

PART 3: THE CHARACTERISTICS OF RECENT DEVELOPMENT

3.1 IS THERE SPRAWL?

This report arose out of concern over the amount of land being urbanized, the pressure to extend the urban boundary onto the Oak Ridges Moraine, and the impact that future growth would have on the liveability of the Region. The aim was to look at what would happen if growth continued as usual and whether changes and alternatives were required. What we have found is that new development in the urban municipalities in the GTA is becoming more intense, and that by North American standards, it would be difficult to characterize all of this new development as sprawl. However, aside from the intensity of development, there are problems with creating and maintaining the types of urban areas that work and can provide for the daily needs of all residents.

In the last ten years the GTA has intensified and grown very rapidly at the same time. This is a real achievement in the North American context. What people often see as sprawl—new subdivisions beside the highway—is in most cases reasonably dense ground related



Source: Derek Griffiths - Canadian Imaging Associates Inc.

housing, built to accommodate some of the approximately 80,000 people per year who move into the GTA. Urban boundaries have generally been respected, although they have also been increased incrementally to accommodate the demand for new development, and growth has been orderly. Estate residential on lower quality agricultural land has been permitted in some regions but even this is limited within the GTA. The divisions between urban and rural are usually clear.

New subdivisions in the GTA are being built at higher densities than before.

There are common issues throughout the Region that have affected the current and future liveability of the Region. The most important issues now and into the foreseeable future for urban municipalities are how to provide transit, how to provide an urban fabric that will support transit, and how to provide housing for all the residents of the Region. Without transit the GTA will end up in gridlock. Without more rental apartments there will not be housing available for everyone. Consequently, employers will not be able to attract certain groups of employees, and densities will be inadequate to provide good transit service. Urban form that supports transit is a complex issue of adequate residential and employment densities, attractive streetscapes, and locating shopping, jobs, and institutions so there exists a synergy amongst many different types of activities. Lastly, there are some special issues of financial viability for older municipalities that could affect the whole Region if not addressed.

This section explains what is currently happening with respect to these critical issues. The problems are difficult for all urban municipalities to deal with. If there was a magic solution to a problem that one municipality had found, it would have been adopted throughout the area. Instead we are all faced with a number of paradoxes.



Source: Urban Development Services, City of Toronto

There may be inadequate public transportation and an over reliance on the car but there have been dramatic funding cuts to municipalities for transit. There may be no new apartments, but in most areas of the GTA it is uneconomic to build rental housing. The urban form and design outside the residential areas is usually unpleasant and hostile to pedestrians. Yet, with the possible exceptions of Markham, Vaughan and Oakville, no suburban municipality has planned for real city centres that function as the heart of the whole community, or succeeded in creating one. The historic downtown may or may not have gone into

decline, but it is not seen as the economic engine and important growth area of the municipality, except in Toronto. The dispersal of jobs in huge employment districts and the lack of city centres or significant mixed-use streets, may make it very difficult to retrofit the GTA Regions for transit.

Transit is possibly the biggest challenge for the GTA. With relatively high residential densities and inadequate transit, road congestion is only likely to get worse. Without the ability to move people and goods across the Region, the economy will suffer, air pollution will get worse and quality of life will deteriorate.

3.2 WHAT IS REALLY HAPPENING WITH GROSS DENSITIES IN THE URBANIZING PARTS OF THE GTA?

Densities in the newly urbanising areas of the GTA have increased quite significantly over the last ten years or so.

There has been confusion about what was happening due to different sources reporting different trends. Many municipalities have been reporting that residential densities were increasing. The Region of York stated this year that gross residential densities in its urban municipalities were comparable to those in Scarborough, Etobicoke, and North York. However, a report for the Greater Toronto Services Board released in 2000, found that gross residential densities were still decreasing.

For this study the previous work was updated by Professor Robert Wright and his team at the University of Toronto and the results triple checked for accuracy. This analysis was based on satellite photographs taken in 1992 and 1999. In order to further check the accuracy of these findings, each of the Regions outside of Toronto were asked to provide any additional information they had on urbanized land boundaries. Halton, Peel and York were able to provide information based on aerial photographs, but only for 1999. This additional information shows that the relationships in the amounts of urbanized land amongst the Regions are essentially the same using either approach, although the amount of urbanized land is higher by an average of 9.5 percent under the approach based on aerial photographs rather than satellite images.

Because comparable data for Durham in 1999 and for all of the Regions in 1992 is not available, we have decided, for the purposes of consistency of analysis in this study to show a range for the data from the satellite photographs and figures adjusted to reflect the three data sources from aerial photographs. The bottom line is that the gross population density figures based on the satellite photographs, which represent the only fully consistent data, may be slightly overstated for both 1992 and 1999. The amount of land consumption is probably slightly higher than stated in the tables shown in this report.

The revised work shows that contrary to earlier information, gross densities in the GTA have increased from a range between 27.8 to 29.4 persons per hectare in 1992, to between 29.3 and 31 persons per hectare in 1999, representing an average increase of almost 4 percent. Much of this increase can be attributed to intensification within the City of Toronto and the Region of Peel, but it also represents increased densities in new development in all parts of the Region.

Table 5: Population Densities GTA 1992, 1999

	Urbanized Area 1992 (Ha)	Urbanized Area 1999 (Ha)	Population 1992	Population 1999	Population Density 1992 (Persons Per Ha)	Population Density 1999 (Persons Per Ha)
GTA	151,404	163,254	4,448,020	5,063,480	29.38	31.02
Toronto	59,390	59,480	2,356,130	2,523,550	39.67	42.43
Halton	15,024	16,700	329,420	368,980	21.93	22.1
Peel	34,012	37,170	784,190	975,760	23.06	26.25
York	26,871	32,056	543,130	693,200	20.21	21.62
Durham	16,106	17,846	435,150	501,990	27.02	28.13
GTA minus Toronto	92,014	103,773	2,091,890	2,539,930	22.73	24.48

Source: GHK, Rob Wright and Peter Gozdyra, University of Toronto, Faculty of Landscape Architecture, based on satellite photography and intercensal population estimates by Statistics Canada (density figures may be overstated by up to 10 percent).

To put this in a different way, land consumption required to house and supply all requirements such as jobs, shopping etc for each additional 1000 people has fallen significantly with only between 26 and 29 hectares required between 1992 and 1999 for every 1000 population for development in the GTA Regions outside of Toronto (York, Peel, Durham and Halton), compared to between 44 and 48 hectares for all development prior to 1992 (See Table 6.).

Table 6: Land Consumption Per 1000 People			
	Land Used per 1000 people: 1992 (ha)	Land Used per 1000 people: 1999 (ha)	Newly Developed Land per 1000 people 1992-1999 (ha)
GTA	34.04	32.24	19.25
Toronto	25.21	23.57	0.54
Halton	45.61	45.26	42.37
Peel	43.37	38.09	16.48
York	49.48	46.24	34.5
Durham	37.01	35.55	26
GTA minus Toronto	43.99	40.86	26.25

Source: GHK , Rob Wright and Peter Gozdyra, University of Toronto, Faculty of Landscape Architecture based on satellite photography and intercensal population estimates by Statistics Canada (land consumption may be understated by up to 10 percent).

