Peel Data Centre

TRANSPORTATION PLANNING

Region of Peel
Working for you

Cordon Count Program in The Region of Peel

November 2003

This newsletter summarizes the results of the 2001 Region of Peel Cordon Count Program by providing highlights, key findings and trends on both vehicle and people travel patterns in the Region.

The Program database is a valuable information source to forecast future vehicle (passenger and truck) and public transit trends. The Region uses the data to validate the Peel Travel Demand Forecasting Model. Program information is also used by both the Region and the area municipalities in developing transportation policy and capital plans.

What is the Cordon Count Program?

The Cordon Count Program involves counting vehicles and people that cross selected counting stations over a 15-hour period, starting at 5:30 a.m. and continuing until 8:30 p.m. The Program began in the last week of April 2001, with surveys completed by the end of June of that year. The Program involved a total of 200 counting stations.

Screenlines & Cordons

A series of successive counting stations can be grouped to form a "screenline". A "cordon" refers to a geographic area enclosed by a set of screenlines. Figure 1 shows Peel Region's boundary cordon and the Brampton/Mississauga and Brampton/Caledon screenlines.

Program Coordination

During the same period in 2001, other GTA regions conducted similar counting programs. Peel worked in conjunction with neighbouring regional municipalities to ensure consistent data collection at boundary stations. The Region also worked closely with local municipalities to accommodate their data needs and obtain best value for the effort.

Key Findings

- Vehicle trips and population increased from 30% in 1991 to 35% in 2001.
- Vehicles crossing the Brampton/Caledon boundary grew by more than 50% in the last decade.
- More than half of the vehicles entering/leaving Peel use arterial roads; the remainder of the vehicles use highways.
- Truck traffic in Peel is growing faster (5% per annum) than either vehicle trips or population.
- Goods movement is becoming more predominant in our transportation system. The share of trucks, among all vehicle trips increased from 16% in 1991 to 19% in 2001.
- Single occupant vehicles increased from 85% to 89%, while the average auto occupancy rate decreased from 1.25 to 1.16 persons in the last 10 years.
- GO Transit ridership crossing the Peel East screenline increased by 36%.
- The share of local public transit, crossing the Peel Region cordon, in the a.m. peak period, has declined from 8.3% to 6.3% in the last 10 years.

