

# SM4RT LIVING

YORK REGION'S INTEGRATED WASTE MANAGEMENT MASTER PLAN



November 2013

Mixed-Use Strategy





# Mixed-Use Strategy

---

**The Regional Municipality of York**  
Environmental Services Department  
17250 Yonge Street,  
Newmarket, ON L3Y 6Z1  
[www.york.ca](http://www.york.ca)  
[www.SM4RTLIVING.ca](http://www.SM4RTLIVING.ca)

Accessible formats or communication supports are available upon request  
Contact: [EnvironmentalServices@york.ca](mailto:EnvironmentalServices@york.ca) or call 905-830-4444 Ext. 73000



## Contents

<b>1.0</b>	<b>Introduction</b> .....	<b>1</b>
<b>2.0</b>	<b>Background and Trends</b> .....	<b>1</b>
2.1	Challenges .....	5
<b>3.0</b>	<b>Current Trends in Waste Management for Mixed-use Properties</b> .....	<b>5</b>
3.1	New Mixed-Use Development .....	5
3.2	Promoting LEED® buildings in York Region.....	6
3.3	East Gwillimbury Thinking Green Developmental Standards .....	9
3.4	Mandating LEED® for All New Construction .....	10
3.5	Considerations Regarding the Application of LEED® .....	12
3.6	Development Standards and Site Plan Reviews.....	13
3.7	Existing Mixed-Use Buildings .....	14
<b>4.0</b>	<b>Mixed-use Building Waste Management and Diversion Strategy</b> .....	<b>17</b>
4.1	Initiatives .....	18
4.2	Pilots.....	20
<b>5.0</b>	<b>Implementation</b> .....	<b>22</b>
5.1	Partnerships .....	22
5.2	Resources, Timeline and Targets .....	22
<b>6.0</b>	<b>Key Benefits of this Strategy</b> .....	<b>23</b>

## List of Figures

Figure 1:	An artist’s rendition of a typical Mixed-Use Building .....	1
Figure 2:	Percentage of York Region Land identified for Intensification.....	2
Figure 3:	York Region Map highlighting pattern of urban growth intensification .....	3
Figure 4:	Current Waste Management Requirements as part of the Sustainable Development Through LEED® Incentive Program .....	9

## List of Tables

Table 1:	Public and privately-owned LEED® Buildings in York Region.....	6
Table 2:	Waste Management Services provide to Mixed-use Buildings in York Region .....	14



	<p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>To ensure that site designs and development standards effectively anticipate and address existing and future waste management and diversion needs in mixed-use buildings and complexes.</li> <li>Establish a protocol to help define levels of service that will be provided to mixed-use developments.</li> </ul>	<p><b>Targets:</b></p> <ul style="list-style-type: none"> <li>Multi-use building waste diversion targets should follow those set out in the Multi-Residential Waste Diversion Strategy. The aim will be to have all mixed-use buildings achieve about 25% waste diversion by 2015, after which, the sector should achieve an incremental increase in waste diversion of 5% by 2020 with an additional 3-5% increase every five years thereafter.</li> </ul>
	<p><b>Benefits:</b></p> <ul style="list-style-type: none"> <li>An increased emphasis (through both encouragement, incentive and policy instruments) to promote and ensure waste reduction and diversion;</li> <li>Greater clarity with respect to the Region's and Local Partner Municipalities roles in managing waste from Mixed-use sources and initiatives to establish this clarity formally; and</li> <li>The understanding that the strategy should seek input from all impacted stakeholder groups to ensure that the issues and challenges associated with waste management and waste diversion in mixed-use developments are appropriately addressed.</li> <li>Outlines the need to develop protocols for servicing mixed-use buildings and complexes by establishing minimal building design conditions.</li> </ul>	

## 1.0 Introduction

Mixed-use is defined as a mix of residential and commercial tenants/owners. Historically, residential waste is managed by the municipality while commercial waste is managed privately and outside of the municipal system. When both uses are in the same building and waste is collected together, it presents a challenge to determine collection services and payments. Figure 1 demonstrates what a mixed-use building typically looks like. The Mixed-Use Strategy is just one component of York Region's first Integrated Waste Management Master Plan, also known as the SM4RT LIVING Plan. SM4RT Living Plan establishes the planning framework and strategic direction in York Region for the next 40 years. SM4RT Living builds on the Region's position as a waste management leader, by focusing on driving waste reduction and reuse, while maximizing recycling and energy recovery from the materials that remain.

### Primary objectives of this strategy are:

- Promote a consistent message to all developers that waste management needs to be considered in the built form
- Provide greater clarity and consistency across the Region for design of waste management systems in new development and redevelopment
- Encourage the sharing of goods
- Increase diversion within mixed-use buildings

**Figure 1: An artist's rendition of a typical Mixed-Use Building**



## 2.0 Background and Trends

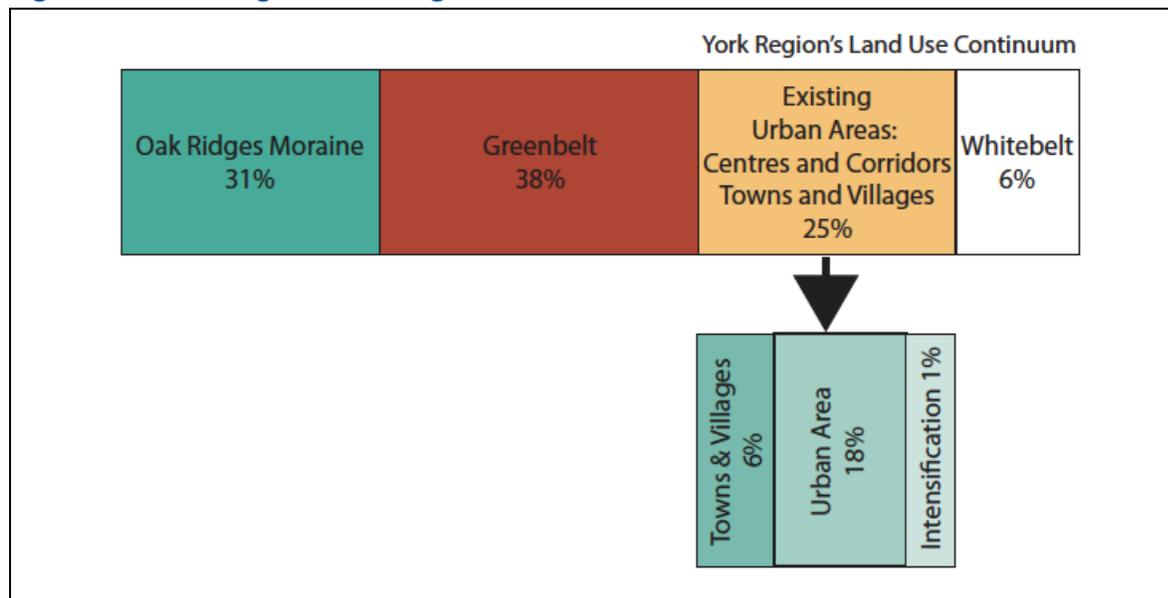
In 2006, the Ontario Ministry of Public Infrastructure Renewal released the document - *Places to Grow - the Growth Plan for the Greater Golden Horseshoe* (the "Growth Plan"), developed under the *Places to Grow Act, 2005*. According to provincial forecasts contained in the Growth Plan, by 2031, York Region population will increase to a total of 1.5 million, accommodating 800,000 jobs and 500,000 households.

The Growth Plan identifies intensification targets for York Region communities, stating that by 2015, a minimum of 40 per cent of all new residential development throughout the Region

must be within the built up areas and that growth within designated intensification areas (Markham Centre, Newmarket Centre, Richmond Hill/Langstaff Gateway, Vaughan Corporate Centre) will be planned to achieve, a minimum gross density target of 200 residents and jobs combined per hectare by 2031 or earlier.

