BARRIERS TO MEETING DENSITY TARGETS IN SUBURBAN COMMUNITIES

A CASE STUDY LOOK AT MARKHAM CENTRE

by

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BARRIERS TO MEETING DENSITY TARGETS IN SUBURBAN COMMUNITIES - A CASE STUDY LOOK AT MARKHAM CENTRE

© Scott Jackson, 2013 Master of Planning in Urban Development Ryerson University ABSTRACT

Ontario provincial policy has identified 25 Urban Growth Centres in the Greater Golden Horseshoe. Most of these centres are located in municipalities where suburban policies and practices are well entrenched in community development. Markham Centre is studied in detail, where interviews were conducted with municipal planning staff and development industry professionals, to investigate how municipalities are facilitating urban development while trying to meet provincial density targets. The study further attempts to understand the challenges which confront willing developers in building higher densities within the suburban planning context. The role of outside agencies, development charges, parkland dedication and parking requirements, were all identified as barriers to high density development, while the co-operative relationship between the municipality and the developers, the structure of the planning department, the use of an advisory committee and the use of a more prescriptive zoning bylaw were all heralded as aiding development within the city.

Keywords: Smart Growth, Intensification, Urban Growth Centres, Suburban Downtowns, Density, Municipal Policy, Municipal Finance, Urban Design, Real Estate Development

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1.0 INTRODUCTION

The effects associated with suburban sprawl are well documented. They include: negative implications for our environment (Kahn, 2006); the increased cost with maintaining and operating low density areas (Burchell et al, 2005), and increasing problems to our physical health and social well being (Putnam, 2001; Zhao & Kaestner, 2010). Over the last several years, the Province of Ontario has introduced smart growth legislation which will preserve agricultural and environmentally sensitive land, by establishing a growth boundary and mandating municipalities to meet intensification targets – all in an effort to curb sprawl.

Density is the most salient feature in meeting the goals of smart growth, including creating transit supportive, mixed use, pedestrian friendly and environmentally sensitive communities. Some of the most successful neighbourhoods in the world, including Jane Jacobs' account of Greenwich Village in New York City, have densities upwards of 100 residential units per acre (247 units per hectare; Jacobs, 1961) – often cited as the modus operandi of good planning. The Province of Ontario has recognized this and mandates 25 Urban Growth Centres (UGC) to meet intensification targets of 150, 200 and 400 people and jobs per hectare (Ontario Ministry of Infrastructure, 2006).

In its most rudimentary description, density means that there are a lot of people around; that public transit can be supported; it means small and large stores can

survive; it provides the opportunity for social interaction, and the presence of others

creates safer conditions. In short, density creates communities.

Note on Density

Gross density is a unit-per-hectare measurement that includes in the land calculation, public infrastructure as well as land occupied by public rights-of-way, recreational, civic, and other non-related uses.

Net density is a unit-per-hectare measurement that includes in the calculation only land occupied by the specified use. It does not include streets, parks, and environmentally sensitive lands.

Increasing net density can be achieved by building denser development forms, such as townhouses, row houses, mid-rise or high-rise buildings, or by eliminating much of the surface parking which surrounds many of the buildings found in suburban environments.

Numerous region wide analyses have been conducted documenting the barriers and obstacles facing developers and municipalities in building high density developments, under the principles of smart growth. These reports tend to be at the scale of the region and summarize findings from multiple municipalities, or they focus on urban environments and ignore suburban municipalities. Very few case study examples have been done providing a more nuanced approach to discovering the successes, challenges, threats and opportunities in building high density - smart growth developments.

The City of Markham provides a unique opportunity for study as it has been experimenting with higher density Greenfield development for the last twenty years. The City in the context of the Greater Toronto Area offers a more progressive approach to planning, experimenting with alternative methods of delivering Greenfield development. Communities such as Cornell, Leitchcroft and portions of Angus Glen over the last twenty years have been built at higher densities and under some of the principles of New Urbanism - the results can now be evaluated and improved upon in future neighbourhood developments.

Markham Centre is the latest embodiment of a New Urbanist development currently under construction, despite the fact that it has been in the planning and development phase for over twenty years. Markham Centre promises to be a mixed-use, pedestrian friendly, vibrant and environmentally friendly downtown. Planning policies at all levels of government attempt to support this initiative, yet challenges remain for developers and city planners to meet smart growth objectives.

The intent of this research is to investigate how municipalities are facilitating urban development while meeting provincial density targets. Further this research will attempt to understand the challenges which confront willing developers in building high densities within the context of traditional suburban planning.

2.0 RESEARCH QUESTIONS

- How are municipalities facilitating urban development while meeting provincial density targets?
- What factors encourage or hinder high density development in Markham Centre?
- Are municipal policies aiding or obstructing the development of higher densities?
- What policies can be change to support high density, smart growth communities?

3.0 RESEARCH METHOD

Answering my research question required a multi-method case study approach, incorporating analysis of original documents and formal interviews. Case studies are useful when the topic is broad, the context of the situation matters and findings could reveal multiple issues.

By accessing municipal documents, I was able piece together the story of Markham Centre and discover the issues pertaining to the history of the site and its development. Brief discussions with municipal staff aided in the clarification of original documents in addition to notifying me of any updated amendments.

Semi-structured interviews were conducted with key players involved in the project. I interviewed three developers who were either currently involved or had been involved in projects located within Markham Centre in the last five years. Each developer was selected based on the type of project they had completed, while only including those who had developed mid-rise buildings or were intending to build highrise buildings. Employees selected for interviews were those who held a position at the management level within their organisation. I sought their professional opinion on building higher density developments within Markham's planning framework and their specific experiences with the policies and players involved.

Semi-structured interviews were further conducted with senior municipal planning staff that had direct involvement in Markham Centre projects within the last five years. Interviews focused on the policies implemented within Markham Centre and shared experiences dealing with the development community.

Interviews were not conducted with staff in positions below the managerial level and with staff who had not previously worked on projects in Markham Centre within the last five years.

All interviews were conducted at each interviewee's place of employment, and took place over the course of three weeks in February 2013. All Interviews lasted between thirty minutes to one hour.

A schedule of interview questions can be found in the Appendix B at the end of the paper.

This research has been approved by the Ryerson Research Ethics Board (REB). The identities of those who have been interviewed have been held in the strictest of confidence. Key informants will be referred to as either municipal staff or development industry professional.

4.0 LITERATURE REVIEW

There exists a sizeable amount of literature on density and its relationship with smart growth. To produce a literature review of all the material would be verbose and yield little benefit for this paper. However, a brief review highlighting the main arguments for and against density and its relevance in select smart growth principles was conducted. Further a review covering the barriers to smart growth development has also been conducted. At the conclusion, a final summary will attempt to tie all the themes together.

I Smart Growth in the Greater Toronto Area

Broadly speaking, smart growth takes a regional approach to planning and development, whose primary objective is curbing sprawl by shaping growth in a way that lessons its negative impacts on the environment (Danielsen et al, 1999). This has been accomplished through the use of land-use controls and policies such as growth boundaries, which encourage compact development and urban revitalization as well as greater transportation and housing options.

At the municipal level, The Ontario Smart Growth Network (2009) defines smart growth as a return to urban villages, where the basic daily needs are available within a short walk. The network identifies smart growth goals in addition to curbing sprawl as fostering healthy communities and supporting community involvement in planning. Smart Growth BC (2012) outlines ten specific and universally accepted principles: a mix land uses; well-designed compact neighbourhoods; variety of transportation choices; diverse housing opportunities; encourage growth in existing communities; preserve open spaces, natural beauty, and environmentally sensitive areas; protect and enhance agricultural lands; utilize smarter, and cheaper infrastructure and green buildings; foster a unique neighbourhood identity and, engaged citizens participate in community life and decision-making.

In Ontario, smart growth has endured numerous failed attempts of wide spread acceptance across the Greater Toronto Area. In 1970, the Toronto-Centred Region Plan sought to preserve agricultural lands, while minimising escalating transportation, water and sewer infrastructure cost as a result of anticipated demographic and economic growth. The plan called for the adoption of a linear urban form, stretching along the shores of Lake Ontario with limits to urbanization north of a designated green belt. The plan was ultimately discarded for two reasons. First, the province succumbed to pressure from municipalities outside the boundary. Second, the province proceeded with building the York-Durham trunk sewer system, which opened up land north of the city (Filion, 2003).

The second attempt at implementing a smart growth plan in the GTA, occurred from the 1980's to 1995. At this time, the Brundtland Commission released a report - *Our Common Future* (WCED, 1987), which brought attention to the issue of sustainability in Canada. Following its release, governments began to recognize the role cities and land-use regulation played in achieving a more sustainable environment (Jacobs, 1991). This understanding led planners, politicians and environmentalist among

others, to support a shift away from low density suburban sprawl towards a more compact form of development ensuring the efficient use of land.

Planning documents at the time proposed denser forms of development with less segregation of land uses and high quality public transit which would encourage walking and transit use. Forty-seven municipalities released plans which called for the creation of nodes at strategic locations including in suburban environments with ambitious public transit use targets. In 1995 with the election of the Conservative Party, plans failed to materialise as the government had less incentive for regional and local scale planning. The result, in addition with the failure of the provincial government to provide the necessary transit funding, removed incentives for municipalities to follow suit with the nodal and transit strategy (Filion, 2003).

