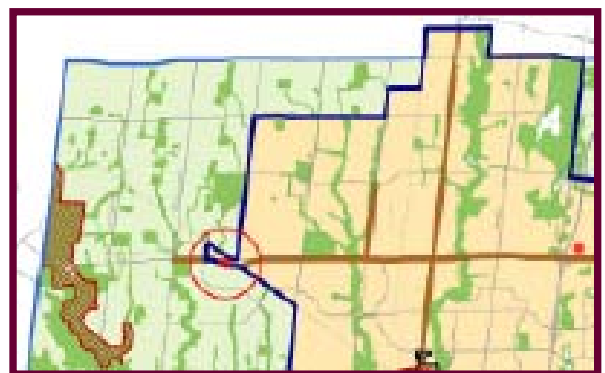


ASSESSMENT OF PLANNED & POTENTIAL GROWTH IN GREENFIELD AREAS

City of Brampton

Discussion Paper for Public Review



HEMSON Consulting Ltd.

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I INTRODUCTION

In June of 2006 the Province of Ontario released the *Growth Plan for the Greater Golden Horseshoe*. The *Growth Plan* provides a framework for implementing the Provincial vision for managing growth in the Greater Golden Horseshoe (GGH) to 2031. It also sets out Provincial interests and directions on many issues including: the distribution of population and employment growth; where and how that growth will be accommodated; infrastructure requirements; and the protection of key heritage and natural resources. With respect to urban structure, it is the Province's intention to concentrate growth in existing urban areas, requiring compact settlement and development patterns for all land use types, residential and employment included.

Municipal official plans are required to conform to the *Growth Plan* within three years of its final release, as stipulated in both the *Greenbelt Act* (2005) and the *Places to Grow Act* (2005). In response, the City of Brampton retained Hemson Consulting Ltd. to undertake a number of studies related to planning for long-term growth in the community. The Region of Peel and the local municipalities of Caledon and Mississauga are also preparing their responses to address conformity with Provincial requirements.

The purpose of this report is to analyse the planned development in greenfield areas of the City of Brampton in order to define the range of density choice options available to the City, especially in planning for those designated greenfield areas that do not yet have an approved secondary plan in place. This report must be considered in conjunction with the additional work currently being undertaken as part of Brampton's overall growth management strategy, including the following:

- Employment Land Strategy;
- Inventory and Assessment of Intensification Opportunities;
- Natural Systems and Culture of Conservation Policy Review;
- Infrastructure Review; and
- Transportation and Transit Master Plan.

The outcome of these studies will be considered prior to finalizing the population and employment forecasts and making detailed policy choices regarding the future of employment land in Brampton. The ultimate growth outlook for Brampton's employment as part of the *Growth Plan* conformity work and associated official plan

update will be determined collectively with the Region of Peel and the other local municipalities.

The report is divided into four sections following this introduction:

- Chapter II summarizes the density targets established by the *Growth Plan*;
- In Chapter III, the pattern of land use and density in the City is discussed. Planned population and employment densities are measured against the *Growth Plan* density targets;
- Chapter IV explores general policy approaches to achieving higher development densities in greenfield areas; and
- Chapter V provides preferred policy directions for meeting *Growth Plan* targets among the range of options available to the City.

The report concludes that Brampton can achieve the greenfield density set out in the *Growth Plan*. The *Growth Plan* defines the greenfield density target as an average across the Region. Brampton can meet this level within the City, but how it relates to the overall regional total will have to be determined by the Region in conjunction with the other local municipalities. The greenfield density shown in this report is based on achieving maximum allowable residential densities in developing areas. In order to achieve these densities, minor land use policy changes and, by extension, patterns of settlement may be required. What changes are required and desirable can only be determined with an appreciation of the current pattern of land use in Brampton and an understanding that there are factors influencing density, which are difficult, if not impossible, to change through land use planning alone. A range of density options is available for all land use types, not only the residential and employment densities which are the explicit focus of the *Growth Plan*, but also retail, mixed-use, institutional and public space uses including transportation.

II **GROWTH PLAN IMPOSES DENSITY TARGETS ON NEW DEVELOPMENT**

The *Growth Plan* establishes a clear planning goal for urban growth in the Greater Golden Horseshoe: more compact, mixed-use communities which support public transit. As density is a key input when planning future land use, the intensification and density targets set out in the Plan are critical to achieving this goal. Municipalities must conform to these targets as well as the other policy directions in the Plan.

The main focus of this report is on that portion of growth in the City occurring on designated greenfield areas outside of the built-up boundary as defined by the Province. By 2015, the *Growth Plan* limits residential development within the built boundary to 60 per cent of the total residential growth, calculated on a Regional basis. The remaining 40 per cent of residential growth must be accommodated through intensification of existing built-up areas. Brampton's conformity with this intensification target is discussed at length in a companion *Inventory and Assessment of Intensification Opportunities* report.

In Brampton, nearly half of the population growth planned for the designated greenfield areas is already subject to approved secondary plans, predominantly in the Bram East, Bram West, Credit Valley and Sandringham-Wellington planning areas. Secondary plan work is already underway in Sandringham-Wellington North and Mount Pleasant, and generalised land use designations have been determined in the official plan for Highway 427 Industrial. In contrast, Huttonville North and Mount Pleasant West in North West Brampton are the last remaining urban areas to be planned and the vision for these areas will necessarily reflect the desire to employ best practices in meeting *Growth Plan* policy.

With respect to density, the *Growth Plan* imposes two density targets: one for greenfield areas and one for the Urban Growth Centres. The density targets for greenfield areas, and their implications for planning in Brampton, as one of the local municipalities in the Region of Peel, are described below.

A. *GROWTH PLAN* REQUIRES MINIMUM DENSITY OF 50 PEOPLE AND JOBS PER HECTARE ON GREENFIELDS

New development on “designated greenfield areas” is required to achieve the vision for “complete communities” under the *Growth Plan*. A “designated greenfield area” is defined by the *Growth Plan* as the “area within a settlement area that is not built-up area” and in Brampton’s case includes all lands in the city outside of the built boundary (the limit of developed urban area as of June 2006, established by the Ministry of Public Infrastructure Renewal in consultation with municipalities).

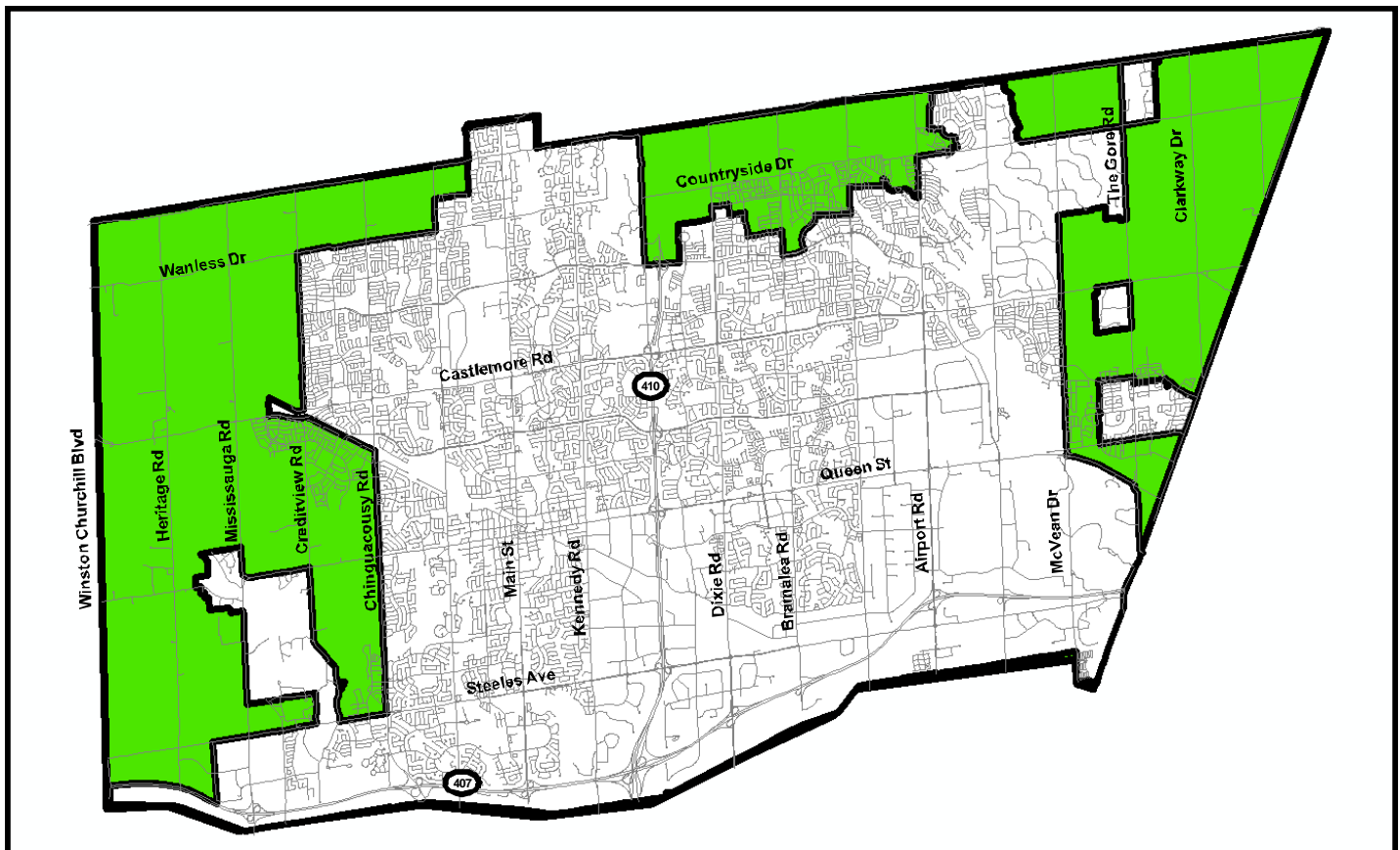
Referring to Section 2.2.7 of the *Growth Plan*, new greenfield communities must be planned to:

- a) Contribute to creating “complete communities”
 - defined in the *Growth Plan* as communities meeting “people’s needs for daily living throughout an entire lifetime by providing convenient access to an appropriate mix of jobs, local services, a full range of housing, and community infrastructure including affordable housing, schools, recreation and open space for their residents. Convenient access to public transportation and options for safe, non-motorized travel is also provided”.
- b) Create “street configurations, densities, and an urban form that supports walking, cycling, and the early integration and sustained viability of transit services.”
- c) Provide “a diverse mix of land uses, including residential and employment uses, to support vibrant neighbourhoods.”
- d) Create “high quality public open space with site design and urban design standards that support opportunities for transit, walking and cycling”.

