase for municipal contribution would only be $501,000. In 2013, there is expected to be a slight cost reduction due to efficiencies gained through the family of services approach. Overall the municipal investment per passenger trip will reduce from $22.00 to $15.00 per trip (on average).

FINANCIAL PERFORMANCE

Overall financial performance was calculated to determine ongoing municipal contributions. Ongoing municipal contributions are based on overall operating cost minus revenues (gas tax contributions are allocated to conventional transit).

The increase in revenue is based on a projected increase in trips from 38,000 to 68,000 over 5 years. The number of trips (and therefore operating costs) is projected to increase each year to accommodate an aging population. However, the shift to additional contracted door-to-door taxi service, the implementation of a Taxi Scrip program and two Community Bus routes and the increased use of accessible conventional transit services will decrease overall municipal subsidy per trip. Overall, the cost recovery ratio is anticipated to increase from 7 percent to 10 percent during year 5 of the plan.

A summary of financial performance is presented in Table 18.

Table 18 - Projected Handi-Van Services Implementation and Financial Performance

Service Hours	2011	2012	2013	2014	2015	2016	2017
Door-to-door Handi-Van Service	14,600	14,815	11,117	11,001	10,877	10,901	10,761
Door-to-door Contracted Taxi			1,503	1,829	2,010	2,195	2,384
- percent of taxi trips relative to Handi-Van			*10%*	*12%*	*13%*	*14%*	*15%*
Community Bus 1			2,110	2,110	2,110	2,110	2,110
Community Bus 2				2,110	2,110	2,110	2,110
- reduction in Handi-Van hrs due to Accessible Transit			*2%*	*2%*	*3%*	*3%*	*4%*
Total	14,600	14,815	14,730	17,050	17,106	17,315	17,365

Ridership	2011	2012	2013	2014	2015	2016	2017
Door-to-door Handi-Van Service	34,700	35,260	26,722	26,708	26,671	26,997	26,918
- passengers per hour	*2.38*	*2.38*	*2.40*	*2.43*	*2.45*	*2.48*	*2.50*
Door-to-door Contracted Taxi	100	100	2,277	2,799	3,106	3,425	3,758
- passengers per hour	*1.50*	*1.50*	*1.52*	*1.53*	*1.55*	*1.56*	*1.58*
Community Bus 1 (Handi-van users)			6,330	8,440	10,550	12,660	12,660
Community Bus 2 (Handi-van users)				8,440	10,550	12,660	12,660
- Total pass/hour			*8*	*8*	*10*	*12*	*12*
- Registered Handi-Van pass/hour			*3*	*4*	*5*	*6*	*6*
Taxi Scrip			5,000	6,000	7,000	8,000	8,000
Accessible Conventional Transit[1]	2,000	2,245	2,520	2,828	3,175	3,563	4,000
- (percent of trips on transit)	*5%*	*6%*	*6%*	*5%*	*5%*	*5%*	*6%*
Total	36,800	37,605	42,849	55,216	61,051	67,305	67,996

Operating Cost	2011	2012	2013	2014	2015	2016	2017
Door-to-door Handi-Van Service	$1,016,200	$1,051,792	$804,999	$812,557	$819,447	$837,672	$843,506
- cost per hour (with administration)	$69.60	$70.99	$72.41	$73.86	$75.34	$76.85	$78.38
Door-to-door Contracted Taxi	$800	$914	$21,113	$26,344	$29,670	$33,212	$36,980
- cost per passenger	$9.00	$9.14	$9.27	$9.41	$9.55	$9.70	$9.84
Community Bus 1		$0	$158,738	$161,913	$165,151	$168,454	$171,823
Community Bus 2			$0	$161,913	$165,151	$168,454	$171,823
- cost per hour	$72.31	$73.76	$75.23	$76.74	$78.27	$79.84	$81.43
Taxi Scrip		$0	$25,000	$30,000	$35,000	$40,000	$40,000
- municipal contribution			$5.00	$5.00	$5.00	$5.00	$5.00
Accessible Conventional Transit[1]							
Total	$1,017,000	$1,052,706	$1,009,850	$1,192,727	$1,214,419	$1,247,792	$1,264,132
Cost Per Trip	$27.64	$27.99	$23.57	$21.60	$19.89	$18.54	$18.59

Revenue	2011	2012	2013	2014	2015	2016	2017
Door-to-door Handi-Van Service	$72,890	$74,066	$61,744	$61,713	$61,626	$62,379	$62,198
Door-to-door Contracted Taxi	$210	$210	$5,261	$6,468	$7,177	$7,915	$8,683
Community Bus 1		$0	$14,626	$19,502	$24,377	$29,253	$29,253
Community Bus 2			$0	$19,502	$24,377	$29,253	$29,253
- average fare	$2.10	$2.10	$2.31	$2.31	$2.31	$2.31	$2.31
Taxi Scrip							
Accessible Conventional Transit[1]							
Total	$73,100	$74,276	$81,632	$107,185	$117,558	$128,799	$129,386

Performance Measures	2011	2012	2013	2014	2015	2016	2017
Revenue Service Hours	14,600	14,815	14,730	17,050	17,106	17,315	17,365
Total Operating Costs	$1,017,000	$1,052,706	$1,009,850	$1,192,727	$1,214,419	$1,247,792	$1,264,132
Total Revenues	$73,100	$74,276	$81,632	$107,185	$117,558	$128,799	$129,386
Cost Recovery	7%	7%	8%	9%	10%	10%	10%
Net Operating Cost	$943,900	$978,430	$928,218	$1,085,542	$1,096,862	$1,118,993	$1,134,747
Gas Tax[2]	$169,400	$170,247	$171,098	$171,954	$172,813	$173,678	$174,546
Municipal Investment	$774,500	$808,183	$757,119	$913,588	$924,048	$945,315	$960,201
Service Area Population	78,700	79,230	79,760	80,290	80,820	81,350	81,880
Passenger Trips *(minus conventional transit)*	34,800	35,360	40,329	52,388	57,877	63,742	63,996
Municipal Investment per Passenger Trip	$22.26	$22.86	$18.77	$17.44	$15.97	$14.83	$15.00
Municipal Investment per Capita	$9.84	$10.20	$9.49	$11.38	$11.43	$11.62	$11.73
Passenger Trips per Capita	0.44	0.45	0.51	0.65	0.72	0.78	0.78
Passenger Trips per Service Hour	2.38	2.39	2.74	3.07	3.38	3.68	3.69

[1] *Cost and revenue included in the conventional transit assessment*

[2] *Based on 2011 contribution to operating costs*

(this page left intentionally blank)

15.0 AODA COMPLIANCE

15.1 January 2012 Requirements

The following components of the AODA were enacted in January 2012, however the Provincial government has noted that it is giving transit systems a grace period until the end of 2012, before it begins to audit services. This is so that transit systems can work together, as much as possible, to develop homogenous policies and practices.

Courtesy and Priority Seating

- Peterborough Transit must have buses marked with designated seating for persons with disabilities. Print-ready materials have been made available through the Ontario Public Transit Association (OPTA) for "Courtesy Seating" and "Priority Seating" to help the industry employ a homogenous approach *(the Ontario Human Rights Code indicates that there should be preferred seating both for people with disabilities and for families - e.g. mothers/fathers with young children).*
- Transit must have a communications strategy to inform the public about the purpose of such seating. (OPTA also assisted in the design of a communications program to help transit systems meet this requirement.)
- Transit should develop a policy to inform drivers and Transit supervisors of what to do when a person with a mobility device is not able to be accommodated on the conventional service because of lack of space availability (recommended in Section 13.1).

Emergency Preparedness and Response Policies

- Peterborough Transit must ensure that emergency preparedness and emergency response policies and procedures include provisions for the safety of passengers with disabilities.
- Transit must make these policies and procedures available in accessible formats.

Emergency Procedures, Plans and Public Safety Information

- Peterborough Transit must ensure that emergency procedures and public safety information that is available to the public is made available in accessible formats or with appropriate communications supports, upon request.

General Responsibilities

Peterborough Transit operators:

- must deploy accessibility equipment upon the request of customers.
- must ensure that customers with disabilities have adequate time to board and be secured.
- upon request, must assist passengers with disabilities with boarding, with being secured, with disembarking and with storage of mobility aids.

Information on Accessibility Equipment

- Peterborough Transit must ensure that information regarding accessibility equipment is available in accessible formats.

Storage of Mobility Aids

- Peterborough Transit staff must ensure that, where possible, mobility aids are safely stored and returned to customers.

Transit Stops

- If the desired Peterborough Transit stop is inaccessible for passengers with disabilities, they should be dropped off at the closest available safe and accessible location. Inaccessibility can include barriers created by weather, such as snow, ice or mud. It can include human-made barriers, such as a fallen stop sign that prevents sidewalk access.
- Peterborough Transit operators must promptly report any inaccessible stop or temporary barrier. Examples could include damaged stops and/or shelters, broken walking surfaces, illegally parked vehicles, etc. Transit can direct drivers to use discretion in their reporting of barriers. For example, if certain routes have been designated by the Municipality to not receive priority snow-plowing until further notice, drivers would not be expected to report snowy stops on those routes. However, Peterborough Transit will be expected to notify its customers that those routes may not be fully accessible.

Workplace Emergency Response Information

Peterborough Transit must:

- ensure that workplace emergency response information required by an employee with a disability is available in the format required.

The following is a synopsis of requirements that must be met by Peterborough Transit. They are listed in alphabetical order, by year, for quick reference.

15.2 January 1, 2013 Compliance

The following requirements must be met by January 1, 2013:

Accessibility Plans

Peterborough Transit must:

- have a multi-year accessibility plan and provide annual status reports. Transit *can create this Plan as a component of the municipality's overall Plan, if desired.*
- include procedures for dealing with vehicle repairs and equipment failures.
- have a process to manage, evaluate and act upon customer feedback.
- hold an annual public meeting for feedback on the accessibility plan.
- post the plan on its website in an accessible format.
- review the plan at least every 5 years.
- continue to file an annual ODA Plan until further notice by the Provincial Government *(It is expected that the ODA or Ontarians with Disabilities Act will be phased out after the Built Environment Standard has been enacted)*.

Establishment of Accessibility Policies

Peterborough Transit must:

- implement policies governing the achievement of compliance with this Regulation.
- make documents available to the public in accessible formats.
- have a statement of its commitment to meeting the needs of persons with disabilities in a timely manner.

Fare Parity

- Offer fare parity between its conventional and specialized services.

Floors and Carpeted Surfaces

- Transit must ensure that flooring on public vehicles is slip resistant, low pile, securely fastened and produces minimal glare.

Grab Bars, Handrails, Stanchions, etc.

- As per Regulation 629, Transit must provide for grab bars and stanchions throughout its vehicles.

Indicators, Alarms and Lifting Devices

- Transit must ensure that its indicators, alarms and lifting devices on its public transit vehicles are equipped with appropriate safety features.

Lighting

- Transit must ensure that adequate lighting is provided at passenger doors on public transit vehicles.

Mobility Aid Spaces

- Transit must provide at least two mobility aid spaces on its transit vehicles, both of which must meet the space requirements set out in the Regulation.

Procuring or Acquiring Goods, Services or Facilities

- Transit shall ensure that accessibility criteria and features are incorporated into procurement documents and specifications when acquiring goods, services and facilities.

Self-Service Kiosks

- Transit must ensure that accessibility features are incorporated into the design, procurement and acquisition of any self-service kiosks that it may decide to acquire.

Service Disruptions

- In the event of a service disruption that is known in advance, Transit must plan alternate accessible travel arrangements for customers with disabilities. The type and style of arrangements will be at the discretion of Peterborough Transit. Options include making known and offering re-routed accessible bus services, booking them onto the Handi-van service, offering accessible taxi or shuttle services, if available and appropriate.
- Transit must ensure that information regarding known service disruptions is made available to the public in an accessible manner.

Signage

- Transit must ensure that its vehicle signage is consistently located, glare free, high contrast and visible at passenger boarding points on each vehicle.

Steps

- Transit must ensure that any steps on its public transit vehicles are uniform and are outfitted with the appropriate safety features.

Stop-Requests and Emergency Response Equipment

- Transit must ensure that stop requests are in accessible locations on vehicles for conventional service and that accessible emergency response equipment is located throughout the vehicles.

Stops and Shelters

- Transit must discuss design criteria for accessible stops and shelters with the municipality's accessibility advisory committee. Transit can share the OPTA shelter and stop design criteria document with the accessibility advisory committee as a basis for discussion. Transit is also encouraged to work with OPTA, including both other transit systems and stop/shelter manufacturers to work towards homogenous stop and shelter design criteria for Ontario systems (*refer to the OPTA document entitled "Design Guidelines for Accessible Transit Stops and Facilities in Ontario" provided in Appendix C).*

Provisions for accessible stops and shelters must be outlined in the municipality's accessibility plan.

15.3 January 1, 2014 Compliance

The following requirements must be met by January 1, 2014.

Employee Accessible Formats and Communication Supports

- Peterborough Transit must ensure that job duties and information required by employees with disabilities are provided in an accessible format.
- Transit must ensure that employees are consulted with respect to the format and/or support provided.

Employee Accessibility Training

- Transit must ensure that specific training is provided to operations employees regarding safe use of accessibility equipment, procedures for temporary barriers, and emergency

response procedures. Transit can also make use of the Provincial Government's on-line training modules, available through the MCSS site at www.mcss.gov.on.ca. These modules are ideal for administrative employees.

- Transit must maintain a record of training for all employees.

Employee Career Development and Advancement

- Transit must take accessibility needs into account when providing career advancement opportunities.

Employee Documented Individual Accommodation Plans

- Transit shall develop and have in place a written process for documenting individual accommodation plans for employees with disabilities.

Employee Performance Management

- Transit must ensure that the accessibility needs of its employees are taken into account when utilizing a performance management process.

Employee Recruitment

- Transit must notify the public of the availability of accommodations in the workplace during recruitments.
- Applicants that are selected for assessment must be granted accessible accommodations upon request or if the applicant indicated the need for accommodation, that consultation take place with the applicant in regard to the most suitable options.
- Transit must notify successful applicants of its policies for accommodating employees with disabilities.

Employee Redeployment

- Transit must ensure that any redeployment activities will take into account the accessibility needs of employees with disabilities.

Employee Return to Work Process

- Transit must have a return-to-work process in place for employees returning to work and requiring disability-related accommodations.

Employee Supports

- Transit must inform all employees of its current policies supporting employees with disabilities, as well as each time there is a change to policies.
- New employees must be informed of policies as soon as practicable.

Fares, Support Persons

- Transit must not charge a fare for a support person who is accompanying a passenger with a disability on its services.
- Transit must have criteria for support persons. Peterborough Transit is encouraged to work with OPTA, CUTA and other Ontario Transit systems for Ontario- wide standardized criteria for support persons, such that a "Support Person" is consistently recognized in the same manner across the province.
- Transit must assess applicants and issue identification relating to their need for a support person while travelling on public transit. A support person is someone specifically needed to assist the customer to ride the system - the customer cannot travel otherwise. A companion, however, is simply another rider and will be expected to pay a fare.

Feedback

- As with the Customer Service Standard, Peterborough Transit must ensure that its processes for receiving and responding to feedback and complaints are accessible to persons with disabilities by providing accessible formats upon request.

Websites and Content

- Peterborough Transit must ensure that its website is compliant with World Wide Web Consortium Web Content Accessibility Guidelines (WCAG) 2.0, initially at Level A and increasing to Level AA, by 2021. The current web site is available in HTML format and offers fonts and background in strong contrast.

15.4 January 1, 2015 Compliance

The following requirements must be met by January 1, 2015:

Accessible Formats and Communication Supports

- Peterborough Transit must make available all information in accessible formats, upon request.

- Transit must ensure that the public is aware of the formats it will provide, and that there is no special fee for information in specific formats. This does not preclude Transit from charging a fee for any of its materials (e.g. printed route maps), should it wish to do so. But is does preclude Transit for charging a different fee for items produced in specifically requested accessible formats.

15.5 January 1, 2017 Compliance

The following requirements must be met by January 1, 2017:

Fare Media

- Peterborough Transit must ensure that all fare media options for conventional service are available on specialized service, as well.

Hours of Service

- Transit must ensure that the days and hours of service for Handi-Van are consistent with those for the conventional Transit transit service. Hours of service need not be identical, unless customer demand proves otherwise. For example, if there is no demand from Handi-Van customers in an area where conventional service operates at 11:00pm, Handi-Van is not expected to provide 11:00pm service in that area. If there is occasional demand for such service, Handi-Van can opt to fill that travel need with brokered services, such as accessible taxis.

ODA Plans

- After the Built Environment Standard (the last of the current standards) is put into legislation, it is expected that the Provincial Government will dissolve the requirement for updating ODA Plans. At that time, only the AODA Plans will be required.
- It is suggested that Peterborough Transit use its current ODA Plan as its basis to build an AODA Plan. Regardless of whether Transit develops its AODA Plan as an overall component of the municipal AODA Plan, or develops an independent Plan, this Plan should include how Transit will:
  - remove possible barriers from its hiring and retention practices;
  - update its employee, and any contractor and volunteer customer service training to accommodate the new legislation;
  - ensure that its customer education, communications and marketing is accessible to those who require special formats;
  - make all of its facilities accessible, be they for customers or for employees (e.g. office space, terminals, stops, shelters, etc.);

- update or create new policies to ensure that barriers to employees and customers with disabilities are removed;
- ensure that there is no disparity in service levels and service hours between conventional and specialized services;
- ensure that here is no disparity of fares and fare media between conventional and specialized services;
- ensure that transit IT services reduce, and do not create barriers for customers (and employees) with disabilities; and
- ensure that the employees of the conventional services and of the specialized services work together to ensure consistency and harmony of policies, practices, communications and services that impact their customers, especially those who may use both services from time to time.

Transit must also determine how to measure and manage compliance.

(this page left intentionally blank)

16.0 ADMINISTRATIVE REVIEW

16.1 Introduction

The administrative review of Peterborough Transit described below, was prepared based on detailed discussions with transit staff; a thorough review of materials provided and the experience of the Dillon team. Based on a review of the current organizational structure and existing work methods and practices, areas where administrative processes and staff roles and responsibilities could be improved are identified with the justification outlined. Also identified are proposals to enhance the functionality of support systems through critical review and the acquisition of appropriate software.

A series of recommendations is also presented for further consideration by senior management. It should be noted that where additional staff resources are recommended, the cost of such additions will be offset by proposed cost savings. All recommendations are targeted toward improving customer service; increasing operational efficiencies; realizing potential cost savings and establishing a culture of continuous improvement for all aspects of Peterborough Transit service delivery.

16.2 Organizational Structure

The current organizational chart for Peterborough Transit was reviewed and a brief description of each position is provided below.

SENIOR MANAGEMENT

The Manager of Transportation for the City of Peterborough is responsible for Transit, Traffic, Parking Control and Transportation Demand Management. The Transit Operations Manager is responsible for all aspects of transit service delivery except for Vehicle Repair which is carried out by the Public Works division.

TRANSIT SUPERVISION

Three Transit Operations Supervisors report to the Transit Operations Manager and are responsible for overseeing the daily delivery of conventional and Handi-Van service. They are located at the downtown terminal where they have access to a supervisor vehicle, as required, to monitor on-street service and respond to various on-road incidents such as vehicle accidents, customer/operator issues, service disruptions, etc. They also perform a variety of tasks, broadly distributed as follows:

- Transit Operations Supervisor 1: Training officer – recruitment - route scheduling – performance reviews for part time staff.

- Transit Operations Supervisor 2: Vehicle repair co-ordination with Public Works – oversee vehicle service function - administration of bus stop and shelter program – oversee transit terminal maintenance – accident investigation and management representative on Accident Review Committee – member of Accessible Transportation Advisory Committee.

- Transit Operations Supervisor 3: Occupational Health and Safety Officer - provide WHIMIS training - administer Handi-Van service – project coordinator for computerized technologies, radio and telephone communications, other special projects.

DISPATCH SUPERVISORS

There are seven approved part time positions within this job classification, all of whom work up to 26 hours per week. Dispatch Supervisors are responsible for supervising the Downtown Terminal Operation. Peterborough Transit operates a radial route structure with all routes meeting at the downtown terminal every 40 minutes. There are 12 bays at the terminal and its unique design requires that buses must drive in to each bay on arrival and then back out from the bay on departure. Through visual inspection, use of video cameras and radio communications, the dispatch supervisor on duty ensures that customers safely transfer between buses; that, as much as possible, buses depart on time and the "backing out" maneuver is carried out safely.

The dispatch supervisors are permanently located at the terminal and are also responsible for handling two-way radio communications with in-service operators; monitoring on-street service delivery and dealing with any customer or operator issues at the terminal. They also receive and record operator book-offs and cover open work in accordance with established procedures.

SECRETARY

This full-time position provides secretarial support to the division and has primary responsibility for all non-union payroll transactions. The secretary is also cross-trained to act as back-up for the cashier, Handi-Van scheduler and for union payroll functions.

CASHIER

One full-time and two part-time cashiers provide the following counter customer services at the Downtown Terminal:

- Fare Media sales for Peterborough Transit and GO Transit;
- Lost and found service; and
- Customer information for next scheduled bus and trip planning.

Terminal customer service hours are Monday to Friday from 9:00am to 8:00pm and weekends from 10:00am to 12:45pm and from 1:15pm to 4:00pm.

The cashiers are cross-trained to provide back-up for the Handi-Van scheduling.

HANDI-VAN SCHEDULER

This full-time position supports Peterborough's specialized transit service through the provision of registration, booking, scheduling and dispatch functions for Handi-Van service. This position also has primary responsibility for the union payroll function, including the manual entry of payroll transactions, and secondary responsibility for non-union payroll in support of the secretary. This position also backs-up the Cashier position, providing additional support, as needed, at the Customer Service counter.

The secretary, cashiers and Handi-Van scheduler are all unionized positions – CUPE Local 126.

TRANSIT OPERATORS

Fifty full-time and 25 part-time operators provide conventional transit service. Twelve full-time and 4 part-time operators provide specialized Handi-Van service.

Operators may bid for either conventional or specialized work without restriction and receive the same hourly rate. Part-time operators are eligible to fill full-time vacancies after working a minimum of 540 hours, which is viewed as a probationary period. All operators are members of ATU Local 1320.

VEHICLE SERVICE PERSONNEL

There are five-full time and two part time positions within this job classification. These positions are responsible for exterior washing, re-fuelling, farebox dumping and interior cleaning of all transit vehicles. Staff are members of ATU Local 1320.

VEHICLE REPAIR

As indicated above, the repair and maintenance of the Peterborough Transit fleet of buses is not a direct responsibility of Peterborough Transit. The Public Works division performs all transit fleet maintenance work. Public Works understands its role as a service provider and the importance of transit fleet maintenance. They also do a good job in providing the required number of buses for daily service and maintaining an acceptable standard of vehicle reliability.

Public Works technicians are assigned to the transit fleet and their transit bus expertise is maintained through on-going training. Transit Supervisor Andrew Burdett is responsible for on-going liaison with Public Works regarding vehicle repair issues. There is a positive relationship and good co-ordination between the two business units. Peterborough Transit is quite satisfied with the vehicle repair services provided by Public Works.

16.3 Review of Transit Service Delivery Functions

The various transit service delivery functions were reviewed. Outlined below is a discussion of those aspects of service delivery where changes should be considered to improve customer service, cost effectiveness and overall efficiency of Peterborough Transit operations.

ROUTE SCHEDULING

The scheduling, run cutting and rostering of all conventional service, is the responsibility of Transit Operations Supervisor 1 (described above), who carries out this function manually.

The scheduling of conventional transit service is a very complex process which ideally lends itself to automation and there are various scheduling software packages available. The 2012 budget has requested funds to initiate research, perform a needs assessment and review available vendors of scheduling software products. Using the information collected a budget request will be established for 2013 and if approved an RFP completed for software purchase, installation and implementation.

It is strongly recommended that scheduling software for conventional service is acquired, which, when used efficiently, can result in savings in service hours, operator hours and possibly peak hour buses. A relatively small investment has the potential to deliver a substantial pay-off. Once proficiency in using the software package is obtained, staff time will also be saved relative to the manual methods currently adopted.

It is also recommended that scheduling expertise be developed with other Peterborough Transit staff to provide back up and redundancy for the Transit Operations Supervisor 1.

The scheduling of Handi-Van service is already automated through the use of TransView software. No changes are recommended for the delivery of the Handi-Van scheduling function.

EMPLOYEE RECRUITMENT

The Manager of Transportation and the Transit Operations Manager are primarily responsible for the recruitment of Peterborough Transit staff, with assistance provided as required by Operations Supervisors, for operator and vehicle service vacancies. The City provides a dedicated HR representative who arranges and attends interviews, provides reference checks and additional support as necessary.

With regard to hiring operators, the main difficulty is trying to attract quality candidates to part-time positions, with no guaranteed hours of work and limited benefits. Another concern is that historically, preference has been given to candidates with a CZ license. This requirement may not always capture candidates with the desired customer service skills. Obviously customer service skills are very important for transit operators. It is much easier to teach a person to drive a transit bus, than it is to deliver good customer service.

The following improvements are suggested for the Operator Recruitment program, which if implemented, will attract candidates best suited to the role of transit operator, which in turn will improve customer service; enhance operator performance and reduce staff time in managing poor performance:

- Change the license criteria from a "CZ" to "G" and train new staff to meet the "CZ" licensing requirements;
- Change the hiring criteria to stress candidates with proven customer service skills;
- To better attract quality candidates, consider changes to the existing working conditions for part-time operators and evaluate the following options:
    - Establish a minimum guarantee for hours of work;
    - Consider limited improvements to fringe benefits; and
    - Conversion of some part time positions to full time extra board.

These proposed changes to working conditions would be seen as favourable to the union, so if any of these are being considered, there may be an opportunity for management to negotiate collective agreement changes in exchange for improved working conditions for part-time employees.

One such concession could be the elimination of the current requirement that, when a full-time employee is absent in excess of thirty calendar days, a second sign-up be held for their choice, for each instance of such employee absence during a bidding period.

OPERATOR TRAINING

Operator training is primarily provided by Transit Operations Supervisor 1, but some training is shared with other supervisors. The Transit Operations Supervisor does not have license signing authority. New employees are trained to CZ license requirements with testing provided at an MTO testing facility.

