

# Appendix C

## Needs and Opportunities Report

Date: July , 2008

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## **1. INTRODUCTION**

The County of Simcoe is located in central Ontario, between Georgian Bay on the west and Lake Simcoe on the east, between the Greater Toronto Area (GTA) to the south and cottage county to the north. Simcoe County is comprised of sixteen municipalities (excluding Barrie and Orillia). Although the cities of Barrie and Orillia are within Simcoe County, they are politically and administratively separate from the County. Simcoe County is mostly rural in nature and is renowned for its natural, cultural, historical and recreational attractions. Popular tourist spots such as Collingwood, Wasaga Beach, Penetanguishene beaches, Horseshoe Valley, including the entertainment attraction Casino Rama are located within the County. Economic, land use and demographic characteristics including developed areas (Town of Midland, Town of Penetanguishene, City of Barrie and City of Orillia), along with strong industrial growth in the south (such as big auto motive manufacturing) and recreation and tourist traffic, have greatly affected and shaped the travel pattern and the existing transportation system in Simcoe County.

Simcoe County currently has a population of approximately 438,700 people and employment within the County is approximately 183,500 employees. Based on the Province's Growth Plan for the Greater Golden Horseshoe, the future population and employment figures for County of Simcoe, including Barrie and Orillia for 2031 is 667,000 people and 254,000 employees respectively.

The Transportation Master Plan will guide Simcoe County in managing their growing transportation demands and accommodating future needs by identifying the existing and future travel demands of residents and businesses, and by providing the County with transportation strategies, policies and tools to support and improve the existing transportation facilities and services in a more balanced and sustainable approach.

The purpose of this report is to:

- identify existing and future transportation concerns,
- examine the current state of the transportation system through a review of background information and recent surveys such as the 2006 Transportation Tomorrow Survey (TTS), County's traffic counts and the Public Attitude Survey that was conducted as a component of the Transportation Master Plan and
- assess the impacts the transportation system in Simcoe will face with the anticipated future population and employment growth in the region



**Figure 1.1 Municipalities within the County of Simcoe**

Through these tasks, measures, priorities and opportunities to improve the County's transportation system will be identified.

## 2. BACKGROUND

### 2.1. Previous Studies

Since the Year 2000, there have been several major studies relevant to transportation or impacting transportation that has been undertaken in the County of Simcoe. These studies and their sponsor includes:

- *Simcoe Existing and Future Travel Demand – MTO – 2001*
- *Highway 427 Extension – Transportation Needs Assessment - MTO -2001*
- *Georgian Triangle Area Transportation Study (GTATS) - MTO, Municipalities-2001*
- *Simcoe Area Transportation Network Needs Assessment - MTO -2002*
- *Intergovernmental Action Plan for Simcoe, Barrie, and Orillia (IGAP) - Ministry of Municipal Affairs and Housing – 2006*
- *Highway 26 Corridor Collingwood Area Study Design - MTO – 2004*
- *Hwy 400 and Highway 11 Preliminary Design Studies, MTO*
- *Highway 89 Study Design – Highway 400 to Rosemont – PIC #2 – MTO May 2007*
- *Georgian Triangle Area Transportation Paper – Area Municipalities – 2007*
- *Developing a Growth a Growth Management Strategy For the Simcoe County Area - Simcoe County – 2007*
- *County Road 50 Environmental Assessment Study - County of Simcoe -2007*
- *County Road 90 Environmental Assessment Study – County of Simcoe – 2008*
- *County Road 88 Environmental Assessment Study – County of Simcoe - 2008*

These studies recommended numerous transportation improvements within the County including the following:

- *a Collingwood By-Pass (a new Provincial facility).*
- *a widening of Highway 400 from between 8 and 10 lanes from Highway 9 to north of Barrie.*
- *a Stayner By-Pass.*
- *A Cookstown By-Pass.*
- *a Bradford By-Pass which would connect Highway 400 to Highway 404.*
- *Highway 26 re-alignment between Wasaga Beach and Collingwood.*
- *Extension of Highway 427 to the Bradford By-Pass.*

- *An interim Collingwood By-Pass comprised of improved municipal roads.*

These studies also recommended more localized improvements including new interchanges on Highway 400, and the closing of the Canal Road (County Road 8) interchange on Highway 400.

## 2.2. 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** the annual growth in population has grown at a rate of 2.2% per year between 2001 and 2006, and employment has grown 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 <sup>1</sup>	392,000	154,000
2006 <sup>1</sup>	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

Illustrated on **Figures 2.1** and **2.2** are the distribution of 2006 population and employment within the County of Simcoe respectively. As can be seen in **Figure 2.1**, the majority of the population is located within the City of Barrie (30.4% 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.

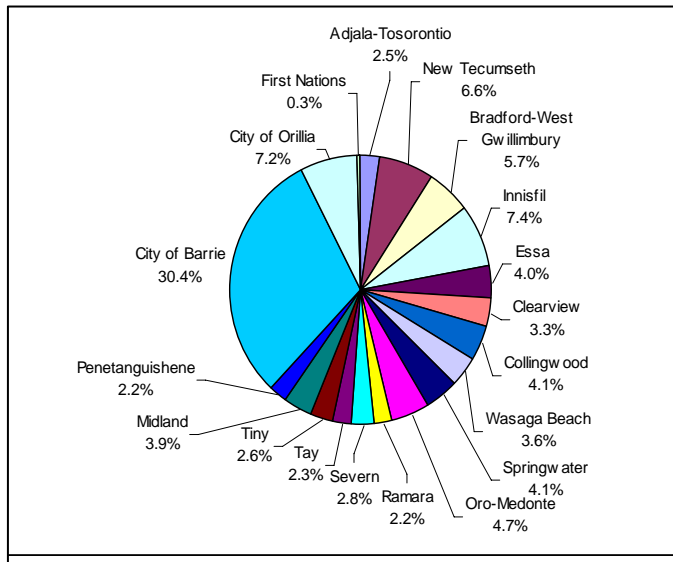


Figure 2.1 - 2006 Population Distribution

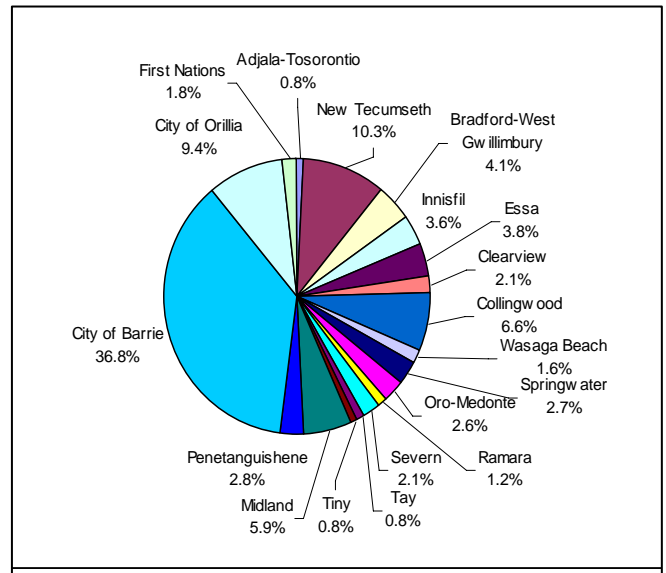


Figure 2.2 – 2006 Employment Distribution

As shown in **Figure 2.2** a majority of the employment is also in the City of Barrie, however, the Town of New Tecumseth provides the second highest allocation of employment.

### 2.3. Canadian Force Base Borden (CFB Borden)

CFB Borden is the largest training base for Canadian Forces and houses a variety of other training facilities and headquarters within the Canadian Forces. In addition, to the approximately 2,500 residents who live on the Base, and the employment generated on the Base, there is a golf course open both to the military and the public and a Military Museum that has numerous exhibition items and tourist attractions. CFB Borden is serviced by a number of County Roads, namely, CR’s 10, 12, 13, 15, 21 and 90.

### 2.4. 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, Haliburton, Parry Sound and beyond. The southern Georgian Bay Region is recognized by Ontario’s Ministry of Tourism as a “Premier Ranked Tourist Destination”. 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<sup>1</sup>. 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 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 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 top ten manufacturing employers in the County are shown in **Table 2.2**. Six out of the ten companies are related to automotive products, indicating a certain degree of dominance among the manufacturing sector. In addition, other generators of goods movement activities include large shopping centers in Barrie and Orillia, and aggregate pits and quarries, which are discussed in more detail under Section 2.8 Trucking. The Towns of Midland and Penetanguishene also have significant manufacturing industries.

**Table 2.2: Top 10 Employers in Manufacturing (Information Extracted from Top 100 Employers of Simcoe County, Huronia Business Times, 2007)**

Company	Location	Number of Full-Time Employees
Honda of Canada Manufacturing	Alliston	4,300
F&P Manufacturing	Tottenham	750
Elcan Optical	Midland	717
Techform Products	Penetanguishene	600
The Source by Circuit City	Barrie	481
TRW Safety Systems	Midland	480
Flex-N-Gate Bradford	Bradford	450
Wolf Steel/Napoleon Appliance	Oro-Medonte	450
Baxter Corp. Canada	Alliston	437

<sup>1</sup> Georgian Triangle Area Transportation Paper, Phase 2 Report, prepared by R.J. Burnside & Associates Ltd.

Faurecia - Brandford	Bradford	400
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**2.5. Walking and Cycling**

A number of the 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, and Midland. 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 Minesing Swamp to just north of Elmvale. While the individual municipalities have developed a network of recreational trails within their jurisdictions, 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, meanders between Wasaga Beach through Clearview, around Borden, through Angus, Springwater and Oro-Medonte, north to Midland then east to Ramara. It has been identified that the link between the trail section in Midland and that of Wasaga Beach is not yet complete.

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 Trans Canada Trail organization, HTG is actively promoting potential trail programs such as Adopt-A-Trail program.

The trail systems in Simcoe County can provide opportunities for a variety of activities such as walking, cycling, blading, snow shoeing, snowmobiling, cross-country skiing, etc. These trails can also be used to develop routes for wildlife movement and to buffer natural areas from urban areas. Many trails in Simcoe County link local communities and school areas and provide an alternative means of transportation, which helps to build towards a sustainable transportation system. Trail systems benefit the economy by attracting tourists. However to better utilize the existing trail system, the County and area municipalities must develop strategies and policies for attracting and accommodating more pedestrians and cyclists.. This will be further discussed in the Transportation Strategy Report as part of the Transportation Master Plan.

## 2.6. 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 (bus and rail service) between the City of Barrie and the City of Toronto is provided by GO Transit. GO Transit rail service to Barrie from Union Station via Bradford was recently reinstated with four trains during the morning and afternoon peak periods.

**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 at 30 minute headways 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 with 60 minute headways. Additional transportation services are provided in the North Simcoe area through the Community Links program which is a volunteered base transportation service which provides transportation services 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. Headways are generally between 30 minute and 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. and operates on 30 minute headways. During the evening schedule, 17 routes are operated on 60 minute headways 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. operating on with 60 minute headways. However there is one exception to this Sunday service schedule and Barrie Transit operates its Bayfield route on 30 minute headways during the Sunday time period.