This policy approach to planning for greenfields emphasizes the building of complete communities, which are compact in urban form with easy access to stores and services to meet daily needs. As part of achieving this vision, the *Growth Plan* imposes a density target on greenfield development, which is to be averaged over the upper-tier municipality. The *Growth Plan* defines density as a “concentration of residents and jobs

over a particular land area (in hectares)”¹. The minimum density target for greenfield areas in the Region of Peel is a combination of 50 people and jobs per hectare across the Region’s designated greenfield areas, excluding environmentally protected areas.² The greenfield lands are shown on Map 1.

MAP 1: CITY OF BRAMPTON – GREENFIELD AREAS



Source: Hemson Consulting Ltd. based upon City of Brampton’s Official Plan & Places to Grow, *Built Boundary for the Growth Plan for the Greater Golden Horseshoe*, 2006, Ministry of Public Infrastructure Renewal.

¹Technical Backgrounder Intensification and Density Targets, Ministry of Public Infrastructure Renewal, 2007.

²In keeping with Section 2.2.7.3 of the Growth Plan, the density target is measured over the entire designated greenfield area of each upper-tier municipality, excluding the following features: wetlands, woodlands, valley lands, ANSIs, endangered/threatened species habitat, wildlife habitat, and fish habitat.

The density target considers people and jobs per hectare together. Jobs include all employment, not just those in industrial-type businesses in employment lands. Employees from all sectors are counted, including business-serving and population-serving jobs in retail, food and service businesses, professionals in offices, and people working from home.

In jurisdictions like Peel, which have a two-tier municipal governance structure, the *Growth Plan* prescribes that the upper-tier municipality identify density targets for the designated greenfield areas of the local municipalities so that the overall density target for the Region can be achieved. This is to be undertaken in consultation with the local municipalities and the process at the Regional level is underway. In addition, both the Region and the local municipalities including Brampton, Mississauga and Caledon have to develop, approve and implement official plan policies for greenfield areas, which are consistent with the targets.

The number of residents and jobs per hectare will be measured using census data as the base and any other data that can be used to supplement the census. The Province will monitor the Region's conformity to the density targets although the *Growth Plan* does not contain provisions should the Region fail to meet the targets.

B. OTHER LEGISLATION INFLUENCES DENSITY BUT *GROWTH PLAN* DRIVES FUTURE PLANNING POLICY IN BRAMPTON

Although the *Growth Plan* is new, there are controls already built into the land use planning process that affect density patterns. These include other statutes, regulations and public standards such as the *Planning Act*, the Provincial Policy Statement, official plans and secondary plans, zoning by-laws, and property standards by-laws. Rules affecting density are also imposed through the building regulatory system by a large body of legislation including the *Building Code Act*, the *Fire Code Act*, and the *Heritage Act*.

For example, separation distances between buildings are regulated for fire safety. Minimum distance separations are also prescribed for habitable room windows. The range of density choices available in Brampton is therefore to some extent a function of existing Provincial legislation and standards established by agencies outside municipal government control.

The requirements of the *Growth Plan* are more restrictive than set out in Brampton's current official plan. The results of the conformity exercise will result in an amended official plan so that City planning policy will embody the policies of the *Growth Plan* as, under Section 3(5) of the *Planning Act*, all decisions will have to conform to the provincial *Growth Plan*.

Such are the density targets of the *Growth Plan* and the legislative context in which they have been imposed. In the next section of the report, the pattern of land use and density in existing communities in the city are discussed.

III CURRENT DENSITIES IN BRAMPTON'S NEW URBAN AREAS

To manage growth in greenfields area, the *Growth Plan* establishes a high level gross density measure and thus provides municipalities with considerable discretion as to how land within their jurisdictions is to be used. A combined gross density measure of 50 people and jobs per hectare is to be achieved in the designated greenfield area of the upper-tier municipality, the Region of Peel. In Brampton, existing gross residential densities in some older areas and overall gross employment densities are lower than the *Growth Plan*'s density targets. The pattern in newer areas is that the residential densities exceed *Growth Plan* targets, but employment density remains relatively low.

However, based on our analysis, densities achieved through recent planning efforts in Brampton indicate that future greenfield development can meet provincial targets without radical change to the City's planning policies. Brampton's 2006 official plan was revised and updated and explicitly embodies the general concepts and requirements of the *Growth Plan*. The policies in the official plan support an urban structure of complete communities with intensified mixed-use nodes and corridors, transit-oriented urban form, and a healthy balance of residential and employment uses. The urban structure in the current official plan is developing as set out in the *Growth Plan*, for example in planning for the Mt. Pleasant Mobility Hub.

A. DENSITY IS A RELATIVE MEASURE

Since density targets inform key policies in the *Growth Plan*, a brief discussion of the measurement of density is provided.

1. Growth Plan Employs a Gross Density Measure for Greenfields Across Upper-Tier Municipalities

Depending on how density is measured, it represents different information about settlement patterns. In land use planning, both "gross density" and "net density" measure the same subject, usually units per land area for residential and gross floor area per land area for non-residential uses. The difference between these two forms is the land area used for calculation:

- Land area used in “net density” typically excludes any land that is not for private use, thus excluding roads, parkland and open space, natural heritage features, and public infrastructure such as storm water management ponds and hydro corridors.
- Land area used in “gross density” includes some or all of the public uses and may include natural heritage features and major infrastructure depending on the purpose.

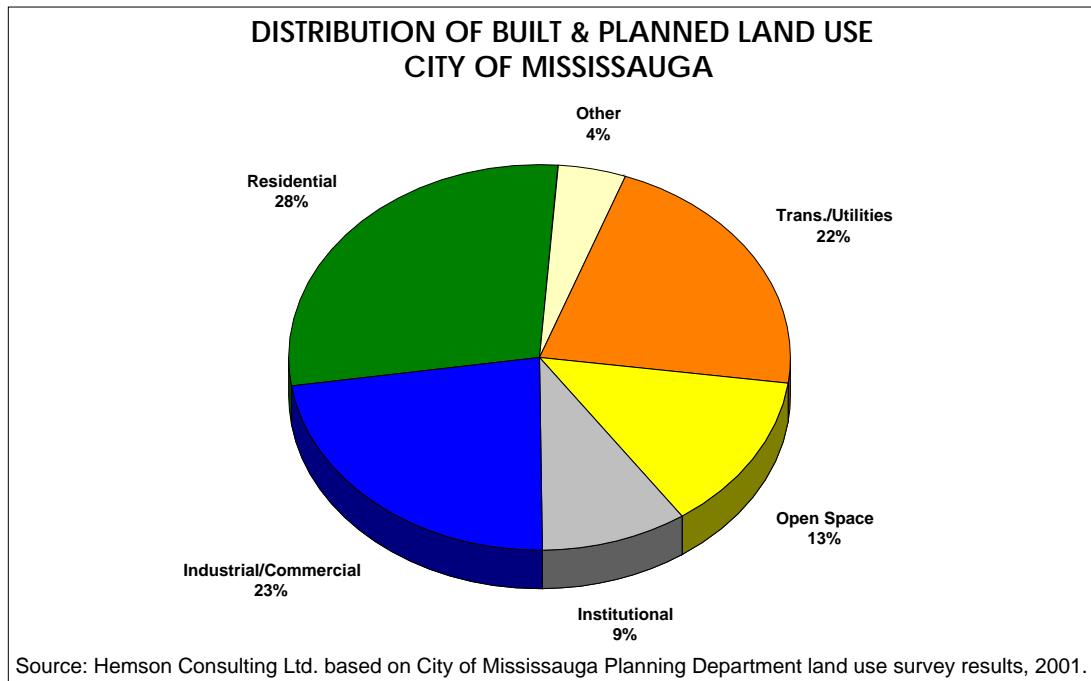
The density target for greenfields in the *Growth Plan* (measured over the entire designated greenfield area of each upper-tier municipality) is a gross measure as it employs the following definition: a combination of people and jobs over the entire land area *net* of natural heritage features. This form of measurement allows comparison of built form across jurisdictions at some level; however, it can also misrepresent the built forms between different areas where landscapes vary or where there happen to be many (or very few) hydro corridors, highways, railways, cemeteries or golf courses, all of which can significantly influence the overall calculation.

A major challenge is that the *Growth Plan* only excludes provincially significant features from the total area used for density calculation in the greenfields. Many municipalities in the GTAH have locally designated natural heritage features and open space, which under local planning regulation are not to be developed. Some municipalities have more areas of such lands than others, which makes achieving the same density target for the greenfield areas more difficult.

Brampton, in consultation with the Region of Peel, has discretion as to how greenfield land will be developed to take into account its own unique landscapes. The range of density choices available to the City is best determined with an appreciation of how land is currently used across Brampton, within the overall context of the Region.

2. Density Calculations Capture More than Just Residential and Employment Lands

Understanding density by any type of measure requires some understanding of the make-up of developed land use across broad areas. Although planning tends to focus on densities in residential areas, the land area in any given community accommodates many other activities and functions and to illustrate, the spectrum of land uses in the neighbouring City of Mississauga are shown in the graph following. Mississauga was chosen as it is nearly fully developed and is similar in many respects to the City of Brampton. A similar type of analysis of Brampton would not be instructive today for Brampton because large portions of the city are yet to be fully planned and even larger areas are yet to be built.



The Mississauga land use chart indicates that about just half of land is typically used for residential or employment purposes combined. That is, about half the land area is used for privately owned lots or land parcels on which all housing units and most employment-related buildings are located. In addition, about nine per cent is institutional (accommodating some employment). These are lands which primarily consist of active public parks, schools, places of worship and community centres. The remaining lands are open space and transportation and utilities, the latter of which is included in road rights-of-way.

