

Appendix E

Transportation Strategy Report

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1. INTRODUCTION

The purpose of this report is to examine different transportation strategies in order to address a growing demand in the County of Simcoe. An effective and sustainable transportation system attempts to strike a balance between the economic and social benefits of transportation with the need to protect the environment¹. The key to the development of a successful and sustainable transportation strategy is finding the right balance between managing demand and providing new transportation capacity that encourages choice between modes of travel, and exploits the synergies that can exist between complimentary strategies.

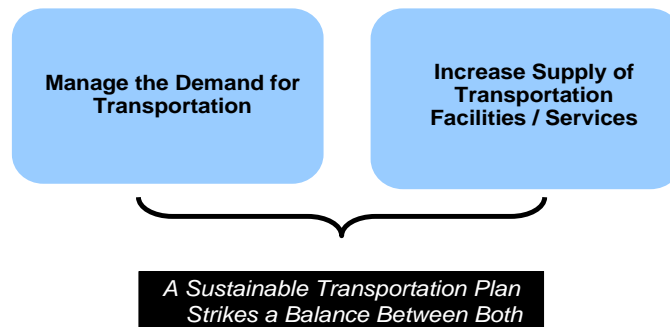


Figure 4.1 - Relationship Between Supply & Demand

Why is balance important?

- ⇒ *A transportation strategy must be achievable – otherwise the system can be over designed or over capacity*
- ⇒ *The transportation system should improve mobility and accessibility for all residents regardless of car availability*
- ⇒ *An effective transportation system and high quality of life are key factors in business location / retention*
- ⇒ *Alternative transportation modes, such as walking and cycling, offer significant health / quality of life benefits*
- ⇒ *A more balanced transportation system can reduce adverse environmental impacts from road widening / construction, air quality, etc*
- ⇒ *An active and mobile community is a vibrant community*

¹ Strategies for Sustainable Transportation Planning: A Review of Practices and Options, Transport Canada, September 2005

The following sections summarize different approaches and considerations that can be used to design an effective strategy for a community.

2. STRATEGIES TO INCREASE SUPPLY

There are three main ways to increase the supply of transportation infrastructure and services: Optimize Existing System, Expand Existing Facilities/Services, and Provide New Facilities/Services.

2.1. Optimizing the Existing System

This approach attempts to maximize the use and capacity of existing transportation assets to allow them to serve more demand and extend their service life. Examples of optimization include;

Increase Supply	
Optimize Existing System	<ul style="list-style-type: none"> • Access Management • Roadway Classification • Designated Truck Routes • Improve Existing Road Conditions • Improve Accessibility of Existing Facilities
Expand Existing Facilities	<ul style="list-style-type: none"> • Widen Existing Roads • Add Cycling Lanes • Add New Transit Service / Routes • Expand Use of Rail Corridors
Provide New Facilities	<ul style="list-style-type: none"> • Construct New Roads • Construct New Sidewalks / Trails • Construct New Bicycle Lanes / Trails • Construct Carpool Lots

Access Management - Access management is a technique used in conjunction with land use policies to control the number of entrances that are permitted on key arterial road corridors. A recent study, undertaken as part of the City of London Transportation Master Plan, found that arterial road optimization and access management could increase the capacity of an arterial road by up to 5%.

Roadway Classification – The Roadway Classification System is useful tool to assist in the management of existing transportation infrastructure, by recognizing the role that each roadway plays in serving transportation needs. The Classification system plays a role in determining the maintenance standards that should be followed, and can provide a framework for the application of access management policies and investment decisions. Maintaining and updating the existing road classification according to recommended changes will ensure the County’s road network continues to function safely and be operated properly.

Designated Truck Routes - By designating routes as truck routes, other roadways that are not suited to carry trucks (due to structural conditions, geometric constraints, impacts to residential areas) can operate more efficiently in carrying auto traffic and serving pedestrian and cycling demands. Designated truck routes provide clear direction to truck drivers and shippers on the appropriate routes to use for goods movements and allows the County to design these facilitates to safely accommodate truck traffic.

Operational Improvements to Existing Roads - Since the operation of key intersections in the County will often deteriorate sooner than the roadway will reach its functional capacity, the construction of turning lanes at key intersections can increase the capacity of the through lanes by removing turning vehicles from the through lanes.

Accessibility Improvements of Existing Facilities – – Considering the demographic trends of a maturing population, identifying, removing and preventing barriers to persons with disabilities or mobility challenges allows them to utilize existing transportation infrastructure and services more effectively and enables them to participate more effectively in a growing and diverse community.

2.2. Expansion of Existing System

This approach attempts to increase the capacity of existing transportation assets by increasing existing service or adding capacity. Expanding existing facilities does not just mean widening roads. There are a number of different approaches that can be used to expand existing facilities to accommodate future transportation needs, and system expansion may be a critical component required to support transit or other non-auto transportation strategies.

Widen Existing Roads - Widening of existing roads can mean widening the number of through lanes or widening to implement continuous turning lanes, commonly known as Two Way Left Turn Lanes (TWLTL). Widening existing roads can reduce impacts in “greenspace” areas, although in some built up corridors widening can have significant social impacts to neighbourhoods or economic impacts to businesses. The public attitude survey questioned residents on how important it was for the County to invest taxpayer’s money towards specific projects and 61% suggested that it was important to widen existing roadways and 95% suggested it was important for the County to work with the provincial government to improve existing provincial highways (Highways 11, 12, 26, 89, 93 and 400).

Studies have shown that the capacity of a four lane arterial road can be increased by up to 15% through the construction of a continuous TWLTL.

Add Cycling Lanes - The addition of cycling lanes to an existing roadway can be an important step in promoting increased multi-modal usage of transportation corridors. On road cycling lanes are obviously more controversial and difficult to implement, due to concerns over conflicts with vehicular traffic and safety, and not all users are comfortable riding in mixed traffic

Add New Transit Routes / Frequency of Service - Expanding transit services can include the addition of new transit routes to serve new growth areas (including adjacent municipalities), the addition of new routes to serve existing high demand corridors and / or increasing the frequency or the hours of service.

Expanding Use of Rail Corridors – Expanding the use of the current rail system for provide new or more frequent GO transit services would play a key role in serving the inter-regional Transportation Needs as a result of new growth. Expanded use of rail corridors may also support goods movement to/from the County and relieve truck traffic on some road corridors

2.3. Construction of New Transportation Facilities

The construction of new transportation facilities can include new roads, new sidewalks and trails, bicycle lanes, and the construction new or enhanced transit facilities. These are the most “aggressive” strategies that not only require extensive capital investment, but may require an extensive planning and implementation process. However, it should be recognized that the selection of a ‘preferred transportation strategy’ will not eliminate the need for road improvements, but it may

For example, access to the Highway 404 corridor is currently constrained by limited capacity through downtown Bradford, which experiences recurring congestion today. This network constraint influences the amount of traffic that ultimately uses the Highway 400 corridor. Improved connections to Highway 404 would allow for improved route choice and may defer or reduce the need for new capacity in the Highway 400 corridor.

influence the amount of road improvements or the types of road improvement that will best compliment the strategy. For example, road network capacity improvements may play a key role in supporting other strategies such as goods movement and improved inter-regional transit. In addition, road network improvements may optimize opportunities for route choice that allows improved access to existing transportation corridors a means of maximizing the benefit these corridors play in serving planned growth.

Information gathered from the public attitude survey indicated that 52% of the respondents suggested that it was important to build new major County Roadways and 86% suggested it was important to work with the provincial government to complete new highways such as the Bradford By-pass or Highway 427 extension.

3. STRATEGIES TO MANAGE TRAVEL DEMAND

Over the past 10 to 15 years, the concept of Transportation Demand Management (TDM) has emerged as a strategy to deal with growth in auto traffic. TDM is described as a series of initiatives and policies

designed to reduce or control the increase in the overall demand for travel within a community by emphasizing the movement of people and goods, rather than motor vehicles.

There are many different TDM strategies with a variety of transportation impacts, however most strategies fall within the following categories:

Each of these strategies uses different types of incentives to encourage people to re-think their travel choices, including the need to travel at all. A listing of some of the most common Demand Management strategies that fall within each of the categories applicable to the Simcoe County transportation system are summarized below.

Manage Demand	
Behavior Based Policies	<ul style="list-style-type: none"> ▪ Increase Walking / Cycling ▪ Flexible Work Hours (spread demand across day) ▪ Telecommuting (work from home) ▪ Ridesharing (carpooling)
Land Use Based Policies	<ul style="list-style-type: none"> ▪ Increased Densities ▪ Encourage Mixed Land Use ▪ Neighbourhood Design to Support Transit / Cycling / Walking ▪ Support Walking / Cycling / Transit at key destinations (employers/retail) ▪ Enhance Accessibility

3.1. Behaviour Based Strategies

Behaviour based strategies tend to use a combination of marketing, incentives, and improved infrastructure / services to provide a wider range of transportation choices, and encourage residents to re-consider the transportation choices they make. Behaviour based strategies can also be structured to achieve a number of related objectives such as a reduction in the number of trips taken, the mode of travel used or the time when they travel. Therefore, behaviour based strategies are very flexible, although they are also largely dependent on voluntary change.

Marketing Alternative Modes of Transportation –

Encouraging auto users to shift to another mode of transportation is a complex task that that may require a number of initiatives and strategies to be implemented as a package. Even with physical, operational, or institutional changes designed to increase the attractiveness of alternative modes, many jurisdictions have still struggled with the development of marketing campaigns to build awareness and encourage the change to occur. Many communities participate in programs like the “Clean Air Day”, “One Tonne Challenge” and “Commuter Challenge”. With the exception of the “one Tonne Challenge”, these are programs designed to encourage people to try to make environmentally-friendly lifestyle choices by using a different mode of travel for one day. While these are good programs, they often do not result in permanent change to individual behaviour. To some extent, many of these types of programs are aimed at encouraging users to change their habits for the “broader good”. While this type of marketing approach

will appeal to a segment of the population, many of these programs do not attract longer term support when people consider their individual circumstances and the reasons for their transportation choices.

Some of the leading jurisdictions in implementing successful TDM programs are using a social or individualized marketing campaign to encourage people to make more sustainable transportation choices. These programs are premised on the idea that each member of the public will have different motivations and reasons for the transportation choices they make. Therefore, you need to understand these motivations and target your strategies to make it attractive for “them” to use another mode of travel.

By segmenting the population into groups with similar motivations, key messages about the benefits that the individual could realize are then marketed to them. For example, employers in the area were encouraged to support flexible work hours and work at home programs as a means to improve morale, productivity, and employee retention.

Employees who were trying to balance the demands of work and home were encouraged to use flexible work hours, telecommute, or ride the LRT system due to the potential time savings that could be better spent at home with their families. Similar marketing initiatives have also been used in Portland, Oregon and Sydney, Australia with a higher degree of acceptance than some of the more traditional, “standard” marketing initiatives.

In the Public Attitude Survey undertaken for Simcoe County, 78% of respondents suggested it was important to reduce the demand for auto travel during peak periods and 95% suggested it was important to reduce Greenhouse Gas Emissions and Improve Air Quality. When asked which initiatives the County should consider regarding future transportation, 89% of the respondents suggested it was important to increase transportation choices for travel between municipalities through the use of buses, trains cycling etc.

Encouraging Shifts to Walking and Cycling –

Walking and cycling improvements not only can substitute for some auto vehicle trips, it can support other alternative modes such as public transit.

Communities with good walking and cycling facilities typically have residents who drive 5-15% less vehicle miles than in more automobile dependent communities.

Across North America, cycling has evolved into a practical, cost effective, environmentally sensitive and healthy mode of transportation for both recreational and utilitarian purposes. Cycling is one of the top three recreational pursuits across Ontario with 20% participation rate and a growth of approximately 2.3%

annually.² The demand for cycling and walking facilities is high in communities across Ontario and municipalities such as York Region, Ottawa, London, Milton and Brampton are actively developing networks to encourage cycling and walking in an effort to lower their reliance on the automobile. The promotion of cycling and walking has significant individual, social, environmental and economical benefits. Such benefits include, but are not limited to, congestion reduction, improved mobility for non-drivers, improved public health, and tourism development.

The development of walking and cycling strategy must recognize the primary types of cyclists within a community:

- Experienced Cyclists who are comfortable riding in traffic typically prefer wide lanes or demarcated lanes on the roads.
- Casual Adult Cyclists, including teenagers who are occasional cyclists with limited skills and training. They cycle mainly for recreation, preferring residential streets, bike lanes and trails.
- Child Cyclists use cycling and walking as their own independent mode of transportation. They generally lack experience, training and judgment, and can be unpredictable on the street.