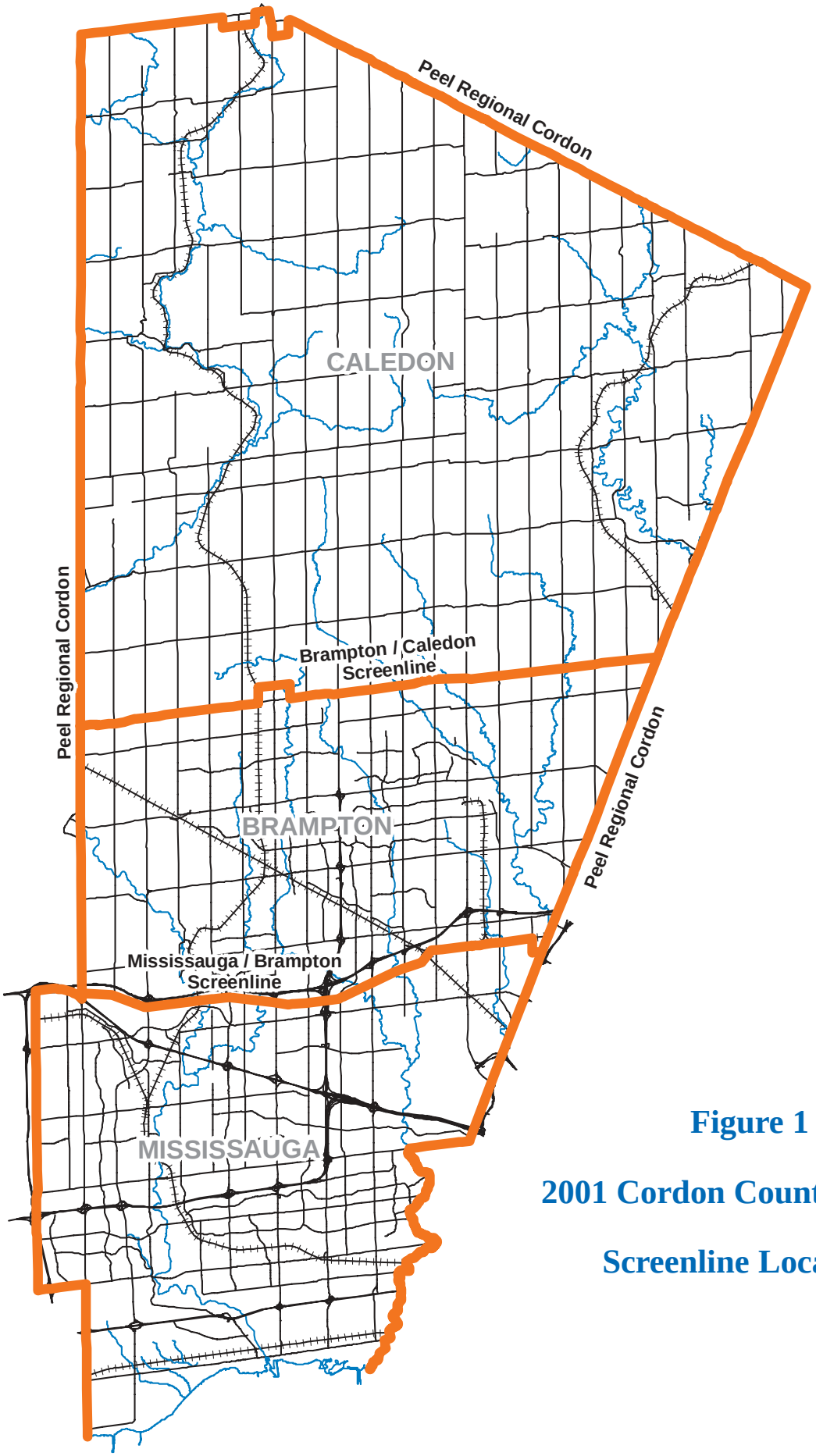


Figure 1

2001 Cordon Count Program

Screenline Locations

Why do we Conduct the Cordon Count Program in Peel Region?

The key objective of the Program is to collect consistent and comprehensive Regional data in daily vehicle movement, helping us to monitor travel pattern changes and plan for transportation system improvements throughout Peel.

The Program database is a valuable information source used to forecast the future passenger vehicle and truck volumes, as well as future transit ridership. The Region's Travel Demand Forecasting Model also uses the database as part of the validation process.

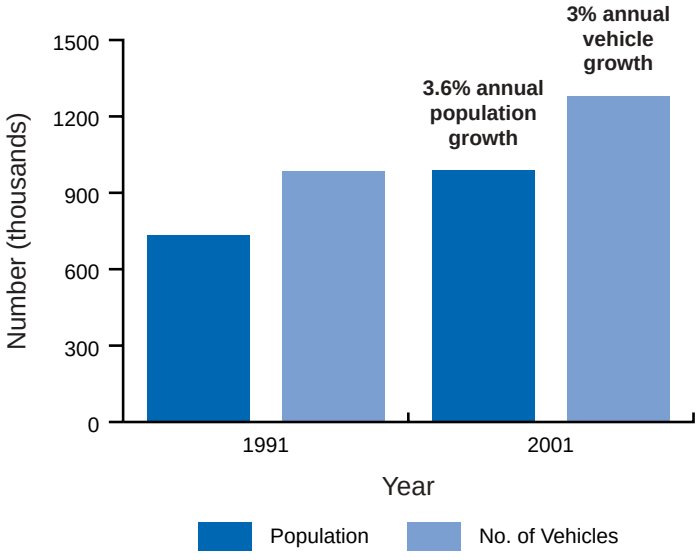
Municipalities and Ontario's Ministry of Transportation require cordon count data for analyzing transportation needs and monitoring growth. Furthermore, the data is used in priority setting capital planning and development phasing.