From 1992 to 1999 the total population of the GTA including the City of Toronto increased by nearly 14 percent but the land area increased by approximately 8 percent. Equally encouragingly, the GTA Regions, not including the City of Toronto, had a population increase of 21.4 percent, but only increased their urbanized land area by approximately 12.9 percent. The gross density for the GTA Regions excluding Toronto was between 22.4 and 24.5 persons per hectare in 1999, compared to between 20.8 and 22.7 persons per hectare in 1992. If employment lands which make up about 25 percent of the GTA and 27 percent of

the GTA excluding Toronto are not included, densities increase to between 37 and 41 persons per hectare and 30 and 33 person/ha respectively. Based on observations of recent development trends, it also appears that residential densities may have increased since that date, improving the overall picture.



Source: Derek Griffiths - Canadian Imaging Associates Inc.



The good news is that residential densities have increased in the GTA. However, there is a lack of concentrated city centres and corridors which support transit and provide attractive pedestrian environments.

Source: Town of Markham

The 1992-1999 land consumption in the GTA outside of Toronto per 1000 new residents is only 59 percent of the amount of land that has been used traditionally. This should be considered a significant achievement in terms of using land more efficiently and also should create the potential to serve the population more easily by public transit. However, as we shall see later, this is not necessarily the case because the pattern of development does not lend itself to efficient transit provision. Increased densities cannot be equated with “effective” densities if uses continue to be spread out and separated.

The 26 to 29 hectares required in 1999 for 1000 residents in the GTA Regions (not including the City of Toronto) also accommodated land for employment activities. Many employees likely had jobs located in existing urbanized areas. The figures show that an impressive total of new jobs and population were accommodated without adding large amounts of urban land. Averaged out over the whole of the urban Toronto Census Metropolitan Area (CMA), the density of jobs increased from approximately 14.9 jobs/ha in 1992 to 16.5 in 1999¹¹, while in employment areas, probably increased somewhere in the order of 55 jobs/ha in 1992 to 63 jobs in 1999¹². (These numbers are at the upper end of the range. The lower end of the range would be approximately 10 percent lower.)

Municipality 2001	Area 2001 (ha)	Population 2001	Population Density 2001 (persons per ha)
Scarborough	18770	593,297	31.6
Etobicoke	12393	338,117	27.3
North York	17687	608,288	34.4
Old City of TO	9720	676,352	69.6
Toronto	63010	2,481,494	39.4

Source: Statistics Canada, 2001 Census (does not account for Census undercount)

Gross densities in Toronto in 1999 were much higher than in the GTA Regions (42 persons per hectare versus an average of 25, see Table 5) but overall densities in the former municipalities of Etobicoke, Scarborough and North York are marginally higher than densities for the rapidly urbanising municipalities in the GTA Regions (Table 7). This makes the recent density increases of municipalities in the GTA Regions all the more impressive considering that at the time Toronto municipalities were developing, many apartments were being constructed. Apartments make up more than 55 percent of the housing stock in the City of Toronto (see Table 8). This is in contrast to recent developments where all forms of apartments have been uneconomic to construct in many of the Regional municipalities and practically no rental apartments are being constructed anywhere (see Figure 2, pg. 32).

¹¹ Based on the Labour Force Survey and employment lands map information from Rob Wright and Peter Godzyra, University of Toronto. Although the Labour Force Survey is based on household interviews and does not strictly speaking represent employment, at a geographic level as large as the Toronto CMA labour force and employment numbers are virtually identical.

Table 8: Housing Stock By Type In the GTA, 1996					
	Durham	York	Metro Toronto	Peel	Halton
Total occupied private dwellings by structure type	154,100	177,575	903,580	265,935	118,155
Single-detached house	103,480 67%	135,330 76%	285,375 32%	128,500 48%	75,110 64%
Semi-detached house	10,220 7%	5,165 3%	84,625 9%	27,445 10%	3,965 3%
Row house	11,885 8%	10,030 6%	46,440 5%	29,285 11%	13,905 12%
Apartment, detached duplex	4,255 3%	5,030 3%	29,440 3%	5,665 2%	1,630 1%
Apartment building, five or more storeys	13,080 8%	14,645 8%	331,930 37%	60,875 23%	16,865 14%
Apartment building, less than five storeys	10,830 7%	7,060 4%	122,545 14%	13,590 5%	6,440 5%
Other single attached house	245 0%	205 0%	3,140 0%	265 0%	175 0%

Source: Statistics Canada, 1996 Census

It is important to point out that the timeframe represented in the preceding analysis is a relatively short 7 years and that urban expansion is not a smooth linear function that takes place at an average rate over a fixed period of time. On the contrary, it can be quite volatile. For example, large areas of employment lands may have been urbanized prior to 1992, but are only now being filled in with actual development, obviating the need for additional employment land to be added to the urban area until after all of the previously urbanized employment land has been filled in. In fact, the overall average density may fall again in the future if large tracts of employment land are once again urbanized prior to being fully developed.

Gross density is just one of the variables that must be considered in preparing an urban growth management strategy. In fact it may not even be the most important variable. The complex set of relationships between the mix of uses, the physical configuration of development, the location of employment vis-à-vis transit as well as the extensiveness, frequency and nature of the transit service are in the end much more important to get right than simple density considerations. In addition, employment density and the location of employment in relation to housing is arguably as important as residential density. Transit needs a focussed (not dispersed) pattern of trip ends to be effective.

However, it is quite evident from the above analysis that land in the GTA is being used more efficiently overall. Unfortunately, this has not translated into “effective transit density.” The pattern of new houses and jobs remains essentially dispersed. In addition, because there has been no significant investment in new transit infrastructure over the past few

years and because the land use pattern of the new investment is not conducive to an increase in transit ridership, there are significant transportation and environmental problems looming over the horizon.

The good news is that residential densities have increased and that the urban municipalities in the GTA Regions have done a very good job of encouraging better residential use of land. The concerns about the ability of the land use pattern to support transit relate to the relationship of residential areas to main roads and other land uses, the lack of concentrated city centres and corridors for jobs, and the location of educational, health and other institutions where they do not support the use of transit. These matters are discussed below.

3.3 NET DENSITIES IN RECENT RESIDENTIAL DEVELOPMENTS

Residential densities are measured in different ways, in different municipalities or even among different subdivision plans, which are not necessarily comparable. However, information from municipalities and from observation on the ground shows that new subdivisions are producing relatively high densities of single-family, semi-detached and townhouse type development. Markham says that current residential densities in new subdivisions are about 18.5 units per hectare (uph) compared to 8.9 units through the 1970s and 1980s.¹² Other municipalities such as Oshawa report similar doubling of residential densities on a different basis. The Region of York estimates that current net residential densities have increased from 15 units per hectare to 25 to 30 units per hectare.¹³ A study on residential densities using 1991 census information found that recently approved residential subdivisions in the suburban municipalities had gross densities (including all the land within the subdivision) between 4.1 units per hectare (uph) to a high of 15.8 uph with the majority of areas falling between 6.5 and 10.5 uph on a gross basis.¹⁴



Source: Urban Development Services, City of Toronto



Source: Derek Griffiths - Canadian Imaging Associates Inc.



Source: Town of Markham

Neighbourhoods should provide an appropriate mix of apartments, including rental apartments and a physical layout that facilitates easy pedestrian access to arterials with transit.