Careful consideration must be given to bicycle and trail facilities design and maintenance practices, with understanding of the characteristics of a bicycle and trail users, knowledge of safety issues, and awareness of the Highway Traffic Act as it applies to cyclists. For less experienced cyclists, signed routes on quiet residential streets, bike lanes on busier two-lane wide roads, and paved shoulders or off-road facilities on rural roads are more ideal. These bikeways will also appeal to more experienced cyclists, along with proposed wide lanes to share with motorists on busy roads.

There are many ways to improve walking and cycling, including the improvement of facilities (i.e. pedestrian facilities such as sidewalks, paths, and crosswalks), traffic calming, encouragement programs, bike parking, and more attractive streets. In essence, the elements in cycling strategies should include³:

- A Cycling Network for bike lanes, multi-use trails and signed bicycle routes.

² Culture and Recreation, Ministry of Citizenship, 1998

³ Draft Report – City of Windsor: Bicycle Use Master Plan (BUMP) Study, Marshall Macklin Monaghan, ESB International, Stantec, Paradigm Transportation Solutions Ltd., Jan 2001.

- Promoting Cycling Awareness through education, encouragement and enforcement and advertisement.
- Improving the Cycling-Transit Link to increase commuter and long-distance cycling trips.
- Providing End of Trip Facilities to meet the needs of cyclists such as secure parking for bicycles.

Communities with good walking and cycling conditions typically have residents who drive 5-15% less vehicle miles than in more automobile dependent communities.⁴

Results from the Public Attitude survey suggested that 88% of the respondents felt it was important to build new off-road walking/bicycle trails throughout the County and 72% suggested it was important to build dedicated bicycle lanes along major county Roads.

While land use and urban design is recognized as key factor in providing a walkable community, there are a number of other strategies and policies that have been used in other municipalities to encourage shifts to walking and cycling. The most obvious is the provision of multi-use trails, sidewalks, and other facilities that link between key origin and destination locations within the community.

The City of Brantford completed a Multi-Use Trail / Bikeway Design Plan in March 2000, which recommended a series of off road and on road cycling / walking trails across the City. The plan identified key infrastructure required to implement a City-wide trail system, including trail related amenities, such as benches, rest areas, bicycle parking areas, and staging areas. Most of the recommendations dealt with trail related infrastructure needs but recommendations to address systemic barriers to walking and cycling as a mode of transportation were not covered to a great extent.

The Region of York has just completed a Pedestrian and Cycling Master Plan (April 2008) with the primary goal to improve conditions for walking and providing a comprehensive cycling network in both the urban and rural areas of the Region. The proposed pedestrian and cycling network is an integration of on-road and off-road facilities.

Beyond infrastructure requirements, people often note systemic barriers to walking and cycling as reasons for continuing their use of the auto for trips to/from work. One of the common barriers to walking and cycling for work related trips is the availability of showers, change rooms, and secure bike racks at

workplace locations; to enable employees to change into work clothes. While the implementation of such facilities within private buildings is beyond the County to control, policies to encourage employers to provide these types of services in new developments or in retrofit situations may encourage some movement.

Another common concern is the need to travel for work, or the need to have a car in case of emergency (i.e. a child at school). Many organizations have provided a guaranteed ride home program or have provided pool cars / taxi vouchers at a workplace to overcome this barrier and support their employees in making alternative travel choices.

Once upon a time, walking and cycling to school was commonplace; now it is a rarity. The Federal Highway Administration has reported that roughly half of all 5 to 18 year olds either walked or biked to school in 1969. The journey to school has changed dramatically since then. By 2001, nearly 9 out of 10 children between the ages of 5 and 15 were driven to school by either a parent or a bus driver, adding additional traffic to the morning commute and negatively affecting communities around schools.

The reasons for this decline in walking and biking trips to school are multifold. For one, the journey between home and school has become longer and more treacherous because of decades of auto-oriented suburbanization. The trend towards consolidated school facilities, rather than local neighbourhood schools, has also increased school trip lengths. In today's world, there are also the fears and concerns of parents about exposing their children to threats from strangers and motor vehicles. And finally, in many communities, sidewalks, crosswalks, bike lanes, and trails are either missing or inadequate.

To address the special pedestrian needs of school-aged children, Active and Safe Routes to School (ASRTS) has been developed as a nationwide program to encourage the use of walking, and other safe transportation modes to and from school. In addition to reducing traffic congestion around schools, these programs have been credited with:

- Improving the level of physical activity for children and adults
- Encouraging a healthier family lifestyle,
- Safer, calmer streets and neighbourhoods, and
- Improved air quality and a cleaner environment

⁴ “Win-Win Emission Reductions”, Todd Litman, Victoria Transport Policy Institute, December 2, 2005.

Encouraging a shift to walking and cycling can reduce some auto vehicle trips, support other alternative modes, such as public transit, and can have significant individual, social, health, environmental and economical benefits to the community. While land use and urban design is recognized as key factor in providing a walkable community, the provision of multi-use trails, sidewalks, and other facilities must also be integrated into community design.

Encouraging Shifts to Transit - The Public Attitude Survey results indicated that 72% of residents suggested it was important to increase the use of public transit for travel within municipalities that have transit service and 88% suggested it was important to provide transit service between municipalities in the County.

Surprisingly, forty-four percent of the respondents of the public attitude survey suggested that the most pressing transportation issue facing the County of Simcoe is the lack of Public Transit. Developing strategies to extend transit service to areas within the County which are not currently served by transit in order to provide residents choice and accessibility to community services is the most challenging aspect of encouraging a shift to transit.

Flexible Hours and Peak Spreading - The use of flexible work hours can also be key part of transportation demand management program. Flexible work hours could be implemented in a number of ways depending on the type of business, and type of employee. This can range from flexible schedules that do not follow traditional 9-5 office hours to shift change times that avoid peak roadway travel times.

Telecommuting - Telecommuting has been growing in popularity over the past 5 to 10 years, although with the wider availability of high speed internet service, serious interest in telecommuting has risen dramatically over the past few years. The implementation of telecommuting programs is typically initiated at the employer level; however, municipalities can provide incentives and assistance to companies wishing to set a program at their location. In the City of Ottawa area, Nortel Networks ran a telecommuting program for many of their employees, and recently some innovative variations like hoteling, satellite offices, and remote business hosting have been introduced by private companies in some markets.

Hoteling essentially treats office space like a hotel, where many of the employees, who work from home or off site, are not assigned to a specific office space, but call in to reserve an office only when needed. Obviously this type of program would be most attractive for sales staff or other employees who are frequently out of the office and do not have a direct supervisory role in the organization.

In 1995 Consulting and Audit Canada (CAC) in Ottawa launched a hoteling strategy with three simple objectives; reduce overhead expenses while maintaining or enhancing employee productivity and customer satisfaction. The CAC hotel was created, complete with an informal drop-in / brainstorming area, a secured storage area which housed files and personal effects, including portable filing units, access to a hotel office "suite" or smaller "booths" which could be electronically reserved on the LAN and a formal meeting room. In addition, an automated reservation system was implemented to provide hoteling staff with access to space. Part of the money saved in the first year was reinvested to purchase new computers, telephony, and associated training.

AT&T has supported teleworkers for more than a decade, using a system something like this throughout the United States. In 2000 AT&T reported that over 55% of their employees participated in the telework program at least a few days per month. They credit this program with savings of \$3000 per employee per year in reduced real estate costs, along with improved productivity and staff retention, in addition to the transportation benefits that accrue to society. In 2006 AT&T reported that their popular telework program helped the company slash its annual real estate costs by US\$30 million and rake in US\$150 million in extra hours of productive work from teleworkers.

Research shows AT&T tele-workers are much less likely to jump ship than in-office staff, according to Joseph Roitz, AT&T's telework director.

“Turnover in our virtual office population is half that of the turnover in our general salaried employee population,” Roitz says.

“Lemmings make leap to teleworkers”, Ann Bednarz, Network World (20 Jan 2006)

The most common barrier to telecommuting is corporate culture, where many supervisors feel uncomfortable trusting their employees to work at home or off site. Not all employees are suited for this type of work arrangement either, and those that do telework report that they need to have access to a separate “home office” to be truly productive. Many organizations have overcome these barriers to implement successful teleworking programs through top down support for the program and an active program of removing barriers to implementation. A similar type of program may be popular in the growing call centre business, provided that companies can implement programs and technology to allow for seamless processes and effective quality control monitoring for remote employees.

Some enterprising businesses, such as Telsec Business Centres Inc. in Toronto, have also established temporary satellite office space for rent in a number of locations. These satellite offices are designed to provide all of the amenities of a corporate office including fax, printing services, meeting room space, temporary office space, and some reception and mail handling services.

With the wider availability of high speed internet service, serious interest in telecommuting has risen dramatically over the past few years. The implementation of telecommuting programs is typically initiated at the employer level.

Ridesharing

Despite some of the challenges with rideshare programs, there are a number of very successful examples of ridesharing in action throughout Ontario. Large manufacturing operations appear to be one of the best workplaces to encourage the formation of carpools. The GM plant in Oshawa, the Chrysler plant in Windsor, and the Ford plant in Mississauga all have a number of employees that regularly participate in carpools and vanpools. Some of these programs are sponsored and / or supported by the company.

One of the key barriers to the formation of carpools is finding someone suitable to drive with. Since the internet has become much more widespread, there are now a number of formal ride matching services on the internet (such as www.carpool.ca, and www.carpooltool.com) that will try to match drivers that travel during the same time periods and have origin and destination points within close proximity of each other. As with any internet based matching service, security is a key concern for many thinking of carpooling.

Ridesharing, is an effective transportation strategy for implementation at large employment centres. About 19% of all trips in the County are made by auto passengers. The most common form of ridesharing is between family members, since ridesharing among co-workers is much more difficult to organize and sustain. There are now a number of ride matching services on the internet (such as www.carpool.ca, and www.carpooltool.com) that will try to match drivers with similar commuting patterns.

3.2. Land Use Based Strategies

To have a significant effect on transportation behaviour increased densities must be combined with other strategies to improve the mix of land uses within neighbourhoods, promote safe and pleasant walking and cycling environments, provide transit supportive land use design, and reduce the amount of and impact of parking.

“Land use and transportation are two sides of the same coin. Transportation affects land use and land use affects transportation.”⁵

Land use strategies come under a variety of names and descriptions (as summarized in **Table 3.1** below), but all of them attempt to use land use at a variety of geographic scales to provide transportation choice to residents and encourage non auto modes of transportation.

Table 3-1 -Land Use Management Strategies⁶

Strategy	Scale	Description
Smart Growth	Regional and local	More compact, mixed, multi-modal development
New Urbanism	Local, street and site	More compact, mixed, multi-modal, pedestrian friendly development.
Transit-Oriented Development	Local, neighborhood and site	More compact, mixed, development designed around quality transit serve, often designed around transit villages.
Location-Efficient Development	Local and site	Residential and commercial development located and designed for reduced automobile ownership and use.
Access Management	Local, street and site	Coordination between roadway design and land use to improve transport.
Streetscaping	Street and site	Creating more attractive, pedestrian friendly and transit-oriented streets.
Traffic calming	Street	Roadway redesign to reduce traffic volumes and speeds.
Parking management	Local and site	Various strategies for encouraging more efficient use of parking facilities and reducing parking requirements.

The transportation benefits of a more compact form of development are recognized in the Province’s recent “Places to Grow” legislation, which requires Greater Golden Horseshoe municipalities to accommodate a higher proportion of their future growth through intensification and requires higher density targets in new Greenfield development areas and existing urban core areas.

Density, however, is only one aspect of the land use solution. To have a significant affect on transportation behaviour increased densities must be combined with other strategies to improve the mix of

⁵ “Land Use Impacts on Transportation: How Land Use Factors Affect Travel Behavior”, Todd Litman, Victoria Transport Policy Institute, November 16,2005

⁶ Ibid.

land uses within neighbourhoods, promote safe and pleasant environments to support walking and cycling, and provide transit supportive land use design.