Given that 69 per cent of York Region land is protected from development, the *York Region 2031 Land Budget Report, January 2009*, indicates that most of the intensification will occur in one per cent of York Region's land as shown in Figure 2.<sup>1</sup>

**Figure 2: Percentage of York Region Land identified for Intensification**

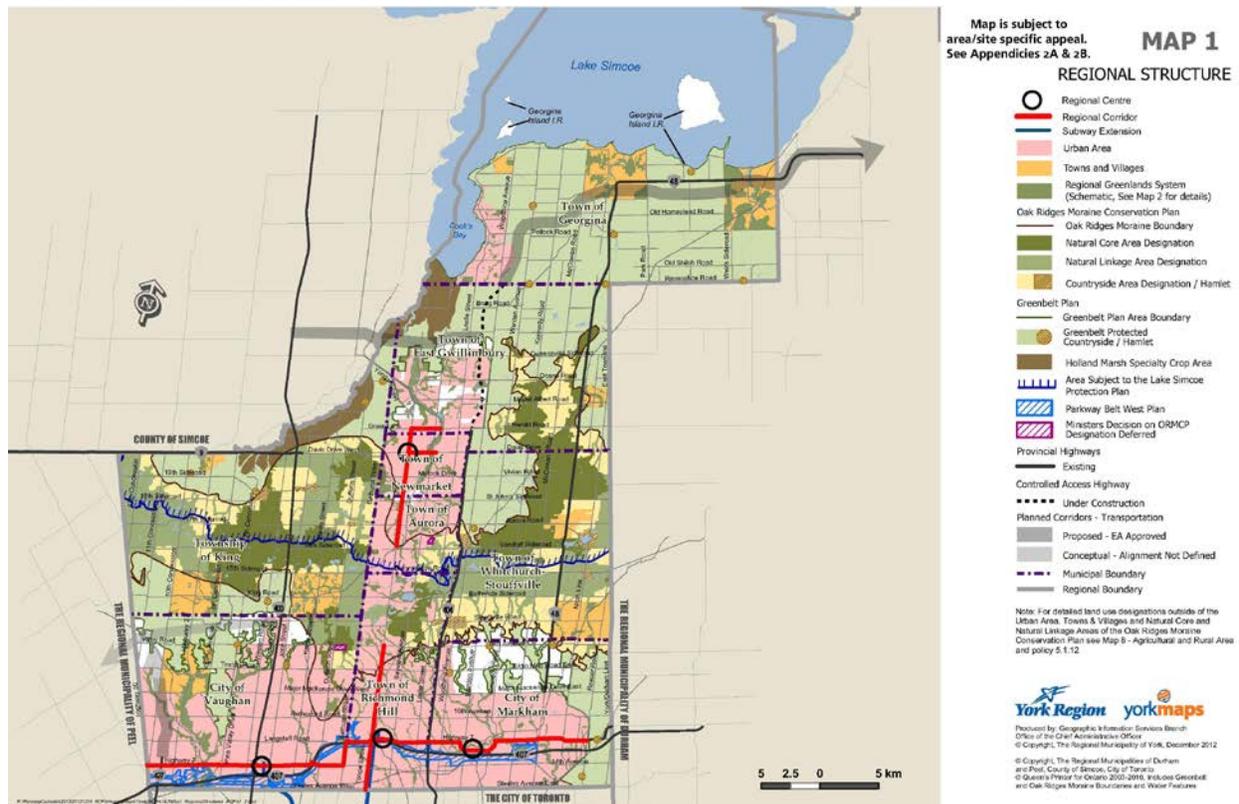


Source: Best Practices for New Communities. York Region Discussion Paper. December 2007

Note: Whitebelt is defined as an area not currently designated “Urban Area” or “Towns and Villages” and outside of the Greenbelt and Oak Ridges Moraine designated areas. The Whitebelt Areas are the last available lands with development opportunities within the Region, where urban boundary expansions will occur.

<sup>1</sup>York Region Intensification Strategy. York Region Planning and Development Services February 2009.

Figure 3: York Region Map highlighting pattern of urban growth intensification



Source: Regional Official Plan. 2012. Regional Structure Map.

Figure 3 shows the location of the existing urban area (pink shading); this is established, built up areas, including towns, cities and intensification areas. The Growth Plan impacts the existing urban area by stipulating minimum intensification and density targets.

A focus has been placed on creating complete communities in a compact urban form where people can work, play and shop close to home in order to meet targets set out in the Growth Plan. In York Region, 90,700 households and 42 per cent of the employment growth will need to be accommodated within existing built-up areas (urban areas, towns and villages).<sup>2</sup>

<sup>2</sup>York Region 2031 Land Budget Report. York Region Planning and Development Services. January 2009

The York Region Intensification study states, “One of the primary goals of these intensification strategies is to emphasize mixed-use development and a strong live-work relationship in intensification areas.” To meet this goal, the Region has developed key principles governing intensification that have been adopted as part of the Regional Official Plan Review. The principles focus on such areas as: transit-supportive and mixed-use development, housing and parking, energy planning and active lifestyles.

Source: York Region 2031 Intensification Strategy. February 2009.

Mixed use development combining residential living with commercial businesses can help to achieve intensification objectives and create more complete communities.

According to the York Region Official Plan, intensification areas most likely to attract mixed-use developments can be found in:

- Regional Centres and Corridors – “The Regional Centres are planned as the most important and intense concentrations of development within the Region. They are vibrant urban places for living, working, shopping, entertainment, cultural identity and human services. The four Regional Centres are strategically located in Markham, Newmarket, Richmond Hill and Vaughan”<sup>3</sup> (shown on Figure 3 as red lines and black circles)
- Community core areas in new communities
- Local centres/key development areas within each local municipality (such as Keswick mixed-use development).

Inherent in this discussion is the need to promote sustainable communities as an aspect of mixed-use development.

“York Region’s new community areas will be state-of-the-art, compact, vibrant, inclusive and diverse. They will prioritize people, sustainability and liveability. Each complete community will have a unique sense of place and identity, and offer a variety of housing, employment and mobility choices. They will be mixed-use communities with high-quality urban design, attracting residents and workers alike.”

Source: York Region Official Plan, 2010

These planned mixed-use buildings and developments must address opportunities and challenges to ensure that waste diversion becomes a priority, during planning and construction as well as during operation and use.

Waste management and diversion issues may vary according to the mixed-use concepts under consideration, such as:

- New mixed-use buildings in targeted neighborhoods, regional centres and corridors
- Community core areas in new communities
- Existing mixed-use buildings located within and outside business improvement areas (BIAs).

<sup>3</sup> York Region Official Plan, 2010

## 2.1 Challenges

Mixed-use buildings present a multitude of challenges to municipalities wanting to provide waste management services and promote waste diversion. Municipalities face the logistical challenge of distinguishing between residential and commercial waste streams generated in a building, especially if the local municipality provides collection service to the multi-residential sector and not the commercial sector. If the building does not have separate storage areas for waste and recyclables generated by each sector, then the municipality may need to establish a policy dealing with this situation and examine each building on a case-by-case basis. As mixed-use developments become larger and more complex, municipalities need to determine the extent that waste management services will be provided and ensure that appropriate and effective waste diversion services are established and maintained.

As with multi residential buildings, municipalities must try to engage residents of the mixed-use building to participate in waste diversion programs. These programs must overcome challenges of program inconvenience, limited storage space, lack of ownership and anonymity. Program success relies on the commitment and involvement of property owners/management and maintenance staff. Municipalities have limited options to entice management and residents to support waste diversion.

## 3.0 Current Trends in Waste Management for Mixed-use Properties

### 3.1 New Mixed-Use Development

York Region will need to address waste management issues associated with new mixed-use buildings and developments. Waste management in new mixed-use developments will reflect the issues and challenges associated with both multi-residential developments and service provision to commercial waste generators.

