FINAL REPORT

County of Simcoe Transportation Master Plan

July 2008

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EXECUTIVE SUMMARY

1. INTRODUCTION

Simcoe County has emerged as a key growth area in the outer ring municipalities surrounding the Greater Toronto and Hamilton (GTAH). Not only is the demand for growth a major challenge facing the County transportation system but the recreational communities within and just to the north and west of Simcoe County dramatically increase the travel demands on the weekends and particularly during the summer months.

Today, the current population and employment levels in the Simcoe Area (including the Cities of Barrie and Orillia) are approximately 438,600 and 183,500 persons respectively based on 2006 Census data. With the Places to Grow legislation, the province has designated that the future population in the County is to grow to a total of 667,000 people by 2031. Employment levels are to increase to 254,000 jobs by 2031.

In accordance with principles and directives outlined in the Provincial Growth Plan for the Greater Golden Horseshoe (Places to Grow), the County has prepared a growth management strategy called the Simcoe Area Growth Plan which defines the amount, location and character of community development to 2031.

The Transportation Master Plan (TMP) is about "big picture thinking" on transportation challenges and opportunities, including current and future transportation demand, broad network options and modes of travel.

The TMP together with the Simcoe Area Growth Plan and the Natural Heritage System Update will provide the framework for the County's Official Plan Update.

2. KEY PROJECT OBJECTIVES

The key objective of the Transportation Master Plan is to create a future vision for transportation in the County of Simcoe, including a vision for the role that pedestrian, cycling, transit and road components can play in servicing future transportation needs. Most importantly the TMP reflects the following criteria:

- Provide balance between growth and the environment
- Meet the County's vision, goals and criteria
- Establish cost effective solutions relative to present economic climate

- Position Simcoe to capitalize on planned growth

The TMP identifies the existing and future travel demands within the County, and provides the County with transportation strategies, policies and tools to support and improve the existing transportation facilities and services in working towards a more balanced and sustainable transportation system for the next 25 years.

Another key objective is to complete Phases 1 and 2 of the Municipal Engineers Association (MEA) Class Environmental Assessment (EA) process (June 2000, updated September 2007) for all Schedule C projects and meet requirements for EA approval of Schedule A and B projects.

3. IMPACT OF FUTURE GROWTH

Under the current population and employment levels, Simcoe Area residents (including Barrie & Orillia) make an average of just over 1 million trips per day. Based on current trip-making patterns in Simcoe County, there are a number of road segments, both Provincial and County roads, that are currently operating at or near capacity. If the current travel behaviours are maintained, by 2031 daily trip-making by Simcoe area residents is forecast to increase by 63%. This adds challenges in terms of determining the appropriate level of service and infrastructure to provide while meeting user expectations with respect to the transportation system.

Approximately 80% of the daily trips made by Simcoe Area residents (including Barrie and Orillia) stay within the Simcoe Area. Of those daily trips, approximately 1.4% are made by transit. The transit mode share in the County is low due to the fact that there is limited public transit services available within the County, and the dispersed nature of the County‘s population. Even with a concerted effort to improve public transit, the trips made by automobile are forecast to increase by 40% by 2031.

Although transit service may not be able to address capacity issues immediately, it is required to provide people with a choice in travel methods and to maintain accessibility to those who need it. With the region’s aging population, this will become even more of an issue in the future in trying to maintain their accessibility to basic services (such as health care etc.).

Chapter 3 of the Transportation Master Plan outlines the future transportation challenges facing Simcoe County.

4. TRANSPORTATION STRATEGIES

There are two basic strategy directions to address the transportation challenges facing Simcoe County. One is to attempt to manage or reduce the demand for transportation in the community. The other is to increase the supply of transportation infrastructure and services. The Master Plan has been developed to

strike a balance between managing demand and increasing supply of transportation service in order to provide an effective and sustainable transportation system.

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. A detailed discussion of the Transportation Strategies examined for Simcoe County is presented in Chapter 4 of the TMP.

The recommended transportation strategy, summarized below, 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 4.1 - 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.

Mode of Travel/ Policy Area	Recommended Strategic Direction
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.
	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 Energy and Infrastructure 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.

Mode of Travel/ Policy Area	Recommended Strategic Direction
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.

5. RECOMMENDED TRANSPORTATION MASTER PLAN

The County of Simcoe Transportation Master Plan is comprehensive in nature and includes a series of detailed recommendations and strategic policies that will be implemented over time. It is based on a multi-modal approach to transportation that considers existing and future person and goods movement needs. The TMP provides a balance of transportation choices required to address future travel demands in the County, and can be characterized as a first step in the process of changing the way residents think about and use their transportation system.

The strategies and policies set out in the Transportation Master Plan provide the County of Simcoe the means to plan and manage a transportation system that supports the key transportation policies and objectives outlined in the Growth Plan for the Greater Golden Horseshoe[1], including:

- Provide connectivity among transportation modes for moving people and for moving goods
- Offer a balance of transportation choices that reduces reliance upon any single mode and promotes transit, cycling and walking

[1] Ontario Ministry of Energy and Infrastructure, "Places to Grow, Growth Plan for the Greater Golden Horseshoe, 2006.

- Be sustainable, by encouraging the most financially and environmentally appropriate mode for trip-making
- Offer multi-modal access to jobs, housing, schools, cultural and recreational opportunities, and goods and services
- Provide for the safety of system users.

The recommendations outlined in the County of Simcoe Transportation Master Plan align with the Provincial Growth Plan's transportation policies with a focus on moving people and moving goods. The Transportation Master Plan includes:

- A series of policies and recommendations to support Active Transportation modes and encourage walking and cycling both at the local level and within a area wide County context
- A strategy for expanding and enhancing existing transit services in the County and introducing new transit services to the County's smaller settlements over the next 25 years. The strategy includes land use, infrastructure, and operational policies to support growth, encourage additional transit ridership and improve the share of trips made by transit, and provide residents with improved choice in their daily travel decisions
- Recommendations on the development of a Transportation Demand Management program within the County including policies and infrastructure that are intended to encourage alternative transportation modes and reduce the amount of travel on the County Road system
- A series infrastructure and policy recommendations aimed at the preservation and enhancement of a network of Goods Movement corridors throughout the County
- A strategy for optimizing the use of the existing road network in the County and policies that can be applied to manage the operation of key arterial road corridors; and,
- A Road Network Improvement Plan to accommodate growth to 2031 and beyond.

Chapter 5 of the report discuss in more detail the key recommendations and policy directions of the Transportation Master Plan.

6. IMPLEMENTATION, PHASING AND MONITORING

The key recommendations of the Transportation Master Plan can be implemented through a series of strategic policies and specific infrastructure optimization/improvements.

Many of the policy recommendations, which are identified in Chapter 5, can be incorporated into policies within the Official Plan which in turn can be implemented through the processing of land use applications under the Planning Act. For the purpose of this report, we have not identified detailed capital allocations or suggested timing for the implementation of these policies as they will require further scoping and political input. It is recommended that the County allocate funding for the further development and

implementation of these policies, which should be reviewed on an annual basis, to support the recommended strategies.

Implementation and phasing for the 6 strategies developed in this Transportation Master Plan are outlined below and are described in more detail in Chapter 6 of the Transportation Master Plan.

6.1. Walking and Cycling

A number of recommendations have been put forward to address walking and cycling in Simcoe County which will require funding from the County. Facilitating linkages to other existing trails or other elements such as development of mapping for promotional and marketing material will require funding and it is recommended that the County allocate $500,000/year to commence work on addressing the recommendations. The costs associated with the County's contribution towards walking and cycling should be reviewed and adjusted annually. In other municipalities, funds dedicated to facilitate walking and cycling have been in the order of 1% to 7% of the annual transportation budget. The suggested amount represents approximately 2.3 % of the budget suggested to fund capital road projects in the short term time period.

6.2. Transit

Recommendations for transit include support through funding or partnering with either local municipalities in expanding their transit systems, with private operators and partnering or funding initiatives with public sector transit operators. To establish the recommended strategies and get operations running, seed funding from the County will be required. It is recognized that the County will have to work with transit operators to assess and determine what is affordable within each horizon year.

6.2.1. Local Transit

Supporting the expansion of existing local transit service (Orillia, Midland, Barrie and Collingwood) outside their jurisdiction will require additional capital investment. The County should, as a minimum initial investment, include capital costs associated with the acquisition of additional transit vehicles needed to expand local services.

In summary, capital funding for the expansion of local service to neighbouring settlement areas for the existing transit service providers would be in the order of $7.15 million

6.2.2. Inter-Municipal Transit Service

Linking communities will require partnering with the private sector transit operators. It is recommended that the County engage in discussions with the private transit service providers to expand or provide new inter-municipal transit service between urban centres within the County. It is suggested that the County's

contribution to the service providers be through funding of the operating costs associated with the bus service expansion. The Plan for Transit suggests a number of new or enhanced transit service connections between Barrie and major urban area such as Midland/Penetanguishene, Collingwood/Stayner/Wasaga Beach, Orillia and Tottenham. Additional connections should be established between Orillia/Midland/Penetanguishene, Alliston/Angus and Bradford/Alliston. The annual contribution by the County towards operating expenses to provide this service would be in the order of $2.9 million.

6.2.3. Inter-Regional Transit Service

The County of Simcoe should engage in discussions with GO Transit to extend GO Rail and Bus services to areas in Simcoe beyond the current service area of Barrie and the recently announced expansion to Bolton. GO Transit expansion from Bolton into the County will provide an alternative transportation facility to move people between the County and major employment areas in the western Greater Toronto Area (GTA) such as Vaughan and the Region of Peel. The County could support the extension of services to areas within the County through a form of funding arrangement with GO Transit for extension of transit services. A transportation corridor such as Highway 427 would have provided this link. Recognizing the Province's plans not to proceed with the extension of Highway 427 into the County of Simcoe, an alternative to this transportation link is needed to service the future growth in the County.

6.3. Transportation Demand Management (TDM)

It is suggested that nominal start up funding be provided by the County in support of Transportation Demand Management. Money will be needed to initiate the pilot project as recommended in the plan and to prepare marketing material and to promote the benefits of TDM. It is suggested that an amount of $200,000 per year be allocated towards TDM and the amount be adjusted through the annual budgeting process.

Carpool lots will require capital funding for the infrastructure. There are approximately 6 locations outside of existing municipal owned buildings where new lots would have to be established. For example, assuming each new lot will contain 5 parking spaces, the total estimated cost to construct 6 carpool lots will be in the order of $720,000.

6.4. Goods Movement

The County needs to initiate discussions with railway operators, as well as provincial and federal governments to investigate opportunities and potential funding sources to upgrade existing rail corridors to support both goods movement and pedestrian mobility.

The County should engage in discussions with Ministry of Transportation (MTO) as well as the Ministry of Energy and Infrastructure (MEI) to move forward in the construction of the Highway 400/404 Link (Bradford Bypass). Protection of lands for this facility should persist and implementation of a facility in this corridor should continue to be a high priority for the County and the Province as it has been identified as a near term need to accommodate growth and to facilitate goods movement and future transit movements.

Similarly, the County needs to initiate discussions with MTO and MEI to move forward on establishing a by-pass around the City of Barrie to facilitate the movement of goods and people.

6.5. Road Network Optimization

A number of intersection improvements were identified in the County's development charges study which identified a capital cost of $500,000 per intersection. These improvements are categorized as Schedule A+ projects under the Class Environmental Assessment process.

6.6. Road Network Improvements

To guide the County in managing the implementation of the infrastructure plans recommended in this Transportation Master Plan, suggested timing for recommended projects has been developed based on technical assessment that considered:

- Forecasts of transportation demands for interim horizon years and assessment of when the improvements are required to address deficiencies. The horizon years assessed for road improvement costs include:
  - Short Term (0-10 years)
  - Medium Term (10 – 20 years)
  - Long Term (20+ years)
- The need to undertake future Class EA studies to determine the recommended design for road improvements projects. For Schedule C projects this could include route planning (for new road corridors), preliminary engineering design (initial design, mitigation of local impacts, refine cost estimates, etc), and property acquisition (where required). For Schedule A and B projects, this would include completion of detailed design and preparation of tender drawings.
- The desire to distribute capital budget requirements across the life of the plan.

The County may choose to implement the recommended projects in a different order or phasing than has been suggested in the Master Plan in order to accommodate other council priorities such as the need to coordinate with other infrastructure works (i.e. sewer work), planned developments in the area, or other considerations beyond the scope of this project.

The capital funding requirements for the proposed road improvements identified for the Transportation Master Plan are summarized below for short term (0-10 years) , medium term (10-20 years) and long term (20+ years) time horizons.

6.6.1. Maintenance Costs

The proposed road network improvement plan will not only require capital costs to upgrade and improve the roads, but will also add to the existing annual maintenance costs expended by the County to maintain the road system. Based on an annual maintenance cost of approximately $5000 per lane km, the recommended road improvement plan will add approximately 660 lane kms of new road at an annual cost of $3.29 million.

The following table summarizes the major operating and capital costs (excluding existing committed capital projects and minor operating items) of the recommended strategy implementations as detailed in Chapter 6:

Table 6.1 - Transportation Master Plan Implementation Summary of Costs (major operating and capital items)

Strategy		Annual Operating Cost ($1,000)	Capital Cost ($1,000)
Walking and Cycling:	Facilitate linkages to other existing trails or other elements such as developing promotional mapping and marketing material	$ 500	
Transit			
Local	Support expansion of local public service through the purchase of 11 additional transit vehicles		$ 7,150
Inter-Municipal	Enhance private transit service connections between Barrie and major urban centres through an annual contribution towards operating expenses	$ 2,900	
Transportation Demand Management (TDM)	Initiate pilot project/prepare marketing materials	$ 200	
	Carpool Lots		$ 720
Road Network Improvements	Short Term (0-10 years)*		$ 135,730
	Medium Term (10-20 years		$ 204,350
	Long Term (20+ years)		$ 132,650
	Additional annual maintenance cost on 660 lane kms	$ 3,290	
Total Annual Operating Costs ($1,000)		**$ 6,890**	
Total Infrastructure Improvement Costs ($1,000)			**$ 480,600**

* Note: Does not include committed projects.

6.7. Transportation Plan Monitoring & Review

The success of long-range plans depends on the ongoing monitoring of relevant conditions, actions, and impacts. The County of Simcoe must remain aware of its progress toward key objectives, so that it can add, modify, or delete priorities as needed.

Through the study, the County has adopted a transportation strategy and laid out a plan to attain the particular transportation goals associated with it. As identified in the plan, a number of transportation capital works projects would be required, along with an aggressive program of other initiatives. Many of these components of the plan are based on prevailing attitudes of County residents and forecasted future travel demands over the transportation network based on future land use development patterns. The Plan must be able to respond to changes in these factors that might affect demand or the emphasis placed on alternative modes of transportation.

Ongoing monitoring would also be necessary in determining the effectiveness of the initiatives identified in the plan in meeting the adopted strategic direction.

The following recommendations should be considered in the ongoing monitoring of transportation conditions in the County:

- To facilitate the ongoing assessment of transportation conditions and updating of the Transportation Master Plan, the County should maintain a traffic demand forecasting model to assist in the development of forecasts of travel demands within and to/from the County. The model should be updated at least every two years and a review of the model should be completed every five years to determine the need to update and recalibrate the model parameters based on available data from the Census and Transportation Tomorrow Survey (TTS). It is recommended that the County allocate approximately $50-75,000 in their 2008/2009 budget to complete this update.
- A Transportation Perspective Report should be provided to Council every 5 years to advise council on recent trends with respect to transportation patterns within the County, and the need to update the Transportation Master Plan. It is recommended that the Transportation Master Plan be reviewed and/or updated every 5 years, in conjunction with statutory requirements to review the Official Plan. Given the close integration between land use planning, land use policy, and transportation; any updates to the Transportation Master Plan should be undertaken in conjunction with the Official Plan Update, as was done with this study.
- As public consultation is a key input to the completion of a strategic Transportation Master Plan, all future TMP updates should include a proactive and comprehensive public outreach program featuring formal Public Consultation Centres, stakeholder workshops, and other innovative outreach strategies to solicit input from a wide cross section of the Community.

CHAPTER 1

INTRODUCTION

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1. INTRODUCTION

1.1. Study Background

Simcoe County has emerged as a key growth area in the outer ring municipalities surrounding the Greater Toronto and Hamilton (GTAH) areas (illustrated in **Figure 1.1**). This emerging growth trend has accelerated over the past few years following the creation of the Greenbelt (located just to the south of the County) and the release of the Province's Places to Grow legislation.

Figure 1.1 - County of Simcoe

The demand for growth is not the only challenge facing the County transportation system. For years it has been recognized that the recreational communities within and just to the north and west of Simcoe County have dramatically increased travel demands on weekends particularly during the summer months. On key highway corridors, the summer daily traffic volumes can increase 20-30% higher than the average daily volumes for the entire year. This factor adds challenges in terms of determining the appropriate level of service and infrastructure required while meeting user expectations with respect to the transportation system.

In accordance with principles and directives outlined in the Provincial Growth Plan for the Greater Golden Horseshoe (Places to Grow), the County has prepared a growth management strategy titled the

Simcoe Area Growth Plan. The Simcoe Area Growth Plan defines the amount, location and general character of community development to 2031.

The Transportation Master Plan (TMP) together with the Simcoe Area Growth Plan and the Natural Heritage System Update, will provide the framework for the County's Official Plan Update.

1.2. Project Objectives

The key objective of the Transportation Master Plan (TMP) is to create a future vision for transportation in the County of Simcoe, including a vision for the role that pedestrian, cycling, transit and road components can play in servicing future transportation needs. Essentially, the TMP reflects the following criteria:

- Provide balance between growth and the environment
- Meet the County's vision, goals and criteria
- Establish cost effective solutions relative to present economic climate
- Position Simcoe to capitalize on planned growth

The TMP identifies the existing and future travel demands within the County, and provides the County with transportation strategies, policies and tools to support and improve the existing transportation facilities and services in working towards a more balanced and sustainable transportation system for the next 25 years.

In order to move people and move goods, initiatives in Places to Grow related to transportation include:

- Increase the variety of options including convenient access to transit, cycling and walking
- Integrate walking and cycling opportunities
- Communities will be built with the densities necessary to sustain this transit investment
- Facilitate efficient goods movement by linking inter-modal facilities, international gateways and communities within the Greater Golden Horseshoe (GGH).

1.3. Study Approach

This study was completed in accordance with Phases 1 and 2 of the Municipal Engineers Association (MEA) Class Environmental Assessment (EA) process (June 2000, updated September 2007) for all Schedule C projects and meet requirements for EA approval of Schedule A and B projects. The TMP was

completed using a four step process, designed to comply with the requirements of the Municipal Class Environmental Assessment process as shown in **Figure 1.2**. **Step 1** established the strengths and deficiencies in the existing transportation network. **Step 2** examined the transportation impacts associated with future growth allocations. **Step 3** developed a series of alternative transportation strategies and assessed their ability to accommodate future mobility needs. Finally, **Step 4**, incorporated the work in a series of infrastructure plans and policies and identified an implementation program to guide the County forward for the next 25 years.

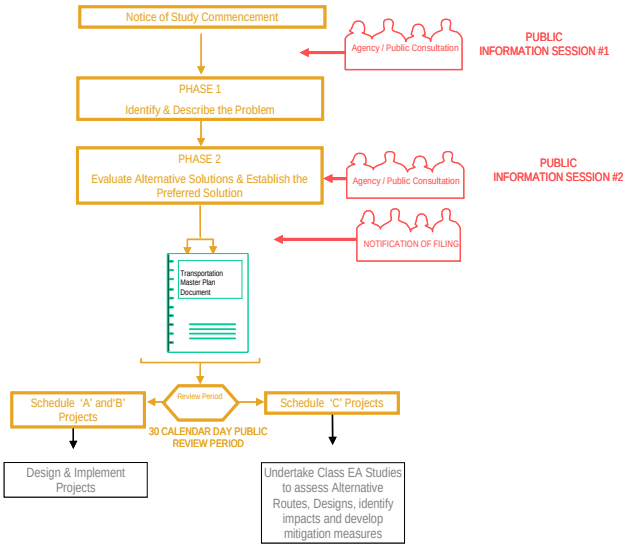

Figure 1.2 – Transportation Master Plan (TMP) Municipal Class EA Process

1.3.1. Step 1 - The Development of a Study Foundation

The development of a study foundation was the first step in the process, where the team identified the strengths and deficiencies in the existing transportation network and reviewed the progress made in implementing the recommendations.

The workplan for this phase included the following:

Data Collection – A significant amount of background data collection was undertaken. Traffic counts were obtained from the County for all County Roads and at key intersections, Simcoe County OD Survey information was obtained from the Ministry of Transportation (MTO) and preliminary Transportation Tomorrow Survey Data was obtained from the University of Toronto Joint Program database.

Transportation Model Development – A strategic level transportation model of the County was developed to assess the transportation impacts and benefits associated with changes to land use, transportation choices, and new infrastructure alternatives within the County.

Public Attitude Survey – A random telephone survey of approximately 600 Simcoe County's residents conducted by Veri/fact Research between September 27, 2007 and October 15, 2007 asked a series of questions about transportation and future growth in the County of Simcoe. The results of this survey were used to provide a snapshot of the transportation perspective of Simcoe County's residents travel habits and their attitudes towards alternative modes of transportation. A series of questions were included to examine what motivates residents to make the transportation choices they do, and what measures could be used to encourage changes on a personal level. This information has been used extensively in the development of the Transportation Strategy for the County.

Public Consultation – The first of two planned Public Information Centres was held during this stage (December 2007) to introduce the Transportation Master Plan Study to residents and to solicit input on the issues, opportunities, and future aspirations about their County and the kind of community they would like to see.

Chapter 2 of this report, entitled "*Current State of the Transportation System"* provides a summary of the technical work undertaken as part of Step 1 activities.

1.3.2. Step 2 - Transportation Impacts Associated with Growth Management Strategy

This stage of the study was integrated with the Province's "Places to Grow" legislation, affecting land use and growth planning for the Greater Golden Horseshoe and Simcoe County.

The transportation system is not only affected by the total growth in population and employment within an area, but is also affected by the location and form of growth that occurs. This aspect of the future growth in Simcoe County was examined in the Simcoe Area Growth Plan (*prepared by Hemson Consulting Ltd)* which allocated the targeted 2031 population and employment for the 16 municipalities within Simcoe County, and included population and employment allocations for the City of Barrie and City of Orillia.

Based on the population and employment allocations as outlined in the Simcoe Area Growth Plan and using a transportation model, forecasts of future transportation patterns were developed for the growth scenario to provide insight into the need for potential transportation improvements.

Chapter 3 of this report, entitled *"Impact of Future Growth"*, provides a summary of the technical work undertaken as part of Step 2 activities.

1.3.3. Step 3 - Developing and Testing Alternative Transportation Strategies

The development and assessment of alternative transportation strategies to address transportation needs and opportunities was the third step in the process. This step used the preferred growth scenario as a starting point, and examined alternative strategies to address the role that transit, cycling, walking, transportation demand management, and roads can play in meeting future travel needs within Simcoe County. Each strategy was assessed in terms of its general effectiveness, implementation issues and opportunities, and alignment with strategic goals of the County.

Transportation Strategy Assessment - This phase of the project undertook a review of current programs and infrastructure within Simcoe County and assessed the role of Walking, Cycling, Transit, Transportation Demand Management, Goods Movement and Road Improvements in serving current travel needs. Research on best practices from other jurisdictions was undertaken, and these experiences were combined with input received on the attitudes of Simcoe County's residents to assess opportunities to encourage a more sustainable transportation strategy. Alternative approaches were developed, ranging from a passive to an active approach, and input was solicited from the public and agencies to assist in the development of future transportation strategies.

Chapter 4 of this report, entitled *"Transportation Strategies"*, provides a summary of the technical work undertaken as part of Step 3 activities.

1.3.4. Step 4 - The Development of the Transportation Master Plan

This final stage of the project used the input received from the public, combined with the results of the technical work program to develop the infrastructure and policy recommendations to guide the County as it grows over the next 25 years.

Infrastructure Plans and Policies – Recommendations and policies were developed for Walking and Cycling, Transit, Transportation Demand Management measures, Goods Movement and Road Network Optimization programs. Updated infrastructure plans were also developed for the recommended road network improvements in the County using an assessment process in accordance with the Environmental Assessment process.

Implementation and Phasing Strategy – An implementation strategy was developed to prioritize improvements and guide the implementation of the necessary transportation policies. Additional studies or projects required to implement the recommendations were identified and prioritized, along with the development of a multi-year capital program.

Public Consultation – Public Information Centre #2 was held during this phase of the study (April 2008) to present the recommendations of the study to the community, agencies, and other stakeholders and obtain feedback on the recommendations. Input received has been incorporated where appropriate and possible to reflect the stakeholder concerns.

Chapters 5 and 6 of this report, entitled *"Recommended Transportation Master Plan"* and *"Implementation, Phasing and Monitoring"*, identifies transportation policies that can be incorporated into the Official Plan to support the strategies previously discussed in Chapter 4. They also provide a summary of the recommended transportation improvements to guide the County as it grows over the next 25 years and provide a recommended implementation plan that prioritizes infrastructure investments required in the short (0- 10 year), medium (10-20 year) and long term (20+ years) horizons. Capital investment requirements are identified for each period, and the policy initiatives required to support and implement the recommendations are outlined, along with recommendations monitoring and review of the Plan. These two chapters summarize the technical work undertaken as part of **Step 4** activities.

1.4. Public Consultation

The TMP followed the "Master Planning Process" as set out in the Ontario legislation for Municipal Class Environmental Assessment (Class EA). This process integrates the planning of municipal infrastructure requirements for existing and future land use, with the principles of Environmental Assessment Planning. The TMP is about "big picture thinking" on transportation challenges and opportunities, including current and future transportation demand, broad network options and modes of travel. The TMP included an extensive and ongoing program of public consultation throughout the study process including:

- Formal notice of commencement
- Creation of a website
- Public Attitude Survey
- Consultation with the general public through a series of two Public Information Centres (PIC's), each held in three different locations throughout the County.

As part of the initial outreach to the community and research for the TMP, a Public Attitude Survey was conducted in late September 2007 to gauge the public's opinion with respect to their level of satisfaction with the County's transportation system, barriers and opportunities to encourage use of alternative modes of travel, and key issues on how to manage future growth in the community. A random sample of approximately 609 residents of the County were asked a series of questions about how they travel around the County, what motivates their transportation choices, and the general effectiveness of different strategies in affecting their travel choices. The sample size was established to obtain a 95% confidence level with the general survey results.

The first series of formal Public Information Centres (PIC) was held on December 4, 2007 in the Town of Wasaga Beach, December 5th in the Town of Bradford West Gwillimbury and on December 6th near the Township of Ramara. They were attended by more than 100 people in total and served as an opportunity for the consulting team to introduce the TMP and to listen to the ideas of County residents and business owners. A summary of comments received from PIC #1 is provided in Appendix A – Public Consultation Summary

The second round of TMP Public Information Centre sessions was held on April 24, 2008 in Midland, April 25, 2008 in Midhurst and on April 29, 2008 in Alliston along with the second PIC for the County of Simcoe's Growth Management Study and the first PIC for the Natural Heritage System. The three sessions were attended by approximately 500 people. This second PIC served as an opportunity for the consulting team to present the recommended transportation plans and highlighted proposed strategies. A summary of comments received from PIC #2 are also provided in Appendix A.

To ensure coordination with County of Simcoe area municipalities, neighbouring area municipalities and relevant technical agencies, a Technical Advisory Committee (TAC) was established and was consulted at three different meetings held during the development of the Transportation Master Plan. Although Simcoe Area municipalities were part of the Technical Advisory Committee, additional meetings were held with staff from the 18 municipalities to gain insight regarding specific current and future transportation concerns.

A Municipal Advisory Group (MAG), comprised of elected officials representing municipalities within the County of Simcoe was also established as a way to engage local municipal politicians to participate in identification of issues, priorities and development of study recommendations. The consulting team met

with the Municipal Advisory Group twice (February 19, 2008 and April 17, 2008) during the development of the Transportation Master Plan.

1.4.1. Public Attitude Survey - Public Perception of the Transportation System

The County recognizes that the choices a community makes today with respect to growth and development and long-term needs for transportation infrastructure will shape the community for years to come. A key factor influencing the development of the Transportation Master Plan is the input that has been received from the various stakeholders and the general public on how growth should be accommodated in the region and how to plan for an efficient transportation system to both foster and support sustainable growth.

As part of the initial outreach and research, a Public Attitude Survey was undertaken between late September and mid-October 2007 to gauge public opinion with respect to their level of satisfaction with their transportation system, barriers and opportunities to encourage use of alternative modes of travel, and key issues on how to manage future growth in the community. A random sample of approximately 609 residents of the County were asked a series of questions about how they travel around the County, what motivates their transportation choices, and the general effectiveness of different strategies in affecting their travel choices. Given the sample size, the results of the survey are considered accurate within +/- 3.97%, based on a confidence level of 95% (19 times out of 20). A summary report of the findings of the survey is provided in Appendix B – Public Attitude Survey Report**.** Some of the highlights emanating from the survey are as follows:

- Responses to growth related questions:
  - 73% felt future growth should be accommodated by providing lands in each community or settlement area.
  - 64% agree that growth should be focused on intensification within existing communities.
  - 79% indicated future growth should be accommodated by implementing policies that allow for better mix of land uses in residential areas.
- Responses to transportation related questions:
  - 77% indicated that the County should reduce the demand for auto travel during peak periods.
  - 67% indicated widening existing roads or constructing new road was important – 61% supported spending taxpayers' money on widening existing roads.
  - There appears to be a slight preference to improving or widening existing roads versus building new roads (this is true for County Roads and Provincial Highways).
  - Residents appear to feel that improvements to the Provincial Highway system are more critical than improvements to the County Road system.

  - 86% indicated it was important to work with the Provincial Government to complete new highways (52% for new County Roads).
  - 95% indicated it was important improve existing provincial highways (61% for widening existing County Roads).

- Responses to questions regarding modes of travel:
  - Residents feel that it is important to increase transportation choices for travel between municipalities (buses, trains, cycling).
  - Only 22% indicated they would consider a different mode of transportation to/from work (37% undecided).

- Attitudes on the environment:
  - 88% feel it is important to limit impact of road construction on natural areas.
  - 95% indicated that it was very or somewhat important to reduce greenhouse gas emissions and improve air quality.

1.4.2. Public Information Centres – You spoke….We Listened

1.4.2.1. Public Information Centre (PIC) #1

The first series of public meetings were held at the Wasaga Beach Recreation Complex on December 4, 2007 from 4:30 p.m. to 7:30 p.m., Bradford Community Centre on December 5, 2007, from 4:30 p.m. to 7:30 p.m., and Casino Rama-Silvernightengale A on December 6, 2007 from 4:30 p.m. to 7:30 p.m. The purpose of the first Public Information Centre was to introduce the study and obtain public input on issues and opportunities and future aspirations about their County and the kind of community they would like to see. The meeting was advertised in local newspapers, on the radio and on the County's website. In addition, a letter of invitation was sent to 78 community stakeholders. Over 100 people attended the Public Consultation Centre meetings. The first session of Public Information Centre (PIC#1) meetings identified some key concerns/suggestions from a broad cross-section of the Simcoe residents. The following is a brief list of these concerns/suggestions/comments raised at PIC #1. A report summarizing the key issues/comments raised is included at PIC #1 is in Appendix A – Public Consultation Program.

- Municipalities highlighted the need for strategies to attract more tourists, including constructing effective transportation linkages to the Greater Toronto Area (GTA) as a means to support tourism and the local economies in many County municipalities, as well as the creation of "scenic routes" with effective signage and promotion;
- Some residents commented that the County should "bring back the Snow Train", which used to transport skiers between the Collingwood area and Barrie along the Barrie/Collingwood Railway line;

- The communities of Atherley and Rama want to intensify as part of their economic development and growth strategy, but planning needs to be well coordinated in that area;
- Many communities identified the need for a new controlled access roadway between Midland/Penetanguishene and Highway 400 – or at least improved access to this key economic area;
- Traffic gridlock along 8th Line and CR 4 and safety issues due to high traffic volumes through residential area along 8th Line were raised by Bradford residents as evidence that growing travel demands between Simcoe County and the Greater Toronto Area (GTA) combined with capacity constraints crossing the Holland River is beginning to have negative impacts on local neighbourhoods as commuters infiltrate through local neighbourhoods searching for alternate routes;
- The public identified a strong desire for increased choices in the daily travel patterns, and highlighted the need for public transit system improvements to link Simcoe County communities. Many residents suggested the use of incentives to encourage residents to change existing behaviors;
- Many residents expressed a desire for improved focus on active transportation infrastructure, including the development of or linking of pedestrian/cycle paths between communities, the need to accommodate pedestrians and cyclists with sidewalks on both sides of local roads, and the creation of cycling paths in designated areas.

1.4.2.2. Public Information Centre #2

The second series of Public Information Centres took place on April 24, 2008 at the North Simcoe Sports and Recreation Centre in Midland, from 5:00 p.m. to 8:30 p.m., on April 25, 2008 at the Simcoe County Museum in Minesing from 11:00 a.m. to 1:00 p.m. and on April 29, 2008 at the Nottawasaga Inn, Alliston from 5:00 p.m. to 8:30 p.m. The purpose of PIC #2 was to present the recommended strategies developed to address the future transportation deficiencies to be included in the Transportation Master Plan and for the public to provide comments on the recommended plan.

PIC #2 for the Transportation Master Plan was presented to the public at the same time as the County of Simcoe's Growth Management Study (Simcoe Area Growth Plan) and the County's Natural Heritage policy update. This was the second forum for the Growth Management Study which provided information on the amount, location and character of community development in the County of Simcoe to 2031 and the first meeting for the Natural Heritage policy update. Together, all three studies provide the framework for the County's Official Plan Update.

A total of approximately 500 people attended the three sessions of PIC #2. Some participants provided comments at the public meeting and others provided their comments on detailed comment sheets provided, or on the County's growth.simcoe.ca website. The following is a brief list of these concerns/suggestions/comments raised at PIC #2. A report summarizing the key issues/comments raised is included at PIC #2 is in Appendix A – Public Consultation Program.

- Cycling arteries should be created to encourage active lifestyle options. For example, Tay Township trail could be expanded to the Orillia area.
- High traffic volumes create bottlenecks for motorists entering smaller urban areas of Simcoe County including Midland and Penetanguishene and Bradford-West Gwillimbury. The Growth Plan should consider how intensification targets will impact traffic in existing settlement areas.
- Simcoe County should work with the Province to put plans for Cookstown and Highway 400/404 Link (Bradford Bypass) back into the Ministry of Transportation five year plan as a long-term solution to traffic gridlock in the southern communities of Simcoe County.
- Seasonal traffic flows impacting municipalities including Wasaga Beach, Collingwood, Midland, Tay and Tiny requires more consideration in Transportation Master Plan.
- Traveling from GTA to Simcoe County destinations can take several hours due to gridlock on highways and County Roads. The Transportation Master Plan should better identify gridlock areas and plan ways to relieve stress.
- Expand train routes for passengers and goods/services transport along existing infrastructure.
- GO Train service should be expanded outside Barrie to convenience residents living in Innisfil, Angus, Wasaga Beach/Collingwood.
- County of Simcoe should fund GO train station construction to benefit residents across the region.
- TMP must recognize and plan for continued use of roads by tractors and other farm equipment.
- Integrated transit system should be planned to connect communities. Develop ways to get people to Midland/Penetanguishene area without traveling through Barrie.
- The goal should be to find innovative and creative ways to move people and goods effectively and efficiently and County should work together with local municipalities to achieve goals.
- Communities less than 10 km apart should be linked with biking/walking tails.

1.4.3. Perspectives of County and Area Municipal Staff

Meetings were held with the staff from the 18 Simcoe Area municipalities during the study. Road network concerns raised by area municipal staff are shown in **Figure 1.3**. Several locations were identified by municipal officials as being problematic. These include congestion on Highway 400 through Barrie, which delays truck traffic to Penetanguishene and Midland, heavy traffic through Stayner, truck traffic traveling through Cookstown and Bradford, and generally, increasingly heavy volumes, including trucks on County and area municipal roads that were not designed for heavy traffic.

Other specific areas of concern in addition to those shown in **Figure 1.3** are as follows:

- Highway 400 closures and impacts to adjacent roads.
- Seasonal traffic volumes and impacts.
- Timing of major freeway improvements.
- Lack of north/south County Roads in Oro-Medonte.
- Implications of a deferred Highway 400/404 Link (Bradford Bypass), and a deferred Highway 427 extension and the impact on County Roads and those of the area municipalities.
- Rehabilitation of Country Road 56 from County Road 21 to Highway 89.
- A Truck By-pass for Thornton, and
- By-pass for Hillsdale

A major issue in several areas of the County is through traffic using County and area municipal roads. This is particularly evident in the western areas of the County (Collingwood, Clearview, Wasaga Beach) and the areas near the Highway 400 and County Road 4 corridors. This is often a result of traffic by-passing congested Provincial roads such as Highway 26 and Highway 400. The issue is especially exacerbated during the summer and winter months on Friday and Sunday nights by recreational users. For example, during the winter months on a Friday afternoon, much of the traffic traveling through or around Collingwood using Highway 26 and other routes (such as Poplar Side Road) have origins in the GTA and destinations in the Town of the Blue Mountains. As mentioned, the County and area municipal roads were not necessarily designed for those heavier volumes.