The Peterborough Transit operator training program is limited. New recruits are trained to the required standards. However, no follow-up/refresher training is provided and this presents a risk management issue for Peterborough Transit. Operators involved in preventable accidents are counselled (after the fact) on accident avoidance techniques. No proactive program is in place to bring operators back to the classroom on a regular basis (e.g. every 2 years) to reinforce defensive driving techniques, safe working practices, customer service skills, etc.

To address this situation, it is recommended that a full-time "Transit Training Coordinator" be hired, with license signing authority, who would have the following duties:

- Design and delivery of training programs for new transit operators;
- Design and delivery of refresher training programs;
- Provide mentoring and coaching services to operators with performance issues;
- Perform check rides, and coaching as required, of in-service operators to evaluate on-road performance;
- Perform license checks to ensure no violations of licensing requirements;
- Training of Vehicle Service employees on the safe operation of transit vehicles in and around transit facilities;
- Act as the management representative on the Accident Review Committee – see note below; and
- Perform risk assessments and make appropriate recommendations to reduce risk through accident avoidance measures; improved driving skills and work practices; employee training and awareness; etc.

Note: In 2012, the Accident Review Committee is being replaced by the Collision and Incident Review Committee. The terms of reference for this revised committee have been drafted as part of a new corporate policy initiative, known as the Fleet Operations and Management Program. This program is set to roll out in the third quarter of 2012. Draft documents are complete and a report is being prepared for Council approval of the new corporate policy.

It is reasonable to assume that the costs associated with hiring a full-time trainer position will be offset by cost avoidance through a reduction in safety violations, vehicle and work place accidents, on-board injuries and overall risk.

It is also understood that the addition of a new full-time position to the Peterborough Transit complement may be difficult to justify at this time. If this is not seen to be feasible, two other possible options are proposed:

- Preferred option - in light of the proposed changes to processes and procedures identified throughout this document, carry out a detailed review of the operations supervisor positions to re-align duties and responsibilities, with a view to assign specific responsibility for the enhanced training functions outlined above.
- Alternative option if feasible -consider partnering with the City of Peterborough training staff to determine if they can provide additional training support to Peterborough Transit.

OPERATOR PERFORMANCE MANAGEMENT

Operator performance is the responsibility of the Transit Operations Manager. Counseling and, if necessary, progressive discipline measures are taken to address customer service complaints, behavioral problems and preventable accidents. It is recommended that performance standards be established, which would be targeted to improve customer service, system safety and punctuality.

For each of these performance elements, the average number of incidents, per operator, of customer complaints, preventable accidents, lates and no-shows, would be calculated and these averages would become the expected standard for all operators. Operators exceeding the average number of incidents would be subject to coaching, counseling and discipline if necessary to improve performance.

Diligent and consistent management of these aspects of operator performance should result in a reduced number of incidents. This will result in reduced averages, which will become the new standard, so that continuous improvement is entrenched in operator performance management.

ATTENDANCE MANAGEMENT

Attendance management is addressed through adherence to a corporate city policy, which may not fully deal with Peterborough Transit employees who have chronic attendance problems.

It is suggested that Peterborough Transit management develop an Attendance Management program, based on the corporate model, but which would also contain the following elements:

- Establish a performance standard for attendance, e.g. average number of days absent per employee for each group – operators and vehicle service;
- Monitor attendance for each employee. Employees exceeding the standard would be subject to counseling to identify an "agreed to" plan to improve attendance;
- Employees who continue to perform below expectations would be subject to further counseling and, dependent on the circumstances, progressive discipline may be required; and
- Chronic offenders would be subject to increased levels of discipline up to and including termination.

Additional staff training may be required to acquire the necessary skills to administer this program. Effective attendance management will reduce days absent, improve system reliability, improve customer service and reduce costs.

PAYROLL SYSTEM – TRANSIT OPERATORS

The current processes required of Peterborough Transit staff to administer the payroll system are laborious, time consuming and inefficient. The process begins with every operator completing a daily timesheet; the manual checking of the timesheet by an Operations Supervisor; the manual cross-checking and system entry by the Handi-Van Scheduler (payroll clerk) and the manual authorization of exceptions by the Transit Operations Manager. Manual input and oversight means high potential for errors and potential over payments. Further staff time, after the fact, is consumed in dealing with employee complaints and inputting error corrections.

It is suggested that a complete review be undertaken involving City IT staff to identify and implement improvements to the payroll system, which will save staff time, reduce errors and improve efficiency. A better approach may be to base operators pay on the work they are scheduled to complete daily and weekly and then only deal with any exceptions to the scheduled work which may arise.

TELEPHONE SYSTEM

The current telephone system has full automated message capability, where by choosing various options, customers receive standard information on operating hours, schedules, fares, accessibility etc. All services including Handi-Van and administrative telephone extensions are available through the main Peterborough Transit phone number – 705-745-0525.

However, the system does not show the number of calls waiting in the queue. This feature is especially important at peak call times and would allow for more efficient scheduling of staff and greater efficiency in call answering.

In addition, no statistics related to call centre management can be obtained from the telephone system. Statistics that record the number of calls; calls answered, calls abandoned, duration of calls etc. can be very useful in creating performance standards for call management and generally improving customers' access to Peterborough Transit information and services.

It is suggested that a complete review of the Peterborough Transit phone system be undertaken to address the current limitations and provide more efficient and cost effective solutions.

CUSTOMER CONTACTS

There is currently no database system in place to track customer contacts such as complaints, compliments, service requests, comments etc. A great deal can be learned from customers feedback on the various services provided.

In conjunction with the review of the phone system mentioned above, it is also suggested that customer contact software be acquired, which would establish a database to record and track

all customer contacts. This database would permit analysis to identify trends, issues, concerns, etc., being expressed by customers. Better information leads to better decisions in dealing with the issues raised, which will improve the overall quality of customer service being offered.

While the acquisition of a customer contact database is the preferred solution, it is understood that financial constraints may prohibit this acquisition at this time. Therefore as an alternative approach, consideration should be given to the manual retrieval of data, by existing staff and the development of related spreadsheet reports.

WINTER MAINTENANCE

The winter maintenance of Peterborough Transit facilities is the responsibility of the Public Works division under contract to Peterborough Transit. Public input during the study suggests there are delays in clearing stops and shelters, which obviously detracts from customer service, impacts mobility and creates a safety risk.

If not already in place, Peterborough Transit should consider establishing service standards for winter maintenance, which must be adhered to by Public Works. If Public Works is unable to clear stops and shelters within an acceptable timeframe, consideration should be given to engage a third party contractor to perform the necessary work.

DISPATCH SUPERVISORS

The responsibilities of the dispatch supervisors are described above. Under the current Peterborough Transit operating environment, these positions play a key role in ensuring the safe operation of the downtown terminal and helping to ensure efficient on-time transit service delivery.

The fact that these positions have only part-time status presents difficulties in attracting and retaining quality candidates. Potential candidates with the necessary skills and experience may be reluctant to leave full time positions for part time status with hours limited to 26 per week.

Peterborough Transit management has submitted a budget proposal to adjust the complement from 7 part time positions to 2 full-time and 4 part-time positions. The creation of at least 2 full-time positions would "raise the bar" in terms of the quality of staff; would motivate part-time staff to aspire to full-time status and would help to attract better qualified candidates to this position.

16.4 Recommendations from the Administrative Review

Based on the findings outlined in the above discussion, the following recommendations are proposed for further consideration by Peterborough Transit management.

16.4.1 That Peterborough Transit acquire appropriate software for more efficient and cost effective scheduling of conventional transit service.

16.4.2 That Peterborough Transit implement improvements to the Operator Recruitment program, which are more likely to attract candidates better suited to the role of transit operator, and which include:

- *Change the license criteria from a "CZ" to "G" and train new staff to meet the "CZ" licensing requirements;*
- *Change the hiring criteria to stress candidates with proven customer service skills;*
- *To better attract quality candidates, identify changes to the existing working conditions for part-time operators and evaluate the following options:*
  - *Establish a minimum guarantee for hours of work;*
  - *Consider limited improvements to fringe benefits; and*
  - *Conversion of some part time positions to full time extra board.*

16.4.3 That Peterborough Transit provide enhanced operator training by hiring a full-time Transit Training Coordinator with full license signing authority.

16.4.4 That Peterborough Transit develop standards for Operator Performance targeted to improve customer service, safe work practices, punctuality and attendance.

16.4.5 That Peterborough Transit implement improvements to operator performance management, including the development of an Attendance Management Program and provision of related staff training if required.

16.4.6 That Peterborough Transit carry out a complete review of the current payroll administration process to identify improvements which will save staff time, reduce errors and improve efficiency.

16.4.7 That Peterborough Transit undertake a complete review of the Peterborough Transit phone system to address the current limitations and provide efficient and cost effective solutions.

16.4.8 That Peterborough Transit acquire database software to improve management and analysis of all customer contacts.

16.4.9 That Peterborough Transit establish service standards for winter maintenance and ensure effective delivery.

16.4.10 That Peterborough Transit adjust the complement of Dispatch Supervisors from 7 part-time positions to 2 full-time and 4 part-time positions.

16.4.11 That Peterborough Transit, in consideration of the various changes to processes and procedures outlined above, carry out a detailed review of the operations supervisor positions to re-align duties and responsibilities.

(this page left intentionally blank)

17.0 CAPITAL ASSET REQUIREMENTS

Renewed investment in transit capital assets is urgently required to address serious limitations in Peterborough Transit's ability to delivery reliable service to its customers. The most difficult challenges relate to the lack of proper space to store and maintain the fleet at the existing maintenance facility; delays in the timely replacement of buses which seriously impacts the state of good repair of the fleet and the outdated design of the downtown terminal which impacts safety and operational efficiency.

The existing 10 year Capital Program for Peterborough Transit was reviewed in detail and adjustments to this program are presented below which support the need for renewed investment in transit infrastructure and support the service improvements and other initiatives identified in this Operations Review. Also included in this section are recommended additional capital requirements, currently not addressed in the long term capital program, which, if acquired, will enhance operational reliability, customer service and system accessibility.

17.1 Maintenance Garage

The chronic space shortages at the existing transit maintenance facilities have been well documented in previous studies. Unfortunately a new Municipal Operations Centre has not yet been approved and staff remains challenged by the serious limitations of the existing site. Of the 49 buses in the conventional fleet, only 43 can be crammed in to the indoor storage area. All ten Handi-Van vehicles must be parked outdoors year round. The overall efficiency of vehicle maintenance activities are also compromised by the deficient physical environment in which staff have to operate.

It is therefore strongly recommended that senior transit staff prepare a submission to Council to seek approval for the new Municipal Operations Centre. The design of this facility would properly accommodate the transit fleet of conventional and specialized vehicles as well as the required number of maintenance and service bays and related plant and equipment. Recognizing the significant costs involved in a new facility, the City should approach both federal and provincial governments for capital assistance.

Efficient, cost effective vehicle maintenance programs cannot be realized until a more modern properly designed maintenance facility is provided.

17.2 Conventional Transit Fleet

The most visible assets of the transit system are its fleet of buses. A chronological breakdown of the age of the fleet is shown in Table 19. Currently Peterborough Transit maintains a fleet of 49 buses for the delivery of conventional transit services. All buses are the standard 40 foot in

length. Thirty-four of these buses (69 percent) are fully accessible and have an average age of 6.3 years. There are 15 (31 percent) non-accessible buses in the fleet, with an average age of 23.9 years, ranging in age from 21 to 29 years.

The overall average age of the fleet is 11.6 years. Peterborough Transit maintains its fleet well beyond the anticipated life of a conventional transit bus of 18 years, which is considered a standard by many transit systems across Canada. The replacement value of the conventional fleet is $22.9 million based on a unit cost of $467K (2012 dollars). The unit cost for each vehicle includes a radio and farebox.

Table 19 - Current Inventory of Conventional Bus Fleet

Make	Year	Age	Quantity	Make	Year	Age	Quantity
GM	1983	29	2	Orion	1998	14	4
GM	1984	28	2	Nova LFS	2004	8	8
GM	1988	24	1	Nova LFS	2005	7	3
GM	1989	23	1	Nova LFS	2008	4	15
MCI	1990	22	8	Nova LFS	2009	3	4
Orion	1991	21	1				

REPLACEMENT BUSES

As can be seen from Table 19, no new buses have been acquired since 2009. The 1983 and 1984 buses should have been replaced by now. Also no new bus orders have been placed so far in 2012 and the lead time for delivery is approximately 13 months. Therefore to bring the replacement program up to date, an order for six replacement buses should be placed immediately for delivery in 2013. This order would replace the six oldest GM buses – 1983 to 1989. The 1990 MCI buses should be replaced in 2014, when they will have reached their extended life expectancy of 24 years.

The 10 Year Capital Program (2011 to 2020), shows funding for two replacement buses in each year from 2012 to 2020, for a total of 18 buses. However over the next few years the acquisition of two buses per year does not match the real replacement requirements as discussed above. It is therefore recommended that the 10 year capital budget for the bus replacement program be adjusted to re-allocate the necessary funds to finance the vehicle acquisitions as outlined below (based on year of delivery).

- 2013 – 6 buses
- 2014 – 8 buses
- 2015 - 1 bus

It should be emphasized that no additional funding will be required for these acquisitions; only an acceleration of funds already committed.

The City has determined an average age for the conventional fleet at 10 years. As noted above, the average age at the beginning of 2012 is 11.6 years. If the above replacement vehicles are acquired within the recommended timeframe, the average age will reduce to 8.8 years in 2013, 5.8 years in 2014 and 6.2 years in 2015.

A further target has been set by the City to have 100 percent of conventional buses fully accessible by 2016. To achieve this target, 15 accessible buses will need to be purchased to increase the accessible fleet from 34 to 49 buses. Therefore 100 percent accessibility will be achieved by 2015 if the recommended acquisitions are approved.

REFURBISHMENT PROGRAM

Due to on-going financial constraints, conventional bus life is extended by a Refurbishment Program which began in 1998. As each vehicle ages, it is assessed by mechanical staff to determine if additional investment in the vehicle is justified. The refurbishment program consists of rebuilding of bulkheads and floors as well as replacement of major components such as engines and transmissions. On average refurbishment extends vehicle life to 24 years from the standard 18 years.

The next buses due for refurbishment would be the four 1998 Orion vehicles. Depending on usage, engines and transmissions have an anticipated life of 6 to 8 years. It is noted that the 10 year Capital Budget (2011-2020) shows funds committed to the Refurbishment Program for 2012 and 2013 only. This budget may be underfunded, therefore it is suggested that the Refurbishment Program be reviewed to identify planned expenditures versus available funding to determine if additional allocations are required.

EXPANSION BUSES

The conventional service strategy, outlined in Section 9.0 of this Operations Review recommends that incremental service improvements are implemented which will require four additional peak hour buses in 2013 and two additional peak hour buses in each year from 2014 to 2017. If approved the daily maximum vehicle requirement will increase from 31 buses in 2012 to 43 buses in 2017.

The Canadian Transit Fleet Fact Book for 2010, published by CUTA indicates that Peterborough Transit's maximum vehicle requirement to meet current service levels is 31 buses. Based on a total fleet of 49 buses, 18 buses are spare, meaning Peterborough Transit operates with an apparent spare ratio of 37 percent (18 divided by 49).

Using the same Fact Book data for 2010, a peer group comparison is presented in Table 20 below and shows that the average spare ratio of the peer group is 30 percent compared to Peterborough Transit at 37 percent.

Table 20 – Spare Ratio – Peer Group Comparison

Transit System	Vehicle Spare Ratio
Brantford	23%
Guelph	20%
Kingston	24%
Niagara Falls	36%
Sarnia	38%
Sault Ste Marie	43%
Thunder Bay	27%
Average	30%
Peterborough	37%

An argument can be made that a 37 percent spare ratio is excessive and that the need for additional expansion buses could be accommodated from available spares. However, the current operational reality is that the six oldest buses in the fleet have been parked at a site remote from the maintenance garage and would only be used in a dire emergency. Theses buses are not available for regular daily service and as indicated above they should be replaced immediately. If these buses are omitted from the calculation, the real spare ratio is 28 percent (12 spares divided by 43 active buses), which is close to the peer group average.

On the other hand, as recommended in Section 17.1, if the six oldest buses are replaced in 2013, it should be feasible to use their new replacements to implement the recommended service improvements for 2013 and 2014. This would still leave 13 spare buses for a revised spare ratio of 26.5 percent (13 divided by 49). It is suggested that this spare ratio be maintained for the time being and appears reasonable compared to the peer group and given the operating environment of the existing maintenance facility.

Therefore, it is proposed that the additional peak hour buses, identified in the conventional service strategy, be provided from a combination of replacement vehicles and fleet additions as outlined in Table 21.

Table 21 – Source of Additional Peak Hour Buses

Year	Additional Peak Hour Buses	Source of Peak Hour Buses
2013	4	Replacement of 1983 and 1984 GM's
2014	2	Replacement of 1988 and 1989 GM's
2015	2	Additions to Fleet
2016	2	Additions to Fleet
2017	2	Additions to Fleet

To allow for the approximate one year lead time in procuring the new additions to the fleet, the 10 year Capital Budget should request additional funding and show annual allocations for two buses in each year for 2014, 2015 and 2016.

As described in Section 8.6 of this study, Peterborough Transit should continue to operate standard 40 foot buses on all fixed route services. However, if the City adopts the proposed strategies for two new Community Bus routes and Employment Specials there may be a need to consider the introduction of thirty foot heavy duty transit buses into the fleet. Thirty foot buses would be an appropriate vehicle to assign to the community routes.

If the introduction of 30 foot buses is to be considered, a business case analysis should be carried out, taking in to account the full implications of having two separate fleets; different spare part inventories; required maintenance and operations staff training; revision of operational procedures, etc. It should be acknowledged that Peterborough Transit does not have the resources to prepare this business case, so if it is to be considered, additional staff resources would be required or the engagement of a consultant, with related budget.

17.3 Specialized Transit Fleet

Peterborough Transit has a fleet of ten vehicles providing transit services to persons with disabilities. These are detailed in Table 22. All vehicles are Ford E450 vans, customized to accommodate wheelchairs for specialized service delivery. Five of these vans (2001 and 2002) are low floor fully accessible vehicles and five (1999 and 2009) are high-floor provided with lift equipment. The City's policy is to purchase low floor transit buses; however adhering to this policy has not been possible in recent years, due to the difficulty in sourcing a reliable low-floor specialized vehicle. The unfortunate reality for Peterborough Transit is that the low floor vehicles require frequent maintenance, are unreliable and have a very high replacement cost when compared to high floor lift equipped vehicles.

Table 22 – Current Inventory of Specialized Bus Fleet

Make	Year	Age	Quantity
Ford E450	1999	13	1
Ford E450	2001	11	1
Ford E450	2002	10	4
Ford E450	2009	3	4

The latest acquisitions of the four 2009 vehicles were high floor vehicles from Crestline Coach. Under this contract, the City has an option to purchase an additional 10 high floor vehicles by 2014.

The average age of these vehicles is 7.6 years and they have a replacement value of $700K based on an estimated price of $70K for a high floor vehicle. The City has a targeted age for the specialized fleet of 5 years. Currently 6 of these vehicles are well in excess of 5 years.

Of the total fleet of ten specialized vans, seven are required for daily service for a spare ratio of 30 percent. However due to the unreliability of the low floor vehicles, having seven vans available for daily service is often challenging. As a result it is strongly suggested that the five low floor vehicles and the 1999 high floor van, be replaced immediately by more reliable high floor lift equipped vehicles. The 10 Year Capital Budget includes a 2012 allocation of $566K which should be sufficient to fund this acquisition.

Assuming these new vans are delivered in 2013, this will significantly improve the reliability of Handi-Van service and reduce the average age of the specialized fleet to approximately two years.

17.4 Support Vehicles

Currently one support vehicle is included in the Transit fleet. This is a 2010 Chevrolet Equinox which is used by transit supervisors in support of daily operations, including the on-street monitoring of conventional and specialized transit service delivery. The replacement of this vehicle is scheduled for 2014 at an estimated cost of $39K.

The 10 year Capital Program includes the purchase of an additional support vehicle in 2015 at an estimated cost of $40K. This vehicle is scheduled for replacement in 2019.

17.5 Maintenance Garage Equipment

This program funds the acquisition of new and replacement maintenance equipment, at the Public Works garage, which is designated for the transit fleet. This includes bus hoists, brake lathes, bus wash equipment, etc. It is critical that the effective maintenance of the transit fleet

is adequately supported by the constant renewal and upgrade of appropriate plant and equipment.

The 10 Year Capital program shows only one allocation of $123K in 2016. While this level of funding may be adequate, it is suggested that a review be undertaken to determine if additional equipment acquisitions are required to ensure the transit maintenance program is fully supported.

17.6 Downtown Transit Terminal

The last refurbishing of the Downtown Transit Terminal took place in the mid-1990's. In the 10 year Capital Program, $1M is allocated in 2013 for required renovations and upgrades to the customer waiting area, the customer service facility and transit operations areas. The budget document states that the extent of these renovations will not be completed until the design phase of the new Municipal Operations Centre is finalized.

It is proposed that operations functions, such as report, dispatch, training and some administration, currently located at the downtown terminal will be relocated to the new facility. This redistribution of functions would free-up space at the Downtown Terminal and create the opportunity to design a modern, fully functioning and more efficient customer service centre, focused on better serving customer needs and addressing all design aspects in compliance with AODA standards. The existing issues related to inadequate space for operator washroom and lunchroom facilities would also be addressed.

Unfortunately however the design activities for the new Operations Centre are not yet underway. This again adds impetus to seeking urgent approval for the design and construction of the new Operations Centre.

17.7 Transit Stops and Shelters

As noted in Section 15 – AODA Compliance, Peterborough Transit does not yet have a listing of stops and shelter locations that are identified as being fully accessible. To accomplish this, Peterborough Transit should work with an accessibility advisory committee to identify the physical conditions required for a stop or shelter location to be designated as fully accessible. Once stop and shelter accessibility criteria have been determined and a listing prepared of those locations which are not accessible, the appropriate estimates must be added to the capital budget, to fund the required modifications. It is noted that the current Capital Program does not include any funding for stop and shelter compliance to AODA standards.

Peterborough Transit currently has 62 transit shelters, throughout the system at locations where there are higher than average boardings; in areas subject to severe weather conditions and where the customer demographic is primarily senior. Fifty-two shelters are owned by the

City and ten are owned by a shelter advertising company. Four new shelters (2 new and 2 replacements) are planned for installation in 2012, at a unit cost of $9K.

To maintain shelters in a state of good repair and to accommodate new requests, the 10-Year Capital Program should provide adequate funding for new and replacement shelters, as determined by staff. However for each year from 2013 to 2020 only $6K to $7K is allocated. Therefore this program appears to be underfunded and should be reviewed to determine if additional funding is required.

It is common in many transit systems for the demand for shelters to be greater than the system's capability to supply. With Peterborough Transit currently funding only two new installations per year it is likely that shelter demand exceeds supply. In these circumstances it may be useful to establish a shelter warrant system. This system would create a list of locations in order of priority, which meet the above noted criteria of high number of boardings; local climate conditions and high incidence of seniors. As funds become available shelters will be installed based on the list of priority locations, which meet the warrants.

17.8 Additional Capital Requirements

The following additional capital requirements are recommended but are not included in the existing 10 Year Capital Program.

NEW DOWNTOWN TERMINAL

As indicated in Section 7.3, the downtown terminal will continue to be the heart of the Peterborough Transit system, serving as a major destination and a key transfer location for local, inter-regional and inter-city services. The existing terminal is outdated and a modern 'flow through' design should be planned as a capital project, hopefully attracting federal and provincial funding support.

A new terminal integrated with transit supportive land uses presents the opportunity to create a Mobility Hub as a catalyst for downtown intensification and attract new ridership. A modern design will help to minimize delays, enhance productivity and improve schedule reliability for transit customers.

ADVANCED TECHNOLOGY

The City has recently invested in a new farebox system which allows for more accurate data collection and monitoring of ridership by route and time of day. New radios have been acquired for all buses for improved communications. In addition GPS technology has recently been acquired; however, this is not being used to its full capability.

Investment in advanced technology enables improved operational efficiencies, potential cost savings and enhanced customer service. It is therefore suggested that the GPS system be

upgraded to allow AVL capability for the communication of real time information and real time monitoring of schedule adherence.

Currently the City has a central traffic signal control system which has transit signal priority (TSP). The existing system requires some minor work for it to be operational. It is recommended that this work be completed in the short-term to expedite the implementation of transit signal priority in the City of Peterborough. The new radios are compatible with TSP technology. TSP will greatly enhance schedule adherence by giving priority to late buses to proceed through the City's busiest intersections.

Both these strategies are becoming popular in cities the size of Peterborough and should be addressed in more detail. If supported the appropriate funds should be allocated in the Capital Program.

17.9 Recommendations from Capital Asset Requirements

Based on the above discussion of Peterborough Transit's capital requirements the following recommendations are proposed:

17.9.1 That Utility Service Department staff to prepare a submission to council to seek urgent approval for the new Municipal Operations Centre and explore the opportunity for federal and/or provincial funding support.

17.9.2 That Peterborough Transit adjust the 10 Year capital budget for the Conventional Bus Replacement program to re-allocate the necessary funds to finance the acquisition of 15 new buses as outlined in Section 17.2.

17.9.3 That Peterborough Transit review the adequacy of funding for the bus refurbishing program to ensure planned expenditures match available funding.

17.9.4 That Peterborough Transit use six replacement buses to be acquired in 2012 for delivery in 2013, to provide the six expansion buses required for conventional service improvements proposed for 2013 and 2014.

17.9.5 That Peterborough Transit request additional capital funding in 2014, 2015 and 2016 to finance the acquisition of six expansion buses required for conventional service improvements in 2015, 2016 and 2017.

17.9.6 That Peterborough Transit immediately replace the five low floor specialized transit fleet and the 1999 high floor van with more reliable high floor lift equipped Handi-Van vehicles.

17.9.7 That Peterborough Transit, if necessary, conduct a full business case analysis, with appropriate resources and budget, to identify all issues related to the

introduction of smaller buses to the Peterborough Transit fleet.