**GO Transit** operates train services between Barrie and Toronto Union stations 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 the primary population areas of the County, CFB Borden, Barrie, and Casino Rama.

**Ontario Northland** also operates a bus service between Toronto and Barrie (with no stops in between) to points north.

**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 private service provider, Sinton Transportation, offers bus service for different communities, with its main specialization in operating school bus service within Simcoe area.

## **2.7. Rail Services**

There are three main rail freight operators in Simcoe County, namely, Canadian National Railway (CN), Canadian Pacific Railway (CPR) and Barrie Collingwood Railway. CN Railway travels along the east side of Lake Simcoe from Gamebridge to Washago on the Bala Subdivision then travels west through Severn County to points west of Sudbury. Canadian Pacific Railway operates 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 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.

Long distance passenger rail service is provided through Ontario Northland which operates on the CN Bala Subdivision along the east side of Lake Simcoe.

The Newmarket subdivision extends from Barrie to Toronto and from Washago to points north of North Bay. The railway enters into the Simcoe County boundary east of the County Road 4 (Yonge Street) and continues north along the west shore of Lake Simcoe. GO Transit recently reinstated rail services between Barrie and Toronto on this subdivision. The section between Washago to Barrie has been abandoned and is used as a pedestrian, bicycle, snowmobile trail except for a section of track between Washago and Longford Mills which services an industrial site located at Longford Mills.

**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. The operation of this line involves a partnership between the City of Barrie, the Town of Collingwood, current shippers, CP Rail and the railway operator - Cando Contracting Ltd. This railway line provides daily rail service to customers at Utopia, and to customers in Barrie on Monday, Wednesday and Friday and to customers in the Collingwood area on Tuesday and Thursday. BCRY operates two locomotives. A major track refurbishment was just completed on key segments of this line to improve the safety and operating efficiencies. This was undertaken to ensure the long-term viability of direct rail service to industries located in the Barrie and Collingwood areas.

**The South Simcoe Railway** is a steam heritage railway in New Tecumseth on a track running from south of Tottenham to north of Beeton. It crosses the CP railway at 7<sup>th</sup> Line in the Town of New Tecumseth. It only operates during the summer period, from May to October and features excursions with historical information of the steam locomotive.

## **2.8. Trucking**

Trucking plays an important role in the movement of goods through the County. The volume of truck traffic is expected to increase as employment and industries grow in the County. 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 Penetanguishene 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 and 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.

It is recognized that truck traffic has an adverse impact on automobile traffic. It also affects the maintenance and operational levels of service on highways and local roads resulting in increased road maintenance and rehabilitation efforts. There are however certain economic benefits that trucking provides to the County as a result of the industries these trucks serve.

Along some County Roads there is an extremely high percentage of trucks but the volume of traffic is low. This indicates a significant amount of the traffic is made up of trucks. For example, County Road 45 and 169 in Ramara have truck percentages in the range of 12% to 18% depending on the time of year. This represents in the order of 300 to 500 trucks per day along these roads. Similarly along County Road 124 in the vicinity of Duntroon, which services a gravel pit in the area, the truck percentage is in the order of 16% in the fall which translates to approximately 550 trucks per day.

Along other County roads such as CR 44 between Highway 12 and CR 45 however, the truck percentage is not as high as these other County Roads (6%), but they carry a significantly higher volume of truck traffic (over 1000 trucks per day). Similarly, County Road 90 carries in the order of 1200 trucks per day. County Roads in the south Simcoe area such as CR 88 and CR's 10 and 50 that service the Honda plant in Alliston carry between 300 and 600 trucks per day.

The Corporation of the County of Simcoe has enacted regulations that pertain to axle load weight restrictions during the thawing months of March and April. According to By-Laws No. 4402 and 4558, no person shall operate a commercial motor vehicle or trailer, except a public vehicle or a two axle truck, during those months on a road under the jurisdiction of the County of Simcoe. While this weight restriction currently affects a number of County Roads, the County is continuing to make ongoing improvements to their road system so more county roads are able to accommodate full load truck traffic all year round.

## **2.9. Air Services**

Air services are not a major component of the County's transportation system mainly due to Simcoe's proximity to Pearson International Airport. However, there are seven airports spread throughout the County including a regional airport which provide general aviation services. These are:

- *Mara Airport in Orillia?*
- *Lake St. John Airport in Ramara*
- *Midland Airport*
- *Collingwood Airport*
- *Barrie Airport*

- *Base Borden Airport*
- *Lake Simcoe Regional Airport in Oro Medonte*

The Lake Simcoe Regional Airport serves the municipalities of Barrie, Orillia and Township of Oro-Medonte and is capable of handling commercial jets. It operates as the main terminal for some corporate charter companies. It offers a variety of services including flight training, recreational purposes, commercial development, fueling operations and an aircraft hangar to facilitate both passenger and goods movements.

## **2.10. The Existing Road Network**

The roads within the County are under the jurisdiction of either the Simcoe County, the Province of Ontario or the area municipalities. The cities of Barrie and Orillia have jurisdiction over almost all 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**.





**Figure 2.3 - Existing Road Network**

**2.10.1. Provincial Highways**

There are a number of Provincial Highways located within Simcoe County or that pass through, with Highway 400 being the most significant. In Simcoe County, a six 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 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 2.3** provides an overview of traffic volumes on the Provincial Highways located within or that pass through Simcoe County. Some of these include Highway 11, 12, 26, 89 and 93.

**Table 2.3 - 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 26 – Stayner	11,000
Highway 26 – Collingwood	17,000

Average Annual Daily Traffic (AADT) volumes along Highway 400 vary from 82,000 vehicles per day from the Simcoe/York Boundary to 106,000 vehicles per day within Barrie. The volume of traffic on Highway 400 slowly decreases as one travels further north down to 12,700 in the vicinity of Highway 12. Highway 400 links the Greater Toronto Area to points further to the north of Simcoe County.

Highway 93 carries approximately 7,800 vehicle trips per day and services the Townships of Tiny and Tay and the Towns of Midland and Penetanguishine.

Highway 12 links Durham Region to the east with the northern areas of Simcoe County and the various links carries a daily traffic volume in the order of 10,000 vehicles per day. With one exception, the section of Highway 12 through Atherly carries in the order of 18,600 vehicles daily.

Highway 11 links Barrie to cottage country to the north and carries approximately 35,000 vehicles per day between Barrie and Orillia and decreases to 21,000 vehicle per day through Washago.

Highway 26 provides access to the recreational and tourist areas of Wasaga Beach, Collingwood and to the Town of Blue Mountains located west of Collingwood. Along its length, Highway 26 has an AADT of 6,600 vehicles per day at County Road 27 which increases to over 11,000 vehicles per day just outside of Stayner. Between Wasaga Beach and Collingwood, this road carries approximately 17,000 vehicles per day.

## 2.11. Simcoe County Roads

The Simcoe County Road system consists of 820 kilometres of 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. County Roads carry AADT's varying from Currently County Road 90 is the only controlled access road within the County and was designated as such through By-Law 4396. Access management has been used for facilitating traffic movements along the arterial corridor in a safe and efficient manner. To optimize roadway operations, a systematic control of the location, spacing, design and operation of driveways in relations to the nearby interchange geometric designs are recommended to be taken into consideration of new proposed developments. The County has recently passed the County of Simcoe Entrance By-Law No. 5544, enacted on September 25, 2007 to enforce access control policies on County roads in reviewing application to new entrance and alterations to entrances.

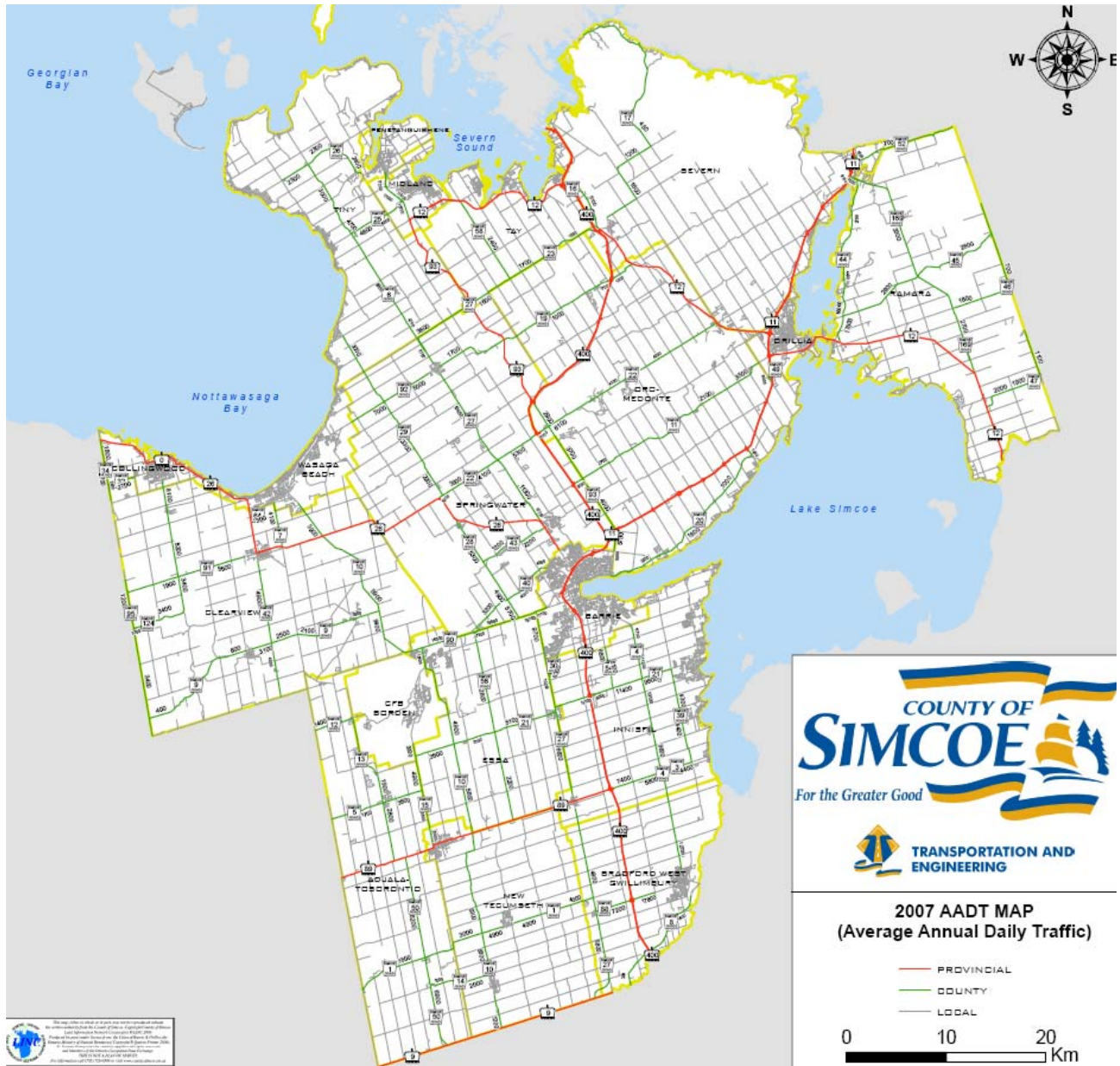
County roads carry AADT's varying from 450 vehicles per day (most northerly section of County Road 17) to over 17,000 vehicles per day found on County Roads 88, 90, 93 and sections of County Road 44. A significant number of County Roads have AADT volumes between 2000 to 5000 vehicles per day. However, 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 2-4** below summarizes some of the higher volume road sections within the County. Illustrated on

**Table 2.4-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



The County roads within each Municipality provide a number of functions linking communities and providing corridors for goods movement and access to the provincial highway system.