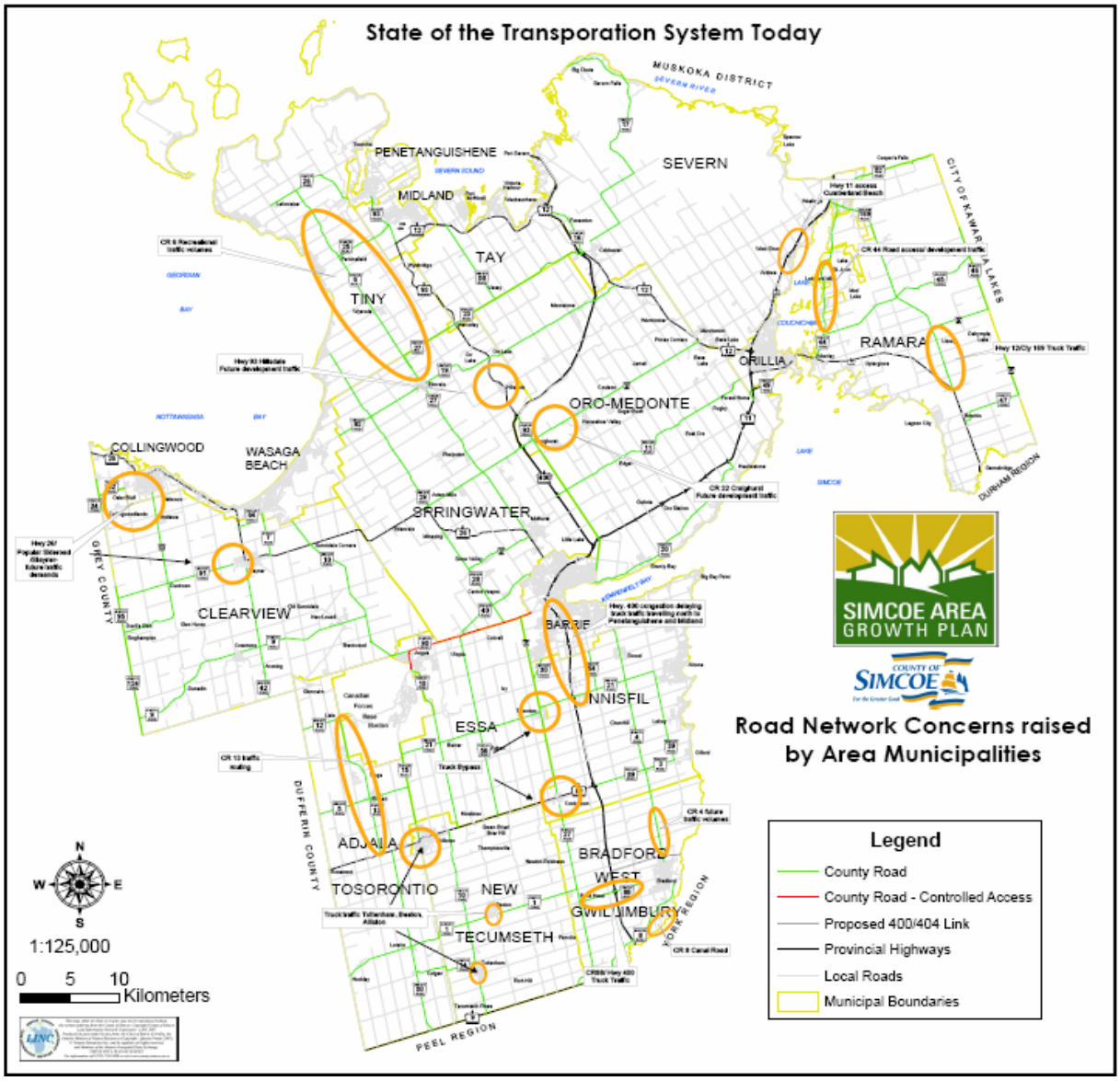

Figure 1.3 - Road Network Concerns Raised by County and Area Municipalities

1.4.4. Municipal Advisory Group Meetings

Municipal Advisory Group Meeting 1 – February 19, 2008

The first municipal advisory group meeting was held on February 19, 2008 from 2:00 p.m. to 4:00 p.m. at the Simcoe County Administration Building and was attended by 12 elected representatives from Simcoe County municipalities and County of Simcoe staff. An overview of the study process and inputs received to date from meeting with Simcoe Area municipalities, the Technical Advisory Committee, through the

public opinion survey and public meetings held in early December was presented during the meeting. Following the presentation, the municipal advisory group had a roundtable discussion on overall considerations and expectations for the Transportation Master Plan, on the future role of transit, trails and active transportation, road jurisdiction and road classifications.

A report summarizing the key issues/comments raised is included in Appendix A – Public Consultation Program.

Municipal Advisory Group Meeting 2 – April 17, 2008

The second municipal advisory group meeting, was held on April 17, 2008 from 9:30 a.m. to 12:00 noon at Tangle Creek Golf Course and was attended by 8 elected municipal representatives and County staff. This meeting focused on the identification of future network deficiencies, and provided an overview of recommended transportation strategies and policy direction which included recommended medium and long term improvements needed to address future transportation deficiencies.

1.4.5. Technical Advisory Committee Meetings

Technical Advisory Committee Meeting 1 – September 26, 2007

The first meeting was held on September 26, 2007 from 1:00 p.m. to 3:00 p.m. at County of Simcoe Museum to provide an overview of the approach to Simcoe County's Transportation Master Plan and provided the opportunity for the technical staff from key agencies and local municipalities to share their ideas on managing growth, participate in identification of issues. The meeting provided the opportunity to discuss a number of important themes and to learn from a diverse cross-section of the County's stakeholders.

Technical Advisory Committee Meeting 2 – October 31, 2007

A second technical advisory committee meeting, held on October 31, 2007 from 1:00p.m. to 3:00 p.m. at Tangle Creek Golf Course, focused on the following:

- reviewing inputs from municipalities and the identification of transportation concerns;
- assessing results from the public attitude survey and;
- a preliminary review of anticipated future deficiencies in the transportation system.

Technical Advisory Committee Meeting 3 – April 17, 2008

The final technical advisory committee meeting was held on April 17, 2008 from 1:30 p.m. to 4:30 p.m. at Tangle Creek Golf Course. Information to be presented at PIC #2 which form the basis for the Recommendations for the Transportation Master Plan was presented. The information included identification of identified areas of future transportation deficiencies based on population and employment projections presented in Simcoe County's Growth Management Strategy and included recommended transportation strategies and policies and recommended medium and long term transportation improvements required to accommodate the anticipated future demands.

CHAPTER 2

CURRENT STATE OF THE TRANSPORTATION SYSTEM

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2. CURRENT STATE OF THE TRANSPORTATION SYSTEM

2.1. Background

Since the Year 2000, there have been several major studies undertaken in the County of Simcoe. A number of these studies have been prepared by the Ministry of Transportation such as the Simcoe Existing and Future Travel Demand (2001), Highway 427 Extension – Transportation Needs Assessment (2001), Simcoe Area Transportation Network Needs Assessment (2002), Highway 26 Corridor Collingwood Area Study Design (2004) and Highway 400 (2004) and Highway 11 (2005) Preliminary Design studies, which have recommended a number of transportation improvements within the County to address future deficiencies. A number of more recent studies have also been undertaken which recommend a number of additional transportation infrastructure improvements required to accommodate future traffic growth. These include the Georgian Triangle Area Transportation Paper by Area Municipalities (2007) and Environmental Assessment Studies for County Roads 50, 88 and 90 by the County of Simcoe.

The Province prepared the Growth Plan for the Greater Golden Horseshoe under the Places to Grow Act, (2005) which outlines a framework for implementing the Government's vision for building stronger, prosperous communities by better managing growth to Year 2031. Enhancing infrastructure, integrating and improving transit systems, protecting valuable natural resources and strengthening local government will go far towards the implementation of this plan. This Plan addresses transportations challenges through policy directions that will:

- Direct growth to built-up areas where the capacity exists to best accommodate the expected population and employment growth, while providing strict criteria for settlement area boundary expansions;
- Promote transit-supportive densities and a healthy mix of residential and employment land uses;
- Preserve employment areas for future economics opportunities; and
- Identify and support a transportation network that links urban growth centres through an extensive multi-modal system anchored by efficient public transit, together with highway systems for moving people and goods.

The plan identified future population and employment targets for the County of Simcoe, including the Cities of Barrie and the Orillia. As a result of this legislation, the Intergovernmental Action Plan for Simcoe, Barrie, and Orillia (IGAP), recommended a number of transportation initiatives required to accommodate the anticipated future growth in the area. These recommendations included:

1. Provincial highways, County roads and local street requirements need to be addressed in a coordinated manner for the study area in order to support the Recommended Urban Structure over the next 25 years.
2. Greater efforts are needed to:
   - Expand regional roads to accommodate the movement of people, goods and services in the study area and to support economic growth of the area.
   - Link regional roads to regional and local transit in order to reduce the use of private automobiles.
   - Improve linkages between regional and local transit to reduce the use of private automobiles.
3. The City of Barrie should extend its local transit service to the new Greenfield lands intended for residential and employment purposes as recommended in the Recommended Urban Structure.

As growth in a community affects the transportation requirements, the location, amount and type of development for an area needs to be identified. The Simcoe Area Growth Plan which follows the principles and directives of Places to Grow is a parallel study to the Transportation Master Plan. It defines the amount, location and character of community development within the County to 2031.

2.1.1. Population and Employment

Information from the 2001 and 2006 Census indicates that Simcoe County is growing at a rapid rate both in population and in employment. As shown in **Table 2.1** on the next page, the annual growth in population has grown at a rate of 2.2% per year between 2001 and 2006, and employment growth at a rate of 2.3% per year.

Table 2.1 - Historical Population and Employment Growth for Simcoe County including Barrie and Orillia

Year	Population	Employment
2001[1]	392,000	154,000
2006[1]	438,600	183,500
Growth 2001-2006	46,600	29,500
% Annual Growth 2001-2006	2.3%	3.6%

Based on 2001 and 2006 Census

On the following page, **Figure 2.1 and Figure 2.2** illustrate the distribution of 2006 population and employment within the Simcoe Area respectively. As shown in **Figure 2.1**, the majority of the population is located within the City of Barrie (30.3% of the population) with the Town of Innisfil and City of Orillia with the next highest proportion of the population at 7.4% and 7.2% respectively.

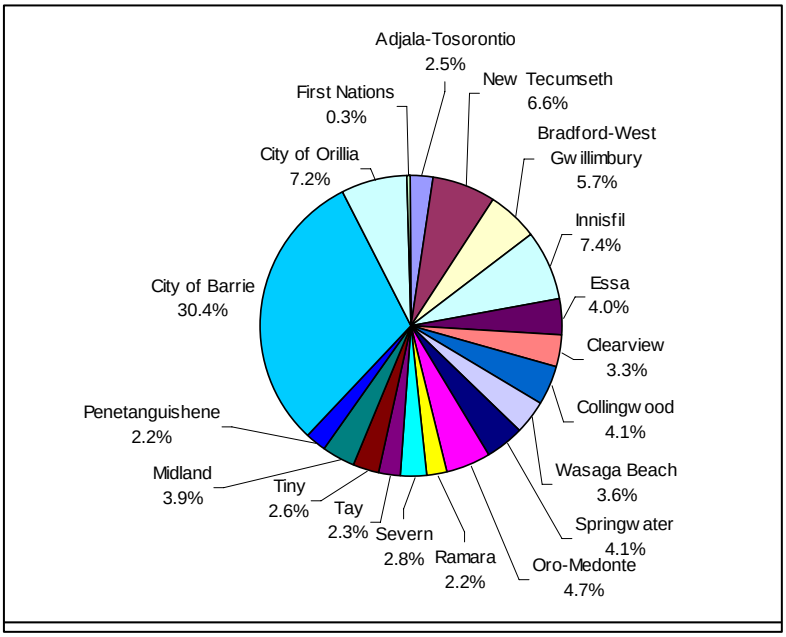


Figure 2.1 - 2006 Population Distribution in Simcoe Area

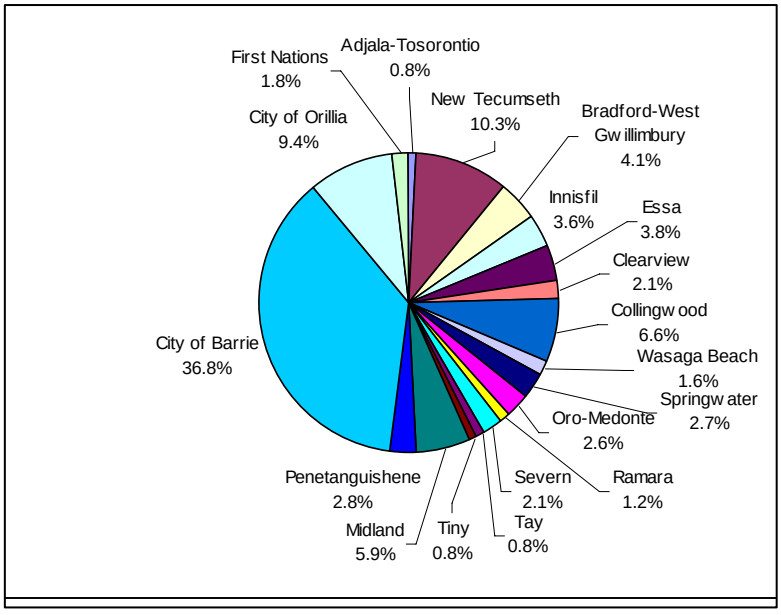


Figure 2.2 - 2006 Employment Distribution in Simcoe Area

As shown in **Figure 2.2,** the majority of employment exists within the City of Barrie. However, the Town of New Tecumseth provides the second highest allocation of employment.

2.1.2. Canadian Force Base Borden (CFB Borden)

Occupying over 21,000 acres of land, CFB Borden is one of the largest training bases in Canada, with about 15,000 Canadian Forces personnel trained on the base annually. CFB Bordon employs approximately 3,250 military members and 1,500 civilians with around 2,500 residents living on the base itself. In additional to a variety of military headquarters and training schools, the base has a public golf course as well as a Military Museum that has numerous exhibition items and tourist attractions.

2.1.3. Transportation and the Economy of Simcoe County

The healthy economy in the County of Simcoe is based primarily on manufacturing, agricultural and tourism industries.

Simcoe County's geographic location and popularity for Ontario vacationers and cottage owners, accommodates all season tourism and recreational destinations. Simcoe County also acts as a gateway to tourist attractions located along Georgian Bay in Grey County and north to the District of Muskoka, Halliburton, Parry Sound and beyond. The southern Georgian Bay Region is recognized by Ontario's Ministry of Tourism as a "Premier Ranked Tourist Destination". The Town of Wasaga Beach attracts, on a single day in the summer, in the order of 100,000 visitors to the area and about 2 million annual visitors, while the south eastern Georgian Bay area attracts in excess of 7.3 million visits annually[1]. It is expected that with the population growth in GTA, there will be greater demand from recreational traffic in this area. This large tourist traffic influx will put significant pressures not only on the Provincial road system but also the County road system. To avoid traffic congestion on these the Provincial highways, many visitors to the area will seek alternative routes on County roads or local roads, which may not be designed for carrying heavy traffic volumes.

Besides the tourism industry, the manufacturing industry also casts heavy demands on the current transportation systems. Most of the County's major industries are located in the Barrie area. However, the County's key manufacturing goods movement generator, Honda, located in Alliston, is ranked as the

[1] Georgian Triangle Area Transportation Paper, Phase 2 Report, prepared by R.J. Burnside & Associates Ltd.

top employer in Simcoe County. Honda has approximately 4,300 full-time workers and generates truck traffic volumes of more than 300 trucks per day. The Towns of Midland and Penetanguishene also have significant manufacturing industries.

2.2. Overview of Existing Infrastructure by Mode

2.2.1. Walking and Cycling

A number of the Simcoe Area municipalities have developed a network of recreational trails throughout Simcoe County, some of which comprise sections of the Trans Canada Trail system. Many of the community trails are centered around the City of Barrie with other concentrations of trails in Collingwood, Wasaga Beach, Midland. Penetanguishene, Tay and Tiny. There are also a number of trails located along abandoned rail lines such as the Oro-Medonte Rail Trail, the Thornton - Cookstown Trail and the North Simcoe Rail Trail, which extends through the Township of Springwater from the edge of the Minesing Swamp to north of Elmvale. While the individual municipalities have developed a network of recreational trails within their municipalities, there are a number of "missing links" required to connect trails from one municipality to another.

In addition to the community trails and the Trans Canada Trail, the Ganaraska Hiking Trail also crosses through the County. It meanders between Wasaga Beach through Clearview, around Base Borden, through Angus, Springwater and Oro-Medonte, north to Midland and then east to Ramara.

A non-profit volunteer corporation, Huronia Trails and Greenways (HTG) is dedicated to promoting and enabling the development of a sustainable network of trails and greenways in Simcoe County. Coordinating closely with the Trans Canada Trial organization, HTG is actively promoting potential trail programs such as Adopt-A-Trail program.

2.2.2. Transit Services

Transit operators within Simcoe County include both rail and bus services. There are local bus services in Barrie, Orillia, Midland and Collingwood. These transit services are run by the local municipalities as well as private bus operators with regularly scheduled services and charter services throughout the County. Inter-Regional transit service is provided by GO Transit.

Collingwood Transit (Colltrans) has 3 basic routes operating between 7:00 a.m. and 6:00 p.m. from Monday to Friday and on Saturdays between 9:00 a.m. and 6:30 p.m. On Sundays, service is provided

between 9:00 a.m. and 5:00 p.m. During the week, buses operate on a 30 minute schedule during peak periods and hourly in the off-peak hours.

Midland Transit has two routes providing service between 7:15 a.m. and 5:15 p.m. during the week and on Saturday between 9:15 a.m. and 4:15 p.m. These routes operate on a 60 minute schedule. Additional transportation services are provided in the North Simcoe area through the Community Links program which is a volunteer base transportation service providing transportation for those in need throughout the North Simcoe Area.

Orillia Transit is operated by Laidlaw School Transit. Four routes are available. Service is provided during the week between 6:15 a.m. and 6:15 p.m. and on Saturday from 8:45 a.m. and 5:45 p.m. There is no Sunday service. Buses generally run every 30 minute or 60 minute depending on the time of day and the route.

Barrie Transit is operated by the City of Barrie and offers both conventional transit service as well as specialized transit service for those with mobility difficulties. The Barrie Accessible Community Transportation Service (BACTS) requires the eligible users to book a time for pick up with the transit service and pick up times are scheduled for every quarter of an hour. Barrie Transit offers its Regular service on 20 routes, Monday to Saturday. Weekday regular service generally operates between 5:45 a.m. and 7:15 p.m. and on Saturday from 7:15 a.m. to 7:00 p.m. with a bus every 30 minutes. During the evening, 17 routes are operated on 60 minute schedules and generally operate between 7:15 p.m. to 11:30 p.m. Sunday service is also available on 17 routes from 9:15 a.m. to 6:30 p.m. with a bus every 60 minutes. However, one exception to this Sunday service schedule is that Barrie Transit operates its Bayfield route every 30 minutes during the Sunday time period.

GO Transit operates train services between Barrie and Toronto's Union station (via Bradford) during peak morning and afternoon peak periods. This consists of four Toronto bound trains in the morning and four Barrie bound trains in the afternoon. GO bus service is also available and operates routes on County Road 4 and Highway 400 serving municipalities between Union Station and Barrie with hourly service.

Greyhound/PMCL Transportation Corporation provides inter-county and inter-regional bus routes which serve Alliston, Tottenham, Collingwood, Wasaga Beach, Midland, Washago, Casino Rama, Angus, CFB Borden, Barrie, and Orillia.

Ontario Northland also operates passenger bus and rail service between Toronto and to points north of Simcoe County. Passenger rail service extends between Toronto and Cochrane (on the Bala Subdivision along the east side of Lake Simcoe) while bus service is provided from Toronto to Barrie and Orillia and to points north of North Bay and Sudbury.

School bus service is also provided within the County by the school boards (Simcoe County District School Board, Simcoe-Muskoka Catholic District School Board). The primary private service providers, Sinton Transportation and Parkview Transit, may offer bus service for different communities, with their main specialization in operating school bus service within Simcoe Area.

2.2.3. Rail Services

There are three main rail freight operators in Simcoe County, namely, CN Railway, Canadian Pacific Railway and Barrie Collingwood Railway. CN Railway travels along the east side of Lake Simcoe from Gamebridge to Washago then travels west through Severn Township to points west of Sudbury. Canadian Pacific Railway (CPR) operates on the MacTier Subdivision and carries heavy freight volumes from Bolton, into New Tecumseth, serves the Honda plant in Alliston, and continues north through the middle of Simcoe County. It is CPR's primary transcontinental route to the western Canadian provinces. The Barrie-Collingwood Railway (BCRY) is a short line operation which provides rail car transportation and switching services for industrial clients in the City of Barrie and the Town of Collingwood.

2.2.4. Trucking

Trucking plays an important role in the movement of goods through the County of Simcoe. The volume of truck traffic is expected to increase as employment and industries grow in the Simcoe Area. At the present time, all County Roads qualify as truck routes. Trucks heading to destinations in Penetanguishene and Midland rely on Highway 400 and Highway 93 through the County to get to their destination. Trucks destined to and from the Honda plant in Allison not only rely on the Provincial highway system such as Highway 400 and Highway 89, but also rely on the County road system. They travel along County Road 88 through the Town of Bradford West Gwillimbury and Bond Head as well as County Road 1 through Beeton and County Road 10 through Tottenham and County Road 50 to access their destinations. Similarly, trucks traveling between Collingwood and Wasaga Beach destined for Penetanguishine and Midland utilize County Roads 92, 27 and 6.

In addition to trucks hauling manufactured goods throughout the County, there are also a number of gravel pit and quarry operations particularly in the Townships of Ramara, Severn, Oro-Medonte and the

west edge of Clearview. These operations generate a significant amount of truck traffic. As areas of the County are rich in sand, gravel and bedrock resources, a number of the quarries and licensed gravel pits are expected to continue to operate well into the future. Due to their close proximity to the GTA, the majority of aggregate is trucked directly to construction sites in the GTA.

The County of Simcoe has enacted regulations that pertain to axle load weight restrictions during the thawing months of March and April which currently affects a number of County Roads. The County is continuing to make ongoing improvements to its road system so more county roads are able to accommodate full load truck traffic all year round.

2.2.5. Air Services

While Pearson International Airport serves the Greater Golden Horseshoe's primary hub for international air travel, local air services and facilities are also an important component of the County Transportation system. There are seven airports spread throughout the County. These airports are:

- Barrie Airport
- Base Borden Airfield
- Collingwood Regional Airport
- Lake Simcoe Regional Airport (in Oro-Medonte)
- Lake St. John Airport (in Ramara)
- Mara Airport (in Orillia)
- Midland/ Huronia Airport

The Lake Simcoe Regional Airport serves the municipalities of Barrie, Orillia and the Township of Oro-Medonte and is capable of handling a wide variety of aircraft ranging from small recreational and flight training aircraft to larger corporate, regional and commercial aircraft. Fully serviced by the Canada Border Service Agency, the Lake Simcoe Regional Airport maintains a Commercial Port-Of-Entry status, which allows the airport to accommodate both international passengers and freight.

The Collingwood Regional Airport is located in Clearview Township, and serves the local communities in Clearview Township, the Town of Collingwood and the Town of Wasaga Beach. The Collingwood Regional Airport is a medium-sized airport and features 2 runways (one 5000 ft. asphalt runway and a smaller 2500 ft. grass runway) and on-site facilities include a new full service public terminal with a restaurant, and Town-owned maintenance building.

The Midland (Huronia) Airport is owned and operated by the municipalities of Midland, Penetanguishene, and Tiny Township and offers services for corporate aircraft servicing the needs of local companies, recreational pilots, visitors, and emergency health care support aircraft and helicopters. There is one 4000 ft. asphalt runway, fuel and hanger services, and a terminal building featuring snacks and conference room facilities.

2.2.6. The Existing Road Network

The roads within the County are under the jurisdiction of either Simcoe County, the Province of Ontario or the area municipalities. The cities of Barrie and Orillia have jurisdiction over most of the roads within their boundaries with the exception of the Provincial highways that extend through these Cities. The existing road network by jurisdiction is shown in **Figure 2.3** *(see page 2-10)*. Highway 26, where it passes through the City of Barrie (Bayfield Street), and through downtown Collingwood, is owned by the province but operated and maintained by the local municipalities under the "Connecting Link" program. Under this program, local municipalities manage portions of provincial highway routes that pass through their municipalities and the province pays for a portion of the costs to upgrade and maintain these routes.

2.2.6.1. Provincial Highways

There are a number of Provincial Highways located within or that pass through Simcoe County with Highway 400 being the most significant. In Simcoe County, this 6-lane controlled access freeway serves traffic traveling between the Greater Toronto Area and Simcoe County as well as to destinations in Northern Ontario and Western Canada. The primary usage of Highway 400 during the week is by commuters. On the weekends, Highway 400 and Highway 26 provides a route for recreational traffic accessing ski areas in the winter and cottages in the summer. Highway 400 also serves as a major goods movement corridor as it connects many major economic centres. **Table 2.2** provides an overview of Average Annual Daily Traffic (AADT) volumes on the provincial highways located within or that pass through Simcoe County.

Table 2.2 - Provincial Highway Traffic Volumes (2004)

Highway Section	AADT
Highway 400 – Barrie	106,000
Highway 400 – Highway 12	12,700
Highway 11 – between Barrie and Orillia	35,000
Highway 12	10,000
Highway 93	7,800

Highway Section	AADT
Highway 26 – Stayner	11,000
Highway 26 – Collingwood	17,000

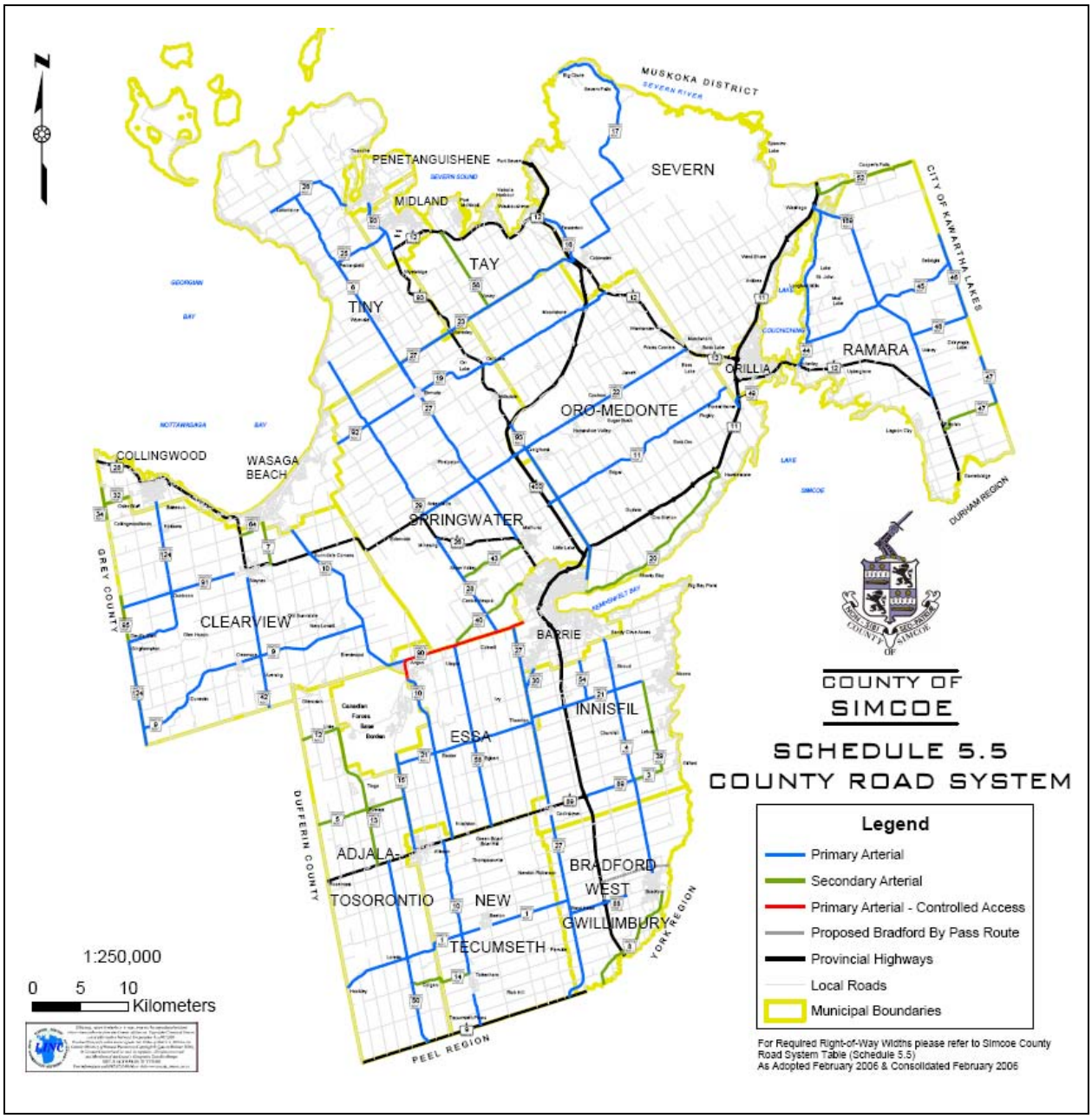


Figure 2.3 - Existing Road Network

2.2.6.2. Simcoe County Roads

The Simcoe County Road system consists of 820 kilometres of County roads, 120 bridges (40 not on County Roads) and 40 traffic signals. It provides a number of functions linking communities and providing corridors for goods movement and access to the provincial highway system. In 1997 and 1998, the Province transferred 238 kilometres of roads to the County. Many of these roads experience higher than average traffic volumes found on the original County roads. While the remaining Provincial road network approaches capacity, there is more and more spill over of recreational traffic onto the County roads which are already experiencing a growing number of commuter trips.

All County Roads (CR) are considered arterial roads and are classified as either primary, secondary or controlled access roadways. Based on 2007 data, County Roads carry Average Annual Daily Traffic volumes varying from 300 vehicle trips per day on County Road 8 west of Highway 400 and 450 vehicles per day on the most northerly section of County Road 17, to over 17,000 vehicles per day on sections of County Roads 88, 90, 93 and sections of County Road 44. A significant number of County Roads have AADT volumes between 2000 to 5000 vehicles per day. However, there are a number of County roads in the southern part of the County which carry between 6,500 vehicles per day to 10,000 vehicles per day. **Table 2-3** below summarizes some of the higher volume road sections within the County. Illustrated on **Figure 2.4** are the 2007 Average Annual Daily Traffic (AADT) volumes on Simcoe County roads.

Table 2.3 - County Road Traffic Volumes (2007)

County Road Section	AADT
County Road 90 Barrie to Angus	18,700
County Road 93 – Highway 93 to Penetanguishene	17,900
County Road 88 – Highway 400 to Bradford	17,800
County Road 44 – Highway 12 to Casino Rama	17,600
County Road 21 –CR 4 to CR 27	12,000
County Road 4 –Bradford to CR 89	12,700
County Road 27 – Highway 26 to Elmvale	11,300
County Road 4 –CR 89 to Barrie	11,000
County Road 10 – CR 90 to CR9	9,400
County Road 10 – Highway 9 to Tottenham	7,200

Most County are two lanes with a rural cross-section and provide inter-municipal connections to residential, industrial and commercial areas as well as access to agricultural lands and rural residences.

The County has developed long range programs for the reconstruction and rehabilitation of the road network so that it can meet rapidly increasing demands. It is essential that these programs are maintained to support the growth and development of the County.

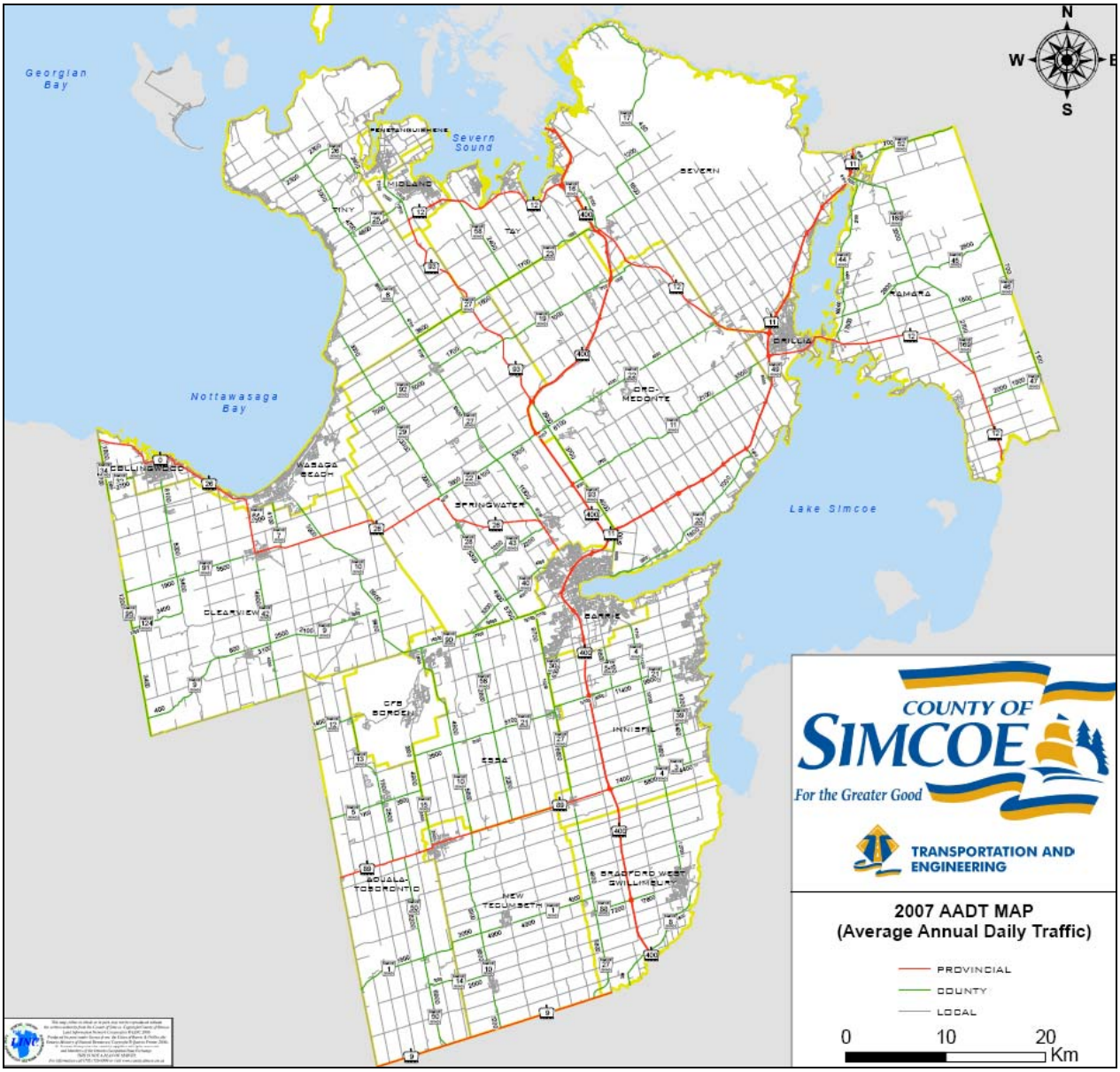


Figure 2.4 - 2007 Annual Average Daily Traffic Volumes – Simcoe County Roads

The 2008 Proposed Capital Budget for Transportation and Engineering includes projects that address some of the safety and operational concerns expressed by motorists and the County community. These

projects include work on bridge rehabilitation and construction, road platform rehabilitation, new road construction, intersection/road reconstruction and maintenance for an estimated cost of $41,111,000.

2.3. State of the Existing Transportation System

To facilitate the assessment of existing, and future, transportation conditions a transportation model was developed for the County of Simcoe. The model was developed to enable an assessment of the daily travel demands covering all modes of travel in the County, including trips made by transit, automobile, and other non-auto based travel modes. The model was also designed to forecast future daily auto travel demands on the area road network as result of future population and employment growth, existing roadways or new/improved roadways, and assumptions related to the share of future trips made by transit, automobile and other modes.

The road network in the model included all of the provincial highways and major county roads within the geographic boundary of Simcoe County, and also included a number of local roads within the built up areas of local municipalities, including the Cities of Barrie and Orillia. To account for travel to and from adjacent municipalities, the model also included external gateways representing major road connections into Simcoe County from the north (Muskoka), from the west (Grey/Dufferin Counties), and from the east (City of Kawartha Lakes). Given the strong interaction of trip making between the Simcoe County and the GTA, the model included the major road network for municipalities to the south of Simcoe County, including Peel, York and Durham Regions, and the City of Toronto.

2.3.1. Existing Travel Demand and Travel Patterns

The existing travel demands for study area residents were derived from the preliminary 2006 Transportation Tomorrow Survey (TTS) data. The TTS is a household travel survey completed in cooperation with the Ministry of Transportation, University of Toronto, and all Regional, County and local municipalities in the Greater Golden Horseshoe. The TTS survey provides a statistically valid sample of typical weekday travel patterns based on interviews with approximately 5% of the population of the entire area. Using Census data, the trip making patterns of the survey participants are expanded to represent an estimate of the overall trip making patterns for all residents in the region. Additional information on the design and conduct of the TTS Survey can obtained from the Data Management Group, at the University of Toronto.

Given the seasonal travel influences in Simcoe County, additional travel survey data was used to represent the pattern of recreational travel in the area. The Ministry of Transportation undertook a series

of Origin-Destination surveys on a number of major highways in the Simcoe County area in the Year 2000, as part of the Simcoe Area Needs Assessment Study. While somewhat dated, the surveys indicate travel patterns for summer weekday and summer weekend conditions at 10 different survey stations covering many of the key roadways in the area. The recreational travel demands from these surveys formed the basis for the summer weekday travel demands used in the modeling process. When combined with the weekday travel demands from the TTS, the overall demands were considered to be representative of a typical Thursday or Friday in the summer.

Profile of Daily Trip Making in Simcoe County

Today, Simcoe area residents, including Barrie and Orillia complete an average of approximately one million trips per day. As noted previously, the population profile of Simcoe County is changing, and according to the 2006 Census there has been a noticeable aging of the population. From a transportation perspective, the aging population has changed the nature of trip making in the County over the same period. Between 2001 and year 2006, a growing share of daily trips made by Simcoe County residents are being made by those over the age of 36, with the largest increases observed in the age cohorts over age 46. The daily trip making patterns of Simcoe County residents by age cohort is shown in **Figure 2.5.**

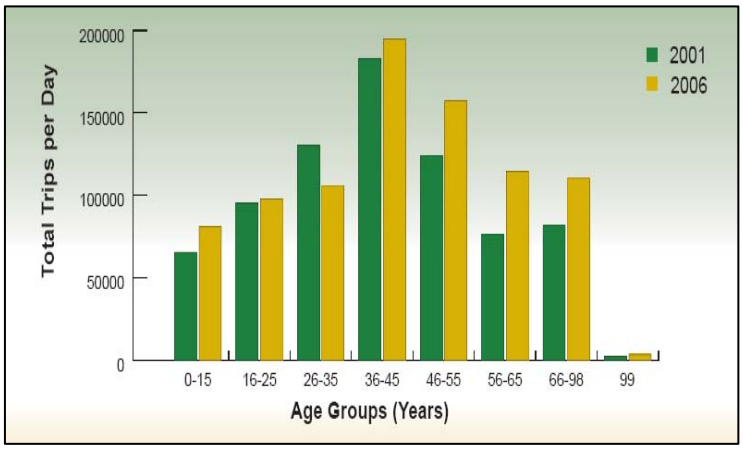


Figure 2.5 - Number of Trips by Age Group in Simcoe Area

A review of the preliminary 2006 TTS data shows that the trip making patterns differ between the various age groups in the County. On an overall basis, approximately 28% of daily person trips in the region (including Barrie and Orillia) are home-work related trips, 10% are trips to/from school, 20% are not home based (representing trips to/from work, shopping, or social activities that do not start or end at

home), and 43% are classified as home based discretionary trips (i.e. between home and a shopping, social, or other non work destination). This discretionary travel already represents the largest segment of daily travel in the area. An examination of the age breakdown of the trip making shows that 62% of the daily trips made by the over age 55 group are trips made for discretionary purposes. When this is combined with the non home based trips (which are also largely discretionary trips) that share increases to 85%. For the 26-35, 36-45, and 46-55 age cohorts, the discretionary trips are between 37% and 42% of the total trip making. As can be seen below, the over age 55 group makes about 26% of the daily trips in the County. Based on Statistics Canada data, they also represent about 25% of the population. The Daily Trips by Age Category and Trip Purpose data are summarized in **Table 2.4**.