What does the Cordon Count tell us About Peel's Travel Characteristics?

Vehicles Trips are Growing at the Same Rate as Population.

Between 1991-2001 vehicles crossing the Peel boundary during a 12-hour period grew at an annual rate of 3 per cent. This is similar to the population growth rate of 3.6 per cent.

Population in Peel Region and Total Vehicles Crossing the Peel Region Cordon (12-hour period)

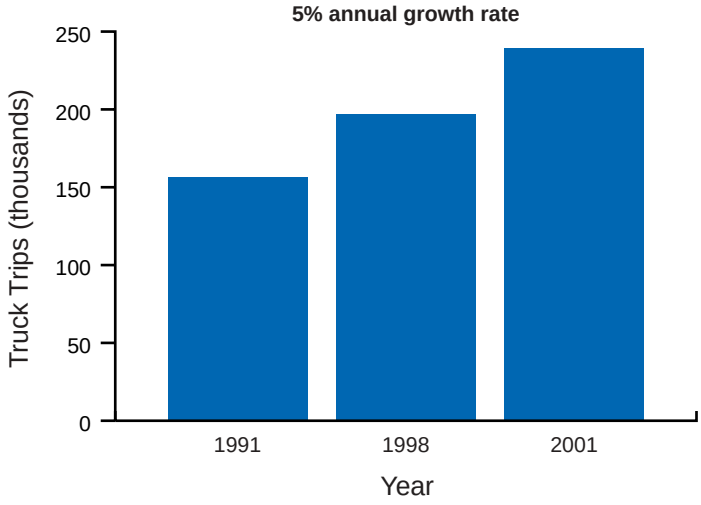


Trucks Crossing Regional Boundaries are Increasing at a Higher Rate.

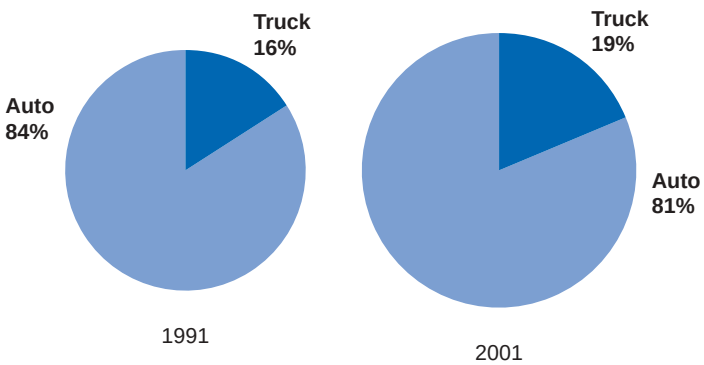
Truck traffic crossing regional boundaries has been increasing rapidly over the past ten years. Between 1991 and 2001, close to 83,000 additional medium/heavy truck trips were crossing the Peel Region Cordon over a 12-hour period. Based on this data, the average annual growth rate for truck trips in Peel Region is about 5 per cent. This is much higher than the annual growth rate of population and total vehicle trips, as indicated above.

The share of truck trips has grown between 1991 and 2001. In 1991, 16 per cent of all vehicles crossing the Peel Region boundary were trucks - that grew to 19 per cent in 2001.