In numerous small towns throughout the province, neighbourhood design principles that support alternative modes of transportation can be readily found. While these small towns and villages do not offer transit services, the mix of land uses and the scale of development patterns can often make walking and cycling much more attractive than some of today's suburban "master planned" communities. Some strategies to achieve these types of benefits within our urban neighbourhoods of today could include:

Encouraging a variety of land uses within a neighbourhood, such as neighbourhood stores and services,

- Encourage the redevelopment of single uses into mixed-use developments,
- Accommodate the reuse of closed, decommissioned, or obsolete institutional uses,
- Provide incentives for ground-floor retail and upper-level residential uses in existing and future development,
- Design communities so that kids can walk to school,
- Use trees and other green infrastructure to provide shelter, beauty, urban heat reduction, and separation from automobile traffic,
- Encourage and provide safe and direct pedestrian routes to transit stops,
- Use visual cues and design elements to indicate pedestrian rights of way and minimize conflicts,
- Avoid use of large scale parking lots and situate parking to enhance the pedestrian environment and facilitate access between destinations,
- Make places walkable for aging populations in response to new demographics and special needs,
- Retrofit existing streets to provide sidewalks to promote more walkable communities in both residential and employment areas.
- Concentrate critical services near homes, jobs, and transit.
- Require building design that makes commercial areas more walkable and connected to the community,
- Plan neighbourhood street networks in a grid patterns with high levels of connectivity and short blocks rather than long blocks with looping street segments and numerous cul-de-sacs
- Locate mixed use activity centers around transit hubs,

- Require sidewalks in all new developments and on both sides of all collector and arterial roads,
- Cluster freight facilities near ports, airports, and rail terminals.

3.3. Summary of Transportation Demand Management Strategies

The following tables provide a summary of some of the common transportation demand management strategies currently in use, along with an assessment of the jurisdictional means of implementation.

Table 3-2 – Common Transportation Demand Management Strategies

Strategy	Example	Implementation
Behaviour-Based		
Shift Peak Travel Hours	Flex Hours	Employers
Telecommute	Work at Home	Employers
Increase Walk/Cycling	Active Transportation Plans	Municipality
HOV Lanes	New HOV Lanes on GTA Freeways	Municipality / Province
Shift to Transit	Expand existing transit services	Municipality / Province
Ride-Sharing	Existing Carpool Lots	Municipality / Province
Land-Use-Based		
Increase Densities	Compact Urban Form	Municipality / Developers
Shorten Home/Work Distance	Mixed Use Development	Municipality / Developers

An assessment of the effectiveness, in terms of extent and degree of impact, along with costs, and implementation issues is provided below.

Table 3-3 – Effectiveness of TDM Strategies

Strategy	Effectiveness		Costs		Implementation	
	Extent	Impact	To Users	To Society	Ease to Administer	Public Acceptance
Behaviour-Based						
Shift Peak Travel Hours	Variable	Minor	None	None	Moderate	Moderate
Telecommute	Broad	Minor	None	None	Moderate	Good
Increase Walk/Cycle	Variable	Minor	None	None	Hard	Poor
HOV Lanes	Variable	Moderate	None	Great	Hard	Moderate
Shift to Transit	Variable	Minor	Moderate	Moderate	Hard	Moderate
Ride-Sharing	Narrow	Moderate	None	Minor	Hard	Good
Land-Use-Based						
Increase Densities	Broad	Moderate	None	Minor	Moderate	Moderate
Shorten Home/Work Distance	Broad	Minor	None	Moderate	Moderate	Moderate

3.4. Best Practices Review

In reviewing the best TDM practices within regional governments including Region of Peel, Region of Halifax, York Region and Halton Region, and municipal governments including City of Hamilton, City of Brampton, City of Peterborough, City of Ottawa and City of Calgary, some popular TDM programs and measures adopted or developed in these governments are summarized as follows: A more comprehensive description of best practices is appended to this report.

Promotion of Balanced Multi-modal Transportation System – To arouse public awareness of different sustainable travel choices through communications and outreach programs to support TDM practices. Methods including websites, cycling route maps, promotion flyers and special programs to increase the recognition of sustainable transportation options are common TDM measures among the Regional and Municipal governments. In some of the regional governments such as Region of Halifax, York Region and Halton Region, TDM promotion activities in coordination with area municipalities and other local agencies / organizations to integrate marketing and education of the environmental or individual health benefits of sustainable transportation choices are being implemented.

Incorporation of TDM Policies in Official Plan – TDM promotion and supportive policies including the establishment of a regional RDM coordinator, encouraging provincial government and municipal government to implement TDM strategies such as carpool / vanpool programs, development of multi-purpose pedestrian / bicycle network, etc, should be considered as part of the Official Plan (implemented in Region of Peel) to foster the TDM implementation across the regional level as well as municipal levels.

Development of Active Transportation Plans – To promote and enhance increased bicycling activities and walking activities, active transportation plans including bicycle plan, pedestrian plan and greenways plan (implemented in Region of Halifax and York Region) may be considered and developed to further guide the development of a long-term and comprehensive bicycle or pedestrian network. Detail design principals and land use restrictions encouraging the active transportation activities would be recommended and defined in these reports. The Town of Wasaga Beach and the Town of Collingwood are currently developing active transportation plans for their communities.

Demonstration of Leadership in TDM Measures – Pilot programs to allow government employees to carpool and permit teleworking and alternative work arrangements for government employees are being recommended for demonstrating leadership by example among different level of governments to support TDM strategy promotions. The City of Peterborough participates in the Shifting Gears Challenge and

promotes carpooling amongst Peterborough Government employees with quick access to a ride matching service with a special section set up especially for Peterborough government employees

Coordination with Area Municipalities, Provincial Government or Other Agencies to Promote TDM Strategies – Formation of Transportation Management Associations (TMAs) can help TDM strategies implementation accomplished through variety of measures including carpooling programs, emergency ride home programs and assistance in supporting alternative transportation and work arrangements. Working closely with business partners, TMAs ensure effective delivery of various TDM programs in local communities. Smart Commute – North Toronto, Vaughan (NTV) was formed in 2001 as a public-private partnership, actively works with employers to implement employee trip programs in reducing single occupancy vehicle travel and traffic congestions. Founding partners including City of Vaughan, York Region, City of Toronto and York University are still involved in this partnership today to foster TDM strategies.

Expansion of Broadband Internet Services – Expanding the internet network to cover more rural areas, will not only support businesses and residents to effectively use broadband for economic and social development, but also providing means to allow development of TDM measures including teleworking and “shop-at-home” activities to reduce trip generation and traffic demand on local transportation networks. In 2007, the Ontario Municipal Rural Broadband Partnership Program approved 18 municipalities in providing funding to support their broadband infrastructure construction to reduce broadband gaps in rural areas. County of Grey and County of Peterborough are two of the municipalities that were approved for funding.

4. TRANSPORTATION STRATEGY OPTIONS

The development of an overall strategy to guide transportation decisions in a community must take into account local characteristics, trends, and attitudes that will have a large influence on the viability and effectiveness of different types of strategic options. Within Simcoe County, some of these considerations include:

- **The demographic profile of the County:** Simcoe County has an aging population that has very different travel needs and patterns than communities with a younger population base. This does not necessarily mean that older residents travel less, but they may travel at different times of day and may be traveling for different purposes. Many communities with aging populations are seeing an increase

in mid-day discretionary travel. It also means that accessibility to services for the aging population must also be taken into consideration given that many services are located in the larger urban centres.

- **Geographic extent of the County:** The County of Simcoe covers a huge geographic area that is characterized by numerous different conditions ranging from bustling urban centres, to smaller rural hamlets and villages, to large expanses of undeveloped wilderness areas. To travel from one end of the County to the other by car can take over an hour without considering traffic congestion. The population is widely distributed throughout the County, with medium sized communities acting as local and regional hubs for population, employment, and services. Developing a balanced transportation strategy must recognize the opportunities created by a distributed population base while considering the inherent challenges associated with long distances between population centres.
- **Recognition of the role and function of the County Road system:** The County Road system is primarily intended to connect communities within the County to facilitate the movement of people and goods. While the County Road system may pass through local communities, and must recognize the needs of other users in these areas, its primary role is to facilitate the medium to longer distance travel needs of residents and businesses.
- **Experience of other municipalities:** The development of a viable transportation strategy within a County context may need different approaches than is typically used for large urban areas. An examination of best practices of other communities with a mixture of rural and urban areas was undertaken to find out what they have undertaken to address similar issues. It is recognized that some urban solutions to a problem cannot be applied to rural settings.
- **Comments from the public during PIC 1 / Public Attitude Survey:** As part of the initial public outreach undertaken for this study, residents provided a number of comments on how the County should move forward in developing their first Transportation Master Plan. Key comments included the need for improved transportation choices within and between communities, a strong desire to provide some form of public transit system improvements to link Simcoe County communities, and a recognition of the benefits and importance of alternative modes of transportation.
- **Effectiveness in reducing demands / providing choice:** The development of a transportation strategy must consider the effectiveness of the strategy in addressing future transportation challenges in the community. A well designed strategy will result in tangible benefits that are visible and measurable, not only to ensure value for money spent, but to encourage continued broader public support.

- **Degree to which the County can influence outcomes or control implementation:** While the County can set overall direction for transportation infrastructure and services, it must be recognized that the County may not have direct control over all of the elements of particular strategy that can influence its effectiveness. For example, many local land use and transportation infrastructure decisions within municipalities will continue to be made by the local municipalities, who best know the needs of their residents. The County can provide direction but may have a limited role in implementation. Similarly other strategies, like transportation demand management or transit, may require individuals to make changes to their travel habits to have noticeable influence. While the County can promote these measures and provide some infrastructure, the changes need to occur at the individual level to realize the full benefits.

There are many ways to utilize the strategies discussed in this chapter to create a more sustainable transportation system and improve the livability of our communities. The key to the development of a successful transportation strategy is finding the right balance between managing demand and providing new transportation capacity, and exploiting the synergies that can exist between complimentary strategies.

Many of these strategies work hand-in-hand with one another and could have broader and more effective achievements when implemented in conjunction with other improvements. For instance, improvements designed to enhance walking and cycling can also benefit transit ridership.

A series of transportation strategy alternatives were developed for the Simcoe County for the key modes of travel in the community. Within each area, different visions of the transportation system were described ranging from a ‘Passive’ approach to an ‘active’ approach. The intent of these options was to design a transportation strategy, which reflects community constraints, opportunities, and resident’s visions of what makes a community livable. **Table 4.2** summarizes the transportation strategy options that are discussed in greater detail in the sections that follow.

Table 4-1 -Range of Transportation Strategy Alternatives

Mode of Travel / Policy Area	Alternative 1 – Passive	Alternative 2- Moderate	Alternative 3 –Active
Walking & Cycling	Maintain and promote existing trail system	Focus on Off-road trails Active transportation on some County Roads	Municipalities to develop active transportation plans. County to focus on both on and off-road facilities. Incorporate active transportation infrastructure into County Road improvements projects
Transit Service	Status Quo No expansion	Expand local services to serve broader markets and provide enhanced inter-city and inter-regional services.	Implement full County transit system
Transportation Demand Management (TDM)	Incorporate general policies in Official Plan County lead by example with pilot TDM project	Incorporate specific policies in Official Plan. County lead by example with full TDM project Identify strategic locations for carpool lots	Develop outreach programs to market TDM throughout the County. Locate carpool lots and provide HOV lanes on all key County Roads,
Goods Movement	Status Quo – All County roads qualify as truck routes	Develop permissive truck route system. Support rail based goods movement corridors Provide climbing lanes on key County Roads	Develop formal truck route system Policies to protect for inter-modal facilities. Develop new rail and road based goods movement corridors
Optimization of Existing Roads	Identify key intersections for operational improvement Develop road closure emergency detour plan	Develop access management policies. Localized intersection improvements Develop road closure emergency detour plan and County to assume some key routes	Develop strict access management policies. Develop a road classification system and implement local improvements on priority corridors Develop road closure emergency detour plan and County to assume all key routes
Road Improvements	The level of road network improvements would vary based on Effectiveness of Other Strategies		

4.1. Walking and Cycling

Simcoe County has a number of trail systems, some of which comprise sections of the Trans Canada Trail system. However, the trail system is lacking of integration between municipalities and also amenities

along the trails systems and at the end of the line. To attract more cycling and pedestrian activities using the trails, the County may support local initiatives to provide new / improved infrastructure to ensure connectivity and safety will be appropriate for everyday and recreational cycling. Developing non-motorized networks connection between roads and trails will enhance mobility of cycling and pedestrian activities and support active transportation within local municipalities as well as inter-municipalities. Furthermore, provision of non-motorized links within and between communities will encourage the viability of walking and cycling for shorter commute trips.

It is also recognized that safe, convenient and cost effective design of non-motorized facilities on arterial transportation corridors within County comprise of a significant element of active transportation infrastructure. Guided by County and local design standards and policies, professional design practices in the development of County’s non-motorized facilities will serve increased bicyclists, walkers, runners, and other users not only for recreation purpose but active transportation. In addition, developing future non-motorized transportation facilities within County road rights-of-way will accommodate existing non-motorized commuters and encourage new users.