Table 2.4 – Daily Trips by Age Category and Trip Purpose – 2006 TTS

Simcoe County Residents
Daily Trips by Age Group

Trip Purpose	0-25	26-35	36-45	46-55	56-99	Total	Share
Home-Based Work	16,972	26,198	49,834	43,728	23,418	**160,150**	28%
Home-based School	55,165	405	348	126	246	**56,290**	10%
Home-based Discretionar	27,660	24,353	53,166	38,392	97,838	**241,409**	42%
Non Home-based	12,479	11,924	28,980	23,568	38,020	**114,971**	20%
Total	**112,276**	**62,880**	**132,328**	**105,814**	**159,522**	**572,820**	
Share	20%	11%	23%	18%	28%		

Barrie / Orillia Residents
Daily Trips by Age Group

Trip Purpose	0-25	26-35	36-45	46-55	56-99	Total	Share
Home-Based Work	13,672	20,672	29,186	24,452	11,199	**99,181**	28%
Home-based School	31,922	555	356	236	342	**33,411**	9%
Home-based Discretionar	17,788	21,102	35,883	26,441	51,938	**153,152**	43%
Non Home-based	8,395	9,788	16,388	14,910	17,822	**67,303**	19%
Total	**71,777**	**52,117**	**81,813**	**66,039**	**81,301**	**353,047**	
Share	20%	15%	23%	19%	23%		

Total Simcoe Area
Daily Trips by Age Group

Trip Purpose	0-25	26-35	36-45	46-55	56-99	Total	Share
Home-Based Work	30,644	46,870	79,020	68,180	34,617	**259,331**	28%
Home-based School	87,087	960	704	362	588	**89,701**	10%
Home-based Discretionar	45,448	45,455	89,049	64,833	149,776	**394,561**	43%
Non Home-based	20,874	21,712	45,368	38,478	55,842	**182,274**	20%
Grand Total	**184,053**	**114,997**	**214,141**	**171,853**	**240,823**	**925,867**	
Share	20%	12%	23%	19%	26%		

Ontario Ministry of Finance[2] projections forecast a continuation of this aging trend for Simcoe County, with the share of residents over the age of 55 forecast to grow from 25% today to over 38% by 2031 as summarized in **Table 2.5**.

Table 2.5 – Age Distribution in Simcoe County – 2006-2031

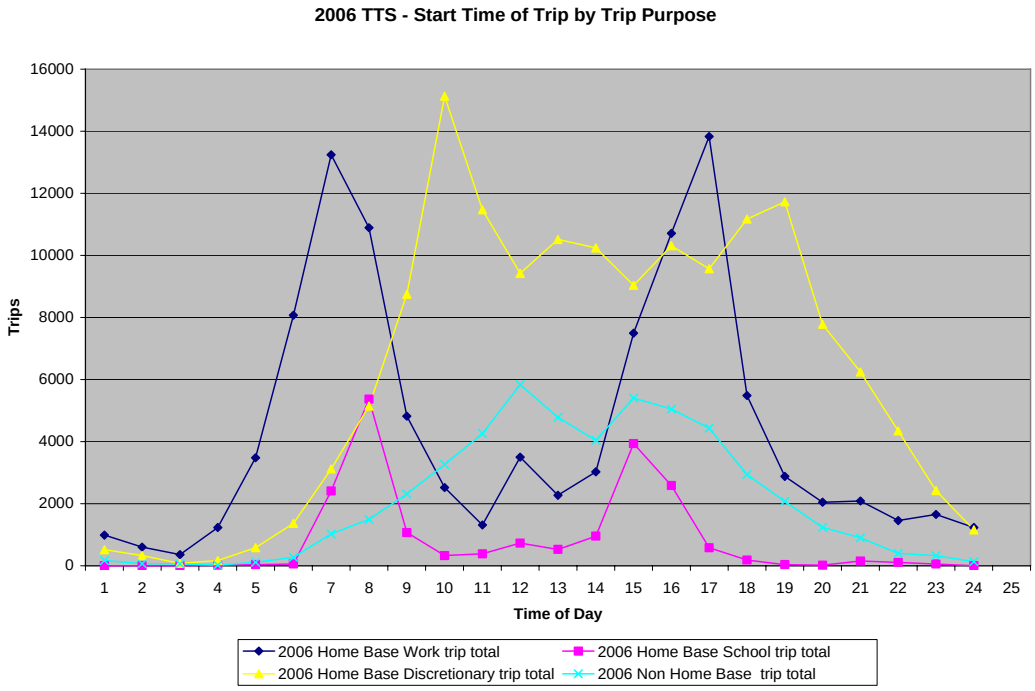
Year	Age Category							
	0-15	**16-25**	**26-35**	**36-45**	**46-55**	**56-65**	**66+**	**Total**
2006	19%	14%	12%	17%	15%	11%	14%	100.0%
2031	15%	10%	10%	14%	13%	13%	25%	100.0%

The increasing age of residents in Simcoe County is expected to result in an escalating amount of discretionary travel during the day. This may reduce the emphasis on peak hour travel demands (as a lower share of residents will be traveling to/from work), but will likely increase the demands during the mid-day and afternoon peak periods.

Work trips will still continue to play a significant role in the travel demands in Simcoe County. Based on 2006 TTS data, 28% of the daily trips in the County can be attributed to residents traveling between their home and work places. While this represents a lower overall share than the discretionary travel, the work trips tend to be concentrated within the traditional peak travel hours, and are therefore closely related to patterns of congestion on the road network during these periods.

Figure 2.6 illustrates the hourly distribution of trips by trip purpose and highlights the cumulative hourly distribution of trip making in the County, based on trip purposes. The cumulative trip making patterns illustrate the peak daily travel occurs during the PM peak period. Total PM Peak hour volumes average between 9% and 10% of total daily travel.

[2] Ontario Population Projections Update, 2006-2031, Ontario Ministry of Finance, Spring 2007



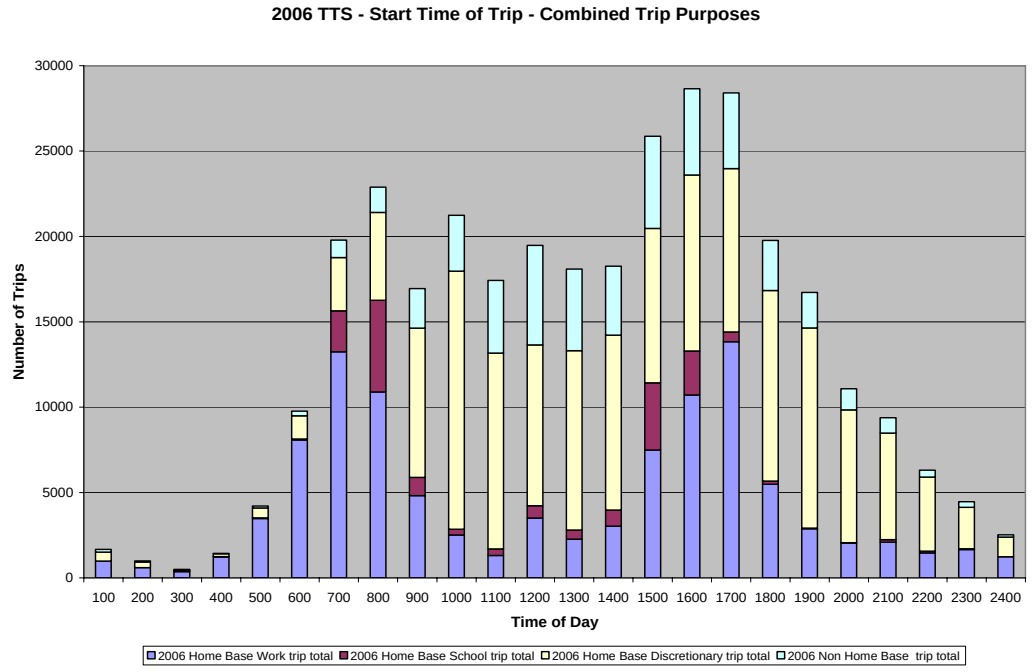


Figure 2.6 - Hourly Distribution of Trips by Trip Purpose

Work Trips

On any given day, there are approximately 268,000 work-related trips made that have an origin or destination in Simcoe County. This represents about 28% of total trips made in the County. Of these about 185,100 daily work trips, or 70%, stay within the Simcoe Area (including the Cities of Barrie and Orillia. Approximately 60% of the work trips that originate within the municipalities in Simcoe County stay within Simcoe County. Barrie and Orillia attract 14% and 5% of the work trips that originate in Simcoe County municipalities respectively. Outlined in **Table 2.6** is the distribution of daily work trips to and from Simcoe County.

Table 2.6 – Distribution of Daily Work Trips to/from Simcoe County – 2006

From/To	Simcoe	Barrie	Orillia	York	Durham	Toronto	Peel	Halton	Other	Total
Simcoe	77,790	17,600	6,500	11,370	760	7,470	4,880	420	3,970	**130,760**
Barrie	17,230	46,500	1,150	4,900	190	3,670	2,250	200	1,100	**77,190**
Orillia	6,180	1,030	11,130	220	100	190	80	0	270	**19,200**
York	10,940	4,680	200	Trips that do not start or end in Simcoe County have been omitted from table						**15,820**
Durham	830	160	130							**1,120**
Toronto	6,930	3,460	210							**10,600**
Peel	4,700	2,310	60							**7,070**
Halton	360	220	0							**580**
Other	4,170	1,160	280							**5,610**
Total	**129,130**	**77,120**	**19,660**	**16,490**	**1,050**	**11,330**	**7,210**	**620**	**5,340**	**267,950**

Source: 2006 TTS - preliminary data – includes trips by all modes of travel from home to work and the return trips from work to home

The Greater Toronto Area (GTA) municipalities attract a significant number of work trips from Simcoe County. Being the closest, York Region attracts about 9% of work trips that originate in Simcoe County, followed by Toronto attracting 6% and Peel Region attracting 4%. Durham Region and Halton Region do not attract a significant number of work trips today, representing a combined total of about 1% of daily trips. Approximately 3% of work trips originating in Simcoe County are destined for other external communities.

Figure 2.7 illustrates the distribution of work trips from Simcoe County on a given day. The information reflects data collected from the 2001 and 2006 Transportation Tomorrow Survey (TTS) and indicates that a significant portion of work trips originating in Simcoe County stay within the County. Over the last

five years, there has even been a slight decrease in the number of work trips destined to areas outside of the County which amounts to approximately 20% of the work trips. Sixty percent of the work trips are destined to employment areas within Simcoe County with another 14% destined to Barrie. It is anticipated that in the future, as the amount of employment increases within the County, the number of work trips traveling outside of Simcoe County will decrease.

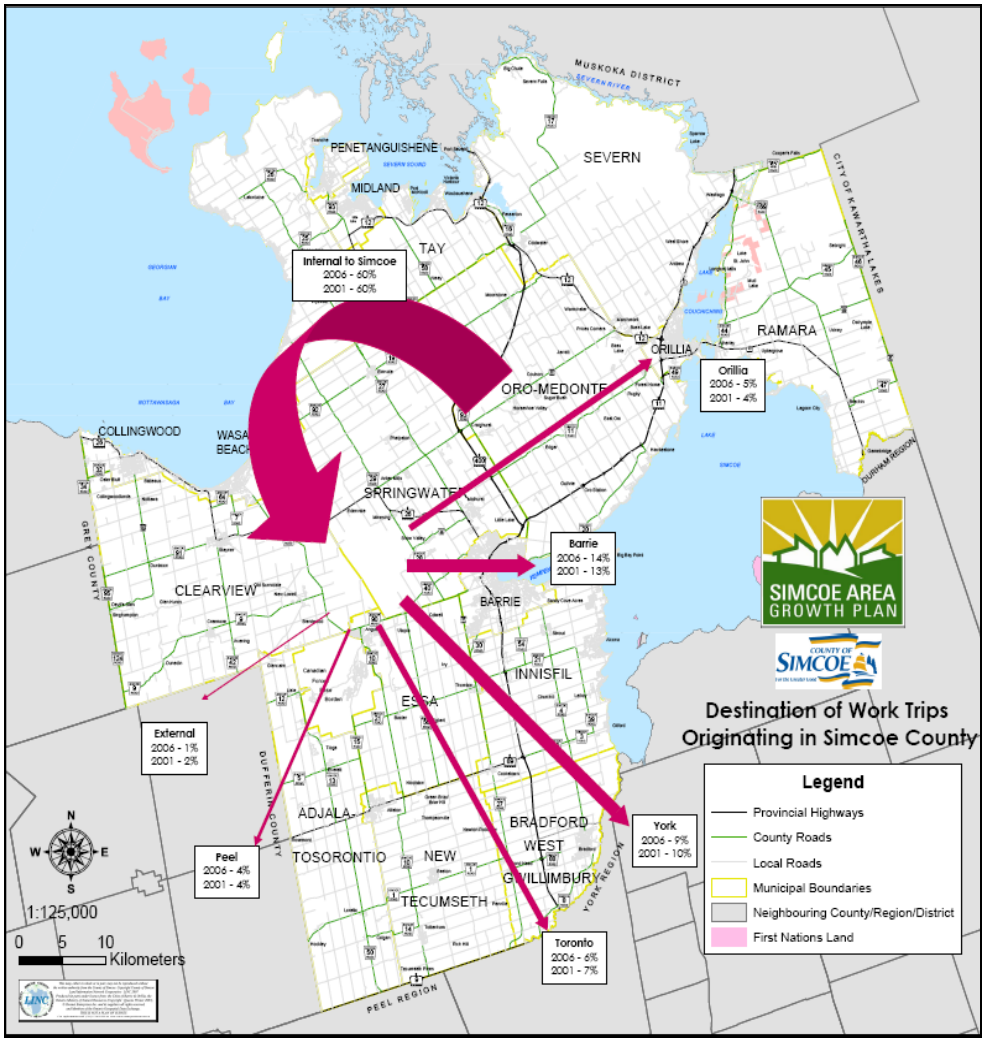


Figure 2.7 - Distribution of Daily Work Trips Originating in Simcoe County (2006)

Current Modes of Travel

The automobile currently dominates as the primary mode of travel used in Simcoe County. Based on the 2006 TTS data, approximately 90% of daily trips are made by auto, either as the driver or passenger. Transit carries approximately 1.3% of daily trips in the area, although most of these are within the urban areas of Barrie and Orillia, where regular transit service is provided. Transit use within Barrie and Orillia represents about 2.4% of daily trips, compared to 0.7% in Simcoe County. Approximately 5% of daily travel is carried by school bus in the rural areas, compared to 2.7% in Barrie/Orillia.

The urban areas of Barrie and Orillia also have a higher share of trips made by other non-auto modes of travel. In these urban areas approximately 5.5% of daily trips are made by other modes of travel, including walking and cycling. This is compared to 3.5% of daily trips in Simcoe County**.** **Table 2.7** summarizes the current daily trip making in Simcoe County by mode of travel.

Table 2.7 – Daily Trips to/from Simcoe County by Mode of Travel

	Total Daily Person Trips	Share of Daily Trips by Primary Mode of Travel					
		Auto	Transit	School Bus	Walk	Cycle	Other
Trips with Origin or Destination in Simcoe County (exluding Barrie / Orillia)	603,279	546,484	4,444	30,977	19,195	1,280	899
		90.6%	0.7%	5.1%	3.2%	0.2%	0.1%
Trips with Origin or Destination in Barrie / Orillia	348,246	311,368	8,283	9,278	17,770	1,086	461
		89.4%	2.4%	2.7%	5.1%	0.3%	0.1%
Total Trips with Origin or Destination in Simcoe Area	951,525	857,852	12,727	40,255	36,965	2,366	1,360
		90.2%	1.3%	4.2%	3.9%	0.2%	0.1%

Auto includes Auto driver, Auto Passenger, Taxi, Motrocycle
Transit includes Local Transit, and Go Rail

2.3.2. Transportation Model Development & Calibration

As previously noted, a transportation model of the road network in Simcoe County and adjacent municipalities was developed to assist in forecasting future travel demands in light of projected growth in the County and surrounding communities.

A transportation model attempts to simulate the travel demands using the major infrastructure in a community based on existing observed travel patterns and forecasts of future growth. The model uses a series of Traffic Zones to represent areas with common land uses or areas that load traffic onto the road network at key points. Existing travel patterns (number of trips, trip purpose, mode of travel, etc)

between traffic zones is typically obtained from travel surveys, either household travel surveys or on-road travel surveys. The data used to build the Simcoe County Transportation Model was obtained from the 2006 TTS Survey, combined with recreational trip making patterns observed in the 2000 origin-destination (O-D) surveys completed as part of the Simcoe Area Transportation Study.

The model forecasts future traffic flows on the roadways by 'assigning' these travel demands to the road network, which represents the major collector and arterial roadways within a community, based on a series of travel characteristics that reflect how well each segment of the road (or link) performs in terms of travel time, speed, and capacity. The assignment procedure looks to minimize overall travel time for all trips by assigning traffic to the path, linking the origin traffic zone to the destination traffic zone, with the shortest overall travel time. As would be expected, the major roads with higher speeds and lower travel times are the first roads to become congested. As a road reaches its planning capacity, the speeds tend to drop as congestion builds, and low speed roadways become more competitive in attracting some of the trips.

The transportation model uses an iterative approach to loading traffic onto the various roads in the model, forecasting the resulting travel times on those roads due to congestion, and reassigning the trips based on potential traffic congestion until an optimum solution is reached. This is referred to as 'equilibrium', which represents the point at which no trip can improve their overall travel time by changing their route. While it is recognized the traffic volumes will change day to day, this 'equilibrium' condition is intended to represent a typical condition, averaged over a number of days, where motorists typically use the fastest route between their origin and destination based on their knowledge of the road network.

Before a transportation model can be used to forecast future traffic flow conditions on the road network, the model must be calibrated and validated to ensure that base year traffic flow patterns can be accurately simulated by the model. Once the above procedures are completed, the model is ready to replicate existing transportation network performance. A well calibrated and validated transportation model can be a valuable tool to forecast travel demands in future and provide insight into the benefits of different transportation strategies and road network improvement alternatives.

Traffic Zone System

A traffic zone is the unit of geography most commonly used in conventional transportation planning models, and is used to break down a community into a series of areas with similar land uses and travel patterns. The size and structure of the zone system has a definite impact on degree of accuracy of the travel demand forecasting model.

As part of the model development, the existing traffic zone system used for the TTS survey was used as the basis for the model in Simcoe County to ensure consistency between sets of data.

The Traffic Zone system for the County is divided into 87 internal traffic analysis zones (TAZ), with 50 zones representing the municipalities within the County. An additional 32 zones cover the Barrie area, and Orillia is divided into 5 zones. The boundaries of the 50 traffic zones within the County are established by taking into consideration the Municipal Boundaries and the Federal Government's census zones.

Municipality	**Number of Traffic Zones**
Adjala-Tosorontio	2
Barrie	32
Bradford-West Gwillimbury	5
Clearview	3
Collingwood	3
Essa	3
Innisfil	6
Midland	4
New Tecumseth	6
Orillia	5
Oro-Medonte	3
Penetanguishene	2
Ramara	2
Severn	2
Springwater	3
Tay	2
Tiny	2
Wasaga Beach	2
Total	**87**

Traffic zones in adjacent GTA municipalities were aggregated to a planning district level of detail to ensure the existing trip making patterns would be reflected in the base model and would be considered in future forecasting. York Region was divided into 18 zones. In the northern part of York Region, the TTS zones were used, while in southern area of the Region, the TTS zones were aggregated by municipality. A similar approach was used for Durham Region, represented by 10 zones. The City of Toronto was aggregated to 16 zones representing the planning districts used in the TTS survey. Peel Region features 3 zones representing the municipalities of Caledon, Brampton, and Mississauga. Halton Region was represented by 2 zones.

Road Links

The road network in the transportation model is represented by a series of links and nodes, which reflects lines of travel and points of intersections of roadways. Typically, links represent roadway segments and nodes represent intersections. The transportation model for the County of Simcoe includes all of the Provincial Highways, County Roads, and major Local Municipal Roads in the study area. Outside the County, only major Regional Roads and Provincial Highways are included in the model.

For the road links, key attributes are coded into the model to describe how each link operates. The model uses these characteristics to determine the best routes for traffic to travel between each origin and destination location. Each of the road network links are grouped by their functional classification so roadways having the same basic function and design characteristics are treated the same for modeling purposes. The key attributes used by the model are; road classification, Free Flow Speed (which typically represents average operating speeds as opposed to posted speed limits), Length (which is automatically provided by the TransCAD GIS Software), Capacity and Number of Lanes by Direction, and the Volume Delay Function for each road (which describes how the speeds and travel times change as the volume of traffic increases). Since the model has been developed to forecast daily travel patterns, the hourly capacity typically used in urban planning models has been translated to a daily capacity, based on the hourly capacity times 10. This factor corresponds to the share of daily travel that occurs within the peak hours, to allow for the model to react to congestion in the road network.

The roadway classification system used in the model attempts to characterize different types of roadways based on the role they play in serving travel demands. The road network in the transportation model has been divided into 6 functional classifications for the purpose of modeling future travel demands, based on the prevailing traffic volumes, degree of access restrictions, and general nature of the land use around the roadway. These road network classifications are not intended to directly correspond to the road network classification system used in the official plan.

The basic road classifications and assumed auto capacities used for the County of Simcoe model are shown in the **Table 2.8** on the following page:

Table 2.8 - Roadway Capacity by Type

Road Type	Lane Capacity (vehicles/ lane)	
	Hourly	Daily
Freeways	1,800	18,000
Freeway HOV lane	1,200	12,000
Rural Highways/Major County Roads	1,000	10,000
Major Arterials	900	9000
Minor Arterials/Minor County Roads	700- 800	7,000-8,000
Township Roads /Minor Collector	400-600	4000-6000

The capacities for each road classification used in the County of Simcoe model are comparable to the assumed planning capacities used in a number of other jurisdictions in Ontario. **Table 2.9** provides a comparison of the planning capacities used in Simcoe County with some similar other jurisdictions in Ontario.

Table 2.9 - Roadway Capacity Comparison with Other Jurisdictions

Road Type/Jurisdiction	City of Brantford	City of Peterborough	City of Greater Sudbury	MTO GTA Model
Freeways	1800	1800	1800	1800
Highway/Expressway/Controlled Access or Rural Highway	1000	1000	-	1200
Major Arterials/Rural Highways	900	800-900	900 - 1000	900
Medium Capacity Arterials	-	700-800	800	700
Minor Arterials/CBD Arterials	700- 800	600	700	500
Major Collectors/Collectors	650	500	500	400
Minor Collector/Local	500	400/300	-	-

Volume Delay Functions

Based on the road type, capacity and posted speed, a volume-delay function is used to describe how each road segment in the model behaves as traffic volumes grow. These functions are required by the equilibrium assignment technique used by TransCAD, for updating travel times to reflect traffic volumes. The link performance functions are based on the Bureau of Public Roads (BPR) formulation, which is as follows:

$t_c = t_{ff}\,(1+\alpha\,(v/c)^{\beta})$

where: t_c = travel time based on volume (loaded travel time)
t_{ff}= free flow travel time on the link
v = link volume
c = link capacity
α,β= calibrated link performance parameters

The α and β values describe the volume-speed relationship for each roadway and are applied based on the functional classification for each of the different roadway types in the model, and are shown in **Table 2.10** below:

Table 2.10 - Volume-Delay Functions by Road Type

Road Type	Parameters	
	α	**β**
Freeways	0.72	6.14
Freeway HOV lane	0.72	6.14
Rural Highways	0.72	6.14
County Roads	0.597	5.87
Major Arterials	0.507	4.96
Minor Arterials	0.507	4.96
Township Roads /Minor Collector	0.507	4.96

Development of Trip Generation Rates

Land use is the key determinant in trip making, and the type of land use land use pattern of an area will have an influence on the trip generation to/from traffic zones within the area. Traditionally, population and employment have been used to represent land use in an area. Estimates of existing population and employment for each traffic zone were obtained from the TTS Data and were adjusted to match municipal control totals from the 2006 Census. Appendix D contains Existing & Future Population and Employment estimates by traffic zone, used for the trip generation and forecasting process.

Trip generation rates were developed for three trip purposes including Home-Base-Work (HBW), Home-Based-Other (HBO), and Non-Home-Based (NHB) trips. School trips were treated as fixed demand for the base year, with future forecasts based on observed population growth in each zone. Separate trip generation rates were estimated for four different geographic areas, including the external GTA municipalities, South Simcoe municipalities, North Simcoe municipalities, and Barrie, to recognize the

different trip making patterns of each area type. Statistical analysis was done using linear regression to estimate population and employment trip rates based on observed trip productions and attractions by zone. The form of the equation for each trip purpose is as follows:

*HBW_P=Home-Based-Work_Production GTA = 0.251*Population + 0.794*Employment + 0*(Population + Employment)*
R^2 = 0.999

Table 2.11 summarizes the trip generation rates used in the model and provides the R^2 value for each model to indicate the goodness of fit of the predicted relationship.

Table 2.11 - Trip Generation Rates – Simcoe County Zones

Trip Purpose	GTA Zones			R^2	North Simcoe		R^2
	Population	Employment	Pop+Emp		Population	Employment	
HBW_P	0.251	0.794	0	0.999	0.263	0.596	0.993
HBW_A	0.2315	0.8343	0	0.999	0.257	0.611	0.991
HBO_P	0.824	0	0	0.989	0.467	1.089	0.977
HBO_A	0.82	0	0	0.989	0.485	1.045	0.979
NHB_P	0	0	0.216	0.990	0	0.935	0.933
NHB_A	0	0	0.214	0.991	0	0.955	0.937

Trip Purpose	South Simcoe			R^2	Barrie		R^2
	Population	Employment	Pop+Emp		Population	Employment	
HBW_P	0.315	0.631	0	0.996	0.2765	0.646	0.996
HBW_A	0.295	0.677	0	0.996	0.282	0.631	0.996
HBO_P	0.647	0.204	0	0.958	0.451	0.996	0.903
HBO_A	0.649	0.235	0	0.968	0.464	0.977	0.926
NHB_P	0	0	0.174	0.846	0	0.961	0.918
NHB_A	0	0	0.168	0.800	0	0.985	0.879

Trip Distribution

Trip distribution is a process used to determine the destination choices for trips generated by trip makers. For the purpose of the model development process, we utilized a doubly constrained "Growth Factor" method, often referred to as a fratar balancing approach, to predict future trip patterns between zones. The fratar method uses the existing trip matrix as a basis for forecasting the future patterns as result of population and employment growth, and develops growth factors for total trip productions and attractions by traffic zone to scale the values in the matrix. The equation for the growth factor method is shown by:

$T_{ij} = t_{ij} * a_i * b_j$

Where T_{ij} = forecast flow between zone i and zone j
t_{ij} = the base year flow between zone i and zone j
a_i = balancing factor for row i
b_j = balancing factor for row j

The methodology uses an iterative process that alternates between factoring the productions and then factoring the attractions to match the total forecast productions and attractions for each zone, with a pre-set convergence factor. For zones with zero trips in the base year, common for new growth areas, seed values were used in the matrix based on the trip distribution patterns for adjacent zones that have values in the base year.

Model Validation

Once the trip generation model has been calibrated to predict base year trips, the model must be tested to determine if the trip assignment process can replicate existing observed volumes on the road network. This process is referred to as validation. Validation of the model is done by comparing the observed volumes from the existing count data with the simulated volumes for the same links from the model. Validation of Annual Average Daily Traffic volumes (AADT) was performed at a number of key screenlines in the County as illustrated in **Figure 2.8**, on the following page.

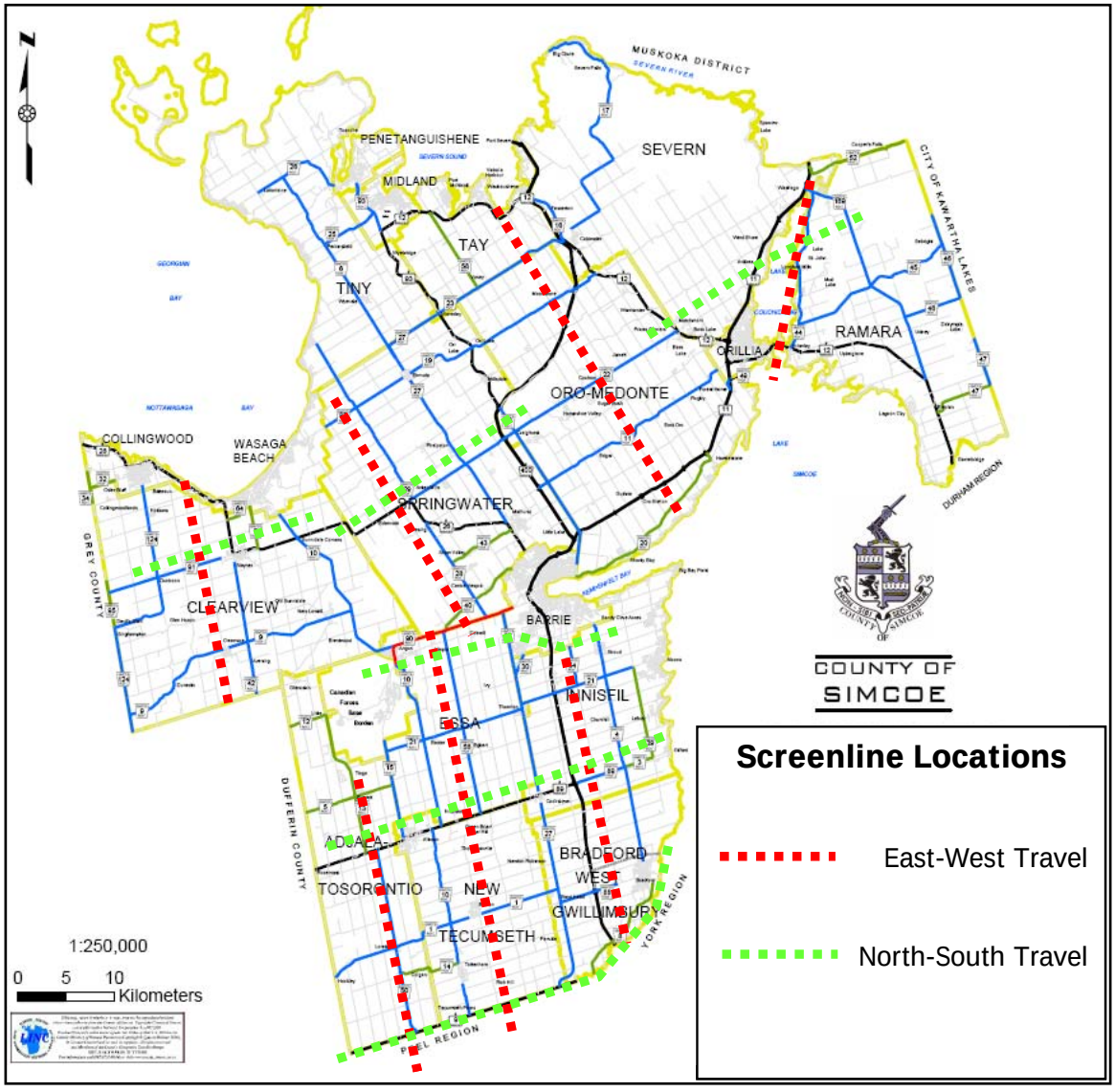


Figure 2.8 - Screenline Locations for Model Validation

Based on the validation results presented in **Table 2.12**, on the following pages, the model is capable of forecasting flows across all major screenlines in the County within 10-15 % on all major screenlines.

Table 2.12 - Model Validation Results

North- South Travel Demands

Screenline	Road	Observed ADT	Simulated ADT	Sim/obs
York-Peel Boundary				
	CR 50	7,500	8,325	1.11
	CR 10	8,200	9,265	1.13
	CR 27	6,350	6,490	1.02
	Hwy 400	87,900	91,330	1.04
	Bridge Street	23,600	25,630	1.09
Total		**133,550**	**141,040**	**1.06**
North of Highway 89				
	CR 50	2,800	3,130	1.12
	CR 15	8,950	7,630	0.85
	CR 10	5,650	7,960	1.41
	CR 56	2,200	2,210	1.00
	CR 27	6,800	3,800	0.56
	Hwy 400	88,700	91,800	1.03
	CR 4	8,600	8,930	1.04
	CR 39	4,750	4,140	0.87
Total		**128,450**	**129,600**	**1.01**
South of County Road 90				
	CR 42	5,100	4,880	0.96
	CR 10	16,000	14,000	0.88
	CR 56	2,350	2,060	0.88
	CR 27	10,200	8,730	0.86
	Hwy 400	86,620	90,200	1.04
	CR 54	7,300	6,525	0.89
	CR 4	10,800	9,700	0.90
Total		**138,370**	**136,095**	**0.98**
North of Stayner / Highway 26				
	CR 124	4,500	3,820	0.85
	CR 42	5,500	5,840	1.06
	Highway 26	9,770	14,500	1.48
	CR 7	3,750	3,630	0.97
	CR 10	3,650	1,200	0.33
Total		**27,170**	**28,990**	**1.07**
North of Horseshoe Valley Rd (Hillsdale)				
	Highway 26	9,010	10,380	1.15
	CR 29	3,200	600	0.19
	CR 27	9,300	11,500	1.24
	Highway 400	22,100	20,400	0.92
	CR 93	2,400	1,260	0.53
Total		**46,010**	**44,140**	**0.96**
North of Orillia				
	Highway 12	8,700	10,050	1.16
	Highway 11	25,340	31,200	1.23
	CR 44 (N of Casino)	2,700	200	0.07
	CR 169	3,300	4,000	1.21
Total		**40,040**	**45,450**	**1.14**

East - West Travel Demands

Screenline	Road	Observed ADT	Simulated ADT	Sim/obs
West of Alliston				
	CR 5	3,600	5,200	1.44
	Highway 89	11,400	9,108	0.80
	CR 1	2,000	2,940	1.47
	CR 14	1,000	500	0.50
	Highway 9	12,800	10,010	0.78
Total		**30,800**	**27,758**	**0.90**
East of Alliston				
	CR 90	16,500	14,700	0.89
	CR 21	4,400	1,470	0.33
	Highway 89	16,235	11,385	0.70
	CR 1	5,390	7,900	1.47
	Highway 9	12,800	13,420	1.05
Total		**55,325**	**48,875**	**0.88**
East of Highway 400				
	CR 21	10,600	15,100	1.42
	CR 89	7,600	8,150	1.07
	CR 88	18,000	12,400	0.69
	CR 8	2,500	2,680	1.07
Total		**38,700**	**38,330**	**0.99**
West of Stayner				
	Highway 26	17,400	21,700	1.25
	CR 91	6,050	4,800	0.79
	CR 9	800	500	0.63
Total		**24,250**	**27,000**	**1.11**
East of Wasaga / CR 10				
	CR 92	6,000	6,310	1.05
	Highway 26	9,100	10,400	1.14
	CR 40	3,500	1,625	0.46
	CR 90	17,200	14,000	0.81
Total		**35,800**	**32,335**	**0.90**
East of Highway 93 / 400				
	Highway 12	8,350	8,140	0.97
	CR 19	1,000	910	0.91
	Highway 400	11,900	13,250	1.11
	CR 22	4,500	4,640	1.03
	CR 11	2,400	2,560	1.07
	Highway 11	32,200	25,600	0.80
	CR 20	1,800	4,100	2.28
Total		**62,150**	**59,200**	**0.95**
East of Orillia				
	CR 52	1,800	2,030	1.13
	CR 169	7,000	4,200	0.60
	Highway 12	18,600	19,800	1.06
Total		**27,400**	**26,030**	**0.95**

A traffic assignment simulating 2006 summer weekday traffic flows was completed to test the model in terms of identifying current capacity deficiencies. **Figure 2.9** illustrates the 2006 Summer Weekday Flows and highlights the state of road system with respect to current capacity deficiencies during peak travel seasons.

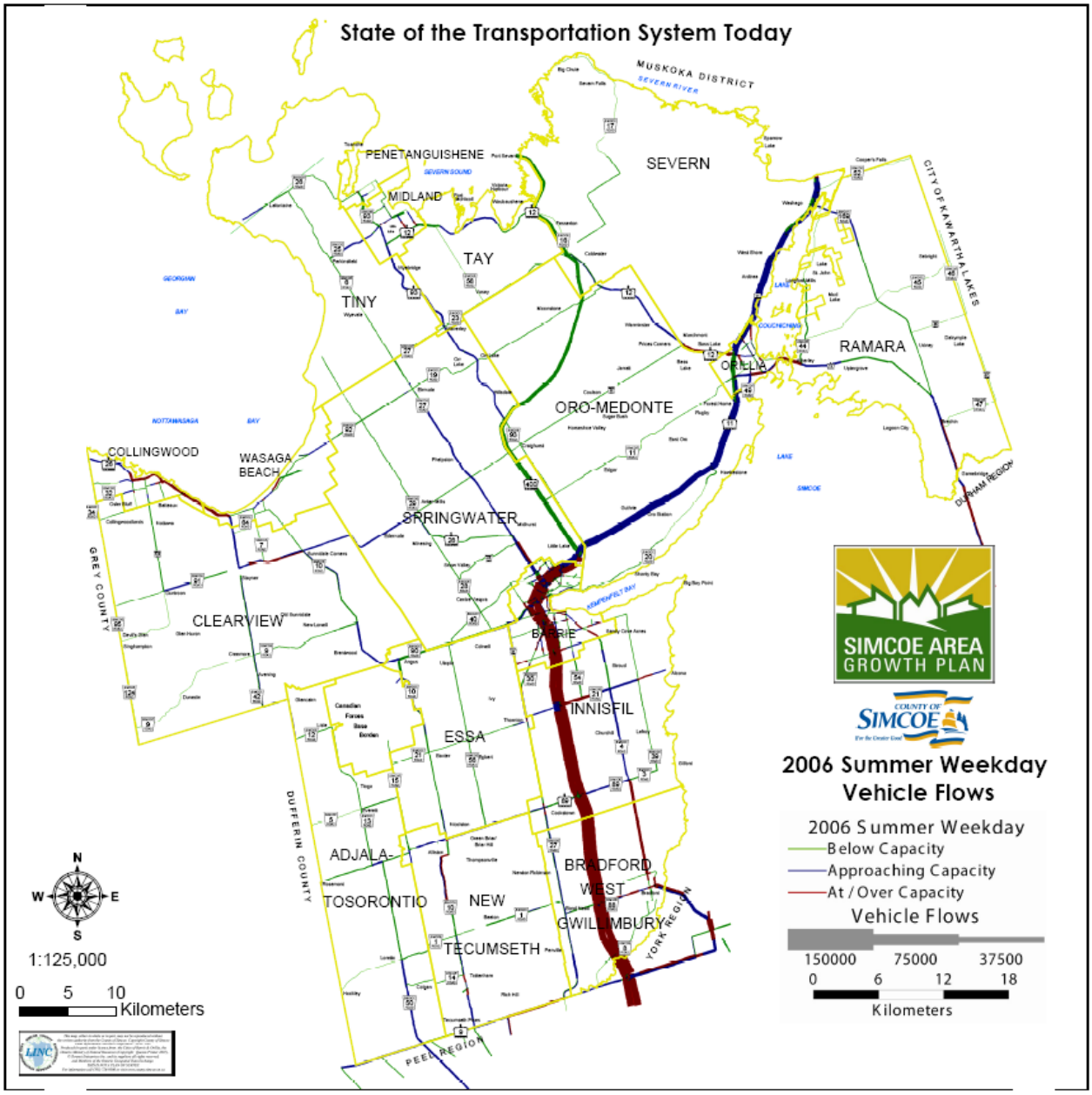


Figure 2.9 - State of the Road Network – 2006 Summer Weekday Flows

With respect to Provincial facilities, Highway 400 is congested or at capacity between the York/Simcoe boundary to north of Barrie. The majority of the Highway 400 traffic flowing through the Barrie area continues onto Highway 11 heading towards Orillia, Gravenhurst and Huntsville area, resulting in this section of Highway 11 approaching capacity. Sections of Highway 26 between Wasaga Beach to east of Collingwood and between Sunnidale Corners and Stayner are also congested or at capacity as is the section between Barrie and County Road 27. Highway 12 east and west of Highway 400 is at capacity with some sections experiencing congestion between Prices Corners and Simcoe County Road 44. Highway 12 and Highway 93, serving the Midland/Penetanguishene area is approaching capacity based on summer weekday traffic conditions.