Total Truck Trips Crossing the Peel Region Cordon (12-hour period)



Percentage of Truck Trips Crossing Peel Region Cordon (12-hour period)



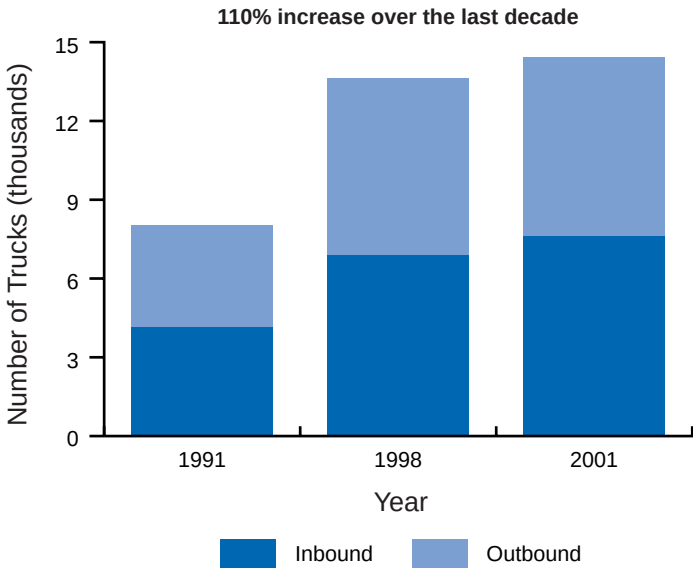
Truck Traffic has Doubled at Municipal Boundaries.

Between 1991 and 2001, vehicles crossing Brampton/Caledon over a 12-hour period increased by over 50 per cent, or 32,200 vehicles.

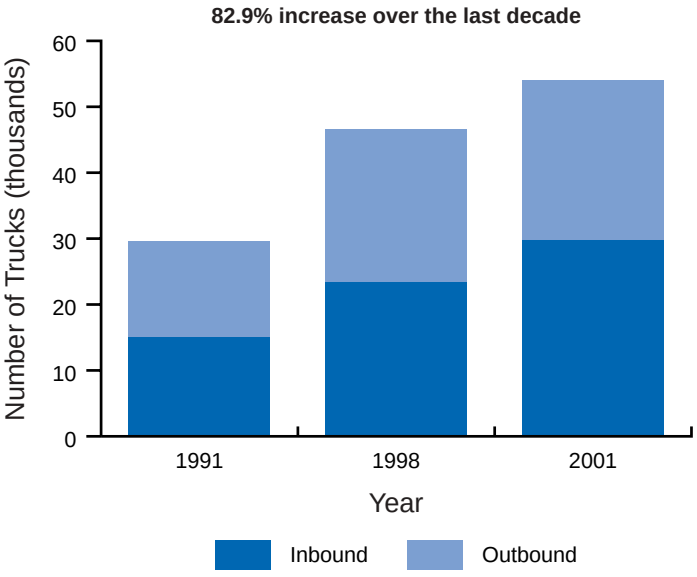
Truck traffic crossing this screenline has increased by 110 per cent from 1991 to 2001. The rate of growth for truck trips doubled the rate of growth for all vehicles.

The result is that truck traffic has a serious impact on roads connecting Brampton and Caledon.

Total Trucks - Brampton/Caledon Screenline



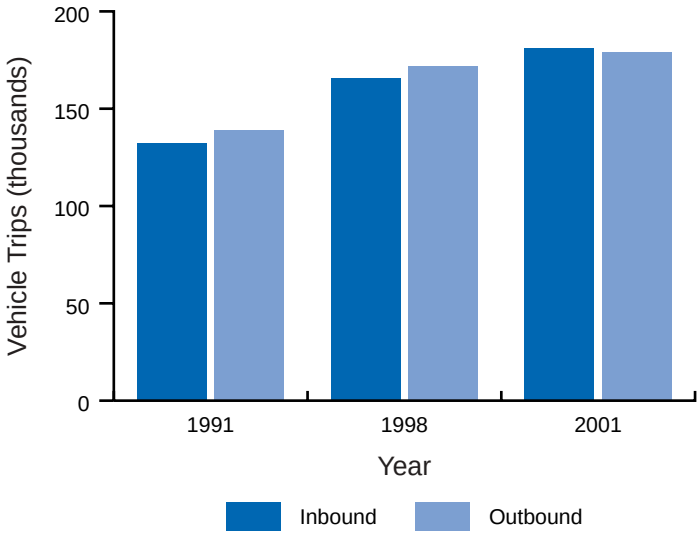
Total Trucks - Mississauga/Brampton Sreenline



Peel Region is a Major Employment Destination.