17.9.8 That Peterborough Transit review the adequacy of funding for the Maintenance Garage Equipment program.

17.9.9 Working with an Accessible Advisory Committee, Peterborough Transit identify the physical conditions required for a stop or shelter location to be designated as fully accessible and establish the related capital budget to fund AODA compliance.

17.9.10 That Peterborough Transit review the adequacy of funding for the acquisition of new and replacement shelters.

17.9.11 That Peterborough Transit consider the development of a warrant system governing the location of new shelters.

17.9.12 That the City of Peterborough develop a business case for a new Downtown Terminal and allocate required funding in the 10 Year Capital Program.

17.9.13 That the City of Peterborough undertake a site selection, preliminary design and costing study for a new downtown transit terminal (with consideration of multimodal coordination and transit-supportive land uses at the site) and that federal and provincial funding support be sought for implementation.

17.9.14 That Peterborough Transit establish a capital budget for the acquisition of an upgraded GPS and for a Transit Signal Priority (TSP) program.

18.0 SUMMARY

18.1 Conclusion

The Route Ahead provides an effective strategy that will help Peterborough Transit achieve its transit mode share targets in a cost effective manner. The strategy for conventional transit is to identify efficiency improvements to allow for service expansion during the peak periods. Peterborough operates a highly effective service which has seen ridership growth in the order of 4 percent per annum over the last few years. Without improvements to the overall level of service, this growth will slow down as crowding will result in capacity and comfort issues on the bus and potential reliability issues (as buses will take longer to complete their routes with more customers boarding and alighting).

In addition to the recommended route and service strategies, Peterborough should monitor performance during the midday period and identify opportunities to extend its 20 minute peak frequency to also accommodate the midday period. Unlike many transit systems that experience high peaking only during the AM and PM peak periods, Peterborough also has a high level of ridership during the midday period and overcrowding may require that the peak 20 minute frequency service be extended during this period. This strategy will require the establishment of utilization performance targets that trigger the need for service expansion.

In addition to the restructuring of supply, it is recommended that more demand management solutions be explored such as the implementation of a U-Pass program at Fleming College. The success of the service arrangement with Trent University is one of the primary reasons for Peterborough Transit's high performance, and identifying similar opportunities with other partners will only increase overall ridership growth. Intensification opportunities around key transit nodes and corridors (i.e. downtown Peterborough) will also help improve ridership growth and the effectiveness of the service. A re-design of the downtown terminal should be included in any development plans for the downtown area.

Handi-Van ridership has been declining over the past few years, however, with an aging population; this trend is expected to reverse. Much of the decline in Handi-Van trips is due to the success of accommodating registrants on the accessible conventional transit services for some of their trips. Improving to a 20 minute peak frequency will help resolve many of the capacity issues that have existed and may ease the situation where parents with strollers and persons with mobility devices have had seating conflicts.

The proposed 'family of services' approach provides increase mobility options for persons with disabilities and will reduce the overall municipal investment per passenger trip. The increase in the use of contracted taxi's for some door-to-door service during the shoulder periods will help reduce the overall cost for the Handi-Van service. A Taxi Scrip program will provide improved

mobility options and more spontaneous travel for registered Handi-Van customers at a minimal cost to the City. It may also help manage some of the demand for Handi-Van services.

The Community Bus is a hybrid between accessible conventional service and Handi-Van, providing curb to curb service to destinations targeted to seniors and existing Handi-Van customers. A pilot is recommended in 2013 using existing Handi-Van resources. If successful, a second Community Bus route is recommended.

The proposed family of services approach is expected to double the trips made by persons with disabilities by 2017 and provide additional options for travel.

Overall, 12 additional peak buses are required by this plan through 2017, however, if the spare ratio is reduced as suggested in the report, this may only require the need for 6 to 8 expansion vehicles for the base conventional routes plus 3 to 5 smaller (30 foot accessible vehicles) for the Community Bus and employee specials.

There is a critical need to initiate action on both a new Maintenance Operations Centre and downtown bus terminal/transfer location.

18.2 Summary of Recommendations

The following present a summary of recommendations located throughout this report. More detail on each of these recommendations can be found in the corresponding section number.

<u>Recommendations in Section 8.0 (Strategic Directions)</u>

8.6.1. That Peterborough Transit continue to operate a radial based system with a secondary emphasis on other key nodes including the Lansdowne Mall and Chemong corridor;

8.6.2. That Peterborough Transit continue to operate on running times of 40 or 80 minutes until such time as a replacement for the current terminal can be implemented;

8.6.3. That the following design principles guide the development of the proposed route structure:

- *Continue the agreement with the Trent Student Association to provide express services;*
- *Continue to utilize TransCab to provide transit coverage to remote areas and areas of low demand;*
- *Provide express service to Fleming College while working with the student association on the adoption of a Universal pass program;*

- *Provide employment specials to low density employment areas beyond the reach of conventional routes. Provide a basic weekday peak period level of service (with a performance target of 10 boardings per hour or more) and seek partnership agreements with key employers for any service outside of this base; and*
- *Adjust routes to provide more direct service where possible and support intensification plans along the Lansdowne and Chemong corridors.*

8.6.4. That Peterborough Transit only provide service outside the City based on a 100 percent cost recovery basis;

8.6.5. That Peterborough Transit initiate discussions with approach GO Transit on a service and fare integration strategy to better accommodate interregional to/from Peterborough; and

8.6.6. That Peterborough Transit continue to operate transit services using 40 ft buses with the exception of Community Bus or Employment Specials.

Recommendations in Section 9.1 (Service Standards):

9.1.1. That Peterborough Transit revise its service coverage standard to be based on a 450 metre walking distance to better reflect a 5 minute walking time of an aging population.

9.1.2. That Peterborough Transit separate the Express Route classification into two separate route types: Post-Secondary Express (routes focused on Trent University and Fleming College) and Employment Express (routes focused on large industrial/employment areas).

9.1.3. That Peterborough Transit revise is utilization standard in the Official Plan to reflect the following:

Each transit route should achieve the following minimum utilization levels, i.e. passengers per vehicle hour:

- *Weekday: Base Routes: 25 boardings per revenue vehicle hour*
- *Saturday Base Routes: 15 boardings per revenue vehicle hour*
- *Sunday Base Routes: 10 boardings per revenue vehicle hour*
- *Post-Secondary Express Routes: 25 boardings per revenue vehicle hour*
- *Employment Express Routes: 15 boardings per revenue vehicle hour*

9.1.4. That new routes or routes with improved frequency be given 6 to 12 months to reach to minimum performance targets.

Recommendations in Section 9.2 (Conventional Transit Service – Weekday)

9.2.1. That Peterborough Transit restructure its routes and services based on the proposed service alignment identified in Figure 17;

9.2.2. That Peterborough Transit initiate negotiations with Trent University students association to seek a cost sharing and service level agreement for combing the East Bank Express and Route 9;

9.2.3. That Peterborough Transit operate at a 20 minute frequency during the weekday AM peak period (7:00am and 9:00am) and PM peak period (2:00pm and 6:00pm) on the four base routes (Route 2, 7, 8 and 10);

9.2.4. That Peterborough Transit operate a minimum 40 minute frequency service on all routes during all hours of operation;

9.2.5. That Peterborough Transit continue its U-Pass program with the Student Association at Trent University and seek to extend a similar program to faculty and staff;

9.2.6. That Peterborough Transit continue to operate a Fleming College express service and pursue any further service improvements through negotiation of a U-Pass arrangement with the Student Association;

9.2.7. That Peterborough Transit continue to operate TransCab services to low-demand areas;

9.2.8. That Peterborough Transit continue to operate the Technology Drive Express and identify partnership approaches for any additional service hours outside the base weekday peak periods;

9.2.9. That Peterborough Transit maintain the existing weekday start and end time of 6:00am and 11:20pm;

9.2.10. That Peterborough Transit offer an extended time transfer of 90 minutes; and

9.2.11. That Peterborough Transit interline routes at the downtown terminal.

Recommendations in Section 9.3 (Conventional Transit Service – Saturday)

9.3.1. That Peterborough Transit adopt the weekday route structure for Saturdays;

9.3.2. That Peterborough Transit operate on Saturdays between 7:20am and 11:20pm;

9.3.3. That Peterborough Transit operate base routes at 40 minute frequencies all day Saturday; and

9.3.4. That Peterborough Transit operate Route 12 for six hours only on Saturdays.

Recommendations in Section 9.4 (Conventional Transit Service – Sunday/Holiday)

9.4.1. That Peterborough Transit adopt the weekday base route structure on Sundays; and

9.4.2. That Peterborough Transit operate base routes at 40 minute frequencies all day Sunday between 8:00am and 7:20pm.

Recommendations in Section 9.5 (Medium-Term Conventional Transit Strategy)

9.5.1. That Peterborough Transit progressively stage the implementation of 20 minute peak period service on additional route pairs until the entire system is upgraded;

9.5.2. That Peterborough Transit consider extending the 20 minute service frequency during the midday periods in response to demand;

9.5.3. That Peterborough Transit monitor ridership on the first and last runs on all service days and look to extend the existing hours of service in response to increases in demand; and

9.5.4. That Peterborough Transit extend service on holidays in which retail and employment areas are open in order to meet potential demand on those days.

Recommendations in Section 9.6 (Transit Fare Strategy)

9.6.1. That Peterborough Transit implements a general fare increase at the same time as the service improvements are introduced;

9.6.2. That Peterborough Transit adjust cash fares in 25 cent increments only;

9.6.3. That small fare increases be completed annually in line with municipal budget processes to avoid large 'one-time increases' or catch-up;

9.6.4. That the City of Peterborough develop and implement a Transit Affordability program for Peterborough residents; and

9.6.5. That Peterborough Transit Staff continue to approach Fleming College administration and the Student Union to implement a U-Pass program similar to the Trent University Program.

Recommendations in Section 13.1 (Accessible Conventional Bus Service)

13.1.1. That Peterborough Transit continue to promote the use of the conventional services to existing and potential clients of Handi-Van services as a short-term measure. This would include:

- *Updating all Handi-Van information to provide a section on the current accessibility features of conventional transit including information on how to use the services;*

- *Expanding and enhancing the accessibility information on the Transit Map and City Transit web site and, over time, adding communications elements which are more directly focused on seniors;*
- *Taking steps to ensure updated and current information is available on general service accessibility (e.g., any change in availability of accessible buses, bus shelter locations and bus stop conditions);*
- *Conducting occasional demonstrations of low floor bus accessibility for groups of seniors and persons with disabilities;*

13.1.2. That Peterborough Transit expand the current program for the ongoing upgrading of high volume and other important bus stops to improve accessibility. Improvements include landing pads, paved connections to sidewalks, benches, shelters or other accessibility enhancements. In conjunction with this program, an accessibility inventory of all bus stops should be developed to guide improvements as well as to be able to provide information to customers. The bus stop improvement program is proposed as a medium to long-term measure;

13.1.3. That Peterborough Transit provide an incentive to Handi-Van service clients to use conventional transit service under conditions (e.g., non-winter seasons, daylight hours, accessible bus stops at origin and destination) in which they are able to use the service. The incentive could be in the form of free passage for clients who have a time limited (e.g., six months) photo identification pass issued by Peterborough Transit. This incentive is suggested as a short -term measure;

13.1.4. That Peterborough Transit offer a travel training program to encourage and assist persons with disabilities to use conventional transit. It is suggested that this be a medium to long-term measure so more experience can be gained from others in the industry. It is also suggested that opportunities to provide this service through partnerships with external agencies should be explored. A generic version of Travel Training may become available in 2012 or 2013, through the Province for use by Ontario Transit systems; and

13.1.5. That Peterborough Transit clarify through signage definition between priority and courtesy seating and adopt a policy of picking up a person with a disability if they cannot be accommodated on a fixed route service due to capacity issues and when the next bus will arrive over 20 minutes later.

Recommendations in Section 13.2 (Taxi Scrip)

13.2.1. That Peterborough Transit initiate a taxi scrip program based on a 50 percent cost share with a municipal contribution limit of $40,000 annually for up to 8,000 trips using taxi vouchers. Handi-Van users would be able to purchase $20.00 in taxi vouchers once per month subject to the municipal budget limit; and

13.2.2. That Peterborough Transit consult with all licensed taxi companies concerning program design.

Recommendations in Section 13.3 (Community Bus)

13.3.1. That Peterborough Transit introduce the Community Bus service in consultation with seniors groups, persons with disabilities, other stakeholders and Handi-Van services staff;

13.3.2. That in the short term a first Community Bus route be established on a one year trial basis and if a performance target of 7 rides per hour is achieved that a second route be introduced;

13.3.3. That the Community Bus service be promoted to the target market, that dispatchers provide positive guidance and encouragement for registrants to use the service and that staff also adopt a target of one prescheduled Handi-Van Services trip being accommodated on each route cycle of the Community Bus;

13.3.4. That Peterborough Transit pursue partnership and sponsorship opportunities for Community Bus capital acquisitions and operations;

13.3.5. That Peterborough operate the first route using resources from the existing Handi-Van service; and

13.3.6. That Peterborough purchase a small low floor accessible vehicle (i.e. Arboc) for use in the Community Bus service; and that, as demand grows for Community Bus, Peterborough Transit should consider increasing the number of routes and operating at lower frequencies as well as potentially operating with conventional accessible buses of higher capacity (i.e. use of 30 foot transit buses).

Recommendations in Section 13.4 (Pre-scheduled Door-to-Door Service)

13.4.1. That Peterborough Transit improve the efficiency and expand the delivery of pre-scheduled door-to-door service through increased use of contracted taxi's in the short-term with a target of providing an additional 3,000 to 4,000 annual trips and accommodating 10 percent to 15 percent of all Handi-Van trips on taxi's within 3 years; and

13.4.2. That Peterborough Transit initiate discussions with all local taxi operators to seek their input and participation in the provision of scheduled door to door services.

Recommendations in Section 13.5 (Eligibility and Registration)

13.5.1. That Peterborough Transit revise its eligibility criteria by introducing three categories of eligibility: Conditional, Unconditional and Temporary. These should be based on a Family of Services concept.

13.5.2. That Peterborough Transit work with a contracted health care practitioner once a week (or as needed) to review applications and make decisions on eligibility.

13.5.3. That Peterborough Transit ask more detailed questions in its application form regarding the ability to use the Family of Services and the need for an attendant.

13.5.4. That Peterborough Transit prepare for the 2014 AODA legislation by having policies and procedures in place that:

- *always ensure that its Eligibility Application Process is completed within 14 days of receipt of each application;*
- *allow temporary access to its service after 14 days of an application, if a decision has not been made;*
- *has an independent appeal process in place; all appeal decisions must be made within 30 days of receipt of each appeal;*
- *has a policy with respect to the collection, use and disclosure of personal information; and*
- *has a procedure relating to the provision of temporary access to the service on compassionate grounds (prior to the 14 day eligibility assessment period).*

13.5.5. That Peterborough Transit continue to communicate CUTA, with the Ontario Public Transit Association (OPTA) and to watch the Metrolinx Web Site to determine if certain sets of eligibility criteria are emerging as Best Practices in the industry.

Recommendations in Section 13.6 (Advisory Committee for Seniors and Persons with Disabilities)

13.6.1. That Peterborough continue to work with the Transportation Sub-Committee of the municipal Accessibility Advisory committee, for the purposes of assisting staff in the implementation of the 'family of services' delivery model.

Recommendations in Section 13.7 (No-Show Enforcement Policy)

13.7.1. That Peterborough Transit re-establish its 'No-show' policy and enforce penalties based on consistent violation of the policy;

13.7.2. That Peterborough Transit initiate an education program to inform registered Handi-Van users about the implications of consistent no-shows and late cancellations to the availability of service to others; and

13.7.3. That the Transit Sub-Committee of the municipal Accessibility Advisory Committee be charged with addressing and providing advice to Transit management on customer complaint and issues including the 'no-show's'.

Recommendations in Section 13.8 (Customer Information)

13.8.1. That Peterborough Transit designate fully accessible stops and note these on its print and web information materials; and

13.8.2. That Peterborough Transit offer a Travel Training Program, to be delivered through the local service agencies.

Recommendations from Section 16 (Administrative Review)

16.4.1. That Peterborough Transit acquire appropriate software for more efficient and cost effective scheduling of conventional transit service.

16.4.2. That Peterborough Transit implement improvements to the Operator Recruitment program, which are more likely to attract candidates better suited to the role of transit operator, and which include:

- *Change the license criteria from a "CZ" to "G" and train new staff to meet the "CZ" licensing requirements;*
- *Change the hiring criteria to stress candidates with proven customer service skills;*
- *To better attract quality candidates, identify changes to the existing working oditions for part-time operators and evaluate the following options:*
  - *Establish a minimum guarantee for hours of work;*
  - *Consider limited improvements to fringe benefits; and*
  - *Conversion of some part time positions to full time extra board.*

16.4.3. That Peterborough Transit provide enhanced operator training by hiring a full-time Transit Training Coordinator with full license signing authority..

16.4.4. That Peterborough Transit develop standards for Operator Performance targeted to improve customer service, safe work practices, punctuality and attendance.

16.4.5. That Peterborough Transit implement improvements to operator performance management, including the development of an Attendance Management Program and provision of related staff training if required.

16.4.6. That Peterborough Transit carry out a complete review of the current payroll administration process to identify improvements which will save staff time, reduce errors and improve efficiency.

16.4.7. That Peterborough Transit undertake a complete review of the Peterborough Transit phone system to address the current limitations and provide efficient and cost effective solutions.

16.4.8. That Peterborough Transit acquire database software to improve management and analysis of all customer contacts.

16.4.9. That Peterborough Transit establish service standards for winter maintenance and ensure effective delivery.

16.4.10. That Peterborough Transit adjust the complement of Dispatch Supervisors from 7 part-time positions to 2 full-time and 4 part-time positions.

16.4.11. That Peterborough Transit, in consideration of the various changes to processes and procedures outlined above, carry out a detailed review of the operations supervisor positions to re-align duties and responsibilities.

Recommendations from Section 17.9 (Capital Asset Requirements)

17.9.1. That Utility Service Department staff to prepare a submission to council to seek urgent approval for the new Municipal Operations Centre and explore the opportunity for federal and/or provincial funding support.

17.9.2. That Peterborough Transit adjust the 10 Year capital budget for the Conventional Bus Replacement program to re-allocate the necessary funds to finance the acquisition of 15 new buses as outlined in Section 17.2.

17.9.3. That Peterborough Transit review the adequacy of funding for the bus refurbishing program to ensure planned expenditures match available funding.

17.9.4. That Peterborough Transit use six replacement buses to be acquired in 2012 for delivery in 2013, to provide the six expansion buses required for conventional service improvements proposed for 2013 and 2014.

17.9.5. That Peterborough Transit request additional capital funding in 2014, 2015 and 2016 to finance the acquisition of six expansion buses required for conventional service improvements in 2015, 2016 and 2017.

17.9.6. That Peterborough Transit immediately replace the five low floor specialized transit fleet and the 1999 high floor van with more reliable high floor lift equipped Handi-Van vehicles.

17.9.7. That Peterborough Transit, if necessary, conduct a full business case analysis, with appropriate resources and budget, to identify all issues related to the introduction of smaller buses to the Peterborough Transit fleet.

17.9.8. That Peterborough Transit review the adequacy of funding for the Maintenance Garage Equipment program.

17.9.9. Working with an Accessible Advisory Committee, Peterborough Transit identify the physical conditions required for a stop or shelter location to be designated as fully accessible and establish the related capital budget to fund AODA compliance.

17.9.10. That Peterborough Transit review the adequacy of funding for the acquisition of new and replacement shelters.

17.9.11. That Peterborough Transit consider the development of a warrant system governing the location of new shelters.

17.9.12. That the City of Peterborough develop a business case for a new Downtown Terminal and allocate required funding in the 10 Year Capital Program.

17.9.13. That the City of Peterborough undertake a site selection, preliminary design and costing study for a new downtown transit terminal (with consideration of multimodal coordination and transit-supportive land uses at the site) and that federal and provincial funding support be sought for implementation.

17.9.14. That Peterborough Transit establish a capital budget for the acquisition of an upgraded GPS and for a Transit Signal Priority (TSP) program.

Appendix A

Public and Stakeholder Consultation

1. Introduction

Over 30 comment sheets were filled out during the Let's Talk Transit Drop in Centre and provided to the study team. The following presents a summary of the feedback provided.

2. Employment Status

Employed (home)	Employed (outside home)	Unemployed / retired	Student (high school)	Student (post secondary)
3	7	13	0	0

3. How often do you use conventional transit / Handi-Van service?

	Daily	Occasionally	Rarely	Never	Total
Conventional Transit	15	1	4	3	23
Handi-Van	7	3	3	13	26
Use Both Systems					7

4. How would you rate the following elements of Peterborough Transit conventional services?

The following presents the number of occurrences in which someone responded to the question. While this does not form a statistically valid sample, it does provide some indication of what people like and don't like about the service.

	Excellent	Good	Fair	Poor	Not Applicable
Proximity of bus stop to home	11	6	3	1	0
Cost of bus fares	10	7	4	0	0
Reliability of service	6	8	5	2	0
Weekday level of service	4	10	5	1	0
Weekday evening level of service	4	10	2	4	0
Saturday level of service	6	8	3	2	0
Sunday level of service	4	10	2	3	0
Travel time in bus	4	6	5	4	0
Frequency of buses	4	3	7	6	0
Customer service	9	6	0	2	0

5. How would you rate the following elements of Peterborough Handi-Van service?

The following presents the number of occurrences in which someone responded to the question. While this does not form a statistically valid sample, it does provide some indication of what people like and don't like about the service.

	Excellent	Good	Fair	Poor	Not Applicable
Registration process	2	7	0	0	0
Booking a trip	2	5	2	2	0
Cost of fares	5	4	1	1	0
Reliability of service	3	6	1	0	0
Availability of Weekday service	4	5	1	1	0
Availability of Saturday service	3	2	2	1	3
Availability of Sunday service	3	3	1	1	2
Travel time	4	4	2	0	0
Customer service	6	4	1	0	0

*Responses received

6. What is your primary interest in the Peterborough Transit Operations Review?

What is your primary interest in the Peterborough Transit Operations Review?	
#	Comments
Most Common	
9	I am a frequent user of the services and feel there could be some improvement.
3	To see if we can develop a system that can run more smoothly and efficiently
2	We need to build a system that encourages people to use the service. If it's faster to walk or ride a bike, people won't use it.
2	Increasing frequency
Service Improvements	
3	To see if we can develop a system that can run more smoothly and efficiently
	To see improvements / changes to routes (hub vs. grid system) and costs to the riders of transit
	I would like improved service to areas that have had service cut
	I would like faster than 40 minute service
	Accessibility, affordability and dependability [of the service]
	I feel that the one-stop/isolation downtown is a waste of time
Personal Interest	
9	I am a frequent user of the services and feel there could be some improvement.
	I depend on the service
	I want to show support for the service by relaying comments I've heard from other transit users.
	To keep the service running
	From my own study there are approximately 1400 people living at the top of the parkway with no bus service available west on Clonsilla Ave.
	To get more information

Other Comments	
	I would like Peterborough to follow suit with other, similar sized communities and adopt a "rack, ride & roll" program where busses on certain routes have bike racks
	I want more people to stop driving to work (and lower Peterborough's carbon footprint). I believe the crucial step is getting people to try the bus, perhaps by promotions and things like Shifting Gears.
	I have had travel service in other cities as well as Peterborough

7. Comments on existing services (likes/dislikes):

Comments on existing services (likes/dislikes)	
Likes	
#	Comments
Most Common	
5	Most drivers are courteous and helpful
3	Affordable cost / reasonable fares
2	I like that all busses return to a central location, this insures that if you take the wrong bus or need to transfer, you can make the connection at a central location
Passes & Fares	
3	Affordable cost / reasonable fares
	The new ten-ride passes give a little break on the price ($2.25 is a high rate).
	Monthly passes
	Subsidized passes
Service	
5	Most drivers are courteous and helpful
2	I like that all busses return to a central location, this insures that if you take the wrong bus or need to transfer, you can make the connection at a central location
	I like that we have the service and you can get to most things
	Wonderful service
	Spacing between stops is good
	Convenient to certain locations
	40 minutes works
	The busses are accessible
Dislikes	
#	Comments
Most Common	
3	Booking [a van] a week in advance is unsatisfactory, a day in advance is more reasonable
3	Presently, if you miss a bus you have to wait 40 minutes for the next one. It is often easier (and faster) to walk than to wait for the next bus
2	The shortened run on Sundays
2	I know some drivers are burning out from overtime
2	Having to wait out in bad weather
Passes & Fares	
	Having to pay full price for a child's pass
	People getting on the bus with no pass or cash (no ride)

Service	
3	Presently, if you miss a bus you have to wait 40 minutes for the next one. It is often easier (and faster) to walk than to wait for the next bus
2	The shortened run on Sundays
	Customer service to the terminal (by phone) is not as good as it once was
	Poor customer service - complaints don't get responses
	If busses are delayed you cannot get through to the terminal in a timely manner (previously 5 minutes, currently about 20 minutes).
	Passengers can often miss the bus because the bus is ahead of schedule (e.g. inbound Lansdowne bus)
	If the conventional bus goes by and the wheelchair spots are full, it passes me by
	There is not enough service to meet trips required
	I see many busses go by and you see 2-3 busses go by at the same time - the first is packed, and the next are empty because people don't know when the next bus will come
	If you rely on service to go to a movie, you have to go in the afternoon
	In the summer when there are events in Del Crary Park you can't access it (you can get there, but you can't get home)
	There are not enough busses running between downtown and Trent University
	Busses sit too long after appointed time to leave
	People don't like wasting time waiting at the Downtown Station
Weather Issues	
2	Having to wait out in bad weather
	When it snows the bus shelters are not shoveled out. This causes riders to wait close to the road which is dangerous
Handi-Van Service	
3	Booking [a van] a week in advance is unsatisfactory, a day in advance is more reasonable
	Handi-Van hours are not late enough, especially on weekends
	Having a Handi-Van Service tell me what time I am going home
	Sometimes you need more help from the drivers to get on or off the van, some will help while others don't
	When the drivers skip runs
	When the drivers are rude
General Dislikes	
2	I know some drivers are burning out from overtime
	When the drivers skip runs
	When a Transcab wouldn't take me out
	When the drivers are rude