Major County roads which service the recreational areas of Collingwood and Wasaga Beach to and from the south are CR 124 and CR 10. County Road 124 located along the western boundary of Simcoe County connects with County roads in Grey County to the west and Dufferin County to the south. Formerly a Provincial highway, it provides access into the Town of Collingwood and within the Township of Clearview in the vicinity of the settlement areas of Duntroon and Singhampton. CR 124 carries a significant amount of truck traffic generated by aggregate pits in the area. County Road 10 provides access to the Collingwood and Wasaga Beach area, through the Townships of New Tecumseth, Essa and Clearview for vehicles coming from or destined to the south. It provides an alternate route to Highway 26 for vehicles destined to this area.

The major county roads servicing the municipalities of Springwater, Tiny, Tay, Midland and Penetanguishine which provide goods movement and recreational/tourist access to the Provincial Highway system are CR 27, CR 6 in the north south direction and CR 92 and CR 22 in the east west direction.

The Township of Oro-Medonte only has one north-south County road , CR 93 which connects Highway 11 with Highway 400 and is the only County road in the area to provide relief to Highway 400 in this area. The remainder of the County roads CR's 11, 19, 22 and 92 within this municipality run east-west and link to the provincial highway system.

Severn Township is only serviced by one County Road which is CR 17. It links Coldwater to the recreational areas of Severn Falls and the Big Chute area.

The main north-south county roads within the Township of Ramara are CR 44 and CR 169. CR44 is heavily traveled between Highway 12 and Casino Rama by trips destined to the Casino. CR 169 is a former provincial highway providing a link between Highway 12 and Highway 11 to the north. This road is heavily used by aggregate haulers in the area.

Similarly, CR's 10, 50 and 88 in the southern area of the County not only provide vehicular access to adjacent municipalities, with connections to the Provincial Road system, but also act as goods movement corridors supporting the industrial/employments lands around Alliston.

County Roads 27 and 4 are heavily traveled north-south routes which parallels Highway 400 and provide much needed links for commuters and recreational traffic between Simcoe County and the GTA.

Most of the County roads are two lanes with a rural cross-section and provide inter-municipal access 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. 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. The 2008 Proposed Capital Budget Transportation and Engineering Map is illustrated on **Figure 2.4**



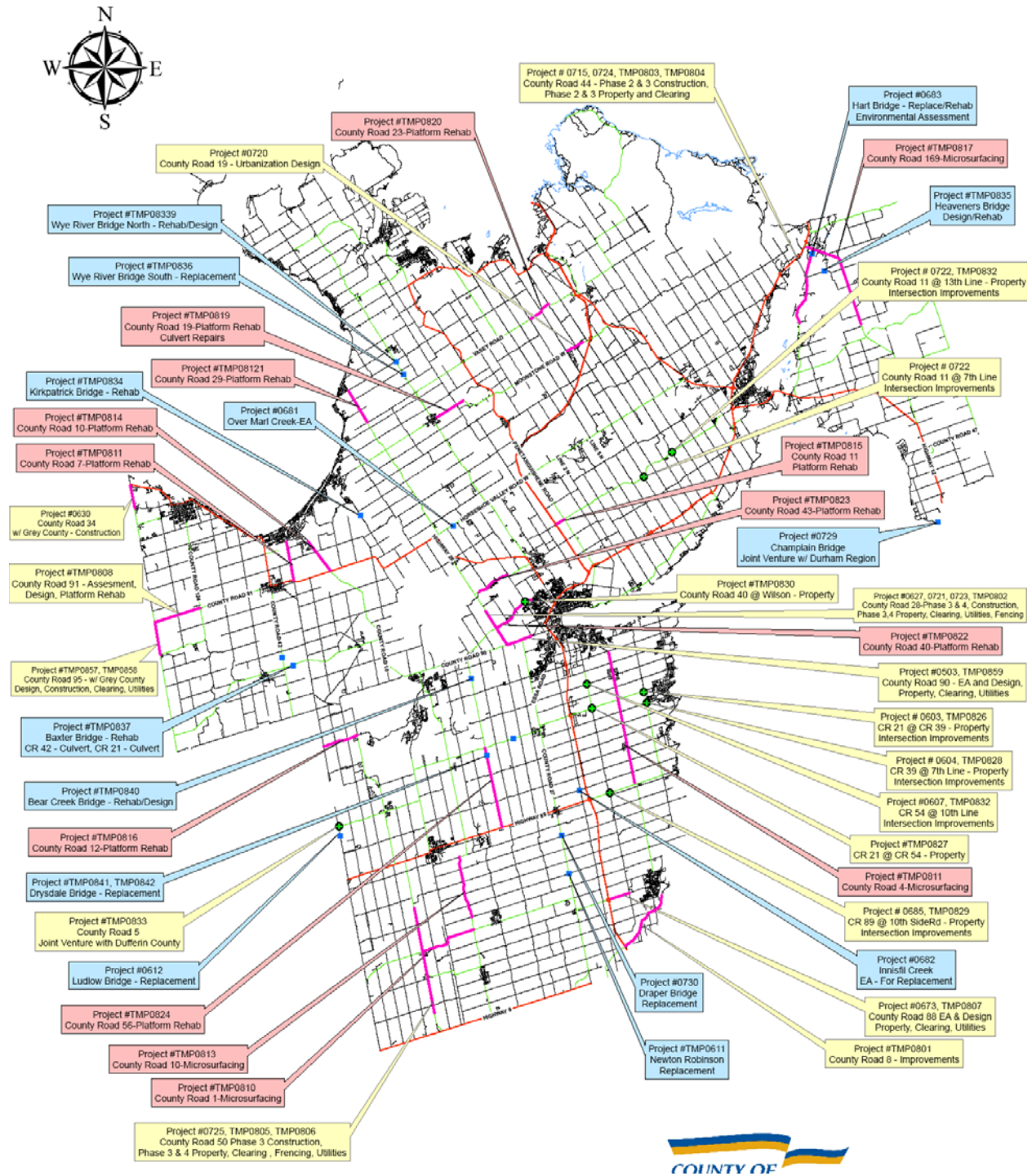


Figure 2.4 – 2008 Transportation and Engineering Capital Plan

### **3. STATE OF THE EXISTING TRANSPORTATION SYSTEMS**

#### **3.1. 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 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 TS survey was used as the basis for the model in Simcoe County.

The Traffic Zone system for the County is divided to 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 49 traffic zones within the County are established by taking into consideration the Municipal Boundaries and the Federal Government’s census zones.

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.

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
<b>Total</b>	<b>87</b>



**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 3.2**:

**Table 3.2 - 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 3.3** provides a comparison of the planning capacities used in Simcoe County with some similar other jurisdictions in Ontario.

**Table 3.3 - 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

$\alpha, \beta$  = calibrated link performance parameters

The  $\alpha$  and  $\beta$  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 3.4** below:

**Table 3.4 - Volume-Delay Functions by Road Type**

Road Type	Parameters	
	$\alpha$	$\beta$
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:

$$HBW\_P = \text{Home-Based-Work\_Production GTA} = 0.251 * \text{Population} + 0.794 * \text{Employment} + 0 * (\text{Population} + \text{Employment})$$

$R^2 = 0.999$

**Table 3.5** 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 3.5 - 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:

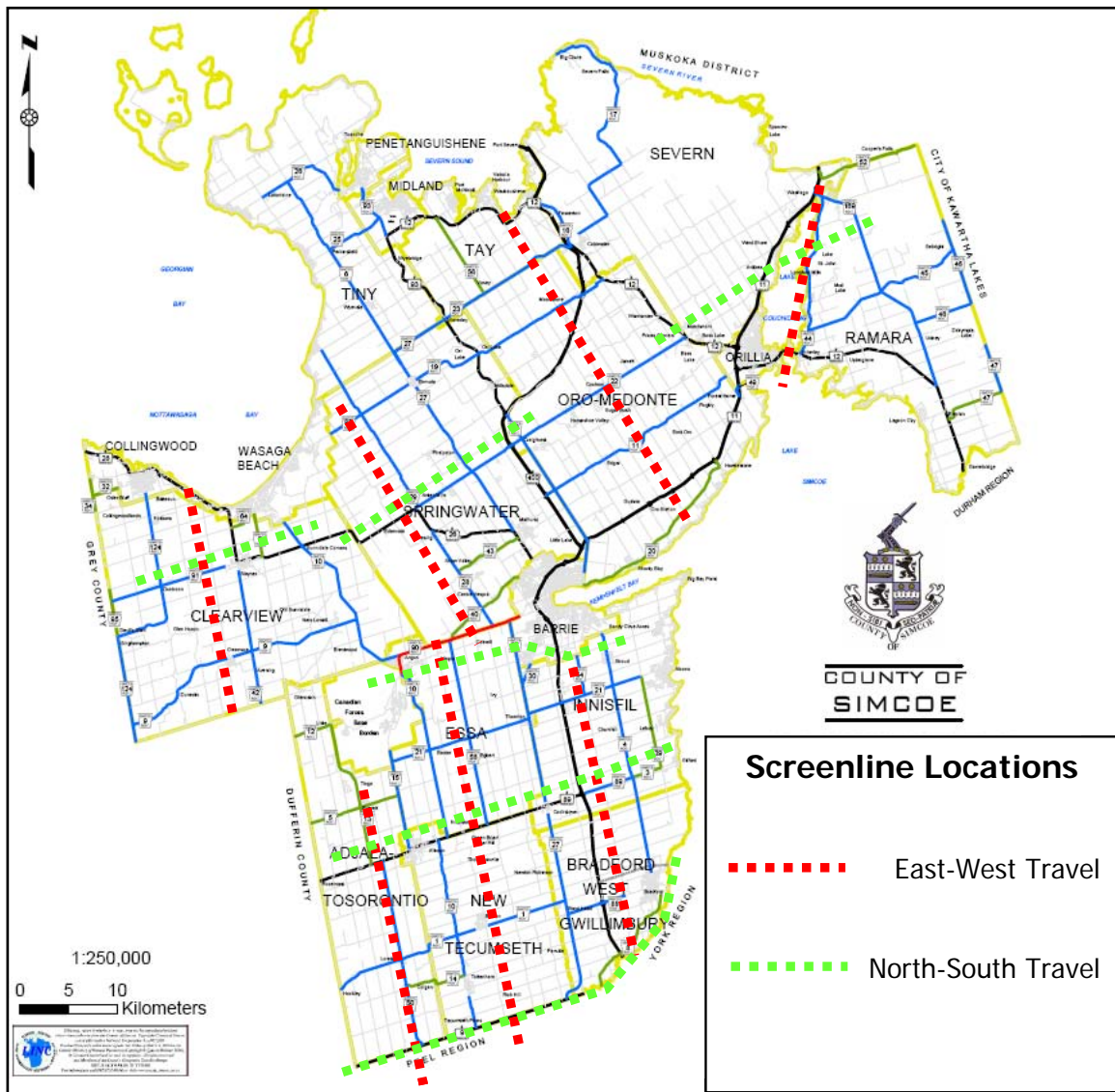
$$T_{ij} = t_{ij} * a_i * b_j$$

- 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 daily traffic volumes (ADT) was performed at a number of key screenlines in the County as illustrated in **Figure 3.1**, on the following page.