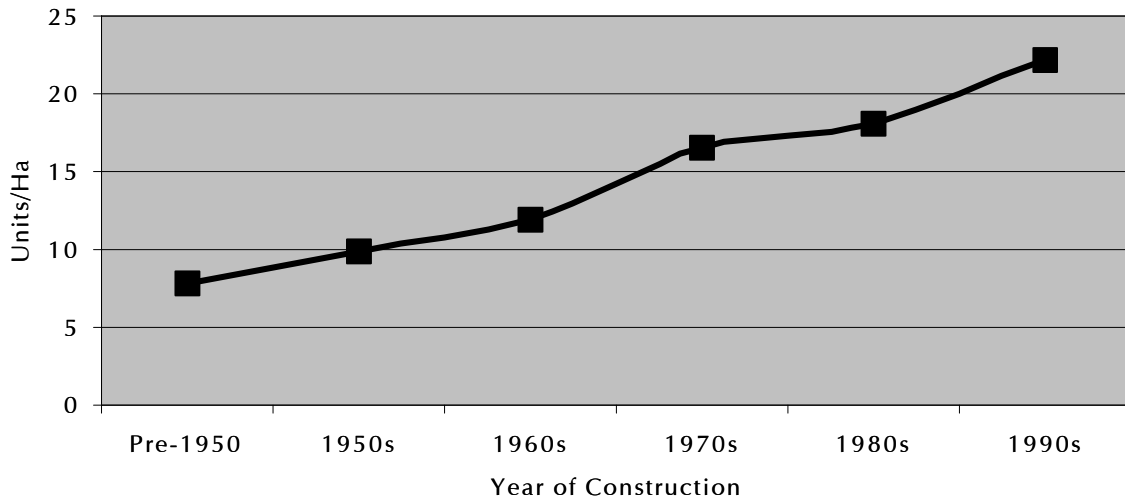
¹² Conversation with Jim Baird, Director of Planning, Markham

¹³ Conversations with planners in these municipalities.

¹⁴ Malone Givens and Parsons Ltd, Future Living Area Requirements, Report 1, Special Study Areas 3&4 Town of Ajax (Toronto: Malone Givens and Parsons Ltd, 1993).

The attached chart from the Region of Halton shows the increases in net residential densities over the past few years.

Figure 1: Net Residential Densities in Halton by Period of Construction




Prepared by Halton Region, based on Assessment Records, up to 3rd quarter 2000.

The densities described above do not include industrial or major employment lands in the gross calculations. The study carried out for this report on the land required for every 1000 additional people (Tables 5 and 6) includes such lands, but still suggests that densities of approximately 11.5 units per hectare are being achieved. Employment lands make up about 27 percent of GTA Regions urbanized area. This translates to gross residential densities excluding employment areas of approximately 14.6 uph.

Housing Densities in Markham

Conversations with Markham planners revealed that housing densities are increasing as townhouses are gaining popularity by meeting shifting demographic needs and affordability. While apartments are not as common, they are also gaining popularity for the same reasons. These densities also reflect Official Plan policies to reach a target mix of 60 percent low, 25 percent medium and 15 percent high density.



The lot sizes in new residential subdivisions are generally smaller than they were in the past few years; the streets feel and look more urban, and the density of ground related housing is comparable to many older urban areas built in Ontario before the Second World War, and higher than some developments in the 1950s and 1960s in urban areas. However, this success is only true of the ground-related housing form — singles, semis and townhouses. The lack of apartment construction in the last ten years in most parts of the GTA, as discussed below, means that the gross residential densities are well below densities found in most older City of Toronto neighbourhoods.

A study of residential neighbourhoods in Toronto found that none of the neighbourhoods that had gross densities over 15 units per hectare (uph) had less than 34 percent of the housing in apartments –either low or high-rise. However, the “Beach” managed to reach a gross density of 29 uph with only 34 percent apartments, of which almost all were less than 5 storeys high. Also, in Cabbagetown 37 percent of all residential units were in apartments and had a density of 24.6 uph on a gross basis.¹⁵ It is important to remember that these neighbourhoods also include significant areas of street-related retail activity providing a mix of uses, which are absent in the newer suburban municipalities.

The increased residential densities in the GTA Regions are a great achievement considering that apartments have been such a small part of the residential mix, particularly after 1993 when the bottom fell out of the condominium apartment market and rental housing construction was also beginning to slow, followed by the cessation of all rental apartment programs.

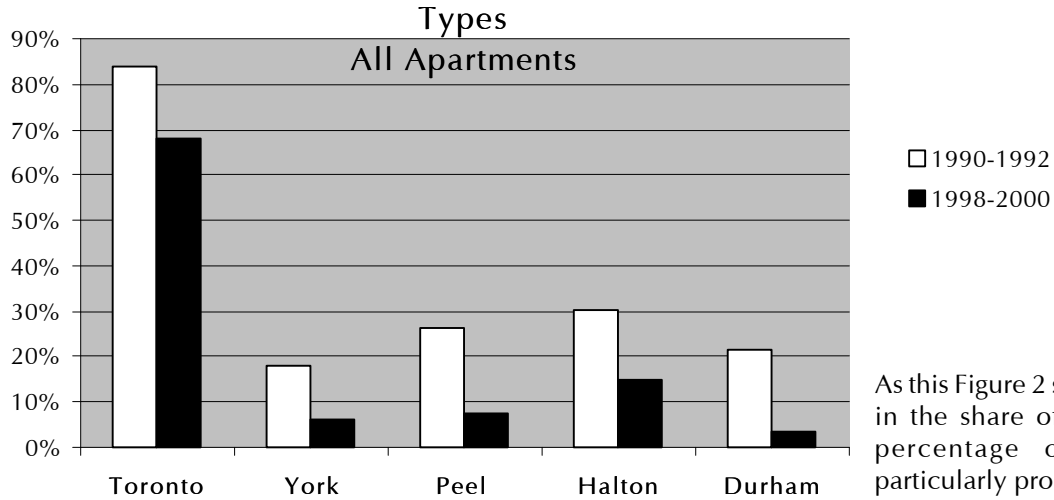
It is not clear how much of the improvement in densities for ground related housing has been the result of planning policies and how much is the result of the market, but it has led to acceptance of a very different urban form in the residential suburbs than was the case in the 1970s and 1980s. With an appropriate mix of apartments, including rental apartments, and a physical layout that provides easy pedestrian access to arterials which are provided with good transit services, these residential densities would be more transit supportive and could provide housing for people with the full range of incomes.

3.4 NO APARTMENT CONSTRUCTION

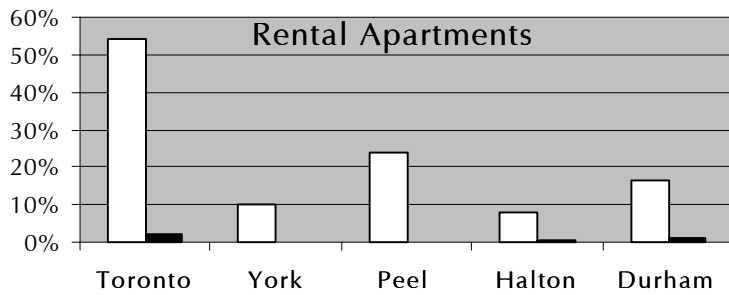
Over the last 10 years there has been a significant decline in the quantity of apartments built in the GTA as a percentage of all housing starts. There has also been a dramatic decrease in the number of rental housing units built, not just as a percentage of all starts but in absolute numbers. In many municipalities within the GTA Regions there has been no rental housing built at all. This decrease in apartment construction as a share of all housing starts has been marked throughout the Region –in the City of Toronto as well as elsewhere.

¹⁵Malone Givens and Parsons Ltd, Future Living Area Requirements, Report 1, Special Study Areas 3&4 Town of Ajax (Toronto: Malone Givens and Parsons, 1993).

