Region of Peel
2051 Land Needs Assessment Report

EXECUTIVE SUMMARY

A fundamental component of the Municipal Comprehensive Review (MCR) is assessing the land needed to accommodate Provincial Growth Plan population and employment forecasts.

A Place to Grow Growth Plan for the Greater Golden Horseshoe (Growth Plan, 2019) requires upper- and single- tier municipalities to plan for the growth forecasted on Schedule 3 of the Growth Plan and undertake a Land Needs Assessment (LNA) utilizing the Provincial Methodology to determine the amount of land that will be required to accommodate the forecasted growth.

This report provides the supporting background information and the technical inputs required to meet the requirements of the Provincial Land Needs Assessment methodology. The Report covers the following key areas:

- Historical population, household, and employment growth in Peel over the past 30 years
- Future planning considerations that will shape growth in Peel over the next 30 years
- Community and Employment Area land needs to be guided by a balanced approach to addressing market demand and policy objectives
- A distribution of population and employment to the local municipalities to meet the Provincial forecasts in Schedule 3

The key findings and observations from the Report are as follows:

- The Region is exceeding its population forecasts and falling short of its employment forecasts compared to the in-effect Regional Official Plan;
- A minimum intensification rate of 55% is recommended to support a range and mix of housing types and support transit investments;
- Peel is currently exceeding the minimum designated greenfield area target of 50 people and jobs per hectare prescribed in the Growth Plan, 2019 and is well positioned to establishes a minimum density above the provincial target;
- The results of the land need assessment for the Region of Peel is based on a balanced approach to providing a range and mix of housing units and employment types to meet the needs of Peel households;
- A land need of approximately 4,400 net developable hectares (3,000ha Community Area and 1,400 ha Employment Area) is required to accommodate forecasted population and employment growth to the planning horizon;
- 44 employment conversion requests have been received to-date. Staff continue to evaluate conversion requests and will update the employment land need based on the final recommendations.

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INTRODUCTION

The Peel 2051 Regional Official Plan Review (Peel 2051) is a Municipal Comprehensive Review (MCR) that will amend the official plan to manage growth and implement provincial policy directions. As part of Peel 2051, the Regional Growth Management Strategy fully integrates and coordinates land use planning, infrastructure planning and infrastructure financing and investment.

To support this integrated approach to planning, the Region of Peel has completed a Land Needs Assessment (LNA) report to determine the amount of land required to accommodate future population and employment growth to the year 2051 in accordance with the requirements of the Growth Plan for the Greater Golden Horseshoe, 2019 and the Provincial Land Needs Assessment Methodology, 2020.

The LNA informs elements of the Peel 2051 MCR including:

- The amount of population and employment growth allocated to the local municipalities;
- The planned mix of housing units and employment types;
- Minimum rates of intensification;
- Minimum densities in designated greenfield areas and Strategic Growth Areas; and
- The need for settlement area boundary expansion.

This report provides an overview of Peel's past growth, and completes the components required by the Provincial Land Needs Assessment Methodology to assess the amount of land required to accommodate future growth.

This report also serves as an update to all previously published documents and Council reports on the LNA.

What is a land needs assessment?

A Land Needs Assessment (LNA) is a standard methodology issued by the Province that must be completed as a part of a MCR to determine the amount of land needed to accommodate forecasted growth to the 2051 Planning horizon.

On August 28, 2020, the Minister of Municipal Affairs announced approval of an updated Land Needs Assessment Methodology that introduced new elements such as a simplified stepped process, flexibility to plan beyond Provincial forecasts, and requirements to address market demand in the land supply analysis.

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The outcome of the LNA is to ensure that sufficient land is available within municipalities to meet forecasted growth in Schedule 3 of the Growth Plan, 2019. This includes accommodate all housing market segments and employment types to the horizon of the plan, while avoiding shortages that may increase the costs of housing and have the effect of not meeting employment targets.

Data Sources

The base year utilized for the LNA is 2021 (estimated). These estimates are derived from the 2016 Census and extrapolated to 2021 based on Region of Peel building permit data, Canadian Mortgage and Housing Corporation, Statistics Canada data-sets, local municipal employment surveys. Interim year forecasts and analysis are provided by Hemson Consulting for the Region of Peel.

Forecasts for the 2051 Planning Horizon are in accordance with Schedule 3 of the Growth Plan for the Greater Golden Horseshoe.

POLICY CONTEXT

Peel Region is growing. Where and how the Region grows will have an impact on all aspects of daily life for residents, including where people live and work, how they travel, how they spend their leisure time and how the natural environment is protected for current and future generations.

The Provincial, Regional (upper-tier) and local municipal (lower-tier) governments all have a role to play in planning for growth (see Fig. 1). The Province of Ontario is responsible for establishing a Provincial planning framework through the *Planning Act, 1990*, the *Provincial Policy Statement, 2020*, and A Place to Grow: Growth Plan for the Greater Golden Horseshoe Amendment 1, (Growth Plan, 2019), among other policy documents and legislation.

Figure 1: Provincial, Regional and Local roles in growth planning

Provincial Policy Statement (PPS)

The PPS is a consolidated statement of the government's policies on land use planning for matters of Provincial interests such as: efficient land management, affordable housing, environmental protection and economic development. It is issued under Section 3 of the *Planning Act*. All planning related decisions are required to conform with the PPS, 2020. The new PPS came into effect on May 1, 2020. The PPS is the primary provincial land use planning policy document in Ontario to guide decision-making.

The Provincial Policy Statement provides direction on matters related to growth, including the achievement of cost-effective development, and minimizing land consumption and servicing costs by supporting the integration of land use planning, growth management, transit supportive development, and intensification. The PPS also directs municipalities to provide an appropriate range and mix of housing options and densities required to meet projected requirements of current and future residents.

A Place to Grow: Growth Plan for the Greater Golden Horseshoe

The Growth Plan is a consolidated statement of the government's policies to plan for growth and development in a way that supports economic prosperity, protects the environment, and helps communities achieve a high quality of life. The Growth Plan guides where and how development will occur through policies and minimum intensification and density targets focused on optimizing existing urban land, infrastructure, and public service facilities.

The policies of the Growth Plan are intended to support:

- The achievement of complete communities
- Prioritize intensification and higher densities to make efficient use of land
- Promoting an integrate transportation network
- Providing housing options to meet the needs of people at any age
- Curbing sprawl and protecting farmland and natural heritage feature areas, and
- Promoting long-term economic growth

The population and employment forecasts for upper- and single- tier municipalities on Schedule 3 in the Growth Plan, 2019 form the basis for planning and managing growth within the planning horizon. The Region of Peel is forecasted to accommodate an additional 700,000 people and 335,000 jobs between 2021 and 2051. Based on the provincial forecasts, the Region of Peel will accommodate a sizable portion of the growth in the Greater Toronto and Hamilton Area in the coming decades.

Table 1: Population and Employment Allocation to Greater Toronto and Hamilton Area (GTHA) Municipalities

Growth Plan – Population and Employment Forecast by Greater Toronto and Hamilton Areas Municipalities 2021-2051						
	Population			Employment		
	2021	2051	2021-2051	2021	2051	2021-2051
Toronto	3,034,000	3,650,000	617,000	1,697,000	1,980,000	282,000
Peel	1,578,000	2,280,000	700,000	736,000	1,070,000	335,000
York	1,211,000	2,020,000	810,000	580,000	990,000	414,000
Durham	722,000	1,300,000	574,000	239,000	460,000	225,000
Halton	618,000	1,100,000	485,000	278,000	500,000	220,000
Hamilton	584,000	820,000	239,000	238,000	360,000	119,000
GTAH Total	7,747,000	11,170,000	3,425,000	3,765,000	5,360,000	1,595,000
GGH Total	10,246,000	14,870,000	4,581,000	4,794,000	7,010,000	2,214,000

Source: Hemson Consulting, 2020 (prepared for the Municipal Affairs and Housing), Schedule 3 – Growth Plan for the Greater Golden Horseshoe

As a part of the conformity exercise with the Growth Plan, 2019 upper- and single- tier municipalities must demonstrate how they will accommodate the forecasted growth, this includes allocating population and employment to the lower-tier municipalities, confirming that sufficient land is available, and conforming to the policy objectives and targets of the Plan.

Regional Official Plan (OP) Review (Peel 2051)

The Regional Official Plan is being comprehensively updated through Peel 2051 Regional Official Plan Review (also known as a municipal comprehensive review or MCR), to be finalized by 2022. This update will incorporate all changes required to bring the Regional Official Plan into conformity with the Growth Plan, 2019, including the population and employment forecasts. It will also update policies in the following areas (Figure 2):

Figure 2: Peel 2051: Regional Official Plan Review Focus Areas

The Region works closely with the local municipalities to plan for growth in a way that reflects local needs. At the local level, municipalities implement the Provincial and Regional growth forecasts, and develop their own supporting policies in local official plans. Working together, all levels of government support the development of "complete communities" – the idea that people can work, learn, shop, be active, and age close to home.

HISTORY OF GROWTH PLANNING IN PEEL

The Regional Municipality of Peel was created in 1974. Between 1974 and 1996, Peel's population grew by more than 500,000 people and 250,000 jobs. Peel's growth in the first 20 years of the Region introduced the need for a more comprehensive approach to planning. In 1996, Regional Council adopted its first Official Plan. The Region's first Official Plan established the urban boundary and introduced growth forecasts to the year 2021.

In 2002, the Region undertook the Regional Official Plan Strategic Update, which included an update to the population and employment forecasts to 2021 through Regional Official Plan Amendment (ROPA) 8. ROPA 8 increased forecasted population and employment growth in Mississauga while decreasing forecasted growth in Brampton. In 2006, the Region expanded the urban boundary of Peel to incorporate lands in Northwest Brampton and extended the planning horizon to accommodate growth to the year 2031 through ROPA 15.

The Growth Plan for the Greater Golden Horseshoe, 2006 (Growth Plan, 2006) was the first growth plan, which provided growth forecasts for upper- and single-tier municipalities to the year 2031 and introduced density and intensification targets. The Region implemented these forecasts and policy requirements through ROPA 24.

In recent years, additional settlement area boundary expansions have been approved or settled at the Ontario Land Tribunal (formerly the Land use Planning Act Tribunal:

- Mayfield West Phase 2 Stage 2 (ROPA 34)
- Ninth Line (ROPA 33)
- Bolton (ROPA 30)

The settlement area boundary expansions have increased the land supply and positioned the local municipalities in Peel to respond to the rapid rate of forecasted growth. Appendix I summarizes the historic growth forecasts in Peel.

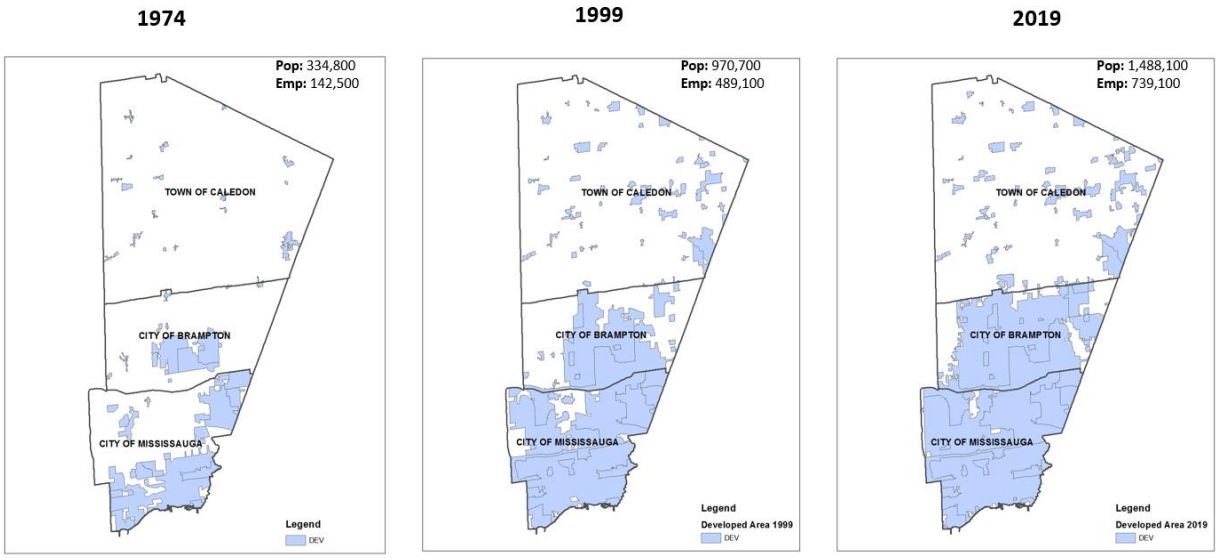

Figure 3: Historical Development Patterns

Source: Peel Data Centre, 2021

Population

The Region of Peel has experienced rapid population growth over the last 30 years, growing by 820,000 people. The Region has consistently exceeded Regional and Provincial population forecasts. Population growth in Peel has been driven by Mississauga and Brampton. Between 1991- 2021 the City of Brampton grew by 450,000 people (188%) and the City of Mississauga increased by 320,000 people (67%).

The pace of growth and historical development patterns may be attributed to the availability of greenfield lands and a preference for lower density housing types. In the last 10 years, growth in Mississauga has slowed, but a greater proportion of the new units being built are in apartment built forms, while growth in Caledon driven by lower density built forms has increased.

Table 2: Historic Population Growth by Local Municipality 1991-2021

Historic Population Growth by Local Municipality 1991-2021				
Year	Peel	Brampton	Caledon	Mississauga
1991	758,474	242,660	36,190	479,624
1996	878,827	276,527	41,124	561,176
2001	1,032,000	339,591	52,802	639,608
2006	1,208,726	452,573	59,535	696,618
2011	1,350,097	545,478	61,900	742,719
2016	1,433,100	615,700	69,000	748,000
2021 (est)	1,578,000	703,000	80,000	795,000
2021 – ROP Forecast	1,490,000	635,000	87,000	768,000

Source: Statistics Canada Census 1991-2016, Region of Peel Official Plan (2021 forecast), Hemson Consulting (2021 estimate).
Note, all figures include an undercount

Households and Housing Mix

The Region added 225,000 additional units in the last 30 years. While population growth is exceeding the forecasts, the total households in the Region is below forecasted levels. This indicates that more people are being accommodated in less units, which may be a result of larger household sizes or alternative living arrangements that are not being captured through traditional reporting measures.

Table 3: Historic Household Growth in Peel 1991-2021

Historic Household Growth in Peel 1991- 2021				
Year	Peel	Brampton	Caledon	Mississauga
1991	229,665	70,680	10,745	148,240
1996	265,930	81,075	12,550	172,305
2001	308,845	97,550	16,110	195,185
2006	359,042	125,934	18,214	214,894
2011	402,900	149,271	19,100	234,600
2016	430,100	168,100	21,200	240,100
2021 (est)	458,000	186,000	24,000	248,000
2021 – ROP Forecast	465,000	184,000	28,000	253,000

Source: Statistics Canada Census 1991-2016, Region of Peel Official Plan (2021 forecast), Hemson Consulting (2021 est).

Over the past 30 years there has been a preference for single- and semi- detached units in Peel. Approximately 55% of the new units over the 30-year period has been in low density housing forms. This trend is consistent across all three municipalities in Peel. Although it should be noted that the City of Mississauga has had a more balanced mixed of units, which may be attributed to land supply constraints. Appendix II provides a detailed breakdown of households by dwelling type in Peel.

Table 4: Households by Dwelling Type (%) in Peel 1991-2021

Households by Dwelling Type in Peel 1991-2021				
Year	Brampton	Caledon	Mississauga	Peel
Single/Semi	81,600 (68%)	10,700 (80%)	47,000 (50%)	139,300 (66%)
Row	16,500 (13%)	2,300 (17%)	18,400 (20%)	37,200 (18%)
Apartment	6,500 (19%)	400(3%)	28,900 (31%)	35,800 (17%)
Total	104,600 (100%)	13,300 (100%)	94,300 (100%)	212,200 (100%)

Source: Canada Mortgage and Housing Corporation (CMHC) Starts and Completions Survey, May 1991 to April 2021.
Note: CMHC data is new construction and does not count units added within existing buildings. From 1991 to 2021 there were approximately 11,000 additional accessory units added within the existing housing stock.

Employment

Between 1991 and 2021 the Region of Peel added approximately 360,000 jobs, much of this growth occurred in the early 1990's, as employment growth in Peel has been slower than anticipated due to several factors such as the 2008 Recession, the changing nature of employment as sectors such as warehousing and logistics are impacted by technological advancements such as automation, and the on-going COVID-19 pandemic

It is anticipated that the Region may fall short of its 2021 Regional Official Plan forecast by approximately 10%. All three of the local municipalities in Peel are not achieving their employment forecasts, however the greatest shortfall is within the City of Brampton, at approximately 25% below the in-effect employment forecast. It should be noted that the 2021 estimates will have to be validated against the 2021 Census and local employment surveys. Many industries have been hard hit by the Pandemic such as the airline industry, and some jobs loss in 2020-2021 may return or transition to different forms of employment in the future.

Table 5: Historic Employment Growth in Peel 1991-2021

Historic Employment Growth in Peel 1991-2021				
Year	Brampton	Caledon	Mississauga	Peel
1991	92,600	11,500	274,100	378,200
1996	103,800	14,500	302,600	420,900
2001	133,600	18,400	382,200	534,200
2006	155,900	21,400	430,700	608,000
2011	172,400	22,700	455,400	650,500
2016	191,400	27,200	476,800	695,400
2021 (est)	210,400	31,900	493,300	735,600
2021 – ROP Forecast	280,000	40,000	500,000	820,000

Source: Statistics Canada Census 1991-2016, Region of Peel Official Plan (2021 forecast), Hemson Consulting (2021 est).

The type of employment accommodated across Peel over the past 30 years is employment land employment jobs which traditionally accommodates warehousing, manufacturing, and logistics. Employment Land Employment jobs (ELE) represented 50% of the new job growth in Peel between 1991 and 2021. These jobs have located in Peel due to its strategic locational advantages such as 400 series highways, goods movement corridors, and the Pearson International Airport. Appendix III provides a detailed breakdown of the historical mix of dwelling units in the Region.

Table 6: Employment Growth by Employment Type (%) in Peel 1991-2021

Employment Growth by Employment Type and Local Municipality 1991-2021				
	Brampton	Caledon	Mississauga	Peel
Major Office	12,000 (10%)	200 (1%)	66,400 (30%)	78,700 (22%)
Employment Land Employment	54,600 (46%)	14,800 (73%)	102,600 (47%)	172,000 (48%)
Population Related Employment	41,800 (35%)	1,800 (9%)	37,100 (17%)	80,700 (23%)
Home based employment	9,400 (8%)	1,900 (9%)	13,100 (6%)	24,400 (7%)
Rural employment	-	1,600 (8%)	-	1,600 (<1%)
Total	117,900 (100%)	20,430 (100%)	219,300 (100%)	357,400(100%)

Source: Statistics Canada Census 1991-2016, Region of Peel Official Plan (2021 forecast), Hemson Consulting (2021 est).

EVALUATING OPTIONS AND IMPLICATIONS OF GROWTH

To align planning with the new forecasts, the Region, working with the local municipalities, internal and external stakeholders, and the development industry, developed a series of growth allocation scenarios that explored options for accommodating forecasted growth throughout Peel. These scenarios considered factors including infrastructure and servicing, transportation planning, development financing, preservation of agricultural lands, employment planning, and a range of density and intensification rates (see Appendix IV for the list of Peel's Growth Management scenarios).

The evaluation of scenarios takes into consideration the changing provincial context that guides how growth is managed in the Region. Throughout 2018 and 2020, the Provincial planning framework underwent many changes with significant implications for growth planning in the Region. Most notably in August 2020, A Place to Grow: Growth Plan for the Greater Golden Horseshoe was updated with a new planning horizon to 2051, new population and employment forecasts, and the introduction of a new Land Needs Assessment methodology.

Table 7: Changing Provincial Requirements

	Region of Peel Official Plan	Growth Plan, 2017	Growth Plan, 2019 (2020 Office Consolidation)
Intensification target	40% intensification to 2025 50% intensification post-2025	50% intensification from MCR to 2031 60% intensification post-2031	50% intensification post-MCR
Designated Greenfield Area Density target	50 residents and jobs per hectare measured across Community	80 residents and jobs per hectare measured across Community Areas	50 residents and jobs per hectare measured across Community Areas

	and Employment Areas		
Policy Areas	Urban Growth Centres Delineated Built-up Area Designated Greenfield Area	Urban Growth Centres Delineated Built-up Area Designated Greenfield Areas Employment Areas Strategic Growth Areas Major Transit Station Areas	Urban Growth Centres Delineated Built-up Area Designated Greenfield Areas Employment Area Strategic Growth Areas Major Transit Station Areas
Planning Horizon	2031	2041	2051
Population and Employment Forecasts	1,640,000 People 870,000 Jobs	1,970,000 People 970,000 Jobs	2,280,000 People 1,070,000 Jobs

Growth Management Strategy

In Peel's case, the Provincially mandated methodology has been supplemented by the extensive work undertaken through the Growth Management Strategy (GMS) to evaluate options for accommodating growth in existing urban areas and through boundary expansion. The principles identified of the GMS to support complete and healthy communities include:

- efficiently using existing and planned Regional infrastructure
- supporting growth pays for growth to minimize financial impacts to existing residents and businesses
- protecting environmental and agricultural resources
- creating densities that support transit, affordable housing and complete communities
- planning for a range of employment over the long-term to adjust to market cycles.

The principles are applied in the forecast and allocation work collaboratively in an integrated manner to address factors including infrastructure and servicing, transportation planning, development financing, preservation of agricultural lands, employment planning, and a range of density and intensification rates. The distribution of population, household, and employment growth within the municipalities of Peel is based on a small geographic unit (SGU) geography forecast prepared by Hemson Consulting that reflects the community and policy areas of the Region. This work has positioned the Region to respond to shifting provincial planning frameworks and new planning assumption and development trends in a manner that balances the requirements of Provincial plans, current market trends, infrastructure and financial planning, and local planning priorities. Moving forward it will be an important part of the on-going monitoring of growth in an integrative manner to support the GMS principles.

Fiscal Impact Scenario

Staff have assessed the fiscal impacts of accommodating new growth to 2051. Several scenarios were evaluated to determine the high-level costs associated with accommodating Settlement Area Boundary Expansion (SABE) under a range of density and intensification assumptions.

Table 8:Fiscal Impact Assessment Scenarios Summary

Fiscal Impact Assessment Summary				
	Minimum Intensification Rate	Minimum Designated Greenfield Area Density (Residents and jobs per hectare)	Community Area Land Need	Employment Area Land Need
LNA Base Scenario (Dec 2020)	55%	65	3,000	1,200
New LNA Base	55%	65	3,000	1,400
High DGA Density	55%	75	2,500	1,400
Low DGA Density	55%	55	3,200	1,400
Minimum Intensification	50%	65	4,200	1,600
No GTA West	55%	65	3,000	1,400

Source: Hemson Consulting, 2021

The detailed findings from the Fiscal Impact Analysis are included in the SABE Planning Justification Report titled: "Hemson Planning Justification Report Part 2: Final Concept Map and Fiscal Impact Analysis – September 2021".

GTA West Corridor

The GTA West corridor has been considered through the SABE Report to assess how Council's position on the corridor may impact the location of new population and employment growth. For the purpose of the LNA, this position does not impact the land requirements or municipal allocation of population and employment growth in accordance with the Growth Plan, 2019.

Climate Change

A climate change lens has also been developed to support the evaluation of scenarios and assist with the Growth Management and Settlement Area Boundary Expansion (SABE) Focus Areas.

Climate Change is one of thirteen focus areas being addressed through the Region's Peel 2051 Official Plan review process. As part of the Climate Change Focus Area, the Region has drafted new policies as part of an integrated systems-based approach that embeds climate change policy direction throughout key theme areas in the Regional Official Plan.

Appendix V – "Climate Change Criteria to Evaluate Regional Growth Allocation, Intensification Targets, Greenfield Density Targets and Settlement Area Boundary Expansions (SABE)" is supplementary to the overall policy framework and direction for climate change planning and supports the integration of climate change considerations specific to the Peel 2051 Growth Management and SABE planning work.

The criteria identify key climate change considerations that assist in understanding how climate change outcomes/objectives can be supported in growth management and settlement expansion policy development and implementation. Specific to the Growth Management Focus Area, the criteria align climate change outcomes to key policy requirements in the Provincial Policy Statement (2020) and Growth Plan (2019). Directions are provided that climate changes objectives can be supported through the allocation of population and employment growth, setting minimum density and intensification targets above Provincial minimums, shifting to more higher density units, and directing growth to strategic growth areas served by transit.

These directions support better use of transit, active transportation (walking, cycling), reduced vehicle trips and a broader range of housing choices that shift building types from low density to medium and higher density housing options, which provide opportunities to maintain, restore, and enhance the diversity and connectivity of natural features such as forests and rivers for the long-term protection of ecosystems and public health that assist in reducing greenhouse gas emissions. The shift in densities, intensification, and unit mix supports the Region of Peel's approach to integrating policy direction for climate change mitigation and adaptation as part of the overall Peel 2051 Official Plan Review as well as alignment with the integration climate change considerations specific to the Growth Management Focus Area component of the Review.

The development of supporting policies in the Regional Official Plan from the LNA will emphasize locating growth in existing built-up areas, and more compact greenfield development.

Policy Areas in Peel

The LNA defines several policy areas and geographies to be utilized in determining the need for land to accommodate forecasted growth and achieving minimum density and intensification targets. For reference, Appendix VI provides mapping of the policy areas and LNA geographies in Peel.

Delineated Built-up area

All lands within the limits of the developed urban area as defined by the Minister, utilized for the purpose of measuring the minimum intensification targets.

Designated Greenfield Areas

Lands within settlement areas but outside of the delineated built-up areas that are designated in an official plan for development to accommodate forecasted growth. These lands are used to measure the minimum designated greenfield area density targets.

Rural Areas

For the purposes of this analysis, Rural Areas in Peel are inclusive of Agricultural and Rural Areas, Palgrave Residential Community, Settlement Areas in the Rural System, and the Greenbelt.

The geographies of the LNA are comprised of community areas and employment areas, which are utilized to determine land needs.

Community Area

Areas where most of the housing required to accommodate the forecasted population will be located, as well as most population-related jobs, most office jobs and some employment land

employment jobs. Community areas include delineated built-up areas and designated greenfield areas.

Employment Area

Areas where most of the employment land employment jobs are (i.e. employment in industrial-type buildings), as well as some office jobs and some population-related jobs, particularly those providing services to the employment area. Employment Areas may be located in both delineated built-up areas and designated greenfield areas.

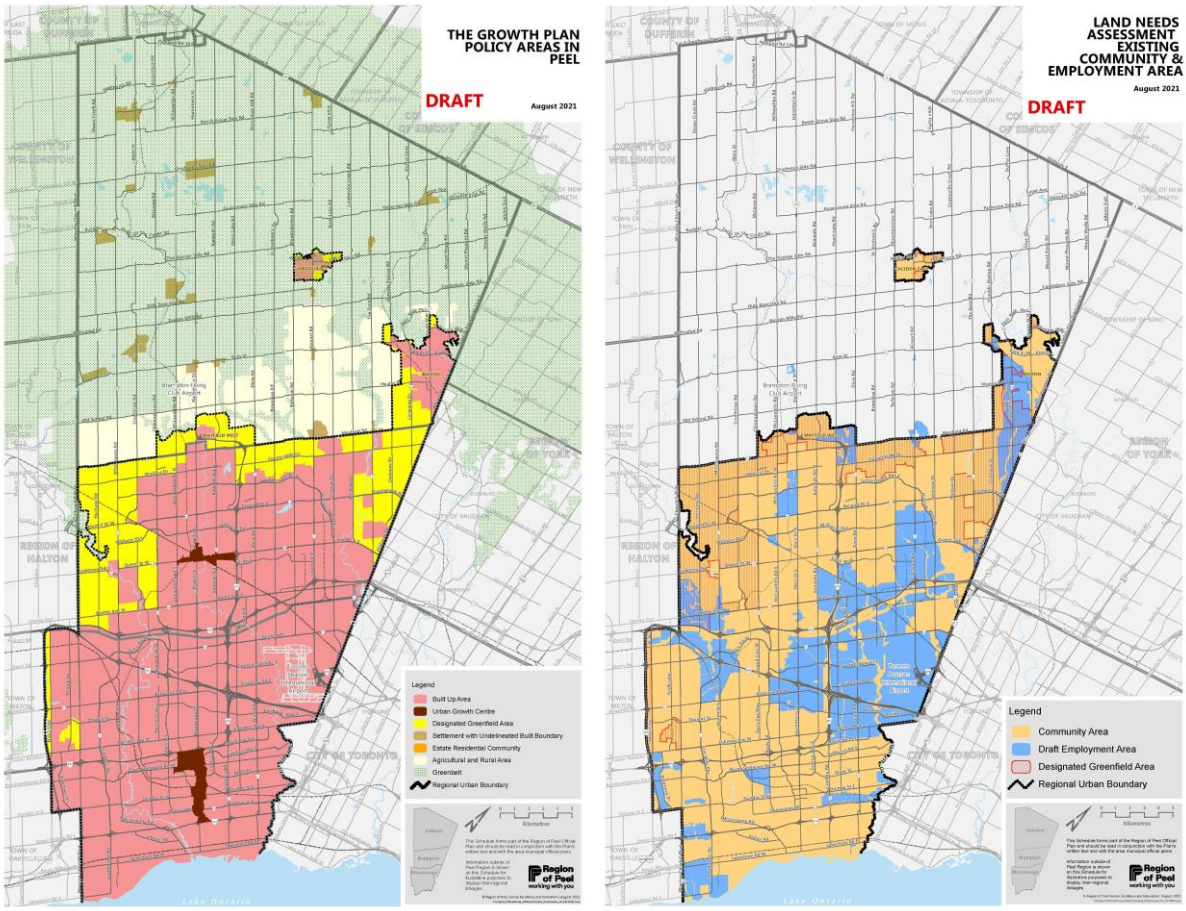

Figure 4 :Existing Policy Areas and LNA Geographies

PLANNING FOR THE FUTURE

Patterns of growth and development trends that have and will continue to shape growth in Peel over the next 30 years

Land supply

The Region of Peel is approaching build-out of its remaining designated greenfield area (DGA) lands. To accommodate growth within the existing settlement areas will require the build-out of the remaining DGA lands in the City of Mississauga and the City of Brampton. Typically designated greenfield areas has accommodated much of the lower density type of dwelling units such as single- and semi- detached units. As Peel looks towards the 2051 Planning Horizon the communities of Brampton and Mississauga will not have the supply of land available in previous decades to accommodate low density units.

The Town of Caledon has a more unique context as they have a limited supply of DGA lands currently available. However, they have rural and agricultural lands available in the 'whitebelt' that could accommodate more growth through Settlement Area Boundary Expansion (SABE). In the past much of the available land supply has been within Brampton and Mississauga, but as we move to 2051, it is anticipated that Caledon will have the largest supply of vacant land to accommodate future growth.

The shift in housing mix

Historically the type of units accommodated in the Region has been single- and semi- detached units. A driver for this preference has been a market demand for low density units and the available supply of land within all three municipalities for these units to be accommodated.

As we've noted both Brampton and Mississauga will built-out their supply of DGA lands within the Planning Horizon. As a result of this, these communities which represent 95% of the total population in Peel (as of 2021) have started to shift their policy frameworks to provide a greater

mix of built forms to preserve their existing land supply and accommodate more people in compact, transit supportive patterns of growth. This shift has started many years ago with Brampton's 2040 Vision and the land use planning work in Mississauga to support future transit infrastructure.

The shift will occur in both the Delineated Built-up Area with an increase in higher density units in Strategic Growth Areas and in SGA with a greater mix of units such as row houses and apartments to support complete communities. Recent examples of such communities include Ninth Line, Heritage Heights, and Mayfield West Stage 2 Phase 2 which are designated greenfield areas being planned with transit-supportive densities and a mix of unit types.

The Changing Nature of Employment

The broader Greater Toronto and Hamilton Area (GTHA) market is experiencing a shift in job growth by employment sector as how people choose to work, and the location of job opportunities evolves. A greater proportion of jobs in Peel will be captured in the service-knowledge based sectors and the demand for industrial space to accommodate warehousing will continue in areas with locational advantages to transportation infrastructure. With an increased focus on service-knowledge based sectors to accommodate jobs in Peel, there will be a need to direct these uses to areas that can support sustainable modes of transit with amenities to attract and retain businesses in the service-knowledge-based sectors.

Transit/transportation

As the Region becomes more urbanized, investment in higher order and rapid transit will be critical to accommodate transit-oriented built forms that support key intensification objectives throughout the Region. The delivery of the Hurontario Light Rail Transit and Regional Express Rail service along transit routes such as the Lakeshore West Go Line, Kitchener Go Line, and Milton Go

Line will support Priority Transit Corridors and other transit line of strategic importance to the Region.

Protecting what is important

The Region's environmental policies will continue to support the protection of natural resources and asset. The Greenland's system and Agricultural and rural lands in the Region protect valuable water resources and ecosystems and support the rural character and economy.

New communities

Across the Region new communities will be established in Strategic Growth Areas and newly designated greenfield areas. These communities will be denser than development of the past and will emphasize complete and healthy communities. These new communities will support the development of healthy and age-friendly communities in Peel.

Climate change

The Growth Management work supports the achievement of key climate change outcomes for mitigation and adaptation through the development of complete, compact communities by aligning with climate change outcomes and policy requirements in the Provincial Policy Statement (2020) and Growth Plan (2019). The allocation of population and employment growth, setting minimum density and intensification targets above Provincial minimums, and directing growth to strategic growth areas served by transit support the efficient use of land and reducing greenhouse gas emissions.

COMMUNITY AREA

Community Areas are lands within the Region that are designated to accommodate most of the forecasted population and household growth as well as a range of population related and major office employment growth. Community Areas are located within the following policy areas: Designated Greenfield Areas, Delineated Built-up Areas, and Rural Areas.

R1: Population Growth

The population forecasts in Schedule 3 of the Growth Plan, 2019 forms the basis for growth that must be planned for in the Region of Peel to the 2051 Planning horizon.

Table 9: Growth Plan Population Forecast to Greater Toronto and Hamilton Area 2021-2051

Growth Plan – Population Allocation to Greater Toronto and Hamilton Area 2021-2051			
	2021	2051	2021-2051
Toronto	3,034,000	3,651,000	617,000
Peel	1,578,000	2,280,000	702,000
York	1,211,000	2,021,000	810,000
Durham	722,000	1,296,000	574,000
Halton	618,000	1,103,000	485,000
Hamilton	584,000	823,000	239,000
GTAH Total	7,747,000	11,172,000	3,425,000
GGH Total	10,246,000	14,827,000	4,581,000

Source: Hemson Consulting, 2020 (prepared for the Municipal Affairs and Housing), Schedule 3 – Growth Plan for the Greater Golden Horseshoe

The Provincial forecast anticipates that Peel Region will accommodate 2,280,000 people by 2051, which is an increase of approximately 700,000 between 2021 and 2051. The population growth forecasted for Peel over the next 30 years less than the total amount of population growth experiences in the Region during the previous 30-year period.

Table 10: Historic and Forecasted Population Growth 1991-2051

Region of Peel - Historic and Forecasted Population Growth 1991-2051							
	1991	2001	2011	2021	2031	2041	2051
Population	755,400	1,032,100	1,340,500	1,578,000	1,829,000	2,050,000	2,280,000
1991-2021	822,600						
2021-2051				700,000			

Source: Source: Statistics Canada Census 1991-2011, Region of Peel Official Plan (2021 forecast), Hemson Consulting (2021 est).

The Growth Outlook for the Greater Golden Horseshoe prepared by Hemson Consulting notes that the population growth in Peel will be fueled by out-migration from Toronto as well as immigrant which has been steadily rising over the past 20 years. Hemson Consulting, Growth Outlook, 2020

Within Peel, the composition of the population is forecasted to continue to age, which is in line with trends across Ontario. The age cohorts with the most forecasted population growth will be core working age. Historically these cohorts have been mid to late career professionals with families or considering starting a family, which has an impact on housing preference. Between 2021 and 2051, proportionally the fully retired age cohorts will see the largest % increase.

Table 11: Population Age Cohorts (%) Distribution 2021-2051

Population Age Cohorts (%) 2021 – 2051		
	2021	2051
School Age (0-19)	22.8%	22.1%
Mixed Post-Sec & Work (20-29)	16.1%	12.3%
Core Working Age (30-59)	41.2%	40.5%
Gradually Retiring (60-69)	10.4%	10.0%
Fully Retired 70+	9.5%	15.1%

Source: Hemson Consulting, 2021

The composition of the forecasted population growth is an important input into the Land Needs Assessment to determine future steps on the total household required to accommodate the new population and the type of housing that will be needed.

R2: Housing Need

The assessment of Housing Need to accommodate forecasted growth is based on the age cohort forecast in Step R1 and consideration for the total units required to accommodate the forecasted population growth and the type of units (single- and semi- detached, townhomes, and apartments) that are commonly occupied by people in each age cohort.

To accommodate the additional 702,000 people forecasted for Peel, approximately 272,000 new dwelling units will be required to support the forecasted growth. An approximate household size of 2.80 people per unit (PPU) will be the basis for the growth required to accommodate new unit growth. There will be a small decline in the PPU for the existing 2021 units as the population ages. The shift in PPU will also result in an overall decrease in the average household size in the Region between 2021 and 2051. The decrease in average PPU will be more pronounced in Brampton and Mississauga, where more higher density units are anticipated over the next 30 years.

Table 12: Persons Per Unit by Housing Type in Peel 2021-2051

Persons Per Unit by Housing Type in Peel 2021-2051					
Year	Municipality	Housing Type			Total of All Types
		Singles and Semis	Rows	Apts	
2021	Brampton	3.98	3.29	2.72	3.61
	Caledon	3.27	2.90	2.04	3.17
	Mississauga	3.55	3.25	2.37	3.05
	Peel	**3.70**	**3.23**	**2.55**	**3.29**
2051	Brampton	3.68	3.06	2.63	3.26
	Caledon	3.34	2.97	1.94	3.16
	Mississauga	3.29	3.02	2.29	2.74
	Peel	**3.47**	**3.02**	**2.39**	**3.00**

Source: Hemson Consulting, 2021

The LNA requires the consideration of market demand to determine the type of dwelling units that will be required. The market demand forecast is primarily based on a combination of the preference in units based on age cohorts and the historically the types of units that have been accommodated in municipalities. Based on the market-based forecast and demographic noted in the section above, there is a market preference for ground-oriented units such as single- and semi-detached units in Peel.

Table 13: Housing Need: Market Demand Approach by Unit Type (2021-2051)

Housing Need: Market Demand Approach by Unit Type 2021-2051					
	Single/Semi	Rows	Apartment	*Accessory Units*	Total
2021	264,300	62,700	119,000	*12,200*	458,200
2051	394,700	119,600	190,300	*25,100*	729,700
Growth 2021-2051	130,400	56,900	71,300	*12,900*	271,600
%	48%	21%	26%	*5%*	100%

Source: Hemson Consulting, 2021

To achieve the market demand forecast, Peel would require 48% of the new dwelling units between 2021 and 2051 to be in single- and semi- detached built forms. The high proportion of lower density units accommodated in this approach would require a significant proportion of the new dwelling units being accommodated in the DGA. The intensification rate under the 'market demand approach' would result is estimated to be less than 40%, which is below the minimum Provincial requirement of 50% and below the Region's estimated rate of 46%.

Table 14: Housing Need: Market Demand Approach by Policy Area and Dwelling Type (2021-2051)

Housing Need: Market Demand Approach by Policy Area and Unit Type 2021-2051					
		DBUA	DGA	Rural Area	Total
2021	Single and Semi	219,400	36,900	8,000	264,300
	Row	52,600	10,000	<50	62,700
	Apartment	128,100	2.900	200	131,200
	Total	400,100	49,800	8,300	458,200
2051					
	Single and Semi	228,200	156,300	10,200	394,700
	Row	73,800	45,800	<50	119,600
	Apartment	202,600	12,600	200	215,400
	Total	504,600	214,700	10,500	729,700
2021-2051 Growth					
	Single and Semi	8,800	119,400	2,200	130,400
	Row	21,100	35,800	<50	57,000
	Apartment	74,500	9,700	<50	84,100
	Total	104,400	164,900	2,300	271,600

Source: Hemson Consulting, 2021

Designated Greenfield Area land supply

To determine the supply, consideration must be given to the amount of developable area remaining in greenfield areas to accommodate population and employment growth. Within Peel Region, resource protection and risk management are achieved through policies in the:

- The Regional Official Plan;
- Local Municipal Plans;
- Conservation Authority Watershed Plans and Programs; and
- The Peel Climate Change Action Plan.

Section 2.2.7.3 of the Growth Plan, 2019 outlines the environmental and non-environmental features that are considered as exclusions for the purpose of determining the available supply of

developable land within the DGA (See Appendix VII for detailed methodology). The following table summarizes the environmental and non-environmental

Table 15: Environmental and Non-Environmental Take-outs for Designated Greenfield Areas by Local Municipality

Environmental and Non-Environmental Take-outs for Designated Greenfield Area by Local Municipality						
	Total Community Area DGA	Total Employment Area DGA	Environmental Features	Non-Environmental Features*	Developable Community Area	Developable Employment Area
Brampton	7,220	1,517	1,600	495	5,490	1,194
Caledon	1,312	719	277	120	1,054	614
Mississauga	545	14	45	198	287	12
Peel	9,056	2,250	1,922	813	6,831	1,820

*GTA West corridor is included as a non-environmental takeout -August 2020 preferred route version

The Region of Peel has approximately 11,000 hectares of DGA lands within existing settlement area boundaries, approximately 7,000 hectares are developable and can accommodate population growth in community and employment areas. It is anticipated that approximately 4,700 hectares or approximately 60% of the DGA lands in Peel are currently developed or at an advanced stage of planning. The remaining lands are at an early stage in the development approval process, or no application has been submitted.

Table 16: Development Status of Designated Greenfield Area Lands by Local Municipality

Development Status of Designated Greenfield Area Land by Local Municipality				
	Developed	Planned/Committed	Undeveloped	Total
Brampton	2,626	1,033	2,568	6,227
Caledon	586	291	608	1,485
Mississauga	176	0	113	290
Peel	3,388	1,324	3,289	8,000

Source: Region of Peel, 2021

The City of Brampton has the largest supply of developable DGA land to accommodate future growth followed by Caledon and Mississauga. Much of this land supply is already committed to accommodate growth in the Region to the 2031 Planning horizon as required by the in-effect Regional Official Plan. Once these lands are exhausted, the City of Brampton and Mississauga will be unable to acquire additional DGA lands as their settlement area boundaries will be fully built-out. The Town of Caledon is the last municipality in Peel with the ability to accommodate new DGA land.

To accommodate the market demand approach, it is anticipated that a housing need of an additional 165,000 units would be required in the DGA. The existing land supply in the Region is insufficient to accommodate these units. Staff estimate approximately 5,900 hectares of additional Community Area land would be required through SABE in the Town of Caledon to accommodate the housing need.

Intensification

The policy objectives of the Growth Plan, 2019 and LNA refer to an intensification first approach to plan and manage growth in a manner that supports more compact built forms and transit-supportive development to leverage transit infrastructure and investment.

The market-based approach would achieve an intensification rate of approximately 40%, which is below the minimum intensification rate of 50% in the current Growth Plan and below the intensification rate of 46%, which the Region has achieved between the period of 2006 and 2020.

Table 17: Intensification Rates in Peel 2006-2020

Intensification Rates in Peel 2006-2020				
	Brampton	Caledon	Mississauga	Peel
2006	42%	44%	79%	57%
2007	24%	44%	76%	42%
2008	60%	73%	63%	62%
2009	12%	23%	91%	64%
2010	8%	10%	100%	19%
2011	14%	2%	95%	37%
2012	22%	7%	73%	31%
2013	33%	3%	90%	45%
2014	8%	0%	81%	22%
2015	9%	1%	100%	27%
2016	13%	38%	100%	45%
2017	22%	3%	100%	39%
2018	36%	30%	100%	68%
2019	38%	0%	100%	51%
2020	41%	9%	100%	55%
Cumulative Rate	25%	13%	89%	46%

Source: Peel Data Center, 2021

To support the intensification first approach to growth, the Region retained Perkins + Will to undertook an Intensification Analysis in 2020 and a 2021 Addendum to determine opportunities to accommodate forecasted growth and support intensification. The initial analysis was completed based on planning work to 2041 and concluded there were sufficient opportunities for intensification in existing and emerging Strategic Growth Areas to accommodate the higher density market segment beyond the planning horizon. An addendum to the Intensification Analysis was recently completed to consider the 2051 planning horizon, noting that there still remains sufficient opportunities in Strategic Growth Areas and gentle density such as the creation of

secondary suites in low density neighbourhoods will play a role as Provincial policy around second and additional residential units will support these forms of development (See Appendix VIII – Intensification Strategy 2051 Addendum).

The analysis undertaken by Perkins + Will stated that over the next 30 years, housing market demand in Peel will be addressed across a range and mix of housing types. Opportunities to accommodate high density growth within new communities can be accommodated in Strategic Growth Areas. However, providing infrastructure and services to support a balanced approach to accommodating growth will be critical and must be supported by growth monitoring to identify and resolve gaps.

From a market perspective, the impact of the Pandemic and continued challenges with housing affordability will continue to impact housing market trends in the short term. Over the long term, the declining availability for lands in DGA and continued investment transit infrastructure and communities' amenities will support more growth in the delineated built-up area through Strategic Growth Areas and gentle intensification. The strategic prioritization of growth to areas within and outside the built boundary is a strategic decision, with a range of inter-connected implications. These decisions will be critical to support the achievement of the intensification goals of the Region and local municipalities.

Strategic Growth Areas and Density Targets

Strategic Growth Areas are nodes, corridors and other areas identified by a municipality within settlement areas to be the focus for intensification and higher density mixed uses. These areas are optimal to support transit viability, make efficient use of land and infrastructure, and facilitate improved transit linkages within and between municipalities.

Strategic Growth Areas are inclusive of Urban Growth Centres, Major Transit Station Areas, and other major opportunities including areas with existing or planned frequent transit service or higher order transit corridors.

Local municipal official plans and recent local planning studies identify key opportunities for accommodating intensification in Strategic Growth Areas across the Region. Some specific examples are:

- Dundas Connects Master Plan (Mississauga);
- Brampton 2040 Vision;
- Queen Street Corridor study (Brampton)
- Inspiration Lakeview (Mississauga);
- Community Nodes (Mississauga Official Plan)
- Town Centres (Brampton Official Plan)
- Re-imagining the Mall Study (Mississauga)
- Major Transit Station Planning (many locations in Brampton, Caledon and Mississauga)

These areas serve as an opportunity to introduce more compact built forms and higher densities into existing built communities to leverage existing services and future transit investment. The built forms in these areas are typically apartments and other intensive forms such as stacked and back-to-back townhomes. The local planning studies completed or underway indicate a shift to

these forms of development to accommodate housing, which deviated from the historical patterns of growth in the market forecast.

To support the achievement of these built forms, minimum density targets will be established for Strategic Growth Areas such as Urban Growth Centres and Major Transit Station Areas. Urban Growth Centres are to be planned for a minimum density of 200 people and jobs people hectare and Major Transit Station Areas are to be planned for a transit-supportive density based on the transit technology (i.e. 160 people and jobs per hectare for Bus and Light Rail Rapid Transit and 150 people and jobs per hectare for Go Rail). To support the minimum densities, a sustainable amount of growth will have allocated to these areas to reflect the local planning work and studies that have been undertaken to support visions of the local municipalities.

Table 18: Strategic Growth Areas in Peel

Strategic Growth Areas in Peel			
	Urban Growth Centres	Major Transit Station Areas	Nodes/Centres*
Brampton	1	21	6
Caledon	0	2	0
Mississauga	1	56	10
Peel	2	80	18

Source: Region of Peel, 2021, *Includes overlapping stations with MTSA. **totals included combines stations.

Recent trends in Development Activity

Historically the Region has developed with a greater proportion of lower density-built forms. In 2021 it is estimated that 60% of the total units in the Region are in single- and semi- detached units. In recent years this development trend has been shifting, in the last 5 years, the types of new units accommodated in the Region has been more diverse with more apartment units being developed. This development trend represents a shift in the market and an opportunity for a

greater mix of housing units to be accommodated throughout the Region. Other factors that may be influencing this shift is investments in transit infrastructure such as the Hurontario LRT and the continued development in the Mississauga Urban Growth Centre.

Table 19: Building Permits Issued by Dwelling Type in Peel (2016-2021)

Building Permits Issued by Dwelling Type in Peel 2016-2021				
	Brampton	Caledon	Mississauga	Peel
Single/Semi	14,961	1,278	1,495	17,734 (51%)
Row	4,037	648	570	5,255 (15%)
Apartment	1,887	149	10,090	12,126 (35%)
Total	20,885	2,075	12,155	35,115 (100%)

Source: Region of Peel, Peel Data Centre, 2021

The proportion of single- and semi- detached units in the Region is well below the historic rates in Peel. The shift in proportion of units is being driven by strong growth in the apartment segment in the City of Mississauga. As Mississauga continues to urbanize along with the City of Brampton, it is anticipated that a greater share of future growth in Peel will be in higher density-built forms.

Recommended Balanced Housing Need

To properly address housing need in the current context and project growth over the next 30 years, additional factors must be considered to support a range and mix of housing. The market-based housing needs forecast must be adjusted to address growth plan policy requirements including intensification, transit supportive development opportunities, and a need to provide for a mix and range of housing types in Peel.

Based on some of the factors noted above, the type of housing units required to support the forecasted population growth in the Region needs to be adjusted from the market-based forecast to reflect the local conditions and factors referenced above. A more balanced approach is proposed that considers the existing land supply of the municipalities, the intensification objectives from the Growth Plan, and local municipal planning work for strategic growth areas. The balanced approach is informed by the scenario work undertaken through the Growth Management Program. Working with internal and external stakeholders, the balanced approach reflects the analysis and discussions.

Table 20: Housing Need: Balanced Approach by Dwelling Type 2021-2051

Housing Need: Balanced Approach by Unit Type 2021-2051					
	Single/Semi	Rows	Apartment	*Accessory Units*	Total
2021	264,300	62,700	119,000	*12,200*	458,200
2051	342,000	126,300	236,400	*25,000*	729,700
Growth 2021-2051	77,700	63,600	117,400	*12,800*	271,600
%	29%	23%	43%	*5%*	100%

Source: Hemson Consulting, 2021

While this outcome shifts away from the pure market-based approach, it does recognize that low density housing forms will still play a role in accommodating new growth in Peel, but as the local

municipalities continue to urbanize and higher order transit is built, development will become more compact, and areas will intensify.

R3 – Housing Need Allocation

The allocation of housing need to the local municipalities is informed by the ability of each municipality to accommodate the range of dwelling types that informed the overall housing need for the Region. The built form of dwelling units is better positioned to be accommodated in specific policy areas and municipalities.

The allocation of housing need for Peel is premised on the more urbanized local municipalities that have access to transit service and existing and planner higher order transit service accommodating a larger proportion of the high density-built forms such as apartment units. This type of growth commonly occurs in the designated built-up areas or existing urbanized areas.

The lower density-built forms such as single- and semi- detached units are directed to the communities that have unplanned lands within their existing designated greenfield areas or the potential to accommodate growth on newly designated greenfield areas through Settlement Area Boundary Expansion.

The allocation of housing need based on the balanced approach results in an intensification rate of 55% of the total units forecasted to accommodate new growth within the delineated built-up-area. This figure supports the local aspirations for more transit-oriented development throughout the Region in Strategic Growth Areas, while balancing market demand and the forecast age cohorts. To achieve this rate of intensification, more family sized apartment units will be required to support to balance transit-oriented development with accommodating family-aged residents in Peel.

The majority of single- and semi- detached units will be accommodated within the DGA but will also include a higher proportion of more dense built forms, such as townhomes and apartments.

The designated built-up-area will accommodate apartment-built forms which in include apartments above and below five storeys, stacked and back-to-back townhomes, accessory units, and to a lesser extent, some single- and semi- detached units.

Table 21: Housing Allocation by Policy Area and Dwelling Type 2021-2051

Housing Allocation by Policy Area and Unit Type 2021-2051					
		DBUA	DGA	Rural Area	Total
2021	Single and Semi	219,400	36,900	8,000	264,300
	Row	52,600	10,000	0	66,600
	Apartment	128,100	2,900	200	131,200
	Total	400,100	49,800	8,200	458,200
2051					
	Single and Semi	228,300	103,400	10,200	342,000
	Row	75,300	50,900	0	126,300
	Apartment	242,200	18,900	200	261,400
	Total	545,500	173,300	10.500	729,600
2021-2051 Growth					
	Single and Semi	8,900	66,600	2,200	77,400
	Row	22,700	40,900	0	63,600
	Apartment	114,100	16,000	0	130,100
	Total	145,700	123,500	2,200	271,600

Source: Hemson Consulting, 2021

The allocation of housing need corresponds with the availability of land by policy areas. The local municipalities of Brampton and Mississauga who have a larger share of lands within the designated built-up area and more existing urban amenities and service such as transit and community facilities will accommodate a larger share of the higher density-built forms. Municipalities such as Caledon, how are still urbanizing but have the potential to accommodate lower density-built forms will have a higher proportion of single- and semi- detached units.

Table 22: Housing Allocation to Local Municipalities by Dwelling Type 2021-2051

Housing Allocation to Local Municipalities by Unit Type 2021-2051					
		Brampton	Caledon	Mississauga	Peel
2021	Single and Semi	125,000	20,900	118,300	264,300
	Row	25,800	2,300	34,600	62,700
	Apartment	35,300	1,000	94,900	131,200
	Total	186,100	24,200	247,900	458,200
2051		Brampton	Caledon	Mississauga	Peel
	Single and Semi	158,600	60,900	122,500	342,000
	Row	53,300	25,500	47,500	126,300
	Apartment	78,600	5,200	177,500	261,400
	Total	290,500	91,600	347,500	729,600
2021-2051 Growth		Brampton	Caledon	Mississauga	Peel
	Single and Semi	33,300	40,000	4,200	77,700
	Row	27,500	23,200	12,900	63,600
	Apartment	43,300	4,200	82,600	130,100
	Total	104,100	67,400	99,700	271,600

Source: Hemson Consulting, 2021

R4: Housing Supply Potential by Policy Area

To determine how the Region of Peel is positioned to accommodate the forecasted housing need, an assessment of the existing supply of land and its ability to accommodate the forecasted units by type and policy area is required. This is of particular importance to the designated greenfield areas, where land supply limitations may impact the ability to accommodate specific types of units.

Delineated Built-up-area (DBUA)

The DBUA is the largest policy area in the Region and is forecasted to accommodate the majority of the growth in Peel. The majority of growth within the DBUA will be directed to Strategic Growth Areas such as Urban Growth Centres, Major Transit Station Areas, and Node/Town Centres. The existing policy areas in the Region identify the DBUA and Urban Growth Centres as the primary focal points for growth. Through the Peel 2051 Official Plan Review and MCR, the Region will be delineating and establishing minimum transit supportive densities for Major Transit Station Areas and conceptually identifying other Strategic Growth Areas such as Nodes and Town Centres. Appendix IX identifies the Strategic Growth Areas that are proposed in the Region's work to support more intensive development within the DBUA to meet the policy objectives of the Growth Plan, 2019 and the minimum intensification target of the Region.

Every Strategic Growth Areas in the Region will not achieve their full development potential and/or planned minimum densities within the planning horizon. Strategic Growth Areas will need to be prioritized within the context of Provincial policy and strategic local objectives to support growth in a manner that responds to local character and supporting investments in transit.

In addition, further opportunities for gentle intensification and infill are available throughout the delineated built-up-area to support a range and mix of housing choices. Additional Residential Units (ARU) present an opportunity to create affordable rental opportunities within existing communities and provide gentle intensification.

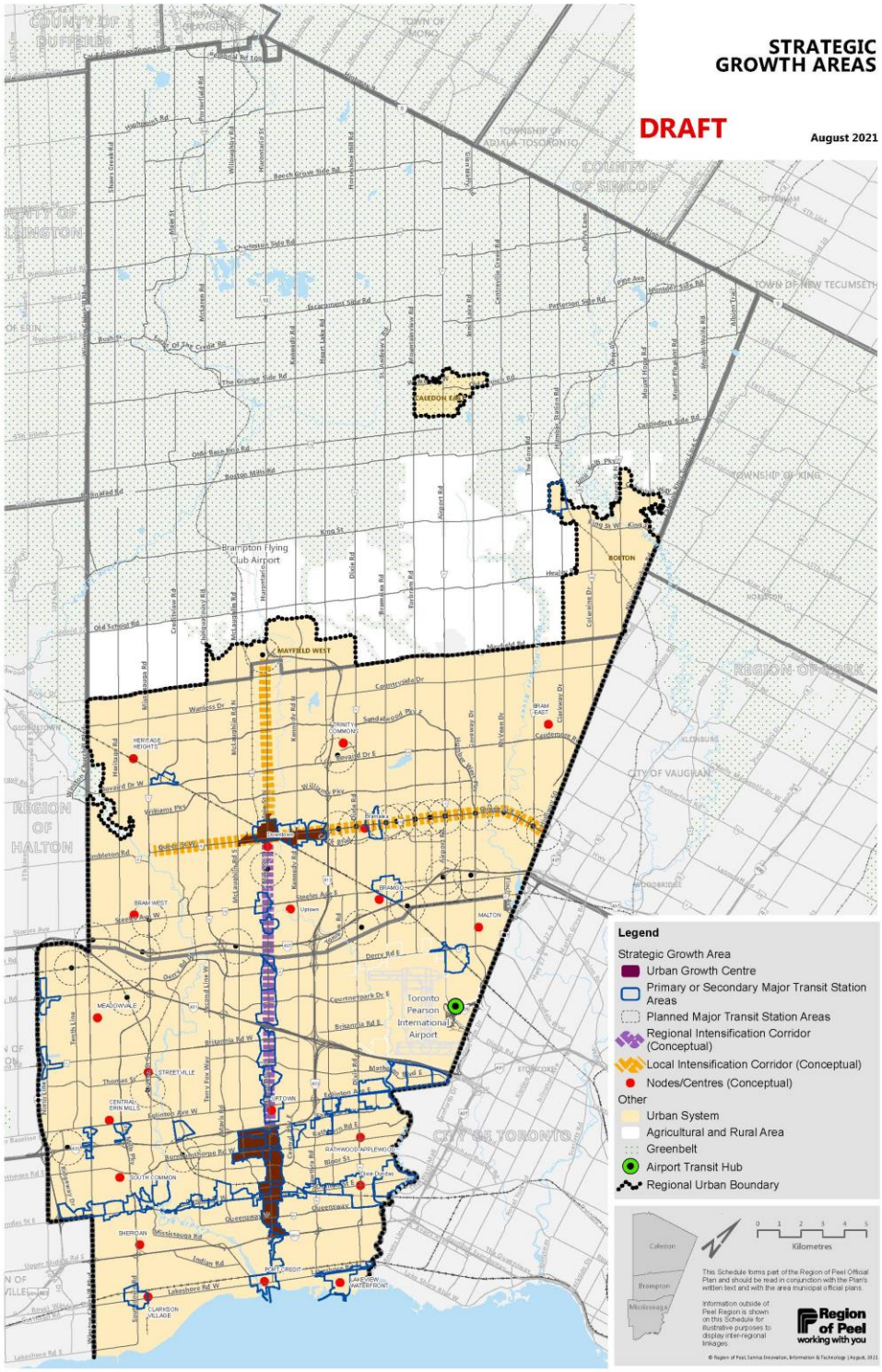

Figure 5: Strategic Growth Areas

Designated Greenfield Area

The Region has approximately 11,000 hectares of land in designated greenfield areas, with approximately 7,000 hectares in Community Area lands that can support residential and service-related employment growth.

Analysis undertaken by Hemson Consulting estimate that approximately 50,000 units and 220,000 residents and jobs are currently are being accommodated in the Region's community area DGA. The density measured across the entire DGA is approximately 31 residents and jobs per hectare. It should be noted that approximately 60% of the Region's vacant DGA is unbuilt. If the density is measured across the built lands in Peel, it is estimated that the density of DGA lands across Peel is approximately 56 residents and jobs per hectare.

Hemson consulting estimated that to 2051, an additional 74,000 units and 280,000 additional residents and jobs can be accommodated on the remaining DGA in Peel. By the planning horizon, the minimum density that will be achieved on the existing designated greenfield area across Peel will be approximately 71 residents and jobs per hectare. The recommended minimum density of 70 residents and jobs across Peel is a blended figure that reflects proposed and planned densities in the designated greenfield area communities of the local municipalities in Peel.

Table 23: Existing Capacity and Development Potential in Designated Greenfield Areas by Local Municipalities 2021-2051

Existing Capacity and Development Potential in Designated Greenfield Areas by Local Municipalities 2021-2051				
	Mississauga	Brampton	Caledon	Peel
Population of Community Designated Greenfield Area (currently designated), 2021	15,400	176,000	15,300	206,700
Total units of Community Designated Greenfield Area	4,200	41,100	4,500	49,800
Single/Semi	*2,300*	*31,300*	*3,300*	*37,000*
Row	*1,300*	*7,500*	*1,200*	*10,000*
Apartments	*600*	*2,300*	*10*	*2,900*
Employment in Community Designated Greenfield Area (currently designated), 2021	800	8,300	1,000	10,100
Total Persons plus Jobs in Community Designated Greenfield Area, 2021	16,200	184,300	16,300	216,800
Developable Community Land Area for Density Calculation, per Growth Plan definition (ha)	290	5,700	1,010	7,000
Designated Greenfield Area, Community Area Density in person + jobs per ha, 2021	56	32	16	31
Population of Community Designated Greenfield Area (as currently designated), 2051	24,200	363,100	51,400	439,100
Total units in Community Designated Greenfield Area	8,200	98,800	16,500	123,600
Single/Semi	*2,300*	*60,800*	*9,900*	*73,100*
Row	*2,400*	*24,900*	*5,900*	*32,900*
Apartments	*3,500*	*13,100*	*700*	*17,500*
Employment in Community Designated Greenfield Area (as currently designated), 2051	1,000	48,800	8,300	58,100
Total Person plus Jobs in Community Designated Greenfield Area, 2051	25,200	411,900	59,700	496,800
Developable Land Area for Density Calculation, per Growth Plan Definition (ha)	290	5,700	1,010	7,000
Designated Greenfield Area, Community Area Density in person + jobs per ha, 2051	87	72	59	71

Source: Hemson Consulting, 2021

To support the Region in achieving the minimum designated greenfield area density, the proposed density for each municipality reflects the current urban fabric and future development potential, including the availability of transit infrastructure and amenities to support higher densities.

For greenfield areas that will be accommodate through settlement area boundary expansion, a minimum density of 65 people and jobs per hectare is being recommended. As boundary

expansion can only be accommodated in the Town of Caledon, the minimum density recommended is below the overall density for Peel as a result of the characteristic of the Caledon greenfield area. Caledon, compared to Brampton and Mississauga, has a less robust transit service, fewer transit stations/infrastructure, need additional community centres and facilities to support growth, and large regional infrastructure (i.e., stormwater ponds) that will be required to accommodate new growth. These factors impact the ability of the Town to achieve higher minimum designated greenfield area densities.

Rural Areas

The Rural Areas in Peel include the Palgrave Estate Residential Community, Rural Settlement, and Agriculture and Rural land. Limited opportunities are available within these areas as they are protected by provincial policies such as the Greenbelt Plan, Niagara Escarpment Plan, and Oak Ridges Moraine Plan. The agricultural and rural lands located outside of provincial policies and outside of existing settlement areas constitute the 'whitebelt' lands. Minor opportunities for infill development and lot severances are available within existing policy frameworks, or more urban development may occur where it is demonstrated as appropriate through a SABE study and in accordance with Provincial policy.

R5: Community Area Jobs

Community Area jobs are comprised of population-based services and major office jobs to meet the needs of the population. The existing designated greenfield areas in Peel can accommodate approximately 58,000 additional jobs on community area lands to support meeting the minimum density. This figure translates to approximately 8 people per job across the entire DGA.

Table 24: Community Area Jobs in Designated Greenfield Areas by Local Municipality

Total Designated Greenfield Area Community Area Jobs		
	2021 DGA	2051 Existing DGA
Brampton	8,300	48,800
Caledon	1,000	8,300
Mississauga	800	1,000
Peel	10,100	58,100

Source: Hemson Consulting, 2021

R6: Need for Additional Land

The existing DGA in Peel can accommodate an additional 73,800 units between 2021 and 2051. Whereas the housing demand by policy area indicates an additional 124,000 units are required to accommodate the housing need under the balanced approach within DGA to 2051.

Table 25: Housing Need Allocation Shortfall

Housing Need Allocation Shortfall					
	Total DGA Units	Total DBUA Units	Intensification Rate	2051 DGA Remaining Unit Potential	Unit Shortfall
Market Based Approach	165,000	104,000	39%	74,000	91,000
Balanced Approach	124,000	145,000	55%	74,000	50,000

Source: Hemson Consulting, 2021

The balanced approach to housing need results in a shortfall of approximately 50,000 units to be accommodate within the DGA. The additional units to be accommodated translates to approximately 175,000 additional people and 19,000 additional Community Area jobs. This shortfall can only be accommodated within the Town of Caledon, as Brampton and Mississauga do not have any additional lands to expand their urban settlement boundaries. As a result, a planned density of 65 residents and jobs per hectare is recommended to determine that a land area of approximately 3,000 hectares for new Community Area is required.

Table 26: Community Area Land Need (Balanced Approach)

Community Area Land Need	
Total Units Shortfall	50,000
Total Residents	174,500
Planned Total Jobs (8 People: 1 Job)	19,400
Total R+J	193,900
Planned Density (Caledon)	65
Community Area Land Need (ha)	2,980

Source: Hemson Consulting, 2021

EMPLOYMENT AREA

The Employment Area Land Needs Assessment relies on the employment forecasts contained in Schedule 3 of the Plan to determine the forecasted numbers of jobs by type. The following are the required components in the Employment Area LNA:

E1 - Employment Forecasts

The employment forecasts in Schedule 3 of the Growth Plan forms the basis for the minimum amount of growth that must be planned for in the Region. The Provincial forecast anticipate that Peel Region will accommodate a significant amount of the job growth forecasted for the Greater Golden Horseshoe. Overall, the Region of Peel will remain the second largest job market in the Greater Toronto and Hamilton Area and accommodate the second most new jobs between 2021 and 2051, only behind York Region.

Table 27: Employment Allocation to Greater Toronto and Hamilton Area (GTHA) Municipalities

Growth Plan – Employment Allocation to Greater Toronto and Hamilton Area Municipalities			
	2021	2051	2021-2051
Toronto	1,697,000	1,980,000	282,000
Peel	736,000	1,070,000	334,000
York	580,000	990,000	414,000
Durham	239,000	460,000	225,000
Halton	278,000	500,000	220,000
Hamilton	238,000	360,000	119,000
GTAH Total	3,765,000	5,360,000	1,595,000
GGH Total	4,794,000	7,010,000	2,214,000

Source: Hemson Consulting, 2020 (prepared for the Municipal Affaires and Housing).