**Figure 3.1 - Screenline Locations for Model Validation**

Based on the validation results presented in **Table 3.6**, 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 3.6 - Model Validation Results**

**North- South Travel Demands**

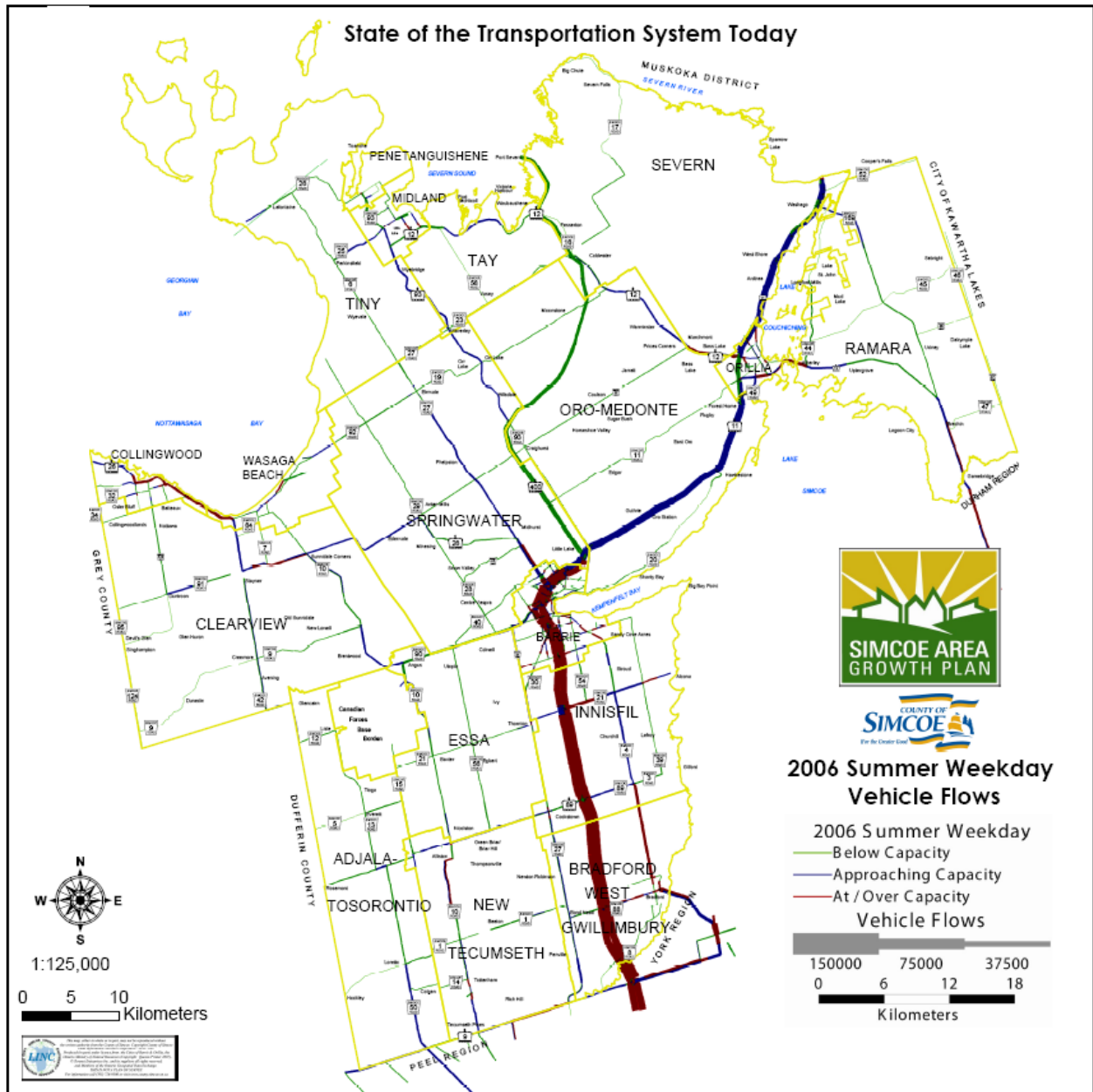
Screenline	Road	Observed ADT	Simulated ADT	Sim/obs
<b>York-Peel Boundary</b>				
	CR 50	7,500	8,325	1.11
	CR 10	8,200	9,265	1.13
	CR 27	6,350	6,490	1.02
	Hwy 400	87,900	91,330	1.04
	Bridge Street	23,600	25,630	1.09
<b>Total</b>		<b>133,550</b>	<b>141,040</b>	<b>1.06</b>
<b>North of Highway 89</b>				
	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
<b>Total</b>		<b>128,450</b>	<b>129,600</b>	<b>1.01</b>
<b>South of County Road 90</b>				
	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
<b>Total</b>		<b>138,370</b>	<b>136,095</b>	<b>0.98</b>
<b>North of Stayner / Highway 26</b>				
	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
<b>Total</b>		<b>27,170</b>	<b>28,990</b>	<b>1.07</b>
<b>North of Horseshoe Valley Rd (Hillsdale)</b>				
	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
<b>Total</b>		<b>46,010</b>	<b>44,140</b>	<b>0.96</b>
<b>North of Orillia</b>				
	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
<b>Total</b>		<b>40,040</b>	<b>45,450</b>	<b>1.14</b>

**East - West Travel Demands**

Screenline	Road	Observed ADT	Simulated ADT	Sim/obs
<b>West of Alliston</b>				
	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
<b>Total</b>		<b>30,800</b>	<b>27,758</b>	<b>0.90</b>
<b>East of Alliston</b>				
	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
<b>Total</b>		<b>55,325</b>	<b>48,875</b>	<b>0.88</b>
<b>East of Highway 400</b>				
	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
<b>Total</b>		<b>38,700</b>	<b>38,330</b>	<b>0.99</b>
<b>West of Stayner</b>				
	Highway 26	17,400	21,700	1.25
	CR 91	6,050	4,800	0.79
	CR 9	800	500	0.63
<b>Total</b>		<b>24,250</b>	<b>27,000</b>	<b>1.11</b>
<b>East of Wasaga / CR 10</b>				
	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
<b>Total</b>		<b>35,800</b>	<b>32,335</b>	<b>0.90</b>
<b>East of Highway 93 / 400</b>				
	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
<b>Total</b>		<b>62,150</b>	<b>59,200</b>	<b>0.95</b>
<b>East of Orillia</b>				
	CR 52	1,800	2,030	1.13
	CR 169	7,000	4,200	0.60
	Highway 12	18,600	19,800	1.06
<b>Total</b>		<b>27,400</b>	<b>26,030</b>	<b>0.95</b>



A traffic assignment simulating 2006 summer weekday traffic flows was completed to test the model in terms of identifying current capacity deficiencies. **Figure 3.2** illustrates the Summer Weekday Flows and highlights the state of road system with respect to current capacity deficiencies during peak travel seasons.



**Figure 3.2 - 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 leaving the Barrie area continues onto Highway 11 heading towards Orillia, Gravenhurst and Huntsville area, resulting in this section of the highway operating close to 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 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).*

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.

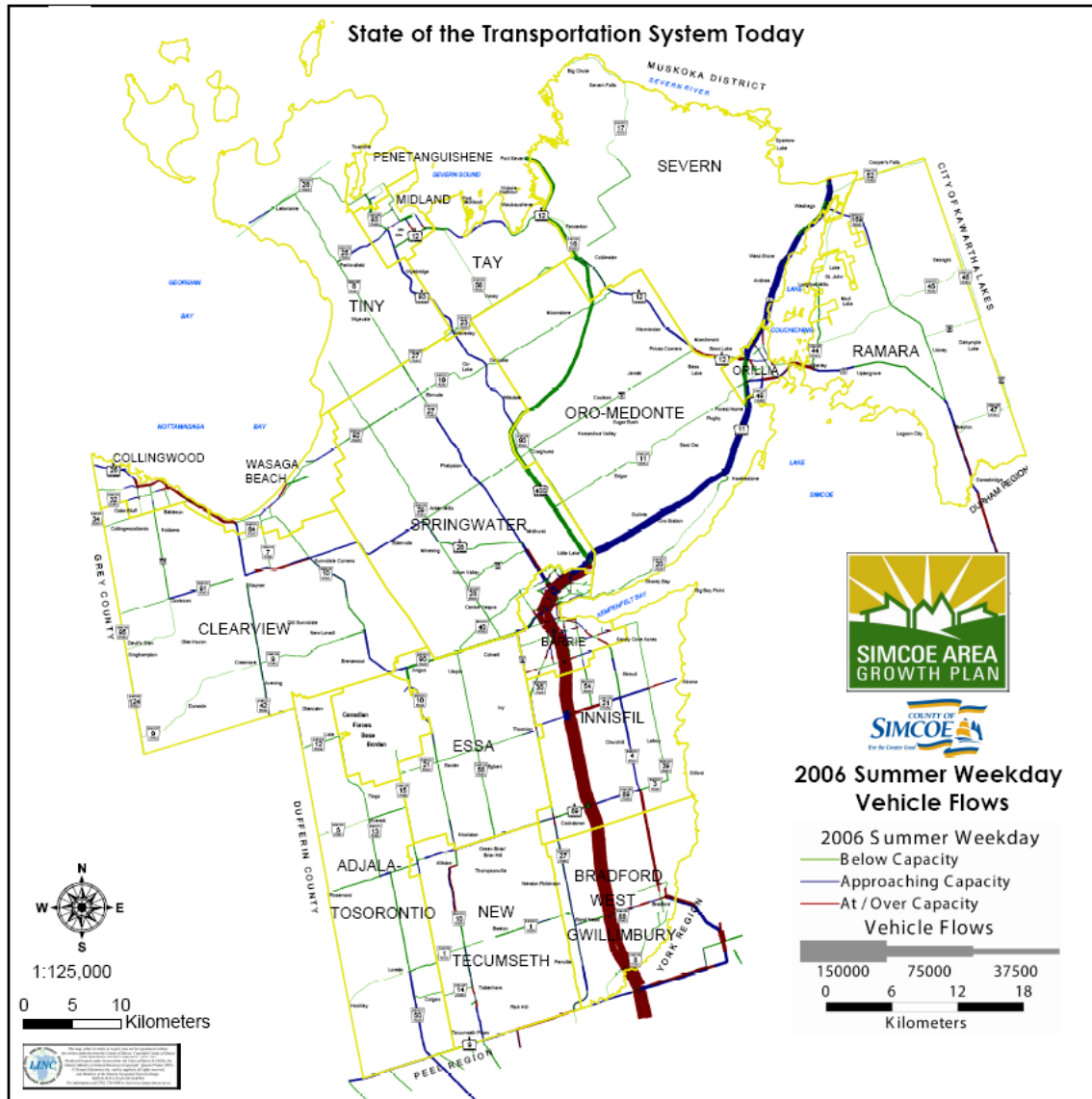
### **3.2. Existing Travel Demand and Travel Patterns**

