



new communities
GUIDELINES

Preliminary draft



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A Message from York Regional Council

When The Regional Municipality of York undertook a *Regional Official Plan* update, we calculated additional lands would be required to accommodate growth. These lands, located in the City of Vaughan, Town of Markham and the Town of East Gwillimbury, are known as new community areas.

Recognizing the need to develop new community areas in a different way, Regional staff prepared the *Best Practices for New Communities Discussion Paper* and we undertook a public consultation, including workshops and discussions with local municipalities and stakeholders.

We heard from people that new communities need to be designed with a priority on people and liveability, and that such communities ought to feature sustainable neighbourhoods.

Based on the input from residents, Regional staff developed the draft *New Communities Guidelines*, which provides clarity on how to implement the policies of the *Regional Official Plan* as they pertain to the new community areas. We hope you find this guide useful and welcome your suggestions for improvement for a final document to follow after further consultation.



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PRELIMINARY DRAFT

BACKGROUND

Sustainability Strategy

York Region has taken a sustainable approach to the growth challenges ahead. The Region's Sustainability Strategy, which was approved in 2007, provides a long-term framework for making smarter decisions about growth management and undertaking municipal responsibilities that better integrate the economy, environment and community. The Sustainability Strategy has informed the Region's growth management strategy, the new Regional Official Plan, and the criteria for how the new communities of the Region should develop.

York Region will grow to 1.5 million residents, 780,000 jobs and 510,000 households by 2031. Given the significance of this level of growth, it is the opportune time to make sustainable choices on how our new communities are built including requiring and encouraging innovation in energy use, transportation, housing choice, water management and green buildings. Green buildings are an important way to achieve the Region's sustainability objectives. This is consistent with the vision of the Province's Growth Plan for the Greater Golden Horseshoe which is to ensure economically, socially and environmentally sustainable growth to 2031.

New Communities

The development of sustainable new communities is essential to achieve a complete community in which to live, work, and play. The location, composition, density, and design of new development projects can have a significant cumulative impact on a community's ability to improve and maintain health and sustain a healthy economy; to provide effective and accessible public services; to secure adequate choice and opportunity for present and future generations of residents; to protect our environment; and, to ensure we all continue to enjoy a high quality of life.

The New Communities Strategy was developed as a component of the Region's Planning for Tomorrow Growth Management Strategy. A New Communities Workshop was hosted by York Region on November 22, 2006. Participants at this workshop discussed potential development in the Region's Whitebelt, with respect to creating new compact communities, ensuring sustainable infrastructure and a linked natural heritage system. In December 2007, York Region released the Best Practices for New Communities Discussion Paper. This paper was intended to simulate discussion on the development of the potential new communities of York Region and provide a basis for future new community criteria. The Best Practices Workshop was held on December 5, 2008. Attendees of the workshop discussed a wide variety of topics and best practices that could be used in future communities. Some of the key themes and ideas that emerged from the workshop's discussion included the concepts of education, flexibility, and coordination. As a result of this engagement and consultation process, New Communities Criteria were prepared and presented to Regional Council for consideration as a policy approach in the new Regional Official Plan.



Regional Official Plan, 2010

The new communities policies in the Regional Official Plan, 2010 reflect current sustainability thinking, such as energy conservation, and to further emphasize community health, walkability and transit integration. The policies of the Regional Official Plan have established a new generation of community design for York Region. Key to the implementation of these new state-of-the-art communities, is an innovative and collaborative secondary plan process led by the local municipalities. The secondary plans would be developed by a multidisciplinary team including the landowners, the conservation authority, the Region, public health and human service providers, ecologists, engineers, architects, etc., in order to ensure an integrated and sustainable approach to the planning, design, and approval of the secondary plans.

New Community Areas

The New Communities of York Region have been designated through boundary expansions in Regional Official Plan Amendments 1, 2, and 3, and are in the City of Vaughan, the Town of Markham, and the Town of East Gwillimbury. The New Communities Guidelines development will provide guidance on the implementation of the Regional Official Plan policies for development within these communities. The guidelines, where appropriate, will also provide guidance to development within the employment areas throughout the Region, and other lands within the designated greenfield areas.



BACKGROUND

Sustainable Buildings/Communities

Planning policies have traditionally covered matters relating to land use and development at the municipal, neighbourhood and site scale. Policies can now, under the Planning Act, address issues relating to sustainability, the exterior design of a building and streetscaping design. Planning policies have not typically addressed the performance or the interior elements of a building; these issues are addressed by the Ontario Building Code. Building sustainable communities means that we must address both land use and the built form. There is a critical interface between community development and the built form wherein the built form plays a major role in supporting the sustainability vision for healthy communities by promoting active transportation; climate resilient communities by providing housing that is more energy and water efficient; supporting a strong local economy by buying materials locally; and providing healthier indoor environments.

DRAFT New Communities Guidelines

The DRAFT New Communities Guidelines will be used for extensive and on-going consultation with stakeholders, local municipalities and the development industry throughout the first half of 2012. Feedback from these consultations will inform a final version of the New Communities Guidelines which will be brought back to Planning and Economic Development Committee and Regional Council by the end of 2012.

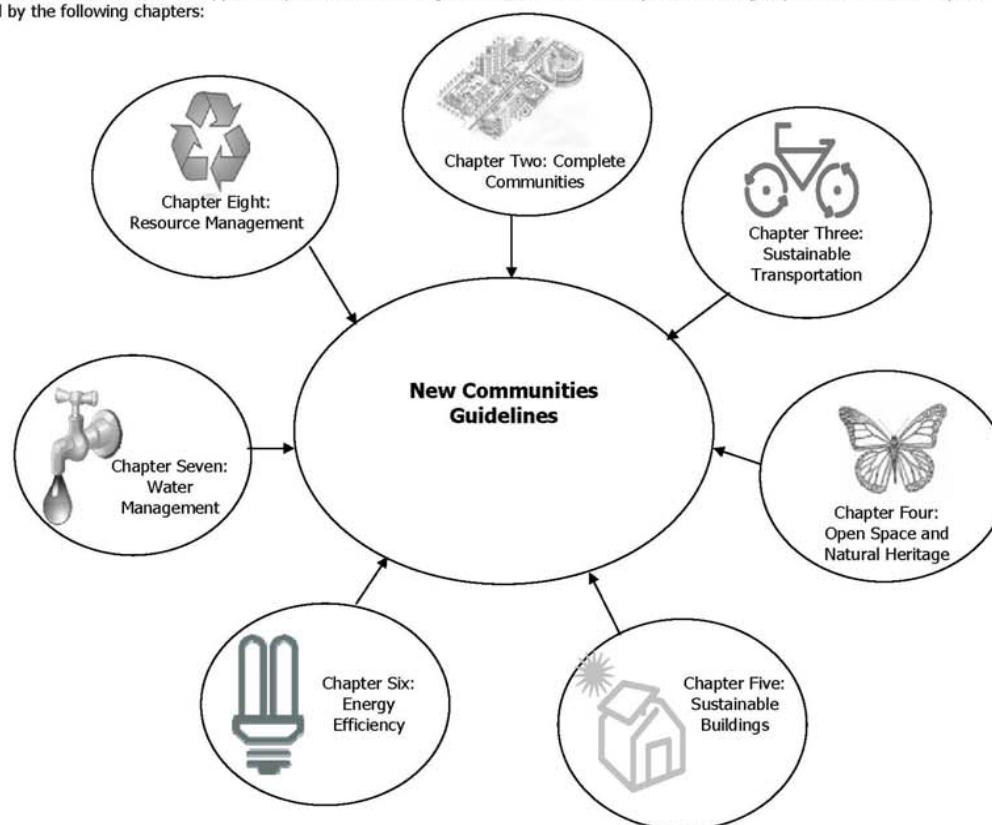
INTRODUCTION

New Communities Guidelines

The Draft New Community Guidelines have been developed by regional staff for consultation purposes with stakeholders, local municipalities and the development industry. This consultation process will be used to inform a final version of the New Communities Guidelines. The final version of the New Communities Guideline will assist in implementing Sections 5.2 (Sustainable Buildings) and 5.6 (New Community Areas) of the Regional Official Plan with an emphasis on creating complete and healthy communities. The Guidelines provide clarity on how to implement the policies and provide examples and tools for additional resources. The intent is that this document supplements the policies of the Plan, and proves helpful for the local municipalities and the development community.