To accommodate the forecasted 1,070,000 million jobs by 2051, the Region will need to accommodate an additional 335,000 jobs. While this growth is significant, historically the Region

of Peel has been positioned to accommodate a significant share of provincial employment. Between 1991 and 2021 the Region accommodated growth of approximately 360,000 jobs.

Table 27 – Historic and Forecasted Employment Growth in Peel

Region of Peel - Historic and Forecasted Employment Growth							
	1991	2001	2011	2021	2031	2041	2051
Employment	378,200	534,300	650,400	735,600	862,800	959,100	1,070,000
1991-2021	357,400						
2021-2051				334,400			

Source: Source: Statistics Canada Census 1991-2011, Region of Peel Official Plan (2021 forecast), Hemson Consulting (2021 est).

The allocation of employment within the Region to support the Land Needs Assessment considers 3 general categories from Statistics Canada that captures where and how people work (Place of Work Status). The categories are defined as:

Usual Place of Work – A person who reported to the same workplace location as the beginning of each shift.

No Fixed Place of Work – A person who does not leave from home and go to the same workplace location at the beginning of each shift (i.e. building/landscape contractors, truck drivers)

Work from Home - A person whose job is located in the same building as their place of residence, live and work of the same farm, building super intendents, teleworkers who spend most of their work week working at home

The majority of employment within the Region will be accommodated with people at usual places of work, followed my modest job growth in no fixed place of work. Work from home or tele-work is an emerging trend that may impact the portion of people who report working from

home. Statistics Canada defines tele-work as people who spend more than half of one-week working from their residences. As a result of the 2020-2021 Covid-19 pandemic, work from home has become more common practice for the white-collar workforce in industries that permit such arrangements. Looking to the future, there is uncertainty around what new workforce arrangements may unfold. Analysis undertaken by Cushman and Wakefield in (Appendix X) notes a desire for office work to return but in a different capacity take supports more agile and flexible work practices. It is unclear what impact this may have on employment reporting but monitoring new and emerging trends on workforce planning will be required to support land use planning.

Table 28: Employment Forecast by Place of Work Status 2021-2051

Employment Forecast by Place of Work Status						
	2021	2031	2041	2051	2021-2051	%
Usual Place of Work	612,400	718,800	798,600	891,400	279,000	83%
No Fixed Place of Work	81,600	95,200	105,500	117,200	35,600	11%
Work from Home	41,400	48,800	55,100	61,400	20,000	6%
Peel	735,500	862,800	959,200	1,070,000	334,500	100%

Source: Hemson Consulting, 2021

Employment by Type

For the purposes of land use planning, employment sectors are captured in 5 general categories that reflect the built-forms and locational attributes of jobs to support land use planning. These categories are as follows:

Employment Land Employment – Refers to industrial type jobs that are typically land intensive forms of development and located in single story developments (i.e. manufacturing, research and development, warehousing, logistics, wholesale trade)

Population related employment – employment that supports residents in single- and mixed- use built-forms through commercial, retail, and institutional uses (i.e., school, hospitals, retail and convenience stores)

Major Office – In the Growth Plan, Major Office is described as "Freestanding office buildings of approximately 4,000 square metres of floor space or greater, or with approximately 200 jobs". For the purpose of this analysis, Major Office Employment is "employment occurring in freestanding office buildings of 1,860 m2 (20,000 sf) or more.

Home based Jobs – A job located in the same building as the persons residence (see work from home)

Rural Employment - This type of employment is most predominantly related to natural resources, agriculture, tourism, and recreation, in rural areas outside of settlement areas

Employment in Peel over the next 30 years will be supported by more urban forms of jobs growth. Mississauga and Brampton will continue to intensify their existing employment areas and shift their focus to jobs that can be accommodated in more compact mixed-use contexts such as Major Office and Population-Related Employment jobs.

The broader Greater Toronto and Hamilton Area (GTHA) market is experiencing a shift in job growth by employment sector as how people choose to work, and the location of job opportunities evolves. In 2019, the Region of Peel commissioned the MOWAT Centre to undertake a study titled "Rethinking Municipal Finance for the New Economy". The report included conclusions that the Peel economy is in transition and has shifted from goods production to good movement including manufacturing plants being replaced by warehouses and distribution centres. In addition, the service sector continues to expand with an emphasis on knowledge-based jobs.

The shifts merit an update employment policy framework to ensure sufficient policy flexibility is available to respond to market changes and provide sufficient opportunities for employment growth.

Employment Land Employment will still play a major role in accommodating employment in Peel, but its share of total employment growth will be lower than historic levels. This is partially due to the availability of land, as Caledon will be the only municipality in Peel that will be able to accommodate this type of employment growth on newly designated greenfield lands.

Table 29: Employment Forecast by Employment Categories in Peel 2021-2051

Employment Forecast by Employment Category 2021-2051						
	Major Office	Population Related	Employment Land	Home Based	Rural Employment	Total
2021	137,200	184,560	366,570	41,420	5,460	735,600
2031	169,430	227,300	412,510	47,970	5,720	862,840
2041	202,670	263,930	432,310	54,440	5,720	959,100
2051	247,220	297,250	458,940	61,420	5,660	1,070,000
	Share of Growth by Category					
2021-2051	33%	34%	28%	6%	0%	100%
	Employment Growth by Category					
2021-2051	110,010	112,690	92,370	20,000	200	334,400

Source: Hemson Consulting, 2021

E2 - Employment Allocation

The allocation of employment to the local municipalities considers the existing employment areas within Peel, the type of employment commonly accommodated, and policy directions.

Table 30: Employment Allocation by Planning Area and Employment Category 2021-2051

Employment Allocation by Planning Area and Employment Category 2021-2051					
		Community Area	Employment Area	Rural Area	Total
2021	Employment Land Employment	8,400	358,200	0	366,600
	Population-related employment	158,000	26,600	0	184,600
	Major Office	31,800	105,400	0	137,200
	Home-Based Employment	39,600	300	1,800	41,700
	Rural	0	0	5,500	5,500
	Total	237,800	490,500	7,400	735,600
2051	Employment Land Employment	9,200	449,600	0	458,900
	Population-related employment	254,600	41,900	0	296,500
	Major Office	73,800	173,400	0	247,200
	Home-Based Employment	58,900	600	2,200	61,700
	Rural	0	0	5,700	5,700
	Total	396,500	665,600	7,900	1,070,000
2021-2051	Employment Land Employment	900	91,500	0	92,400
	Population-related employment	96,600	15,300	0	111,900
	Major Office	42,000	68,000	0	110,000
	Home-Based Employment	19,300	300	400	19,900
	Rural	0	0	200	200
	Total	158,700	175,100	500	334,400

Source: Hemson Consulting, 2021

The broader Greater Golden Horseshoe has been in a period of structural economic change as employment growth once driven by the manufacturing sector shifts to more service and knowledge-based industries. Various macro-economic trends including globalization, automation, and industry efficiencies have led to an overall decline in the amount of manufacturing jobs. The same forces have driven rapid growth in the warehouse and distribution, retail, and professional and technical service sectors.

The industrial sector which is accommodated in Employment Areas will continue to be critical to the economic health of the Region. Peel's Employment Areas benefit from access to 400 series

highways, the Pearson International Airport, and close border access. While jobs are a good measure for employment, they do not capture the other benefits Employment Areas provide such as supporting the existing tax base, providing a diversified land base, leveraging existing and planned goods movement and freight infrastructure, aligning with provincial investments, and supporting local opportunities for employment services such as Ontario Works. The City of Brampton and Town of Caledon will account for the majority of ELE Job growth in Peel over the next 30 years due to their availability of land in designated greenfield areas to accommodate more land intensive forms of employment.

On the other side of these trends, growth in Population Related Employment and Major Office which include employment sectors such as, retail, finance and insurance, educational services, and healthcare and social assistance are on the rise. While the service-knowledge based sectors are driving the new economy, this has not translated to new office development in the Region. In recent years, the Region has not been meeting its employment forecasts, with a lack of office development being one of the contributing factors. One of the challenges facing the Region and many of the 905 municipalities is the shift of office development from suburban locations to urban environments such as downtown Toronto. Which is now compounded by an uncertainty future for office work as Work from Home (WFH) has become an option for many workforces.

Table 31: Employment Allocation by Employment Category to the Local Municipalities 2021-2051

Employment Allocation by Employment Category and Local Municipalities 2021-2051					
		Brampton	Caledon	Mississauga	Peel
2021	Employment Land Employment	99,700	18,200	248,670	366,570
	Population-related employment	75,080	4,580	104,990	184,560
	Major Office	20,520	240	116,450	137,200
	Home-Based Employment	14,290	3,390	23,880	41,420
	Rural Employment	-	5,530	-	5,530
	Total	210,410	31,945	493,250	735,600
2051	Employment Land Employment	131,240	65,980	261,720	458,940
	Population-related employment	128,800	32,590	135,150	296,540
	Major Office	74,820	9,470	162,930	247,220
	Home-Based Employment	20,140	11,280	30,200	61,620
	Rural Employment	0	5,680	0	5,680
	Total	355,000	125,000	590,000	1,070,000
2021-2051	Employment Land Employment	31,540	47,780	13,050	92,370
	Population-related employment	53,720	28,010	30,160	111,890
	Major Office	54,300	9,230	46,480	110,020
	Home-Based Employment	5,850	7,830	6,320	20,000
	Total	144,590	93,055	96,750	334,400

Source: Hemson Consulting, 2021

With the changing nature of employment and uncertainty as a result of the Pandemic, The Region retained Cushman and Wakefield to update its Employment Strategy Discussion Paper to provide direction and recommendations for the Region to undertake to support meeting its employment forecasts and anticipated growth. Cushman and Wakefield advise, risks to accommodating, sustaining, and growing employment lie in the misallocation of resources – either allocating too few, too many, or locating them incorrectly, which could contribute to the employment growth forecast not being achieved.

E3 - Existing Employment Area Potential

Employment Land Employment is the driver for determining the amount of land needed to accommodate future uses. To determine the land needs for Employment Land Employment, the supply of land must be assessed. Staff have determined that there are approximately 2,000 hectares of vacant land within the Region. The methodology for the vacant land inventory is attached as Appendix XI.

Table 31 – Vacant Employment Area Lands by Local Municipality

Vacant Employment Area Land by Local Municipality				
	Vacant	Vacant Low Potential	Underutilized	Total
Brampton	726.9	127.3	144.2	998.5
Caledon	282.1	0.1	30.3	312.6
Mississauga	573.7	4.6	92.2	670.5
Peel	1582.7	132.1	266.7	1981.4

Source: Region of Peel, 2021

Employment growth in the transportation, logistics, and warehousing sectors are typically land extensive and require locations in new Employment Areas. This includes home-based employment and no fixed place of employment. The continued advancement of automation and efficiency in industrial facilities may impact planning assumptions about the number of jobs that will be accommodated in Employment Areas. Some service-knowledge sector jobs do locate in traditional Employment Areas. While these uses typical provide more jobs and increased densities, they can have the negative impact of creating land use compatibility issues that impact the ability of existing or potential new industries to operate.

The existing supply of Employment Area lands in Peel is planned to be intensified between 2021 and 2051. This includes the development of existing vacant lands with potential and the

intensification of existing employment lands. Staff anticipate an overall density of 41 jobs per hectare in Peel's Employment Areas by 2051.

Table 32 – Employment Area Capacity and Density by Local Municipality 2021-2051

Employment Area Capacity and Density by Local Municipality 2021-2051				
	Brampton	Caledon	Mississauga	Peel
2021	118,400	17,500	354,600	490,500
2021 Density	25	14	40	33
2051	184,300	34,000	409,300	627,600
2051 Density	38	27	46	42
2021-2051 Growth	66,000	16,500	54,700	137,100

Source: Hemson Consulting, 2021

It should be noted that as Peel has urbanized, the older Employment Areas in communities such as Brampton and Mississauga have a higher employment density, compared to newer Employment Areas which may accommodated more land intensive employment forms such as logistics and warehousing, which traditionally yield lower densities.

E4 - Need for Additional Land

Based on the existing supply of Employment Areas is Peel, there is a land need of approximately 39,000 additional jobs in Peel. These jobs will be accommodated in Employment Areas within the Town of Caledon. The average density to be achieved in these areas is approximately 26.4 jobs per hectare, which is generally consistent with the Region's densities in the 2020 Development Charges Background Study.

Table 32 – Employment Area Land Need

Employment Area Land Need	
2051 Employment Area Jobs	661,250
2051 Employment Area Supply	623,220
Employment Area Job Need	38,030
New Area Density	26.4
Employment Area Land Need	1,440

An approximate land need of 1,440 hectares would be required to accommodate the additional jobs to be accommodated on new Employment Area lands.

Adjustments

Employment Conversions

The Region has received 44 employment conversion request to-date that capture approximately 370 hectares of land within the Regions proposed Employment Area designation. Based on staff preliminary assessment approximately 270 hectares of land are being proposed for exclusion from the employment overlay. These conversions have already been considered in the land

needs assessment. However, refinements will be required based on the evaluation of all conversion requests to be submitted through this MCR process

CONCLUSION

The Region of Peel is forecasted to accommodate a significant share of the overall population and employment growth forecasted for the Greater Golden Horseshoe. Approximately 700,000 people and 335,000 jobs will be coming to Peel in the next 30 years.

The manner in which growth will be accommodated in the next 30 years will shift away from historic patterns of development. Growth will be accommodated using a balanced approach that addressed market demand and policy objectives such as climate change, efficient use of infrastructure, supporting complete communities, healthy development, affordable housing, age friendly planning, sustainable transportation, and fiscal sustainability.

The results of the Land Needs Assessment indicate that the Region will require an additional 3,000 hectares of Community Area land and 1,400 hectares of Employment Area land to accommodate new growth to the planning horizon. The location of this new growth will be addressed through Settlement Area Boundary Expansion.

APPENDIX

Appendix I: Summary of ROPA Historical Forecasts

Appendix II: Household Growth by Dwelling Type 1991-2021

Appendix III: Employment Growth by Employment Type 1991-2021

Appendix IV: Peel Growth Management Scenarios

Appendix V: Climate Change Criteria to Evaluate Regional Growth Allocation

Intensification Targets, Greenfield Density Targets and Settlement Area Boundary Expansions (SABE)

Appendix VI: Policy Areas and LNA Geographies

Appendix VII: DGA Takeout Methodology

Appendix VIII: Intensification Analysis 2051 Addendum

Appendix IX: Strategic Growth Areas

Appendix X: Peel Region Employment Strategy Discussion Paper Draft

Appendix XI: Vacant and Underutilized Land Inventory

Appendix XII: 2051 Municipal Growth Allocation of Population and Employment

Appendix XIII: 2051 Land Budget Tables

Appendix I Summary of ROPA Historical Forecasts

1996 Region of Peel Official Plan Population and Employment Forecasts

Year	2011		2021	
	Population	Employment	Population	Employment
Brampton	481,000	216,000	553,000	257,000
Caledon	65,000	25,000	84,000	32,000
Mississauga	660,900	407,200	690,900	431,300
Peel	1,206,900	648,200	1,327,900	720,000

ROPA 8 Population and Employment Forecasts

Year	2011		2021	
	Population	Employment	Population	Employment
Brampton	469,000	205,000	588,000	256,000
Caledon	67,000	26,000	84,000	33,000
Mississauga	681,000	439,200	716,000	473,300
Peel	1,217,000	670,200	1,388,000	762,000

ROPA 24 Population and Employment Forecasts

Year	2021		2031	
	Population	Employment	Population	Employment
Brampton	635,000	280,000	727,000	314,000
Caledon	87,000	40,000	108,000	46,000
Mississauga	768,000	500,000	805,000	510,000
Peel	1,490,000	820,000	1,640,000	870,000

Appendix II: Households by Dwelling Type (%) in Peel (1991-2021)

New Dwelling Units in Peel (1991-2021)					
		Brampton	Caledon	Mississauga	Peel
1991	Single and Semi	46,815	10,245	82,540	139,605
	Row	11,165	415	24,520	36,100
	Apartment	12,670	50	40,845	53,570
	Total	70,650	10,710	147,905	229,275
1996		Brampton	Caledon	Mississauga	Peel
	Single and Semi	51,265	11,545	93,385	156,195
	Row	15,020	955	32,555	48,530
	Apartment	14,765	0	46,110	60,875
	Total	81,050	12,500	172,050	265,600
2001		Brampton	Caledon	Mississauga	Peel
	Single and Semi	65,610	14,815	111,915	192,340
	Row	11,785	685	25,295	37,765
	Apartment	20,165	605	58,070	78,840
	Total	97,560	16,105	195,280	308,945
2006		Brampton	Caledon	Mississauga	Peel
	Single and Semi	82,455	16,660	112,225	211,340
	Row	14,050	790	29,710	44,550
	Apartment	29,435	770	72,960	103,165
	Total	125,940	18,220	214,895	359,055
2011		Brampton	Caledon	Mississauga	Peel
	Single and Semi	99,280	17,335	118,525	235,140
	Row	17,215	855	33,100	51,170
	Apartment	32,775	885	82,960	116,620
	Total	149,270	19,075	234,585	402,930
2016		Brampton	Caledon	Mississauga	Peel
	Single and Semi	110,630	19,040	117,920	247,590
	Row	20,670	1,360	34,115	56,145
	Apartment	36,715	850	88,880	126,445
	Total	168,015	21,250	240,915	430,180
2021 (est)		Brampton	Caledon	Mississauga	Peel
	Single and Semi	125,000	20,900	118,300	264,300
	Row	25,800	2,300	34,600	62,700
	Apartment	35,300	1,000	94,900	131,200
	Total	186,100	24,200	247,900	458,200

Source: Peel Date Center, 1991-2016, Hemson Consulting (2021 est).

Appendix III: Employment Growth by Employment Type in Peel (1991-2021)

Employment Growth by Employment Type in Peel (1991-2021)					
		Brampton	Caledon	Mississauga	Peel
1991	Major Office	6,180	0	46,880	53,060
	Employment Land Employment	47,300	5,700	150,000	203,000
	Population-related employment	34,600	5,500	82,000	122,100
	Home-based employment	5,000	2,100	10,800	17,900
	Total	93,080	13,300	289,680	396,060
		Brampton	Caledon	Mississauga	Peel
1996	Major Office	6,040	0	50,370	56,410
	Employment Land Employment	56,300	8,300	168,100	232,700
	Population-related employment	37,100	5,900	88,700	131,700
	Home-based employment	5,500	2,300	14,100	21,900
	Total	104,940	16,500	321,270	442,710
		Brampton	Caledon	Mississauga	Peel
2001	Major Office	7,620	0	69,670	77,290
	Employment Land Employment	75,200	8,000	216,800	300,000
	Population-related employment	43,100	5,000	77,400	125,500
	Home-based employment	7,100	2,800	18,500	28,400
	Total	133,020	15,800	382,370	531,190
2006		Brampton	Caledon	Mississauga	Peel
	Major Office	9,830	0	88,440	98,270
	Employment Land Employment	79,200	9,600	237,800	326,600
	Population-related employment	57,000	5,700	83,600	146,300
	Home-based employment	9,300	3,000	20,800	33,100
	Total	155,330	18,300	430,640	604,270
2011		Brampton	Caledon	Mississauga	Peel
	Major Office	10,730	0	88,340	99,070
	Employment Land Employment	73,100	9,000	191,500	273,600
	Population-related employment	59,400	5,500	100,900	165,800

	Home-based employment	9,600	2,700	20,100	32,400
	Total	152,830	17,200	400,840	570,870
2016		Brampton	Caledon	Mississauga	Peel
	Major Office	12,800	94,500	0	107,300
	Employment Land Employment	86,500	12,100	196,700	295,300
	Population-related employment	70,200	6,400	106,600	183,200
	Home-based employment	10,900	3,000	20,300	34,200
	Total	180,400	116,000	323,600	620,000
2021		Brampton	Caledon	Mississauga	Peel
	Major Office	20,520	240	116,450	137,200
	Employment Land Employment	99,700	18,200	248,670	366,570
	Population-related employment	75,080	4,580	104,990	184,560
	Home-based employment	14,290	3,390	23,880	41,420
	Total	209,590	26,410	493,990	729,750

Source: Employment Strategy Discussion Paper, Cushman$ Wakefield (2017), 1991-2016, Hemson Consulting (2021 est).

Appendix IV: Peel Growth Management Scenarios

Peel Growth Management Scenarios		
	Scenario	**Description**
1	**2016 Base**	2014 base updated with current applications, census data, etc.
2	**Brampton Base – Without 40% Activity Rate**	Test of Brampton at 890,000 population with additional population allocated to both Caledon and Mississauga, 40% activity rate not achieved
2A	**Brampton with 40% Activity Rate**	Test of Brampton at 890,000 population and achievement of 40% activity rate for employment
3	**Greenfield Policy**	Test of implications of increased greenfield and reduced intensification versus the Base scenario
4	**Market Employment Consideration**	Test of implications of employment growth using recent historical employment trends to 2041
5	**Infrastructure Phasing Consideration**	Test of benefits / costs of alternate phasing of major trunk sewer and water infrastructure to inform all scenarios
6	**Proposed Provincial *Growth Plan* Policy**	Test to gain an understanding of proposed amendments to *Growth Plan*. Adjustments required to incorporate modifications to the new *Growth Plan* policy
7	**Transit Oriented / Intensification**	Test of higher transit supportive intensification, primarily in Mississauga; test to get Mississauga population close to 1 million
8	**GTA West Corridor High Employment**	Test of higher employment land, employment primarily in Caledon resulting from GTA West infrastructure
9	**Extreme Focused Intensification**	Test of extreme intensification focused in Mississauga Note: Forecasts exceed Provincial Growth Forecasts
10	**Provisional Growth Scenario**	This scenario aims to respond to Local municipal, Regional and Provincial growth objectives and industry input and meet *Growth Plan* Amendment 2 requirements for 1.97 million population
10A	**Brampton 40% Activity Rate – revised**	Test based on Provisional allocation but adjusted for 40% activity rate in Brampton
11	**Caledon +15,000**	Test of a Caledon population 15,000 higher in 2041 and Mississauga 15,000 lower
12	**Caledon +30,000**	Test of a Caledon population 30,000 higher in 2041 and Mississauga 30,000 lower
13 & 14	**New Growth Plan Policies**	Initial tests of the Provisional Scenario and a higher Caledon population scenario under the new *Growth Plan* policies released in May 2017
15	**Recommended Allocation**	Population and employment growth allocation recommended for the Peel 2041 Official Plan Amendment
16	**Scenario 16**	Scenario 16 includes refinements to Scenario 15 to incorporate 2016 Census, previous Land Needs Assessment methodology, and local municipal visioning and plans
16R	**Revised Scenario 16**	Scenario 16R was developed to respond Provincial policy changes introduced through the 2019 Growth Plan. As part of updated growth scenario, staff also considered the most up-to-date information available (I.e. Census, development trends).
17	**2051 Reference Scenario**	Updated scenario to reflect 2051 planning horizon and new Schedule 3 forecasts in the Growth Plan Amendment 1, 2020

Appendix V

Region of Peel
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Peel2041+
Regional Official Plan Review
and Municipal Comprehensive Review

Climate Change Criteria to Evaluate Regional Growth Allocation, Intensification Targets, Greenfield Density Targets and Settlement Area Boundary Expansions (SABE)

November 2020

Climate Change Criteria to Evaluate Regional Growth Allocation/Intensification and Greenfield Density Targets

Outcome	Planning Objective	Supporting Provincial Policy	Considerations	Criteria Considerations
Climate Change Mitigation				
Climate Change Mitigation / Reduce Greenhouse Gas Emissions	Compact Built Form	**PPS, 2020** 1.1.1 1.1.3.2 1.1.3.5 1.1.3.6 1.2.4 1.8.1 **Growth Plan (2019)** 1.2.1 2.2.1 2.2.1.4 2.2.2.3 2.2.6.2 2.2.7.2 4.2.10.1	• Does the growth allocation / distribution, intensification target, and greenfield density target support achievement of a compact built form? • Does the growth allocation / distribution and intensification target support intensification and redevelopment opportunities in the existing built up area and existing designated greenfield areas? • Does the growth allocation / distribution and intensification target support intensification and redevelopment opportunities in urban growth centres, major transit station areas, and other strategic growth areas? • Does the greenfield density target support development of compact, transit-oriented, mixed use communities? • Is the policy framework in place to support development of compact, complete, transit-oriented, mixed use	**Growth Allocation/Distribution:** 1) Maximize opportunities to allocate / distribute growth to the existing built-up area and existing designated greenfield areas. 2) Maximize opportunities to allocate / distribute growth to urban growth centres, major transit station areas and other strategic growth areas. 3) Ensure that the potential capacity within urban growth centres, major transit station areas and other strategic growth areas is fully considered and utilized. **Intensification Target:** 4) In order to support compact built form, intensification targets that exceed Growth Plan minimums are preferred over intensification targets that are only achieving Growth Plan minimums. 5) The intensification target should exceed what the current market is

Outcome	Planning Objective	Supporting Provincial Policy	Considerations	Criteria Considerations
			communities?	providing based on analysis of past trends and a future forecast that maximizes opportunities to avoid allocation to greenfield areas. **Greenfield Density Target:** 6) In order to support compact built form, greenfield density targets that exceed Growth Plan minimums are preferred over greenfield density targets that are only achieving Growth Plan minimums. **General:** 7) Existing policies that support development of compact, complete, transit-oriented, mixed use communities are strengthened in the Regional Official Plan.
Climate Change Mitigation / Reduce Greenhouse Gas Emissions	Sustainable Transportation System	**PPS, 2020** 1.1.3.2 1.4.3 1.5.1 1.6.7.4 1.8.1 **Growth Plan (2019)** 2.2.1.2 2.2.1.4 2.2.5.13	• Does the growth allocation / distribution, intensification target, and greenfield density target support achievement of sustainable modes of travel? • Does the growth allocation / distribution, intensification target, and greenfield density target support opportunities to minimize vehicle	**Growth Allocation/Distribution:** 8) Maximize opportunities to allocate / distribute growth to the existing built-up area and existing designated greenfield areas. 9) Maximize opportunities to allocate / distribute growth to urban growth centres, major transit station areas and other strategic growth areas

Outcome	Planning Objective	Supporting Provincial Policy	Considerations	Criteria Considerations
		2.2.7.1 4.2.10.1	kilometres traveled? • Does the growth allocation / distribution and intensification target maximize opportunities for active transportation options in compact, mixed use communities? • Does the growth allocation / distribution maximize opportunities to support existing or planned higher order transit infrastructure? • Does the greenfield density target optimize support for frequent transit service or higher order transit service? • Is the policy framework in place to support development of compact, complete, transit-oriented, mixed use communities? • Is the policy framework in place to support active and other sustainable transportation modes?	served by existing or planned higher-order transit and frequent transit service. 10) Growth allocation / distribution options that minimize vehicle kilometres travelled are preferred to growth allocation / distribution options that do not minimize vehicle kilometres travelled. 11) Growth allocation / distribution options that maximize allocation to small geographic units (SGUs) that can better support active transportation options are preferred to growth allocation / distribution options that are less able to support active transportation. **<u>Intensification Target:</u>** 12) In order to support sustainable transportation modes, intensification targets that exceed Growth Plan minimums are preferred over intensification targets that are only achieving Growth Plan minimums. **<u>Greenfield Density Target:</u>** 13) In order to support sustainable transportation modes, greenfield

Outcome	Planning Objective	Supporting Provincial Policy	Considerations	Criteria Considerations
				density targets that exceed Growth Plan minimums are preferred over greenfield density targets that are only achieving Growth Plan minimums. 14) In order to support sustainable transportation modes, greenfield density targets should be optimized to support frequent transit service and planned higher-order transit. **General:** 15) Existing policies that support active and other sustainable transportation modes are strengthened in the Regional Official Plan.
Climate Change Mitigation / Reduce Greenhouse Gas Emissions	Renewable and Alternative Energy Systems	**PPS, 2020** 1.6.11.1 1.7.1 **Growth Plan (2019)** 4.2.9.1 4.2.10.1 4.2.10.2	• Does the growth allocation / distribution, intensification target, and greenfield energy target support the provision of renewable and alternative (low or zero carbon) energy systems? • Is the policy framework in place to support the development of renewable and alternative (low or zero carbon) energy systems?	**Growth Allocation/Distribution:** 16) Maximize opportunities to allocate / distribute growth to the existing built-up area and existing designated greenfield areas. 17) Maximize opportunities to allocate / distribute growth to urban growth centres, major transit station areas and other strategic growth areas to support energy conservation and opportunities for the implementation

Outcome	Planning Objective	Supporting Provincial Policy	Considerations	Criteria Considerations
				of renewable and alternative energy systems, including district energy. **<u>Intensification Target:</u>** 18) In order to support opportunities for the implementation of renewable and alternative energy systems, including district energy, intensification targets that exceed Growth Plan minimums are preferred over intensification targets that are only achieving Growth Plan minimums. **<u>Greenfield Density Target:</u>** 19) In order to support opportunities for the implementation of renewable and alternative energy systems, including district energy, greenfield density targets that exceed Growth Plan minimums are preferred over greenfield density targets that are only achieving Growth Plan minimums. **<u>General:</u>** 20) Existing policies that support the development of renewable and alternative (low or zero carbon) energy systems are strengthened in the Regional Official Plan.

Outcome	Planning Objective	Supporting Provincial Policy	Considerations	Criteria Considerations
Climate Change Mitigation / Reduce Greenhouse Gas Emissions	Protection of Agricultural Land / Soils	**PPS, 2020** 1.1.3.8 **Growth Plan (2019)** 2.2.8.3 4.2.10.1	• Does the growth allocation, intensification target and greenfield density target minimize conversion of agricultural land? • Is the policy framework in place to protect agricultural land and support sustainable farming practices that sequester carbon?	**Growth Allocation/Distribution:** 21) Maximize opportunities to allocate / distribute growth to the existing built-up area and existing designated greenfield areas. 22) Maximize opportunities to allocate / distribute growth to urban growth centres, major transit station areas and other strategic growth areas to minimize the removal and conversion of lands from the prime agricultural area. **Intensification Target:** 23) In order to minimize the removal and conversion of lands from the prime agricultural area, intensification targets that exceed Growth Plan minimums are preferred over intensification targets that are only achieving Growth Plan minimums. **Greenfield Density Target:** 24) In order to minimize the removal and conversion of lands from the prime agricultural area, greenfield density targets that exceed Growth Plan minimums are preferred over greenfield density targets that are only achieving Growth Plan

Outcome	Planning Objective	Supporting Provincial Policy	Considerations	Criteria Considerations
				minimums. **General:** 25) Existing policies that protect agricultural land and support sustainable farming practices that sequester carbon are strengthened in the Regional Official Plan.
Climate Change Adaptation				
Climate Change Adaptation / Building Resilient Communities	Compact Built Form / Protection of Natural Environment / Watershed Health	**PPS, 2020** 1.1.1 1.1.3.8 **Growth Plan (2019)** 2.2.1.3 4.2.2.6 4.2.10.1	• Does the growth allocation, intensification target and greenfield density target minimize urbanization of natural areas, agricultural and rural lands? • Is the policy framework in place to identify, protect, restore and enhance natural heritage systems, features and areas? • Is the policy framework in place to identify, protect, improve and restore water resource systems, features and areas?	**Growth Allocation/Distribution:** 26) Maximize opportunities to allocate / distribute growth to the existing built-up area and existing designated greenfield areas. **Intensification Target:** 27) In order to minimize increases in impervious land cover in areas that are relatively undisturbed, intensification targets that exceed Growth Plan minimums are preferred over intensification targets that are only achieving Growth Plan minimums. 28) In order to minimize the removal and conversion of agricultural and rural lands, intensification targets that exceed Growth Plan minimums are

Outcome	Planning Objective	Supporting Provincial Policy	Considerations	Criteria Considerations
				preferred over intensification targets that are only achieving Growth Plan minimums. **<u>Greenfield Density Target:</u>** 29) In order to minimize increases in impervious land cover in areas that are relatively undisturbed, greenfield density targets that exceed Growth Plan minimums are preferred over greenfield density targets that are only achieving Growth Plan minimums. 30) In order to minimize the removal and conversion of agricultural and rural lands, greenfield density targets that exceed Growth Plan minimums are preferred over greenfield density targets that are only achieving Growth Plan minimums. **<u>General:</u>** 31) Existing policies that identify, protect, restore and enhance natural heritage systems, features and areas are strengthened in the Regional Official Plan. 32) Existing policies that identify, protect, improve and restore water resource

Outcome	Planning Objective	Supporting Provincial Policy	Considerations	Criteria Considerations
				systems, features and areas are strengthened in the Regional Official Plan.
Climate Change Adaptation / Building Resilient Communities	Human Health and the Built Environment	**PPS, 2020** 1.1.1 3.1.3 3.1.8 **Growth Plan (2019)** 1.2.1 2.2.1.4 4.2.10.1	• Is the policy framework in place to improve resiliency of the built environment and address risk and vulnerability of the built environment to extreme weather and changing climate and weather patterns? • Is the policy framework in place to improve resiliency of communities and address the risks and implications of extreme weather and changing climate and weather patterns on human health and vulnerable populations?	**General:** 33) Existing policies that improve resiliency of the built environment and address risk and vulnerability of the built environment to extreme weather and changing climate are strengthened in the Regional Official Plan. 34) Existing policies that improve resiliency of communities and address the risks and implications of extreme weather and changing climate on human health and vulnerable populations are strengthened in the Regional Official Plan.

Climate Change Criteria to Evaluate Settlement Area Boundary Expansions (SABE)

Outcome	Planning Objective	Supporting Provincial Policy	Considerations	Criteria Considerations
Climate Change Mitigation				
Climate Change Mitigation / Reduce Greenhouse Gas Emissions	Compact Built Form	**PPS, 2020** 1.1.1 1.1.3.2 1.1.3.8 1.1.3.9 1.2.4 1.8.1 **Growth Plan (2019)** 2.2.1.4 2.2.8 4.2.10.1	• Does the greenfield density target for the settlement expansion area support development of a compact, transit-oriented, mixed use community? • Does the settlement expansion area provide a logical, contiguous expansion of an existing settlement area? • Is the policy framework in place to support development of compact, complete, transit-oriented, mixed use communities within the proposed settlement expansion area?	• Refer to SABE technical studies for detailed criteria.
Climate Change Mitigation / Reduce Greenhouse Gas Emissions	Sustainable Transportation System	**PPS, 2020** 1.1.1 1.1.3.2 1.1.3.8 1.1.3.9 1.2.4 1.8.1 **Growth Plan (2019)** 2.2.8 3.2.2 3,2.3	• Does the greenfield density target for the settlement expansion area support achievement of sustainable modes of travel within the settlement area? • Is the greenfield density target for the settlement expansion area optimized to support frequent transit service and higher order transit, where appropriate? • Is the SABE a contiguous expansion of	• Refer to SABE technical studies for detailed criteria.

Outcome	Planning Objective	Supporting Provincial Policy	Considerations	Criteria Considerations
		4.2.10.1	existing settlement areas to ensure that the new community will be interconnected with existing and planned transit and active transportation infrastructure? • Is the SABE located near existing or planned transit infrastructure? • Is there a direct and clear connection between the expansion area and planned transit hubs? • Is the SABE located near existing or planned active transportation infrastructure? • Is the SABE connected to existing and proposed cycling network? • Is the SABE connected to existing and proposed pedestrian network? • Does the SABE location allow for strong connectivity for daily activities and with employment opportunities within existing settlement areas in Caledon and/or Brampton?	

Outcome	Planning Objective	Supporting Provincial Policy	Considerations	Criteria Considerations
Climate Change Mitigation / Reduce Greenhouse Gas Emissions	Renewable and Alternative Energy Systems	**PPS, 2020** 1.1.3.2 1.6.11.1 1.7.1 1.8.1 **Growth Plan (2019)** 2.2.8 4.2.9.1 4.2.10.1 4.2.10.2	• Does the greenfield density target support the provision of renewable and alternative (low or zero carbon) energy systems within the settlement expansion area? • Does the location of the settlement expansion area include existing or planned public works facilities or industrial uses that provide potential energy sources (e.g., energy sources from waste heat processes) for district energy systems? • Is the policy framework in place to support electric vehicle technology, building energy conservation and efficiency and the development and implementation of renewable and alternative (low or zero carbon) energy systems in the settlement expansion area?	• Refer to SABE technical studies for detailed criteria.
Climate Change Mitigation and Adaptation / Reduce Greenhouse Gas	Protection of Agricultural Land / Soils	**PPS, 2020** 1.1.3.8 2.3.5.1 **Growth Plan (2019)** 2.2.8 4.2.6.6 4.2.10.1	• Is the greenfield density target for the settlement expansion area optimized to minimize consumption of agricultural land? • Have alternative locations across the Region been evaluated, prioritized and	• Refer to SABE technical studies for detailed criteria.

Outcome	Planning Objective	Supporting Provincial Policy	Considerations	Criteria Considerations
Emissions / Protection of Agricultural Lands for Local Food Production			determined based on avoiding, minimizing and mitigating the impact on the Agricultural System? • Have reasonable alternatives that avoid prime agricultural areas been evaluated? • Where prime agricultural areas cannot be avoided, are lower priority agricultural lands used?	
Climate Change Adaptation				
Climate Change Adaptation / Building Resilient Communities	Compact Built Form / Protection of Natural Environment / Watershed Health	**PPS, 2020** 1.1.1 2.1.2 2.1.3 2.2.1 **Growth Plan (2019)** 2.2.1.3 2.2.1.4 2.2.8.3 4.2.1 4.2.2.3 4.2.2.6 4.2.2.7 4.2.10.1	• Does the settlement expansion area avoid, minimize and mitigate potential negative impacts on watershed conditions and the water resource system? • Does the settlement expansion area protect, improve or restore the water resource system? • Does the settlement expansion area protect, restore and enhance the natural heritage system? • Does the settlement expansion area provide for the protection of a continuous, linked natural heritage	• Refer to SABE technical studies for detailed criteria.

Outcome	Planning Objective	Supporting Provincial Policy	Considerations	Criteria Considerations
			system? • Are key hydrologic areas and the Natural Heritage System for the Growth Plan avoided? • Are significant and sensitive natural heritage and water resource features and areas avoided?	
Climate Change Adaptation / Building Resilient Communities	Human Health and the Built Environment	**PPS, 2020** 1.2.1 3.1.1 3.1.3 3.1.8 **Growth Plan (2019)** 1.2.1 2.2.1.2 2.2.1.4 4.2.10.1	• Does the settlement expansion area avoid development within regulatory floodplains? • Will development within the settlement expansion area be resilient to flooding (riverine and overland flooding) and other natural hazards? • Is the policy framework in place to improve resiliency of the built environment and address risk and vulnerability of the built environment to extreme weather and changing climate and weather patterns? • Is the policy framework in place to improve resiliency of communities and address the risks and implications of extreme weather and changing	• Refer to SABE technical studies for detailed criteria.

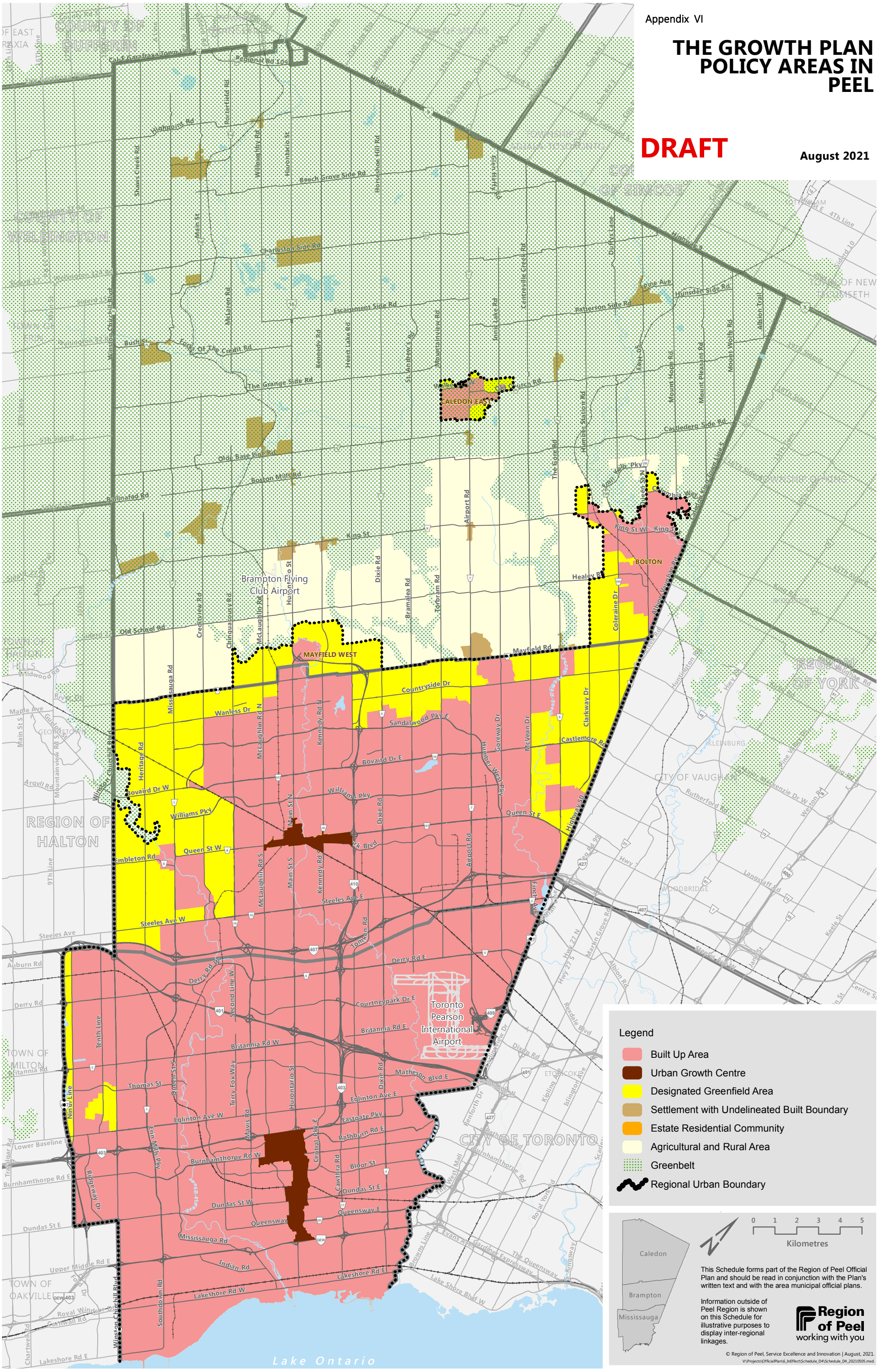
Outcome	Planning Objective	Supporting Provincial Policy	Considerations	Criteria Considerations
			climate and weather patterns on human health and vulnerable populations?	

Appendix VI

THE GROWTH PLAN POLICY AREAS IN PEEL

DRAFT

August 2021



This Schedule forms part of the Region of Peel Official Plan and should be read in conjunction with the Plan's written text and with the area municipal official plans.

Information outside of Peel Region is shown on this Schedule for illustrative purposes to display inter-regional linkages.

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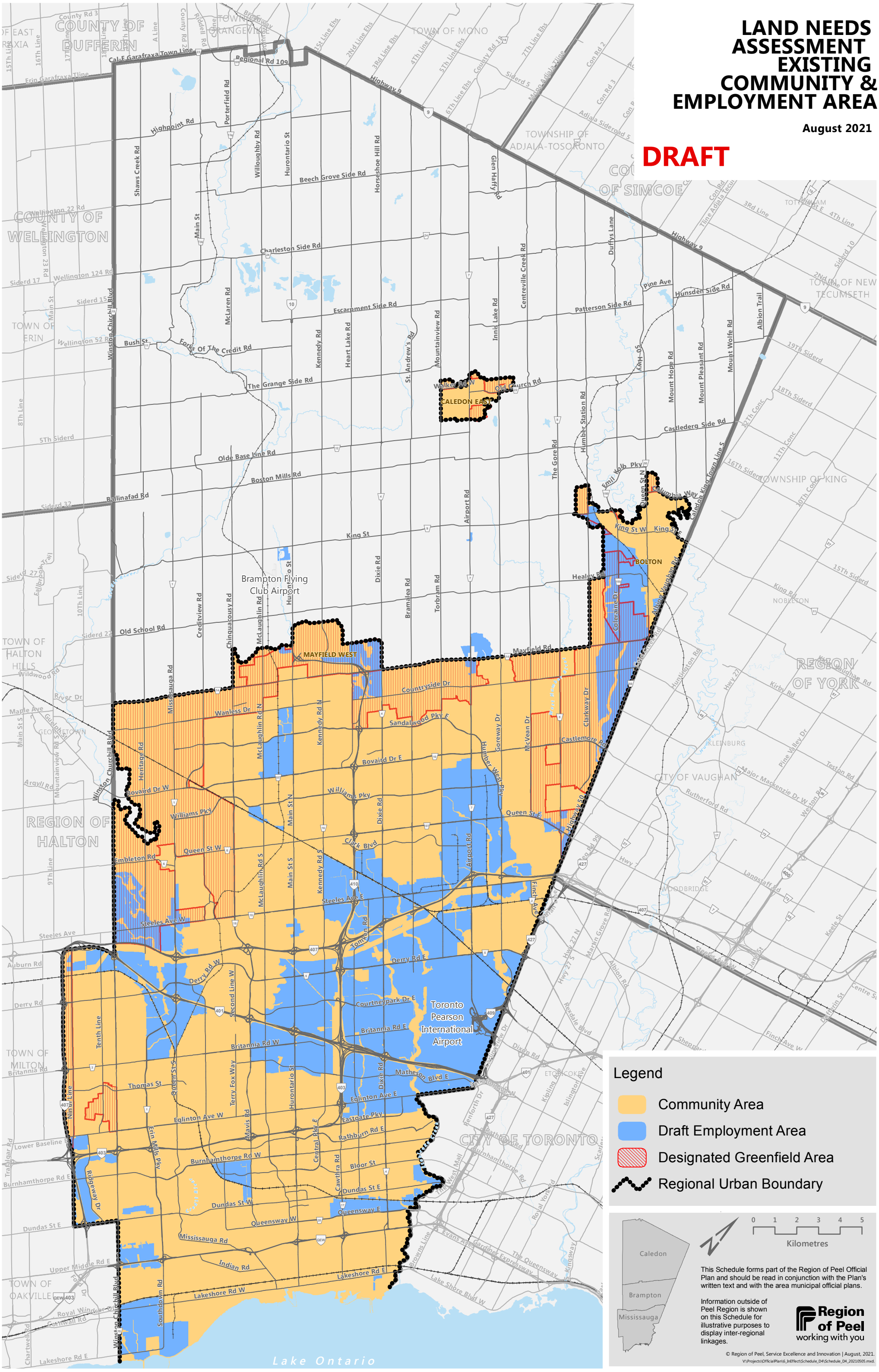
LAND NEEDS ASSESSMENT EXISTING COMMUNITY & EMPLOYMENT AREA

August 2021

DRAFT



Peel2051
Regional Official Plan Review

Recommended Methodology to Confirm Environmental and Non-Environmental Exclusions (Take Outs)

New Settlement Expansion Areas and Existing Designated Greenfield Areas

August 2021

Region of Peel
working with you

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Table of Contents

List of Tables

1. Introduction

The Peel 2051 Regional Official Plan Review is being undertaken in accordance with the *Planning Act* to ensure that the policies of the Plan are consistent with Provincial plans and policies and address Regional needs. As part of the Review, the Region is required to accommodate and plan for growth to 2051. Provincial requirements under the Growth Plan require the Region to determine the available supply of developable land within existing and new designated greenfield areas (DGA) and then later measure the minimum greenfield density target, once established by the Region, over the entire DGA taking into account eligible environmental and non-environmental take outs.

The following technical summary describes the approach being taken to identify and map environmental and non-environmental take outs for the purposes of the Peel 2051 Review. Separate take out methods are proposed for existing DGA and new settlement areas (proposed new DGA) that will be identified through the Region's Settlement Area Boundary Expansion Study which is a component of Peel 2051. Separate methods for the existing and new DGA are required to account for the established and currently planned boundaries of environmental take outs in existing DGA where natural heritage designations have been refined and determined through development approvals.

2. Take Out Methodology for New Settlement Areas

The following describes the recommended approach to produce mapping of environmental and non-environmental exclusions ("take outs") for the purpose of delineating new settlement area boundaries with sufficient net developable area to meet land needs in accordance with Policies 2.2.7.3 and 2.2.8.2 of the Growth Plan. Policy 2.2.7.3 of the Growth Plan lists eligible environmental and non-environmental features and areas required to be netted out of the calculation of developable area for the purpose of measuring greenfield density. Accounting for take outs also allows the developable area needed to satisfy new community and employment land needs to be determined in accordance with Growth Plan Policy 2.2.8.2.

Policy 2.2.8.2 states:

A settlement area boundary expansion may only occur through a municipal comprehensive review where it is demonstrated that:

a) *based on the minimum intensification and density targets in this Plan and a land needs assessment undertaken in accordance with policy 2.2.1.5, sufficient opportunities to accommodate forecasted growth to the horizon of this Plan are not available through intensification and in the designated greenfield area:*
    i) *within the upper- or single-tier municipality, and*
    ii) *within the applicable lower-tier municipality;*
b) *the proposed expansion will make available sufficient lands not exceeding the horizon of this Plan, based on the analysis provided for in policy 2.2.8.2 a), while minimizing land consumption; and*
c) *the timing of the proposed expansion and the phasing of development within the designated greenfield area will not adversely affect the achievement of the minimum intensification and density targets in this Plan, as well as the other policies of this Plan.*

Policy 2.2.7.3 states:

The minimum density target will be measured over the entire designated greenfield area of each upper- or single-tier municipality, excluding the following:

a) natural heritage features and areas, natural heritage systems and floodplains, provided development is prohibited in these areas;
b) rights-of-way for:
  i) electricity transmission lines;
  ii) energy transmission pipelines;
  iii) freeways, as defined by and mapped as part of the Ontario Road Network; and
  iv) railways;
c) employment areas; and
d) cemeteries.

Unlike existing designated greenfield areas that have established or planned natural heritage systems, features and areas with defined boundaries, the natural heritage systems in new settlement areas are subject to further study and refinement at the local level through the secondary plan approval stage when more detailed field studies are undertaken to inform the delineation of land uses. The process involves further evaluation and refinement of system, feature and area boundaries including identifying buffers adjacent to features, enhancement areas and linkages.

In determining an environmental take out for new settlement expansion areas, the approach recommended for the Peel 2051 Regional Official Plan Review has considered two methods. The first involved mapping natural heritage features and areas based on available Regional datasets. The features and areas selected for mapping are subject to policy requirements prohibiting development and include buffers to represent areas adjacent to features that would typically be protected while recognizing that these areas require confirmation and potential refinement in subsequent stages. The second method included in the approach utilizes a preliminary conceptual natural heritage system based on a further detailed desktop assessment of features and functions generated as a component of the scoped sub-watershed study for the expansion area. The outputs from these two methods generated two "take out" scenarios. Based on an assessment of the two methods a recommended environmental "take out" is described with mapping to support the confirmation of net developable land requirements for the Peel 2051 Settlement Area Boundary Expansion Study.

2.1 Natural Heritage Features and Areas

The eligibility of natural heritage features and areas, natural heritage systems and flood plains to be included as a take out requires development to be prohibited in the areas. The relevant policies determining whether development is prohibited is provided in the Provincial Policy Statement, the Growth Plan, the provincial Greenbelt Plans, the Region of Peel Official Plan and the Town of Caledon Official Plan. New settlement expansion areas are not contemplated in the Cities of Brampton and Mississauga as settlement boundaries extend to municipal limits and have no areas with potential for settlement expansion.

3. Policy Basis for Natural Heritage Feature and Area Take Outs

3.1 Provincial Policy Statement

The 2020 Provincial Policy Statement (PPS) provides policy direction for the protection of natural heritage features and areas and identification of natural heritage systems.

Development and site alteration are not permitted in (Policy 2.1.4):

- significant wetlands and significant coastal wetlands.

Development and site alteration are also not permitted in the following features unless it is demonstrated that there will be no negative impacts on the features or their ecological functions (Policy 2.1.5):

- significant woodlands;
- significant valleylands;
- significant wildlife habitat;
- significant areas of natural and scientific interest;
- coastal wetlands not subject to policy 2.1.4

In the case of fish habitat or the habitat of endangered or threatened species, development and site alteration is not permitted unless the development is permitted in accordance with federal and provincial requirements (Policy 2.1.6 and 2.1.7).

The PPS also does not permit development and site alteration on adjacent lands to natural heritage features and areas unless the ecological function of the adjacent lands has been evaluated and it is demonstrated that there will be no negative impacts on the natural features or their functions (Policy 2.1.8). The implementation of this policy in accordance with the Region of Peel and Town of Caledon Official Plans typically requires buffers and enhancement areas adjacent to features to be identified and protected. The consideration of buffers and enhancement areas requires consideration in the determination of the net developable area for new settlement expansion areas.

The PPS further requires municipalities to identify, maintain, restore or, where possible, improve the diversity and connectivity of natural heritage features and areas and the long-term ecological function of natural heritage systems (Policy 2.1.2). The PPS requires protection of significant natural heritage features and the flexibility to include 'other natural heritage features and areas', and 'lands that have been or that have the potential to be restored to a natural state'. The policies support the inclusion of features that may not be deemed 'significant' at the provincial level, but which support the identification of a natural heritage system as defined under the PPS. The implementation of the PPS requires municipalities to effectively identify and protect natural heritage systems including providing appropriate buffers adjacent to features and linkages between and among features and areas. The identification of natural heritage systems is a fundamental component of planning new communities

and should be given consideration in the determination of the developable area for new settlement areas.

Finally, in accordance with the PPS, development is generally directed to areas outside of hazardous lands adjacent to river, stream and small inland lake systems which are impacted by flooding hazards. The relevant exclusion in the Region of Peel for flooding hazards is the regulatory flood plain associated with river and stream systems impacted by flooding hazards.

3.2 Growth Plan Natural Heritage System

The Growth Plan states that if a settlement area is expanded to include the Natural Heritage System for the Growth Plan, the portion within the revised settlement area boundary will be designated in official plans and continue to be protected in a manner that ensures that connectivity between, and the diversity and functions of, the natural heritage features will be maintained, restored, or enhanced (Policy 4.2.2.7).

The Growth Plan further directs that municipalities within settlement areas:

- will continue to protect any other natural heritage features or areas in a manner consistent with the PPS; and
- may continue to protect any other natural heritage system or identify new systems in a manner consistent with the PPS (Policy 4.2.3.6).

The Growth Plan identifies three locations in the Region where the Natural Heritage System for the Growth Plan applies outside of settlement areas. If settlement expansions include the Natural Heritage System for the Growth Plan in these locations, it is appropriate that the Natural Heritage System boundary be considered as an eligible take out as the policy requires its designation and protection.

3.3 Greenbelt Plan

Generally, the Greenbelt Plan does not apply to lands within settlement boundaries (Villages and Hamlets). However, where expansions to settlement areas are proposed the policies of the Greenbelt Plan and Growth Plan apply. In accordance with the Greenbelt Plan and Growth Plan, expansion of Villages within the Protected Countryside may be permitted if the expansion is modest in size and represents no more than a 5 per cent increase in geographic size of the settlement area boundary, up to a maximum 10 hectares (Policy 2.2.8.3 k)). Villages within the Greenbelt Plan Area in Peel include Inglewood, Caledon Village, Alton and Caledon East.

Policies applying to the Natural Heritage System, key natural heritage features and key hydrologic features apply when considering expansions to Greenbelt Villages (Greenbelt Policies 3.2.2.4 and Section 3.2.5).

Settlement Areas within the Greenbelt Plan Area are not permitted to expand into the Natural Heritage System (Policy 3.2.2.6).

Beyond the Natural Heritage System within the Protected Countryside, key hydrologic features are defined by and subject to the policies of Section 3.2.5 of the Greenbelt Plan (Policy 3.2.5.2). The Greenbelt Plan does not permit development and site alteration within key hydrologic features or their associated vegetation protection zones (VPZ). The Plan further states that the required vegetation protection zone for key hydrologic features is a minimum of 30 metres. Key hydrologic features and their required VPZs are defined as:

- permanent and intermittent streams (30 m minimum VPZ)
- lakes and their littoral zones (30 m minimum VPZ)
- seepage areas and springs (30 m minimum VPZ)
- wetlands (30 m minimum VPZ)

Beyond the Natural Heritage System within the Protected Countryside, key natural heritage features are subject to the policies of the PPS (Policy 3.2.5.3).

If expansions of settlement areas (Villages) are considered, key hydrologic features and associated vegetation protection zones are eligible to be excluded from the net developable area along with any PPS protected natural heritage feature and area and associated buffer.

3.4 Niagara Escarpment Plan

The Niagara Escarpment Plan designates six Minor Urban Centres in Peel. Any proposal to expand the boundary of a Minor Urban Centre requires an amendment to the Niagara Escarpment Plan subject to the policies of the Plan.

In accordance with the Growth Plan, the definition of designated greenfield area excludes rural settlements which include the Minor Urban Centres of the Niagara Escarpment Plan. The designated greenfield area density calculation therefore does not include the Minor Urban Centres of the NEP or any settlement area expansion of a Minor Urban Centre. The environmental take outs are not a required deduction in the calculation of designated greenfield density but should be considered in the determination of the net developable area for a Minor Urban Centre expansion. If applicable, the identification of key natural heritage and key hydrologic features and their vegetation protection zones is based on development criteria specified in the Niagara Escarpment Plan.

3.5 Oak Ridges Moraine Conservation Plan

Upper-tier municipalities may consider an expansion to a Settlement Area as part of a municipal comprehensive review. The only designated Settlement Area in Peel is the Caledon East Rural Service Centre. In accordance with the Oak Ridges Moraine Conservation Plan (ORMCP), Settlement Area boundaries are not permitted to expand into Natural Core Areas or Natural Linkage Areas (ORMCP Implementation).

Similar to the Greenbelt Plan and Niagara Escarpment Plan, if a settlement expansion is considered outside of Natural Core Area and Natural Linkage Area designations, development and site alteration is

not permitted in key natural heritage features and key hydrologic features and their associated vegetation protection zones (VPZs). The ORMCP specifies minimum 30 metre VPZs for certain features and requires natural heritage and hydrologic evaluations to be undertaken to consider the adequacy of the minimum VPZs and the determination of VPZs for other features that do not have specified zones. The protection of key natural heritage and key hydrologic features and their minimum VPZs therefore requires consideration in the determination of the net developable area of ORMCP settlement area expansions.

The ORMCP defines key natural heritage features and their minimum VPZs as:

- wetlands (30 m minimum VPZ)
- habitat of endangered and threatened species (subject to natural heritage evaluation)
- fish habitat (30 m minimum VPZ)
- life science Areas of Natural and Scientific Interest (subject to natural heritage evaluation)
- significant valleylands (30 m minimum VPZ)
- significant woodlands (30 m minimum VPZ)
- significant wildlife habitat (including habitat of special concern species) (subject to natural heritage evaluation)
- sand barrens, savannahs and tallgrass prairies (30 m minimum VPZ)

Key hydrologic features and their associated VPZs are:

- permanent and intermittent streams (30 m minimum VPZ)
- wetlands (30 m minimum VPZ)
- kettle lakes (greater of 30 m minimum VPZ or all land within the surface catchment area)
- seepage areas and springs (30 m minimum VPZ).

3.6 Region of Peel Official Plan

The Regional Official Plan implements the Provincial Policy Statement's (PPS) natural heritage system policies by providing policy direction for the protection of natural heritage and water resource features through the Greenlands System's Core Areas, Natural Areas and Corridors (NAC) and Potential Natural Areas and Corridors (PNAC) policy framework. Core Areas of the Greenlands System are identified and shown on Schedule A to the Region of Peel Official Plan.

In accordance with the Plan, development and site alteration are not permitted within Core Areas with limited exceptions (Policy 2.3.2.6). Core Areas include:

a) significant wetlands
b) significant coastal wetlands;
c) Core woodlands meeting one or more of the criteria in Table 1;
d) Environmentally Sensitive or Significant Areas;
e) Provincial Life Science Areas of Natural and Scientific Interest;
f) significant habitats of threatened and endangered species;
g) Escarpment Natural Areas of the Niagara Escarpment Plan; and

h) Core valley and stream corridors meeting one or more of the criteria in Table 2.

The Regional Official Plan directs the area municipalities to identify and protect Core Areas in conformity with the Plan and provincial policy and to further interpret, identify and protect NAC and PNAC features and areas in the local official plans in accordance with provincial policy (Policies 2.3.2.4 and 2.3.2.11). Implementation requires environmental impact studies for development and site alteration within and on adjacent lands to the Greenlands System in accordance with the policies of the Plan and provincial policy (Policy 2.3.2.25).

The Regional Official Plan is read in conjunction with the area municipal official plans to determine the extent of natural heritage features and areas and adjacent lands protected in accordance with provincial, regional and local policy. A summary of the Town of Caledon Official Plan requirements regarding implementation of the Regional Plan is provided below.

Section 2.5 of the Regional Official Plan further implements provincial policy direction for natural hazards including policy addressing development in flood plains. In accordance with the Plan, development is directed to areas outside of the regulatory flood plain in accordance with provincial policy.

It is recommended that the criteria for identification of eligible natural heritage exclusions be based on the most recent draft or final Greenlands System policies that are being proposed through the Peel 2051 Regional Official Plan Review.

3.7 Town of Caledon Official Plan

The area municipal official plans in Peel further interpret, identify and protect natural heritage features and areas in accordance with provincial and regional policy direction.

The Town of Caledon Official Plan's Ecosystem Framework incorporates and refines the components of the Regional Greenlands System, as defined in the Region of Peel Official Plan, in a manner which conforms with the policy direction in the Regional Plan and in accordance with provincial policy. The Ecosystem Framework establishes policy requirements for Natural Core Areas, Natural Corridors, Supportive Natural Systems, and Natural Linkages. Natural Core Areas and Natural Corridors are designated Environmental Policy Area (EPA) on Schedule A to the Town of Caledon Official Plan. Development and site alteration are not permitted within the EPA designation with limited exceptions.

Ecosystem components which are not currently designated EPA, and which are identified through more detailed environmental studies as warranting protection, may be excluded from development in order to satisfy the Town's environmental policies and performance measures. The Town's Ecosystem Framework components identified through studies as warranting protection are generally placed in an EPA designation, subject to the policies of the Caledon Official Plan. The Town of Caledon Ecosystem Framework components are categorized in Table 3.1 of the Caledon Official Plan.

The Town of Caledon is undertaking an official plan review to be consistent with the 2020 Provincial Policy Statement and conform to provincial plans, including the 2019 Growth Plan and the Regional Official Plan. Until such time that the Town of Caledon's Official Plan is updated it is recommended that the current in effect Caledon Official Plan policies and mapping apply to identify eligible environmental exclusions recognizing that any revisions to the natural heritage policies and mapping as a result of the official plan review will need to be reflected in the implementation of the settlement area boundary expansion at the local level.

4. Take Out Option 1 for New Settlement Areas – Identification of Environmental Exclusions Based on Existing Natural Heritage Feature Mapping and Buffers

In accordance with the above direction relating to the protection of natural heritage features and areas, the following option is one of two options being considered for the identification of environmental take outs for the purposes of Policies 2.2.7.3 and 2.2.8.2 of the Growth Plan. The mapping of environmental features and areas utilizes existing mapped datasets and mapped designations in the Provincial Greenbelt Plans, Growth Plan, Region of Peel Official Plan and Town of Caledon Official Plan.

4.1 Outside the Greenbelt Plan Area and Outside Settlement Areas

Protected Natural Heritage Features and Flood Plains

The following natural heritage features and areas are recommended to be included as eligible environmental take outs:

- Region of Peel – Core Areas of the Greenlands System in Peel as mapped on Schedule A
- Town of Caledon – Environmental Policy Areas as mapped on Schedule A
- Natural Heritage System for the Growth Plan
- The following additional environmental features where development is prohibited by policy in the Regional Official Plan or Town of Caledon Official Plan:
    - Wetlands (all wetlands, evaluated Provincially significant, evaluated non-Provincially significant and unevaluated wetlands)
    - Earth and Life Science Areas of Natural and Scientific Interest
    - Peel Core, NAC and PNAC Woodlands (all woodlands > 0.5 ha in size)
    - Peel Core and NAC valley and stream corridors (all defined valley and stream corridors based on conservation authority crest of slope data)
    - Watercourses
    - Drainage (approximately represents headwater drainage features not identified in the watercourse data layer)
    - Waterbodies (all waterbodies > 0.5 ha. in size excluding off-line artificial reservoirs, industrial ponds, sewage lagoons and stormwater management ponds)
    - Conservation Authority Flood Plains (“engineered” floodplains)

Buffers

In addition to mapping features, it is recommended that buffers be applied to the base natural heritage feature data to represent lands that would be identified in subsequent planning stages and protected within a recommended natural heritage system as buffers adjacent to features, enhancement areas added to features, and linkage areas connecting features and areas. Buffers are recommended to be included in the take out analysis to represent a regional scale natural heritage system that will need to be further interpreted, identified, and protected in the secondary plan implementing the regional settlement area boundary expansion.

Regarding buffer width, 30 m buffers are recommended to be applied to currently mapped outer boundaries of all wetlands, woodlands, watercourses, waterbodies, and valley and stream corridors. It is also recommended that 15 m buffers be applied to drainage features (either side of polyline) in addition to the buffers that apply to all wetlands, woodlands, watercourses, waterbodies, valley and stream corridors.

Headwater drainage features represented by the "drainage" dataset will not reflect the ultimate location of headwater features requiring protection as the current regional scale data is based on air photo interpretation and is not field verified.

The recommended 15 metre and 30 metre "vegetation protection zone (VPZ)/buffers" generally align with provincial, regional and local policy direction and guidelines and reflect approximate buffer and/or enhancement requirements that would need to be confirmed through detailed delineation of a natural heritage system in the secondary plan.

Mapping buffers provides a high-level sensitivity testing of constraints recognizing that regional scale datasets are only representative of feature boundaries and that delineation of the natural heritage system with vegetation protection zones/buffers and enhancement areas will require detailed studies at the secondary plan and development approval stages.

Testing of the 15 m buffer applied to drainage features will be undertaken to confirm the application of this buffer provides a reasonable representation of headwater enhancement areas and may be included or excluded based on results of the scoped subwatershed study.

The Region of Peel Core Greenlands dataset[1], Town of Caledon Environmental Protection Areas, earth and life science ANSIs and conservation authority flood plains are recommended to be mapped without buffers.

After buffers are applied, all datasets should be merged and mapped as a single constraint layer. The base data to be used in the take out calculation is attached as Appendix A along with the procedure to generate the GIS shapefile.