One of the trends associated with mixed-use developments is the application of Leadership in Energy and Environmental Design (LEED®) Green Building Standards, a portion of which reflect and address waste management.

#### LEED® Green Building Standards

LEED® stands for Leadership in Energy and Environmental Design, which is a Green Building Rating system developed to provide standards for environmentally sustainable design and construction of building. Buildings can achieve up to four ratings – bronze, silver, gold or platinum, with each higher rating requiring that more stringent specifications be met. Categories include sustainable siting, water and energy efficiency, materials and resources, indoor environmental quality and innovation & design.

Source: Canada Green Building Council at <http://www.cagbc.org>

As of January 2013, there are 87 LEED® buildings constructed or under construction in York Region that are registered and certified in Canada by either the Canada Green Buildings Council (CaGBC) or US Green Buildings Council (USGBC), as shown in Table 1. <sup>4</sup>Almost two thirds are private sector initiatives and with one or two exceptions, all projects have been certified by the Canadian Green Buildings Council (CaGBC).

**Table 1: Public and privately-owned LEED® Buildings in York Region**

York Region	Number of LEED® Buildings
<b>Aurora</b>	1 public, 2 private
<b>East Gwillimbury</b>	1 public
<b>Georgina</b>	2 private
<b>King City</b>	1 public, 1 private
<b>Markham</b>	10 public, 25 private
<b>Newmarket</b>	2 public, 3 private
<b>Richmond Hill</b>	5 public, 9 private
<b>Thornhill</b>	4 private
<b>Vaughan</b>	10 public, 11 private
<b>Total</b>	<b>87</b>

Outside of LEED®, there are other measures applied to address waste management for mixed-use properties as discussed below.

### 3.2 Promoting LEED® buildings in York Region

In 2008, the Town of Newmarket and Rodeo Homes partnered to build EcoLogic, Canada’s greenest residential community. The EcoLogic development is the first residential development in Canada to achieve LEED platinum certification. These homes were built to exceed specific

<sup>4</sup> LEED® Projects in Canada, excel file. Canada Green Buildings Council at <http://www.cagbc.org/Content/NavigationMenu/Programs/LEED©/ProjectProfilesandStats/default.htm>

environmental targets, including a 50 per cent reduction in household water draws, a 35 per cent reduction in overall discharge flows and a 60 per cent reduction in solid waste, greenhouse gas production and energy consumption compared to conventional homes. Some of the advanced green features of these homes include: rainwater collection with underground storage to flush toilets and irrigate gardens, superior insulation levels (including spray-in foam insulation in the walls), air-tight construction for added draft-proofing, heat recovery ventilation, drain water heat recovery, high efficiency appliances and lighting, ultra low-flow bathroom fixtures, sustainably harvested (SFC) wood, low VOC glues and finishes and solar air and hot water arrays. The Rodeo Homes and Newmarket partnership represents a good example of an opportunity for the Region to target developers from the outset to practice environmentally sustainable construction

York Region continues to support LEED® achievements in new developments. The 2010 Regional Official Plan encourages “new buildings to be designed and certified to LEED® Silver, Gold or Platinum standards” and the Region “to provide complementary incentive programs to achieve the successful implementation of LEED® buildings across York Region.”

York Region currently operates the Sustainable Development through LEED® incentive program to support the construction of new sustainable multi-unit residential developments. Qualified projects must meet objectives related to water conservation and transit-oriented development, and incorporate a three stream waste collection system in the building. The projects are also required to achieve LEED® certification at Silver level or higher.

York Region uses servicing allocation as the incentive to encourage sustainable high-density developments through this program. The Region assigns water/wastewater servicing capacity to each municipality and the municipality will allocate to individual applications to support growth and development. When a specific proposal enters the Region’s incentive program and commits to the sustainability requirements, the project can proceed to construction with reduced servicing allocation. The municipality can re-distribute the savings in allocation to other projects in the city/town to meet the local Official Plan’s growth targets.

York Region encourages mixed-use building developments to apply to the Region’s incentive program. The program implementation guide states that – “the high density residential component of the development can and is encouraged to be within a mixed-use building (i.e. commercial on ground floor).”<sup>5</sup>

This incentive program is designed to support green developments in targeted intensification areas within the Region including:

- Regional Centre (defined in accordance with the York Region Official Plan and corresponding Local Official Plan)

---

<sup>5</sup>York Region “Sustainable Development through LEED®” A High Density Residential Green Building Incentive Program November 2010

- Approved Community/Secondary Plan along those segments of Yonge Street and Highway 7 identified as 'Regional Corridor' in the York Region Official Plan
- Approved Local Centre within the Local Official Plan
- Approved Local Corridor within the Local Official Plan

Under the current program, developments must achieve four sustainability objectives:

1. Achieve significant water conservation
2. Conform with the York Region Transit-Oriented Development (TOD) Guidelines
3. Incorporate a three-stream solid waste management system
4. LEED® Certification

During the application process, applicants must complete and submit a checklist to ensure their project is designed to meet the selected level of incentive requirements. Regardless of the incentive level, the waste management and diversion requirements are the same as identified in Figure 4 below.<sup>6</sup> A letter of credit can be required by the Region under circumstances when the issuance of the LEED® Certification document is still pending but the developer is requesting Regional clearance of the draft plan of condominium.

This incentive program is currently being updated. Proposed changes to the program objectives and application process were presented to Regional Council in March 2014.

The proposed revisions include several new waste management requirements including 'flex space' in the waste storage room to allow for new diversion programs such as battery recycling, textile donation or waste electronics collection. A requirement for a construction waste management plan to divert at least 75 per cent of construction waste from landfill through reuse or recycling may also be implemented. Details of the new components will be refined through further consultation with building industry stakeholders and local municipal and Regional staff.<sup>7</sup>

---

<sup>6</sup>York Region "Sustainable Development through LEED®" A High Density Residential Green Building Incentive Program November 2010

<sup>7</sup> Residential Sustainability Incentive Program Update. Report to Committee of the Whole, March 6, 2014. Adopted by Regional Council on March 27, 2014.

**Figure 4: Current Waste Management Requirements as part of the Sustainable Development Through LEED® Incentive Program**

Waste Management	1. Include a three stream waste management plan outlining details related to collection and disposal.	<input type="checkbox"/>
	2. Blue Box, organic material and residual garbage are to be separated	<input type="checkbox"/>
	3. Storage Areas should be sufficiently sized to store bulky items, recycling for two weeks and organics for one week	<input type="checkbox"/>
	4. Storage in each unit to enable residents to store three streams of waste prior to central collection	<input type="checkbox"/>
	5. Blue Box materials are not be compacted prior to collection	<input type="checkbox"/>
	6. Comprehensive Education Plan	<input type="checkbox"/>
	7. Municipal staff are permitted to conduct inspection to verify three stream waste management system has been constructed.	<input type="checkbox"/>
	8. York Region to be provided letter on an annual basis (for a period of five years) from private collectors that certifies the materials have been appropriately recycled or composted.	<input type="checkbox"/>

### 3.3 East Gwillimbury Thinking Green Developmental Standards

In 2006, the Town of East Gwillimbury began to introduce green building requirements for new developments (commercial buildings, multi-residential buildings, and major renovations) and stipulated that new commercial developments must achieve LEED® Silver certification. With development of its new Official Plan, East Gwillimbury decided to develop its own green development standards permitting more flexibility in the manner in which developers meet the standards. Rather than mandating the LEED® silver certification requirement, it was incorporated into the Thinking Green Development Standard checklist as an optional goal that non-residential or high density residential development could achieve.<sup>8</sup>

#### East Gwillimbury's Official Plan

The Official plan stipulates that “the Town shall develop a Sustainable Development Evaluation System, in consultation with the development industry, to ensure the sustainability goals and policies of this Plan are addressed through development applications. The Sustainable Development Evaluation System shall be used to provide a basis under which the Town will evaluate and prioritize development approvals.”