Organization of the New Communities Guideline

The New Community Guidelines contains two sections. The first section is a checklist of the applicable policies which distinguishes between mandatory and encouraged policies. The second part of the guideline is more detailed; being the explanatory text. Both sections of the document will be organized by the following chapters:



New Community Guidelines Chapters



Complete Communities

Complete Communities are the fundamental building blocks for creating a sustainable Region. Communities are much more than the architecture of buildings and spatial layout of neighbourhoods. Complete communities are places where people interact, learn, work, play and call home over their entire lifetime. York Region's priorities for creating healthy and complete communities include people, sustainability and liveability. To achieve these priorities, we must plan communities that will offer a variety of housing types, employment opportunities and mobility choice. These complete communities will also provide a full range of community infrastructure including human services, affordable housing, and high quality urban design to create an attractive and engaging public realm.



Sustainable Transportation

The Region's approach to transportation planning is focused on trip reduction, providing transportation choices and a shift to more sustainable modes of transportation such as walking, cycling and transit. Improving opportunities for active transportation, increasing transit use and decreasing automobile traffic, can help make communities more liveable by creating an environment that is healthy and safe with reduced air pollution, greenhouse gases and noise pollution.



Open Space and Natural Heritage

York Region has placed significant emphasis on the identification, protection, restoration and enhancement of the Region's Natural Heritage System. York Region has promoted the integration of natural heritage values into development and recognizes natural heritage as an important ingredient for York's quality of life and economic prosperity. In new community areas, Open Space and Natural Heritage will be highly valued for its contribution to liveable neighbourhoods including contributing to community identity and sense of place, improving liveability, health and quality of life and providing educational and recreational opportunities.



Sustainable Buildings

Sustainable Buildings are a key component of creating complete sustainable communities in York Region. Sustainable Buildings support the sustainability vision for the Region by contributing to climate resiliency by conserving more energy and water, supporting local industry by buying materials locally, and providing healthier indoor environments. York Region has made a commitment to achieve LEED® Certification for any building or facilities constructed by the Region. York Region also encourages the construction of sustainable buildings in the private sector through the development and implementation of incentive programs.



Energy Efficiency

York Region has made a commitment to demonstrate leadership in energy conservation and innovation, to address climate change and to encourage the co-ordinated, efficient and safe integration of utilities to better serve residents and businesses. As the Region grows, additional utility infrastructure will be required and an integrated approach utilizing innovative technologies, renewable energy systems and energy conservation practices will be required to maintain the high levels of service expected by York Region residents.



Water Management

The growth that York Region will experience will continue to put enormous pressure on the Region's environment and its infrastructure. Water efficiency and conservation contributes to a healthy watershed by providing the tools to use less water while maintaining the same standard of living. In new community areas, we must achieve a minimum of 10% reduction in water consumption for all buildings. This will be achieved by utilizing high efficiency toilets, faucets and fixtures, restricting the use of potable water outdoors, and implementing low impact development techniques.



Resource Management

York Region has adopted a conservation-first approach to servicing the needs of residents which aims to maximize the use of existing infrastructure and services. Resource Management in new community areas addresses how we manage waste throughout the life cycle of a building, how we minimize waste through use of environmentally preferable and locally sourced products and the need for comprehensive education and training for home owners and building operators.

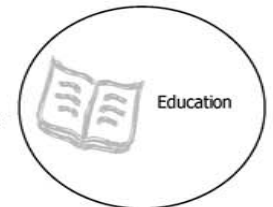
INTRODUCTION

New Community Guidelines – Underlying Themes

Education



Education is vital to ensuring the successful implementation of the policies in the York Region Official Plan. The New Communities Guidelines is an educational tool, providing enhanced guidance on Sections 5.2 (Sustainable Buildings) and 5.6 (New Community Areas) of the Regional Official Plan. York Region also has a leadership role in educating regional and local staff, stakeholders and our residents. This can be achieved in a variety of ways including: sharing information on our experience with owning and operating green buildings, ensuring regional staff have the expertise necessary to engage and assist the local municipalities and development industry in successful implementation of these guidelines, and raising public awareness about the impact of our communities on our quality of life, human health, environment and economic competitiveness.



Climate Change



York Region is already experiencing the impacts of Climate Change. How we plan our built environment, communities and supporting infrastructure play a large role in our ability to mitigate (e.g. greenhouse gas reductions) and adapt (e.g. provision of shade) to Climate Change. Building complete, sustainable communities ensures York Region residents continue to thrive in the face of Climate Change.



Healthy Communities



The physical aspects of our communities can play a critical role in the physical, psychological and social health of individuals. Research suggests that the way communities have been designed, is adversely affecting health of residents as shown by increasing rates of obesity, diabetes, cardiovascular diseases, respiratory illnesses, traffic injuries and exposure to environmental contaminants. Health-oriented development creates healthy sustainable communities by recognizing the value of: the quality of our air, soil and water; opportunities for exercise and recreation; access to healthy foods; social equity and cohesion; and safety and security. There are community design and land use decisions that positively influence human health including the provision of transportation systems emphasizing transit and active modes of transportation, encouraging mixed-use development, increased density and providing access to community amenities such as recreational facilities, green spaces and natural environments and accessible streets, public spaces, buildings and structures. These Guidelines illustrate the elements of community design that contribute towards creating healthy communities.



Scope of the Document

The New Communities Guidelines are intended as a helpful tool to assist local municipalities and the development community in successfully implementing the Regional Official Plan. The guidelines serve several purposes including:

- acting as an educational tool to further explain Regional Official Plan policy intent (such as density targets and housing mix);
- providing detail requirements necessary to achieve specified targets (such as 10% water conservation); and
- providing information on best practices for encouragement policies (such as urban heat island reduction).

Each guideline will provide varying level of detail relative to the scope of the Regional Official Plan policy. Guidelines, such as those that address specific targets or performance targets will provide detailed information and direction. Other guidelines will provide general guidance that is meant to inform local planning processes and directions.

Living Document

It is intended that this document will be a living document and updated as new information becomes available. The New Community Guidelines will be available in print and as a web-based, interactive document. In its web-based format, the document will provide linkages to external guidance documents and resources.

READING THIS DOCUMENT

How to read this document

The following illustrations provide examples of the layout and organization of the checklist and guidelines.

DRAFT New Communities Guidelines Checklist

Category		Guideline	ROP Policy	Required	Optional	
Complete Community Design	CC1	That local municipalities prepare comprehensive secondary plans	5.6.1	☐		Cross-reference to specific Guideline
		That each new community area is planned in a comprehensive and coordinated manner	5.6.2	☐		
	CC2	Development contributes to the overall density requirement of 20 residential units per hectare and a minimum of 70 residents and jobs per hectare in the developable area.	5.6.3	☐		A brief description of the topic area addressed by the guideline
	CC3	Development provides a wide range of housing types, sizes and affordability.	5.6.4	☐		
	CC4	Minimum 25 % of new housing units to be affordable or development demonstrates how it contributes to a minimum of 25% affordable housing in the Region.	3.5.6	☐		Official Plan policy reference
	CC5	Community core areas contain a mix of population-related employment and residential uses.	5.6.5	☐		
		New Retail is designed to be walk able, transit-supportive and integrated into the community	4.4.1	☐		
	CC6	Development contains live-work opportunities through a combination of flexible zoning permissions and accommodations for combined residential and office or retail uses.	5.6.6	☐		
	CC7	New community areas are planned to consider human service needs, including educational, social, health, arts, culture, and recreational facilities.	5.6.8	☐		Indicates those guidelines and related policies that are mandatory
	CC8	Development is designed to reduce urban heat island effects and considers integrating green and white roofs, greening to provide shade, and light coloured hard surface materials.	5.2.35		☐	Indicates those guidelines and related policies that are encouraged
	CC9	New community areas are designed to have high quality urban design with attractive buildings, landscaping and public streetscapes.	5.6.7	☐		
		To employ the highest standard of urban design	5.2.8 (a – h)	☐		

READING THIS DOCUMENT

COMPLETE COMMUNITIES

CC₁- Comprehensive Secondary Plans

Preparation of comprehensive Secondary Plans using multidisciplinary and integrated approach.