4.2 Within the Greenbelt Plan Protected Countryside

The environmental exclusions for expansion of Villages within the Greenbelt Plan Protected Countryside are recommended to include all the exclusions in Section 4.1 plus the following Greenbelt key hydrologic features and their vegetation protection zones:

[1] The Region of Peel Core Greenlands consists of individual features and areas that have been combined and mapped as one mapping dataset/layer that includes natural heritage areas that would not normally require the application of buffers for their protection (e.g. Escarpment Natural Areas and Environmentally Sensitive or Significant Areas). Buffer requirements for natural heritage feature types that may be included in these areas are mapped separately in the methodology (e.g. woodlands, wetlands, valleylands).

- permanent and intermittent streams (30 m minimum VPZ)
- lakes and their littoral zones (30 m minimum VPZ)
- seepage areas and springs (30 m minimum VPZ)
- wetlands (30 m minimum VPZ)

With the exception of seepage areas and springs, existing mapped data for key hydrologic features are available from provincial and regional data sources. It is recommended that wetlands within the Greenbelt Protected Countryside area be mapped in accordance with the Greenbelt Plan 2005 Technical Definitions and Criteria for Key Natural Heritage Features in the Natural Heritage System for the Protected Countryside or as may be amended and updated by the Province.

4.3 Within the Oak Ridges Moraine Conservation Plan Area

The environmental exclusions for expansion of Settlement Areas within the ORMCP Area are recommended to include all the exclusions in Section 4.1 plus the following ORMCP key natural heritage features and key hydrologic features and their vegetation protection zones:

ORMCP key natural heritage features:

- wetlands (30 m minimum VPZ)
- habitat of endangered and threatened species (subject to natural heritage evaluation)
- fish habitat (30 m minimum VPZ)
- life science Areas of Natural and Scientific Interest (subject to natural heritage evaluation)
- significant valleylands (30 m minimum VPZ)
- significant woodlands (30 m minimum VPZ)
- significant wildlife habitat (including habitat of special concern species) (subject to natural heritage evaluation)
- sand barrens, savannahs and tallgrass prairies (30 m minimum VPZ)

ORMCP key hydrologic features:

- permanent and intermittent streams (30 m minimum VPZ)
- wetlands (30 m minimum VPZ)
- kettle lakes (greater of 30 m minimum VPZ or all land within the surface catchment area)
- seepage areas and springs (30 m minimum VPZ)

Existing datasets of ORMCP key features and their VPZs are available from the Town of Caledon. If needed, further refinement of key natural heritage features and key hydrologic features within the ORMCP should be undertaken in accordance with the Oak Ridges Moraine Technical Paper Series.

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5. Take Out Mapping Option 2 for New Settlement Areas – Identification of Environmental Exclusions Based on Conceptual Natural Heritage/Water Resource System Study

The Region retained a consultant team led by Wood Environment & Infrastructure Solutions to undertake an Environmental Screening and Scoped Subwatershed Study as part of the Settlement Area Boundary Expansion Study (SABE). The Scoped Subwatershed Study includes an inventory of the natural environment potentially affected by development, an assessment of the potential impacts of settlement expansion, and an implementation plan with recommendations and strategies to manage impacts.

A key deliverable of the Scoped Subwatershed Study is the identification of a conceptual natural heritage system at a regional scale based on a natural heritage and water resource system study component.

The eventual deliverable of this study is to identify a conceptual natural heritage and water resource system using existing information (mapping and observational data, where available) of natural features and areas supplemented by additional information collected through the subwatershed study and the analysis and integration of technical subwatershed study sub-components (e.g. aquatic, hydrology, hydrogeology, ecology). The study includes:

i) Identification of a natural heritage system that enhances the form, function and integrity of ecological features within and surrounding the study area;
ii) Identification of minimum ecological buffers where prescribed by relevant policies, and recommended potential buffers/enhancement areas where not prescribed but consistent with natural heritage system planning objectives;
iii) Identification and potential refinement of the provincial Growth Plan Natural Heritage System, as mapped by the Province;
iv) Identification and refinement of the Core Areas of the Greenlands System;
v) Identification of a water resource system that should be managed for the long-term protection of key hydrologic features, key hydrologic areas and their functions;
vi) Strategies to avoid and/or mitigate anticipated impacts of land use changes on the form and function of the ecological features, natural heritage system and water resource system;
vii) Identification of linkages which will maintain and where possible improve connectivity across the landscape to support a robust and resilient natural heritage system and connect features in an urbanizing landscape;
viii) Identification of enhancement opportunities which serve to enhance the size, shape and configuration of existing natural heritage system features and areas and maintaining or improving the existing function of linkages between features and areas; and
ix) Consideration and review of conservation authority 'target' natural heritage systems areas as a way to inform, validate and, where appropriate, refine the natural heritage system developed through the Scoped Subwatershed Study.

The output of the study will provide information on whether there is sufficient net developable area within the recommended settlement area boundary while providing the necessary protection of a natural heritage system.

5.1 Summary of the Recommended Conceptual Scoped Subwatershed Natural Heritage System

The identification of a preliminary conceptual natural heritage system for the SABE has been completed and will be refined and finalized at the conclusion of the Peel 2051 Regional Official Plan Review. The conceptual NHS has been developed based on recommended targets for the protection, restoration and enhancement of existing natural cover, the protection of natural heritage features and the establishment of linkages and additional enhancement areas. The Scoped Subwatershed Study includes a recommended overall enhancement target to increase natural cover by a minimum of 30% and identifies the following system components for protection, restoration and enhancement. System components that are not mapped in the Regional study and require delineation when detailed subwatershed studies are undertaken at the local level are indicated as "undefined/unmpapped".

Natural Heritage System Features

- Key features
- Supporting features
- Other features

Linkages – Minimum Vegetated Width

- Major Landscape Linkages
- Local Landscape Linkages
- Feature or Site Scale Linkages (Undefined/unmapped)

Linkages – Permeable Landscape Zones

- PLZs are recommended to facilitate additional habitat connectivity for NHS linkages identified above and to support placement of supporting and/or compatible uses in proximity to features and linkages of the NHS
- A minimum of 30% of permeable landscape zones outside of existing natural cover and buffers comprising the NHS is to be established as natural, self-sustaining vegetation (undefined/unmapped)

Enhancement Areas (Defined and undefined/unmapped)

- In-system enhancements within valleylands of the NHS (Defined)
- Out of system enhancements that fill gaps, holes or inlets within, along the boundary of, or between key features outside valleylands (Defined)
- Floodplains (Defined)
- Provincial Natural Heritage System Enhancements (Un-defined/unmapped)
- Portions of the Linkages PLZs to be enhanced/established as natural, self-sustaining vegetation (undefined/unmapped)

- Other enhancement opportunities identified through future, detailed studies that support habitat diversity, feature size, shape or species-specific habitat objectives (undefined/unmapped)

Provincial Natural Heritage System Enhancements (Un-defined/unmapped)

- The Greenbelt Plan and Growth Plan NHS require that 30% of the total developable area will remain or be returned to natural self-sustaining vegetation
- Recommended enhancements within the Provincial NHS systems reflect provincial policy direction

The study provides recommended targets for several of the NHS system components and preliminary Regional-scale mapping of the base NHS system components. This mapping information and the recommended target areas for un-defined/unmapped system components developed for the Regional scale study were used to compare "take out" options in both the Focus Study Area for the SABE and in the final recommended SABE boundary.

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6. Recommended Environmental Take Out Option For New Settlement Areas

The information below provides an analysis of the two take out options considered and a recommendation to utilize the Scoped Subwatershed Natural Heritage Base System (Scoped SWS NHS) mapping with allowances for enhancement targets for the purposes of confirming land needs for new settlement areas identified through the SABE Study.

6.1 Comparison of Take Out Options

Table 6.1 below compares the total area of the Regional Environmental Take Out Option 1 (mapped features and buffers) and the Scoped SWS NHS Option 2. The Scoped SWS NHS Base System contains the recommended Scoped SWS NHS System components that would be subject to policy protection as noted previously, buffers adjacent to key features and enhancement areas that were possible to map at a regional scale. The mapped Scoped SWS NHS Base System components include natural heritage features recommended for protection or further evaluation; 30 m buffers on all features except headwater drainage reaches requiring further assessment; recommended major and local landscape linkages; and defined enhancements.

In order to account for undefined enhancements that are not mapped in the Scoped SWS NHS Base System, but are to be provided in the implementation of the study recommendations, take out areas for additional undefined/unmapped enhancements are also added to the Scoped SWS NHS Base System based on recommended targets in the Scoped SWS where these have been provided. For the purpose of the take out analysis, these include the calculated enhancement area targets for permeable linkage zones and other enhancements, with the assumption that these additional enhancements would be provided on tableland outside features and outside the Greenbelt. The entirety of the Greenbelt NHS is also included as settlement areas are not permitted to expand into the Greenbelt Area.

A key difference between the two options is that the Scoped SWS NHS Base System identifies locations for recommended landscape linkages based on ecological criteria and does not apply buffers to all “drainage” features with the exception of watercourses that have been mapped for inclusion in the Scoped SWS NHS based on assessment at the regional scale. Headwater drainage features are subject to field assessments and if included with other targeted enhancements, based on the currently mapped extent of “drainage” feature data, would potentially overrepresent the NHS system that would ultimately be refined and verified in subsequent implementation stages. Although the analysis indicates that total take out areas are very similar between the options, the location of system components varies in some key areas as noted above and based on the approach taken in developing ‘Regional Take-Outs’ versus the Scoped SWS NHS, which has been informed by natural heritage system planning criteria and assessment at a scoped subwatershed scale. Appendix B provides a comparison map of the take out options recognizing that both systems are subject to further refinement and confirmation in subsequent planning stages.

Table 6.1: Comparison of Take Out Options

NHS/Environmental Take Out Option	Total Area of Take Out within FSA[1]	Total Area of the FSA	Net Area Remaining in FSA	NHS/Environmental Take Out as a % of the FSA
Scoped SWS NHS Base System	2,053 ha	8,059 ha	6,006 ha	25.5%
Scoped SWS NHS Base System + Greenbelt NHS	2,164 ha	8,059 ha	5,895 ha	26.8%
Scoped SWS NHS Base System + Greenbelt NHS + Permeable Linkage Zone + Other Enhancements[4]	2,250 ha	8,059 ha	5,809 ha	27.9%
Regional Environmental Take Out Layer[5]	2,277 ha	8,059 ha	5,782 ha	28.2%
	Total Area of Take Out within SABE[2]	**Total Area of the SABE (Dec 2020)**	**Net Area Remaining in SABE**	**NHS/Environmental Take Out as a % of the SABE**
Scoped SWS NHS Base System	1,184 ha	5,651 ha	4,467 ha	21.0%
Scoped SWS NHS Base System + Greenbelt NHS[3]	1,187 ha	5,651 ha	4,464 ha	21.0%
Scoped SWS NHS Base System + Greenbelt NHS + Permeable Linkage Zone + Other Enhancements[4]	1,272 ha	5,651 ha	4,379 ha	22.5%
Regional Environmental Take Out Layer[5]	1,309 ha	5,651 ha	4,342 ha	23.2%

Notes:

1 FSA Area does not net out Mayfield West Phase 2 Stage 2 or the approved ROPA 30 Lands.

2 Draft Recommended SABE Area (September 2021) excludes Mayfield West Phase 2 Stage 2 and the approved ROPA 30 Lands.

3 The total area of the Scoped SWS NHS within the SABE includes minor overlaps with the Greenbelt Protected Countryside/NHS.

4 Area of unmapped Permeable Landscape Zone and Other Enhancements is approximately 85 ha. For this assessment, the take out area assumes the PLZ and Other Enhancements will be provided on tablelands outside of Greenbelt and other NHS System areas (e.g. existing key features).

5 Includes 15 m buffer applied to all drainage feature polylines

6.2 Selection of Take Out Option

As summarized in the analysis above, both take out options provide a similar land area for natural heritage system planning and either one of the two options could provide an eligible environmental take out for the purposes of confirming that sufficient net developable land needs are provided in the recommended SABE area to meet growth requirements to 2051. Because it is informed by a scoped subwatershed study analysis, the Scoped SWS NHS Base System with added allowances for the Greenbelt NHS and additional system enhancement take outs is the recommended option to provide base mapping for the environmental take out. Since recommended permeable landscape zone and other system enhancements are not mapped, it is recommended that an additional allowance for the take out areas based on targets identified in the Scoped SWS (i.e. approximately 85 ha) be included and distributed to the community and employment land areas based on their proportional land area requirements in the SABE. Supporting analysis, mapping, targets and recommendations are provided in the Peel 2051 SABE Scoped Subwatershed Study reports. The Scoped SWS NHS take out areas within the SABE Focus Study Area and recommended SABE boundary are approximately 2,250 hectares and 1,272 hectares respectively.

6.3 Conformity with Growth Plan Requirements and Eligibility

It is recommended that the Peel 2051 Regional Official Plan policy direction provide for the implementation of the recommended Scoped SWS NHS within the SABE. The policy direction should include requirements for the completion of detailed subwatershed studies and identification of a natural heritage system to further implement the direction, targets, criteria and recommendations of the broader scale Scoped SWS with requirements for natural heritage system protection, restoration and enhancement to meet or exceed recommended targets and criteria. Refinement of the natural heritage system boundary will be required in accordance with the recommendations of the Scoped SWS. Additional policy requiring the designation of the natural heritage system in the local municipal official plan with direction that development shall not be permitted in the natural heritage system is also recommended to ensure the take out is tied to eligibility requirements in Growth Plan Policy 2.2.7.3.

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7. Non-Environmental Take Outs

The following non-environmental features and areas are recommended to be included as eligible take outs in accordance with the Growth Plan Policy 2.2.7.3:

- Provincially approved rights-of-way for energy infrastructure (energy transmission lines and pipelines)
- Provincially approved rights-of-way for freeways
- Provincially approved rights-of-way for railways
- Rights-of-way for existing railways
    - identified by querying parcel dataset using Peel's rail line data; selecting parcels that intersect with rail lines, with manual refinement using aerial photography
- Cemeteries
    - Peel cemeteries dataset; "Exact" cemeteries only
- Employment Areas

Although employment areas are listed as an eligible take out for the purpose of measuring minimum density targets in the DGA, for the purpose of identifying new settlement area boundaries for employment areas, environmental and non-environmental exclusions have been applied to determine if sufficient net developable land area is provided to meet land need requirements for growth to 2051.

The following table provides a summary of the total area of combined environmental and non-environmental take outs in the FSA and the draft recommended Settlement Area Boundary Expansion (September 2021).

Table 7.1 Environmental and Non-Environmental Take Outs within the FSA and SABE (September 2021)

NHS/Environmental Take Out Option	Total Area of Take Out within FSA	Total Area of the FSA	Net Area Remaining in FSA	Environmental/Non-Environmental Take Out as a % of the FSA
Non-Environmental Take Outs	555 ha	8,059 ha	7,504 ha	6.9%
Environmental[1] and Non-Environmental Take Outs Combined	2,654 ha	8,059 ha	5,405 ha	31.8%
	Total Area of Take Out within SABE[1]	**Total Area of the SABE (Dec 2020)**	**Net Area Remaining in SABE**	**NHS/Environmental Take Out as a % of the SABE**
Non-Environmental Take Outs	16 ha	5,651 ha	5,635 ha	0.0%
Environmental[2] and Non-Environmental Take Outs Combined	1,281 ha	5,651 ha	4,370 ha	22.3%

Notes:

1 Draft Recommended SABE Area (September 2021) excludes Mayfield West Phase 2 Stage 2 and the approved ROPA 30 Lands.

2 Environmental take out includes the Scoped SWS NHS and additional 85 ha allowance for the recommended Scoped SWS Study's Permeable Linkage Zone (PLZ) and Other Enhancements.

8. Recommended Take Outs For Existing Designated Greenfield Areas

The mapping of natural heritage systems, features and areas in existing designated greenfield areas (DGA), unlike in new settlement areas, is more refined as natural heritage designations have been generally established on the basis of more detailed technical studies and planning approvals. In most instances the mapped delineation of environmental take outs in existing DGA incorporates buffers and enhancement areas and reflects established limits of development. Accordingly, the recommended approach to mapping existing DGA utilizes existing mapped boundaries of natural heritage systems and features as designated in municipal official plans and, where information is available, in recently approved secondary plans.

Where natural heritage systems, features and areas have been refined and designated in secondary plan areas, the natural heritage designations of the secondary plan have been used to replace broader scale mapping in the municipal official plan. Where appropriate, environmental take outs in the existing DGA have been refined to parcel fabric in developed areas to match established designation boundaries and approved limits of development.

The base data to be used in the take out calculation is attached as Appendix C along with the procedure to generate the GIS shapefile. Mapped environmental and non-environmental exclusions include:

Environmental Take Outs

- Region of Peel – Core Areas of the Greenlands System in Peel (Schedule A as amended through Peel 2051)
- Town of Caledon – Environmental Policy Areas (Schedule A)
- City of Brampton – Natural Heritage Features and Areas (Schedule D)
- City of Mississauga – Significant Natural Area, Natural Green Spaces, Special Management Areas and Linkages (Schedule 3)
- Refinements based on secondary plan natural heritage designations
- Conservation Authority Flood Plains (“engineered” floodplains)

Non-Environmental Take Outs

- Cemeteries
- Hydro Transmission Corridors
- Railway Rights of Way
- Ninth Line Transitway Right of Way
- TransCanada Pipeline Right of Way
- Employment Areas

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9. Summary

The above methodology is recommended to be applied to measure density targets in existing and new DGA and to delineate new settlement boundaries (i.e. new DGA) with sufficient net developable area to meet land needs in accordance with Policies 2.2.7.3 and 2.2.8.2 of the Growth Plan. The approach to identify environmental take outs in new settlement areas provides two "take out" methods, one determined by applying buffers to existing mapped data, and a second that provides a more refined regional scale conceptual natural heritage system based on a scoped sub-watershed study. The selection of the recommended natural heritage system mapping option for new settlement areas has considered the more refined analysis provided through the Scoped Subwatershed Study. It is also recommended that appropriate direction be considered in the policy framework for the settlement expansion to require implementation and refinement of the regional scale natural heritage system at the secondary plan stage based on the recommended targets, criteria and recommendations of the Scoped Subwatershed Study.

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Appendix A: Table of Environmental and Non-Environmental Exclusions for New Settlement Areas

Step	Layer	Files	Attribute Name	Date
1	Region of Peel – Schedule A (Core Areas of the Greenlands System in Peel – as shown on proposed Schedule Y1 – August 2020)	Provincially significant wetlands	GREENSYS	August 2020 Draft Schedule Y1 (formerly OP Schedule A)
		Core woodlands	GREENSYS	August 2020 Draft Schedule Y1 (formerly OP Schedule A)
		Environmentally sensitive or significant areas	GREENSYS	August 2020 Draft Schedule Y1 (formerly OP Schedule A)
		Provincial Life Science Areas, Natural and Scientific Interest	GREENSYS	August 2020 Draft Schedule Y1 (formerly OP Schedule A)
		Escarpment Natural Areas of the Niagara Escarpment Plan	GREENSYS	August 2020 Draft Schedule Y1 (formerly OP Schedule A)
		Core Valley and Stream Corridors	GREENSYS	August 2020 Draft Schedule Y1 (formerly OP Schedule A)
2	Caledon Official Plan Environmental Policy Areas – All Schedules including Palgrave Estate EZ1	Woodlands	C_EPA_Jul4	Jan 2018 (data received July 2018)
		Wetlands	C_Wetlands_Jul4	April 2018 (data received July 2018)
		Niagara Escarpment Natural Areas	C_EPA_Jul4	April 2018 (data received July 2018)
		ANSI	C_EPA_Jul4	April 2018 (data received July 2018)
		Environmentally Significant Areas	C_EPA_Jul4	April 2018 (data received July 2018)
		Threatened and endangered species	C_EPA_Jul4	April 2018 (data received July 2018)
		Oak Ridges Moraine Key Natural Heritage Features	C_EPA_Jul4	April 2018 (data received July 2018)
		Oak Ridges Moraine Hydrologically Sensitive Features	C_EPA_Jul4	April 2018 (data received July 2018)
		Greenbelt Key Natural Heritage Features	C_EPA_Jul4	April 2018 (data received July 2018)

Step	Layer	Files	Attribute Name	Date
		Greenbelt Key Hydrological Features	C_EPA_Jul4	April 2018 (data received July 2018)
		Fisheries	C_EPA_Jul4	April 2018 (data received July 2018)
		Valley and Stream Corridors	C_EPA_Jul4	April 2018 (data received July 2018)
		Palgrave Estate EZ1	C_PERC_EZ1	April 2018 (data received July 2018)
5	Greenbelt Plan Area (Protected Countryside Area)	Greenbelt Plan Area boundary (Protected Countryside Area) within the FSA	GRNBELT	May 2017
6	Additional Environmental Features Where Development is Prohibited by Policy in the Regional Official Plan or Local Official Plan	Wetlands (all wetlands, evaluated Provincially significant, evaluated non-Provincially significant and unevaluated wetlands)	WETLAND	August 2020
		LIO ANSIS (All provincially significant and regionally significant earth science and life science ANSIs)	ANSI_ES ANSI_LS	March 2019
		Peel Core, NAC and PNAC Woodlands (> .5 ha in size)	LIO_WOOD	March 2019
		Peel Core and NAC valley and stream corridors	VALSTREAM	March 2019
		Watercourses - Watercourse Polylines	WATERCOURS	March 2019
		Rivers - River Polygons	RIVERS	March 2019
		Drainage	DRAINAGE	March 2019
		Waterbodies (> 0.5 ha. in size including natural lakes, natural ponds and marsh	WATERBOD	March 2019

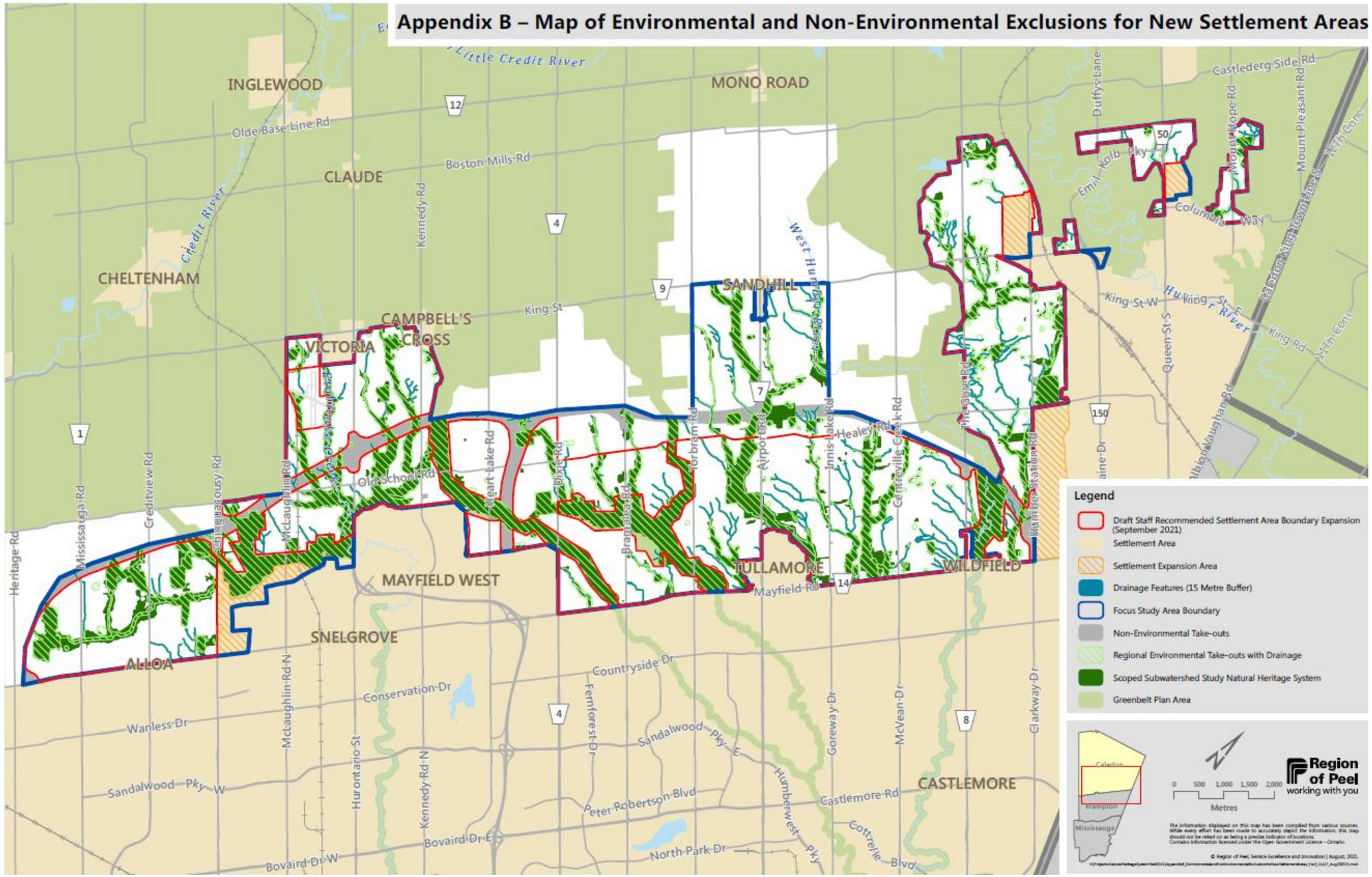
Step	Layer	Files	Attribute Name	Date
		waterbodies and Claireville Reservoir; excluding off-line artificial reservoirs, industrial ponds, sewage lagoons and stormwater management ponds)		
		Escarpment Natural Areas	NEP Escarpment Natural Areas	March 2019
7	Conservation Authority Flood Plains	Engineered/Regulatory flood plains	FLOOD	September 2018
8	Secondary Plan Review	ROPA 28 lands	N/A	September 2018
		ROPA 33 Ninth Line lands	N/A	January 2019
		ROPA 34 Mayfield West Phase 2 Stage 2 lands	N/A	October 2018
		ROPA 30 lands	N/A	November 2020
9	Non-Environmental Features Layer	Cemeteries	CEMETERY	2012
		Hydro Transmission Corridors (Settlement areas to exclude GTA West Transportation Corridor EA – 2020 Preferred Route)	HydroROW GTA West Transportation Corridor EA – 2020 Preferred Route	2012 and 2019
		Railway Right of Way (excluding any adjacent land holdings outside the immediate ROW)	RAILROW	2019
		TransCanada Pipeline Right of Way	PIPELINE	2019
		Existing 400 series highways (Settlement areas to exclude GTA West Transportation Corridor EA – 2020 Preferred Route)	F400sROW GTA West Transportation Corridor EA – 2020 Preferred Route	2019 2020 (GTA West Corridor Preferred Route)

Methodology, Inputs and Process to Calculate Net Developable Area for New Settlement Areas:

1) Create a copy of each of the shapefiles listed above by step.
2) Simplify their attribute tables by removing all fields.
3) Add new field with layer name (e.g. "FLOOD") and enter "YES" for all features in the shapefile.
4) Use the Geoprocessing tool Union to join the shapefile(s) of Step 1 with the shapefile(s) of Step 2.
5) Dissolve newly created shapefile, preserving fields.
6) Repeat process joining the newly created Step 1&2 file with the shapefile(s) of Step 3. Continue until all shapefiles above have been joined together.
7) Run the tool 'Multi-part to Single-part' to clean up the newly joined shapefile.
8) Create a new field in the final shapefile and calculate geometry to get total takeout area.

Note: Region to obtain latest datasets prior to finalizing environmental and non-environmental exclusions.

Appendix B: Map of Environmental and Non-Environmental Exclusions for New Settlement Areas



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Appendix C: Table of Environmental and Non-Environmental Exclusions for Existing Designated Greenfield Areas

Step	Layer	Files	Policy	Attribute Name	Date
1	Region of Peel – Schedule A (Core Areas of the Greenlands System in Peel)	Provincially significant wetlands	ROP 2.3.2.2 (definition) ROP 2.3.2.6 (development prohibited)	GREENSYS	November 2013 (OP Schedule A)
		Core woodlands		GREENSYS	November 2013 (OP Schedule A)
		Environmentally sensitive or significant areas		GREENSYS	November 2013 (OP Schedule A)
		Provincial Life Science Areas, Natural and Scientific Interest		GREENSYS	November 2013 (OP Schedule A)
		Escarpment Natural Areas of the Niagara Escarpment Plan		GREENSYS	November 2013 (OP Schedule A)
		Core Valley and Stream Corridors		GREENSYS	November 2013 (OP Schedule A)
2	Caledon – Schedule A (Environmental Policy Areas)	Woodlands	Caledon OP 3.2.3.1.1 (definition) Caledon OP 5.7.3.1.1 (development prohibited generally, limits / exceptions in subsequent sections)	C_EPA	Jan 2018 (Received Jan 2019)
		Wetlands		C_EPA	April 2018 (Received Jan 2019)
		Niagara Escarpment Natural Areas		C_EPA	April 2018 (Received Jan 2019)
		ANSI		C_EPA	April 2018 (Received Jan 2019)
		Environmentally Significant Areas		C_EPA	April 2018 (Received Jan 2019)
		Threatened and endangered species		C_EPA	April 2018 (Received Jan 2019)
		Oak Ridges Moraine Key Natural Heritage Features		C_EPA	April 2018 (Received Jan 2019)
		Oak Ridges Moraine Hydrologically Sensitive		C_EPA	April 2018 (Received Jan

Step	Layer	Files	Policy	Attribute Name	Date
		Features			2019)
		Greenbelt Key Natural Heritage Features		C_EPA	April 2018 (Received Jan 2019)
		Greenbelt Key Hydrological Features		C_EPA	April 2018 (Received Jan 2019)
		Fisheries		C_EPA	April 2018 (Received Jan 2019)
		Valley and Stream Corridors		C_EPA	April 2018 (Received Jan 2019)
	Caledon – Bolton Residential Expansion Settlement Area ROPA 30 Lands	Take out for the ROPA 30 lands include all wetlands, woodlands, valley and stream corridors, watercourses and drainage features with 30 m buffers and the GTA West 2020 Preferred Route. File name: BRES_SABEtakeoutsIntersect_20201008	Region of Peel OP 5.4.3.2.9.1 Natural Heritage Take out was basis for settlement and ROPA approved by the LPAT.	N/A	September 2020
3	Brampton – Schedule D (Natural Heritage Features and Areas)	Valley lands/Watercourse Corridors	Brampton OP 4.6.7.1 (development prohibited)	B_Valley	Received Jan 2019
		Woodlands	Brampton OP 4.6.8.1/4.6.8.2 (developers must maintain/restore/enhance; development must be in accordance with	B_Wood	Received Jan 2019

Step	Layer	Files	Policy	Attribute Name	Date
			Woodlot Development Guidelines and Province's NHS reference manual)		
		Wetlands (Provincially Significant and Other)	Brampton OP 4.6.9.1 (development prohibited on Provincially Significant Wetlands) Brampton OP 4.6.9.3 (other wetlands must be studied and maintained/restored/enhanced as needed)	B_WetL	Received Jan 2019
		Environmentally Sensitive/Significant Areas	Brampton OP 4.6.10 (development prohibited, with limited exceptions)	B_ESA	Received Jan 2019
		ANSIs	Brampton OP 4.6.1.1 (development prohibited unless no negative impacts)	B_ANSI_LS B_ANSI_ES	Received Jan 2019
		Provincial Greenbelt (Protected Countryside, Natural Heritage System Overlay)	Brampton OP 4.6.14	B_GBelt	Received Jan 2019
4	Mississauga – Schedule 3	Significant Natural Area/Natural Green Spaces	Mississauga OP 6.3.27 (development	M_NATSYS	Received Jan 2019

Step	Layer	Files	Policy	Attribute Name	Date
			not permitted unless reasonable alternatives have been considered and negative impacts minimized) Mississauga OP 6.3.28 (development not permitted (with limits) in provincially significant wetlands/coastal wetlands, endangered or threatened species, fish habitat) Mississauga OP 6.3.32 (development not permitted in natural green spaces unless no negative impact)		
		Special Management Areas	Mississauga OP 6.3.32 (development not permitted unless no negative impact)	M_SPECMGM	Received Jan 2019
		Residential Woodlands	Residential	M_WOOD	Received Jan 2019

Step	Layer	Files	Policy	Attribute Name	Date
			woodlands: Mississauga OP 6.3.19 (development will have regard to how existing tree canopy will be protected, enhanced)		
		Linkages	Mississauga OP 6.3.32 (development not permitted unless no negative impact)	M_LINKAGE	Received Jan 2019
		Ninth Line Natural Heritage System	City of Mississauga OP 6.20.2.4 (protect and enhance NHS identified in subwatershed study) Includes Greenlands designation as shown on Ninth Line OP schedules	M_NL_NHS	Received Jan 2019
5	Greenbelt (Protected Countryside Only)	Protected Countryside (Only)	Protected Countryside only within Caledon- Schedule A (Env. Policy Areas)	GRNBELT	2017
6	Conservation Authority Flood Plains	Engineered/Regulatory flood plains	O. Reg. 160/06 O. Reg. 166/06 2(1) and 3(1) (development prohibited without	FLOOD	September 2018

Step	Layer	Files	Policy	Attribute Name	Date
			permission)		
7	Non-Environmental Features Layer	Cemeteries	Cemetery layer queried for "Exact" polygons (POLTYPE)	CEMETERY	2012
		Hydro Transmission Corridors	Queried hydro one networks ROW and hydro one networks transformer station Additional manual parcel selection based on aerial imagery interpretation	HydroROW	2012
		Railway Right of Way	Railway ROW (excluding any adjacent land holdings outside the immediate ROW). Used parcel fabric dataset to select rail parcel ownership by location (parcels that intersect with rail line dataset)	RAILROW	2019
		Ninth Line Transitway ROW	PPS 1.6.8.1	M_407T_ROW	TBD
		TransCanada Pipeline Right of Way	Buffered 30 metres from pipeline line	PIPELINE	2019
		Existing 400 series highways	Single line street network –	F400sROW	2019

Step	Layer	Files	Policy	Attribute Name	Date
			queried class=Provincial Freeway; selected Parcel ownership by location; manual refinement to remove excess parcels		
		GTA West Transportation Corridor EA – 2020 Preferred Route	PPS 1.6.8.1	GTA West Corridor EA – 2020 Preferred Route	2020 (GTA West Corridor Preferred Route)
8	Region of Peel Employment Areas	Region of Peel Draft Employment Area Schedule Y6 (Peel 2051)	Refer to Caledon Official Plan	Draft Employment Area	June 2021

Refinements

- Latest versions of datasets as currently designated in the respective official plans have been obtained.
- Environmental take outs in the existing DGA have been refined to parcel fabric in developed areas to match established natural heritage designation boundaries. Where natural heritage systems, features and areas have been refined and designated in secondary plan areas, the natural heritage designations of the secondary plan has been used to replace any broader scale mapping in the municipal official plan.

Methodology, Inputs and Process to Calculate Net Developable Area for Existing Designated Greenfield Areas:

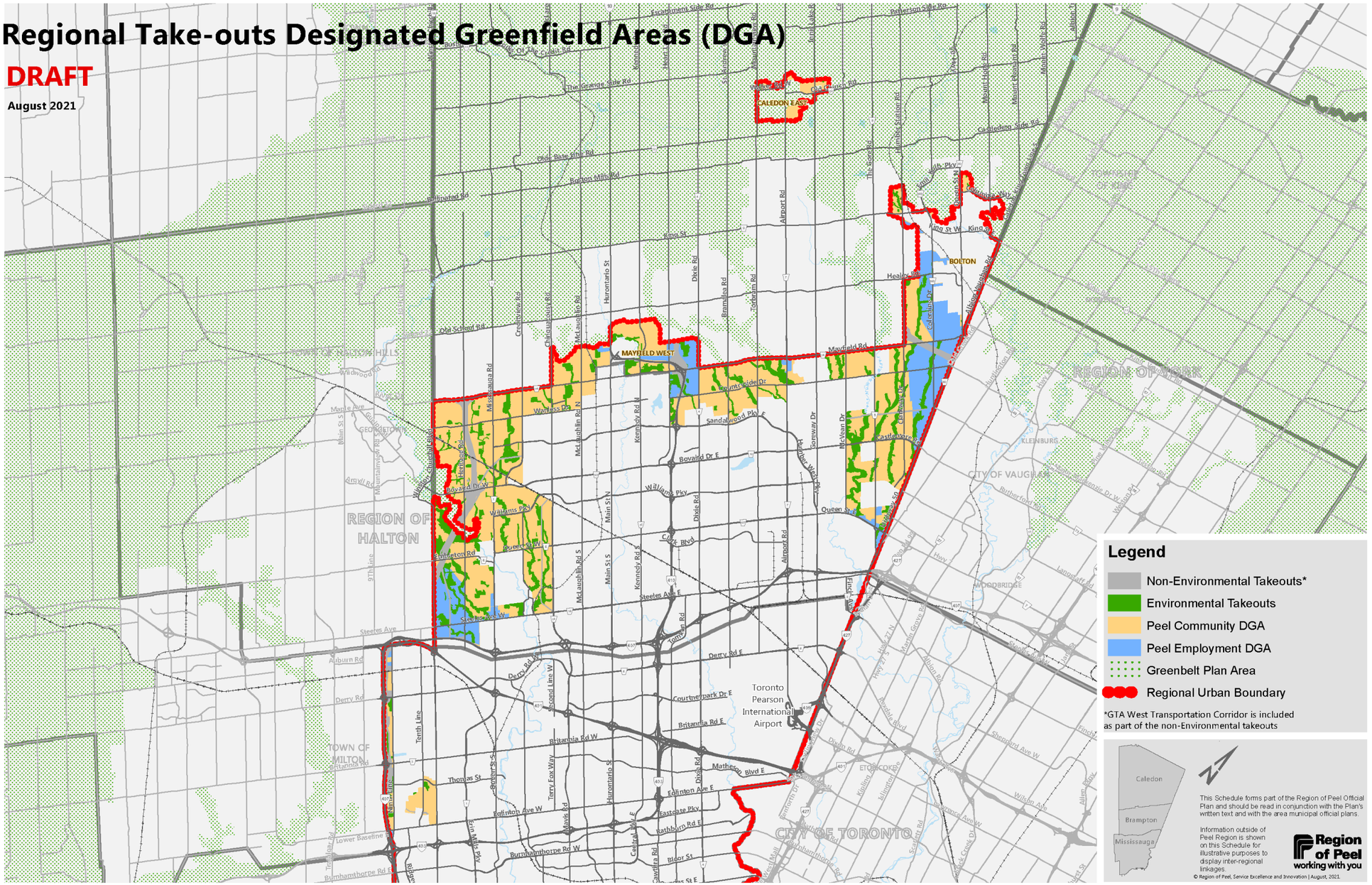
1) Create a copy of each of the shapefiles listed below and save them in folders by step.
2) Simplify their attribute tables by removing all fields.
3) Add new field with layer name (e.g. "FLOOD") and enter "YES" for all features in the shapefile.
4) Use the Geoprocessing tool Union to join the shapefile(s) of Step 1. Dissolve newly created shapefile, preserving layer fields.
5) Repeat this process for Steps 2-6 to get 6 shapefiles by step.
6) Union the newly created Step 1 file with the Step 2 shapefile. Continue until all shapefiles above have been unioned.
7) Run the tool 'Multi-part to Single-part' to clean up the new shapefile.

8) Create a new field in the final shapefile and calculate geometry to get total takeout area.

Notes:

- In addition to Steps 1-6, the calculation of the area over which the minimum density target for the entire DGA is measured excludes employment areas as designated in the Region of Peel Official Plan(Peel 2051) so that the measurement of the minimum density target applies to community areas only.
- Ninth Line NHS and CA floodline data refined to align with local municipal land use designations

Appendix D: Map of Environmental and Non-Environmental Exclusions for Existing Designated Greenfield Areas



Perkins&Will

Memo

Date: 2021-08-12

To: Duran Wedderburn, Principal Planner, Region of Peel

From: Paul Kulig (Perkins&Will), Sean Hertel (Sean Hertal + Associates Urban Planning), Craig Ferguson (Urban Metrics) and Ashita Parekh (Perkins&Will)

Re: Update to Peel Region Intensification Analysis Memo (July 2020)

Update to Peel Region Intensification Analysis Memo (July 2020)

This update to the Intensification Analysis Memo (July 2020) is prepared to update and validate the findings from our previously-completed work. The addendum confirms that the findings from the July 2020 report are still applicable and relevant to support Peel Region's ongoing Official Plan review process; it confirms that there are many opportunities to achieve the required intensification and related density requirements under in-force Provincial planning policy This addendum provides an overview of the most recent policy requirements and a review of new intensification in the Region it includes an assessment of the capacity of new and emerging Strategic Growth Areas based on the Region's growth scenario; impacts to market conditions based on the new 2051 horizon; and final recommendations stemming from this addendum and the original July 2020 analysis.

1. Executive Summary

The findings and the recommendations of our July 2020 Intensification Analysis Memo, based on the policies and 2041 planning horizon of the 2017 Growth Plan, are still applicable and relevant for informing Peel Region's ongoing Official Plan Review process which is now focused on a planning horizon to 2051. The additional population and employment growth, and related policy requirements including minimum density targets, assigned to Peel Region are still achievable. Accordingly, this Addendum confirms the findings of our original Memo, and includes additional information and analyses arising from the Province's approval of an updated Growth Plan and the Region's ongoing growth management work program (see Table 1).

The Region has sufficient opportunities to achieve its allocated growth to 2051. Strategic decisions will need to be made, in meeting and/or exceeding the Growth Plan intensification targets, about where to prioritize that additional growth. There are a significant number of Strategic Growth Areas including future Major Transit Station Areas (e.g. Clarkson GO Station, Mississauga) within the Region's built boundary, having the potential to absorb a significant proportion of population and employment growth to 2051. There are also significant opportunities to meet that assigned growth through Designated Greenfield Areas, including Heritage Heights in Brampton and Mayfield West in Caledon. These areas, which include Strategic Growth Areas with variety of housing forms and a mix of uses, will play an important role in meeting the market demand for ground-related housing forms (e.g. single- and semi-detached) that will be created by adding an additional 300,000 residents to 2051.

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Given that there are many different markets for residential and employment growth, it is reasonable to expect that growth within and outside of the Region's built boundary will each contribute significantly to meeting the 2051 targets. Mississauga will continue to intensify its supply of housing types and mix of uses will continue to diversify, especially at Major Transit Station Areas. Brampton's vision for compact mixed-use rapid transit corridors will continue to be advanced and realized, in addition to opportunities for "gentle density" in existing neighbourhoods. Caledon will experience significant population and employment growth through urban expansion while creating opportunities for focused mixed-use intensification in existing and emerging centres.

2. Overview of Current Provincial Policy

The Province on June 16, 2020 released proposed changes to the Growth Plan (2019), the most significant of which:

- Extend the planning horizon from 2041 to 2051;
- Assign to Peel Region an additional 310,000 people and 100,000 jobs, for an ultimate 2051 population of 2.28 million and 1.07 million employees;
- Maintain the 2031 minimum intensification target of 50 per cent through 2051;
- Define and introduce protections for Provincially Significant Employment Lands; and
- Introduce an updated Land Needs Assessment Methodology, which includes consideration of current and emerging market trends.

Given the timing of these changes, which came into law in August 2020, the original Intensification Analysis Memo (July 2020) acknowledged but did not provide detailed analyses on the extent to which the new requirements may impact Peel Region's in- progress Growth Plan conformity exercise.

Date: 2021-08-12

Re: Update to Peel Region Intensification Analysis Memo (July 2020)

Table 1: Comparison of In-Force Peel Official Plan and Growth Plan Requirements

	Peel Official Plan	Growth Plan, 2017 (Included in July 2020 Intensification Analysis Memo)	Growth Plan, 2019 (Included in May 2021 Intensification Analysis Memo Addendum)
Population Forecast	**1,490,000 (2031)**	**1.97 Million (2041)**	**2.28 Million (2051)**
Employment Forecast	**870,000 (2031)**	**970,000 (2041)**	**1,070,000 (2051)**
Minimum Intensification Target	**40% to 2025 50% to 2031**	**50% to 2031 60% to 2041**	**50%**
Minimum Designated Greenfield Area (DGA) Target	**50 ppl/jobs per ha (including employment areas)**	**80 ppl/jobs for new DGA**	**50 ppl/jobs per ha**
Urban Growth Centre Target	**200- Brampton 200- Mississauga**	**200- Brampton 200- Mississauga**	**200- Brampton 200- Mississauga**
Major Transit Station Areas	**-No Requirements**	**-Delineate Boundaries -Minimum transit supportive densities -Alternative densities**	**-Delineate Boundaries -Minimum transit supportive densities -Alternative densities**
Strategic Growth Areas	**-No Requirements**	**- Identify and delineate boundaries -Establish minimum densities**	**- Identify and delineate boundaries -Establish minimum densities**
Employment Areas	**-Conversion protection policies**	**-Delineate Employment Areas -Conversion protection policies**	**-Delineate Employment Areas -Conversion protection policies -Provincially Significant Employment Areas**
Land Needs Assessment Methodology	**-No requirement**	**-Methodology issued**	**-Methodology updated**

Source: Adapted from Region of Peel Growth Management Focus Areas – Policy Directions Report, May 2020

This latest (August 2020) in-force version of the Growth Plan has impacted the Peel 2041 Official Plan Review mid-stream; it added 10 years, 310,000 residents and 100,00 employees to the planning horizon. Impacts include the allocation of new growth to the local municipalities, additional lands needed through Settlement Area Boundary Expansion, and the assessment of infrastructure capacity to accommodate the forecasted growth. While this is a significant change to consider and implement, the Region and its area municipalities are well-positioned to accommodate this additional growth allocation.

There are many opportunities for additional growth within the built boundary, especially within the numerous designated Strategic Growth Areas, towards achieving the minimum 50 per cent intensification target. The Region is currently (2020) achieving a rate of 44% per cent. This will be complemented by planned growth within the Designated Greenfield Areas, which are being planned to exceed the minimum density target of 50 people and people per hectare. Overall, a spectrum of housing market demands will be met across the Region over the next 30 years, which also includes higher density housing opportunities (i.e. Strategic Growth Areas) within the new communities. Providing infrastructure and services to support this tandem growth strategy will be critical, which should be supported and guided by a robust continuous growth monitoring program to identify and close potential gaps.

3. New Intensification

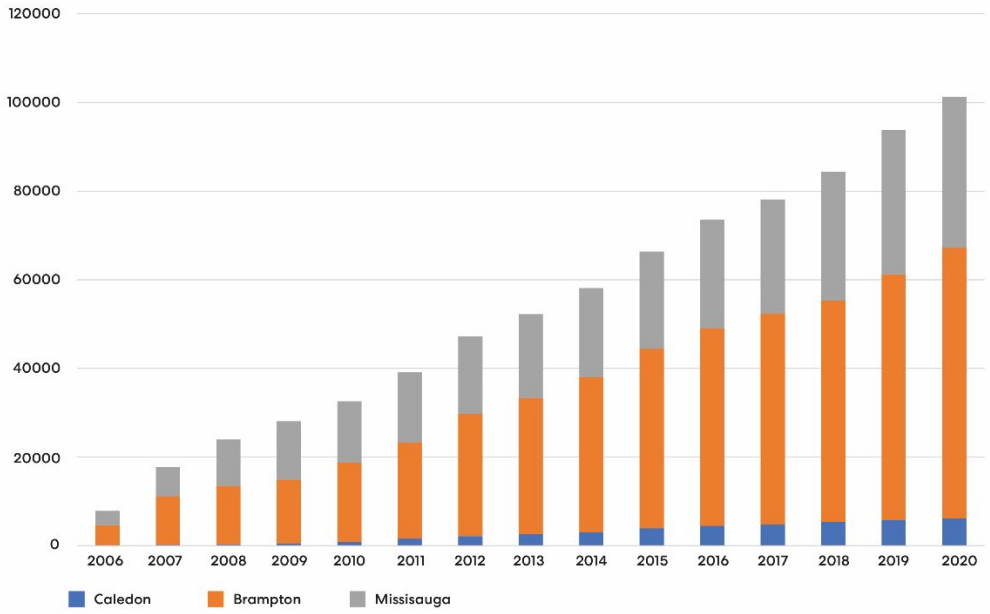
In analysing building permit data from the years 2016-2020 it is observed that Brampton accounted for a larger share of development during 2019-2020 with most of that growth being in single-detached units. Similarly, in Mississauga, single-detached units accounted for a relatively larger share of construction activity in comparison to the previous decade. The short timeframe for analysis, however, makes it unclear if this growth is an impact of COVID-19 or a broader market trend. As part of this memo, additional data for 2018-2020 was added to the analysis. In general, it exhibits a continuation of earlier trends with regards to Cumulative New Growth; a growing share of apartment units and single-detached unit in Mississauga and Brampton respectively; and relatively constant split by unit type in Caledon.

Below are some graphs and charts to complement these observations:

Date: 2021-08-12

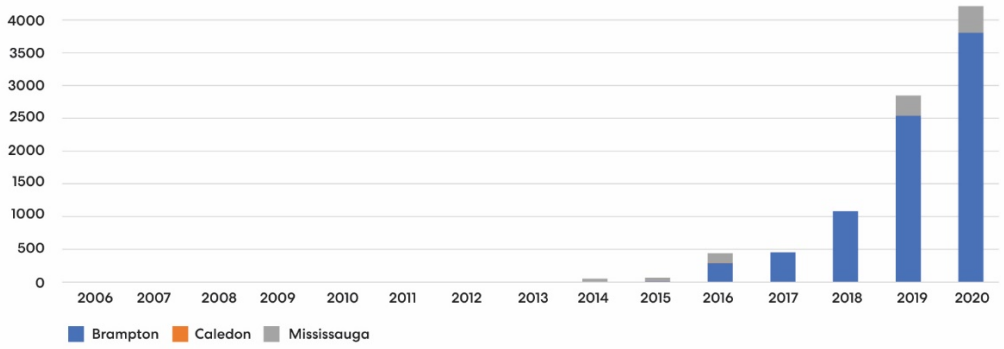
Re: Update to Peel Region Intensification Analysis Memo (July 2020)

Cumulative New Unit Growth (2006-2020):



As per the above graph the Region has seen steady rate of new unit growth across all three local municipalities from 2006-2020.

Secondary New Unit Growth (2006-2020):

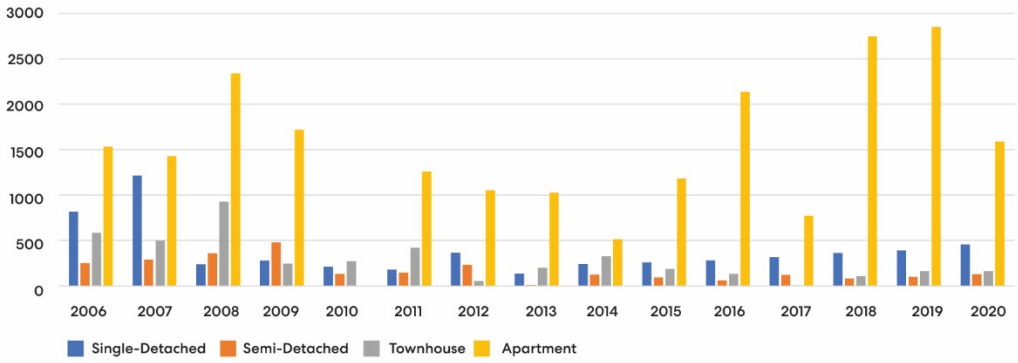


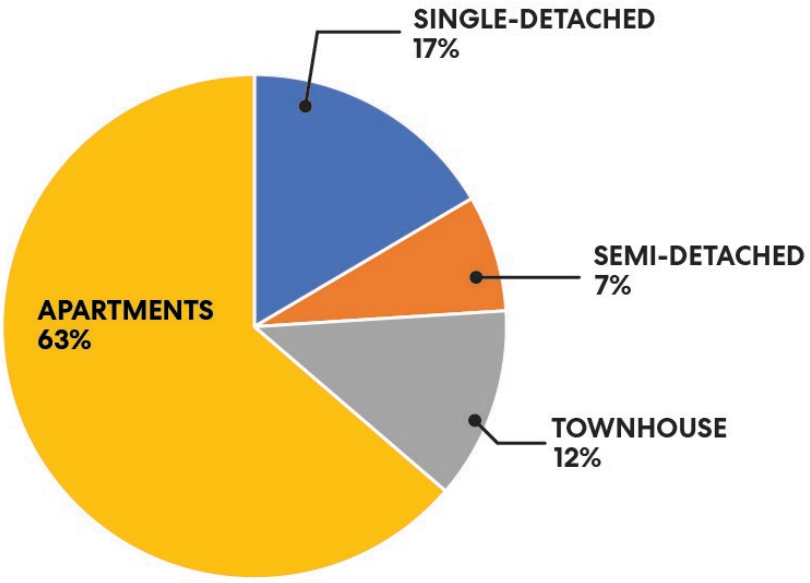
The growth in secondary suites is primarily focused in Brampton, starting in 2015 (when secondary suites were first permitted) and accelerating in 2017, after requirements for parking, unit size and registration were relaxed. By 2020, Secondary Suites represented 32% of total new units in Brampton and were mainly found across single-detached homes.

Date: 2021-08-12

Re: Update to Peel Region Intensification Analysis Memo (July 2020)

Mississauga New Units by Typology (2006-2020):



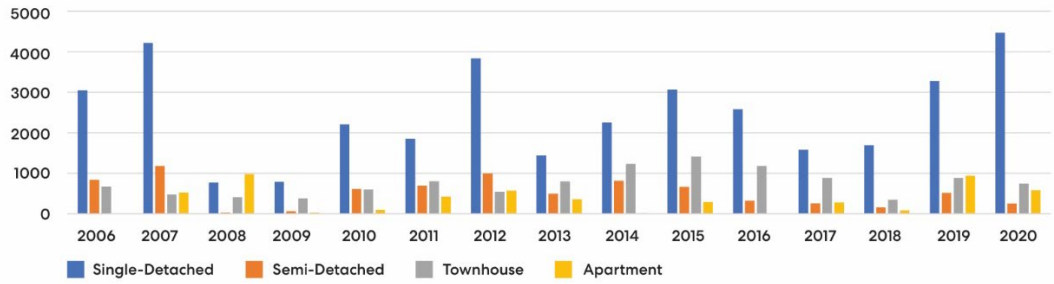


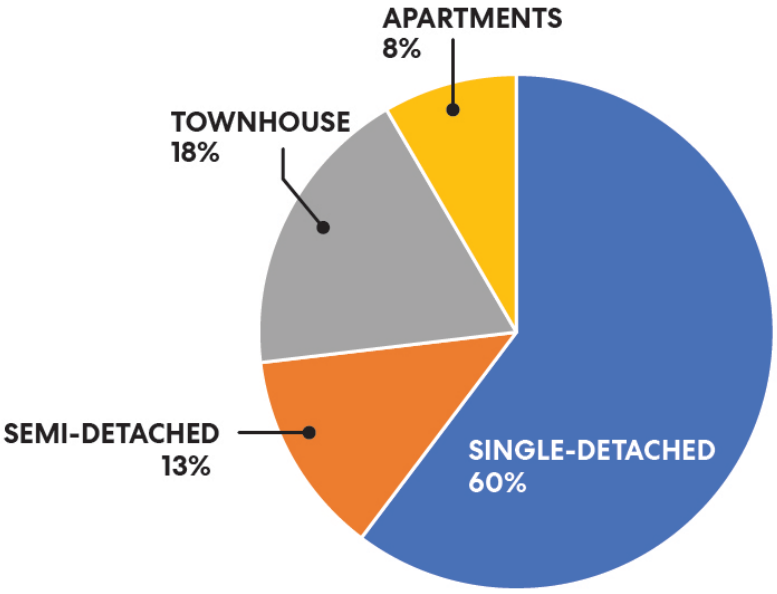
The City of Mississauga experienced consistent unit growth in 2006-2019; 2020 being the exception, with over 68% of new unit delivery, in 2020, in form of apartments.

Date: 2021-08-12

Re: Update to Peel Region Intensification Analysis Memo (July 2020)

Brampton New Units by Typology (2006-2020):



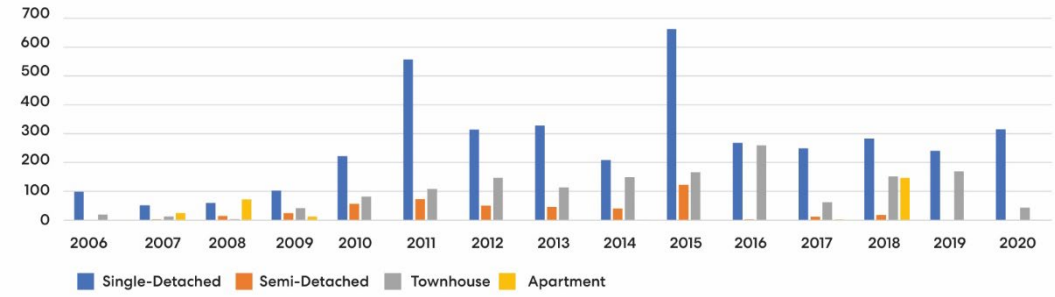


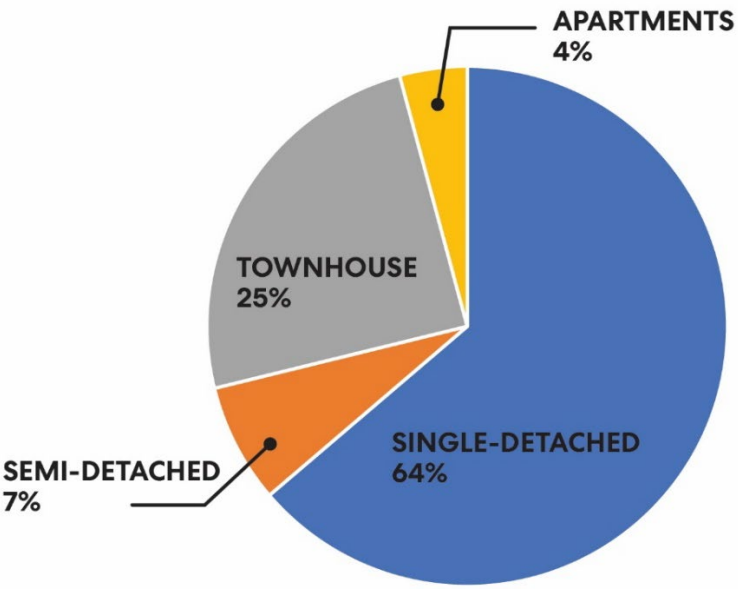
The City of Brampton experienced peak new unit growth in the year 2020. New unit growth in Brampton in 2006-2020 was primarily low density; over 73% of new unit delivery in Brampton, in 2020, was in the form of single detached house.

Date: 2021-08-12

Re: Update to Peel Region Intensification Analysis Memo (July 2020)

Caledon New Units by Typology (2006-2020):



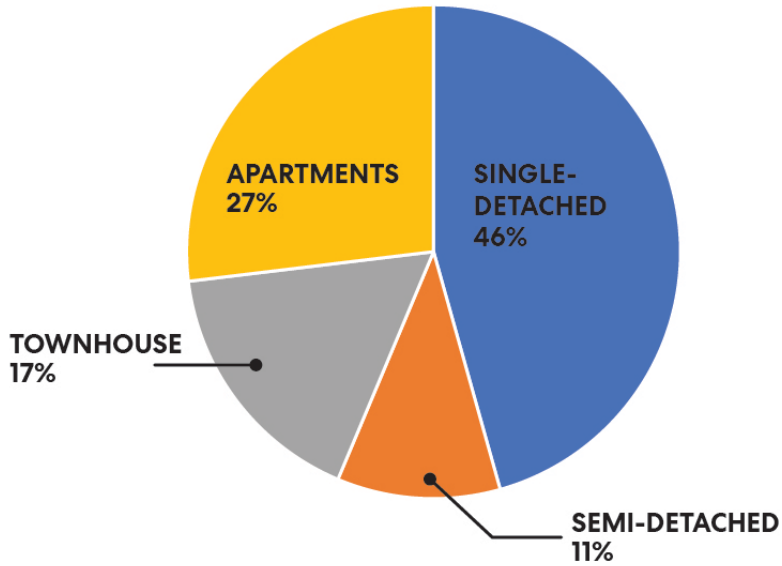


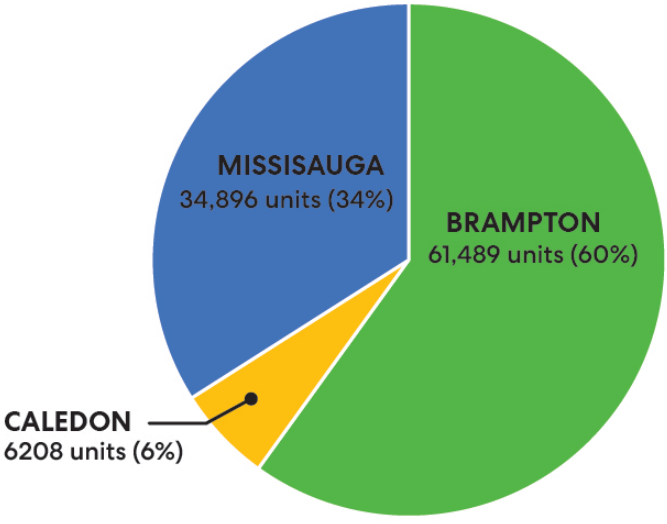
The Town of Caledon has experienced steady increase in growth since 2011. Over 87% of new unit delivery in Caledon, in 2020, was in the form of single detached houses.

Date: 2021-08-12

Re: Update to Peel Region Intensification Analysis Memo (July 2020)

Peel Region New Units by Typology (2006-2020):





Peel Region's new unit growth in 2006-2020 occurred primarily in Brampton with over 61,000 units. 46% of the growth in Peel Region was in the form of single-detached housing. This suggests that the majority of Peel Region's built form is occurring through low density growth.

4. New and Emerging SGAs

In consideration of the many options available to Peel Region and its area municipalities to accommodate their respective growth allocations to 2051, and to meet the minimum density targets, it is important to confirm the definition and function of Strategic Growth Areas. As defined by the in-force (August 2020) Growth Plan, these areas are:

> *"Within settlement areas, nodes, corridors, and other areas that have been identified by municipalities or the Province to be the focus for accommodating intensification and higher-density mixed uses in a more compact built form.*
> *Strategic growth areas include urban growth centres, major transit station areas, and other major opportunities that may include infill, redevelopment, brownfield sites, the expansion or conversion of existing buildings, or greyfields. Lands along major roads, arterials, or other areas with existing or planned frequent transit service or higher order transit corridors may also be identified as strategic growth areas."*

While compact development, meeting and possibly exceeding the minimum requirements, is being planned for the Designated Growth Areas this growth is not considered to be "intensification". Strategic Growth Areas, such as MTSAs, outside of the built boundary will still provide important opportunities for a range of higher-density and mixed-use development at transit-supportive densities.

5. Market Conditions

Since the Region of Peel Intensification Analysis was prepared, the COVID-19 pandemic has continued to impact housing market trends. In the GGH, housing affordability has continued to deteriorate. While work from home arrangements have provided some people with the flexibility to live further away from city-centres, where many jobs are concentrated, in search of larger homes and more space. These trends could present some constraints for Peel Region in achieving anticipated rates of intensification over the short-term.

However, the purpose of this memorandum is to provide insights into the opportunities and constraints associated with accommodating intensification between the 2041-2051 period. Over the long-term, which includes the 2041-2051 period, it is likely that many of the impacts of the COVID-19 pandemic will be in the rear-view mirror and long-term demographic trends will continue to influence housing choice. The long-term trends that are likely to present opportunities for the Region to achieve its intensification target include strong migration and an aging demographic. Also, during the 2041-2051 period there will be fewer opportunities to develop greenfield and whitebelt lands in Peel Region, which will likely result in a larger concentration of development occurring within the built- up area, including in the SGAs, as these locations will have the transit infrastructure and community amenities to accommodate growth.

As illustrated in the Region of Peel Intensification Analysis, many of the SGAs, particularly the MTSAs, were not anticipated to meet their density targets by 2041. Based on forecasts provided by Peel Region for the 2041 to 2051 period, growth will be distributed across the SGAs.

- The UGCs in Mississauga and Brampton will continue to be an important destination for population and employment growth with the build-out of Square One and investments being made by the City of Brampton in the Downtown.
- Among the MTSAs, station areas along the Hurontario LTR, Dundas BRT and QueenBRT are also expected to play a larger role in accommodating population and employment growth during the 2041 to 2051 period, as there is anticipated to be transit infrastructure in place to support these new persons and jobs.
- Other Strategic Growth Areas, such as Uptown Brampton, Downtown Brampton and Bramalea, are also expected to play an outsized role in accommodating growth in the latter half of the forecast horizon. Based on the capacity available in the SGAs to accommodate growth, it is reasonable to assume that they can accommodate the forecast intensification during the 2041 to 2051 period.

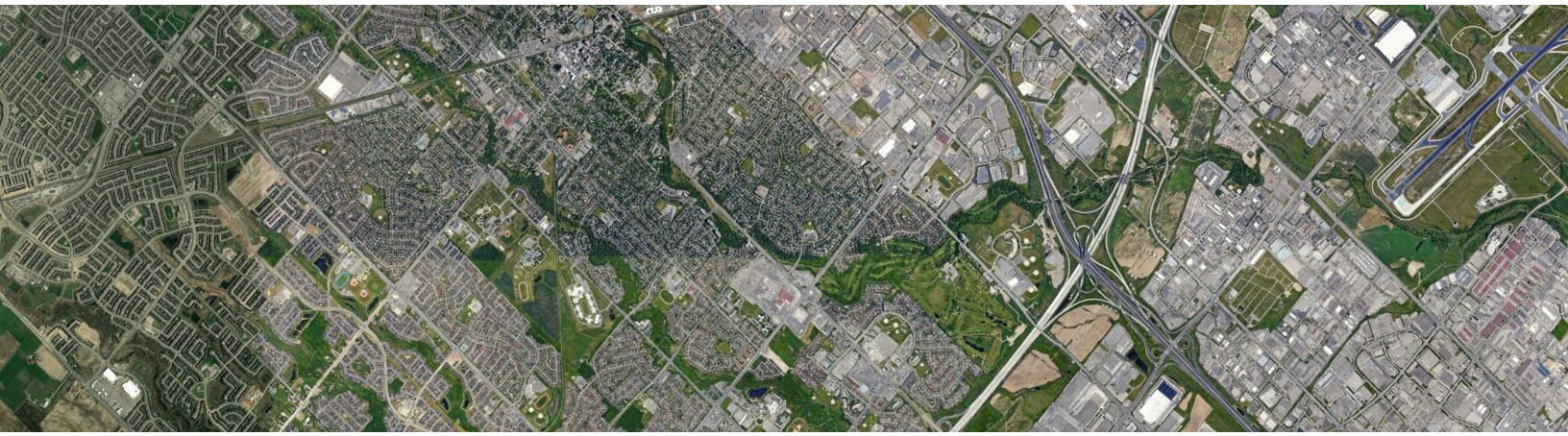
6. Key Findings and Final Recommendations:

The findings and recommendations of our original (July 2020) Intensification Analysis Memo, beginning in Section 4.2, are still applicable. The addition by the in-force (August 2020) Growth Plan of 10 years, 310,000 people and 100,000 jobs to Peel Region's planning horizon will still allow for the achievement of the required density targets. In consideration of the changes to Provincial policy and the emerging directions of Peel Region's Official Plan process over the past year, it is especially important to carefully consider that:

- Achieving the target densities for some Strategic Growth Areas, including some Major Transit Station Areas, will likely occur beyond 2051;
- Planning for growth in Designated Greenfield Areas (e.g. Heritage Heights, Brampton), especially at densities greater than 50 people and jobs per hectare, may have some impact on the magnitude and timing of intensification within the built boundary and especially Strategic Growth Areas;
- Infrastructure investments to support both intensification and greenfield development, as currently being considered in the on-going Official Plan Review process, will have significant financial and growth management impacts to and likely beyond 2051:
- There are sufficient opportunities to accommodate intensification within delineated built-up areas in Peel Region to meet minimum intensification target, as the Region plans to accommodate its 2051 population and employment targets, being 2.28-million people and 1.07-million jobs respectively; gentle density including the creation of secondary suites in lower density neighbourhoods will continue to play a key role in this trend.
- The allocation and prioritization of growth to areas within and outside the built boundary is a strategic decision, with a range of inter-connected implications, that must be made by Peel Region and its area municipalities; and
- A robust and continuous monitoring program should be put in place by the Region, to assess current and emerging development trends including the mix and density of housing types. Such a program will further support the proactive planning by the Region and the area municipalities, including making important decisions regarding the prioritization of infrastructure and service delivery.
- Intensification within existing low-rise residential neighbourhoods will contribute to overall intensification in Peel Region. Specific policy updates will be guided by on-going studies by local municipalities.