Despite previous failed attempts, the Province of Ontario under the direction of the Liberal Party, have introduced a series of smart growth policies and plans such as *Places to Grow: Growth Plan for the Greater Golden Horseshoe 2006* (Ontario Ministry of Infrastructure, 2006); the *Oak Ridges Moraine Act 2010* (Ontario Ministry of Municipal Affairs and Housing 2010), and the Regional Transportation Plan – the *Big Move* 2008 (Metrolinx, 2008). Together, these plans lay the policy framework for upper, lower and single tier municipalities to amend their official plans and growth guiding documents in the future.

II Density and Mixed-Use

One key component of creating a vibrant, pedestrian oriented public realm is the success of local consumption amenities such as stores, cafes and theatres. The spill-out of pedestrians into and out of these stores all activate the streets, squares and public spaces, helping create a sense of community.

Rappaport (2008) suggests that amenities help support high density levels and that amenities are becoming an important determinant of where people choose to live – a key component of positive economic growth. Florida (2008) contends that young creative urban professionals - the ones which most communities seek to support a knowledge economy, are attracted to the places that are vibrant and which provide numerous amenities resulting from higher densities. This is reflected in the Toronto core, where the appetite of urban living has resulted in an increase in high-rise condo ownership and a boom in the condominium market (Thorpe, 2008).

Kackar et al (2003), research suggests that in order to achieve a mix of uses that help create vibrant pedestrian streets, businesses require traffic volumes associated with densities of 17 and 44.5 units per hectare or higher for local amenities such as a small corner store and supermarket respectively. Even higher densities are required to support greater retail and services.

A failure to achieve minimum densities can result in unsuccessful developments. For example, Grant and Perrott (2011) discovered that Markham's Cornell community, built under the smart growth design principles of new urbanism, had difficulty retaining the desired retail as the community was lacking in the necessary residential gross density which amounted to only 20 units per hectare (York Region, 2007).

III Density and Transportation

A significant objective of smart growth is the greater reliance on local transit and the removal of automobiles from roads and highways. In order for transit to be effective, minimum densities must be in place to support the chosen mode of transport. Concurrently, in order for higher density development, transit must be a pre-requisite.

Holtzclaw et al. (2002) illustrates the relationship between driving and residential density in their analysis of the Chicago, Los Angeles and San Francisco regions. They revealed that communities built at greater densities, generate lower levels of vehicle miles traveled due to the likelihood of services and amenities available to support the area- therefore the need to travel outside of the area decreases.

Cervero et al. (2004), in their review of transit-supportive development literature, found that densities required to support basic bus service needs to be provided at approximately 17 units per net hectare, whereas premium bus service (such as bus rapid transit) can be provided at 37 units per net hectare. Rail service was shown to be most effective at 50 to 75 units per net hectare. Similarly Holtzclaw, (2012) found that bus and rail transit can be supported at densities of 20 units per hectare and higher, whereas transit stops need 50 units per hectare and 74 units per hectare to support high-frequency transit service.

In a report prepared by Metrolinx (2008), 35 units per hectare, built in semidetached or townhouse units could support good bus service, 52 units per hectare built in duplexes, rows or triplexes could support excellent bus service, possibly LRT. 75 to

160 units per hectare built in row houses and low rise apartments could support bus, LRT or streetcar, and that 175 to 300 unit per hectare built in mid-rise apartments and high-rises could support subway and feeder bus networks.

Employment density is also an important factor in determining levels of transit use. Cervero and Duncan (2006) suggest that achieving the right balance of jobs and housing is one of the most important ways land use planning can contribute to reduced motorized travel. Specifically, they realised that having jobs within approximately six kilometres of homes significantly reduced vehicle kilometres travelled (VKT) for work trips.

In order for there to be an increase in transit and pedestrian travel for work trips, employment density levels needed to be greater than 185 employees per gross hectare. This suggests that employment densities need to be approximately six times residential densities in order to support transit as indicated in the study by Frank and Pivo (1995).

Further, active forms of transportation are promoted by higher density developments. Numerous studies have shown that there is a relationship between mixed land use and walking and cycling patterns (Saelens et al., 2003; Lund, 2003; Lee and Moudon, 2004).

IV Density and Infrastructure

Numerous conclusions have been reached regarding the positive and/or negative relationship of density and infrastructure cost.

In a study of 487 municipal governments, Holcombe & Williams (2008), put forward that infrastructure expenditures declined with increases in population density for cities smaller than 500,000, whereas expenditures on services increased with population densities for cities larger than 500,000.

Similar findings were uncovered by the Urban Land Institute (ULI) which found that infrastructure costs per housing unit dropped significantly as densities increase, citing the combined cost of utilities, schools and streets all fell from 90,000 U.S dollars per unit on four acres of land to 10,000 U.S dollars for 30 units per acre of land (Kackar & Preuss, 2003).

The ULI published a report demystifying high density and compact smart growth developments, claiming that these communities can help pay for schools through property taxes while not adding significantly more students to a school, as most dwellers in condominiums or apartments do not have families . They also contend that the mix of uses and amenities that support higher densities improve a community's economic stability which help pay for the infrastructure and public services everyone needs (ULI, 2005).

Conversely, in a 1992 article called Population Growth, Density and the Cost of Providing Public Services, Ladd reviewed data of 247 large counties covering 59 percent of U.S population and discovered that increasing population density decreases costs to local governments but only at level below 50 people per square mile. Above that amount, costs increase on a per capita basis (Ladd 1992).

V Density and Urban Form

At the centre of smart growth's success is the management of density. Jabareen, (2006) identifies density as a critical element of sustainable urban form and the way in which it is integrated and designed will ultimately lead to the success or failure of higher density communities.

A major challenge facing Planners and Developers in building density is the public's negative perceptions. Jacobs (1961), argues that many people's mental image of density, is in reference to the row upon row of homogenous high-rise buildings, housing thousands of people in cramped quarters. For example, Le Corbusier's vertical cities epitomized this vision, where people were housed at 1,200 inhabitants per acre, in tall buildings with 95 percent of the space below, dedicated to nature (Corbusier, 1987). For others, images of the failed Pruitt-Igoe urban housing project in St. Louis, created mental associations of high density living with crime, and racial segregation.

Much of these negative associations were supported by older discourse in academia, where research had examined the negative effects of living in high-rise conditions, such as: the psychological strain experienced in women and children at escalating heights (Gillis, 1977); strained family relations due to lack of privacy; diminished interaction and friendship practices among neighbours and friends (Mitchell, 1971); increase in aggression due to lack of space and violation of territory; increase in drugs, crime and suicide; health concerns over less clean air, sun and the transmission of infections (Newman & Hogan, 1981), among others. More recent regulations in design

and technology have addressed these concerns resulting in greater demand for higher quality living arrangements.

The tower on podium design has proliferated in the Toronto area. This style attempts to address many of the design concerns which historically have plagued tall building design. No longer are towers being placed away from the street and surrounded by green space with minimal ground floor coverage. Instead, towers are being placed on three to eight storey podiums or walk-up townhouses which front adjacent roadways and that cover greater ground floor to open space ratios. Above the podium and stepped back from the front facing façade, tower(s) rise above with small floor plates and spaced at distances apart which translates to minimal shadow and wind impacts at grade, while providing a continuous building frontage which help frame the street.

The typology borrowed from Vancouver has been so successful that the term "Vancouverism" has come to describe it (Boddy, 2005). Perhaps more importantly Vancouverism promotes high buildings and municipalities are leveraging increased densities in return for community amenities such as parks, schools, social housing, streetscape improvements and art installations (Boddy, 2004). In Ontario, Section 37 of the *Planning Act 1990* gives municipalities these rights to negotiate with developers.

Tall buildings typically epitomize high density developments however, it is often emphasized that high densities can be achieved with a variety of urban forms. Jacobs (1961), attributes the most successful places with a healthy mix of diversity, as having densities upwards of 100 residential units per acre (247 units per hectare). This is well

above the 60 units per acre (148 units per hectare) in Pruitt-Igoe project, yet by Jacobs' accounts, Greenwich Village in New York City (the location of her study) does not suffer from the same problems. Instead Jacobs contends that design principles such as the right massing of buildings, the variety of uses, short blocks and access to green space as factors in the success of the area (Jacobs, 1961).

In a preliminary report prepared by York Region, entitled visualizing the look of intensification in York Region (York Region, 2008), images of recently built residential buildings showed that high densities could be achieved in buildings less than 10 storeys in high. Factors such as: building coverage; onsite open space; massing and step-backs; parking standards, and location of parking (surface vs. structures), all were identified as contributing factors minimising the building form on neighbouring impact.

Examples of cities around the world illustrate that desirable densities can be achieved in building typologies other than high-rise towers. For example Paris, where building heights have been limited by the height of the Tower of Notre Dame (approximately 100 feet or 6 storeys), has been cited often by architects and planners as their favourite place to visit. The narrow streets, the ground level uses such as boutiques and cafes, the quaint public spaces and beautiful city parks.

While many planners, city builders and urban design intellectuals highlight the multiple benefits of high density - mid and low-rise building typologies, the reality in today's development industry is that the high-rise form of development is more cost efficient and risk adverse form of development.

VI Density and Housing Choice

Most "smart growth" planning reforms adopt as a core principle the goal of increasing housing affordability and diversity. More compact higher density land-use patterns improve the quality of life for most people and produce a richer range of housing choices at affordable prices.