With an annual employment growth of 20,500, Peel Region is attracting more traffic from other GTA regions. In 1991, there were about 6,700 more vehicle trips leaving than entering Peel in the a.m. peak period. In 2001, the trend reversed, with about 2,000 more trips entering Peel Region in the same period.

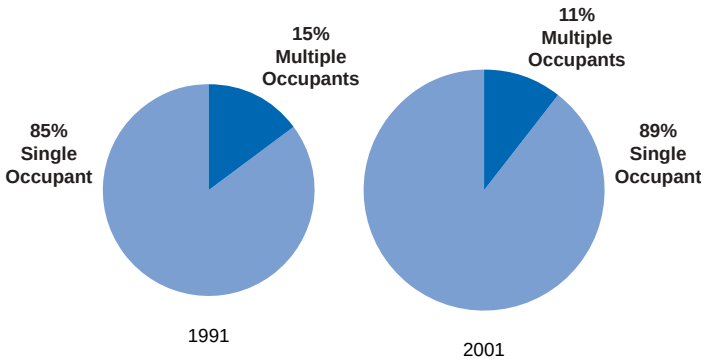
Vehicle Trips Entering and Leaving Peel Region



There are more Single Occupant Vehicles on the Roads.

In 1991, 85 per cent of all vehicles that crossed the Peel Cordon in the a.m. peak period were single occupant vehicles (SOVs). By 2001, the percentage increased to 89 per cent where nine out of ten vehicles on the roads were SOVs.

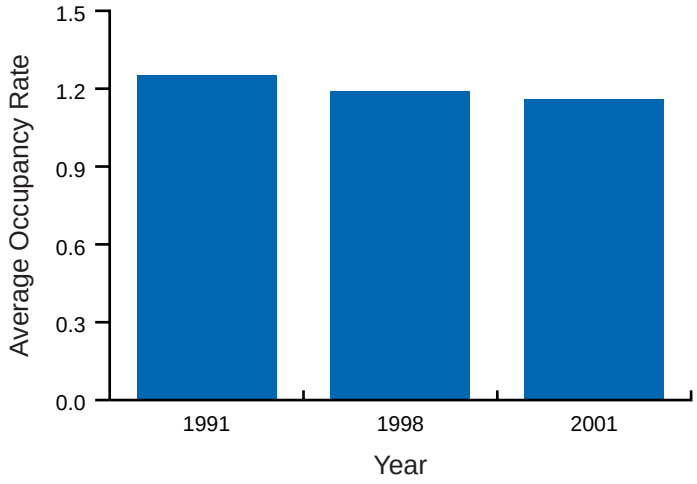
Single Occupant Vehicles Crossing Peel Region Cordon (a.m. peak period)



The Average Auto Occupancy is Dropping.

In 1991, the average auto occupancy rate, based on automobiles crossing the Peel Region Cordon in a 12-hour period was 1.25 persons per vehicle. By 2001, the average auto occupancy rate dropped to 1.16. The problem of SOVs becomes more acute during the peak morning period. The average peak period auto-occupancy rate for 1991 was 1.2, but dropped to 1.1 in 2001.