Region of Peel
working with you

REGION OF PEEL
INTENSIFICATION ANALYSIS



JULY 2020

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ACKNOWLEDGEMENTS

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Craig Ferguson

TABLE OF CONTENTS

EXECUTIVE SUMMARY

PURPOSE

The Intensification Analysis memo was prepared to support the parallel MTSA Study for Peel Region as part of the Peel 2041 Municipal Comprehensive Review (MCR). The memo supports the Region's analysis and validation of Strategic Growth policies and has been assembled as a separate deliverable to be integrated with the larger regional MTSA Study. The memo consists of a review of historic intensification in the Region, an assessment of the capacity and potential of the Strategic Growth Areas based on the Region's growth scenario, and draft policy directions stemming from this analysis.

HISTORIC RATES OF INTENSIFICATION

Intensification is generally defined as any new residential development within the existing built-up urban fabric, which may occur on undeveloped or previously developed land – what makes it intensification is its location within the area defined as already urbanized.

Between 2006-2018, the cumulative intensification rate indicates that Peel Region has met the 40% minimum target, however after 2009, less than 40% of new units were within the built-up area. Historically, the City of Mississauga has experienced consistent unit growth in 2006-2018, with over 61% of new unit delivery in the form of apartments comprising of over 80% of all new unit growth for apartments across Peel Region as a whole. In contrast, new unit growth in Brampton in 2006-2018 was primarily low-density; with over 59% of new unit delivery in Brampton in the form of single detached houses. Over 86% of all new single-detached units delivered across Peel Region as a whole occured in Brampton from 2006-2018. Town of Caledon experienced low new unit growth from 2006-2010, with most new unit growth in the form of single-detached houses and townhouses.

SGA EXISTING DENSITIES AND FORECAST GROWTH

The Intensification Analysis identifies and evaluates existing (2016) densities within each of the Strategic Growth Areas (SGAs) in Peel Region. The analysis also includes an evaluation of the forecast densities allocated to each SGA to 2041, based on the Region's draft Growth Allocation. This analysis included a high level examination of Urban Growth Centres, Major Transit Station Areas, and other Strategic Growth Areas in Brampton and Mississauga.

STRATEGIC MARKET DEMAND ASSESSMENT

Each municipality is expected to accommodate a larger share of household growth in apartment units in comparison to the existing stock of housing. SGAs will play an important role in achieving this future mix, as the majority of household growth in the SGAs is expected to be accommodated in apartment units and to a lesser extent, townhouse units. There are a variety of demographic, economic and housing market factors that are likely to influence the rate of intensification in the SGAs and household growth in higher densities. The analysis examines demographic and housing trends, land supply, new home construction and prices, rental market, access to amenities and transit and economic trends.

There are a number of factors that are expected to influence Region-wide development within the SGAs. As these SGAs represent an important opportunity for intensification within the Region, the intensification target can be achieved. Factors that are likely to result in increased development within the SGAs include population growth in the 20 to 39 age group and age 65 and over age cohort are likely to increase demand for apartment units over the forecast horizon.

There may also be renewed interest in purpose-built rental housing, driven, in part, by low vacancy rates and increased interest from institutional investors This is likely to help the Region achieve the rate of intensification in the SGAs and forecast housing mix.

Employment is one of the strongest predictors of net migration and housing growth within a municipality. The significant employment growth forecast in Peel Region and neighbouring municipalities will impact population growth and demand for housing in the Region.

Has the Region set an appropriate Intensification Target?

The Region's intensification targets are aspirational, yet achievable. To 2031, the Region is using an intensification target of 51%, which is the minimum intensification target in A Place to Grow (50%). In 2031-2041, the Regional intensification target increases to 60%. It does appear that the intensification target is achievable. In the early part of the forecast horizon (to 2031) the majority of the growth is anticipated to occur in Brampton, where most new development will likely occur in the DGA. That being said, the City of Brampton has been proactive in investing in the Downtown UGC (i.e. Riverwalk, new University campus and Centre for Innovation) to help attract future development to the area and increase rates of intensification. Post-2031, as the DGA in Brampton begins to build-out and growth shifts to the built-up areas in Mississauga and Brampton, the amount of growth accommodated through intensification will likely increase and the 60% intensification target could be achieved.

How can the market demand Opportunities and Constraints be address to meet the intensification target?

Certain market demand opportunities and constraints, such as demographics and household characteristics, will be beyond the control of the Region. That being said, the aging population and escalating house prices are expected to result in increased demand for apartment units in the Region. Therefore, if the Region and local municipalities are proactive in ensuring community infrastructure, active transportation and the public realm improvements are in place in the SGAs, it could help attract higher-density forms of development to these locations and achieve the intensification target.

What SGAs should the Region be focusing on to 2041? Does growth allocation need to be shifted?

The SGAs that are identified as have the highest potential for redevelopment based on community considerations, mobility, market readiness and land use should be the focus for growth to 2041. It does not appear to be necessary to shift the growth allocation among the SGAs, as most of the growth is already be directed towards UGCs and Priority Transit Corridors, which have the highest potential for intensification and redevelopment.

EXECUTIVE SUMMARY

SGA HIERARCHY

Growth efforts should be focused within Built Up Urban Areas, with secondary priority to Designated Greenfield Areas. Within the BUPA, the Downtown Mississauga and Downtown Brampton Urban Growth Centres are the highest priority areas for intensification in the Region due to their strategic location within their respective municipalities, access to higher-order transit, and market potential. Secondary to Urban Growth Centres are Major Transit Station Areas and Corridors, which are categorized based on their physical and geospatial relationship as singular nodes or connected corridors. The MTSA GO Station and Transit Hub nodes play an important role in terms of mobility and future growth potential. The MTSA Corridors are categorized by function and priority, as Primary MTSA Corridor, Secondary MTSA Corridor and Mobility MTSA Corridors. Tertiary, are the SGAs identified at the local municipal level. The City Mississauga identifies Community Nodes and Major Nodes under the Official Plan, and the City of Brampton identifies Town Centres and Major Growth Areas in the 2040 Vision Plan.

KEY OBSERVATIONS AND RECOMMENDED POLICY-IMPLEMENTATION APPROACHES

Arising from a broad assessment of the Region's intensification framework and growth rates, including historical and forward-looking analyses, it is recommended that the Region consider adopting as policy a new intensification hierarchy as introduced in section 4.0 of this report. This hierarchy, shown on page 56, will further support the Region's current policy directions by:

- Reinforcing the primacy of the Brampton and Mississauga UGS as the most strategically important and highest density intensification areas in the Region;
- Establishing MTSAs as important, yet diverse, intensification nodes in ways that respond differently to a number of factors including transit service levels, growth rates, neighbourhood context, and infrastructure requirements; and
- Positioning other areas, including local community nodes and town centres, as being lower priority and yet more flexible locations for intensification.

PEEL REGION STORY

Peel Region has experienced and will continue to experience significant housing, job and population growth. This report aims to capture the shape, typology and speed of this growth and how it has changed historically. The following illustrates a brief snapshot of the Peel Region story:

POSTWAR GROWTH AND THE SUBURBAN DREAM

1945-1960

Following the Second World War, Peel enjoyed the economic boom that accompanied the return of veterans from combat. Growth was aided by large investments in infrastructure. Though the first sections of the Queen Elizabeth Way (QEW) opened in the 1930s, by the 1950s the highway supported commercial and residential development in the communities surrounding it, especially in Clarkson, Lorne Park, and Port Credit. Further north, the first stretch of Highway 401 through Peel, which ran between Highway 10 (Hurontario Street) and Highway 27, opened in November 1958.

Port Credit Weekly, February 23, 1956 (PAMA Archives)

PLANNED COMMUNITIES

1945-1980

Limits on the growth of planned communities in Peel during the 1950s eased during the following decade. The Province helped fund major infrastructure projects, including new sewer and water lines, and the expansion of sewage facilities at Clarkson and Lakeview. Roads continued to expand, as old rural concessions turned into modern 4-lane arteries. These projects helped Peel deal with a boom sparked by rapid industrial and residential growth in Toronto, which saw companies and homeowners look west for more room and lower costs.

Parade through the community of Bramalea. Photo around 1965 Brampton Guardian fonds, 2010.299, PAMA Archives.

AMALGAMATION AND GROWTH

1974-2011

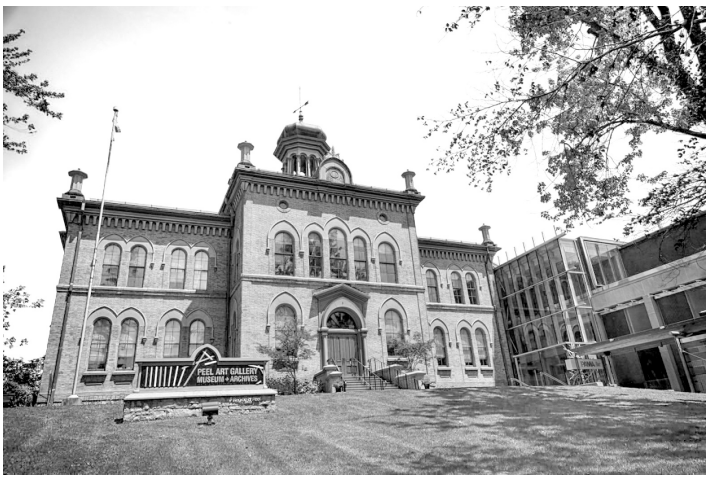
A series of amalgamations beginning in the late 1960s reflected the rapid growth of Peel and transformed its municipal organizations. Between 1971 and 2011, the population of Peel grew by over 500 percent from 264,000 to 1,300,000.

REGION-WIDE GROWTH

2011 TO TODAY

Peel has continued to see rapid growth throughout the Region, across all three municipalities. During the five year period between 2011 and 2016, the population of Peel grew from 1,296,809 to 1,381,739, at a growth rate of 6.5%. Peel has the second largest population in the GTA, behind Toronto (2,731,571). Peel's Strategic Plan aims to achieve a community where growth is well managed and sustaianbility and long-term benefits are prioritized for future generations.

Home advertisements in the 1970s. (Bramptonist.com)



Peel Art Gallery on Main St, Downtown Brampton

1.0 VISUALIZING HISTORIC INTENSIFICATION

1.1 INTENSIFICATION: A LAND ACTIVITY MEASUREMENT

Intensification is one of several descriptions and ways to measure development and its use of land. The Neptis Foundation defines residential intensification as a key element in most growth management efforts: moving the focus of new residential development from peripheral farmland to existing built places. In Ontario, intensification is used to describe development of a site within an urban area at higher densities than currently exist, which can be achieved in a variety of ways; the redevelopment of vacant or brownfield lands; infilling of spaces between existing buildings; or expansion or conversion of existing buildings. In contrast to spread out low-density sprawl, intensification is promoted as a way to achieve several benefits, including decreased consumption of greenfield land, decreases in automobile use in favour of active transportation, and efficient use of public urban infrastructure such as water and sewer pipes as well as "soft" infrastructure such as public schools. Development in areas that are already urbanized plays to a growing city's strengths rather than spreading its resources over an ever wider-geography.

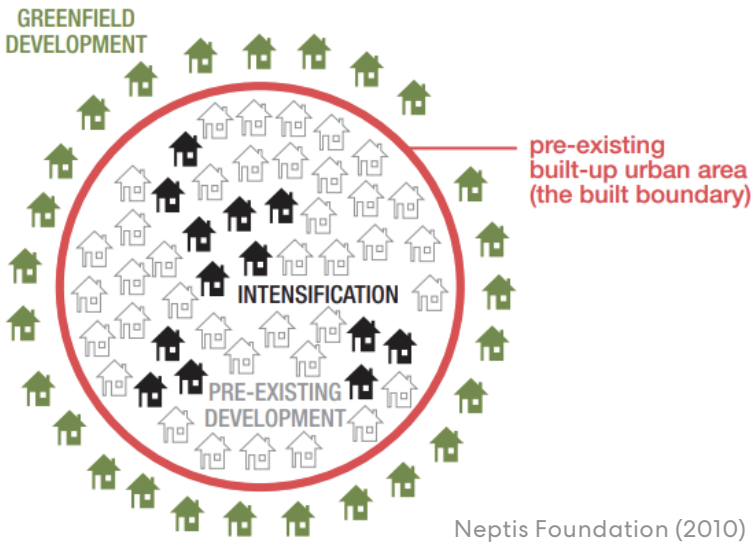
The Government of Ontario generally defines intensification as any new residential development within the existing built-up urban fabric, which may occur on undeveloped or previously developed land – what makes it intensification is its location within the area defined as already urbanized. The Growth Plan for the Greater Golden Horseshoe (GGH) emphasizes that intensification and optimizing the use of the existing land supply represents a new approach to city-building in the GGH, one which concentrates more on making better use of our existing infrastructure, and less on continuously expanding the urban area. In order to optimize the use of the existing land supply to avoid over-designating new land for future urban development, the Growth Plan (2017) outlines intensification and density targets to manage projected growth.

This study begins with this definition and acknowledges that intensification is also a process of commercial, industrial, and retail development that support residential activities; these non-residential uses also contribute to the consumption of land in the built-up urban fabric and peripheral areas.

Methodology

With this working definition of intensification, the following study is a longitudinal analysis of building permits in the Region of Peel for residential development between 2006 to 2018. The location of residential intensification ("where"), the magnitude and type of development ("how much and what kind of change"), and the time of development ("when") have been analyzed for Brampton, Mississauga, and Caledon, as well as across the Region of Peel.

Neptis Foundation. (2010). Implementing Residential Intensification Targets: Lessons from Research on Intensification Rates in Ontario. Toronto: Neptis Foundation. // Hayden, D. (2004). A Field Guide to Sprawl. New York.



Neptis Foundation (2010)

"Where?"

Understanding land consumption and the use of existing buildings for residential activities provides a picture of how sustainably developed or previously undeveloped land has been used. The spatial distribution of new construction and second units were mapped to understand where growth in residential built form occured. **New units** represent an intensification of land and **second units** represent the category of permit issuance that represented the most significant intensification of existing buildings *and* land.

"How much & what kind of change?"

Understanding the built form of building permit activities helps to understand how intensely land resources and how the *existing* built form is being used. Between 2006 and 2018, building permits were issued for a variety of different jobs including conversions, relocations, demolitions, new construction, and second units. These permits resulted in either an addition of residential units, loss of units, or no change in the number of units. The analysis provides a breakdown of the net change in units by building type, including detached dwellings, semi-detached dwellings, townhouses, and multi-unit apartments.

"When?"

Patterns of development and land intensification can be understood as happening at different *rates* of intensification. Building permit activity was analyzed for when residential units were added, the year over year volume of units added, and what kind of units were added.

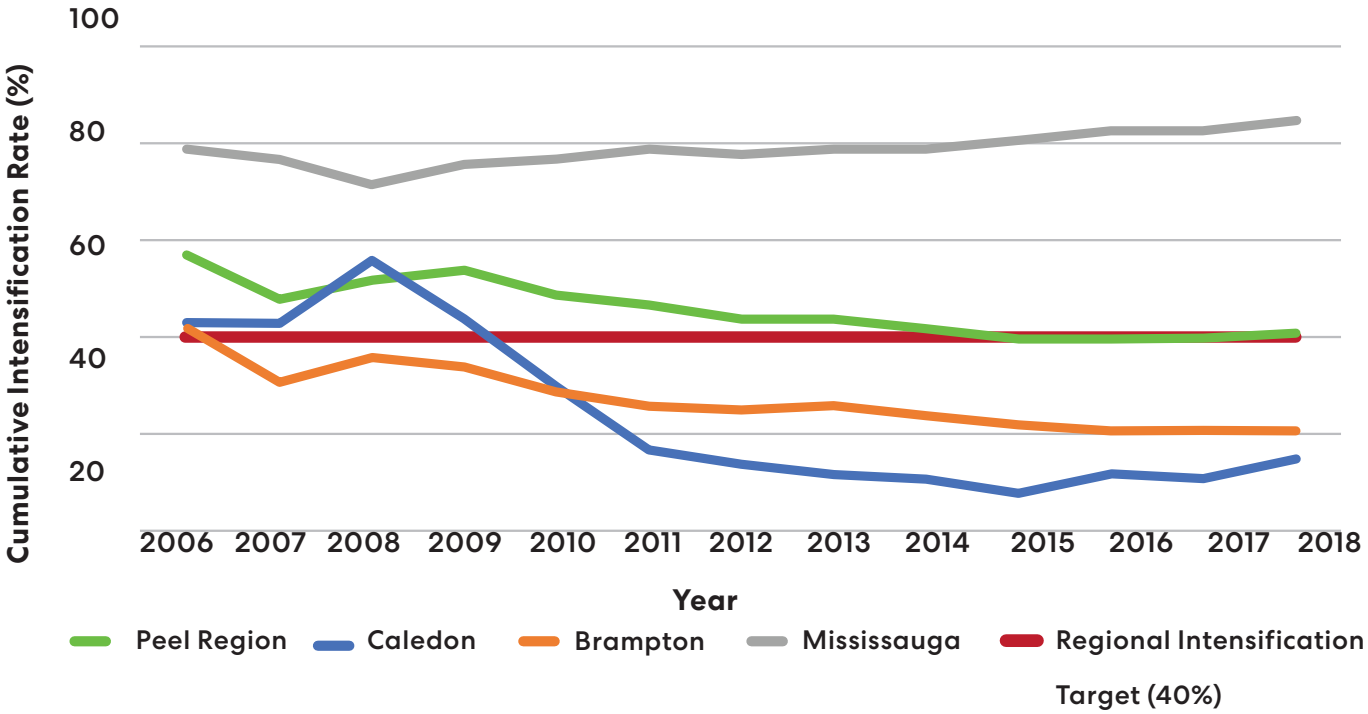
1.2 INTENSIFICATION AND NEW UNIT GROWTH

Intensification Targets

Intensification targets for the Region according to Regional Official Plan (2016) Policy 5.5.3.2.4 "Require that by 2015 and for each year until 2025, a minimum of 40% of the Region's residential development occurring annually to be located within the built-up area."

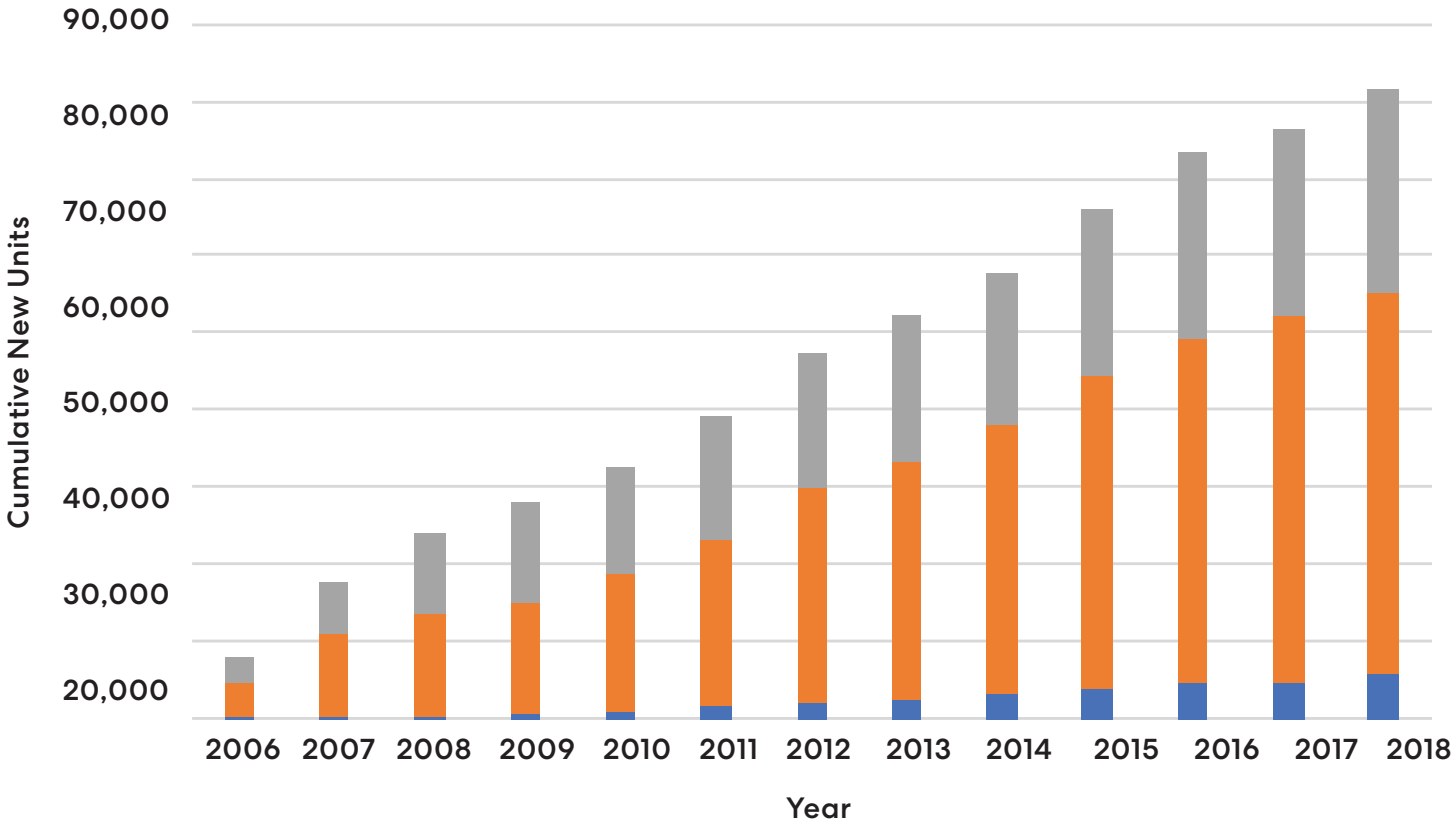
The figure below illustrates the Cumulative Intensification Rate (2006-2018) across the three municipalities and Peel Region as a whole, in comparison to the 40% target set out by the Regional Official Plan. Peel Region has met the 40% minimum target, however after 2009, less than 40% of new units were within the built-up area.

Cumulative Intensification Rate (%), 2006-2018



The Region has seen a steady rate of new unit growth across all three local municipalities from 2006-2018. In 2006, the Region had 359,042 occupied dwelling units (PPU). Since then, the Region has seen an increase of 81,406 new unit growth between 2006-2018 - a total of 440,406 occupied dwelling units.

Cumulative New Unit Growth, 2006-2018



Historic Population Growth (2006-2016)

	2006	2011	2016
Peel Region Population	1,159,405	1,296,814	1,381,739
Occupied Dwelling Units (PPU)	359,042	402,939	430,180
People / Dwelling	3.23	3.22	3.21

Source: Statistics Canada

1.3 HISTORIC INTENSIFICATION IN MISSISSAUGA

Location

- Concentration of new low-density buildings within Designated Greenfield Areas
- Clusters of high-density apartment buildings located within the Urban Growth Centre, with significant intensification occurring adjacent to and outside of the Urban Growth Centre
- No visible pattern of growth concentrated within MTSAs from 2006-2018
- High density built forms in Clarkson, Port Credit, Erin Mills Town Centre, Eglinton and Hurontario

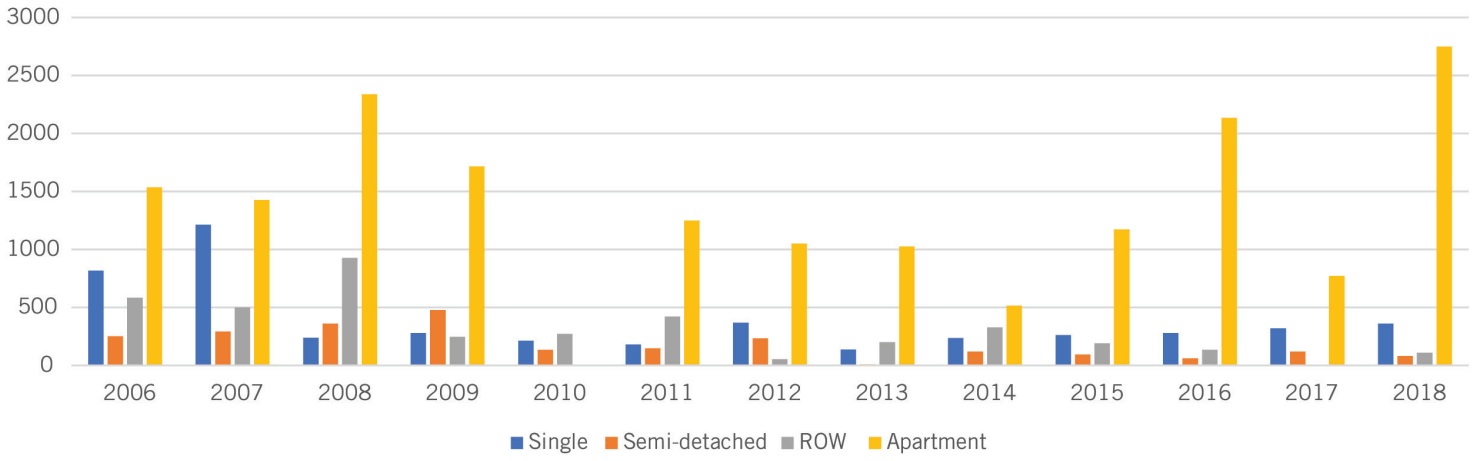
Timing

- Growth spike in 2007-2008 could be a result of 'new' Growth Plan policies in 2006
- Low growth of new residential units in 2010-2011 as a response to 2008-2009 economic recession
- Inference that ground-related units are built out in Mississauga, where people have started to look for these types of units in other municipalities, rather than adjusting their preferences to apartment units
- Ninth Line DGA lands recently approved by Council ROPA 33

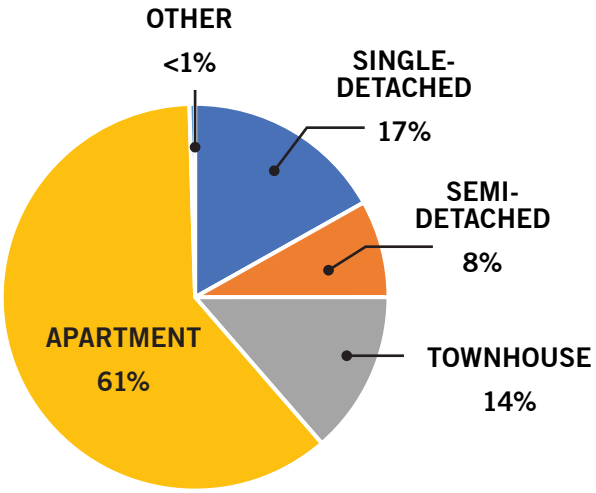
Typology

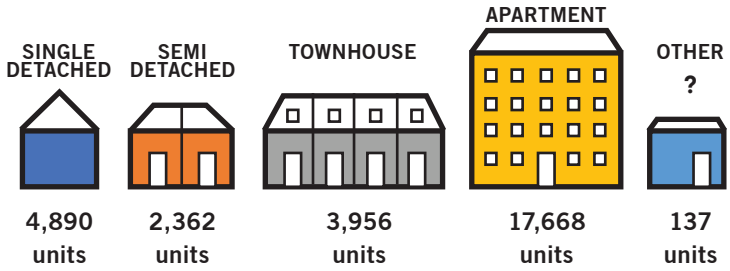
- Intensification within Mississauga primarily through apartment building typologies
- Noticeable distribution of second unit additions north of Dundas St, in contrast to new building additions concentrated south of Dundas St from 2012-2018
- Lower income areas to the north associated with 'gentle density' (ie. secondary units), in contrast to higher income areas to the south that have newly developed buildings. This observation is likely related to market demand to the south, which has better access to transit.
- Larger distribution of second units to the north could be related to income levels and trend of multi-generational households, whereas units in the south generally have larger and older lots.

Mississauga New Units by Typology (2006-2018)



Mississauga New Units by Typology (2006-2018)





Total New Units Built: (2006-2018) **29,013 units**

- The City of Mississauga experienced consistent unit growth in 2006-2018, with over 61% of new unit delivery in the form of apartments.
- Single detached houses saw an increase of over 17% of new units respectively in Mississauga.
- Over 80% of all new unit growth for apartments across Peel Region as a whole, occurred in Mississauga

APARTMENT

SEMI DETACHED

TOWNHOUSE

SINGLE DETACHED

1.4 HISTORIC INTENSIFICATION IN BRAMPTON

Location

- Growth primarily occurring on the edges of the Built Up Area, within Designated Greenfield Areas from 2006-2018 contributing to intensification
- High-density intensification primarily occurring within Urban Growth Centres
- Limited relationship between new unit growth within or along MTSA corridors between 2006-2018. However, recent permit activity around Trinity Commons and development at Mississauga Rd and Steeles Ave is beginning to suggest a trend towards intensification along key transit nodes in Brampton

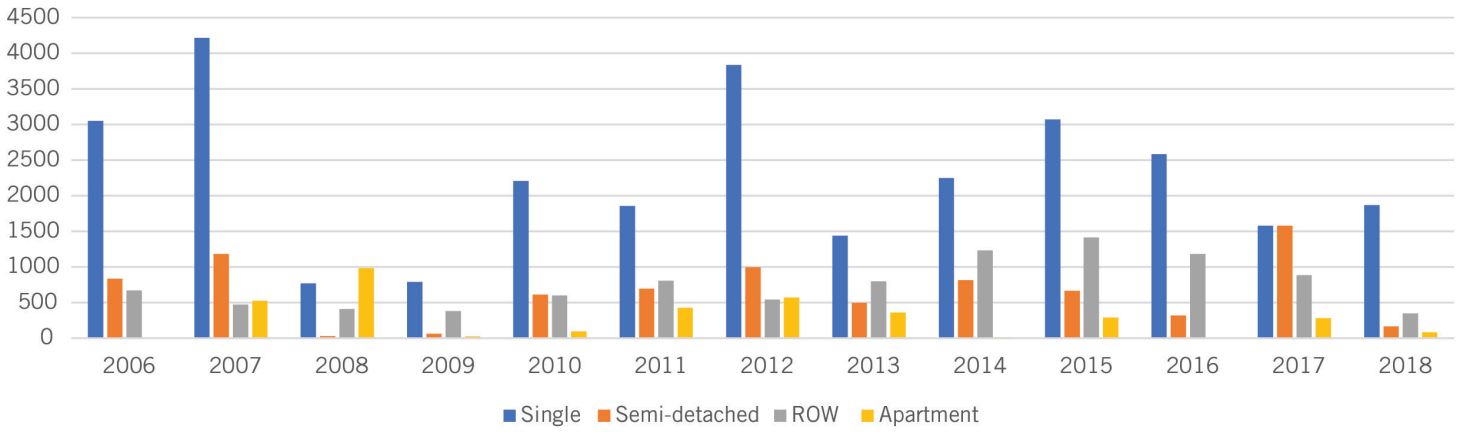
Timing

- Peak of single-detached dwellings in 2007, followed by little growth in 2008-2009 due to economic recession
- Steady growth of low-density units from 2010-2018 in the form of single-detached housing
- Many the Town Centres (identified in the Brampton 2040 Vision) had low existing densities in 2016. Intensification rates are steadily increasing along key transit nodes, however will continue to trend within Designated Greenfield Areas in the near term.

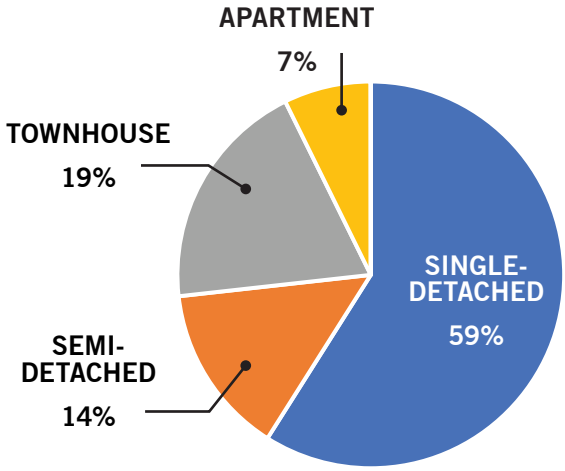
Typology

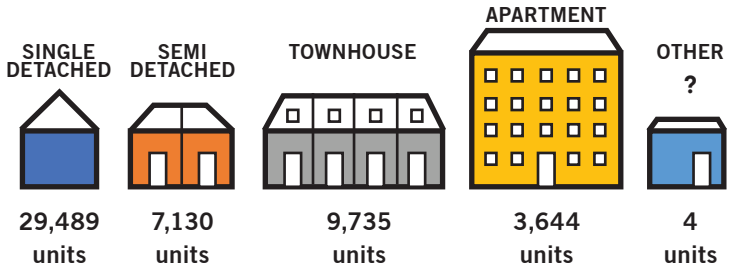
- Growth primarily occuring in the form of single detached housing, with some development in the form of semi-detached and townhouses
- Slow transition and market uptake of higher density housing within Brampton (apartment units)
- Ground-related housing is still very important and appears to be a sizable share of intensification in the form of new buildings, with some in the form of second units.

Brampton New Units by Typology (2006-2018)



Brampton New Units by Typology (2006-2018)





Total New Units Built: (2006-2018) **50,002 units**

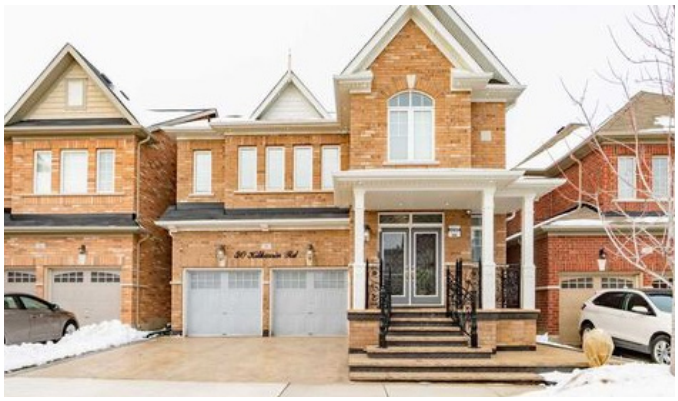
The City of Brampton experienced peak new unit growth in year 2007, and in 2012 onwards. New unit growth in Brampton in 2006-2018 was primarily low-density; over 59% of new unit delivery in Brampton was in the form of single detached houses. Over 86% of all new single-detached units delivered across Peel Region as a whole occured in Brampton from 2006-2018. A small percentage of new unit growth occurs in the form of mid to higher-density housing in townhouses and apartments.

APARTMENT

SEMI DETACHED

TOWNHOUSE

SINGLE DETACHED



1.5 HISTORIC INTENSIFICATION IN CALEDON

Location

- In proportional comparison to Brampton, Caledon yields more uptake in new buildings, notably in Caledon East. Similar to southern areas of Mississauga, this could be attributed to a specific market profile geared towards more affluent end-users from the surrounding lower density neighbourhoods
- New unit growth occuring in proximity to, but not within MTSAs
- Minor permit activity across rural area, however generally low rates of intensification in contrast to other municipalities within the Region

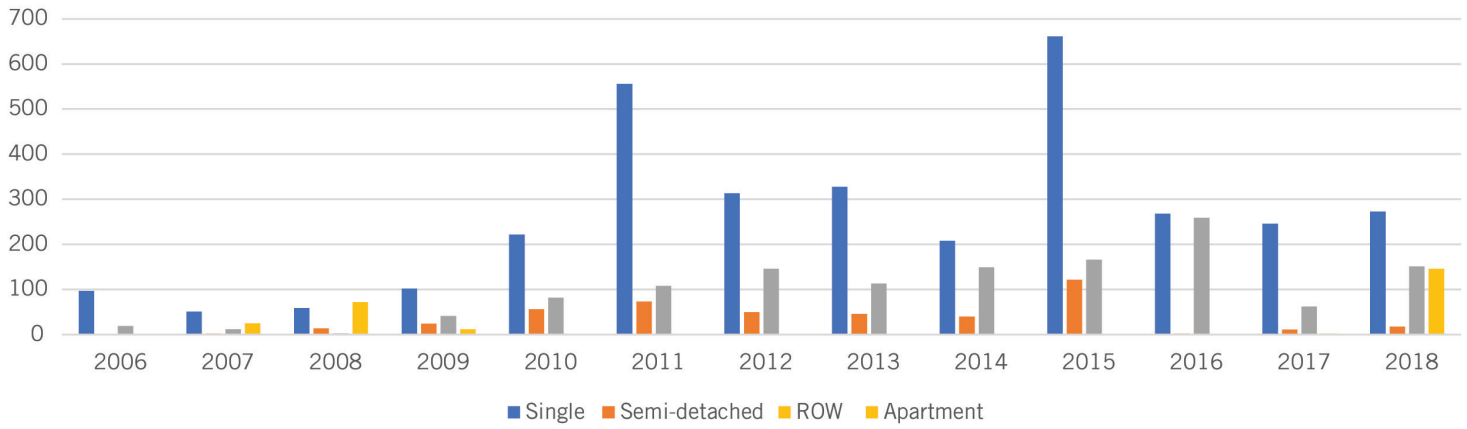
Timing

- Accelerated development in recent years, from 2010-2018 which could be related to fewer new ground-related units being available in other parts of the Region
- Steady growth of new residential units within Caledon, with peak unit growth in 2018

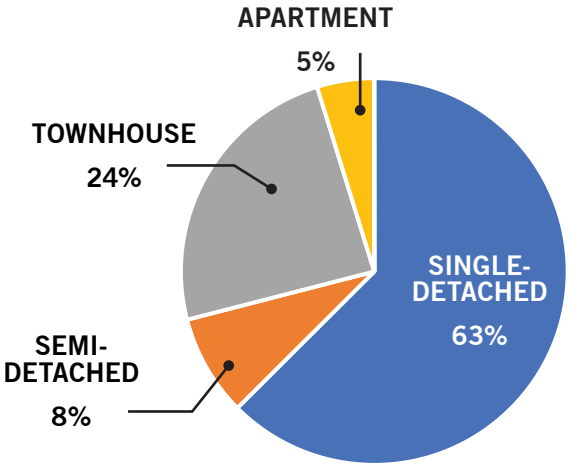
Typology

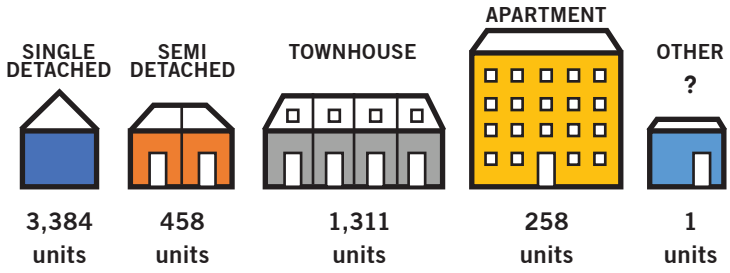
- Very little second-unit development, likely attributed to the age of new housing and income levels
- Noticeable uptake of higher density housing typologies in 2018, with visible trend of increasing higher-density housing typologies in the form of apartments and townhouses.
- Apartment units occurring primarily within Built Up Areas

Caledon New Units by Typology (2006-2018)



Caledon New Units by Typology (2006-2018)





Total New Units Built: (2006-2018) **5,412 units**

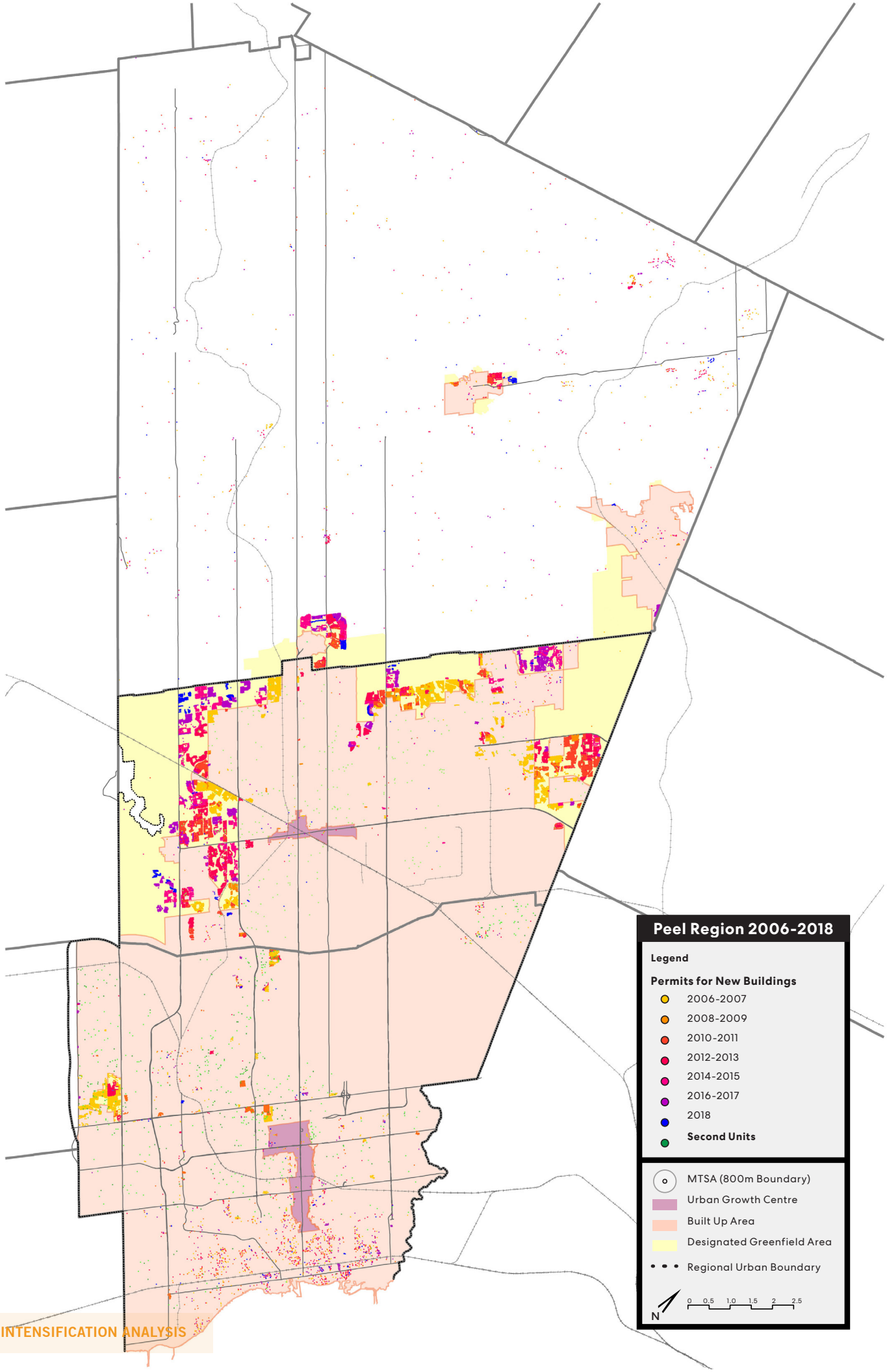
Historically, the Town of Caledon experienced low new unit growth from 2006-2010, with a steady increase following 2011. The majority of new unit growth in Caledon is in the form of single-detached housing with 3,384 new units and townhouses with 1,311 new units. A small percentage of new unit growth occurs in the form of apartment and single detached housing.

APARTMENT

SEMI DETACHED

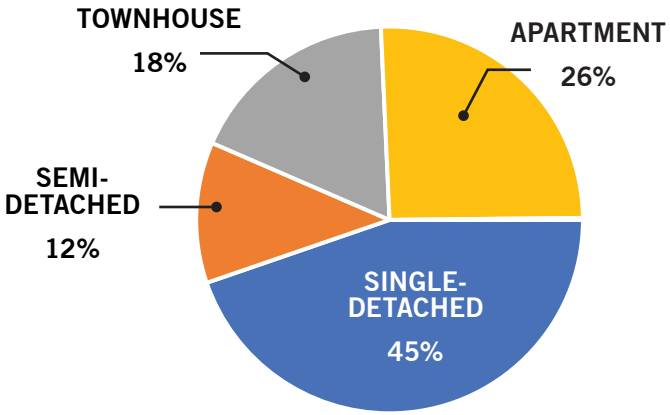
TOWNHOUSE

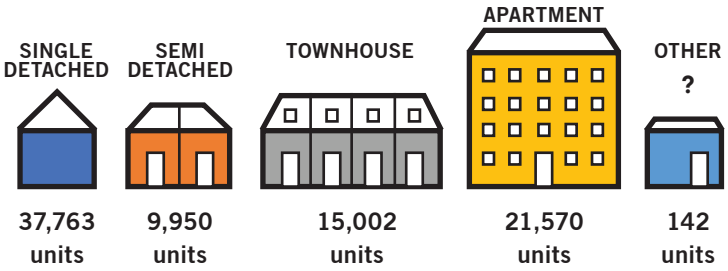
SINGLE DETACHED


Peel Region 2006-2018
Legend
Permits for New Buildings
2006-2007
2008-2009
2010-2011
2012-2013
2014-2015
2016-2017
2018
Second Units
MTSA (800m Boundary)
Urban Growth Centre
Built Up Area
Designated Greenfield Area
Regional Urban Boundary
N
0 0.5 1.0 1.5 2 2.5

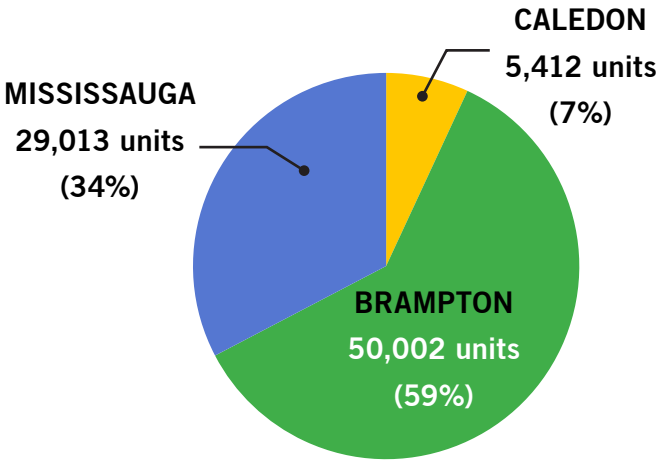
1.5 HISTORIC INTENSIFICATION IN PEEL REGION

Peel Region New Units by Typology (2006-2018)





Total New Units Built: (2006-2018) **84,427 units**



- Peel Region's new unit growth in 2006-2018 occurred primarily in Brampton with over 50,000 units; 45% of which was in the form of single-detached housing. This suggests that the majority of Peel Region's built form is occurring through low density growth.
- However, Mississauga's growth occurs primarily in the form of higher density apartments and townhouse units, making up over 80% of the overall new unit growth in the form of apartment dwellings across the Region.
- In comparison to Mississauga and Brampton, Caledon has experienced the lowest amount of growth, accounting for only 7% of new units in 2006-2018. Most of the new units in Caledon occur in the form of semi-detached housing.

See Appendix for maps that visualize historic rates of intensification between 2006-2018 across Mississauga, Brampton and Caledon. The maps illustrate building permits for new buildings from building permit data (MPAC) provided by the Region of Peel.

2.0 SGA EXISTING DENSITIES AND FORECAST GROWTH

The existing 2016 densities within each Peel Region SGA, as well as the forecast densities to 2041 were considered for this analysis based on information provided by Peel Region. The purpose of this analysis has been to compare target densities identified for policy areas in A Place to Growth; Growth Plan for the Greater Golden Horseshoe ("A Place to Grow") to existing densities and forecast densities to 2041. An evaluation of how growth allocated to other SGAs in Peel Region, including Town Centres, Major Growth Areas, Mall Nodes, Community Nodes and Major Nodes, compare to target densities contained in the local official plans has also been undertaken.

2.1 URBAN GROWTH CENTRES

Figure 1 summarizes existing and forecast densities for the Downtown Brampton and Downtown Mississauga Urban Growth Centre (UGC). As shown, both UGCs are forecast to exceed the target density of 200 residents and jobs per hectare by 2041, which is identified in A Place to Grow.

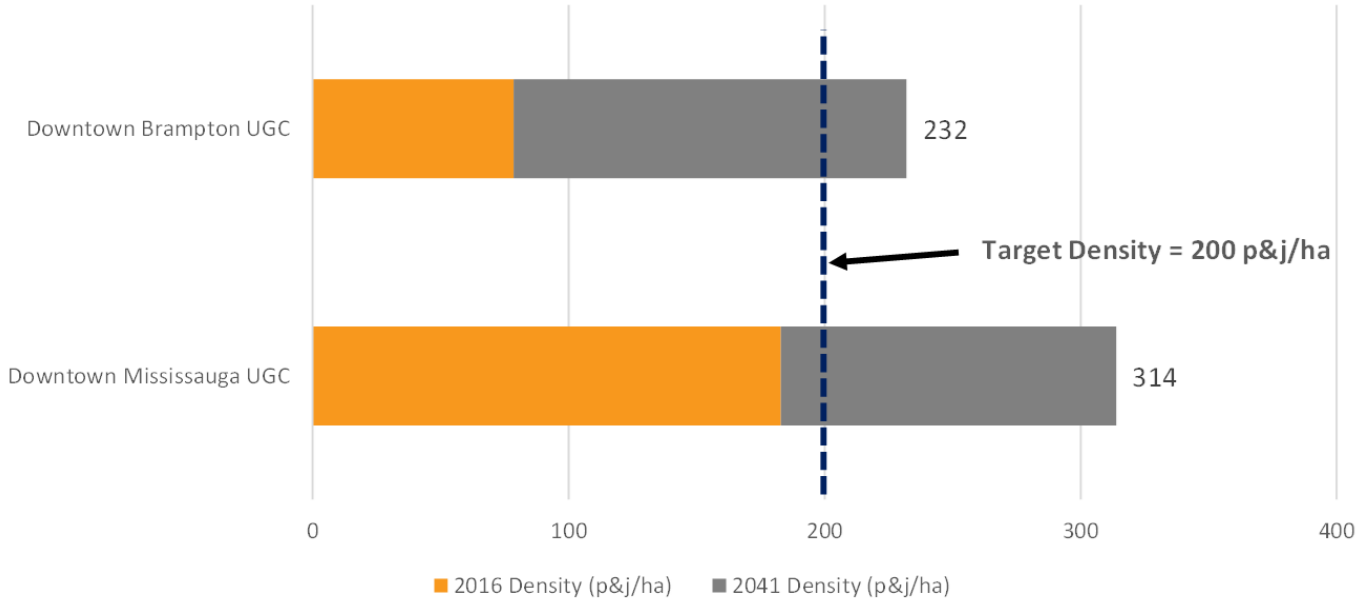


Figure 1: Urban Growth Centre – Existing and Forecast Densities

Within the Downtown Mississauga UGC, the majority of growth is forecast to be residential, with residents accounting for approximately three-quarters of additional density, post-2016. Apartment units are anticipated to account for most of this residential growth. In the Downtown Brampton UGC, over half (57%) of the additional density to 2041 is anticipated to be residential, with apartment units accounting for approximately three-quarters of this growth.

The significant amount of growth (residential and non-residential) forecast in the UGCs is consistent with recent development trends, including the redevelopment of Square One. Also, significant investments being made in the UGCs, including transit investments, as well as the investments by Brampton in a new university campus, the Centre for Innovation, the Riverwalk, etc. are likely to help draw both new residents and businesses to the UGCs.

2.2 MAJOR TRANSIT STATION AREAS

The following sections summarize the existing and forecast densities in each of the MTSAs in Peel Region. The MTSAs have been grouped by transit corridor to assist in identifying the corridors that have the greatest capacity to accommodate growth to 2041. This analysis is based on the boundaries that have been delineated for each of the MTSAs, as opposed to the 800-metre radius. The only exception are some stations along the Highway 407 BRT corridor, where boundaries have not been delineated. For each transit corridor, MTSAs are organized from either north-to-south, or west-to-east, depending on the orientation of the corridor.

Highway 403 BRT

Figure 2 summarizes the existing and forecast densities for each of the 14 MTSAs located along the Highway 403 BRT. In 2016, the combined density across the MTSAs was 55 persons and jobs per hectare, which was well below the target density of 160 persons and jobs per hectare identified in A Place to Grow. Therefore, significant increases in density would be required to achieve the target density.

As shown, only one MTSA (Erin Mills) is forecast to exceed the target density. Erin Mills station is forecast to achieve a density of 205 persons and jobs per hectare by 2041. The relatively high forecast density in the Erin Mills MTSA is due to the MTSA being within the Central Erin Mills Major Node, which has a forecast density range of 200 to 300 persons and jobs per hectare, based on Figure 5-5 of the City of Mississauga Official Plan.

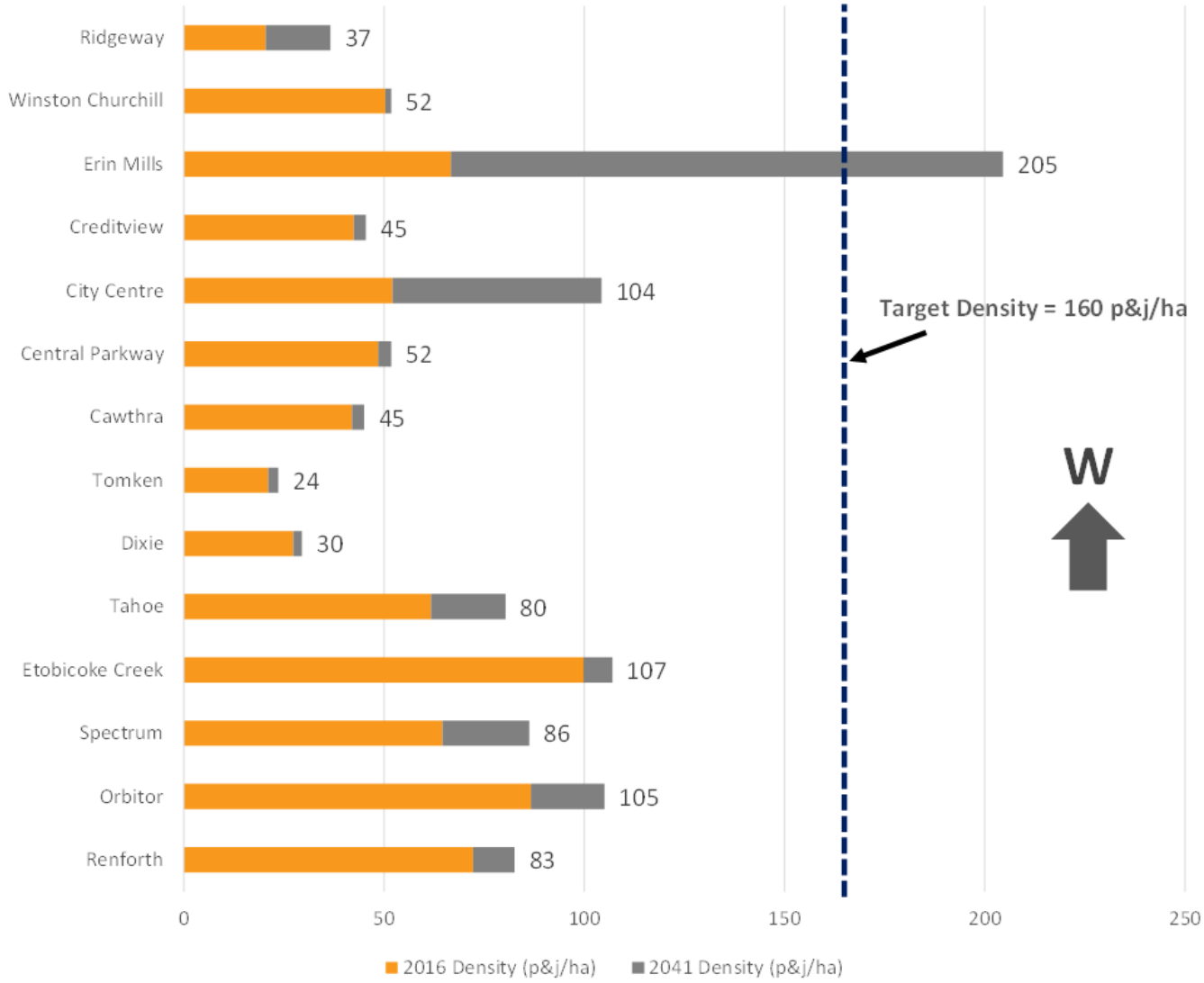


Figure 2: Highway 403 BRT - MTSA Existing and Forecast Densities

The MTSAs along the Highway 403 BRT, excluding Erin Mills, are expected to achieve an average density of approximately 70 persons and jobs per hectare by 2041. This level of density is reasonable, as many of the delineated MTSAs located along the Highway 403 BRT are largely built-out with low-density employment and residential uses, making intensification of these sites more challenging.

Also, based on the Station Area Profiles completed by Perkins + Will, Sean Hertel Urban Planning, Steer and urbanMetrics, many of the MTSAs located along the Highway 403 BRT are identified as having "moderate" mobility characteristics and "limited" land use/built form and community considerations. This includes limited pedestrian and cycling infrastructure and limited community services and amenities. Therefore, it may not be reasonable to accommodate significant intensification within these MTSAs until these considerations are addressed.

That being said, if the target density of 160 persons and jobs per hectare were to be achieved in each MTSA, it would require an allocation of 98,400 persons and jobs to the MTSAs between 2016 and 2041, as shown in Figure 3.

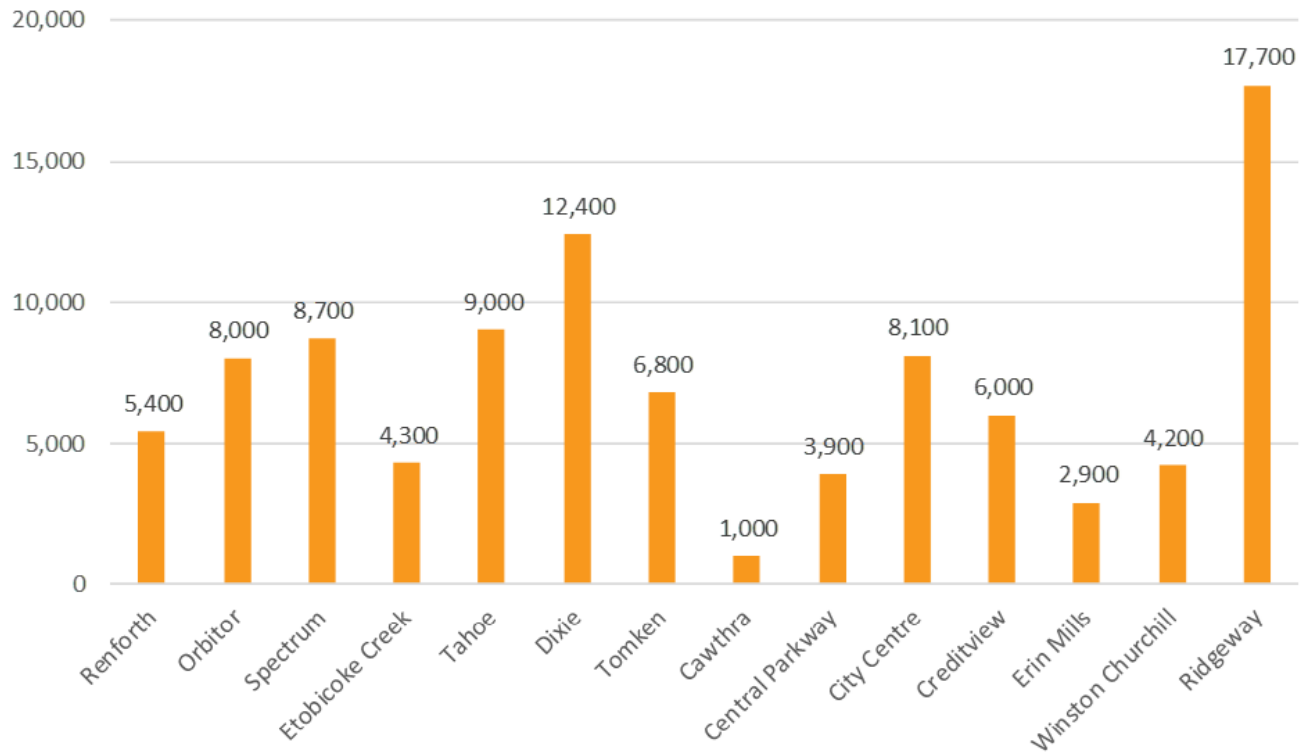


Figure 3: Allocation of Persons and Jobs to Each MTSA Along the Highway 403 BRT

Highway 407 BRT

Figure 4 summarizes the existing and forecast densities for each of the 9 MTSAs located along the Highway 407 BRT. Only the Britannia and Derry MTSAs have delineated boundaries. For the remaining MTSAs, we have utilized the 800-metre radius in our analysis.

In 2016, the combined density across the MTSAs was 32 persons and jobs per hectare, which was well below the target density of 160 persons and jobs per hectare identified in A Place to Grow. The 2041 population and employment allocated to each MTSA show that each of the MTSAs are expected to remain below the target density. The low density in the MTSAs is related, in part, to the low-density forms of development that exist in the MTSAs and the significant greenspace associated with set-backs from Highway 407 and the hydro corridor. Given these constraints, it is unlikely that these MTSAs are likely to achieve the target density by 2041.

Also, based on the Station Area Profiles, many of the MTSAs located along the Highway 407 BRT are identified as having "limited" mobility and community considerations, such as limited pedestrian and cycling infrastructure and limited community services and amenities. Therefore, it may not be reasonable to accommodate significant intensification in these MTSAs.

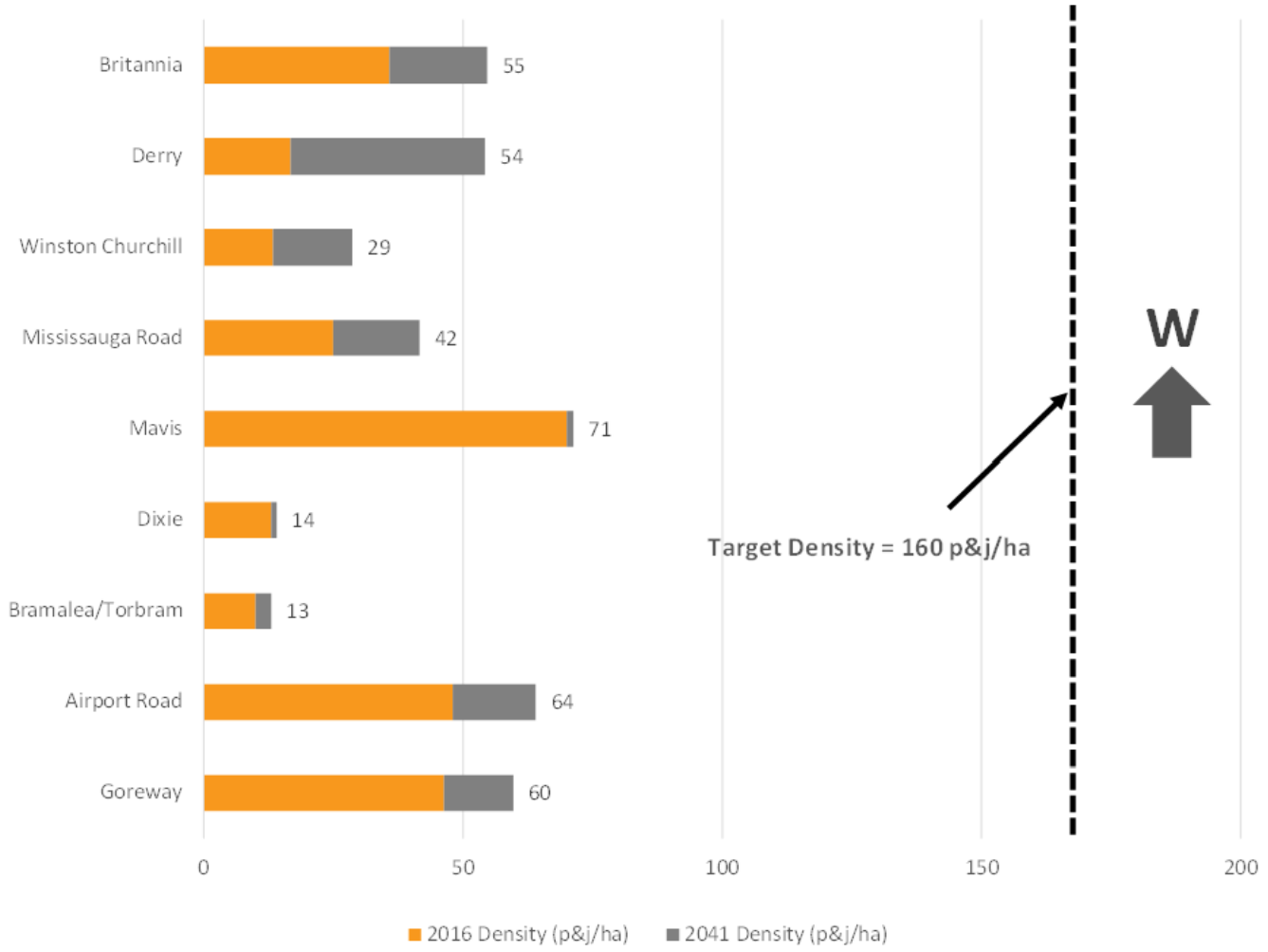


Figure 4: Highway 407 BRT – MTSA Existing and Forecast Density

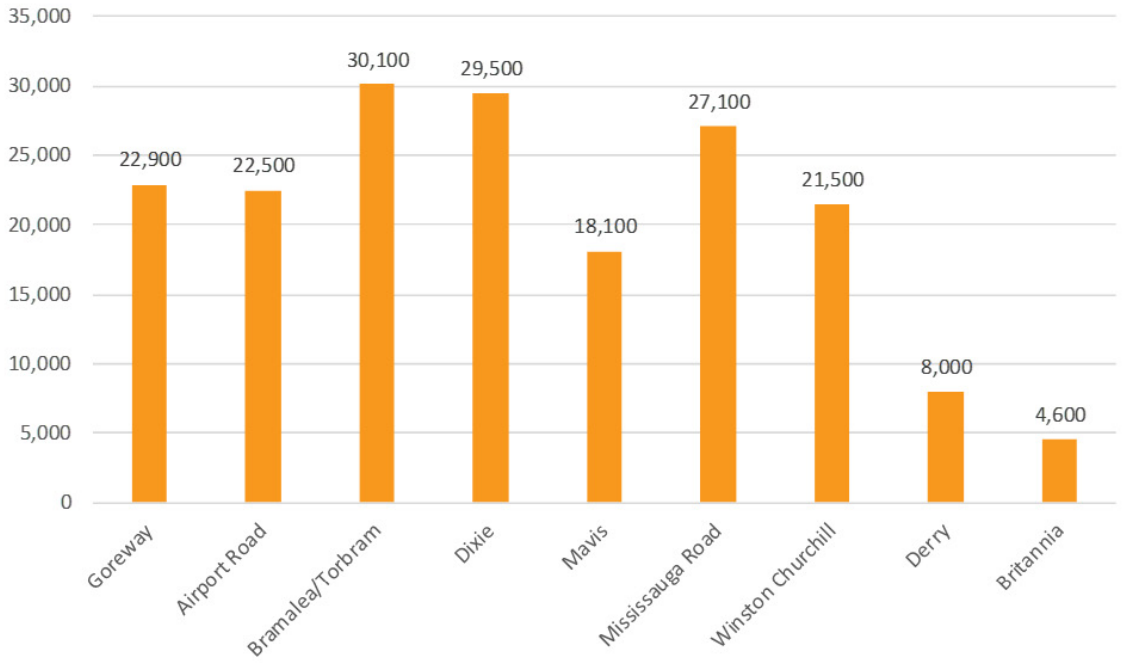


Figure 5: Allocation of Persons and Jobs to Each MTSA Along the Highway 407 BRT

If the MTSAs along the Highway 407 BRT were to achieve the target density, it would require the allocation of an 184,300 persons and jobs to the MTSAs between 2016 and 2041. That being said, this large allocation of persons and jobs is related to utilizing the 800-metre radius for the MTSA, rather than a delineated boundary.