Table 4-2 –Walking and Cycling Options

Walking and Cycling		
Policy		
Alternative 1 – Passive	Alternative 2 - Moderate	Alternative 3 – Aggressive
<p>Incorporate general land use policies in OP to support local efforts to improve active transportation infrastructure in new development areas.</p> <p>Maintain and promote existing County Trail System and support local initiatives to provide new/improved trail infrastructure.</p> <p>Allow limited infrastructure on lower volume County Roads passing through built up areas provided local municipalities fund the cost.</p>	<p>Incorporate policy in County OP encouraging the development of local policies to require provision of sidewalks/trails in all new development areas – condition of County Approval</p> <p>Provide funding to local municipalities to encourage integration of local trail / sidewalks to County facilities.</p> <p>Develop polices to permit active transportation infrastructure on some County Roads (low volume) in/around built up areas, where requested by municipalities or where required to connect to County or local trail system.</p>	<p>Incorporate policy in County OP requiring the development of local policies to require provision of sidewalks/trails in all new development areas – condition of County Approval</p> <p>Incorporate policy in County OP encouraging the development of local active transportation plans in municipal OPs for urban areas.</p> <p>Provide funding to local municipalities to encourage integration of local trail / sidewalks to County facilities.</p>
Infrastructure		
<p>Maintain and promote existing County Trail System and support local initiatives to provide new/improved trail infrastructure.</p>	<p>Major focus - off-road trail network</p> <p>Co-ordinate the development of County wide off-road trail system, including</p>	<p>Provide funding to support the development of local active transportation infrastructure.</p> <p>Major focus - off-road trail network</p> <p>Minor focus – on-road facilities</p>

<p>Allow limited infrastructure on lower volume County Roads passing through built up areas provided local municipalities fund the cost.</p>	<p>marketing and funding for implementation.</p> <p>Develop standards for on road active transportation infrastructure within County Road Rights-of-way based on the roadway classification.</p> <p>(i.e. low volume roads allow on road bike lanes – high volume roads allow off road trails in boulevard areas.)</p>	<p>Co-ordinate the development of County wide off-road trail system, including marketing and funding for implementation.</p> <p>Incorporate active transportation infrastructure into County Road improvement projects as a matter of policy. Solicit cost sharing for active transportation infrastructure with municipalities.</p>
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4.2. Transit Services

The current transit operators within Simcoe County include (rail and bus), local bus services in Barrie, Orillia, Midland, and Collingwood, private bus operators with regularly scheduled services and charter services and Inter-Regional transit (bus and rail service) between Toronto and Barrie. Transit services to serve inter-municipal transportation demand are identified as one of the major areas to improve in the future as the local services currently only serve their immediate municipality. Coordination of services between local municipalities and also private sector transit providers to improve inter-municipal transit services requires further considerations into different approach alternatives, network scenarios and funding mechanisms. Closely working with private operators such as Greyhound and public agencies such as GO Transit and local municipalities, and providing efficient coordination among these parties will be a key success for expanding transit services to areas of the County.

Along with population growth in Simcoe County, expanding local transit coverage and improving local transit services is another critical area to be considered in meeting increased traffic demands and providing choices for alternate forms of transportation for Simcoe area residents. Providing and securing a supportive funding system to maintain and construct new transit infrastructures will be noted as a major challenge facing County and local municipalities into the future.

Table 4-3 –Transit Services Options

Transit Services		
Policy		
Alternative 1 – Passive	Alternative 2 - Moderate	Alternative 3 – Aggressive
<p>Incorporate general policies in OP to support intensification in local municipalities in accordance with Places to Grow requirements.</p>	<p>Incorporate general policies in OP to support intensification in local municipalities in accordance with Places to Grow requirements.</p>	<p>Incorporate general policies in OP to support intensification in local municipalities in accordance with Places to Grow requirements.</p>
<p>Incorporate policies to support the development of local transit services within municipalities.</p>	<p>Develop County policies that support local initiatives to expand local municipal transit services to adjacent municipalities.</p>	<p>Work directly with local municipalities to develop area transit service plans that extend existing local services to</p>

	<p>Encourage GO Transit /Ontario Northland to extend rail passenger services into Simcoe County.</p> <p>Work directly with local municipalities to develop area transit service plans that extend existing local services to adjacent municipalities.</p> <p>Work with GO Transit /Ontario Northland and provide funding to support the extension of rail passenger services into Simcoe County using existing rail corridors (CP MacTier corridor, Barrie-Collingwood Railway (BCRY))</p>	<p>adjacent municipalities.</p> <p>Work with GO Transit /Ontario Northland and provide funding to support the extension of rail passenger services into Simcoe County using existing rail corridors (CP MacTier corridor, Barrie-Collingwood Railway (BCRY))</p>
Infrastructure		
<p>Work with existing private companies delivering transit / rail based services to provide information to County residents on the availability of third party transit services and enhance the promotion of their services.</p> <p>Partner with the private sector transit providers and local municipalities to develop local transit stops with shelters, schedules, and other amenities (possible located at municipal buildings / facilities).</p>	<p>Expand Local Transit Service to serve additional municipalities</p> <p>Provide a share of the capital funding to support the purchase of new equipment where required to expand local municipal transit services to adjacent municipalities (ie. Collingwood provide services to Wasaga Beach; Midland provide services to Penetang)</p> <p>Inter-municipal Transit Service</p> <p>Partner with private sector transit providers to provide additional inter-municipal services (additional fixed routes, more frequent service, specialized services) through a tendered contract approach.</p>	<p>Expand Local Transit Service to serve additional municipalities</p> <p>Co-ordinate and fund the expansion of local municipal transit services to adjacent municipalities (ie. Collingwood provide services to Wasaga Beach, Clearview; Midland provide services to Penetang, Severn, Tay, Tiny; Partner with Barrie Transit to provide services to Springwater, Essa, Innisfil; Partner with Orillia Transit to provide services to Ramara, Severn, Oro-Medonte; Partner with York Region Transit to provide services to Bradford, New Tecumseth)</p> <p>Inter-municipal Transit Service</p> <p>Develop a limited inter-municipal County Transit Service between key municipalities and local transit service areas using small / fully accessible buses to provide accessibility between municipalities and other regional services (i.e. GO Transit / Ontario Northland) on a fixed schedule basis (ie 4 to 6 buses per day).</p>

4.3. Transportation Demand Management (TDM) Programs

A Transportation Demand Management (TDM) Program is an institutional framework for implementing a set of TDM policies or incentives to encourage residents to either reduce the amount they travel, shift their time of travel to avoid peak periods, or change their mode of travel. Effective TDM strategies integrating the walking / cycling and transit services improvement strategies would be an alternative approach to encourage moving towards a sustainable transportation system. The County does not

currently have any TDM programs in place and it would be a good opportunity to act upon the County's position in exercising the TDM practices as recommended in this Transportation Master Plan.

The results of the Public Attitude Survey of Simcoe County residents indicates that there may be a market for the promotion of alternative transportation modes, if the right incentives and marketing campaign can be implemented and targeted to these potential users. Based on a review of the opportunities available to promoted TDM in Simcoe County and some of the best TDM practices review in the previous section, the following alternative strategies could be implemented in the future.

Table 4-4 – Transportation Demand Management Options

Transportation Demand Management		
Policy		
Alternative 1 – Passive	Alternative 2 - Moderate	Alternative 3 – Aggressive
<p>Incorporate general policies in OP to support transportation demand management objectives.</p> <p>Lead by example with pilot project for County employees aimed at encouraging carpooling, permitting compressed work weeks (where feasible for specific jobs), permitting telecommuting at least once per week (where job duties permit and as permitted by HR Department).</p> <p>Develop / distribute promotional information to market benefits of TDM to the public.</p>	<p>Incorporate specific policies in County OP to support transportation demand management objectives and require municipalities to consider TDM policies in their local OP's.</p> <p>Lead by example with full TDM program for County employees aimed at encouraging carpooling, permitting compressed work weeks (where feasible for specific jobs), permitting telecommuting at least once per week (where job duties permit).</p> <p>Develop / distribute promotional information to market benefits of TDM to the public. Partner with local agencies (Health Unit / Environmental Groups) to deliver educational services and participate in events such as Commuter Challenge, etc.</p> <p>Target largest employers in County (Honda, School Board, etc) to provide TDM marketing materials.</p> <p>Develop policies to support and encourage employer based TDM programs (ie. Honda vanpool Program), and provide funding and program support assistance.</p>	<p>Incorporate specific policies in County OP to support transportation demand management objectives and require municipalities to develop TDM policies in their local OP's.</p> <p>Require Traffic Impact Studies to incorporate TDM measures for developments that generate over 500 trips in the peak hour</p> <p>Lead by example with full TDM program for County employees aimed at encouraging carpooling, permitting compressed work weeks (where feasible for specific jobs), permitting telecommuting at least once per week (where job duties permit).</p> <p>Develop / distribute promotional information to market benefits of TDM. Take a lead role in developing outreach programs to discuss TDM opportunities with local municipalities, employers, school boards, and agencies.</p> <p>Develop policies to support and encourage employer based TDM programs (ie. Honda vanpool Program), and provide funding and program support assistance.</p>
Infrastructure		
<p>Provide (or partner with existing private service provider) to provide Ride Matching services for County</p>	<p>Provide (or partner with existing private service provider) to provide Ride Matching services for County residents.</p>	<p>Provide (or partner with existing private service provider) to provide Ride Matching services for County residents.</p>

<p>residents.</p> <p>Work with MTO to provide additional carpool lots adjacent to provincial highways.</p>	<p>Work with MTO to provide carpool lots adjacent to provincial highways.</p> <p>Identify strategic locations for Carpool Lots on key County Roadways that connect to Provincial Highways (CR 90, CR 1 / 88, CR 44, CR 22, etc).</p> <p>Provide funding support for establishing High Speed (broadband) internet services throughout the County – to enable work at home.</p>	<p>Work with MTO to provide carpool lots adjacent to provincial highways.</p> <p>Identify locations for Carpool Lots on all key County Roadways.</p> <p>Provide funding support for High Speed (broadband) internet services.</p> <p>Provide HOV lanes on key County Roads.</p> <p>Provide County funding for employer or community based vanpool/carpool programs (could be integrated with transit).</p>
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4.4. Goods Movement

The movement of Goods with origins and/or destinations within Simcoe County and Goods movement through Simcoe County is critical to the economic well being of the County. In the Simcoe County, truck movements and haul routes are largely related to the manufacturing industry or extractive aggregate resources activities. While there are no specific policies or restrictions in guiding the haul route system in the current County’s Official Plan, however, the County did express intent in establishing haul routes which are suitable for the function based on traffic patterns, existing and proposed land uses served by road and the costs of upgrading and maintaining the road.

Based on experiences in a wide variety of municipalities, truck route management falls into two basic types: restrictive and permissive. Based on a review of the opportunities available in Simcoe County, the following alternative strategies could be implemented in the future.

Table 4-5 – Goods Movement Options

Goods Movement		
Policy		
Alternative 1 – Passive	Alternative 2 - Moderate	Alternative 3 – Aggressive
<p>No significant change. All County Roads qualify as truck routes.</p> <p>Roadway classification system incorporates observed truck usage (truck %age) based on count data to determine road class.</p>	<p>Develop a Permissive Truck Route Signing program to identify key goods movement corridors in the County and request trucks to follow these routes (except for local deliveries).</p> <p>Develop a truck route by-law based on this permissive route system. Most county roads permit trucks, except those in key residential areas where a viable alternative route exists.</p> <p>Develop policies to support rail based good movement corridors. (i.e land use around rail corridors)</p>	<p>Develop a formal County Truck Route System that features truck prohibitions on minor County Roads in residential areas that are not intended to serve truck traffic.</p> <p>Develop a truck route by-law based on this route system. Only major County Roads would be identified as Goods Movement corridors and permit trucks, based on volume or access to key generators.</p> <p>Develop policies to support rail based good movement corridors. (i.e land use around rail corridors).</p> <p>Establish policies (and possibly incentives) to protect for the development of inter-modal facilities in the County where rail / road freight integration opportunities exist. (Hwy 400 / Hwy 11 external gateways, CP MacTier Rail line / CR 90 area, CN Bala Subdivision / CR 169 area / Hwy 12 area)</p>
Infrastructure		
<p>Design standards incorporate observed truck usage (truck %age) based on count data</p>	<p>Design standards incorporate observed truck usage (truck %age) based on count data.</p> <p>Upgrade lane widths; provide passing lanes / climbing lanes, etc on key goods movement County Roads.</p>	<p>Design standards incorporate observed truck usage (truck %age) based on count data.</p> <p>Work with MTO / PIR to develop new goods movement corridors through Simcoe County as an alternative to Highway 400, that protect both local and provincial goods movement interests.</p>

4.5. Road Network Optimization

The need for optimization of the existing transportation network is a key requirement for any county/municipality in times of fiscal restraint. Optimization of the existing transportation system includes maximizing the capacity of existing facilities, improving the performance and reliability of existing services, and making minor operational improvements or localized widening to improve system performance. Partnership with provincial government and local municipalities in identifying the potential corridors and intersections for infrastructural and operational improvements, and developing plans or policies to support roadway optimization objectives may be required.