8. Suggestions for Future Improvements:

Suggestions for future improvements	
#	Comments
Most Common	
5	Better (improved) plowing of sidewalks at intersections and bus stops so the winter travel and getting on/off busses is less dangerous (e.g. Water Street @ Marina Blvd)
4	More frequent service
3	More shelters where they are needed- particularly at Wal-Mart and Zellers
3	More frequent service during peak times
3	Expand services into areas that currently don't have any service / need improved service

2	Run busses until 10:00 pm, particularly on Sundays
2	Increase the number of vans and drivers, as many people rely on this service and the help from the drivers & staff
2	Take suggestions from drivers and riders who use the system to review the system and make adjustments where required
2	Introduce some busses that are express north/south and east/west that bypass the station hub (i.e. a bus from Parkhill South to Lansdowne, with no downtown bypass).
Service	
4	More frequent service
3	More frequent service during peak times
3	Expand services into areas that currently don't have any service / need improved service
2	Run busses until 10:00 pm, particularly on Sundays
2	Increase the number of vans and drivers, as many people rely on this service and the help from the drivers & staff
	Extend evening service - if I go out I usually miss the last bus home
	Increase the number of busses as the city grows
	Increase the hours of service to have ridership for shift workers
	More runs to Fleming and Trent during evenings and weekends
	More service to the west
	Better customer service
	Have busses only travelling on arterial streets
	We don't need busses travelling through residential areas (adding to noise and air pollution).
	Hire more drivers
	It is reasonable for people to walk 10 - 15 minutes to a bus stop as long as you are assured you will get a bus every 15 - 20 minutes along main routes (Lansdowne, George, Chemong, Parkhill, Charlotte, etc.)
	A regular bus on Clonsilla Ave West would be an improvement
	A bus service to and from Lakefield
	Put extra busses on the longest routes
Passes & Fares	
	There should be a low rate for high school students
	I think if a person receives a subsidized pass on OW or ODSP, so should their spouse and/or dependents
	Group rates perhaps - we recently took 14 youth on an outing which cost us (a non-profit organization) $56 just for the youth (there were 4 adults as well).
	Bus pass vouchers from Ont. Works should be accepted at the Peterborough Square and Lansdowne Mall kiosks instead of just at the transit terminal.
	Better and more expedient connections to the transit office (by phone)
	Drivers waiting at half time if ahead of schedule
	Automated announcement stop installed as quickly as possible
	Light on name signs at front of busses be left on at the terminal, in case people can't see bus signs & numbers at the terminal platform
Weather Issues	
5	Better (improved) plowing of sidewalks at intersections and bus stops so the winter travel and getting on/off busses is less dangerous (specifically Water Street @ Marina Blvd)
3	More shelters where they are needed- particularly at Wal-Mart and Zellers
HandiVan Service	
2	Increase the number of vans and drivers, as many people rely on this service and the help from the drivers & staff
	Buy new Handi-Vans to ease up on the amount of wheelchairs on the busses
	Repair Handi-Vans when necessary
	Buy new Handi-Vans to ease up on the amount of wheelchairs on the busses

	Introduce a service to take a van out of town (currently have to use a cab)
	Being able to book a van a couple of days in advance and be able to come home when I want to
General Recommendations	
	Don't take [transit] away
	Allow people to carry their dogs on and hold them (even charge a fee)
	Make it easier for working and service dogs to be accepted on transit vehicles
	Increase advertising in bus shelters and in the busses to help cover costs
	Provide signage to explain the routes and system for new users - make it easier to try the bus

9. Other Comments:

Other Comments	
#	Comments
Most Common	
3	The drivers are excellent at being helpful, friendly and courteous to passengers / great service
3	Don't agree with elderly or disabled diving up spaces at the front for strollers and young able-bodied parents, another solution for strollers needs to be found
2	The hub system of having all busses go downtown and sit (idling) or a while is a big waste of time. A grid system should be developed.
2	The Handi-Van is my main form of transportation, as I don't drive and have a fixed income. I have depended heavily on the Handi-Van service for daily activities and appointments for years.
Service	
3	The drivers are excellent at being helpful, friendly and courteous to passengers / great service
	They need to put on extra busses on routes that are busiest with more riders to help carry the load and keep them on schedule.
	In Peterborough, our frequency of service is very low compared to other communities
	I have often heard people describe feeling "isolation" as they feel stuck without access to transit above the parkway
	Cutting transit services would see a lot of people staying in because they can't afford other forms of transportation (e.g. cabs).
	The Trent service is much better than the regular service
	Peterborough has a tag-line "It's a natural," and improved bus service would help make this true
	The busses are sometimes not on time
	Service is good for Peterborough
	Overall I am impressed with the drivers but I can't say the same for the people calling out the busses (there is one especially that is very ignorant on the radio with the drivers).
	I notice that the busses move regularly up and down the parkway
	They need to put on extra busses on routes that are busiest with more riders to help carry the load and keep them on schedule.
Handi-Van Service	
2	The Handi-Van is my main form of transportation, as I don't drive and have a fixed income. I have depended heavily on the Handi-Van service for daily activities and appointments for years.
	Independence is very important and having the Handi-Van service allows me to stay that way as I can't drive.

Accessibility / Mobility Issues	
3	Don't agree with elderly or disabled diving up spaces at the front for strollers and young able-bodied parents, another solution for strollers needs to be found
	There are some issues regarding the rights of people with walkers, wheelchairs, scooters and parents with strollers & whom should be made to move
	Many seniors with walkers & mobility [issues] do not know where they are; an automated stop announcement would help solve this problem as people could be alert prior to their stop
	Bike racks should be installed on the front of busses
	Bus shelters are only required for stops with high usages (should monitor and identify these stops)
Hub System / Idling / Wait Times	
2	The hub system of having all busses go downtown and sit (idling) or a while is a big waste of time. A grid system should be developed.
	Take a serious look at the N/S, E/W system and eliminate wasted time.
	Busses are also waiting too long at Fleming College
Transit System Design	
	The system needs to quit bringing in people from outside of Peterborough to design the routes. They need to listen to the people who use it as well as the drivers who drive them (they are the ones that know). People from out of town don't use them and have no idea of what goes on.
	It would be nice if City Council read and acted on consultant reports
	Maybe our mayor, Mr. Bennett should ride the busses for one day and talk to those who ride.
General Comments	
	We need our transit, it should not be taken away from us, it should be improved. No money, no pass, no free ride
	It seems strange that there have been battles in Council and during elections over the parkway, while the community on the west side of Clonsilla was gradually growing and they need to have public transportation
	Announcements for meetings in radio and fliers on the busses prior to meetings
	Dispatch is great

1. Introduction

The following presents a summary of comments heard at the first focus group for the 2011 Peterborough Transit Operations Review. The focus group was held at the Evinrude Centre on October 26th, 2011 between 6:00pm and 8:00pm. Overall, 20 people were in attendance; representing a broad cross section of conventional transit users and Handi-Van users. A list of attendees is appended to this memo.

2. Peterborough Transit Services Today – What Do you Like?

Participants were asked what they liked about the service today. The following responses were provided.

- Affordable (especially for persons with a disability) (still some issues of people walking to avoid fare).
- Reduces the stress of driving.
- Can use travel time productive.
- Drivers go out of their way to be helpful.
- Much better - Like Handi-Van now with computer system – get put on wait list for trip and usually get it.
- Frequent service on Trent Express and Fleming Express.
- Regular bus usually on time.
- All come to downtown is good if you are downtown employer/shop owner.
- Driver discretion. Drivers will stop between stops and let passengers off in the evening for safety purposes.

3. Peterborough Transit Services Today – What Don't you Like?

Participants were asked what they didn't like about the service today. The following responses were provided.

- Inefficiencies in terms of the number of dispatchers required to operate the service (inefficient management of services).
- Late buses pulling into the downtown terminal makes entire city late. Will often pull a entire run on the whole system to catch up.
- No direct travel on Lansdowne and Chemong (don't want to go into the downtown all the time).
- Lack of connection from Fleming and Trent Express (coordinate with City Bus).

- No access to rural areas outside the city.
- 40 minute schedule is too long and confusing. Society runs on a half hour or hourly schedule.
- Not enough done to attract new users to the system. Marketing info needs to do a better job attracting new users.
- Not enough bus shelters.
- Customer service – Long wait times on phones… Used to get through in 5 min. – now – 20 minutes.
- Bus run early - don't stop at timing point. (6 responses)
- Conflict on accessible low floor vehicles for priority seating (wheelchairs, strollers, seniors. There needs to be a clear policy. Often, the two spots are full and persons in a mobility device can get left behind at the stop.
- Hub leads to duplication of routes.
- Fleming Express quick but not enough runs.
- Municipal contribution for transit is termed as a "subsidy". We should not use this term as we don't use it on other infrastructure and services (i.e. municipal contribution towards roads is viewed as an 'investment'; not a subsidy.
- Not a car-centric community. Cities are for people and should be planned that way.

4. Your Transit Experiences Elsewhere

For the remainder of the session; participants were split into three groups to discuss potential improvements. Each table was facilitated by a member of the consulting team or a Peterborough staff member.

For the first question; participants were asked what improvements they have seen elsewhere that may work in Peterborough.

Table 1

- Build for people, not for cars.
- Connect with urban planning – people, pedestrian and transit.
- St. Catharines Transit terminal is drive in – drive out – no backing up, less time lost.
- A clock at each hub stop. No dispatcher – they leave on time on their own.
- Buses arrive at the hub at 30-minute intervals, on the hour and half hour and on the quarter hour.
- Kingston – more decentralized with a transfer system – 8 hubs.
- Info to riders: Toronto can book Handi-Van on-line with a confirmation number. This reduced time on the phone.

- Web-site to plan your route on-line.
- York Region Transit - GPS computer screen on bus schedules tell you when the next bus will arrive.
- Tell everyone how much ridership has increased.
- Some extra buses at high use times.

Table 2

- Free transit days → Portland, Windsor.
- Overlapping linear runs → Port Hope.
- On-line tools that help users go from point to point → Ottawa
- U-Pass - subsidized by schools, businesses, etc. → Guelph; requirement by city of developers, etc.
- Employee passes → contributed by employees themselves.
- Smart Card system → Presto (GO).
- Connections between transit systems.
- Timed transfers onto any run → Dresden.
- Universal transfers.
- Light-Rail.

Table 3

- Voucher system for Handi-Van users, so that they can obtain more last-minute travel.
- GPS tracking system on buses to allow for live run-time updates at major stops.
- Employ U-Pass (employers guarantee particular number of riders and transit subsidize passes for employees of that workplace).
- Use the city buses for school children (high school) rather than the yellow bus.
- Institute a 'do not turn away' policy for users who cannot afford the cost of a trip/pass.
- Remove city/country subsidy divide.

5. What improvements are needed for Current or New Riders?

Participants were asked what improvements they have seen elsewhere that may work in Peterborough.

Table 1

Current Riders

- Provide clocks at the terminal – outside
- Handi-Van – can only book 7 days ahead. Would like to book closer to the day of my trip.
- Handi-Vans often totally booked. Should put extra vans on when they're needed.
- Have a floating Handi-Van available to assist during peak times.
- Establish a policy to allow request stops so all drivers will do it and passengers know they can request it.
- Respond to customer management calls/complaints/ policy questions in a timely way.
- Provide consistent, accurate info on whether buses on time.
- Provide some service on holidays.

New Riders

- More drivers.
- Market transit for green impact and convenience.
- Improve service and travel time.
- Coordinate major employers with transit schedule – also Lansdowne.
- Increase time span of Handi-Van.
- Lower the age for seniors to 62.
- Design transit to get drinkers home safely and later.
- Market the reliability of buses.
- Smaller buses? (may not be more efficient).
- Brag about how well the buses are maintained.
- Repair the big dip in Simcoe Street at the entrance to the terminal.
- Market the different demographics of those who ride the bus.
- Develop a campaign to challenge the stigma.
- Address the conflict between wheelchairs and strollers.
- Address stroller safety.

Table 2

Conventional Transit

- Frequency - Better than 40 min → 30 minutes during peak periods.
- Regional service variation → targeted.
- Re-evaluate routes.
- Linear routes → grid system → transfer points.
- Connection from Fleming to Trent.
- Better use of current resources → downtown over-serviced while developing areas poorly serviced.
- Transitions to cycling → bike racks on buses (recognize storage of buses is an issue).
- Better location for storage of buses.
- Better use of resources like advertising on buses.
- Functionally/institutionally transit needs to be more integrated both information wise and in linking to their ridership. Transportation needs to see transit as important and essential.
- New riders need incentives.
- Promotion of bus services to new riders.
- Rural buses → more access to outlying areas.

Handi-Van

- Booking for Handi-Van services overbooked. 1-2 week wait times. Most Handi-Van services only available by planning 1-2 weeks in advance. Need to improve.
- Better customer service for Handi-Van users.
- More attention needed to volume of accessibility / disabled / elderly in City of Peterborough.
- Some issues are needed to be revisited in terms of modern accessibility changes → strollers vs wheelchairs or the elderly. More wheelchair spots?
- More shelters.
- Increasing service to certain runs (i.e. more than one bus) for certain accessibility intensive runs.

Table 3

Current Riders

- Implementation of audio-stop announcement needs to be completed.
- More expedient removed of snow from bus stops.
- Stop improvements: stops need to be

New Riders

- Have stop times associated with every bus stop – this needs to be advertised on the stops using a sign or automated call-in system.

paved to facilitate snow removal and accessibility.

- Frequency of services improved – perhaps pilot a 20-minute peek period service.
- Consider switching to a grid system rather than a hub system (or a grid/hybrid system).
- Reduce length of 80 minutes service – make more direct.
- Consistent end-of-service / beginning of service start times (for weekday – weekend times).
- Consider having smaller buses running during lower usage times.
- Handi-Van services needs to have a pre-booked option as well as last-minute booking.
- To help alleviate the pressure on the H-V service, try to better integrate volunteer drivers (i.e. for medical appointments, etc.).
- Provide bike racks on all buses to facilitate multi-modal travel → find new bus storage facility, if racks cannot be accommodated in current barn.
- Create expertise social enterprise opportunities re: driver – incorporate existing and no community groups in service provision.
- London has a congestion fee where you are charged a fee to come into the city.
- Market a new vision to the whole community
- Get younger seniors on the bus – 60 or 62 for the senior rate
- More people can access disability passes
- Free New Year's Eve.
- Special offers to attract new riders.
- Discounted employer passes.

- School kids use transit not school buses.

6. Priority Setting

Participants were asked to prioritize the long list of improvements into a top three for Handi-Van and conventional transit. These are the improvements that they felt would make the most difference.

Table 1

Conventional Transit

- Making transit an essential service fully funded by the City budget and not as a subsidy.
- Re-examine routes and how they are servicing ridership to points they are connecting to (linear transfers) → more connections not through central hubs. → combination of hub and spoke and linear.
- Marketing and promotion of buses to new riders. (Incentives)
- Increased frequency and reliability on that frequency - > 40 min.
- Schedules posted at bus stop → route information.
- Changing bus storage to allow better use of buses (e.g. bike racks).

Handi-Van

- Co-ordination and efficient use of available Handi-Van services. Currently there is duplication and inefficiency.
- Increase in service → currently booking a week ahead maximum. Service over-burdened.
- Emergency service available?
- Improved customer service.
- Accessible stops.

Table 2

Conventional Transit

- Shorter wait times.
- Flexible buses and schedules with room for all the divers users.
- Clear the stops in winter and sidewalks.
- More bus shelters.
- Restructure the Terminal.

Handi-Van

- Improve customer service.
- More vans.
- More flexible.
- Accessible lens to review all aspects.
- Accessible shelters amenities, clocks, washrooms

Table 3

- Audio – Announcements.
- Snow cleaning at the bus stops and paving at the stops.
- Improve service to increase ridership – municipal commitment to promoting socially and environmental responsible transportation.
- Integrate transit service into land-use and transportation planning (e.g. require stops in new developments rather than as an afterthought).
- If transit revenues exceed targets set by the municipality, consider re-investing $$ in the system.
- Consider having more free/discounted regular service ($1 Fridays, etc.) to encourage usage.
- Have times associated with each stop and hold drivers accountable to these times.
- Consider more ways of knowing where the bus is (apps. or on-line access to live bus schedule) – GPS.

7. Your Vision for Peterborough Transit

Participants were asked about their vision for Peterborough Transit. If you were writing a transit vision for Peterborough, how would you articulate it.

- Everyone using public transit
- More people choosing to use the system as an option
- Creative class people in the community
- Ned to have effective public transit systems
- Increase in transit traffic and decrease in automobile traffic (single occupant vehicle)
- A community that takes pride in an efficient and accessible transit system that is head and shoulders above the rest.
- Affordable system
- Integrated system (conventional transit, Handi-Van – Fleming and Trent, transit and GO) – regional travel and transit and active transportation
- Fun and friendly
- Change the way we think about transit in terms of funding
- There are real financial benefits to promoting transit – costs are born by the municipality but benefits are broader (i.e. improvements to health care)
- Demonstrate linkages between transit and broader community goals
- Cross marketing to achieve top technology
- Gleening group – improve integration between different groups (brought in the ground floor) – Peterborough transit integrated through partnerships
- Safe

- Ridership growth – employees with u-pass or discounted passes – high school kids riding transit.
- Our system is:
  - Accessible
  - Green
  - Safe
  - Flexible
  - Friendly
  - Reliable
  - Clean
  - Fun
  - Efficient
- Part of an integrated regional system
- Everybody uses public transit
- Choice based as well as needs based
- Decrease in single occupant vehicles
- Incentives to use transit not cars

Minutes of Meeting

DILLON CONSULTING

Subject:	City of Peterborough – Public Transit Operational Review – The Route Ahead		
Purpose:	Focus Group #2		
Present:	See agenda / invite list		
Date:	31 January 2012	Project #	11-5470

Item	Notes
	Dennis Kar (DK) and Beatrice Schmied (BS) presented information regarding the current service operations and performance of the Peterborough Transit service and discussed potential for improvement. BS noted that no decisions had been made as the focus group's input and insights would be required to move forward with development of a draft strategy. Following the presentation a broad discussion was held with all participants.
1	Summary on initial round table discussions All participants in the group using wheelchairs have experienced bus being full with no further room for them to board. There was some discussion about who should get priority: parents with strollers or persons using mobility devices? Taxi Scrip concept explained and discussed – many felt that could be useful in winter months but that half price fares may still be too high for many. BS noted that AODA legislation may assist to control fare levels. DK noted that this is not a replacement of Handi-Van service – just an alternate option. Group noted that at least two utilize trans-cab services on regular basis and were satisfied with the service. Group happy to hear that transit ridership is growing but felt that this was not perception of Council. Also surprised to note that Handi-Van use is falling as some feel more service is needed. Noted a need to further inform council that the service is effective relative to its peers in terms of ridership and financial performance. Indicates that Peterborough Transit has room to expand.
2	Group asked whether issues presented have been fully captured: Concern generally expressed over drivers taking breaks when vehicles arrive at terminal and leaving passengers standing in cold. Coordinated service arrival means that terminal is very busy for a 5 to 10 minute period and waiting passengers increase congestion. Would like to see policy where drivers let passengers wait on the bus while they are waiting for all connections to be made. Also noted early departures at stops major problem, particularly with long wait times and 40 minute frequency. Many times, entire trips are missed to get back on schedule, with little communication. Late running services cause break-downs in operations as one late vehicle can hold up whole system. Missed transfers create problems and drivers do not always ask passengers about transfers and call ahead to manage. Communications generally considered poor, although stop announcements now working and welcomed. All feel that better communication in terminal, enhanced signage and real-time displays would raise the profile of transit. Current arrangements at terminal felt to be chaotic and facilities dated. Policies should be enforced, such as drivers communicating with connecting buses on behalf of customers. General reiteration that Council attitude to Transit perceived to be second class mode – looking for ways to keep funding low.

	Some attributed lower Handi-Van use to more low-floor buses allowing easier use of conventional service. Also felt that complaints to Peterborough Transit were ignored. Complaint processes acknowledged as being in place, but no outcomes or responses provided. Transit should be given better traffic light priority than it currently does.
3	Group asked what they considered to be major destinations: Hospital; Wal-Mart; Lansdowne Place; Lansdowne Rd generally; Farmers Market; Chemong Road, downtown core, high and elementary schools. It was felt that there was too much duplication of service in some areas.
4	Requested feedback on affordability and financial issues. DK noted that system is cost effective, fares are low and cost recovery levels are higher than peers. Suggestion to improve charging for young children for travel with parents – many travel free. Transit should not have to act as a social service for riders needing lower fares – separate agencies needed for that. Generally OK with concept of fare increase if linked to service improvements. Fares generally perceived to be at lower end of cost range. Can sales tax and development charges be used to subsidize service improvements? Transit returns revenue to Council; roads do not! General comment made that if suitable service is provided, people are prepared to pay for it. Bus passes should be made available in more than two locations. Should help increase ridership and revenue.
5	Views on outline service improvement options Some felt that 30 minute frequency option did not work well and would not work again. However, approximately 40% would support frequency increase at this level. Remainder not generally in favour. 20 minute peak frequency was supported but group were concerned over how this could be managed with 80 minute service routes. 40 minutes not felt to be good enough. 80% agreed with this. Most supported all day improvement to 20 minute service if it can be achieved. Noted that new developments and neighbourhoods need to have transit accessibility fully integrated as part of planning process. This will form part of our review. The idea of a Community Bus was well received. There should be evening service on Saturdays to accommodate the bar crowd. Target students and bar crowd better – e.g. free New Year's Eve Service.
6	Group asked what they would do to improve terminal. Drive-in Reverse-out arrangement considered hazardous and requires supervisor control. Children can sometimes run behind buses to catch connections. Need to address poor layout and safety issues Terminal should have call-out announcements; visible clocks; better quality facility; better organization; better security.
7	How can communications be improved? Suggested use of social media, schools for young. Seniors in more traditional way – community channel. Upgrade the transit web site, and include some interesting transit statistics.

	Bus routes would be better to have names than numbers for easy identification by customers. The route names on buses should be at eye level for customers at the terminal and on buses. There should be additional information on the route guide, such as policy info. Some seniors could act as Transit Ambassadors by ensuring that their seniors' building or centre is stocked with current transit information. Communications should be targeted by demographic groups. Better education is needed for transit riders and for car drivers (e.g. yield to buses).
8	General issues raised at closing round table: Poor sidewalk and stop maintenance in winter creates hazard. Gap between stops can be too long – need closer to door service in winter Women should be allowed to alight at preferred locations in hours of darkness – drivers sometimes refuse. It was noted that drivers currently do this, but the policy should be better communicated. Transit services ending too early create problems for regular users / those that rely on service to get around.
9	Next Steps Team to review outcomes of discussions, develop draft strategy and present at a public open house in the Spring.

Introduction

On May 24, 2012 Dillon Consulting held a Public Information Centre to present the findings and recommendations of the Transit Operations Review. Approximately 129 people were in attendance and 60 comment sheets were filled out and provided to the study team. The following presents a summary of the feedback provided.

Demographics

Adult	Senior	High School Student	Post-Secondary Student
35	18	1	1

How often do you use conventional transit / Handi-Van service?

	Daily	Occasionally	Rarely	Never	Total
Conventional Transit	39	7	4	1	51
Handi-Van	1	5	1	44	51

*A total of 5 people indicated they make use of both systems to make their trips.

Do you want to suggest any specific changes to the proposed routes for conventional transit service or the community bus routes?

- Do not suppress early hours on Saturday morning or provide one ride to connect to GO transit station (first one in the day) for people that wish to go downtown Toronto for the day or to catch a train at the Oshawa GO station.
- Hours of operation should be extended to midnight (Monday to Saturday) and to 9pm on Sunday.
- In the winter buses should run every 20 minutes to avoid having people waiting out in the cold for long periods of time.
- All bus stops should be accessible.
- 10 people were concerned with the proposed changes to Route 10. They would like the routing to remain unchanged.
- 5 people were concerned with the proposed changes to Route 11. They would like the routing to remain unchanged and suggested that the route should continue to service Willowbrook Plaza.
- 3 people were concerned with combining Route 9 and East-Bank service. They would like Route 9 to remain unchanged.
- A number of people supported the Community Bus concept.
- It was noted that travelling along Park St instead of George St is inconvenient and that there would be a loss of access to Market Plaza and No Frills.

Interlining means that when a bus reaches the terminal, it will change route numbers allowing passengers on that bus to transfer to another route without leaving the bus (i.e. Route 1 becomes Route 2). If routes are being interlined at the terminal, which route pairs should be interlined for your convenience?

The following presents the number of occurrences in which someone responded to the question. While this does not form a statistically valid sample, it does provide some indication of which routes should be interlined at the terminal.

A number of people were concerned with how this concept would be communicated to passengers. Ten people were not in favor of the idea and thought it would be confusing for passengers.

Route	Frequency of response
Chemong and Monaghan	4
Chemong and Charlotte	3
Chemong and Fleming	2
Chemong and Highland	1
Chemong and Major Bennett	1
Jackson Park and Ashburnham	1
Collison and Ashburnham	1
Collison and Lansdowne	1
Collison and Highland	2
Collison and Monaghan	1
Collison and Charlotte	2
George St N and Monaghan	1
George St N and Highland	1
Geroge St N and Charlotte	1
George St N and Lansdowne West	1
SSFC and Charlotte	1
SSFC and Monaghan	1

Which routes should be prioritized for 20 minute service during the peak periods?

The following presents the number of occurrences in which someone responded to the question. While this does not form a statistically valid sample, it does provide some indication of which routes the public would prefer to have 20 minute service.

Route	Frequency of response
SSFC/Kawartha	5
Lansdowne West	16
Monaghan Road	18
Trent Express	3
Collison	7
Charlotte West	11
Jackson Park	1
George St N	5
Chemong	9
Route 9/East-Bank	1

What are your thoughts on the recommendations for Handi-Van services?

- The most frequent comment received was that the requirement to book a trip one week in advance is very inconvenient. Passengers should be able to book a trip any time and only a few days in advance.
- It was also noted that service hours should be the same as conventional service and that passengers should be allowed to book a trip at any time in the day.
- Additional comments included the need for more vans, and to include the Brock and Reid stop (St. Peter's KPP Building) as part of the North Loop.