Dundas BRT

Figure 6 summarizes the existing and forecast densities for each of the identified MTSAs along the Dundas BRT corridor. In 2016, the combined density across the 17 MTSAs located along the Dundas BRT was 51 persons and jobs per hectare, which was well below the target density of 160 persons and jobs per hectare. Therefore, significant growth (both residential and non-residential) would be required to achieve the target density.

Dundas is the only MTSAs along the Dundas BRT corridor that are expected to meet or exceed the target density of 160 persons and jobs per hectare by 2041. The high density at Dundas station is related to the Hurontario LRT, which is also in the station area.

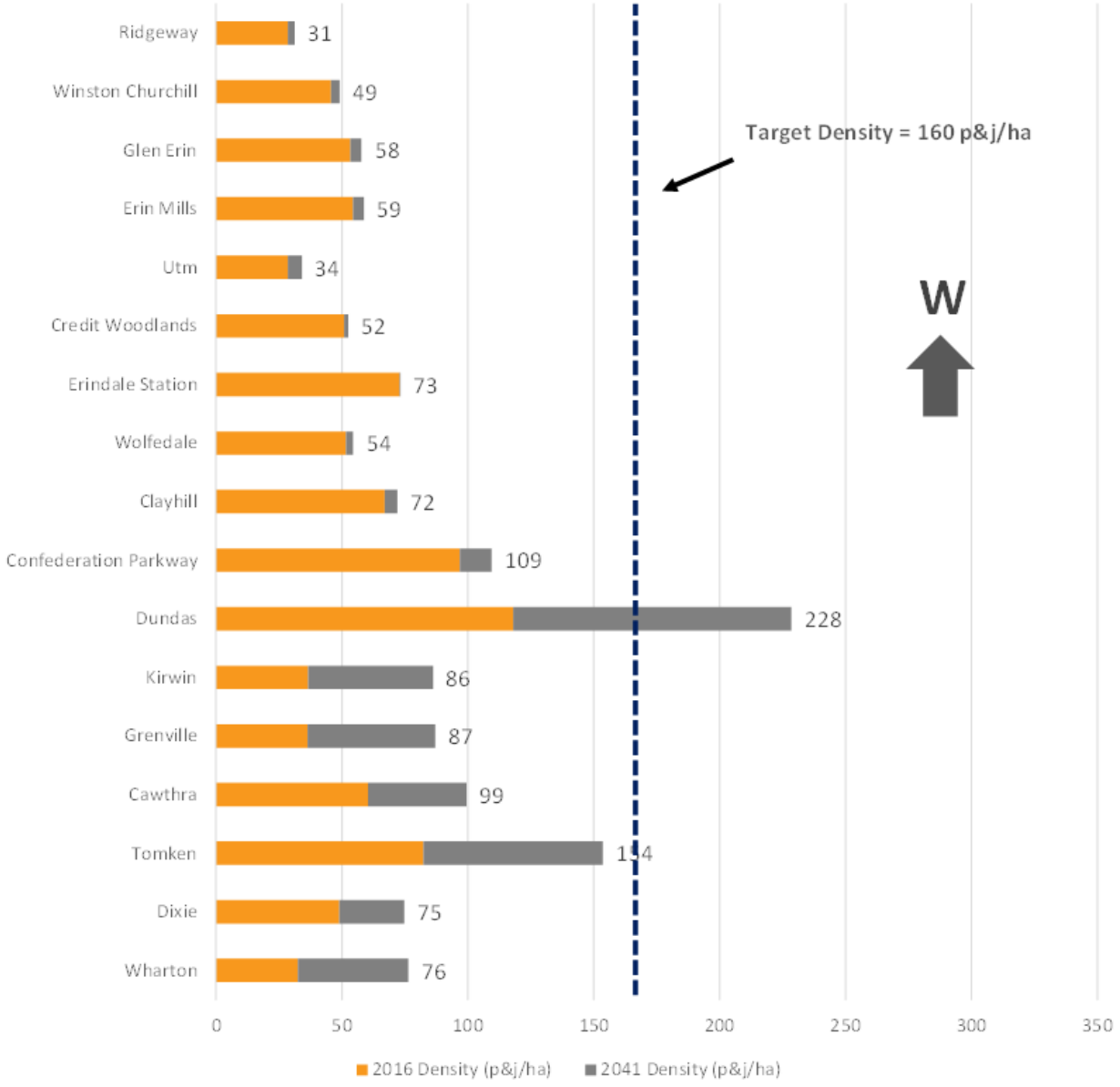


Figure 6: Dundas BRT - MTSA Existing and Forecast Density

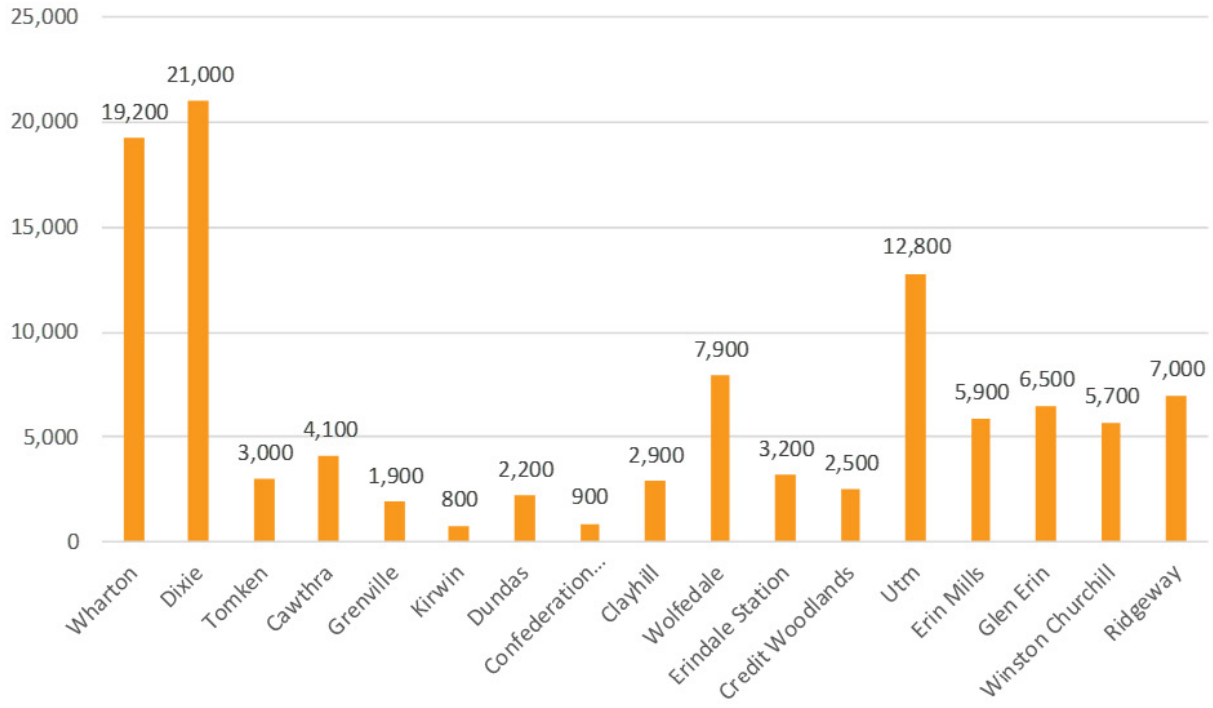


Figure 7: Allocation of Persons and Jobs to Each MTSA Along the Dundas BRT

If MTSAs along the Dundas BRT were forecast to achieve the target density of 160 persons and jobs per hectare, they would need to accommodate 107,500 persons and jobs between 2016 and 2041. As part of the Station Area Profiles, it was identified that many of the MTSAs along the Dundas BRT have "strong" land use/built form and community considerations, which could support growth in this area of Mississauga. That being said, it could take a long period of time to accommodate growth in this area of the City. Many of the MTSAs have "limited" market potential, as they are generally built-out and would require redevelopment of existing sites.

Queen Street BRT

Figure 8 summarizes the existing and forecast densities for each of the identified MTSAs along the Queen BRT corridor. In 2016, the combined density across the 16 MTSAs along the Queen Street BRT was 64 persons and jobs per hectare.

As shown, in 2016, all of the MTSAs along the Queen Street BRT were below the target density of 160 persons and jobs per hectare. However, the Central Park and Dixie stations were close, at 134 and 141 persons and jobs per hectare, respectively.

By 2041, there are five stations that are forecast to meet or exceed the target density. All of these MTSAs are located in the Downtown Brampton UGC. The high densities in some of the MTSAs is related to the Brampton 2040 Vision, which forecasts significant growth in the Major Growth Areas of Downtown Brampton and Bramalea, which are both located along the BRT corridor.

If the MTSAs along the Queen Street BRT were to achieve the target density, it would require the allocation of 99,500 persons and jobs to the MTSAs between 2016 and 2041, as shown in Figure 9.

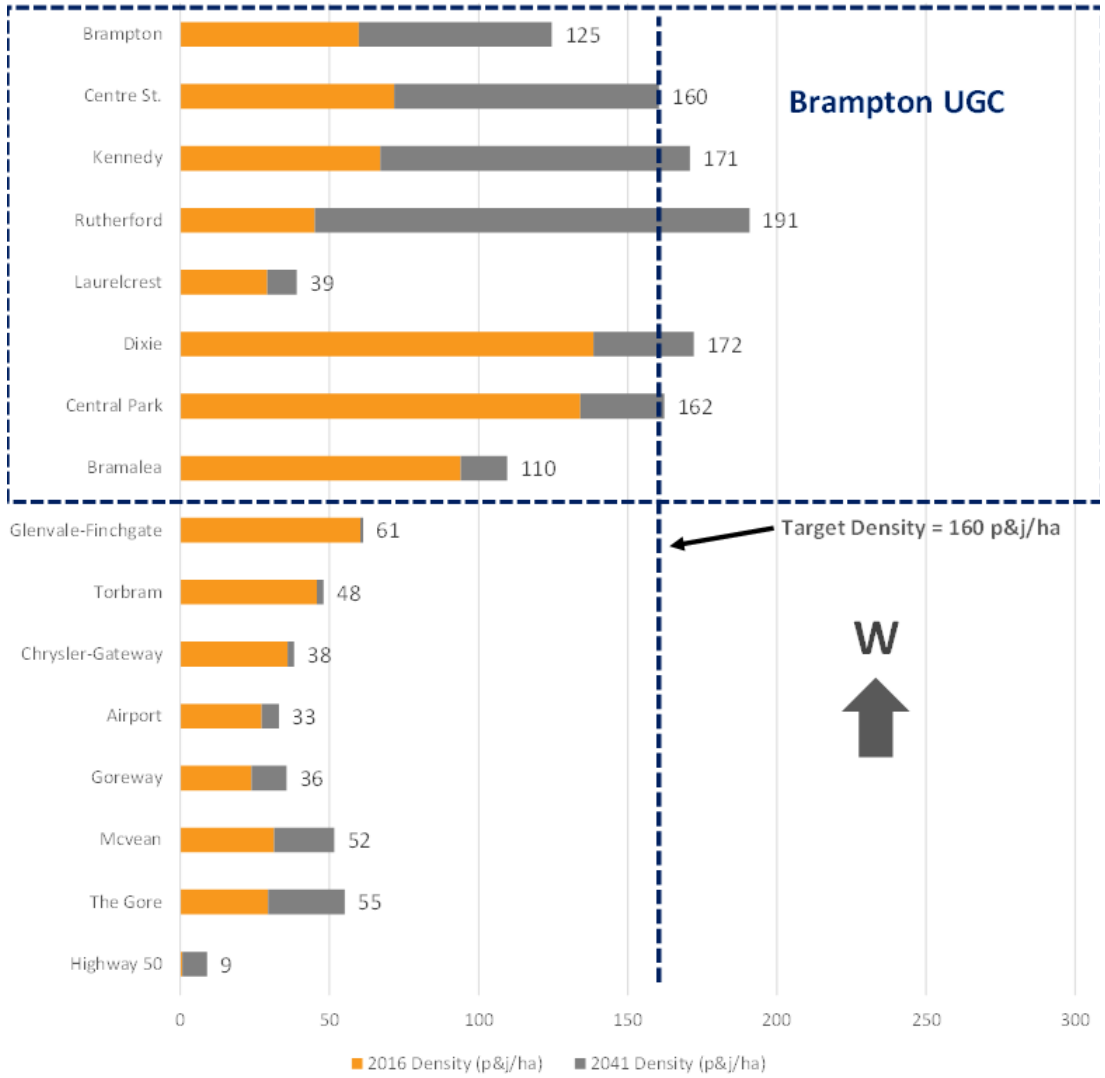


Figure 8: Queen Street BRT - MTSA Existing and Forecast Density

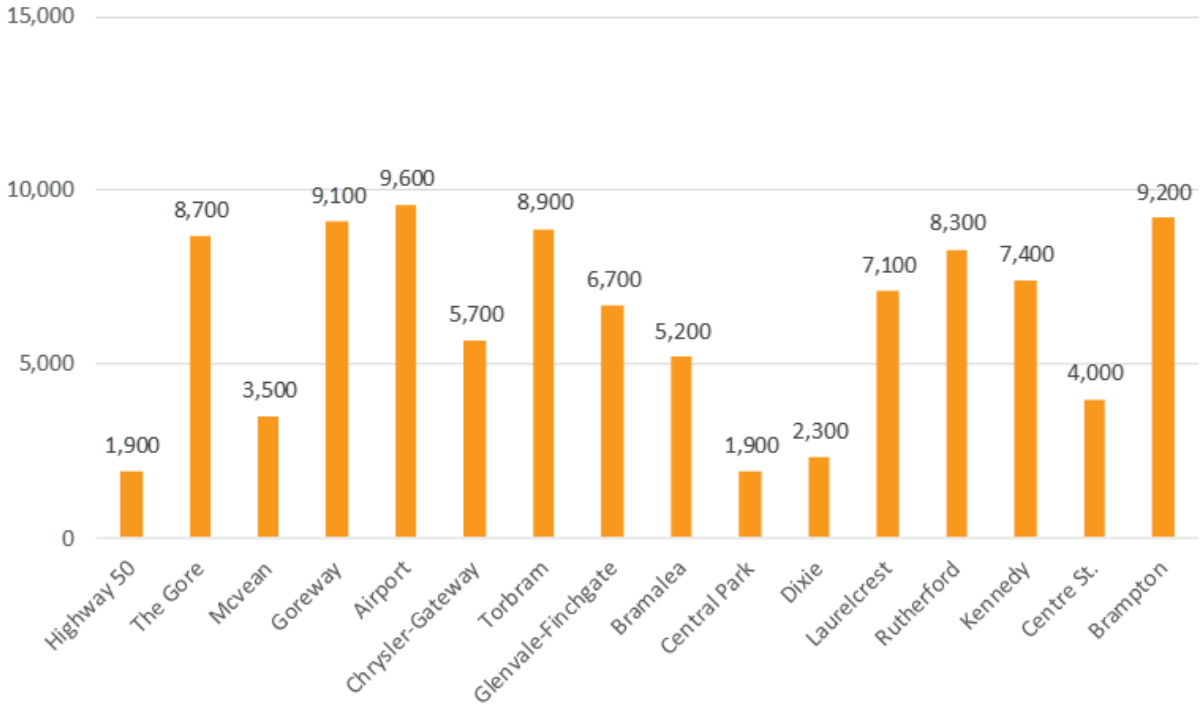


Figure 9: Allocation of Persons and Jobs to Each MTSA Along the Queen Street BRT

Lakeshore BRT

Figure 6 summarizes the existing and forecast densities for the three MTSAs along the Lakeshore BRT corridor. In 2016, these MTSAs had a combined density of 24 persons and jobs per hectare. Therefore, significant increases in density would be required to achieve the target density.

By 2041, the density across the three MTSAs is forecast to be 83 persons and jobs per hectare. However post-2041, the build-out of the Inspiration Lakeview master plan that is planned for the former Ontario Power Generate (OPG) site is expected to add additional density to this area of Mississauga.

The majority of growth within the MTSAs along the Lakeshore BRT corridor between 2016 and 2041 is expected to be residents (approximately three-quarters of growth). This residential growth is forecast to predominately be accommodated in apartment units (86% of unit growth). If the MTSAs along the Lakeshore BRT were to achieve the target density, it would require the allocation of 17,400 persons and jobs to the MTSAs between 2016 and 2041.

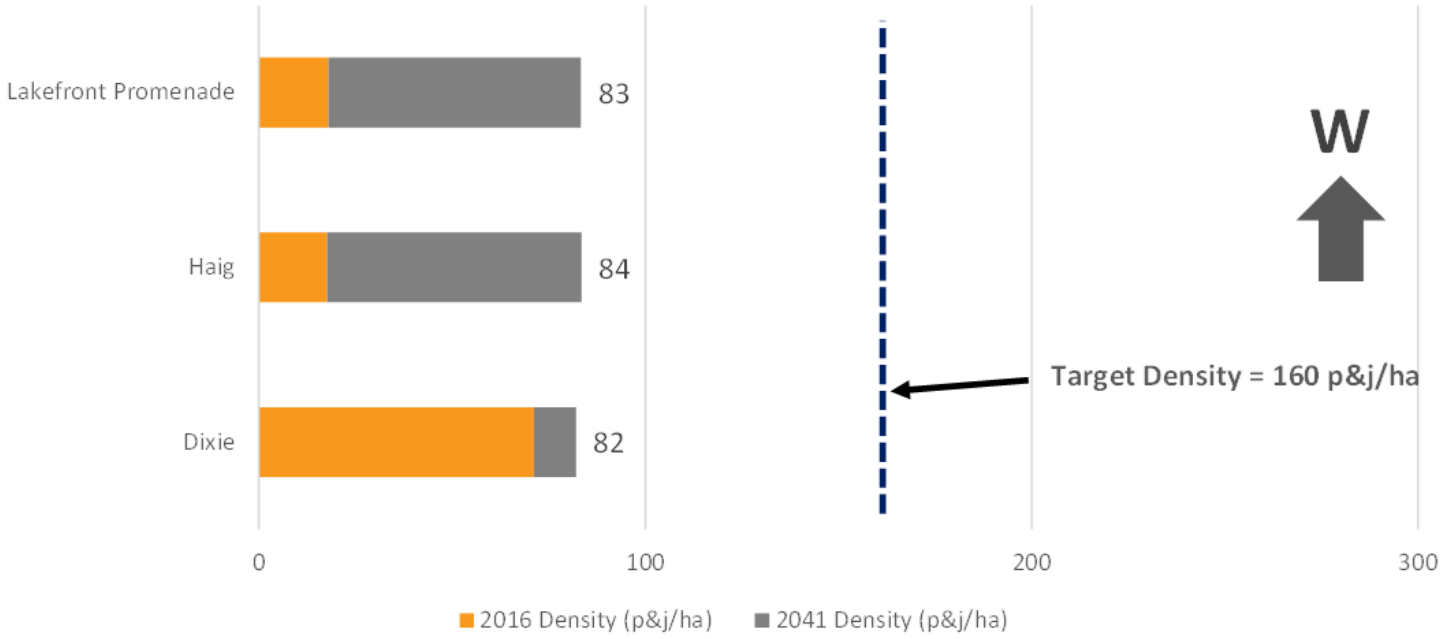


Figure 10: Lakeshore BRT – MTSA Existing and Forecast Density

Hurontario LRT

Figure 7 summarizes the existing and forecast densities for each of the identified MTSAs along the Hurontario LRT corridor. In 2016, the combined density across the 23 MTSAs along the Hurontario LRT was 115 persons and jobs per hectare, which was the highest density along the various transit corridors in Peel Region. It is also notable that seven of the MTSAs had already exceed the target density by 2016.

By 2041, half of the MTSAs are expected to meet or exceed the target density. As shown, the highest densities are forecast for MTSAs located in the Mississauga UGC and the Gateway Terminal, which includes the proposed redevelopment of Brampton Shoppers World.

Growth within the MTSAs along the Hurontario LRT corridor is expected to be balanced with population accounting for 64% of growth. Most of these new residents are forecast to be accommodated in apartment units, which is consistent with the existing character of many of the MTSAs.

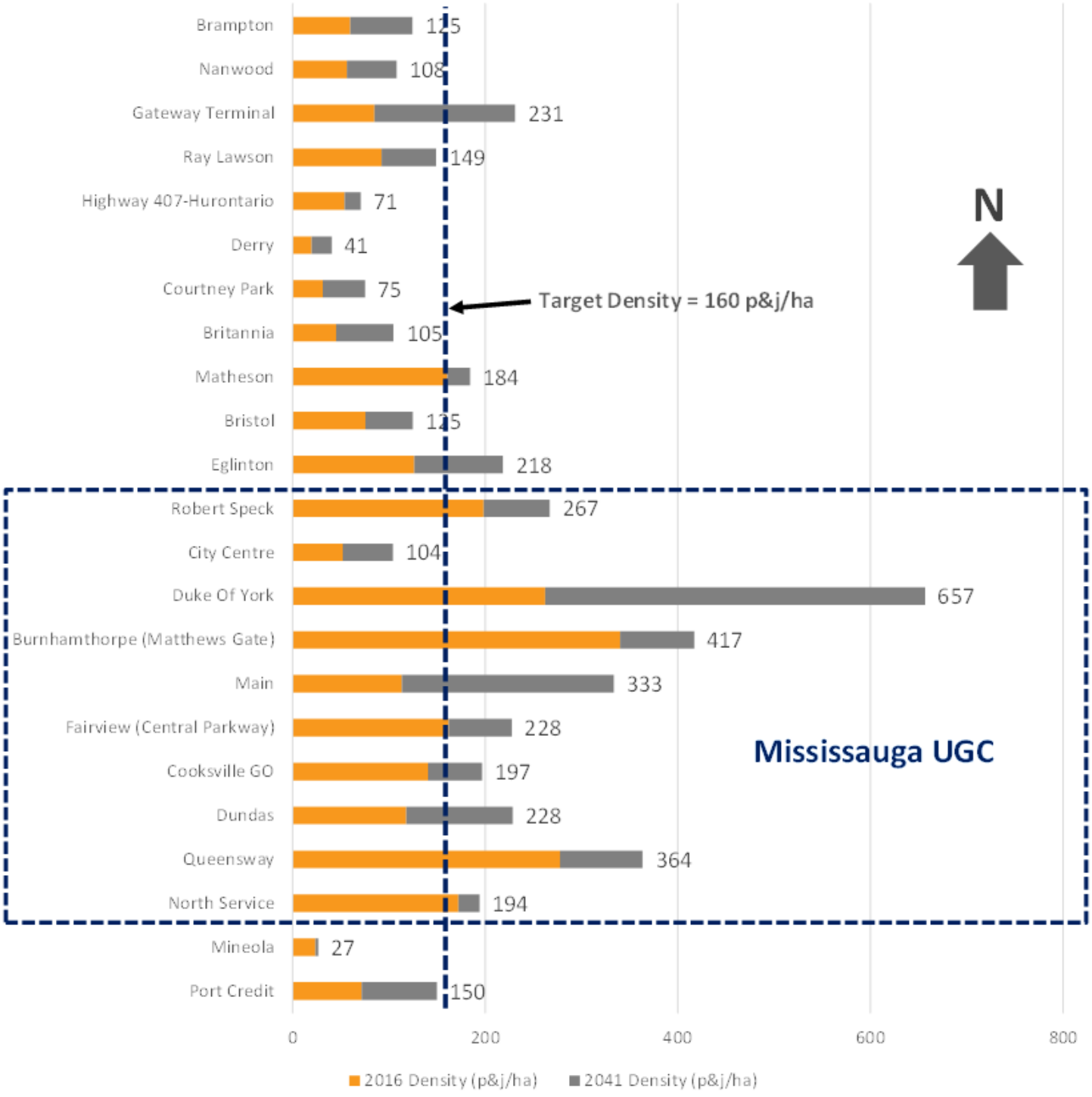


Figure 11: Hurontario LRT - MTSA Existing and Forecast Density

However, if the target density of 160 persons and jobs per hectare were to be achieved in each MTSA, it would require an allocation of 92,600 persons and jobs to the MTSAs between 2016 and 2041, as shown in Figure 12.

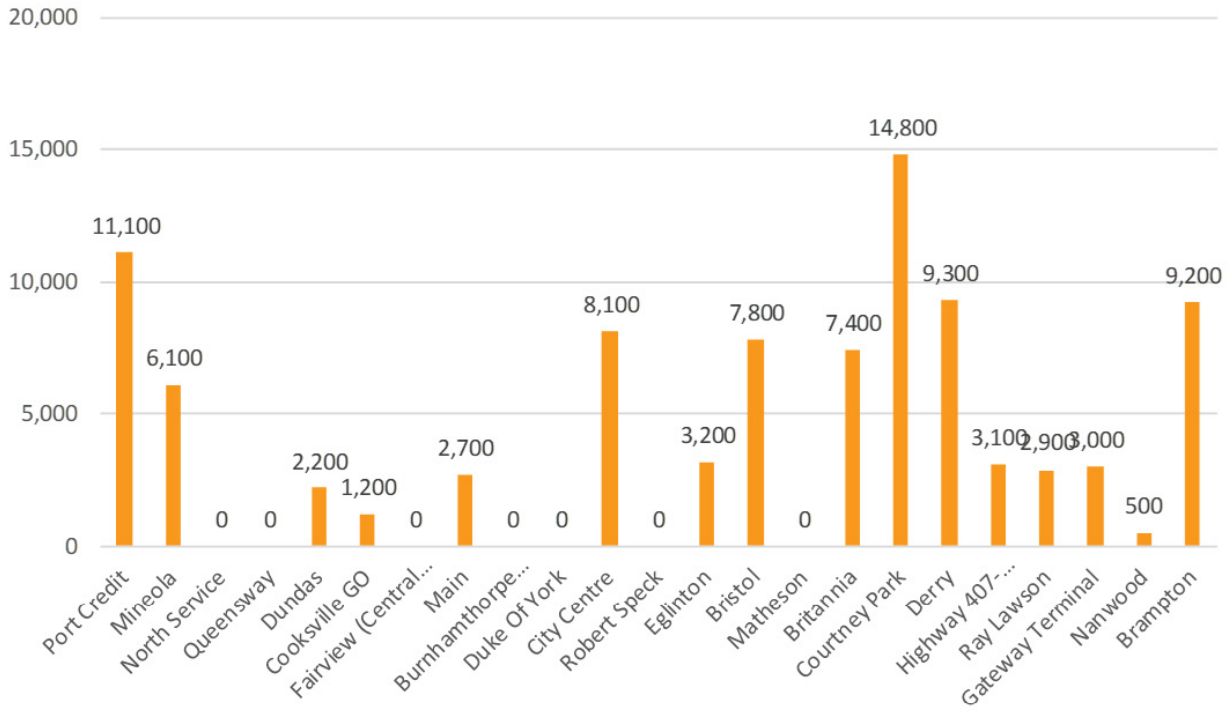


Figure 12: Allocation of Persons and Jobs to Each MTSA Along the Hurontario LRT

GO Transit Stations

Figure 8 summarizes the existing and forecast densities for the nine existing and one proposed GO Transit train station in Peel Region.

MTSAs along the Milton GO Corridor had a combined density of 41 persons and jobs per hectare in 2016 and a forecast density of 59 persons and jobs per hectare in 2041. This forecast density is well below the target density of 150 persons and jobs per hectare. The low densities are related, in part, to the large surface parking lots that characterize these MTSAs. Achieving the density target will be dependent, to some extent, on the redevelopment of these parking lots. To achieve the target density, 58,000 persons and jobs would need to be allocated to the four MTSAs between 2016 and 2041.

The four MTSAs along the Kitchener GO Corridor had a combined 2016 density of 32 persons and jobs per hectare. The Brampton and Mount Pleasant GO Stations are forecast to achieve the highest densities along the Kitchener GO Corridor. Forecast growth in the Brampton GO MTSA is associated with its location in the Downtown Brampton UGC. Similarly, the Mount Please GO MTSA is located adjacent to the Heritage Heights Town Centre in the Brampton 2040 Vision. As part of the Station Area Profiles, both the Brampton and Mount Pleasant MTSAs were identified as having “strong” mobility and market growth characteristics. Therefore, the level of intensification in these MTSAs seems reasonable.

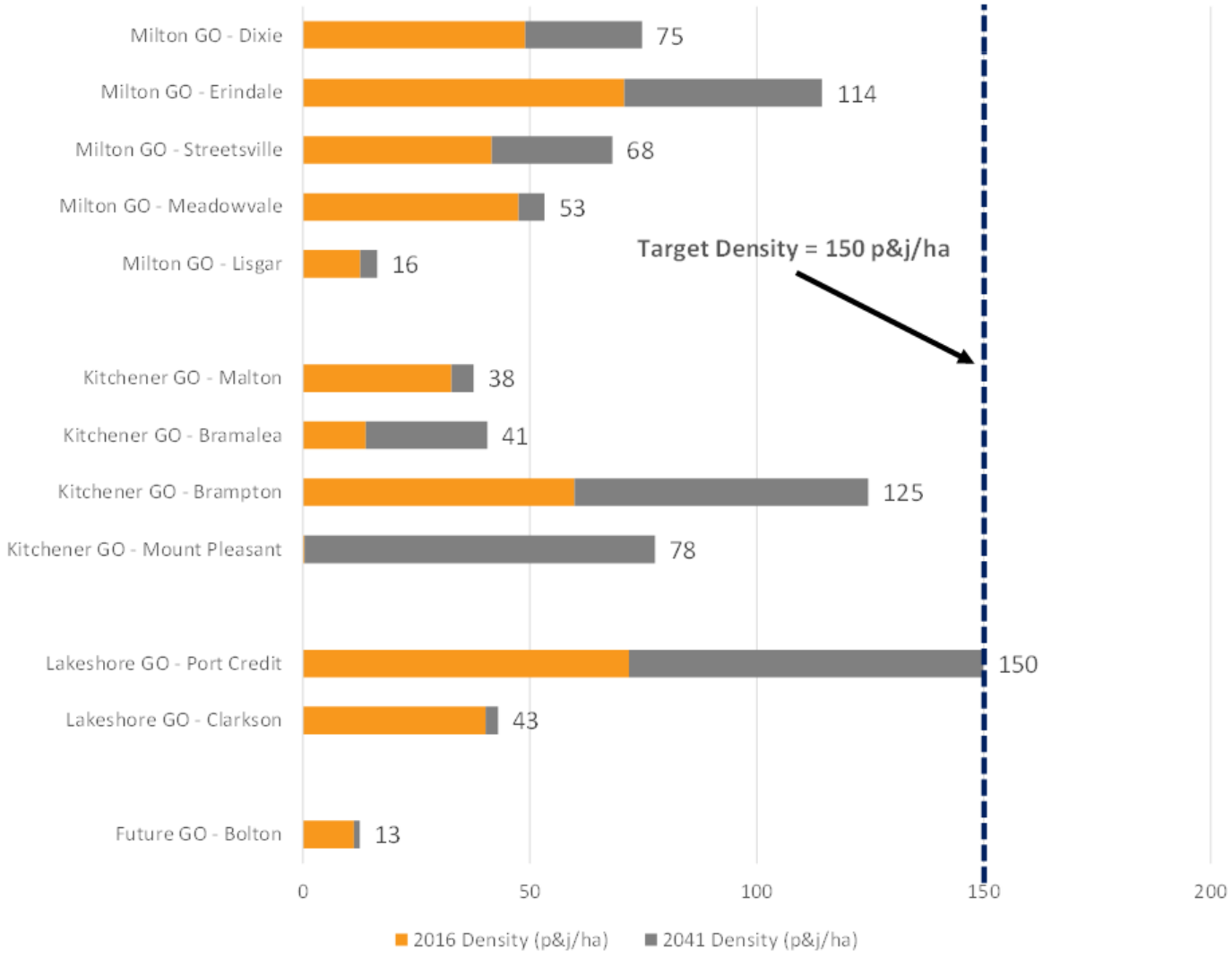


Figure 13: GO Transit Stations – MTSA Existing and Forecast Density

Clarkson GO and Port Credit GO are only MTSAs in Peel Region located along the Lakeshore West Corridor. The Port Credit GO station is forecast to achieve the density target of 150 persons and jobs per hectare by 2041. The Clarkson GO MTSA is forecast to have 2041 density of 43 persons and jobs per hectare. To achieve the target density, 9,100 persons and jobs would need to be allocated to this MTSA between 2016 and 2041.

There is also one future GO Station in Bolton that is forecast to achieve a density of only 25 persons and jobs per hectare by 2041. A total of approximately 7,900 persons and jobs would be required to be allocated to this MTSA to achieve the target density by 2041.

2.3 OTHER STRATEGIC GROWTH AREAS

In addition to the UGCs and MTSAs, both Brampton and Mississauga have identified other Strategic Growth Areas in their Official Plans and other long-range planning documents. The following sections summarize the existing and forecast densities in each of these other SGAs in Peel Region.

City of Brampton

The Brampton 2040 Vision identifies three Major Growth Areas and five Town Centres, which are intended to accommodate a large share of intensification in Brampton. As shown in Figure 9, many of the Town Centres in Brampton had low existing densities in 2016. The 2041 density is related to forecasts identified for each of these Town Centres in the Brampton 2040 Vision.

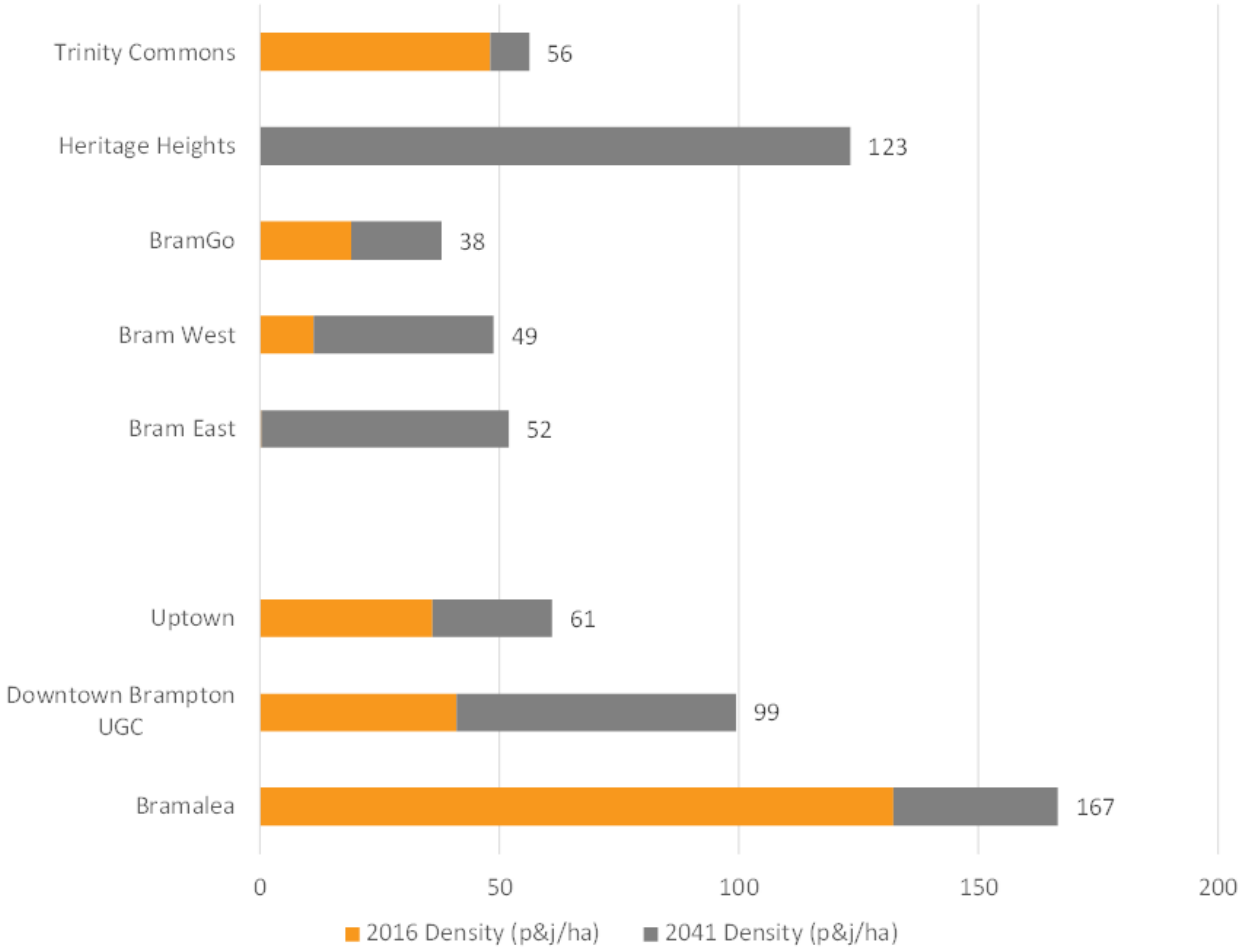


Figure 14: Town Centres and Major Growth Areas - Existing and Forecast Density

City of Mississauga

Mississauga has a total of 12 SGAs that include Mall Nodes, Community Nodes and Major Nodes. Figure 5-5 of the City of Mississauga Official Plan identifies target density ranges for the Community Nodes and Major Nodes.

Among the Mall Nodes, there was combined 2016 density of 100 persons and jobs per hectare. This is forecast to reach 152 persons and jobs per hectare by 2041, based on the Reimagining the Mall Directions Report completed on behalf of the City. As shown, each of the Community Nodes and Major Nodes, with the exception of Lakeview, are forecast to achieve minimum densities identified in the City of Mississauga Official Plan by 2041.

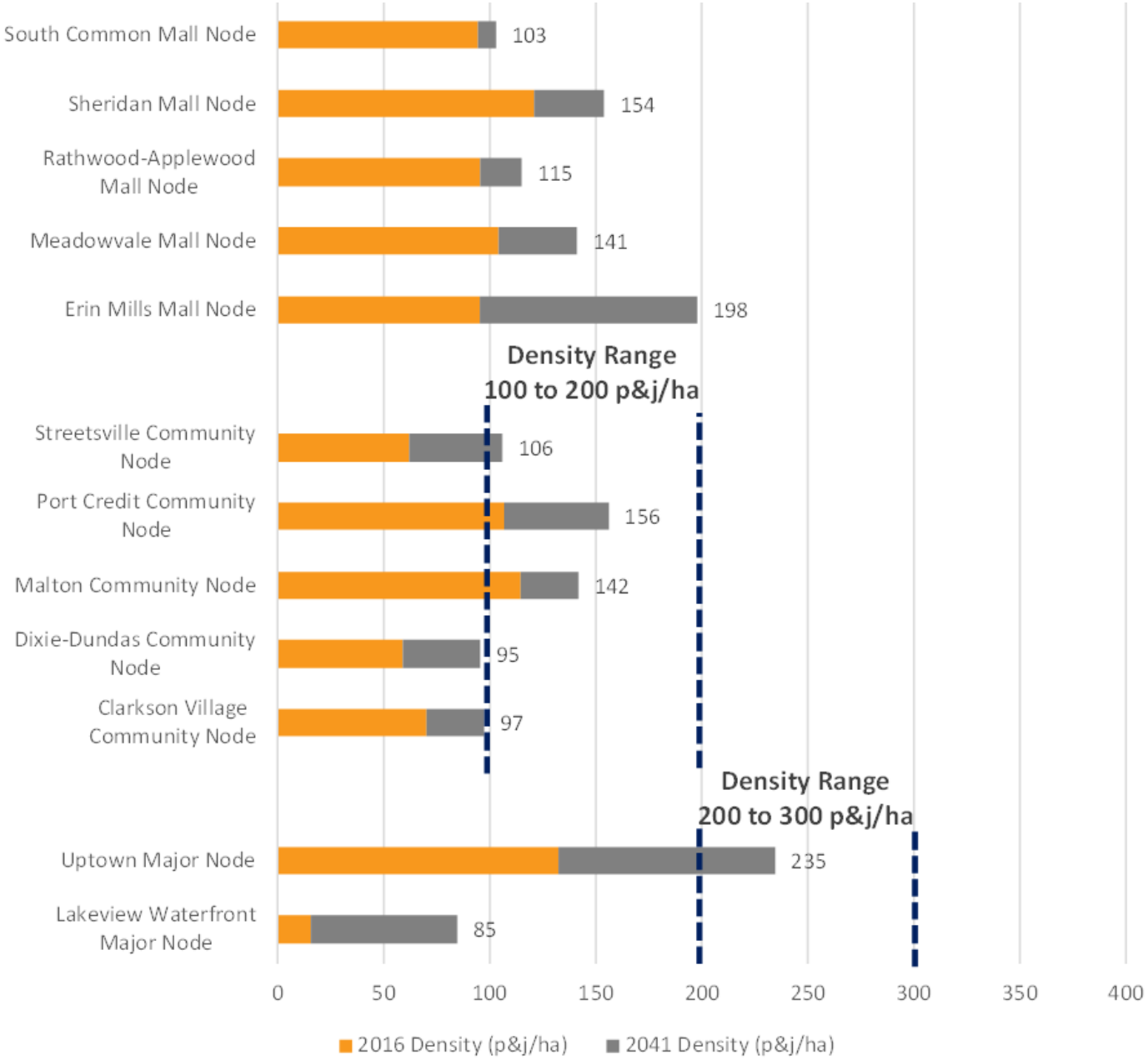
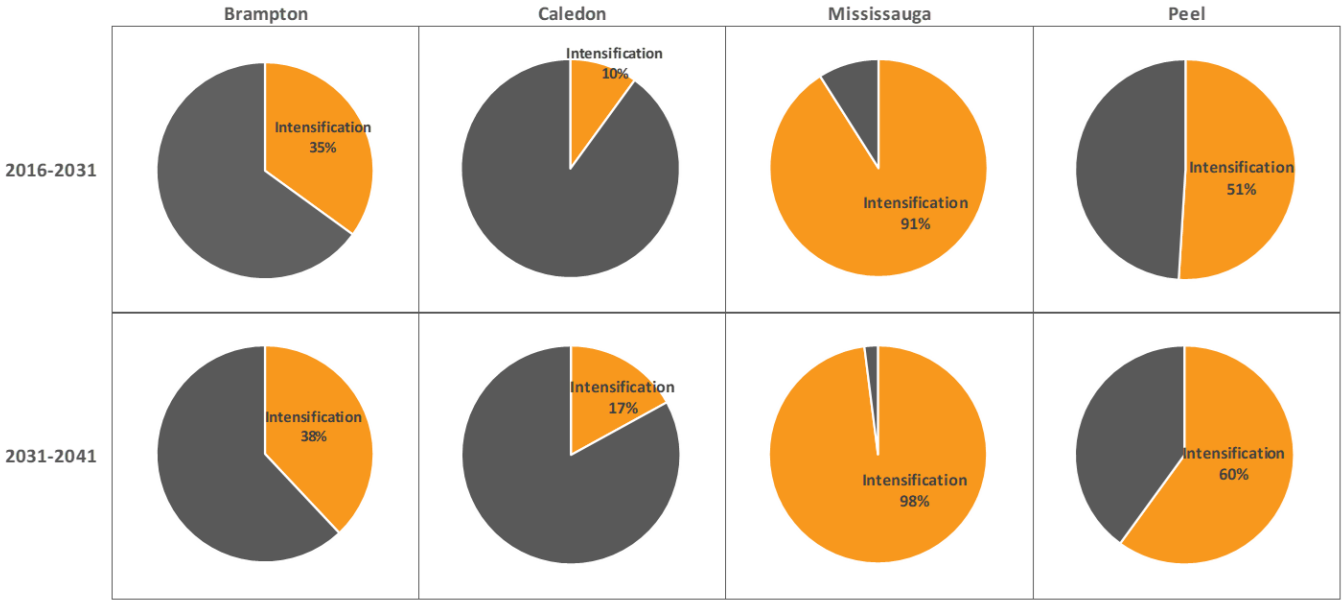


Figure 15: Mall Nodes, Community Nodes and Major Nodes – Existing and Forecast Densities

3.0 STRATEGIC MARKET DEMAND ASSESSMENT

The following high-level strategic market demand assessment is based on broad housing, demographic and economic trends to identify opportunities and constraints to achieving the forecasted rate of intensification and housing mix identified in the Region's draft Growth Allocation for SGAs.

The Region of Peel, in consultation with the constituent municipalities has identified "that by 2031 and for each year thereafter, the following minimum residential intensification targets will be planned to be achieved within the built-up area of each local municipality".[1] Accommodating new residential units within the SGAs of each municipality will be an important part of the Region's ability to achieve these targets.



As shown below, to achieve the intensification targets, each municipality is expected to accommodate a larger share of household growth in apartment units in comparison to the existing stock of housing. SGAs will play an important role in achieving this future mix, as the majority of household growth in the SGAs is expected to be accommodated in apartment units and to a lesser extent, townhouse units.

There will be a variety of demographic, economic and housing market factors that are likely to influence the rate of intensification in the SGAs and household growth in apartment units. In this analysis, we consider the potential impact of demographic trends, the supply of land, housing market characteristics and economic factors to assess the opportunities and constraints these factors will have on achieving the forecasted housing mix and rate of intensification in the SGAs.

[1]Based on Paragraph 62 in Appendix II – Peel 2041 Growth Allocation and Growth Management Regional Official Plan Amendment – Request to Proceed with Consultation of Draft Amendment.

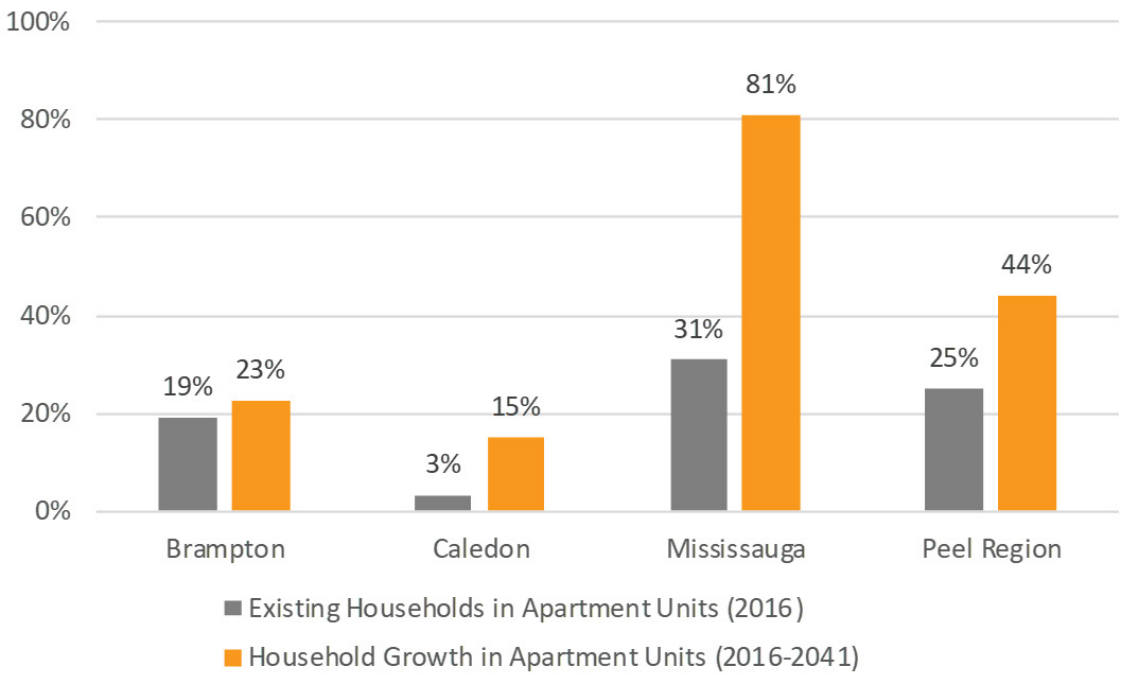


Figure 16: Households in Apartment Units

3.1 DEMOGRAPHIC AND HOUSING TRENDS

Demographic trends are one of the most important factors that influence demand for housing by unit type. Strong population growth and the age structure of the population in Peel Region are anticipated to increase demand for housing overall, and for apartment units, in particular, and influence the Region's ability to achieve the forecast housing mix and rate of intensification in the SGAs.

Headship Rates and Age Structure

The age structure of the population has a significant impact on demand for housing, by unit type. As shown below, there are some consistent trends in headship rates by unit type for various age cohorts.

For example, headship rates for **single and semi-detached dwellings** increase after the 15 to 24 age cohort, peaking in the 45 to 64 age cohort and then decline as people age. That being said, the rate of decline differs by municipality. A similar trend exists for **townhouse units**, with headship rates generally peaking slightly earlier in the 34 to 54 age cohort, before starting to decline.

These trends are in comparison to age specific headship rates for **apartment units**. In Mississauga, headship rates peak much earlier in the 25 to 44 age cohort, before declining in the 45 to 64 age cohort, then starting to rise again after age 65 as people move into apartment units for lifestyle reasons. Brampton and Caledon have not yet seen a similar peak in headship rates in the 25 to 44 age cohort, but have a similar pattern of increasing headship rates in apartments rising after 65 years of age.

Overall, these trends in headship rates by age group and dwelling type are likely to influence the rates of intensification and dwelling mix that can be anticipated in Peel Region to 2041.

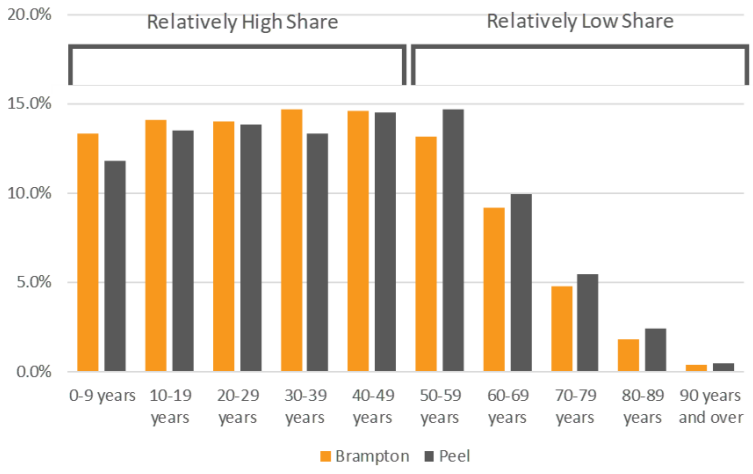
Figure 17: Headship Rates by Dwelling Type, Peel Region, 2016 Census

SOURCE: urbanMetrics based on Statistics Canada, 2016 Census of Canada

The table above examine the age structure in Brampton, Caledon and Mississauga to assess, at a high level, the impact on the forecasted housing mix and rates of intensification in the SGAs.

Brampton

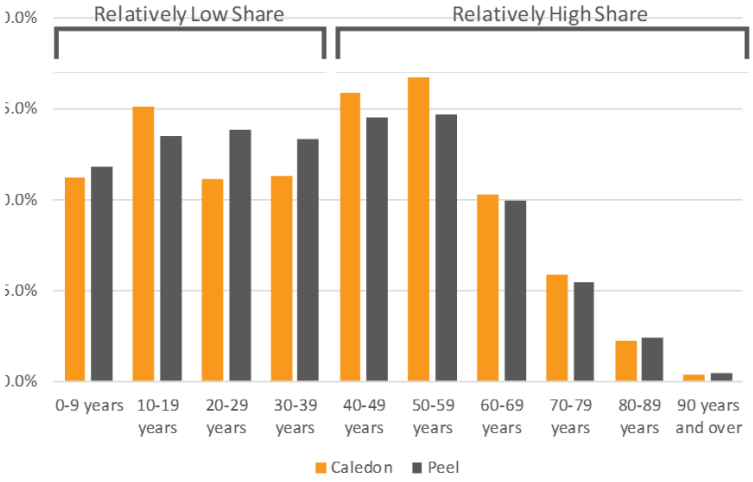
Share of Population by Age Group, 2016



- At the time of the 2016 Census, Brampton had a relatively large share of its population under the age of 20, which are predominately people living at home with family. Brampton also had a relatively large share of its population in the 20 to 49 age cohort.
- Households in these age groups have a higher propensity for ground-related units (i.e. single-detached, semi-detached and townhouse units).
- It will take a number of years for the population in the 20 to 49 age cohort to 'downsize' into apartment units. Therefore, a significant shift towards higher-density forms of housing is likely to materialize slowly. This presents a constraint to forecast household growth in apartment units and the intensification target.

Caledon

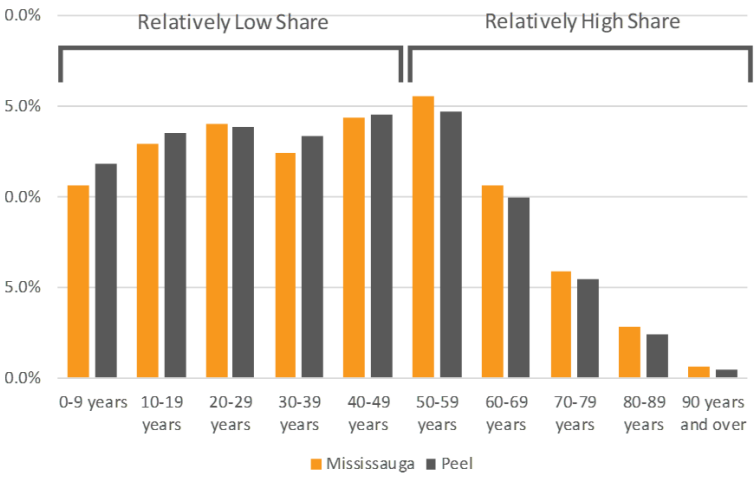
Share of Population by Age Group, 2016



- The relatively large share of the population in Caledon in the age 40 and over cohort presents an opportunity for apartment development in the municipality.
- As shown earlier, after 65 years of age, there is an increasing propensity to live in apartment units.
- However, in comparison to other municipalities in Peel Region, headship rates in single and semi-detached units decline much slower in Caledon, which presents a potential constraint.

Mississauga

Share of Population by Age Group, 2016



- Mississauga also has a relatively large share of its population in the 50 and over age cohort. As shown earlier, Mississauga also has the highest propensity for apartment units in the age 50 and over cohort.
- The age structure of the population in Mississauga is expected to create an opportunity for achieving the forecast housing mix and rate of intensification in the SGAs.
- The older age profile of Mississauga residents will also increase demand for seniors housing, which can also be accommodated within SGAs.

SOURCE: urbanMetrics based on Statistics Canada, 2016 Census of Canadaw

Population Growth

Peel Region is anticipated to experience significant population growth in the coming years. Fueled by strong employment growth and available land for development, the Region is anticipated to add 541,820 people between 2016 and 2041, an increase of nearly 38%.

As shown below, the City of Brampton is anticipated to account for the majority of population growth to 2031 as the remaining Designated Greenfield Area (DGA) lands are largely built-out. After 2031, Region-wide population growth is anticipated to slow, as demand for ground-related housing will likely shift to surrounding municipalities where supply is still available.

The large share of growth in the DGA of Brampton to 2031 will likely present a challenge to achieving the forecast housing mix and rates of intensification in the SGAs in the early part of the forecast horizon.

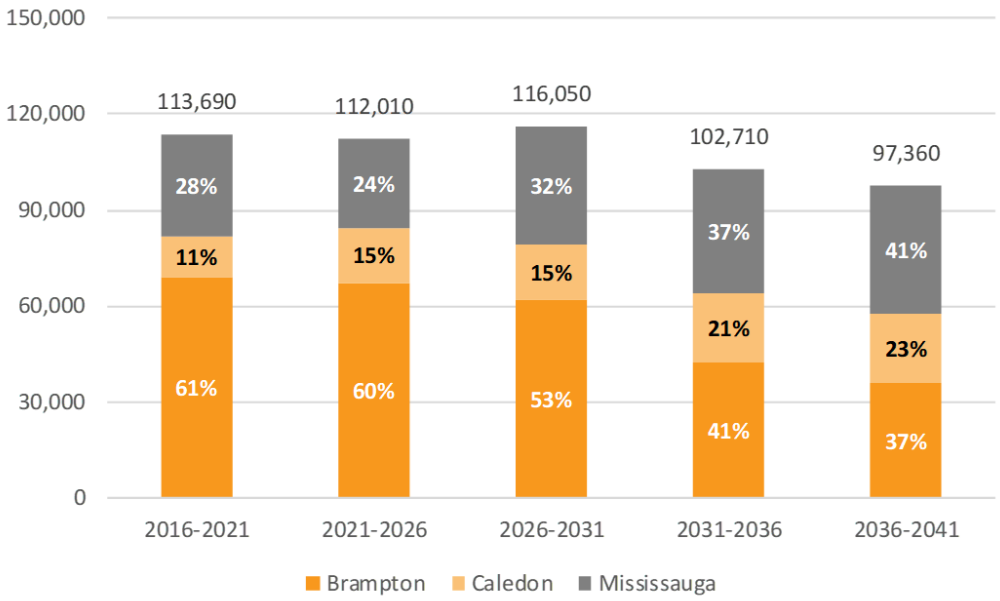


Figure 18: Population Growth, 2016-2041

SOURCE: urbanMetrics based on Peel Region 2041 Growth Allocations – Scenario 16.

Figure 19 summarizes population growth by age cohort between 2016 and 2041. Significant population growth is anticipated in the age 65 and over cohort, which has a relatively high propensity to live in apartment units, as shown earlier. Strong population growth in the age 65 and over cohort present an opportunity for the Region to achieving its forecast dwelling mix and rates of intensification in the SGAs.

Population growth in the 20 to 29 age cohort is also anticipated to result in demand for apartment units in Peel Region, as this demographic also has a relatively high propensity to live in this type of housing, particularly in Mississauga.

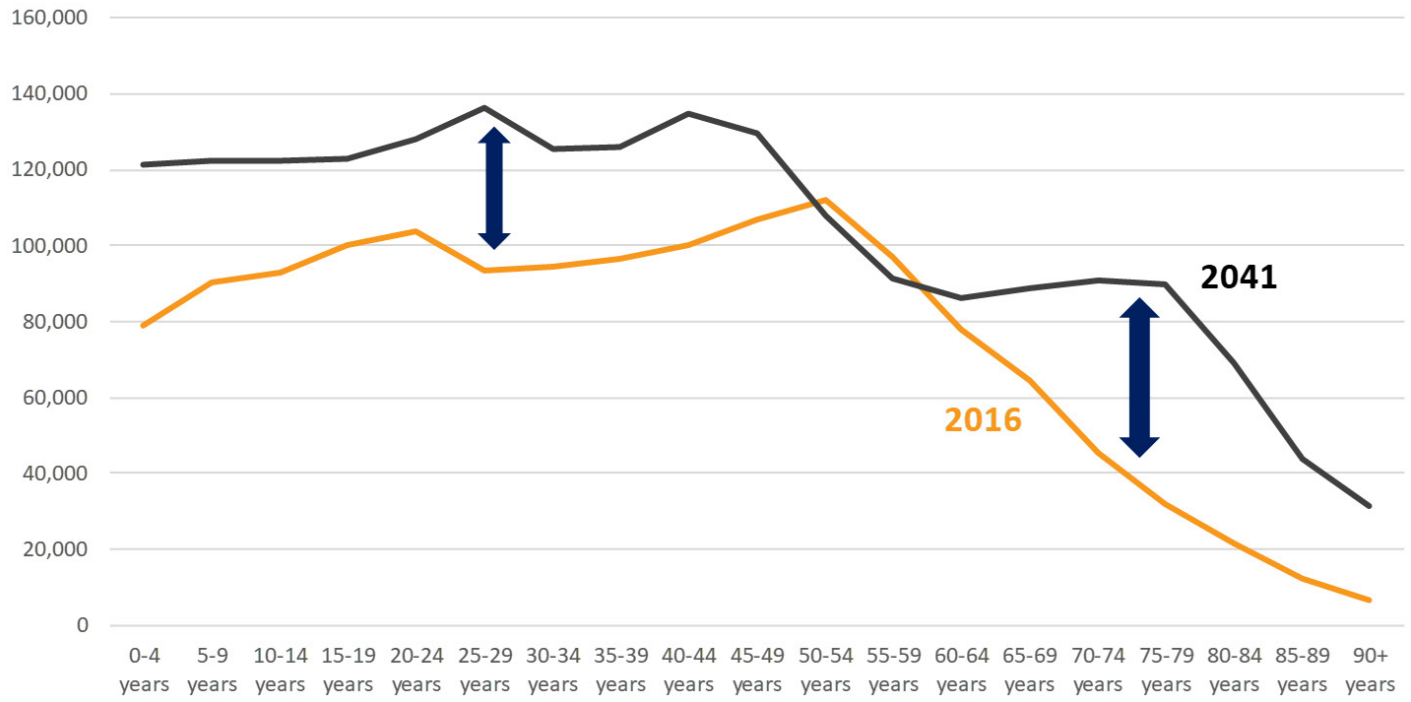


Figure 19: Population by Age Group, Peel Region, 2016 and 2041

SOURCE: urbanMetrics inc. based on Greater Golden Horseshoe Growth Forecasts to 2041, Technical Report, November 2012, prepared by Hemson Consulting Ltd.

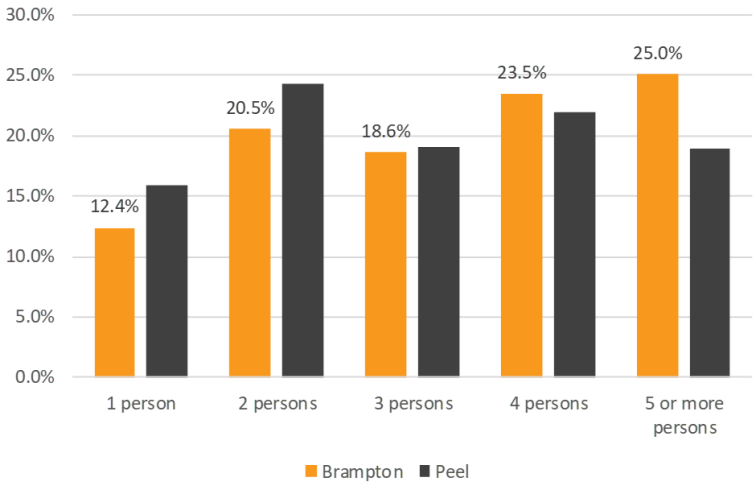
Household Characteristics

The existing characteristics of households in each municipality is also anticipated to impact future demand for housing by unit type, as it will be more difficult to accommodate large household sizes and multi-generational households in apartment units.

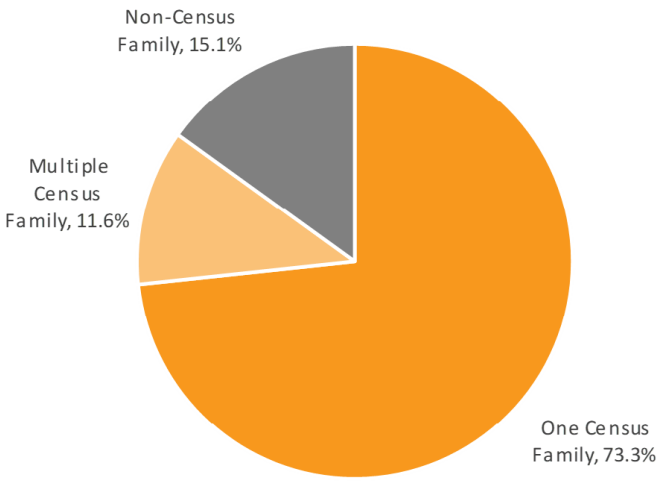
The table below examines the various household characteristics in Brampton, Caledon and Mississauga to assess, at a high level, the impact on the forecasted housing mix and rates of intensification in the SGAs.

Brampton

Share of Households by Household Size, 2016



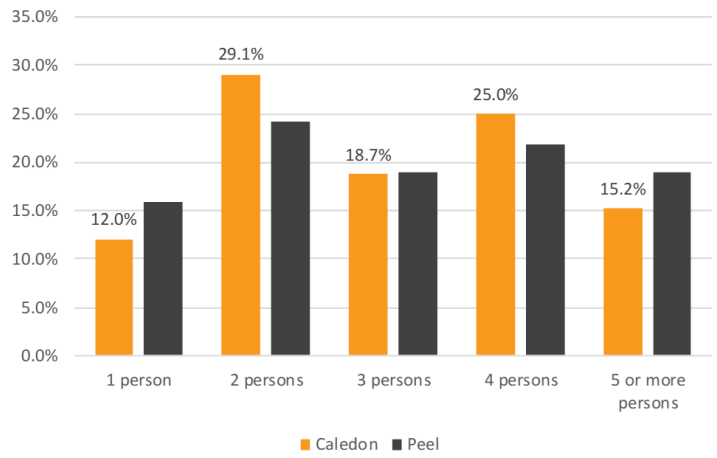
Share of Households by Household Type, 2016



- The City of Brampton has a relatively large share of households with 4 or more persons, in comparison to the Region-wide average. This could present a constraint to achieving the forecast housing mix, as it will be more difficult to accommodate large households in apartment units, in comparison to municipalities with small household sizes.
- The relatively large share of multi-family households, which are generally multi-generational households will also present a constraint to achieving the forecast housing mix. In Brampton, as people age, they are more likely to live with family members than move into an apartment unit on their own. This will impact demand for apartment units in Brampton in future years.