For our purposes, the key idea to be taken from this analysis is that when considering increasing densities to meet targets, such as those in the *Growth Plan*, the effect of net density changes is diluted by the other land uses that do not contribute population or employment. For example, a fairly significant increase of, say, six persons plus jobs on actual properties would only result in an increase of about three persons and jobs at the overall level. With so much of total urban land use not being directly used for housing or employment, making significant changes in total density can be challenging.

“Complete communities” are part of the vision of the *Growth Plan*. The context for increased densities is a land use framework mixing local services, community infrastructure including schools, recreation and open space, and a high degree of accessibility to transit. The land budget for any new greenfield community is necessarily affected by more than just the mix and range of housing and employment.

The *Growth Plan*'s density target of 50 persons plus jobs applies to all future designated greenfields. There is no evidence to suggest that the composition of land uses on these future greenfields will be proportionally different from the existing pattern. After all, new houses and businesses will still need roads and other public infrastructure, so a significant portion of future greenfields will therefore consist of more than privately owned residential, commercial and industrial buildings. Areas for natural heritage conservation and open space are arguably on the increase. For this reason, the full range of land uses must be taken into consideration as part of planning future densities.

The Province has chosen a high level gross density measure for the *Growth Plan* that is to be applied across the GTAH. Applying a single standard to such a wide range of jurisdictions is problematic because, as discussed, the use of land in these jurisdictions do differ from place to place. Nevertheless, it is the measure required by the *Growth Plan*, so the analysis proceeds on this basis.

B. OVERALL DENSITIES IN GREENFIELD AREAS MEET THE *GROWTH PLAN* COMBINED DENSITY TARGET

Having established some of the factors that influencing density in urban communities in general, we can now turn to the planned density of development in Brampton. While the *Growth Plan* density target does not apply to the existing developed area, for illustrative purposes we have calculated the density of current development to provide a basis for comparison. It is followed by the key matter at hand in this report: the planned density of greenfield development in Brampton in respect of the *Growth Plan*'s 50 persons plus jobs per hectare target.

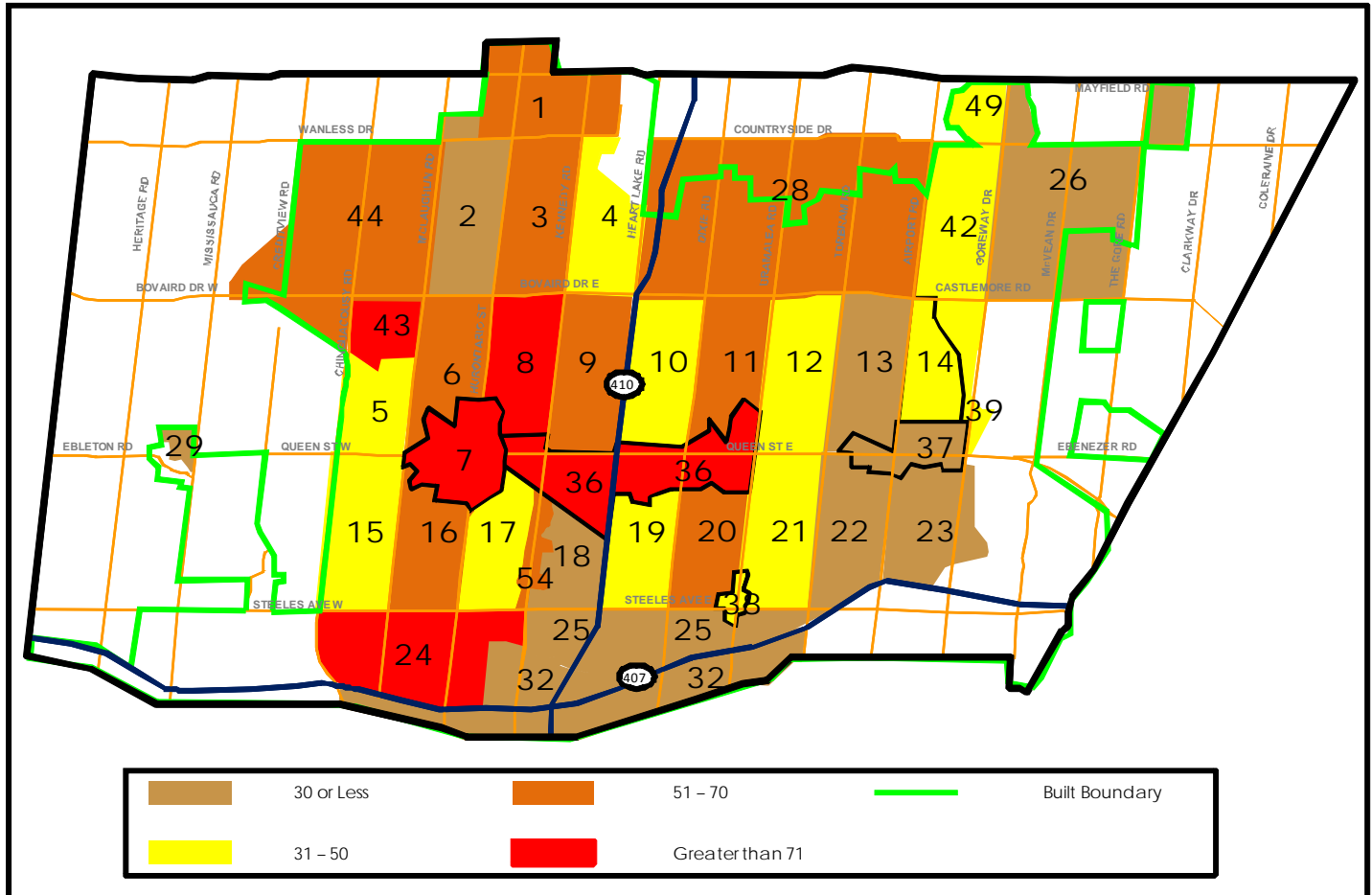
1. Within the Built Boundary, the Current Density of 44 Persons Plus Jobs per Hectare Is Forecast to Grow to 52 by 2031

Before considering planned density in Brampton's greenfields, it is instructive to calculate the density of existing built communities and use these results to help inform future land use and density in greenfields. Based on currently developed lands within the built boundary, the 2008 existing persons plus jobs per hectare measure comparable to the *Growth Plan* target is shown by secondary plan area in Map 2¹. It is important to reiterate that given the minimum greenfield density is to be measured over the

¹ The map shows all secondary plan areas having substantial portions of their development area within the built boundary. Bram West (40), Bram East (41) and Credit Valley(45) are not shown on the map since the small portion of plan areas within the built boundary do not provide a relevant comparison.

greenfield of the entire region for *Growth Plan* compliance, there is no real regulatory relevance to measuring the data on a secondary planning basis, but it is of interest to advance the understanding locally of the characteristics of different density levels.

MAP 2: CITY OF BRAMPTON – PEOPLE & JOBS DENSITY BY SECONDARY PLAN, 2008



Source: Hemson Consulting Ltd. based upon City of Brampton's Official Plan & Places to Grow, *Built Boundary for the Growth Plan for the Greater Golden Horseshoe, 2006*, Ministry of Public Infrastructure. Renewal.

There is a distinct pattern on the map of the lowest densities occurring in the secondary plan areas that contain employment districts, generally along Highways 410 and 407 and Airport Road. Employment development, by the persons plus jobs measure, is far less dense than typical residential areas. As discussed at some length in the accompanying report, *City of Brampton Employment Land Strategy: Analysis and Strategic Directions*, there is a significant challenge of meeting *Growth Plan* density targets while providing sufficient land for long-term employment land growth. This is because the nature of industrial-type employment areas is defined by the type of economic activity undertaken, and although the use of land is efficient for the activities involved, employment densities are low relative to *Growth Plan* targets. This is particularly

challenging in Brampton and some neighbouring jurisdictions such as Milton, where there is a strong market focus on manufacturing and on distribution centres.

Much higher persons plus jobs densities occur in the residential areas, with the highest densities occurring in areas with either a large number of apartment units, such as the Central Area (36)¹; in newer areas with particularly high person per unit factors, such as Sandringham-Wellington (28); and newer areas, such as Fletchers Meadows (44), where the lot sizes for ground-related housing are much smaller than in the past. These observations are helpful in evaluating what approaches exist to help achieve minimum densities across greenfields.

Taking the entire area within the built boundary together, Table 1 indicates the current 2008 overall density and the density based on growth forecast to occur by 2031. The area inside the built boundary is currently about 15 per cent below the 50 persons plus jobs *Growth Plan* target for greenfield areas. As growth occurs over the next 20-plus years, the area is forecast to rise to and then to exceed the 50 persons plus jobs level.

Table 1		
Persons and Jobs Density of Development within the Built Boundary		
	2008	2031
Population	456,000	499,000
Employment	<u>164,000</u>	<u>239,000</u>
Total Persons Plus Jobs	620,000	738,000
Land Area for Growth Plan Calculation (ha)	14,100	14,100
Persons Plus Jobs per hectare	44	52

Source: Population and employment are based on “preliminary forecast” adopted by Brampton Council in June of 2008. Land areas are from City of Brampton GIS-based data.

Note: The calculations in the table include the entire area within the built boundary, including those secondary Plan areas not shown on Map 2.

Of the 120,000 person plus jobs growth over the period which leads to the increase in density, about half is in locations across the built up area on remaining undeveloped lands lying within the built boundary and through some intensification. About one-quarter of the growth is in Bram West where the location of the built boundary just happens to contain a substantial amount of future development land. The remaining

¹ Brampton Secondary Plans are both named and numbered. In this report both names and numbers have been provided where possible. Due to scale, map labelling is limited to the Secondary Plan numbers.

quarter is in Downtown Brampton and the Queen Street Corridor where a significant amount of intensification is planned.