Source: Town of East Gwillimbury Consolidated Official Plan 2031, June 2010.

East Gwillimbury has established the Thinking Green Development Standards, approved by Council in February 2012, and supported by a user-friendly Thinking Green Site Plan Checklist.<sup>9</sup> Any new development application brought forward after February 2012 is subject to the

<sup>8</sup>East Gwillimbury. Thinking Green – Developmental Standards. January 2012.

<sup>9</sup>York Region Draft Official Plan Green Building Policies, Clause No. 7 in Report No. 6 of the Planning and Economic Development Committee was adopted, without amendment, by the Council of The Regional Municipality of York at its meeting on September 24, 2009.

Thinking Green Development Standards.<sup>10</sup> Each application will be reviewed and evaluated against the checklist. The Site Plan checklist includes a number of waste management requirements impacting mixed-use developments, as follows:<sup>11</sup>

**Required:**

*38. Developers shall distribute a Town-approved sustainability handout to all new homeowners/residents, outlining sustainability features, such as green building materials, waste management programs, transit stop locations & encouraging other activities (low-water gardening, green cleaning materials, alternate pest control measures, purchasing green power).*

*54. Waste diversion initiatives are implemented:*

- *High-rise residential buildings - Handling and storage facilities for recyclable & organic materials (i.e. a three-stream chute system)*
- *Non-residential buildings - Handling and storage facilities for recyclable materials*

Furthermore, the Town may encourage the use of priority approval processing and bonus increases in height and density, if the developer demonstrates that the development exceeds requirements of the Town's Thinking Green Development Standard requirements.<sup>12</sup>

The standards currently apply only to new developments that have received Council approval. Any development approved by Council prior to February 2012 is not subject to the standards. To date, there are only a few developments underway where the new standards apply. It is too early to determine the success of the standards and the success of the waste diversion policies should be monitored in partnership with East Gwillimbury.

### 3.4 Mandating LEED® for All New Construction

York Region currently requires minimum LEED® Silver requirement for new Regional facilities. Other local municipalities with similar requirements include East Gwillimbury, Richmond Hill and Markham. In Newmarket, LEED® Silver is encouraged for new municipal facilities.

Currently, neither York Region nor the local municipalities have been able to mandate that new construction— residential, mixed-use and/or commercial buildings achieve a specific LEED® certification other than for their own facilities. The January 2012 introduction of revised energy efficiency standards (SB10) under the Ontario Building Code in effect establishes an equivalent LEED® entry-level requirement for energy efficiency. The SB10 standard requires that all large buildings (including multi-residential apartment and condominium buildings four storeys and greater) achieve 25 per cent higher energy efficiency to the previous standard. All new large

<sup>10</sup> Communication with Dan Stone, Manager of Economic Development & Sustainability, East Gwillimbury, November 20, 2012

<sup>11</sup> East Gwillimbury. Thinking Green – Developmental Standards. January 2012.

<sup>12</sup> Town of East Gwillimbury Consolidated Official Plan 2031, June 2010.

building developments must meet these energy efficiency standards, however the standards do not address waste diversion.

The City of Markham, in effect, has made the Sustainable Development Through LEED® program mandatory by under-allocating the servicing credits, which forces the developers to achieve the LEED® requirements.

Downtown Markham is North America's largest development of LEED® Certified buildings. The \$3 billion development combines residential, retail and commercial properties in the largest planned mixed-use development in Canada.

Markham currently uses a checklist for development in Markham Centre and is in the process of completing Sustainable Development Standards and Guidelines, which are expected to require that all new medium and high density construction meet LEED®Silver standards.

Sources: Downtown Markham (Remington Group) website and York Region Draft Official Plan Green Building Policies, Clause No. 7 in Report No. 6 of the Planning and Economic Development Committee, September 2012

Other North American communities, however, have begun to demand that all new construction, both public and private construction, achieve minimal LEED® standards. Some examples include:

**City of Los Angeles, CA** – In 2008 the Mayor of Los Angeles signed into law that starting in 2012, the City will require all designated construction projects to achieve LEED® Certified standard. If a builder commits to pursuing LEED® Silver certification, the City will expedite the permit process through the Planning and Public Works Departments.<sup>13</sup> The ordinance stipulates which buildings must achieve LEED® as follows:

1. A new non-residential building or structure of 50,000 gross square feet or more of floor area
2. A new mixed-use or residential building of 50,000 gross square feet or more of floor area in excess of six storeys
3. A new mixed-use or residential building of six or fewer storeys consisting of at least 50 dwelling units in a building, which has at least 50,000 gross square feet of floor area, and in which at least 80 per cent of the building's floor area is dedicated to residential uses
4. The alteration or rehabilitation of 50,000 gross square feet or more of floor area in an existing non-residential building for which construction costs exceed a valuation of 50 percent of the replacement cost of the existing building; or

<sup>13</sup> Los Angeles Mandates LEED® For New Buildings April 2008 at <http://www.facilitiesnet.com/energyefficiency/article/Los-Angeles-Mandates-LEED®-For-New-Buildings--8754>

5. The alteration of at least 50 dwelling units in an existing mixed-use or residential building, which has at least 50,000 gross square feet of floor area, for which construction costs exceed a valuation of 50 per cent of the replacement cost of the existing building.<sup>14</sup>

The City has established a Green Building Team comprised of the Mayor, Department Directors and General Managers (e.g. Planning Department, Bureau of Sanitation and Environmental Affairs Department) with “a mission is to encourage innovation, to remove obstacles to green building, and to facilitate the City's sustainable green building objectives.”<sup>15</sup>

The City of Los Angeles has introduced new requirements that reflect the State of California's new Green Building Code, called CalGreen Code, launched January 1, 2011 that affects all new construction. Los Angeles now requires that all construction achieve 50 per cent or greater construction debris and waste recycling before 2020.

Source: LEEDing the Way: City of Los Angeles Green Buildings and Green Infrastructure. City of Los Angeles April 23, 2012. Climate Change Forum

Other communities following suit include:

**City of San Francisco, CA** - The San Francisco Building Code requires green building standards to be met by all new commercial, residential and municipal constructed buildings (regardless of size or occupancy), as well as renovations to areas over 25,000 ft<sup>2</sup> in existing buildings that are undergoing major structural upgrades. The standards require that all large commercial projects and new residential high rise developments must meet LEED® Gold standards.

**Washington, DC** - By 2012, new construction and substantial improvements of nonresidential privately-owned projects greater than 50,000 square feet will be required to achieve certain LEED® certifications.

**City of Portland, OR** - In 2005 the Portland Development Commission (PDC) Board of Commissioners adopted a resolution to include requirements for all private new commercial or mixed-use buildings over 10,000 square feet that receive financial assistance from the PDC totaling more than \$300,000 and 10 per cent of the total cost must achieve LEED® Silver certification. The new policy also requires major retrofits of city-owned buildings to achieve LEED® Silver certification and provides for city support of new private building projects to help them achieve LEED® Silver certification

### 3.5 Considerations Regarding the Application of LEED®

Under the “waste – related” category of Materials and Resources in the LEED® program, contractors are required to provide adequate space for storage and the collection of

<sup>14</sup>City of Los Angeles. Green Building Program - Ordinance No. 17982

<sup>15</sup>City of Los Angeles. Green Building Program - Ordinance No. 17982

recyclables. In addition, they can score points relating to sustainable management and diversion of construction and demolition materials.

The LEED® program has received criticism about its weakness in promoting waste diversion, for the following reasons:

- Only requirement that must be met is the need to provide storage and collection for recyclables, while optional points are awarded for waste diversion and reuse
- LEED® focuses on end product specifications (e.g. using recycled content and material reuse), not front end design, such as designing developments to include three stream sort systems and adequate storage space.

York Region's Sustainable Development Through LEED® incentive program, has addressed this weakness through an additional requirement that high rise, high-density developments incorporate a three-stream solid waste management system, education program, and adequate storage space on-site and in each unit.