ROP Policies

5.6.1 That local municipalities, in consultation with York Region, prepare comprehensive secondary plans for *new community areas* that meet or exceed the policies of this section of this Plan. The secondary plan preparation should include an innovative approach that involves a multidisciplinary team assembled by the local municipality in order to ensure an integrated and sustainable approach to the planning, design and approval of the secondary plan.

Related ROP Policies

5.6.2 That each *new community area* shall be planned in a comprehensive and co-ordinated manner.

4.3.13 That local municipalities, in consultation with York Region, prepare comprehensive secondary plans for new employment lands that are consistent with the applicable policies in Sections 5.2 and 5.6 of this Plan.

Synergies

Supporting Themes

Objective: To create complete communities through a comprehensive and integrated secondary plan process

What is a Complete Community?

Complete Communities are the fundamental building blocks for creating a sustainable Region. Communities are much more than the architecture of buildings and spatial layout of neighbourhoods. Complete communities are places where people interact, learn, work, play and call home over their entire lifetime. York Region's priorities for creating healthy and complete communities include people, sustainability and liveability. To achieve these priorities, we must plan communities that will offer a variety of housing types, employment opportunities and mobility choice. These complete communities will also provide a full range of community infrastructure including human services, affordable housing, and high quality urban design to create an attractive and engaging public realm.

New Community Areas will be complete communities

New community areas are newly designated areas in the Region which will accommodate growth to the year 2036. The new community areas, located in the Town of East Gwillimbury, City of Vaughan and the Town of Markham, have been established in Plan Amendments 1, 2 and 3. These new community areas will be planned in a comprehensive manner through an innovative and integrated design approach to the secondary plan process that will be led by the local municipalities.

What is a Secondary Plan?

The Secondary Plan guides development at the community and neighbourhood scale. Secondary Plans provide a detailed policy framework and direction on topics such as land use, infrastructure, transportation, environment, urban design and similar matters. The Regional Official Plan identifies a number of supporting studies that need to be prepared in support of the secondary plans for new community areas including a Community Energy Plan, a Master Environmental Servicing Plan, a Mobility Plan and a Greenlands System Plan.

Figure 1: The Secondary Plan Process

What is the Integrated Design Process?

The integrated design process is an iterative, collaborative and comprehensive approach to the planning and design of communities that encourages early establishment of common vision, goals and objectives. The advantage of collaboration between a diverse range of disciplines is the early identification of synergies and trade-offs resulting from the shared vision. The result is a final design with improved function, efficiency and economy.

Additional Resources:

[Integrated Design Process: History and Analysis](#), International Initiative for a Sustainable Built Environment
[Integrated Design Process Guide](#), Canadian Housing and Mortgage Corporation
[Roadmap for the Integrated Design Process](#), Prepared for the BC Green Building Roundtable

Figure 2: Multi-disciplinary Team

Chapter reference

Objective of ROP policy

Guideline reference

Official Plan/related Official Plan policy reference

Detailed explanation of the policy intent and requirements

Identifies related chapters and supporting theme areas

Additional information, resources and guidance

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DRAFT New Communities Guidelines Checklist

Category		Guideline	ROP Policy	Required	Optional
Complete Community Design	CC1	That local municipalities have prepared comprehensive secondary plans	5.6.1	☐	
		That each new community area is planned in a comprehensive and coordinated manner	5.6.2	☐	
	CC2	That development contributes to the overall density requirement of 20 residential units per hectare and a minimum of 70 residents and jobs per hectare in the developable area	5.6.3	☐	
	CC3	That development provides a wide range of housing types, sizes and affordability	5.6.4	☐	
	CC4	That a minimum 25% of new housing units are affordable or that development demonstrates how it contributes to a minimum of 25% affordable housing in the Region	3.5.6	☐	
	CC5	That community core areas contain a mix of population-related employment and residential uses	5.6.5	☐	
		That new retail developments are designed to be walkable, transit-supportive and integrated into the community	4.4.1	☐	
	CC6	That development provides live-work opportunities through a combination of flexible zoning permissions and accommodations for combined residential and office or retail uses	5.6.6	☐	
		That developments are encouraged to incorporate live-work opportunities	5.2.6		☐
	CC7	That new community areas are planned to consider human service needs, including educational, social, health, arts, culture, and recreational facilities	5.6.8	☐	
	CC8	That developments are designed to reduce urban heat island effects and consider the integration of green and white roofs, greening to provide shade, and light coloured hard surface materials	5.2.35 (a – c)		☐
		That new communities areas are designed to reduce urban heat island effects	5.6.16		☐
	CC9	That new community areas are designed to have high quality urban design with attractive buildings, landscaping and public streetscapes	5.6.7	☐	
		That the highest standard of urban design is employed	5.2.8 (a – h)	☐	
	CC10	That health, environmental and cumulative air quality impact studies are completed to assess the impact on human health for development with significant known or potential air emission levels near sensitive uses such as schools, daycares and seniors facilities	3.2.5	☐	
		That sensitive uses such as schools, daycares and seniors facilities not be located near significant known air emissions sources such as controlled access provincial 400-series highways	3.2.6	☐	
	CC11	That new community areas are designed to ensure accessibility to people of all ages, cultures and abilities	5.2.7	☐	

Category		Guideline	ROP Policy	Required	Optional
Sustainable Transportation	ST1	That a mobility plan is prepared consistent with policy 5.6.12	5.6.12 (a – j)	☐	
		That development requiring Regional approval is supported by a transportation study	5.2.4	☐	
	ST2	That communities are designed with an interconnected transportation system	5.6.12 (a, b, e, f)	☐	
	ST3	That communities are designed to ensure walkability	5.2.3	☐	
	ST4	That communities are designed to implement the York Region Pedestrian and Cycling Master Plan	5.6.13	☐	
		That the York Region Pedestrian and Cycling Master Plan's Planning and Design Guidelines are applied	7.2.3	☐	
	ST5	That communities are designed so transit can easily service the majority of the population	5.6.12 (c, d, h)	☐	
	ST6	That development is designed to meet or exceed the York Region Transit-Oriented Development Guidelines	5.2.8 (g)	☐	
		That mobility plans are completed to ensure that new community areas are design to meet the York Region Transit-Oriented Development Guidelines	5.6.12 (g)	☐	
	ST7	That development implements trip-reduction strategies consistent with the policies of Section 7.1	5.6.12 (j)	☐	
Open Space & Natural Heritage	ST8	That development is consistent with all parking standards contained in policy 5.2.10	5.6.12 (i)	☐	
		That secondary plans and zoning by-laws shall incorporate parking management policies and standards	5.2.10 (a – f)	☐	
	NH1	That a Regional Greenlands System plan is prepared and implemented consistent with policy 5.6.14	5.6.14 (a – g)	☐	
	NH2	That the Regional Greenlands System plan evaluates the potential impacts of development on key natural heritage and hydrologic features	5.6.14 (a)	☐	
	NH3	That the Regional Greenlands System plan identifies the strategic enhancement and restoration areas	5.6.14 (b)	☐	
	NH4	That the Regional Greenlands System plan identifies how infrastructure projects will contribute to overall ecological gain within the Greenlands System	5.6.14 (c)	☐	
	NH5	That the Regional Greenlands System plan identifies securement opportunities and management requirements	5.6.14 (d)	☐	
	NH6	That the Regional Greenlands System plan identifies a trail system with the Greenlands System	5.6.14 (e)	☐	