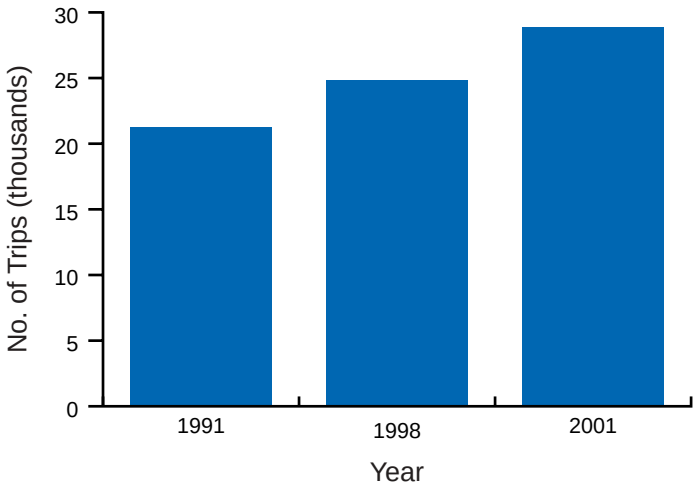
Average Auto Occupancy (12-hour period)



GO Transit Ridership Increased in the Last Decade.

Although employment in Peel Region has increased, Toronto still provides the highest concentration of jobs in the GTA. Between 1991 and 2001, about 7,300 more commuters used GO Transit in crossing the Peel East screenline to Toronto during the a.m. peak period. That represents a 36 per cent increase in GO riders. In 1991, 14.4 per cent of commuters used GO service during the a.m. peak period to get to Toronto. In 2001, GO Transit's share increased to 17.2 per cent.

GO Rail Trips Crossing Peel East Screenline (a.m. peak period)

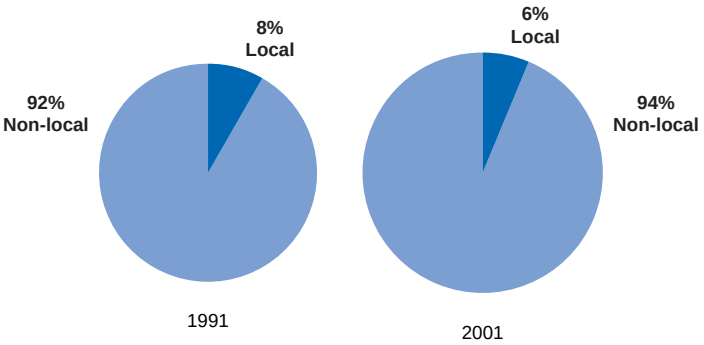


Local Transit Ridership is Decreasing.

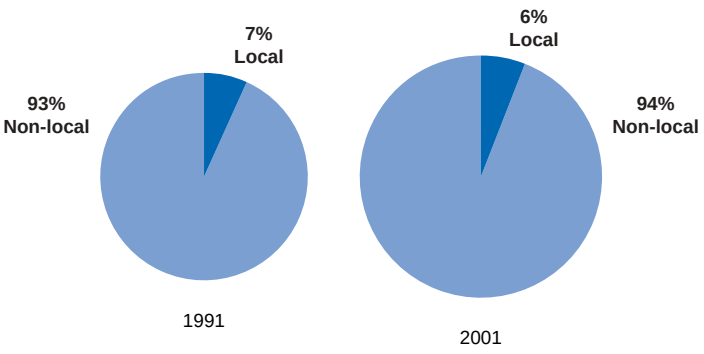
Although GO ridership increased, local transit share has decreased. In 1991, about 8.3 per cent of people crossing the Peel Region Cordon, in the morning peak period, used local transit. In 2001, local transit use dropped to 6.3 per cent. Over that 10-year period, about 2,300 or 8.3 per cent less people used local transit in crossing the cordon in a 12-hour period.

The share of local transit crossing the Brampton/Mississauga screenline has also decreased. In 1991, 7.2 per cent of all the trips crossing the Brampton/Mississauga screenline in the a.m. peak period used local transit. In 2001, with growth in both population and employment, approximately 1,000 more people used either Mississauga Transit or Brampton Transit to travel between these municipalities. Despite that growth, local transit share still dropped to 6.3 per cent.