### **3.6 Development Standards and Site Plan Reviews**

Within York Region, some municipalities are emphasizing waste diversion in new development through standards and site plan reviews. East Gwillimbury's requirements were discussed in Section 3.3.

The City of Markham requires that all residential high density and multi-use developments build three-stream sort systems into their design. The City also requires that developers pay a fee (\$24.50 per unit) up front to the City to pay for educational materials and waste diversion collection containers that must be provided to each unit in new multi-residential and mixed-use buildings. At the same time, the City requires letters of credit for new commercial establishments, which ensures that the business establishes and maintains an effective waste diversion program for two years after operations commence.

Recognizing the need for consistency in development and execution of design standards that support waste diversion in new construction developments, Richmond Hill, in partnership with York Region and other interested local partners, are developing a revised Waste Management Development Standard incorporating best practice design standards to address all requirements associated with waste management and waste diversion activities (including designated garbage/recycling/organics collection and storage, access and pick up areas, multiple/three stream sort systems, diversion targets and promotion and education. This

standard will address mixed-use buildings/complexes and mixed-use community developments.

Recently, Richmond Hill used its development standards and site plan process to influence developers of a new mixed-use residential building to construct a tri-sorter sort system and two separate storage rooms for the residential side and the commercial side. This will enable the municipality to provide full waste management service to the multi-residential component of the building, which would have been impossible if the building combined garbage and recycling storage. Markham has similar requirements.

Source: Communications with Rosanne Fritzsche on November 6, 2012

The City of Vaughan is dealing with the challenge of how to incorporate in-ground collection systems into design standards. In-ground storage type systems offer an alternative to above ground storage of waste and diverted material streams. Containers provide an in-ground storage system for multi material streams (such as garbage, organics, recyclables). The benefit of an in-ground system is that it requires less frequent collection and maintenance due to the large underground storage. The City of Vaughan has received requests by developers to incorporate in-ground storage containers as part of the site plans, requiring review and approval on a case-by-case basis by the Solid Waste Management Division of Public Works. The Solid Waste Management Division is considering revising collection design standards policy to consider use of in-ground in certain conditions.<sup>16</sup>

### 3.7 Existing Mixed-Use Buildings

Currently, most mixed-use buildings in York Region are characterized by having a small commercial retail store(s) at ground level and one or two apartments on top and are often located within a business improvement area (BIA). Local municipalities in York Region are responsible for waste management collection services. The service provided to mixed-use buildings varies from municipality to municipality, as presented in Table 2.

**Table 2: Waste Management Services provide to Mixed-use Buildings in York Region**

Municipality	Service details
<b>Richmond Hill</b>	<ul style="list-style-type: none"> <li>- If located in the Business Improvement Area (BIA), allow commercial and residential unit to receive residential level waste collection service (three bags of garbage, recycling, green bin); if more service is required then it must contract with private sector</li> <li>- New mixed-use requires separate storage areas so Richmond Hill can service multi-residential component</li> </ul>

<sup>16</sup> Communications with Caroline Kirkpatrick, Solid Waste Management Division, November 12, 2012

Municipality	Service details
<b>Markham</b>	<ul style="list-style-type: none"> <li>- Provide front end waste management service to multi-residential component only, commercial sector must hire private contractor</li> <li>- In BIA, Markham provides curbside level service to both</li> <li>- Do not allow multi-residential buildings to opt out of garbage service and must participate in recycling and green bin</li> <li>- Markham has always required mixed-use buildings to have two separate storage rooms and encourages using different coloured bins</li> </ul>
<b>Vaughan</b>	<ul style="list-style-type: none"> <li>- No service provided to mixed-use buildings</li> <li>- Only some grandfathered mixed-use properties, mostly in the BIAs, receive residential level of service</li> </ul>
<b>Newmarket</b>	<ul style="list-style-type: none"> <li>- Treat the mixed-use building as a commercial building with both the residential and commercial having to meet the commercial waste management requirements (twice weekly garbage collection with a six bag limit and weekly recycling and green bin)</li> </ul>
<b>Aurora</b>	<ul style="list-style-type: none"> <li>- Provides service to multi-residential consisting of front end bin collection for garbage and totes for recyclables</li> <li>- Commercial component is not encouraged to use front end bins but rather is encouraged to get own bin or use small business service provided by the Town</li> </ul>
<b>East Gwillimbury</b>	<ul style="list-style-type: none"> <li>- In 2010, Council passed legislation that only the residential portion of mixed-use buildings would receive municipal collection service; any mixed-use building receiving service for both commercial and residential prior to 2010 would continue to receive service</li> </ul>
<b>Georgina</b>	<ul style="list-style-type: none"> <li>- Allow commercial and residential units to each receive residential level waste collection service (one free bag + four tag bags of garbage, recycling, green bin)</li> <li>- If more service is required then it must contract with private sector</li> <li>- Most mixed-use buildings are comprised of commercial businesses on the ground floor and one or two apartments over top</li> </ul>
<b>King</b>	<ul style="list-style-type: none"> <li>- No Service</li> </ul>
<b>Whitchurch-Stouffville</b>	<ul style="list-style-type: none"> <li>- Will service mixed-use if commercial and residential can meet residential collection requirements</li> <li>- Expect that in the future new mixed-use buildings will need to be serviced by front-end bin collection, which is provided to large multi-residential buildings</li> </ul>

In the future, new mixed-use building developments in York Region will consist of high density buildings with commercial units, coupled with medium or high-rise multi-residential above. “Regional Centres and Corridors are planned to become the economic hubs of the Region and the preferred locations for major office, mixed-use commercial and high-density residential development”.<sup>17</sup>

<sup>17</sup> York Region Official Plan 2010

The City of Toronto offers bin service to mixed-use buildings meeting specific requirements. Since the City has established a volume-based levy service for multi-residential buildings, it can recover the cost of providing waste management service to the commercial side of the mixed-use building. Unlike Markham and Richmond Hill, the City has to contend with numerous mixed-use buildings that share storage rooms, making it difficult to separate out the different streams.

Toronto addresses mixed-use waste management service in its Waste Management, Commercial Properties Bylaw. While the City does not provide collection services to industrial properties, it provides collection services to commercial properties, including mixed-use properties, under the following circumstances: "Owners of mixed residential/commercial properties may choose to have the entire property, both the commercial and residential portion, participate in the bin program. Owners of residential properties may request additional recycling bins from the Division."<sup>18</sup> The Bylaw identifies the criteria for buildings eligible for city waste management service. In essence, Toronto will provide service to new mixed-use buildings less than four storeys high and a ground floor space of less than 500 m<sup>2</sup> or where not more than 2/3 of the space is dedicated to commercial activities.

Within York Region, developers have announced plans to construct significant mixed-use community developments including the Langstaff/Gateway development and Yonge Street community centre. Municipalities in York Region will need to develop policies that address the provision of waste management service to these mixed-use developments.

The Langstaff Land Use and Built Form Master Plan identifies an opportunity to consider alternative waste collection systems such as an underground vacuum collection system (e.g. Envac), which uses a network of underground pipes and suction to collect separated streams of garbage, recyclables and deliver them to a centralized transfer facility.

As with any mixed-use complex, York Region and its municipal partners will need to address the logistics of collection, transfer and maintenance of the system.