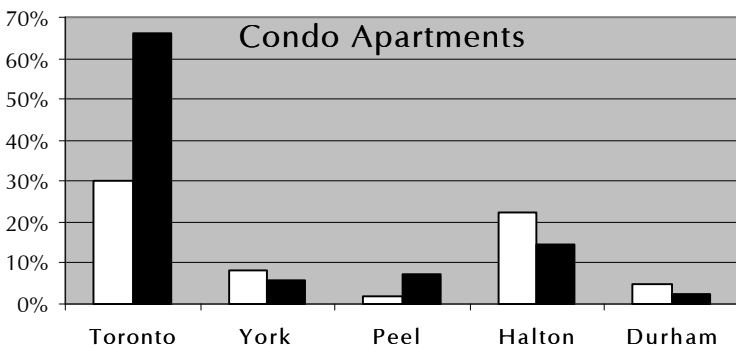
Figure 2: Apartments as a Percentage of All Housing



As this Figure 2 shows, the decline in the share of apartments as a percentage of all starts is particularly pronounced for rental apartments. This situation is also found throughout South Central Ontario with the marked exception of Kitchener due to the presence of one developer who has continued to build this type of housing there.



In the City of Toronto there was an important increase in the number of condominium apartments built which in absolute numbers more or less made up for the complete lack of rental apartment construction. However, apartments as a whole declined as a percentage of the new housing starts and condominiums were generally far less affordable than rental housing had been. In the surrounding Regions, the absolute number of condominium apartments built has increased, except in Durham, but only Peel Region has seen a marked increase in market share for condominium apartments from 2.1 percent on average in 1990-1992 to 7.3 in 1998-2000 of new housing starts.



Source: CMHC

There has been a gradual erosion of programs to encourage rental housing construction in Canada since 1972. In fact, rather than introducing or maintaining programs to encourage rental housing construction, the opposite has been happening; disincentives for rental housing construction have gradually eroded rental housing development during the past 20 years. For example, income tax rules for capital cost allowance on rental housing have been progressively tightened beginning with the introduction in 1972 of legislation which

disallowed the pooling of capital cost allowance for rental housing and continuing in the 1980's with various additional reductions in the capital cost allowance. The application of the GST to rental housing construction in 1991, the lingering concerns by developers about rent controls, the Federal withdrawal from social housing programs in the late 1980's and the complete withdrawal from social housing by the Province in 1995 has resulted in the virtual elimination of rental housing starts throughout the GTA in the late 1990's.



Source: Urban Development Services, City of Toronto

There has been a serious decline in the number of apartments, especially rental apartments built in the GTA.



Source: Urban Development Services, City of Toronto

The result is that the range of housing choices for the population of the GTA has been reduced and the densities in the GTA Regions are not as high as they would otherwise be. It is difficult to achieve higher densities without any apartment buildings. Throughout the GTA, there has been a steep decline in apartments starts even including condominium apartments, as a percentage of all housing starts between the early and the late 1990's, from an average in the GTA Regions of 23.6 percent to 7.5 percent.

Many municipalities in the GTA such as Oakville, Oshawa and Milton,¹⁶ under pressure from landowners and neighbouring residents, have downzoned sites designated for apartments to townhouse development or in some cases even single-family housing. These sites have sat empty for several years as the economics of development have made developing apartments unprofitable without any housing programs or other incentives to build at higher densities.

Downzoning

In some GTA municipalities, downzoning has occurred because a single family home costs the same as a higher density condominium. In Oshawa, for example, \$150,000 can purchase a small single family home. With these prices, it makes little sense to purchase a condominium. This is especially true when higher density sites are designated in greenfield areas and lack access to a mix of amenities and services.

Mississauga has been under intense pressure to downzone lands designated for apartments but has recently reconfirmed that these sites should be retained for high density housing to provide the mix of housing needed for the city's residents and to provide residential density that can support transit use. Apartments make up 29 percent of existing housing stock but the city intends to have 36 percent of all units as apartments at build out. This will require that Mississauga holds firm on its intent to retain apartment sites. Depending on the municipality, the potential for infilling vacant apartment sites still exists and could lead to increased densities within the already urbanized area. Other municipalities have permanently closed the door to overall higher densities that were originally planned by approving lower density housing on these sites.

¹⁶ Conversations with planners in these municipalities.



Source: Derek Griffiths - Canadian Imaging Associates Inc.

Sites zoned for higher density are often under the threat of being downzoned.

By downzoning high-density sites, municipalities lose opportunities to encourage long-term plans for apartments along transit routes, with access to corridors with amenities and services. This is a more environmentally sustainable urban form in contrast to exclusively car-oriented, low-density subdivisions. High density, mixed-use developments flanking transit routes can create better links between employment and housing and provide the population to support transit use.

Higher Density Development in Burlington

Burlington currently is home to a “best practise” example in terms of affordable, higher density housing. One developer has been building four story low-rise apartments that sell in the \$100,000 to \$115,000 range. Planners rezoned an area from single use to mixed commercial and residential to allow the apartments to be built close to amenities and services. Not only do these apartments provide an affordable option for first time homebuyers, they also contribute to an increase in housing density. In the past few years Burlington’s densities have increased to 41 percent low density, 33 percent medium and 26 percent high.

In addition, high-density, mixed-use communities establish a more equitable urban form for a range of people including seniors, new immigrants, youth and children. These communities allow people with lower incomes, mobility barriers and limited access to automobiles to do errands, travel to work and participate in the community. A recent labour force and housing study in Mississauga portrays a desire for this type of mixed-use urban form. The study revealed that lower paid labourers in Mississauga tend to live in rental apartments, are typically more reliant on public transit and have relatively few choices in terms of housing.¹⁷ Survey research revealed that labourers in manufacturing businesses prefer to live in relatively close proximity to work and that shift work and long hours are reasons why people want or need to shorten their commuting times. The survey respondents also mentioned the need for access to affordable housing close to public transit.



Source: Burlington Economic Development Corp.

Higher density housing on Burlington’s waterfront.

¹⁷ The Planning Partnership and Royal LePage, Labour Force Needs Study: Housing and Other Issues, a Report for the City of Mississauga (Toronto: The Planning Partnership, 2000).

The study also highlights the link between high densities and affordability. For Mississauga workers, higher density forms of housing (new and existing) provide much more affordable housing. The survey conducted as part of the study presents a direct relationship between household income and ability to afford housing – for someone making \$61,500, only 16 percent of older detached homes and 4 percent of new detached houses represent affordable housing, compared to 90 percent of townhouses.

The Importance of Housing Access

A healthy mix of housing options that includes higher density units and rental housing is urgently needed throughout the GTA. Homelessness, the most devastating effect of a lack of housing access, is reported to be on the increase throughout the region. As the availability of housing options deteriorates, people from a wide range of backgrounds become vulnerable to the state of homelessness. One cannot assume that the homeless are unable or unwilling to work or are homeless by choice. Income security no longer equates to housing security. Currently forty percent of the shelter population in Mississauga is working, twenty five percent full time, and York Region shelters have noted an increase in the number of homeless families with at least one adult working.

Source: York Region, Responding to Homelessness in York Region: From Awareness to Action, a Report for the York Region Homelessness Task Force, (York Region, York Region, 2000).

The City of Toronto released a report in June 2001, "Unlocking the Opportunity for New Rental Housing", on government actions that would make building private rental apartments economic again. The proposed policy initiatives mainly relate to changing insurance and tax provisions at the federal level; provisions regarding reducing or waiving development fees for rental housing, eliminating the PST for construction materials and training construction labour force at the Provincial level; and provisions to reduce parking requirements, streamline development approvals and reduce fees for rental construction at the City level.¹⁸ A similar report with many of the same recommendations was prepared for the Province of Ontario¹⁹.