Caledon

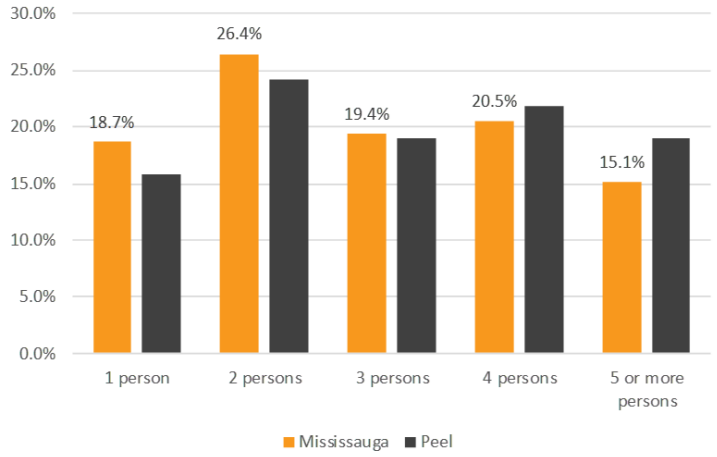
Share of Households by Household Size, 2016



- As shown earlier, Caledon has a relatively large share of its population in the age 50 and over cohort. Caledon also has a relatively large share of households with only two persons, which are generally couples without children at home.
- The large number of two person households presents an opportunity for apartment construction in Caledon, as these households may choose to downsize to apartment units.

Mississauga

Share of Households by Household Size, 2016



- Mississauga also has a relatively large share of one and two person households. Over one-third of these households (36%) are in single and semi-detached units.
- Therefore, there is an opportunity to achieve the forecast housing mix and rate of intensification in the SGAs, as a portion of these one and two person households may downsize to apartment units over the forecast horizon.

SOURCE: urbanMetrics inc. based on 2016 Census of Canada.

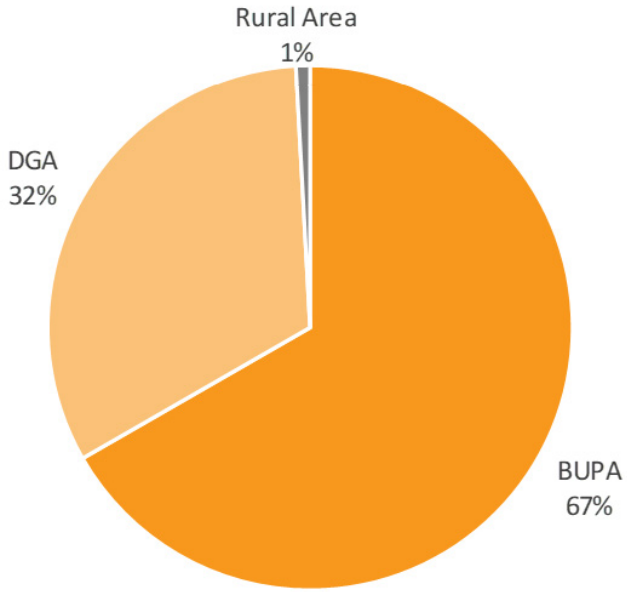
3.2 LAND SUPPLY

One factor that will likely impact the rate of intensification that can be achieved in the SGAs is the amount of DGA land that exists in a municipality. Municipalities with a large supply of vacant DGA lands are likely to face more constraints to achieving the forecast housing mix and rate of intensification in the SGAs, in comparison to municipalities that are largely built-out.

The table below summarizes the gross land area in the built-up area (BUPA), DGA and Rural Area of each municipality.

Brampton

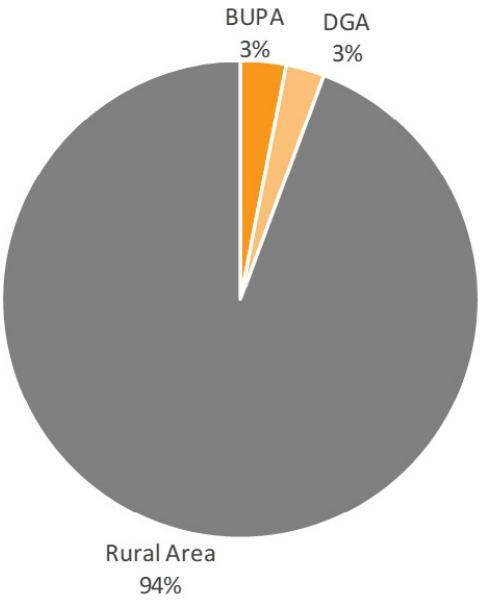
Gross Land Area (Ha) by Policy Area



- Among municipalities in Peel Region, Brampton has the largest amount of DGA land.
- Overall, Brampton is forecast to accommodate nearly 39,000 new households in the DGA between 2016 and 2031, or 71% of all Peel Region DGA household growth.
- Towards the end of the 2031 planning horizon, the City's greenfield housing opportunities will likely be approaching build-out. Therefore, post 2031, a greater share of residential development will likely be accommodated through intensification.
- The large supply of DGA land presents a potential constraint to achieving the rate of intensification in Brampton's SGAs in the early part of the forecast horizon.

Caledon

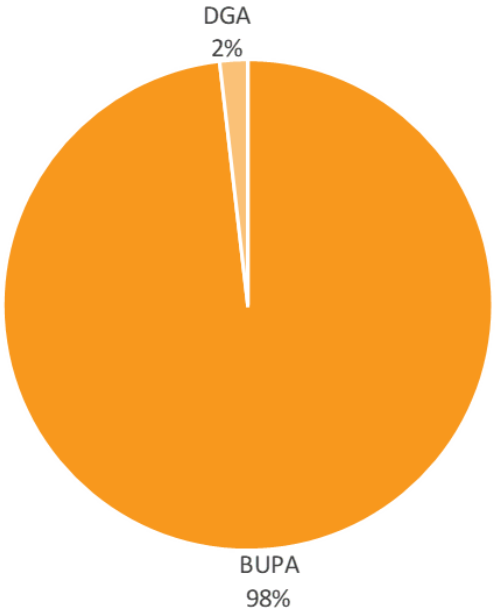
Gross Land Area (Ha) by Policy Area



- In Caledon, the amount of Rural Area and DGA lands presents a potential constraint to achieving the rate of intensification in the SGAs.
- Caledon is forecast to accommodate 12,730 new households in the DGA between 2016 and 2031, and 880 households in the Rural Area.

Mississauga

Gross Land Area (Ha) by Policy Area



- Nearly all lands in Mississauga are within the Built-up Area of the municipality.
- There are a number of significant proposed residential developments, such as the redevelopment of Square One and Inspiration Lakeview. These developments present an opportunity to achieve the rate of intensification in the SGAs.

SOURCE: urbanMetrics inc. based on Table 1 in Appendix III: Peel 2041 Growth Management ROPA – Request to Proceed with Consultation on Draft Amendment.

3.3 NEW HOME CONSTRUCTION AND PRICES

Recent trends in housing construction and new house prices are also important in identifying the opportunities and constraints to achieving the forecast rate of intensification and housing mix in the SGAs.

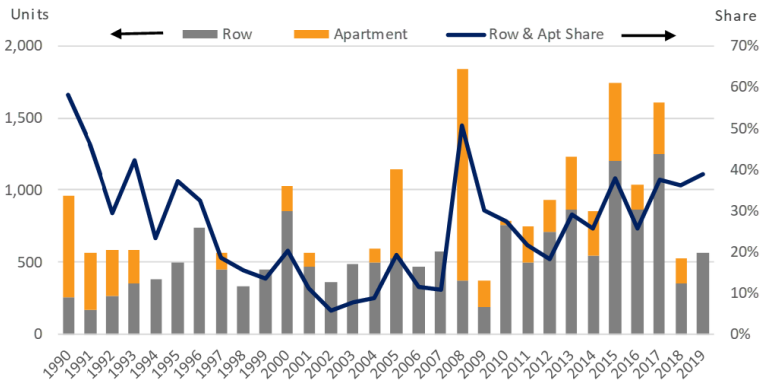
In municipalities already experiencing high rates of apartment construction or where the price of new ground-related housing is out of the reach of the average household, there are greater opportunities to achieving the forecast housing mix and rate of intensification in the SGAs.

Housing Starts

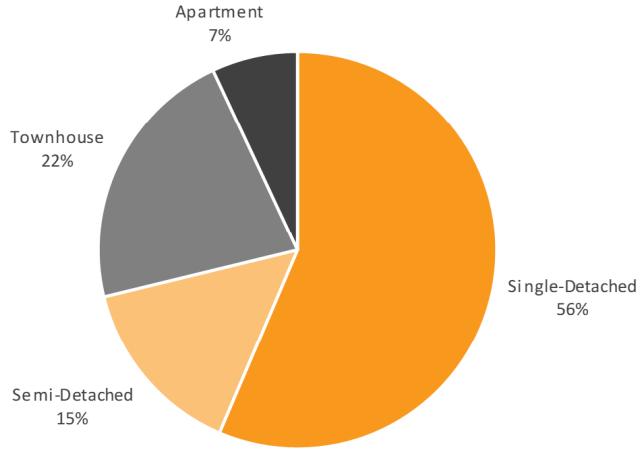
The following table examines housing construction in Brampton, Caledon and Mississauga to assess, at a high level, the impact on the forecasted housing mix and rates of intensification in the SGAs.

Brampton

Housing Starts by Unit Type, 1990 to 2019



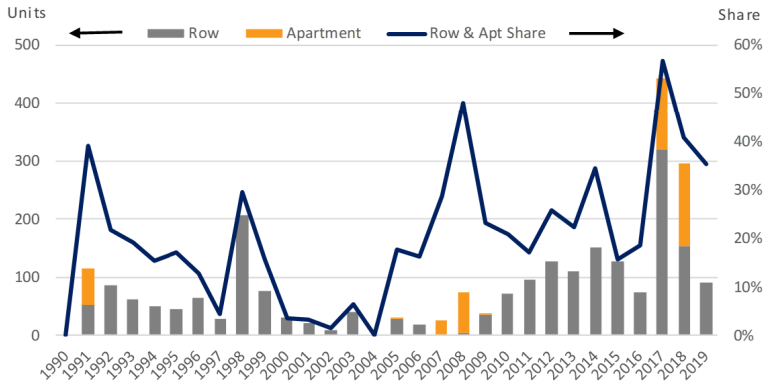
Share of Housing Starts by Unit Type, 2010 to 2019



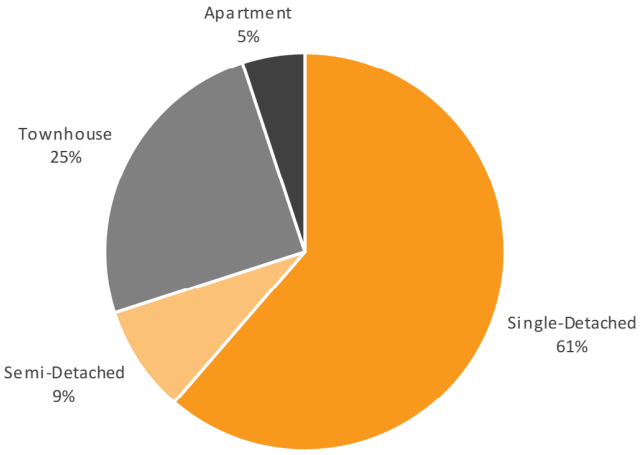
- Brampton has had a relatively steady pace of apartment construction in recent years, with an average of about 250 apartment starts per year over the last decade.
- The share of housing starts in Brampton that are either townhouse or apartment starts has generally been trending higher over the past two decades. The trend towards townhouse and apartment construction presents an opportunity to achieving the forecast housing mix and rate of intensification in the SGAs.

Caledon

Housing Starts by Unit Type, 1990 to 2019



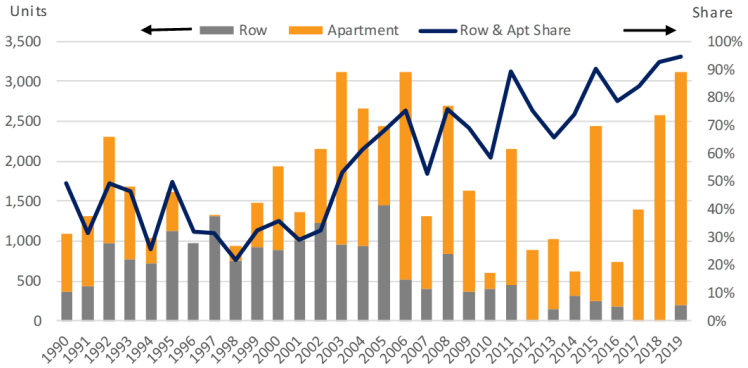
Share of Housing Starts by Unit Type, 2010 to 2019



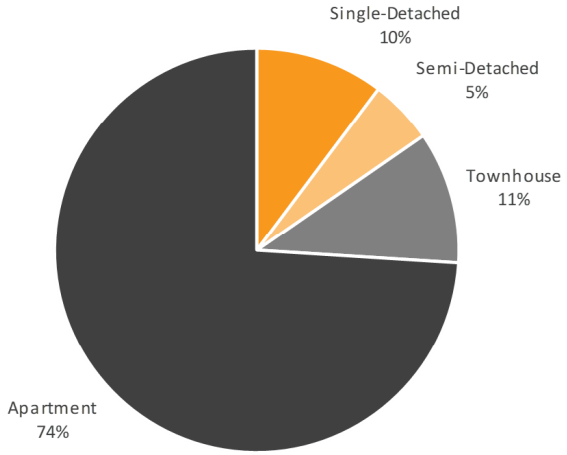
- The share of housing starts in Caledon that are townhouse units has been trending higher in recent years. Between 2010 and 2019, townhouse units accounted for 25% of housing starts and has been much higher than 25% in recent years. This presents an opportunity to achieving the forecast housing mix and rate of intensification in the SGAs.
- That being said, there has been very little apartment construction in Caledon in recent years, accounting for only 5% of housing starts over the past decade. This presents a potential constraint to achieving forecast growth in apartment units.

Mississauga

Housing Starts by Unit Type, 1990 to 2019



Share of Housing Starts by Unit Type, 2010 to 2019



- In Mississauga, apartment construction, as a share of all residential construction, has been trending higher since the late 1990s. In recent years apartment units have accounted for over 90% of housing starts as the municipality becomes increasingly built-out.
- Going forward, there are a number of large apartment developments in the pipeline in Mississauga, particularly in the UGC and in Lakeview that will likely result in the apartments continuing to account for the vast majority of housing construction activity.

New Home Prices and Household Income

The significant escalation in housing prices will continue to impact demand for housing by unit type, as certain types of housing become out of reach for the average household. As the price of new single-detached and semi-detached units rise, there will likely be stronger demand for townhouse and condominium apartment units as the only alternative for ownership housing. This will provide an opportunity for the municipalities to achieve their forecast housing mix and intensification in the SGAs.

To determine the types of housing that are attainable to the average household, we have compared new house prices to the maximum house price that can be purchased based on the estimated average household income in each municipality. This analysis makes a number of assumptions, which include:

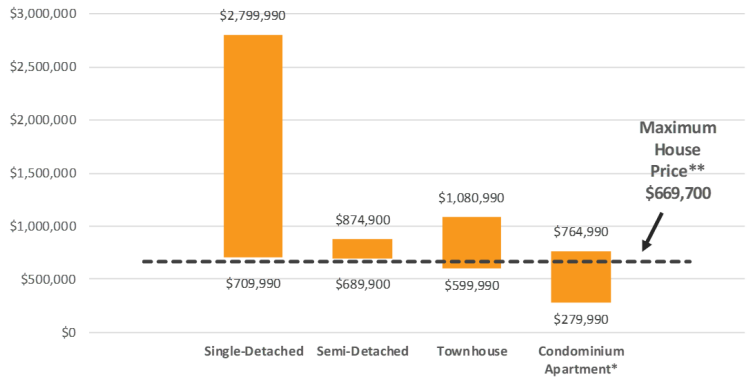
- **New House Prices** – New house prices are based on data from Altus Data Solutions. For the purpose of this analysis, we have considered the range of available house prices as of March 2020.
- **Household Income** – We have utilized average household income in each municipality based on the 2016 Census of Canada (2015 income) and inflated income to 2020 levels based on Statistics Canada survey of average weekly earnings (Table 14-10-0223-01) for the Province of Ontario.
- **Mortgage Assumptions** – We have assumed a gross debt service (GDS) ratio of 39%[2], a 10% down payment, 3.1% CMHC mortgage loan insurance premium, a 2.89% mortgage rate for a 5-year fixed mortgage and a 25-year amortization period.
- **Other Monthly Expenses** – We have assumed monthly property tax payments based on the maximum purchase price of the house and monthly utility costs of $150 per month.

While there are a range of assumptions that can be used, the purpose of this analysis is to highlight general trends in demand for housing based on new house prices and income. Overall, this analysis indicates that in all municipalities in Peel Region, condominium apartment units are within reach for a household with the average household income. In Brampton and Caledon, townhouse units are also within reach for units priced at the low end of the range. House prices and income suggest that townhouse and apartment units could account for a larger share of new housing demand going forward, which provides an opportunity to achieve the forecast housing mix and growth in the SGAs.

[2] https://www.canada.ca/en/department-finance/news/2016/10/technical-backgrounder-mortgage-insurance-rules-income-proposals-revised-october-14-2016.html

Brampton

New House Price Range and Maximum Purchase Price Based on Household Income



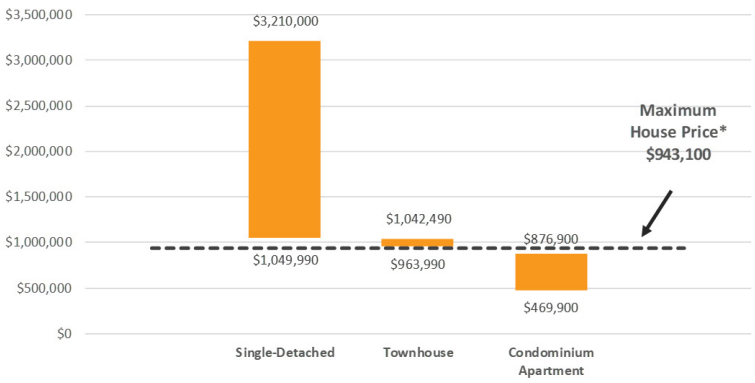
* includes condominium apartments and stacked townhouse units. Excludes pent-house units.

** calculated maximum house price that can be carried by the average household income in the municipality.

- In Brampton, a maximum purchase price of $669,700 can be carried by the average household income. This is sufficient to purchase a condominium apartment unit in the City.
- The low end of the price range for townhouse units is also within reach for a household with an average income.
- The price of a new single-detached and semi-detached unit is above the maximum purchase price for a household with an average income. This suggests that there could be a shift away from single and semi-detached units to townhouse and condominium apartment units in Brampton.
- Stronger demand for condominium apartment units could help the City achieve the forecast rate of intensification in the SGAs.

Caledon

New House Price Range and Maximum Purchase Price Based on Household Income

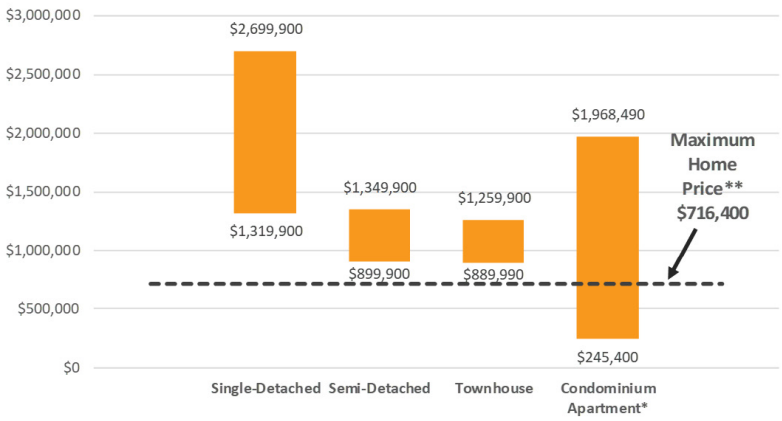


** calculated maximum house price that can be carried by the average household income in the municipality.

- With a calculated maximum purchase price of approximately $943,000, the price of a new condominium apartment unit is within reach for a household in Caledon with an average income.
- The lower end of the price range for townhouse units is also within reach for a household with an average income.
- As the price of a single-detached dwelling is out of reach for a household with an average income, it suggests that there could be a shift towards townhouse and condominium apartment units in the municipality over the forecast horizon.

Mississauga

New House Price Range and Maximum Purchase Price Based on Household Income



* includes condominium apartments and stacked townhouse units. Excludes pent-house units.

** calculated maximum house price that can be carried by the average household income in the municipality.

- In comparison to Brampton and Caledon, the low end of the price range for a new single-detached, semi-detached and townhouse unit is out of reach for a household with an average income.
- As shown, the price of a new condominium apartment unit is well within reach for a household with an average income.
- This suggests that from a housing attainability perspective, there will continue to be strong demand for condominium apartment units in Mississauga.

SOURCE: urbanMetrics inc. based on Altus Data Solutions, Statistics Canada, CMHC, municipal property tax rates and average mortgage rates from various financial institutions.

3.4 RENTAL MARKET

In recent years, there has been a pronounced shift in the tenure of new apartment construction. While condominium apartments continue to account for a large share of construction, purpose-built rental buildings have started to gain market traction.

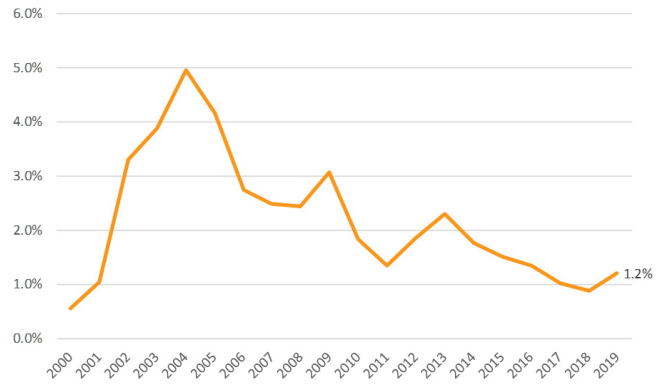
The shift towards rental apartment construction provides an opportunity for municipalities in Peel Region to achieve the rate of intensification and forecast housing mix in the SGAs. The renewed interest in purpose-built rental apartments is a result of a number of factors, including but not limited to:

- Strong house price appreciation, which has made owning a home less attainable for many households;
- Increased demand for purpose-built rental buildings from institutional investors seeking long-term stable returns; and,
- Record low interest rates and capitalization rates, which, together have pushed up prices for existing multi-tenant apartment buildings.

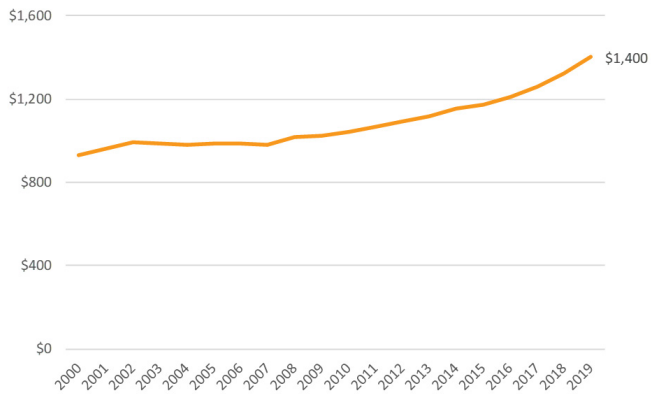
High prices for existing apartment buildings has encouraged the development of new buildings or re-development of existing apartment complexes. For example, owners of some apartment complexes are looking to maximize the value of underutilized parcels by adding additional apartment towers or infill townhomes. Similarly, some owners of low-rise rental apartment projects are looking to increase density on their sites by re-developing low-rise buildings and replacing them with high-rise buildings.

In municipalities across Peel Region, vacancy rates are near all-time lows and average monthly rent has been accelerating. These factors will likely contribute towards increased rental apartment construction in the Region and help achieve the forecast housing mix and potentially the rates of intensification forecast in the SGAs.

Rental Apartment Vacancy Rate, Peel Region



Rental Apartment Monthly Rent, Peel Region



SOURCE: urbanMetrics inc. based on data from CMHC.

3.5 ACCESS TO AMENITIES AND TRANSIT

In addition to factors noted above, access to amenities and transit are important factors that will influence demand for housing across the Region and within the SGAs.

Major transit investments are planned within most of the SGAs, particularly in the two UGCs and each of the MTSAs. These investments are likely to increase the rates of intensification in these SGAs. It is anticipated that SGAs where transit exists or is imminent, such as the GO Transit stations and the Hurontario LRT, are likely to accommodate intensification sooner than SGAs located along transit corridors where investment is expected to occur over the longer-term.

Increasingly, quality of life is becoming an important factor being considered by people when deciding where to live. SGAs with convenient access to retail amenities, schools, childcare, recreational opportunities (indoor and outdoor) and other urban amenities could be more successful in achieving forecast rates of intensification. As part of the analytical lens analysis, it was identified that many of the MTSAs and the UGCs scored highly in terms of these “community considerations”.

Municipalities in Peel Region are also making significant investments to help create a sense of ‘place’ in the various SGAs. For example, Brampton is making significant investments in the Downtown, such as a new university campus, the Centre for Innovation and the Riverwalk. These transformational investments will be important in helping to achieve the forecast rate of intensification.

3.6 ECONOMIC TRENDS

We have looked at long-term economic trends that are likely to influence population growth and the potential impact on intensification. Employment is one of the strongest predictors of net migration and housing growth within a municipality. The significant employment growth forecast in Peel Region and neighbouring municipalities will impact population growth and demand for housing in the Region.

[3] Unlocking the Potential of the Airport Megazone; Pamela Blais, October 2016

Peel Region is also home to the Airport Megazone (AMZ)[3], a regionally, provincially and nationally significant employment zone, which will continue to be an employment anchor in the Region and fuel employment growth. The AMZ has a diverse range of jobs in manufacturing, warehousing, transportation, as well as finance and business service jobs that will continue to attract both national and international investment. Investments in the GTA West Corridor will also create employment opportunities in areas of Peel Region that currently do not have strong highway access.

The AMZ and strong highway access has lent itself to Peel Region being logistics powerhouse in Southern Ontario. Based on data from Cushman and Wakefield, there were nearly 290 million square feet of industrial gross floor area (GFA) within Peel Region at the end of 2019, or about 22% of the total industrial space in the GTA. This was the largest concentration in any regional municipality in the GTA. Peel Region also has a significant concentration of office space within the GTA, accounting for approximately 18% of all office space in the GTA, based on properties tracked by Colliers.

Due to these factors, significant employment growth is forecast in Peel Region to 2041. The composition of this employment growth will also likely have an impact on intensification in the SGAs. As shown in Figure 10, while employment growth in Peel Region is forecast to slow between 2016-2021 and 2031-2036, major office employment is expected to account for a larger share of employment growth. There will be opportunities to accommodate this employment growth within SGAs and along transit corridors. For example, the proposed redevelopment of both Shoppers World Brampton and Square One include office components. The presence of office jobs within the SGAs could also attract residential uses, as some people will choose to live and work in the same community for improved quality of life. There will also be opportunities to accommodate population-related employment within the various SGAs to help create complete communities.

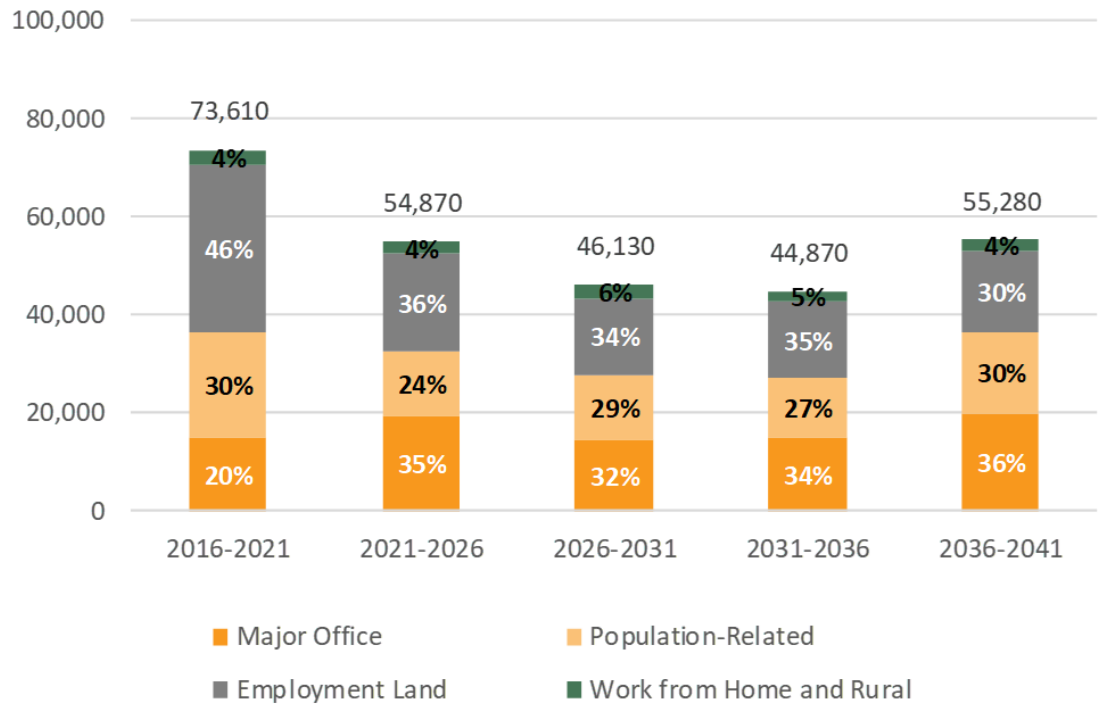


Figure 20: Employment Growth, 2016-2041

SOURCE: urbanMetrics based on Peel Region 2041 Growth Allocations – Scenario 16.

3.7 OPPORTUNITIES AND CONSTRAINTS

There are a number of factors that are expected to influence Region-wide development within the SGAs. As these SGAs represent an important opportunity for intensification within the Region, the intensification target can be achieved. Factors that are likely to result in increased development within the SGAs include population growth in the 20 to 39 age group and age 65 and over age cohort are likely to increase demand for apartment units over the forecast horizon.

There may also be renewed interest in purpose-built rental housing, driven, in part, by low vacancy rates and increased interest from institutional investors This is likely to help the Region achieve the rate of intensification in the SGAs and forecast housing mix.

Employment is one of the strongest predictors of net migration and housing growth within a municipality. The significant employment growth forecast in Peel Region and neighbouring municipalities will impact population growth and demand for housing in the Region.

The tables below summarize the opportunities and constraints that are expected to impact the rate of intensification and forecast housing mix in each of the municipalities in Peel Region.

Brampton

Opportunities

- Population Growth – The City of Brampton is forecast to account for the majority of population growth in Peel Region to 2031. Strong population growth will increase demand for housing in general, a portion of which will likely be accommodated in SGAs.
- Age Structure – A relatively large share of Brampton's population is in the 25 to 34 age group. While this age group does not have a high proportion of apartment-dwellers, there is a longer-term opportunity to increase apartment demand as experienced in Mississauga.
- New Home Construction – Townhouse and apartment units have accounted for an increasing share of housing construction in Brampton.
- New House Prices - The low end of the price range for single-detached and semi-detached units is above the maximum purchase that is considered attainable for a household with an average income. This suggests that there could be a shift away from single and semi-detached units to townhouse and condominium apartment units in Brampton.

Constraints

- Age Structure – There is a relatively large share of the population under the age of 20 and in the 30 to 49 age group. The 30 to 49 age group is most likely to live in ground-related housing. This will limit demand for apartment units over the short to medium-term.
- Household Size– Brampton has a relatively large share of households with 4 or more persons, which could present a constraint to achieving the forecast housing mix, as it will be more difficult to accommodate large households in apartment units.
- Household Type – Brampton also has a relatively large share of multi-generational households, which could limit demand for apartment units, as people age 65 and over are more likely to live with family members than move into apartment units.
- Land Supply – Brampton has the largest supply of DGA land in Peel Region. The large supply of DGA land presents a potential constraint to achieving the rate of intensification in Brampton's SGA in the early part of the forecast horizon.

Caledon

Opportunities

- Population Growth – Population growth in Caledon is forecast to accelerate through the forecast period. Increasing from about 2,500 new residents per year during 2016-2021 period to almost 4,500 new residents per year during the 2036-2041 period.
- Age Structure – A relatively large share of Caledon residents are age 40 and over. Based on dwelling type propensities from the 2016 Census, after 65 years of age, the propensity to live in apartment units begins to increase. Therefore, there is an opportunity for stronger demand for apartment units, which could help Caledon achieve its forecast housing mix and rate of intensification in the SGAs.
- Household Size – Caledon has a relatively large share of two person households and households that are couples without children. There is an opportunity for these households to 'downsize' to apartment units and help Caledon achieve the forecast housing mix.
- New House Price - As the price of a single-detached dwelling is out of reach for a household with an average income, it suggests that there could be a shift towards townhouse and condominium apartment units in the municipality over the forecast horizon.

Constraints

- Housing Propensities – While Caledon has a relatively large share of residents over 40 years of age, the age specific headship rates for single and semi-detached housing remains elevated in the older age cohorts, which could limit demand for apartment units.
- Land Supply – The large supply of Rural Area and DGA land in Caledon presents a potential constraint to achieving the rate of intensification in the SGAs.
- Housing Construction – While townhouse units are accounting for a larger share of construction activity in Caledon, there have been very few new apartment units built over the past decade.

Mississauga

Opportunities

- Age Structure – A relatively large share of Mississauga residents are age 50 and over. Based on dwelling type propensities from the 2016 Census, after 55 years of age, the propensity to live in apartment units begins to increase. Therefore, there is an opportunity for stronger demand for apartment units in future years, which could help Mississauga achieve its forecast housing mix and rate of intensification in the SGAs.
- Household Size - Mississauga also has a relatively large share of one and two person households. Over one-third of these households (36%) are in single and semi-detached units and could 'downsize' to apartment units in the future and help achieve the rate of intensification.
- Land Supply - There are a number of significant proposed residential developments, such as the redevelopment of Square One and Inspiration Lakeview. These developments present an opportunity for achieving the rate of intensification in the SGAs.
- Housing Construction - In recent years apartments have accounted for over 90% of housing starts as the municipality becomes increasingly built-out.
- New House Price - The low end of the price range for a new single-detached, semi-detached and townhouse unit is out of reach for a household with an average income, which should result in a further shift to apartment units.

Constraints

- Population Growth – Average annual population growth in Mississauga is forecast to slow during the 2021-2026 period, which will impact rates of intensification over the short-term. However, after 2026, population growth is forecast to increase.

Has the Region set an appropriate intensification target?

The Region's intensification targets are aspirational, yet achievable. To 2031, the Region is using an intensification target of 51%, which is the minimum intensification target in A Place to Grow (50%). In 2021-2041, the Peel Region intensification rate is 58%. It does appear that the intensification target is achievable. In the early part of the forecast horizon (to 2031) the majority of the growth is anticipated to occur in Brampton, where most new development will likely occur in the DGA. That being said, the City of Brampton has been proactive in investing in the Downtown UGC (i.e. Riverwalk, new University campus and Centre for Innovation) to help attract future development to the area and increase rates of intensification. Post-2031, as the DGA in Brampton begins to build-out and growth shifts to the built-up areas in Mississauga and Brampton, the amount of growth accommodated through intensification will likely increase and the 60% intensification target could be achieved.

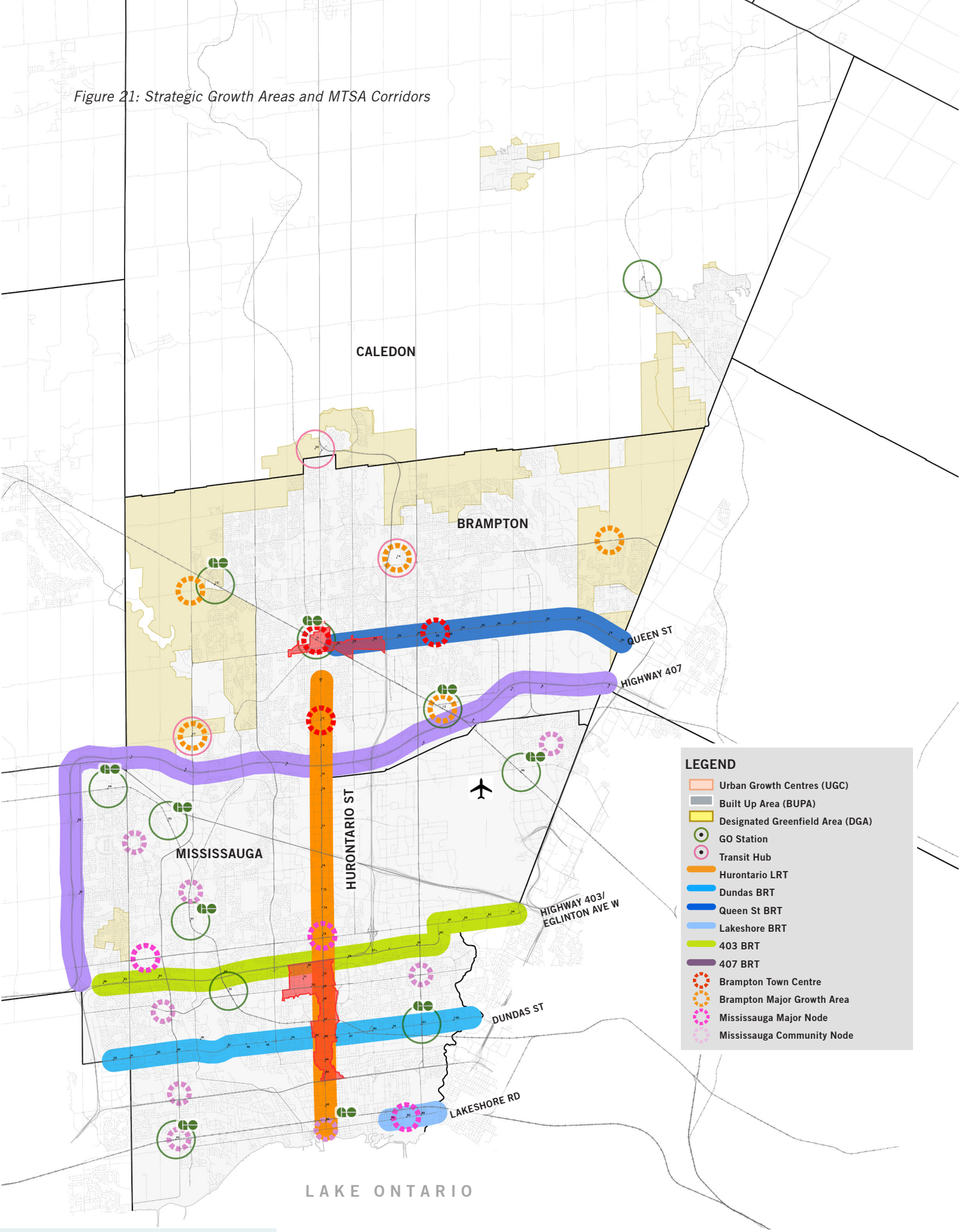
How can the market demand Opportunities and Constraints be address to meet the intensification target?

Certain market demand opportunities and constraints, such as demographics and household characteristics, will be beyond the control of the Region. That being said, the aging population and escalating house prices are expected to result in increased demand for apartment units in the Region. Therefore, if the Region and local municipalities are proactive in ensuring community infrastructure, active transportation and the public realm improvements are in place in the SGAs, it could help attract higher-density forms of development to these locations and achieve the intensification target.

What SGAs should the Region be focusing on to 2041? Does growth allocation need to be shifted?

The SGAs that are identified as have the highest potential for redevelopment based on community considerations, mobility, market readiness and land use should be the focus for growth to 2041. It does not appear to be necessary to shift the growth allocation among the SGAs, as most of the growth is already be directed towards UGCs and Priority Transit Corridors, which have the highest potential for intensification and redevelopment.

Figure 21: Strategic Growth Areas and MTSA Corridors



SECTION 4: STRATEGIC GROWTH AREAS AND MTSA CORRIDORS

4.1 SGA HIERARCHY

This section articulates a hierarchy for Strategic Growth Areas (SGA) within the Region of Peel. The role of SGAs across the Region are varied and serve different functions in achieving target densities. A mix of complementary uses and amenities are require to support the development of complete communities within each SGA.

Every five years, the Growth Plan sets out the population and employment forecasts to be used by municipalities to plan and manage growth in the Region. The Growth Plan identifies land designated for urban development within Settlement Areas, which are comprised of Designated Greenfield Areas (DGA), Built-Up Areas (BUPA) and Intensification Areas. The Growth Plan Policy 1.2.1 states that intensification and higher densities should be prioritized in Strategic Growth Areas to make efficient use of land and infrastructure and support transit. Since the introduction of the Growth Plan, the Region has seen a shift to more compact development patterns, a greater variety of housing options, more mixed-use development in Urban Growth Centres (UGC) and Strategic Growth Areas (SGA), and greater integration of transit and land use planning

The map on page 56 illustrates the different Strategic Growth Areas that guide growth throughout the Region of Peel. The overlapping boundaries of regional and local municipal SGAs, illustrate the subsequent overlapping policies for the same geographic area. The following SGA hierarchy is a tool that policy makers can use to better understand the interconnected relationships between the various SGA policies, varying means that aim to achieve the same end of a transit-supported complete community.

The following inforgraphic illustrates a proposed organization for understanding the hierarchy of SGAs across the Region. Growth efforts should be focused within Built Up Urban Areas as the priority for future growth. Within the BUPA, the Downtown Mississauga and Downtown Brampton Urban Growth Centres are the highest priority areas for intensification in the Region due to their strategic location within their respective municipalities, access to higher-order transit, and market potential. Secondary to Urban Growth Centres are Major Transit Station Areas and Corridors, which are categorized based on their physical and geospatial relationship as singular nodes or connected corridors. The MTSA GO Station and Transit Hub nodes play an important role in terms of mobility and future growth potential. The MTSA Corridors are categorized by function and priority, as Primary MTSA Corridor, Secondary MTSA Corridor and Mobility MTSA Corridors. Tertiary, are the SGAs identified at the local municipal level. The City Mississauga identifies Community Nodes and Major Nodes under the Official Plan, and the City of Brampton identifies Town Centres and Major Growth Areas in the 2040 Vision Plan.

SGA HIERARCHY

WITHIN THE BUILT UP URBAN AREA

HIGH PRIORITY

URBAN GROWTH CENTRE (UGC)

- DOWNTOWN MISSISSAUGA
- DOWNTOWN BRAMPTON

MAJOR TRANSIT STATION AREA (MTSA)

PRIMARY MTSA CORRIDOR

- HURONTARIO LRT

SECONDARY MTSA CORRIDOR

- QUEEN ST BRT
- DUNDAS BRT
- LAKESHORE BRT

MTSA STATIONS

- GO STATION
- TRANSIT HUB

MOBILITY MTSA CORRIDOR

- 403 BRT
- 407 BRT

LOW PRIORITY

OTHER STRATEGIC GROWTH AREAS (SGA)

- MISSISSAUGA:
  COMMUNITY NODES, MAJOR NODES
- BRAMPTON:
  TOWN CENTRES, MAJOR GROWTH AREAS

The following SGA profiles summarize the common characteristics of each SGA including physical description, planning framework, and complimentary uses.

URBAN GROWTH CENTRES: DOWNTOWN MISSISSAUGA, DOWNTOWN BRAMPTON

The Growth Plan defines Urban Growth Centres as planned focal areas for investment in mixed-use, high-density, and public-transit oriented developments across the Greater Golden Horseshoe. There are two UGCs within the Region of Peel, located in Downtown Mississauga and Downtown Brampton. UGCs are planned to accommodate and support major transit infrastructure and serve as high density major employment centres. UGCs will be planned to accommodate a significant share of population and employment growth, with a minimum gross density target of 200 people and jobs combined per hectare for each respective UGC by year 2031.

The Mississauga UGC is unique in that it was planned for mixed-use, high density development from the outset. The area is centred on the Square One commercial centre and includes Mississauga's civic core. Ongoing, high density residential development continues, and ambitious plans for the redevelopment of the Square One property point to strong market demand.

The Brampton UGC is centred around Brampton's historic downtown and includes a mix of traditional main street commercial buildings and contemporary mixed-use high density infill , surrounded by a grid of low-rise residential. Intensification has been more modest and significant opportunities exist for the redevelopment of highway commercial developments surrounding the historic downtown.

Both areas are well supported by a variety of amenities, however a detailed review of CS&F facilities is warranted given the scale of proposed intensification.

PRIMARY MTSA CORRIDOR: HURONTARIO LRT

The Hurontario LRT corridor is identified as a primary MTSA corridor due to the planned higher order transit of the Hurontario LRT, interface with various transportation modes and ability to accommodate an intensive concentration of people and jobs along the corridor. Within the Region of Peel, there are 22 MTSAs identified along the Hurontario LRT corridor, with 3 MTSAs in Brampton and 19 MTSAs in Mississauga respectively. Policy 2.2.4.3.b of the Growth Plan identifies that Major Transit Station Areas will be planned for a minimum density target of 160 people and jobs combined per hectare for MTSAs served by light rail transit.

The Hurontario LRT corridor is comprised of a series of MTSAs that are closest to meeting intensification targets While a few of the Hurontario MTSAs have already met their planned density targets, the majority will require a mix of mid- to high-rise infill to meet their targets.

Existing planning documents have identified preliminary public amenities required to support this level of intensification and these should be monitored throughout implementation.

SECONDARY MTSA CORRIDOR: QUEEN ST BRT, DUNDAS BRT, LAKESHORE BRT

Description:

The Queen St BRT, Dundas BRT and Lakeshore BRT all serve important roles from a Regional transit perspective in providing network connections. Lands adjacent to these corridors should be planend to be transit-supportive and supportive of active transportation and a range and mix of uses and activities. Within the Region of Peel, there are 33 MTSAs along these secondary corridors. Policy 2.2.4.3.b of the Growth Plan identifies that Major Transit Station Areas will be planned for a minimum density target of 160 people and jobs combined per hectare for MTSAs served by bus rail transit.

Secondary MTSA corridors are characterized by existing highway commercial land uses on large parcels. Many are over 30 years old and have attracted development interest. Typically, these MTSAs will require a mix of mid- to high-rise infill to meet their targets.

Most are poorly served by directly adjacent community amenities, however, those adjacent to residential neighbourhoods may benefit from amenities found therein.

MTSA STATION: GO STATION

GO Station MTSAs are lands within an approximate 500-800 metre radius (10 minute walk) of a GO Station. MTSAs are intended to be developed as higher density, mixed-use, transit supportive neighborhoods that provide access to local amenities, jobs, housing and recreation opportunities. There are two active GO train lines that service the residents in the Region of Peel: Kitchener GO and Milton GO. Policy 2.2.4.3.c of the Growth Plan identifies that Major Transit Station Areas will be planned for a minimum density target of 150 people and jobs combined per hectare for MTSAs served by the GO Transit rail network. They are places of connectivity between regional rapid transit services, and also places where different modes of transportation, from walking to high-speed rail, come together seamlessly.

Mix of Complementary Uses

GO Station MTSAs can be characterized into two major groups:

1. Mixed Use GO Stations, like Port Credit, Cooksville or Brampton that permit a variety land uses and have an existing level of intensification (generally 1960s era residential slab towers). These areas have strong market demand and some (Port Credit) have already seen significant recent mixed-use intensification. Mount Pleasant and Streetsville GO Stations various on this type.

2. Employment GO Stations, like Bramalea or Clarkson that are characterized by existing employment uses. Intensification at these GO stations would require careful review of land use designations that would support desired intensification.

TRANSIT HUB

Description:

In the Regional Transportation Plan, Transit Hubs are Major Transit Station Areas at key intersection points on the Frequent Rapid Transit Network. Also known as Mobility Hubs, Transit Hubs are intended to create important transit network connections, integrate various modes of transportation and accommodate an intensive concentration of places to live, work, shop or play. They are particularly significant because of their combination of existing or planned frequent rapid transit service with an elevated development potential. As defined in the Growth Plan, to be identified as a mobility hub, a major transit station area must be located at the interchange of two or more current or planned regional rapid transit lines as identified in the Regional Transportation Plan.

Mix of Complementary Uses

Transit Hubs are typically located at the intersection of major arterials and include a mid-size commercial property, surrounded by low-rise residential neighbourhoods. Opportunities for intensification, consistent with the scale of the transit infrastructure and built form context are anticipated.

MOBILITY MTSA CORRIDOR: 403 BRT, 407 BRT

Description:

The 403 and 407 BRT mobility MTSA corridors serve an important function and role from a mobility perspective within the Region. The investments for MTSAs along highway corridors to support active transportation and intensification are relatively small compared to those along rapid transit, and any growth along these corridors is likely to occur in the post-2041 horizon. Policy 2.2.4.3.b of the Growth Plan identifies that Major Transit Station Areas will be planned for a minimum density target of 160 people and jobs combined per hectare for MTSAs served by bus rail transit.

Mobility MTSA Corridors are characterized by their location within or adjacent to major transportation rights of way (HWY 403 or 407), and are generally surrounded by employment uses immediately beyond.

There is limited intensification anticipated within these MTSAs however they serve important roles with the transportation network and will require targeted investments to transit, active transportatio and public realm networks.

MISSISSAUGA SGA: COMMUNITY NODES, MAJOR NODES

Mississauga Official Plan Policy 5.3 outlines the City Structure as the basis of the urban hierarchy, which includes Communty Nodes and Major Nodes. The Downtown will contain the highest densities, tallest buildings and greatest mix of uses; Major Nodes will provide for a mix of population and employment uses at densities and heights less than the Downtown, but greater than elsewhere in the city; and Community Nodes will provide for a similar mix of uses as in Major Nodes, but with lower densities and heights. Major Nodes and Community Nodes are identified as Intensification Areas with the following density targets; OP Policy 5.3.2.4 states that Major Nodes will achieve a gross density of between 200 and 300 residents and jobs combined per hectare, and Community Nodes will achieve a gross density of between 100 and 200 residents and jobs combined per hectare.

Mississauga's Community Nodes and Major Nodes are characterized by existing commercial uses that are anticipated to experience intensification.

They will require a mix of contextual mid- to high-rise built form to meet targeted densities and a careful review of existing CS&F facilities to support planned intensification.

BRAMPTON SGA: TOWN CENTRES, MAJOR GROWTH AREAS

Brampton identifies three Major Growth Areas for focused transit, infrastructure investments and growth at Uptown Brampton, Downtown Brampton and Bramalea. The growth projections identifed in the 2040 Vision Plan identify that Downtown Brampton is planned to achieve a household balance of 53,000 jobs and 30,000 households and Uptown Brampton is planned to achieve a household balance of 26,000 jobs and 20,000 households. The 2040 Vision Plan identifies Town Centres as secondary focus areas to Major Growth Areas that are planned to be complete, mixed-use, diverse communities with employment and multiple-family housing options. Five Town Centres were identified which include Bram East, Trinity Commons, Heritage Heights, BramGO and Bram West. Town Centres are identified to achieve a household balance of 46,000 jobs and 30,000 households within the post 2040 planning horizon.

Brampton's Major Growth Areas overlap other SGAs described in previous categories listed above. Town Centres are generally characterized by exisitng commercial uses that are anticipated to experience intensification.

They will require a mix of contextual mid- to high-rise built form to meet targeted densities and a careful review of existing CS&F facilities to support planned intensification.

DESIGNATED GREENFIELD AREA

Designated Greenfield Areas are lands within a Settlement Area, that is not yet built up. The Growth Plan 2.2.7.1 identifies that new development taking place in Designated Greenfield Areas will be planned, designated, zoned and designed in a manner that supports the achievement of complete communities, supports active transportation and encourages the integration and sustained viability of transit services. New development within designated greenfield areas must meet minimum density targets of 50 residents and jobs per hectare, measured across the Regiont to achieve the minimum density required for basic transit service.

Designated Greenfield Areas are characterized by greenfield development with minimum density targets that can be met with a mix of low-rise residential building types, augmented by targeted mid-rise built form.

As greenfield sites, DGAs require the comprehensive provision of amenities and open spaces to support growth.

4.2 KEY OBSERVATIONS AND RECOMMENDED POLICY-IMPLEMENTATION APPROACHES

4.2.1. Centres will continue to intensify alongside continued Greenfield development

Built-up area intensification is especially strong in the Urban Growth Centres (UGCs) and Hurontario Street corridor, however, urban expansion development in the Designated Growth Areas (DGAs) will continue to be a component of Peel Region's population and employment growth. In the short term, Brampton will continue to experience a high rate of growth in the DGAs. Major Transit Station Areas (MTSAs) in Brampton will, with the exception of some areas along Queen Street and Hurontario-Main Street for example, largely develop and intensify post-2041. The ratio and type of development in the DGAs versus built-up areas, particularly in Brampton, should be monitored closely to identify opportunities to achieve a balanced market (e.g. range of housing and employment mix) and an increasing rate of intensification in the longer term (e.g. phase/design initial or interim development stages to facilitate future infilling).

4.2.2. UGCs should continue to remain the focus of future growth

The Brampton and Mississauga UGCs are well-positioned to meet and exceed 2041 Growth Plan intensification targets. Some policy and/or implementation intervention may be required, however, to support their evolution. The primacy of the Brampton UGC, as the most strategically important intensification node in the City, should be maintained as other Strategic Growth Areas (SGAs) such as the "Shoppers World" site (MTSA) begin to intensify significantly. A specialized suite of policies and investment strategies should be established to sustain and bolster the development of the Brampton UGC, where unique physical properties (e.g. built heritage, flood plains, rail connection and overpass) may become barriers to full build-out. The Mississauga UGC, already achieving the Growth Plan target density, should continue to develop and diversify (e.g. wider range of non-residential uses). While MTSA intensification in the Hurontario corridor will begin to increase significantly with the future opening of the LRT, monitoring and implementation tools should be applied to ensure that the planned role and function of the UGC is maintained and enhanced, as other SGAs grow and evolve.

4.2.3. Phased development hierarchy along key transit corridors

The MTSAs in the Queen, Dundas and Hurontario Street Corridors represent a significant share of planned growth in Peel Region, the timing and type of which should be carefully considered leading up to and possibly beyond 2041. A development phasing hierarchy should be established for MTSAs in these corridors, especially for that segment of Hurontario located north of the planned LRT terminus at Steeles Avenue. A combination of regulatory (e.g. zoning, conservation authority), infrastructure, service (e.g. public facilities) and market (e.g. reduced charges, fees) incentives and/or changes are recommended for those MTSAs having pre-2041 development priority.

4.2.4. GO stations at varying levels of 'readiness' based on existing context

GO Transit rail stations are significant potential intensification and community-building opportunities, each with physical and/or land use contexts presenting unique opportunities and constraints. There are some GO rail station MTSAs, such as Cooksville and Downtown Brampton, that are essentially "development-ready" and should be prioritized for any needed site-specific policy and/or implementation interventions required by the market to deliver projects (e.g. address flooding concerns, improve connectivity with surrounding lands, etc.). Employment-area GO rail stations MTSAs, such as Clarkson and Bramalea, require some degree of land use (including zoning) changes to better position these areas for achieving the Growth Plan density targets and a broader range of land uses including commuter-serving retail.

4.3 REGIONAL POLICY DIRECTIONS TO GUIDE INTENSIFICATION

The Region of Peel's Growth Management Focus Area Policy Directions Report (May 2020) introduced a number of options to update the Official Plan's Regional Structure including potential changes to the Section 5.3 - Urban System polices. These changes, towards conforming to the evolving Growth Plan structure and policies for the 2041 and now 2051 planning horizons, would refine the Regional intensification hierarchy by further articulating roles, functions and responsibilities for the detailed planning and implementation of SGAs having a Regional and/or area municipal interest. These policy changes include, but are not limited to:

- Delineating the specific boundaries of the Urban Growth Centres (UGCs) in Brampton and Mississauga on Official Plan Schedules;
- Adding a new Schedule showing the Strategic Growth Areas (SGAs) across the Region, including the specific boundaries of the approximately 100 Major Transit Station Areas (MTSAs); and
- Adding new policies to assist local municipalities in the delineation and implementation of local SGAs.

4.3.1 A new intensification hierarchy to build upon, support Regional policy directions

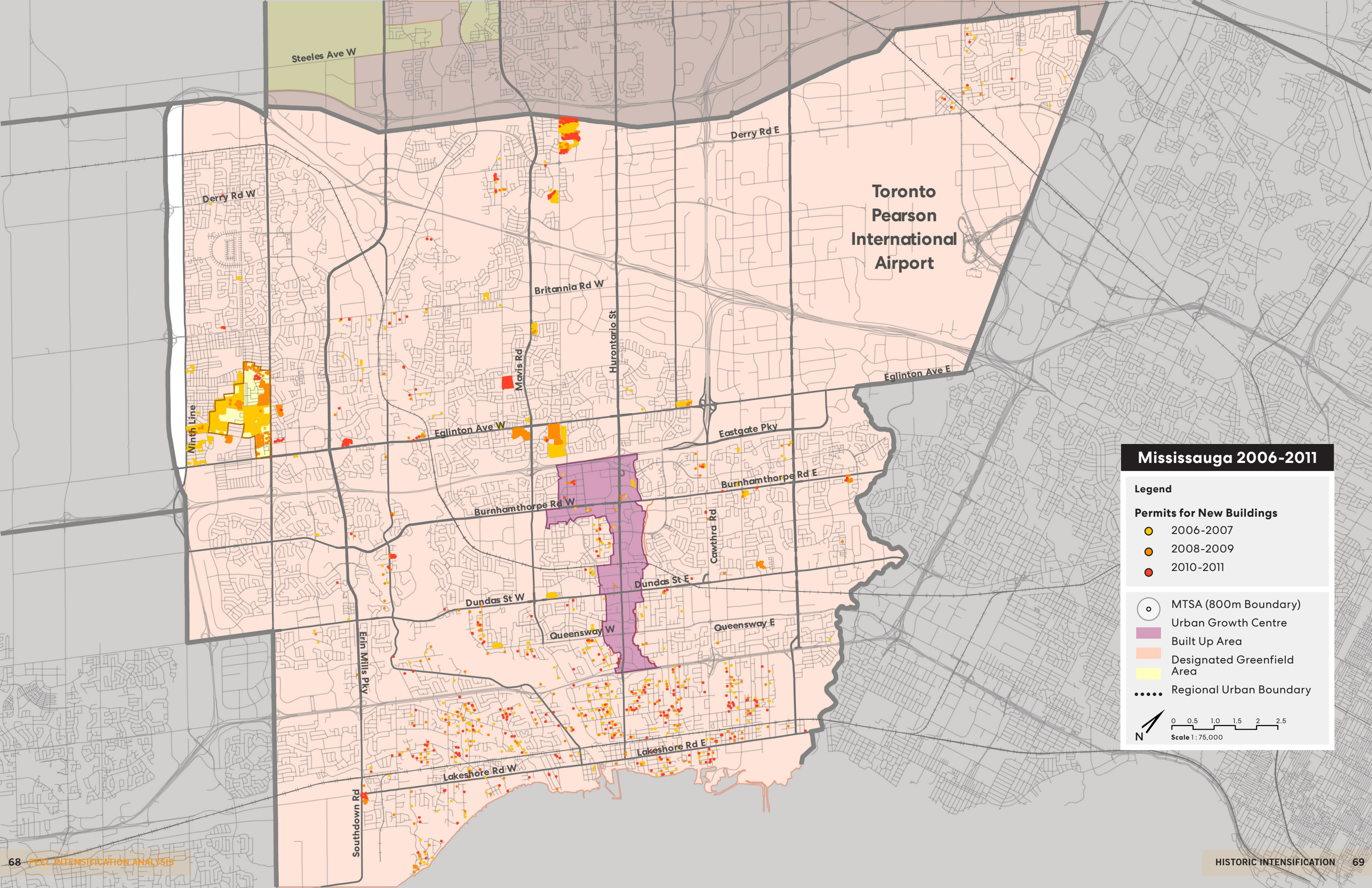
This Intensification Analysis was undertaken in coordination with, and will further shape, the Region's May 2020 policy directions work. Arising from a broad assessment of the Region's intensification framework and growth rates, including historical and forward-looking analyses, it is recommended that the Region consider adopting as policy a new intensification hierarchy as introduced in section 4.0 of this report. This hierarchy, shown on page 56, will further support the Region's current policy directions by:

- Reinforcing the primacy of the Brampton and Mississauga UGS as the most strategically important and highest density intensification areas in the Region;
- Establishing MTSAs as important, yet diverse, intensification nodes in ways that respond differently to a number of factors including transit service levels, growth rates, neighbourhood context, and infrastructure requirements; and
- Positioning other areas, including local community nodes and town centres, as being lower priority and yet more flexible locations for intensification.