Congested County roads include the following:

- County Road 88 between Highway 400 and east of Bradford (the County is currently planning to widen this section to 4 lanes)
- County Road 4 between the boundary with York Region and County Road 89
- The Bridge Street Connection across the Holland River (between Simcoe County and York Region)
- County Road 10 south of Alliston
- County Road 21 (Innisfil Beach Road) east of Highway 400
- County Road 10 south of Tottenham
- County Road 27 (Bayfield Street)
- County Road 90

In addition to the traffic volume on the County roads, local roads and the Provincial highway system, the traffic variations on the road system are also dependent on the County's industries and tourism activities. Based on the AADT volume on Highway 400, traffic volumes are highest during the summer and fall periods, with combined daily commuter traffic and occasional tourist traffic. While entering into the winter season, traffic volume on Highway 400 decreases with less recreational traffic going to the cottages and beach areas. The traffic variation patterns observed on Highway 400 are similar to the traffic volume fluctuations along most of the County roads, with a few exceptions to some of the winter resort providers such as Blue Mountain Resort and Horseshoe Valley Resort.

CHAPTER 3

IMPACT OF FUTURE GROWTH

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3. IMPACT OF FUTURE GROWTH

3.1. Introduction

Growth in a community can affect transportation needs in a number of ways. The location of new residential, employment, and commercial growth areas will define where the demand for travel will be in the future. Similarly, the manner in which these growth areas develop will affect the decisions residents make with respect to how and where they will travel.

To assess the existing travel patterns in the County and to see how planned growth in Simcoe will influence future travel demand, the strategic transportation demand model (*discussed in Chapter 2*) was utilized to forecast growth in travel demands for each mode of travel. In order to determine how the travel patterns will change, the model included planned growth allocations in the Greater Toronto Area as indicated in the provinces Places to Grow Plan as well as the future planned growth allocations, both population and employment for Simcoe County including the Cities of Barrie and Orillia.

3.2. Proposed Places to Grow Plan Forecasts to Year 2031

The Greater Golden Horseshoe (GGH) area is one of the fastest growing regions in North America. The "Places to Grow Plan" for the GGH area has been developed by the provincial government in an effort to control and plan future growth for the area that extends from County of Peterborough to the east, County of Wellington and Region of Waterloo to the west, Region of Niagara to the south and the County of Simcoe in the north. Within the next 25 years, the population under this plan is expected to grow to approximately 11.5 million people. As shown in **Table 3.1** on the following page, the Growth Plan identifies a population allocation of 667,000 people for Simcoe County (including Barrie and Orillia) and an allocation of 254,000 jobs by the year 2031. This represents an increase of approximately 228,400 people and 70,500 jobs between 2006 and 2031 or an annual growth rate of 2.1% for population and 1.5% for employment.

Table 3.1 - Future Population and Employment Growth

MUNICIPALITY	POPULATION (000)				EMPLOYMENT (000)			
	2001	2011	2021	2031	2001	2011	2021	2031
GTA + Hamilton	5,810	6,860	7,770	8,620	2,950	3,630	4,040	4,330
County of Northumberland	80	87	93	96	29	32	33	33
County of Peterborough	56	58	144	149	16	17	60	60
City of Peterborough	74	79			37	41		
City of Kawartha Lakes	72	80	91	100	20	23	25	27
County of Simcoe	254	294	583	667	85	102	230	254
City of Barrie	108	157			53	77		
City of Orillia	30	33			16	17		
County of Dufferin	53	62	71	80	19	22	25	27
County of Wellington	85	91	269	321	36	41	137	158
City of Guelph	110	132			63	76		
Region of Waterloo	456	526	623	729	236	282	324	366
County of Brant	35	39	157	173	16	17	67	71
City of Brantford	94	102			39	45		
County of Haldimand	46	49	53	56	17	19	19	20
Region of Niagara	427	442	474	511	186	201	209	218
Total GGH	**7,790**	**9,090**	**10,330**	**11,500**	**3,810**	**4,640**	**5,170**	**5,560**
Note: from Schedule 3 of the GGH Growth Plan								

The Growth Plan promotes planning on a more regional level and sets the stage for future growth and land use scenarios by providing guidelines for municipal planning that are intended to:

- stimulate economic prosperity;
- facilitate the efficient movement of goods by linking inter-modal facilities, international gateways, and communities within the GGH;
- revitalize downtowns;
- provide growth forecast objectives:

- promote intensification - by the year 2015 and for each year thereafter to 2031, a minimum of 40 percent of all residential development in upper and single tier municipalities will be in the built-up area;
- designate urban growth centres which will generally be planned to achieve a minimum gross density target (the closest centres to which this applies are downtown Barrie and Newmarket Centre);
- encourage more compact communities, with services, shops and businesses close to home;
- curb urban sprawl;
- preserve greenspace and agricultural lands that are under pressure in the GGH;
- cut down on car dependency by increasing modal share of alternatives to the automobile;
- contribute to better air quality;
- spur transit investment and create conditions favourable to public transit use; and
- promote a culture of conservation.

Through its policies, the GGH Growth Plan will impact the future land use/socio-economic environment in the analysis area, by establishing guidelines for future growth, land use (including greenspace and agriculture) and transportation objectives.

The transportation system is not only affected by the total growth in population and employment within an area, but is also affected by the location and form of growth that occurs. The Simcoe County Growth Management Strategy prepared an allocation of the targeted 2031 population and employment for the 16 municipalities within Simcoe County and included population and employment allocations for the City of Barrie and City of Orillia.

In reviewing the population and employment growth statistics in the development of the Simcoe Area Growth Plan (*prepared by Hemson Consulting Ltd.- see* **Table 3.2**), rapid population growth is identified in New Tecumseth, Bradford-West Gwillimbury, Innisfil, Clearview, Collingwood, Wasaga Beach and in the City of Barrie areas. The 2031 population in these municipalities will be approximately double that of the 2006 population, while the City of Barrie will have the greatest population gain (more than 50,000) in the future.

To facilitate the travel demand forecasting process, the municipal population and employment allocations summarized in **Table 3.2** were further refined to the traffic zone system used by the model. A detailed summary of population and employment forecasts by traffic zone is provided in **Appendix D**.

Table 3.2 – Simcoe Area Growth Plan, Proposed Distribution of Population and Employment Growth from 2006 to 2031

Community	2006 Census Total Population	2006 Census Employment	2031 Proposed Total Population	2031 Proposed Employment
Adjala-Tosorontio	11,100	1,600	14,200	2,100
New Tecumseth	28,800	19,700	49,000	26,300
Bradford-West Gwillimbury	25,000	8,000	49,700	16,200
Innisfil	32,400	5,700	65,000	13,100
Essa	17,600	7,700	22,900	10,300
Clearview	14,600	4,400	26,000	5,800
Collingwood	18,000	10,800	30,200	14,400
Wasaga Beach	15,600	3,100	35,000	4,100
Springwater	18,100	5,000	26,500	6,700
Oro-Medonte	20,800	4,700	28,100	6,200
Ramara	9,800	1,900	15,500	2,500
Severn	12,500	3,900	20,200	5,300
Tay	10,100	1,500	11,300	2,000
Tiny	11,200	1,400	13,900	1,900
Midland	16,900	12,000	19,700	16,000
Penetanguishene	9,700	5,300	12,300	7,000
Simcoe County Total	**272,200**	**96,400**	**439,500**	**139,900**
City of Barrie	133,500	64,300	185,000	90,000
City of Orillia	31,400	19,700	41,000	21,000
First Nations	1,500	3,100	1,500	3,100
Total Simcoe County Area	**438,600**	**183,500**	**667,000**	**254,000**

(Source: Hemson Consulting Ltd. 2008)

Figure 3.1 illustrates the distribution of Year 2031 population and employment within Simcoe County. In the future Barrie will continue to accommodate the most population and employment, however, areas such as Innisfil, New Tecumseth and Bradford West Gwillimbury will experience significant growth. With respect to employment, Bradford and Innisfil will accommodate a larger share than current proportions of the employment within the County.

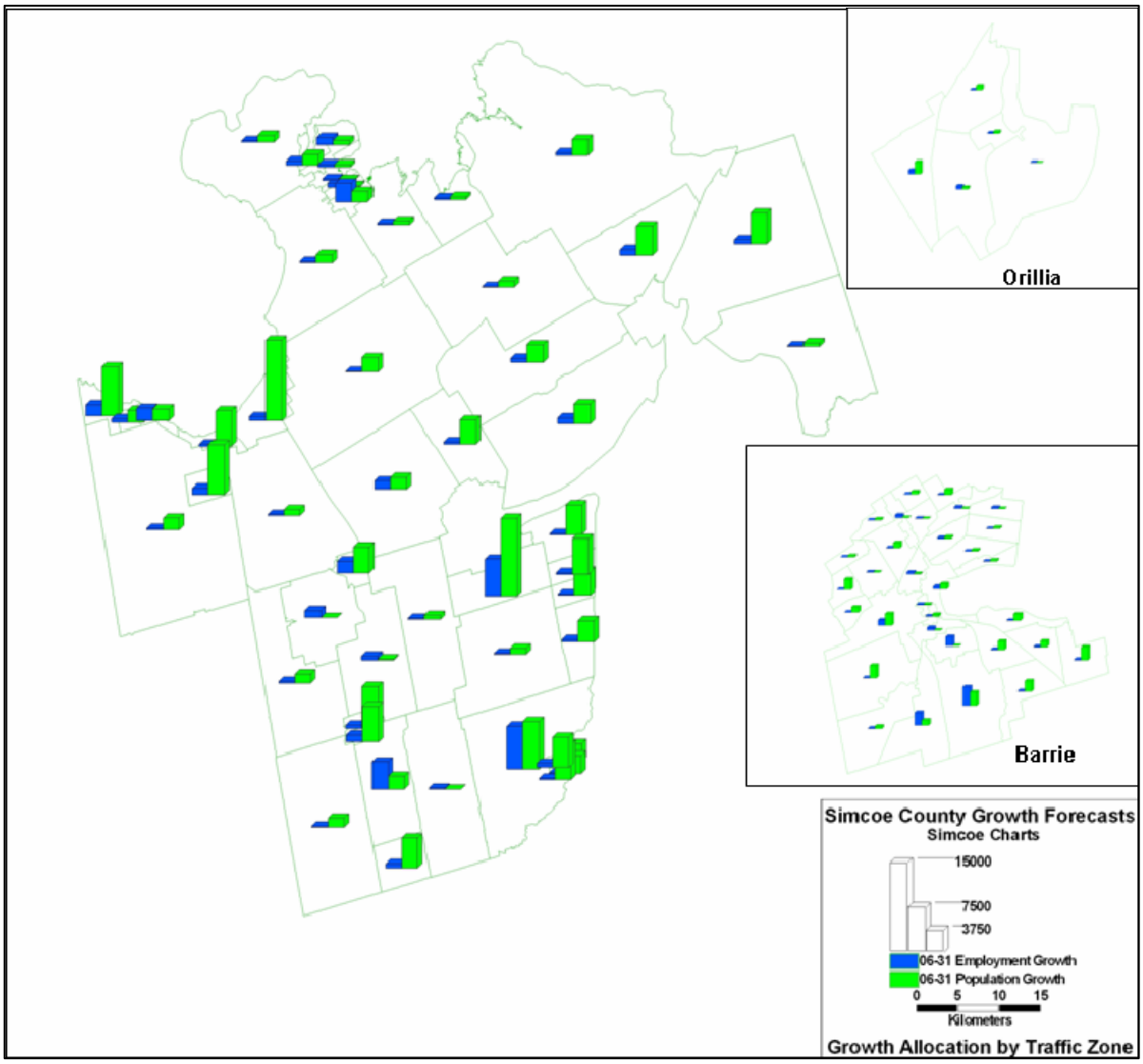

Figure 3.1 - Distribution of Year 2031 Population and Employment Growth

3.3. Growth in Daily Trips

As indicated earlier, Simcoe residents (including Barrie & Orillia) make an average of one million trips per day. This includes trips made to, from and through Simcoe County by all modes of travel.

Table 3.3 provides a summary of the total trip making activity in the Study Area for 2006.

Table 3.3 –Total Daily Person Trips to/from Simcoe County – 2006

To / From	Simcoe	CFB Borden	Barrie	Orillia	Grey	Muskoka	Dufferin	York	Durham	Toronto	Peel	Halton	Other	Total
Simcoe	327,254	3,071	51,196	21,609	3,094	1,295	3,919	22,946	1,748	10,215	7,886	991	6,799	**462,023**
CFB Borden	2,983	818	1,558	0	38	0	95	21	0	34	84	0	17	**5,648**
Barrie	51,812	1,517	233,661	3,443	264	544	389	8,539	475	5,285	3,442	413	3,047	**312,831**
Orillia	21,374	0	3,491	55,890	97	230	17	471	442	478	288	66	1,048	**83,892**
Grey	3,092	19	296	39	0	0	593	34	22	259	181	248	0	**4,783**
Muskoka	1,186	0	510	267	0	0	65	706	501	1,090	227	216	0	**4,768**
Dufferin	3,917	40	350	19	552	84	Trips that do not start or end in Simcoe County have been omitted from table							**4,962**
York	22,929	30	8,706	718	40	1,163								**33,586**
Durham	1,906	0	627	410	21	631								**3,595**
Toronto	10,756	49	5,534	381	398	1,432								**18,550**
Peel	8,413	87	3,496	248	185	927								**13,356**
Halton	974	42	447	114	139	444								**2,160**
Other	6,916	17	3,064	973										**10,970**
Total	**463,512**	**5,690**	**312,936**	**84,111**	**4,828**	**6,750**	**5,078**	**32,717**	**3,188**	**17,361**	**12,108**	**1,934**	**10,911**	**961,124**

By 2031 daily trip making in Simcoe County is forecast to increase by approximately 48%, as presented in **Table 3.4** based on current trip making practices and forecasts of future growth in population and employment in Simcoe County and the surrounding municipalities.

Table 3.4 –Total Daily Person Trips to/from Simcoe County – 2031

To / From	Simcoe	CFB Borden	Barrie	Orillia	Grey	Muskoka	Dufferin	York	Durham	Toronto	Peel	Halton	Other	Total
Simcoe	529,500	4,018	86,174	31,067	4,132	1,859	5,902	41,664	2,880	15,466	13,145	1,751	14,550	**752,108**
CFB Borden	3,867	801	1,710	0	43	0	106	28	0	46	100	0	18	**6,719**
Barrie	81,950	1,638	294,174	3,784	274	619	429	12,510	848	7,086	4,682	638	3,736	**412,368**
Orillia	30,252	0	3,912	55,996	131	212	21	653	633	475	346	85	1,194	**93,910**
Grey	4,235	19	297	63	0	0	700	87	23	297	242	317	0	**6,280**
Muskoka	1,710	0	594	275	0	0	77	1,083	633	1,280	313	277	0	**6,242**
Dufferin	5,935	45	365	18	552	103	Trips that do not start or end in Simcoe County have been omitted from table							**7,018**
York	42,110	50	13,569	1,158	87	1,845								**58,819**
Durham	3,396	0	1,051	616	34	821								**5,918**
Toronto	16,189	51	7,844	407	518	1,663								**26,672**
Peel	14,259	102	4,813	337	269	1,234								**21,014**
Halton	1,863	62	737	172	197	593								**3,624**
Other	17,680	20	2,294	1,148										**21,142**
Total	**752,946**	**6,806**	**417,534**	**95,041**	**6,237**	**8,949**	**7,235**	**56,025**	**5,017**	**24,650**	**18,828**	**3,068**	**19,498**	**1,421,834**

The overall growth in trip making will vary by area, based on the growth forecasts and the relative attractiveness of travel between municipalities. Trips that begin in Simcoe County, excluding those that pass through the region or begin in external municipalities, are forecast to grow by 63%, as summarized in **Table 3.5** and illustrated in **Figure 3.2**. Internal trips within Simcoe County represent the majority of these trips and are forecast to increase by 62%. Given the forecast population and employment growth in Barrie, trips between the municipalities in Simcoe County and the City of Barrie are forecast to increase by 68%. Trips to Orillia are expected to increase by 44% in 2031.

Trips from Simcoe County to the GTA are forecast to grow by 71%, with York Region attracting a growing share of trips from Simcoe County in the future. Trips from Simcoe County to York Region are expected to increase from 5% of total trips today to 6% in the future. This represents a growth in daily trips of 82% over 2006. Trips to the Region of Peel and to the Region of Halton are forecast to grow by 67% and 77% respectively, with Durham and Toronto showing slightly lower growth.

Table 3.5– Growth in Total Daily Person Trips from Simcoe County - 2006 – 2031

From Simcoe County To	2006 Person Trips	2031 Person Trips	Growth
Simcoe	327,254	529,500	**62%**
CFB Borden	3,071	4,018	**31%**
Barrie	51,196	86,174	**68%**
Orillia	21,609	31,067	**44%**
Grey	3,094	4,132	**34%**
Muskoka	1,295	1,859	**44%**
Dufferin	3,919	5,902	**51%**
York	22,946	41,664	**82%**
Durham	1,748	2,880	**65%**
Toronto	10,215	15,466	**51%**
Peel	7,886	13,145	**67%**
Halton	991	1,751	**77%**
Other	6,799	14,550	**114%**
Total	**462,023**	**752,108**	**63%**

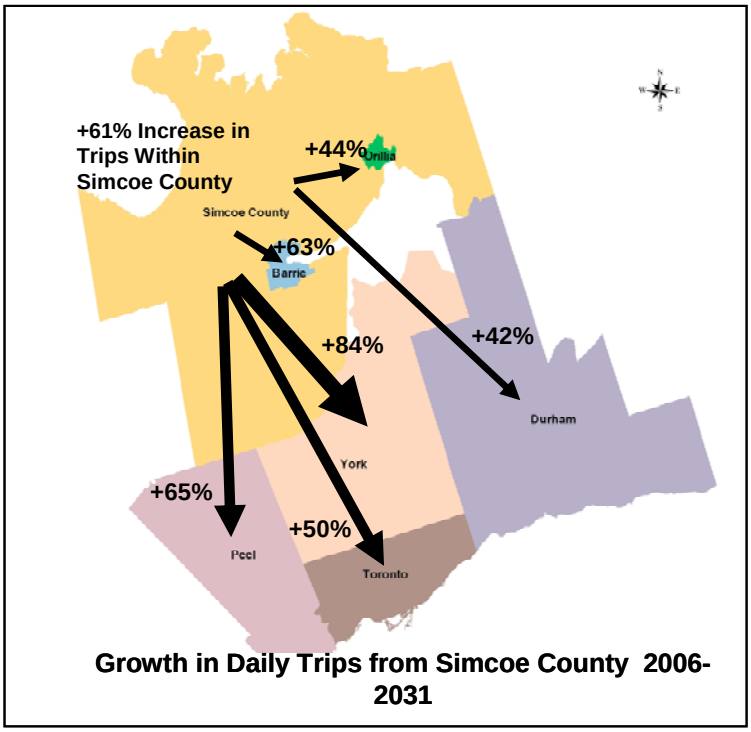

Figure 3.2 - Growth in Daily Trips from Simcoe County Municipalities

The strong growth in travel demand between Simcoe County and the GTA will result in challenges in terms of serving the inter-regional transportation needs of this growing area. The recent extension of GO Train service to Barrie will help divert some trips from the auto mode of travel, but this service is primarily designed to serve the downtown Toronto market and does not serve the Durham, York and Peel Region areas as effectively.

Trip making from Barrie is forecast to increase by 32% over the 25 year planning horizon, as summarized in **Table 3.6** on the next page. Internal trips to Barrie are forecast to grow by 26% and trips to Simcoe County municipalities are expected to grow by 58% over the same period. The GTA will continue to represent a significant destination for trips from Barrie, increasing from 5.8% of daily trips to 6.2% of daily trips by 2031. This represents an increase of 42% over the 25 year horizon. Due to the forecast employment growth in the County, trips between Barrie and Simcoe County municipalities are expected to grow by 58%, increasing from 17% of total trips to 20% of total trips by 2031.

Orillia currently exhibits a strong connection with surrounding municipalities in Simcoe County and acts a regional hub for services and employment, as illustrated by the lower share of internal trip making compared to Barrie. In 2006, 67% of daily trips from Orillia have a destination in Orillia, compared to

75% internal trips in Barrie. Due to forecasted growth in the municipalities surrounding Orillia this pattern is expected to continue in the future, with the share of internal trip making dropping to 60% by 2031. Despite population and employment growth in the community, internal trip making is only forecast to increase by 0.2% over the horizon period. Strong growth in trip making to the adjacent municipalities in Simcoe County is forecast, particularly between Orillia and Severn Township, Ramara, and Oro-Medonte.

Table 3.6 - Growth in Total Daily Person Trips from Barrie & Orillia – 2006-2031

From Barrie To	2006 Person Trips	2031 Person Trips	Growth	From Orillia To	2006 Person Trips	2031 Person Trips	Growth
Simcoe	51,812	81,950	**58%**	**Simcoe**	21,374	30,252	**42%**
CFB Borden	1,517	1,638	**8%**	**CFB Borden**	0	0	**0%**
Barrie	233,661	294,174	**26%**	**Barrie**	3,491	3,912	**12%**
Orillia	3,443	3,784	**10%**	**Orillia**	55,890	55,996	**0.2%**
Grey	264	274	**4%**	**Grey**	97	131	**35%**
Muskoka	544	619	**14%**	**Muskoka**	230	212	**-8%**
Dufferin	389	429	**10%**	**Dufferin**	17	21	**24%**
York	8,539	12,510	**47%**	**York**	471	653	**39%**
Durham	475	848	**79%**	**Durham**	442	633	**43%**
Toronto	5,285	7,086	**34%**	**Toronto**	478	475	**-1%**
Peel	3,442	4,682	**36%**	**Peel**	288	346	**20%**
Halton	413	638	**54%**	**Halton**	66	85	**29%**
Other	3,047	3,736	**23%**	**Other**	1,048	1,194	**14%**
Total	**312,831**	**412,368**	**32%**	**Total**	**83,892**	**93,910**	**12%**

3.3.1. Forecast Transit Usage

As noted in **Table 3.7**, the auto mode of travel currently dominates travel patterns in Simcoe County. Trips made by transit represent approximately 1.4% of total daily trips within the County, with the majority of these transit trips occurring in the urbanized areas of Barrie and Orillia. The transit mode share for trips to and from Barrie and Orillia in 2006 was 2.4%, compared to 0.7% for trips to/from the municipalities in Simcoe County. At this time there is limited public transit service available within the County.

Currently, within Simcoe County, the transit mode share is approximately 0.3% and in the Cities of Barrie and Orillia, the larger urban centers, the transit mode shares are higher at 2.2% and 1.3% respectively. The TTS data for 2006 does not include the newly introduced GO Rail service to Barrie, opened in December 2007. To estimate the influence of this new transit service, the current observed mode shares between the Newmarket and Bradford areas to the Vaughan area and to downtown Toronto (primary urban centres served by the existing Bradford GO Service) were applied to Barrie and the surrounding municipalities of Innisfil, Essa and Springwater. For other destinations the existing modes shares were maintained at 2006 levels. The resulting 2031 transit trips forecast from Simcoe County are summarized in **Table 3.7** on the following page.

Table 3.7 – Forecast Growth in Transit Trips from Simcoe County – 2006-2031

From Simcoe Area To	Total 2006 Person Trips	2031 Person Trips	2006 Transit Trips	2006 Transit Share	2031 Transit Trips	2031 Transit Share
Simcoe	400,440	641,702	1,400	0.3%	2,250	0.4%
CFB Borden	4,588	5,656	0	0.0%	0	0.0%
Barrie	288,348	384,260	8,015	2.8%	11,350	3.0%
Orillia	80,942	90,847	1,425	1.8%	1,780	2.0%
Simcoe Area	774,318	1,122,465	10840	1.4%	15,380	1.4%
Grey	3,455	4,537	0	0.0%	0	0.0%
Muskoka	2,069	2,690	0	0.0%	0	0.0%
Dufferin	4,325	6,352	0	0.0%	0	0.0%
York	31,956	54,827	263	0.8%	580	1.1%
Durham	2,665	4,361	64	2.4%	105	2.4%
Toronto	15,978	23,027	398	2.5%	1920	8.3%
Peel	11,616	18,173	147	1.3%	230	1.3%
Halton	1,470	2,474	0	0.0%	0	0.0%
Other	10,894	19,480	0	0.0%	0	0.0%
Total	**858,746**	**1,258,386**	**11,712**	**1.4%**	**18,215**	**1.4%**

To maintain the current 1.4% transit mode share, the number of daily transit trips from the County must increase from 11,700 to over 18,200 just to keep up with growth. This translates into approximately 6,500 new transit trips per day from Simcoe County, in an area that has limited transit service. If no improvements are implemented, the share of the transit trips as a percentage of the overall number of trips

can be expected to decrease. As a result, a strategy to improve and expand transit usage in the County will need to form a significant portion of the Transportation Master Plan.

Currently the Bradford Line of the GO Rail Transit system that currently services Simcoe County provides good linkages to the western portion of the urban growth centers of York Region (Newmarket, and Vaughan) and to the City of Toronto. However, the current GO system does not provide effective links to areas such as Markham, Richmond Hill, Durham and Peel Regions which will be attracting a significant share of the new trips made by Simcoe Area residents.

Even with a concerted effort to improve public transit in Simcoe County, the trips made by automobile are forecast to increase by 40% by 2031. This is mainly due to the size and dispersed nature of the population and employment within the County and the transportation infrastructure that is currently in place.

Aggressive Transit Focus

With a significant investment in transit service, there are opportunities to significantly improve transit usage to and from Simcoe County. Based on feedback received at the Public Information Centres, an aggressive transit scenario was developed, assuming a doubling of the overall mode share for trips from Simcoe County from 1.4% to 3.2%. This aggressive transit scenario was developed based on the following key assumptions:

- Transit ridership in Barrie would need to double from 3% to 6%, similar to 2031 transit mode share targets used in similar sized communities across Ontario (i.e. City of Brantford, City of Peterborough);
- Transit ridership in Orillia would need to double from 2% to 4%;
- Transit ridership within Simcoe County would need to increase from 0.4% to 1.0%;
- Transit ridership to York Region would need to increase from 1.1% to 5% and ridership to Durham Region would need to increase from 2.4% to 3%. These increases would require the development of improved transit infrastructure/services between Simcoe County and the emerging growth centres of downtown Markham, Richmond Hill, and the new Seaton community;
- Transit ridership to Toronto would need to increase from a projected level of 8.3% to 15%, which would require the introduction of all day service on the GO Rail Service to Barrie, and improved transit infrastructure and services to areas of western Toronto, including the airport area and Etobicoke.;
- Transit ridership to Peel Region would need to increase from a projected level of 1.3% to 6% and ridership to Halton Region would need to increase to 4%. To achieve these increases, new transit

infrastructure would be required between Simcoe County and Brampton/Mississauga to link into planned higher order transit services in these communities.

To achieve a transit mode share of 3.2% for all trips to/from Simcoe County, ridership would need to increase by an additional 22,500 trips per day over the base forecasts (29,000 new trips compared to 2006). This would translate into an auto trip reduction of 23,200 autos per day (2.6%), based on an average auto occupancy of 1.25. Almost half of this reduction would occur due to internal trips within the Cities of Barrie and Orillia, and would therefore have limited influence on the Simcoe County road network. To achieve these levels of transit ridership, an aggressive transit plan incorporating local, inter-city, and inter-regional service enhancements would be required. Presented in **Table 3.8** is the growth in Transit Trips required from Simcoe County under an aggressive transit mode split.

Table 3.8 - Aggressive Transit Scenario–Growth in Transit Trips from Simcoe County

From Simcoe Area To	Total 2006 Person Trips	2031 Person Trips	2031 Base Transit Trips	2031 Base Transit Share	2031 Aggressive Transit Trips	2031 Aggressive Transit Share
Simcoe	400,440	641,702	2,250	0.4%	6,417	1.0%
CFB Borden	4,588	5,656	0	0.0%	57	1.0%
Barrie	288,348	384,260	11,350	3.0%	23,056	6.0%
Orillia	80,942	90,847	1,780	2.0%	3,634	4.0%
Simcoe Area	774,318	1,122,465	15,380	1.4%	33,164	3.0%
Grey	3,455	4,537	0	0.0%	45	1.0%
Muskoka	2,069	2,690	0	0.0%	0	0.0%
Dufferin	4,325	6,352	0	0.0%	0	0.0%
York	31,956	54,827	580	1.1%	2,741	5.0%
Durham	2,665	4,361	105	2.4%	131	3.0%
Toronto	15,978	23,027	1920	8.3%	3,454	15.0%
Peel	11,616	18,173	230	1.3%	1,090	6.0%
Halton	1,470	2,474	0	0.0%	99	4.0%
Other	10,894	19,480	0	0.0%	0	0.0%
Total	**858,746**	**1,258,386**	**18,215**	**1.4%**	**40,724**	**3.2%**

3.3.2. Growth in Recreational Trip Making

As noted previously, recreational travel plays an important role in the economy in Simcoe County, and makes up a significant portion of daily travel demands, in both the summer and winter months. The

forecasting work for the TMP has utilized an estimate of summer recreation demands in the model since some base data was available for this time period. It is recognized that winter demands can be just as significant in some portions of the County, particularly in the ski hill areas around Horseshoe Valley, Mount St Louis, and the Collingwood/Blue Mountain areas. Using data provided from the Simcoe Area Needs Assessment Study, combined with estimates of Summer Average Daily Traffic (SADT) volumes using Simcoe County Roads and Provincial Highways, the estimated 2006 daily summer demand for the area is 125,000 auto trips.

The high Canadian dollar and the higher fuel costs are expected to affect recreational travel patterns in Ontario in the future. The recent Ontario Tourism Outlook for the 2007-2011 periods, published by the Ministry of Tourism in June 2007, forecast an increase in outbound tourism trips of 4.2% per year over the forecast period, largely driven by the strong Canadian dollar and continued economic performance in Ontario.

This report noted that tourist trips to Ontario are expected to grow by 1.2% per year over the forecast period, largely driven by increased intra-provincial travel (due to rising fuel costs, border crossing issues), and travel from overseas. The growth in inter-provincial travel was estimated at 1.6% per year, and may be higher still, if gas prices continue to increase as recent trends have illustrated. Local trip making may play a larger role in vacation trip planning for Ontario residents than travel to the United States, if the cost of travel continues to outpace the increased buying power of the higher Canadian dollar.

Based on the above assessment, a reasonable forecast of growth in tourism/recreational traffic demand in the Simcoe County area has been estimated at 1.5% per year.

3.4. Transportation Implications of Future Growth

The challenge facing the County's transportation system is accommodating anticipated growth in travel demand based on future increases in population and employment projections in accordance with the Places to Grow Growth Plan targets.

Figure 3.3 illustrates the 2031 Summer Weekday Traffic patterns on the major road network in Simcoe County. Due to the significant role the Provincial Highways play in serving in travel to/from and through Simcoe County, most of the traffic congestion in the future will be felt on the Provincial Highway network. These forecasts include a number of planned improvements, including:

- Highway 400 widening to 10 lanes, between Highway 9 and Highway 400/ Highway 11 interchange (8 lanes + High Occupancy Vehicle lanes (HOV));
- Extension of Highway 404 from Green Lane to Ravenshoe Road;
- Widening of County Road 88 (Bradford) to four lanes;
- Widening of County Road 90 to five lanes between Barrie and Angus; and
- Construction of the Highway 26 By-pass between the Town of Wasaga and the Town of Collingwood.

However, even with these improvements, the results the growth impact analysis using the strategic transportation demand model indicate that there will continue to be deficiencies in the road network. There is therefore a need to look beyond the Highway 400 corridor at additional improvements to address future deficiencies. As congestion occurs on Highway 400 and other Provincial facilities in the County, there will be "spillover" onto the County Road system.

It should also be recognized that without key Provincial facility upgrades, traffic congestion will significantly affect goods movement throughout the County. The efficiency of goods movement to and from Simcoe County will be impacted by congestion and unreliable travel times, particular through the Barrie area. Early on in the project, the need to the Provincial Highway system for goods movement was raised by the public and by municipalities as a critical factor in maintaining existing and future employment opportunities, particularly for areas in the northern part of the County.

Current bus based transit service, in the County will also be impacted by increased congestion levels, particularly the inter-regional bus transit provided on the Highway 400 and Highway 404 corridors. Achieving improved inter-regional transit ridership between Simcoe County and the GTA will require new transit supportive infrastructure (in addition to the recent GO Rail service to Barrie) to maintain or increase the current mode share from today's levels.

As mentioned previously, the new GO service will not effectively address the growth in the County particularly the demands to other areas of the GTA such as Peel Region and Northern York Region. In addition, further improvements to transit will be required just to maintain the current share of the daily trips.

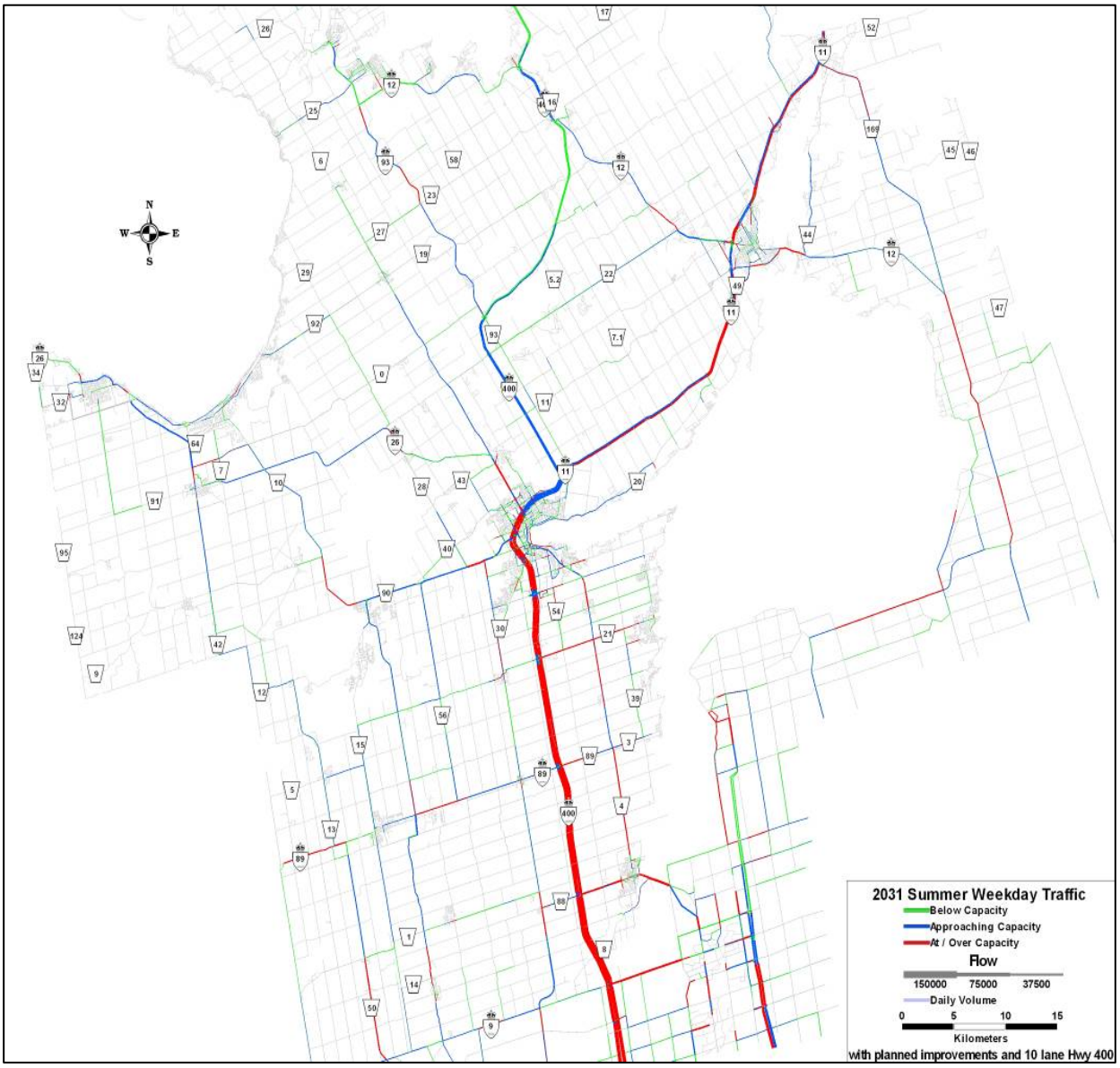

Figure 3.3 - 2031 Future Roadway Deficiencies - Summer Weekday

Improved transit would also provide mobility for those who do not have access to a vehicle and who require transportation services. Residents in smaller outlying communities are being forced to travel to major centres in order to receive their basic services and many rely on other forms of transportation other than a car to get them to their destination. With Simcoe County's aging population, this will become even more of an issue in the future as residents try to maintain their accessibility to basic services (such as health care etc.).

The County needs to develop strategies to accommodate these future travel demands, particularly the additional traffic on their road system, and the need for improvements to transit services to keep pace with growth and provide mobility options for residents. Road network improvements are necessary to support future growth, to maintain efficient transportation connections between communities and to protect the quality of life enjoyed by Simcoe County residents.

CHAPTER 4

TRANSPORTATION STRATEGIES

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4. TRANSPORTATION STRATEGIES

4.1. Strategy Development

The development of an overall strategy to accommodate existing and future transportation needs within a community is a key step in developing a Transportation Master Plan. The transportation strategy sets the context for the types of infrastructure and a policy direction considered within the plan, and provides a framework for implementation of the plan recommendations.

In the face of significant growth, and the projected increase in travel demands that will be generated by that growth, there are two basic strategy directions to address the transportation challenges facing Simcoe County. One is to increase the supply of transportation infrastructure and services. The other is to manage or reduce the demand for transportation in the region. The Transportation Master Plan has been developed to strike a balance between managing demand and increasing supply of transportation service in order to provide an effective and sustainable transportation system.

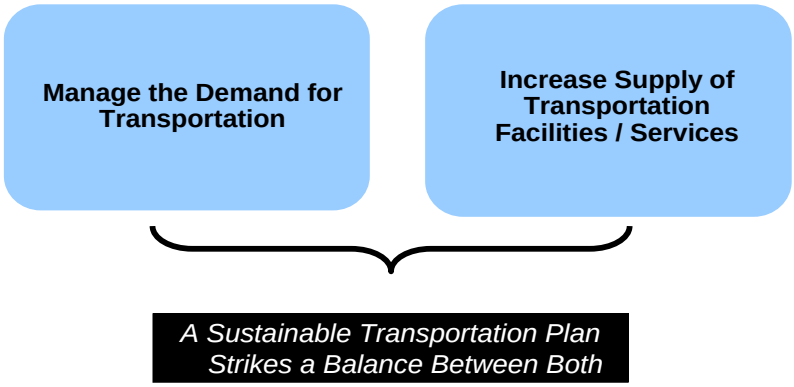

Figure 4.1 - Relationship between Supply and Demand

The following sections provide an overview of the different types of transportation strategies that can be used to increase the supply and manage the demand for transportation, and highlight some of the benefits associated with each. A more extensive discussion of the various strategies and examples of where they have been used in other jurisdictions is provided in **Appendix E.**

4.2. Strategies to Increase Supply and Manage Demand

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.