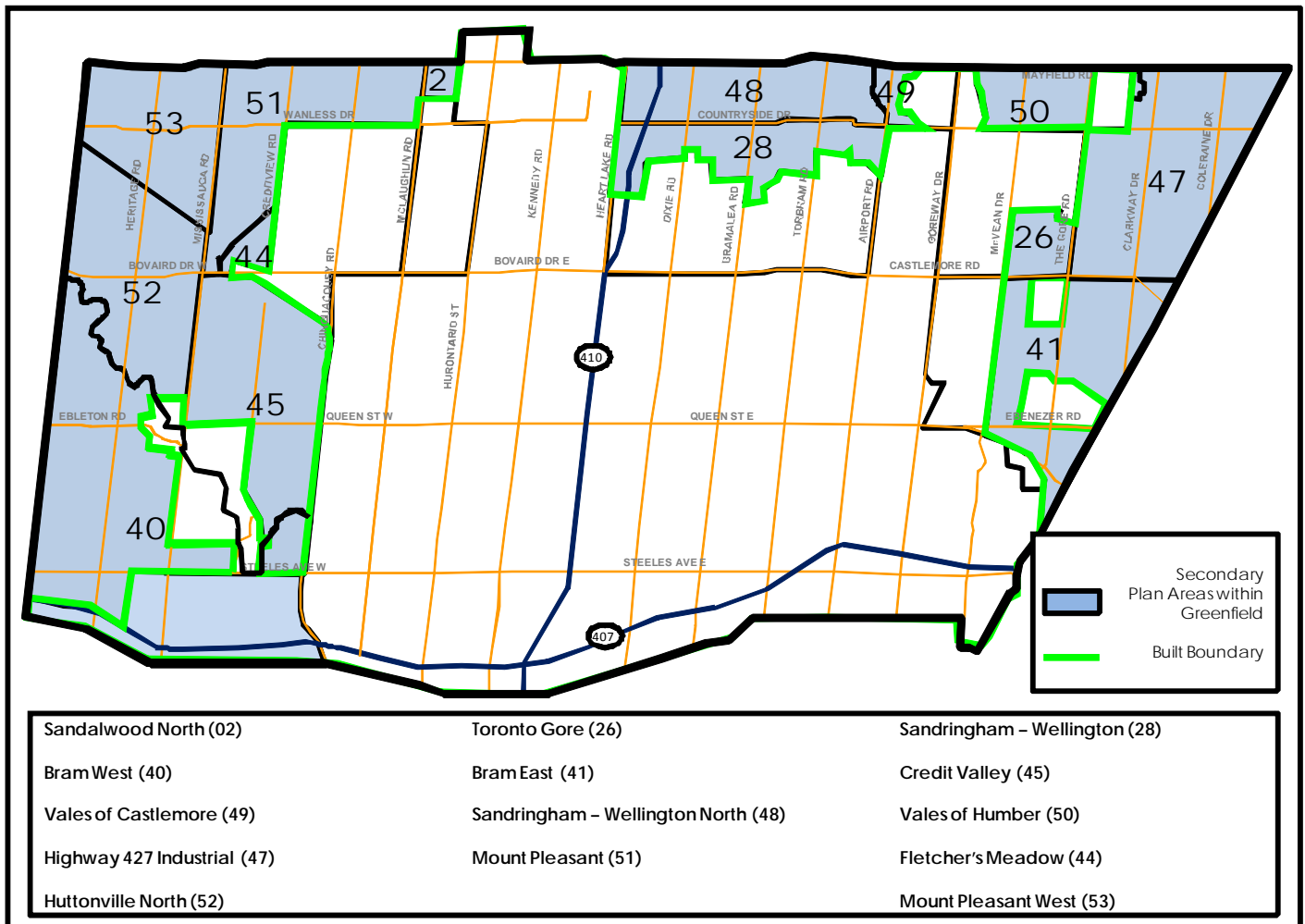
2. Analysis of Density Potential in Greenfields Areas Was Undertaken

The following series of tables provides a summary of the analysis prepared of the greenfield areas in the City of Brampton for the purposes of assessing where current planning for these areas stands in respect of the 50 persons plus jobs per hectare standard established in the *Growth Plan*. The step-by-step analysis guides the reader through some of the key elements of the analysis. The numbers in these tables are based on considerable analysis both by the staff of the City of Brampton and Hemson Consulting to arrive at the summary statistics provided.

The following key data sets form part of the greenfield density analysis:

- population by secondary plan area;
- employment in the industrial-type employment districts by secondary plan area;
- employment in residential districts combined with employment districts to provide total employment by secondary plan area;
- analysis of land areas used for the density calculation; and
- the density calculation.

Key data sets and assumptions associated with these steps are described with each table. For reference, the relevant plan areas are shown on Map 3.

MAP 3: CITY OF BRAMPTON – SECONDARY PLANS WITHIN GREENFIELD

Source: Hemson Consulting Ltd. based upon City of Brampton's Official Plan & Places to Grow, *Built Boundary for the Growth Plan for the Greater Golden Horseshoe, 2006*, Ministry of Public Infrastructure Renewal.

3. Capacity Population of 250,000 Is Estimated for the Greenfield Areas

The estimated population capacity is provided in Table 2 by secondary plan area. The key sources and assumptions for this part of the analysis are:

- Housing unit potential for areas with secondary plans has been calculated by the the City of Brampton using a combination of:
 - existing unit counts maintained in GIS; and

- potential units on vacant land estimated using GIS-measured area of vacant land for each residential and mixed-use secondary plan designation and the maximum allowable density in each designation.
- Housing unit potential for areas without secondary plans is based on the following:
 - Sandringham-Wellington North (48) and Mount Pleasant (51) are estimated based on secondary plan work currently underway.
 - Mount Pleasant GO Mobility Hub is a portion of Fletcher’s Meadows (44) Secondary Plan area, the rest of which is now built. The area is being planned in conjunction with Mount Pleasant (51), and therefore is considered as an area without a secondary plan, just for the purposes of this analysis. Unit yields are based on secondary plan work currently underway.
 - Residential portions of Highway 427 Industrial (47), Huttonville North (52) and Mount Pleasant West (53) are assumed to develop at the same gross residential density as that assumed for Mount Pleasant (51).
 - The Vales of Humber (50) is designated for “executive housing” so has been estimated by the City at a lower density consistent with the intention of the area being mainly single-detached units on relatively large lots.
- The number of persons per unit (PPU) is based on the unit-specific PPUs used in the growth forecasts being prepared for the City in conjunction with the *Growth Plan* conformity work. The PPUs are based on an assumption of continuation of the PPU in abutting newer areas. This has the effect of showing Sandringham-Wellington North (48) with a high PPU as an “extension” of Sandringham-Wellington (28) which has a high PPU relative to the City. Likewise, areas west of Fletcher’s Meadows are assumed to reflect its characteristics, while Highway 427 Industrial (47) would be more like Bram East (41).
- PPUs not only vary by location, but also vary over time. The capacity household population is based on forecast 2016 PPUs for each of the areas. Because PPUs change over time and the areas will be built at different times during the planning period, this “mid-point” measure of the *Growth Plan* planning period was determined as an appropriate common basis for measurement. This approach is also being used by a number of other municipalities in the GTAH and has been discussed among the Regional Planning Commissioners of the GTAH.
- The household population estimates are then factored up to include the non-household (institutional) population and the Census net under coverage to provide the total population. The last column of the table is the population definition

consistent with that used in the *Growth Plan*'s Schedule 3, which provides the *Growth Plan*'s population targets.

The total population shown in this table is the "persons" in the persons plus jobs per hectare measure in the *Growth Plan*. In accordance with *Growth Plan*, these populations are planned capacity within the areas, not all of which will be built within the period to 2031. A small amount of remaining unit capacity, almost entirely in higher density forms, will accommodate growth after 2031.

Table 2 Population Capacity on Greenfield Lands				
	Housing Unit Potential	Persons per Unit	Household Population	Total Population
Areas with Secondary Plans (Portion outside built boundary)				
Sandalwood North (02)	660	3.44	2,260	2,370
Toronto Gore (26)	120	3.63	440	460
Sandringham-Wellington (28)	7,070	4.00	28,260	29,610
Bram West (40)	7,420	3.35	24,860	26,050
Bram East (41)	7,960	3.82	30,400	31,850
Credit Valley (45)	11,680	3.54	41,350	43,330
Vales of Castlemore (49)	290	3.63	1,070	1,120
Sub-Total	35,200	3.65	128,630	134,790
Areas Without Secondary Plans				
Sandringham-Wellington North (48)	4,990	3.65	18,220	19,090
Vales of Humber (50)	2,260	3.65	8,260	8,650
Highway 427 Industrial (47)	4,060	3.55	14,430	15,120
Mount Pleasant (51)	11,880	3.63	43,100	45,200
Mount Pleasant GO Hub (44)	1,570	2.80	4,400	4,610
Huttonville North (52)	3,340	3.63	12,130	12,710
Mt Pleasant West (53)	3,180	3.63	11,530	12,080
Sub-Total	31,290	3.58	112,090	117,460
Total	66,480	3.62	240,720	252,250

Notes: Totals may not add due to rounding.

Total population includes the Census net under coverage.

4. Over 100,000 Jobs Would Be Accommodated at Build-out of Greenfield Areas

The estimated employment capacity of the greenfield areas is based on two components of employment: the employment in the planned industrial-type employment areas and the other population-related employment accommodated throughout the greenfield communities. In addition, there are major office uses which are generally accommodated within the employment areas or in the major office nodes, such as Downtown, Mississauga Road–Steeles Avenue and Hurontario, south of Steeles.

The employment capacity of the employment areas is provided in Table 3 by secondary plan area. The key sources and assumptions for this part of the analysis are:

- The only major employment area within an existing secondary plan is Bram West (40), where the portion in employment area outside the built boundary is shown. The figure is based on the existing approved portion of the secondary plan area mainly at the west end of Bram West. These employment areas are largely within the “Corridor Protection Area” in Bram West. The corridor protection area is for the purpose of reserving lands for a possible major north–south transportation corridor. Depending on the ultimate size and nature of this transportation corridor, the available development may be reduced from the areas shown in the tables.
- Sandringham-Wellington North (48) lands are those currently designated in the *Brampton Official Plan* at the top of Highway 410.
- Highway 427 Industrial (47) lands are estimated based on the boundary between employment and residential areas being on Clarkway Drive, slightly west of where the boundary is shown on the City concept map in the *Brampton Official Plan*. As described in the *Employment Land Strategy*, the exact location of this boundary was to be determined through the secondary planning process.
- Huttonville North (52) and Mt Pleasant West (53) are the two as yet unplanned areas in North West Brampton. The analysis is based on 600 net hectares of employment land being provided in this area, which is within the range of the employment land options previously considered in the North West Brampton planning work completed in 2002. The directions in the *Employment Land Strategy*, prepared as part of the current *Growth Plan* conformity studies, are to give consideration to providing more employment land in North West Brampton than the 400 net hectares that has been assumed in some work in recent years.
- The land analysis takes account of the anticipated 5 per cent long-term land vacancy in employment land, consistent with the analysis undertaken in the *Employment Land Strategy* and previously for the City of Brampton.