Based on a review of the existing road network, and opportunities available to enhance existing network capacity, the following alternative strategies could be implemented in the future.

Table 4-6 – Road Network Optimization Options

Road Network Optimization		
Policy		
Alternative 1 – Passive	Alternative 2 - Moderate	Alternative 3 – Aggressive
<p>Develop a County Road Classification system to enable priority setting for capital expenditures.</p> <p>Enhance current County set-back and entrance policies to reflect different levels of control for different classifications of roadway.</p> <p>Work with MTO and municipalities to develop Road Closure action plans for diverting traffic from Provincial highways.</p>	<p>Develop a County Road Classification system to manage CR system in an integrated manner.</p> <p>Develop Access Management Policies tied to the CR classification system governing, set-back and entrance requirements, entrance and CR design standards (including spacing), entrance consolidation, etc.</p> <p>Work with MTO and municipalities to develop Road Closure action plans for diverting traffic from Provincial highways. Assume some of the key diversion routes as County Roads.</p>	<p>Develop a limited County Road Classification system to recognize existing and planned function of County Roads.</p> <p>Develop strict Access Management Policies tied to the CR classification system – Identify key County Road that should have controlled access designations and develop policies to restrict new entrances on these County Roads (or portions of these CR Roads). Establish strict set-back and entrance requirements, entrance and CR design standards (including spacing), etc based on CR Classification system.</p> <p>Develop access policies for key corridors that require municipal road access rather than private entrances.</p> <p>Work with MTO and municipalities to develop Road Closure action plans for diverting traffic from Provincial highways. Assume all diversion routes as County Roads and manage these as priority corridors.</p>
Infrastructure		

<p>Identify key intersections for operational improvements (turning lanes, signals, etc) to maximize the capacity of existing roads.</p>	<p>Identify key road segments for localized operational improvements (turning lanes, signals, etc) to maximize the capacity of existing roads.</p> <p>Develop a corridor based program of localized improvements – tied to the CR classification system. (high class roads receive priority for construction)</p> <p>Provide localized widening through intersections, or passing lanes / Truck Climbing lanes to extend the life of existing high volume corridors.</p>	<p>Identify key road corridors for localized operational improvements (turning lanes, signals, etc) and priority investment to maximize the capacity of existing roads.</p> <p>Develop a corridor based program of localized improvements – tied to the CR classification system. (high class roads receive priority for construction)</p> <p>Develop a network wide Passing Lane / Truck Climbing lane program focusing on key corridors serving major generators.</p>
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5. STRATEGIES EVALUATION

Each of the strategy alternatives was assessed based on series of broad criteria reflecting sustainable transportation objectives, key elements of the Simcoe County’s Strategic Plan objectives and reflect the aspects of the environment outlined in the EA Act. The following five categories of consideration and their respective criteria are proposed for use in evaluating alternatives transportation improvement strategies:

The alternatives were evaluated based on the following six key criteria and a qualitative assessment of the effectiveness of each strategy was undertaken:

- **Transportation / technical considerations –**
 - support for transit/non-auto modes,
 - ability to promote/improve connectivity to other County/Provincial roads,
 - ability reduce auto demands / improve overall transportation network performance
- **Potential benefits to social / cultural environment**
 - potential to minimize impacts to existing neighbourhoods,
 - potential to minimize impacts to heritage resources areas, and
 - potential to minimize impacts to agricultural resources
- **Potential benefits to natural environment**
 - potential to reduce / avoid impacts on environmentally sensitive areas,
 - potential to reduce / avoid impacts to watercourses, habitat areas and
 - potential to improve air quality

- **Potential economic benefits**
 - potential to improve community accessibility,
 - support for future growth areas and
 - support for key goods movement routes
- **Land use planning considerations (i.e. Places to Grow)**
 - capability to influence desirable development patterns,
 - potential to impact on existing residences, businesses, institutions or community facilities
 - potential to enhance accessibility
- **Costs**
 - potential costs to users / businesses
 - potential costs to the County / Municipalities

For the purpose of evaluation, each strategy was subjected to a detailed comparative evaluation, which assesses the effectiveness of each alternative in response to the evaluation criteria. Cumulative effects and benefits of the strategies within the alternative are considered in the evaluation. Based on the descriptions provided, each alternative strategy was ranked in terms of how effective it is in addressing the criteria.

Table 5-1 provides a summary of the evaluation results for each strategy.

Table 5-1 Evaluation of Effectiveness of Alternative Strategies

Evaluation Criteria / Indicators	Alternative 1 - Passive	Alternative 2 - Moderate	Alternative 3 - Active
Walking and Cycling			
Transportation	No/Minimal	Moderate	High (Best)
Social/Cultural Environment	Minor	Moderate	High (Best)
Natural Environment	No/Minimal	No/Minimal	Negative (Worst)
Economic	No/Minimal	Minor	Minor
Land Use	No/Minimal	No/Minimal	No/Minimal
Cost	Moderate	Minor	Negative (Worst)
Transit			
Transportation	No/Minimal	Moderate	High (Best)
Social/Cultural Environment	Minor	Moderate	High (Best)
Natural Environment	No/Minimal	Minor	Minor
Economic	No/Minimal	Moderate	Moderate
Land Use	No/Minimal	Minor	Minor

Cost	Moderate	Minor	Negative (Worst)
Transportation Demand Management Programs			
Transportation	No/Minimal	Moderate	High (Best)
Social/Cultural Environment	No/Minimal	Moderate	Moderate
Natural Environment	No/Minimal	Minor	Minor
Economic	No/Minimal	No/Minimal	No/Minimal
Land Use	No/Minimal	No/Minimal	No/Minimal
Cost	Moderate	Minor	Negative (Worst)
Goods Movement			
Transportation	No/Minimal	No/Minimal	High (Best)
Social/Cultural Environment	No/Minimal	Minor	Moderate
Natural Environment	No/Minimal	No/Minimal	Negative (Worst)
Economic	No/Minimal	Moderate	High (Best)
Land Use	No/Minimal	Moderate	High (Best)
Cost	Negative	Negative	Negative (Worst)
Road Network Optimization			
Transportation	No/Minimal	Minor	Moderate
Social/Cultural Environment	No/Minimal	Minor	Moderate
Natural Environment	Minor	Moderate	High (Best)
Economic	Minor	Moderate	High (Best)
Land Use	No/Minimal	No/Minimal	No/Minimal
Cost	Moderate	Moderate	Moderate

6. RECOMMENDED TRANSPORTATION STRATEGIES

Based on input from the public, various transportation stakeholders, and Municipal and County staff, a “Made in Simcoe” transportation strategy was developed which reflects community constraints, takes advantage of current and emerging opportunities, and attempts to reflect the vision of what Simcoe residents told us would maintain the livability of their community in light of planned growth.

The recommended transportation strategy, summarized in **Table 6.1**, promotes a balanced approach to transportation that:

- Emphasizes need to promote and invest in alternative modes of travel,
- Establishes the principle of municipal leadership by example, particularly in promoting Transportation Demand Management measures,

- Actively promotes alternative transportation modes in the community through the use of policies, and standards
- Focuses on partnerships with local municipalities, the provincial government and private interests to build upon existing best practices to enhance services, and
- Requires an investment in incentives to encourage participation and remove barriers.

Table 6-1 Recommended Transportation Strategies

Mode of Travel/Policy Area	Recommended Strategic Direction
Walking & Cycling	1. Encourage the development of local policies to require provision of sidewalks/trails in all new development areas.
	2. Encourage municipalities to prepare Active Transportation Plans for their municipalities and settlement areas as part of their Official Plan updates.
	3. Permit active transportation infrastructure on some County Roads (primarily lower volume County Roads) in/around built up areas, where requested by municipalities or where required to connect to County or local trail system.
	4. Develop standards for on road active transportation infrastructure within County Road Rights-of-way based on the roadway classification (i.e. low volume roads would allow on road bike lanes – high volume roads would allow off road trails in boulevard areas.).
	5. Major focus for the County should be on the development of the off-road trail network.
	6. Incorporate active transportation infrastructure into County Road improvement projects where policies permit and where cost sharing agreements can be reached with municipalities.
Transit Services	7. Partner with the private sector transit providers and local municipalities to develop/enhance local services and amenities.
	8. Support intensification and transit-supportive densities in local municipalities.
	9. Support local initiatives to expand local municipal transit services to adjacent municipalities.
	10. Work with GO Transit /Ontario Northland and provide funding to support extension of additional rail passenger services into Simcoe County.
	11. Work with local municipalities to develop area transit service plans to extend existing local services to adjacent municipalities and provide a share of the capital funding to support the purchase of new equipment for expansion.
	12. Partner with private sector transit providers to enhance or provide additional inter-municipal services.
Transportation Demand Management (TDM)	13. Provide policies to support Transportation Demand Management objectives.
	14. Lead by example with a pilot TDM project for County employees aimed at encouraging carpooling, permitting compressed work weeks, permitting telecommuting at least once per week (where job duties permit and as permitted by HR Dept.).
	15. Market benefits of TDM to the public and to larger employers in the County.
	16. Connect major residential areas with major employers.
	17. Support and encourage employer based TDM programs and provide funding and program support assistance.
	18. Initiate Ride Matching programs for Simcoe area residents/employees (or partner with existing private service provider).
	19. Identify locations for Carpool Lots on key County Roadways

Mode of Travel/Policy Area	Recommended Strategic Direction
	20. Establish High Speed (broadband) internet services throughout the County.
Goods Movement	21. All County Roads should continue to be utilized as truck routes. 22. Develop a Permissive Truck Route Signing program to identify key goods movement corridors in the County and request trucks to follow these routes (except for local deliveries). 23. Support & protect rail based goods movement corridors. (i.e. land use around rail corridors). 24. Consider the development of long term inter-modal facilities in the County where rail/road freight integration opportunities exist. (i.e. CP MacTier Rail line/CR 90 area, Hwy 400/Hwy 11 external gateways, CN Bala Subdivision/CR 169 are /Hwy 12 area) 25. Design standards to incorporate observed truck usage (truck percentage) based on traffic count data. 26. Work with Ministry of Transportation /Ministry of Public Infrastructure Renewal to develop new or improved goods movement corridors through Simcoe County as an alternative to Highway 400, that protect both local and provincial goods movement interests.
Road Network Optimization	27. Develop a County Road (CR) Classification system to recognize existing and planned function of County Roads. 28. Develop Access Management Policies tied to the CR classification system 29. Identify key County Roads that should have controlled access designation and develop policies to restrict new entrances on these County Roads. 30. Establish set-back and entrance requirements, entrance and CR design standards (including spacing), etc. based on CR Classification system. 31. Develop access policies for key corridors that require municipal road access rather than private entrances. 32. Work with MTO and municipalities to develop Road Closure Action Plans to manage traffic that is diverted from Provincial Highways due to closures. Assume all diversion routes as County Roads and manage these as priority corridors. 33. Identify key road corridors for localized operational improvements (turning lanes, traffic signals, etc) and prioritize investments to maximize the capacity of existing roads 34. Develop a corridor based program of localized improvements – tied to the CR classification system. (high classification of roads receive priority for construction) 35. Develop a network wide Passing Lane/Truck Climbing lane program focusing on key corridors serving major truck generators.