The 2006 summer weekday traffic flows and the state of the road network are illustrated on **Figure 3.3**. 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 leaving the Barrie area continues onto the Highway 11 heading towards Orillia, Gravenhurst and Huntsville area, resulting in this section of the highway operating close to 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. Congested County roads include the following:

- *County Road 88 between Highway 400 and east of Bradford.*
- *County Road 4 between the boundary with York Region and County Road 89.*
- *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).*

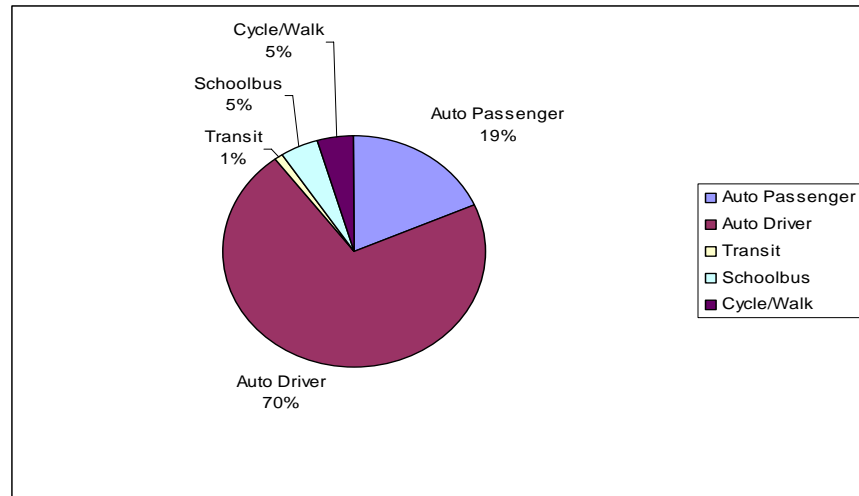
Based on the 2007 Average Annual Daily Traffic (AADT) map as shown in **Figure 3.6**, some of the heavily used County roads include CR's 4, 21, 27, 30, 54, 88, 90 and 93, along the sections serving the southern traffic coming off from the Highway 400 and designated to urban centres and tourists attractions such as Barrie, Bradford, Penetanguishene, Midland and Wasaga Beach. Some other heavily used County roads also include road sections connecting to Casino Rama, Orillia, CFB Borden, Collingwood and Severn Bridge.



**Figure 3.3 State of the Road Network – 2006 Summer Weekday Flows**

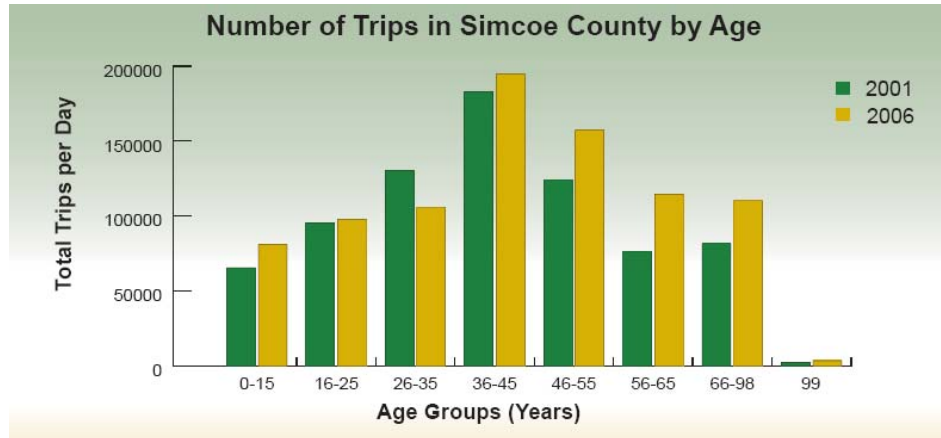
In addition to the traffic volume on the County roads, local roads and the Provincial highway system, the traffic variations on the road system are also dependent on the County’s industries and tourism activities. Based on the AADT volume on Highway 400, traffic volumes are highest during the summer 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.

Regarding the existing mode share pattern (as shown in **Figure 3.4**) within Simcoe County, the majority (89%) of trips are auto-mobile related (auto-driver and passenger), while the rest consists of 5% cycling/walking, 5% school buses and 1% transit.



**Figure 3.4 Existing Mode Share within Simcoe County**

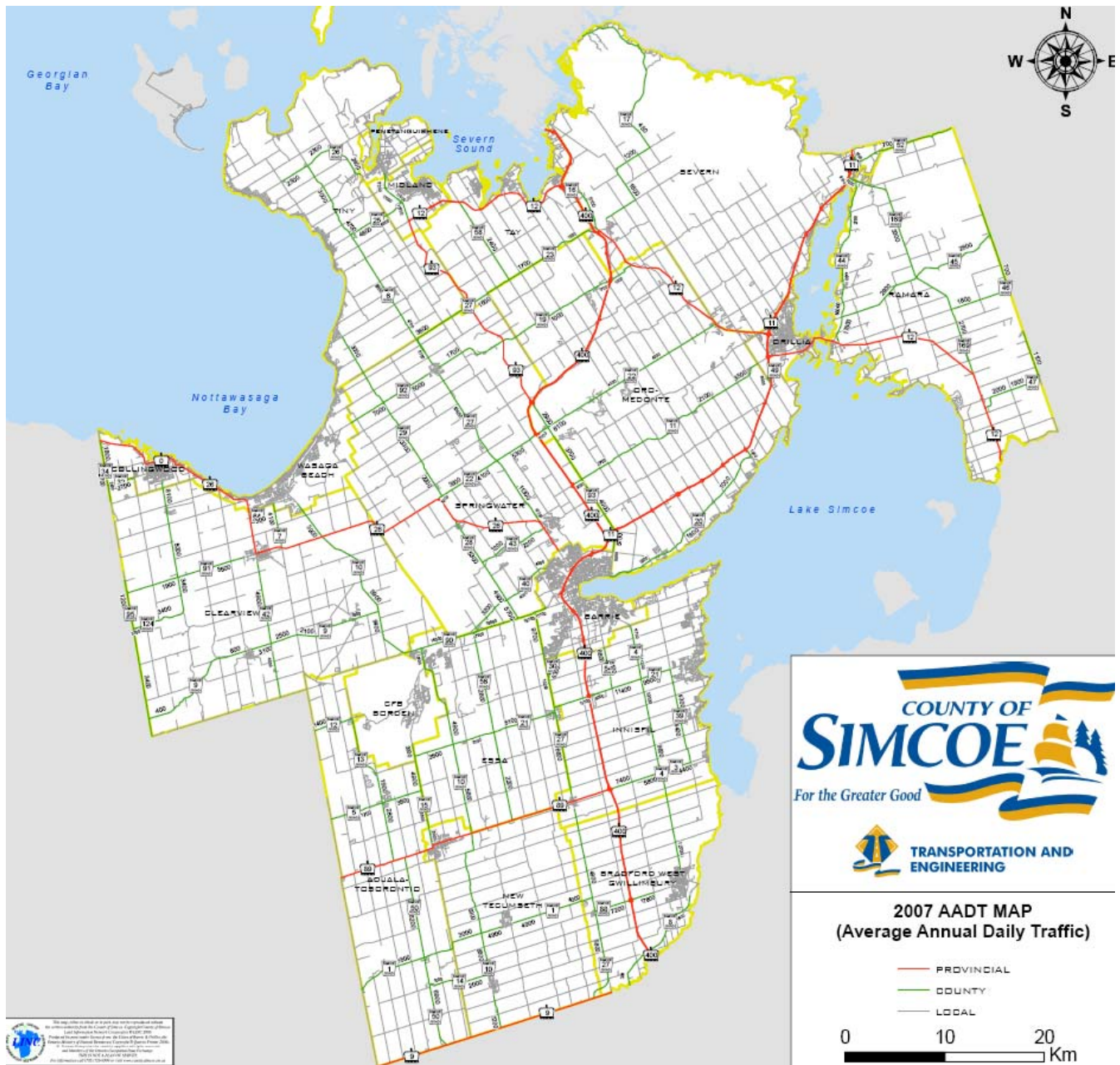
Between the year 2001 and year 2006, Simcoe County residents from age 36 and above generated increasing total trips per day as shown in **Figure 3.5**. The middle age cohort, ranging from age 36-45, peaks the total trips per day. The increasing age of residents in Simcoe County is expected to result in an increasing amount of discretionary travel during the day and thus higher total trips per day generated by the residents within the “66 or above” age category.



**Figure 3.5 Number of Trips in Simcoe County by Age**

Total trips per day originating in Simcoe County (including Barrie and Orillia) in 2006 was approximately 863,300 trips. (2006 TTS)

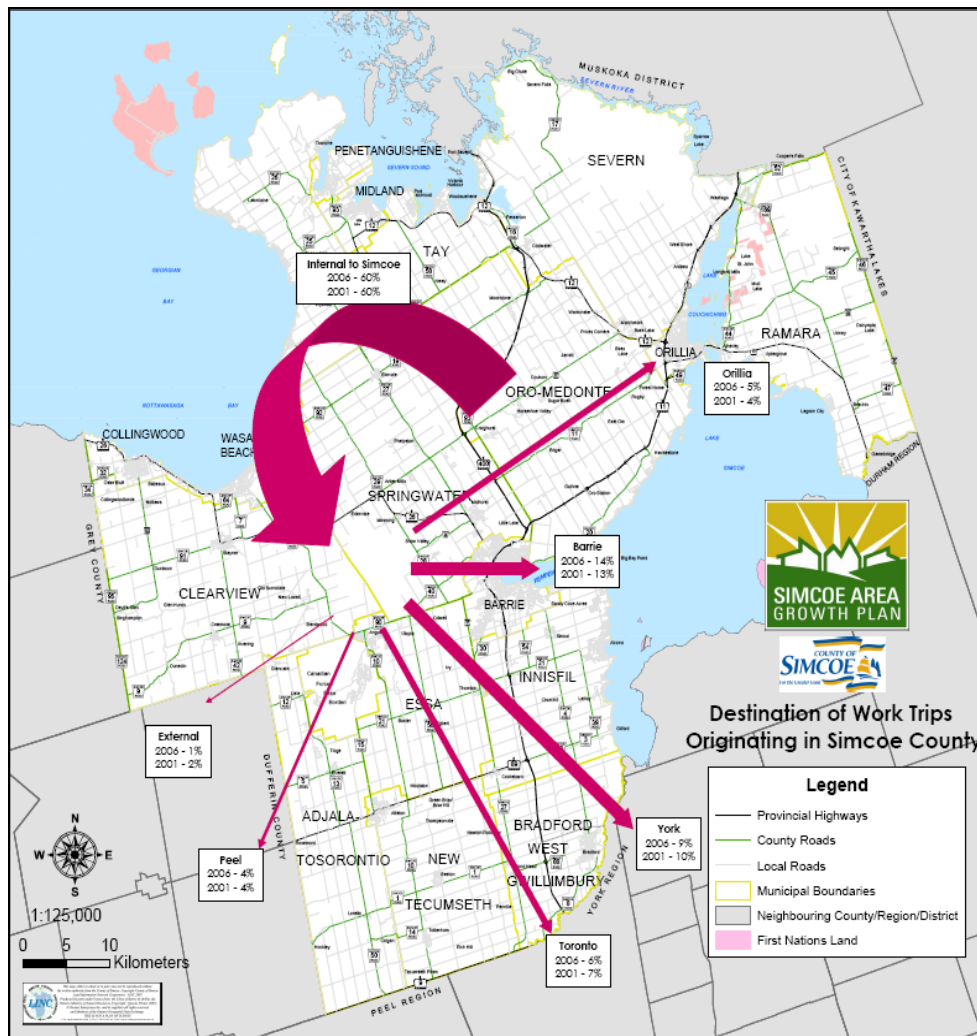




**Figure 3.6 Simcoe County 2007 Average Annual Daily Traffic**

Illustrated on **Figure 3.7** is the destination of work trips originating in Simcoe County (excluding trips originating in Barrie and Orillia). 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 stays 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.