- The employment density is a combined employment density of all uses in the employment areas at 45.0 employees per net hectare. That is, the lands are primarily employment land employment (i.e. that accommodated in industrial-type buildings) at 38.0 employees per net hectare (per the *Employment Land Strategy*) plus a portion of freestanding office development (at 250 employees per net hectare) and a small amount of population-related employment (75 employees per net hectare).

Table 3 Employment Area Capacity on Greenfield Lands				
	Employment Areas (net ha)	Occupied Land at Capacity with 5% Long-term Vacancy (net ha)	Employment Density (employees per net ha)	Employment Land Employment
Areas with Secondary Plans (Portion outside built boundary)				
Bram West (40)	410	390	45.0	17,520
Bram East (41)	130	120	45.0	5,420
Vales of Castlemore (49)	10	<10	45.0	390
Sub-Total	550	520	45.0	23,340
Areas Without Secondary Plans				
Sandringham-Wellington North (48)	95	90	45.0	3,950
Highway 427 Industrial (47)	580	550	45.0	24,710
Huttonville North (52)	300	285	45.0	12,830
Mt Pleasant West (53)	300	285	45.0	12,830
Sub-Total	1,245	1,180	45.0	54,300
Total	1,795	1,700	45.0	77,650

Note: Totals may not add due to rounding.

The employment capacity of the entire greenfield area is provided in Table 4 by secondary plan area. The key sources and assumptions for this part of the analysis are:

- Employment land employment is from Table 3.
- Work-at-home employment is based on the current ratio of work-at-home employment to population in Brampton.
- Other population-related employment accounts for retail, service, education, health care, recreation and other employment generally found at scattered locations throughout the community. To be conservative, the ratio used here is

only about half the expected population-related employment generated from the population in this area, on the basis that a substantial number of these jobs will be located within existing concentrations, such as Downtown, the Queen Street Corridor and other existing commercial concentration.

The total employment shown in this table is the “jobs” in the persons plus jobs per hectare measure in the *Growth Plan*. Like the residential development calculations, this is a capacity measure of employment, not all of which will be built out within the 2031 planning time frame.

Table 4 Total Employment Capacity in Greenfield Areas				
	Employment Land Employment	Work-At- Home Employment	Other Population- Related Employment	Total Employment
Areas with Secondary Plans (Portion outside built boundary)				
Sandalwood North (02)	0	50	190	240
Toronto Gore (26)	0	10	40	50
Sandringham-Wellington (28)	0	610	2,370	2,980
Bram West (40)	17,520	540	2,080	20,140
Bram East (41)	5,420	660	2,550	8,630
Credit Valley (45)	0	890	3,470	4,360
Vales of Castlemore (49)	390	20	90	510
Sub-Total	23,340	2,770	10,780	36,900
Areas Without Secondary Plans				
Sandringham-Wellington North (48)	3,950	390	1,530	5,870
Vales of Humber (50)	0	180	690	870
Highway 427 Industrial (47)	24,710	310	1,210	26,230
Mount Pleasant (51)	0	930	3,120	4,050
Mount Pleasant GO Hub (44)	0	100	870	960
Huttonville North (52)	12,830	260	1,020	14,100
Mt Pleasant West (53)	12,830	250	970	14,040
Sub-Total	54,300	2,420	9,400	66,120
Total	77,650	5,190	20,180	103,020

Note: Totals may not add due to rounding.

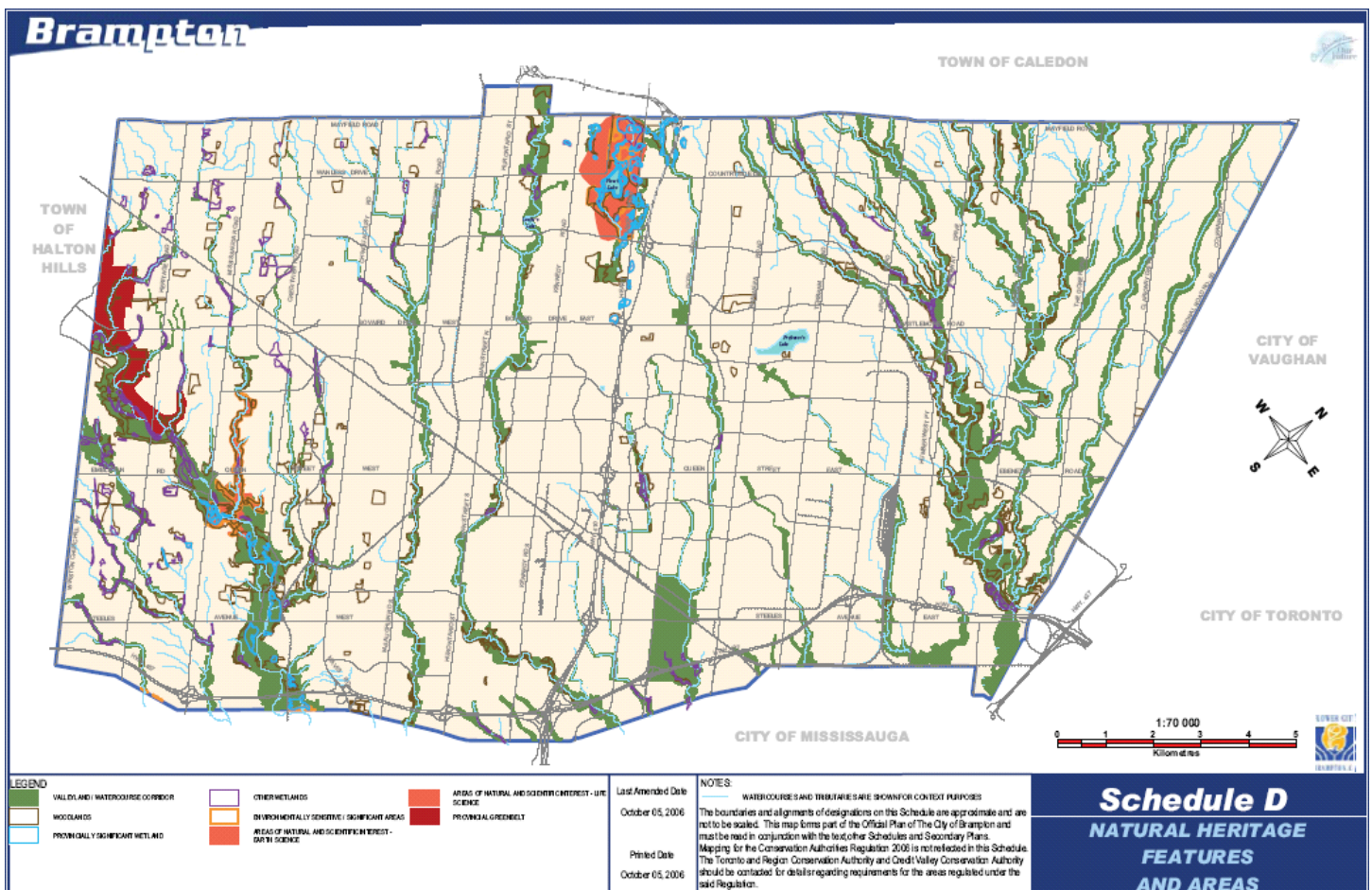
5. Land Area Based on the *Growth Plan* Definition for the Density Calculation

As already described, land areas used for the density calculation in the *Growth Plan* only exclude environmentally protected areas. For the purpose of this calculation the environmentally protected areas taken out of the calculation include:

- Provincially significant wetlands;
- Regulation fill line (Appendix C of *Brampton Official Plan*, 2006);
- Watercourse corridor and valley land (Schedule D of *Brampton Official Plan*, 2006);
- Areas of Natural and Scientific Interest (ANSI) for Life Sciences; and the
- Greater Golden Horseshoe Greenbelt.

Schedule D of *Brampton Official Plan* maps many of these features and is reprinted in this report as Map 5.

MAP 5: SCHEDULE D FROM BRAMPTON OFFICIAL PLAN



There is some uncertainty as to exactly what environmentally protected areas are to be excluded from the land calculation to meet the *Growth Plan* definition. The exclusions shown here were determined by the City of Brampton and the Region of Peel and are consistent with the calculations being undertaken elsewhere in the Region.

Excluding these environmentally protected areas in Brampton's greenfields, the total area subject to greenfield density calculation is approximately 6,660 hectares. Table 5 below provides a detailed list of total land areas and provincially significant environmental areas in each secondary plan area.

Table 5 Land Areas for Greenfield Density Calculation			
	Total Land Area (ha)	Less Environmentally Protected Areas (ha)	Land Area for Greenfield Density Calculation (ha)
Areas with Secondary Plans (Portion outside built boundary)			
Sandalwood North (02)	43	0	43
Toronto Gore (26)	222	88	134
Sandringham-Wellington (28)	490	112	378
Bram West (40)	1,489	537	952
Bram East (41)	842	237	605
Credit Valley (45)	1,030	246	784
Vales of Castlemore (49)	83	21	62
Sub-Total	4,199	1,242	2,958
Areas Without Secondary Plans			
Sandringham-Wellington North (48)	652	199	453
Vales of Humber (50)	258	46	212
Highway 427 Industrial (47)	1,262	293	969
Mount Pleasant (51)	856	171	685
Mount Pleasant GO Hub (44)	66	6	60
Huttonville North (52)	977	359	618
Mt Pleasant West (53)	704	141	563
Sub-Total	4,775	1,214	3,561
Total	8,974	2,456	6,518

Note: Totals may not add due to rounding.