LIST OF FIGURES

APPENDIX

The following contains maps that visualize historic rates of intensification between 2006-2018 across Mississauga, Brampton and Caledon. The maps illustrate building permits for new buildings from building permit data (MPAC) provided by the Region of Peel.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Derry Rd E
Toronto Pearson International Airport
Britannia Rd W
Mavis Rd
Hurontario St
Eglinton Ave E
Eglinton Ave W
Eastgate Pky
Burnhamthorpe Rd E
Burnhamthorpe Rd W
Cawthra Rd
Dundas St E
Dundas St W
Queensway W
Queensway E
Erin Mills Pky
Ninth Line
Lakeshore Rd E
Lakeshore Rd W
Southdown Rd
Mississauga 2006-2011
Legend
Permits for New Buildings
2006-2007
2008-2009
2010-2011
MTSA (800m Boundary)
Urban Growth Centre
Built Up Area
Designated Greenfield Area
Regional Urban Boundary
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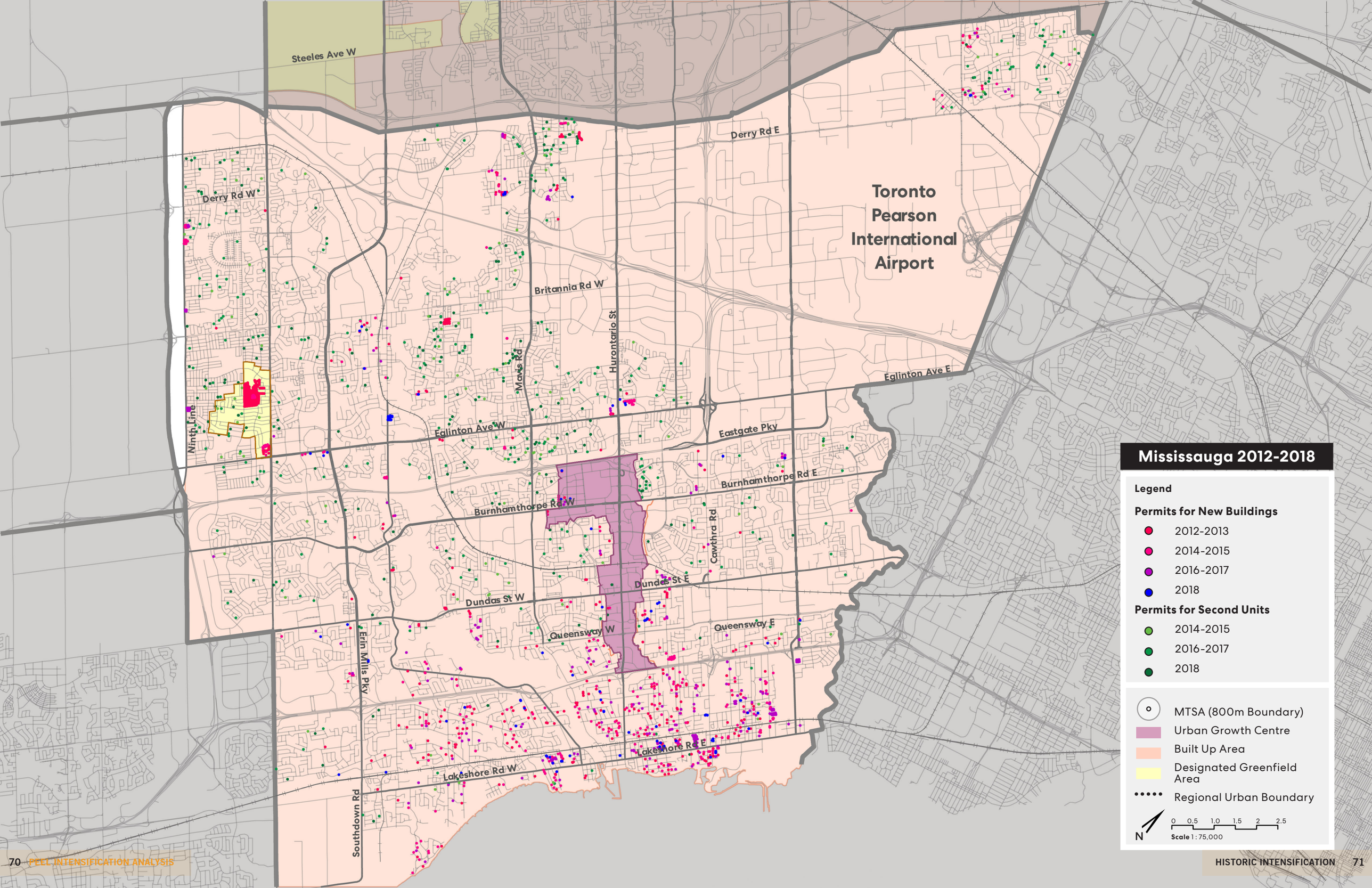
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Cawthra Rd
Dundas St W
Dundas St E
Queensway W
Queensway E
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Lakeshore Rd E
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2014-2015
2016-2017
2018
Permits for Second Units
2014-2015
2016-2017
2018
MTSA (800m Boundary)
Urban Growth Centre
Built Up Area
Designated Greenfield Area
Regional Urban Boundary
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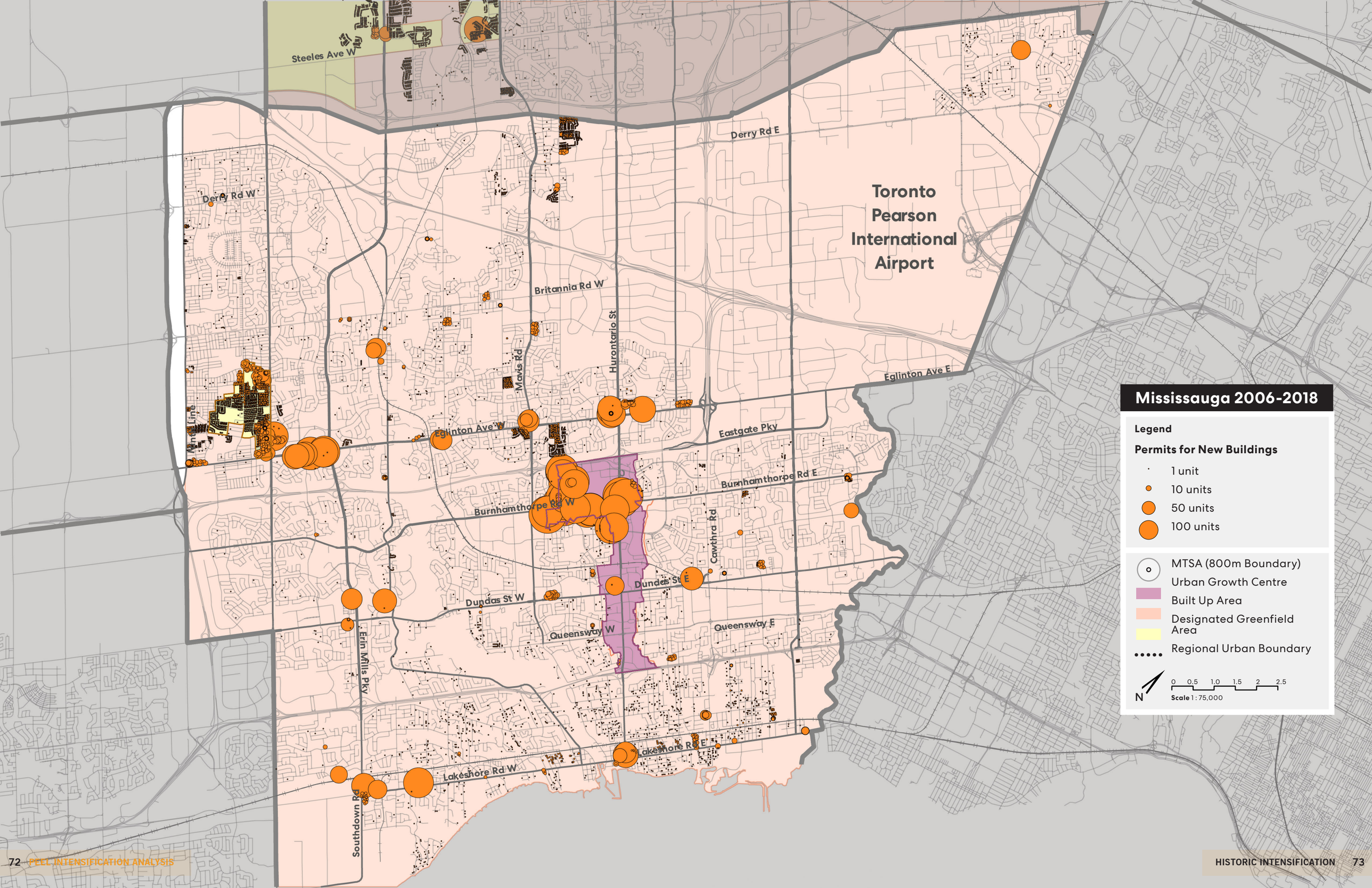
Scale 1 : 75,000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Cawthra Rd
Dundas St E
Dundas St W
Queensway W
Queensway E
Erin Mills Pky
Lakeshore Rd E
Lakeshore Rd W
Southdown Rd
Mississauga 2006-2018
Legend
Permits for New Buildings
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10 units
50 units
100 units
MTSA (800m Boundary)
Urban Growth Centre
Built Up Area
Designated Greenfield Area
Regional Urban Boundary
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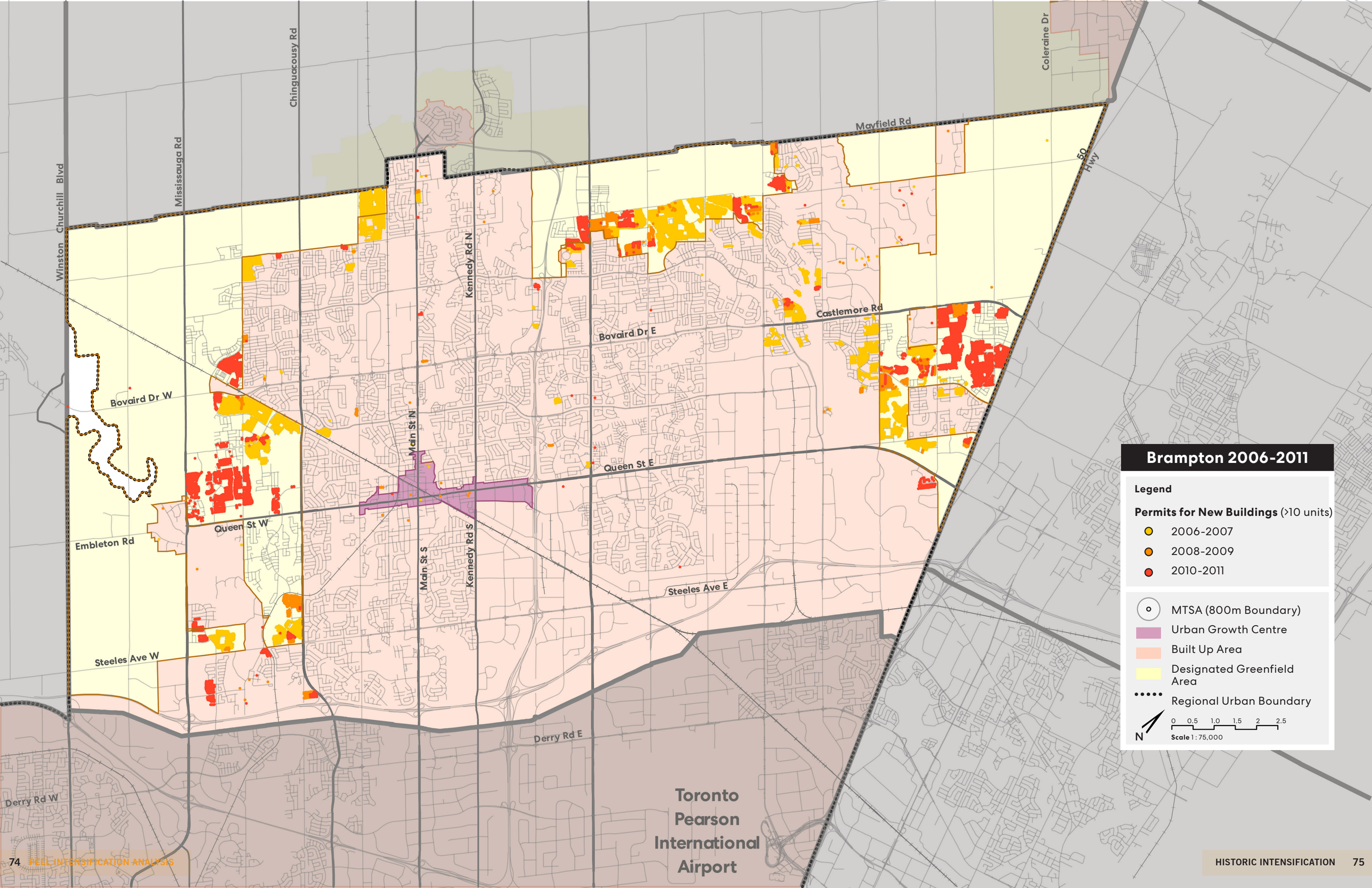
Scale 1 : 75,000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Main St N
Queen St E
Queen St W
Embleton Rd
Main St S
Kennedy Rd S
Steeles Ave E
Steeles Ave W
Derry Rd E
Derry Rd W
Toronto Pearson International Airport
Brampton 2006-2011
Legend
Permits for New Buildings (>10 units)
2006-2007
2008-2009
2010-2011
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Built Up Area
Designated Greenfield Area
Regional Urban Boundary
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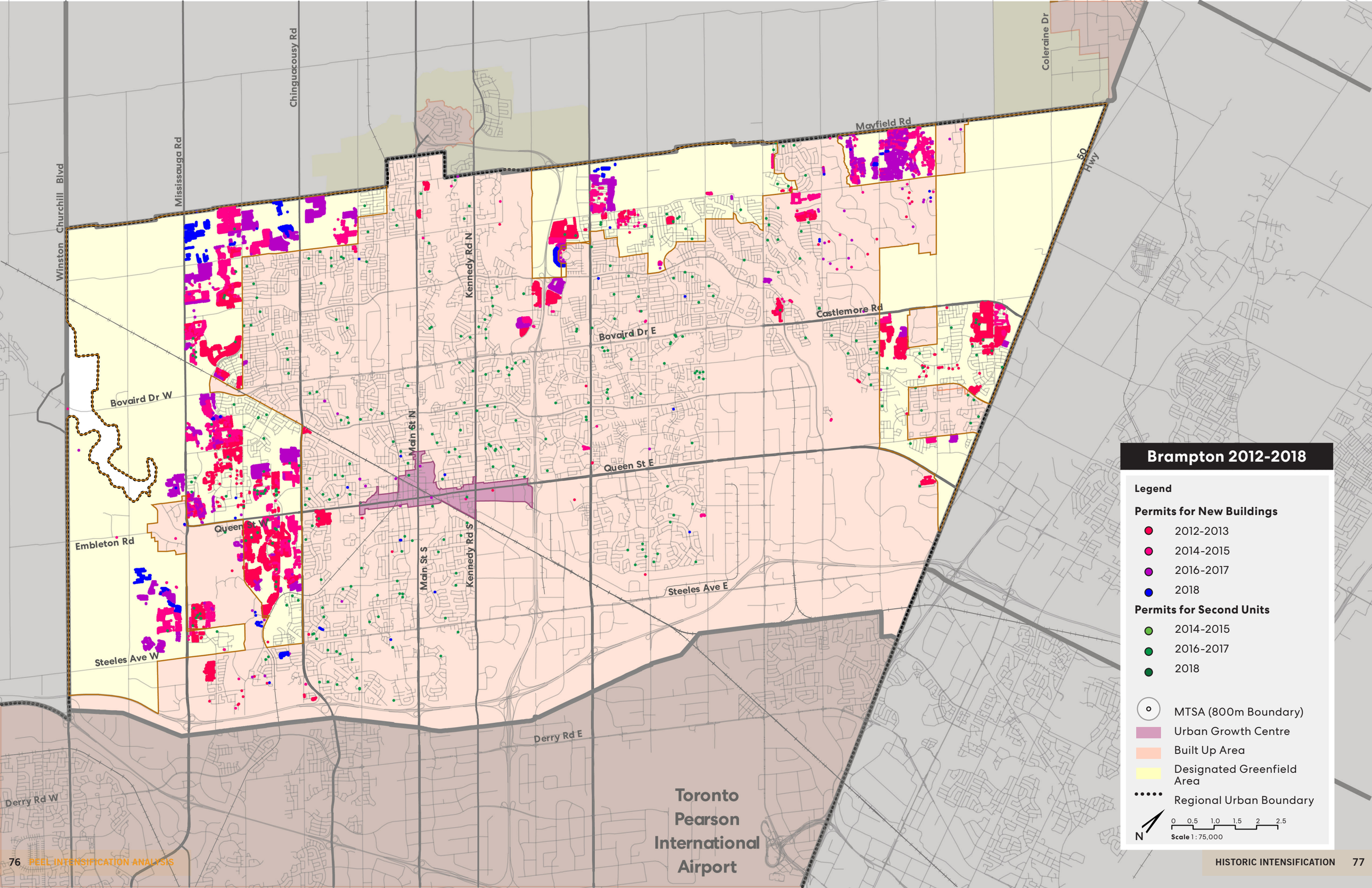
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Bovaird Dr W
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Queen St W
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Main St S
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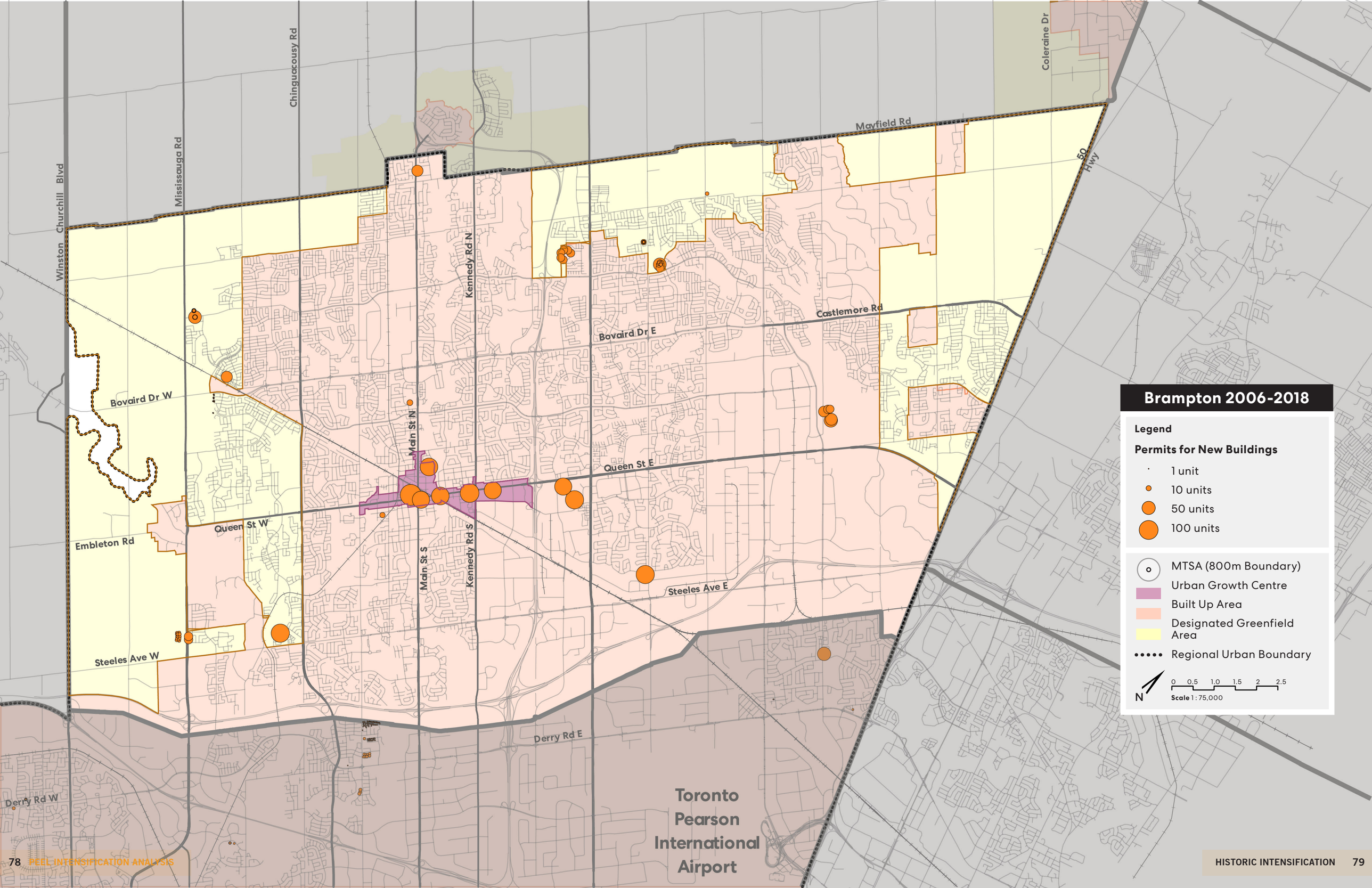
Scale 1 : 75,000


Brampton 2006-2018
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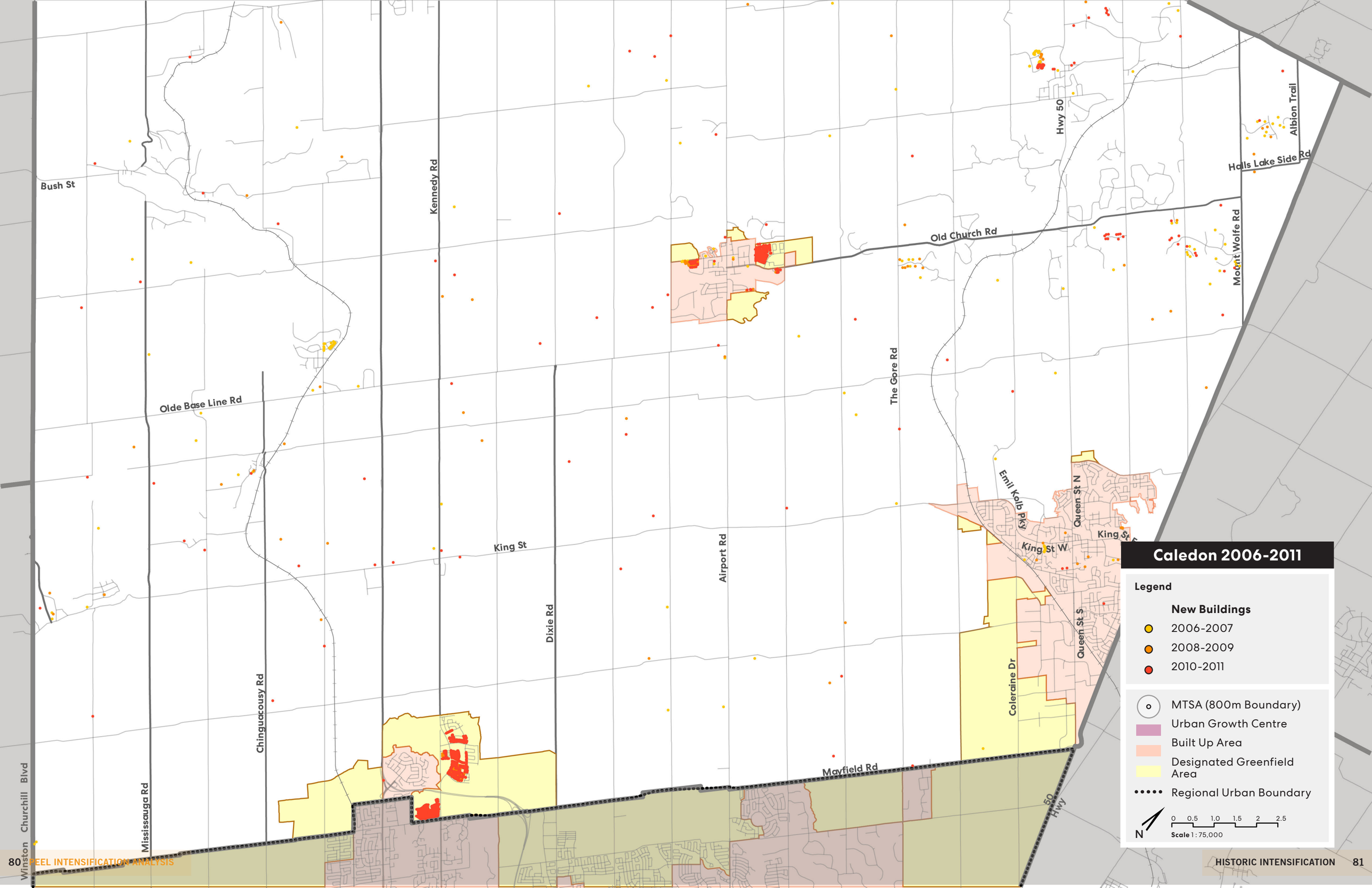
Steeles Ave W
Derry Rd E
Derry Rd W
Toronto Pearson International Airport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Albion Trail
Halls Lake Side Rd
Old Church Rd
Mount Wolfe Rd
The Gore Rd
Olde Base Line Rd
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Dixie Rd
Airport Rd
Emil Kolb Pky
Queen St N
King St W
Queen St S
Coleraine Dr
Mayfield Rd
Chinguacousy Rd
Mississauga Rd
Winston Churchill Blvd
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Caledon 2006-2011
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Scale 1 : 75,000

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Old Church Rd
Hwy 50
Albion Trail
Halls Lake Side Rd
Mount Wolfe Rd
The Gore Rd
King St
Dixie Rd
Airport Rd
Chinguacousy Rd
Mississauga Rd
Mayfield Rd
Emil Kolb Pky
Queen St N
King St W
Queen St S
Coleraine Dr
Winston Churchill Blvd
50 Hwy

Caledon 2012-2018

Legend

New Buildings
- 2012-2013
- 2014-2015
- 2016-2017
- 2018

Second Units
- 2015
- 2016

- MTSA (800m Boundary)
- Urban Growth Centre
- Built Up Area
- Designated Greenfield Area
- Regional Urban Boundary

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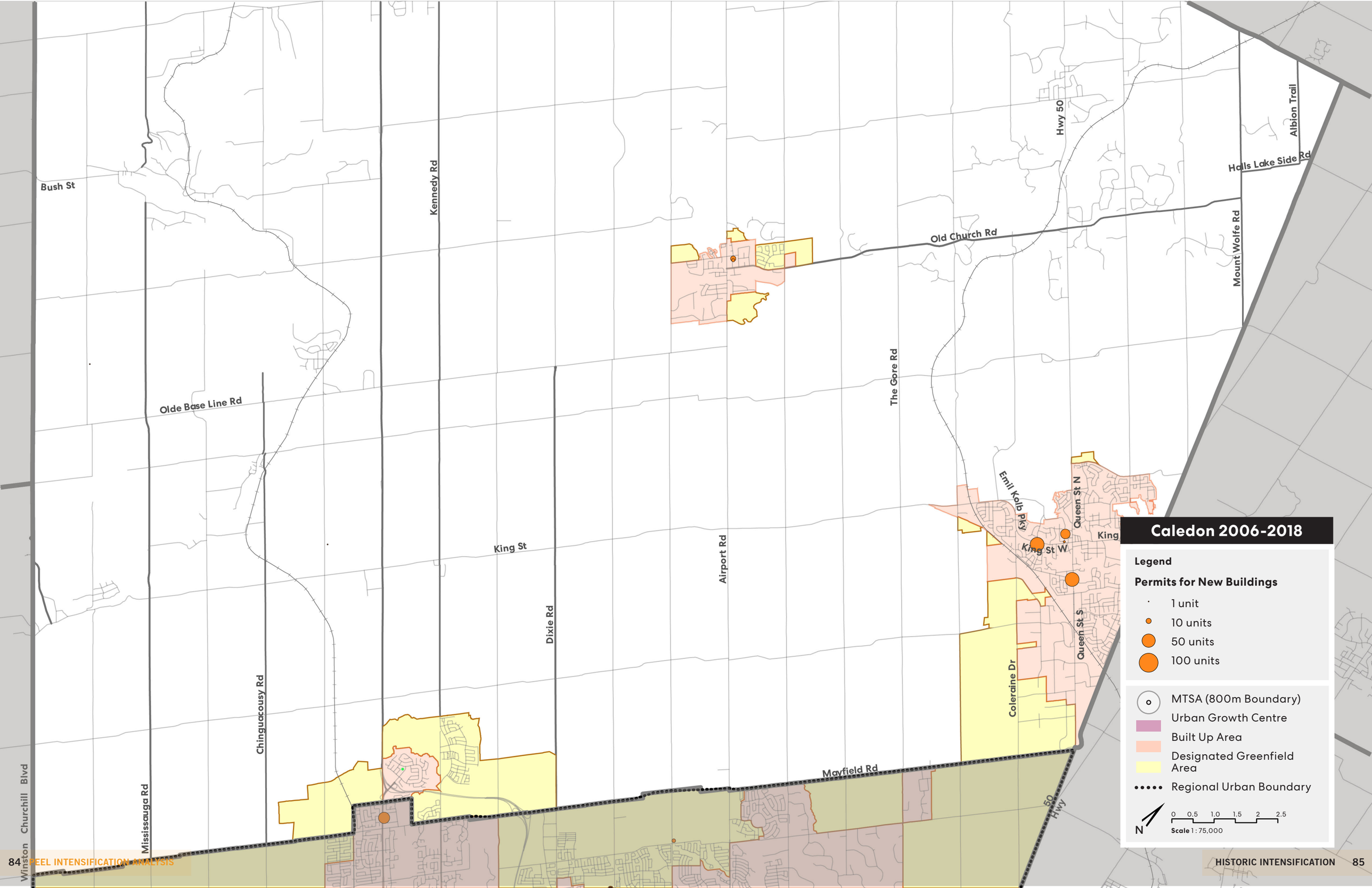
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MTSA (800m Boundary)
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Built Up Area
Designated Greenfield Area
Regional Urban Boundary
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Scale 1 : 75,000

Appendix: IX

STRATEGIC GROWTH AREAS

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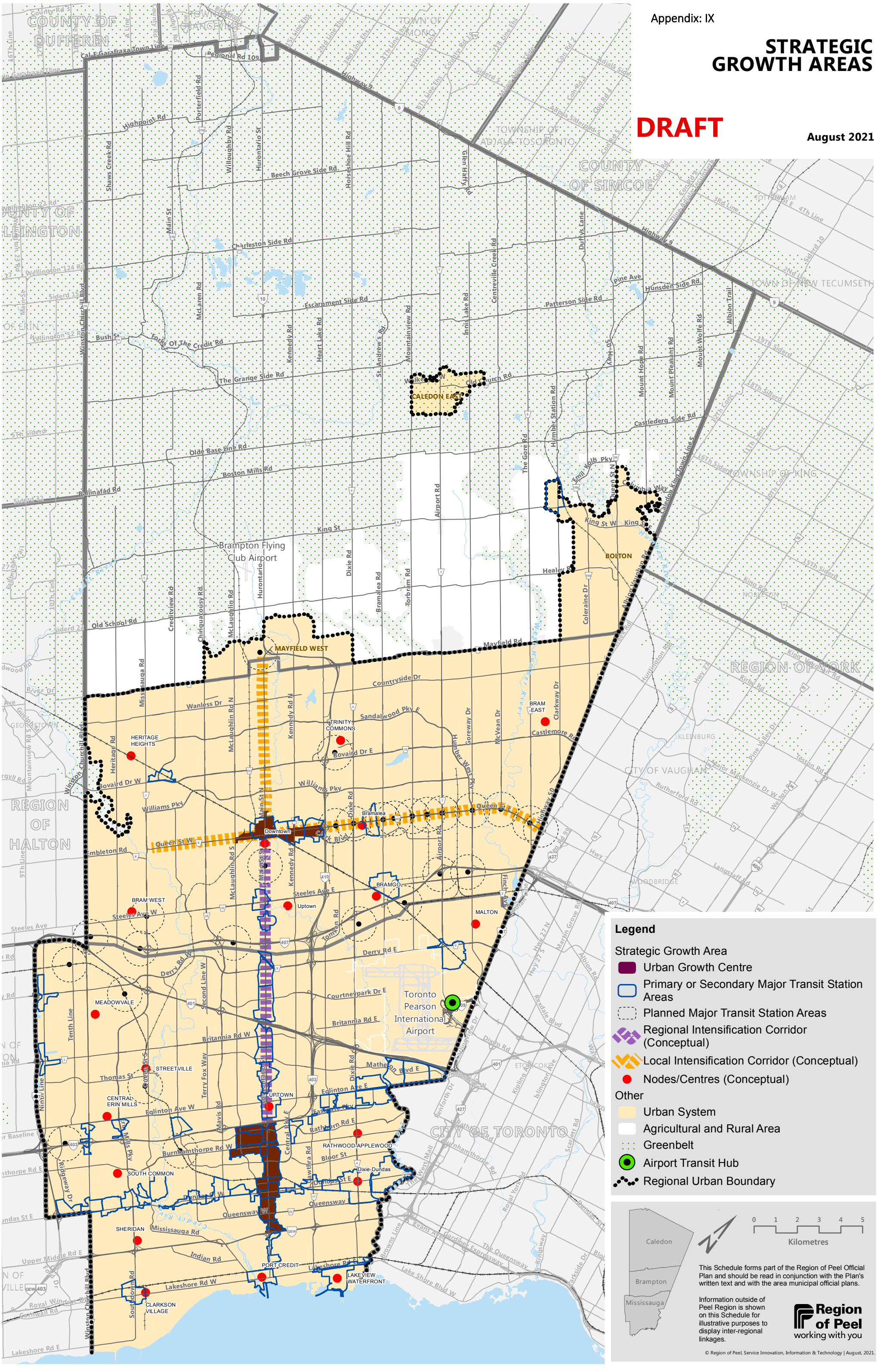
August 2021



This Schedule forms part of the Region of Peel Official Plan and should be read in conjunction with the Plan's written text and with the area municipal official plans.

Information outside of Peel Region is shown on this Schedule for illustrative purposes to display inter-regional linkages.

Region of Peel
working with you

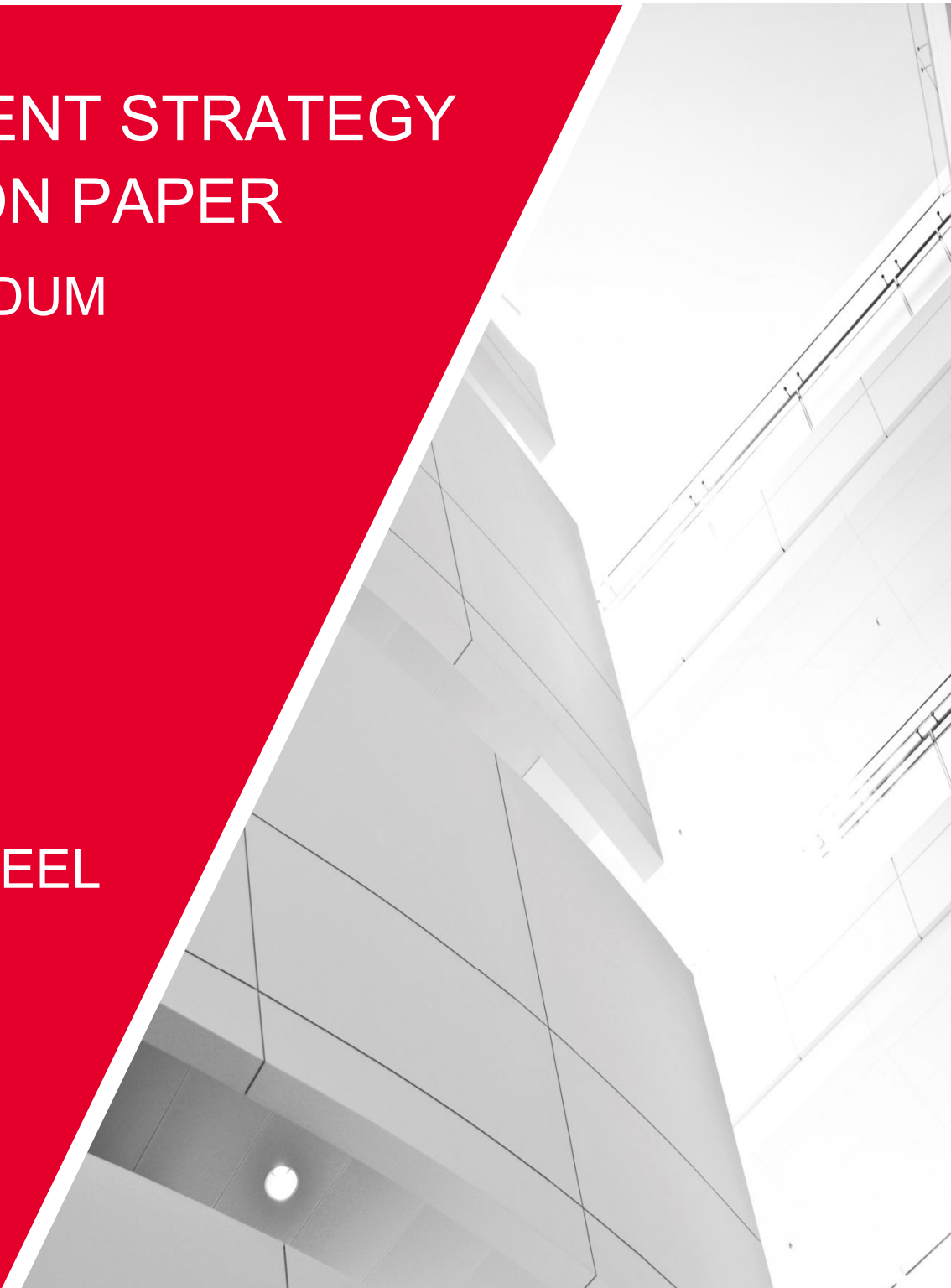
Appendix X

DRAFT August 16th

CUSHMAN & WAKEFIELD

EMPLOYMENT STRATEGY DISCUSSION PAPER

2051 ADDENDUM



PREPARED FOR:

REGION OF PEEL

August 16, 2021

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Regarding: Employment Strategy Discussion Paper – 2051 Addendum

Cushman & Wakefield is pleased to provide this *2051 Addendum* to our earlier *Employment Strategy Discussion Paper ("Employment Strategy")*. This document focuses on a number of topics, including evolving policy decision-making related to employment lands, Peel Region Council's decisions regarding the GTA West Corridor, and recently completed population and employment projections to the 2051 forecast horizon. Of course, the influence of the COVID-19 pandemic, recession, and recovery – and impacts on employment and real estate markets/land demand – is also addressed.

This *2051 Addendum* revisits the strategic recommendations from the *Employment Strategy* in light of current economic and market conditions. We look forward to discussing the analysis and strategies with you.

Respectfully submitted,

Cushman & Wakefield

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1.0 INTRODUCTION

1.1 Overview and Purpose

Cushman & Wakefield delivered the original *Employment Strategy Discussion Paper* (*"Employment Strategy"*) in September 2017 (which was released to the public), and an update in February 2019 (which was used for internal purposes by Peel Region staff). It has subsequently informed a range of land use and planning policy decisions in Peel Region. Of course, a lot has changed since this time.

The COVID-19 pandemic has caused planners to reevaluate land requirements to adjust to new employment realities and associated real estate needs. Evolving policy decision-making related to employment lands (such as the introduction of Provincially Significant Employment Zones) and decisions regarding the GTA West Corridor (no longer supported by Regional Council) must now be considered. As well, recently completed population and employment projections to the 2051 forecast horizon may now be taken into account. All of the preceding necessitates a reexamination of the strategic directions from the *Employment Strategy*, and is the purpose of this *2051 Addendum*.

Upon review, significant portions of the *Employment Strategy* remain supportable in the current environment. This *2051 Addendum* focuses on key areas of change that have been identified; it is intended to be read as a companion to the original report, and not as a standalone document.

2.0 RECENT CHANGES TO EMPLOYMENT POLICY FRAMEWORK

2.1 Introduction of Provincially Significant Employment Zones

2.1.1 Overview

Provincially Significant Employment Zones (PSEZ) were introduced by the Province of Ontario/Ministry of Municipal Affairs and Housing in 2019. As areas of high economic output, PSEZ are strategically located to provide stable, reliable employment across the region. They enable opportunities to improve coordination between land use planning, economic development, and infrastructure investments to support investment and job creation over the longer-term. *A Place to Grow: Growth Plan for the Greater Golden Horseshoe* sets out new policies that protect employment areas critical to the local and provincial economy. These policies give municipalities the flexibility to change the use of lands from employment areas to other uses, while making sure key employment areas are protected for the long-term.[1]

2.1.2 Impact on Employment Strategy

Peel is home to several PSEZ (some of which overlap into an adjacent municipality). These include:

- Zone 13 – along The Queensway East in Mississauga, west of Highway 427.
- Zone 14 – a large zone generally west of Toronto Pearson Airport, extending along Highway 401, Highway 407, and north along Airport Road.
- Zone 15 – on Bolton's west side, incorporating northeast Brampton, and extending into Vaughan.
- Zone 16 – along the CP Rail line at Mavis Road/Burnhamthorpe Road West, in Mississauga.

[1] https://www.ontario.ca/page/provincially-significant-employment-zones

- Zone 17 – incorporating Mississauga's Southdown Employment Area, and west into Oakville.
- Zone 18 – along Highways 401, 407, and 403 in the west/central part of Mississauga.

Provincially Significant Employment Zones can consist of employment areas as well as mixed-use areas that contain a significant number of jobs. Lands within a PSEZ may not be converted to a designation that permits non-employment uses until a Municipal Comprehensive Review occurs (unless the affected part of the employment area is located within a Major Transit Station Area). The identification of PSEZ is aligned with the *Employment Strategy's* recommendations regarding identifying and protecting employment lands in Peel to meet anticipated growth projections.

2.2 Peel Region Council's Decision on GTA West Corridor

2.2.1 Overview

The GTA West Corridor is a proposed new multi-modal transportation corridor that would include a 400-series highway, transitway, and potential goods movement priority features extending from Highway 400 (between Kirby Road and King-Vaughan Road) in the east to the Highway 401/407 ETR interchange area in the west.[2] In March 2021, Regional Council passed a resolution opposing any and all advanced construction associated with preparations for a GTA West Highway and Transmission Corridor; to support the request for a federal Environmental Assessment; and to oppose in principle the construction of any transportation corridor traversing the Region of Peel. Council also passed resolutions requesting that the Provincial government study alternatives to the GTA West Transportation Corridor such as the proposed Brampton Boulevard, and that Provincial money budgeted for the GTA West Transportation Corridor be invested into regionally connected transit, active transportation, and other sustainable modes of transportation.[3]

2.2.2 Impact on Employment Strategy

Council's decision to oppose the development of the proposed GTA West Corridor is not aligned with the recognition of the *Employment Strategy* that highway access is increasingly important to fostering growth of Employment Land Employment. The GTA West Corridor would have greatly enhanced mobility (particularly for goods movement) across southern Caledon, and "unlocked" lands for employment uses by elevating their perceived site selection attributes among prospective users. As a result, lands in proximity to in-place major highway infrastructure (Bolton's proximity to Highway 427 and the Mayfield West area's proximity to Highway 410) take on greater importance with respect to planning for ELE opportunities in south Caledon, and established employment areas require protection from future conversion. This issue is identified in Cushman & Wakefield's *Employment and Commercial Opportunities Technical Study* work that forms part of Peel Region's Settlement Area Boundary Expansion project.

The GTA West Corridor would have helped to ensure a broad variety of suitable employment lands from a location, size, servicing, and cost perspective by potentially introducing new well-connected employment areas across south Caledon – in particular at the interchange locations. Peel's employment areas still offer a range of desirable site selection attributes to attract jobs over time. However, there is arguably some increased risk to the forecast of Employment Land Employment being achieved in the absence of the new 400-series highway, as other municipalities compete to attract jobs.

2 https://www.ontario.ca/page/gta-west-transportation-corridor
3 https://www.peelregion.ca/council/decisions/#2021

2.3 Settlement Area Boundary Expansion in Caledon

2.3.1 Overview

In November 2020, Cushman & Wakefield completed the *Employment and Commercial Opportunities Technical Study* to support the Region of Peel's Settlement Area Boundary Expansion study in south Caledon. The Technical Study explored real estate market and site section attributes across a previously identified Focus Study Area in order to guide the planning of future lands for employment uses. Ongoing work includes an examination of the impacts of Peel Region Council's decision regarding the GTA West Corridor.

2.3.2 Impact on Employment Strategy

The *Employment and Commercial Opportunities Technical Study* prioritized the planning of future employment lands in Bolton's PSEZ, and in Mayfield West near the intersection of the planned GTA West Corridor and Highway 410 north-south extension. Other lands in proximity to highway interchanges were also identified as well-suited to accommodate growth. Ongoing work is considering the impact of the absence of the major highway infrastructure, and the resulting increased importance of planning for future employment in proximity to existing highways, in order to accommodate occupier location preferences. Providing public transit connections to established and emerging employment areas will be critical to support their ongoing function, and to enable new areas to prosper (this is particularly true in the absence of the GTA West Corridor, which would have increased mobility across south Caledon).

3.0 EMPLOYMENT GROWTH FORECAST TO 2051

3.1 Introduction

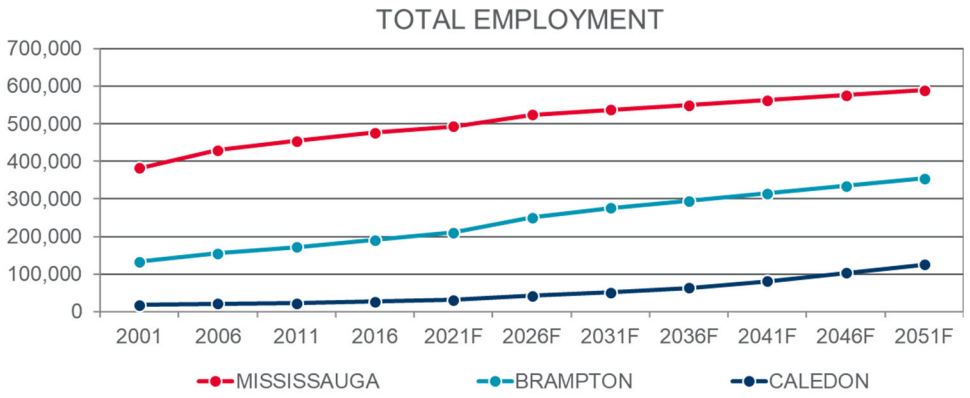
The *Employment Strategy* incorporated an employment by industry projection to 2041. Subsequently, the Province released longer-term projections to 2051 (Growth Plan Amendment 1, adjustments to Schedule 3). These prior projections had been incorporated into planning for land needs in Peel Region, and refinements are now underway to reflect the 2051 forecast horizon. The following section highlights the changes to the employment forecast by type of employment and by local municipality.

3.2 Employment Growth by Type and by Local Municipality

3.2.1 Total Employment

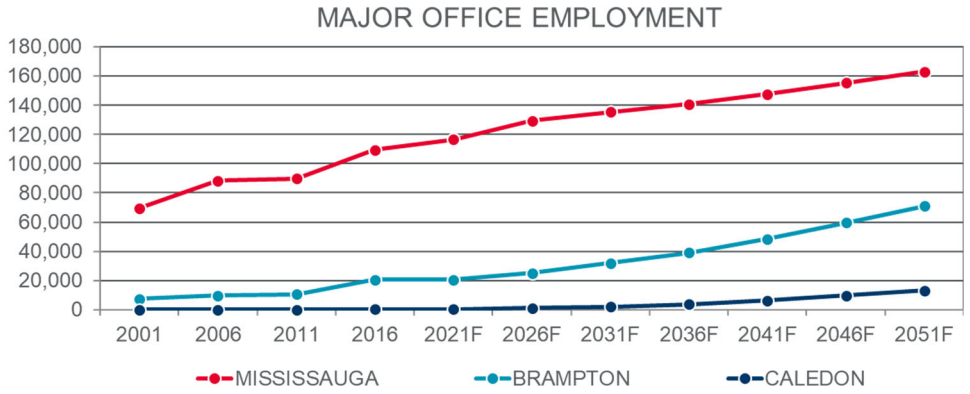
Hemson Consulting projects that total employment across Peel Region will surpass 1.07 million jobs by 2051. This represents growth of just over 375,000 jobs from 2016-2051, with Brampton leading the way (163,800 new jobs, representing a 44% share of the total increase), followed by Mississauga (113,200; 30% share) and Caledon (98,300; 26% share).

TOTAL EMPLOYMENT BY MUNICIPALITY				
Year	Mississauga	Brampton	Caledon	Peel Total
2016	476,800	191,300	27,200	695,300
2021F	493,300	210,500	31,700	735,400
2026F	524,600	250,200	42,600	817,400
2031F	537,600	276,400	51,700	865,700
2036F	549,500	294,600	63,500	907,600
2041F	562,800	314,900	81,500	959,200
2046F	576,300	335,400	103,000	1,014,700
2051F	590,100	355,100	125,400	1,070,500
2016-2051	**113,200**	**163,800**	**98,300**	**375,200**
Note: Values rounded to nearest 100.				



3.2.2 Major Office Employment

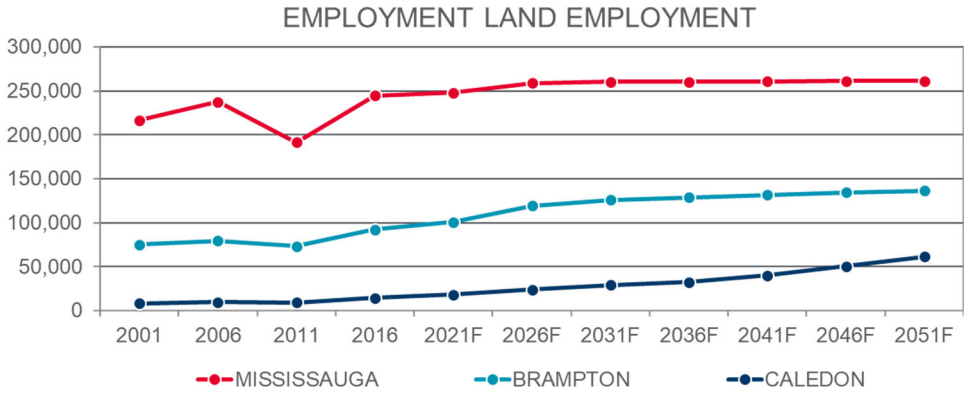
Across Peel, Major Office Employment is projected to increase by approximately 117,200 jobs over the 2016-2051 forecast period. This accounts for a 31% share of overall employment growth during this time. The *Employment Strategy* incorporated a projection to 2041 during which MOE was anticipated to account for a nearly identical 30% share of overall employment growth. For comparison, MOE represented an estimated 19% of total employment in Peel in 2016, with this share rising to 23% by 2051. This growth is projected to occur primarily in Mississauga (46% share of MOE growth) and Brampton (43% share), although new MOE jobs are also anticipated in Caledon (11% share).



3.2.3 Employment Land Employment

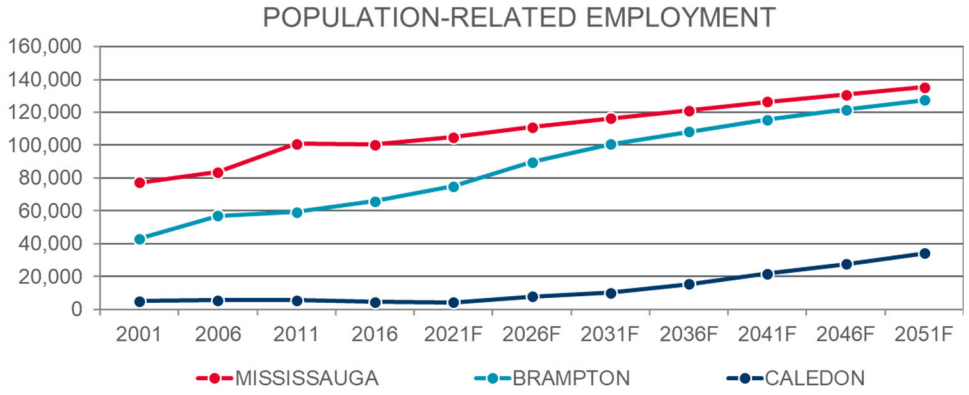
Employment Land Employment accounted for just over one-half of total employment in Peel Region in 2016 (51% share). From 2016-2051, it is projected that ELE growth will be approximately 107,600 jobs, representing a 29% share of total employment growth. The employment by industry projections to 2041 included in the *Employment Strategy* had anticipated that ELE would account for a 37% share of overall employment growth, so the more recent forecasts incorporate a notable downward adjustment in the distribution of employment by type as far as ELE is concerned (offset by an overall rise in other categories).

Caledon and Brampton are projected to account for the most significant share of these jobs (44% and 41% share, respectively), while Mississauga will account for a modest proportion of new ELE jobs (16% share). This is reflective of the remaining employment land supply in each municipality, and the nature of growth that is anticipated – including significant ELE greenfield growth in Caledon.



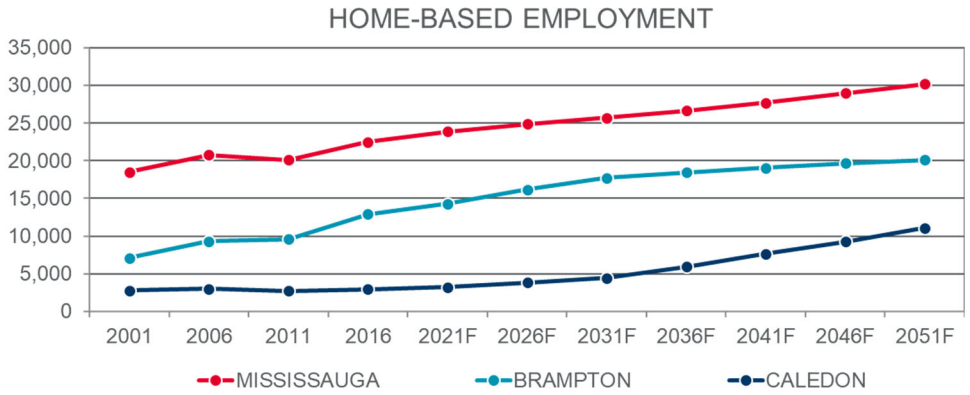
3.2.4 Population-Related Employment

Population-Related Employment represented a 25% share of overall employment in Peel Region in 2016. It is projected to account for just over one-third of total job growth during the 2016-2051 forecast period, adding in the range of 126,400 jobs. The projections used in the *Employment Strategy* anticipated PRE jobs to represent a 28% share of total employment from 2016-2041, which is six percentage points lower than the forecast share of growth through 2051 (34% share – the leading category of employment growth). Brampton accounts for the largest proportion of forecast PRE growth (49% of Peel's total growth), followed by Mississauga (28% share) and Caledon (24% share).



3.2.5 Home-Based Employment

Home-Based Employment (HBE) represented a 6% share of Peel's total employment in 2016. Some 23,000 additional jobs are forecast through 2051, divided fairly evenly across the local municipalities. This anticipated growth represents a 6% share of overall employment growth, versus the 4% share that had been anticipated through the 2041 forecast horizon in the *Employment Strategy*.



3.2.6 Impact on Employment Strategy

The 2016-2051 projection of employment by industry anticipates a greater extent of jobs to occur in the Population-Related Employment and Home-Based Employment categories compared to the earlier 2041 forecast horizon (of course, the increased population allocation to 2051 is the driver of greater PRE jobs). This is offset by a smaller share of employment occurring in the Employment Land Employment segment. Whereas ELE was forecast to account for the largest share of growth through 2041 at 37% of total employment, this has been adjusted downward to a 29% share (now trailing both PRE and MOE). This is in part due to changing plans for the future development of Heritage Heights in northwest Brampton – an original land use concept envisioned a greater extent of employment lands and ELE compared to a new plan which incorporates more mixed-use, transit-oriented development, generating more MOE and PRE uses. The outlook for MOE will require ongoing monitoring given the changing nature of office work due to the COVID-19 pandemic, which will be discussed in greater detail later in this report.

These changes have important implications for land budgeting for employment uses, and overall strategic growth management. The employment categories have different characteristics and needs, including employment densities (floor space per worker); land use patterns (differing built forms and varied site selection preferences); and infrastructure requirements (roads, water/wastewater, transit, etc.). Overall, employment in Peel is becoming increasingly more urban, as established employment areas continue to see land absorption, and more jobs are directed to strategic growth areas over time.

As expressed in the *Employment Strategy*, effective growth management is linked with implementation strategies and economic development efforts to attract and retain the different categories of employment. The risks to accommodating, sustaining, and growing employment lie in the misallocation of resources – either allocating too few, too many, or locating them incorrectly – which could contribute to the employment growth forecast not being achieved. Planning policy and land use designations need to align with the anticipated employment growth by type to ensure an adequate supply of lands in the right locations in order to capture growth as opportunities emerge.

4.0 REAL ESTATE MARKET PERSPECTIVES

4.1 Office Market Recent Performance

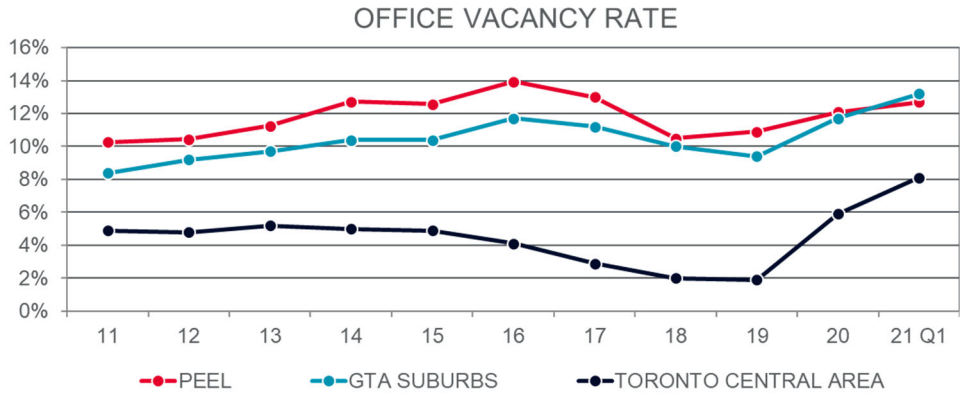
4.1.1 Introduction

Cushman & Wakefield recently released its 2021 Q1 office market survey data. This can be compared to year-end 2019 data to identify the impact of the COVID-19 pandemic on the GTA office market overall, as well as select submarkets in Peel.

4.1.2 Vacancy Rates

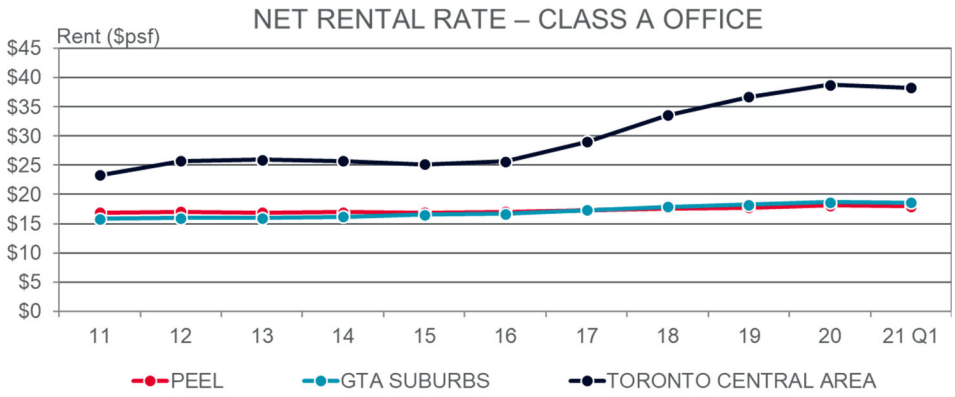
The overall GTA office vacancy rate at year-end 2019 was 5.6% (1.9% for the Central Area [Downtown and Midtown Toronto], and 9.4% in the Suburbs). At 2020 Q1, the overall vacancy rate stood at 10.6% (8.1% for the Central Area, and 13.2% in the Suburban markets). This profound adjustment in the level of available space is due in part to a significant rise in sublet space, which increased from 14% of all vacant space pre-pandemic to a present one-third share. Many office occupiers are postponing decision-making regarding their office needs, and some have placed unused space on the market as available for lease. It is unclear whether this is related to short-term strategies associated with work-at-home mandates, or linked to a structural change in demand for office space. Notable is the less pronounced increase in availability in the Suburbs, which are more auto-dependent, and less impacted by public transit commuting-related concerns.

In Peel Region, the local office submarkets had an aggregate vacancy rate that was slightly above the overall GTA Suburban average pre-pandemic (10.9% versus 9.4%), but vacancy in Peel has not increased as much as the overall Suburban market over the last year (current vacancy of 12.7% in Peel compared to 13.2% for GTA Suburbs as a whole).



4.1.3 Rental Rates

Despite rising vacancy, asking office rents do not yet show an indication of an adjustment to weaker space demand. This may reflect a belief that demand will resume in a significant way once the return to office is meaningfully underway as the rate of new COVID cases declines in tandem with increased vaccinations. As well, those tenants that have delayed decision-making regarding near-term lease expiries, or those committing to only short-term renewals, will be faced with a commitment to make in the near future. It can be anticipated that rental rates will soften as landlord and tenant expectations adjust to market realities over the next few quarters.



4.2 Office Market Trends

4.2.1 Overview of Recent Trends

Office buildings shifted from being 87% occupied globally in February 2020, to virtually empty in April 2020 (still leased, but without tenants). The office workforce endured a sudden, forced transition to a work-from-home paradigm due to the emergence of COVID-19. Cushman & Wakefield identifies the office sector as an "In-Betweener"; this is a reference to commercial real estate sectors that are being significantly impacted by the pandemic, but also have structural factors in place that are creating long-term tailwinds that will ultimately help these sectors re-emerge when the crisis is in the rear-view mirror. There is little doubt that the built environment will need to adapt as a result of these unfortunate circumstances. The bigger question is whether the office has changed forever, or if we even need offices at all. The unequivocal answer to both questions is "yes". Leaders that perhaps weren't historically on board with the idea of remote working have seen irrefutable evidence that individuals can remain effective while working away from the office.

The following reflects a range of sentiments regarding working from home, and the changing office ecosystem, drawn from discussions with office occupiers and landlords over the past year:

- "We don't feel as distant because we're all working the same way."
- "Just because employees have the ability to work from home, it doesn't mean they necessarily prefer it. Some find it challenging and less productive, and can't wait to get back to the office."
- "Many workers who are executing well with work-from-home policies by necessity will be glad to return to the office when it is safe to do so, and they again have the choice."
- "The ability to execute focused work is similar to pre-COVID-19, while teamwork has increased. However, the bond between colleagues is hampered by exclusively working from home, as is the connection employees feel with their company's culture."
- "The office is a place for memorable events, learning, teambuilding, socializing, and parties. The office will no longer be a place to come and sit silently in rows doing individual work – especially at historical city centre rental rates and commute costs."

Going forward, the office of the future will become a place for connectivity – both virtual and physical. Businesses will need to create an environment that people will want to spend time in, as opposed to seeing it as a daily chore. This will impact space layouts, amenities, and location. The positive experience that many occupiers are having with working from home is now being considered a potential major turning point in how they think about real estate. Some companies are talking about a return to a "hub and spoke" model, with a higher quantity of smaller offices in suburban locations. Other firms will come back to the office providing more individual flexibility, allowing employees to work from home more often. Whatever the future holds, the discussion about office real estate has shifted from strictly urban to a broader range of alternatives, including the suburbs.

While Peel's office market accounts for a roughly one-third share of the total Suburban office inventory across the GTA, it has accounted for half of the new Suburban office construction completed this past decade, as tracked by Cushman & Wakefield. As described in the *Employment Strategy*, the emergence of new office nodes such as Vaughan Metropolitan Centre, Downtown Markham, Midtown Oakville, and East Harbour on the edge of Toronto's downtown (to name a few), will place increased competitive pressure on office attraction. Major Office Employment growth projections will not be achieved without planning efforts to direct development to strategic growth areas and support intensification of existing employment areas. As well, new and improved transportation/transit infrastructure is required to provide enhanced labour accessibility, among other considerations. The elimination of a twice daily commute for office workers during stay-at-home mandates is widely seen as a benefit of working remotely. Efforts to reduce crowding on transit vehicles and improve service frequency are keys to enticing workers back to the office.

The pandemic has created several forces that directly impact the office sector's fundamentals. Some of the impacts are cyclical – for example, the COVID-19 recession has resulted in office-using job losses, higher vacancy, and will place downward pressure on rental rates. Other impacts are structural, such as a greater share of employees who will regularly work from home (WFH). Cushman & Wakefield's perspectives on the outlook for the office sector are that the structural impacts of work from home will be offset by factors such as economic growth, population growth, and office-using penetration, which means demand for office will continue to grow over the next decade. One offsetting effect is the potential reversal of a decades-long trend of densification, in which businesses have been absorbing less space per office-using employee. COVID-19 is requiring society to physical distance in the near-term, which is disrupting this trend. It is still unclear if a reversal of densification – "dedensification" – will emerge in a meaningful way. At a minimum, Cushman & Wakefield believes that densification will stop, and that practices that allow for distancing, such as agile working and rotating shifts, will increase. Should densification begin to reverse in the aggregate, it would offset some of the loss in demand caused by more remote working – possibly offsetting it fully.

While work from home has benefits, a common workplace provides critical value to both firms and workers. Cushman & Wakefield believes that the paradigm of the future is a mix of traditional office spaces, home offices, and semi-public spaces. We also believe that it is very unlikely for the pendulum to permanently swing so far in one direction – particularly for firms that rely on innovation, knowledge spillovers, and creativity, to generate value and revenue. Overall, the present uncertainty regarding the future of office demand introduces additional concern that Peel's Major Office Employment forecasts may not be achieved.

4.2.2 Timing of Recovery

Early signals from U.S. market data from 20201 Q1 (the U.S. is further ahead in vaccination efforts compared to Canada, and fewer work-from-home mandates remain in effect) indicates some optimism for the office sector. Anecdotally, post-Labour Day is a targeted return to office date for many U.S. firms (this may be optimistic for Canadian markets, but perhaps not far off). Tours of office space by prospective occupiers accelerated dramatically across the U.S. in Q1, and the proportion of short-term lease deals (< 1 year term) was lower in each of the past two quarters compared to the recent peak in 2020 Q3. New sublet space added to the pool of available office space has also declined in each of the past two quarters. The extent of the permanent work-from-home shift is still unclear as to the overall impact this will have on office space demand, so the overall outlook remains uncertain, but the return to office in a meaningful way is clearly on the horizon. The go-forward effects on different office-using industries may be uneven, as may be the performance of various geographic submarkets. The next 12-24 months will be a period of adjustment, as more and more leases expire, and decisions need to be made about the office workplace ecosystem of the future.

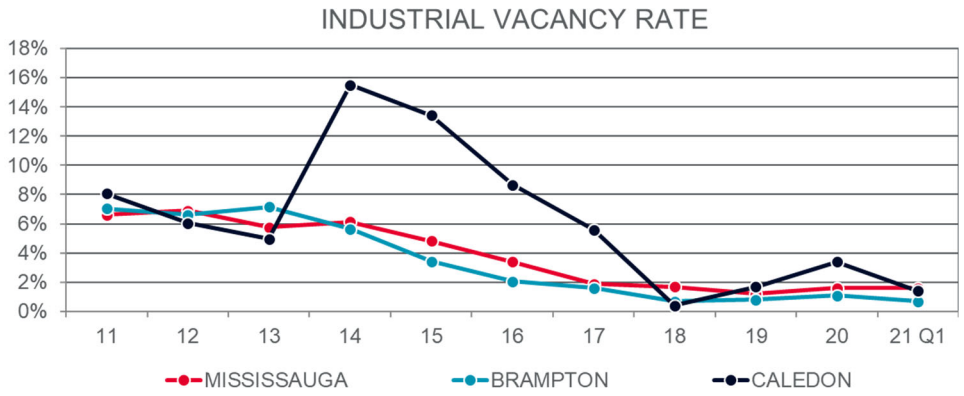
4.3 Industrial Market Recent Performance

4.3.1 Introduction

Cushman & Wakefield recently released its 2021 Q1 industrial market survey data. This can be compared to year-end 2019 data to identify the impact of the COVID-19 pandemic on the GTA's industrial market overall, as well as Caledon, Brampton, and Mississauga (industrial data is tracked by municipality – unlike office data, which is tracked by office concentration/submarket).

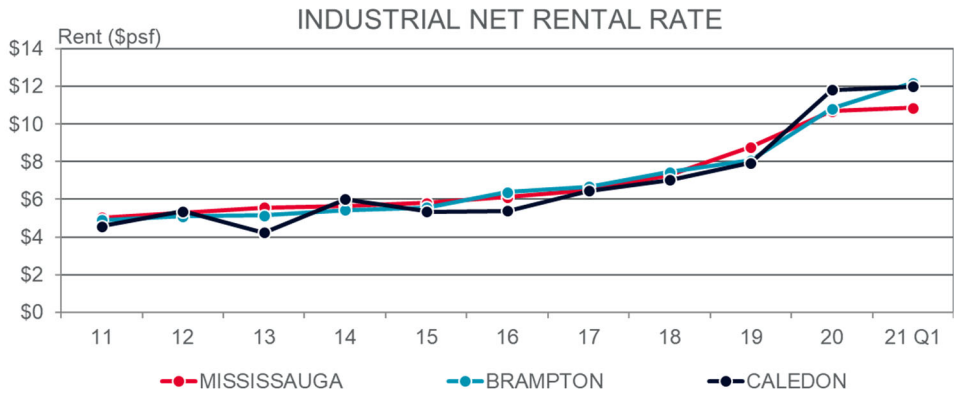
4.3.2 Vacancy Rates

The overall GTA industrial vacancy rate was 1.5% this past quarter. This is only 0.2 percentage points higher than the all-time low recorded at year-end 2019, and a testament to the resiliency of the industrial sector during the pandemic. The GTA's industrial vacancy rate has declined steadily from a level of around 7% back in 2010. In Peel, the same strong performance over recent quarters is observed. The three local municipalities have a vacancy rate in the range of about 1.0%-1.5%, and are essentially unchanged from pre-pandemic levels.



4.3.3 Rental Rates

Industrial net rents across the GTA continue to reach unprecedented levels. At year-end 2019, the average asking net rent was $8.75 psf, which represented year-over-year growth of nearly 20%. At year-end 2020, rents approached $10.00 psf, and the asking net rent this past quarter exceeded $10.50 psf. Net rents have doubled in the GTA market over the past decade (for the period from year-end 2011 through 2020), and rents in Peel's local municipalities have followed a similar trajectory.



4.4 Industrial Market Trends

4.4.1 Overview of Recent Trends

Cushman & Wakefield identifies the industrial/logistics sector as a clear "Winner" among the various commercial real estate asset classes. The "Winners" are those sectors that were already benefiting from long-term demographic and structural shifts in the economy, only to see those shifts accelerated by COVID-19. The move to online shopping has been happening for some time now, and its rate of acceptance has expanded over the past year or more (out of necessity) due to lockdown mandates. With the sale of more products online, there is a need for the logistics space to house the goods outside of a traditional brick and mortar store. Especially in the COVID-19 era, consumers want goods shipped directly to them, cutting out the retail location as the middleman, going straight from business to consumer. This will drive the need for more industrial inventory in more locations, both for large box warehouse and "last mile" infill to reach the consumer more rapidly.

With increased consumer demand for goods at a faster, more streamlined rate, and growing retailer demand, the answer for suppliers is to invest in an e-commerce model for direct to consumer shipments. Greater adoption of e-commerce will take several years to implement across many markets, meaning demand will continue to be widespread for longer than just through the remainder of the pandemic.

As the world has adjusted to life during the COVID-19 pandemic, we have seen a marked acceleration in the adoption or improvement of supply chain innovations, and an opportunity to address some pain points that had been lower on the priority list for many industries. COVID-19 has amplified awareness of the need for contactless technology far beyond payment and delivery solutions used by sellers and consumers. Optical and voice-enabled technology, automation, and robotics will find new adopters in warehouse material handling equipment, order pick technology, and shipping/receiving processes. Robotics in the warehouse help limit contact among team members receiving goods, picking orders, and shipping them out. Autonomous vehicles may help to offset driver shortages to meet the increased demand for shipments to consumers, and to expedite the shipment of critical goods to rural or remote geographies with fewer transit options.

One of the most active property types in industrial real estate is cold storage. With online grocery more popular than ever before, restaurants and farmers forced to adjust their food supply chain, and the shutdown of some processing plants despite being "essential", the need for cold storage warehouse space is growing like never before. These trends are likely to continue post-pandemic, with changing consumer preferences taking hold.