Category		Guideline	ROP Policy	Required	Optional
	NH7	That the Regional Greenlands System plan examines the feasibility of providing local community garden plots	5.6.14 (f)		☐
	NH8	That communities include an integrated open space network	5.6.15	☐	
	NH9	That new community areas incorporate public art	5.6.8		☐
Sustainable Buildings	SB1	That new buildings work to achieve high building energy efficiency	5.2.20 (a - b)	☐	
	SB2	That new buildings are encouraged to have very high building energy efficiency	5.2.22 (a - c)		☐
	SB3	That development is designed to maximize solar gains and be constructed in a manner that facilitates future solar installations	5.2.26	☐	
	SB4	That new buildings work to achieve 10% greater water conservation than the Ontario Building Code	5.2.21	☐	☐
		That new building are encouraged to achieve 20% greater water conservation that the Ontario Building Code	5.2.23		
	SB5	That new building are encouraged to be designed and certified to LEED [®] Silver, Gold or Platinum standards	5.2.24		☐
	SB6	That buildings are encouraged to achieve enhanced indoor air quality	5.2.29		☐
Energy Efficiency	SB7	That incentive programs are provided to achieve the successful implementation of LEED [®]	5.2.24		☐
	EE1	That local municipalities have prepared a Community Energy Plan	5.6.10	☐	
	EE2	That communities are designed to maximize passive gains, and to ensure that all buildings are constructed in a manner that facilitates future solar installations	5.6.9	☐	
	EE3	That all new buildings are encouraged to include on-site renewable or alternative energy systems	5.2.28		☐

Category		Guideline	ROP Policy	Required	Optional
Water Management	WM1	That a comprehensive master environmental servicing plan is prepared	5.6.11 (a – c)	☐	
	WM2	That innovative techniques for stormwater management are utilized	5.6.11 (c)	☐	
		That development have an integrated and innovative approach to water management	5.2.11	☐	
	WM3	That the use of potable water for outdoor watering is restricted	5.2.31	☐	
	WM4	That the installation of rainwater harvesting systems is required	5.2.32	☐	
	WM5	That the use of water conserving, drought resistant landscaping is encouraged	5.2.33 (a – d)		☐
Resource Management and Education	WM6	That all development is encouraged to incorporate green roofs	5.2.34		☐
	RM1	That the diversion of construction and demolition waste is encouraged	7.4.14		☐
	RM2	That three-stream waste collection capabilities in all multi-residential buildings is implemented	7.4.9	☐	
	RM3	That the use of environmentally preferable products in all new development is encouraged	5.2.30		☐
	RM4	That the use of locally and regionally-sources materials is encouraged	5.2.36		☐
	RM5	That resident, building owner and operator education materials and training on sustainable buildings is developed	5.2.39		☐

CC1 – Comprehensive Secondary Plans

Preparation of comprehensive Secondary Plans using multidisciplinary and integrated approach.

ROP Policies

- 5.6.1** That local municipalities, in consultation with York Region, prepare comprehensive secondary plans for *new community areas* that meet or exceed the policies of this section of this Plan. The secondary plan preparation should include an innovative approach that involves a multidisciplinary team assembled by the local municipality in order to ensure an integrated and sustainable approach to the planning, design and approval of the secondary plan.

Related ROP Policies

- 5.6.2** That each *new community area* shall be planned in a comprehensive and co-ordinated manner.
- 4.3.13** That local municipalities, in consultation with York Region, prepare comprehensive secondary plans for new employment lands that are consistent with the applicable policies in Sections 5.2 and 5.6 of this Plan.

Synergies



Supporting Themes



Objective: To create complete communities through a comprehensive and integrated secondary plan process

What is a secondary plan?

The Secondary Plan guides development at the community and neighbourhood scale. Secondary Plans provide a detailed policy framework and direction on topics such as land use, infrastructure, transportation, environment, urban design and similar matters. The Regional Official Plan identifies a number of supporting studies that need to be prepared in support of the secondary plans for new community areas including a Community Energy Plan, a Master Environmental Servicing Plan, a Mobility Plan and a Greenlands System Plan.



Figure 1: The Secondary Plan Process

What is the integrated design process?

The integrated design process is an iterative, collaborative and comprehensive approach to the planning and design of communities that encourages early establishment of common vision, goals and objectives. The advantage of collaboration between a diverse range of disciplines is the early identification of synergies and trade-offs resulting from the shared vision. The result is a final design with improved function, efficiency and economy.

New community areas will be complete communities

New community areas are newly designated areas in the Region which will accommodate growth to the year 2031. The new community areas, located in the Town of East Gwillimbury, City of Vaughan and the Town of Markham, have been established through Regional Official Plan Amendments 1, 2 and 3.

Secondary Plans for new community areas will be led by the local municipalities

These new community areas will be planned in a comprehensive manner through an innovative and integrated design approach to the secondary plan process that will be led by the local municipalities.

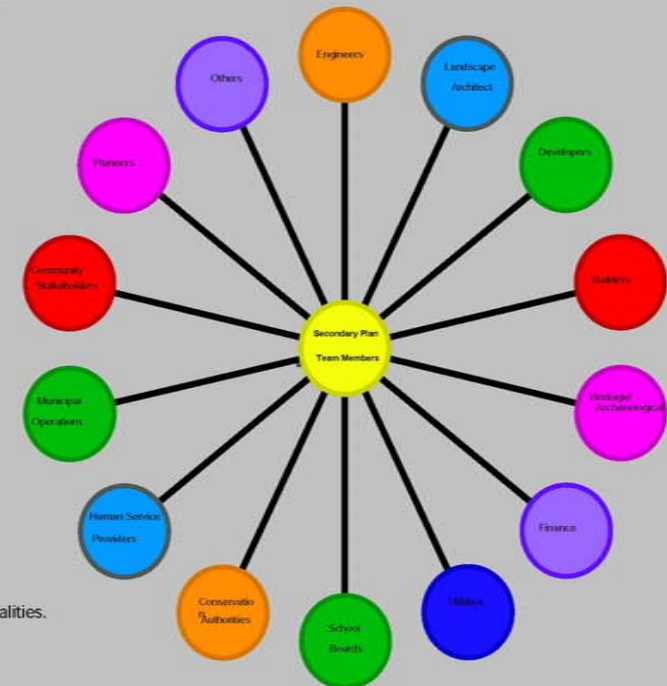


Figure 2: Multi-disciplinary Team

Additional Resources:

[Integrated Design Process: History and Analysis](#), International Initiative for a Sustainable Built Environment
[Integrated Design Process Guide](#), Canadian Housing and Mortgage Corporation
[Roadmap for the Integrated Design Process](#), Prepared for the BC Green Building Roundtable

CC2 - Minimum Density Requirements

Minimum Density Requirement of 20 residential units per hectare and a minimum of 70 residents and jobs per hectare in the developable area.

ROP Policies

5.6.3 That *new community areas* shall be designed to meet or exceed a minimum density of 20 residential units per hectare and a minimum density of 70 residents and jobs per hectare in the *developable area*.

Regional Growth Management Minimum Targets

- Minimum 40% residential intensification within the built up areas by 2015 and beyond
- Minimum 50 residents and jobs per hectare within designated greenfield areas
- Minimum 25% new affordable housing units
- 2.5 floor space index in the Regional Centres
- 3.5 floor space index in and around major Subway Centres
- 25% Woodland cover
- Sustainable Building Targets

Synergies



Supporting Themes



Objective: To meet or exceed a minimum density of 20 residential units/70 residents and jobs per hectare in new community areas.

Why 70 density?

The Provincial Growth Plan for the Greater Golden Horseshoe established an implementation framework to manage growth in the Greater Golden Horseshoe. The forecasts prepared in support of the York Region Official Plan, includes the Provincial Growth Plan's key policy direction requiring York Region's designated greenfield areas achieve average minimum densities of 50 residents and jobs per hectare. Through the forecasting and land budget exercises, it was determined that densities in new community areas would have to be higher to offset densities of already approved greenfield residential and employment areas in the Region. New community areas will be required to achieve a minimum density of 70 people and jobs per hectare. From a health perspective, communities built at these densities support active transportation, transit and reduced emissions.