Other communities have had to address waste management services provided to mixed-use developments, such as Toronto's Regent Park re-development and Victoria's Docks Green mixed-use community. In the case of Regent Park, the City of Toronto has not altered its waste management service policy and treats each mixed-use building on a case-by-case basis. Mixed-use buildings with a multi-residential component that exceeds the four storey limit can receive City multi-residential waste management service. Mixed-use buildings with less than four

<sup>18</sup>Source: City of Toronto, Toronto Municipal Code, Chapter 841 - Waste Collection, Commercial Properties. 2002

storeys and that meet the commercial requirements can receive bin service. Commercial space that exceeds the limit must retain the services of a private hauler.<sup>19</sup>

Dockside Green is a mixed-use sustainable community built on 15 acres of reclaimed brownfields land by the inner harbour of Victoria, British Columbia. It is one of the first community developments in North America to have its larger buildings achieve LEED® Platinum and provides a mix of commercial, residential, office and light industry uses.<sup>20</sup>

## 4.0 Mixed-use Building Waste Management and Diversion Strategy

Over the next 20 years, York Region will experience a significant increase in the number of mixed-use buildings and complexes constructed throughout the Region. Mixed-use buildings present unique challenges and opportunities from a waste management and diversion perspective. The following strategy addresses these challenges and opportunities to ensure that York Region is prepared to meet the waste management needs and promote waste diversion in mixed-use developments in the future.

York Region and local municipal partners face two distinct issues in dealing with waste management and diversion services at future mixed-use developments. The first issue is how to ensure that the mixed-use developments are designed and constructed to maximize waste diversion program accessibility to residents and users and to ensure waste diversion remains as convenient as garbage disposal. The second issue addresses the question of who assumes responsibility for providing waste management and diversion services once the mixed-used development is operational and what enforcement procedures are necessary to ensure waste diversion remains a priority. This issue also touches on who is responsible for maintaining the infrastructure supporting waste management and diversion services.

**Issue 1 – Design and Construction** – York Region needs to work with local municipal partners to ensure site designs and development standards effectively anticipate and address existing and future waste management and diversion needs in mixed-use buildings and complexes. Adoption and enforcement of the standards will be critical to the overall end result. Funds to support adequate monitoring and enforcement during construction and start-up could be raised through deposits/letters of credit from developers.

**Issue 2 – Servicing**–The Region, along with local municipal partners, could establish a protocol to help define levels of service that will be provided to mixed-use developments (buildings and complexes) under specified circumstances. For example, buildings that meet a specific set of conditions (e.g. >25 per cent space allocated to

<sup>19</sup>Communications with Renee Dello, Senior Analyst, City of Toronto, November 20, 2012

<sup>20</sup>York Region, Best Practices for New Communities Discussion Paper, no date

residential, separate onsite storage rooms, three stream collection, adequate access routes) will receive a specified level of municipal collection service for a specified fee. Buildings deviating from the specified conditions and introduce novel (e.g. vacuum systems) or non-conforming infrastructure (e.g. single storage room) will be dealt with on a case-by-case basis and could be charged a fee for the evaluation. Developments that are asked to use private sector hauling services could be required to provide regular reports to the Region and/or partner municipality, demonstrating on-going maintenance of diversion programs in the building. Buildings unable to meet the diversion requirements could be asked to prepare a plan to address the shortfall and ultimately may face penalties (e.g. fines) for failure to comply. This approach should give developers clear direction in developing and maintaining a waste management and diversion infrastructure, enabling them to access public waste management and diversion services or require them to use private sector services. During the discussions, it may be decided that all new mixed-use developments should assume responsibility for providing waste management and diversion services and for maintaining associated infrastructure. Consideration should be given to ensure that waste diversion programs are maintained. York Region and local municipal partners will need to work with property management and boards (e.g. condos) to ensure that monitoring occurs.

Reporting could be part of the privilege of constructing in the community. Other communities in the US require reporting by buildings or waste haulers (e.g. Chicago, San Francisco, San Diego) regardless of who provides the service. Multi-residential and mixed-use buildings are considered part of the IC&I sector in the US. Halifax requires that all buildings provide recycling services, which is enforced by city staff who visit buildings and by residents who report on buildings not providing adequate service. Other communities mandating recycling in all multi-residential and mixed-use buildings include Owen Sound, Portland, Seattle, San Francisco, California and Chicago.

Time is of the essence for York Region to define its expectations for waste management and diversion infrastructure and services for mixed-use developments.

## 4.1 Initiatives

The following initiatives have been identified as having potential for successful implementation in York Region. The initiatives focus on establishing uniform site design and development standards that are adopted by all local partner municipalities. These initiatives will lay the groundwork for York Region partner municipalities to effectively address the needs and challenges associated with provision of waste management and diversion services to mixed-use buildings and complexes. Furthermore, the up-front time and resources put into developing effective design and development standards should send a clear message to developers about the Region's waste diversion expectations and alleviate future conflicts or misunderstandings about these expectations.

**Ensure Consistency in Guidelines and Development Standards** - York Region should ensure consistency in its guidelines and plans as it applies to waste management and diversion. All guidelines and new community designs should send a strong signal to the community and developers about the Region's commitment to waste diversion and ensure a level playing field is established so that all stakeholders are required to meet the same waste diversion expectations. New community designs need to consider solid waste management infrastructure needs early in the process to ensure that designs work to meet density/mixed-use/and other sustainable objectives without sacrificing waste diversion/reduction ones.

Richmond Hill, in partnership with York Region and other local partners, is pursuing a project to develop revised waste management development standards. Once completed, all local partners could adopt these development standards and incorporate into existing sustainable development requirements applied to mixed-use developments. Adoption of the revised standards would ensure consistency in the message to developers about the importance of effective waste management and diversion in York Region and establish a level playing field by requiring all developments achieve the same waste management and diversion standards set by the Region and local partner municipalities.

Development standards could:

- Incorporate Markham's subdivision and multi-residential/mixed-use recycling container fee program
- Incorporate a consistent definition and approach to service level provision, which could be:
  - 1) An approach whereby any facility with a residential component is considered residential and provided residential services
  - 2) Requirement for dual storage and collection systems to maintain separation between waste streams
  - 3) Split based on occupancy where a trigger is identified (e.g. 50 per cent residential) determining the type of collection service provided (i.e. public or private)
- Incorporate relevant elements from East Gwillimbury's Thinking Green Development Standard and Site Plan Checklist as it pertains to waste diversion in mixed-use and multi-residential buildings.

As part of the new development standards and proposed protocol, questions that need to be addressed include:

- Who is responsible for alternative waste management systems (such as underground collection systems) that do not comply with traditional collection approaches?
- What are the differing requirements for new mixed-used buildings, new mixed-use complexes and new mixed-used communities (i.e. is mixed-use residential [public

waste services] or commercial [public or private waste services] and at what point does a mixed-use facility transition from residential to commercial)?

- How to address new mixed-use developments that include more than one municipal jurisdiction?
- How to address collection and processing impacts?
- How to build in a database monitoring system?
- How to ensure waste management requirements are incorporated into Regional development standards and incentive programs?
- How can the Region/local municipality effectively educate and monitor programs in support of the development standards?

Based on input during municipal and Regional staff meetings, the development standards could be considered the first of a multi-phase approach. Once the development standards are complete, they could be followed by a Phase 2 - Monitoring System Design and a Phase 3- Letter of Credit and other supportive incentive programs.

Once the development standards are completed, elements could be incorporated into the Region's incentive program Sustainable Development Through LEED®, which promotes LEED® certification in high-density developments. The development standards would take precedence over waste management and diversion activities identified in LEED®. Other LEED® certification requirements set out by local municipalities could also incorporate the development standards.

**Stakeholder Working Group** - York Region should establish a Stakeholder Working Group, which should meet regularly to enable local municipal partners, property management companies and community groups share information and develop strategies to increase waste diversion from mixed-use buildings, among other things. The group could explore topics such as chute closure measures, friendly competitions, training limitations and needs, overcoming community educational challenges, etc. The Stakeholder Advisory Committee developed and used as part of the SM4RT Living Plan could also be used in the future for this purpose with an expanded membership.

## 4.2 Pilots

Currently, the majority of mixed-use buildings in York Region are characterized by having a small commercial retail store on the ground floor with one or two apartments on the upper floors, and they are most often located within a BIA. These buildings receive waste management services most commonly provided to commercial establishments in BIA areas. No pilots are recommended for these buildings as they are, for the most part, effectively serviced by existing waste diversion programs offered by local municipal partners.