Aurand (2009) research suggests that neighbourhoods with greater density and a variety of housing types is likely to have a greater quantity of affordable rental units as opposed to a low density neighbourhood consisting of single-family homes.

Conversely, Connerly (2004) in his work addressing the issue of how well smart growth in the U.S. assures a sufficient supply of affordable housing to meet expanding population demands and help meet existing needs, concludes that smart growth attempts to control population growth can increase house prices and decrease housing affordability.

Aurand and Connerly put forward that due to the ambiguity towards affordable housing in smart growth principles, municipalities are much less inclined to include affordability in smart growth plans. Aurand recommends communities that want to pursue adding affordable units, should implement the necessary policies in their plans.

Samuel and Leonard (2002), propose that growth controls tend to increase housing costs for two primary reasons. First, they restrict land supply, citing that zoning for example restrict land uses that may or may not be consistent with market trends, thus forcing developers to seek rezoning or use less-efficient land for development purposes. Second, growth management laws increase development costs by expanding

the role of politics in land development, citing the need to negotiate with planners and citizens. Samuel and Leonard's argument is akin to a more laissez fair approach to planning in general, thought by most as a reason why sprawl occurred in the first place.

VII Density and the Environment

Smart growth advocates would claim that sprawling and inefficient land use accounts for the loss of open space and agricultural lands, and that higher density developments offer the best solution for protecting these lands including the preservation of air and water. Placing development in existing urbanized areas already equipped with the necessary infrastructure, eliminates the environmental cost of servicing those areas away from urban cores (however many large scale infill projects require upgrades in civil infrastructure such as water/sewage, etc.). The proximity and compactness of local amenities provides the opportunity to drive less and thus reduce smog.

Cox (2007) challenges a number of these claims. First he says that urbanization does not threaten agricultural land, claiming that urban areas with more than 1 million people, (the amount of new land developed since the 1950's in the U.S) equals barely one-tenth of the land removed from agricultural production. Cox instead asserts that agricultural improvements, not sprawl have led to the loss of land. Cox further alleges that higher density communities will bring more smog and create slower- more stop and go traffic associated with higher population densities.

The extent, at which efficient urban form utilizes surface areas, minimises impervious surface areas which creates erosion and polluted storm water runoff (ULI, 2005), the Urban Land Institute cites a study completed for the state of New Jersey confirming that compact development can achieve a 30 percent reduction in runoff and an 83 percent deduction in water consumption in comparison with low density conventional suburban development.

VIII Barriers to High Density and Smart Growth Development

The most comprehensive analysis identifying barriers to smart growth has been identified by Blais (2003) in a report by the Neptis Foundation on behalf of the Province of Ontario. The report, a result of a workshop conducted with developers and builders from the Greater Golden Horseshoe outlined twenty-two barriers preventing smart growth developments at the site specific scale. Identified below is a summary of the findings: too many nodes leading to an over-supply of identified nodes and a dilution of the limited demand for denser forms of development; demand for high density forms of development, generally occurs towards the end of the build-out of suburban areas; too much land supply at the urban fringe, depress land prices and removes the incentive to build at higher densities; lack of a clear vision and mixed signals from municipalities; unrealistic expectations on behalf of the municipality and province setting unrealistic goals and stringent urban design standards which are inconsistent with market forces; standard and public taking at the community level; high parking requirements; parking By-laws fail to acknowledge local conditions; inadequate public transit to support compact development; ratepayer opposition to change; development charges favour low density development and discourage smart growth development and, increased costs associated with mid-rise construction.

In a report prepared by the Friends of the Greenbelt foundation (2011), Interviews in addition to a review of academic papers, professional publication, municipal and provincial documents, and media reports, a number of barriers to smart growth were identified. Those included: the capacity of existing infrastructure failing to support additional buildings and increased population and job densities; local resident resistance slows down approval processes and limits densities; slower approval processes due to inexperienced municipal staff with expertise in handling designintensive condominium site plans; parkland dedication policies forcing developers to pay cash in lieu based on existing area property values, and property tax fees developers need to pay at re-zoned rates, while holding land waiting for approvals.

Gonzalez and Grant (2011) revealed that developers in two Alberta communities were hesitant to build denser developments, as market preferences demanded lowdensity housing options. Developers interviewed did however allude to a strong realestate market and rising development costs favouring higher density development, resulting in more choice and affordability to the consumer. This research mirrored conclusions reached by the Regional Municipality of Peel, acknowledging that apartment and townhouse developments posed greater risk and are subject to the "ebbs and flows" of the economy, and that there is little a municipality can do to influence the broader economic forces which affect the marketplace (Lyon, 2010).

On the regulatory side, Gonzalez and Grant (2011) found that planners and elected officials discussed the need to properly 'manage', 'balance', and be 'creative' with densities to achieve sustainability objectives and reduce the negative externalities of high-density development. The Regional Municipality of Peel recognized that well intentioned planning policies fail to consider the economics of intensification, such as height limits and parking requirements and their subsequent effects on developer's project feasibility (Lyon, 2010).

Services such as transit was an issue as consumers wouldn't buy into higher density developments without adequate transit, and transit could only be supported by higher density development (Gonzalez & Grant, 2011). Other infrastructure such as aging and future roads, municipal services and utilities, also stymied development potential as the associated cost placed extra burden on developers.

Pamela Blais (2003) commissioned Royal LePage Advisors to undertake a proforma analysis for eight development types found in four UGC's across the GTA. Each proforma produced a total project cost based on land cost, municipal expenses, hard construction cost and other soft cost such as legal fees and marketing. The report identified: administration costs; structured or underground parking cost; slow market absorption rates, and building regulations as creating greater financial risk for developers.

The issues facing developers indicated by Blais, parallels many of the barriers identified in the Toronto Avenues and Mid-Rise Building Study. However in addition, the study suggests that outdated as of right zoning, adds to developer risk by forcing mid-

rise buildings to encounter the same planning obstacles in the approval process as would the development of tall buildings (City of Toronto, 2010).

Perhaps the greatest barrier for high density development is consumer choice. Evans & Unsworth (2012) in their evaluation of England and Scotland's real estate market revealed that consumers were willing to live in higher density developments only due to the planning policies which restricted affordable options to purchase single detached homes. Their evaluation revealed that young people were willing to live in flats but would move out to detached homes years later as their families grew.

Agrawal & Stillich (2008), studied personal preference for different housing types that support sustainable urban growth in the GTA. Their results indicated that three quarters of those surveyed would live in a typical single detached home however, that number was drastically reduced to only 32 percent if it was a "must have" need. Almost half of respondents indicated that they would live in a two storey townhouse, with a greater share of acceptance if access to greater green spaces existed. Agrawal and Stillich (2008) found that newcomers' preference for housing type, favoured high density and environmental sustainable housing types, and condominiums, were suitable for half of respondents including those with families. Respondents admitted that the likelihood of living in higher density projects was more favourable if the neighbourhood contained many of the qualities found in smart growth communities where daily needs are within walking distance.

In the politically divided U.S., Lewis and Baldassare (2010) looked at data from two surveys conducted in five western U.S. states, to assess public support for various

aspects of compact development. They conclude that different groups of residents supported different elements of compact development. For example, political groups such as conservatives are less inclined to favour compact development than liberals, and low-income racial minority residents tend to be more inclined to favour living in compact developments.

A 2002 U.S. survey conducted by the National Association of Realtors and the National Association of Homebuilders (National Family Opinion, 2002), discovered that 62% of respondents preferred "houses spread out" when purchasing a new home. This contrasts with Hollander (2008) study, in which a U.S. national mail survey was conducted with thousands of adults who supported the idea of new smart growth developments in their community.

IX Summary of Findings from the Literature Review

In sum, a brief review of the literature suggests that a link between higher residential and employment densities and meeting the objectives of smart growth are indispensable. While the debate continues among market driven economists, and pro sprawl libertarians, smart growth unquestionably has gained acceptance by planning professionals, environmentalist and social advocates.

Density can offer a more efficient land use and provide better transit for residents and employees. It can create safer, more walk-able streets and can lessen the environmental footprint of development. It has the potential to offer greater housing choices while further minimising infrastructure cost for a community.

In practice, density in smart growth communities is facing a number of barriers which threaten the effectiveness of their objectives. Blais (2003), pointed out 22 obstacles, of which local and regional planning and their regulations have direct influence. Agrawal & Stillich suggest that consumers are open to the idea of living in higher densities (with a few caveats) while others denounce the movement and claim it operates against the wishes of the community.

While the debate continues on, the conversation in this paper has changed from should we have density? To what should the density look like and how should we create it? This poses challenges to Planners and Developers in understanding how Markham Centre will achieve the residential and employment densities set out in the Growth Plan and the required densities necessary to meet the objectives of smart growth.

5.0 CASE STUDY – MARKHAM CENTRE

Markham, Ontario is a short 25 kilometre drive north-east of downtown Toronto (Figure 1) and is home to approximately 301,709 people - a 15.3 percent increase since 2006. Markham's diverse population includes one of the largest Chinese and South Asian communities - including the largest Indian,



Figure 1: Markham in relation to Toronto

communities - including the largest Indian, Pakistani and Sri Lankan contingent outside their respective countries (Statistics Canada, 2011 Census of Population).

The city is a leader in attracted a range of business enterprise including a number of leading international companies. The top 100 employers range from IBM Canada Ltd with over 7000 employees, to American Express and TD Waterhouse Inc. Small business further flourish in this diverse and strong economy with thousands of small and medium size business located throughout the municipality.