The proposals appear practical and highly desirable as they would allow the private market to provide higher density rental housing which is needed as part of the housing mix in all municipalities and to create transit supportive communities. An additional, important aspect of getting rental housing built in the future is that the vast majority of new higher density rental housing developments will happen on infill opportunities within today's urban envelope: 1) making better use of underdeveloped land and municipal services; 2) bringing additional revenue to the municipal budget; and 3) improving accessibility to shopping and jobs.

¹⁸ City of Toronto, Planning Division, Policy and Research, Unlocking the Opportunity for New Rental Housing: A Call to Action (Toronto: City of Toronto, 2001).

¹⁹ Housing Supply Working Group, Affordable Rental Housing Supply: The Dynamics of the Market and Recommendations for Encouraging New Supply (Ontario: Housing Supply Working Group, 2001).

3.5 DISPERSED DESTINATIONS

It used to be that most destinations when you left your house were either in your neighbourhood or downtown. As the City grew, a more dispersed pattern of travel based on the use of the car evolved, which has made it very difficult to provide effective public transit and build coherent communities.



Source: Derek Griffiths - Canadian Imaging Associates Inc.



Source: Urban Development Services, City of Toronto



Source: Urban Development Services, City of Toronto

Many areas lack a dynamic synergy linking pedestrian spaces with mixed uses.

The current structure of retail activity has both badly hurt many downtowns that existed before the 1970s and has created a planning regime in which downtowns have been given a relatively minor role compared to the role that these areas played in cities before and immediately after the Second World War. Downtowns used to be the location not only of major retail activity but office employment and many important institutions such as hospitals, universities, colleges and courthouses. The dispersal of retail activity to arterial strips and shopping malls, and more recently, power centres, has separated these uses from offices (located in business parks), and institutions (located on the cheapest piece of land central to the population to be served). Transit accessibility is usually low on the list considered as part of the selection criteria for a site. Until recently it was also rarely a factor in determining how to structure municipal growth.

In the early 1990s all GTA municipalities, regional and local, accepted a vision for the GTA set out in GTA 2021-the Challenge of our Future²⁰ that there should be compact, transit-oriented development in nodes and corridors. The purpose of the nodes and corridors was to concentrate development in these areas so that the GTA could be better served by transit and would need less land for greenfield development. The two documents²¹ that have evaluated the success of the strategy for nodes and corridors show that although there has been broad acceptance of the concept in the Regional Official Plans, there has been little if any concentrated development of housing or jobs in the areas designated as nodes outside the City of Toronto, with a few exceptions such as Markham Town Centre.

The concept of a “node” does not have any of the connotations of a healthy downtown. It appears to be density for density’s sake rather than a situation in which the mix of uses creates a dynamic synergy that is greater than the sum of the parts, which is the real nature of downtowns. Perhaps because the concept of nodes represents such an abstraction, little has been done to actually create them for new urban areas unless they have been conceived as downtowns or city centres.

²⁰ Ontario, Office of the Greater Toronto Area, GTA 2021: The Challenge of Our Future, 1992.

²¹ Wright, Robert, The Evolving Physical Condition of the Toronto Area: Space, Form and Change, a report prepared for the Neptis Foundation (Toronto: The Neptis Foundation, 2001) and Canadian Urban Institute, Miller, Glenn, Janice Emeneau, and John Farrow, GTA Urban Structure: An Analysis of Progress Towards The Vision/-97 (Toronto: Canadian Urban Institute, 2001).

Markham is trying to create a new city centre with multiple land ownerships, mixed uses, and a symbiotic relationship between these elements that is implied by the idea of a city centre. If you live in a city centre you should be able to work and do government business and most errands right there, and if you come to a city centre for one reason such as work, you should be able to carry out many other activities such as shopping, entertainment, eating out and business errands. Similarly, one suspects that nodes or corridors will not be successful unless they are seen to be performing this role. The evidence to date is that they have not worked, except where they have been perceived as performing the same function as a traditional downtown.

Initiatives in Brampton

Brampton has attempted to encourage its historic downtown as a node for employment and housing by establishing a pro-active development incentive program. Some of the program strategies include providing grants in-lieu of development charges for downtown builders, funding a façade improvement program, reducing parkland dedication requirements and encouraging intensification.

3.6 LOCATION AND DENSITY OF EMPLOYMENT

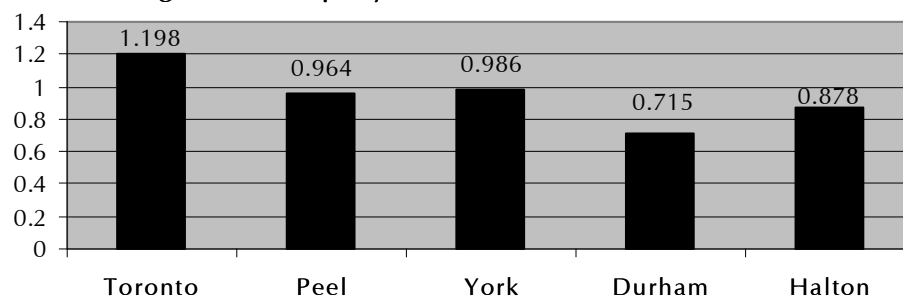
The GTA suburban municipalities are not generally bedroom communities. There has been strong employment growth in the GTA Regions and most municipalities have a good balance between jobs and residents. This is also projected to improve in the future (see Table 9).

	1996	2001	2011	2021	2031
	%	%	%	%	%
Toronto	52	56	57	59	61
Peel	48	52	54	54	54
York	48	51	54	54	54
Durham	35	38	39	42	43
Halton	45	46	48	51	54

Source: City of Toronto, Urban Development Services, GTA Population and Employment Projections to 2031 (Toronto: City of Toronto, 2000).

In fact, as Figure 3 shows, the Regions of the GTA match up quite well in terms of the relationship between the ratio of jobs to the local labour force, with the exception of Durham which at first glance appears to still be more of a “bedroom community” than the other Regions.

Figure 3: Employment/Labour Force Ratio 1996



Ratio of jobs available in area/local labour force. A ratio greater than 1 indicates an excess of jobs over local available labour force.

Source: Statistics Canada

Information on the commuting patterns of the labour force within the GTA also shows a tendency for people to, by and large, live and work within the same Region. However, this information shows as well, that a large proportion of people still travel outside their Regions to go to work compared to Toronto, where 83.2 percent of the labour force works within the City. Durham Region has 60.3 percent of the labour force working within the Region followed by Peel (60.0 percent), Halton (54.3 percent), and finally, York (51.0 percent). (See Table 12.)

	Toronto (%)	Peel (%)	York (%)	Durham (%)	Halton (%)
To Toronto	842,580 (83.2)	125,075 (30.7)	113,580 (41.7)	61,355 (29.4)	28,545 (16.8)
Within own Region		246,595 (60.0)	138,965 (51.0)	125,960 (60.3)	92,035 (54.3)
Within GTA (excl. Toronto and own Region)	162,800 (16.1)	29,615 (7.3)	16,995 (6.2)	18,360 (8.8)	34,150 (20.1)
To rest of Province	7,375 (0.7)	5,760 (1.4)	3,005 (1.1)	3,095 (1.5)	14,750 (8.7)

Source: MTO and Statistics Canada, 1996

It is interesting that although Durham has the lowest employment to labour force ratio of all the Regions within the GTA, a high percentage of the labour force in Durham works within Durham Region. This is partially accounted for by the location of the largest employer in Durham, General Motors in Oshawa, which is in the centre of Durham Region and is less likely to draw people from outside Durham because of long distances from Durham’s boundaries to the plant.