4.2.1. 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	▪ Access Management ▪ Roadway Classification ▪ Designated Truck Routes ▪ Improve Existing Road Conditions ▪ Improve Accessibility of Existing Facilities
Expand Existing Facilities	▪ Widen Existing Roads ▪ Add Cycling Lanes ▪ Add New Transit Service / Routes ▪ Expand Use of Rail Corridors
Provide New Facilities	▪ 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 a 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 key intersections in the County will often deteriorate sooner than the roadway will reach its capacity, the construction of turning lanes at select

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. This enables them to participate more effectively in a growing and diverse community.

4.2.2. Expansion of Existing System

This approach attempts to increase the capacity of existing transportation assets by increasing existing services 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. System expansion may be a critical component required to support future transit or other non-auto transportation strategies. These approaches include the following:

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 compared to building new roads although in some built up corridors widening can have significant social impacts to neighbourhoods or economic impacts to businesses.

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 may be 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, the addition of new routes to serve existing high demand corridors and/or increasing the frequency or hours of service.

Expanding Use of Rail Corridors – Expanding the use of the current rail system to 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.

4.2.3. Construction of New Transportation Facilities

The construction of new transportation facilities can include new roads, new sidewalks and trails, bicycle lanes, and the construction of 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. It should be recognized that the selection of a 'preferred transportation strategy' will not eliminate the need for road improvements, but it may 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, new road links may provide better connectivity to other existing roadways that allow motorists to choose between different routes to get to their destination. This allows motorists to make better use of existing roadways, and can lessen the amount of traffic using the primary route, possibly reducing the need for major improvements.

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.

Information gathered from the public attitude survey indicated that 52% of the respondents suggested 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 Highway 400/404 Link (Bradford Bypass) or the Highway 427 extension.

4.3. 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

Manage Demand

Behavior Based Policies	▪ Increase Walking / Cycling ▪ Flexible Work Hours (spread demand across day) ▪ Telecommuting (work from home) ▪ Ridesharing (carpooling)
Land Use Based Policies	▪ Increased Densities ▪ Encourage Mixed Land Use ▪ Neighbourhood Design to Support Transit / Cycling / Walking ▪ Support Walking / Cycling / Transit at key destinations (employers/retail) ▪ Enhance Accessibility

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 attempt to either modify individual behaviour or change the land use environment that plays a role in why people travel, where they travel to, and how they travel.

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.

4.3.1. 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 may require a number of initiatives and strategies to be implemented as a package. Some of the leading jurisdictions with successful TDM programs are using social or individualized marketing campaigns to encourage people to make more sustainable transportation choices. These programs recognize that each member of the public will have different motivations and reasons for the transportation choices they make, and the marketing programs need to reflect the benefits that matter most to each segment of the population. Results from the Public Attitude Survey indicated that 56% of the residents surveyed felt that it was important for the County to provide financial incentives to encourage ridesharing and other trip reduction programs.

Encouraging Shifts to Walking and Cycling - 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, environmental and economical benefits to the community. While land use and

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

urban design are recognized as key factors in providing a walkable community, the provision of multi-use trails, sidewalks, and other facilities must also be integrated into community design.

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.

Encouraging Shifts to Transit – The Public Attitude Survey results indicted 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.

Forty-four percent (44%) 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 - 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, although adequate telecommunications infrastructure must be in place and available for optimal success.

Ridesharing - 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 online ridematching services supported by employers or municipalities that will try to match drivers with similar commuting patterns. Of the residents who participated in the public attitude survey, 61% indicated that it was very important and somewhat

important for the County to invest taxpayer's money towards constructing carpool lots and/or "carpool only lanes" on key County roads.

4.3.2. Land Use Based Strategies

Density is only one aspect of the land use solution. 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 to promote safe and pleasant walking and cycling environments, provide transit supportive land use design, and reduce the amount of and impact of parking.

4.3.3. Best Practices Review

In reviewing the best Transportation Demand Management (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:

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 promotes/implements 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.

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

Development of Active Transportation Plans – To promote/enhance the use of human – powered non-motorized transportation through increasing bicycling activities and walking activities. Active transportation plans include a bicycle plan, pedestrian plan and/or 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 principles and land use restrictions encouraging the active transportation activities would be recommended and defined in these reports. The Town of Wasaga Beach and Town of Collingwood are examples of Simcoe Area municipalities that are currently developing active transportation plans for their communities. The Township of Springwater is also undertaking a walking and cycling Master Plan Study.

Demonstration of Leadership in TDM Measures – Pilot programs to encourage government employees to carpool and to permit teleworking and alternative work arrangements for government employees are being recommended to support TDM strategy promotions. Such a program would demonstrate 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 assist TDM to implement/promote strategies through a 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 ensures effective delivery of various Transportation Demand Management programs in local communities. Smart Commute – North Toronto, Vaughan (NTV), 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 the 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 will also provide the 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 have been approved for funding.

4.4. Strategy Development & Evaluation

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 areas 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 very large geographic area that is characterized by many 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. A summary of the experience of other municipalities is provided in **Appendix E** Transportation Strategy Report.
- **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 its 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 to reduce greenhouse gas emissions and improve air quality..
- **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 tangle 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 detailed implementation initiatives. 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.

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. The right balance for any given community will be different, and will be guided to a large extent by the unique needs and considerations in the community.

To ensure that the transportation strategy for the County considered all modes of travel, a series of transportation strategy alternatives were developed for each mode individually. The alternatives range from passive approaches, that tend to focus on maintaining and promoting current practices, to approaches that incrementally become more active and aggressive in terms of the policies and infrastructure that could be considered.

Table 4.1 provides a summary to characterize the Transportation Strategy Options that were considered for each mode of travel. A more detailed listing of the strategy alternatives is included in **Appendix E.**

Table 4.1 - Transportation Strategy Options

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 areas and	Implement full County transit system

Mode of Travel/ Policy Area	Alternative 1 – Passive	Alternative 2- Moderate	Alternative 3 –Active
		provide enhanced inter-city and inter-regional services.	
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		

The strategy 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

Appendix E also provides the detailed evaluation results for each of the transportation strategy alternatives.

4.5. Recommended 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 4.2**, 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 4.2 - 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
	20. Establish High Speed (broadband) internet services throughout the County.

Mode of Travel/Policy Area	Recommended Strategic Direction
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 Energy and Infrastructure 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.

CHAPTER 5

TRANSPORTATION MASTER PLAN

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5. RECOMMENDED TRANSPORTATION MASTER PLAN

The County of Simcoe Transportation Master Plan is comprehensive in nature and includes a series of detailed recommendations and strategic policies that will be implemented over time. It is based on a multi-modal approach to transportation that considers existing and future person and goods movement needs. The Plan provides a balance of transportation choices required to address future travel demands in the County, and can be characterized as a first step in the process of changing the way residents think about and use their transportation system.

The strategies and policies set out in the Transportation Master Plan provide the County of Simcoe the means to plan and manage a transportation system that supports the key transportation policies and objectives outlined in the Growth Plan for the Greater Golden Horseshoe[1], including:

- Provide connectivity among transportation modes for moving people and for moving goods
- Offer a balance of transportation choices that reduces reliance upon any single mode and promotes transit, cycling and walking
- Be sustainable, by encouraging the most financially and environmentally appropriate mode for trip-making
- Offer multi-modal access to jobs, housing, schools, cultural and recreational opportunities, and goods and services
- Provide for the safety of system users.

The recommendations outlined in the County of Simcoe Transportation Master Plan align with the Provincial Growth Plan's transportation policies with a focus on moving people and moving goods. The Transportation Master Plan includes:

- A series of policies and recommendations to support Active Transportation modes and encourage walking and cycling both at the local level and within an area wide County context
- A strategy for expanding and enhancing existing transit services in the County and introducing new transit services to rural areas of the County over the next 25 years. The strategy includes land use, infrastructure, and operational policies to support growth, encourage additional transit ridership and improve the share of trips made by transit, and provide residents with improved choice in their daily travel decisions

[1] Ontario Ministry of Energy and Infrastructure, "Places to Grow, Growth Plan for the Greater Golden Horseshoe, 2006.

- Recommendations on the development of a Transportation Demand Management program within the County including policies and infrastructure that are intended to encourage alternative transportation modes and reduce the amount of travel on the County Road system
- A series of infrastructure and policy recommendations aimed at the preservation and enhancement of a network of Goods Movement corridors throughout the County
- A strategy for optimizing the use of the existing road network in the County and policies that can be applied to manage the operation of key arterial road corridors, and
- A Road Network Improvement Plan to accommodate growth to 2031 and beyond.

The following sections highlight the key recommendations and policy directions of the Transportation Master Plan.

5.1. A Plan for Walking and Cycling

5.1.1. Key Elements of the Plan

A majority of the walking and cycling trips in Simcoe County occur at the local community level. Approximately 4% of the daily trips made in the County of Simcoe (including Barrie and Orillia) are made by walking/cycling. As expected, the urban areas of Barrie and Orillia have a higher share of daily walking and cycling trips (5.5%), than the other areas of Simcoe County, where 3.4% of the daily trips are made by active transportation modes.

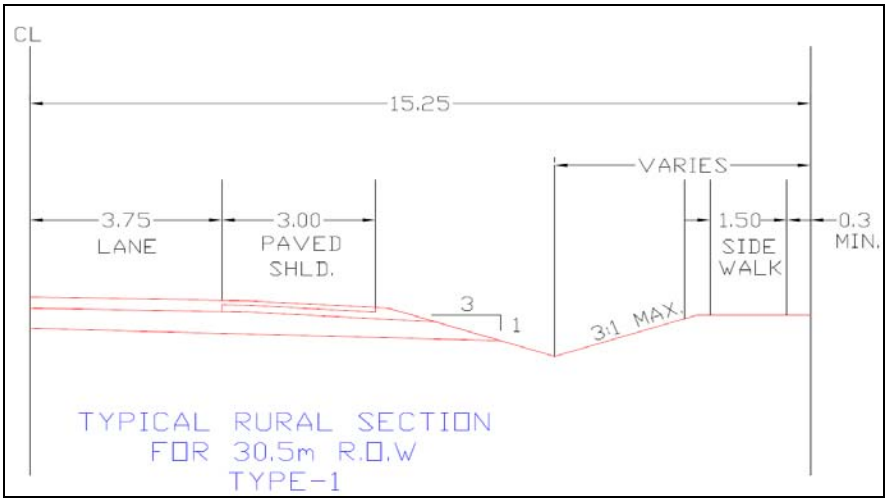
The public attitude survey completed as part of this study suggested that the majority of residents surveyed treat walking and cycling as a recreational pursuit as opposed to a utilitarian/commuter mode of travel. While the public focus on walking and cycling tends be recreational in nature today, it is recognized that over time the County should be encouraging a greater emphasis on walking and cycling as the preferred more of travel for short trips (under 5 km in length).

The County's plan focuses on policies to support recreational participation in walking and cycling as well as a focus on developing infrastructure to promote active transportation at the municipal level. While implementing new walking and cycling infrastructure in existing neighbourhoods will evolve over time, new growth areas should be planned, from the start, with a focus on promoting walking and cycling among new residents. Walking and cycling infrastructure should be designed in such a way as to connect to the existing trails network, provide access to local commercial areas, encourage increased walking and cycling for local short trips, and provide safe walking and cycling routes to neighbourhood schools and community centres.

On a County wide basis, the preferred strategy shifts to emphasize the development of an integrated off-road trail system to connect communities within Simcoe County. The County wide trail system will build upon the existing trail system established by area municipalities and trail associations, and incorporate facilities and utilize infrastructure (e.g. abandoned railway lines) to fill in the missing links in the trail system and complete connections to these existing municipal and to other trails. Establishing a network of trails will promote healthy and active lifestyles and could be attractive to tourists.

The County needs to take a leadership role and act as a clearing house for information regarding the trails system within the County. This role should include coordinating new county wide trails or linkages, gathering information about the trails system in the county (such as identifying facility infrastructure along the routes), promoting the trail system and linking into tourist information, and provide way finding signs along the trails to help users of the facilities.

Where linkages are required to connect communities or existing trail systems, it is recommended that the County develop standards to allow for infrastructure to accommodate cycling facilities and trails within the County Road right of way. On low volume County Roads, with traffic volumes of less than 3000 vehicles per day, an on-road cycling facility could be provided by paving the shoulder. For higher volume roads, an off-road facility could be provided within the 30.5 m road right of way (R.O.W.) along the backslope of the ditch. Figure 5.1 illustrates the recommended treatment for incorporating active transportation infrastructure onto existing and future two lane County Roads. On a two lane County Road with higher volumes, an off-road facility would only be provided on the backslope of the ditch. The figure labeled Type 1 below, illustrates in general how the on-road facility can be accommodated on the shoulder of the road (for low volume roads) and how a path can be accommodated on the backslope of the ditch (for higher volume roads). The figure identified as Type 2 below shows in more detail the road cross section with an on-road and off-road facility on a two lane road.



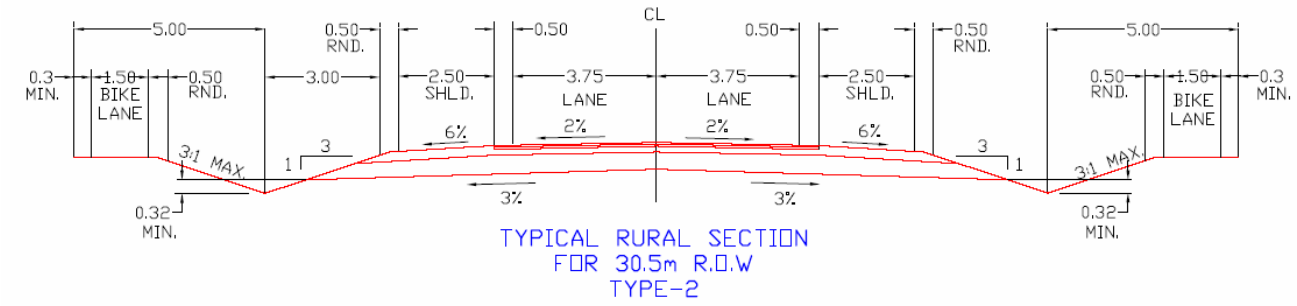
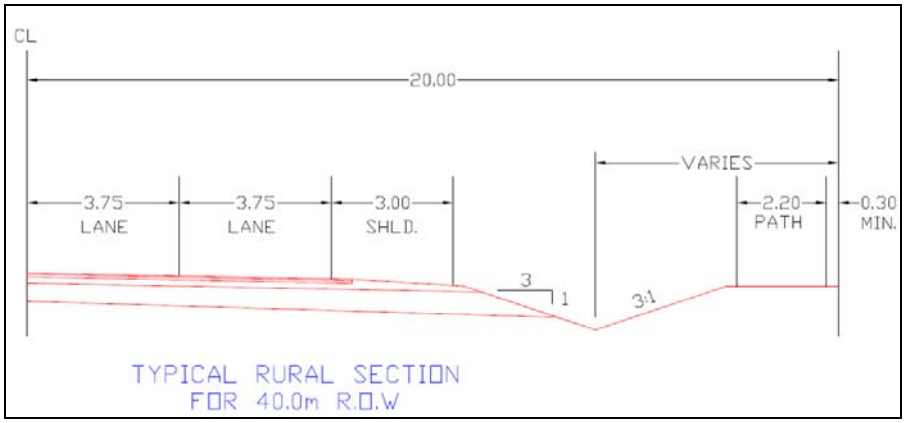


Figure 5.1 – Typical On Road Cycling/Walking Infrastructure – Low Volume County Roads - (Two Lane Road)

Figure 5.2 reflects a typical four lane County Road cross section with a walking/cycling facility. within a 40 m right-of-way. It is likely that a four lane cross section will require additional road right-of-way to accommodate an off-road trail.



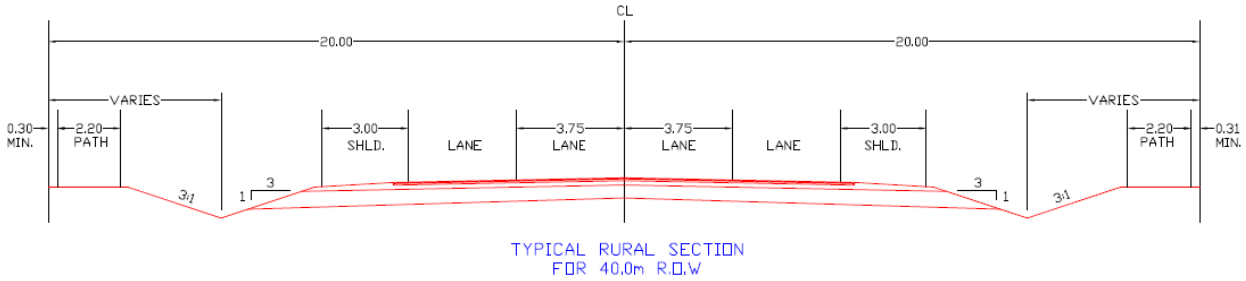


Figure 5.2 – Typical Off Road Cycling/Walking Infrastructure – Four Lane Road

5.1.2. Policies to Support Walking and Cycling

The plan for walking and cycling will be implemented primarily through policies that are incorporated into the County and local Official Plans. Ongoing program management for the off-road County Trail System should be coordinated by the County, in conjunction with other County wide tourism and recreational initiatives. This will require an annual commitment to funding for this coordination effort.

The policy recommendations for Walking and Cycling cover the areas of Leadership, Development of Trail Networks, and Walking & Cycling Policies in local municipalities, and are detailed below:

Leadership

1) The County should assume a leadership role in the development and promotion of Active Transportation (human-powered non-motorized transportation) infrastructure within the County. This leadership role should include the coordination of a County-wide off road trail network, the promotion of walking and cycling as a preferred mode of travel for short trips, funding support for active transportation infrastructure, and the development of Official Plan policies to promote walking and cycling in local municipalities.

2) The County needs to designate staff resources to take on a coordinating role with area municipalities and trail associations in implementing and monitoring the trail system.

3) The County should encourage walking and cycling among its own employees and provide appropriate infrastructure at all municipal work sites, such as:

   i. secure bicycle racks/shelters,

   ii. showers and change rooms,

   iii. sidewalk connections between buildings and municipal sidewalks, where applicable.

4) As the owner and manager of a significant number of public facilities, the County should ensure that all of its public facilities are pedestrian and bicycle friendly. This can encourage non-motorized travel to those facilities and set a leading example for other property owners for how to make their facilities accessible for pedestrians and cyclists. At a minimum this should include:

   i. Provision of secure bicycle racks/shelters and

   ii. Provision of direct sidewalk connections between buildings, activity centres, and municipal sidewalks

5) The County should actively promote cycling/walking through a series of initiatives, such as:

   i. The development of promotional information for residents that highlight the personal benefits of walking and cycling. Information should be targeted to particular groups to help messages reach the residents who are most likely to walk or ride a bicycle.

   ii. The development of promotional information for schoolchildren with a strong emphasis on safety and identifying safe routes to schools.

iii. Development of promotional information for commuters to identify cycling routes and public bicycle storage/locker facilities. Information to cyclists and drivers should focus on respect for other road users, and safety information about sharing road space with bicycles.

iv. Create a County Road Trail Map and Access Guide which includes accurate and up to date maps and other information (i.e. type of trail, trail amenities, trail parking lots, etc), and on how to walk and cycle to a particular destination.

v. Create tourist promotion materials highlighting cycling and walking facilities and access to key attractions in the County.

vi. Development of a walking and cycling safety guide, covering general safety, rules of the road, trail courtesy, etc;

vii. The development and coordination of promotional campaigns to encourage cycling and walking (i.e. Bike to Work week, Clean Air Day, etc);

6) County Staff should facilitate ongoing consultation with adjoining municipalities, conservation authorities, school boards and other agencies and community groups (i.e. "Active and Safe Routes to School" (ASRTS)&"Walk to School Routes") to promote cycling awareness and opportunities

Development of Trail Networks

A barrier free and comprehensive network of trails, and bicycle lanes will make travel by foot and bicycle more attractive users of the system. To support the development of active transportation infrastructure in Simcoe, the County should:

1) Coordinate the development of a detailed Pedestrian and Cycling infrastructure plan, to identify and protect opportunities for new trail connections and supporting facilities throughout the County. The County should prepare and maintain a comprehensive map of the County trail system and work in cooperation with adjacent municipalities to ensure that inter regional connections for pedestrians and cyclists are provided.

2) Incorporate Active Transportation Infrastructure into County Road improvement projects where key linkages are needed between municipal trail systems to address potential barriers, where an acceptable trail design can be accommodated within the Right-of-Way, and where cost sharing agreements can be reached with municipalities.

3) Where feasible, provide and/or fund the provision of pedestrian walkways, bicycle paths and/or mobility aid paths to link existing communities and/or trails and proposed activity centres throughout the County. The linked system may be provided in parklands and open space in both new development and redevelopment areas.

4) Upon completion of a County Wide Trail system, the County should incorporate the proposed trail system into its Official Plan and develop policies requiring the dedication of lands through new development areas to complete future trail/sidewalk connections identified in the Official Plan;

5) The County should coordinate with local municipalities and trail associations to:

   i. Provide trail signage along each route, and key destinations that can be accessed from the trail should be signed at key staging areas, crossing or intersection locations, and at key trail links. Trails should have regular route marking along their length to provide assurance that users are still on the trail, particularly where the type of trail changes (i.e. multi-use trail transition to a municipal trail);

   ii. Develop trail staging areas along the trial network and at key trail links that include parking facilities and basic user amenities such as trail maps, washrooms or portable toilets (where possible), secure bicycle racks, and shelters;

   iii. Provide benches and rest stops at regular intervals throughout the system. Key locations could include trail staging areas, trail intersections/nodes, key parks or open spaces along a trail route, or at other points of interest along the trail;

   iv. Provide appropriate traffic control devices on trails and off road cycling facilities where they cross existing roadways or other locations to direct pedestrians and cyclists, without conflicting with auto users. Traffic control (signs) for trail/pedestrian users are typically smaller but conform to standard traffic signs designs (colour, shape, etc). An inventory of trail related signing should be maintained and all signs should be inspected at regular intervals to ensure that signs remain visible over time;

6) County staff and Council should continue ongoing consultation with agencies responsible for publicly owned lands (i.e. federal and provincial governments) to establish and protect corridors or alignments for extensions to the trail network within and beyond the County

Walking/Cycling Policies in New Development Areas

1) Require municipalities to develop Active Transportation Plans as part of their Official Plan, recognizing that each municipality will have a different approach to implementation. A municipal Active Transportation Plan should include, as a minimum:

   i. An active transportation system map identifying existing/proposed sidewalks, multi-use trails, and associated facilities, including proposed connection to the County Trail System;

   ii. Policies requiring the provision of sidewalks and/or multi-use trails through all new development areas and standards outlining a minimum number of development units for application of the policy;

   iii. Policies outlining the requirements and conditions related to the dedication of lands in new development areas to complete future trail/sidewalk connections identified in the Official Plan;

iv. Policies outlining cycling and pedestrian safety measures to reduce injuries and fatalities associated with motor vehicle collisions (i.e. traffic calming, narrower streets, signage, cycling lanes, etc.);

v. Policies and plans that identify where new sidewalks and/or trails should be provided through existing built up areas;

vi. Policies and standards specifying the design parameters that should be used for new trails/sidewalks that reflect Ontario Provincial Standards, Accessibility Act requirements, and best practices;

vii. Policies requiring the provision of secure bicycle racks/shelters, showers and change rooms, and sidewalk connections between buildings and municipal sidewalks for all new community centres, schools and other public use buildings, meeting halls, and major employment land uses that meet a minimum floor space threshold (to be established by each municipality).

2) Trail and sidewalk facilities should be planned to encourage crossing locations at intersections rather than mid block;

3) Connections between local streets and neighbourhood parks, schools, natural corridors and other open space areas should be provided in all new subdivision development plans.

5.2. A Plan for Transit Service

5.2.1. Key Elements of the Plan

Transit is a key component in the plan for growth and it cannot be ignored. The plan for transit is a plan designed to begin the process of change. Transit is required not only as a long term solution to congestion, but is also required to provide residents with choice for travel and to maintain accessibility to basic services. There are three main elements of the plan for transit, which are illustrated in Figure 5.3, and further described in the sections below:

1. Expand the reach of current local municipal transit services and build on best practices currently in operation.

2. Invest and partner with existing transit operators to improve and expand inter-municipal transit service in the County.

3. Focus on working with the province and existing transit providers to expand and enhance inter-regional transit services through the provision of new or enhanced rail and bus services to neighbouring municipalities.

5.2.2. Local Transit

There are a number of best practices currently underway in a number of Simcoe County municipalities that currently offer transit services. The Town of Collingwood is already looking into extending transit service into the Town of Wasaga Beach, recognizing the strong linkages between these communities for access to local services. Similarly, the Town of Midland is looking at expanding its Community Links program to service the surrounding areas.

The proposed plan for local transit is designed to build upon these best practices by encouraging municipalities that currently operate transit services to extend local transit services to adjacent municipalities or built up areas within adjacent municipalities. Extending their regular service would provide residences in the adjacent areas with improved access to services in the more urbanized municipalities, and would provide the area with alternative travel options. To achieve this, it is recommended that:

1) The County includes policies in its Official Plan that support the provision of local transit service in municipalities.
2) The County should establish a local transit reserve fund within their annual budgeting process and contribute an annual allocation of at least 2% of the annual roads budget to fund the capital costs associated with the initial purchase and ongoing capital replacement of new buses and infrastructure required to deliver the service.
3) The County should initiate discussions with local municipalities to implement the local transit service areas as identified in Figure 5.3 and establish service levels and performance measures for each service area that reflect funding considerations, potential ridership, and required infrastructure. Specifically, the County should:

    (i) Partner with Collingwood Transit to provide transit services to Wasaga Beach and Stayner and contribute to funding a share of the capital costs associated with the provision of new buses required to implement the service, and the provision of transit stops/shelters in the local municipalities.

    (ii) Partner with Midland Transit to provide transit services to the Town of Penetanguishene, built up areas in the Township of Tiny (such as Perkinsfield and Lafontaine), and built up areas in the Township of Tay (such as Port McNicoll and Victoria Harbour). The County should contribute to funding a share of the capital costs associated with the provision of new buses required to implement the service, and the provision of transit stops/shelters in the local municipalities.

    (iii) Partner with the City of Barrie to extend existing local transit service to areas such as Midhurst, Elmvale, Angus, and the built up areas within the Town of Innisfil. The County

should contribute to funding a share of the capital costs associated with the provision of new buses required to implement the service, and the provision of transit stops/shelters in the local municipalities.

(iv) Partner with the City of Orillia to extend service into Ramara Township and Severn Township. The County should contribute to funding a share of the capital costs associated with the provision of new buses required to implement the service, and the provision of transit stops/shelters in the local municipalities.

(v) The Town of Bradford West Gwillimbury has indicated the desire to establish a local transit service for their municipality. Their Transportation Master Plan Study indicates the desired threshold for establishing a transit service to be 30,000 population. At the current rate of development in the Town of Bradford West Gwillimbury, this threshold will be reached in the near future. The availability of another local transit system in the County will assist in servicing Simcoe Area residents with another transportation choice. Accordingly, the County should partner with the Town of Bradford West Gwillimbury, and assist in funding the start up capital costs associated with the introduction of regular transit services in the community and encourage the development of future transit routes that extend services to the Bond Head area and eventually Alliston.

5.2.3. Inter-Municipal Transit

The provision of inter-municipal transit services is also a key element of the Transit Plan for Simcoe County. Many residents have noted that many key services, including health care and other provincial and federal services are increasingly being moved to larger urban centres. For residents who do not drive or have access to a car, this presents significant mobility challenges and many residents in Simcoe County municipalities are faced with paying high costs for taxi services or moving into the larger urban areas to be closer to the services they need.

Many residents have expressed the desire for improved transportation choices to facilitate this type of inter-municipal travel throughout the County. Currently this type of service is only provided on a limited basis by private sector inter-city bus service providers, such as Greyhound. This service, however, provides a backbone that could be used to implement an improved service to benefit County residents. Therefore, it is recommended that the County partner and work with these private sector transit operators (i.e. Greyhound) to enhance existing service through providing more frequent service or more direct service between municipalities in Simcoe County.

While the specific service delivery model for this type of transit service could vary in detail depending on the service area, the demands, and local needs, the concept includes the outsourcing or purchase of an external service through a competitive tendering process. The County would issue a Request For Proposals to contract with a service provider for the provision of inter municipal transit services on an individual route or a group of routes for a fixed fee. The compensation framework could be structured

based on the ridership ($ per passenger), on the provision of a set number of revenue hours of service, on a fixed fee per route, or some combination of the various approaches. Alternatively, the County could choose to subsidize fares for specific services provided to users.

The County would be responsible for defining the services to be delivered, the service levels that should be provided (i.e. # of buses per day, number of seats per bus, hours of service, number of routes, etc), and establishing the contract and administering the service. As part of the service offering, the County would promote the service to local residents, provide route maps and schedules on their website and public buildings (or with municipal mailings), and provide bus stops (with signs/shelters or other infrastructure) at convenient locations in each community.

The County should initiate discussions with the private sector transit providers in the region to better understand their current service delivery framework, current ridership levels on existing private services, and to assess the potential risks and approaches to risk transfer that will provide the best value for money to County residents.

Key inter-municipal transit routes for consideration should include services between:

- Collingwood, Wasaga Beach, Stayner, Angus and Barrie
- Angus to Alliston
- Barrie to Alliston and Tottenham
- Alliston to Bradford West Gwillimbury
- Barrie to Bradford West Gwillimbury
- Midland to Barrie
- Orillia to Barrie, and
- Midland to Orillia

5.2.4. Inter-Regional Transit

Currently, the inter-regional transit service to/from Simcoe County is provided by GO Transit which operates rail and bus services between Barrie and the GTA. The current rail service operates during peak periods, offering 4 trains per day in both the am and pm peak periods on the GO Barrie line, which serves stations in Bradford, Newmarket, Aurora, King City, Maple, Rutherford, York University and Union Station. During the off peak period, and on weekends, service is provided by GO Buses running on Highway 400. GO Bus service is also provided between Barrie, Newmarket and Aurora, with routes that

use the Bridge Street to Yonge Street connection in the Bradford area to access the GO Station in Newmarket. From there, bus connections are available to the Yonge Street corridor which connects to the TTC subway station at Finch Avenue.

With growing demand between Simcoe County and the northern areas of York Region, inter-regional transit services will need to be significantly enhanced in the future to keep pace with new demand. To be truly effective in serving the growth needs of Simcoe County, inter-regional transit will also need to expand to serve new commuter markets. Effective connections to urban growth centres identified in the Places to Grow Growth Plan will need to be provided, including the Richmond Hill, Markham Centre, Etobicoke and Brampton/Mississauga centres. Destination areas such as Markham, and Durham Region further to the east, are not currently served by inter-regional transit.

The province of Ontario recently released the MoveOntario 2020 plan for transit investment in the GTA. The plan includes 52 rapid transit projects and 902 kilometres of new or improved rapid transit that will move people efficiently around the region. Key projects included in the MoveOntario 2020 program include the extension of GO rail service to Barrie (completed in 2007), GO Richmond Hill rail line extension to Aurora Road, VIVA Yonge Street corridor to Newmarket, a new GO rail line from Union Station to Bolton (using the CPR line), and the Brampton Acceleride/and VIVA east-west rapid transit projects, serving the Highway 7 corridor.

While these are positive enhancements to improve the inter-connection of the rapid transit system in the GTA, these improvements alone will not provide alternatives to address the growing travel demands between Simcoe County and the GTA municipalities. Previous studies completed by the province had indicated the need for the extension of Highway 427 to serve this demand, combined with a widening of Highway 400 to 10 lanes. The Highway 400/404 Link (Bradford By-Pass) had also been recommended in previous studies as a new transportation corridor required to service growth in the Simcoe County area.

In light of the Province's decision not to proceed with the extension of Highway 427 or the Highway 400/404 Link (Bradford By-Pass), Simcoe County will need to work with the province to identify alternative transportation solutions to improve inter-regional transit services to Simcoe County to accommodate planned growth designated under the Provincial Places to Grow Growth Plan. The following discussion outlines the County's recommended approach to enhancing transportation and transit services between the County and the GTA.

Alternative to the Highway 427 Extension

The County of Simcoe, through this project, recognizes the significant challenges associated with the previously proposed Highway 427 extension to Barrie. Notwithstanding the potential environmental impacts of a new corridor through the greenbelt, the forecasting work completed during this study has shown that a widened Highway 400 and the GO Rail extension to Barrie will not be able to address this demand on their own. As such it is recommended that the County of Simcoe work with the province to investigate a transit based alternative to the Highway 427 extension. This would include the MoveOntario plan to extend GO Rail service to Bolton on the CP MacTier line, combined with a further extension of this service into Simcoe County. The new route would provide direct transit service to the growing communities of Tottenham and Alliston, which are not currently served by transit at all. An extension north to Angus and east to Barrie (along the Barrie Collingwood Railway line) would provide a second rapid transit route to the region, that would provide improved connections to the western GTA and would also enhance internal transit opportunities within Simcoe County (particularly for the Barrie to Alliston section, which could attract Barrie residents working at the Honda Plant in Alliston).

The significant growth in tourism in the Collingwood and Craighurst areas also present another opportunity for longer term consideration of improved inter-regional transit service into Simcoe County. It is recommended that the County work with the province, the local municipalities, and the Rail lines to investigate opportunities to provide rail based services to Collingwood, on the Barrie-Collingwood Rail Line, and to Craighurst, on the CPR MacTier line. These longer term investments in rail based service could focus on weekend services to provide an alternative to the significant influx of GTA based visitors to the region that contribute to the seasonal traffic demands using the Highway 400 and Highway 26 corridors today.

The Highway 400/404 Link (Bradford By-Pass) as an Inter-Regional transit Corridor

Transit service to the eastern section of the GTA, including the urban growth centres of Markham, Richmond Hill, Scarborough, and in Durham Region are not currently served effectively by inter-regional transit. Bus based transit services provide access from Bradford to Newmarket on the east side of the Holland River, but access to the employment nodes along the Highway 404 corridor is limited. The Ministry of Transportation has recently opened High Occupancy Vehicle lanes on Highway 404 that have been successful in attracting new users to carpooling, and provide the opportunity for enhanced express bus service to operate in this corridor. The province recently released their long term plan for the HOV

network in the GTA, which includes new HOV lanes on the Highway 404 corridor north to Aurora in the mid term (by 2016), extended to Newmarket and beyond in the longer term.

The MoveOntario 2020 plan is also planning to extend GO rail service to Aurora Road/Stouffville area via the Richmond Hill Line, which will improve transit access to the Richmond Hill area and provide an alternate route to downtown areas of Toronto. For these initiatives to benefit residents of Simcoe County and provide reasonable alternatives to continued auto use, improved connections are required between the Bradford area and the Highway 404 corridor. Forecasting work completed during this study has identified that the demands using the Bridge Street/Yonge Street corridor will be significantly over capacity by 2031. This congestion will also impact the viability of inter-city transit routes that currently utilize this corridor, and would effectively limit opportunities to enhance bus based rapid transit service that connects to the Highway 404 corridor. The construction of the Highway 400/404 Link (Bradford By-Pass) would provide opportunities to introduce a dedicated transitway into the corridor to serve this need, as well as providing other benefits to goods movement and auto travel options. As such it is recommended that the County of Simcoe work with the province to re-examine the decision to defer the Highway 400/404 Link (Bradford By-Pass) from the long term road network plan for this area. In addition to its role of serving commuter and goods movement demands, the Highway 400/404 Link (Bradford By-Pass) should be considered as true multi-modal corridor that would provide access to Highway 404 for bus based rapid transit and High Occupancy Vehicles.

Figure 5.3 – Simcoe County Transit Plan

5.2.5. Policies to Support Transit

The policies within the transit section of the report outline specific services required to achieve the ridership increases outlined in the strategy.

Land Use Planning & Growth Management Policies

1. In accordance with the Provincial Growth Plan principles and the Simcoe Area Growth Plan recommendations, the County should incorporate specific policies in their Official Plan that promote intensification and the provision of transit-supportive land use densities in local municipalities.
2. The County should adopt Official Plan land use polices that encourages compact developments with a broad range and mix of uses that are compatible, pedestrian friendly, and transit supportive.
3. The County should require municipal Official Plans to adopt transit-supportive design features for developments/redevelopments within the built up areas of the existing communities that offer transit services (e.g. incorporate transit stops in all new subdivisions and other major trip generators, locate bus stops near major retail and business entrances, get the built form closer to street, provide a grid pattern of streets instead of cul-de-sacs and dead-end streets)
4. The County should work with municipalities within transit service areas to develop Transit Supportive Urban Design Guidelines to be used in preparation of secondary, subdivision plans, site plans and intensification of employment lands and residential uses, particularly in close proximity of transit routes. These guidelines should include a check list for site plan approvals that will ensure measures to encourage transit usage.

Marketing & Education

5. Ensure public participation in transit planning through public information sessions to obtain input from the public regarding service options and other transit initiatives early in the decision making process.
6. Undertake a marketing study to help develop marketing campaigns targeting current and potential customers, key influencers and specific groups (students, shoppers, business, etc.)

    - programs to change the public image of transit (e.g., elementary school education programs);
    - advertisement campaigns and promotions that target specific groups in an effort to increase ridership (i.e., high school students, seniors,);

7. Partner with local organizations, to develop marketing and advertising campaigns for the new transit services and consider enhancements to the County Website to profile the transit services, provide information on routes, schedules, fares, specials and other initiatives under way.

5.3. A Plan for Transportation Demand Management

5.3.1. Key Elements of the Plan

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.

The results of the Public Attitude Survey of 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 the County of Simcoe, and based on best practices observed in other jurisdictions, it is recommended that the County focus on policies and infrastructure to support ridesharing and teleworking as the key focus of their Transportation Demand Management Program. The following key policy directions have been recommended in the Transportation Master Plan.

Municipal Leadership by Example

One of the most effective ways to demonstrate the viability and benefits of TDM measures is to lead by example. Municipalities are large employers and thus generate significant commuting activity. They also operate facilities that act as major travel generators for the public, including administrative buildings, arenas, libraries, conference centres and entertainment venues. Leadership by example will be necessary to show residents and business in that there is an alternative to the automobile, and that small improvements can be made without significant impacts to individuals or businesses.

A targeted TDM program focusing on major employers in the County should start with the County itself, as one of the major employers in the area. A pilot program, developed for County employees, can provide useful experience that will be invaluable in promoting the types of TDM solutions that are appropriate for County residents, and the potential benefits that could be realized by businesses and employees. To gain credibility, particularly with large employers in the County, the County will need to demonstrate workable approaches to overcome common TDM barriers that are best demonstrated through direct local experience.