I Markham Centre (Early Planning Context)

Markham Centre is roughly bounded by Highway 7 to the north, the 407 Highway to the south, Kennedy Road to the east and Rodick Road to the west (Figure 2).



Figure 2: Markham Centre Boundary

The site has been in the planning and development phase for two decades with a significant amount of infrastructure investment built since the late 1990's (OPA 21).

The area was first commissioned for study in 1992 with NORR Partnership and Andres Duany and Elizabeth Plater-Zyberk Architects, retained to prepare a plan for the area. The objective was to develop a plan that would provide a variety of residential housing choices, employment, commercial, recreational, cultural and institutional activities built in a compact urban core, with lower density residential neighbourhood on the periphery. The commissioned team led multiple design charettes which focused attention towards the New Urbanist approach of community development. The result of their work culminated in an amendment to the Official Plan (OPA 21) and the creation of a secondary plan area - the Central Area Planning District (Figure

3).



Figure 3: OPA 21

When the Central Area Planning District was created in 1992 and later endorsed by council on August 23, 1994 (later approved by the Ontario Municipal Board in 1997), provincial policies mirrored many of the policies enacted by the province today. The Growth Settlement Guidelines encouraged compact urban form, mixed land uses and quality urban design that facilitated pedestrian movement and that was economically and environmentally sustainable (Town of Markham, 2011). The provincial policy statement, 1996 echoed sustainable forms of development, while the GTA 2021 – The Challenge of Our Future, March 2002, supported the principles of compact living environments, nodal development, housing on main streets and a variety of land uses, and specifically identified Markham Centre and Highway 7 as a prime node and corridor opportunity (Town of Markham, 2011).

The York Region Official Plan, 1994 in addition identified a regional centre in the approximate location of Markham Centre, consisting of the highest intensity of uses, including business, government, entertainment, cultural and medium and high density residential development (Town of Markham, 2011).

A number of supporting studies further influenced OPA 21 including: the Rouge Park Management Plan; the Transit Supportive Land Use Planning Guidelines (Town of Markham, 2011) released by the provincial government, and a study put forth by the Office of the Greater Toronto Area published a demographic forecast for the region, entitled: Outlook for Population and Employment in the GTA (Town of Markham, 2011).

Transportation policy further supported the creation of OPA 21, including the: Markham Transportation Planning Study completed in 1994, and a detailed Markham Centre transportation assessment which influenced the extent and placement of roads in the area (Town of Markham, 2011).

II Markham Centre (Today's Planning Context)

Today, many of the policies which first influenced OPA 21 no longer exist; however, they have been replaced with similar policy adjusted to today's reality. The

term 'smart growth' has risen to encompass the same principles which promote the creation of complete communities featuring urban forms and uses which are more mixed, dense and that promote pedestrian oriented communities where the dependence on the automobile is reduced (Bohl, 2007).

Smart growth has been supported by the introduction of the provinces' Places to Grow 2005 Act in and accompanying Growth Plan for the Greater Golden Horseshoe (Figure 4). The planning framework has created an urban growth boundary by protecting upwards of 7300 square Kilometres of green belt encircling the GTA and apportioning 40 percent of



Figure 4: Growth Plan for the Greater Golden Horseshoe



Figure 5: Greenbelt Plan

new growth to occur within the existing urbanised area (Ontario, 2006). The Growth Plan builds on other key government initiatives including: the Greenbelt Plan (Figure 5) (Ontario Ministry of Municipal Affairs and Housing 2010), Provincial Policy Statements, 2005 (PPS, 2005) and the Regional Transportation Plan – the Big Move (Figure 6) (Metrolinx, 2008).

As part of the Growth Plan, 25 Urban Growth Centres (UGC) have been identified for intense development with residential and employment densities of



Figure 6: The Big Move

150, 200 and 400 persons/jobs per hectare depending on the location. As per the plan, each UGC is to strive for: as focal areas for investment in institutional and region-wide public services, as well as commercial, recreational, cultural and entertainment uses; to accommodate and support major transit infrastructure; to serve as high density major employment centres which will attract provincially, nationally or internationally significant employment uses; to accommodate a significant share of population and employment growth.

III Markham Centre

Markham Centre has been identified as one of four Urban Growth Centres within the Region of York. This requires the city to meet density targets within these areas of 200 persons and jobs per hectare by 2031 or earlier (Province of Ontario, 2006).
Markham has responded and has allocated 400 hectares, of which 300 hectares is developable for intense development. While early figures in OPA 21 suggest that 10,000 residential units equalling 25,000 persons, 55,000 square metres of retail and 39,000 square metres of employment space totalling 17,000 jobs was originally proposed, more recent forecast arising out of the city's Growth Management Plan, are calling for an increase in residential units up to 20,000 resulting in 41,000 persons and 39,000 jobs (Town of Markham, 2010).



Figures 7,8,9,10: Artist Rendering of Remington Groups Downtown Markham Development

IV Development Snapshot

To date, development in Markham Centre has been built primarily in the western portion of the site. What follows is a few of the more recent developments and the net densities at which they have been developed or proposed:

Figure 11	Bijou phase 2 Developer: Remington Group Status: Complete Land area: 0.68 ha Number of units: 244 within 2 buildings Height =7 storeys each Units per net ha: 359 Persons per net ha: 736 persons
Figure 12	55 & 75 South Town Centre Road, 30 & 32 Clegg Road Developer: Liberty Development Corporation Status: complete Land area: 1.3 ha Number of units: 589 units within 4 buildings Height: 9, 10, 13 and 16 Storeys Units per net ha: 453 Persons per net ha: 929
Figure 13	Nexus 8110, 8130 Birchmount Road Developer: Remington Group Land Status: Status: Under construction Land Area: 0.75 ha Number of units: 376 units within 4 buildings Height: 6, 10, 11 and 14 Storeys Units per net ha: 501 Persons per net ha: 1028 Retail: 35,242 sq ft at grade



Honeywell Canada 85 Enterprise Boulevard Developer: Remington Group Status: Complete Land area: 2.4 ha Office Area: 14,319 m2

6.0 FINDINGS

I Table of Findings

Issue	Municipal Perspective	Development Perspective			
City-Developer Relationship	n/a	Positive relationship with municipal staff			
Application Process	Encouraging density by fast-tracking development	Apprehension politically towards the mixing of uses surrounded by traditional low rise ground related housing stock			
Public Concerns	Added layer of public consultation through the use of an advisory committee	Positive as it provides the opportunity for open dialog amongst members of the public and the development community and the committee works without political influence			
 Outside Agencies Toronto Regional Conservation Authority Ministry of Transportation Ontario Ministry of Natural Resources Education Ministry Metrolinx 	The province has done very little to support mixed growth plans	All approach Markham Centre development from previous suburban mentality			
Parking and Employment	Recognises concerns and is allowing for temporary surface parking until later stages of development and is seeking TIEG's to build community parking structures. TIF are one of many financial tools to help support the proposed sports complex. Awaits Provincial authority	High cost of providing underground parking as required by secondary plans and zoning is creating challenges attracting employment use.			

Development Charges	Does not recognise as a	Prices affect return on
	barriers to higher density	investment, and
	development, felt prices	developer's bottom line.
	are fair	Once return becomes too
		little, investor seek-out
		more traditional, more risk
		adverse investments.
Parkland Dedication	Current Parkland	Believes City of Markham
	Dedication policy of One	Should adopt City of
	hectare for every 300 units	Toronto Standard of 0.4
	is unfavourable towards	hectares for every 300 units
	higher density	
	development. Is working	
	towards a graduated	
	Parkland Dedication policy	
Residential Built Form	Recognises midrise	Midrise development
	development creates	creates economic
	economic challenges for	challenges, has since
	developers, has accepted	changed to point tower on
	point towers placed at	podium typology
	strategic locations	
Urban Design	Current standards continue	n/a
	to facilitate suburban 'style'	
	development. Learning	
	curve with city staff has	
	needed to take place	
Zoning	Zoning by-law 2004-196 is	Has difficulty complying
	more design focused,	with element of zoning by-
	however has created	law 2004-196
	•	

Interviews with management level staff at the City of Markham and three development industry professionals with direct experience in dealing with projects in Markham Centre within the last five years, aided in gaining an understanding of the issues in achieving higher density development in Markham Centre.

At the onset of interviews, both developers and municipal staff indicated that achieving the 200 units and jobs per hectare was possible. In fact, one developer interviewed predicted that densities after full build-out would be close to four or five hundred units and jobs per hectare. His reason cited, was due to brisk sales as a result of the strong residential market conditions that support condominium lifestyles in the 905 region. Municipal Officials also suggested that meeting density targets would easily be achievable, as the planning policy had already been in place with the preparation that was done with OPA 21, that supported higher densities and which was recently adjusted to meet the Growth Plan targets. Municipal staff further indicated that the area contained the necessary infrastructure to support the added densities, as the upfront planning had been done years prior.

Markham Centre's success to date could be attributed to its brisk residential sales and planning preparation achieved through OPA 21; however, attracting employment use, has been more of a challenge for developers and municipal staff. Development industry professionals and municipal staff both alluded to the challenge of attracting employment and retail densities necessary to produce a true mixed use community. While the provincial growth plan does not specify what percentage of density should be allocated towards non-residential uses, Markham's OPA 21 does, and the most recent adjusted numbers in the Growth Management Plan refers to 39,000 jobs – slightly less than half of total expected population.