Alternative Strategies – Evaluation Framework

Evaluation Criteria / Indicators	Alternative 1 - Passive	Alternative 2 - Moderate	Alternative 3 - Active
Walking and Cycling			
Transportation	<p>Provides minimal effectiveness in support for non-auto modes and connectivity to other trails. Does not encourage new opportunities to attract walking or cycling.</p> <p>No effect on improving level of transportation service or on network travel times.</p>	<p>Provides moderate support for non-Auto modes through the continued development of off road trails and connectivity with other trails.</p> <p>No effect on improving level of service or network travel times as volume of trips made by these modes of travel would be low.</p>	<p>Provides high support for off-road trail and on road facilities through the development of local active transportation plans, facilities and connectivity to other trails.</p> <p>Provides minimal impacts to level of transportation service and to overall network travel times.</p>
Social/Cultural Environment	<p>Minor effectiveness in developing community accessibility and connecting communities and support for healthier communities.</p>	<p>Moderate effectiveness in connecting communities and increase accessibility to communities and support for healthier communities as it increases opportunities to participate in mode of travel.</p>	<p>High effectiveness in connecting enhancing communities and increase accessibility to communities and support for healthier communities.</p>
Natural Environment (protection of)	<p>No /minimal impact on the natural environment (on existing sensitive areas, watercourses and habitat and agricultural/resource base areas).</p> <p>Minimal impacts on improving overall air quality.</p>	<p>No impact on the natural environment</p> <p>Minimal impacts on improving overall air quality as number of people shifting to these modes of travel from autos would be minimal.</p>	<p>May have a negative impact on natural environment with respect to any required widenings needed to accommodate trails or bike lanes.</p> <p>Minimal impacts on improving overall air quality.</p>
Economic	<p>Minimal benefit on supporting economic growth in the area in terms of support for future growth areas or goods movement routes.</p>	<p>May have minor effects on economic growth in the area through the enhancement of the trail system. May attract people to the area to use trail system.</p>	<p>May have minor potential to improve on economic growth in the area through the enhancement of the trail system. May attract people to the area to use trail system.</p>
Land Use	<p>Minimal capability to influence development patterns and minimal impact on improving effectiveness for existing communities.</p>	<p>Minimal capability to influence development patterns and minimal impact on improving effectiveness for existing communities.</p>	<p>Will have minimal capability to influence desirable development patterns.</p>
Cost	<p>Low costs for users and to the County.</p>	<p>Low to Moderate cost to County and no cost to users. Moderate effectiveness to the road</p>	<p>Moderate to high costs to County for funding support for active transportation as</p>

Evaluation Criteria / Indicators	Alternative 1 - Passive	Alternative 2 - Moderate	Alternative 3 - Active
		network operations in terms of cost as the number of trips shifting from autos would be low.	additional infrastructure required with minimal effectiveness in reducing auto demand. Minimal cost to the user.
Transit			
Transportation	Strategies provides minor support for transit. Minimal effectiveness in support for improved travel choice and will have no effect on improving level of transportation service and network travel time for the County.	Strategies provides moderate support for transit. Moderate effectiveness in support for improved travel choice and will have minor effect on improving level of transportation service and will have minimal improvement to network travel times.	Strategies provides high support for transit. Moderate to high effectiveness in support for improved travel choice and will have moderate effect on improving level of transportation service. Will have minimal effect to network travel times.
Social/Cultural Environment	Minor effectiveness in developing community accessibility and connecting communities.	Moderate effectiveness in connecting communities and increase accessibility to communities.	High effectiveness in connecting enhancing communities and increase accessibility to communities with increase in transit service.
Natural Environment	No /minimal impact on the natural environment (on existing sensitive areas, watercourses and habitat and agricultural/resource base areas). Minimal impacts on improving overall air quality.	No /minimal impact on the natural environment (on existing sensitive areas, watercourses and habitat and agricultural/resource base areas). Minor impacts on improving overall air quality.	No /minimal impact on the natural environment (on existing sensitive areas, watercourses and habitat and agricultural/resource base areas). Minor impacts on improving overall air quality.
Economic	No effect on supporting economic growth in the area in terms of community accessibility, support for future growth areas or goods movement routes.	May have moderate effects on economic growth in the area with the expansion of local transit service. Minimal support for goods movement routes.	May have moderate potential to improve on economic growth in the area through the provisions of extension of transit service into neighbouring communities.
Land Use	Minimal capability to influence development patterns and minimal impact	Minor capability to influence development patterns and minor impact on improving	Minor capability to influence development patterns and minor impact on improving

Evaluation Criteria / Indicators	Alternative 1 - Passive	Alternative 2 - Moderate	Alternative 3 - Active
	on improving effectiveness for existing communities.	effectiveness and accessibility to existing communities.	effectiveness and accessibility to existing communities.
Cost	Minor cost for users and to the County as County playing a support role with respect to transit operations.	Moderate cost to County with partnering with private sector and providing a share of the funding for transit expansion.	High costs to County for funding support for extensive transit system. Likely higher cost to user with larger system.
TDM			
Transportation	Minimal effectiveness in support for improved travel choice and will have minimal effect on improving level of transportation service and network travel time for the County.	Moderate effectiveness in support for improved travel choice and will have minor effect on improving level of transportation service and will have minimal improvement to network travel times.	Moderate to high effectiveness in support for improved travel choice and will have moderate effect on improving level of transportation service. Will have minor effect to network travel times with potentially some reduction of vehicles on the roadway
Social/Cultural Environment	Minimal effectiveness in developing community accessibility and connecting communities.	Moderate effectiveness in connecting communities and increase accessibility to communities.	Moderate effectiveness in connecting enhancing communities and increase accessibility to communities
Natural Environment	No /minimal impact on the natural environment (on existing sensitive areas, watercourses and habitat and agricultural/resource base areas). Minimal impacts on improving overall air quality.	Minor impact on the natural environment (on existing sensitive areas, watercourses and habitat and agricultural/resource base areas). Minor impacts on improving overall air quality with a reduction in the number of vehicles on the roads.	Minor impact on the natural environment (on existing sensitive areas, watercourses and habitat and agricultural/resource base areas). Minor impacts on improving overall air quality with a reduction in the number of vehicles on the roads.
Economic Environment	Minimal effect on supporting economic growth in the area in terms of community accessibility, support for future growth areas.	Minimal effect on supporting economic growth in the area in terms of community accessibility, support for future growth areas	Minimal effect on supporting economic growth in the area in terms of community accessibility, support for future growth areas.
Land Use	Minimal capability to influence development patterns and minimal impact on improving effectiveness for existing	Minimal capability to influence development patterns and minimal impact on improving effectiveness for existing communities.	Minimal capability to influence development patterns and minimal impact on improving effectiveness for existing

Evaluation Criteria / Indicators	Alternative 1 - Passive	Alternative 2 - Moderate	Alternative 3 - Active
Cost	<p>communities.</p> <p>Minor cost to County and user. Cost for initiatives not as extensive as other alternatives, but likely not as effective in shifting travel patterns.</p>	<p>Minor cost for user, but moderate costs for County with construction of carpool lots and funding for high speed internet service. Effectiveness of strategies could be comparable to an active approach with less cost.</p>	<p>communities.</p> <p>Negative (worst) - High cost for County with construction of carpool lots on all key county roads, funding for high speed internet service and funding for program assistance.</p>
Goods Movement			
Transportation	<p>No effectiveness in support for improved travel choice and will have minimal effect on improving level of transportation service and network travel time for the County.</p>	<p>Minor effectiveness in support for improved travel choice and will have minor effect on improving level of transportation service and network travel time for the County. Will improve traffic operations on roads not designated as truck routes.</p>	<p>No effectiveness in support for improved travel choice but will have moderate effect on improving level of transportation service and network travel time for the County with establishment of truck route system. Development of a new goods movement corridor and encourage a shift to rail base goods movement would improve level of transportation service and overall network travel time</p>
Social/Cultural Environment	<p>Minimal effectiveness in developing community accessibility and connecting communities. As truck traffic increases, network travel time for County roads will decrease.</p>	<p>Minor effectiveness in connecting communities and increase accessibility to communities. Providing truck climbing lanes will assist in efficiency of road system.</p>	<p>Moderate effectiveness in connecting enhancing communities and increase accessibility to communities. Establishment of inter-modal facilities would and new goods corridor enhance movement of goods into communities.</p>
Natural Environment	<p>Minor impact on the natural environment (on existing sensitive areas, watercourses and habitat and agricultural/resource base areas).</p> <p>Minimal effectiveness in improving overall air quality</p>	<p>Moderate impact on the natural environment (on existing sensitive areas, watercourses and habitat and agricultural/resource base areas).with widening to accommodate truck passing lanes.</p> <p>Minor effectiveness in improving overall air quality through support of rail base goods movement.</p>	<p>Potential to have a negative impact on the natural environment (on existing sensitive areas, watercourses and habitat and agricultural/resource base areas) through the development of inter-modal facilities.</p> <p>Moderate effectiveness in improving overall air quality by providing more efficient transportation system and shift to</p>

Evaluation Criteria / Indicators	Alternative 1 - Passive	Alternative 2 - Moderate	Alternative 3 - Active
Economic Environment	Minimal effectiveness in supporting growth through community accessibility and connecting communities.	Minor effectiveness in supporting growth in communities through increase accessibility to communities. Moderate effectiveness in supporting goods movements.	rail base transport. High effectiveness in supporting economic growth in communities through increased accessibility to communities. High potential to support goods movements in the County with support for inter-modal facilities and new corridors to increase efficiency of truck movements and deliveries through the County.
Land Use	Minimal capability to influence development patterns and minimal impact on improving effectiveness for existing communities.	Moderate capability to influence development patterns and minimal impact on improving effectiveness for existing communities with establishment of truck routes.	High capability to influence development patterns and could have moderate effectiveness in improving existing communities through stricter truck route policies and establishment of inter-modal facilities.
Cost	Moderate cost to County for maintenance due to damage by trucks on County Roads.	Moderate cost to County for maintenance of County Roads however may be less than Alternative 1 with limiting the number of roads used for the movement of goods. Additional costs would be associated with construction and maintenance of truck climbing lanes.	High cost to County for maintenance and construction additional truck lanes as well as the additional corridors.
Roadway Optimization Strategies			
Transportation	Minimal effectiveness in support for improved travel choice and will have minimal effect on improving level of transportation service and network travel time for the County. Minor intersection improvements will not be capable of accommodating anticipated future traffic volumes.	Minor effectiveness in support for improved travel choice and will have minor effect on improving level of transportation service and network travel time for the County.	Provides moderate support for non-auto modes And Improves level of transportation service along the road by improving capacity of the roadway. Maintains connectivity to other County/Provincial roads Improves network travel time with more stringent access management policies and controlled access designations.,

Evaluation Criteria / Indicators	Alternative 1 - Passive	Alternative 2 - Moderate	Alternative 3 - Active
Social/Cultural Environment	Minimal effectiveness in developing community accessibility and connecting communities.	Minor effectiveness in connecting communities and increase accessibility to communities.	Moderate effectiveness in connecting enhancing communities and increase accessibility to communities. Development of road closure plan will benefit communities.
Natural Environment	Minimal impact on the natural environment (on existing sensitive areas, watercourses and habitat and agricultural/resource base areas). Minor impacts on improving overall air quality.	Minor impact on the natural environment (on existing sensitive areas, watercourses and habitat and agricultural/resource base areas). Moderate impacts on improving overall air quality.	Minor impact on the natural environment (on existing sensitive areas, watercourses and habitat and agricultural/resource base areas). Moderate to high effectiveness on improving overall air quality through reducing delays to vehicles.
Economic Environment	Minor effect on supporting economic growth in the area in terms of community accessibility, support for future growth areas or goods movement routes.	Moderate effects on economic growth in the area. Minor support for goods movement routes.	High effectiveness to improve on economic growth in the area through improvement of roadway operations and support for goods movements.
Land Use	Minimal capability to influence development patterns and minimal impact on improving effectiveness for existing communities.	Minimal capability to influence development patterns and minimal impact on improving effectiveness for existing communities.	Minimal capability to influence development patterns and minimal impact on improving effectiveness for existing communities.
Cost	Minimal cost to County.	Minor cost to County.	Moderate cost to County.

Summary of Best Practices

Higher Level TDM Policies

Region of Peel:

(Source: Transportation Demand Management Study Report)

- Promote a balanced, multi-modal transportation system that promotes choices for travelers and influences the demand for limited transportation systems. Transportation Demand Management (TDM) will build partnerships between all levels of the public and private sector; provide information and education about travel options and offer incentives and programs that discourage Single Occupant Vehicle (SOV) travel. TDM is an essential component of sustainable transportation solutions.
- Creating effective and valued policies and programs takes careful understanding of the issues, often revisiting existing policies and measures to determine their effectiveness for each specific area and discussing potential areas of interest with stakeholders.
- The current Region of Peel Official Plan includes the following policies to encourage TDM:
 - Encourage the Provincial government and neighbouring municipalities to increase public transit usage and ridesharing as well as other TDM programs (Policy 5.6.2.5);
 - Encourage the area municipalities and MTO to implement TDM strategies including car or vanpooling and ride-share programs (Policy 5.6.2.8)
- TDM, when implemented in concert with other transportation policies oriented towards sustainability, contributes to a net gain in air and water quality. The partnerships developed through the TDM strategies compound the benefit more than the public sector's involvement can provide on its own.

Policy: Coordinate with area municipalities, school boards, transit providers and non-profit organizations, to educate the public, through new initiatives, on the relationship of vehicle trips and air pollution

Policy: Encourage the private and public sector to integrate the marketing and education of the benefits of transportation alternatives, including health, improved air quality and enhanced quality of life, into existing activities and programs

- Develop supporting guidelines
- Develop TDM strategies such as bicycle promotion and marketing, carpool promotion and marketing, telework promotion, transit promotion, vanpool promotion, special events
- Land use and community design have an impact on mode choice, amount and location of parking and travel demand. Reduced dependency on the automobile can be achieved when residents or employees can conveniently walk, bike or use transit to reach their destinations.