Are the current fares affordable? Would you be prepared to contribute more toward service improvements?

- It was generally noted that the current fare system in place is affordable and that the majority of people would be willing to accept a small fare increase if service improvements were made.
- 2 people were willing to pay up to $3 a ride. Ten people noted that they would not be willing to pay more for transit.
- Four people noted that the current fare for children is too expensive. They would like to see an increase in the age of a child at which parents are required to pay a fare.

Other comments

The following presents a summary of general comments received:

- Extended service hours on Sunday and service on holidays is required.
- Extend service hours to midnight.
- Buses need to be more reliable, adhere to schedule.
- 3 people expressed the need for improved bus stops and additional shelter/seating at each.
- Better winter maintenance and accessibility to stops is needed.
- 2 people expressed the need for bike racks.

- 6 people noted that strollers take up a number of seats on the bus which prevents seniors and wheelchairs from boarding the bus.
- More staff is needed at the customer service window during the first/end of the month period
- Concerns with the merge of Route 9 and the East-Bank Express, in which 2 distinct populations will be required to merge onto one route.
- It was suggested that vans be used for regular routes when ridership is low.

Appendix B

Examples of Transit Terminals

WYNDHAM

MacDONNELL STREET

WYNDHAM STREET

RELOCATE EXISTING PEDESTRIAN CROSSING EAST TO NEW INTERSECTION

NEW SIGNALIZED INTERSECTION WITH TRANSIT PRIORITY

RESTRICTED TO TRANSIT VEHICLES ONLY

RESERVED PARKING FOR TRANSIT

OVERFLOW PLATFORM/PUBLIC WASHROOM

HOTEL

29 SPACES

POTENTIAL SNOW STORAGE

PROPOSED SIDEWALK WIDENING

DELIVERY AREA

CARDEN STREET

TRACK SHIFT SOUTHERLY BY 2m

MOUNTABLE CURB

SIGNALIZED INTERSECTION WITH TRANSIT PRIORITY

TWO-WAY TRAFFIC

ONE-WAY TRAFFIC

INTER-CITY

PASSENGER DROP OFF

PROPOSED TOE WALL

TAXI PARKING

TRANSFORMERS TO BE RELOCATED

PROPOSED BIKE SHELTER

MONUMENT

VIA RAIL STATION

A

B

NEW SIDEWALK AND REMOVAL OF EXISTING PEDESTRIAN TUNNEL RAMP (FINAL TREATMENT TO BE RESOLVED)

PARKING

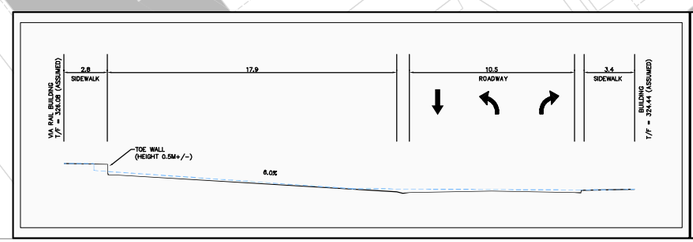
WALKER BUILDING

RELOCATED SOUTH TRACK

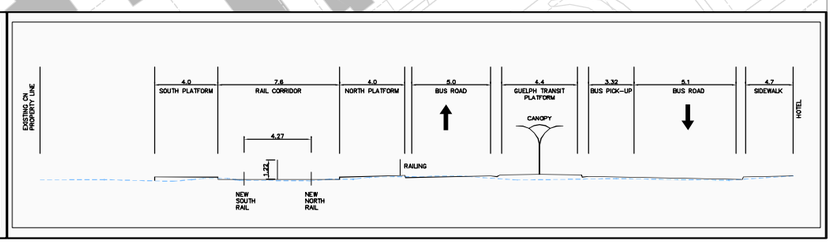
FARQUHAR STREET E.

NEEVE STREET

SECTION A-A'



SECTION B-B'



LEGEND

- GO PLATFORM
- BUILDINGS
- BUS PLATFORM
- PEDESTRIAN CROSSING
- EXISTING TRANSFORMER
- GUELPH TRANSIT BUS
- INTER-CITY BUS
- PARATRANSIT BUS
- RAILING
- DECORATIVE PAVING STONE
- TOE WALL
- CANOPY
- CURB
- CURB AND GUTTER
- POTENTIAL DRIVER WASHROOMS

0 5 50

25

Revisions		
No.	Description	Date
1	RE-ISSUED WITH SOUTH RAIL TRACK SHIFT	6/15/09
2	RE-ISSUED WITH GO PLATFORM SHIFT	6/23/09
3	GENERAL LAYOUT REVISIONS	6/29/09
4	GENERAL LAYOUT REVISIONS	11/03/09
5	*	*

City of Guelph
Inter-Regional Transportation Terminal
Concept Development

PRELIMINARY DESIGN CONCEPT NORTH SIDE

CITY OF Guelph Making a Difference

Project No:	09-1932	Designed By:	AMS
Project Manager:	PAM	Drawn By:	AMS
Location:	091932	Checked By:	PAM
File Name:	Proposed Rail Works	Date Issued:	11/5/09

DILLON CONSULTING

Figure No. 4

G:\CAD\091932 Guelph Transit\Proposed Rail Works_AMS_Oct 1,09.dwg Modified: November 5, 2009

T.8 Brantford - Brantford Transit Terminal

STATUS

Opened October 1988

PROPERTY

Property Size: 30.5 metres by 80.8 metres
Property Area: 0.246 hectares
Former Land Use: Municipal Parking Lot

PLATFORMS

Driving Area
Surface Material: Concrete
Pedestrian Platform
Surface Material: Concrete
Bus Bay Design: Centre island saw-toothed
Number of Bus Bays: 11
Number of Layover Bays: 1
Platform Covered: Canopy

BUILDING

Terminal Building: Yes
Building Area: 165 sq.m.
Climate Controlled: Yes

COSTS

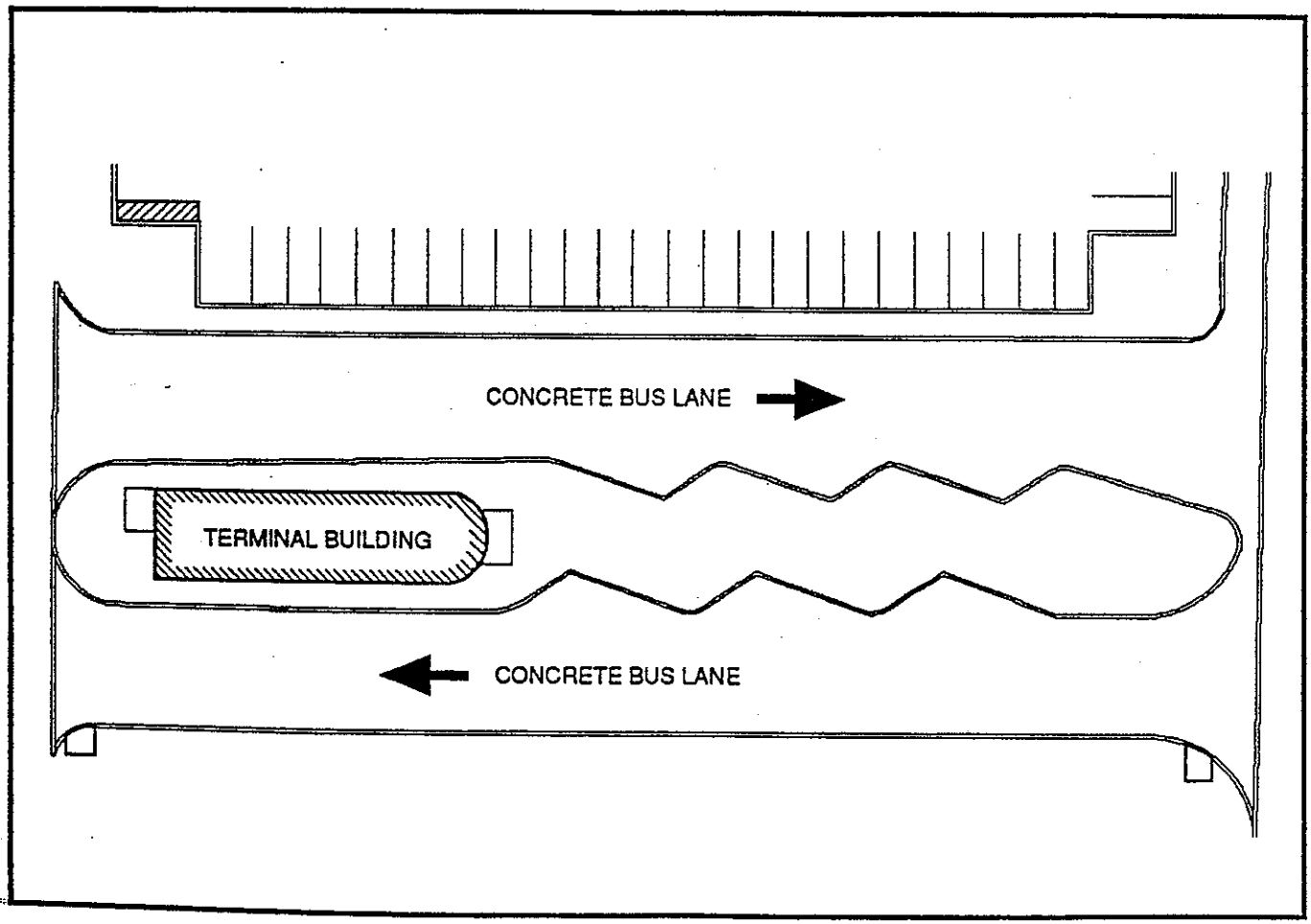
Property: $478,000
Construction: $900,000
Total: $1,378,000
Subsidy: $1,028,876

FACILITIES

- **BPX:** ?
- **Kiosk:** No
- **Restaurant:** No
- **Snack Bar:** Yes
- **Vending Machines:** No
- **Convenience Counter:** Yes
- **Telephones:** Yes
- **Video Games:** No
- **Public Washrooms:** Yes
- **Driver's Room:** Yes
- **Dispatch Room:** Yes
- **Clerk's Office:** Yes
- **Staff Washrooms:** Yes
- **Maintenance Room:** Yes
- **Advertisement Area:** Yes
- **Intercity Bus:** Yes

OTHER COMMENTS

- snack bar leased



T.4 Brampton - Bramalea City Centre Transit Terminal

STATUS

Opened June 1990

PROPERTY

Property Size: 230 metres by 37 metres
Property Area: 0.851 hectares
Former Land Use: Parking Lot

PLATFORMS

Driving Area
Surface Material: Asphalt
Pedestrian Platform
Surface Material: Brick
Bus Bay Design: Centre island saw-tooth with parallel bus bay
Number of Bus Bays: 14
Number of Layover Bays: 7
Platform Covered: Yes - two (2) shelters

BUILDING

Terminal Building: Yes
Building Area: 105 sq.m.
Climate Controlled: Yes

COSTS

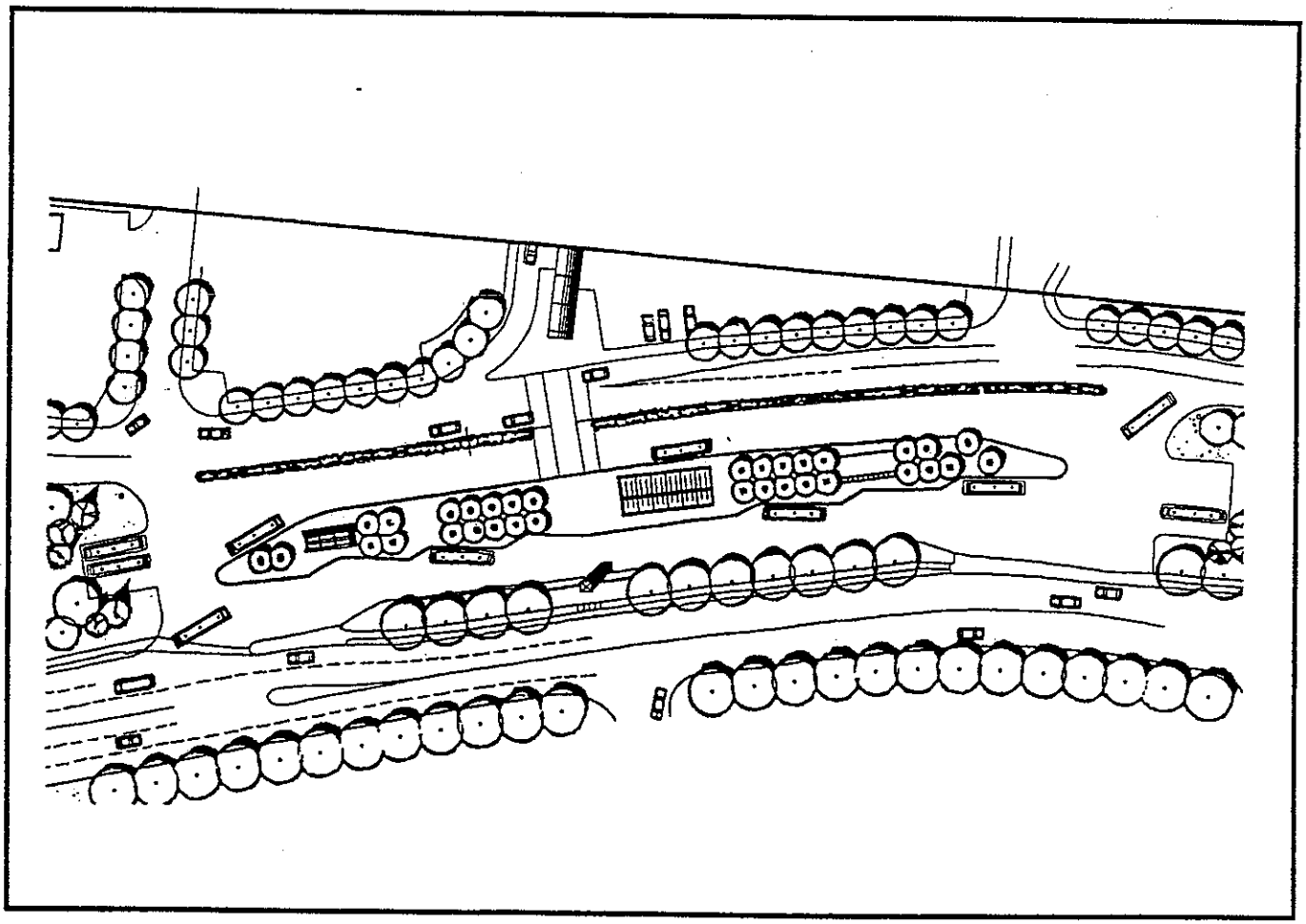
Property: N/A
Construction: N/A
Total: N/A
Subsidy: N/A

FACILITIES

- **BPX:** ?
- **Kiosk:** Yes
- **Restaurant:** No
- **Snack Bar:** No
- **Vending Machines:** Yes
- **Convenience Counter:** Yes
- **Telephones:** Yes
- **Video Games:** No
- **Public Washrooms:** Yes
- **Driver's Room:** Yes
- **Dispatch Room:** Yes
- **Clerk's Office:** Yes
- **Staff Washrooms:** Yes
- **Maintenance Room:** Yes
- **Advertisement Area:** No
- **Intercity Bus:** ?

OTHER COMMENTS

- Property cost is unknown



T.3 Thunder Bay - Water Street Transit Terminal

STATUS

Completed

PROPERTY

Property Size: 31.5 metres by 70 metres
Property Area: 0.221 hectares
Former Land Use: Mixed Retail and Parking

PLATFORMS

Driving Area
Surface Material: Asphalt
Pedestrian Platform
Surface Material: Brick
Bus Bay Design: Centre island saw-tooth
Number of Bus Bays: 10
Number of Layover Bays: 0
Platform Covered: No

BUILDING

Terminal Building: Yes
Building Area: 170 sq.m.
Climate Controlled: Yes

COSTS

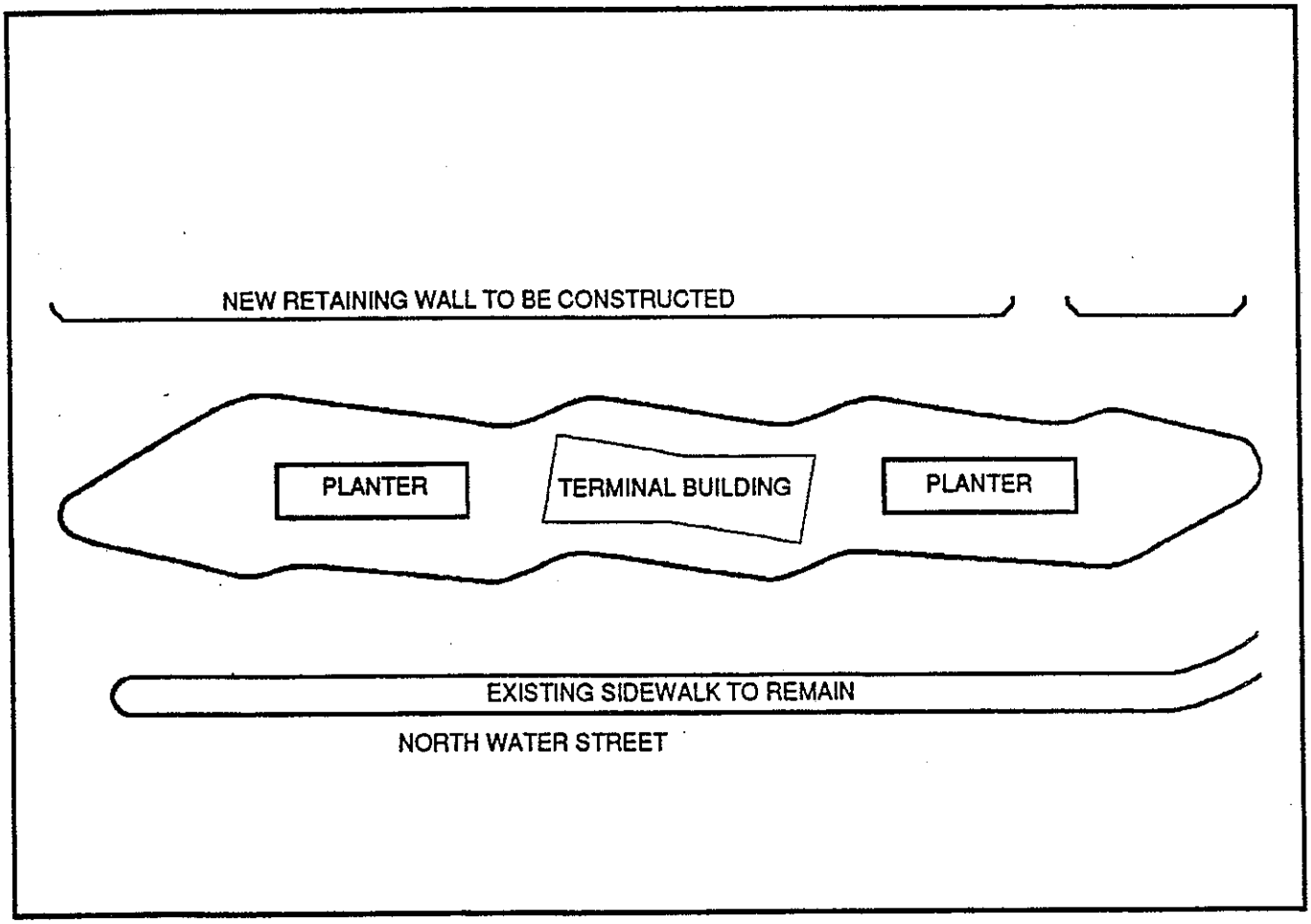
Property:	$300,000
Construction:	$258,000
Total:	$558,000
Subsidy:	$418,500

FACILITIES

- **BPX:** ?
- **Kiosk:** Yes
- **Restaurant:** No
- **Snack Bar:** No
- **Vending Machines:** No
- **Convenience Counter:** No
- **Telephones:** Yes
- **Video Games:** No
- **Public Washrooms:** No
- **Driver's Room:** Yes
- **Dispatch Room:** No
- **Clerk's Office:** No
- **Staff Washrooms:** Yes
- **Maintenance Room:** Yes
- **Advertisement Area:** No
- **Intercity Bus:** ?

OTHER COMMENTS

- Property cost is an estimated
- Subsidy is an estimate



Appendix C

Design Guidelines for Accessible Transit Stops and Facilities in Ontario

Design Guidelines for Accessible Transit Stops and Facilities in Ontario

Table of Contents

1. Introduction

The Accessibility for Ontarians with Disabilities Act (AODA) was enacted into law in 2005 to develop, implement, and enforce accessibility standards for Ontarians with disabilities with respect to the built environment and structures, customer service, and employment. The Act sets out January 1, 2025 as the horizon date of meeting accessibility throughout the province.

The Ministry of Community and Social Services has developed, or is in the process of developing, a series of standards in the following areas to identify, remove, and prevent barriers to accessibility:

- **Customer Service** (adopted as regulations 429/07 and 430/07, and placed into effect on January 1, 2008);
- Employment, Information and Communications, and Transportation (combined into an **Integrated Accessibility Regulation**, adopted as regulation 191/11, and placed in effect July 1, 2011); and,
- **Built Environment** (Final proposed standard released for review in July, 2010).

Information on the process and development of the above standards and regulations are available on the Province of Ontario's website, http://www.accesson.ca/.

1.1 Purpose of this Document

The *Integrated Accessibility Regulation* includes measures for ensuring consultation with local accessibility advisory committees regarding transit stops and shelters and ensuring accessorily of same going forward. The purpose of this report is to provide members of the Ontario Public Transit Association (OPTA) with a guideline document to be utilized as a starting point with respect to accessible stops and shelters. The guideline material is based on a review of:

- Existing accessibility standards and guidelines for transit agencies in Ontario and across Canada;
- Accessibility guidelines contained in the Americans with Disabilities Act; and,
- Best practices from around the world.

2. Definitions

For general definitions regarding accessibility and barrier-free environments as set out in the *Accessibility for Ontarians for Disabilities Act*, refer to the associated sections and clauses in those documents, available online:

- Accessibility for Ontarians with Disabilities Act, 2005: http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_05a11_e.htm

For the purposes of this document regarding accessibility for transit stops and facilities, the following definitions apply, as adapted from the following documents:

- Federal Transportation Administration regulations, *Part 37 – Transportation Services for Individuals with Disabilities (ADA)*: http://www.fta.dot.gov/civilrights/ada/civil_rights_3906.html.

- Ontario Building Code, 2006

Bus or Highway Coach means any of several types of self-propelled vehicles, generally rubber-tired, intended for use on city streets, highways, busways or segregated rights-of-way including but not limited to minibuses, 9.6 metre to 13.5 metre buses, 18 metre articulated buses, highway coaches, double-deck buses, and electrically powered trolley buses, used by public entities to provide designated public transportation service and by private entities to provide transportation service including, but not limited to, specified public transportation services. Self-propelled, rubber-tired vehicles designed to look like antique or vintage trolleys are considered buses.

Commuter bus service means fixed route bus service, characterized by service predominantly in one direction during peak periods, limited stops, use of multi-ride tickets, and routes of extended length, usually between the central business district and outlying suburbs. Commuter bus service may also include other service, characterized by a limited route structure, limited stops, and a coordinated relationship to another mode of transportation.

Commuter rail transportation means short-haul rail passenger service operating in metropolitan and suburban areas, usually characterized by reduced fare, multiple ride, and commutation tickets and by morning and evening peak period operations. This term does not include **light** or **rapid rail** transportation.

Demand responsive system means any system of transporting individuals, including the provision of designated public transportation service by public entities and the provision of transportation service by private entities, including but not limited to specified public transportation service, which is not a fixed route system.

Facility means all or any portion of buildings, structures, sites, complexes, equipment, roads, walks, passageways, parking lots, or other real or personal property, including the site where the building, property, structure, or equipment is located.

Fare paid areas means that portion of a *rapid transit station* to which access is gained by a pass or by paying a fare.

Fare-paid area control means the point where passengers enter or leave the *fare-paid area*.

Fixed route system means a system of transporting individuals (other than by aircraft), including the provision of designated public transportation service by public entities and the provision of transportation service by private entities, including, but not limited to, specified public transportation service, on which a vehicle is operated along a prescribed route according to a fixed schedule.

Key transit stations means *transit stations* where the following criteria are met:

(1) Stations where passenger boardings exceed average station passenger boardings on the rail system by at least fifteen percent, unless such a station is close to another accessible station;

(2) Transfer stations on a rail line or between rail lines;

(3) Major interchange points with other transportation modes, including stations connecting with major parking facilities, bus terminals, intercity or commuter rail stations, passenger vessel terminals, or airports;

(4) End stations, unless an end station is close to another accessible station; and,

(5) Stations serving major activity centres, such as employment or government centres, institutions of higher education, hospitals or other major health care facilities, or other facilities that are major trip generators for individuals with disabilities.

Light rail or **streetcar** means a rail vehicle operated on city streets, semi-exclusive rights of way, or exclusive rights of way. Service may be provided by vehicles with step-entry or by level boarding with a platform.

Paratransit (also, **specialized transit**) means comparable transportation service for individuals with disabilities who are unable to use fixed route transportation systems.

Rapid rail means a subway-type transit vehicle railway operated on exclusive private rights of way with high level platform stations. Rapid rail also may operate on elevated or at grade level track separated from other traffic.

Transit station means the portion of a property located appurtenant to a right of way on which *commuter rail*, and *rapid rail systems* and connecting *fixed route systems* are operated, where such portion is used by the general public and is related to the provision of such transportation, including passenger platforms, designated waiting areas, restrooms, and, where a public entity providing public transportation owns the property, concession areas, to the extent that such public entity exercises control over the selection, design, construction, or alteration of the property.

Transit stop means a designated location on-street or in a designated or segregated right-of-way where individuals board and alight from *bus* or *light rail fixed route systems*.

Transit facility or **transit terminal** means a physical structure the primary function of which is to facilitate access to and from a transportation system which has scheduled stops at the structure. The term does not include an open structure or a physical structure the primary purpose of which is other than providing transportation services, such as administration, maintenance, or storage facilities.

2.1 Implementation

The standards proposed in this guideline are intended to apply for new construction or extensive renovation/change only.