II City-Developer Relationship

The relationship and co-operation between municipality and developer is fundamental for a successful development. Both parties realise that a joint effort

approach to development was needed in order to meet developer and municipal objectives. One developer interviewed said

they have as much to gain or lose as we do. Now our loss and gain is financial, their loss and gain is community building. They (the city) understand that they're building a downtown; they understand that to build a downtown, they have to keep the process moving. As soon as you stop or slow down, it takes away years of advancement... so if you stop the process and all of a sudden the site shuts down for a year; it's really tough to get the momentum back. In other municipalities, they don't get that. They don't understand the importance of keeping the process going. That's a huge difference in Markham.

Developers expressed positive attitudes towards working with municipal staff on Markham Centre projects. Many interviewed felt that the two sides were on the same page from a policy perspective, and that higher density development around higher order transit was coming at some point.

One developer said that the municipal staff in Markham are progressive compared to a number of municipalities across the entire GTA. The developer interviewed went so far to say

if you wanted to do most of what we're doing in Markham Centre in any other municipality, you wouldn't get it done. There's absolutely no way it would get done.

Developer's claimed that the process of building these types of communities was a learning process and admitted that Markham was doing it the right way. He stated that Markham was taking their time and alluded to the large amount of public consultation involved in educating the community about more urban types of development.

III Application Process

Developer's alluded to apprehension politically towards the mixing of uses surrounded by traditional low rise ground related housing stock. That from a community perspective, there was some concern and apprehension over height and density in addition to issues of traffic and congestion.

Municipal staff in an interview when questioned about such apprehension claimed that the application process for higher density development, city staff had been encouraging density and specifically higher point towers in the downtown. Municipal staff alleged that they had been trying to fast-track development applications, and in cases where projects have been appealed to the Ontario Municipal Board, they have decided to settle and not fight developers on additional height - instead choosing to negotiate with them and accommodating it.

Currently the City is looking into the use of Section 37 charges for increasing allowable density in return for community benefit. At the time of writing, no project has yet utilised this financing tool; however, reports and presentations have indicated its use at a future point.

IV Public Concerns

Markham's use of an advisory committee was positively received by the development community. One developer cited that the committee provides an opportunity for open dialog amongst members of the public and the development community and that any plan refinement can be changed in a back and forth process.

The developer maintained that because the committee works without political influence, the process becomes easier and that it provides an avenue to get information out to the public early in the process, which is crucial in achieving community support and development approval.

V Outside Agencies

The primary challenge of building density in a Markham Centre has been the struggles working with external provincial agencies, who continue to impose suburban standards and operate in a suburban vacuum. Unanimously, developers and city officials cited working with outside agencies as their number one challenge. One city official said

the province has done very little to support mixed growth plans, very little.

Developers interviewed claimed those provincial agencies, specifically the Toronto Regional Conservation Authority (TRCA), the Ministry of Transportation Ontario (MTO) and the Ministry of Natural Resources (MNR), all approach Markham Centre development from previous suburban mentality. One developer when asked why he felt this took place said

when you look at the context of Markham Centre, it's really a suburban community. If you contrast Markham Centre with Downtown Toronto, the differences are that in downtown Toronto, they're redeveloping existing lands - so all the environmental takeout has already occurred. All the transportation issues have been dealt with already. You're not putting in new roads, you may put in some turning lanes or phase the lights but you're not really changing the infrastructure. In the 905, it's a clean slate, so when we go out there for a proposal, you get every agency looking at us from a suburban context. The developer interviewed when referring to the TRCA, claimed that they look at a natural area (in this context the Rouge Valley within Markham Centre) and treat it as if the development is a typical suburban Greenfield development. The developer expressed that

they lose sight of the fact that they're going to preserve a natural area whether it's a tree or a stream, and what's going to happen is they're going to result in lower density type development.

One developer argued that the TRCA ignores the long term and that higher density are much better for the environment than low density Greenfield communities. The developer further stated that they look at development from a single-view standpoint, doing what is in their own mandate. If their mandate is to protect the environment, they approach it with this single minded determination to protect the environment.

The City also suggested challenges dealing with the TRCA, claiming they have been resisting additional road networks and road crossings over the one of Rouge River tributaries – A necessary step in opening up land for added density.

One developer expressed frustration with this single minded response from

outside authorities

unless their mandate changes, it's always a struggle. Everything we do is a struggle when it comes to that stuff. We're building a LEED community here; every building we put up is LEED. Yeah you know what? Residential LEED, a lot of people are doing it now, our industrial buildings are getting LEED, and our retail buildings will be LEED, that's unheard of. But they don't really look at that - they look at the natural area which we'll protect, but don't be asking for additional buffers. Don't be asking for all these things that you would get in a traditional low density single family housing development because that's not what this is. When asked about MTO's involvement in Markham Centre as the 407 highway runs the entire south length of the site, one developer expressed frustration working with them, saying

they're supposed to be the ones implementing the province's mandate for smart growth as one of the agencies. They're supposed to be one of the leads in implementing smart growth. But every time we submit an application, for development, we have to go through a process that would drive you crazy. It takes months if not a year to get approval for a building that should have been approved in a matter of weeks and it takes forever.

The City expressed similar concern, citing the need to produce all sorts of reports such as traffic studies for developments that lie within their screening zones, yet the projects have nothing to do with the highway and only to do with the internal road network.

Working with Metrolinx was also revealed as a challenge for city officials. One city employee in respect to the planned mobility hub at eastern end of Markham Centre, felt that Metrolinx could be more proactive in planning, specifically that they were not doing any active planning until they were ready to build the transit way, which is still years away. The city official expressed frustration because all the development wants to happen now and suggested that Metrolinx and MTO should be partnering with the city and area developers to design it and have the developer build the mobility hub at their expense. Municipal staff alluded to the opportunity of taking advantage of air rights as the availability of provincial lands could be freed up. The Education Ministry was also identified by the City as creating challenges in building Markham Centre. One city official explained that the Ministry's funding model for building new schools is based upon the 'six acre elementary site', whereby the conventional suburban school site, based on the York Region School Board standard, does not conform to the City's vision. The City instead wants an urban school in a vertical format that is more costly to build and which the traditional funding model doesn't support. The city official interviewed claimed that the traditional funding model is all based on cheap and limitless land.

One developer interviewed felt that a double standard with the province has been set which allows internal agencies including provincial agencies to not follow the rules. Yet regions and municipalities are required and forced to meet provincial objectives.

The ironic thing is that the provincial Growth Plan is mandated down to the regional governments and the local governments to implement it - and there are rules and penalties if you mess it up. There's a whole checklist of things that have to happen to be in conformity with the Growth Plan. But it doesn't seem to apply to the internal agencies, like the provincial agencies. I mean MTO is one of them, but you also have the ministry of natural resources, they're also supposed to be implementing the Growth Plan, but they don't. To them it doesn't matter what you're trying to do, where you're trying to do it. If in their view, you're doing something they don't like, you're tied up and with the Ministry of Natural Resources, that's easily two years.

VI Parking and Employment

Due to a strong residential market, attracting condominium buyers has been easy thus far. Employment targets of 39,000 jobs established by the Growth Management Plan have been more difficult.

When asked why employment densities have been difficult to attract, one developer interviewed believed a competitive market was created as a result of the policies of the Growth Plan which now mandate mixed-use and encourage growth centres to attract employment uses. One developer said

The one thing I don't think the province anticipated when they had the Growth Plan done, is by putting in such a huge employment component in the plan, they made it so competitive out there, that from a cost perspective, you can't deliver the rents and prices that you want in these areas because there's so much employment land.

The developer claimed that he had lost the opportunity to build two office buildings in Markham Centre to the nearby 404 office corridor in Richmond Hill, as a result of a competitive market which seeks out the cheapest opportunity and path of least resistance. When asked of the city official's and developer's opinion of the Markham Centre policies which may dis-incentivise employers from locating in Markham Centre, both agreed that one of the salient problems is that Markham Centre does not encourage surface parking and that the amount of parking allowed in Markham Centre is much lower than that found in Richmond Hill. One developer explained that the cost of providing a sea of surface parking was upwards of 2,500 dollars a spot - far less than the 45,000 to 55,000 dollars a spot for below grade parking and 25,000 to 30,000 dollars a spot for a structured parking garage.

This problem poses challenges which threaten the profitability of development. One developer admitted that they need to set rents close to a zero profit point, just to get employment and retail uses in the buildings. The developer alleged it's a terrible business plan. City officials recognize that it's a concern and admitted that they want to be in a good position to attract somebody, if the right offer comes to the table.

VII Development Charges

Development charges (DC's) are fees imposed by a municipality to offset the offsite infrastructure capital cost necessary for development to transpire. DC's can pay for soft service costs such as: fire; police, and ambulance or hard costs such as sewers. Both are a result of the increases in local demand created by the new development.

Residential DC's in the GTA including Markham are primarily levied according to the type of residential unit built (i.e. single/semi detached, townhouse, small or large apartments). (For a comparison of select GTA municipalities and there development charge rates see Appendix A).

One developer expressed frustration with development charges imposed on the type of unit typically found in high density residential buildings. The developer claimed that when you calculate how much development charges are generated on an acre of land from a high density development versus a low density development, it's much more than the amount generated from a typical subdivision development.