**Figure 3.7 Destination of Daily Work Trips Originating in Simcoe County (2006)**

### 3.3. Public Perception of the System

The survey was undertaken by Veri/Fact Research via telephone. A random sample of County residents was selected and 609 surveys were completed. People responded to questions concerning where growth should occur in the County, how the transportation system should be expanded and improved with respect to roads and modes of travel, and on the environment. The complete report is included as Appendix A. 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.
  - Only 47% agree that growth should be accommodated by expanding outwards into undeveloped areas.
  - 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 road related questions*
  - 67% indicated widening existing roads or constructing new road was important – 61% supported spending taxpayers money on widening existing roads.
  - 77% indicated that the County should reduce the demand for auto travel during peak periods.
  - 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 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.

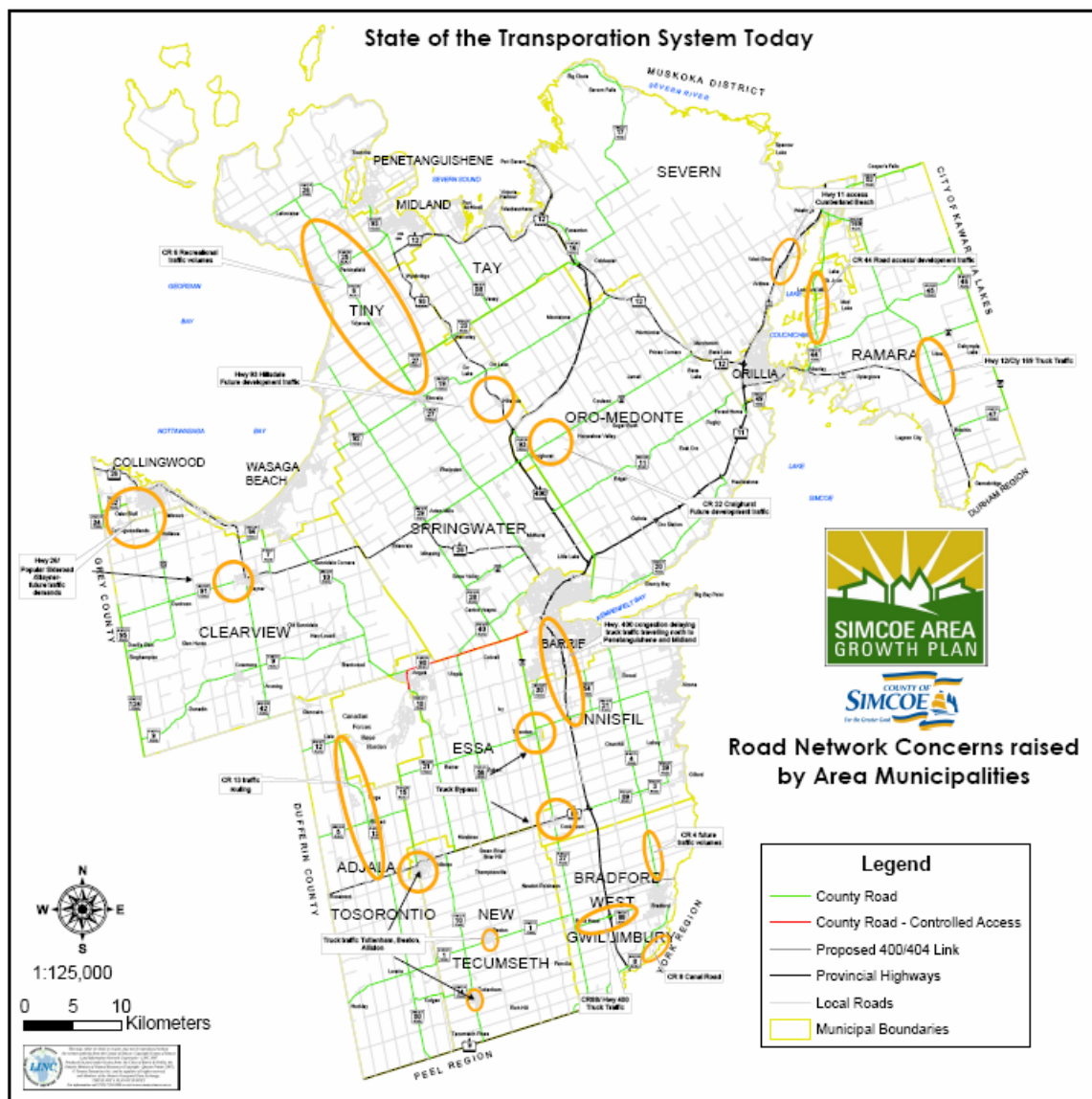
### **3.4. Road Network Concerns Raised by County and Area Municipalities**

Road network concerns raised by area municipal staff are shown in **Figure 3.8**. Several locations have been identified by municipal officials as being problematic including 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 3.8** 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 Freeway link, 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 and,*
- *A Truck By-pass for Thornton.*
- *By-pass for Hillsdale*



**Figure 3.8 Road Network Concerns Raised by County and Area Municipalities**

A major issue in several areas of the County, especially in the west part (Collingwood, Stayner, Wasaga Beach) and the areas near the Highway 400 and County Road 4 corridors is through traffic using County and area municipal roads. This is a result of traffic by-passing congested Provincial roads such as Highway 26 and Highway 400. This 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 designed for these heavier volumes.

## **4. FUTURE NEEDS**

### **4.1. 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 how often 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.

### **4.2. Proposed Places to Grow Plan Forecasts to Year 2031**

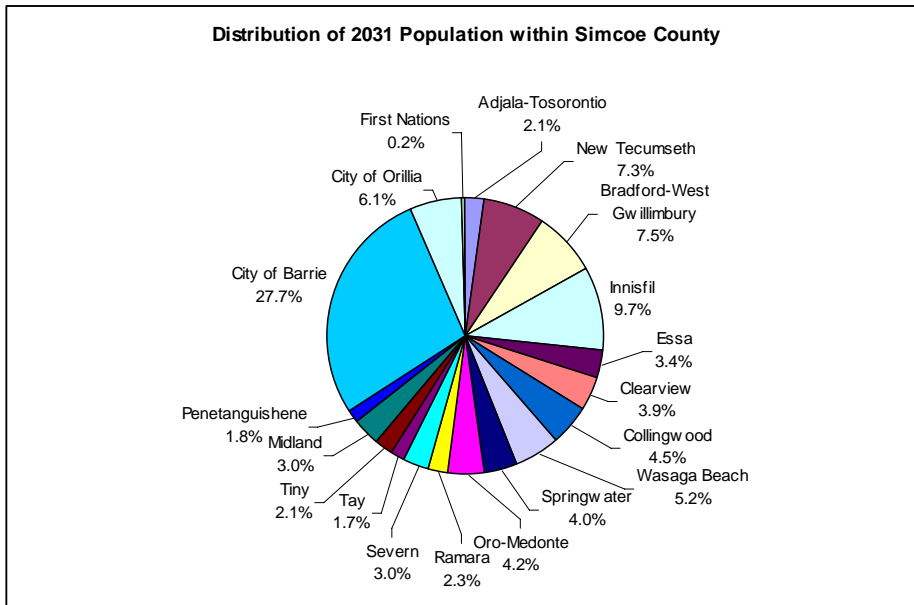
The Greater Golden Horseshoe (GHH) area is one of the fastest growing regions in North America. The “Places to Grow Plan” for the GHH area has been developed by the provincial government in an effort to control and plan future growth for the area that extends from County of Peterborough to the east, 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 4.1** 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 228,300 people and 79,000 jobs between 2006 and 2031 or an annual growth rate of 2.1% for population and 1.8% for employment.

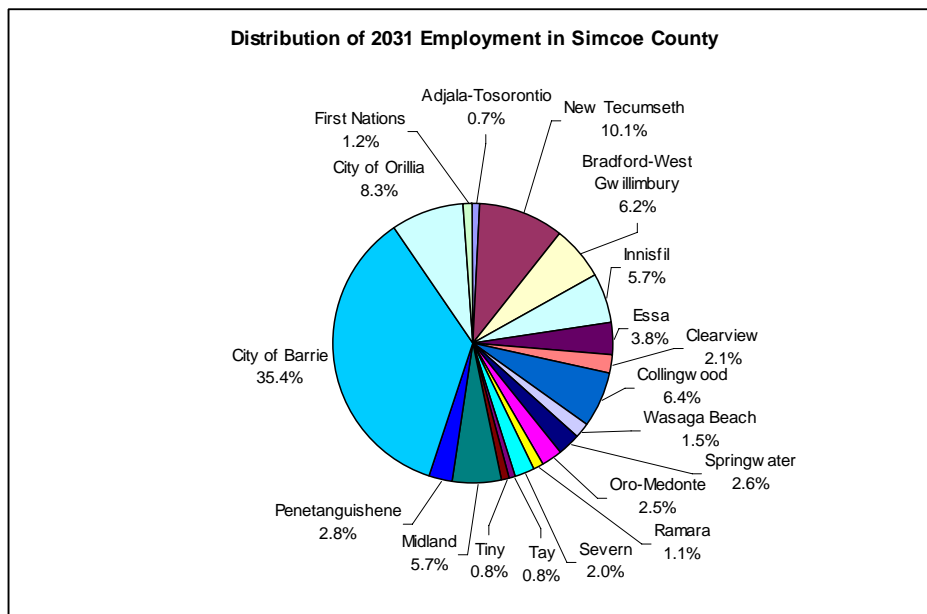
**Table 4.1 - Greater Golden Horseshoe Area Population and Employment (thousands)**

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
<b>Total GGH</b>	<b>7,790</b>	<b>9,090</b>	<b>10,330</b>	<b>11,500</b>	<b>3,810</b>	<b>4,640</b>	<b>5,170</b>	<b>5,560</b>
<b>Note: from Schedule 3 of the GGH Growth Plan</b>								

Illustrated in **Figures 4.1** and **4.2** are the distribution of 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 4.1** Distribution of 2031 Population within Simcoe County