3. Accessible Design Guideline for Transit Stops

3.1 Applicability and Implementation

The following section applies to *transit stops* served by *fixed route systems* and *specialized transit*.

New construction and reconstruction of existing *transit stops* should be in accordance with the following section. The timing of the retrofit of existing *transit stops* will be at the discretion of the responsible transit agency, with priority given to key transit stops at locations with high passenger volumes, transfers between routes and transit modes, or in proximity to major activity centres and other facilities that are major trip generators for persons with disabilities.

3.2 Areas of Consideration

When designing *transit stops*, consideration should be given to three main areas of activity:

- **Transit zone**, the area within the roadway where the transit vehicle will enter, service, and depart from the stop;

- **Passenger zone,** the area where boarding and alighting from transit vehicles occurs; and,
- **Wheelchair pad,** the area that accommodates the boarding and alighting from transit vehicles by persons using a wheelchair or scooter.

3.3 Minimum Dimensions

Transit Zone

The transit zone shall allow enough space for a bus to stop within 15 centimetres of, and parallel to, the curb.

Design considerations for transit zones include:

- The type of *transit stop*, such as a pull-out bay versus within a general traffic lane;
- The type and configuration of transit vehicle serving the stop; and,
- The number of transit vehicles that may serve the stop at the same time.

Passenger Zone

The passenger zone shall:

- Be constructed with a minimum length of 9.0 metres (to accommodate boarding and alighting via the front and rear doors) and a clear 1.5 metre width parallel to the vehicle roadway, to the maximum extent allowed by legal or site constraints;
- Have a maximum slope of 2%, measured perpendicular with the curb for drainage purposes;
- Be provided with a hard surface throughout the passenger zone except where environmental or aesthetic requirements require the minimization of hard surfaces. When such requirements are in place, hard surfaced landings shall be provided that line up with doors for passenger boarding and alighting;
- Provide tactile treatments to mark accessible boarding locations in accordance with the Detectable Indicator requirements set out in the *Final proposed Built Environment Standard* and in this report Appendix A; and,
- Be connected to streets, sidewalks, or pedestrian paths by accessible exterior routes as set out in the *Final Proposed Built Environment Standard* and in this report Appendix A,

Wheelchair Pad

The wheelchair pad shall have the following to allow for the majority of scooters and wheelchairs to navigate and for the boarding ramp to deploy on equipped vehicles:

- A minimum width of 2.0 metres and a depth of 2.75 metres, positioned where accessible boarding will occur; and,
- A 2.7 metre vertical clearance to allow for the deployment of boarding ramps.

The wheelchair pad area can be contained within the dimensions of the *passenger zone*, provided the area is kept clear of all obstacles.

3.4 Transit Stop Amenities

Seating

Where provided, seating and benches shall:

- Provide seating requirements in accordance with the Street Furniture requirements set out in the *Final Proposed Built Environment Standard* and in this document Appendix A
- Be within a transit shelter, where there is one present; and,
- Be a minimum length of 1100 mm to comfortably accommodate two persons.

Shelters

Where provided, shelters shall:

- Be installed or positioned as to provide an *accessible exterior route* from the shelter to adjacent sidewalks, streets, or pedestrian paths and the *passenger zone*;
- Have a minimum clear floor area that is 750 mm wide and 1250 mm deep entirely within the perimeter of the shelter to accommodate a wheelchair or a scooter; and,
- Provide a lighting level of not less than 100 lx, provided by adjacent street lighting or lighting integrated into the shelter, in accordance with Exterior Lighting requirements set out in the *Final Proposed Built Environment Standard* and in this report Appendix A.

3.5 Signage and Customer Information

Stop Identification Pole and Sign

Stop identification pole and sign are the main means of identifying a bus stop; therefore, it needs to be clearly visible. Sign should give basic information, such as routes served and direction.

- The stop identification pole should be located at a standard or uniform position at all stops, to the maximum extent possible, as they serve as a point of reference for those with disabilities, particularly the visually impaired.
- The stop pole shall be located 0.45 m from the back of the face of the curb.
- The design of each pole and sign should be consistent throughout the transit system as to provide a strong visual identity for the system and to provide clarity to transit users.
- The stop identification sign shall comply with technical Signage requirements as set out in the *Final Proposed Built Environment Standard* and this report Appendix A

  Where new stop identification signs are installed or old signs are replaced, they shall comply with the requirements in this section.

Customer Information

- The name or location (street name and intersection) of the stop shall be prominently displayed at each stop.

- Where possible, an additional sign with tactile characters and Braille should be provided on the signage pole or other consistent location.

- At a minimum, schedule and route information should be available at all transfer locations. When possible, system maps and general system information should be posted in all bus shelters.

- Where electronic or real-time service information is provided, it shall comply with the signage provisions set out in the *Final Proposed Built Environment Standard* and be designed to provide audible information on demand.

- Bus schedules, timetables or maps are not required to comply with the Signage provisions set out in the *Final Proposed Built Environment Standard*..

4. Transit Stations, Terminals, and Facilities

4.1 Applicability and Definitions

The following section applies to *new construction transit stations, transit terminals, and transit facilities* and to the retrofit of *key transit stations*.

4.2 Areas of Considerations

When designing *new transit stations, transit terminals, and transit facilities* and the retrofit of *key transit stations*, the following areas should be considered as key aspects of achieving an accessible design:

- An **accessible entrance** that provides access to fixed routes of the transit system;
- An **accessible route** from the *accessible entrance* to the service areas of the *transit station*; and,
- **Accessible amenities**, such as washrooms, where they are provided for users of the transit system.

4.3 Station Elements

Accessible Entrance

Where different entrances to a station serve different transportation fixed routes or groups of fixed routes, at least one entrance serving each group or route shall comply with Entrance provisions set out in the *Final Proposed Built Environment Standard* and this report Appendix A.

All accessible entrances shall, to the maximum extent practicable, coincide with those used by the majority of the public.

In below ground transit stations, at least one entrance to each station shall comply with Entrance provisions set out in the *Final Proposed Built Environment Standard* and this report Appendix A.

Fare-paid area control at transit station entrances shall comply with Entrance provisions set out in the *Final Proposed Built Environment Standard* and this report Appendix A.

Where station is not staffed, an assistance phone / intercom shall be provided. The location and accessible route to such phone / intercom shall be clearly signed and shall comply with the Signage requirements set out in the *Final Proposed Built Environment Standard* and this report Appendix A.

Signage and Customer Information

Directional signage to station entrances shall be provided along major pedestrian corridors in station area and from nearby destinations. Directional signage should provide the most direct path.

Where any entrance is not barrier-free, directional signage shall be provided that gives directions to the nearest barrier-free, accessible entrance. Directional signage to accessible entrances shall be marked with the universal symbol of accessibility.

Station entrance signage shall be placed either above or adjacent to the station entry. Accessible entrances shall be marked with the universal symbol of accessibility. Signage shall include, at a minimum, the name of the station.

All directional and station entrance signage must comply with the Signage requirements set out in the *Final Proposed Built Environment Standard* and this report Appendix A.

Directions to accessible entrance and accessible route shall comply with Wayfinding requirements as set out in the *Final Proposed Built Environment Standard* and this report Appendix A.

Accessible Route

Accessible interior routes from an accessible entrance to those areas necessary for use of the transportation system shall be provided. The accessible route shall include the features specified in the Interior Accessible Route requirements as set out in the *Final Proposed Built Environment Standard* and this report Appendix A, and in Clause 3.8.1.3 – Barrier-Free Path of Travel – of the *Ontario Building Code, 2006*.

Tactile navigational strips shall be provided along accessible routes, consistent with the Detectible Indicator requirements as set out in the *Final Proposed Built Environment Standard* and this report Appendix A.

Lighting along accessible routes within *transit stations* shall be illuminated to an average level of not less than 200 lx measured at floor level, consistent with the Lighting requirements as set out in the *Final Proposed Built Environment Standard*.

Escalators. Where provided in below grade stations, escalators shall have a clear width of 815 mm minimum.

Track Crossings. Where it is necessary to cross tracks to reach boarding platforms, the route surface shall be level with the rail top at the outer edge and between the rails, except for a 65 mm maximum gap on the inner edge of each rail to permit passage of wheel flanges. Where gap reduction is not practicable, an above-grade or below-grade accessible route shall be provided.

Signage and Customer Information

Where circulation paths and movement corridors for persons with disabilities are different than those for general public use, accessible routes shall be clearly signed and marked.

Directional signage along accessible route shall be placed at frequent intervals and at decisions points such as corridor junctions and at landings for escalators, elevators or stairways.

Directional signage shall comply with all technical Signage requirements as set out in the *Final Proposed Built Environment Standard* and this report Appendix A.

Passenger Waiting and Boarding Areas

An accessible *passenger waiting and boarding area* will be provided at all *fixed route system* service areas, connected to the *accessible entrance* by *accessible routes*.

Lighting at passenger waiting and boarding areas within *transit stations* shall be illuminated to an average level of not less than 200 lx measured at floor level, consistent with the Lighting requirements set out in the *Final Proposed Built Environment Standard* and this report Appendix A.

A *designated waiting area* shall be defined in each passenger boarding area. Where multiple transit routes serve the same general passenger area, only one designated waiting area shall be required. This designated waiting area shall be positioned to provide the most direct and short route to the accessible boarding location of the transit vehicle, when only specific locations on a vehicle are deemed accessible.

The designated waiting area shall include the following:

- Seating consistent with Seating (benches) requirements as set out in the *Final Proposed Built Environment Standard* and this report Appendix A;
- Lighting at least double the illumination level of the surrounding *passenger waiting and boarding area*

Signage and Customer Information

Signage with information on routes and destinations served by the station shall comply with all technical Signage requirements as set out in the *Final Proposed Built Environment Standard* and this report Appendix A.

A minimum of one sign identifying the specific station and routes served shall comply with signage requirements per above.

Boarding areas shall be clearly marked with signage providing route and direction information.

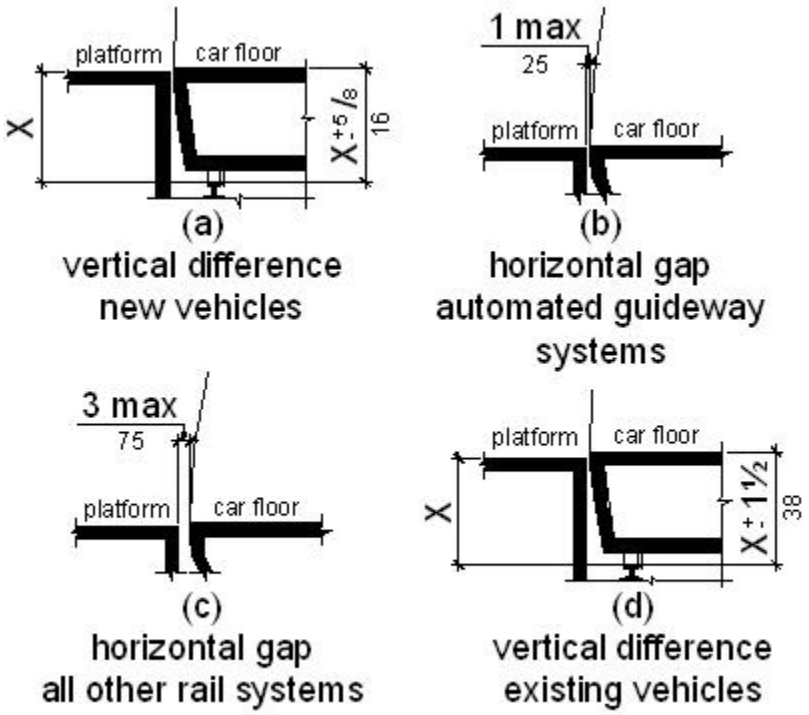
A minimum of one sign identifying the specific station that complies the above shall be provided on each platform or boarding area.

Signs shall be placed at frequent intervals, be clearly visible and account for potential obstructions (i.e. to the maximum extent practical, provide alternatives to signage obstructed by high volume of users/people or high noise levels).

Platform Requirements

Where platform edges border a drop-off and are not protected by platform screens or guard-rails, the platform edge shall have detectable warnings that comply with the Detectable Warnings requirements as set out in Clause 8.6 of the *Final Proposed Built Environment Standard* and this report Appendix A.

In stations covered by this section, rail-to-platform height shall be coordinated with the floor height of vehicles so that the vertical difference, measured when the vehicle is at rest, is within plus or minus 16 mm (38 mm for retrofit of existing systems) under all normal passenger car load conditions. The horizontal gap, measured when the vehicle is at rest, shall be 75 mm maximum.



NOTE: x = rail-to-platform height

Where it is not structurally or operationally feasible to meet the horizontal gap or vertical difference requirements, mini-high platforms, car-borne or platform mounted lifts, ramps or bridge plates, or similar manually deployed devices.

Washrooms

Transit Stations, transit terminals, and transit facilities will provide washrooms consistent with the Washroom requirements as set out in the *Final Proposed Built Environment Standard* and this report Appendix A, and the *Ontario Building Code* within **non-*fare paid* areas** of station areas. Additional washroom facilities within *fare-paid* areas of a transit station*, transit terminal, or transit facility* may be provided at the discretion of the responsible transit agency.

Washrooms, where provided, shall be constructed to be consistent with the Washroom requirements as set out in the *Final Proposed Built Environment Standard* and this report Appendix A, and the *Ontario Building Code*.

4.4 Minor Station Elements

Where provided, the following minor station elements shall comply with the following requirements:

Public Address Systems. Where public address systems are provided to convey information to the public in *transit stations*, it shall comply with Clause 6.4 of the *Final Proposed Built Environment Standard* (http://www.mcss.gov.on.ca/en/mcss/programs/accessibility/Built_Standard/standard/section%206.4_built.aspx).

5. References

The following documents have been used as a basis for this document.

Ministry of Community and Social Services (2005). Accessibility for Ontarians with Disabilities Act. Accessed from http://www.mcss.gov.on.ca/en/mcss/programs/accessibility/OntarioAccessibilityLaws/2005/index.aspx.

Ministry of Municipal Affairs and Housing (2006). Ontario Building Code.

- Section 3.8 – Barrier-free Design

Department of Transportation (United States of America) (2006). ADA Standards for Transportation Facilities. Accessed from http://www.access-board.gov/ada-aba/ada-standards-dot.cfm.

United States Access Board (2002). ADA Accessibility Guidelines for Buildings and Facilities. Accessed from http://www.access-board.gov/adaag/html/adaag.htm.

Federal Transit Administration (United States of America) (2007). Transportation Services for Individuals with Disabilities. Accessed from http://www.fta.dot.gov/civilrights/ada/civil_rights_3906.html.

The following pages are excerpts from the Final Proposed Built Environment Standard. These requirements have not been finalized, nor adopted into any regulation. They are provided for your reference when developing guidelines with respect to accessible transit stops and shelters.

8.7 Detectable Indicators

Rationale

Detectable indicators provide important navigational cues for persons with low or no vision. These surfaces alert all pedestrians to potential hazards, such as crosswalks, ramps and stairs or drop-offs at transit platforms. Suitable surfaces include a change in texture and high colour contrast but should not present a tripping hazard. Detectable indicators should be used consistently throughout a facility.

Functional Description

This section addresses detectable surfaces used to identify potential hazards through the use of distinct changes in colour and texture. Detectable indicators have a texture that can be felt under foot or detected by a person using a long cane. The texture is either built-in or applied to the walking surface. Typical locations for detectable indicators include (but are not limited to): top of stairs; curb ramps; and at unprotected edges with a change in level (such as at the edge of a transit platform).

Committee Comment It was noted that for some applications of these requirements a different profile for the tactile surface may be used e.g. transportation. Tactile systems should be selected to be appropriate to the hazard or intended use. Existing standards do not include sufficient information to prescribe specific tactile system designs.

Technical Requirements

8.7.1 Indicators

8.7.1.1 Types

Detectable floor and ground warning surfaces shall be used to inform persons who are walking over them of three possible situations:

a) a hazard indicator signals that a person should stop;
b) a warning indicator signals that caution should be taken; and
c) a direction indicator facilitates wayfinding in open areas and signals a route to be taken.

8.7.1.2 Hazard Indicators

8.7.1.2.1 HAZARD SURFACES

Detectable hazard surfaces shall

a) be used consistently throughout a facility;
b) be detectable when walked upon as being different in texture from adjoining surfaces;
c) have a visual tonal contrast with adjoining surfaces that meet the requirements of Clause 6.1.12, Tonal Contrast;
d) be slip resistant;
e) have minimum glare; and
f) be composed of truncated domes that
    i. have a height of 5 mm (0.2 in) ± 0.5 mm (0.02 in);
    ii. have a base diameter of 23 mm (1 in) ± 2 mm (0.08 in);
    iii. are not be more than 3 mm (0.1 in) above or below the surrounding surface; and
    iv. are organized in a regular pattern with spacing of 60 mm (2.4 in) ± 5 mm (0.2 in) on centre.

Note: *Applying a paint finish to a concrete surface does not provide appropriate detectability.*

8.7.1.2.2 LOCATION

A detectable hazard indicator shall be located at

a) an unprotected drop-off edge, such as a transit platform, where
    i. the change of elevation is greater than 250 mm (10 in); and

ii. the slope is steeper than the ratio of 1:3 (33.3%);

b) the unprotected edges of a reflecting pool;
c) curb ramps; and
d) an entry into a vehicular route or area where no curbs or other elements separate it from the pedestrian route of travel (e.g. traffic islands at pedestrian crossings).

8.7.1.2.3 INSTALLATION OF HAZARD INDICATORS

A detectable hazard indicator shall be installed

a) a distance of 600 mm to 650 mm (24 in to 26 in) from the edge of the hazard;
b) along the full width of the hazard;
c) so that the base surface is level with, or not more than 3 mm (0.1 in) above, the surrounding surface; and
d) without creating a tripping hazard.

8.7.1.3 Warning Indicators

8.7.1.3.1 LOCATION OF WARNING INDICATORS

A detectable warning indicator for stairs shall

a) be provided
   i. where the stairs are not enclosed;
   ii. at each landing incorporating an entrance into a stair system;
   iii. where the regular pattern of a stairway is broken; and
b) where the run of a landing not having a continuous handrail is greater than 2100 mm (83 in);
c) extend the full width of the stair; and
d) have a depth of 900 mm to 920 mm (35 in to 36 in), commencing one tread depth from the edge of the stair.

8.7.1.3.2 CONFIGURATION OF WARNING INDICATORS

A detectable warning indicator shall be composed of continuous ridges that

a) have a height of 4 mm (0.16 in) ± 1 mm (0.04 in);
b) have a width of 6 mm (0.24 in) ± 2 mm. (0.08 in); and
c) are spaced from 50 mm (2 in) ± 10 mm (0.4 in) on centre.

8.7.1.3.3 INSTALLATION OF WARNING INDICATORS

A detectable warning indicator shall

a) have ridges that run perpendicular to the route of travel;
b) not create a tripping hazard; and
c) have the base surface level with, or not more than 3 mm (0.1 in) above, the surrounding surface.

8.7.1.4 Directional Indicators

8.7.1.4.1 CONFIGURATION OF DIRECTIONAL INDICATORS

A detectable direction indicator shall be composed of continuous ridges that

a) have a height of 2 mm (0.08 in) ± 0.5 mm (0.02 in) from the base surface;
b) are spaced from 15 mm (0.6 in) ± 9 mm (0.35 in) on centre; and
c) have a top width of 0.16 times the spacing width.

8.7.1.4.2 INSTALLATION OF DIRECTIONAL INDICATORS

A detectable direction indicator shall

a) have a width of 600 mm (24 in) to 800 mm (32 in);
b) have a clear space of at least 320 mm (13 in) on each side;
c) be installed with the ridges running in the direction of the route of travel;

d) not create a tripping hazard; and
e) be installed with the base surface level with, or not more than 3 mm (0.1 in) above, the surrounding surface.

8.7.2 Ramps

Detectable indicators at ramps shall
a) be provided at the top, intermediate level and bottom of the ramp;
b) extend the full width of the ramp;
c) have a depth of at least 920 mm (36 in) with an offset of 300 mm (12 in) from the landing; and
d) comply with Clause 8.7.1.2, Hazard Indicators.

8.7.3 Curb Ramps

Detectable indicators at curb ramps shall
a) be provided at the top and bottom of the curb ramp;
b) extend the full width of the ramp;
c) have a length of 600 mm (24 in) to 650 mm (26 in), starting at 150 mm (6 in) to 200 mm (8 in) from the curb; and
d) comply with Clause 8.7.1.2, Hazard Indicators.

8.7.4 Elevated Platforms

Detectable indicators at elevated platforms shall
a) be consistent throughout the setting; and
b) be positioned parallel to the open platform edge, extending the full length of the platform;
c) be 610 mm (24 in) deep from the edge of the elevated platform; and
d) comply with Clause 8.7.1.2, Hazard Indicators.

***Note**: Elevated platforms such as stage areas, speaker podiums, etc. should be accessible to all.*

8.7.5 Pedestrian and Vehicular Intersection

If a pedestrian walk crosses or joins a vehicular way and the walking surfaces are not separated by curbs, railings, or other elements between the pedestrian areas and vehicular areas, the boundary between the areas shall
a) be defined by a continuous detectable warning surface along the full length of the crossing boundary between the walking surface and the vehicle way; and
b) have a depth of at least 920 mm (36 in).

8.7.6 Escalator

Escalators shall incorporate detectable warning surfaces in compliance with Clause 8.7.1.2, Hazard Indicators and shall be provided at the head and foot of the escalator.

5.1 Accessible Exterior Route

Rationale

Accessible exterior routes shall provide a clear path of travel to facilities and address the range of capabilities of the individuals that might use them. Consideration shall be given to the expected number and type of users in determining the design parameters that will enable independent, safe, and efficient use of the exterior walk by individuals of all ages and abilities. Accessible exterior routes shall provide a path of travel that is free from safety hazards or barriers that impede users. In outdoor environments, the most common barriers to use of an exterior route are inadequate drainage from rain, or snow melt, the formation of ice or a soft or unstable ground surface.

Irregular surfaces, such as cobblestones or pea-gravel finished concrete, are difficult for both walking and pushing a wheeled mobility device. Uneven surfaces can also create unpleasant and damaging vibration for wheeled mobility device users. Sand and gravel surfaces are extremely difficult for wheeled mobility devices and walking aids.

Functional Description

This section addresses accessible exterior routes. Accessible exterior routes and walkways serving buildings are pedestrian circulation paths that provide access to facilities and elements outside a building, and include elements within a privately owned site, as well as public right-of-ways. Accessible exterior routes and walkways that service buildings include (but are not limited to)

(a) sidewalks and footpaths;
(b) routes across plazas and other open spaces, elements within public common-use areas on a privately owned site;
(c) public right-of-ways;
(d) ramps;
(e) curb ramps;
(f) stairs; and
(g) elevators, or other elevating devices (as permitted) where a difference in elevation exists.

Accessible exterior routes and walkways that service buildings do not include trails and pathways within parks and other natural environments, or privately owned homes.
Note: *The requirements for trails are addressed in Clause 11.1, Paths and Trails.*

Technical Requirements

5.1.1 Criteria for Exceptions

5.1.1.1 Conditions

Accessible exterior routes and walkways shall comply with this Clause, except where compliance would

a) cause substantial harm to cultural, historic, religious, or significant natural features or characteristics;
b) substantially change the intended experience provided by the facility;
c) require construction methods or materials that are prohibited by federal, provincial, or local law, other than laws whose sole purpose is to prohibit use by persons with disabilities; or
d) be impractical due to physical terrain; or

5.1.1.2 Variances

Should the criteria for exception occur as noted in Clause 5.1.1.1, Conditions, then the conditions on the exterior walk and walkways may vary to the extent indicated, but the variance should always be the minimum required over the shortest distance possible.

5.1.2 Clear Width and Reduced Width

The minimum clear width for accessible exterior routes and walkways shall

a) be 1500 mm (60 in);
b) if one or more of the criteria for exception exists as noted in Clause 5.1.1, Criteria for Exceptions the width of the exterior walk and walkways may be reduced to a minimum of 1200 mm (47 in), provided that passing spaces of at least 1800 mm (71 in) in width and 1800 mm (71 in) in length are provided at intervals not to exceed 50 m (164 ft.); and
c) be reduced to 920 mm (36 in) at curb ramps.

Notes:
1)The permitted reduction should be as small as possible, and it should continue for the shortest distance possible.
2) The minimum clear width does not include objects (e.g., cars, etc) that could overhang into the accessible exterior route.

Committee Comment
The Committee is seeking public input on whether the space and distance provided above are sufficient.

5.1.3 Running Slope

5.1.3.1 Limit

The running slope for accessible exterior routes and walkways shall

a) not exceed 1:20 (5%), unless one or more of the criteria for exception applies as noted in Clause 5.1.1, Criteria for Exceptions; and
b) be the minimum permitted by the terrain.

5.1.3.2 Level Rest Area

Where the running slope exceeds 1:20 (5%), a level rest area complying with Clause 3.8, Rest Areas shall be provided every 30 m (98.5 ft.).

5.1.4 Cross Slope

5.1.4.1 Exterior

The cross slope on accessible exterior routes and walkways shall;

a) be the minimum required to maintain proper drainage; and
b) not exceed 1:20 (5%) unless one or more of the criteria for exception occur (see Clause 5.1.1) .

Note: *The cross slope of 1:50 (2%) as noted in Clause 9.11.4 for parking spaces and access aisles should be maintained. In high pedestrian traffic areas the cross slope should be maintained at 1:50 (2%) wherever possible.*

5.1.4.2 Level Rest Area

Where the cross slope exceeds 1:20 (5%), a level rest area shall be provided every 30 m (98.5 ft.), complying with Clause 3.8, Rest Areas.
Note: *Rest areas are provided every 30 m (98.5 ft.) so that people using assistive devices can rest periodically, and thereby manage cross slopes in these areas.*

5.1.5 Tonal and Tactile Contrast

A high visual tonal contrast in accordance with Clause 6.1.12, Tonal Contrast, and/or changes in surface texture shall be used to

a) distinguish the edges of the accessible exterior routes; and
b) clearly distinguish the exterior walk from vehicular routes.

.