Percent Local Transit Modal Share Crossing Peel Region Cordon



Percent Local Transit Modal Share Crossing Brampton/Mississauga Screenline



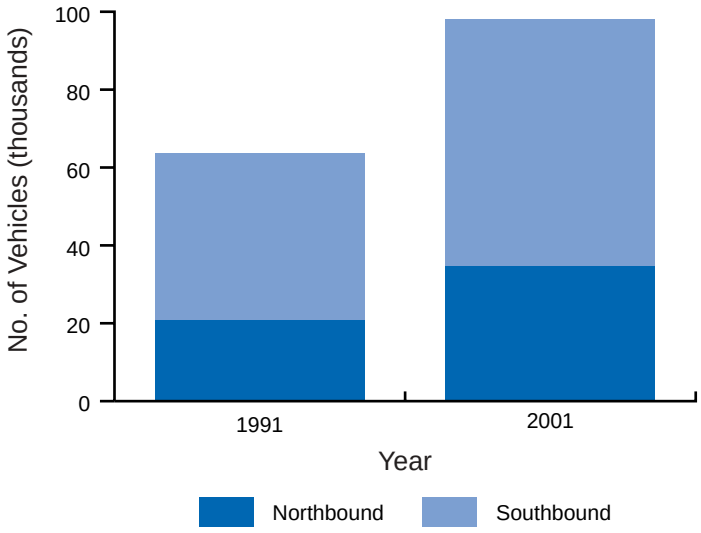
Both Highways and Arterial Roads Play an Important Role.

Nearly half (45 per cent) of total trips across the Peel Cordon are carried on the Provincial highway system, while the remainder are carried on the arterial road network.

With Regional Growth and Highway 407, the Travel Pattern between Mississauga and Brampton has Changed.

There has been growth in the reverse flow in the morning peak along the Mississauga/Brampton screenline. From 1991 to 2001, southbound trips from Brampton to Mississauga in the a.m. period grew by 47 per cent while northbound trips have increased more by 67 per cent.

Directional Traffic Flow at the Brampton/Mississauga Screenline (a.m. peak period)



For More Infromation:

Regional Municipality of Peel
10 Peel Centre Drive, 6th Floor
Brampton, Ontario
L6T 4B9

Phone: (905) 791-7800 ext.4347
Fax: (905) 791-7920

Email: planninginfo@region.peel.on.ca

What does the Cordon Count Program Tell Us?

The Cordon Count Program has highlighted a number of transportation trends, which require response and action. The following are some of the key actions indicated by the trends:

Develop Policies and Programs to Increase Auto Occupancy.

Considering the rate of growth in employment and population in Peel Region, simply widening roads will not satisfy the burgeoning number of vehicle trips. In response, the Region and local municipalities have to develop land use and transportation policies and programs to reduce single-occupant vehicle trips. For example, more focus on developing Transportation Demand Management (TDM) measures can encourage commuters to use sustainable modes of transportation such as public transit and carpools.

Work with GO Transit to Improve Transit Services.

GO trains represent a popular, sustainable, and essential transportation mode in serving Toronto-bound commuters in the Region. Although employment in Peel and other GTA regions has increased, Toronto remains the major employment centre in the GTA. The Region should continue to work with MTO, GO Transit and other GTA Regions to improve GO service and increase their use. There is also a need to improve GO bus services on highway 407 and implement an inter-regional Bus Rapid Transit system.

Introduce Policies and Programs to Encourage the Use of Public Transit.

Cordon Count information tells us that local transit is losing its share of market. Improving public transit's share is a key factor in developing an effective transportation system for the Region and achieving Ontario's vision for Smart Growth. The Region and local municipalities must work together to create a pro-transit strategy, secure public funding and make bus service in Peel a more attractive option for commuters.

Develop Policies and Programs to Accommodate the Growth in Goods Movement.

The high percentage of trucks crossing the Peel Regional Cordon indicates that goods movement is a huge factor for our local economy. Currently, goods movement is not considered adequately in transportation planning at the federal, provincial and municipal levels. The region should work with senior levels of government and the industry to better understand goods movement needs and to develop appropriate policies, plans and programs.