**Figure 4.2** Distribution of 2031 Employment in Simcoe County

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 green space 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 green space 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.*), rapid population growth is identified in New Tecumseth, Bradford-West Gwillimbury, Innisfil, Clearview, Collingwood, Wasaga Beach and in the



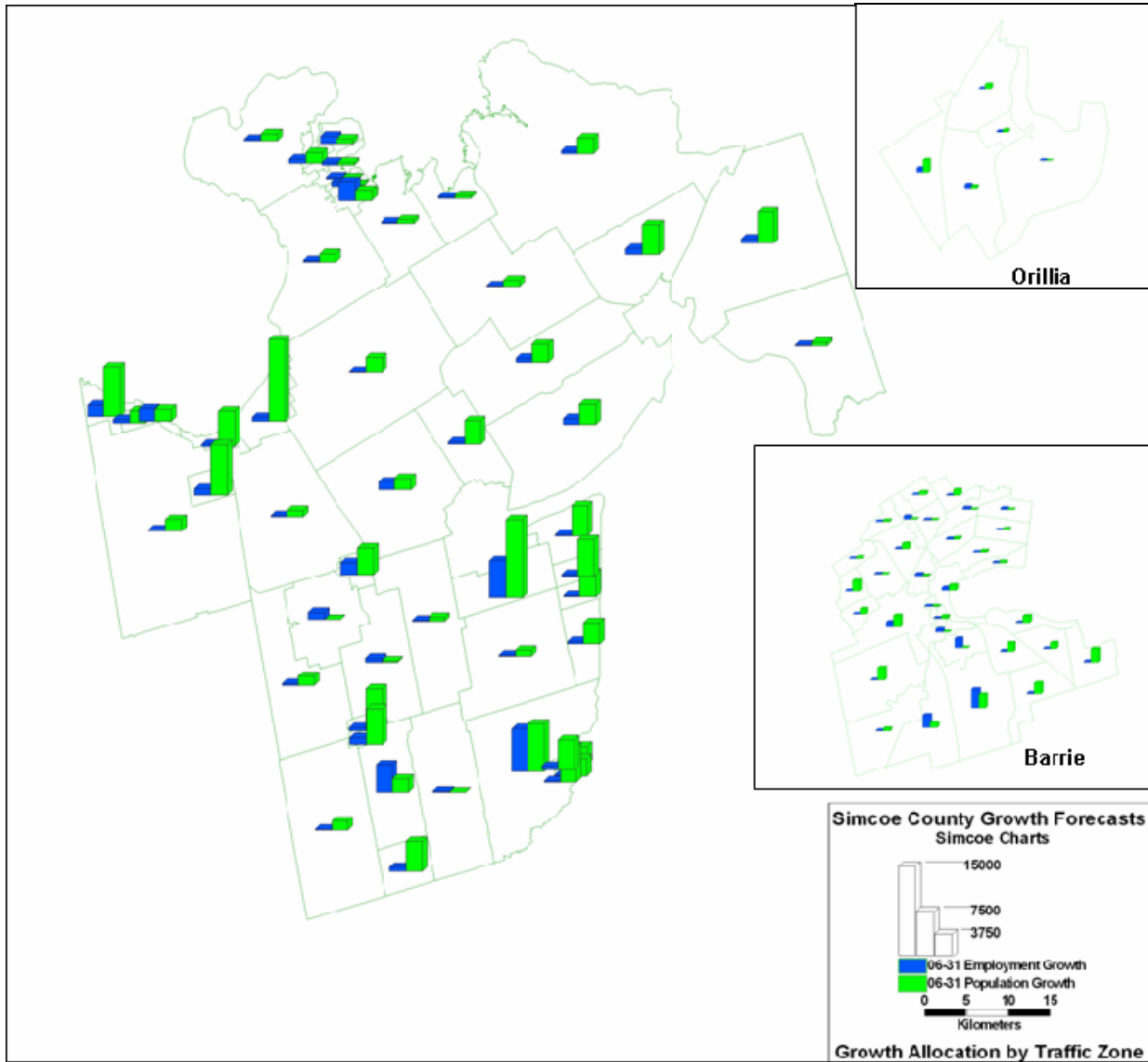
City of Barrie areas. The 2031 population in these municipalities will be approximately double that of the 2006 population, while the City of Barrie will have the greatest population gain (more than 50,000) in the future.

To facilitate the travel demand forecasting process, the municipal population and employment allocations summarized in **Table 4.2** 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 .

**Table 4.2 – Simcoe Growth Plan, Proposed Distribution of Population and Employment Growth from 2006 to 2031**

<b>Community</b>	<b>2006 Census Total Population</b>	<b>Estimated 2006 Census Employment</b>	<b>2031 Proposed Total Population</b>	<b>2031 Proposed Employment</b>
Adjala-Tosorontio	11,100	1,400	14,200	1,900
New Tecumseth	28,800	18,300	49,000	25,600
Bradford-West Gwillimbury	25,000	7,300	49,700	15,700
Innisfil	32,400	6,400	65,000	14,500
Essa	17,600	6,800	22,900	9,600
Clearview	14,600	3,800	26,000	5,400
Collingwood	18,000	11,700	30,200	16,300
Wasaga Beach	15,600	2,800	35,000	3,900
Springwater	18,100	4,800	26,500	6,700
Oro-Medonte	20,800	4,600	28,100	6,400
Ramara	9,800	2,100	15,500	2,900
Severn	12,500	3,700	20,200	5,200
Tay	10,100	1,500	11,300	2,100
Tiny	11,200	1,500	13,900	2,100
Midland	16,900	10,400	19,700	14,600
Penetanguishene	9,700	5,000	12,300	7,000
<b>Simcoe County Total</b>	<b>272,200</b>	<b>92,100</b>	<b>439,500</b>	<b>139,900</b>
City of Barrie	133,500	65,200	185,000	90,000
City of Orillia	31,400	16,700	41,000	21,000
First Nations	1,500	3,100	1,500	3,100
<b>Total Simcoe County Area</b>	<b>438,600</b>	<b>177,200</b>	<b>667,000</b>	<b>254,000</b>

(Source: Hemson Consulting Ltd. 2008)



**Figure 4.3 – Distribution of Year 2031 Population and Employment**

**Figure 4.3** 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.

### 4.3. 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 4.3 provides a summary of the total trip making activity in the Study Area for 2006.

**Table 4.3 –Total Daily Person Trips to/ from Simcoe County – 2006**

From To	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 4.4 based on current trip making practices and forecasts of future growth in population and employment in Simcoe County and the surrounding municipalities.

**Table 4.4 –Total Daily Person Trips to / from Simcoe County – 2031**

From To	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 4.5**. 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 4.5 – Growth in Total Daily Person Trips from Simcoe County - 2006 – 2031**

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

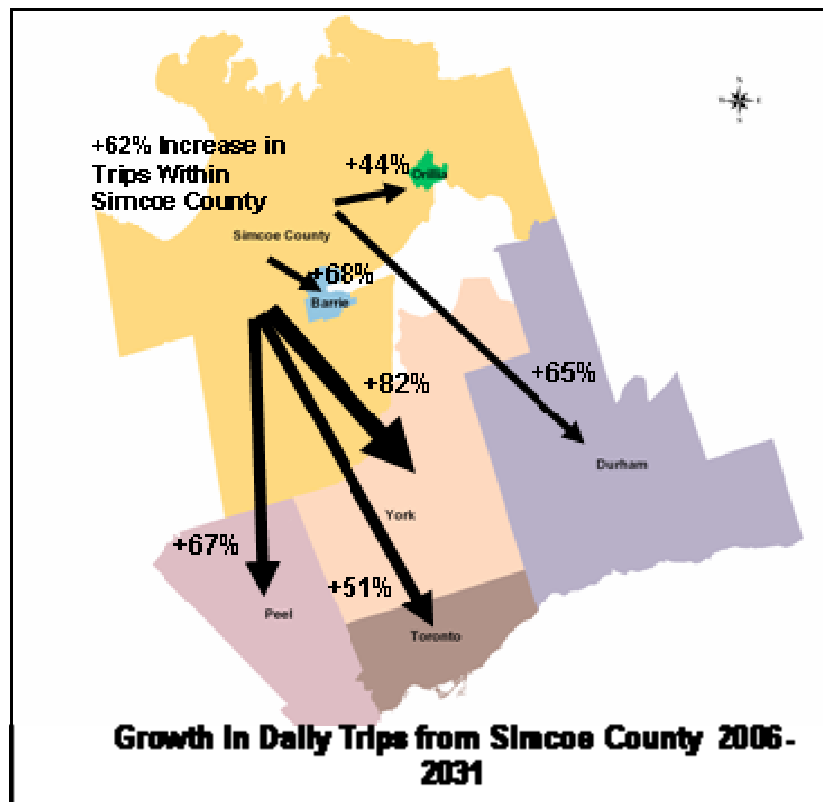


Figure 4.4 - Growth in Daily Trips from Simcoe County Municipalities

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 recently opened 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 4.6** 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 4.6 – Growth in Total Daily Person Trips from Barrie & Orillia – 2006-2031**

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

#### 4.3.1. Forecast Transit Usage

As noted in **Table 4-7**, the auto mode of travel currently dominates travel patterns in Simcoe County. Trips made by transit represent approximately 1.3% 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 4.7** on the following page.



**Table 4.7 – Forecast Growth in Transit Trips from Simcoe County – 2006-2031**

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

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 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 4.8** is the growth in Transit Trips required from Simcoe County under an aggressive transit mode split.

**Table 4.8 - Aggressive Transit Scenario—Growth in Transit Trips from Simcoe County**

<b>From Simcoe Area To</b>	<b>Total 2006 Person Trips</b>	<b>2031 Person Trips</b>	<b>2031 Base Transit Trips</b>	<b>2031 Base Transit Share</b>	<b>2031 Aggressive Transit Trips</b>	<b>2031 Aggressive Transit Share</b>
<b>Simcoe</b>	400,440	641,702	2,250	0.4%	6,417	1.0%
<b>CFB Borden</b>	4,588	5,656	0	0.0%	57	1.0%
<b>Barrie</b>	288,348	384,260	11,350	3.0%	23,056	6.0%
<b>Orillia</b>	80,942	90,847	1,780	2.0%	3,634	4.0%
<b>Simcoe Area</b>	774,318	1,122,465	15,380	1.4%	33,164	3.0%
<b>Grey</b>	3,455	4,537	0	0.0%	45	1.0%
<b>Muskoka</b>	2,069	2,690	0	0.0%	0	0.0%
<b>Dufferin</b>	4,325	6,352	0	0.0%	0	0.0%
<b>York</b>	31,956	54,827	580	1.1%	2,741	5.0%
<b>Durham</b>	2,665	4,361	105	2.4%	131	3.0%
<b>Toronto</b>	15,978	23,027	1,920	8.3%	3,454	15.0%
<b>Peel</b>	11,616	18,173	230	1.3%	1,090	6.0%
<b>Halton</b>	1,470	2,474	0	0.0%	99	4.0%
<b>Other</b>	10,894	19,480	0	0.0%	0	0.0%
<b>Total</b>	<b>858,746</b>	<b>1,258,386</b>	<b>18,215</b>	<b>1.4%</b>	<b>40,724</b>	<b>3.2%</b>

#### **4.3.2. 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 US, 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.