Policy: Coordinate with area municipalities to promote land uses and site design in the region which foster the use of alternative modes of transportation, including transit, vanpooling,

carpooling, and active transportation (such as bicycling and walking), as well as infrastructure to encourage teleworking

- Develop supporting guidelines
 - Develop TDM strategies such as pedestrian and bicycle connections, bicycle amenities, transit access and visibility, building orientation, passenger loading areas, amount and location of parking, access to services and amenities
 - Develop parking management strategies
- Managing transportation demand should be a major component of any transportation policy, complementing supply side strategies.

Policy: Coordinate with all levels of the public and private sector, to promote a safe and sustainable transportation system that offers travellers a variety of mobility choices and increases the efficiency of the existing transportation system

Policy: Encourage local municipalities to develop multi-purpose pedestrian/bicycle network that promotes active transportation and consider the provision of technically appropriate routes on Regional roads to encourage active transportation. These routes will be designed to provide the necessary linkages with the area municipal active transportation networks

- Develop supporting guidelines
 - Develop TDM strategies such as advanced traveler information systems, transit priority systems, alternative work arrangements, freight management, access management, tourist trip management, roadway pricing
- Regional TDM programs with measured success rely on partnerships to develop and implement strategies.

Policy: Foster the development of TDM strategies by acting as a regional resource for TDM

Policy: Coordinate with area municipalities to promote and support TDM within regional and area municipal government employees/departments

Policy: Coordinate with area municipalities to encourage the facilitation of public-private partnerships to promote and implement TDM strategies

Policy: Coordinate with area municipalities to evaluate and measure TDM strategies

- Develop supporting guidelines
 - Develop TDM strategies such as appointing Employee Transportation Coordinator, commuter orientation meetings, providing subsidies and financial incentives for trying alternative traffic modes, vanpool subsidy program.
- Coordinate with GTA Smart Commute Initiatives

- Develop a five-year TDM action plan
- Identify TMAs through feasibility analysis
- TDM measures and monitoring evaluation techniques

Region of Halifax:

(Source: - Transportation Demand Management Study Report

- Active Transportation Functional Plan

- Region's Website)

- A regional TDM Coordinator was hired in August, 2003 to initiate a regional TDM program. TDM primary role as developing and integrating TDM policies into the regional plan. Encouraging TMA formation and serves as a knowledge base for local transportation management programs.
- A Bike Plan was developed in 2003 and the region is starting to implement it, as well as improving pedestrian facilities to get people walking.
- Also working on integrating biking and walking into the public transit network. There are no HOV or bus only facilities at this time.
- The regional government works in partnership with TRAX, a local non-profit organization promoting trip reduction programs. TRAX is a project that came out of the Ecology Action Centre (EAC), which is one of Nova Scotia's oldest environmental organizations.
- The Active Transportation Plan was approved in principal on November, 2006 by Halifax Regional Council. The plan provides policy direction for the development of an Active Transportation network within HRM. As well, technical guidelines have been created for the planning and design of the network.
- HRM is developing a TDM functional plan
- Parking Strategies to address current parking issues in the short-term is currently underway

Halton Region:

(Source: Halton Region Transportation Master Plan)

- A dual focus Transportation Demand Management (TDM) program for the Region of Halton has been developed as a key component of the Transportation Master Plan:
 - A TDM policy statement for the Regional Official Plan and Transportation Master Plan that outlines Regional Council's commitment to considering TDM in all planning and operational decisions; and
 - A TDM strategy for the Halton Regional Centre to demonstrate leadership in trip reduction initiatives for employment areas.

- Policy statements and objectives regarding TMP should be added to the Regional Official Plan:
 - The objectives of the Region are:
 - To improve transportation network efficiency through both travel demand management and transportation supply management strategies.
 - It is the policy of the Region to:
 - Promote and support travel demand management initiatives, including the formation of a Regional transportation management association, to reduce travel by single-occupancy vehicles and to reduce congestion on Halton's transportation network.
- Region of Halton Report No. PPW99-03, dated June 17, 2003, recommended endorsement of Urban Transportation Showcase Program by Halton Regional Council, and Regional participation in the *Smart Commute Initiative* program.
- The Smart Commute Association will coordinate a range of regional-scale TDM measures & tools and support the delivery of local initiatives through a number of Transportation Management Associations (TMAs). Local TMAs will generate local funding for transportation improvements and share information with government agencies about transportation needs and concerns.
- Implementation of a region-wide TMA in Halton will require the appointment of a TDM coordinator to liaise with the Smart Commute Association and to provide the resources to actually implement measures and tools.
- Given the characteristics of the travel market, and the site characteristics for the Halton Regional Centre, **Table** below outlines the proposed TDM plan to the Halton Regional Centre. A handful of TSM measures and tools are already in place at the Halton Regional Centre, and these are noted in the table with a checkmark.

Table 4 – TDM Measures/Tools for the Halton Regional Centre

TDM Strategy	Recommended TDM Tools
Trip Elimination	<ul style="list-style-type: none"> • Support teleworking and alternative work arrangements for employees • Optimize electronic payment opportunities and Web-based information dissemination for Regional services
Trip Reassignment	<ul style="list-style-type: none"> • Little opportunity to divert or reassign trips, given the destination is fixed (i.e., alternative destinations are not available)
Trip Scheduling	<ul style="list-style-type: none"> • Investigate opportunities to schedule shift start and end times outside of peak periods ✓ Permit flex hours within administrative/office staff core to spread peak arrival and departure times as much as possible
Trip Linking	<ul style="list-style-type: none"> • Develop enhanced convenience retail on, or within walking distance of, site (dry cleaning, dining, etc.) • Provide shower facilities on-site to promote cycling ✓ Provide recreational/fitness facilities and/or child care facilities
Modal Choice	<ul style="list-style-type: none"> • Investigate feasibility of providing corporate bus passes for casual use by staff • Work with Town of Oakville Transit staff to ensure access and service to site is optimum and that ancillary facilities (shelters, benches) are provided where appropriate • Investigate feasibility of shuttle van service to Bronte GO station to improve attractiveness of service • Investigate feasibility of implementing parking charges at the Regional centre to improve attractiveness of alternative modes • Investigate feasibility of implementing a vanpool program to reduce single occupant vehicles • Promote cycling and provide links to existing local cycling paths, and provide bicycle storage facilities
Trip Sharing	<ul style="list-style-type: none"> • Establish preferential parking strategy for car and vanpools, using location and cost as incentives • Investigate feasibility of implementing a ridematching service • Investigate feasibility and cost of implementing a “guaranteed ride home” program for employees participating in ridesharing

York Region:

(Source: -Best Practices Review: Sustainable Transportation Programs Across North America

- Transportation Master Plan 2002)

- Key sustainable transportation accomplishments in York region including achieving York region transit ridership growth, operating VIVA, completing an environmental Assessment for a subway extension and rapid transit services, adopting transit oriented development guidelines, undertaking a cycling and pedestrian master plan, developing Transportation Management Associations (TMAs) through the Smart Commute Initiative and establishing a Transportation Demand Management (TDM) coordinator.
- TDM strategy development with supportive policies and programs
- Amendments to regional OP
- Implement Regional support program for TDM initiatives
- Introduce TDM programs for regional and other municipal employees
- Region can consider encouraging other communities to discourage the amount of parking at major sites
- Should explore a reduced price transit pass program that is marketed to all employees and university students in the Region

- Consider developing a Transit Oriented Development Best Practices Handbook to be used as an information resource for the public, municipalities, developers, planners, etc.
- Consider designating Markham Town Centre, Beaver Creek/ Commerce Valley and other major activity centres as transit “fare free zones”
- Consider actively working with municipalities to ensure that all developments within urbanized areas include sidewalks and are both bicycle and transit supportive in design by adopting specific guidelines and identifying potential funding sources.
- Consider exploring additional locations for commuter car share opportunities
- Consider working with municipalities to implement transit supportive site design guidelines
- Consider encouraging municipalities to concentrate new employment opportunities within 200 metres of transit stops
- Identify regional arterials suitable for HOV lanes and reserved bus lanes and implement these measures where appropriate for all road widening initiatives and also as a retrofit for existing arterials
- Amend the Development Charges Act to ensure it is more supportive of transit

Lower Level TDM Policies

City of Hamilton:

(Source: -Development of Policy Paper for Phase 2 of the Transportation Master Plan for the City of Hamilton TRAVEL DEMAND MANAGEMENT (TDM) POLICY PAPER,

-Development of Policy Paper for Phase 2 of the Transportation Master Plan for the City of Hamilton SUMMARY OF PROPOSED RECOMMENDED POLICIES)

- Currently involved in the smart commute association project
- Hamilton Street Railway’s Employer Commuter Pass (EC Pass) which offers a discount to employers who purchase monthly bus passes for their staff. Employers, in turn, offer the passes to their employees at full, partial or no cost. The City has itself implemented the EC Pass program, allowing departments (albeit with a relatively low uptake) to offer each employee a discounted transit pass in exchange for giving up his/her free parking privileges.
- Council also recently considered a recommendation to limit City-paid parking only to employees who are required to use a personal vehicle three or more times a week, in conjunction with an investigation of ways to encourage the use of other commuter options.
- The Moving on Sustainable Transportation (MOST) program of Transport Canada has also awarded Environment Hamilton and McMaster’s Ontario Public Interest Research Group over \$30,000 to investigate the feasibility of community transit passes (bulk discounted transit passes purchased by a block of households in a given neighbourhood), and to form a Transit Users Group (TUG) to represent riders’ interests.
- The Official Plan of the former Region (which will remain in effect until the City adopts a new one) stresses the importance of a multimodal transportation system and promotes the use of “alternative modes” through better facilities and services for walking, cycling and transit travel. While the plan does not speak to the management of demand (per se) it does reflect a progressive

approach to regulatory or infrastructure-oriented measures that can remove barriers to changing demands.

- The TDM-related recommendations of the Regional Transportation Review included:
 - Provision of bicycle racks at major activity areas
 - Enhancement of cycling awareness by distributing route maps and safety information, and by making cycling skills courses available
 - Creation of parking management programs at suburban workplaces to promote transit, carpooling and other means of reducing single-occupant vehicle use
 - Better control of long-term parking supply and pricing
 - Provision of bicycle parking at strategic municipal parking lots
- A key recommendation highlighted by the Regional Transportation Review Technical in its Executive Summary was “That the Region ensure leadership by example by establishing a Travel Demand Reduction Program for Municipal Employees”. It suggested reducing free parking, charging for parking, discounting bus passes, improving bicycle storage, providing bus tickets for business travel. One goal of this recommendation was to demonstrate the Region’s commitment to its own vision, and to set an example for area businesses to follow.
 - Regularly recognize and reward community partners in TDM initiatives

City of Peterborough:

(Source: - City of Peterborough’s website

- Peterborough Comprehensive Transportation Plan update)

- Many of the existing programs implemented in the City are a joint effort of the City of Peterborough, Peterborough Green-Up and the Peterborough County/City Health Unit. Current programs include:
 - **Carpooling**
Use of the website provided by the City is available to all Ontario residents and is no charge. There is a special section set up exclusively for Peterborough government employees to search for carpool partners amongst themselves.
 - **Walking**
Active and Safe Community Routes is a group of professionals and volunteers working together to improve walking infrastructure (including sidewalks and trails) in the City and County, create and publicize walking routes and trails, promote walking kits and pedometers, and provide information about the health benefits of walking.
 - **Workplace Programs**
Participate in the Shifting Gears Transportation Challenge. Have fun and get fit competing against other Peterborough companies to have the most employees that walk, bike, carpool or take transit to work. This event is held in May each year.
 - **School Programs**
Active and Safe Routes to School is a partnership of the City, Peterborough County/City Health Unit, Peterborough Green-Up, Student Transportation Services of Central Ontario and the Peterborough Lakefield Community Police. The group is working to promote walking and cycling to school. Resources are available for schools and parents. Likely best known for its work in promoting International Walk To School Day, this group is starting to work on Safe

Travel Plans for Peterborough schools. These plans will outline safe walking routes to specific schools.

- **Anti-Idling**

This is a series of activities designed to reduce the idling of car engines while parked or waiting. The purpose of this project is to reduce vehicle emissions and fuel consumption.

- **Transportation Plans**

The TDM Planner monitors implementation of recommendations in City's Comprehensive Transportation Plan, including trails development and cycling lanes.