As a consequence of the impacts of the pandemic, some manufacturers are likely to hold more inventory as they seek increased flexibility and less vulnerability to disruptions. Diversifying component sourcing – including an emphasis on localizing or regionalizing components to be closer to plants while holding more inventories – will require additional logistics real estate. Reshoring or nearshoring would shorten supply chains, effectively reducing long lead times, thereby giving manufacturers more control over production quantities to allow for greater flexibility in response to demand.

The outlook for continued employment growth for industrial-type space appears robust. The industrial sector has performed very well during the COVID-19 pandemic, despite initial supply chain-related concerns. Mississauga and Brampton are two of the GTA's largest industrial markets by inventory size, and Caledon has emerged over the past decade and is certainly now very much "on the radar" for prospective occupiers. Peel's industrial areas have the key site selection attributes that occupiers desire, such as highway/transport infrastructure, labour availability, and an established business climate. While the GTA West Corridor would have added another vital east-west link to support goods movement, these markets exhibit very strong underlying fundamentals for industrial-type employment growth in the region.

4.4.2 Timing of Recovery

The industrial sector has been a leading commercial real estate sector, despite the recession linked with the pandemic. Across the GTA, new supply continues to be initiated, rental rates are at record highs, and vacancy is well below historic norms. There is really no "recovery" to be attributed to this sector; it has continued to be a driver of land demand and employment growth, and this is poised to continue for the foreseeable future. Growth will be fueled by strong demand from the e-commerce sector, reshoring of critical manufacturing, and rationalizations to existing supply chains.

4.5 Retail Market Recent Performance

Unlike the office and industrial markets, Cushman & Wakefield does not track vacancy and rental rate data for the retail market. A significant challenge in gathering retail market information is that shopping centre tenants often negotiate directly with a landlord, and these negotiations do not involve a real estate leasing professional/broker. Many major regional/national retailers have an in-house leasing team, and do not retain outside brokerage professionals. Accordingly, details of these leasing arrangements do not become known across the industry. This differs from the office and industrial markets, where real estate leasing professionals are much more frequently a participant in lease negotiations among landlords and tenants (indeed, both parties may have brokerage representation).

4.6 Retail Market Trends

4.6.1 Overview of Recent Trends

Pre-COVID, the "Most Challenged" commercial real estate sector, retail, had already been undergoing major structural changes leading to reduced demand for space and, at the same time, has been hardest hit by lockdown mandates. With so many stores forced to shut down, retailers have had to move sales strictly online. Although people still have to shop and necessity retail (grocery, drug stores, etc.) is doing well, bankruptcies are an unfortunate outcome of this pandemic.

Some restaurants started offering outdoor dining and take out with the hopes of surviving, and others turned their operations into ghost kitchens (delivery-only restaurants). After COVID-19, experiential concepts may come storming back. People are pining to go out and shop, eat, and be entertained – pent up demand will be unleashed. But there will be longer lasting implications for certain concepts, with continuing transition across the retail spectrum. The issue with this recession has not been one of demand; it's been supply led. Households whose incomes have been sustained during the crisis haven't had the chance to spend the money they'd like to… as opposed to not having the money to spend.

With the continued rise of e-commerce, the introduction of new paths to purchase, and the impact of COVID-19, mall developers are faced with difficult challenges and the ultimate question: what does the future hold for the shopping mall? When first developed, the mall welcomed everyone, and it housed everything. As time progressed, so did the mall. Movie theatres, food courts, and bars extended our stay and expanded our spending. Each year, developers, landlords, and retailers put more emphasis on driving footsteps to shops, restaurants, and theatres. Then, in the early 2000s, everything changed; consumers shifted their focus to experiences over clothes, and convenience over community. During the last decade, we have seen even further erosion of the mall experience. Malls have seen thousands of stores close, consumers disengage, and communities struggling to understand the intrinsic value to the neighborhood.

For the past several years, the department store model – once the lifeblood of the mall – has been in transition. There have been countless bankruptcies, closures, consolidations, and liquidations within this once formidable segment of the retail industry. At one time, department stores were the centre of the retail universe, and viewed as innovators in merchandising techniques and customer service. But unfortunately, department stores started to lag their nimbler competitors and saw market share slip. Besides having to deal with potentially millions of square feet which will need to be backfilled or repurposed, mall owners are faced with the related impacts on other tenants of the shopping centre. As the long-held belief that the department store was the anchor for a mall's success has diminished, we have seen several new, innovative uses replace these fortress stores. Examples include food halls, movie theatres, entertainment concepts, and gyms – and grocery stores could be next on the list.

This is a natural evolution of the slow but steady shift over the last decade of bringing more food and entertainment into the mall, while reducing the footprint of apparel, given its vulnerability to digital competitors. Adaptive reuse is another viable option mall owners could consider. Repurposing unused vacant spaces can be an excellent way to recoup revenue losses. The list includes uses such as: aquariums, casinos, community services, data centres, food halls, government offices, healthcare, health clubs, hotels, houses of worship, last-mile logistics/distribution, libraries and museums, multi-family apartments, schools, self-storage, senior housing, and trampoline parks.

Whether driven by “shelter in place” mandates across the globe, current consumer sentiment around venturing out into stores, or constraints around the number of shoppers allowed in stores to accommodate physical distancing, online shopping has seen a dramatic increase over the past year or more. Consumers are challenging companies to step up their digital capabilities, and to answer diverse needs for delivery of orders, ranging from traditional at-home parcel delivery to curbside pick-up to contactless delivery of perishable goods, and everything in between. The lines between how the customer shops in-store and via direct distribution are increasingly blurred, and successful companies will find new ways to leverage processes, diversify building and space types, and inventories, for a seamless customer experience.

4.6.2 Timing of Recovery

Changes in the retail sector have been underway for some time, with increased adoption of e-commerce causing store sizes to decrease, an increase in experiential concepts, and omni-channel product offerings. The pandemic has accelerated trends that were already taking hold, and bankruptcies and store closures will continue to alter the retail-commercial landscape. Pent-up consumer demand will underpin the recovery of the retail sector, once stay-at-home mandates are lifted, and vaccination levels reach critical thresholds. However, the recovery will likely be uneven and protracted, and it is unclear when pre-pandemic levels of employment will return.

5.0 STRATEGIC RECOMMENDATIONS

5.1 Overview

The recommendations contained in the *Employment Strategy* reflect conditions that were observed in late-2017. Since then, the COVID-19 pandemic and associated economic recession and recovery have profoundly affected all aspects of the economy. Overwhelmingly, the recommendations put forward in the *Employment Strategy* remain appropriate today. Below, we discuss the ongoing importance of these insights, as well as revisions to prior guidance and new strategic recommendations to reflect evolving market conditions and emerging policy areas of significance.

5.2 Major Office Employment (MOE)

5.2.1 NEW RECOMMENDATION: Monitor Impacts of the Changing Nature of Office Work

Pre-pandemic, the GTA office market exhibited near record low levels of office vacancy, rising rental rates, and a new development pipeline approaching 11 million sf of space (almost all located in Downtown Toronto). Office space was is high demand. The pandemic-linked forced work-from-home paradigm shift has resulted in a reevaluation of the role of the office workplace. Fundamentally, our offices serve two very distinct purposes: (1) *to enable our best work*: including colleague, team, and client connections; knowledge transfer, mentoring, and learning; ideation and brainstorming; exploration and networking; and concentration and focus; and (2) *to serve as a home for the organization*: including a physical expression of its values and culture; serving as an inspiring destination; advancing career development; fostering socialization, bonding, and belonging; and a place to showcase our expertise.

The need for office spaces will persist, although the way business manage their office workplaces – including floor plans/desk utilization policies/dedensification; in-office versus work-from-home flexibility policies; and more – will evolve, and remains uncertain at this time. The transition will vary across office occupying industries, across geographies, and over time, as in-place leases mature. These trends will need to be monitored to understand their impact on land needs and associated infrastructure requirements, and the extent of dedicated Home-Based Employment that emerges.

5.2.2 Suburban Locations Must Offer an Urban Environment to Compete for Sought-After Major Office Employment

Over the past five years, Downtown Toronto (7.3 million sf of new construction since 2016) has accounted for two-thirds of all new office supply across the GTA. There is a further 8.2 million sf presently under construction or firmly committed in the Downtown submarkets, compared to just over 200,000 sf in the Suburbs as a whole. In the near term, the Downtown office market in particular will face challenges related to uncertain occupier requirements in the return-to-work phase, at a time of rising vacancy and considerable new supply being added to the market.

Suburban municipalities must offer a compelling office site selection alternative on more than just a financial (rent) basis. Enhanced multi-modal transportation and an urban, amenity-rich environment is sought-after, and highly valued among office occupiers. This includes evaluating the impact of improved transit service levels and enhanced infrastructure (including broadband service) to established office nodes and ensuring that a high quality public realm is a feature of new development/redevelopment. This recommendation takes on arguably greater importance at this time, as major organizations are reevaluating their office needs. Peel has begun to address this through its Major Transit Station Area policy work to date.

5.2.3 Leverage Positive Spin-Off Effects from Major Office Development

Linked to the previous recommendation, it remains critical to ensure that land use planning provides opportunities for shopping, recreation, and other amenities to support the office workforce in established and emerging office locations. Urban, mixed-use nodes are likely to emerge as a location preference for office occupiers; therefore, capitalizing on the present dynamic environment from an office workplace strategy perspective is a unique opportunity. Peel can build upon its successes in attracting suburban office development going forward, and take actions to increase the attractiveness/competitiveness of its more urban nodes. Associated opportunities include directing new development to strategic growth areas; optimizing transit infrastructure and generating new ridership; and balancing development charge revenues through increased non-residential construction activity.

5.2.4 Consider Financial Incentives to Attract New Office Development

The *Employment Strategy* identified a range of potential incentives to attract new office construction. The *Feasibility Assessment for a Major Office Employment Community Improvement Plan for the Region of Peel* recommended that the Region offer funding on a matching basis to each local CIP targeting Major Office Employment. This is an example of taking action on the *Employment Strategy's* recommendations, and remains supportable given present GTA office market dynamics.

5.2.5 REVISED RECOMMENDATION: Monitor MOE Density to Understand Impacts on Real Estate Market

The monitoring guidance related to office employment density referred to in the *Employment Strategy* pertained to increasing densities (less office space per worker). The pandemic has almost certainly brought an end to this densification trend. While occupancy planning visions that will guide the preferred layout of the future office workplace are not yet known – and will play out over many years to come as in-place leases expire – there is a consensus that a greater allocation of space per worker is a likely outcome. Personal workstations may become less common as employees work from home part of the time, "hotelling" (shared workstations) strategies are introduced, and more communal spaces take their place in new floorplan designs. These dynamics will be critical to monitor, as they impact demand for new office construction/land absorption, along with financial considerations such as the collection of development charges and property taxes.

5.2.6 NEW RECOMMENDATION: Consider Policy to Ensure Office Space Retention

As established office nodes mature, there may be interest in eventually redeveloping portions of these employment areas to alternative land uses, including mixed-use projects that include residential units. Single-use suburban business/office parks no longer represent the preferred planning vision; they are reflective of an outdated, automobile-oriented paradigm. Nonetheless, it will likely remain desirable to retain some extent of office jobs on these lands, and the incorporation of an office space retention policy is a tool to ensure that this objective can be achieved. For example, the requirement for retention of office space can be offset by the granting of additional residential density in order to ensure that redevelopment is economically viable.

An office retention policy should not be a blanket approach across the Region. There may be individual sites where it can be established that prevailing office market demand is no longer supportive of office as a go-forward use (e.g. persisting high vacancy and below-market achievable rents). This is likeliest to be the case for older office buildings located outside of established concentrations of office space where there is an alternative highest and best use for the site.

5.3 Employment Land Employment (ELE)

5.3.1 Identify Employment Areas

The introduction of Provincially Significant Employment Zones (PSEZ) augments planning for employment growth and land needs budgeting, alongside other lands within Peel's municipalities that are designated as Employment Areas, as per Growth Plan requirements. The evolving planning policy landscape regarding employment areas must continue to be implemented across Peel's local municipalities, in order to plan for infrastructure needed to support these lands, and to protect them from conversion, as appropriate.

5.3.2 Protect Budgeted Employment Lands from Conversion

Municipalities must continue to protect the designated, budgeted employment lands that are necessary to meet employment targets from conversion to other uses. This guidance from the *Employment Strategy* remains equally important today, as plans for growth to 2051 are underway.

5.3.3 Ensure Variety of Employment Lands – Location, Size, and Servicing

The current Settlement Area Boundary Expansion project in Caledon will add to the Region's supply of employment land, and bring to market additional locations for growth, with varied parcel sizes and levels/timing of servicing. Broadband service within employment areas is another key site selection factor in the modern economy.

Planning for employment lands in Heritage Heights in northwest Brampton is an important opportunity. Caledon, Brampton, and Mississauga all continue to offer employment lands with excellent site selection characteristics to suit a range of occupier needs. This is critical, as low levels of vacancy, escalating rents, and very strong occupier demand is causing some businesses to explore leasing/new development in location alternatives such as Hamilton, Guelph, Kitchener, Waterloo, and municipalities north of the GTA, where there is growing interest.

5.3.4 Support Employment Land Intensification Opportunities

The *Employment Strategy* provided a recommendation to provide flexibility in planning policy to facilitate the redevelopment of older/dysfunctional industrial building to alternative uses. While this may displace/replace Employment Land Employment, such adaptive re-use of buildings could include more office-type functions – particularly firms seeking low-cost environments that do not need conventional office space (such as high-tech start-ups, and other "new economy" uses). This recommendation remains supportable at this time – particularly as businesses reevaluate their office occupancy requirements (non-traditional office buildings may play a role in future employment accommodation in a more dispersed office location strategy). While new office construction should continue to be directed to transit-supportive areas (such as Major Transit Station Areas), the adaptive re-use of aging/obsolete industrial facilities as low-cost office spaces should be supported, where market demand exists.

5.3.5 NEW RECOMMENDATION: Support Redevelopment within Existing Employment Areas, and Consider Impacts along Transitioning Corridors

Some industrial developers have sought opportunities to build a modern, large facility in place of several older, obsolete buildings. Such properties that are well located and accessible, and are home to industrial buildings that are older-generation (lower ceiling clear height, in need of significant capital repair, etc.) may be well suited to become a target for demolition. Such development permissions present the possibility of retaining jobs in existing employment areas, and this initiative is in support of the preservation of employment lands for ongoing employment uses. This trend is likely to accelerate over time.

Select employment areas will evolve over the longer term to provide a home to intensified uses, including mixed-use development. These opportunities typically exist adjacent to transit infrastructure (such as within Major Transit Station Areas) and at nodes and along key arterials that have a highest and best use that differs from the current on-the-ground built form. Corridors in Peel that are facing market/economic/social pressures for a land use transition present a tension between one key policy objective (employment land retention) versus other planning/municipal goals (densification, transit-supportive growth, development and property tax-related revenues, etc.).

In contemplating any conversion of employment areas to a more mixed use function (particularly along the arterial edges of industrial/business parks), it is necessary to evaluate whether the conversion may impact the viability and ongoing use of the employment lands, whether jobs are lost/displaced, and the rate/extent of change that may occur. Given their strategic importance, a nuanced and local approach to transitioning corridors is needed, rather than a one-size-fits-all solution.

5.3.6 NEW RECOMMENDATION: Consider Introduction of Retail-Commercial Thresholds within Employment Areas

While retail-commercial is appropriately regarded as a population-related land use (since such uses primarily serve the local, community, or regional population base), it is a necessary amenity within employment areas to provide readily accessible retail and service commercial functions to the employees nearby. Such uses are typically small-scale, and are not intended as a shopping destination; they are ancillary to the overall employment area/business park function.

In order to ensure that employment areas remain healthy and productive, and attract continued investment, the introduction of additional retail-commercial uses is supportable where such uses do not disrupt/restrict the established industrial/commercial operations. One mechanism to ensure that major retail uses do not encroach on employment areas is to restrict the floor area of an individual retail-commercial unit or property, or to limit the percentage of a building's floor area that is permitted for retail-commercial purposes. This would prevent the intrusion of larger retail-commercial developments that are oriented to the nearby residential base, as opposed to primarily serving the needs of the employment area itself.

5.3.7 Recognize that Highway Access is Increasingly Important

Direct or frictionless access to highways is vital as a site selection driver for many industrial occupiers. Warehousing and logistics uses are increasing as a component of the industrial stock, as e-commerce growth is necessitating new distribution models for retailers (a trend accelerated by the pandemic). Due to their large building footprint (and accordingly, land cost), warehousing and logistics uses are often attracted to large sites on the urban periphery. As discussed earlier, Council's decision regarding the GTA West Corridor presents a change in position from the direction recommended in the *Employment Strategy* (we appreciate that this decision is multi-faceted).

Many of Peel's established employment areas feature remaining undeveloped land that offers ready access to the GTHA's urban market and beyond, and will remain a sought-after location to accommodate ELE growth. From a market demand and site selection perspective, absent any new major highways being constructed, proximity to established major highway infrastructure is of heightened importance to facilitate the required labour access and goods movement to enable successful employment areas. Protecting these well-located employment lands from conversion – whether they form part of established employment areas, or those planned for future growth – takes on heightened importance in the absence of new major highway infrastructure, such as the GTA West Corridor.

5.3.8 Recognize that Multi-Modal Transportation Access is Increasingly Important

As noted earlier, providing/enhancing transit connections to established and emerging employment areas will be critical to support their ongoing function, and to enable new areas to prosper. Employers will increasingly be attracted to employment areas that offer good accessibility, to draw upon the regional labour pool.

Providing public transit to serve employment areas can be challenging, from a ridership/service level perspective (and therefore, also a financial challenge). In planning for future land needs, there is an opportunity to designate additional lands with good highway access, while continuing to plan for expanded infrastructure such as arterial roads and new highways, along with transit and active transportation modes. These principles remain relevant in the current market environment.

5.3.9 NEW RECOMMENDATION: Consider the Creation of an Economic Activity Area in Caledon

Employment Land Employment uses such as warehousing and distribution centres will continue to play an important role as a part of Peel's employment base, and land will be needed to accommodate continued growth. Of note, this is presently being addressed as an element of the Region's Settlement Area Boundary Expansion project in the Town of Caledon.

To help mitigate the impacts of goods movement – and to focus such operations and provide the supportive infrastructure they require – the creation of an economic activity area such as an "enterprise zone" or "business park" could be considered which includes a set of supportive infrastructure and land use policies to help foster business/industry clustering. The increased e-commerce activity that has emerged during the pandemic – and is likely to be sustained – is a further driver of the need for policies to support the goods movement industry while mitigating impacts on other land uses.

5.3.10 Monitor ELE Density to Ensure Adequate Land Supply

Increasing warehousing and distribution activity in employment areas, as well as automation taking the place of some labourers in some industrial workplaces, is resulting in declining industrial-type employment density (which means increasing floor space per worker). As expressed in the *Employment Strategy*, municipalities must continue to monitor this trend, and align land budgets with the appropriate ELE density to ensure an adequate supply is provided for this land-intensive use.

5.4 Population-Related Employment (PRE)

5.4.1 Recognize that Population-Related Employment Requires a More Nuanced Level of Consideration

As identified in the *Employment Strategy*, prevailing planning practices envision more mixed land uses, integrating retail and institutional functions with other complimentary uses. It is important to plan for the location of these uses in both greenfield and intensification development scenarios, in order to attract these forms of employment. Changing consumer shopping preferences may result in less demand for physical retail-commercial space, and this needs to be considered in planning for new greenfield development, as well as supporting transitional uses in established areas.

5.4.2 Plan for Decline in Future Retail Employment Demand, as E-Commerce Increases as a Share of Total Retail Spending

Closely linked with the preceding recommendation is the acknowledgement that the retail sector is undergoing transformational change. It had begun pre-pandemic, and has been fast-forwarded over the past year or more. Greater retail spending occurring online transfers space demand (and employment) to warehousing and distribution facilities, and away from shopping centres/retail nodes.

5.4.3 NEW RECOMMENDATION: Provide Increased Planning Flexibility to Encourage Adaptive Reuse/Redevelopment of Shopping Centres

The decline of traditional anchor tenants such as department stores has caused landlords to reimagine their shopping centres. The loss of key customer draws has a detrimental impact on other occupants at the centre, with less consumer traffic, and lower sales. While the phenomenon is likely to be far less prevalent in Canada compared to select over-retailed U.S. markets, converting vacant anchor units into alternative uses such as industrial logistics is an emerging solution, to serve as "last mile" distribution sites (where these new uses are compatible with adjacent/nearby land uses).

Other options include adding residential and office uses to the property – which tend to be well located and transit accessible (those within major urban areas) – in order to revitalize struggling shopping centres.

5.5 Home-Based Employment (HBE)

5.5.1 Recognize a Continuum of Home-Based Employment, and Provide Supportive Policy

The *Employment Strategy* identified a need to recognize a continuum of Home-Based Employment (a single home office, a home business, and more formal live-work spaces featuring physical separation of the residence and workplace), and to provide supportive policy. This recommendation emphasized the importance of striking the right balance of permission for such uses, while maintaining the character of residential areas. Home-based jobs had been a modest but growing component of the overall mix of employment.

In March 2020, a huge segment of the workforce shifted to work-from-home, out of necessity. It is likely that a segment of workers (particularly office-type occupations) will permanently work from home going forward, rather than return to their pre-pandemic communal workplace setting. Businesses are still in the process of developing their post-pandemic workplace arrangements, and the mix of home-based versus office-based versus a hybrid employment model is not yet known. This is a topic that should be closely monitored, as it has significant implications for employment land demand, and the rate of new non-residential construction (offices in particular).

Increased levels of work from home would place greater importance on the provision of reliable broadband infrastructure to meet the telecommunications needs of workers. This is of particular importance with the increased adoption of videoconferencing and data transfer requirements in industries that are well-suited to allow their workforce to work remotely.

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Peel2041+

Vacant and Underutilized Employment Land Inventory

May 2021 Draft

Table of Contents

1.0 Introduction

The Region is tracking the quantity of vacant and underutilized land within regional employment areas to better understand the potential for accommodating additional jobs in the existing land supply. In this inventory the identified parcels are placed under one of three defined categories, “vacant,” “vacant low potential,” or “underutilized.”

Vacant:	Lands which contain no buildings or structures or have minimal site coverage from a non-employment use.
Vacant Low Potential:	Lands which are vacant but face more substantial limitations on developability.
Underutilized:	Lands which have been developed on only a portion of the site or support minimal employment activity.

2.0 Summer 2020 Draft Inventory

To inform the Region’s growth management and employment work in Peel 2041+, an inventory of vacant and underutilized employment lands in Peel is being prepared. The Region reviewed over 2000 hectares of potentially vacant and underutilized land in our draft regional employment area. This does not include employment to be identified in Heritage Heights/Northwest Brampton or new lands to accommodate the Province’s proposed Growth Plan forecasts for 2051. Information on the methodology used to create the map is below.

The draft regional employment layer was used as a base layer, then refined as follows:

- Data from the Municipal Property Assessment Corporation (MPAC) and other parcel-based land use data was reviewed for vacant land.
- The City of Mississauga’s 2019 vacant lands inventory was referenced to further confirm vacant sites. Recent vacant land inventories were not available for Brampton or Caledon.
- Building permit data was used to exclude lands with structures to be built, etc.
- A site-by-site review of aerial imagery was further used to exclude lands that are occupied.
- A site-by-site review of aerial imagery was further used to add underutilized sites. Underutilized properties are those not serving their full potential in providing employment uses and jobs. For example, sites where only part of a large property is being utilized for a business, lots where only a small portion supports a dwelling, sites where there are only agricultural uses, and sites used for sparse truck parking with no associated building or other activities on site.

3.0 May 2021 Inventory

3.1 Inputs to Update the Inventory

The vacant and underutilized employment land inventory was updated to provide classifications and reflect natural changes to the employment land supply which occur year-over-year. The updated May 2021 Peel Vacant and Underutilized Employment Land Inventory is included in section 5. Information which informed the update includes:

- New orthoimagery (aerial photography) for the year 2020

- A review of the City of Mississauga 2020 Vacant Lands inventory.
- Updated building permit data.
- Classification of individual parcels within the map data.

3.2 Parcel Classification Types and Key Considerations

Vacant:	Lands which contain no buildings or structures or have minimal site coverage from a non-employment use, including: • True vacant parcels • Very large sites with little coverage from a residential dwelling • Very large sites with little coverage from farm-related buildings
Vacant Low Potential:	Lands which are vacant but face more substantial limitations on developability, which may include: • Possible Linear Infrastructure • Very small size (under 0.2 ha) or an awkward shape and isolated (not adjacent to another vacant site) • Segments of the Maple Lodge Farms site which may continue to be held for agricultural use for the foreseeable future. See a presentation from maple Lodge Farms to Brampton City Council on March 10th 2021, Item 7.1: https://pub-brampton.escribemeetings.com/FileStream.ashx?DocumentId=19038.
Underutilized:	Lands which have been developed on only a portion of the site or support minimal employment activity. For example: • Site is used for sparse parking/vehicle storage only • Only part of the site is built upon • Empty farm fields around Pearson International Airport, not in runways • Single residential sites with employment potential

3.3 Summary of Vacant and Underutilized Lands in Peel

The draft regional employment area includes approximately 14,880 hectares of land in Brampton, Caledon, and Mississauga. A total of approximately 1,980 hectares of the regional employment area is identified in for employment development potential in this inventory, a reduction from 2020 to 2021 by approximately 200 hectares. More than nearly 1,600 hectares are true “vacant” parcels.

The inventory includes a range of parcel sizes from less than 0.5 hectares to the larges parcel at 65 hectares. Half (51%) of the sites are above one hectare 16% are above 5 hectares, while the number of hectares on those over-5-hectare large sites totals 1,310 hectares. Most large sites above 5 hectares are in the Brampton Secondary Plan 47 area (northeast Brampton), Bramwest, Southdown in Mississauga, Pearson International Airport, and Mayfield West in Caledon. These lands have access to goods movement corridors including regional roads, highways, rail facilities, and the airport. As seen on the inventory map, some vacant lands (of varying sizes) have excellent access to transit service for workers, notably Clarkson GO station

in Southdown, the Hurontario LRT in the Gateway Corporate Centre, the Steeles Corridor in Bramwest, and multiple intersecting routes at Pearson Airport.

Land Area Totals in Hectares				
	Vacant	Vacant Low Potential	Underutilized	Total
Brampton	726.9	127.3	144.2	998.5
Caledon	282.1	0.1	30.3	312.6
Mississauga	573.7	4.6	92.2	670.5
Peel	1582.7	132.1	266.7	1981.4
Parcel Counts by Size				
	Less than 0.5 ha *	0.5 to 1 ha	1 to 5 ha	Over 5 ha
Brampton	98	26	87	59
Caledon	25	16	46	16
Mississauga	89	67	96	31
Peel	212	109	229	106
* Many small parcels are adjacent to other sites and could make a larger parcel, combined.				

4.0 Development Activity Considerations

While lands with building permits have been removed from the inventory, the Region will continue to monitor vacant lands with active development applications. Comparing active development applications (site plans and plans of subdivision) against the inventory provides an approximate quantification of lands that may no longer be vacant in the short term, provided they are approved and building permits are issued. At this time, there are approximately 480 hectares of land in the inventory which also have a site plan or subdivision application filed on the lands since 2013.

5.0 Next Steps

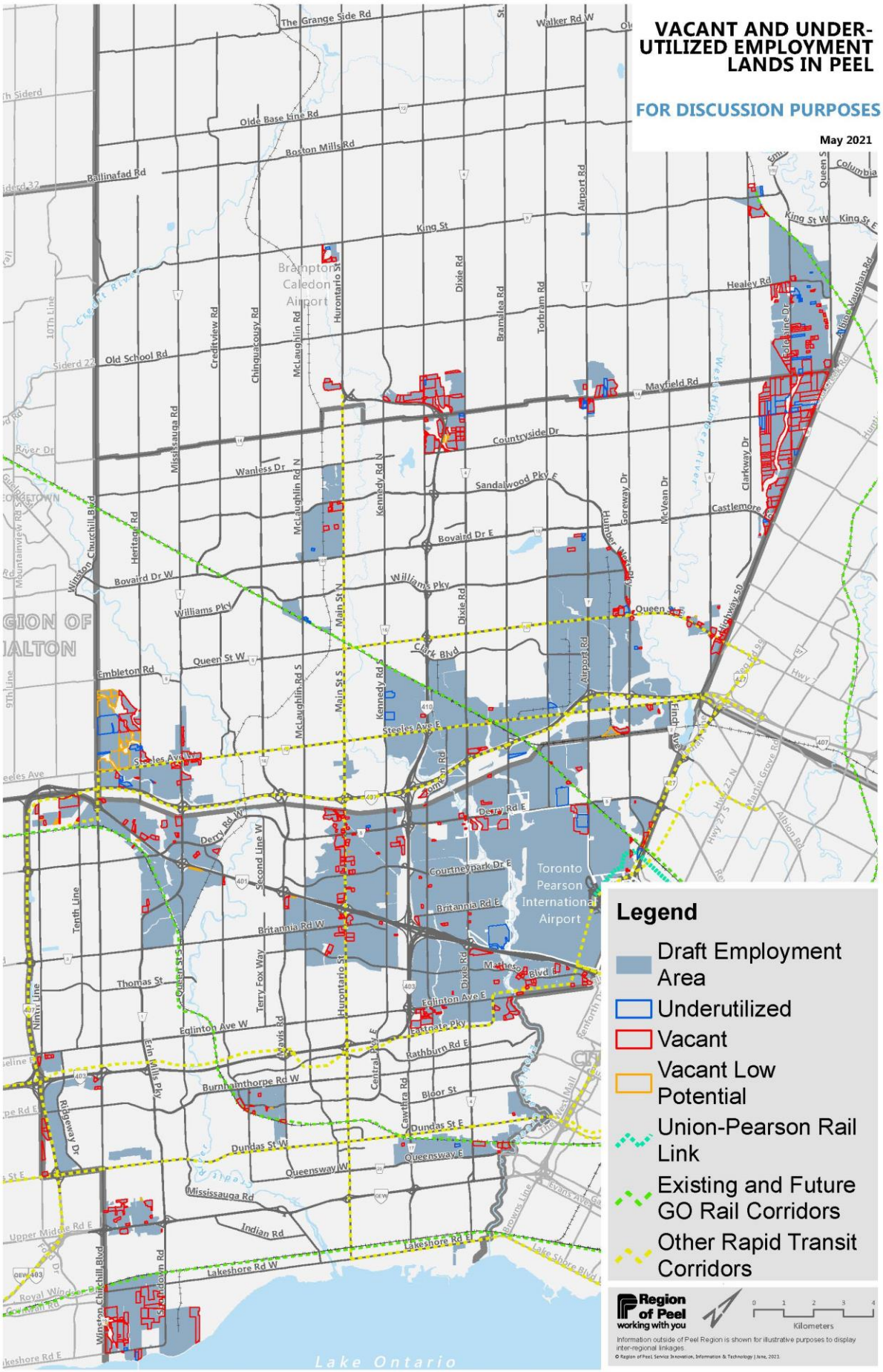
The vacant and underutilized land supply inventory supports the broader technical work associated with employment planning and management of forecasted employment growth in Peel, and will inform the land needs assessment to accommodate 2051 growth.

8) Create a new field in the final shapefile and calculate geometry to get total takeout area.

Notes:

- In addition to Steps 1-6, the calculation of the area over which the minimum density target for the entire DGA is measured excludes employment areas as designated in the Region of Peel Official Plan(Peel 2051) so that the measurement of the minimum density target applies to community areas only.
- Ninth Line NHS and CA floodline data refined to align with local municipal land use designations

6.0 Vacant and Underutilized Employment Land Inventory Map, 2021



Appendix XII: 2051 Municipal Growth Allocation of Population and Employment

2051 Municipal Growth Allocation of Population and Employment		
Municipality	Population	Employment
Caledon	300,000	125,000
Brampton	985,000	355,000
Mississauga	995,000	590,000
Peel	2,280,000	1,070,000

Source: Hemson Consulting (2051 est).

Table 1: Historical and Current Population in Peel by Municipality and Policy Area

Year	Policy Area	Municipality			
		Brampton	Caledon	Mississauga	Peel
2016[3]	Total	608,600	69,000	693,400	1,371,000
	BUPA[1]	488,000	36,700	664,000	**1,188,700**
	UGC[2]	*7,000*	*0*	*69,600*	**76,600**
	DGA	120,600	15,500	29,400	**165,500**
	Rural Area	0	16,800	0	**16,800**
2021*	Total	703,000	80,000	795,000	1,578,000
	BUPA[1]	527,000	39,000	779,600	**1,345,600**
	UGC[2]	*8,400*	*0*	*79,600*	**88,000**
	DGA	176,000	23,200	15,400	**214,600**
	Rural Area**	0	17,800	0	**17,800**
2031*	Total	865,000	112,000	852,000	1,829,000
	BUPA[1]	566,200	36,900	832,800	**1,435,900**
	UGC[2]	*20,600*	*0*	*106,100*	**126,700**
	DGA	298,800	57,700	19,200	**375,700**
	Rural Area**	0	17,400	0	**17,400**
2041*	Total	929,100	201,000	920,000	2,050,100
	BUPA[1]	587,400	38,700	897,800	**1,523,900**
	UGC[2]	*30,700*	*0*	*122,100*	**152,800**
	DGA	341,700	143,200	22,200	**507,100**
	Rural Area**	0	19,100	0	**19,100**
2051*	Total	985,100	300,000	995,000	2,280,100
	BUPA[1]	622,000	43,500	970,800	**1,636,300**
	UGC[2]	*40,300*	*0*	*137,500*	**177,800**
	DGA	363,100	235,100	24,200	**622,400**
	Rural Area**	0	21,400	0	**21,400**

Notes:

BUPA - Built-Up Area (also includes UGC)

DGA - Designated Greenfield Area

UGC - Urban Growth Centre

[1] - also includes population within urban growth centres

[2] - UGC population figures in this column are subset of the BUPA category and should not be added to calculated the total area

[3] - 2016 figures are based on the 2016 Census and Hemson's Consulting allocation to policy areas

* Figures are based on Hemson's Consulting allocation 2051 Reference Scenario

** Rural Area includes Greenbelt, PERC, Undelbuiltbnd, Whitebelt

Table 2: Historical and Current Dwelling Units in Peel by Municipality and Policy Area

Year	Policy Area	Municipality			
		Brampton	Caledon	Mississauga	Peel
2016[3]	Total	168,000	21,300	240,100	**429,400**
	BUPA[1]	139,900	10,700	235,900	**386,500**
	DGA	*28,100*	*5,000*	*4,200*	**37,300**
	Rural Area[2]	0	5,600	0	**5,600**
2021*	Total	186,100	24,200	247,000	457,300
	BUPA[1]	145,100	11,400	242,800	**399,300**
	UGC[2]	*3,900*	*0*	*34,200*	**38,100**
	DGA	41,000	7,000	4,200	**52,200**
	Rural Area**	0	5,800	0	**5,800**
2031*	Total	240,700	35,600	279,600	555,900
	BUPA[1]	165,000	11,900	273,900	**450,800**
	UGC[2]	*8,500*	*0*	*46,700*	**55,200**
	DGA	75,700	17,600	5,700	**99,000**
	Rural Area**	0	6,100	0	**6,100**
2041*	Total	271,500	63,000	317,700	652,200
	BUPA[1]	179,800	13,200	311,100	**504,100**
	UGC[2]	*12,900*	*0*	*55,000*	**67,900**
	DGA	91,700	43,000	6,600	**141,300**
	Rural Area**	0	6,800	0	**6,800**
2051*	Total	290,500	91,700	346,700	728,900
	BUPA[1]	191,700	15,000	339,000	**545,700**
	UGC[2]	*16,700*	*0*	*61,000*	**77,700**
	DGA	98,800	69,400	7,700	**175,900**
	Rural Area**	0	7,300	0	**7,300**

Notes:

BUPA - Built-Up Area (also includes UGC)

DGA - Designated Greenfield Area

UGC - Urban Growth Centre

[1] - also includes unit within urban growth centres

[2] - UGC population figures in this column are subset of the BUPA category and should not be added to calculated the total area

[3] - 2016 figures are based on the 2016 Census and Hemson's Consulting allocation to policy areas

* Figures are based on Hemson's Consulting allocation 2051 Reference Scenario

** Rural Area includes Greenbelt, PERC, Undelbuiltbnd, Whitebelt

Table 3: Historical and Current Employment in Peel by Municipality and Policy Area

Year	Policy Area	Municipality			
		Brampton	Caledon	Mississauga	Peel
2016[3]	Total	191,400	27,200	476,800	695,400
	BUPA[1]	177,200	14,700	475,000	**666,900**
	UGC[2]	*9,600*	*0*	*36,200*	**45,800**
	DGA	14,200	7,800	1,800	**23,800**
	Rural Area	0	4,700	0	**4,700**
2021*	Total	210,500	31,800	493,300	735,600
	BUPA[1]	190,600	14,600	491,400	**696,600**
	UGC [2]	*12,100*	*0*	*38,800*	**50,900**
	DGA	19,900	12,200	1,900	**34,000**
	Rural Area**	0	5,000	0	**5,000**
2031*	Total	273,400	52,100	537,300	862,800
	BUPA[1]	225,600	17,000	534,800	**777,400**
	UGC[2]	*19,500*	*0*	*45,800*	**65,300**
	DGA	47,800	30,000	2,500	**80,300**
	Rural Area**	0	5,100	0	**5,100**
2041*	Total	314,100	82,100	562,800	959,000
	BUPA[1]	244,400	19,000	559,800	**823,200**
	UGC[2]	*25,400*	*0*	*52,100*	**77,500**
	DGA	69,700	57,900	3,000	**130,600**
	Rural Area**	0	5,200	0	**5,200**
2051*	Total	355,000	125,000	590,000	1,070,000
	BUPA[1]	269,800	21,900	586,500	**878,200**
	UGC[2]	*31,800*	*0*	*58,400*	**90,200**
	DGA	85,200	97,800	3,500	**186,500**
	Rural Area**	0	5,300	0	**5,300**

Notes:

BUPA - Built-Up Area (also includes UGC)

DGA - Designated Greenfield Area (does include New DGA)

UGC - Urban Growth Centre

[1] - also includes unit within urban growth centres

[2] - UGC employment figures in this column are subset of the BUPA category and should not be added to calculated the total area

[3] - 2016 figures are based on the 2016 Census and Hemson's Consulting allocation to policy areas

* Figures are based on Hemson's Consulting allocation 2051 Reference Scenario

** Rural Area includes Greenbelt, PERC, Undelbuiltbnd, Whitebelt

Table 4: Historical and Current Housing Mix in Peel by Municipality and Policy Area

Year	Policy Area	Dwelling Type	Brampton		Caledon		Mississauga		Peel	
			Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
2016	Entire Municipality	**Total**	**168,000**	**100%**	**21,300**	**100%**	**240,100**	**100%**	**429,400**	**100%**
		Singles and Semis	115,400	69%	19,200	90%	127,900	53%	262,500	61%
		Towns	21,500	13%	1,400	7%	37,500	16%	60,400	14%
		Apartments	31,100	19%	700	3%	74,700	31%	106,500	25%
	Built-up Area	**Total**	**139,900**	**83%**	**10,700**	**50%**	**235,900**	**98%**	**386,500**	**90%**
		Singles and Semis	92,400	66%	9,400	88%	125,600	53%	227,400	59%
		Towns	17,000	12%	800	7%	36,200	15%	54,000	14%
		Apartments	30,500	22%	500	5%	74,100	31%	105,100	27%
	Designated Greenfield Area	**Total**	**28,100**	**17%**	**5,000**	**23%**	**4,200**	**2%**	**37,300**	**9%**
		Singles and Semis	23,000	82%	4,400	88%	2,300	55%	29,700	80%
		Towns	4,500	16%	600	12%	1,300	31%	6,400	17%
		Apartments	600	2%	0	0%	600	14%	1,200	3%
	Rural Area	**Total**	**0**	**0%**	**5,600**	**26%**	**0**	**0%**	**5,600**	**1%**
		Singles and Semis	0	**0%**	5,400	**96%**	0	**0%**	5,400	**96%**
		Towns	0	**0%**	0	**0%**	0	**0%**	0	**0%**
		Apartments	0	**0%**	200	**4%**	0	**0%**	200	**4%**
2021	Entire Municipality	**Total**	**186,100**	**100%**	**24,200**	**100%**	**247,000**	**100%**	**457,300**	**100%**
		Singles and Semis	125,000	67%	20,900	86%	128,300	52%	274,200	60%
		Towns	25,800	14%	2,300	10%	38,200	15%	66,300	14%
		Apartments	35,300	19%	1,000	4%	80,500	33%	116,800	26%
	Built-up Area	**Total**	**145,100**	**78%**	**11,400**	**47%**	**242,800**	**98%**	**399,300**	**87%**
		Singles and Semis	93,200	64%	9,600	84%	126,100	52%	228,900	57%
		Towns	17,900	12%	1,000	9%	36,900	15%	55,800	14%
		Apartments	34,000	23%	800	7%	79,800	33%	114,600	29%
	Designated Greenfield Area	**Total**	**41,000**	**22%**	**7,000**	**29%**	**4,200**	**2%**	**52,200**	**11%**
		Singles and Semis	31,800	78%	5,700	81%	2,200	52%	39,700	76%
		Towns	7,900	19%	1,300	19%	1,300	31%	10,500	20%
		Apartments	1,300	3%	0	0%	700	17%	2,000	4%
	Rural Area	**Total**	**0**	**0%**	**5,800**	**24%**	**0**	**0%**	**5,800**	**1%**
		Singles and Semis	0	**0%**	5,600	**97%**	0	**0%**	5,600	**97%**
		Towns	0	**0%**	0	**0%**	0	**0%**	0	**0%**
		Apartments	0	**0%**	200	**3%**	0	**0%**	200	**3%**
2031	Entire Municipality	**Total**	**240,700**	**100%**	**35,600**	**100%**	**279,600**	**100%**	**555,900**	**100%**
		Singles and Semis	150,800	63%	28,500	80%	129,900	46%	309,200	56%
		Towns	41,800	17%	5,700	16%	42,500	15%	90,000	16%
		Apartments	48,100	20%	1,400	4%	107,200	38%	156,700	28%
	Built-up Area	**Total**	**165,000**	**69%**	**11,900**	**33%**	**273,900**	**98%**	**450,800**	**81%**
		Singles and Semis	96,500	58%	9,700	82%	127,700	47%	233,900	52%
		Towns	23,300	14%	1,200	10%	40,300	15%	64,800	14%
		Apartments	45,200	27%	1,000	8%	105,900	39%	152,100	34%
	Designated Greenfield Area	**Total**	**75,700**	**31%**	**17,600**	**49%**	**5,700**	**2%**	**99,000**	**18%**
		Singles and Semis	54,300	72%	12,900	73%	2,200	39%	69,400	70%
		Towns	18,500	24%	4,500	26%	2,200	39%	25,200	25%
		Apartments	2,900	4%	200	1%	1,300	23%	4,400	4%
	Rural Area	**Total**	**0**	**0%**	**6,100**	**17%**	**0**	**0%**	**6,100**	**1%**
		Singles and Semis	0	**0%**	5,900	**97%**	0	**0%**	5,900	**97%**
		Towns	0	**0%**	0	**0%**	0	**0%**	0	**0%**
		Apartments	0	**0%**	200	**3%**	0	**0%**	200	**3%**
2041	Entire Municipality	**Total**	**271,500**	**100%**	**63,000**	**100%**	**317,700**	**100%**	**652,200**	**100%**
		Singles and Semis	157,100	58%	46,200	73%	131,600	41%	334,900	51%
		Towns	50,500	19%	14,000	22%	46,800	15%	111,300	17%
		Apartments	63,900	24%	2,800	4%	139,300	44%	206,000	32%
	Built-up Area	**Total**	**179,800**	**66%**	**13,200**	**21%**	**311,100**	**98%**	**504,100**	**77%**
		Singles and Semis	96,800	54%	10,100	77%	130,000	42%	236,900	47%
		Towns	25,500	14%	1,500	11%	44,400	14%	71,400	14%
		Apartments	57,500	32%	1,600	12%	136,700	44%	195,800	39%
	Designated Greenfield Area	**Total**	**91,700**	**34%**	**43,000**	**68%**	**6,600**	**2%**	**141,300**	**22%**
		Singles and Semis	60,300	66%	29,500	69%	1,600	24%	91,400	65%
		Towns	25,000	27%	12,500	29%	2,400	36%	39,900	28%
		Apartments	6,400	7%	1,000	2%	2,600	39%	10,000	7%
	Rural Area	**Total**	**0**	**0%**	**6,800**	**11%**	**0**	**0%**	**6,800**	**1%**
		Singles and Semis	0	**0%**	6,600	**97%**	0	**0%**	6,600	**97%**
		Towns	0	**0%**	0	**0%**	0	**0%**	0	**0%**
		Apartments	0	**0%**	200	**3%**	0	**0%**	200	**3%**
2051	Entire Municipality	**Total**	**290,500**	**100%**	**91,700**	**100%**	**346,700**	**100%**	**728,900**	**100%**
		Singles and Semis	158,600	55%	60,900	66%	132,500	38%	352,000	48%
		Towns	53,300	18%	25,500	28%	51,100	15%	129,900	18%
		Apartments	78,600	27%	5,300	6%	163,100	47%	247,000	34%
	Built-up Area	**Total**	**191,700**	**66%**	**15,000**	**16%**	**339,000**	**98%**	**545,700**	**75%**
		Singles and Semis	96,800	50%	10,400	69%	130,800	39%	238,000	44%
		Towns	26,300	14%	1,900	13%	48,600	14%	76,800	14%
		Apartments	68,600	36%	2,700	18%	159,600	47%	230,900	42%
	Designated Greenfield Area	**Total**	**98,800**	**34%**	**69,400**	**76%**	**7,700**	**2%**	**175,900**	**24%**
		Singles and Semis	61,800	63%	43,300	62%	1,700	22%	106,800	61%
		Towns	27,000	27%	23,600	34%	2,500	32%	53,100	30%
		Apartments	10,000	10%	2,500	4%	3,500	45%	16,000	9%
	Rural Area	**Total**	**0**	**0%**	**7,300**	**8%**	**0**	**0%**	**7,300**	**1%**
		Singles and Semis	0	**0%**	7,200	**99%**	0	**0%**	7,200	**99%**
		Towns	0	**0%**	0	**0%**	0	**0%**	0	**0%**
		Apartments	0	**0%**	100	**1%**	0	**0%**	100	**1%**

Table 5: Historical and Current Employment Mix in Peel by Municipality and Policy Area

Year	Policy Area	Employment Type	Brampton		Caledon		Mississauga		Peel	
			Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
2016	Entire Municipality	**Total**	**191,400**	**100%**	**27,200**	**100%**	**476,800**	**100%**	**695,400**	**100%**
		Population Related	66,000	34%	4,600	17%	100,300	21%	170,900	25%
		Major Office	20,400	11%	200	1%	109,300	23%	129,900	19%
		Employment Lands	92,400	48%	14,300	53%	244,600	51%	351,300	51%
		Other	12,600	7%	8,100	30%	22,600	5%	43,300	6%
	Built-up Area	**Total**	**177,200**	**93%**	**14,700**	**54%**	**475,000**	**100%**	**666,900**	**96%**
		Population Related	62,200	94%	4,200	91%	98,500	98%	164,900	96%
		Major Office	17,300	85%	200	100%	109,300	100%	126,800	98%
		Employment Lands	87,900	95%	9,500	66%	244,600	100%	342,000	97%
		Other	9,800	78%	800	10%	22,600	100%	33,200	77%
	Designated Greenfield Area	**Total**	**14,200**	**7%**	**7,800**	**29%**	**1,800**	**0%**	**23,800**	**3%**
		Population Related	3,800	6%	400	9%	1,800	2%	6,000	4%
		Major Office	3,100	15%	0	0%	0	0%	3,100	2%
		Employment Lands	4,500	5%	4,800	34%	0	0%	9,300	3%
		Other	2,800	22%	2,600	32%	0	0%	5,400	12%
	Rural Area	**Total**	**0**	**0%**	**4,700**	**17%**	**0**	**0%**	**4,700**	**1%**
		Population Related	0	0%	0	0%	0	0%	0	0%
		Major Office	0	0%	0	0%	0	0%	0	0%
		Employment Lands	0	0%	0	0%	0	0%	0	0%
		Other	0	0%	4,700	58%	0	0%	4,700	11%
2021	Entire Municipality	**Total**	**210,500**	**100%**	**31,800**	**100%**	**493,300**	**100%**	**735,600**	**100%**
		Population Related	75,900	36%	4,300	14%	104,300	21%	184,500	25%
		Major Office	20,500	10%	200	1%	116,400	24%	137,100	19%
		Employment Lands	99,700	47%	18,300	58%	248,600	50%	366,600	50%
		Others	14,400	7%	9,000	28%	24,000	5%	47,400	6%
	Built-up Area	**Total**	**190,600**	**91%**	**14,600**	**46%**	**491,400**	**100%**	**696,600**	**95%**
		Population Related	69,500	92%	4,000	93%	102,400	98%	175,900	95%
		Major Office	17,400	85%	200	100%	116,400	100%	134,000	98%
		Employment Lands	93,200	93%	9,300	51%	248,600	100%	351,100	96%
		Others	10,500	73%	1,100	12%	24,000	100%	35,600	75%
	Designated Greenfield Area	**Total**	**19,900**	**9%**	**12,200**	**38%**	**1,900**	**0%**	**34,000**	**5%**
		Population Related	6,400	8%	300	7%	1,900	2%	8,600	5%
		Major Office	3,100	15%	0	0%	0	0%	3,100	2%
		Employment Lands	6,500	7%	9,000	49%	0	0%	15,500	4%
		Others	3,900	27%	2,900	32%	0	0%	6,800	14%
	Rural Area	**Total**	**0**	**0%**	**5,000**	**16%**	**0**	**0%**	**5,000**	**1%**
		Population Related	0	0%	0	0%	0	0%	0	0%
		Major Office	0	0%	0	0%	0	0%	0	0%
		Employment Lands	0	0%	0	0%	0	0%	0	0%
		Others	0	0%	5,000	56%	0	0%	5,000	11%
2031	Entire Municipality	**Total**	**273,400**	**100%**	**52,100**	**100%**	**537,300**	**100%**	**862,800**	**100%**
		Population Related	101,200	37%	9,900	19%	116,000	22%	227,100	26%
		Major Office	32,600	12%	1,600	3%	135,200	25%	169,400	20%
		Employment Lands	121,900	45%	22,900	44%	260,300	48%	405,100	47%
		Others	17,700	6%	17,700	34%	25,800	5%	61,200	7%
	Built-up Area	**Total**	**225,600**	**83%**	**17,000**	**33%**	**534,800**	**100%**	**777,400**	**90%**
		Population Related	87,300	86%	4,900	49%	113,700	98%	205,900	91%
		Major Office	23,100	71%	400	25%	135,200	100%	158,700	94%
		Employment Lands	104,100	85%	10,700	47%	260,200	100%	375,000	93%
		Others	11,100	63%	1,000	6%	25,700	100%	37,800	62%
	Designated Greenfield Area	**Total**	**47,800**	**17%**	**30,000**	**58%**	**2,500**	**0%**	**80,300**	**9%**
		Population Related	13,900	14%	5,000	51%	2,300	2%	21,200	9%
		Major Office	9,500	29%	1,200	75%	0	0%	10,700	6%
		Employment Lands	17,800	15%	12,200	53%	100	0%	30,100	7%
		Others	6,600	37%	11,600	66%	100	0%	18,300	30%
	Rural Area	**Total**	**0**	**0%**	**5,100**	**10%**	**0**	**0%**	**5,100**	**1%**
		Population Related	0	0%	0	0%	0	0%	0	0%
		Major Office	0	0%	0	0%	0	0%	0	0%
		Employment Lands	0	0%	0	0%	0	0%	0	0%
		Others	0	0%	5,100	29%	0	0%	5,100	8%
2041	Entire Municipality	**Total**	**314,100**	**100%**	**82,100**	**100%**	**562,800**	**100%**	**959,000**	**100%**
		Population Related	116,500	37%	20,800	25%	126,400	22%	263,700	27%
		Major Office	50,500	16%	4,600	6%	147,500	26%	202,600	21%
		Employment Lands	128,100	41%	23,900	29%	261,000	46%	413,000	43%
		Other	19,000	6%	32,800	40%	27,900	5%	79,700	8%
	Built-up Area	**Total**	**244,400**	**78%**	**19,000**	**23%**	**559,800**	**99%**	**823,200**	**86%**
		Population Related	98,800	85%	6,400	31%	123,800	98%	229,000	87%
		Major Office	31,800	63%	1,300	28%	147,500	100%	180,600	89%
		Employment Lands	102,500	80%	10,400	44%	260,800	100%	373,700	90%
		Other	11,300	59%	900	3%	27,700	99%	39,900	50%
	Designated Greenfield Area	**Total**	**69,700**	**22%**	**57,900**	**71%**	**3,000**	**1%**	**130,600**	**14%**
		Population Related	17,700	15%	14,400	69%	2,600	2%	34,700	13%
		Major Office	18,700	37%	3,300	72%	0	0%	22,000	11%
		Employment Lands	25,600	20%	13,500	56%	200	0%	39,300	10%
		Other	7,700	41%	26,700	81%	200	1%	34,600	43%
	Rural Area	**Total**	**0**	**0%**	**5,200**	**6%**	**0**	**0%**	**5,200**	**1%**
		Population Related	0	0%	0	0%	0	0%	0	0%
		Major Office	0	0%	0	0%	0	0%	0	0%
		Employment Lands	0	0%	0	0%	0	0%	0	0%
		Other	0	0%	5,200	16%	0	0%	5,200	7%
2051	Entire Municipality	**Total**	**355,000**	**100%**	**125,000**	**100%**	**590,000**	**100%**	**1,070,000**	**100%**
		Population Related	128,900	36%	32,300	26%	135,300	23%	296,500	28%
		Major Office	74,800	21%	9,500	8%	162,900	28%	247,200	23%
		Employment Lands	131,100	37%	27,000	22%	261,600	44%	419,700	39%
		Other	20,200	6%	56,200	45%	30,200	5%	106,600	10%
	Built-up Area	**Total**	**269,800**	**76%**	**21,900**	**18%**	**586,500**	**99%**	**878,200**	**82%**
		Population Related	113,000	88%	7,700	24%	132,400	98%	253,100	85%
		Major Office	41,200	55%	1,800	19%	162,800	100%	205,800	83%
		Employment Lands	103,800	79%	11,200	41%	261,400	100%	376,400	90%
		Other	11,800	58%	1,200	2%	29,900	99%	42,900	40%
	Designated Greenfield Area	**Total**	**85,200**	**24%**	**97,800**	**78%**	**3,500**	**1%**	**186,500**	**17%**
		Population Related	15,900	12%	24,600	76%	2,900	2%	43,400	15%
		Major Office	33,600	45%	7,700	81%	100	0%	41,400	17%
		Employment Lands	27,300	21%	15,800	59%	200	0%	43,300	10%
		Other	8,400	42%	49,700	88%	300	1%	58,400	55%
	Rural Area	**Total**	**0**	**0%**	**5,300**	**4%**	**0**	**0%**	**5,300**	**0%**
		Population Related	0	0%	0	0%	0	0%	0	0%
		Major Office	0	0%	0	0%	0	0%	0	0%
		Employment Lands	0	0%	0	0%	0	0%	0	0%
		Other	0	0%	5,300	9%	0	0%	5,300	5%

Notes:

For 2016, an additional category titled Other was added which include Work-at-Home and Rural employment

The sums of the data for the employment types and associated percentages may differ from the totals due to rounding

Table 6: Number of Persons per Unit (PPU) in 2016, 2021, 2031, 2041 and 2051 by Municipality

Year	Municipality	Person Per Unit			
		Housing Type			Total of All Types
		Singles and Semis	Rows	Apts	
2016	Brampton	3.85	3.17	2.71	**3.52**
	Caledon	3.18	2.82	2.07	**3.12**
	Mississauga	3.39	3.09	2.37	**2.97**
	Peel	**3.58**	**3.12**	**2.47**	**3.19**
2021	Brampton	3.98	3.29	2.72	**3.61**
	Caledon	3.27	2.90	2.04	**3.17**
	Mississauga	3.55	3.25	2.37	**3.05**
	Peel	**3.70**	**3.23**	**2.55**	**3.29**
2031	Brampton	3.81	3.16	2.71	**3.45**
	Caledon	3.13	2.78	2.03	**3.03**
	Mississauga	3.39	3.11	2.36	**2.91**
	Peel	**3.57**	**3.11**	**2.46**	**3.15**
2041	Brampton	3.68	3.06	2.62	**3.29**
	Caledon	3.22	2.85	1.95	**3.08**
	Mississauga	3.29	3.02	2.28	**2.77**
	Peel	**3.46**	**3.01**	**2.38**	**3.01**
2051	Brampton	3.68	3.06	2.63	**3.26**
	Caledon	3.34	2.97	1.94	**3.16**
	Mississauga	3.29	3.02	2.29	**2.74**
	Peel	**3.47**	**3.02**	**2.39**	**3.00**

Notes:
Persons per Unit is calculated based on household population per occupied housing unit.
Figures are based on Hemson's Consulting allocation 2051 Reference Scenario

Table 7: 2021 Population, Unit, and Employment by Municipality and Policy Area

Category	Policy Area/Municipality	Brampton	Caledon	Mississauga	Peel
Population	Total	703,000	80,000	795,000	**1,578,000**
	BUPA[1]	527,000	39,000	779,600	**1,345,600**
	UGC	*8,400*	*0*	*79,600*	**88,000**
	DGA	176,000	23,200	15,400	**214,600**
	Rural Area	0	17,800	0	**17,800**
Units	Total	186,100	24,200	247,000	**457,300**
	BUPA[1]	145,100	11,400	242,800	**399,300**
	UGC	3,900	0	34,200	**38,100**
	DGA	41,000	7,000	4,200	**52,200**
	Rural Area	0	5,800	0	**5,800**
Jobs	Total	210,500	31,800	493,300	**735,600**
	BUPA[1]	190,600	14,600	491,400	**696,600**
	UGC	12,100	0	38,800	**50,900**
	DGA	19,900	12,200	1,900	**34,000**
	Rural Area	0	5,000	0	**5,000**

Table 7A: 2031 Population, Unit, and Employment by Municipality and Policy Area

Category	Policy Area/Municipality	Brampton	Caledon	Mississauga	Peel
Population	Total	865,000	112,000	852,000	**1,829,000**
	BUPA[1]	566,200	36,900	832,800	**1,435,900**
	UGC	*20,600*	*0*	*106,100*	**126,700**
	DGA	298,800	57,700	19,200	**375,700**
	Rural Area	0	17,400	0	**17,400**
Units	Total	240,700	35,600	279,600	**555,900**
	BUPA[1]	165,000	11,900	273,900	**450,800**
	UGC	8,500	0	46,700	**55,200**
	DGA	75,700	17,600	5,700	**99,000**
	Rural Area	0	6,100	0	**6,100**
Jobs	Total	273,400	52,100	537,300	**862,800**
	BUPA[1]	225,600	17,000	534,800	**777,400**
	UGC	19,500	0	45,800	**65,300**
	DGA	47,800	30,000	2,500	**80,300**
	Rural Area	0	5,100	0	**5,100**

Table 7B: 2041 Population, Unit, and Employment by Municipality and Policy Area

Category	Policy Area/Municipality	Brampton	Caledon	Mississauga	Peel
Population	Total	929,100	201,000	920,000	**2,050,100**
	BUPA[1]	587,400	38,700	897,800	**1,523,900**
	UGC	*30,700*	*0*	*122,100*	**152,800**
	DGA	341,700	143,200	22,200	**507,100**
	Rural Area	0	19,100	0	**19,100**
Units	Total	271,500	63,000	317,700	**652,200**
	BUPA[1]	179,800	13,200	311,100	**504,100**
	UGC	12,900	0	55,000	**67,900**
	DGA	91,700	43,000	6,600	**141,300**
	Rural Area	0	6,800	0	**6,800**
Jobs	Total	314,100	82,100	562,800	**959,000**
	BUPA[1]	244,400	19,000	559,800	**823,200**
	UGC	25,400	0	52,100	**77,500**
	DGA	69,700	57,900	3,000	**130,600**
	Rural Area	0	5,200	0	**5,200**

Table 7C: 2051 Population, Unit and Employment by Municipality and Policy Area

Category	Policy Area/Municipality	Brampton	Caledon	Mississauga	Peel
Population	Total	985,100	300,000	995,000	**2,280,100**
	BUPA[1]	622,000	43,500	970,800	**1,636,300**
	UGC	*40,300*	*0*	*137,500*	**177,800**
	DGA	363,100	235,100	24,200	**622,400**
	Rural Area	0	21,400	0	**21,400**
Units	Total	290,500	91,700	346,700	**728,900**
	BUPA[1]	191,700	15,000	339,000	**545,700**
	UGC	16,700	0	61,000	**77,700**
	DGA	98,800	69,400	7,700	**175,900**
	Rural Area	0	7,300	0	**7,300**
Jobs	Total	355,000	125,000	590,000	**1,070,000**
	BUPA[1]	269,800	21,900	586,500	**878,200**
	UGC	31,800	0	58,400	**90,200**
	DGA	85,200	97,800	3,500	**186,500**
	Rural Area	0	5,300	0	**5,300**

Notes:

[1] - BUPA (Built-Up Area) includes also population, unit and jobs within UGCs; UGCs population, unit and jobs are also listed separately for reference purposes

Figures are based on Hemson's Consulting allocation 2051 Reference Scenario

Table 8: 2021-2031 Population, Unit and Employment Growth by Municipality and Policy Area

Category	Policy Area/Municipality	Brampton	Caledon	Mississauga	Peel
Population	Total	162,000	32,000	57,000	251,000
	BUPA[1]	39,200	-2,100	53,200	90,300
	UGC	12,200	0	26,500	38,700
	DGA	122,800	34,500	3,800	161,100
	Rural Area	0	-400	0	-400
Units	Total	54,600	11,400	32,600	98,600
	BUPA[1]	19,900	500	31,100	51,500
	UGC	4,600	0	12,500	17,100
	DGA	34,700	10,600	1,500	46,800
	Rural Area	0	300	0	300
Jobs	Total	62,900	20,300	44,000	127,200
	BUPA[1]	35,000	2,400	43,400	80,800
	UGC	7,400	0	7,000	14,400
	DGA	27,900	17,800	600	46,300
	Rural Area	0	100	0	100

Table 8A: 2031-2041 Population, Unit, and Employment Growth by Municipality and Policy Area

Category	Policy Area/Municipality	Brampton	Caledon	Mississauga	Peel
Population	Total	64,100	89,000	68,000	221,100
	BUPA[1]	21,200	1,800	65,000	88,000
	UGC	10,100	0	16,000	26,100
	DGA	42,900	85,500	3,000	131,400
	Rural Area	0	1,700	0	1,700
Units	Total	30,800	27,400	38,100	96,300
	BUPA[1]	14,800	1,300	37,200	53,300
	UGC	4,400	0	8,300	12,700
	DGA	16,000	25,400	900	42,300
	Rural Area	0	700	0	700
Jobs	Total	40,700	30,000	25,500	96,200
	BUPA[1]	18,800	2,000	25,000	45,800
	UGC	5,900	0	6,300	12,200
	DGA	21,900	27,900	500	50,300
	Rural Area	0	100	0	100

Table 8B: 2041-2051 Population, Unit, and Employment Growth by Municipality and Policy Area

Category	Policy Area/Municipality	Brampton	Caledon	Mississauga	Peel
Population	Total	56,000	99,000	75,000	230,000
	BUPA[1]	34,600	4,800	73,000	112,400
	UGC	9,600	0	15,400	25,000
	DGA	21,400	91,900	2,000	115,300
	Rural Area	0	2,300	0	2,300
Units	Total	19,000	28,700	29,000	76,700
	BUPA[1]	11,900	1,800	27,900	41,600
	UGC	3,800	0	6,000	9,800
	DGA	7,100	26,400	1,100	34,600
	Rural Area	0	500	0	500
Jobs	Total	40,900	42,900	27,200	111,000
	BUPA[1]	25,400	2,900	26,700	55,000
	UGC	6,400	0	6,300	12,700
	DGA	15,500	39,900	500	55,900
	Rural Area	0	100	0	100

Table 8C: 2021-2051 Population, Unit and Employment Growth by Municipality and Policy Area

Category	Policy Area/Municipality	Brampton	Caledon	Mississauga	Peel
Population	Total	282,100	220,000	200,000	702,100
	BUPA[1]	95,000	4,500	191,200	290,700
	UGC	31,900	0	57,900	89,800
	DGA	187,100	211,900	8,800	407,800
	Rural Area	0	3,600	0	3,600
Units	Total	104,400	67,500	99,700	271,600
	BUPA[1]	46,600	3,600	96,200	146,400
	UGC	12,800	0	26,800	39,600
	DGA	57,800	62,400	3,500	123,700
	Rural Area	0	1,500	0	1,500
Jobs	Total	144,500	93,200	96,700	334,400
	BUPA[1]	79,200	7,300	95,100	181,600
	UGC	19,700	0	19,600	39,300
	DGA	65,300	85,600	1,600	152,500
	Rural Area	0	300	0	300

Notes:
[1] - BUPA (Built-Up Area) includes also population, unit and jobs within UGCs; UGCs population, unit and jobs are also listed separately for reference purposes
Figures are based on Hemson's Consulting allocation 2051 Reference Scenario

Table 9: Projected Intensification Rates by Municipality

Category	Policy Area/Municipality	Brampton	Caledon	Mississauga	Peel
2021-2031	Total Units	54,600	11,400	32,600	98,600
	Intensification Units	19,932	446	31,019	51,398
	Intensification Rate	**37%**	**4%**	**95%**	**52%**
2031-2041	Total Units	30,800	27,400	38,100	96,300
	Intensification Units	14,762	1,277	36,569	52,608
	Intensification Rate	**48%**	**5%**	**96%**	**55%**
2041-2051	Total Units	19,000	28,700	29,000	76,700
	Intensification Units	17,083	1,731	28,738	47,553
	Intensification Rate	**90%**	**6%**	**99%**	**62%**

Table 10 : Population, Household and Employment Forecasts for Peel

Table 10: Population, Household and Employment Forecasts for Peel												
Municipality	2021			2031			2041			2051		
	Population	Households	Employment	Population	Households	Employment	Population	Households	Employment	Population	Households	Employment
Brampton	703,000	186,100	210,500	865,000	240,700	273,400	929,100	271,500	314,100	985,100	290,500	355,000
Caledon	80,000	24,200	31,800	112,000	35,600	52,200	201,000	63,000	82,200	300,000	91,700	125,000
Mississauga	795,000	247,000	493,300	852,000	279,600	537,300	920,000	317,700	562,800	995,000	346,700	590,000
Peel	**1,578,000**	**457,300**	**735,600**	**1,829,000**	**555,900**	**862,900**	**2,050,100**	**652,200**	**959,100**	**2,280,100**	**728,900**	**1,070,000**

Note:
Figures are based on Hemson's Consulting allocation 2051 Reference Scenario