How do we calculate density?

Density is calculated by dividing the sum of residents and jobs by developable land area.

What land uses are excluded in calculating developable land area?

The following land uses are excluded when calculating density targets specified in the York Region Official Plan:

Environmental	Infrastructure	Existing Uses
- Provincially and locally significant wetlands (and associated 30m buffers) - Watercourses and water bodies (and 15m associated buffers) - Significant Woodlands (and associated 10m buffers) - Floodplain lands - Areas of Natural and Scientific Interest and Environmentally Sensitive Areas - Regional Greenlands Systems (and associated buffers)	- Transmission Corridors - Rail Lines - Trans Canada Pipelines and Compressor Stations - Existing/Proposed 400 Series Highways	- Land uses that will be retained, such as: - estate residential subdivisions - cemeteries - landfills

Secondary Plans in support of new community areas will need to demonstrate that the proposed land uses can meet the 70 density target.



Small Scale Commercial Street



Cornell Secondary Plan



Compact Residential Street

Additional Resources:

<http://www.epa.gov/dced/pdf/density.pdf> and Cornell (Markham)
[Places to Grow Tools - Visualizations](#), Ministry of Infrastructure

[Visualizing Density](#), Lincoln Institute of Land Policy
[2031 Land Budget](#), Regional Municipality of York

CC3 - Range of Housing Types, Sizes and Affordability

Development provides a wide range of housing types, sizes, and affordability.

ROP Policies

5.6.4 That new community areas shall contain a wide range and mix of housing types, sizes and affordability.

Related ROP Policies

3.5.20 To encourage the construction of new rental units with a full mix and range of unit sizes, including family-sized and smaller units.

Objective: To provide a wide range of housing choice

In new community areas, York Region has forecasted the need for 27,270 residential units to accommodate growth to 2031. Through the secondary plan process, local municipalities will have to determine an appropriate housing mix that contribute towards a transit supportive compact built form anticipated in the Region's new communities. The Region's forecast of households is divided into four dwelling types: single detached, semi-detached, rows (townhouses), and apartments. Apartments include both low-rise and high-rise apartment units, as well as duplex units.

Providing a wide range of housing choice can have multiple health benefits for a community including addressing the social determinants of health, promoting aging in place and improving social cohesion. New communities will provide a diverse range of housing choice (a mix and range of types, lots sizes, unit sizes, functions, tenures and levels of affordability) to provide opportunity for all household types, including larger families, seniors, new immigrants and single person households.

The following chart identifies an example of the unit types and mix that will be required to meet the Region's forecasted growth to 2031. York Region will partner with local municipalities to ensure that densities and unit mixes identified in the secondary plan process are implemented at the development stage. This monitoring and review will occur as part of the growth management work currently undertaken by the Region.

York Region 2031 Whitebelt Area Unit Forecasts by Structure Type and Local Municipality

	Single	Semi	Row	Apt.	Total
East Gwillimbury	3,500	700	2,100	700	7,000
Markham	5,940	1,190	3,560	1,190	11,880
Vaughan	4,190	840	2,520	840	8,390
York Region	13,630	2,730	8,180	2,730	27,270

Source: York Region Planning and Development Services



Synergies



Supporting Themes



Additional Resources:

[Making Ends Meet in York Region Discussion](#) 2011, York Region

CC4 - 25% Affordable Housing

A minimum 25% of new housing units are affordable or development demonstrates contribution toward 25% minimum.

ROP Policies

- 3.5.6** That a minimum 25% of new housing units across the Region be *affordable*, and distributed within each local municipality. A portion of these units should be accessible for people with disabilities. *Affordable* housing units should include a mix and range of types, lots sizes, unit sizes, functions and tenures to provide opportunity for all household types, including larger families, seniors, and residents with special needs.

Related OP Policies

- 3.5.8** To encourage the development of intrinsically *affordable* housing, which includes modest amenities, standard materials, minimal details and flexibility within units.

Synergies



Supporting Themes



Objective: To ensure that a minimum of 25% of new housing units across York Region are affordable.

What is the definition of affordable housing?

In the case of ownership, affordable housing is defined as the least expensive of:

- a. housing for which the purchase price does not exceed 30% of gross annual household income for low- and moderate-income households; or,
- b. housing for which the purchase price is at least 10% below the average purchase price of a resale unit in York Region;

In the case of rental, affordable housing is defined as the least expensive of:

- a. a unit for which the rent does not exceed 30% of gross annual household income for low- and moderate-income households; or,
- b. a unit for which the rent is at or below the average market rent of a unit in York Region.

For the purposes of this guideline, "low- and moderate-income households" means, in the case of ownership housing, households with incomes in the lowest 60th percentile of the income spectrum for York Region or, in the case of rental housing, households with incomes in the lowest 60th percentile of the income spectrum for renter households for York Region.

Making dollars and sense of the definitions

Home Ownership

- maximum gross income for low and moderate households is \$106,690
- average price of a resale unit: \$491,880
- 10% below the average purchase price of a resale unit: \$442,695
- affordable ownership unit: \$404,010

Source: York Region Planning and Development Services, 2010 based on information from Statistics Canada, Toronto Real Estate Board, Canadian Housing and Mortgage Corporation

Note: Data is for the year 2010; 60th percentile income levels are based on 2006 Census data, adjust for inflation to 2010

Rental

- maximum gross income for low and moderate rental households is \$51,150
- maximum affordable rent per month: \$1,280
- average rent: \$1,010
- affordable rental unit: \$1,010/mo.

What tools already exist and/or contemplated in the Regional Official Plan that promote housing affordability?

- a wide range of housing choices (including a variety of dwelling types, tenures, and sizes) throughout all neighbourhoods
- a match between the type, tenure and price of the housing stock and the income levels and demographics of the community
- development at sufficient levels of density to promote a range of transportation choices
- proximity of housing to employment centres, transit, schools, health facilities, and community facilities
- integration of rental, ownership, market and non-market housing within neighbourhoods and buildings
- protection of the existing affordable rental housing stock
- infill and intensification in existing areas that are already served by municipal or regional infrastructure (such as sewers, water, roads)

What are some strategies for achieving the affordable housing targets?

- providing a range of housing types and sizes, functions, tenures and costs
- promoting compact development, intensification and infill opportunities
- using planning tools for height and density bonusing
- encouraging construction of new rental units with a full mix of unit sizes
- encouraging secondary suites and adaptable housing
- providing live-work opportunities
- utilizing community improvement plans

Does the Region provide any further guidance on the provision of affordable housing?

The Region is in the process of developing an updated Housing Directions Study (proposed Spring 2012) and will be developing a Housing and Homelessness Strategy. The Strategy is a partnership between Community and Health Services and Long Range and Strategic Planning and will address the provision of social housing and market affordability.



Additional Resources:

[York Region Housing Supply Strategy](#), 2002

Building Foundations: Building Futures, Ontario's [Long-Term Affordable Housing Strategy](#), Government of Ontario, 2010

[Strong Communities through Affordable Housing Act](#), 2011

CC5 - Community Core Areas

New Communities Areas are designed to contain Community Core Areas

ROP Policies

5.6.5 That new community areas shall be designed to contain community core areas, which will be the focus of local retail, personal services, human services, community services and provide connections to rapid transit. The community cores shall be within a reasonable walking distance from the majority of the population.

4.4.1 To require that new retail be designed to be walkable, transit-supportive, and integrated into communities and pedestrian and cycling networks, with high-quality urban design

Related ROP Policies

3.1.8 To support locally grown and produced agricultural products

4.1.5 To work with local municipalities to create a business friendly environment that includes:

- A diverse range, size and mix of available employment lands;
- State-of-the-art communications facilities and networks, including broadband technology...

7.5.6 To require underground installation of utilities, where feasible, in new community areas....

Synergies



Supporting Themes



Objective: To ensure that people can meet their daily needs within their own communities by focusing retail, personal, human and community services within community core areas.

What are community core areas?