Future mixed-use buildings and developments, however, will be characterized as having a larger commercial component at the street level and larger multi-residential components on the upper floors. A number of pilot activities have been identified under the Multi-Residential Waste Diversion Strategy that could be applied to future mixed-use building developments.

These pilots, explored in more detail in the Multi-Residential Waste Diversion Strategy, employ social marketing strategies to actively engage residents in the waste diversion programs offered in the buildings through reward programs, challenges, competitions, one-on-one information sessions and pledges. Social marketing is an educational approach that relies on interaction and engagement to transform behaviour and inform. The pilots also explore expanded diversion opportunities by establishing reuse rooms for residents to share gently used items and community gardens to divert food waste through composting and use the compost to grow food and plants.

Pilot activities suitable for commercial establishments are identified in the IC&I Waste Diversion Strategy. These focus on demonstration projects showcasing IC&I establishments achieving high waste diversion rates and encouraging peer-to-peer learning through case studies in targeted sectors.

Additional pilots that could be explored for mixed-use buildings to address waste diversion challenges in the buildings and foster greater support for waste diversion include:

**Pilots to Promote Waste Diversion within Mixed-Use Buildings** - York Region could work with local municipalities and become actively involved in implementing a series of pilots to test different approaches that encourage residents and superintendents to participate in waste diversion activities (e.g. testing incentives, rewards, education and social norms) in mixed-use developments. Some activities could include:

- Residents in select buildings to sign a pledge promising to recycle and have them put a sticker on their door demonstrating their support for and participation in recycling
- Hire students to deliver recycling reminder prompts door-to-door and discuss recycling with residents; at the same time, provide residents with a recycling handbook and fridge magnet reminding them to recycle and showing them the benefits of recycling
- Introduce a challenge among multi-residential buildings or within the community to increase recycling or waste diversion rates
- Engage children in select buildings to participate in recycling by issuing a challenge
- Engage superintendents in select buildings by providing gift cards or other prizes (tickets to sporting events) for achieving targeted increases in recycling rates for the building

**Monitor Development Standards** -Pilots specific to mixed-use buildings and complexes should be established to monitor the effectiveness of revised development standards to ensure that they are stipulating realistic waste management and diversion requirements that meet the needs of residents and municipalities. For example, monitoring of mixed-used developments may show that storage room sizing and access requirements outlined in the development standards may need to be revised to better accommodate storage needs in the building (this is addressed in the Consistent Development Standards implementation initiative).

**Assess Volume-Based Fees-** York Region could work with a local municipal partner to assess a volume-based billing system for multi-residential component of the mixed-use building, as is currently done with commercial accounts, that would monitor, record and charge a fee for each standardized volume of garbage collected. The assessment would need to explore the technological and infrastructure requirements associated with setting up a database to record the volumes of waste collected at each building as well as a fee schedule and billing system. The system could be piloted in the host municipality and the results used to develop a template for implementing similar programs across other municipalities in the Region.

Markham staff are investigating a system to track and monitor waste management and diversion activity in its multi-residential sector. The Multi-Residential Waste Diversion Strategy contains additional information with respect to this program.

## 5.0 Implementation

The following provides an overview of the approach to implementing this strategy.

### 5.1 Partnerships

The nature of mixed-used buildings and developments within York Region is expected to radically change in the future. York Region has no jurisdiction over garbage, recycling and organics collection services, which remain the responsibility of local municipal partners. The Region must, therefore, work closely with municipal partners in pursuing policies and programs addressing future mixed-use developments.

At the same time, the Region and municipal partners could consider meeting with developers, planners and builders on an ongoing basis to develop a process addressing waste management and waste diversion challenges and targets facing this sector, in a supportive and interactive manner. Partnerships with industry groups such as the Building Owners and Managers Association (BOMA), the Association of Condominium Managers of Ontario and the Canadian Condominium Institute should also be pursued to support on-going implementation and continuous improvement of waste management systems in mixed use buildings.

### 5.2 Resources, Timeline and Targets

The following provides an outline of the resources required as well as performance targets and monitoring.

#### Roles and Responsibilities

The proposed arrangement for the implementation of this strategy is as follows:

<b>York Region:</b>	Lead and/or Supporter Depending on Initiative/Pilot
<b>Local Municipalities:</b>	Lead and/or Supporter Depending on Initiative/Pilot
<b>Community Partner:</b>	Stakeholder and/or Participant

**Other:** Stakeholder and/or Participant

### **Resources**

York Region should use staff identified in the Multi-Residential and IC&I Waste Diversion Strategies to work on mixed-use building waste related issues. These positions could be established as contract positions, with a review at an appropriate point regarding the need to make the positions permanent.

### **Targets**

Multi-use building waste diversion targets should follow those set out in the Multi-Residential Waste Diversion Strategy. The aim will be to have all mixed-use buildings achieve about 25 per cent waste diversion by 2015, after which, the sector should achieve an incremental increase in waste diversion of five per cent by 2020 with an additional three-to-five per cent increase every five years thereafter.

### **Performance Measurement**

For each new initiative, there are specific performance measurements identified however, there are several overarching metrics to measure performance of the mixed-use strategy as a whole, including:

- Increase in percent diverted from mixed-use developments
- Annual number of development starts to which the consistent development standard has been applied
- Number of locations participating in goods sharing/donation
- Number of demonstrations evolving to a permanent program at participating buildings
- Number of developments/buildings participating in pilot programs each year

## **6.0 Key Benefits of this Strategy**

The following provides a summary of the key benefits of this strategy:

- Recognizes that York Region will continue to increase growth in mixed-use developments, characterized by large complexes combining commercial space with high-rise living space and the challenges associated with providing waste management and diversion services to sectors with competing needs and expectations
- Outlines the need to pursue adoption of consistent development standards by local municipal partners
- Identifies the need to develop protocols for servicing mixed-use buildings and complexes that support the 4R's whether municipal collection service is provided or not
- Increases emphasis (through encouragement, incentive and policy instruments) on promoting waste reduction and diversion
- Provides greater clarity with respect to the Region's and local partner municipalities' roles in managing waste from mixed-use sources and recommends initiatives to establish role clarity



- Encourages input from all impacted stakeholder groups to ensure that the issues and challenges associated with waste management and waste diversion in mixed-use developments are appropriately addressed