6. Overall Density Exceeds the 50 Persons Plus Jobs per hectare Required by the Growth Plan

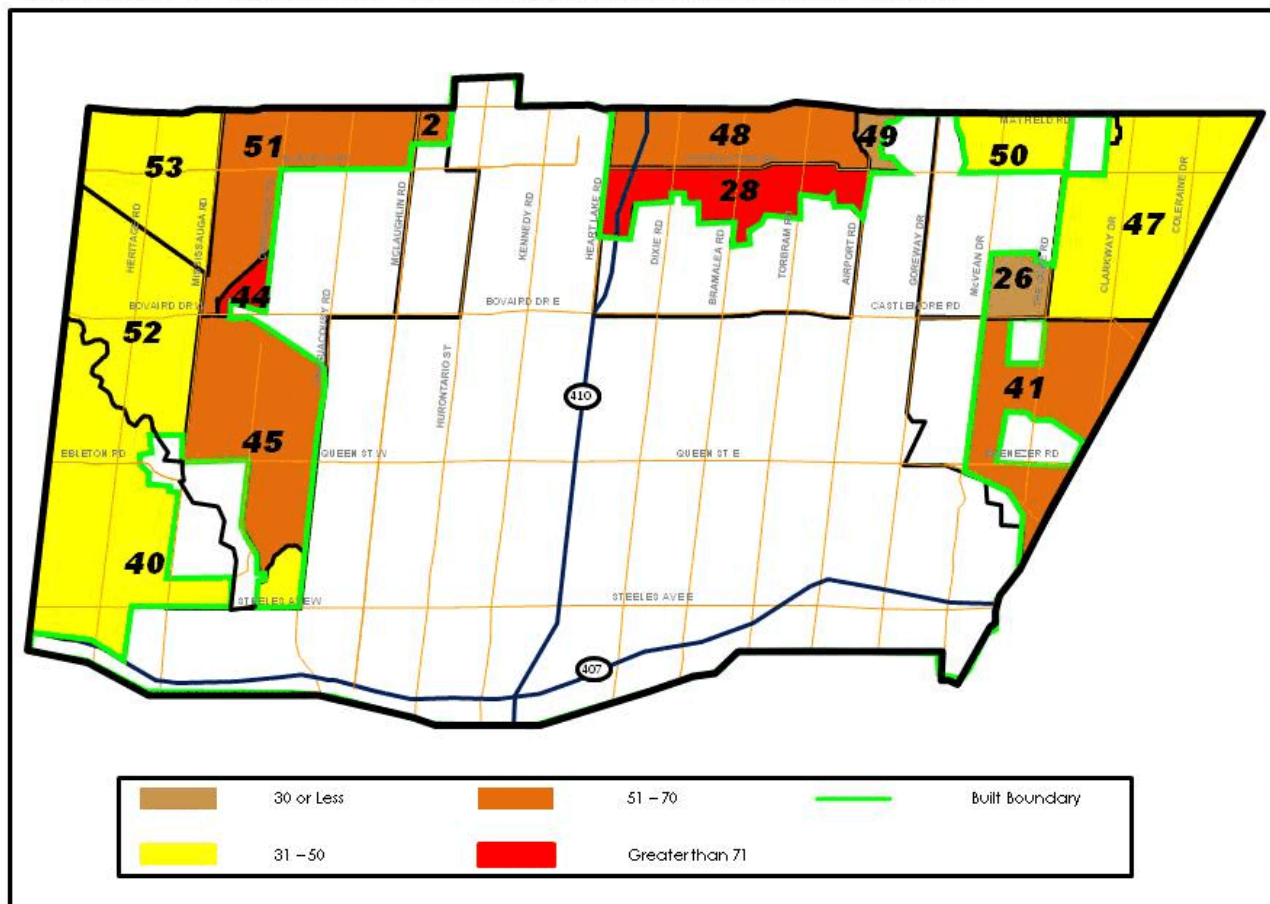
Based on the population in Table 2, the employment in Table 4 and the land area in Table 5, the planned average greenfield density is over 50 persons plus jobs per hectare, exceeding the Provincial density target of 50 persons plus jobs per hectare, as shown in Table 6.

Greenfield Density Calculation					Table 6
	Persons	Jobs	Persons + Jobs	Land Area for Greenfield Density Calculation (ha)	Greenfield Density (persons + jobs per ha)
Areas with Secondary Plans (Portion outside built boundary)					
Sandalwood North (02)	2,370	240	2,600	43	60.8
Toronto Gore (26)	460	50	510	134	3.8
Sandringham-Wellington (28)	29,610	2,980	32,590	378	86.3
Bram West (40)	26,050	20,140	46,190	952	48.5
Bram East (41)	31,850	8,630	40,480	605	66.9
Credit Valley (45)	43,330	4,360	47,690	784	60.8
Vales of Castlemore (49)	1,120	510	1,620	62	26.3
Sub-Total	134,790	36,900	171,690	2,958	58.1
Areas Without Secondary Plans					
Sandringham-Wellington North (48)	19,090	5,870	24,960	453	55.1
Vales of Humber (50)	8,650	870	9,520	212	44.9
Highway 427 Industrial (47)	15,120	26,230	41,350	969	42.7
Mount Pleasant (51)	45,200	4,050	49,250	685	71.9
Mount Pleasant GO Hub (44)	4,610	960	5,570	60	93.3
Huttonville North (52)	12,710	14,100	26,810	618	43.4
Mt Pleasant West (53)	12,080	14,040	26,120	563	46.4
Sub-Total	117,460	66,120	183,580	3,561	51.6
Total	252,250	103,020	355,270	6,518	54.5

Note: Totals may not add due to rounding.

Densities for each secondary plan area are illustrated on Map 5. Areas with higher densities are primarily residential and those with lower densities include significant employment areas (except for Toronto Gore [26] and Vales of Humber [49] which are planned for estate residential to accommodate upscale executive housing). The Mount Pleasant GO Mobility Hub in Fletcher's Meadows (44) is particularly dense as a focussed higher-density residential and higher-density employment area of the type encouraged by *Growth Plan* policy.

MAP 5: CITY OF BRAMPTON – GREENFIELD DENSITY AT PLANNED CAPACITY



Source: Hemson Consulting Ltd. based upon City of Brampton's Official Plan & Places to Grow, *Built Boundary for the Growth Plan for the Greater Golden Horseshoe, 2006*, Ministry of Public Infrastructure Renewal.

The *Growth Plan* uses a jobs per hectare measure for employment lands, which puts planned areas with large business parks at somewhat of a disadvantage. Areas with significant areas of planned employment land, such as Bram West (40) have lower calculated densities because jobs in employment districts are found primarily in low-rise industrial-type buildings and multiples.

Trends in manufacturing, a significant portion of Brampton's planned economic sector, indicate the density of jobs is on the decrease as manufacturing output continues to grow at a more rapid rate than manufacturing employment.

Logistics and distribution, also representing a significant of Brampton's economic activity, is accommodated in large, efficient, and highly automated distribution facilities with relatively low employment densities.

New generation facilities combining storage with other functions such as offices, assembly and manufacturing may increase demand for industrial-type buildings in key locations, such as those offered by planned employment lands in Brampton.

As discussed in the companion report, *Employment Land Strategy*, the Province recognizes employment land density is declining with the changing economy, putting further pressure on communities to meet planning targets. It tends to fall to the residential density side of the equation to compensate for low employment densities. Recognizing employees per hectare is not the best measure of employment activity, nonetheless, the gross density approach of the *Growth Plan* seeks to achieve a combined average of 50 persons plus jobs per hectare over the greenfields in each upper-tier municipality.

The conclusion of the planning greenfield capacity in Brampton is that it exceeds the 50 persons plus jobs per hectare target of the Growth Plan, using its definition of the land area for measurement as determined by the City and the Region. Actually achieving the level of growth indicated by the population and employment capacity will require further policy directions by the City. The next chapter explores general policy approaches to considering planning for higher densities of development. This is followed by specific policy directions in Chapter V.

IV SETTING DENSITY TARGETS MEANS EXAMINING DENSITIES FOR ALL LAND USES

The analysis in the previous chapter indicates that planning to achieve the *Growth Plan* density targets in Brampton is quite possible. The proportion of new greenfields designated for employment lands may, however, affect planning for other uses. Given the relatively low density of new businesses measured on a jobs per hectare basis, lands designated and reserved for employment will require that the density target be taken up in residential areas both within the City of Brampton and within the other local municipalities in the Region. However, because of the wide variety of land uses in the City, achieving the targets likely requires that densities of all land uses be modified: residential, employment, retail, mixed-use, institutional and public space.

When evaluating density options it is important to distinguish between density as a measure and perceptions of density; many perceive that higher density just means more high-rise apartments and office buildings rather than more comprehensive approach of achieving density targets within a diversity of built form. The former is critical when planning for future servicing and infrastructure. However, perceptions of density will greatly affect the ability of an area to attract new residents and industries irrespective of the actual density of the area.

A. THERE ARE LIMITATIONS TO HOW LAND USE PLANNING CAN INFLUENCE DENSITIES

Density, as it applies to planning and development, is often misunderstood. This is because perceptions of density vary greatly from place to place, even within the GTAH. What is seen as very high density in Brampton may not be considered so high in Toronto, or even Mississauga. Even within the City itself, where there is a range of settlement patterns, perceptions of density may vary.

Any discussion of density options must therefore acknowledge the difference between actual density and perceived density. The former is useful to planners as a relative measure: it serves as a basis for comparing jurisdictions and for setting community standards. However, actual density targets should not be an end to themselves. Rather,

they are best used as a means to achieve broader planning objectives. In this regard, the success of planning policies will rarely be judged by community residents on whether density targets as calculated are achieved.

From a policy planning perspective, one limitation on density options is that perceptions of density can be as meaningful to residents as actual densities, and this is especially true for greenfields communities, which have traditionally been expected to look and feel “suburban”, that middle ground between country and city. With the *Growth Plan* and the Greenbelt, the role of newly developing greenfields has now dramatically shifted to urban and there is no longer expected to be any suburban middle ground created through new subdivision. The change in density will be perceived by people based on a variety of influences, as follows, which do not necessarily reflect the actual density:

- Building Types — certain building forms are associated with certain density levels, regardless of actual density — row house development is sometimes far denser than “tower-in-the-park” high-rise development;
- Design — architectural elements and mixing of higher- and lower-density forms can reduce perceived density;
- Context — what is perceived as unacceptably high-density in one context may not be in another — “too tall” is not an absolute measure but only in relation to the buildings next door;
- Size — small pockets of high density may be perceived differently than large high-density developments because they may be better integrated into an area;
- Mixed-Use — mixed-use land use is generally perceived to be of higher density, whether or not it is actually the case.