The community core areas are pedestrian-friendly, mixed-use areas that are organized around a vibrant public realm in a central location to service the majority of the community.

What role will community core areas play?

Community core areas will provide local retail, personal service, human and community services in new community areas. Over time, these areas should evolve into a dense, compact and diverse part of a healthy new community area with strong linkages to surrounding neighbourhoods.

Local municipalities and developers should evaluate development concepts against the following criteria for the successful implementation of community core areas.

1. Well Designed Public Realm – create a memorable space that serves as a central space for the community
2. Collaboration/Partnership – new approaches to collaboration and partnership are necessary to ensure that public, private and community interests are addressed through development
3. Plan for Complexity – development of community core areas can be complex, involve a variety of stakeholders, and should be planned for evolution and diversification over time
4. Mixed-Use/Multi-Use – utilize approaches such as mixed-use and performance-based zoning to ensure a wide variety of uses
5. Connect to the Community – strong connections to surrounding neighbourhoods, park systems and commercial areas reinforce the community core area as a public centre. In addition, Commercial Core Areas should provide residents with connections to local agricultural products and to healthy affordable foods
6. Mobility Systems – interconnections between mobility systems should be provided in the community core area
7. Sustainability – utilize a holistic approach that considers the economic, social and environmental elements for creating community core areas
8. Activity - the community core areas should be the heart of the community and programming and management issues around use of this space should be addressed



Additional Resources:

Creating Great Town Centres and Urban Villages, Prema Katari Gupta, Kathryn Terzano, Dorothy Verdon, Nora Yoo, The Urban Land Institute, 2008

CC6 - Live-work Opportunities

Development contains a live-work opportunities through a combination of flexible zoning permissions and accommodations for combined residential and office or retail uses.

ROP Policies:

- 5.6.6 That within *new community areas*, live-work opportunities be provided through a combination of flexible zoning permissions and accommodations for combined residential and business or personal services, office use, and home occupations.

Objective: To provide live-work opportunities in new community areas

What is a live-work unit?

A live-work unit is a type of property, unit or structure that is designed and/or used for two purposes – living and working.

What are flexible/performance-based zoning permissions?

Flexible/performance-based zoning originally arose as a way of regulating the adverse environmental impacts of industry and addressed the measurement of impacts such as noise, dust and traffic generation on adjacent land uses. Newer flexible/performance-based zoning by-laws use other quantifiable measures of land use intensity including open-space ratios, impervious surface ratios, floor space index density, landscaping and urban design criteria to facilitate the development of mixed-use areas.

Flexible zoning permissions focus on community goals and associated performance measures; ensuring a greater variety of uses is permitted which facilitates creative community development and site design. The combination of live-work units and flexible zoning permissions encourages the creation of community core areas.



Synergies



Supporting Themes



Additional Resources:

Edmonton Zoning By-law – [Live Work Units](#), City of Edmonton

[Live Work Use Guidelines](#), City of Vancouver, 2006

[Tomorrow's Property Today](#), Sustainable live-work development in a low carbon economy, Tim Dwelly, Andy Lake and Lisa Thompson, Live Work Network, 2008

CC7 – Human Service Needs

Development considers human service needs, including educational, social, health care, arts, culture and recreational facilities.

ROP Policies

5.6.8 That *new community areas* shall be planned to consider human services needs, including educational, social, health, arts, culture, and recreational facilities.

Related ROP Policies

3.1.5 That public health and other human services be incorporated into the design and evaluation of *new community areas* and Regional Centres and Corridors.

5.1.9 To require local municipalities to prepare detailed sequencing plans within each secondary plan that are supported by water, wastewater and transportation infrastructure, and the provision of human services.

Objective: To ensure adequate human services are provided in new community areas

What are human services?

Human services are programs and services that support safe, caring and healthy communities and promote a high quality of life.

Does York Region provide any guidance on human services planning?

The Economic Analysis of Human Services Costs to 2031 Report provides a set of recommendations and strategies for enhancing human services planning within York Region. These broad recommendations focus on planning of human services in York Region over the next 20 to 25 years. Some of the strategies identified, include:

- **Collaborative Planning:** This includes the involvement of York Region organizations, various levels of government, the human service sector and citizens and communities.
- **Alternative Service Models:** Consider increased reliance on service delivery through arrangements with the volunteer, community and/or private sectors (as is already done for housing). This can be achieved through integrated and collaborative planning
- **Service Integration:** Provide convenient and simple access services. The Region should continue to develop single window service mechanisms and a "common roof" approach to service delivery
- **Prevention:** Prevention and early intervention and addressing root causes are very effective ways of managing service delivery
- **Urban Intensification:** Consider how intensification might affect change to service delivery

What is a human services needs assessment?

A human services needs assessment is a study that identifies the human services needs of a community. It involves:

- gathering information about the proposed demographics of the new community area
- identifying existing and proposed amenities and services in the community (assets)
- identifying which human services needs are required and a timeline for implementation (priorities)
- identifying opportunities for the provision of services through partnerships

How will this be implemented in new community areas?

The identification of the necessary human services within a community will occur as part of the secondary plan process and should consider the following requirements:

- analysis of current and forecasted demographic characteristics
- settlement patterns and catchment areas
- capacity of existing social infrastructure
- analysis of future needs for social infrastructure
- identification of the type, location and standard of facility and service provision required
- linking implementation strategies to other planning mechanisms and resourcing arrangements
- developing phasing and staging policies that establish population thresholds for when human services should be provided



Supporting Themes



Additional Resources:

[A Community Needs Assessment Guide: A Brief Guide on How to Conduct a Needs Assessment](#), 2000 Centre for Urban Learning and Department of Psychology, Loyola University Chicago
[Queensland Social Infrastructure Planning Guide](#)
[Economic Analysis of Human Services Costs to 2031 - Recommendations For Enhancing Human Services Planning in The Regional Municipality of York](#), York Region 2010
[Community Collaborative Planning Guide: Weaving Collaboration into a Tapestry of Change](#)

CC8 –Urban Heat Island

Development is designed to reduce urban heat island effects through integration of green and white roofs, planning for shade and light coloured hard surface materials.

ROP Policies

- 5.2.35 To encourage local heat island effects mitigation in all development including:
- green and/or white roofs;
 - locating trees or other plantings to provide shading for at least 50% of sidewalks, patios, and driveways within 15 m of the home; and,
 - installing light-coloured paving materials including white concrete, grey concrete, open pavers and any material with a solar reflectance index of at least 29.

Synergies



Supporting Themes



Objective: To prevent/reduce the urban heat island effect in new community areas.

Urban heat island – what is it and why should we be concerned about it?

Urban heat islands are becoming an increasingly common phenomenon as cities continue to expand and grow. On hot summer days, urban centers can be up to 6 degrees (C°) warmer than the surrounding countryside. This effect occurs because of the amount of dark heat-absorbing surfaces in urban areas attract and retain the sun's heat. Elevated temperatures can impact communities by increasing peak energy demand, air conditioning costs, heat-related illness and mortality and by decreasing air quality. Higher urban temperatures also speed up the chemical reactions that produce smog.

What is solar reflectivity?

Solar reflectivity is a measure of the ability of a surface material to reflect sunlight on a scale of 0 to 100. Solar reflectance is also called albedo.

What is thermal emissivity?

Thermal emissivity is the ability of a material to emit heat to the surrounding atmosphere.

What is solar reflectance index?

Solar reflectance index is a measure of how well a material rejects solar heat. The index ranges from 0 (least reflective) to 100 (most reflective). Cooler materials score higher on this index.

What strategies can we employ to reduce the urban heat island effect?

Green/Cool Roofs

Green roofs are vegetated roofing systems and are discussed in further detail in the water management section of these guidelines (see W6). Cool roofs are light coloured roofing materials that reject solar heat and contribute less to the urban heat island effect.

Provision of Shade

Trees and vegetation lower surface and air temperatures through evapotranspiration and creating shade. Trees and vegetation are most useful as a mitigation strategy when planted in strategic locations around buildings or to shade pavement in parking lots and streets. In areas where the provision of trees is not feasible, consideration should be given to alternatives such as shade structures. This is important in public spaces like parks, playgrounds and sports fields.