Using employment areas as shown on Regional Official Plans and including the City of Toronto's Central Area as a rough approximation of employment areas in the Toronto Census Metropolitan Area (which excludes all other mixed-use areas such as the North York, Scarborough and Markham city centres as well as older downtowns such as Oshawa and Burlington), and using information from Statistics Canada Labour Force survey, a rough estimate of employment densities in employment areas is approximately 63 jobs per hectare in 1999. This represents an increase from a similar estimate for 1992 of approximately 55 jobs per hectare.

As mentioned before, gross employment densities throughout the Toronto CMA are approximately 16.5 jobs per hectare. If one were to exclude the City of Toronto and just include the part of the CMA outside of Toronto, the gross employment densities will have increased from approximately 10.6 jobs per hectare in 1992 to 14 jobs per hectare in 1999. Employment densities in the employment areas also would have increased from approximately 36 jobs per hectare in 1992 to 50 jobs per hectare in 1999.



Source: Urban Development Services, City of Toronto

The commute to work: an important part of life in the GTA.

	All Urbanized Area		Employment Areas	
	Labour Force per Hectare		Labour Force per Hectare	
	1992	1999	1992	1999
Toronto CMA	14.9	16.5	55	63
Toronto CMA adjusted*			32	36
City of Toronto	18.9	20.1	79.3	80.1
Toronto CMA minus City of Toronto	10.6	14	36	50.5

Source: Statistics Canada, Labour Force Survey (used here as a surrogate for employment) and mapping information from Robert Wright and Peter Gozdyra, University of Toronto. (Figures may be overstated by up to 10 percent). The totals for this calculation exclude education services, health care and social assistance, information, culture and recreation, accommodation and food services, other services, public administration and 50 percent of trade from labour force figures that are in the employment districts (since most of these uses are located outside of employment districts).

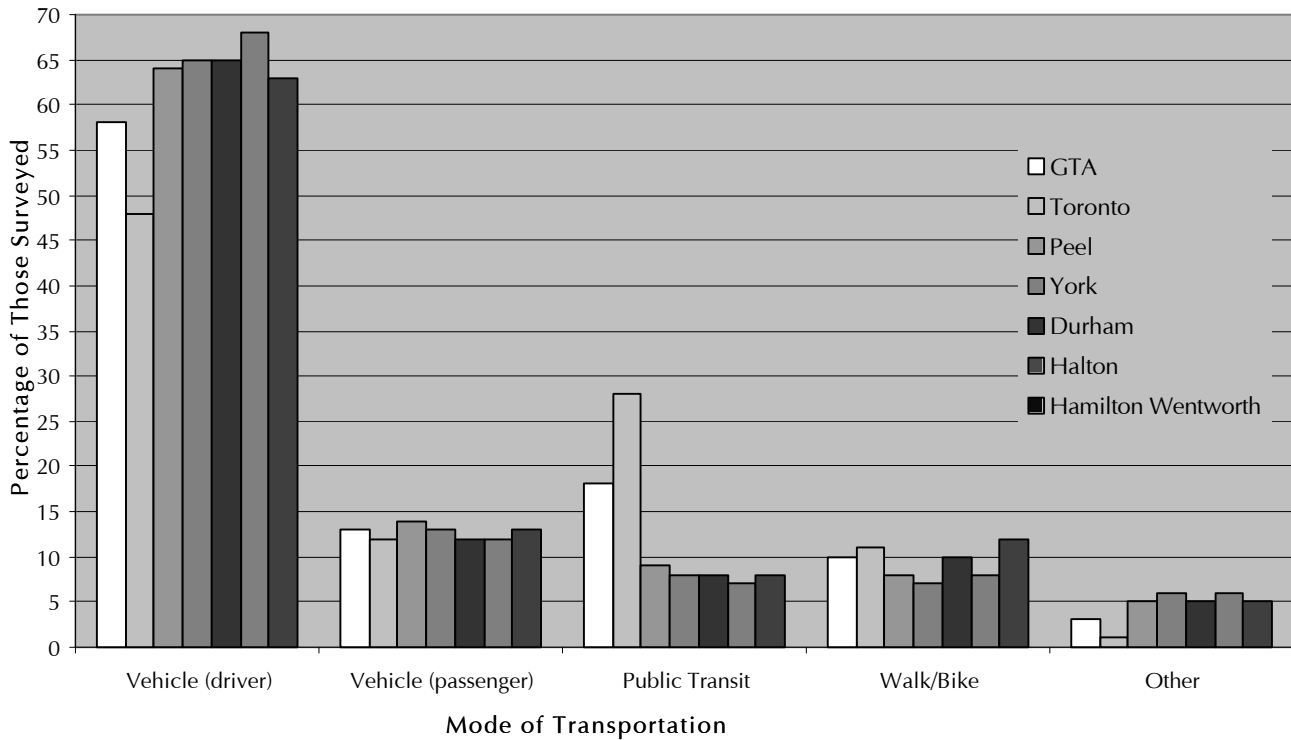
Generally, commercial corporate centres such as the Mississauga City Centre, the Airport Corporate Centre in Mississauga, the Beaver Creek Business Park and the Dennison Steeles Business Park have similar employment densities at between 60 to 80 jobs per gross hectare. The Scarborough Town Centre located at the terminus of a rapid transit line has an employment density that is 15 percent higher than the upper range of these other commercial corporate centres. The City of Toronto's Financial District is in a league of its own with 2200 jobs per gross hectare, whereas the Yonge/Eglinton and North York Centres, both located on the Yonge subway, have employment densities of between three and five hundred jobs per gross hectare. The Liberty Village area in the City of Toronto, which contains office

and media related employment, has a higher employment density than the commercial corporate centres, but lower than the two centres on the Yonge subway line. Most industrial areas hover around 30 to 40 jobs per hectare.

The general pattern is clear from these figures; office and quasi-office employment areas with good access to public transit have significantly higher employment densities, with access to rapid transit generating the highest densities. Office concentrations with poor access to public transit have much lower employment densities and industrial areas, many of which include office uses, are much more spread out and have the lowest employment densities regardless of whether there is good access to transit. The policy for growth management is clear: locate office uses as much as possible in centres with good public transit or along transit corridors, not scattered about in industrial areas.

The relationship of employment to population, commuting patterns and employment density leads to the issue of how people get to work and what impact this has and will have in the future on road congestion and air quality in the GTA. Figure 4 details the mode of transportation to work by Region within the GTA.

Figure 4: Mode of Transportation to Work 6-9 AM: GTA



Source: Transportation Tomorrow Survey, Statistics Canada, 1996

There are two reasons why the transit use for travel to work is much lower in the Regions surrounding Toronto than in Toronto. The first is that the transit service in the GTA outside of Toronto is much poorer for work trips. It is extensively organized to get people into Toronto and more specifically into the central area. The information on commuting patterns of the labour force within the GTA clearly shows that a majority of people in each of the Regions work in their own Region. For the most part, outside of the City of Toronto the option of using transit for the whole trip is not available because a system organized around a grid, with feeder bus routes serving faster lines across the GTA does not exist. What is available are buses that offer infrequent service and circuitous routing.