Community Education and Awareness

Since TDM programs essentially try to invoke change at an individual level, all successful TDM programs rely on a partnership between public sector agencies, private sector businesses and community interest groups. Getting the message out is a key part of any program that seeks to invoke change. Some of the leading jurisdictions with successful TDM programs are using social or individualized marketing campaigns to encourage people to make more sustainable transportation choices. These programs recognize that each member of the public will have different motivations and reasons for the transportation choices they make, and the marketing programs need to reflect the benefits that matter most to each segment of the population.

There is a need to target and reach out to major (large) employers such as hospitals, Honda (Alliston), school boards, health units and to environmental groups to market the benefits of TDM. The initial strategy for the County to lead by example will help the County recognize the challenges and issues associated with getting employees to change modes of travel and for the County to use this knowledge to deliver information to employers.

Land Use Polices

The connection between land use, urban form and transportation choices is becoming more widely understood. The 'Places to Grow' legislation has implemented policies to encourage increased density and a broader mix of land uses within communities. In addition to density targets, the urban design and infrastructure of newly developed areas must also support alternatives to automobile use.

In this context, the County should:

1) Develop official plan policies that encourage local municipalities to incorporate pedestrian-friendly and transit-supportive infrastructure and urban design principles into large developments and employer sites to encourage non auto modes of travel. This could include showers, change rooms, convenient/accessible transit stops, preferential parking for carpools, building orientation to support transit, and other measures to create a pedestrian friendly environment.
2) Connect major residential areas with major employers through the use of TDM

Carpooling

1) Provide funding and program support assistance to encourage employer based TDM.
2) Initiate ride matching programs for Simcoe area residents (or partner with existing private service provider).
3) To support carpooling, utilize existing infrastructure at municipal facilities scattered throughout the County and designate a certain number of parking spaces for people who carpool. The spaces can be signed and marked and promoted to offer preferential spaces for employees who carpool.
4) Identify locations for carpool lots at key strategic locations along County Roadways. **Figure 5.4** illustrates locations of potential carpool lots.
5) In addition to the potential carpool lots identified by the County, the Ministry of Transportation is investigating potential expansion of its current car pool lot infrastructure in the County as well. It is recommended that the County work with the MTO in establishing these additional carpool lots in order to service future growth areas in Simcoe County.

Telework

Recognizing that the County has just initiated the fist step in launching a County-wide initiative to identify the scope of high-speed internet service, it is recommended that these efforts continue in support of TDM measures. The County should play a lead role in the expansion of high speed internet services throughout the area and should work with municipalities and service provides to offer these services at a reasonable cost to Simcoe residents and businesses.

Figure 5.4 - Transportation Demand Management – Potential Carpool lots

5.3.2. Policies to Support Transportation Demand Management

The plan for Transportation Demand Management includes recommendations on policies, promotional considerations and recommendations on infrastructure. The following policy approaches are recommended to be incorporated into the County of Simcoe approach to TDM:

Community Dialogue & Education and Awareness Program

Advisory Committees, public information sessions, stakeholder workshops and outreach to school boards or business groups are critical measures to build awareness and encourage a County of Simcoe TDM programs that fit with the context of everyday lives of residents. The following policies approaches should be considered:

1. Based on the results of the internal TDM pilot program develop material to sell the idea of TDM to major employers to encourage participate in the program. Undertake research to identify examples of successful TDM applications in place at major work places in other jurisdictions, and find ways to promote TDM as "Good for business".
2. Encourage and assist major employers in the development of TDM pilot programs in their workplaces, based on the experience gained in the Municipal program.
3. Work with (and/or fund) community associations, interest groups and non-governmental organizations to develop and implement TDM-related marketing material, programs, and other initiatives, particularly those aimed at families and individuals.
4. Develop an Education and Awareness Program to promote alternative modes of transportation (transit/walking/cycling/carpooling) and provide information on the benefits that can be achieved for individual user groups or employers (individualized marketing)
5. Promote sustainable transportation choices through communications and outreach methods including Web sites, production of cycling route maps, cycling skills training and competitions, household flyers, media relations, and special events that raise the profile of sustainable transportation choices and encourage trial by individuals.
6. Participate in Clean Air Day or Smart Commute challenges and other County wide/national programs and encourage a healthy level of competition between employers, civic groups, and other municipalities to post the best results.
7. Consider the use of a TDM program identifier to link initiatives and provide a recognizable platform (or "brand") for TDM tools, services and communications.

Development of Tools & Incentives: Development of tools to support TDM at the local level and Incentive programs to encourage use are both key to encouraging employers to implement and maintain effective TDM programs throughout the County. The following policy approaches should be considered:

1. Develop or promote use of existing web based commercial ride matching service (carpool tool, carpool zone, etc) for use by County residents and employers for ridematching services.
2. Partner with community groups/taxi companies and employers to provide a guaranteed ride home service for all registered carpoolers, or those signed up to regularly use alternative transportation modes (i.e. walking, transit).
3. Provide preferential parking locations for carpools in municipal parking lots.
4. Establish an incentive program to support TDM participation at the corporate level, and the individual level (i.e. ridesharing, alternative work hours and telecommuting to the employers).
   - ✓ Development of financial or other incentives for existing employers to participate in TDM programs.
   - ✓ Provide awards or ways of recognizing employers with exceptional TDM programs.
   - ✓ Develop policies that allow for reduced parking requirements for larger employment land uses that incorporate TDM supportive infrastructure into their site plan.
   - ✓ Develop policies that encourage Development Charge credits for new developments that incorporate TDM supportive infrastructure into their development concept and can demonstrate potential reduction in auto demand as a result.

Land Use Policies to Support TDM

1. Explicitly consider TDM in all municipal transportation plans and studies (i.e. Municipal Class EA projects and Secondary Plan Studies) including the degree to which it can help achieve key objectives, and required actions.
2. Require the consideration for TDM measures and plans as a part of the Site Plan approval process for large industrial or other employment based land uses to ensure that infrastructure to support TDM is incorporated into the site design process.
3. Ensure that infrastructure to support High Speed Internet Services is incorporated into new development areas and commercial core areas.
4. Actively support the development of carpool lots at key locations throughout the County and at locations adjacent to Provincial Highway corridors. Based on the future County carpool lots recommended in **Figure 5.4**, develop policies that require future land proposals in these areas to

examine opportunities to provide these carpool lots as part of their development or provide lands to the County for future carpool lot construction.

5. Work with the MTO to provide carpool lots as part of interchange upgrade projects within the County and develop policies in the Official Plan to protect lands adjacent to the MTO interchanges for future carpool lot construction.

5.4. A Plan for Goods Movement

5.4.1. Key Elements of the Plan

A region that is both well equipped from a freight infrastructure perspective and strategically located from a global perspective can profit considerably from its ability to receive, sort and deliver goods and services quickly, cheaply and effectively. The world business environment is now based on effectively and efficiently dealing with customer response. Faster, frequent and reliable deliveries reduce inventory and product costs and maintain customer loyalty, but are dependent on the abilities of transportation carriers and transportation infrastructure[2].

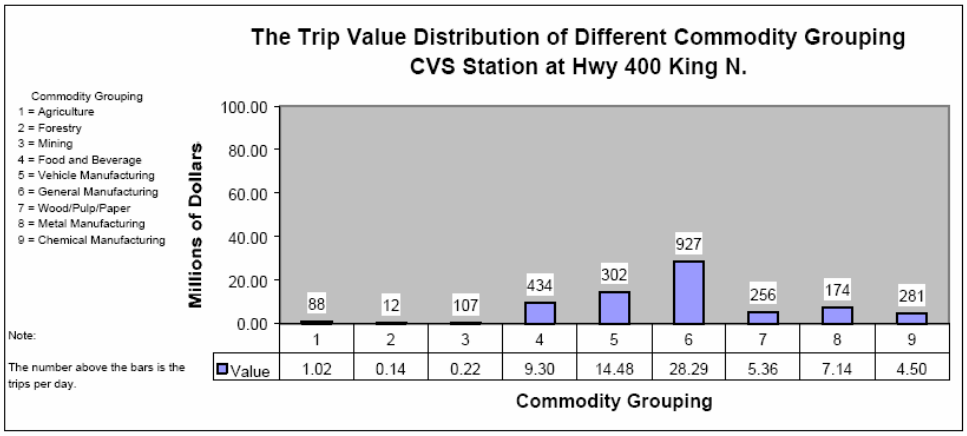
Throughout the study process, municipalities stated that goods movement through the County is a very important factor in supporting the economic health of their communities. The Highway 400 corridor is the obvious backbone to this goods movement infrastructure network for local business and manufacturing. A study of freight movement issues and trends completed by the Ontario Ministry of Transportation[3] estimated that in 2001 there were between 8000 and 9000 daily truck movements that travel on Highway 400, south of Barrie. Based on estimates of the economic value of truck movements in various corridors, this represents about $300 million dollars worth of goods that are shipped on Highway 400 on a daily basis. To the north of Barrie daily truck volumes reduce to about 1,600 daily truck trips carrying an estimated $58 million worth of goods every day.

Figure 5.5 provides a profile of the types of goods being shipped on Highway 400 on a daily basis, based on roadside interviews completed as part of the MTO Commercial Vehicle Survey. General

[2] Goods Movement Context for Central Ontario: Issues, Challenges and Opportunities, MTO/iTrans Consulting, Dec 2004

[3] Ibid

Manufacturing goods dominate the commodities being shipped on Highway 400, followed by Vehicle Manufacturing, Food and Beverage, and Metal Manufacturing Goods.



Source: MTO Commercial Vehicle Survey

Figure 5.5 – Profile of Commercial Goods Shipped by Truck on Highway 400 (at King N Station)[4]

> *According to the Aggregate Producers' Association of Ontario (APAO), Ontario consumed an average of 170 million tonnes of aggregate in 2002, one-third of this in the GTA alone.*
>
> *To place this in context:*
> - *A typical, large office block uses 16,000 tonnes, or 1,000 truckloads.*
> - *One km of a six-lane road uses 51,800 tonnes, or 3,500 truckloads.*
> - *An average brick home requires 440 tonnes, or 30 truckloads.*
> - *The average school needs 13,000 tonnes, or 900 truckloads.*

The transportation of aggregates, which includes items such as stone for concrete, sand, gravel, asphalt, fill, topsoil, waste soil, etc., is also an important and visible aspect of trucking in Simcoe County. Pits in the northern portions of the County, both in the west and in the east contribute to the local trucking on Simcoe County Roads. Growth in the Barrie area and the southern Simcoe municipalities will increase the demand for local aggregate production and transport on Simcoe County Roads in the future. For example, data from the Aggregate Producers Association of Ontario notes that the construction of an average brick home requires about 30 truckloads of aggregate, and a large office building requires about 1,000 truck loads.

The municipalities in Simcoe County have expressed concerns about the ability to manage commercial goods movement on the area transportation system in light of future growth. This concern was primarily

[4] Goods Movement Context for Central Ontario: Issues, Challenges and Opportunities, MTO/iTrans Consulting, Dec 2004, based on data from MTO Commercial Vehicle Survey

related to the reliability of the Provincial road network for goods movement due to increased congestion, particularly on the Highway 400 corridor.

Seasonal traffic demands on the Provincial highway system further aggravate the issue of goods movement reliability for business in the region, with daily traffic volumes increasing by over 20% on a typical summer weekday on many County Road and Provincial Highways. With the lack of efficient alternate routes for goods movement in the region, the impact of emergency road closure of the highways is a key risk that businesses who rely on time sensitive freight deliveries must consider in their decisions on plant locations.

Given the above context, the recommended Goods Movement Plan for Simcoe County, illustrated in **Figure 5.6** involves a number of strategic components that will involve co-operation and dialogue between various levels of government and stakeholders. The County, on its own, cannot influence many of the broader economic and logistics issues related to the modern goods movement industry, but it can and should be the local advocate for goods movement concerns of its member municipalities.

Figure 5.6 - Goods Movement Corridors

5.4.2. Policies to Support Goods Movement

The County also has a role to play in supporting future goods movement opportunities in the region through the development of supportive land use policies, the management of the existing County Road infrastructure, planning for new County Road infrastructure, and in the protection of existing and future inter-regional goods movement corridor opportunities (such as existing rail corridors and future highway corridors) within the County boundaries.

Development of Supportive Land Use/Official Plan Policies

1. Through the County's Official Plan, lands should be identified that could support future inter-modal activities in the County. Ideally these lands would be located in proximity to rail corridors, airports, and road corridors (including provincial highways). In the Goods Movement Plan, illustrated in **Figure 5.6**, opportunities for future inter-modal goods movement nodes have been identified in:
   - **the Alliston Area**, related to the protection of future opportunities for increased use of the CPR rail line for use in supporting current and future automotive and related manufacturing industry in the Alliston Industrial Park;
   - **the Utopia Area** in the vicinity of County Road 90 and the CPR rail mainline – this area takes advantage of existing (informal) inter-modal activity that currently utilizes the existing sidings in this area, provides a linkage to the Barrie Collingwood Rail Line (serving the Collingwood and Barrie areas), and is served by the future upgrading of County Road 90 and the connection this corridor provides to Highway 400. County Road 90 is planned for expansion to 5 lanes and is currently designated Controlled Access (prohibiting new entrances), making it an effective goods movement corridor in the County;
   - **the Lake Simcoe Airport** adjacent to Highway 11 and the existing Oro-Medonte 7th Line. Protection of lands around the airport for industrial/logistics uses would provide a key goods movement nod in the County that supports time sensitive, high value goods movement, and
   - **the Washago Area**, in the vicinity of Highway 169 and Highway 11, adjacent to the CN Rail line. This inter-modal site opportunity would integrate with the CN Mainline serving Western Canada, and could allow for rail/roadway integration opportunities serving the Highway 11 and Hwy 12 corridors, particularly with trend to increased international trade with Asia, which increasingly utilizes the Vancouver Port as the port of entry for goods destined to Central Canada, among other locations.
2. Through the County's Official Plan, and in local land use planning, industrial areas that require or generate heavy truck traffic should be planned for and encouraged to locate near or adjacent to freeways, provincial highway corridors, and/or Primary County Roads.
3. The County should consider the development of a Goods Movement Schedule as part of future Official Plan updates that identifies the key goods movement corridors throughout the County and

provides a context for local land use planning and for the day-to-day management of land use applications adjacent to these facilities.

4. The County should include policies in its Official Plan requiring development applications for lands adjacent to identified Goods Movement Corridors to consider proximity impacts as part of the development application process. This could include restrictions on zoning for incompatible or sensitive land uses adjacent to heavily traveled truck routes, and restrictions on the density of new entrance roadways onto heavy truck routes due to the nuisance factors (noise, engine braking, and air quality) associated with stopping and starting at numerous signalized intersections.

5. The County of Simcoe should participate as a member of the Provincial Goods Movement Advisory Council as a forum to foster dialogue and promote the resolution of local goods movement issues and concerns with the province.

Planning & Management of the County Road Transportation Network

1. Within the context of goods movement and the role of the County Road system, all County Roads should continue to be utilized and/or constructed as truck routes, as all County Roads serve an inter-municipal transportation function.

2. While it is recognized that all County Roads accommodate trucks, certain roads within the County play a primary role in linking goods movement facilities. Therefore, it is recommended that the County develop a permissive truck route program to identify key goods movement corridors and to encourage usage of these routes by shipper and carriers, and minimize undesirable impacts to existing communities and built up areas.

3. The County should review and update its permissive truck routes in conjunction with each Official Plan/Transportation Master Plan update taking the following factors into account when considering new potential truck routes;

    a. The impact of the truck route on abutting lands;
    b. Service to major truck traffic generators;
    c. The provision of network continuity and connections to the provincial highway network;
    d. The structural capacity and geometric design of the roadway to accommodate truck weights and dimensions;
    e. Adequate clearance from overhead structures and obstructions;
    f. Traffic lanes are of an adequate width;
    g. Steep grades, in excess of 4 per cent, are avoided, where practical; and

h. The roadway has adequate capacity to accommodate the truck traffic.

4. Recommended County Road goods movement corridors include

   a. CR 50, between Highway 9 and Highway 89
   b. CR 10, between Highway 9 and Highway 89
   c. CR 1, between CR 50 and CR 10,
   d. CR 7 and the 27/28 Sideroad (to be assumed as a County Road as part of the interim Stayner By-Pass discussed in Section 5.5), and
   e. Line 7 and Line 6 (Oro-Medonte), between Highway 11 and Highway 400 (to be assumed as future County Roads as discussed in Section 5.5).

5. Existing Provincial Highways identified as good movements corridors include, Highways 400, 89, 93, 12, 11, 26, and the proposed Highway 404 extension.

6. The County should also develop a route map identifying what roads can accommodate oversized loads and indicate where there are specific restrictions in terms low height clearances, restricted turning radii, seasonal weight restrictions or structural weight limits on bridges. This map should be made available on the website, and provided to the road authority that is responsible for issuing oversize/overweight permits to trucks moving these goods. This issue was raised by area municipalities that trucks carrying wide loads are sometimes encounter obstacles on the County road system.

7. The County should continue to update its By-Law No 4558 "Exceptions to Axle load weight restrictions" as County Roads and bridges continue to be upgraded to accept loads in compliance provincial weight restrictions for commercial vehicles.

Rail Corridors

1. The County recognizes the importance of rail service to the community and will encourage and support rail service improvements that enhance the movement of people and goods to/from and through the County.

2. Existing Rail corridors within Simcoe County should be identified as Goods Movement corridors, including:

   i) the CNR Rail line, though Ramara and Severn Townships,
   ii) the CNR Bradford line through Bradford-West Gwillimbury, Innisfil, and Barrie;
   iii) the CPR Rail line through the Town of New Tecumseth, and the Townships of Essa, Springwater, Oro-Medonte, and Severn; and

iv) the Barrie-Collingwood Railway line, through Barrie, Essa and Clearview Townships, and the Town of Collingwood.

3. The County will work with rail companies, GO Transit, and local municipalities to minimize conflicts between rail facilities and adjacent land uses, wherever possible.

4. The County will consider and protect for the development of long term inter-modal facilities where appropriate rail/road freight integration opportunities exist and where land use policies permit.

5. County shall cooperate with the appropriate agencies and rail companies with respect to the location, planning, design, construction and safety of new rail facilities.

6. Where rail facilities are to be relocated or abandoned, the County shall ensure that the lands are redeveloped for uses appropriate to the County's overall land use and transportation plans. Where feasible, the County shall endeavor to acquire abandoned rail lines and protect these lands from incompatible use and from adjacent incompatible land uses that would preclude their use as future goods movement corridors.

7. The County shall cooperate with the appropriate agencies and rail companies to protect for future infrastructure improvements such as grade separated rail crossings or rail corridor widening wherever possible.

8. Planning for land uses on each side of a rail corridor or yard should be comprehensively evaluated with a view to:

   i) Minimizing trespass problems. For example, schools or commercial uses located across the railway corridor from residential uses are likely to lead to trespass issues if there are no formal public crossings in the immediate vicinity;

   ii) Implementing safety and sound attenuation features (protective berms/buffers, building setbacks, security fencing for trespass deterrence, sound barriers, plantings, etc.) where required;

   iii) Ensuring site access and crossing reviews are completed, including ensuring adequate site access setbacks from at-grade crossings (to prevent vehicular blockage of crossings), protecting at-grade road/rail crossing sightlines, crossing improvements and discouraging new at grade road crossings. The recommendations include a minimum 30 meter distance between the railway right-of-way and any vehicular ingress/egress. In addition, trees, utility poles, mitigation measures, etc. are not to block sightlines or view of the crossing warning signs or systems;

   iv) Ensuring that the existing drainage pattern is not negatively affected. Municipalities should consult with railways regarding proposed land development and/or infrastructure projects which may have impacts on existing drainage patterns. Proposed alterations to the existing drainage pattern affecting Railway property should receive prior concurrence from the Railway;

   v) Protection of expansion capacity for rail facilities, particularly where rail and passenger service opportunities have been recommended in this plan or exist in the same corridor; and

vi) Incorporating appropriate notification clauses (e.g. rail operation warning clauses) to future residential property owners. Such warning clauses should be registered on title if possible and be inserted into all agreements of purchase and sale or lease for the affected lots/units, where feasible.

9. Development review of residential or other sensitive land uses proposed adjacent to railway facilities should include noise and vibration studies to assess the suitability of the proposed use and to recommend mitigation requirements. The recommended mitigation requirements should then be identified in any subsequent conditions of approval. Noise and vibration studies should be considered for significant rail facility expansions that bring rail activity closer to sensitive land uses. The following guidelines from the Railway Association of Canada (RAC)/Federation of Canadian Municipalities (FCM) Proximity Guidelines are recommended and outline minimum noise influence areas to be considered for each type of rail facility when undertaking noise studies:

   - Freight Rail Yards = 1,000 m
   - Mainline Rail Corridors = 300 m
   - Secondary Lines, Branch Lines, Spur Lines = 250 m

   The recommended minimum vibration influence area is 75 m from a railway corridor or rail yard.

10. New development applications adjacent to railway facilities should incorporate building set back requirements and/or berms to minimize safety concerns and reduce adverse impacts associated with the proximity to the rail corridor. The recommended minimum building setbacks and berm heights (in accordance with the RAC/FCM Proximity Guidelines and Best Practices Report, August 2007) are as follows:

    - Rail freight yard - 300 m setback (for residential uses)
    - Mainline - 30 m setback, 2.5 m berm height
    - Branch/Spur line - 15 m setback - 2.0 m berm height (for branch line)

11. For any new development, including parks or trails proposed adjacent to rail corridors or yards, a minimum 1.83 m high security fence should be constructed and maintained by the proponent along the entire mutual property line to reduce trespass.

12. Municipalities should work with railways and other levels of government to increase coordination for development approvals that also require rail regulatory approvals (e.g. new road crossings) to ensure that the respective approvals are not dealt with in isolation and/or prematurely.

Protection of Future Inter-Regional Goods Movement Corridors

Recognizing that goods movement by truck will continue to be the dominant mode of transport for many goods in Ontario, a number of Provincial corridors are needed to be protected as Goods Movement corridors in order to maintain the competitiveness of the Simcoe Area and Central Ontario economies. Anticipated traffic congestion on the Provincial Highway network, due to planned growth in the Greater Golden Horseshoe, will result in less reliable goods movement corridors and negative impacts on the Simcoe Area and potentially the entire Central Ontario economy if improved capacity is not provided.

Simply adding capacity to existing routes may not be the optimum method of protecting the integrity of strategic goods movement routes. In addition to expanded capacity, corridor choice opportunities are just as important in ensuring that time sensitive goods movement can still be accommodated in the event of incidents on the highway network that require closures of major provincial facilities. It is recommended that the County engage in discussions with the Ministry of Transportation (MTO) and the Ministry of Energy and Infrastructure (MEI) to develop new/improved goods movement corridors through the Simcoe County area as an alternative to the Highway 400 corridor. Given the anticipated growth in traffic on the Highway 400 corridor, new corridors are critical to protect both local and provincial long term goods movement interests.

The planning and protection of a Controlled Access Highway By-Pass of the City of Barrie will provide an alternative Goods Movement corridor around the City of Barrie to protect the movements to the Highway 400 and Highway 11 corridors to the North. This is particularly important to areas such as Midland where approximately 27% of the employment is manufacturing based industries. The community is struggling to retain current manufacturing businesses and to attract new industry over concerns that these businesses will not be as competitive or sustainable in light of the predicted increase in traffic congestion on the Highway 400 corridor.

The previously recommended Highway 400/404 Link (Bradford By-Pass) is also a key provincial route that would serve as key goods movement corridor linking Simcoe County to the GTA. This route would provide an efficient connection to the Highway 404 corridor for commercial traffic that:

- Provides route choice, particularly for trucks accessing the industrial nodes and urban growth centres in East Toronto, Markham, Richmond Hill, and the Durham Region areas;
- Provides relief to growing truck traffic demands and congestion on other east-west provincial facilities and municipal roads, such as Highway 9, Green Lane, and even as far south as Highway 401;

- Provides an alternative route to Highway 400 in the event of weather or other incidents that often close this key facility.

It is also recommended that the County support and protect rail based goods movement corridors now. Factors such as the increase in oil and gas prices could change the future dynamics of goods movement logistics which are not only time sensitive but cost sensitive. The County should provide support and help facilitate upgrading of rail track of the Barrie/Collingwood Railway to support higher grade of service and protect other existing corridors from uses that would impede their function as goods movement corridors in the future.

5.5. A Plan for Road Network Optimization

The need for optimization of the existing transportation network is a key requirement for any 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 to improve system performance.

Based on a review of the existing road network, opportunities available to enhance existing network capacity, and best practices used in other comparable jurisdictions, the Transportation Master Plan has identified three key components of a Road Network Optimization Strategy. These components are an enhanced road network classification system, a strategy for optimizing the capacity of existing roads, and an access management framework to protect key County Roads from incompatible development that would interfere with the inter-municipal function provided by the County Road system. The following sections outline the key policy directions in each area.

5.5.1. Road Rationalization/Classification

The development of a road classification system assists the County in prioritizing capital funding and maintenance programs. This classification system underpins the road network optimization approach recommended in the Transportation Master Plan, and provides a framework to assist with day-to-day decision making, priority setting and policy management.

The first challenge in updating the County Road Classification System was to decide what key criteria should be used to differentiate a County Road from a local municipal road. There are a number of jurisdictions

Road Rationalization Criteria

- *Connects Municipalities/Population Centres*
- *Connects to upper-tier road in neighbouring jurisdiction*
- *Connects a provincial highway to a population centre >5 km distance*
- *Average Annual Daily Traffic Volume*
- *Functions as Commercial Goods Corridor*
- *Connects Major Recreational Centre to Provincial Highway*
- *Provides Urban Congestion Relief/By-pass*
- *Designated Emergency Detour Routes*

that have used a technical criteria based approach to rationalizing their road network and determining which roads serve which functions. As part of our review, approaches used by Simcoe County in the past were compared to approaches previously used by the Ministry of Transportation, and more recently by Grey County, Essex County, and the Ontario Good Roads Association. Based on these different approaches, 8 key criteria, as noted in the inset, were selected to represent the key functional characteristics of a typical County Road.

Each of the criteria were assigned a weighting factor, to reflect the relative importance placed on the individual criteria relative to the role a County Road plays in the overall transportation system. A scoring system was developed to determine a minimum threshold for a roadway to be considered as County Road, and the scoring was also used to determine the functional classification of each road within the recommended County Road System. The roads were classified into three categories: Controlled Access, Primary Arterial and Secondary Arterial Roads. The recommended road classification for Simcoe County Roads is presented in Figure 5.7.

Through the road rationalization process, the functional classification of each County Road was confirmed. A number of roads were recommended for transfer to the local municipality and other local roads were recommended for upload to the County. A more detailed description of the County Road Classification System used in this study and further details of the Road Rationalization assessment can be found in Appendix F.

Implementation of changes to the County Road System should be undertaken in the short term, although some of the roads recommended for upload to the County may need to be subsequently upgraded to meet County Road standards. These improvements would be undertaken over the medium to long term, and a recommended approach to phasing these changes has been presented in Chapter 6. In the short term, it is recommended that the County initiate discussions with affected municipalities to develop more detailed implementation plans for funding, improvements and timing of road transfers (both uploads and downloads) recommended in this plan. A summary of the road network rationalization results is provided below.

Roads Recommended for Transfer to Local Municipalities

1) County Road 8/Canal Road (Entire length)– to Town of Bradford West Gwillimbury

2) County Road 39 (Entire length) – to Town of Innisfil

3) County Road 49 – to City of Orillia

Roads Recommended for Transfer From Local Municipality to County

1) 5 Sideroad Innisfil (CR 88 to Barrie City limits) – from Town of Innisfil
2) 10 Sideroad Innisfil (Line 5 to CR 21) - from Town of Innisfil and Town of Bradford West Gwillimbury
3) 5th Line, New Tecumseth – from Town of New Tecumseth and Town of Bradford West Gwillimbury
4) Wilson Drive (Barrie Limits to Highway 26) – from Township of Springwater
5) Flos Road 4 (Highway 93 to Springwater/Clearview boundary) – from Township of Springwater
6) 12 Concession (Springwater/Clearview boundary to CR 7) – from Township of Clearview
7) 27/28 Sideroad (CR 7 to CR 124) – from Township of Clearview
8) Poplar Sideroad (Highway 26 to 10th Line) – from Township of Clearview/Town of Collingwood
9) 10th Line (Poplar Sideroad to CR 32) – from Township of Clearview/Town of Collingwood
10) Line 5/Line 6 (Highway 12 to Highway 400) – from Township of Tay
11) Line 6 (Highway 400 to CR 22)/Line 7 (CR22 to Highway 11) – from Township of Oro-Medonte
12) Division Road (Highway 12 to Highway 11) – from Township of Severn

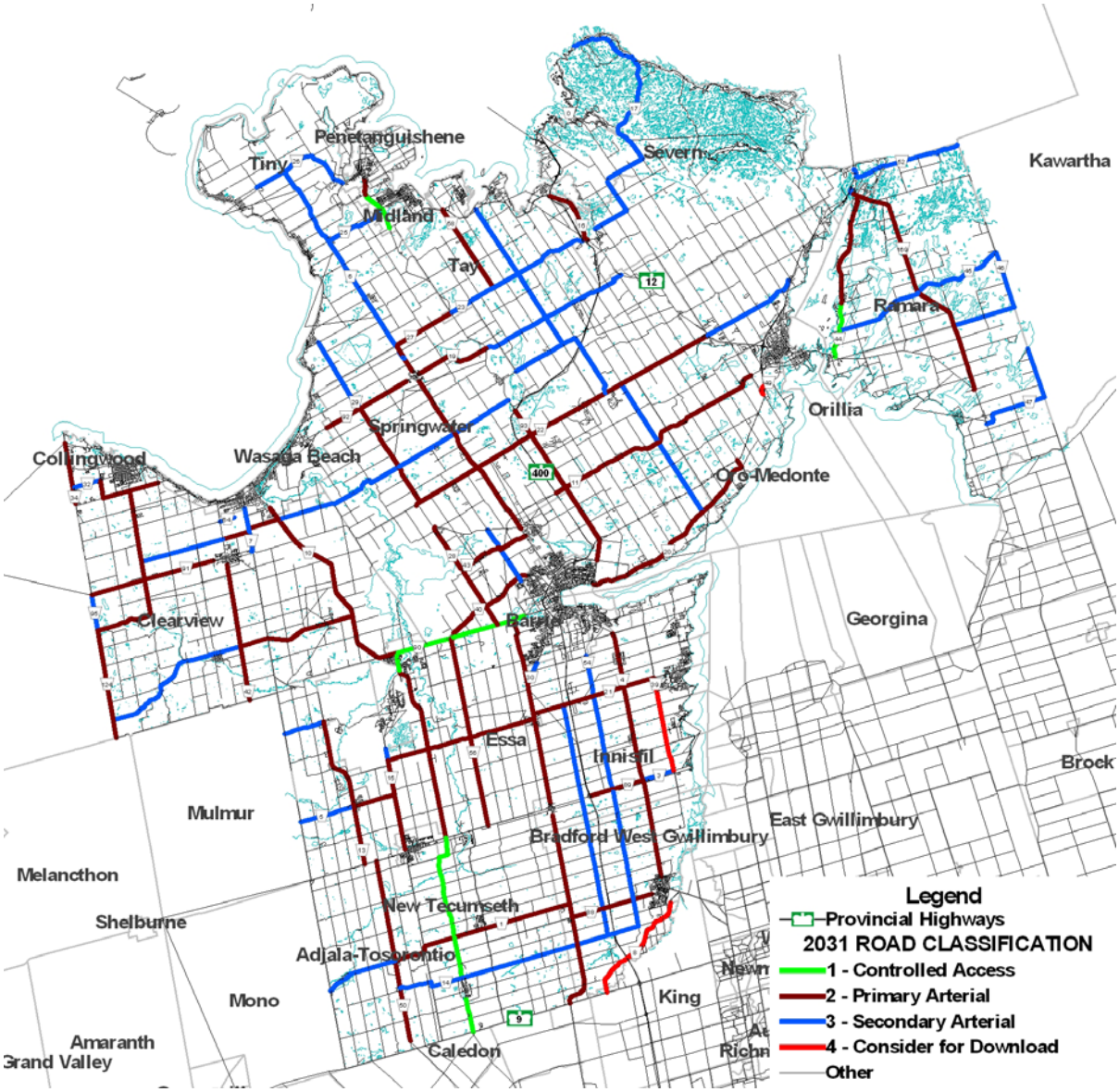


Figure 5.7 - Recommended 2031 County Road Classification

5.5.2. County Road Capacity Optimization

The plan for Road Network Optimization also includes optimizing the capacity of the County Road System to make sure the existing road system works effectively. Since the operation of major intersections along a roadway often deteriorate before the roadway will reach its functional capacity, strategic improvements to these key intersections can defer the need for more costly widening or the construction of new roads. Localized improvements such as the construction of turning lanes at key intersections can increase the capacity of the through lanes, by removing turning vehicles from the

through traffic flow. On busier roads with numerous entrances, two way left turn lanes can be implemented to achieve the same objectives. The key objective is to protect the integrity of the existing road network and the county road function.

Within this context the County of Simcoe should implement the following optimization measures and policies:

- The County should develop an annual intersection improvement program that is tied to and prioritized based on the County Road classification system. Funding for this program should be allocated in the annual budget process and should be targeted at between 10-15% of the capital budget for transportation, depending on identified needs. This allocation is in addition to funding for road reconstruction and rehabilitation, which is an important aspect of maintaining the existing road system and is driven by pavement conditions and/or structural bridge conditions and rehabilitation needs.
- All primary County Roads should receive signal priority (where signals are provided) during peak periods,
- The County should adopt a maximum volume to capacity ratio target of 0.85 before road widening should be considered,
- Consider intersection operational improvements, such as turning lanes, in primary County Road corridors as an initial improvement prior to widening. Separate left turn lanes should be considered where turning volumes exceed 60 vehicles per hour (both signalized and unsignalized intersections)
- The County should work with the Ministry of Transportation, Emergency Service Providers, and local municipalities to develop Emergency Road Closure action plans to accommodate traffic that is re-routed to the County/local road network in the event of closures of the Provincial Highways in Simcoe County. For example, when Highway 400 is closed, the roads through the adjacent municipalities are paralyzed and gridlock often ensues. A formal plan will outline what routes are to be used in case of emergency, what signing is required to guide motorists back to the Provincial Highway, and will identify improvements that are necessary to enable these route to function more efficiently during major closures.
- To protect the integrity of these Emergency Detour Routes, it is recommended that the County assume these routes as County Roads (where they are outside of the existing built up areas of Barrie and Orillia). The County should also upgrade these routes to County Road Standards and apply the same access management policies that are applied to other County Roads.

5.5.3. 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%. Within this context, the County of Simcoe should implement the access management policies outlined in section 5.5.4 into their site planning and development processes and policies.

The County recently enacted the Simcoe County Entrance By-law No 5544 which regulates the construction, alteration or change in the use of any private or public entranceway, gate or other structure or facility that permits access to a County Road.

5.5.4. Policies to Support Road Network Optimization

The preferred strategy for road network optimization suggests an aggressive approach to maintaining and enhancing the capacity of key arterial roads in the County. This should be achieved through a combination of localized intersection improvements, optimization, access management policies and improvements. The following policies and best practices should be implemented by the County.

1. County Roads are facilities where traffic movement is the primary consideration while land access is a secondary function. County Roads normally carry medium to high traffic volumes and a high level of access control is to be exercised along them.
2. All County Roads are considered Arterial Roads and are classified as Controlled Access, Primary, or Secondary County Roads.
3. The County should establish and maintain guidelines for the preparation of transportation impact studies to be carried out to assess the impact on the Transportation Master Plan, the road system and adjacent land uses from proposed developments and land use changes that will result in a significant increase in traffic.
4. New entrances or alterations to existing entrances on Primary and Secondary County roads shall be in accordance with the applicable Simcoe County Entrance By-Law.
5. For Controlled Access Roads, the County should develop a By-law similar to By-Law 4396 enacted for County Road 90, outlining policies for access controls on future Controlled Access Roads.
6. All County Roads in the County should be given signal priority (where applicable) during peak hours regardless of increased delays to side road traffic.
7. Accesses to major commercial or industrial developments that generate significant volumes of traffic should be treated the same as local/collector roads, and a spacing of 250-300 m should be provided between access points/adjacent intersections, depending on the County Road Classification.
8. New developments should emphasize access via local/collector side roads where feasible. Direct access should be avoided where possible. Where a side road access is unavailable, careful consideration should be given to design the entrance and ensure adequate spacing to adjacent

entrances/signalized intersections. At the intersection of two County Roads or a County Road and High Volume Local Arterial Road, a private entrance should be located on the road carrying the lesser volume of traffic. At the intersection of two County Roads or a County Road and High Volume Local Arterial Road with similar traffic volumes, a private entrance should be located on the facility that allows the maximum corner clearance (distance from the existing intersection)

9. The County should adopt a maximum volume to capacity ratio of 0.85 as the relevant service target for overall signalized intersection performance before network improvements are required. At an intersection, a maximum volume to capacity ratio of 0.90 should be permitted for left turn movements, and a maximum volume to capacity ratio of 0.85 should be maintained for other individual movements.

10. Signalized intersections on the above noted County Roads should incorporate separate left turn lanes where turning volumes exceed 60 vph or where turning lanes can be shown to improve through capacity.

11. Ensure that access management policies and associated warrants and design standards are readily made available to the development industry. The County should attempt to identify access management concerns early in the site plan approval process and (if possible) during the site design process.

12. Where safe access or intersection operations cannot be provided, or where a proposal either alone or in combination with existing conditions is determined by the County to be detrimental to the operation of a County Road, such access or intersection operation proposals may be denied. In these cases, the County will endeavor to identify alternative solutions for consideration by the applicant, including:

    i. Use of mutually shared access arrangements with adjacent properties, (if land uses and projected traffic volumes are compatible and acceptable to the County).
    ii. Access consolidations for existing entrances.
    iii. Other access restrictions including centre medians, right-in/right-out entrance designs, turning restrictions, etc

13. For County Roads passing through urbanized areas, Two Way Left Turn Lanes should be considered to improve capacity where the entrance density exceeds 25 commercial entrances per km (residential entrances should not be included in calculation of entrance density).

14. Ensure application of acceptable design guidelines (i.e. TAC standards) for geometric design components of driveways.

15. For commercial sites with direct access to a County Road, the minimum distance back from the ultimate property line to the nearest parking stall or cross isle (clear throat distance) should be:

    - 6 m to 8 m for all developments with less than 50 parking stalls
    - 8 m to 15 m for developments with 50-199 parking stalls
    - 18 m for developments with 151-200 parking stalls
    - 15 m to 24 m for developments with over 200 parking stalls

The functional classifications of Provincial Highways and County roads are illustrated on **Figure 5.7** and are recommended for implementation in Schedule 5.5 of the Official Plan. Incorporation of new County Roads or the reclassification of existing roads shall require an amendment to this Official Plan. Additional policies for each Classification of County Road are summarized below and should be incorporated into the County Official Plan.