Testing this claim, taking a typical development in Markham Centre; two residential towers at a net densities of 500 units per net hectare on a 2 hectare site, DC's will amount to over ten times the amount as that which would be charged for a status quo suburban sprawl (see Appendix A) - A significant amount of money affecting a developer's return on investment.

What this says is that the higher density of development will account for a lower demand for linear infrastructure per unit than a development with the same number of units spread out over a larger area.

Developers interviewed agreed that if you took the amount of services used in more compact higher density forms of development, due to their compact form, fewer roads, public infrastructure and less maintenance such as snow cleaning would be required. Developers claimed that everything is cheaper in higher density development, specifically that economies of scale can be achieved; however developers expressed frustration in that they continue to pay as if they were developing in a Greenfield situation.

Recently, GTA regions have increased development charges placing greater financial burden on developers. When asked about this increase, developers expressed frustration alluding to the effect it has on their bottom line.

You have to remember that when you're dealing with the price of your end product, it's market driven. What we're talking about here is your return on investment. If you're going forward, you want to build a high rise building; the market is going to take what the market is going to take. It doesn't matter what your cost is. If you want to sell it, you're going to sell it at a competitive price that the market wants. If it's too high, no one is going to buy it. So you set your price, and then you start taking out your inputs, and you take out all your costs, and all of a sudden, your profit number starts shrinking. It gets to a point that when you go to finance the construction of the building, the banks look at your bottom line. They look at your return on investment. And they'll go, are you guys crazy? You can take your money, not build a building, invest it in anything and make a better return.

When questioning these charges and the disincentives they have on development, municipal staff all agreed that they were fair and that the reduced

amount charged towards units found in higher density areas took into consideration the efficiencies found in higher density development. Currently, there are no future plans to change development charges in Markham Centre.

VIII Parkland Dedication

Historically, the City of Markham was able to utilize the maximum one hectare per 300 dwelling units as specified in the section 42 of the *Planning Act* (R.S.O. 1990), as it never created of challenge for developers building low density neighbourhoods. Since the evolution of the city's policies toward more urbanized developments, challenges with existing parkland provisions have become a problem.

A number of municipal staff confirmed that the current parkland dedication standard of one hectare for every 300 dwelling units is inappropriate for applications on higher density forms of development.

The reason is that in some developments, the amount of land generated by one hectare for every 300 dwelling units can produce required park space greater than the development site itself. Further, the cost of cash-in-lieu payable could be greater than the value of the development site itself. One Municipal staff responded by saying

The higher developer's build, the denser they build, the more money they need to spend on parkland dedication... it's unfair for developers as it affects their bottom line. They should have a level playing field.

The City recognized back in 2006 and undertook a study evaluating alternative parkland delivery methods for Markham Centre. One recommendation calls for developers to enter into the Markham Centre Parkland Funding and Deliver Agreement.

This agreement is customized to secure parkland within the Secondary Plan area, using 1.2 hectares per 1,000 population standard for residential development (using a 2.2 person per unit assumption for all unit types). This option has its advantages as it addresses: fluctuations in land cost; site size, as well as changes in density and household size consistently. The approach recognizes that public parkland is related to the number of people and allows for the consideration of reducing household sizes that generally accompanies greater density developments.

Developers interviewed, claimed that at certain densities, the 1.2 hectares per 1,000 residents does provides relief; however noted that even this more relaxed requirement was still not enough in higher density areas.

A further issue with the policy, specifically cash-in-lieu where parkland cannot be retained, is that land values were substantially higher in Markham Centre where higher forms of development are permitted versus low density areas with lower values. Many in the development community expressed frustration with having to pay market rates, however the money spent on parkland elsewhere in the city was obtained at significantly lower values.

One developer praised Markham's attempts at reducing the impact of parkland requirements, citing two rules not used anywhere else. First, Markham allows for parkland requirements to be obtained by taking 60% in land and 40% in cash. This makes sense as urban environment tend to have built amenities already in place. The second rule Markham uses, requires cash in lieu at the time of draft plan approval as specified under section 50 of the *Planning Act* (R.S.O. 1990). At this time, the value of a

development is substantially less than the value of land under section 42 of the *Planning Act* (R.S.O. 1990) which is the day before building permit issuance. This helps keep rates down to a reasonable level. While the developer interviewed claimed that prices were still incredible high, they did acknowledge that these changes were helping them get through the system.

When asked what amount of park space or cash-in-lieu would satisfy the development community, one developer referenced the City of Toronto standard that requires 0.4 hectares for every 300 units (City of Toronto, 2004). One Markham

employees responded by saying

this is like comparing apples to oranges. Toronto is built out and no space exists for any more parkland. It is an unfair argument. We need a made in Markham solution which recognises the suburban context and the issues facing this city.

In a January 2013

Development Services Committee

meeting, municipal officials



Figure 15: Proposed Parkland Dedication Rates for High-Rise Buildings

Over 8.0 FSI 0.3 ha/1000 people

(75% reduction for that component)

(50% reduction for that component)

(25% reduction for that component)

Between 5.0 and 8.0 FSI 0.6 ha/1000 people

Between 2.5 and 5.0 FSI 0.9 ha/1000 people

Less than 2.5 FSI 1.2 ha/1000 people

presented a recommendation for a reduction to the conveyance requirement for apartment form buildings. The study recommended to council a graduated and cumulative approach to park land conveyance, where 1.2 hectare per 1,000 people is for the portion of development with an FSI of less than 2.5. This rate would reduce incrementally over four stages to a rate of 0.3 hectare per 1,000 people for the portion of a development with an FSI greater than 8 (Figure 15).

When questioned about the status of this new proposal, municipal staff felt it was in the process, however still years down the road. One employee said

it may not even go anywhere – it's up to council, besides, developers don't even build near 8 FSI to even warrant some of the changes.

Both developer's and municipal staff agreed that Markham's Parkland Dedication policy as defined by the *Planning Act* 1990 caused concern for developers. All those interviewed however, felt that on its own, the effect was limited in promoting dense urban development.

When asked about alternative forms of delivering parkland requirements, stratified parks were mentioned as an opportunity to meet city requirements and developer objectives while making more efficient use of the land. Strata arrangements are established with the development of parkland or publicly accessible open spaces on top of buildings or structure. This can work where land values are elevated and available land supplies are constrained.

Markham entered into a strata parkland agreement with a major developer building a high density development along Yonge Street. The City credited the developer for the "surface strata" for on-site parkland, with the developer responsible for the maintenance of the substructure and the municipality responsible for the park and its substructure.

While strata parks do present a collaborative opportunity, municipal staff were sceptical of their success. One municipal staff member was cautious that they would be

successful, citing that future problems may occur in the future such as structural problems or water protection issues.

IX Residential Built Form

In a recent conference prepared by the Urban Land Institute, Randy Peddigrew, Senior Vice President of the largest land owners in Markham Centre – the Remington Group, alluded to their plan which called for a midrise form of development reminiscent of a building scale found in Europe. He claimed that flexibility was needed in these kinds of development and that the plan moving forward was to switch from a low to midrise slab building to a taller- thinner point tower sitting atop a three to eight storey podium.

Referring to these comments, a development industry professional interviewed said that mid-rise buildings reminiscent of a scale found in Europe simply don't work, as it doesn't account for the required parking. He claimed that residents want parking, and that in order to provide it, you need to go below grade. The developer claimed that in terms of building construction costs, underground parking is one of the biggest.

It's far more expensive to build underground parking under these slab buildings than it is under a point tower.

The developer claimed that financially these buildings weren't working and that they weren't getting enough densities to pay for the parking. When they moved to point towers, the developer alleged that the economics changed, that as you build deeper and you have more units, you can amortize the costs and the building begins to make sense.

From an urban design standpoint, the developers and city officials both alluded to point towers as better for the street than slab buildings, due to the lack of sunlight which is difficult to reach the sidewalk. Point towers, the developer claimed, can have a smaller podium which you can deal with where you don't really notice the height.

City officials revealed that the plan moving forward was to strategically place these types of towers away from the major corridors such as highway 7, opting instead to place them toward the Rouge Valley where little community opposition exists.

X Urban Design

One of the more important aspects to building a new downtown with densities upwards of 400 person and jobs per hectare is the quality of urban design specifically at street level.

The challenge in creating a downtown in a Greenfield context is, how do you get developers to build a cohesive integrated downtown rather than a series of projects or buildings. City officials interviewed admitted that to date, Markham Centre can be criticised for a lack of variety in building styles. The city official interviewed claimed they were fortunate to have large owners of land instead of small fragmented ownership; however did express challenges as these developers like to use the same architect which over a large tract of land can produce a monotonous look.

City officials further admitted that most municipal design standards were still centered on suburban development types and that changing these standards has been done on the fly. The City official stated that a learning curve has needed to take place and will continue to take place in the future.

One such example included the City Architect doing a seminar with council to demonstrate visually what the difference between a slab building versus a point tower with podium. This exercise resulted in council having better understanding of the benefits of allowing height in Markham Centre.