Bus Service to Office Parks

At first glance, transit provided to office parks and light industrial areas in Markham, Vaughn and Mississauga seems frequent and accessible. A bus route that loops off Jane Street into office areas in Vaughan is available every 15 to 20 minutes and bus routes to light industrial areas near the airport in Mississauga run every 30 minutes at peak periods. But, because of the low-density, campus-like urban form of large green spaces and parking lots, it can take roughly 15 to 20 minutes to walk from the workplace to the transit stop. The time to walk to the bus stop and wait for the bus is then extended by a travel time on winding bus routes that follow curvilinear routes through the low-density areas and congested arterial roads.

Altogether, before even reaching a destination, up to 30 minutes of a commuter's time may be taken up by walking to the stop and waiting for the bus. Adding the actual bus journey time to the wait and walk times, it can easily take up to 45 minutes to reach a transfer point, not even the destination. Because of this journey time, transit to work is not a desirable choice if a person has access to an automobile. In terms of land use and equity issues, this adds up to long commutes for workers who may not have any other option than to take transit to work.

The second reason is that employment areas, and particularly most office employment areas (including offices within the industrial employment areas), are not designed for transit use. As some of the photos in this report show these areas are large, removed from arterials, with extensive distances between buildings, making it difficult and extremely time consuming to walk from the transit stop along the closest arterial to the building where one works.

Source: Derek Griffiths - Canadian Imaging Associates Inc.

Many employment areas throughout the GTA are large, removed from arterials, and have extensive distances between buildings. It is difficult and extremely time consuming to walk from the transit stop along the closest arterial to the building where one works.



Transit to the Airport Employment Area

Frequent bus service provided by the TTC and Mississauga Transit to the airport and surrounding areas are examples of transportation policies shaped to meet user needs. While a formal survey of airport-bound transit users has not been conducted, according to the TTC, a large number are airport area employees who require transit to commute to work. To meet the demands of the high volume of airport-bound commuters, buses to the airport, for the most part run every 20 or 30 minutes. In one case, because of user demand, more buses were added on one route and buses now run every 8 to 10 minutes.

Some industrial uses are land extensive and there is probably little that can be done to improve transit access to these types of uses (e.g. transport, warehousing, outdoor storage etc.). Other uses, in particular offices can be very transit supportive as illustrated by the areas of the pre war downtowns and North York, Yonge/Eglinton and Scarborough Centres in Toronto. To be effective, the buildings in office areas need to be built close together and the pedestrian environment needs to be made attractive and walkable with narrower arterial roads, wider sidewalks and tree planting.



Source: Urban Development Services, City of Toronto

Generally, office buildings will support transit to a greater extent if they are located along arterials next to each other or on adjacent streets in compact downtown like environments, not on campuses surrounded by extensive green areas and parking lots. Furthermore, the tendency for municipalities across the Region (including the City of Toronto) to extend zoning permission for dispersed office uses into sprawling industrial areas tends to work against the possibility of increasing transit use for work purposes.

3.7 LOCATION OF SHOPPING

Shopping malls are located on arterials or highways, often at intersections. It is possible to improve public transit service to malls along arterial road locations, but highway locations are more difficult to serve by transit. Shopping malls share some of the same characteristics as commercial strips, but in addition the designs of shopping malls discourage pedestrian and transit access and are characterized by:

- buildings which are set well back from the street with parking and access roads between the buildings and the sidewalk;
- locations on extremely wide arterials or highways which are difficult to cross by foot;
- many access points for cars cutting across sidewalks, creating unsafe conditions for pedestrians;
- a design that creates significant distances between one location and the next adjacent location; and
- visual clutter caused by inappropriate signage.



Source: Urban Development Services, City of Toronto

Shopping malls are located on arterials or highways, often at intersections. Malls along arterial road locations can be well served by public transit but highway locations are more difficult. Shopping malls share some of the same characteristics as commercial strips, but in addition the designs of shopping malls discourage pedestrian and transit access and are characterized by:

Malls and power centres often do not provide a pedestrian and transit friendly urban form.

- extensive parking lots surrounding buildings located far from any street, making access to the stores by foot difficult, time consuming, unsafe and unpleasant;
- signage which is intended for drivers only and not pedestrians adding to visual clutter;
- the emphasis on single, retail use, rather than a mix of services, employment, government and housing uses preventing public transit being used efficiently and increasing the number of trips required. Municipalities generally accept the situation because shopping and shopping alone is the planned function (even if undesirable); and
- “quasi-private spaces...controlled by a single owner who enforces a uniformity of space, design, type of store and urban texture, and generally does not provide public facilities or round-the-clock access”²². Because of this uniformity, malls rarely provide opportunities for the types of mixed uses often found on traditional main streets such as offices, churches, community centres, social services and other public uses.

However, even shopping malls with all their limitations for transit accessibility are no longer being built in the GTA. They are being replaced by power centres. Power centres originally were attracted to low cost industrial land and although continuing to pursue lower cost land they have been willing to pay premiums for location on highways and major arterial roads. Because of their layout, design and the distances between stores almost all trips to power centres and between stores need to be made by automobiles.

²² Berridge, Lewinberg Greenberg Ltd. Study of the Reurbanization of Metropolitan Toronto, (Toronto: Metro Planning, 1991)



Source: Derek Griffiths - Canadian Imaging Associates Inc.

Parking lots and impervious surfaces negatively impact the environment in several ways.

In fact, one of the most prominent features of these power centres are the extensive parking lots that surround the buildings creating long and unpleasant distances for walking from the car to the store. In this respect they represent a significant and detrimental departure from the shopping mall typology built throughout the 1960's and 1970's. Malls have a greater density of employees and as focussed locations/destinations, can be served by bus transit. They also provide an opportunity for interaction among people, whereas power centres are not designed to provide for this type of interaction.

The Environmental Impacts of Parking Lots

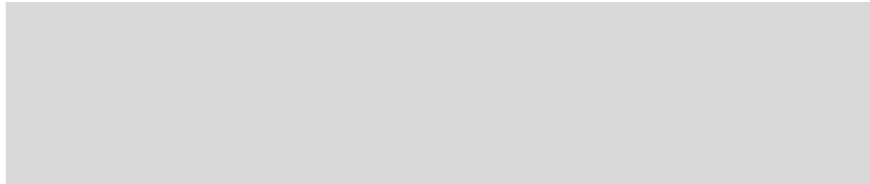
The large parking areas found in low-density commercial and industrial areas in the GTA generate a range of environmental impacts. The temperatures of these artificial surfaces on hot days is higher than vegetated surfaces and materials such as asphalt store much of the sun's energy and remain hot long after sunset. This produces a dome of elevated air temperatures, a phenomenon known as the "urban heat island." In many cases, large paved surfaces contribute to temperature increases over the city of 5 to 8 °C, compared to the air temperatures over adjacent rural areas. These high temperatures can contribute to smog production and heat stress that affects human health. In turn, as people increase their reliance on air conditioning, utility bills cost more.

Parking lots also impact the environment because they are hard, impervious surfaces that do not soak up rainwater. Since the excess rainwater cannot soak into the ground, it accumulates and rushes into storm sewers and waterways. This leads to an increase in the contamination of groundwater as rainwater picks up a variety of pollutants—grease, oil, and particulates—as it runs over impermeable surfaces before it reaches storm drains¹.

¹ United States Environmental Protection Agency, Our Built and Natural Environments: a Technical Review of the Interactions Between Land Use, Transportation, and Environmental Quality, (Washington D.C: Environmental Protection Agency, 1999).