Provincial Highways

The following general policies shall apply to Provincial Highways:

1. There are six provincial highways located within the County – Highway 400, Highway 93, Highway 89, Highway 26, Highway 12 and Highway 11. Development which falls within the Ministry of Transportation's permit control area is subject to the requirements of the Ministry of Transportation.
2. New entrances or the upgrading of entrances within the Ministry of Transportation's permit control area of a provincial highway shall be subject to the approval of the Ministry of Transportation. This may increase the access and traffic signal spacing requirements outlined for Controlled Access, Primary and Secondary Arterial roads which intersect with a provincial highway.
3. The County, area municipalities and the Ministry of Transportation will work cooperatively with respect to the planning of land development and associated access connections within the Ministry of Transportation's permit control area adjacent to all provincial highways and interchanges within the County, to protect the future capacity and operation of both the provincial highway network and the County's transportation facilities.

Controlled Access County Roads

The following general policies shall apply to a Controlled Access County Roads:

1. A Controlled Access County Road is designed to carry large volumes of intra municipal and inter regional traffic through the County in association with other types of roads and its primary function is to:
   - Connect major centers/settlement areas within and outside the County.
   - Accommodate long distance person or goods movement travel through the County between major activity areas. Traffic movement is the primary consideration.
2. The basic minimum right of way widths for Controlled Access County Roads shall range from 36 to 45 metres,
3. The basic right of way width for a Controlled Access County Road may require 40m should Active Transportation infrastructure or a new trail be provided in the right-of way.
4. The right of way widths of Controlled Arterial Roads at major intersections should be increased to include provisions for left turn lanes. Right turn lanes may also be required to be provided at major intersections;
5. Traffic signals will be well spaced and at least 300 metres apart;
6. Controlled Access County Roads will generally serve major commercial, industrial and or growth areas and driveway access will be strictly controlled.
7. Where a Controlled Access County Road has existing driveways at a density of 25 entrances per kilometre or greater, a centre left turn lane may be required to be provided.
8. Access to Controlled Access County Roads shall be in accordance with County of Simcoe Bylaw 4396 or its successor.

Primary County Roads

The following general policies shall apply to Primary County Roads:

1) A Primary County Road is designed to carry large volumes of intra municipal and inter regional traffic through the County in association with other types of roads and its primary function is to:
   - Connect major centers/settlement areas within and outside the County.

- Accommodate long distance person or goods movement travel through the County between major activity areas. Traffic movement is the primary consideration.

2) The basic minimum right of way widths for Primary County Roads shall range from 30.5 to 45 metres, with 36.0 being the preferred minimum;

3) The basic minimum right of way width for a Primary County Road may require 40m should Active Transportation infrastructure or trail be provided in the right-of way.

4) The right of way widths of Primary County Roads at major intersections should be increased to include provisions for left turn lanes. Right turn lanes may also be required to be provided at major intersections;

5) Traffic signals shall be well spaced and at least 300 metres apart;

6) Primary County Roads will generally serve major commercial and industrial areas and driveway access will be strictly controlled and kept to a minimum.

7) Where a Primary County Road has existing driveways at a density of 25 entrances per kilometre or greater, a centre left turn lane may be required to be provided, and

8) Access to Primary County Roads shall be in accordance with the County of Simcoe Entrance By-Law.

Secondary County Roads

The following general policies shall apply to Secondary County Roads:

1. A Secondary County Road is designed to carry moderate volumes of intra municipal and inter regional traffic through the County in association with other types of roads and its primary function is to;
   - Connect two or more settlements or major activity centers within the County;
   - Connect between two primary arterial roads; or
   - Connect a settlement or activity center with a primary arterial road.
   - Provide access to local properties and intersecting municipal roads or local streets that intersect with it. Traffic movement major consideration.
2. The basic minimum right of way widths for Secondary County Roads shall range from 30.5 to 36 metres;

3. Minimum intersection spacing should be 250m, except where mid block intersections with minor local roads are required to service existing land uses.
4. New local road connections to Secondary County Roads shall maintain the minimum 250 m spacing;
5. Secondary County Roads will generally serve residential, commercial and industrial areas and driveway access may be considered but controlled and kept to a minimum;
6. Access to Secondary County Roads shall be in accordance with the County of Simcoe Entrance By-law.

Table 5.1 indicates the desired right-of-way for existing and future county roads.

Table 5.1 – Road Right-of-Way Widths

SIMCOE COUNTY FUTURE ROAD SYSTEM (ROAD RIGHT OF WAY)			
COUNTY ROAD NO.	**DESCRIPTION**	**NEW PROPOSED CLASSIFICATION**	**NEW PROPOSED REQUIRED BASIC R.O.W. WIDTHS**
1	County Road 27 to County Road 50	Primary Arterial	30.5 m
	County Road 50 to Simcoe/Dufferin Boundary Road	Secondary Arterial	30.5 m
3	County Road 4 to County Road 39	Secondary Arterial	36.0 m
4	Town of Bradford Limits to City Limits of Barrie	Primary Arterial	45.0 m
5	County Road 15 to Simcoe/Dufferin Boundary	Secondary Arterial	30.5 m
6	County Road 27 to County Road 26	Primary Arterial	30.5 m
7	Highway 26 to 27/28 Sideroad Nottawasaga	Secondary Arterial	45.0 m
	27/28 Sideroad Nottawasaga to Wasaga Beach	Secondary Arterial	36.0 m
8*	Highway 9 to Bradford	Secondary Arterial	20.0 m
9	County Road 10 to Creemore	Primary Arterial	30.5 m
	Creemore to 1.8km East of Grey Boundary	Secondary Arterial	30.5 m
	1.8km East of Grey Boundary to Grey Boundary	Secondary Arterial	30.5 m
10	Highway 9 to Industrial Parkway (Including Tottenham By-Pass)	Controlled Access	40.0 m (36.0 metre minimum where constraints exist)
	Industrial Parkway to Hwy 89	Controlled Access	45.0 m
	Hwy 89 to Town of Wasaga Beach	Primary Arterial	40.0 m (36.0 metre minimum where constraints exist)
11	Concession 1 former Orillia Township to Highway 400	Primary Arterial	30.5 m
12	Lisle to Dufferin Boundary	Secondary Arterial	30.5 m
13	Highway 89 to Lisle	Secondary Arterial	30.5 m
14	County Road 10 to Colgan	Secondary Arterial	30.5 m
	Colgan	Secondary Arterial	20.0 m
	Colgan to County Road 50	Secondary Arterial	30.5 m
15	Alliston to C.F.B. Borden	Primary Arterial	30.5 m
16	Highway 12 to Highway 400	Primary Arterial	30.5 m
17	Coldwater to Concession 3/4	Secondary Arterial	30.5 m
	Concession 3/4 to Muskoka	Secondary Arterial	30.5 m
19	Highway 12 to Hwy 93	Primary Arterial	30.5 m
	Hwy 93 to Elmvale	Secondary Arterial	30.5m
20	Highway 11 to Hawkstone	Secondary Arterial	30.5 m
	Hawkstone to Barrie	Secondary Arterial	30.5 m
21	County Road 27 West	Primary Arterial	30.5 m
	County Road 27 East	Primary Arterial	40.0 m (36.0 metre minimum where constraints exist)
22	Highway 12 to Highway 26	Primary Arterial	36.0 m
23	Highway 93 (Waverley) to Highway 400 (Coldwater)	Secondary Arterial	30.5 m
25	County Road 93 to County Road 6	Secondary Arterial	30.5 m
26	Penetanguishene to County Road 6	Secondary Arterial	30.5 m
	County Road 6 to Lafontaine	Secondary Arterial	30.5 m
27	Highway 9 to County Road 90	Primary Arterial	40.0 m (36.0 metre minimum where constraints exist)
	Highway 26 to Hwy 93	Primary Arterial	
28	County Road 90 to Highway 26	Primary Arterial	30.5 m
29	County Road 22 to County Road 92	Primary Arterial	36.0 m
	County Road 92 to Concession 3/4 Tiny	Secondary Arterial	30.5 m
30	County Road 27 to City of Barrie Limits	Secondary Arterial	40.0 m (36.0 metre minimum where constraints exist)
32	Collingwood to Grey Boundary/County Road 34	Secondary Arterial	36.0 m
34	Simcoe/Grey Boundary Road	Primary Arterial	40.0 m (36.0 metre minimum where constraints exist)
39*	County Road 3 to County Road 21	Secondary Arterial	40.0 m (36.0 metre minimum where constraints exist)
40	Barrie to Dobson Road	Secondary Arterial	40.0 m
	Dobson Road to County Road 90	Secondary Arterial	36.0 m
42	Dufferin Boundary to Stayner	Primary Arterial	36.0 m
43	Highway 26 to County Road 28	Primary Arterial	36.0 m
44	County Road 169 to Benson Road/ Consession 2	Primary Arterial	30.5 m
	Highway 12 to Benson Road/ Consession 2	Controlled Access	36.0 m
45	County Road 44 to City of Kawartha Lakes	Secondary Arterial	30.5 m
46	County Road 169 to Simcoe County Boundary	Secondary Arterial	30.5 m
	Victoria/Simcoe Boundary to County Road 45	Secondary Arterial	30.5 m
	County Road 45 to Concession E/F	Secondary Arterial	20.0 m
47	Highway 12 to Simcoe/Victoria Boundary	Secondary Arterial	30.5 m
	Simcoe/Victoria Boundary to Concession 7/8	Secondary Arterial	30.5 m
49*	City of Orillia Limits to Highway 11	Primary Arterial	30.5 m

50	Highway 9 to Highway 89	Primary Arterial	40.0 m (36.0 metre minimum where constraints exist)
52	Highway 11 Easterly to Muskoka Boundary	Secondary Arterial	20.0 m
	Muskoka/Simcoe Boundary Road	Secondary Arterial	20.0 m
54	County Road 21 to Barrie	Secondary Arterial	40.0 m (36.0 metre minimum where constraints exist)
56	Highway 89 to County Road 90	Primary Arterial	40.0 m (36.0 metre minimum where constraints exist)
58	County Road 23 to Highway 12	Secondary Arterial	30.5 m
64	Highway 26 to Landfill Site	Secondary Arterial	20.0 m
88	County Road 27 to 10th Sideroad BWG	Primary Arterial	45.0 m
89	County Road 3 to Highway 400	Primary Arterial	40.0 m (36.0 metre minimum where constraints exist)
90	Barrie to Concession 4/5	Controlled Access	45.0 m
	Concession 4/5 to Base Borden	Controlled Access	40.0 m
91	Highway 26 to County Road 124	Primary Arterial	36.0 m
	County Road 124 to Grey County	Primary Arterial	36.0 m
92		Primary Arterial	36.0 m
93	City of Barrie Limits to Highway 11	Primary Arterial	36.0 m
	Highway 11 to Highway 400	Primary Arterial	36.0 m
	Highway 12 to Vinden St.	Controlled Access	36.0 m
	Vinden St. to Town of Penetanguishene Limits	Primary Arterial	36.0 m
95	County Road 124 to Grey County Road 19	Secondary Arterial	30.5 m
124	Collingwood to Dufferin County	Primary Arterial	36.0 m
169	Highway 12 to Highway 11	Primary Arterial	40.0 m (36.00 metre minimum where constraints exist)
* Note: Potential transfer to lower tier municipality. Subject to agreement between the County of Simcoe and Area municipality.			
Proposed New County Roads			
5th Line (CR 14 extension New Tecumseth)	CR 10 to Highway 400	Secondary Arterial	30.5 m
5 Sideroad (Bradford West Gwillimbury/Innisfil)	Line 5 (Bradford West Gwillimbury/Innisfil) to CR 21	Secondary Arterial	30.5 m
10 Sideroad (Bradford West Gwillimbury/Innisfil)	Line 5 BWG to CR 21 Innisfil	Secondary Arterial	36.0 m
Wilson Road (Springwater)	Ferndale Drive to CR 43	Secondary Arterial	40.0 m
Wilson Road (Springwater)	Cr 43 to Highway 26	Secondary Arterial	30.5 m
Flos Road 4 (Springwater)	Highway 93 to Strongville Rd.	Secondary Arterial	30.5 m
12 Concession Sunnidale (Clearview)	Strongville Rd.(Clearview/Springwater Line) to CR 10	Secondary Arterial	30.5 m
12 Concession Sunnidale (Clearview)	CR 10 to CR 7	Secondary Arterial	36.0 m
27/28 Sideroad (Clearview)	CR 7 to Highway 26	Primary Arterial	36.0 m
27/28 Sideroad - Clearview	Highway 26 to CR 124	Secondary Arterial	30.5 m
Poplar Sideroad (Collingwood/Clearview)	Highway 26 to 10th Line Collingwood	Primary Arterial	36.0 m
10th Line (Collingwood/Clearview)	Poplar Sideroad to CR 32	Primary Arterial	36.0 m
Line 5 (Oro-Medonte)	Mt. St. Louis to Highway 12	Secondary Arterial	30.5 m
Line 6 Oro(Oro-Medonte)	CR 22 to Mt. St. Louis Rd.	Secondary Arterial	30.5 m
Line 7 Oro (Oro-Medonte)	Highway 11 to CR 22	Secondary Arterial	30.5 m
Mt. St. Louis Rd (Oro-Medonte)	Line 5 to Line 6	Secondary Arterial	30.5 m
Division Road (Severn)	Highway 12 to Highway 11	Secondary Arterial	36.0 m

Long Term Corridor Protection areas shall be preserved so that the corridors will be available to meet the long term transportation demands of the County. When these new corridors are constructed and open to traffic they may be considered as Controlled Access, Primary County or Secondary County Roads without amendment to the Official Plan. Long Term Corridor Protection areas shall also be used to protect for future County Road and/or Provincial Highway corridors, as outlined in the Recommended Road Network Plan. The County should work with the Ministry of Transportation and local municipalities to control land use around these Long Term Corridor Protection areas to ensure that new development patterns and uses are compatible with and do not preclude the implementation of new provincial infrastructure when it is determined to be required. **Figure 5.8** illustrates areas that should be protected for future transportation corridors. These include a future Highway 400/404 Link (Bradford By-Pass), Barrie By-Pass, Highway 26 By-Pass around the Town of Collingwood, a potential Thornton By-Pass and potential By-Pass of Beeton.

Although potential by-passes of settlement areas of Thornton and Beeton are not required to address network capacity deficiencies within the 2031 planning horizon, it is recognized that they may be required to relieve localized congestion associated with local development in these settlement areas. While the County recognizes the desire of the Town of New Tecumseth to protect for a By-Pass of Beeton, the municipality is encouraged to protect for this corridor in their Official Plan and consider options to provide this by-pass connection through the planning and design of the local road network, or as part of the land use planning process for new developments in the community.

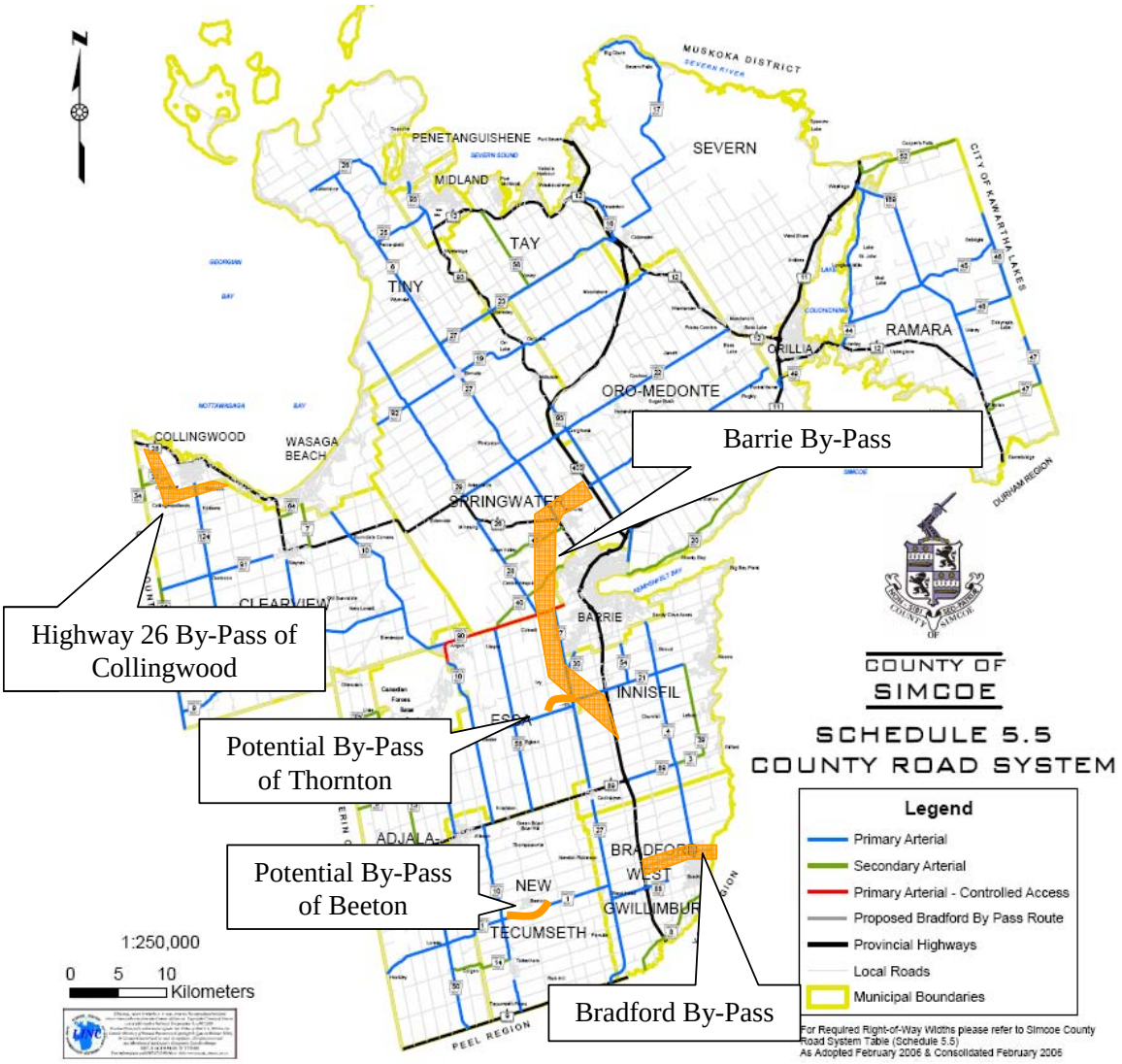


Figure 5.8 – Corridors for Long Term Protection

5.6. A Plan for Road Network Improvements

5.6.1. Key Elements of the Plan

The Transportation Master Plan was initiated by the County to review its transportation needs for the next 25 years, based on the provincially designated growth forecasts outlined in the Places to Grow Growth Plan for the Greater Golden Horseshoe, and the Simcoe Area Growth Plan. The effectiveness of a series of transportation strategies (e.g. cycling, transit, TDM etc.) were examined based on their ability to address future transportation demands and an attempt was made to solve the deficiencies as much as possible through non-automobile oriented solutions.

However, even with an aggressive approach to encouraging future travel via non-auto transportation modes, there will still be a need for road improvements. The County will be challenged to maintain the current 1.4% share of trips made by transit as growth continues in areas that currently do not offer local/or inter-regional transit services. To meet a target of 3% of future trips made by transit, significant investments in local/inter-regional transit infrastructure will be required, as outlined in earlier sections of this plan. Even with an aggressive emphasis on transit and other non-auto modes of travel, road improvement improvements will still be required.

The implementation of planned and committed projects will address some of the future transportation needs in the community; however, many of the road segments in the County will still be approaching or over capacity in 2031 with these improvements in place. Based on forecasts of future travel demands in 2031, new road capacity will be required in a number of areas in the County. Under the Environmental Assessment Process, municipalities are required to consider all aspects of the environment in their assessment and evaluation of infrastructure projects. The Environmental Assessment Act includes a broad definition of the "environment", including the technical, natural, social, cultural, built and economic environments. The EA Process requires a systematic evaluation of alternatives in terms of their advantages and disadvantages; and proponents are required to consider both positive and negative effects on the natural, social, cultural, and economic environments as part of their assessment and evaluation process.

As part of the overall Public Consultation Strategy for the Transportation Master Plan, the proposed evaluation criteria and indicators for use in evaluating subsequent road improvement alternatives were presented to the public and comments were requested. A full description of the evaluation criteria and

indicators used in the evaluation process can be found in the Evaluation of Road Network Alternatives contained in Appendix G.

The evaluation criteria were grouped under the four key areas established as part of the Class EA process:

- Technical
- Socio-Cultural Environment
- Natural Environment; and
- Economic Environment

For the purpose of evaluation, each network alternative was subjected to a detailed comparative evaluation, using a "Reasoned Argument Process", which describes the advantages and disadvantages (or positive and negative affects) of each alternative in response to the evaluation criteria. The projected capacity deficiencies on the road network are related to the system-wide capacity and operating characteristics of the County Road system in each area. Therefore, rather than examining each localized deficiency in isolation, road network alternatives were also developed on a system wide basis within a series of five (5) zones: South Simcoe, Central Simcoe, Georgian Triangle, Oro-Medonte/Orillia/Ramara and North Simcoe areas.

It is important to note that the evaluation criteria were developed recognizing the system-wide approach used in a Master Planning Study, and the fact that for many alternative improvements the specific route or design details are not developed at this stage of study. Detailed route planning or design is typically undertaken in Phase 3 of the EA process: Assessment of Design Alternatives. Thus, the evaluation compares the relative difference in potential affects that could be experienced as a result of the improvement rather than undertaking detailed assessments of specific affects, since the degree of impact could change significantly depending on the final route and/or design treatment chosen. A full description of the evaluation results and detailed assessment can also be found in Appendix G.

The road network improvements identified in this plan are not only needed to accommodate future auto traffic, but the infrastructure improvements are required to help facilitate and support other modes of travel as well, such as transit and goods movement. Given the prominent role that the provincial highway network plays in serving the travel demands in Simcoe County, these roadways will require extensive improvements as the County continues to grow, particularly for travel demands between Simcoe County and the GTA.

Previous studies completed by the Province have indicated the need for the extension of Highway 427 to serve this demand, combined with a widening of Highway 400 to 10 lanes. The Highway 400/404 Link (Bradford By-Pass) has also been recommended in previous studies as a new transportation corridor required to service growth in the Simcoe County area.

In light of the Province's decision not to proceed with the extension of Highway 427, Simcoe County will need to work with the province to identify alternative transportation solutions to improve inter-regional transit services to Simcoe County to accommodate planned growth designated under the Provincial Places to Grow Growth Plan. Recommendations in this regard were presented in the Transit component of this plan. Forecasting work completed during the preparation of this study has illustrated that transit enhancements and the emphasis on widening Highway 400 to 10 lanes will not address future travel demands on the provincial highway network in Simcoe County. Highway 400 through Barrie is forecast to be over capacity by 2031, even with the planned/approved widening to 10 lanes. Given the strategic importance of the Highway 400 corridor to the local economy in Simcoe County, and the regional economies in Northern and Central Ontario, it is recommended that the County strongly encourage the Province to consider opportunities to implement a Controlled Access Highway to by-pass the Barrie Area.

The Barrie By-Pass should generally be extended from Highway 400 in the Town of Innisfil, loop around the west side of Barrie to tie back in to the Highway 400 corridor just to the north of Midhurst. This corridor will help relieve pressure on Highway 400 through Barrie, and the existing Bayfield/Highway 26 corridor. It will also provide enhanced access to major tourist destinations in the Georgian Triangle in the western portion of the County. Highway 400 serves a variety of roles in the Barrie area. Not only does the corridor act as an economic and commuter link between the northern parts of Simcoe County, south Simcoe and the Greater Toronto Area – it also functions as a higher order arterial road for trips within Barrie and it acts as the gateway to northern Ontario and the western Canadian provinces. As traffic volumes increase with the levels of growth and employment forecasted for the Simcoe Area, congestion on Highway 400 through Barrie will have detrimental impacts on the region's infrastructure and economy. The recommended Barrie By-Pass will support strong goods movement to areas in the northern part of the County and protect the long distance trucking demands that are critical to the economy of Northern Ontario and the GTA itself.

Similarly, the Highway 400/404 Link (Bradford By-Pass) is a key initiative in the overall transportation network and will assist in protecting the integrity of Highway 400 to the south and provide route choice for motorists who commute to areas in the south and east. The Highway 400/404 Link (Bradford By-

Pass) also protects opportunities to facilitate more efficient transit movement to the Highway 404 corridor and should be planned to accommodate HOV lanes and a transitway to tie into the HOV network on Highway 404. This improvement will help spread future demands over two key Provincial corridors that feed into the GTA and help balance the travel demands between these two corridors. With the current growth and traffic pressures experienced in the South Simcoe Area, this facility is required in the short term time horizon. However, it is recognized that a for a facility this size, construction may take some time and as a result, the implementation of the Highway 400/404 Link (Bradford By-Pass) should be included in the Medium to Long Term horizon.

While all the Provincial Highway corridors play a key role the County of Simcoe's road network, the recommended Barrie By-Pass and the Highway 400/404 Link (Bradford By-Pass) are vital corridors in terms of protecting the ability for moving goods and people around and through Simcoe County, as well as in accommodating the growth that has been designated for this area. These two proposed corridors play a key role in the County and support the objectives of the Provincial Growth Plan by:

- facilitating ***improved linkages between urban growth centres*** in the Greater Golden Horseshoe for all modes of travel, including transit, HOV, and auto users;
- provide infrastructure to facilitate bus based inter-regional transit movements which are necessary to achieving an ***increased transit mode share*** in the County;
- will provide efficient goods movement corridors through and into Simcoe County that support to economy of the Greater Golden Horseshoe and Northern Ontario and are necessary precursors to ***attracting a strong employment base in Simcoe County that will support increased live-work opportunities*** in the Region; and
- Provides for the establishment of a goods movement route to facilitate the movement of goods into and out of areas of significant employment, industrial and commercial activity and to ***provide alternate routes connecting to the provincial network***.

Traffic congestion associated with future growth in the Collingwood area and the Town of Blue Mountains also requires improvements to the Provincial Highway network to address longer term travel demands. While a series of local road improvements has been studied by the area municipalities and the Ministry of Transportation has provided funding to construct an interim by-pass of Stayner and an alternate route for the Collingwood area, these improvements will not address the longer term needs of the area. These alternate routes are based on upgrading existing municipal roads. In the short to medium term horizon, it is recommended that the County contribute to the capital cost of the interim by-pass plan developed for Stayner and the alternate route for the Collingwood area and assume these roadways as County Roads to protect their ability to accommodate inter-municipal and tourist traffic demands. In the

longer term, it is recommended that the County work with the Ministry of Transportation and the local municipalities to protect for a new highway corridor to by-pass the Collingwood area.

It is recommended that the County of Simcoe work with the area municipalities, the Ministry of Transportation (MTO) and the Ministry of Energy and Infrastructure (MEI) to develop these new and improved Provincial Highway Corridors. New corridors such as the Highway 400/404 Link (Bradford By-Pass) and the Barrie By-Pass are critical components in the transportation infrastructure of the County and are required to:

- accommodate approved growth (Growth Plan),
- provide route choice for motorists that protects the functionality of existing provincial highways to/from the GTA,
- provide opportunities to facilitate and enhance transit movements,
- provide reliable alternative goods movement corridors, and
- maintain access to significant provincial tourism areas

It will also be necessary for the County to work with MTO and Local Municipalities to implement improvements to the County Road system to address local congestion in advance of any new/improved Provincial Highway Corridors. This Transportation Master Plan incorporates a number of improvements to County Roads that should be implemented in the medium term while planning for provincial corridor improvements is being completed. It is recognized that the provincial initiatives will be subject to the Provincial planning process and will need to undergo Provincial Environmental Assessment studies as well as the Ministry's Planning and Design process which will determine the need and justification of the initiative, the location, design and time frame of the infrastructure.

5.6.2. Recommended Road Network Improvements

The recommended road improvements required on the County Road system to address future travel demands were presented to the public at PIC #2 on April 24, 25 and 29, 2008. In addition to the infrastructure improvements required on County Roads, the Transportation Master Plan identifies a number of Provincial Infrastructure initiatives that are required in Simcoe County to accommodate the planned growth. These include:

- New Barrie By-Pass – 4 lanes controlled access facility
- Highway 400/404 Link (Bradford By-Pass) – 6 lanes, controlled access facility – with transitway or HOV lanes

- Highway 400 – 10 lanes (8 lanes + 2 HOV) (Barrie to GTA and through Barrie) including improved interchanges
- Highway 11 – 6 lanes (Barrie to County Boundary)
- Highway 12 – 4 lanes (from Durham boundary through Orillia and Highway 11 north to Warminster)
- Highway 400 - new interchange at Line 5 Bradford West Gwillimbury and closure of Canal Road interchange
- Highway 26 – Collingwood By-Pass – 4 lanes
- Highway 26 – 4 lanes Stayner to new Highway 26 Realignment between Town of Wasaga Beach and Collingwood
- Highway 89 – 4 lanes, from Highway 400 to Alliston (including a by-pass of Cookstown)
- Highway 89 - 4 lanes, from County Road 50 to Dufferin Boundary

Summarized in **Table 5.2** are the recommended road improvements for the County Road system.

Table 5.2 - Recommended County Road Network Improvements

Road	Limits	Type of Improvement	Comment
CR 10 New Tecumseth	Highway 9 to Tottenham boundary	Widening 2 to 4 lanes	Best alternative to address future capacity deficiencies between Hwy.9 and Hwy. 89 on CR 10.
CR 10 -Tottenham By-Pass New Tecumseth	3rd Line to north of 5th Line	New 4 lane road	Best alternative to address future capacity deficiencies through downtown Tottenham on CR 10.
CR 10 New Tecumseth	CR 14 to Highway 89	Widening 2 to 4 lanes	Best alternative to address future capacity deficiencies between Hwy.9 and Hwy. 89 on CR 10.
Alliston By-Pass via Industrial Parkway New Tecumseth	Church St. to Hwy. 89	Upgrade to County Road Widening 2 to 4 lanes	Best alternative to address future capacity deficiencies when compared to widening Hwy. 89 through Alliston.
5th Line New Tecumseth/ Bradford West Gwillimbury	CR 10 to Highway 400	Upgrading to County Road Standards	Provides County Road network connection with future interchange at Hwy. 400. Offers an alternate east/west route for motorists and goods movement. Provides relief to CR 1, through Beeton
5th Line Interchange Bradford West Gwillimbury	Highway 400	New interchange	With the recommended closure of Canal Road interchange by MTO, an alternate connection for Bradford West Gwillimbury is required to accommodate future traffic. Provides relief to CR 88 corridor and alternative to Canal Road (CR 8).

Road	Limits	Type of Improvement	Comment
Line 5 Bradford West Gwillimbury	Highway 400 to 10 Sideroad	Widening 2 to 4 lanes	Required to accommodate future growth in Bradford and traffic volumes destined to and from future Hwy. 400 interchange. Provides relief to CR 88 corridor and alternative to Canal Road (CR 8).
5 Sideroad Bradford West Gwillimbury/Innisfil	Line 5 BWG to Barrie City Limit	Upgrading to County Road Standards	Integral part of emergency detour route planning along the west side of Hwy. 400.
CR 27 Bradford West Gwillimbury	Highway 9 to 6th Line	Widening 2 to 4 lanes	Combined with Bond Head By-Pass, provides the best alternative to address future capacity deficiencies between Hwy.9 and CR 1 on CR 27.
CR 27- Bond Head By-Pass Bradford West Gwillimbury	6th Line to CR 1	New 4 lane road	Best alternative to address future capacity deficiencies on CR 27 through Bond Head.
CR 88 Bradford West Gwillimbury	Highway 400 to Bond Head By-Pass	Widening 2 to 4 lanes	Required to accommodate future traffic volumes on CR 88 and potential growth in Bond Head.
CR 88 Bradford West Gwillimbury	Highway 400 to Bradford Limit	Widening 2 to 4 lanes	Required to accommodate future traffic volumes on CR 88 and growth in Bradford. EA complete.
10 Sideroad Bradford West Gwillimbury/Innisfil	Line 5 BWG to CR 21 Innisfil	Upgrading to County Road Standards	Integral part of emergency detour route planning along the east side of Hwy. 400.
CR 4 Bradford West Gwillimbury/Innisfil	8th Line BWG to CR 89	Widening 2 to 4 lanes	Required to address future capacity deficiencies on County Road 4 due to growth in Bradford and Innisfil.
CR 4 Innisfil	CR 89 to Barrie City Limit	Widening 2 to 4 lanes	Best alternative to address future capacity deficiencies on County Road 4 due to growth in Innisfil and Barrie.
CR 21 Innisfil	Hwy 400 to 20th Sideroad	Widening 2 to 4 lanes	Best alternative to address future capacity deficiencies on County Road 21 due to growth in Innisfil.
CR 21 Innisfil	CR 27 to Hwy 400	Widening 2 to 4 lanes	Together with improvements to CR 27 and Wilson Drive, this improvement will provide interim relief to congestion through Barrie.
CR 27 Innisfil	CR 21 to CR 90	Widening 2 to 4 lanes	Together with improvements to CR 21 and Wilson Drive, this improvement will provide interim relief to congestion through Barrie.

Road	Limits	Type of Improvement	Comment
CR 27 Springwater	Highway 26 to CR 22	Widening 2 to 4 lanes	Together with improvements to CR 27 south of CR 90 and Wilson Drive, this improvement will provide interim relief to congestion through Barrie.
Wilson Drive Springwater	Ferndale Drive (Barrie City Limit) to Highway 26	Upgrading to County Road Standard and widening 2 to 4 lanes	Provides relief for urban congestion along Bayfield Street and provides secondary connection for the north side of Barrie to Hwy. 26.
Wilson Drive Springwater	CR 43 to Hwy 26	Upgrading to County Road Standards	Provides continuity in CR system with connection to Provincial highway system.
CR 90 Essa/Springwater	CR 10 to Barrie City Limit	Widening to 5 lanes and bridges and box culverts	Required to address future capacity deficiencies on CR 90. EA completed.
CR 10 Clearview	CR 90 to CR 9	Widening 2 to 4 lanes	Required to address future capacity deficiencies on CR 10 between CR 90 and CR 9. Provides alternate route to Highway 26 to serve Collingwood / Wasaga Beach area
Flos Road 4 Springwater	Highway 93 to Springwater/Clearview boundary	Upgrading to County Road Standards	Together with 12th Concession, Sunnidale, provides additional east/west connectivity in the County Road system and provides alternate east/west corridor through to the Georgian Triangle (and connects with Stayner By-Pass). Provides capacity relief to CR 92 at east end of Wasaga Beach.
Flos Road 4 Springwater	Vigo Bridge	Bridge Replacement	Existing single lane truss bridge requires replacement and widening..
12 Concession Sunnidale Clearview	Springwater/Clearview boundary to CR 7	Upgrading to County Road Standards	Together with Flos Road 4, provides additional east/west connectivity in the County Road system and provides alternate east/west corridor through the Georgian Triangle (and connects with Stayner By-Pass). Provides capacity relief to CR 92 at east end of Wasaga Beach
27/28 Sideroad Clearview	CR 7 to Highway 26	Upgrading to County Road Standards	Provides relief as a by-pass around Hwy. 26 congestion through Stayner

Road	Limits	Type of Improvement	Comment
CR 10 Clearview	Highway 26 to 27/28 Sideroad/12 Conc.	Widening 2 to 4 lanes	Together with widening of 27/28 Sideroad Clearview, will accommodate future traffic volumes by-passing congested area of Hwy. 26 through Stayner
27/28 Sideroad Clearview	CR 10 to Highway 26	Widening 2 to 4 lanes	Together with widening of CR 10 north of Hwy. 26, will accommodate future traffic volumes by-passing congested area of Hwy. 26 through Stayner
27/28 Sideroad Clearview	Highway 26 to CR 124	Upgrading to County Road Standards	Provides continuity in the County Road system and provides alternate east/west corridor through the Georgian Triangle.
Poplar Sideroad Collingwood	Highway 26 to 10th Line Collingwood	Upgrading to County Road Standards	Poplar Sideroad along with 10th Line provides relief to existing Hwy. 26 congestion and provides an alternate route through Collingwood.
10th Line Collingwood	Poplar Sideroad to CR 32	Upgrading to County Road Standards	10th Line along with Poplar Sideroad provides relief to existing Hwy. 26 congestion and provides an alternate route through Collingwood.
Line 7 Oro-Medonte	Highway 11 to CR 22	Upgrading to County Road Standards	Together with Line 6, provides County Road network continuity through Oro-Medonte. Supports future growth around airport, supports goods movement and utilizes existing infrastructure.
Line 6 Oro-Medonte	CR 22 to Mt. St. Louis Rd.	Upgrading to County Road Standards	Together with Line 7 as well as Line 5, provides County Road network continuity through Oro-Medonte. Supports future growth in area, supports goods movement and utilizes existing infrastructure.
Mt. St. Louis Rd Oro Medonte	Line 5 to Line 6	Upgrading to County Road Standards	Provides County Road continuity.
Line 5 Oro-Medonte	Mt. St. Louis to Highway 12	Upgrading to County Road Standards and bridge reconstruction	Together with Line 6 provides County Road network continuity through Oro-Medonte. Supports future growth and goods movement in North Simcoe area, and utilizes existing infrastructure. Provides more effective relief to Hwy. 93 congestion than CR 6. Existing single lane bridge structure requires replacement and widening..

Road	Limits	Type of Improvement	Comment
Division Road Severn	Highway 12 to Highway 11	Upgrading to County Road Standards	Integral part of emergency detour route planning along Hwy. 11 and provides road network continuity in the County Road system by connecting CR 22 with Hwy. 11.
CR 44 Ramara	Highway 12 to Casino Rama	Widening 2 to 4 lanes	Improvement on CR 44, combined with widening of Hwy. 11 north of Orillia and widening of Hwy. 12 through Orillia and north of Hwy. 11 provides the best overall relief for congestion on Hwy. 11 north of Orillia.
CR 44 Ramara	CR 169 to Longford Mills	Upgrading to County Road Standards	Improvements required to upgrade road condition to County standards.
CR 54 Innisfil	CR 21 to Barrie City Limit	Widening 2 to 4 lanes	Improvements required to accommodate future growth in Barrie and Innisfil.
CR 40 Springwater	Dobson Road to Barrie City Limit	Widening 2 to 4 lanes	Improvements required to accommodate future development in Centre Vespra
CR 1 Adjala-Tosorontio/ New Tecumseth	CR 50 to CR 10	Upgrading to County Road Standards	Upgrade to accommodate truck traffic all year. Facilitate truck movements between CR 50 and CR 10 (to remove half load restrictions).
CR 50 Adjala-Tosorontio	Highway 9 to Highway 89	Widening for truck climbing lane	Improvements required to accommodate existing and future vehicle and truck traffic.

Figures 5.9, 5.10 and 5.11 illustrate the road network improvements recommended in this plan for the short term (0 to 10 years), medium (10 to20 years) and long term (> 20 years) time horizons, respectively.