Light-coloured paving materials

Light-coloured paving materials such as white concrete, grey concrete, open pavers or suitable paving material with a solar reflectance index of at least 29 are recommended.



Additional Resources:

City of Toronto [Green Roof](#) Benefits
[Green Roofs: A Resource Manual for Municipal Policy Makers](#), CMHC, 2006
 New York Urban Heat Island Mitigation Manual
[Shade: A Planning Guide](#), York Region SunSense Coalition
[Reducing Urban Heat Islands](#): Compendium of Strategies: Trees and Vegetation, Environmental Protection Agency
[Clean Air Partnership](#)
[The Urban Heat Island Effect](#), Climate Change and Health, Health Canada

Pictures
 Vaughan Fire/EMS Station
 Earth Rangers
 Vaughan Parking Standards
<http://www.gmbsservices.ca/Eco/Shade%20Structure.htm> (York Region School)

CC9 – High Quality Urban Design

Development has high quality design with attractive buildings, landscaping and public streetscapes

ROP Policies

5.6.7 That *new community areas* shall be designed to have high-quality urban design, attractive buildings, landscaping and public streetscapes, consistent with policy 5.2.8 of this Plan.

5.2.8 To employ the highest standard of urban design, which:

- provides pedestrian scale, safety, comfort, accessibility and connectivity;
- complements the character of existing areas and fosters each community's unique sense of place;
- promotes sustainable and attractive buildings that minimize energy use;
- promotes landscaping, public spaces and streetscapes;
- ensures compatibility with and transition to surrounding land uses;
- emphasizes walkability and accessibility through strategic building placement and orientation;
- follows the York Region Transit-Oriented Development Guidelines; and,
- creates well-defined, centrally-located urban public spaces.

5.2.10 That retail, commercial, office, and institutional structures be carefully designed in compact form and be pedestrian-oriented, transit-supportive, and multi-storey where appropriate.

Synergies



Supporting Themes



Objective: To have high quality urban design

What is high quality urban design?

High quality urban design considers how buildings and the spaces between them are integrated and shaped together to create a functional, attractive, and memorable place.

What are the elements of good urban design?

- Well-designed buildings, at an appropriate mass and scale, are critical to creating the public realm by ensuring an enhanced streetscape and creating an animated pedestrian environment.
- The public realm is the location for human activity and interaction occurring at a variety of scales ranging from grand central plazas and squares to small informal meeting places.
- Streets connect and facilitate mobility through neighbourhoods and communities. The appearance and character of these streets contribute to the quality of the public realm and should be designed to accommodate a range of users, create visual interest, provide amenity, and encourage social interaction.

What is the role of private spaces in urban design?

The space or interface between the municipal right-of-way and the front of the building provides a transition from the public to the private realm. Good urban design requires conscious and co-ordinated efforts on the part of the public and private sectors, and involves collaboration between the two to maximize the public and private benefits of development to create a sense of place.

Is there a regional role in urban design?

Yes, York Region has an interest in urban design, in the following areas:

- as a transit service provider, York Region has a particular interest in ensuring that developments incorporate good urban design principles that facilitate and promote transit usage
- as a road authority, York Region must work in partnership with adjacent property owners to create attractive streetscapes and resulting public realms that encourage and promote active transportation and transit use, and
- in the area of Public Health and Healthy Communities, studies show that quality urban design will positively impact the health of York Region residents

What is the local municipal role in urban design?

Local municipalities have a lead role in implementing high quality urban design within their respective communities. Typically, local municipalities develop urban design guidelines that give visualization to urban design policy expressed in municipal official plan policy or zoning-by-laws. These guidelines are used for consideration and evaluation during the development approval process.



Additional Resources:

York Region [Streetscape Program](#)

[Towards Great Regional Streets](#) - A Path to Improvement Design Guidelines for 6-Lane Regional Streets, York Region, 2008

[Coordinated Street Furniture](#): Urban Design Guidelines, York Region Transit

City of Vaughan/Town of Markham Urban Design

CC10 – Cumulative Air Quality Impact

To require health, environmental and cumulative air quality impact studies to assess the impact to human health for development with significant known or potential air emission levels near sensitive uses such as schools, daycares and seniors' facilities.

ROP Policies

3.2.5 To require health, environmental and cumulative air quality impact studies that assess the impact on human health for development with significant known or potential air emission levels near sensitive uses such as schools, daycares and seniors' facilities.

3.2.6 That sensitive uses such as schools, daycares, and seniors' facilities not be located near significant known air emissions sources such as controlled access provincial 400-series highways.

Related ROP Policies

3.2.3 To reduce vehicle emissions by ensuring that communities are designed to prioritize pedestrians and cyclists, reduce single occupancy automobile use and support public transit and transportation demand management initiatives.

7.2.70 To discourage the location of land uses sensitive to noise and vibration and safety issues, in proximity to rail facilities, rail corridors and intermodal yards, to avoid issues of compatibility.

Objective: To require health, environmental and cumulative air quality studies to assess impacts on health near sensitive areas.

What is the impact of air quality on human health?

Research has shown that exposure to air pollution represents a significant human health risk. There is a growing body of scientific evidence demonstrating the link between proximity to sources of air pollution and poor health outcomes.^{1,2,3} The health effects primarily affect the body's respiratory and cardiovascular systems. People with chronic diseases, children, the elderly and those of lower socio-economic status are most at risk from poor air quality.

Common air pollutants include ozone (O3), fine particulate matter (PM2.5), nitrogen dioxide (NO2), and volatile organic compounds (VOCs). Sources of these pollutants include vehicle emissions, industrial emissions, road and construction dust. Table 1 (see page 16) identifies the source and health effects of these and other contaminants of concern.

There are numerous health benefits associated with compact communities including less driving, reduced emissions, increased walking, cycling, use of public transit, and increased ability for citizens to age in place and engage in social activities.^{5,6,7} York Region is working to improve air quality by ensuring that communities are well planned and sensitive uses are not impacted by emission sources. Many jurisdictions have incorporated set-back requirements to ensure that sensitive land uses are not too close to sources of air emissions.

Understanding cumulative air quality is a key component to developing programs and policies to reduce potential adverse impacts. In the context of air quality, cumulative impact studies forecast human health impacts by including existing pollutant levels and anticipated pollutant levels arising from industrial or transportation sources in proximity to development proposals. This is most often done by conducting a cumulative air quality impact study which models emissions, meteorology, atmospheric chemistry, exposures and health impacts.

What is the Process for Developing Air Quality Impact Study?

In order to ensure that future development does not adversely affect, or is not adversely affected by air pollution, it is recommended that a detailed analysis of developments with significant known or potential air emission, or developments that are sensitive uses, be conducted. This analysis is typically called an air quality impact assessment and should include the following:

- Problem Formulation – includes identification of site characteristics, background and cumulative air pollutant levels, sensitive populations, and exposure scenarios and pathways
- Exposure Assessment – evaluates data related to air pollutants, sensitive populations and exposure pathways
- Hazard Assessment Step – identifying and understanding potential health outcomes resulting from exposure to air pollutants
- Risk Characterization Step – estimation, description and evaluation of risk for short term and long term exposure duration
- Risk Management Step – opportunities for decreasing exposure through tree planting vegetative buffers, noise walls, siting and set-backs



References:

1. Brender, J., J. Maantay and J. Chakraborty. 2011. Residential proximity to environmental hazards and adverse health outcomes. *American Journal of Public Health* 101:S37-S51
2. Schlesinger, R., N. Kunzli, G. M. Hidy, T. Gotschi and M. Jerrett. 2006. The health relevance of ambient particulate matter characteristics: coherence of toxicological and epidemiological inferences. *Inhalation Toxicology* 18: 95-125
3. Grahame, T. and R. Schlesinger. 2010. Cardiovascular health and particulate vehicular emissions: A critical evaluation of the evidence. *Air Qual Atmos Health* (2010) 3:3-27
4. York Regional Municipality of York. Corporate Air Quality Strategy. <http://www.york.ca/NR/rdonlyres/dc5xmon5nk2tluwq42emum71mjwbxrb134qmuteqvqkfrh6bctc5p6fiyjt4pdxwbmpa53qsykbhd73ucl6eie/York+Region+Corporate+Air+Quality+Strategy.pdf>
5. Saelens, B., James F. Sallis and Lawrence D. Frank. 2003. Environmental correlates of walking and cycling: Findings from the transportation, urban design, and planning literatures. *Annals of Behavioral Medicine*. 25: 80-91
6. Frumkin, H. 2002. Urban sprawl and public health. *Public Health Rep.* 117(3): 201-217
7. Devlin, A., L. Frank and J. vanLoon. 2009. Physical activity and transportation benefits of walkable approaches to community design in British Columbia. B.C. Recreation and Parks Association. <http://act-trans.ubc.ca/files/2011/06/physical-activity-and-transportation-benefits.pdf>

CC10 - Cumulative Air Quality Studies

ROP Policies

- 3.2.5 To require health, environmental and cumulative air quality impact studies that assess the impact on human health for development with significant known or potential air emission levels near *sensitive uses* such as schools, daycares and seniors' facilities.

What are some of the major air quality contaminants, their sources and associated health effects?

Contaminant of Concern	Source	Health Effects
Particulate Matter	Point sources (industries, facilities) and mobile (traffic corridors, vehicles, planes)	The greatest effect on health is from particles 2.5 microns or less in diameter. Exposure to fine particulate matter has been associated with hospital admissions and several serious health effects, including premature death. People with asthma, cardiovascular or lung disease, as well as children and elderly people, are considered to be the most sensitive to the effects of fine particulate matter. Adverse health effects have been associated with exposure to PM _{2.5} over both short periods (such as a day) and longer periods (a year or more).
Ozone	Product of atmospheric photochemical reactions between nitrogen oxides and volatile organic compounds (VOCs) in the presence of sunlight.	Ozone irritates the respiratory tract and eyes. Exposure to high levels of ozone results in chest tightness, coughing and wheezing. People with respiratory and heart problems are at a higher risk. Ozone has been linked to increased hospital admissions and premature death.
Nitrogen Oxides	Product of combustion of fossil fuels or biomass. Point sources (industries, facilities) and mobile (traffic corridors, vehicles, planes)	Nitrogen oxides can irritate the lungs and lower resistance to respiratory infection. Sensitivity increases for people with asthma and bronchitis. Nitrogen oxides have been linked to increased hospital admissions and premature death.
Sulphur Oxides	Predominantly point sources with minor input from transportation	Health effects caused by exposure to high levels of sulphur oxides include breathing problems, respiratory illness, changes in the lung's defences, and worsening respiratory and cardiovascular disease. People with asthma or chronic lung or heart disease are more sensitive. Sulphur oxides have been linked to increased hospital admissions and premature death.
Benzene	Fossil fuels predominantly gasoline and diesel. Point sources (industries, facilities) and mobile (traffic corridors, vehicles, planes)	Benzene is a carcinogen linked closely with leukemia. Short term exposures can also irritate lung tissue.
Polycyclic Aromatic Hydrocarbons (PAHs)	Combustion in air produces PAHs. Point sources (industries, facilities) and mobile (traffic corridors, vehicles, planes)	PAHs are known carcinogens. Shorter term exposure has been linked with developmental effects in children.
Heavy Metals	Heavy metals make up a small fraction of fuels. Point sources (industries, facilities) and mobile (traffic corridors, vehicles, planes)	Heavy metals is a broad category with each metal having different toxicities and health effects of most concern. Many heavy metals are carcinogenic and many cause neurodevelopmental deficits in children.

Synergies



Supporting Themes



Additional Resources:

[Georgetown South Project](#), Supplemental Human Health Assessment of Air Quality Impacts, Metrolinx, February 2011

BC MOE - [Environmental Best Management Practices for Urban and Rural Land Development in British Columbia](#)

NCCEH - [Minimizing Children's Non-residential Exposure to Traffic-related Pollution](#)

Ontario Ministry of Environment, 2010. Resources. <http://www.ene.gov.on.ca/environment/en/resources/results/listing#d>

Regional Municipality of Halton, 2009. Official Plan Amendment No. 38 <http://www.halton.ca/common/pages/UserFile.aspx?fileId=33306>

California Environmental Protection Agency, 2005. Air Quality and Landuse Handbook: A Community Health Perspective. <http://www.arb.ca.gov/ch/handbook.pdf>

CC11 – Accessibility

Communities are designed to be accessible

ROP Policy

5.2.7 That communities be designed to ensure accessibility to people of all ages, culture and abilities.

Related ROP Policies

3.3.5 To ensure that public building and facilities are designed to be accessible, and are located in proximity to pedestrian, cycling and transit systems.

3.3.11 That communities be designed in a manner that facilitates inclusivity and accessibility for residents, workers and visitors.

3.5.19 To encourage accessibility features in all new housing.

5.2.8 To employ the highest standard of urban design, which:

- a. provides pedestrian scale, safety, comfort, accessibility and connectivity;
- f. emphasizes walkability and accessibility through strategic building placement and orientation;

Synergies



Supporting Themes



Objective: Communities are designed to ensure accessibility for all

What is Community Design?

Community design is the creation and management of the built environment encompassing the interactions between elements such as buildings, streets, mobility systems, park and open spaces to create the shape and pattern of a community. Community design is vital to creating communities that are attractive, accessible to all, healthy and vibrant with a unique sense of place.

What Does Accessibility Mean?

Accessibility means removing barriers that prevent people of all ages, cultures and abilities from accessing opportunities. These barriers may be found in technology, information and communication, attitudes, policies and in physical and architectural environments.

Provincial Legislation

The goals of *The Accessibility for Ontarians with Disabilities Act (OADA), 2005* and *The Ontarians with Disabilities Act, 2001* are to make Ontario accessible for people with disabilities by 2025. Through province-wide accessibility standards, accessibility will be improved by identifying, breaking down and preventing barriers to accessibility. In order to achieve its objective, the OADA has and continue to establish accessibility standards in the areas of:

1. Customer Service
2. Transportation
3. Information and Communications
4. Employment
5. Built Environment

Universal Access and Design in our Community

Universal Design strives to make the built environment as usable as possible by everyone regardless of age, culture and ability.

It is an inclusive design strategy that ensures accessibility through implementation of the following design principles:

1. Equitable Use: The design is useful and marketable to any group of users
2. Flexibility in Use: The design accommodates a wide range of individual preferences and abilities
3. Simple and Intuitive Use: Use of the design is easy to understand
4. Perceptible Information: The design communicates necessary information effectively to the user
5. Tolerance for Error: The design minimizes hazards and the adverse consequences of accidental or unintentional actions
6. Low Physical Effort: The design can be used efficiently and comfortably
7. Size and Space for Approach and Use: Appropriate size and space is provided for approach and use

What do our communities need to make them more accessible?

1. Provide public spaces that enhance safety and inclusiveness for persons of all ages and abilities
2. Encourage buildings that are designed to be accessible for persons of all ages and abilities
3. Provide way-finding to public facilities and services such as libraries, transit stations, health care facilities, etc
4. Provide opportunities for community engagement and social involvement; actively solicit the contributions of persons of all ages and abilities in the community design process
5. Encourage an adequate supply of diverse and affordable housing
6. Provide compact mixed-use development around public transit centers to facilitate access to transit and services
7. Provide enhanced mobility options, including public transportation, walking and bicycling, and specialized transportation for individuals with varied functional capabilities and preferences



Additional Resources:

[The Accessibility for Ontarians with Disabilities Act, 2005](#)

[The Ontarians with Disabilities Act, 2001](#)

[World Health Organization—Age Friendly Cities Guide](#)

[Transportation Standard](#)

[Built Environment Standard](#)

[World Health Organization—Age Friendly Cities Checklist](#)