It should be noted that the widely used planning definition of net density makes only limited reference to the perceived quality of life in a community. This is because the amount and distribution of parks, recreation facilities, hospitals, and public transit are typically excluded from the calculation of net density. Thus, the net density of a community that is 40 per cent parkland but with a relatively compact settlement form can be identical to that of a community where parks comprise only 10 per cent of the land area and a less intense pattern of use.

Moreover, there are factors influencing actual density that are difficult, if not nearly impossible, to change through land use planning. For example, it is very difficult to influence household size for a given housing type through planning policy, yet household size greatly affects population density. For non-residential development it is impossible (and probably not desirable either) to regulate the number of employees in buildings directly.

B. *GROWTH PLAN* DENSITY TARGETS AND MARKET FORCES CAN BE COMPATIBLE

The current pattern of land use in Brampton, and its associated densities, have been largely shaped by market forces under the direction of planning policies. The pattern of settlement has been driven for the most part by a desire for suburban living, automobile ownership, subdivisions of single family houses, warehouse and distribution type industries, and large scale retail shopping centres. While the policy direction in Brampton has changed towards a more urban form and feel in its newest communities, lifestyle and market preferences, though, may still be held by many residents throughout the GTA and by people and businesses looking to settle in Brampton.

To some people living in the Greater Golden Horseshoe, there is a discontinuity between the current planning policy environment in Ontario, which favours higher-density development, and the desires of individuals who have chosen low-density development, and the market serving these consumers.

It needs to be stressed, however, that the objectives of the *Growth Plan* and the density targets it imposes need not be incompatible with the aspirations of those current and future residents of the City desiring a less intense living environment. Balancing the greenfield density objectives of the *Growth Plan* and market forces is possible but not without its issues.

C. IF PLANNED DENSITIES ARE TO RISE, CITY NEEDS TO EXPLORE HIGHER DENSITY OPTIONS FOR ALL LAND USES

In considering planning choices for designated greenfield areas, each of the major land uses has its own characteristics. These characteristics largely determine the range of density options in the City.

1. New Residential Development May Have to Be High Enough to Compensate for Low Employment Densities

A discussion of residential density is key to determining density choices for Brampton. At the same time, any discussion of higher-density housing can be controversial. Calls for reducing urban land consumption often focus on residential development densities. At the same time, many people may enjoy living in low-density suburban areas or aspire to single detached home ownership and come to Brampton where there has historically been a range of more affordable ground-related housing relative to other areas in the GTA.

As demonstrated in Section III above, planned and recently constructed residential greenfield development just exceeds the combined *Growth Plan* density target, assuming Development occurs at maximum permitted densities for the residential areas. And, in addition, residential densities in these communities must ultimately be high enough to offset the low densities that will almost certainly arise on designated greenfield areas set aside for employment land, retail uses, and public open space. Achieving the maximum planned densities in residential areas means that some further shift to higher-density residential development may be required.

Three fundamental factors determine residential densities: the land area on which housing units are built; the number of units on the land; and the built form on the land. These factors are not necessarily interdependent. Thus, changing the area of land on which a fixed number of units is built will change the density without changing the built form of the houses. Conversely, changing the number of housing units built on a fixed area of land also changes the density without necessarily changing the built form.

With respect to built form, there is a range of choices in how to meet the density targets, but single detached housing cannot on its own meet the density targets. The only way to achieve higher residential densities for new housing is either to change the built form (to more row housing or cluster housing, for example) or to change the characteristics within the built form. In the latter case, since parking occupies a large amount of the land needed for residential development, reducing the amount of surface parking will increase the densities, provided that the change is significant and that extra

housing units are put in place. For example, single detached housing densities could be increased by the introduction of collective parking for blocks or groupings of houses.

At the same time, the *Growth Plan* density targets for greenfield development, as clearly demonstrated in the previous chapter, are not so onerous that larger numbers of apartment units would be required in greenfield areas to meet the targets. While not required to meet the target, some of this type of development may be desirable at some locations for a range of other planning reasons such as the encouragement of transit use.

2. Employment Land Density Is Low and Difficult to Increase

As discussed earlier, it is low employment densities that cause development on greenfield areas in Brampton to barely meet the *Growth Plan*'s combined people and jobs per hectare density targets. The main reason for this low density is the pattern of land use on "employment land." Employment land generally refers to business parks and other designated employment areas. As discussed in the *Employment Land Strategy*, there are many sound economic reasons as to why employment density is at the current levels. Nevertheless, it remains a challenge for meeting *Growth Plan* targets.

The ability to increase densities on employment land through municipal planning policy is limited. Built form for industrial-type buildings is determined by the economic activity on the site and its requirements for truck loading, truck movement and parking. Firms dealing with manufacturing and distribution, which predominate in newer areas of Brampton, develop single-storey buildings because the form is economic. A few industrial activities may be slightly more flexible with respect to built form but would rarely be able to choose higher-density building types.

One reason for the constraints on changing built form is that building density on employment land in the GTA has already increased significantly over the past 20 years. Lot coverages for typical buildings have increased from about 30 per cent to around 40 per cent and even to 50 per cent in some cases. Ceiling heights have increased from as low as 12 feet to 20 feet or more. Moreover, the productive interior volume of these buildings is much higher today than in the past¹. Changes in building form coupled with rising efficiency and productivity mean that the level of economic activity is rising in employment areas; the rate of economic growth is greater than the rate at which employment land is consumed.

¹ A modern industrial building with 45 per cent coverage and 20 foot ceilings has 2½ times more interior volume than a 30 per cent coverage building with 12-foot ceilings characteristic of many industrial buildings in the 1960s and 1970s.

Competition has driven firms to increase densities on employment land in recent years. The decrease in size of the built form is the result of economic benefits that accrue from efficient use of utilized space coupled with increased automation. Added to this is the fact that competitive employment land in the GTAH is getting more and more expensive. Many companies have sought to become more efficient by consolidating their operations and their space. One way to achieve this has been to build one large building instead of several smaller ones.

Land use planning policies which aim to change employment densities, by increasing designations for high-density office development for example, are very limited in scope. The amount of office development in the GTAH is largely determined by the structure of the GTAH economy which itself is dependent to a large degree on the distribution of industrial-type activities. Attracting more offices to North West Brampton would necessarily be at the expense of other parts of the City (and indeed the GTAH) and would not therefore change the overall employment density across the region as envisioned by the Province. If Brampton was able to redirect its office development to employment areas, this would indeed increase the employment density, but this would run contrary to *Growth Plan* policies which seek to concentrate office development in Major Transit nodes.

Planning policies can regulate buildings and built form but cannot regulate employment activity directly. Indeed, there is a limited role for planning in this area as the level of employment in a given building is tied to activity in the building, the corporate structure of the firm, and level of business being conducted. All of these factors are changing constantly, fluctuating with the global marketplace. In short, there are few planning policies that can directly influence employment land density, notwithstanding the *Growth Plan*'s use of a density target that measures jobs per hectare.

Within these limitations, changes to the function and design of Brampton's employment land can be explored. Specifically:

1. Reducing setbacks to reduce, or at least concentrate, the amount of land devoted to landscaping, but without creating forbidding streetscapes for employees and other pedestrians.
2. Encouraging the very small number of industries that can make efficient use of multi-storey buildings (full or partial), parking, and truck bays to do so. For instance, encouraging office space and outdoor rest areas to piggyback active business space in a second storey.
3. Encouraging shared use of land (truck turning areas; truck bays; truck storage, overflow and visitor parking).

Creative economic incentives can stimulate these changes. However, these changes will likely initially be resisted by employers. Perception of added costs is not popular in what is a highly competitive market. The shared use of land also raises insurance and liability issues.

3. Retail Land Use Densities also Difficult to Change

Large-scale commercial building densities are quite low, largely due to the amount of land set aside for parking. That said, the perception that large-format store sites are underused is often misplaced. Parking for these uses is built to accommodate peak usage and during peak periods — parking availability on Saturday matters to retailers, the fact that the lot may be empty on Tuesdays is of little concern. At peak periods, the number of people and jobs on a given site is very large. Conventional density measures do not therefore adequately capture the pattern of use in these areas.

Reducing the land associated with large-scale retail uses is largely a function of reducing the area set aside for parking. This usually involves the construction either of underground parking facilities or of multi-storey lots both of which may be a prohibitively expensive cost for many retail developers. It must also be stated that any extra building costs incurred by retail developers will almost certainly be passed on to consumers.

A reduction in large-scale retail areas and a corresponding increase in smaller more localized retail outlets accompanied by transit and designed as local pedestrian destinations can be encouraged through land use planning policies and may increase densities if accompanied by a shift away from use of the car for shopping. Retail uses typically follow residential development by a multi-year time lag so that it will be some time before any significant influence on driving habits and shopping patterns could be seen.

The options for changing densities on existing localized retail development land uses are similar to those available for residential uses as discussed earlier in this section and in the section below.

4. Mixed-Use Development Often Perceived to Be Higher Density but Is It Actually the Case?

Mixed-use development allows for land to be shared by complementary uses. The *Growth Plan* explicitly (and implicitly through the combined density targets) requires that development that mixes people and jobs be incorporated into local planning policy.

Brampton could consider designating planned commercial areas for mixed commercial–residential development where appropriate. But, unlike the built-up area where commercial retail services are already in place, such sites designated for mixed-use should require minimum retail development to ensure that commercial services are served in new communities. This is to reduce the possibility that high-value residential uses will push out areas reserved for commercial space. *Commercial areas in employment area are not being suggested for conversion.*

Mixed-use land use is generally perceived to be of higher density, as people and jobs share the same site, would seem to be a land use to be encouraged in light of the *Growth Plan*. However, in contemporary planning, the concept of mixed-use development in the GGH has only been applied in a significant way to adding some commercial uses to residential developments, and, as has been demonstrated earlier in this report, does not account for the majority of the overall land use.