5.1.9 Changes in Level

5.1.9.1 Exterior Walk

Changes in level along the surface of an exterior walk shall not present a tripping hazard or impede the passage of individuals using wheeled mobility devices.

5.1.9.2 Bevelled

A change in level greater than 20 mm (0.8 in) and up to 50 mm (2 in) shall be bevelled, with the bevel having a maximum slope of 1:2 (50%).

Committee Comment
The Committee is requesting public input on whether the change in level and bevelling are sufficient.

5.1.10 Gratings or Other Openings in the Surface

Gratings shall

a) comply with Clause 3.6.4, Gratings; and
b) be placed off the accessible route and may be located in an amenity strip on either side of an exterior walk and walking surface.

Note: *Openings can include access openings, ventilation or drainage grates, utility covers, and gratings around trees.*

5.1.11 Edge Protection

5.1.11.1 Details

Edge protection, where provided to protect a change in level for user safety, shall

a) be a minimum of 100 mm (4 in) above the walkway surface for grade differentials from 200 mm (8 in) to 600 mm (24 in);
b) have tonal contrast and/or texture complying with the requirements of Clause 6.1.12, Tonal Contrast, with the contrast located on the edge as protection and not on the surface of the walkway; and
c) be designed so as not to impede drainage of the surface.

Note: *Edge protection can be provided in the form of a raised curb or landscaping. See Clause 3.1.11 Guards at Entrances.*

5.1.11.2 Guards

For grade differentials greater than 600 mm (24 in), guards shall be provided in accordance with Clause 3.4.8, Guards at Ramps.

5.1.12 Signage

Where signage occurs along accessible exterior routes and walkways it shall comply with Clause 6.1, Signage.

5.1.13 Ramps

Where the exterior walk or walkway has a slope of more than 1:20 (5%) and elevates the person above the surrounding terrain, the elevated section shall be considered a ramp and the ramp shall comply with Clause 3.4, Ramps.

5.1.14 Curb Ramps

Where curb ramps occur along accessible exterior routes and walkways at transitions across vehicular routes, they shall comply with Clause 5.2, Curb Ramps.

5.1.15 Pedestrian Crossings

Where pedestrian crossings occur at transitions across vehicular routes, they shall comply with Clauses 5.3, Pedestrian Crossing and 5.4, Pedestrian Crossing Signals.

5.1.16 Alternative Path of Travel

Where stairs are located on accessible exterior routes or walkways, the stairs shall not be the only means of access along the accessible exterior routes or walkways. An alternative accessible route shall be available that

is immediately adjacent to the stairs and may include either a ramp or another accessible means of negotiating the elevation change.

5.1.17 Street Furniture

Where street furniture areas occur along accessible exterior routes and walkways they shall comply with Clause 5.5, Street Furniture.

5.1.18 Picnic Areas, Patios and Terraces

Where picnic areas or patios and terraces occur along accessible exterior routes and walkways they shall comply with Clauses 11.5, Picnic Areas and 9.16 Patios.

5.5 Street Furniture

Rationale

Street furniture can provide a resting place for any individual with difficulty walking distances. Such furniture should incorporate strong tonal contrasts and be located off pathways, to minimize its potential as an obstruction to pedestrians.

Functional Description

This section addresses street furniture, which includes, but is not limited to
(a) benches;
(b) bollards;
(c) lighting elements;
(d) planters;
(e) permanent signage; and
(f) temporary signage.

Street furniture also includes amenities that provide a specific service and/or function to the public and complement outdoor spaces, rights-of-way, and accessible route. Examples of these elements include, but are not limited to
(a) bicycle racks;
(b) drinking fountains;
(c) information kiosks;
(d) mailboxes;
(e) newspaper boxes;
(f) parking meters;
(g) recycling stations;
(h) telephones;
(i) vending machines; and
(j) waste receptacles.

Technical Requirements

5.5.1 General

5.5.1.1 Accessible Route

Street furniture and amenities and the placement of street furniture and amenities relative to accessible routes shall
a) comply with Clause 5.1, Accessible Exterior Route;
b) not be placed within the accessible exterior route itself; and
c) not require the movement or temporary removal of an element to provide access to and use of street furniture.

5.5.1.2 Tonal Contrast

The ground surface where the street furniture and amenities are located shall be distinguished from the accessible route by contrasting tonal and texture that meet the requirements of Clause 6.1.12, Tonal Contrast.

5.5.1.3 Operating Mechanisms

The operating mechanisms on amenities, where supplied, shall comply with Clause 8.4, End User Controls and Operating Mechanisms, and shall be designed so that they do not interfere with features intended to prevent the inappropriate use of the amenities (e.g., by animals or children).

5.5.1.4 Signage

Signage, instructions, or symbols, etc. that indicate the operation of an amenity shall comply with requirements for font size, contrast, etc., as specified in Clause 6.1, Signage.

5.5.1.5 Rest Areas

Where provided, rest areas with seating shall comply with Clause 3.8, Rest Areas.
Note: *Opportunities to provide rest areas with seating should be considered at all times, especially at drop-off locations, bus stops, and paths of travel exceeding 175 m (574 ft.).*

5.5.2 Amenities

5.5.2.1 Drinking Fountains

Where drinking fountains are provided, they shall have water spouts mounted at heights suitable for both a seated adult/standing child and a standing adult, and comply with Clause 7.10, Drinking Fountains.

5.5.2.2 Parking Meter

Access to a parking meter from accessible on-street parking shall comply with Clause 9.11.15, Parking Meter / Dispensing Machine.

5.5.2.3 Lighting Elements

Illumination levels for street furniture elements shall comply with Clause 8.6, Exterior Pedestrian Lighting and not spread to adjacent properties.

5.5.2.4 Seating and benches

Seating and benches shall

a) have a seating / bench surface located at a height of 430 mm (17 in) to 500 mm (20 in) above the surrounding grade;
b) be 460 mm (18 in) to 510 mm (20 in) deep;
c) have a back rest; and
d) provide a minimum of one arm rest opposite of the wheeled mobility device parking space.

8.6 Exterior Pedestrian Lighting

Rationale

Ensuring adequate vision is an important component of individual safety and security, and independent access for many individuals.

The level of illumination is only one of the factors to be considered in relation to accessible lighting for exterior pedestrian facilities. The even distribution of light (eliminating shadows or very bright spots) and the reduction of glare or other reflective surfaces also play a significant role and must be considered.

For the purposes of this clause, “building” refers to a temporary or permanent structure with walls, a roof, and an entrance (e.g., campsite outhouses and port-o-potties).

Functional Description

This section addresses installed lighting systems and lighting elements along exterior accessible routes, including but not limited to sidewalks, pathways, stairs, ramps, etc. and at functional areas exterior to buildings, including entrances, parking, passenger drop off areas, curb ramps etc.

Technical Requirements

8.6.1 Location

Exterior pedestrian lighting shall be provided

a) on accessible exterior routes;
b) on accessible exterior routes leading to public buildings; and
c) at accessible building entrances, passenger loading zones, and accessible parking facilities.

Note: Accessible exterior routes and walkways that service buildings do not include trails and pathways within parks and other natural environments, or privately owned homes.

8.6.2 Light Levels

Exterior pedestrian lighting shall

a) be evenly distributed over the accessible route;
b) be positioned so as to not cause any obstruction, protrusions, or tripping hazard;
c) along an accessible exterior route, illuminate the walk to at least 100 lx, measured at ground level;
d) at accessible building entrances, accessible parking facilities, and accessible passenger loading zones, be equipped to provide non-glare illumination to an average level not less than 100 lx, measured at ground level; and
e) along accessible exterior routes leading to steps and ramps and at exterior steps and ramps
    i. be equipped to provide illumination to an average level not less than 100 lx, measured at ground level; and
    ii. clearly illuminate or be reflective and/or radiant / glowing (glow in the dark) at the treads, risers, and nosings at stairs.

8.6.3 Glare

Lighting fixtures (luminaries) that do not provide a view of the light source, either directly or by specular reflection, from common lines of sight shall be used.

8.6.4 Colour

Light sources shall provide as full a spectrum of light as possible as an aid to edge and colour definition.

8.6.5 Supplementary Lighting

Where supplementary lighting, such as landscape or accent lighting, is provided, it shall be designed and incorporated into the site so as not to spill onto exterior walkways or cause glare conditions.

6.1 Signage

Rationale

Signage must be simple and uncluttered, and incorporate plain language. The use of graphic symbols is helpful for individuals such as children, those with limited literacy or cognitive abilities, or those who speak a different language.

Sharp contrasts in colour make signage easier for everyone to read, particularly someone with low or no vision. The intent of the symbol must be evident, culturally universal, and intuitive. To enhance readability, raised tactile lettering should incorporate edges that are slightly smoothed.

Street signage and numbering systems must be legible and incorporate audible signage, it can be used by people with little or no vision.

Functional Description

This section addresses the accessibility of signage systems for both permanent and temporary signs, and both interior and exterior signs. Signage includes but is not limited to the following; wall mounted signage, signage on support posts and suspended signage.

Committee Comment Street signage was included, as it is extremely important and assists with wayfinding, etc.

Technical Requirements
6.1 – General Signage Features/Characteristics

6.1.1 – Font

6.1.1.1 Print
Print letters and numerals on signage shall
a) be a san serif font;
b) be a mixture of upper and lower case;
c) have a stroke-width-to height ratio between 1:5 and 1:10 that is based on an uppercase "O";
d) have a character height in accordance with Table 6.1.4.1 that is based on an uppercase "O".;
e) have a tonal contrast of 70% with their background; and
f) be finished with a matte or glare-free surface.

6.1.1.2 Electronic
Electronic letters and numerals shall
a) approximate san serif or Arabic fonts;
b) have a character height in accordance with Table 6.1.4.1.;
c) be displayed for a duration that is a function of the number of words needed to convey the information accurately, but shall not be less than 10 seconds ;
d) not be red on a black background;
e) where provided, light emitting diodes (LED) signs shall be white, yellow, green, or light blue on a black background to achieve the best contrast.
Note: Red LEDs on a black background are unreadable for most people with vision loss, particularly those who are colour-blind.

Table 6.1.4.1 Height and viewing distance

Minimum Character Height (mm)	Functional Viewing Distance (mm)
200 (8 in)	6000 (236 in)
150 (6 in)	4600 (181 in)
100 (4 in)	2500 (98 in)

Minimum Character Height (mm)	Functional Viewing Distance (mm)
75 (3 in)	2300 (91 in)
50 (2 in)	1500 (59 in)
25 (1 in)	750 (30 in)

Note: The functional viewing distance is the closest distance one can reasonably approached on an accessible path of travel

6.1.2 Tactile Characteristics

Tactile characters shall
a) beraised at least 0.8 mm above the surface;
b) be between 16 mm and 50 mm high;
c) be san serif font;
d) be smooth at its edges;
e) be accompanied by Grade 1 Braille; and
f) have a tonal contrast of 70% with the signage background.

6.1.5 Pictograms

Pictrograms shall
a) have a minimum height and width of 150 mm;
b) where possible, be consistent with national and international standards; and
c) have a tonal contrast of 70% with the signage background.

3.1 Entrances

Rationale

Design decisions concerning entrances will have an immediate impact on the independence and dignity of everyone entering a facility. Entrances that address the full range of individuals using the facility promote a spirit of inclusion that separate accessible entrances do not. Features such as canopies can limit the influence of weather conditions on this already busy area and also make an entrance more obvious to a person with a cognitive disability or someone unfamiliar with the facility.
Note: *Where permitted and where acoustic privacy is not a design requirement, access openings without doors are preferred. For example, public washroom entrances in buildings with large assembly areas.*

Functional Description

This section addresses pedestrian entrances into a building. Entrances include all access and entry points into a building or facility. Entrances also function as egress points. An entrance consists of a set of elements that includes the approach to a building, facility, or controlled access area and may extend to the curb, the actual entrance, the transition area to the interior, and may include a lobby and/or a waiting area. For the purpose of determining the number of entrances to a building, several adjacent doors in a bank of doors are considered to be a single entrance.

Technical Requirements

3.1.1 Accessible Entrances

3.1.1.1 Minimum Number of Accessible Entrances

Except for transportation facilities, at least 50%, but not less than one of all pedestrian entrances to a structure or facility shall

a) be accessible with a no-step entrance;
b) be connected to or integrated with an accessible interior route; and
c) comply with Clause 4.1, Accessible Interior Route and Table 3.1.1.

Table 3.1.1 – Minimum number of accessible entrances

Number of pedestrian entrances into building	Minimum number of pedestrian entrances required to be barrier-free
1 to 3	1
4 to 5	2
6 or more	Not less than 50 percent

Note: Numbers are rounded down to the nearest whole number

3.1.1.2 Entrances to Transportation Facilities

At least one entrance to each transportation station shall comply with 3.1 Entrances. All accessible entrances shall, to the maximum extent practicable, coincide with those used by the majority of the general public.

3.1.2 Main or Primary Entrances

The main or primary entrances to a building or a suite shall be accessible.

3.1.4 Entrance from an Enclosed Parking Garage

If a direct pedestrian entrance from an enclosed parking garage to the building is provided, at least one direct entrance from the enclosed parking garage to the building shall be accessible and comply with Clause 4.1.1, Clear Width.

3.1.5 Access to Parking Areas

An accessible route shall be provided from an accessible entrance to parking areas as follows:

a) Where exterior parking is provided, an accessible route complying with Clause 5.1, Accessible Exterior Route shall be provided to the exterior parking area;

b) Where interior parking is provided, an accessible route complying with Clause 4.1, Accessible Interior Route shall be provided to the door of the indoor parking area or the point where a passenger elevator serves the indoor parking level; and

c) If a passenger elevator is provided along the accessible route it shall comply with and Clause 3.3, Elevating Devices.

3.1.6 Enclosed Pedestrian Walkway, Underpass or Overpass

If an enclosed pedestrian walkway, overpass or underpass connects two accessible storeys in different buildings the pedestrian walkway, overpass or underpass shall comply with Clauses 4.1, Accessible Interior Route, 3.4, Ramps and 3.2, Doors and Doorways.

3.1.7 Doors and Clear Spaces at Entrance Doors

3.1.7.1 Doors and Clear Spaces

All doors and clear spaces at entrances shall comply with Clause 3.2, Doors and Doorways and either Clause 4.1, Accessible Interior Route or Clause 5.1, Accessible Exterior Route.

3.1.7.2 Entrance at Sidewalk

Where an entrance abuts a public sidewalk, the sidewalk may be considered to be part of the clear space in front of the door.

3.1.8 Controlled Entrances

Where turnstiles, gates, or other barriers are used to control access, an adjacent alternate access system or an integrated access system shall be provided.

Note:

(1) Half-height automatic swing doors can provide independent access for people with reduced mobility.

(2) These types of entrances are provided at various occupancies types which include but are not limited to: libraries, retail stores, transit stations and recreational facilities.

3.1.9 Canopies

Where canopies are used at a pedestrian entrance, and a passenger loading area is adjacent to the entrance, the vertical clearance shall comply with Clause 9.18.3, height Clearance.

3.1.10 Waiting Areas

Where waiting area is provided as part of an entrance area, a clear space of at least 1370 mm (54 in) deep by 1620 mm (64 in) wide within a seating or waiting area shall be provided adjacent to the accessible interior route.

Committee Comment
The intent is to provide an accessible, sheltered waiting area space for people with disabilities (including those using mobility devices and service animals) where there is a lobby or waiting area as part of the entrance.

3.1.11 Guards at Entrances

Accessible entrances shall be equipped with guards as follows:

a) Where there is a change in vertical elevation greater than 600 mm (24 in), at the edges of a landing or an accessible route leading to an entrance, guards that are tonal-contrasted with their surroundings and complying with Clause 3.4.8, Guards at Ramps shall be provided at the edges of the landing or accessible route; and
b) Where doors swing into an accessible interior route, a cane-detectable guard shall be installed at right angles to the wall containing the door and extending for the full width of the door.

3.1.12 Stairs and /or Ramps at Entrances

Where stairs and / or a ramp are present leading to an entrance, they shall comply with Clauses 3.4, Ramps and / or 3.5, Stairs.

3.1.13 Floor Surfaces

Ground and floor surfaces at entrances shall comply with Clause 3.6, Ground and Floor Surfaces.

3.1.14 Lighting

Entrance area lighting shall comply with:

a) Clause 8.5, Interior Lighting; and
b) Clause 8.6, Exterior Pedestrian Lighting.

6.4 Wayfinding

Rationale

Everyone uses cues from their environment to make their way around and find their destination in both the external and built environments. The cues include the design of the building itself, the use of signage, the placement of furnishings, lighting, the placement of security and information staff, the use of signage, the use of colour, texture and acoustics.

People with differing abilities may rely more on one certain cue. For instance, someone who is Deaf, deafened or hard of hearing will look for visual cues such as directories, signage and the use of colour. Someone who is no/low vision may rely more on texture, strong colour contrasts, acoustics and the placement of furnishings.

The design of wayfinding cues is particularly important for emergency situations when people must evacuate a facility quickly and efficiently.

Functional Description

This section references Appendix H which addresses wayfinding in the built environment. Wayfinding is a term that describes the spatial problem-solving process that a person uses to reach a destination. A mental "map" is formed of the overall environment and the desired destination. This map is based on information obtained from "orientation cues" that are available from the environment. These cues include not only signage, but also the overall spatial forms, structures, sounds, surface textures, colours, illumination levels, etc. Tactile maps and/or recorded instruction can augment these orientation cues and enable people to find their way independently, even in complex settings. A well-designed setting can thus be spatially gratifying and simple enough for persons to navigate, if there are adequate, varied, and non-conflicting wayfinding cues available.

Technical Requirements

6.4.1 Design Principles

Design principles and guidance to implement wayfinding is found below.

Appendix H Wayfinding

Rationale

Everyone uses cues from their environment to make their way around and find their destination in both the external and built environments. The cues include the design of the building itself, the use of signage, the placement of furnishings, lighting, the placement of security and information staff, the use of signage, the use of tone, texture and acoustics.

People with differing abilities may rely more on one certain cue. For instance, someone who is Deaf, deafened or hard of hearing will look for visual cues such as directories, signage and the use of colour. Someone who is no/low vision may rely more on texture, strong tonal contrasts, acoustics and the placement of furnishings.

The design of wayfinding cues is particularly important for emergency situations when people must evacuate a facility quickly and efficiently.

Functional Description

This section addresses wayfinding in the built environment. Wayfinding is a term that describes the spatial problem-solving process that a person uses to reach a destination. A mental "map" is formed of the overall environment and the desired destination. This map is based on information obtained from "orientation cues" that are available from the environment. These cues include not only signage, but also the overall spatial forms, structures, sounds, surface textures, colours, illumination levels, etc. Tactile maps and/or recorded instruction can augment these orientation cues and enable people to find their way independently, even in complex

settings. A well-designed setting can thus be spatially gratifying and simple enough for persons to navigate, if there are adequate, varied, and non-conflicting wayfinding cues available.

H.1 Design Principles

Any combination of the following design principles may be used to support wayfinding in the built environment

a) Provide a logical layout that is easy to memorize for a person with no/low vision;
b) Use textural contrasts and tactile cues with the built environment to provide directional cues;
c) Define the space with acoustic characteristics;
d) Use colour and brightness contrasts to accentuate the structural and decorative design of the built environment;
e) Use tactile signs to provide information that can be read by touching;
f) Use audible signs to provide information that can be heard by everyone; or
g) Use lighting both inside and out to differentiate one area from another.

Note: *The intent of wayfinding is to consider the use of design and maintenance of a built environment from the wayfinding perspective of people who have no/low vision.*

H.2 Wayfinding Systems

The design of wayfinding systems shall include:

a) identifying and marking spaces;
b) grouping spaces;
c) linking and organizing spaces; and
d) communicating this information to the user.

H.3 General Requirements

A wayfinding system shall

a) be understandable to people of differing abilities;
b) be on the accessible route;
c) be provided in external areas that include, but are not limited to
    i. parking areas;
    ii. building sites with more than one building;
    iii. passenger loading zones;
    iv. accessible entrances;
    v. public streets;
    vi. accessible exterior routes; and
    vii. open plazas.
d) be provided in internal areas that take a person to/from areas that include, but are not limited to
    i. entrances;
    ii. elevators;
    iii. exits;
    iv. accessible washrooms;
    v. information kiosks; and
    vi. public telephones; and
    vii. large enclosed areas (e.g. convention centres or large shopping centres).
e) have signage complying with Clause 6.1, Signage, that identifies areas that include, but are not limited to
    i. directions including street orientation; and
    ii. items listed in (c) and (d);
f) use colour and textured wall and floor surfaces to distinguish hallways and pathways;
g) use visual tonal contrast that meet the requirements of Clause 6.1.12, Tonal Contrast;
h) where applicable, use pictograms and universal symbols;
i) where possible, provide audio to differentiate hallways and pathways;
j) be modified to account for changes made to the internal or external environment; and
k) be of consistent design and location throughout a specific facility.

H.4 Interior Lighting

Light shall be used to assist with wayfinding by the following

a) by placing the light fixtures in the middle of the corridor provides a visual clue for orientation by helping to define the right and left sides of the corridor; and
b) with lights on both sides of the hall where the ceiling and wall meet has the same effect.

4.0 Interior Accessible Routes

4.1 Accessible Interior Route

Rationale

All routes of travel through a facility should enable individuals with a range of disabilities to use them. They must provide the clear width necessary for persons using wheeled mobility devices, those pushing strollers, or those travelling in pairs. Consideration should be given not just to the width of items, such as wheeled mobility devices, but also to their manoeuvrability. While a corridor may be wide enough for a person to drive a scooter in a straight line, it may not be possible to make a turn around a corner. Accessible interior routes need to be connected to accessible entrances and accessible exterior routes.

High visual tonal contrast from the surrounding environment and/or tactile pathways set into floors may be used to assist individuals with low or no vision to negotiate an environment. Edge protection that guards a change in level is an important safety feature for all users.

Functional Description

This clause addresses accessible interior routes or pedestrian circulation paths within buildings which provide access to facilities and elements within buildings and allow persons with disabilities to move throughout the interior of a building safely, easily, efficiently, and comfortably. Accessible interior routes include (but are not limited to) corridors, hallways and passageways, as well as routes across foyers and other open spaces. Accessible interior routes are permitted to include ramps, curb ramps, stairs, elevators or other elevating devices (as permitted) where a difference in elevation exists. Access should be provided to all areas of all buildings, with the exception of those noted in Clause 4.1.3, Exempted Areas.

Technical Requirements

4.1.1 Clear Width

Every accessible interior route shall have an unobstructed width of at least 1100 mm (44 in) except as required in Clauses, 4.1.2 Minimum Clear Width Exceptions, 4.1.4 Unobstructed Passing Area and 4.1.5 Reduced-Width..

4.1.2 Minimum Clear Width Exceptions

The minimum clear width of an accessible interior route shall be 1100 mm (44 in) except in the following situations:

a) at doors, the minimum clear width shall comply with Clause 3.2.3, Clear Width;
b) where additional maneuvering space is required at doorways, the minimum clear width shall comply with Clause 3.2.4, Maneuvering Area at Doors;
c) at landings for elevating devices, the minimum clear width shall comply with Clause 3.3, Elevating Devices;
d) at landings at the top and bottom of a ramp the minimum clear width shall comply with Clause 3.4, Ramps; and
e) at landings at the top and bottom of stairs the minimum clear width shall comply with Clause 3.5, Stairs.

4.1.3 Exempted Areas

An accessible interior route is not required for the following areas in a building:

a) to elevator machinery rooms;
b) to crawl spaces;
c) to attic; and
d) within portions of a floor area with fixed seats in an assembly occupancy where these portions are not part of the accessible interior route to spaces designated for wheeled mobility device use.

Note: Individual accommodations may be required to make an area accessible.

4.1.4 Unobstructed Passing Area

Every accessible interior route less than 1620 mm (64 in) in width shall be provided with unobstructed spaces not less than 1830 mm (73 in) in width and 1830 mm (73 in) in length, located not more than 30 m (98.5 ft.) apart, to allow for passing by one or more persons using a mobility device, service animal or personal attendant. If the corridor is less than 30m, a passing area is not required.
Note: A passing area and rest area may be combined.

4.1.5 Reduced-Width

The clear width of an accessible interior route may be reduced to a 915 mm (36 in) minimum for a maximum length of 610 mm (24 in), provided that the reduced width segments are separated by segments at least 9 m (30 ft) long and 1100 mm (44 in) wide.

4.1.6 Areas Requiring an Accessible Interior Route

4.1.6.1 Occupied Floors

Except as identified in Clause 4.1.3, Exempted Areas, an accessible interior route shall be provided throughout the entrance storey and within all other normally occupied floor areas served by a passenger elevator, LU/LA, and ramp.

4.1.6.2 All Routes

Except as identified in Clause 4.1.3, Exempted Areas, an accessible interior route shall be provided for all paths commonly used by the public and employees of a building.

4.1.6.3 Difference in Level

An accessible interior route may include ramps, independently operated passenger elevators, or other platform-equipped passenger elevating devices to overcome a difference in level.

4.1.7 Surfaces

Interior surfaces that are on an accessible interior route shall comply with Clause 3.6, Ground and Floor Surfaces.

4.1.8 Slope and Changes in Elevation

4.1.8.1 Cross Slope

The cross slope for an accessible interior route shall be no greater than 1:50 (2%).

4.1.8.2 Running Slope

The running slope for an accessible interior route shall be no greater than 1:20 (5%).

4.1.8.3 Changes in Elevation
A vertical change in elevation
a) between 6 mm (0.25 in) and 13 mm (0.5 in) shall have a bevel with a maximum slope of 1:2 (50%); or
b) greater than 13 mm (0.5 in), shall meet the requirements of Clause 3.4.2.1, Ramps.

4.1.9 Curb Protection

Where the edge(s) of an accessible interior route, path, or corridor is not level with the adjacent surface, except at stairs and at elevated platforms such as performance areas or loading docks, the edge(s) shall be protected as follows

a) where the change in level is less than 200 mm (8 in), the edge shall be marked with a high tonal contrast

marking in accordance with Clause 6.1.12, Tonal Contrast;

b) where the change in level is between 200 mm (8 in) and 600 mm (24 in) there shall be a tonal contrasting curb at least 75 mm (3 in) high; and
c) except at transportation facility platforms (e.g. subway platform)**,** where the change in level is greater than 600 mm (24 in) there shall be a guard that meets the requirements of Clause 3.4.8, Guards at Ramps.