XI Zoning

The Markham Centre zoning by-law 2004-196, implements the goals and objectives of OPA 21. The by-law differs slightly from traditional Euclidean zoning (heavily criticised for enabling separation of uses, uniformity and homogeneity in building type - major caveats of suburban sprawl), to more of a form based code promoted by the 'New Urbanist'. Form-based codes place greater emphasis on builtform and design and less on regulating land use. While by-law 2004-196 has not fully embraced the principles of a form based code, some key differences from traditional zoning controls include: the range of permitted uses is broad, providing landowners the needed flexibility to develop organically and in-keeping with the way traditional downtowns have evolved over time; caps are placed on the amount of non-residential net floor area (NFA) and the number of dwelling units. This differs from other zoning where density is typically calculated based on a floor space index (FSI), or floor area ratio (FAR) applied to an individual parcel of land. Zoning by-law 2004-196 instead allocates maximum net floor areas and units to entire blocks, comprised of multiple parcels, where the allocation of building area and number of units must be determined through the submission of precinct plans; built form, bulk and massing of development is regulated with minimum height requirements allocated based on the hierarchy of road in which the property fronts; the by-law supports the areas objectives by reducing the amount of parking that can be provided with any use. The By-law encourages the use of parking garages serving multiple uses in strategic location; all developable parcels are subject of holding provisions, which requires development to meet specific requirements and approval of council in order to have the hold removed (Town of Markham, 2004).



The by-law is intended to be prescriptive while also enabling flexibility, allowing for the evolution of a downtown core. A number of major issues with Zoning By-law 2004-196 have emerged which have created problems for both developers and city officials.

Both municipal staff and development industry professional admitted there was difficulty in complying with the by-law. One developer claimed that the zoning by-law was fairly prescriptive, and that every time they wanted to change something due to market preferences for different building forms and changes in development philosophy, delays resulted from the variances and zoning bylaw amendments required for new building forms that did not conform to the zoning by-law from 2007.

The developer claimed that uncertainty in the market and the unknown as to

what types of buildings were going to put up caused extra risk. One developer said

We aren't going to start building until we start testing the site. We go to the market, because we're not going to build a building on spec. No one does that, you'd be crazy too. If you take our retail building, yeah its community amenity, it has certain standards as to what's suppose to happen from a build form perspective, but it was never tested. So we started testing it with the marketplace. We tried to get tenants however, under the current format, the current zoning bylaw, nobody wanted it. Nobody would locate there. We were lucky enough to get Cineplex interested in going there. They had specific requirements. Those requirements were not going to conform to the bylaw.

The new zoning by-law presents challenges to municipal staff as well. One City

worker admitted that although the by-law is identified as a development standard, in

reality, the by-law is a design standard that promotes façade and building articulation.

He claimed that it is very unique from a zoning perspective, and that municipal staff are

having difficulty understanding the new code as they are not trained in urban design.

7.0 CONCLUSION

This research paper has looked to answer: how municipalities are facilitating urban development while meeting provincial density targets; what factors are encouraging or hindering high density development; are municipal policies aiding or obstructing the development of higher densities, and what policies can be change to support high density, smart growth communities.

I Meeting Density Targets

Meeting density targets as required by the Growth Plan has created challenges to both developers and city officials. Residential targets to date have been met with relatively little difficulty, as market conditions are strong enough to support mid-rise and high-rise development. This is in stark contrast to Gonzalez and Grant (2011) findings, which revealed market preference for low density housing options in two Alberta communities as the number one barrier to higher density development. It is acknowledged that real estate varies from location to location and that the demographics of the GTA and Markham specifically have implications on the saleability of higher density development. This mirrors Agrawal and Stilich (2008) conclusions on personal preference for housing type in the GTA. It would be worth-while to investigate the demographic make-up of Markham Centre versus other Urban Growth Centres and discover any correlation between demographics and market preference for higher density living.

II Barriers to Development

The findings in this research revealed that working with outside agencies was recognised as the greatest challenge to development; however, no immediate threat to meeting density targets as the province does not distinguish between residential and employment targets. Possible reasons why working with outside agencies has been a challenge have included the embedded policies in outside agencies, such as the TRCA, MTO and MNR, which fail to reflect the urban context. This is due to the lack of funding available or human resource power necessary to appropriately deal with the degree of development taking place in these areas.

Further review of outside organizations and the reasons why they struggle to conform to more urban type of development in the suburban context is worth exploring in greater detail.

Two added charges developer's face are Parkland Dedication Requirements and Development Charges, which threaten their rate of return. While acknowledging that these charges have not yet derailed any projects, they both highlight the growing frustrations of developers trying to development more urban forms of development in suburban planning context.

Currently, higher density developments are charged rates upward of three times less than those charged for detached housing. This said, by Markham and the Region charging a fee per unit, the development of townhouses, mid-rises and high-rises in Markham Centre are in fact subsidizing the cost of less dense developments outside the growth centre boundary. Pamela Blais (2010) relates this to a Smart Car, subsidizing a

Hummer (Blais, p.94). Blais points out that the cost of hard services is more directly related to a sites density (number of units to size of the lot). She uses the example of a detached house on a lot that is twenty feet, is charged the same amount in DC's as a similar house on a lot 60 feet wide, where the cost to service the wider house is substantially more (Blais, 2010). In essence what this is saying is that the higher density of development will account for a lower demand for linear infrastructure per unit than a development with the same number of units spread out over a larger area.

Similar findings were also concluded in a report prepared by the Friends of the Greenbelt Foundation (2011). While these fees were identified as an extra cost to developers, they did not present significant obstacles in building higher densities due to a strong residential market. These same conclusions were reached in the City's Community Improvement Plan for Markham Centre (Town of Markham, 2011).

III Barriers to Development - Attracting Employment

Meeting residential targets have shown not to be a concern for the city; however, challenges exist in attracting employers who traditionally seek out the cheapest land available - In this case study, land not too far from Markham Centre.

Regarded as the single greatest barrier in attracting employment uses, is the availability of cheap parking (surface parking), of which Markham Centre does not encourage. This conclusion echoes Blais' work for the Neptis Foundation (2003) which saw parking as one many barriers to smart growth development. The City of Markham has responded and is allowing more flexibility in their parking by-law, permitting

temporary surface parking to accompany development and that over time and with the construction of more buildings and the improvement of transit, structured garages can replace surface lots and those cost could be amortized.

In addition to allowing for greater flexibility in the by-law, Section 28 of the Ontario *Planning Act* 1990, stipulates that municipalities can designate portions of areas as Community Improvement Plan (CIP), provided that the municipalities official plan contains provision relating to community improvement plans (R.S.O. 1990). Markham has already obtained this designation.

Municipalities are using CIP's as an incentive to achieve development that meets their municipal objectives; however finding sources of capital remains problematic as growing municipalities are facing infrastructure gaps. The CIP in place for Markham Centre and has identified potential financial incentives such as loans, grants and land or obtain tax assistance including the use of Tax Increment Equivalent Grants (TIEG) for property owners, which can be paid back through the incremental increase in the value of land after development has occurred. This grant would go towards the building of infrastructure projects such as community parking garages (Town of Markham, 2011).

Another tool Markham is seeking to use is Tax Increment Financing (TIF). TIF's permits municipalities to borrow funds towards infrastructure projects which enable future development that would otherwise not occur to proceed. The municipality/region would freeze property tax rates at the level before development and would then capture the increase in property tax that would normally be proportionately shared between the municipalities and the school board. This increment

- as a result of new development, would then be used to pay off the loan (See Figure 16). In a sense, TIF's use future tax revenue to pay for an immediate project at present day.



Figure 16: Tax Increment Financing Model

Municipalities have been using this alternative revenue structure in 48 U.S states since the 1950's, to achieve: environmental standards; select employment uses; meet intensification targets, or encourage economic development.

In Ontario, TIF's have never been used in a municipality; however, Alberta and Manitoba have recently used Tax Increment Financing as a means for financing community revitalization projects in municipalities.

The City of Markham submitted a business case to the ministry over five years ago for the use of TIF's however, the City has yet to receive approval for the use this financing model. The City more recently has again began investigating the use of TIF's to pay back potential loans associated with helping pay for a proposed 2000 seat hockey arena, which the City believes would help entice non-residential uses to the area (City of Markham, 2012).

It should be noted that the difference between a Tax Increment Equivalent Grant and Tax Increment Financing is that TIEGS are directed towards property owners and are specific to a given site, whereas TIF's are used by municipalities and can cover a larger area.

Further research into the TIF tool is worth exploring as urban growth centres across the GTHA attempt to attract employment uses while meeting pedestrian oriented, built-form objectives.

IV Lessons for Other Urban Growth Centres

Markham's history of building higher densities and experimenting with New Urbanism as a form of Greenfield development, has aided in the development of Markham Centre. Findings in this research revealed a number of City initiatives which have attempted to lessen the burden on developers in Markham Centre and whose lessons could be transplanted to other municipalities wrestling with the challenges of building new suburban downtowns.

Instrumental in the process has been the co-operative relationship with mutual objectives shared amongst developers and city planners. Markham's unique planning department which works in a team structure, where district teams consisting of Urban Planners, Urban Designers, Engineers and Zoning Examiners work as a unified team under one district manager and where each group collaborates and works together on

development applications has proven to be successful. This format has prevented the department from getting bogged down in silos, as can happen in more fragmented planning departments.

In addition, Markham's early efforts at creating a downtown with the approval of OPA 21, and subsequent infrastructure improvements, allowed for a seamless transition from early density numbers and those required by the Growth Plan. Markham over the last 25 years has been a leader in building higher density developments in the suburban context. Cornell and other New Urbanist communities previously built, have paved a path forward and tested the waters in alternative forms of suburban community development which has eased the transition for Markham Centre.