5. More Efficient Use of Public Space Will Increase Densities

Residential development for the most part drives the need for institutional services (schools, hospitals, places of worship, community centres), and public open space (parks and trails). Typically, the denser the community, the wider the variety of services and the more accessible they become to a greater number of people. This is because high densities allow for the provision of community facilities such as arenas, pools, community centres, parks, and schools to be located in close proximity to more residences. When densities are low there may not be enough population and revenues generated by property taxes to justify some of these facilities.

The amount of newly developed land that is dedicated to open space, especially public parks, natural heritage lands, forestry lands, and other environmentally protected areas, in recent years far exceeds the amount set aside for open space in the past. This is why older urban communities are often much denser on a gross density basis than new development: the standards for parks and other public uses were much lower (or not in place at all) in the past. In fact, it is likely that the rate at which this land has been added to the GTA's supply of open space is greater than the rate at which land has been urbanized or developed.

Of all public space, parkland has the greatest effect on density. The effect of parkland on density is largely controlled by regulatory and public standards which require portions of newly developed land to be dedicated to parkland (usually at a rate per 1,000 population in new development). The increase in parkland required to serve an increased high density populations could be an impediment to higher densities in newly developed areas.

In older communities where redevelopment at higher densities has occurred it has been suggested that parks and public services lack the capacity to accommodate the additional population that results. In this respect, municipalities have the ability to provide for additional public space through the redevelopment planning process and by redeveloping lands themselves where appropriate.

Most of the lands required for institutional and public spaces are set in accordance with regulatory and public standards that establish road rights-of-way, school site sizes, stormwater management capacities, and environmental standards. It is therefore difficult to change the use of these lands, by mixing school and parkland uses, for example, through land use planning. However, an investigation into the distribution and use of public space and opportunities for overcoming entrenched conventional approaches may reveal opportunities for using lands set aside for public uses more efficiently and thereby increasing densities.

6. Higher Densities Raise Proportion of Land Used for Roads

There is considerable debate about the effect higher densities have on patterns of transportation. However, whether higher densities result in an increase in the use of public transit and a corresponding reduction in road traffic or not has little impact on the amount of land dedicated to local roads in new development. This is because the vast majority of land set aside for local roads is not a product of the amount of road traffic. Roads, or road allowances, in these areas serve to sustain a wide range of public infrastructure — water pipes, sewer pipes, stormwater drains, cable networks, hydro poles, sidewalks and other pedestrian amenities. Roadways also provide access to infrastructure when it needs repairing or replacing. Reduction in right of way widths has occurred in residential areas to improve pedestrian amenity, especially in new urbanism-influenced areas. However, the presence and size of local road rights-of-way are not just related to traffic needs.

A reduction in traffic can potentially reduce the need for arterial roads. However, any reduction in arterial road networks would have a marginal effect on densities in greenfield areas because arterial roads comprise only a small proportion of the overall land use of these areas. Moreover, the addition of dedicated bus lanes and high occupancy vehicle lanes could result in an increased need for these roads. The

experience in the GTAH has been that by relying on north-south and east-west concession roads with too few mid-block through-roads has resulted in peak hour gridlock in many areas.

Increasing the density in an area and reducing the amount of road traffic therefore has little effect on the amount of roads in the area. Indeed, with increasing net residential density the proportion of land required for roads usually increases.¹

Achieving the *Growth Plan* density target of 50 people and jobs per hectare on future greenfield development is achievable. The proportion of proportion of employment land designated in North West Brampton will be a factor as employment land densities are lower and require new residential development at a high enough density to compensate. Consideration of the use of public space within the planned areas is also a consideration for the City, as more efficient use of public space too will increase persons and jobs per hectare as measured by the *Growth Plan*. Of course, Brampton's role in achieving the density target is measured in terms of its contribution to the overall target in the Region of Peel in the context of urban structure and good planning within the region as a whole.

¹By way of illustration think of three building lots with 70, 90 or 110 foot depths respectively. In each case the amount of road in front of the unit is the same, though the area of the lots varies by more than 50per cent. This in turn means the proportion of land devoted to roads for each of these lots ranges from a low of about 20per cent of the combined lot and road area for the 110 foot depth to a high of about 30per cent of the combined lot and road area for the 70 foot depth lot.

V STRATEGIC DIRECTIONS

The assessment of planning and potential growth in Brampton's greenfield areas concludes that the density targets set out in the *Growth Plan* are achievable and will actually be delivered when development occurs.

The following policy directions are recommended in support:

- Residential and employment densities should be considered separately;
- Use of minimum density controls for residential areas;
- Opportunities for higher-density mixed-use development along arterial road frontages should be seized;
- Monitoring of success to be put in place.

Meeting the density target of 50 people and jobs per hectare in Brampton's designated greenfield areas will be a challenge. On the one hand, employment land, which constitutes a large proportion of the designated greenfield area, is unlikely to meet the density of 50 employees per hectare due to primarily low-density development that characterizes most industrial areas and business park environments in the GTAH and Brampton. On the other hand, there are relatively limited areas in the designated greenfield area that appear well-suited to large quantities of higher-density residential development.

Mount Pleasant Village is one of the best places to encourage best practices in mixed-use high-density development. It is a major transit node linking multi-modal transportation (Brampton buses with regional GO rail transit) and the Mount Pleasant GO Station. Part of the area is developing around the station south of the tracks while the remainder is outside. The area will assist in providing the City's share of both intensification and new density targets. Aggressive planning policies in the official plan have already identified the area for concentrated residential and employment activities.

Notwithstanding that the overall planned target will reflect some challenging policy choices, there are nevertheless many opportunities for Brampton to improve densities in the designated greenfield areas. Several secondary plans have not been completed for areas outside the built boundary, for example, the secondary plans for North West Brampton, which consists of Mount Pleasant, Mount Pleasant West and Huttonville North, and Countryside Village. For these secondary plan areas, new policies should generally encourage dense residential form and promote mixed-use development while respecting other policy objectives of natural conservation, settlement, and quality of life, which reflects the real challenge of implementing the *Growth Plan*.

A. RESIDENTIAL AND EMPLOYMENT DENSITIES SHOULD BE CONSIDERED SEPARATELY

As discussed in the companion *Employment Land Strategy* report, the need for planned employment lands in greenfield areas is great, and, although the traditional industrial type of employment uses in Brampton is not very high in density, they are very important to the City's economic future. While the provincial density targets are expressed in both jobs and people per hectare, in the development planning and approvals process employment densities are very difficult to direct through land use planning policy and in practice. Historically, the potential for employment intensification has been limited, and while it may improve in the future, efficiencies would not appreciably affect overall densities within the planning period.

Densities in residential areas will have to compensate for lower employment densities in greenfield areas. It is recommended that the City, in concert with the Region, continue to plan for residential densities that are in the higher ranges to compensate for lower job densities in employment lands. Monitoring of densities should continue to measure residential and employment land densities separately.

B. ARTERIALS TO BE PLANNED FOR INTENSIFICATION

Arterial roads in greenfield areas should be considered for designation as Intensification Corridors within the *Growth Plan* definition, as a focus for higher-density mixed uses.

While the transition to higher-density mixed use will necessarily be gradual and long-term in nature, the policy framework could be set now.

1. Greenfield Arterial Road Frontages Could Provide for Mixed-use Developments

The frontages of arterial roads in greenfield areas could be considered for designation as Intensification Corridors. Within this designation, opportunities could be identified for mixed-use developments; for instance, in areas where a neighbourhood shopping plaza might be suitable, a residential component could complement the development and help to achieve *Growth Plan* policies.

This approach is recommended with the caveat that the long-term retail and service needs of the community would still need to be met and not displaced or replaced by the housing component.

In keeping with our recommendations for intensification within the City generally, additional residential density is to be permitted within the planned framework decided by the City in areas and on sites where intensification can be accommodated along with other good planning principles meeting other City objectives.

2. Mississauga Road in North West Brampton Should Be an Intensification Corridor

Mississauga Road, generally north of Williams Parkway, should be considered for designation as an Intensification Corridor. Density assumptions for North West Brampton were originally based on the design of a neighbourhood similar to the one envisioned for the Mount Pleasant area, but the opportunity for Mississauga Road to be developed as a focus for mixed-use, higher-intensity uses should be considered within the constraints of the landscape character. At present, most of Mississauga Road lies within the designated greenfield area and has yet to develop. Notwithstanding this, it is suggested that the Intensification Corridor designation be assigned to this road since it is already a major transportation corridor.

The companion *Inventory and Assessment of Intensification Opportunities* report concludes that the result of this designation would be to support increased intensification, increasing the unit, and therefore the population, potential of this area. Developments of the highest quality of urban design and attention to siting could use the landscape setting to their advantage while delivering on yield.

C. MINIMUM RESIDENTIAL DENSITY POLICY COULD BE ESTABLISHED

The City should consider the use of minimum density controls for all density types. Within this, there are two choices:

- Minimum density for all housing types; and
- Minimum unit yield across secondary planning areas.

1. Minimum Density Requirements for Residential Land Uses

For greenfield secondary plans, a minimum density for low-, medium-, and high-density residential land uses could be required to ensure that *Growth Plan* density targets are met. The regulated minimum density would need to be set at close to the maximum density allowable for all residential types.

2. Minimum Unit Yield by Secondary Plan

An alternative, more flexible approach, would be to establish a minimum unit yield for each secondary plan area, or possibly, by block plan area. This approach would provide homebuilders with flexibility across the secondary planning area to accommodate market demands and to respond to the existing landscape.

D. AREAS WITHOUT SECONDARY PLANS SHOULD PLAN FOR INTENSIFICATION ACROSS ALL LAND USES

For areas without secondary plans, planning should take account of density in all urban uses, not just residential. The promotion of alternative development standards for road rights-of-way and for other public uses would increase overall yield.

E. MONITORING PROCESS SHOULD BE ESTABLISHED AT THE OUTSET

While undertaking the various components of the *Growth Plan* conformity exercise, the City has very capably generated required data sets and reports to assist us in our work. Staff should consider putting in place a protocol for continuing to gather and report on their density tracking in order to monitor the progress in achieving planned targets.