4.1.10 Reduced Headroom

Where the headroom of an area on an accessible interior route is reduced to less than 2100 mm (83 in) in height, a guard or other barrier (e.g., large planter, bench, etc) complying with Clause 3.7.1, Protruding Objects, shall be provided.

4.1.11 Rest Areas

An accessible interior route shall have level rest areas spaced no more than 30 m (99 ft) apart.

4.1.12 Convex Mirrors

All facilities shall have convex mirrors installed at hallway intersections along an accessible interior route to allow people who are Deaf, deafened or hard of hearing to see oncoming pedestrian traffic.

5.5.2.4 Seating and benches

Seating and benches shall

e) have a seating / bench surface located at a height of 430 mm (17 in) to 500 mm (20 in) above the surrounding grade;
f) be 460 mm (18 in) to 510 mm (20 in) deep;
g) have a back rest; and
h) provide a minimum of one arm rest opposite of the wheeled mobility device parking space.

7.2 Washrooms

Rationale

As an integral feature of a building, washroom facilities should accommodate individuals with a range of abilities. Although many persons with disabilities use toilet facilities independently, some can require assistance.

Where the individual providing assistance is of the opposite gender then typical gender-specific washrooms are awkward and a separate unisex washroom is preferred. Parents and caregivers with small children and strollers also benefit from a large, individual washroom with toilet and change facilities contained within the same space. (See Clause 7.7, Universal Toilet Rooms)

Circumstances such as wet surfaces and the need to transfer between toilet and a wheeled mobility device can make toilet facilities accident-prone areas. If an individual falls in a washroom, a door that swings inward could prevent his or her rescuers from opening the door. Due to the risk of accidents, design decisions such as door swings and material finishes have safety implications. Toilet facilities are a prime location for emergency call switches. The appropriate design of all features will increase the usability and safety of all toilet facilities.

The identification of washrooms involves design issues. For children or those who cannot read text, a symbol or pictogram is preferred. A person with a reduced or no vision also benefits from accessible signage. Features such as colour-contrasting door frames and door hardware will also increase accessibility.

Functional Description

This section addresses the requirements for the provision of accessible common-use washrooms. Common-use washrooms are facilities that contain multiple fixtures - the washroom can be used by more than one person at a time.
Note: *Requirements for Water Closets, Water Closet Stalls, Lavatories, Urinals and Washroom Accessories are presented in separate Clauses within this Standard.*

Technical Requirements

7.2.1 Access to Washrooms

Where accessible washrooms are provided they shall be on an accessible route.

7.2.2 Dimensions and Placement

7.2.2.1 Dimensions

Accessible washrooms shall

a) be identified with wayfinding signage complying with Clause 6.1, Signage and Clause 6.3, Wayfinding;
b) have a minimum clear floor space of 1800 mm (72 in) diameter, of which a maximum of 500 mm (20 in) shall be under the lavatory, to allow a person using a mobility device to make a 180° turn;
c) have evenly distributed illumination throughout the washroom of at least 200 lx measured at floor level;
d) have a minimum clearance of 1400 mm (55 in) between the outside face of the accessible stall and any wall-mounted fixture or obstruction; and
e) have floors that drain to the wall opposite the door at a maximum slope of 1:50 (2%), are slip resistant, and shall comply with Clause 3.6, Ground and Floor Surfaces.

7.2.2.2 Lavatories

Accessible washrooms shall include lavatories that meet the requirements of Clause 7.1, Lavatories.

7.2.2.3 Accessories

Where washroom accessories are provided they shall meet the requirements of Clause 7.3, Washroom Accessories.

7.2.2.4 Water Closets

Water closets shall meet the requirements of Clause 7.4, Water Closets, and where water closet stalls are provided they shall meet the requirements of Clause 7.5, Water Closet Stalls.

7.2.3 Doors to Washrooms

All doors, where provided to accessible washrooms shall

a) comply with Clause 3.2, Doors and Doorways;
b) not swing into the space required for operating the door;
c) have a minimum 1700 mm (67 in) clearance between the inside face of an in-swinging entrance door and the outside face of an adjacent toilet stall; and
d) be equipped with a power-assisted door operator complying with Clause 3.2.9, Power Door Operator.

Note: *The power assist device would be provided for combination washrooms.*

7.2.4 Minimum Number

The minimum number of accessible washrooms shall be determined using Table 7.2.4.

Table 7.2.4 Designated Accessible Toilet Stalls

Number of water closets (toilets) per washroom per floor	***Minimum number of accessible toilet stalls per washroom.***	***Universal Toilet Room required***
1-3	1 (can be the Universal Toilet Room)	0
4-9	1	1
10-16	2	1
17-20	3	1
21-30	4	1
Over 30	1 additional accessible toilet stall for each unit of 10	1

Note: *The number of water closet stalls will be determined by the occupancy loads in the Building Code.*

7.3 Washroom Accessories

Rationale

Design issues related to washroom accessories include the hand strength, dexterity, and cognitive ability required to operate mechanisms, as well as operability with a closed fist. Reaching the accessories is another concern. Accessories that require the use of two hands to operate can present difficulties for a range of persons with disabilities whose balance or ability to reach is limited.

Functional Description

This section addresses the accessibility requirements of washroom accessories within accessible washrooms. Accessories include but are not limited to paper towel dispenser/disposal receptacles, hand dryers, paper towel, soap dispensers, and vending machines.

Technical Requirements

7.3.1 Detailed Requirements

At least one type of each washroom accessory shall

a) be located so that where there is an obstruction between 500 mm (20 in) and 625 mm (25 in) in depth,

the dispensing height is not more than 1100 mm (43 in) above the floor e.g. paper towel dispenser or hand dryer;

Note: *Dispensing height can be modified depending on accessory e.g. toilet paper dispenser versus. paper towel dispenser.*

b) have operable portions and controls mounted between 400 mm (16 in) and 1200 mm (47 in) above the floor;
c) where they apply to a lavatory be located within arms reach of the accessible lavatory and no more than 610 mm (24 in) from the edge of the lavatory;
d) be self operated or operable with a closed fist;
e) have a tonal contrast that meet the requirements of Clause 6.1.12, Tonal Contrast;
f) have a clear floor area of 1370 mm (54 in) by 1370 mm (54 in) in front of controls and operating mechanisms for receptacles and dispensers to allow for a front or side approach;
g) where they apply to a water closet be located in close proximity to the accessible water closet; and
h) any additional accessories that are added to a lavatory shall take into consideration the requirements of this section.

Note: *Washroom accessories should be place so that a person can reach them from a seated position and a person who has low or no vision will not bump into them.*

7.3.2 Floor Clearance

Accessories located less than 875 mm (34 in) from the floor shall not encroach into the required clear floor space.

7.3.3 Protrusions

Accessories shall be cane detectable and comply with the requirements of Clause 3.7, Overhanging and Protruding Objects.

7.3.4 Mirrors

Where mirrors are provided, at least one shall

a) be mounted with its bottom edge not more than 1000 mm (39 in) from the floor; or
b) be inclined from vertical to be usable from a seated position.

7.4 Water Closets

Rationale

Automatic flush controls are preferred. If flushing mechanisms are not automated, then consideration must be given to the ability to reach a switch and the hand strength or dexterity required to operate it. Lever style handles on the transfer side of the toilet facilitate these considerations. Appropriate location of the toilet paper dispenser will ensure it does not interfere with use of the grab bar.

Appropriate placement of grab bars makes sitting and standing or transfers between the toilet and a mobility device safer.

Functional Description

This section addresses the accessibility requirements of water closets (toilet fixtures) within accessible toilet stalls and universal toilet rooms.

Technical Requirements

7.4.1 Configuration

Water closets for persons with physical disabilities shall

a) be equipped with a seat located not less than 430 mm (17 in) and not more than 460 mm (18 in) above the floor;
b) be equipped with a back support where there is no seat lid or tank;
c) not have a spring-activated seat;
d) have toilet seats designed to avoid pinching the user;
e) have flush controls complying with Clause 7.4.2, Flush Controls; and
f) have internal extension guards that will not allow the seat to slide should the back attachment become loose.

7.4.2 Flush Controls

Water closets for persons with physical disabilities shall

a) be equipped with a hands-free automatic flushing device, that can also be hand-operated in compliance with Clause 8.4, End User Controls and Operating Mechanisms; or
b) be hand-operated by a lever that
    i. is located on the transfer side of the toilet;
    ii. is easily accessible to a mobility device user; and
    iii. complies with Clause 8.4, End User Controls and Operating Mechanisms.

Note: *Flush controls should not interfere with back supports if provided.*

7.4.3 Toilet Paper Dispenser

A water closet shall have a toilet paper dispenser that is,

a) wall mounted;
b) located below the grab bar;
c) in line with or not more than 300 mm (12 in) in front of the toilet seat; and
d) not less than 600 mm (24 in) above the floor.

Committee Comment
The toilet paper dispenser must be placed within reaching distance while seated on the water closet (toilet).

7.4.4 Water Closet Location

A water closet shall be located so that its centreline is not less than 390 mm (15.5 in) and not more than 410 mm (16.5 in) to the centerline of a
a) grab bar mounted to an adjacent side wall ;or
b) a fold down grab bar..

7.5 Water Closet Stalls

Rationale

The manoeuvrability of mobility devices is a significant consideration in the design of an accessible stall. The increased size of the stall is required to ensure that there is sufficient space to facilitate proper placement of any mobility device to accommodate transfer onto the toilet fixture. Not only is space required for mobility equipment, there are also instances where an individual requires assistance and the stall will have to accommodate a second person or service animal.

Door swings are normally outward for safety reasons and space considerations, but this can make it difficult to close the door once inside. A handle mounted part way along the door makes it easier for individuals to close the door behind them. The proper location of the toilet paper dispenser should ensure it is reachable from the toilet but does not interfere with use of the grab bars. Universal features include accessible hardware and a minimum stall width to accommodate persons of large stature, parents with children, or persons using a service animal.

Functional Description

This section addresses water closet (toilet fixture) stalls within common-use washroom areas for use by people with disabilities. The dimensional requirements for water closet (toilet fixture) stalls other than those for use by people with disabilities are not covered by this Clause.

Technical Requirements

7.5.1 Minimum Size

An accessible water closet stall shall have a clear floor space of at least 1500 mm (59 in) wide and 1500 mm (59 in) deep.

7.5.2 Clearance

Accessible water closet stalls shall have a clearance of at least 1700 mm (67 in) between the outside of the stall face and the face of an in-swinging washroom door, and 1400 mm (55 in) between the outside of the stall face and any wall-mounted fixture or other obstruction.

7.5.3 Stall Doors and Door Controls

An accessible water closet stall shall be equipped with a door that

a) where the stall is approached from the front, aligns with the clear transfer space adjacent to the water closet;
b) provides, when in an open position, a clear opening of at least 900 mm (35 in) wide;
c) is capable of being locked from the inside by a device that is operable with a closed fist, does not require fine finger control, tight grasping, pinching, or twisting of the wrist and complies with Clause 8.4.4, End User Controls and Operating Mechanisms;
d) can be released from the outside in case of emergency;
e) swings outward, unless a 810 mm (32 in) wide by 1370 mm (54 in) long clear floor area is provided within the stall or enclosure to permit the door to be closed without interfering with the mobility device;
f) Is equipped with spring-type or gravity hinges so that the door closes automatically; and
g) is equipped with a “D” type door pull at least 140 mm (5.5 in) long mounted horizontally on the outside of the door and inside of the door
    i. at a height of 800 mm (32 in) to 1000 mm (39 in) above the floor; and
    ii. aligned with a clear maneuvering space adjacent to the water closet.

7.5.4 Grab Bars

Water closet stalls shall be equipped with two grab bars

a) the first one L-shaped with 760 mm (30 in) long horizontal and vertical components mounted with the horizontal component 750 mm (30 in) to 900 mm (35 in) above the floor and the vertical component 150 mm (6 in) in front of the toilet bowl;
b) the second one is at least 600 mm (24 in) in length mounted horizontally on the wall behind the water closet from 840 mm (33 in) to 920 mm (36 in) above the floor and, where the water closet has a water tank, are mounted 150 mm (6 in) above the tank;
c) installed to resist a load of at least 1.3kN applied vertically or horizontally;
d) not less than 30 mm (1.2 in) and not more than 40 mm (1.5 in) in diameter;
e) provided with a clearance of a minimum of 50 mm (2 in) from the wall; and
f) that have a slip resistant surface.

7.5.5 Coat Hooks

Two collapsible coat hooks shall be mounted not more than 1220 mm (48 in) from the floor on a side wall, and project not more than 50 mm (2 in) from the wall.
Note: *Collapsible is defined in Clause 14.0, Glossary.*

7.5.6 Tonal Contrast

Toilet stall partitions, doors, water closet stall door pulls, lock control, coat hooks, and grab bars shall have a high visual colour/tonal contrast that meet the requirements of Clause 6.1.12, Tonal Contrast.

7.5.7 Fold Down Grab Bar

Where provided, a fold down grab on the transfer side of the toilet shall comply with Clause 7.7.5, Fold Down Grab Bar.

7.6 Urinals

Rationale

A clear floor space is required in front of urinals for a mobility device. The provision of grab bars can assist individuals in rising from a seated position and steadying themselves.

Floor-mounted urinals accommodate children and persons of short stature, as well as enable easier access to drain personal care devices. Flush controls should be lever-style or automatic (preferred); manual flushing shall be provided as well.

Strong visual contrasts between the urinal, the wall, and the floor will assist persons with low or no vision.

Functional Description

This section addresses the accessibility requirements of urinals in washrooms and universal toilet rooms (where applicable). Where more than one urinal is provided, at least one urinal shall meet the requirements of this clause.

Technical Requirements

7.6.1 Configuration

Accessible urinals shall

a) be wall-mounted with an elongated rim located no higher than 375 mm (15 in) above the finished floor or floor-mounted with the rim at the finished floor level;
b) be at least 345 mm (14 in) deep, measured from the outer face of the urinal rim to the back of the fixture;
c) be of a depth that shall not restrict reach and access to a grab bar; and
d) be equipped with grab bars installed on each side that
    i. comply with Clause 7.5.4, Grab Bars, items c), d), e), and f);
    ii. are not less than 600 mm (24 in) long; and
    iii. are mounted vertically between 380 mm (15 in) to 450 mm (18 in) from the centreline of the urinal and with the lowest end located between 600 mm (24 in) and 650 mm (26 in) above the floor.

7.6.2 Minimum Number

In each male washroom there shall be at least one accessible urinal that meets the requirements of Clauses, 7.6.1 Configuration, 7.6.3 Clear Floor Space, 7.6.5 Flush Controls and 7.6.6 Tonal Contrast.

7.6.3 Clear Floor Space

The clear floor space provided in front of each urinal shall

a) be 810 mm (32 in) wide by 1370 mm (54 in) long; and
b) adjoin but not overlap the accessible interior route.

7.6.4 Privacy Screen

Where privacy screens are provided they shall

a) be mounted a minimum of 460 mm (18 mm) to the centerline of the urinal;
b) incorporate a high visual tonal contrast that meets the requirements of Clause 6.1.12, Tonal Contrast, to

differentiate them from the surrounding environment; and
c) have a vertical outer edge that contrasts in tone and that meets the requirements of Clause 6.1.12, Tonal Contrast.

Note: *The placement of the privacy screens depends on where the grab bars are installed, as there must be enough hand space between the grab bars and the screens.*

7.6.5 Flush Controls

Where provided, flush controls shall
a) be automatic or operable with a closed fist;
b) be mounted no higher than 1220 mm (48 in) above the finished floor; and
c) comply with Clause 8.4, End User Controls and Operating Mechanisms.

7.6.6 Tonal Contrast

There shall be strong tonal contrast that meet the requirements of Clause 6.1.12, Tonal Contrast, between the urinal, the wall, and the floor.

7.7 Universal Toilet Rooms

Rationale

The provision of a separate universal toilet room is advantageous in a number of instances. For an individual using a mobility device, the extra space provided by a separate washroom is preferred to an accessible stall. Should an individual require an attendant of a different gender to assist them in the washroom the complication of a woman entering a men's washroom or vice versa is avoided. This same scenario would apply to a parent with a young child of a different gender.

In the event of an accident or fall by a single individual in this form of washroom, an emergency call switch and a means of unlocking the door from the outside are important safety features.

Incorporating universal toilet rooms into all public buildings will provide options for persons with disabilities and enhanced accessibility for everyone.

Functional Description

This section addresses the accessibility requirements of universal toilet rooms. Universal toilet rooms are washrooms containing a single water closet (toilet fixture) intended for private use. Universal toilet rooms are often used by more than one person at a time – a person with an attendant to assist with hygiene routines.

Technical Requirements

7.7.1 Detailed Requirements

7.7.1.1 Location

A universal toilet room shall be provided on every occupied floor of a building.

7.7.1.2 Details

A universal toilet room shall:
a) be served by an accessible interior route;
b) have a door capable of being locked from the inside and released from the outside in case of emergency and that;
    i. has a graspable latch-operating automatic locking mechanism or power lock located on both

sides of the door not less than 900 mm (35 in) and not more than 1000 mm (39 in) above the floor and operable with a closed fist;
ii. if it is an outward swinging door, have a door closer, spring hinges, or gravity hinges, so that the door closes automatically;
iii. comply with Clause 3.2, Doors and Doorways; and
iv. has a power door operator and meets the requirements of 3.2.9, Power Door Operator to open and close the door;

c) have one lavatory complying with Clause 7.1, Lavatories;
d) have one water closet conforming to the requirements of Clause 7.4, Water Closet;
e) have grab bars conforming to the requirements of Clause 7.5.4, Grab Bars;
f) have no internal dimension between walls less than 2500 mm (98 in);
g) have a coat hook that meets the requirements of Clause 7.5.5, Coat Hooks;
h) be designed to permit a mobility device to make a 360 degree turn in an open space;
i) be identified with signage in compliance with Clause 6.1, Signage;
j) be equipped with a mirror and washroom accessories complying with Clause 7.3, Washroom Accessories;
k) have a stable, slip resistant floor in compliance with Clause 3.6, Ground and Floor Surfaces; and
l) have a clear transfer space beside the toilet to facilitate transfer to and from a mobility device which shall be at least 900 mm (35 in) wide by 1500 mm (59 in) long with the width measured from the edge of the water closet bowl.

Note: *Where there may be a large number of people in the building, accessible water closet stalls can also be provided within the same facility along with the Universal Toilet room.*

7.7.2 Adult Change Table

Universal toilet rooms shall have an adult change table that:

a) is at least 810 mm (32 in) wide by 1830 mm (72 in) long;
b) has a change surface height between 450 mm (18 in) and 500 mm (20 in);
c) has an adjacent clear floor space not less than 760 mm (30 in) wide by 1500 mm (59 in) long;
d) is designed to carry a minimum load of 1.33 kN (299 lb); and
e) if of the fold-down type, has no operable portions higher than 1220 mm (48 in) from the floor.

Note: A fold down bench in the down position may overlap the clear floor space.

7.7.3 Controls

All controls and operating mechanisms in a universal toilet room shall

a) have a visual tonal contrast that meets the requirements of Clause 6.1.12, Tonal Contrast;
b) have their operable portions (e.g., electrical receptacles, thermostats, and intercom switches) located
   i. a maximum of 1200 mm (47 in) above the floor, where there is no obstruction with a depth greater than 500 mm (20 in), to be reachable from a seated position; or
   ii. at a maximum of 1100 mm (43 in) above the floor where there is an obstruction depth between 500 mm (20 in) and 625 mm (25 in); and
c) meet the requirements of Clause 8.4, End User Controls and Operating Mechanisms.

7.7.4 Lighting

Universal toilet rooms shall

a) be automatically lit when occupied (e.g. by use of motion sensors);
b) comply with Clause 8.5.3, Washrooms; and
c) comply with Clause 8.5.5.1, Task Lighting.

Note: *Providing lighting automatically (e.g., where it is turned on by the use of a motion sensor) will make it easier for the user of the facility who might have difficulty finding a light switch or being able to use it.*

7.7.5 Fold Down Grab Bar

Universal toilet rooms should be equipped with a fold-down grab bar that

a) is at least 760 mm (30 in) in length;
b) is located on the transfer side of the toilet;
c) is mounted to the same height as the ends of the permanent horizontal bar so the bars are level;
d) extends at least 150 mm beyond the front face of the seat and does not impede the transfer space; and

e) does not require more than 22.2 N (5 lb) of force to pull it down.

7.7.6 Emergency Call System

Where universal toilet rooms are provided in buildings that have a monitored security system, the universal toilet rooms shall

a) have an emergency call system linked to a central monitoring location (e.g., office or switchboard);
b) have a visual and audible signal to indicate that help is on the way; and
c) where the room is not monitored provide a visual and audible signal both inside and outside of the room that help has been requested.

7.7.7 Visual and Audible Fire Alarm

Universal toilet rooms shall be equipped with a visual and audible fire alarm that complies with Clause 8.5.12.2, Stroboscopic Lighting.

Appendix D

Delegations Received at Council Meeting of September 19th, 2012

Notes – Transit Review Meeting

September 19, 2012

Evinrude Centre, 6:00 p.m. - 9:12 p.m.

#	Name	Address	Comments
1			Concern with where extra $0.50 or $0.75 of fare is going
2			Concern with route 12 becoming rush hour only as he will have to take a cab. Feels unsafe at terminal.
3			Concern with change to #8 Monaghan
4			Concern with hiring out of town consultant and $75G for study, concern with reduced hours, changes to seniors pass
5			Concern with route 12 change, able bodied passengers using the priority seating. Taxi script – should be able to pay only regular fare and choose the cab company (taxi scripts should be a last resort. Would like the "no shows" for handivan checked into by a third party. Public transit is an essential service.
6			Sometimes handivans not on time and don't run well. Should have more routes and accessible buses
7			Thinks TASS bus route now has too many students on it. Concern with changes to seniors passes. Thinks we have a good service.
8			Too much construction.
9			Likes peak period buses, thanked consultant for listening to them, concern with lack of holiday service. Collison bus route shouldn't be changed.
10			Thinks the system is good. Wants a 90 min transfer pass, likes 20 min frequency. Concern with no holiday service, thinks the City should pay more for the service.
11			Impressed with detail and attitude of consultants. Noted problems with booking handivan. Should have penalties for no show clients. Wants holiday service.
12			Comprehensive report and well done. Likes idea of community bus because it is flexible. Happy hours not reduced. Should be consequences for no show users of handivans. Thinks taxi script idea is good
13			Detailed report. Needs to be admin review and better customer service skills for drivers, more fulltime employees. Issues with winter maintenance. Concern with proposed cuts last year. Department needs a shake up.
14			Doesn't want route 9 combined. Suggested 30' buses. Some stops need work (flooding, no shelter). Should increase advertising on buses. Thinks route 12 should be peak hours only.

15			Almost impossible to figure out route changes – wants them in writing. Concern with Collison route change. Very concerned with end of seniors semi-annual passes.
16			Price changes may make it cost prohibitive. Concern with Cumberland/Hilliard street bus stop (because of hill).
17			Drivers should be better educated about services. Should lower the steps more often for people. #6 SSFC bus is too crowded. Lansdowne Street buses can't take everyone.
18			Likes report. Would like holiday service. Likes 20 minute service, wants an advisory committee for seniors/disabled.,
19			Uses handivan everyday. ODSP forms can't be used for taxis, computer system is the problem with dispatch, disgrace that seniors and disabled are being impacted, they aren't able to wait outside in bad weather for handivan. Concern that the support worker has to buy a pass to travel with the disabled person. Some very good drivers.
20			Taxi's are less costly than handivan. Community bus would be a benefit. Thinks handivan costs will have to be increased.
21			Doesn't think we are gathering enough information, Peterborough isn't Guelph. Concerned with combining Nichols/Trent East bank route. Mentioned that students pick where to live based on bus routes. Likes the 20 minute service, but concerned with condition and number of buses. Took issue with the numbers cited in the report.
22			Concerned with where money is coming from for improvements – shouldn't be from users or tax payers. Community bus idea sounds good. Has been left at the curb in the past because no wheelchair space left on the bus. Great system, great drivers and some good ideas in report.
23			Likes 20 minute service, should use "My Beat" police notification for transit updates/cancellations, make transit run later so people can go out at night. Should refer to routes by name, not number.
24			Cuts will impact seniors and disabled, taxi scripts should be available. Radial system provides good access to the core, but perhaps we can start moving away from this. Our system is underfunded.
25			Line ups at ticket office – maybe electronic ticket sales or sales at convenience stores. Staff need to be fully aware of policies. If disabled person can't get on because no space driver needs to call and have another driver dispatched. Maybe handivan requests can be done by email. Perhaps Trillium College can arrange for passes like Trent does. Stop locations need to be reviewed. How long are taxi scripts good for?

26			Wants buses to go to 300 Hedonics at night. Said public complaints intended for Councillor Vass were thrown out by 'Andrew'. People should be paying for kids and there should be a sign on the fare boxes.
27			Transit is essential service. Transit is a gem and we don't spend enough. Trent students are subsidizing and Fleming should do the same. Really amazing customer service from bus drivers for the most part. Need 20 min routes and holiday service.
28			Happy consultant adjusted report based on earlier input. Investments in public transit impact positively throughout the community.
29			We should consider another hub at Lansdowne. Commitment to public transportation is important to deal with too much traffic.
30			Concern with lack of snow removal at sites. Next stop announcement system is good but not loud enough. Priority seating concerns. Way finding – next tactile walkways, signage at terminal etc. Lots of wonderful drivers but should be more training to interact better with their clients.
31			Some great things in report. Need to set a timeframe for goals. Concern with wheelchair clients being left behind when spaces full on bus. Poor winter maintenance meant he had to wait on the road in winter and was almost hit by a vehicle. He called public works almost daily on this matter last year
32			Can't read the receipts for pass purchases because printing is too light. Not in favour of combining Nichols route with Trent East Bank. Should have talked to seniors about this and not just students. Thinks we have a good system.
33			Told story of person in wheelchair stuck in snow on roadway. City buses and handivans passes without helping. Some handivan drivers are exceptional and some are not good at all.
34			