**ATTACHMENT A – LEED PROJECTS IN YORK REGION**

York Region	LEED Buildings (Public and Private Sector)	Description
<b>Aurora (3)</b>	<ul style="list-style-type: none"> <li>- York Regional Police Investigative and Support Services Building</li> <li>- Magna Arts and Education Building, Aurora Campus</li> <li>- Aurora Resthaven</li> </ul>	<ul style="list-style-type: none"> <li>- Local government - Office building</li> <li>- Commercial - Office building</li> <li>- Commercial - Nursing home/extended care</li> </ul>
<b>East Gwillimbury (1)</b>	<ul style="list-style-type: none"> <li>- Leeder Place Family Shelter</li> </ul>	<ul style="list-style-type: none"> <li>- Local government - Low-rise multi-unit residential (&lt;=three storeys)</li> </ul>
<b>Keswick (2)</b>	<ul style="list-style-type: none"> <li>- Habitat For Humanity York Region</li> <li>- Crates Landing</li> </ul>	<ul style="list-style-type: none"> <li>- Single family, duplex, triplex or townhome</li> <li>- Mixed-use building</li> </ul>
<b>King City (2)</b>	<ul style="list-style-type: none"> <li>- SDM King City</li> <li>- King City apartment</li> </ul>	<ul style="list-style-type: none"> <li>- Commercial - Mixed-use</li> <li>- Local government - Low-rise multi-unit residential (&lt;=three storeys)</li> </ul>
<b>Markham (35)</b>	<ul style="list-style-type: none"> <li>- The Verdale , The Verdale II, The Verdale on the Valley</li> <li>- Majestic Court Condominiums</li> <li>- Honda Canada Headquarters</li> <li>- PowerStream South Operations Centre</li> <li>- Greensborough</li> <li>- Bill Crothers Secondary School</li> <li>- Stantec Consulting</li> <li>- Markham Museum Collections Building</li> <li>- Governor's Square</li> <li>- Nexus Condominiums</li> <li>- Markham Stouffville Hospital Expansion</li> <li>- Markham Fire Station 93</li> <li>- Johnson Controls Canada Regional Office</li> <li>- BLJC Office Renovation</li> <li>- East Markham Community Centre &amp; Library</li> <li>- Leslie Boutique</li> <li>- Cottonlane Estates Inc.</li> <li>- Eden Park 2</li> <li>- Leslie Street Sewage Pumping Station Upgrade</li> <li>- Markham Fire Station 99</li> <li>- Warden Square Phase 1</li> <li>- Downtown Markham L+M</li> <li>- Markham Uptown - River Park (Block 6)</li> <li>- Canadian Union of Public Employees</li> <li>- Ontario Regional Office</li> <li>- 150 Commerce Valley Drive</li> <li>- Markham Uptown Blocks 7 &amp; 8</li> <li>- Enbridge Technology Centre</li> <li>- 50 Minthorn Boulevard</li> <li>- Markham Pan Am Centre</li> <li>- The Essential Condominium</li> <li>- Markham Uptown - River Park (Block 5)</li> <li>- BDC Markham</li> <li>- Cottonlane Estates Inc.- 2nd submission</li> <li>- Flato Towers</li> </ul>	<ul style="list-style-type: none"> <li>- Commercial - high-rise multi-unit residential (&gt;10 storeys)</li> <li>- Commercial - High-rise multi-unit residential</li> <li>- Commercial - office building</li> <li>- Industrial / manufacturing</li> <li>- Single family, duplex, triplex or townhome</li> <li>- School Board - high School</li> <li>- Commercial - office building</li> <li>- Local Government - other</li> <li>- Commercial - high-rise multi-unit residential</li> <li>- Commercial - high-rise multi-unit residential</li> <li>- Public health - hospital / Clinic</li> <li>- Local government - public Safety</li> <li>- Commercial - office building</li> <li>- Commercial - office building</li> <li>- Local government - community centre</li> <li>- Commercial - high-rise multi-unit residential</li> <li>- Commercial - high-rise multi-unit residential</li> <li>- Industrial / manufacturing</li> <li>- Local government - other</li> <li>- Local government - public safety</li> <li>- Commercial office building</li> <li>- Commercial mixed-use</li> <li>- Commercial high-rise multi-unit residential</li> <li>- Commercial office building</li> <li>- Regional government – office</li> <li>- Commercial - office building</li> <li>- Commercial - mixed-use</li> <li>- Commercial - mixed-use</li> <li>- Commercial - office building</li> <li>- Local government - sports facility</li> <li>- Commercial - mid-rise multi-unit residential</li> <li>- Commercial - high-rise multi-unit residential</li> <li>- Commercial - office</li> <li>- Commercial - high-rise multi-unit residential</li> <li>- Commercial - high-rise multi-unit residential</li> </ul>

York Region	LEED Buildings (Public and Private Sector)	Description
<b>Newmarket (5)</b>	<ul style="list-style-type: none"> <li>- Stickwood Walker</li> <li>- Tom Taylor Place</li> <li>- Rodeo Newmarket</li> <li>- Lake Simcoe Region Conservation Authority - administration building addition</li> <li>- Newmarket Operations Centre</li> </ul>	<ul style="list-style-type: none"> <li>- Single family, duplex, triplex or townhome</li> <li>- Mid-rise multi-unit residential</li> <li>- Single family, duplex, triplex or townhome</li> <li>- Office building</li> <li>- Local government administration</li> </ul>
<b>Richmond Hill (14)</b>	<ul style="list-style-type: none"> <li>- BMW Group Canada Head Office Richmond Hill Ontario</li> <li>- The Renaissance of Richmond Hill</li> <li>- Oak Ridges Community Centre</li> <li>- École Secondaire de Richmond Hill</li> <li>- Guizzetti Developments at 9076 Yonge</li> <li>- Richmond Hill Toyota</li> <li>- Mackenzie Green</li> <li>- Richmond Hill Fire Station 8-6</li> <li>- The Beverly Hills Resort Residences</li> <li>- Gormley GO Station</li> <li>- Canada Post Markham Distribution Depot</li> <li>- Four Season Gardens Luxury Residences - Phase II Building B</li> <li>- Fontainbleu</li> <li>- BMW Training Facility</li> </ul>	<ul style="list-style-type: none"> <li>- Commercial - office building</li> <li>- Commercial -mid-rise multi-unit residential</li> <li>- Local government - community Centre</li> <li>- School board - high school</li> <li>- High-rise multi-unit residential (&gt;10 storeys)</li> <li>- Commercial - retail</li> <li>- Mid-rise multi-unit residential</li> <li>- Local government - public safety</li> <li>- Commercial - high-rise multi-unit residential</li> <li>- Local government - public transport</li> <li>- Local government - industrial /</li> <li>- Commercial - mid-rise multi-unit residential (&gt;three&lt;10 storeys)</li> <li>- Commercial other</li> <li>- Commercial other</li> </ul>
<b>Thornhill (4)</b>	<ul style="list-style-type: none"> <li>- Eden Park Towers – Phase One</li> <li>- MMM Group Head Office</li> <li>- 31 Thornheights Road</li> <li>- MintoWaterGarden</li> </ul>	<ul style="list-style-type: none"> <li>- High-rise multi-unit residential (&gt;10 storeys)</li> <li>- Commercial office building</li> <li>- Mid-rise multi-unit residential</li> <li>- High-rise multi-unit residential</li> </ul>
<b>Vaughan (21)</b>	<ul style="list-style-type: none"> <li>- McCleary Court Community Environmental Centre</li> <li>- PowerStream corporate head office</li> <li>- Toronto and Region Conservation - Restoration Services Centre</li> <li>- Vaughan Fire &amp; Rescue Station No. 7-9 &amp; York Region EMS Paramedic Response Station</li> <li>- Kortright Centre for Conservation - Living City Centre</li> <li>- Krcmar office building</li> <li>- Cara Operations head office relocation</li> <li>- Vaughan Civic Centre</li> <li>- Milestone Corporate Center</li> <li>- Mapleglen Residence</li> <li>- York Region Transit Bus Maintenance Facility</li> <li>- Longo's Head Office and Distribution Centre</li> <li>- MTO Highway Service Centre, King City 400-2</li> <li>- Mixed-use development</li> <li>- Vaughan Fire Station No. 7-10</li> <li>- Rutherford Marketplace</li> <li>- Rutherford Marketplace Building 2A</li> <li>- Easton's Group Office Building</li> <li>- Rutherford Marketplace Building 11</li> <li>- Element Hotel Vaughan</li> <li>- FCR Rutherford Market Place Building 11</li> </ul>	<ul style="list-style-type: none"> <li>- Regional government - other</li> <li>- Local government - office building</li> <li>- Local government - conservation centre</li> <li>- Local government - public safety (firehall, police station)</li> <li>- Local government - conservation centre</li> <li>- Commercial office building</li> <li>- Commercial office building</li> <li>- Local government - office building</li> <li>- Commercial mixed-use</li> <li>- Mid-rise multi-unit residential</li> <li>- Local government - other</li> <li>- Commercial industrial / manufacturing</li> <li>- Local government - other</li> <li>- Commercial office building</li> <li>- Local government - public safety</li> <li>- Commercial retail</li> <li>- Commercial retail</li> <li>- Commercial office building</li> <li>- Commercial retail</li> <li>- Commercial hotel / motel</li> <li>- Commercial retail</li> </ul>