Community concerns over height and density has been minimised as a result of two municipal initiatives. First, a transparent application process takes place, whereby a thorough review of Markham Centre applications is performed by the Markham Centre Advisory Group. The group consisting of 20 representatives including: interest groups; residents and businesses, and representatives from local area stakeholders, assists the City in reviewing and confirming the principles and objectives of the Markham Centre Plan. In doing so, the group has created an evaluation method whereby a number of performance measures focus on five key themes: green-lands, transportation, built-form, green infrastructure and public/open spaces (Town of Markham, 2007). Each application submitted is required to adhere to these guiding principles which support the areas vision. Second, the strategic placement of residential towers away from existing

population densities and towards current Greenfield and environmental lands ensures that few people not living within the development are affected.

Community design has also played a significant role in the success of Markham Centre. In addition to the advisory committee, zoning by-law 2004-196 has been more prescriptive in establishing desired built form, and while challenge have been expressed by both city official and development industry professionals, flexibility in the by-law has enabled development to proceed meeting market conditions.

V Conclusion and Recommendations

To conclude, this paper has identified a number of barriers threatening development and meeting density targets in Markham Centre. As 24 other Urban Growth Centres across the Greater Golden Horseshoe, of which most are located in suburban locations and operate in a suburban planning framework, struggle with facilitating more urban types of development, similar challenges will present themselves. The preparation a municipality takes in advance of shovels hitting the dirt will ease the transition for both the city and the development community. With this in mind however, it is the responsibility of the province to ensure that its arms length organisations support higher densities and Smart Growth development, if the province wants to realise its regional policy objectives.

In addition to some of the approaches Markham has used to encourage higher density development (as discussed above), this paper will conclude with a number of further recommendations for both the City of Markham and the arms length provincial

organisations, which may aid in the development of Markham Centre and other Urban Growth Centres across the region.

Recommendations for Municipalities

- Alter parkland dedication requirements to better reflect more urban, sustainable forms of development. Markham has created a good alternative to their parkland requirement through the proposed graduated system, which allows for less conveyance for higher densities.
- The calculation of development charges should be based on the square foot of the unit instead of by unit type. Currently, higher density developments are charged rates upward of three times less than those charged for detached housing. This said, by Markham and the Region charging a fee per unit, the development of townhouses, mid-rises and high-rises in Markham Centre are in fact subsidizing the cost of less dense developments outside the Growth Centre boundary.
- Use of an advisory committee or review panel to ensure high quality design and provide an additional opportunity for community engagement. Opening the lines of communication and opportunity for meaningful input can drastically reduce community opposition to higher densities.
- Trade-off density in exchange for community benefit as permitted in section 37 of the Planning Act

- The adoption of prescriptive zoning by-laws that will municipalities better control urban design. Such a code, as alluded to in this paper can have the potential to create delays and confusion for developers and it can also presents challenges for municipal staff unqualified in urban design. Therefore, municipal staff in charge of implementing such a by-law should be well versed in urban design.
- Structured parking should be built with aesthetic in mind and should be well integrated into the urban fabric. The use of parking structures may conjure up poor public perceptions due to the aesthetic quality most represent. Generally these stand alone structures are designed for functional reasons with little care given to human scale or the public realm in which they reside. However, architects, engineers and planners have begun to envision new types of parking facilities where other 'non parking uses' are being built along the fronting street and in turn hiding the parking garage or a faux architectural façade is being placed fronting the street, helping to create a more pleasant pedestrian experience at street level. Further work tying parking structures and alternative methods of delivering parking space into suburban downtowns is worth exploring in greater detail.

Recommendations for Outside Agencies

• Outside agencies should begin conforming their standards and practices to reflect more urban forms to more urban types of development where

standards and practices which traditionally suited low density sprawl no longer are applicable in Urban Growth Centres. Further, opportunity exists for partnership amongst external organisations and municipalities to meet dual objectives which could lesson financial strain and accelerate mutual interest.

- Selling of air rights above provincially owned land could help pay for infrastructure investment.
- Finally, provincial policy has failed to offer incentives for municipalities and developers in meeting density targets. Arms length organisations are proving to be difficult to work with and a strain on the development process. If provincial policy continues to demand density targets, financial incentives should be easily accessible laying the foundation for higher density development. TIF Financing is one such example.

8.0 APPENDIX - A

GTA Development Charge Rates

GTA Development Charges

Residential (\$/Unit)	Municipality							
	Markham	Ajax	Aurora	Mississauga	Newmarket	Pickering	Richmondhill	Toronto
Single/Semi	\$61,931	\$34,819/\$31,045	\$57,871	54543.73*	\$57,093/\$54,063	\$22,790	\$54,338	\$19,412
Townhouse	\$52,700	\$28,426	\$49,538	21847.06* **	\$47,967	\$19,016	\$47,007	\$15,695
2 Bed/Large Apt.	\$39,119	\$20,764	\$36,416	40391*	\$35,200	\$14,136	\$34,247	\$12,412
1 Bed/Small Apt.	\$26,259	\$13,977	\$26,032	40391*	\$23,999	\$9,612	\$24,120	\$8,356
Other Residential				54543.73*				

* Does Not include Storm Water Management

** Contingent on unit size less than 70m2 (750 sq ft)

Non-Residential (\$/sq m of GFA)		Municipality						
	Markham	Ajax	Aurora	Mississauga	Newmarket	Pickering	Richmondhill	Toronto
Industrial	\$240	\$90	\$239	\$157	\$232	\$53	\$255	\$0
Office	\$240	\$243	\$239	\$209	\$232	\$206	\$255	\$141
Institutional	\$240	\$96	\$239	\$276	\$232	\$59	\$255	\$141
Retail/Commercial	\$440	\$243	\$437	\$276	\$431	\$206	\$479	\$141
Mixed Use Retail *	\$436		•	•	•		•	
Mixed Use Other *	\$238	1						

* Markham is the only municipality which makes this distinction

Application of Development Charges High-rise vs. Single Detached Subdivision

Development Option	Development Option 1 -	Development Option 2 -		
	Single detached dwellings (2	High-rise towers		
	Hectare Site)	(2 Hectare Site)		
Number of Units	25 units/ha = 50 units	500 units/ha = 1000 units		
Development Charge	\$61,931/unit	\$39,119/2bd unit*		
per unit		\$26,259/1bd unit*		
Cost incurred by	\$3,096,550	\$32,689,000		
developers				
* Based on the assumption that 1 and 2 bedroom unit mix will be split 50/50				
SCHEDULE OF QUESTIONS FOR DEVELOPERS

SCHEDULE OF QUESTIONS FOR MUNICIPAL STAFF

Interview Questions for Municipal Staff

- 1. The Province of Ontario has identified Markham Centre as an Urban Growth Centres as per the Growth Plan for the Greater Golden Horseshoe and requires the city to meet 200 persons and jobs per hectare by 2031. What was your general feeling when the province first introduced the growth plan and the density targets for Markham centre?
- 2. Was Markham prepared to deal with it? Why?
- 3. As you are aware, the province has identified two urban growth centres in the city. Markham Centre being one of them. How has the province aided you in building these densities?
- 4. Has the province been fully on board with meeting these targets? Specifically outside agencies?
- 5. Describe you experience working with developers in achieving these densities?
- 6. Describe any challenges you have encountered with developers in meeting these density targets? Residential and Employment
- 7. Do any of the following municipal requirements for approval, dis-incentives higher density forms of smart growth developments in projects you have encountered: Parkland dedication requirements? Development charges? Submitting precinct plans? Working with the advisory committee? Current Zoning By-law 2004-196?
- 8. Have developers ever failed to meet a density target the city originally sought? Why?
- 9. Do you think the city can do more to make more favourable development conditions for building higher densities in Markham Centre?
- 10. Meeting density requirements means that different building typologies need to be built, describe the public's perception to this new style of development?
- 11. Your original plan for the area called for a mid-rise scale of development. Recently the developers changed to a more point tower with a podium built form. Was this positively received by the city? Why?
- 12. What issues do you think will present themselves in the next phases of development?
- 13. Describe any other obstacles in achieving the required density for development?
- 14. What municipal policies work in terms of helping meet intensification targets?
- 15. Are there any incentives the City can offer to help developers build densities in Markham Centre?

Interview Questions for Development Industry Professionals

- The Province of Ontario has identified Markham Centre as an Urban Growth Centres as per the Growth Plan for the Greater Golden Horseshoe and requires the city to meet 200 persons and jobs per hectare by 2031. From your experience building in Markham Centre, has the city pushed you to increase or decrease densities to meet these objectives?
- 2. Describe any challenges you have encountered with the city in meeting these density targets? Residential and Employment
- 3. Do any of the following municipal requirements for approval dis-incentives higher density forms of smart growth developments in projects you have or are attempting to build: Parkland dedication requirements? Development charges? Submitting precinct plans? Working with the advisory committee? Current Zoning By-law 2004-196?
- 4. If any challenges working with the city exist, do you have any suggestions for improvement?
- 5. Meeting density requirements means that different building typologies need to be built, describe the public's perception to this new style of development?
- 6. Have there been challenges in selling this new form of development?
- 7. In terms of construction, what challenges has your company faced in building this new community?
- 8. Your original plan for the area called for a mid-rise scale of development. Recently the company you work for has decided to change from mid-rise development to a tower-podium form of development. Why?
- 9. What issues do you think will present themselves in the next phases of development?
- 10. Describe any other obstacles in achieving the required density for development?
- 11. What municipal policies work in meeting intensification targets?
- 12. Are there any incentives the City can offer to help developers build densities in Markham Centre?

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