Figure 5.9 - Short Term Road Improvements

Figure 5.10 - Medium Term Road Improvements

Figure 5.11 - Long Term Road Network Improvements

CHAPTER 6

IMPLEMENTATION, PHASING AND MONITORING

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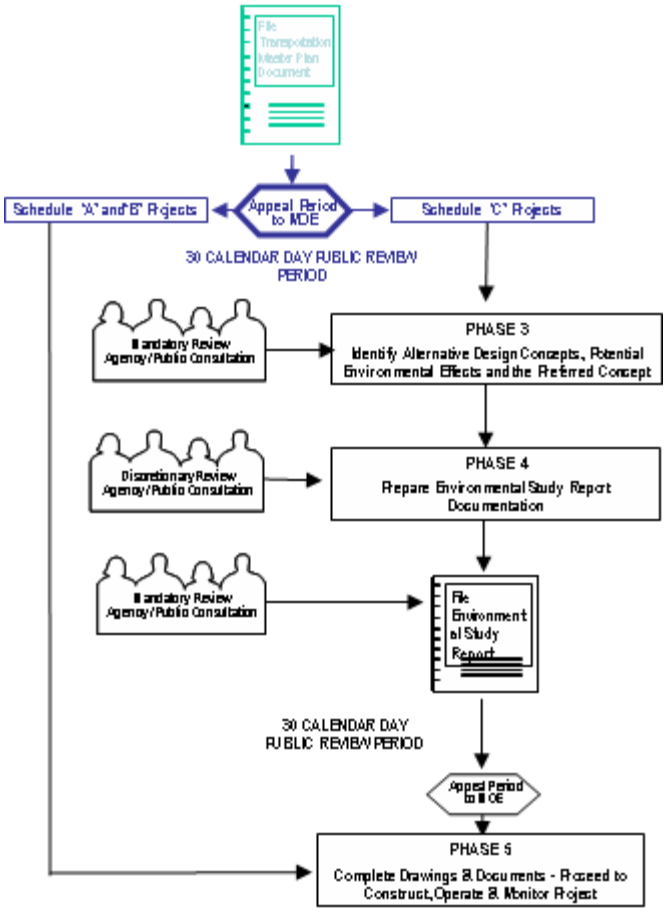
6. IMPLEMENTATION, PHASING AND MONITORING

6.1. Introduction

The key recommendations of the Transportation Master Plan can be implemented through a series of strategic policies and specific infrastructure optimization/improvements.

Many of the policy recommendations can be incorporated into policy documents within the Official Plan which in turn can be implemented through the processing of land use applications under the Planning Act. For the purpose of this report, we have not identified any detailed capital allocations or suggested timing for the implementation of these policies as they will require further scoping and political input. It is recommended that the County allocate funding for the further development and implementation of these policies, which should be reviewed on an annual basis, to support the recommended strategies.

For the implementation of specific infrastructure optimization/improvement projects, the Transportation Master Planning process is intended to address the requirements of Phases 1 and 2 Municipal Class EA planning process, providing an assessment of the problem or opportunity and an assessment of alternative solutions. For the infrastructure projects recommended as part of the Master Plan that fall within the Schedule B category, approval of the Master Plan will constitute approval to proceed with the project. For more extensive Schedule C projects, with higher potential for environmental affects (both positive and negative), further project specific Environmental Assessment Studies may need to be completed by the County to examine alternative designs prior to implementation.



Implementation and phasing for the 6 strategies developed in this Transportation Master Plan are outlined below.

6.2. Walking and Cycling

A number of recommendations have been put forward to address walking and cycling in Simcoe County which will require funding from the County. Facilitating linkages to other existing trails or other elements such as development of mapping for promotional and marketing material will require funding and it is recommended that the County allocate $500,000/year to commence work on addressing the recommendations. The costs associated with the County's contribution towards Walking and Cycling initiatives should be reviewed and adjusted annually. In other municipalities, funds dedicated to facilitate walking and cycling have been in the order of 1% to 7% of the annual transportation budget. The suggested amount represents approximately 2.3 % of the budget suggested to fund capital road projects in the short term time period.

6.3. Transit

Recommendations for transit include support through funding or partnering with either local municipalities in expanding their transit systems, with private operators and partnering or funding initiatives with public sector transit operators. To establish the recommended strategies and get operations running, seed funding from the County will be required. It is recognized that the County will have to work with transit operators to assess and determine what is affordable within each horizon year.

Local Transit

Supporting the expansion of existing local transit service outside their jurisdiction will require additional capital investment. The County should, as a minimum initial investment, include capital costs associated with the acquisition of additional transit vehicles needed to expand local services. The provision of additional buses will allow expansion of existing service to other settlement areas while still maintaining the current level of service with current customers.

Table 6.1 summarizes the number and cost of additional transit vehicles that will likely be required to expand existing local transit services to support the recommended transit plan.

Table 6.1 - Transit Vehicles for Local Transit Service Expansion

Transit Service Provider	Service expansion	Number of Additional transit vehicles	Capital Cost
Colltrans	Wasaga/Stayner	1	$ 650,000
Midland Transit	Tay/Tiny/Penetanguishene	2	$ 1,300,000
Barrie Transit	Midhurst/Angus/Thornton/Innisfil/Stroud/Bradford	6	$ 3,900,000
Orillia Transit	Severn/Ramara	2	$ 1,300,000
Total		**11**	**$ 7,150,000**

The Town of Bradford West Gwillimbury has indicated the desire to establish a local transit service for their municipality. The rate of development occurring in the Town of Bradford West Gwillimbury will bring the population to the transit threshold of 30,000 people identified in their transportation study within the near future. To assist the Town of Bradford West Gwillimbury in establishing its transit system, it is recommended for consideration that the County provide capital funding towards the purchase of equipment, such as a bus for the transit system.

In summary, capital funding for the expansion of local service to neighbouring settlement areas for the existing transit service providers would be in the order of $7.15 million. Additional funding would be required if the County provides funding support for the Town of Bradford West Gwillimbury. It is recommended that the County pursue the option of using a portion of the Gas Tax funding to support these transit initiatives.

Inter-Municipal Transit Service

Linking communities will require partnering with the private sector transit operators. It is recommended that the County engage in discussions with the private transit service providers to expand or provide new inter-municipal transit service between urban centres within the County. It is suggested that the County's contribution to the service providers be through funding of the operating costs associated with the bus service expansion. The Plan for Transit suggests a number new or enhanced transit service connections between Barrie and major urban area such as Midland/Penetanguishene, Collingwood/Wasaga Beach/Stayner, Orillia and Tottenham and between Orillia/Midland/Penetanguishene, Alliston and Angus and Bradford and Alliston. Costs for this service is assumed to include 7 bus routes, with 2 buses for each route, making 2 round trips per day, with each round trip taking 2 hours per day. Based on an estimated average transit operating expense per revenue vehicle hour of $200/revenue vehicle hour, over

the course of one year, the annual contribution by the County towards operating expenses to provide this service would be in the order of $2.9 million.

Inter-Regional Transit Service

The County of Simcoe should engage in discussions with GO Transit to extend GO Rail and Bus services to areas in Simcoe beyond the current service area of Barrie and the recently announced expansion to Bolton. GO Transit expansion from Bolton into the County will provide an alternative transportation facility to move people between the County and major employment areas in the western Greater Toronto Area (GTA) such as Vaughan and the Region of Peel. As suggested in the Plan for transit, the County could support the extension of services to areas within the County through a form of funding arrangement with GO Transit for extension of transit services. A transportation corridor such as Highway 427 would have provided this link. Recognizing the Province's plans not to proceed with the extension of Highway 427 into the County of Simcoe, an alternative to this transportation link is needed to service the future growth in the County.

6.4. Transportation Demand Management (TDM)

It is suggested that a nominal start up funding be provided by the County in support of Transportation Demand Management. Money will be needed to initiate the pilot project as recommended in the plan and to prepare marketing material and to promote the benefits of TDM. It is suggested that an amount of $200,000 per year be allocated towards TDM and the amount be adjusted through the annual budgeting process.

Carpool lots will require capital funding for the infrastructure. Based on the recommended plan, there are approximately 6 locations outside of existing municipal owned buildings where new lots would have to be established (as identified on **Figure 5.4 in Chapter 5**). For example, assuming each lot will contain 5 new designated parking spaces, the total estimated cost to construct 6 carpool lots will be in the order of $720,000. Suggested locations for these carpool lots are in the vicinity of: County Road 10/Tottenham; County Road 4/9th Line, Bradford West Gwillimbury; County Road 90/County Road 10, Angus; County Road 92/County Road 29, Springwater; County Road 27/County Road 22, Springwater and Bayfield Street/Carson Road, Midhurst.

Construction of these new parking lots would fall under Schedule A of the Municipal Class EA process.

6.5. Goods Movement

The County needs to initiate discussions with railway operators, as well as provincial and federal governments to investigate opportunities and potential funding sources to upgrade existing rail corridors to support both goods movement and pedestrian mobility.

The County should engage in discussions with MTO as well as MEI (Ministry of Energy and Infrastructure) to move forward in the construction of the Bradford By-pass (Highway 404-400 connection). Protection of lands for this facility should persist and implementation of a facility in this corridor should continue to be a high priority for the County and the Province as it has been identified as a near term need to accommodate growth and to facilitate goods movement and future transit movements.

Similarly, the County needs to initiate discussions with MTO and MEI to move forward on establishing a by-pass around the City of Barrie to facilitate the movement of goods and people.

6.6. Road Network Optimization

A number of intersection improvements were identified in the County's development charges study which identified a capital cost of $500,000 per intersection. These improvements are categorized as Schedule A+ projects under the Class Environmental Assessment process.

Intersection Improvements Identified in DC By-Law	
County Road 27 – Essa 25th	County Road 50 – 30th Sideroad Adjala
County Road 54 – 9th/Lockhart Rd.(Innisfil)	County Road 10 – County Road 1/14
County Road 54 – Lockhart Rd.(Innisfil)	County Road 10 – County Road 14
County Road 88 – BWG 5th Sideroad	County Road 30 – Salem Rd (Innisfil)
County Road 89 – County Road 39/20th Sideroad (Innisfil)	County Road 4-- BWG 9th
County Road 89 -- Innisfil 10th Sideroad	County Road 4 -- BWG 10th
County Road 50 – County Road 14 (Adjala-Tosorontio)	County Road 4 -- BWG 11th
County Road 50 –Adjala 5th Sideroad	County Road 4 – Innisfil 3rd
County Road 4 -- BWG 12th	County Road 4 – Innisfil 2nd
County Road 4 – BWG 13th	County Road 21 – Innisfil 5th Sideroad
County Road 4 – BWG 14th	County Road 21 – Innisfil 10th Sideroad
County Road 4 – Innisfil 9th	County Road 44 in Washago
County Road 4 – Innisfil 7th	County Road 27 – BWG 9th
County Road 4 – Innisfil 6th	County Road 27 – BWG 10th
County Road 4 – Innisfil 5th	County Road 27 – Salem Rd.(Innisfil)
County Road 4 – Innisfil 4th	

6.7. Road Network Improvements

To guide the County in managing the implementation of the infrastructure plans recommended in this Transportation Master Plan, a suggested timing for recommended projects has been developed based on technical assessment that considered:

- Forecasts of transportation demands for interim horizon years and assessment of when the improvements are required to address deficiencies. The horizon years assessed for road improvement costs include:
  - Short Term (0 -- 10 years)
  - Medium Term (10 – 20 years)
  - Long Term (20+ years)
- The need to undertake future Class EA studies to determine the recommended design for road improvements projects. For Schedule C projects this could include route planning (for new road corridors), preliminary engineering design (initial design, mitigation of local impacts, refine cost estimates, etc), and property acquisition (where required). For Schedule A and B projects, this would include completion of detailed design and preparation of tender drawings.
- The desire to distribute capital budget requirements across the life of the plan.

The County may choose to implement the recommended projects in a different order or phasing that has been suggested in the Master Plan in order to accommodate other council priorities such as the need to coordinate with other infrastructure works (i.e. sewer work), planned developments in the area, or other considerations beyond the scope of this project.

The capital funding requirements for the proposed road improvements identified for the Transportation Master Plan are summarized in **Table 6.2, Table 6.3** and **Table 6.4** for short term (0-10 years) , medium term (10-20 years) and long term (20+ years) time horizons respectively.

In addition to the funding allocated for annual road related capital projects, an additional $15 to $20 million dollars a year should be included in the budget to address costs associated with road rehabilitation and bridge maintenance and reconstruction.

Table 6.2 - Short Term Time Horizon

Short Term (0-10 Years) Road Improvements				
Road	**Location**	**Type of Improvement**	**EA Schedule**	**Cost**
Committed Projects				
County Road 88 Bradford West Gwillimbury	Highway 400 to Bradford Limit	Widening 2 to 4 lanes	C (EA complete)	$ 6,000,000
County Road 90 Essa/Springwater	CR 10 to Barrie City Limit	Widening to 5 lanes	C (EA complete)	$ 25,150,000
County Road 90 Essa/Springwater	CR 10 to Barrie City Limit	Bridges and box culverts	C (EA complete)	$ 14,000,000
County Road 50 Adjala-Tosorontio	Hwy. 9 to Hwy 89	Widening for truck climbing lane	C (EA complete)	$ 20,000,000
County Road 44 Ramara	CR 169 to Longford Mills	Upgrading to County Road standards	A+	$ 20,000,000
		Subtotal Committed Projects		$ 85,150,000
New Projects				
Wilson Drive Springwater	Ferndale Drive (Barrie City Limit) to CR 43	Upgrading to County Road standards and widening 2 to 4 lanes	Upgrade – A+ Widening -C	$ 11,200,000
27/28 Sideroad Clearview	CR 7 to Highway 26	Upgrading to County Road standards	A+	$ 6,667,200
Poplar Sideroad Collingwood	Highway 26 to 10th Line Collingwood	Upgrading to County Road standards (urban)	A+	$ 11,427,000
10th Line Collingwood	Poplar Sideroad to CR 32	Upgrading to County Road standards	A+	$ 4,736,000
County Road 21 Innisfil	CR 27 to Hwy 400	Widening 2 to 4 lanes	C	$ 8,000,000
County Road 27 Innisfil	CR 21 to CR 90	Widening 2 to 4 lanes	C	$ 20,000,000
County Road 4 Bradford West Gwillimbury/Innisfil	8th Line BWG to CR 89	Widening 2 to 4 lanes	C	$ 20,000,000
County Road 10 New Tecumseth	Highway 9 to Tottenham boundary	Widening 2 to 4 lanes	C	$ 6,000,000
CR 10 - Tottenham By-Pass New Tecumseth	3rd Line to north of 5th Line	New 4 lane road	C	$ 12,600,00
County Road 21 Innisfil	Hwy 400 to 20th Sideroad	Widening 2 to 4 lanes	C	$ 17,000,000
County Road 27 Springwater	Highway 26 to CR 22	Widening 2 to 4 lanes	C	$ 16,000,000
Flos Road 4 Springwater	Vigo Bridge	Bridge Reconstruction	C	$ 2,100,000
		Subtotal New Projects		$ 135,730,200
Total Cost				**$ 220,880,200**
Cost per year				**$ 22,088,020**

Table 6.3 - Medium Term Time Horizon

Medium Term (10-20 Years) Road Improvements				
Road	**Location**	**Type of Improvement**	**EA Schedule**	**Cost**
Wilson Drive Springwater	CR 43 to Hwy 26	Upgrading to County Road standards	A+	$ 5,000,000
10 Sideroad Bradford West Gwillimbury/Innisfil	Line 5 BWG to CR 21 Innisfil	Upgrading to County Road standards	A+	$ 24,000,000
5 Sideroad Bradford West Gwillimbury/Innisfil	Line 5 BWG to Barrie City Limit	Upgrading to County Road standards	A+	$ 24,000,000
Flos Road 4 Springwater	CR 29 to Springwater/Clearview boundary	Upgrading to County Road standards	A+	$ 8,000,000
5th Line New Tecumseth/ Bradford West Gwillimbury	CR 10 to Highway 400	Upgrading to County Road standards	A+	$ 30,000,000
12 Concession Sunnidale Clearview	Springwater/Clearview boundary to CR 7	Upgrading to County Road standards	A+	$ 9,000,000
Division Road Severn	Highway 12 to Highway 11	Upgrading to County Road standards	A+	$ 10,000,000
27/28 Sideroad Clearview	CR 10 to Highway 26	Widening 2 to 4 lanes	C	$ 5,000,000
County Road 44 Ramara	Highway 12 to Casino Rama	Widening 2 to 4 lane	C	$ 11,000,000
County Road 4 Innisfil	CR 89 to Barrie City Limit	Widening 2 to 4 lanes	C	$ 30,000,000
County Road 1 Adjala-Tosorontio/New Tecumseth	CR 50 to CR 10	Upgrading to County Road standards	A+	$ 1,950,000
Line 7 Oro-Medonte	Highway 11 to CR 22	Upgrading to County Road standards	A+	$ 13,000,000
5th Line Interchange Bradford West Gwillimbury	Highway 400	New interchange	C	$ 15,000,00
Line 5 Bradford West Gwillimbury	Highway 400 to 10 Sideroad	Widening 2 to 4 lanes	C	$ 5,000,000
County Road 54 Innisfil	CR 21 to Barrie City Limit	Widening 2 to 4 lanes	C	$ 8,400,000
County Road 40 Springwater	Dobson Road to Barrie City Limit	Widening 2 to 4 lanes	C	$ 5,000,000
Total Cost				**$ 204,350,000**
Cost per year				**$ 20,435,000**

Table 6.4 - Long Term Time Horizon

Long Term (20 + Years) Road Improvements				
Road	**Location**	**Type of Improvement**	**EA Schedule**	**Cost**
Line 5 Oro-Medonte	Mt. St. Louis to Highway 12	Upgrading to County Road standards	A+	$ 16,000,000
Line 5 Oro-Medonte		Bridge reconstruction	C	$ 2,100,000
Line 6 Oro-Medonte	CR 22 to Mt. St. Louis Rd.	Upgrading to County Road standards	A+	$ 6,500,000
Mt. St. Louis Rd Oro Medonte	Line 5 to Line 6	Upgrading to County Road standards	A+	$ 1,500,000
Alliston By-Pass New Tecumseth	Industrial Parkway	Upgrading to County Road standards	A+	$ 450,000
County Road 27 Bradford West Gwillimbury	Highway 9 to 6th Line	Widening 2 to 4 lanes	C	$ 17,000,000
County Road 27-Bond Head By-pass Bradford West Gwillimbury	6th Line to CR 1	New 4 lane road	C	$ 8,400,000
County Road 88 Bradford West Gwillimbury	Highway 400 to Bond Head By-pass	Widening 2 to 4 lanes	C	$ 7,000,000
27/28 Sideroad - Clearview	Highway 26 to CR 124	Upgrading to County Road standards	A+	$ 8,200,000
County Road 10 Clearview	Highway 26 to 27/28 Sideroad/12 Conc.	Widening 2 to 4 lanes	C	$ 5,000,000
Flos Road 4 Springwater	CR 29. to Highway 93	Upgrading to County Road standards	A+	$ 12,500,000
County Road 10 Clearview	CR 90 to CR 9	Widening 2 to 4 lanes	C	$ 15,000,000
County Road 10 New Tecumseth	CR 14 to Highway 89	Widening 2 to 4 lanes	C	$ 33,000,000
Total Cost				**$ 132,650,000**
Cost per year				**$ 26,530,000**

6.7.1. Sensitivity Assessment

This Road Network Improvement plan for the County of Simcoe is developed on the assumptions that Highway 400 from Highway 9 to north of the City of Barrie will be widened to include 10 lanes. As well, the construction of a 4 lane controlled access highway around the City of Barrie is included in the Road Network Improvement plan to facilitate traffic movements around the congestion expected through the City of Barrie. The timing of improvements are under the control of MTO and will be based on the implementation and funding priorities of the Province. These improvements are key in the development

of the County's plan as they will carry a significant amount of the future traffic traveling through the area. If they are not constructed to the extent assumed in the analysis, there will be significant spillover of traffic to adjacent County Roads.

A sensitivity analysis was undertaken to assess the extent of the impact to the County Roads with only 8 lanes on Highway 400 between Highway 9 and Highway 400/Highway 11interchange and no Barrie By-pass. Based on the recommended road network improvement projects identified in the Transportation Master Plan and an assessment of summer weekday traffic generated by future 2031 population and employment projections, additional improvements would be required on the County Road system. The estimated capital cost to accommodate the additional spillover traffic is estimated to be in excess of $215 million.

Table 6.5 identifies the additional road improvements that would be required on County Roads to accommodate the spillover traffic if only eight (8) lanes are provided on Highway 400 and there is no Barrie By-Pass. These additional road improvements required on the County Road system to accommodate the spillover traffic would cost the County an additional $8.63 million per year over the life of this plan as summarized in **Table 6.6**.

Recognizing that MTO improvements would take time to evolve, the road network improvements included in the capital plan described in Section 6.7, already includes some planned upgrades to the County Road system needed to accommodate future growth. Improvements to County Road 21 west of Highway 400 and County Road 27 north of County Road 21, as well as improvements to Wilson Drive will provide relief in the interim. It should be recognized that the road improvements outlined in **Table 6.5** are in addition to 25 year capital plan presented above.

Table 6.5 - Additional Road Improvement Capital Costs (Limited Provincial Investment)

Additional Long Term (20 + Years) Road Improvement Requirements				
Road	**Location**	**Type of Improvement**	**EA Schedule**	**Cost**
10th Sideroad - future CR Bradford West Gwillimbury/Innisfil	Line 8 Bradford West Gwillimbury to CR 21	Widening 2 to 4 lanes	C	$ 42,000,000
CR 27 Bradford West Gwillimbury/Innisfil	CR 1 to CR 21	Widening 2 to 4 lanes	C	$ 39,000,000
CR 27 Innisfil	CR 21 to CR 30	Widening 4 to 6 lanes	C	$ 7,500,000
CR 10 – Tottenham New Tecumseth	Hwy 9 to 7th Line (includes by-pass)	Widening 4 to 6 lanes	C	$ 21,250,000
CR 10 - Alliston New Tecumseth	Industrial Pkwy to Hwy 89	Widening 4 to 6 lanes	C	$ 7,500,000
CR 10 north of Alliston Essa	Hwy 89 to 5th Sideroad	Widening 2 to 4 lanes	C	$ 8,000,000
CR 10 south of Angus Essa	CR 21 to Cambrai Rd	Widening 2 to 4 lanes	C	$ 17,000,000
CR 10 north of Angus Clearview	CR 9 to Flos Rd 4	Widening 2 to 4 lanes	C	$ 26,000,000
CR 42 Stayner Clearview	CR 9 to Margaret St	Widening 2 to 4 lanes	C	$ 17,000,000
CR 50 Adjala-Tosorontio	Hwy 9 to CR 1	Widening 2 to 4 lanes	C	$ 18,000,000
CR 90 Essa/Springwater	CR 28 to CR 27	Widening 4 to 6 lanes	C	$ 5,000,000
CR 88 Bradford West Gwillimbury	Hwy 400 to Mulock Dr - Bond Head	Widening 4 to 6 lanes	C	$ 7,500,000
Additional Road Improvement Total Cost				**$ 215,750,000**

Table 6.6 - Additional Yearly Capital Costs

	Recommended Plan	**Recommended Plan with Highway 400 only 8 lanes and no Barrie By-Pass**
Total Capital Cost	$ 557,880,200	$ 773,630,200.00
Average Cost per year (over 25 years)	$ 22,315,208	$ 30,945,208.00
Increase in Yearly Capital Costs		$ 8,630,000.00

Maintenance Costs

The proposed road network improvement plan will not only require capital costs to upgrade and improve the roads, but will also add to the existing annual maintenance costs expended by the County to maintain the road system. Based on an annual maintenance cost of approximately $5000 per lane km, the recommended road improvement plan will add approximately 660 lane kms of new road at an annual cost of $3.29 million. **Table 6.7** summarizes the additional annual maintenance costs to the County with these improvements.

Table 6.7 - Additional Annual Maintenance Costs

Improvement	Lane km	Cost
Widening of Existing County Roads	320 Lane km	$ 1,595,000
New County Roads	340 Lane km	$ 1,690,000
Total Additional Annual Maintenance Cost	**660 Lane km**	**$ 3,285,000**

Similar to the road construction costs, the additional road improvements required to the County Roads to accommodate the spillover traffic as a result of only 8 lanes on Highway 400 and no Barrie By-Pass will also create additional road maintenance costs. It is estimated that these further improvements to the County Road system will add another 206 lane km to the maintenance network resulting in an additional cost of approximately $1.03 million annually.

6.8. Transportation Plan Monitoring & Review

The success of long-range plans depends on the ongoing monitoring of relevant conditions, actions, and impacts. The County of Simcoe must remain aware of its progress toward key objectives, so that it can add, modify, or delete priorities as needed.

Through the study, the County has adopted a transportation strategy and laid out a plan to attain the particular transportation goals associated with it. As identified in the plan, a number of transportation capital works projects would be required, along with an aggressive program of other initiatives. Many of these components of the plan are based on prevailing attitudes of County residents and forecasted future travel demands over the transportation network based on future land use development patterns. The Plan must be able to respond to changes in these factors that might affect demand or the emphasis placed on alternative modes of transportation.

Ongoing monitoring would also be necessary in determining the effectiveness of the initiatives identified in the plan in meeting the adopted strategic direction. Ideally the performance measures can be tied to broader municipal management measures such as, the Municipal, Performance Measurement Program (MPMP).

A Transportation Master Plan is not intended to be a static document and must retain some measure of flexibility and be adaptable to changes in the travel behaviour, and other conditions in the County. As growth and economic conditions change over the next few years the County should consider the need to update this Master Plan to take advantage of, or reflect changes beyond the scope of this study. This can be best accomplished through ongoing monitoring of relevant conditions and periodic updates to the Travel Demand Model and Master Plan.

The following recommendations should be considered in the ongoing monitoring of transportation conditions in the County.

6.9. Transportation Model & Data Management Program

To facilitate the ongoing assessment of transportation conditions and updating of the Transportation Master Plan, the County should maintain a traffic demand forecasting model to assist in the development of forecasts of travel demands within and to/from the County.

The model should be updated at least every two years, using traffic count data from a screenline count program, and a review of the model should be completed every five years to determine the need to update and recalibrate the model parameters based on available data from the Census and Transportation Tomorrow Survey (TTS). It is recommended that the County allocate approximately $50-75,000 in their 2008/2009 budget to complete this update.

A key aspect of the model review and update process is the regular scheduling of traffic counts throughout the County. It is recommended that two count programs be developed, as follows:

Screenline Count Program – As part of the validation process for the transportation model, base year forecasts from the model are compared to observed traffic counts at a series of traffic count stations on key screenlines throughout the County. By undertaking regular counts at these screenline stations, any updates to the model can be readily validated, plus the County can monitor growth trends on these key roadways as a measure of how the road network is performing and how growth is affecting travel

demands. Traffic counts for highway sections crossing the screenlines can be obtained from the Ministry of Transportation and utilized to measure the performance of the roadways. The screenline count program should be undertaken between two and three times per year, at least every second year at the stations illustrated in **Figure 6.1** and summarized in **Table 6.9.** The Screenline Count program should be undertaken using automatic traffic recorders configured to record total vehicles and vehicle classifications.

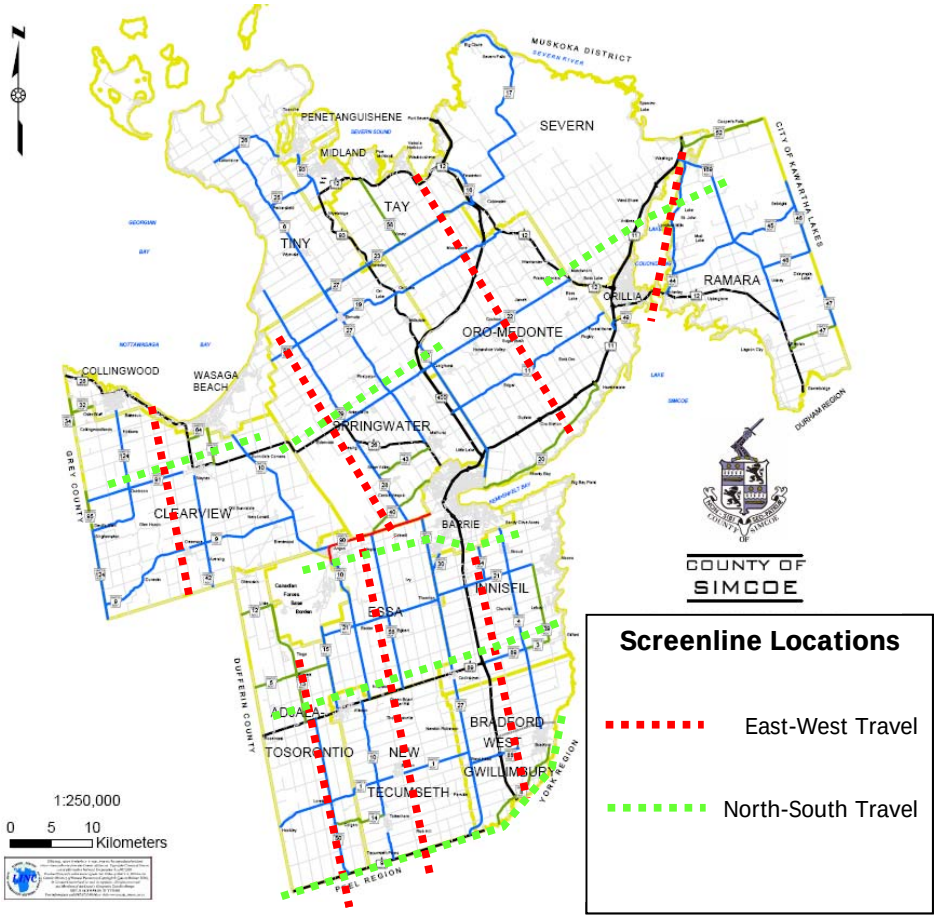


Figure 6.1 Screenline Count Locations

All of the stations should be counted during either the spring (Late April to End of May) or fall months (Late September to end of October) as these represent typical periods that approximate the Average Annual traffic volumes on most roads. These counts should be for a minimum of 3 continuous weekdays, between Monday and Thursday. Given the importance of Summer travel demands in the region, each of the stations should also be counted during the summer months (mid June to mid August) and should include a minimum of 7 continuous days, including weekends. Long weekends should be avoided if

possible. Winter counts should also be considered on Simcoe of the key County Roads leading into the recreational ski areas in the County. These counts should also be for 7 continuous days, between January and March Break, to catch the peak ski season. Under pavement induction loops or other permanent traffic counter should be installed at these stations to avoid traffic hoses being removed during winter snow plowing operations. The estimated cost of this program is approximately $20,000 per year, plus the cost for the installation of permanent counting station loops, estimated at $5000 per station (one per lane/per direction).

Corridor Traffic Count Program (ATR) – The County currently conducts a traffic count program to undertake daily traffic counts on sections of County Road, three times a year, spring, summer and fall, every three years. These volumes are used to determine current Average Annual Daily traffic volumes on each of the road segments. Typically, only weekday traffic volumes are being collected. Throughout the Master Plan process, it was echoed by both residents and municipal representatives that recreation and tourist traffic, which typically occurs on weekend and during the summer and winter months, contribute to the transportation challenges in the County. It is suggested that the time period of these daily traffic counts be expanded to 7 days of data collection to include weekend traffic.

Cordon Counts – County should utilize information collected in the Traffic Cordon Count Program to monitor movements to the Region of Peel and Region of York to monitor traffic trends between the Regions.

Transportation Tomorrow Survey - The County should also continue to participate in the Transportation Tomorrow Survey (TTS), undertaken every 5 years, to provide an update of transportation patterns in the County and surrounding area and to ensure that up to date information is available to assess changing transportation trends in the community.

Table 6.8 - Screenline Count Locations

North- South Count Locations (County Roads)

Screenline	Road	Location	Spring / Fall	Summer	Winter
York-Peel Boundary					
	CR 50	Between Hwy 9 and CR 14	X	X	
	CR 10	Between Hwy 9 and Tottenham South Limits	X	X	
	CR 27	Between Hwy 9 & 5th Line	X	X	
North of Highway 89					
	CR 13	Between Hwy 89 and CR 5	X	X	
	CR 15	Between Hwy 89 and CR 5	X	X	
	CR 10	Between Hwy 89 and 5th Sideroad	X	X	
	CR 56	Between Hwy 89 and 5th Sideroad	X	X	
	CR 27	Between Hwy 89 and 5th Sideroad	X	X	
	CR 4	Between CR 89 and 3rd Line	X	X	
South of County Road 90					
	CR 42	Between CR 9 & Dufferin-Simcoe Boundary	X	X	
	CR 10	Between CR 90 & Base Borden Entrance	X	X	
	CR 56	Between CR 90 & 30th Sideroad	X	X	
	CR 27	Between CR 90 & CR 30	X	X	
	CR 54	Between CR 21 & Mapleview Dr	X	X	
	CR 4	Between CR 21 & Mapleview Dr	X	X	
North of Stayner / Highway 26					
	CR 124	Between CR 91 & 27/28th Sideroad	X	X	X
	CR 42	Between CR 91 & 27/28th Sideroad	X	X	X
	CR 7	Between Hwy 26 & 27/28th Sideroad	X	X	X
	CR 10	Between Hwy 26 & Conc 12/ Flos Rd 4	X	X	X
North of Horseshoe Valley Rd (Hillsdale)					
	CR 29	Between CR 22 & Conc 12/ Flos Rd 4	X	X	X
	CR 27	Between CR 22 & Conc 12/ Flos Rd 4	X	X	X
	CR 93	Between CR 22 & Hwy 400	X	X	X
North of Orillia					
	CR 44 (N of Casino)	Between Airport Rd & CR 169	X	X	
	CR 169	Between CR 45 & CR 169	X	X	

East - West Count Locations (County Roads)

Screenline	Road	Observed ADT	Spring / Fall	Summer	Winter
West of Alliston					
	CR 5	Between CR 13 & CR 15	X	X	
	CR 1	Between CR 50 & CR 10	X	X	
	CR 14	Between CR 50 & CR 10	X	X	
East of Alliston					
	CR 90	Between CR 10 & CR 56	X	X	
	CR 21	Between CR 10 & CR 56	X	X	
	CR 1	Between Beeton & 15th Sideroad	X	X	
East of Highway 400					
	CR 21	Between Hwy 400 & CR 54	X	X	
	CR 89	Between Hwy 400 & 10th Sideroad	X	X	
	CR 88	Between Hwy 400 & 10th Sideroad	X	X	
	CR 8 / 5th Line	Between Hwy 400 & 10th Sideroad	X	X	
West of Stayner					
	CR 91	Between CR 124 & CR 42 / Hwy 26	X	X	X
	CR 9	Between Dunedin & Creemore	X	X	X
East of Wasaga / CR 10					
	CR 92	Between Wasaga & CR 29	X	X	X
	CR 40	Between CR 90 & CR 28	X	X	X
	CR 90	Between CR 40 & CR 28	X	X	X
East of Highway 93 / 400					
	CR 23	Between Line 5 & Gervais Rd	X	X	X
	CR 19	Between Line 5 & Line 7	X	X	X
	CR 22	Between Line 6 & Line 7	X	X	X
	CR 11	Between Line 6 & Line 7	X	X	X
	CR 20	Between Line 6 & Line 7	X	X	X
East of Orillia					
	CR 52	East of Muskoka Street	X	X	
	CR 169	East of CR 44	X	X	

6.10. Transportation System Monitoring & Reporting

The Transportation Master Plan should be monitored on an annual basis, taking into consideration the following:

- the results of the annual traffic count program at key screenlines;
- the results of the annual traffic count program on key roadways;
- new trends and technologies in traffic operations and management;
- private sector initiatives in implementing transportation demand management measures;
- the status and progress towards achieving transportation system performance targets;
- the status of transportation related provincial initiatives, policies and funding programs;
- population growth and land use changes within the community; and
- the need to re-assess, amend or update components of the Transportation Master Plan.

A Transportation Perspective Report should be provided to Council every 5 years, to advise council on recent trends with respect to transportation patterns within the County, and the need to update the Transportation Master Plan. Some the areas identified for the monitoring program are highlighted below.

Transportation Mode Shares

The infrastructure requirements identified in this Master Plan are based on achieving a 5% reduction in auto usage over the 25 year planning horizon. While it is recognized that the achievement of these targets will take time, the County should monitor progress towards achieving these targets so that implementation measures can be adjusted as required.

The TTS data provides the most comprehensive data on the overall travel patterns in the County and should be used as the primary source for this review. Statistics Canada Census information also provides some data through the Place of Work data to identify travel habits for work trips.

In addition to the formal TTS survey, the County should consider regular updates to the Public Attitude Survey undertaken as part of this Transportation Master Plan. Ideally these would be conducted around the mid point of the 5 year plan review cycle to provide input into the plan review and update process. Not only will this survey provide a snapshot as to overall travel trends in the County between successive TTS surveys, but the input on public attitudes towards transportation choices and barriers could be a valuable tool in understanding how the public's perceptions of transportation are changing over time, and to gauge the effectiveness of new programs implemented as part of this plan. The survey should capture a

sufficient sample size to be accurate within +/-5% at a confidence level of 95%. As part of the survey undertaken for this study, a sample of 609 residents participated in the survey. The estimated cost for this type of survey is $7000.

The following mode share targets summarized in **Table 6.9** should be achieved over the life of this plan. It should be recognized that this is a very aggressive target and will require funding and co-operation by all levels of government to move towards the travel mode share targets.

Table 6.9 - Travel Mode Share Targets by Horizon Year

Mode of Travel	Existing Mode Share % of Trips	2031 Target Mode Shares % of Trips
Auto Driver	70%	65%
Auto Passenger	19%	22%
Transit	1.4%	3%
Walk/Cycle	4.5%	6%
Other	5.1%	4%
Total	100%	100%

Transit Monitoring

With the implementation of strategic directions recommended in this plan to expand existing transit services to other areas of the County, the County of Simcoe needs to work with transit operators (municipalities, GO Transit, private operators) to periodically monitor transit use (e.g., 5-year interval) using the TTS data and supplementary rider surveys and boarding counts to assess specific performance of the various transit operations within the County.

Walking & Cycling System Monitoring

The policy and infrastructure recommendations geared to improving cycling and walking in the County are a critical component of the Master Plan. By monitoring success in achieving or implementing these recommendations compared to the travel mode share targets, the County can monitor the effectiveness of the program and use this knowledge to facilitate future updates to the Master Plan. Based on the recommended walking and cycling plan developed, a few key indicators have been established to benchmark progress towards meeting these objectives.

Key Walking Cycling Indicators

- Share of Daily Trips by Walking and Cycling (target 6% by 2031)
- Share of short trips >5 km by walking/cycling
- Length of Multi-use trail system and Active Transportation infrastructure (km)
- Number/Length of New Cycling/Walking Links completed by Year
- % of Collector/Local roads with sidewalks on at least one side (% in terms of km of length)
- % of municipal facilities (community centres, buildings, etc) with bicycle racks
- % of sidewalks that are accessible

No targets have been developed for many of these specific indicators; however the County should monitor progress to improve upon these aspects of the walking and cycling network in the county.

Transportation Plan Review & Updates

As noted previously, a Transportation Master Plan is not intended to be a static document and must retain some measure of flexibility and be adaptable to changes in the travel behaviour, and other conditions in the County.

It is recommended that the Transportation Master Plan be reviewed and/or updated every 5 years, in conjunction with statutory requirements to review the Official Plan. Given the close integration between land use planning, land use policy, and transportation; any updates to the Transportation Master Plan should be undertaken in conjunction with the Official Plan Update, as was done with this study.

As public consultation is a key input to the completion of a strategic Transportation Master Plan, all future TMP updates should include a proactive and comprehensive public outreach program featuring formal Public Consultation Centres, stakeholder workshops, and other innovative outreach strategies to solicit input from a wide cross section of the Community.