#### 4.4. 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.

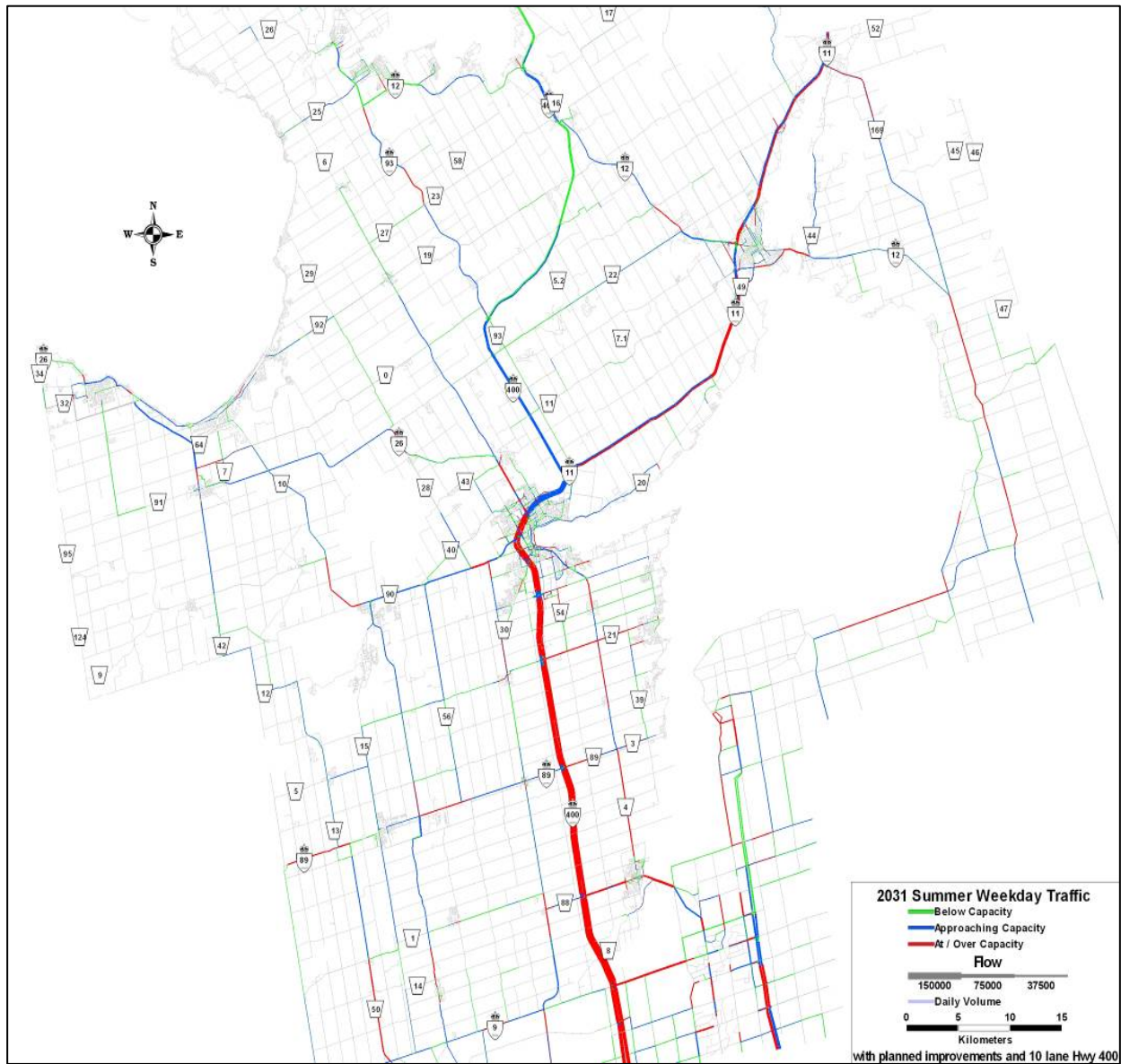
**Figure 4.5** illustrates the 2031 Summer Weekday Traffic patterns on the major road network in Simcoe County. Due to the significant role the Provincial Highways play in serving in travel to / from and through Simcoe County, most of the traffic congestion in the future will be felt on the Provincial Highway network. These forecasts include a number of planned improvements, including:

- Highway 400 widening to 10 lanes, between Highway 9 and Highway 400 extension/ 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.
- Extension and widening of Bathurst Street from Green Lane to Bridge Street (old highway 11)( Region of York)

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.

**Figure 4.5 - 2031 Future Roadway Deficiencies - Summer Weekday**



Current bus based transit services, 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.

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.

## **5. OPPORTUNITIES**

### **5.1. Road Network Improvements**

The existing County road network has some missing links which would make operations and maintenance more efficient. For example, the road link between Simcoe County Road 27 and Simcoe County Road 29 could be uploaded to the County closing the link between these County roads. Generally, the County road network and the area municipal roads should be rationalized in terms of their use and potential efficiencies in terms of operations and maintenance.

Local municipalities have proposed a series of interim improvements to local roads which are anticipated to address road capacity issues related to traffic on Highway 26 in Stayner and Collingwood. By-passes have been recommended in previous studies. The Municipalities of Clearview, Collingwood and Simcoe County are requesting Provincial support for these interim measures which include:

- Poplar Sideroad, Grey Road 19/21 reconstruction to accommodate higher traffic volumes near Collingwood.
- Simcoe Road 7, Clearview Sideroad 27/28 reconstruction to accommodate higher traffic volumes near Stayner.

Additionally there is potential to utilize other County or Municipal roads for the purpose of bypassing major settlement areas such as Cookstown, Tottenham, Beeton, Bond Head and Hillsdale as examples. Some of the preferred alternatives include:

- Bradford By-Pass, widening of County Road 4



- Cookstown By-Pass using existing IC, Alliston By-Pass and widening
- Tottenham By-Pass and widening of County Road 10
- Bond Head By-Pass and widening of County Road 27
- Widening of County Road 21 in Innisfil
- Barrie By-Pass – New Freeway By-Pass North of Midhurst
- Collingwood By-Pass
- Stayner / Wasaga Area new County Road via Flos Road 4, and County Road 10 improvement
- Oro Medonte Highway 11 widening
- Orillia-Rama widening of Highway 11, Highway 12 and County Road 44
- North Simcoe Area new North-South County Road via 5<sup>th</sup> Line, 6<sup>th</sup> Line and 7<sup>th</sup> Line

## 5.2. Transit Service Opportunities

From the public attitude survey, 47% of respondents indicated that increased transportation choices between municipalities are very important (bus, train cycle) and 42% indicated that it was somewhat important. Currently, GO Transit (bus and train) and Greyhound provide the majority of services between municipalities in the County. Although GO Buses do provide some inter-municipal service within the County, these routes primarily provide services to and from Toronto. It should be noted that the majority of Simcoe residents have their work trip destinations within the County. The City of Toronto and the Region of York account for only 15% of work trip destinations and this has decreased since 2001.

There are potential expansions to the existing municipal systems which could improve services between municipalities. An expansion of Collingwood west along Mountain Road and east along Highway 26, would provide services to the Town of the Blue Mountains around the ski hill area and to Wasaga Beach.

As outlined in a previous study, it was recommended that Barrie Transit to provide service to newly developing Greenfield areas around Barrie. There is also the potential to extend services to the surrounding areas such as Innisfil, Essa, Oro-Medonte and Springwater. In some ways, this kind of

service could also complement bus services operated by the School Boards. For example, students living in Angus attending high school in Barrie are constrained from after school extra-curricular activities because of the availability of transit after their school bus leaves. There is also potential/opportunity to extend Midland Transit into Penetanguishene.

The Barrie-Collingwood Railway (BCRY) is a short line operation which provides rail car transportation and switching services for industrial clients in Barrie and Collingwood. With expansion of GO Rail services to Barrie and with the rapidly increasing population in Barrie, there is potential to expand the use of this line to provide passenger rail service between Barrie and Collingwood.

### **5.3. Walking and Cycling Opportunities**

Site Plan approval is generally within the jurisdiction of the area municipalities, however, the Official Plans of the area municipalities have to conform to the policies in Simcoe County's Official Plan. To improve and promote walking and cycling for active and recreational transportation, it would be useful to have policies related to improving walk and cycle access to subdivisions in both the Transportation Master Plan and the Official Plan. Elements such as provision of sidewalks in settlement area would assist in providing opportunities to increase walking.

Several improvements to the trail system could also promote walking and cycling activities.

### **5.4. Opportunities for Other (non transit) Alternative Modes of Transportation**

Based on the public attitude survey, 61% of respondents feel that the County should invest in car pool lots or car pool lanes on key County roads and 56% support incentives to encourage ride-sharing and other trip reduction programs. The MTO provides carpooling lots along Highway 400 and is currently looking at the implementation of HOV lanes on Highway 400. The MTO's current policies support the implementation of HOV lanes on 400 series highways wherever a widening is planned. The MTO should be encouraged to provide further carpool lots along Highway 400 and Highway 11.

As no major widening of County roads is envisaged where HOV lanes could be implemented, for the short term, the emphasis should be on implementing carpool lots.

The implementation of carpool lots could serve both work trips and recreational travelers from outside the County. Key locations should be identified on the County road system and could include:

- A carpool lot in or around Stayner. This could capture residents living in Collingwood, Wasaga Beach and Stayner that work in Peel Region or Toronto or Barrie.

- A carpool lot on Highway 11 between Barrie and Orillia (under MTO jurisdiction)
- A carpool lot on Highway 400 north of Barrie (under MTO jurisdiction).

Ridesharing could also be encouraged through major employers in the area such as Honda in Alliston or major plants in or around Collingwood, Orillia and Barrie. To facilitate this, the implementation of Transportation Management Association(s) could assist in initiating discussions with companies and in the setting up of ridematching.

Muskoka and Parry Sound District will remain the locations of most new recreational investment, with Collingwood and Blue Mountain attracting an increasing share of recreational travel. By 2031, an approximate 60% increase in tourist travel can be expected based on projections by Hemson Consulting.

## **6. CONCLUSIONS**

The Growth Plan for the Greater Golden Horseshoe identifies the County of Simcoe will have population and employment targets of 667,000 people and 254,000 jobs by 2031. This represents an increase of approximately 58% growth in population and 45% growth in employment over the next twenty five years. The review of the existing conditions and the current transportation network within the County of Simcoe indicates there are existing problems with the current network. An examination of future 2031 population and employment projections which have been allocated to the 18 municipalities throughout the County indicates that there will continue to be congestion on many of the major road facilities in the County and it is expected to become worse if no improvements to the transportation system are undertaken. In addition, seasonal traffic demands that occur in different areas of the County also increase congestion levels significantly.

In order to accommodate the anticipated population and employment projected for Simcoe County, this Transportation Master Plan will develop a multi-modal plan which identifies the County's longer term infrastructure needs based on planned growth. It will take a system wide approach to defining all future transportation needs of the County including walking, cycling, transit, rail, autos and trucks.