3.8: LOCATION OF INSTITUTIONS

There have not been many major new institutions located in the GTA in the last ten years. In the early 1990's the provincial government had a policy of locating ministries and government offices in downtown areas as a specific policy to reduce sprawl and car dependency. However, although important for those downtowns where these ministry offices located, e.g. Peterborough and St Catharine's, all significant ministry relocations were outside the GTA. Since 1995 there has been no provincial government policy to guide the location of new government institutions.



Source: Derek Griffiths - Canadian Imaging Associates Inc.

Since the 1970's institutions such as courthouses, hospitals, universities and colleges have been located, in dispersed locations and in campus like environments that involve great distances between buildings and locations accessible only by car, rather than in areas that could develop into downtowns, much as they were before the Second World War.

Institutions

According to interviews with officials in Brampton, Oshawa, Markham and Vaughn, there is an attempt to ensure that institutional sites are serviced by transit. However, due to the low-density environment of these districts, transit frequency may not meet the needs of people who rely on these services to commute to work, especially people who have to work evening and early morning shifts.

New institutions should be planned in higher density, transit supportive centres.

A particularly dramatic recent example of this is the decision to locate Ontario's newest university: "The Ontario Institute of Technology" in Oshawa on a site adjacent to the current Durham College on a greenfields site, when Oshawa's downtown could provide a much better location for transit accessibility for students and faculty. Locating such a facility in downtown Oshawa would provide the downtown with a significant boost increasing the daytime and evening population of the area as well as improving prospects for retail, housing and entertainment uses and providing opportunities for intensification.

Travel to School in 905

Car oriented urban design limits the ability for youth and children to walk or take transit to school, and participate in their communities. Research in the United States highlights how suburban schools on large lots are increasingly built far from residential areas and in subdivisions and neighbourhoods with a lack of walkways, bikeways and frequent transit. These planning decisions make young people dependent on parents to drive them everywhere, thereby increasing air pollution.

For example, in Oakville most of the high schools are located in the southern part of the community close to the Lake, while a majority of the recent population growth has been north of Queen Elizabeth Way. Most of the major arterials and bus routes run east-west and end up at the east end of Oakville at the GO Station. Using transit to get to school is not an option for most students because of this transit pattern. Consequently, students are driven by their parents or drive themselves. Some rely on school buses. However, these children are limited in their ability to participate in extra-curricular activities. Participation in extra-curricular activity is even more difficult for children who walk or cycle.

Another issue to consider is that the lack of pedestrian access fosters a more sedentary lifestyle with a range of health implications. Recent research reveals that 31% of Canadian children do not get the physical activity they need to develop cardiovascular fitness, muscle strength and flexibility; and over 25% of Canadian children are considered overweight. While "Walk to School" programs in Toronto and throughout Canada are currently trying to reverse these trends, these programs will not succeed unless planners and policy makers make pedestrian access a priority.

Surface Transportation Policy Project. High Mileage Moms: A Transportation and Quality of Life Study, (Washington: Surface Transportation Policy Project) Greenest City, Active and Safe Routes to School, (Toronto: Greenest City)<http://www.greenestcity.org/indexasrts.html>

3.9 THE CAR AS URBAN DESIGNER

It is not news that accommodation for the car determines how our newer urban areas look. However, if an urban area is built with the accommodation of the car as the paramount aim then the needs of pedestrians will not be met. A pedestrian environment cannot be created by trying to fit people on foot into the urban fabric after the location of buildings, roads, parking, landscaping and the amount of land given to each of these uses has been determined with reference to what is most efficient for someone in a car rather than what is most efficient and attractive for pedestrians.

Throughout the GTA Regions, including the inner suburbs in the City of Toronto, arterial roads are generally so unpleasant and so impractical for getting anywhere on foot that it is a rare sight to see more than a few pedestrians walking on these streets. There are efforts to improve the situation, but it is difficult to change major arterial roads into pedestrian friendly places. This is as true in Toronto as elsewhere. The Avenues reports²³ for Toronto found many challenges in changing streets such as the Queensway between Mimico Creek and Kipling Avenue, or Kingston Road between Highland Creek and Guildwood GO station, or Finch and Weston where they meet, into good pedestrian environments



Source: Urban Development Services, City of Toronto.

Throughout the GTA Regions, including the inner suburbs in the City of Toronto, arterial roads are generally so unpleasant and so impractical for getting anywhere on foot that it is a rare sight to see more than a few pedestrians walking on these streets.

“Each study area includes conditions that permit traffic volumes and speeds that undermine a good pedestrian environment. These include infrequent signalized intersections, the absence of pedestrian crosswalks, a random pattern of vehicular access to fronting properties, extremely wide curb cuts, the general absence of on-street parking and a maximum number of lanes for moving traffic typically with separate turning lanes at major intersections... some avenues serve a significant role in the regional road network which would be compromised by a meaningful reduction in capacity.”²⁴

²³ City of Toronto Urban Development Services. *Bloor and Landsdowne, The Avenues: A Concept Plan for the Study Area.* (Toronto: City of Toronto, 2000)

²⁴ The City of Toronto Urban Development Services, *Finch-Weston, The Avenues, City of Toronto Incremental Growth Study, Phase II Report* (Toronto: City of Toronto, 2001).

Better Pedestrian Environments

It is important to highlight that most GTA municipalities are negotiating how to encourage better pedestrian environments with pedestrian-oriented urban design guidelines and plans for extensive bike paths. However, higher densities, a mix of land uses and reduced road widths need to be integrated to make these spaces truly pedestrian friendly. Bike paths need to be planned for more than recreational purposes and should provide alternatives to using a car to do errands, travel to school and work. For a community with a higher employment to population ratio like Oshawa, there are interesting opportunities to encourage utilitarian, as well as recreational bike paths.

Similar challenges exist for arterial streets in suburban municipalities, which are often designed for higher volumes of traffic. York Region has urban design standards, for regional roads which, if rigorously adopted would improve their quality.²⁵ However, the standards, even if adopted universally, would have traffic lights every 350 to 500 meters apart which is still completely inadequate for pedestrians. Crossing these arterial roads anywhere except at a traffic light is hazardous, so that getting to a store right across the street could require a walk of from two thirds of a kilometre to a kilometre, illustrating how difficult it would be to transform these roads into places that can be used by anyone who is not in a car.

The problem with the arterial road form and separation in the GTA, outside the older parts of Toronto, is that they can neither meet the needs of the automobile due to lack of capacity increasing congestion nor do they provide good transit or an environment that is attractive to pedestrians (who are often also transit users) and cyclists.

The GTA faces a major transportation crisis particularly in the 905 areas unless dependence on the private automobile can be reduced. Higher modal splits in favour of transit are unlikely to occur if the environment for pedestrians is unattractive. It is not possible to have beautiful (or even attractive) environments for people if the main goal is exclusively to build efficient places for cars. The role and design of arterial roads whether they pass through industrial areas, residential areas, or commercial areas is a major issue that has not been satisfactorily resolved in the past and must be addressed in the future.

The key to creating a good environment for pedestrians is to provide a critical mass of buildings on narrower streets that are located close to one another which minimize the distance between buildings. The whole fabric needs to be attractive and manageable for pedestrians. Office buildings or apartments on campus like environments in a sea of green, may look attractive from a distance (during the summer), but they create vast spaces that are difficult and lengthy to negotiate on foot.



Source: Derek Griffiths - Canadian Imaging Associates Inc.

Pedestrian-friendly, transit oriented design should be a priority in residential, commercial, and even in industrial areas.

²⁵ York Region, Regional Streets: Standards for rights of Way and Boulevards (York Region: Region of York, 1998).