- Two types of transportation system strategies are considered in transportation master planning; Structural (Supply-Side) strategies and Transportation Demand Management (Demand-Side) strategies. TDM strategies fall into three basic categories:
 - Market-Based Strategies – affecting the individual or collective cost to travel (e.g. user pay, parking pricing);
 - Behaviour-Based Strategies – affecting the personal decision on when and how to travel (e.g. transit service, telecommuting, ride-sharing and peak-hour shifts) and;
 - Land Use-Based Strategies – affecting the functional relationship and proximity (e.g. increase density and mixed land use)
- In most cases, the main factors that affect TDM feasibility are:
 - Traffic Conditions – represented by travel distances, times and delays that influence the decision of when and how to travel. Smaller cities with generally convenient, acceptable travel conditions often have no functional need for TDM.
 - Public Awareness – about traffic conditions, true travel costs, impacts to the community and availability of alternative services.
 - Demographics – that influence the ability to use alternative modes based on lifestyle (i.e. employment travel, child rearing) or physical capability (i.e. for cycling).
 - Availability of Alternative Systems – to support TDM, on the basis that latent demand for alternatives modes will be realized through provision of needed infrastructure and services.
 - Employment Density – large concentrations or nodes of employment, for example in the downtown and business/industrial areas, can support efficient transit service, and therefore increased transit use, compared to decentralized and spread-out employment areas.
 - Population Density – of a community influences the location and use of alternative travel modes, with higher density nodes and corridors more supportive of transit use than low density neighbourhoods.
 - Socio-Economics – of residents influence their ability and need to travel by various modes, with higher income communities have a higher rate of two and even three auto households.

- Climatic Conditions – such as an extended winter season affect the ability to use non-motorized forms of transportation.
 - Parking Cost/Availability – affects the competition between auto use, and alternatives modes that do not require vehicle parking.
- Expected TDM effectiveness assessment:

Strategy	Effectiveness		Costs		Implementation		Recommended yes/no
	Extent	Impact	To Users	To Society	Ease of Administration	Public Acceptability	
Market-Based							
Peak Hour Road Pricing	Broad	Great	Great	None	Moderate	Poor	No
User Pay	Broad	Great	Great	Great	Moderate	Poor	No
Increase Auto Costs	Broad	Moderate	Great	Moderate	Easy	Poor	No
Increase Long-Term Parking Costs	Broad	Great	Great	None	Easy	Poor	Yes
Behaviour-Based							
Shift Peak Travel Hours	Variable	Minor	None	None	Moderate	Moderate	Yes
Telecommute	Broad	Minor	None	None	Moderate	Good	Yes
Restrict Vehicle Use	Variable	Minor	Great	None	Hard	Poor	No
Intelligent Vehicle Systems	Narrow	Minor	Great	Moderate	Hard	Moderate	Yes (1)
HOV Lanes	Variable	Moderate	None	Great	Hard	Moderate	No
Transit-Priority Systems	Variable	Moderate	None	Minor	Hard	Moderate	Yes
Ride-Sharing	Narrow	Moderate	None	Minor	Hard	Good	Yes
Land Use-Based							
Increase Densities at Strategic Locations	Broad	Moderate	None	Minor	Moderate	Moderate	Yes (2)
Shorten Home/Work Distance	Broad	Minor	None	Moderate	Moderate	Moderate	Yes (2)

(1) Limited to Signal System Optimization

(2) Long term potential only

City of Calgary:

(Source: - *Transportation Demand Management Study Report*

- *Best Practices Review*)

- In 1995, the city developed the Calgary Transportation Plan: GoPlan. It resulted in a number of policies, containing general guidelines to: modify travel behaviour, encourage people to get out their cars, expand bike parking and initiate TDM programs and monitor their effectiveness.
- Calgary transit conducted a study in 1998-1999 to assess potential application and benefits of TDM and summarize findings in a report entitled “Managing Transportation Demand in Calgary: TDM Market Review”
- In 2002, the current city council reviewed the numerous services that the city offers and prioritized about 60 in a document titled: Looking Ahead Moving Forward. Priorities included:
 - Implementing and promoting TDM programs, which encourage carpooling, flexible work week/time options, biking, walking and telecommuting.
 - Increasing use of public transit
 - Reducing greenhouse gas emissions.
 - Developed a regional rideshare database and hired a full time TDM Specialist, to promote and track ridesharing for city employees.
 - Started Commuter Challenge Week (help people with their commutes and giving prizes to try alternative transportation)
 - Partnered with Commuter Connection to initiate a citywide rideshare pilot program
 - Established first Park’n Pool site in the parking lot of a local co-op
 - Set up alternative transportation fairs to raise people awareness in alternative transportation modes
 - Established “Escape the Rush” program to increase awareness among business and general public of TDM benefits to encourage travel options
 - Use of HOV lane strategies and TSP system
 - Established pathway and cycling program

City of Ottawa:

(Source: *Best Practices Review*)

- Supported by the City of Ottawa, Active and Safe Route international program supports reducing obesity rates in school children and explore safer, more active way to travel
- The Bruce Timmermans Cycling Awards recognize individuals and organizations that make outstanding contributions to the encouragement of cycling
- The OC Transpo ECOPASS offers up to a 15% yearly saving on transit passes.
- In 2005, EnviroCentre non-profit organization received funding to help formulate a strategy aimed at developing Canada’s first TMA for Ottawa’s Byward Market Area
- TravelWise Program is a community wide TDM initiative that has focused primarily on special events and public education.
- City’s Anti-idling campaign discourages unnecessary motor vehicle idling.
- City’s Transportation Master Plan identifies several policies to enhance City’s existing TDM initiatives by:

- Developing a comprehensive TDM strategy
- Adopting a “leadership by example” role
- Integrating TDM with public health , recreation and environmental programs
- Helping developers reduce development costs and improve marketability through TDM, and encouraging them to include TDM-supportive programs and infrastructure
- Working with primary and secondary schools, universities and colleges to make walking, cycling, transit and ridesharing more attractive through initiatives such as the universal student pass program

Summary

Higher (Regional) Level TDM Measures/ Tools

	Region of Peel	Region of Halifax	York Region	Halton Region
Promote a balanced multi-modal transportation system	*	√	√	*
Create effective TDM policies and programs	*	√	*	√
TDM policy statements in OP/ TMP	√	*	*	*
Coordinate with area municipalities, and other organizations to educate the public on relations between traffic and environmental effects	*	√	√	√
Encourage the private/public sector to integrate the marketing and education of the environmental/ health benefits of transportation alternatives into existing activities and programs	*	√	√	√
Develop TDM policy supportive guidelines and strategies	*	√	*	√
Coordinate with area municipalities to promote land uses and site design in the region which foster the use of alternative modes of transportation and infrastructure to encourage teleworking	*	√	*	*
Develop parking management strategies	*	*	*	*
Coordinate with all levels of the public and private sector, to promote a safe and sustainable transportation system	*	√	√	*
Encourage local municipalities to develop multi-purpose pedestrian/bicycle network that promotes active transportation and consider the provision of technically appropriate routes on Regional roads to encourage active transportation.	*	√	√	*
Foster the development of TDM strategies by acting as a regional resource for TDM	*	√	*	*
Coordinate with area municipalities to promote and support TDM within regional and area municipal government employees/departments	*	√	√	√
Coordinate with area municipalities to encourage the facilitation of public-private partnerships to promote and implement TDM strategies	*	√	√	*
Coordinate with area municipalities to evaluate and measure TDM strategies	*			
Establish regional TDM Coordinator	*	√	√	*
Develop Bike Plan, Pedestrian Plan, Action Plan, etc	*	√	√	
Integration of biking and walking with public transit	*	√	√	
HOV lane implementation			*	
Demonstrate leadership in TDM measures		√	*	*
Transit-Orientated Development			√	

* (Working on that)

√ (Already Implemented)

Lower (Municipality) Level TDM Measures/ Tools

	City of Hamilton	City of Brampton	City of Peterborough	City of Ottawa	City of Calgary
Promote a balanced multi-modal transportation system	√	√	√	√	√
Create effective TDM policies and programs	√	√	√	√	√
TDM policy statements in OP/ TMP	√	√	√	√	√
Coordinate with other organizations to educate the public on relations between traffic and environmental effects	*			√	
Encourage the private/public sector to integrate the marketing and education of the environmental/ health benefits of transportation alternatives into existing activities and programs	*		√	√	√
Develop transit fare reduction program	√			√	
Promotion and improvement strategies to cycling	*		√	√	√
Promotion and improvement strategies to walking	*	*	√	√	√
Develop auto parking management strategies	√	*	*	*	√
Coordinate with all levels of the public and private sector, to promote a safe and sustainable transportation system	√			√	
Promotion and facilitating carpool system	√	*	√	*	√
Schedule management	√		*	√	√
Land use controls	*	*	*	√	
Transit services improvement and promotion	*	*	*	√	√
Improving accessibility	*				
Coordinate with public-private partnerships to promote and implement TDM strategies	√		√	√	√
Consider TDM in municipal transportation plans and studies	*		√	√	√
Establish City TDM Coordinator	*		√		√
Develop Bike Plan, Pedestrian Plan, Action Plan, etc	*			√	
Integration of biking and walking with public transit	*			√	√
HOV lane implementation/ reserve bus lanes		√			√
Demonstrate leadership in TDM measures	√	*	√	√	
Transit-Orientated Development				√	√
Adopting ITS strategies		*	*	*	√
Coordinate with regional government to take proactive role in TDM measures	√	*	√		√
Anti-Idling			√	√	

* (Working on that)

√ (Already Implemented)

Essex-Windsor Region:

(Source: - Transportation Master Plan Report)

- 80% of all trips in PM peak period auto dominated
- 10% walking, 2% cycling
- 3% Windsor Transit – only serves urban area

Recommendations

- Assuming not transit service expansion beyond City, continued auto dominance and low vehicle occupancy.
- Recommended Road improvements \$17 M / year but will not address all capacity deficiencies.
- Focus on combination of selected roadway capacity enhancements and development forms in urban areas that offer alternative choices.

TDM Strategies

- Encourage more intensive development and redevelopment within Settlement areas
- Neo-Traditional approach in supporting transit, cycling and walking within subdivisions
- Encourage telecommuting
- Official Plan policies to encourage active/non-motorized modes of transportation
- Ride-sharing program and more commitments and support services provided at the employer and community level.
- Direct further investigations be carried out at the local municipality level on extensions of non-motorized routing plans
- Role of public education and awareness in meeting the plans objectives.

Peterborough County:

(Source: - Transportation Master Plan Report)

- Population of 53, 168 in 2001. Expected population in 2021 – 70,000 people
- Increase trend towards trip making
- 93% travel to/from work by private auto
- Peterborough Transit only services the City of Peterborough
- Greyhound provides service to limited communities in the County – other areas have no inter-city bus service.
- No formal bikeways in the County except along multi-use off-road trails

Recommendations

- Establish new County Road Classification system
- New transportation policies for County Road standards – access policies
- Alternative service delivery method for transit service to County communities (i.e. dial a cab) rather than heavily subsidized extension of Peterborough Transit service expansion beyond the City.
- Continue GO Transit service provided by Greyhound with new carpool lot in County

- Number of road capacity improvements – Capital costs of \$70 M over 20 years.
- Better integration of transportation and land use planning.

City of Greater Sudbury:

(Source: - Transportation Study Report)

- Population in 2001 – 155,000 people, 65,659 employment
- Population projection for 2021 – 174, 981 people, employment 74, 237
- Old City of Sudbury is major urban center with population of 85, 358 people and employment of 49, 749
- 70% trips made by auto
- 330,000 person trips all modes
- Transit system – Conventional and Trans cab and Handi – Transit
 - Provides service to all areas within Greater Sudbury
 - Covers an area of 3627 sq. km.
 - 83% of population is within 400 m of a transit route
 - Ridership growing steadily
 - 50 buses operate 36 routes
 - 50% of operating costs through fare box and other means, City pays remaining costs
 - 3.5 million riders annually in 1999 and 4.2 million in 2003

Recommendations

- Road rehabilitation – priority to existing infrastructure before implementing new routes
- Priority roads with higher classification
- Maintain roads predominantly used by trucks
- Road improvement capital cost spending \$118.5 M over 16 years.
- Communicate with MTO to widen provincial facilities
- Continue to request Transportation Impact Studies to support new development
- Review Sudbury access control policy
- Provide sidewalks on both sides of urban arterial roads and collector roads
- Pedestrian connections between neighbourhoods
- Provide pedestrian links to major attractions/generators.
- Provide adequate funding to maintain current service level (quality and quantity) and keep fare increases below cost of living index
- Improve integration with VIA rail station
- Focus on compact mixed use development
- Ensure adequate bicycle/walking links and adequate road network to facilitate transit.