

CITY OF VAUGHAN

EXTRACT FROM COUNCIL MEETING MINUTES OF APRIL 23, 2013

Item 1, Report No. 2, of the Priorities and Key Initiatives Committee, which was adopted without amendment by the Council of the City of Vaughan on April 23, 2013.

**1 MEASURING SUSTAINABILITY PERFORMANCE OF NEW DEVELOPMENT IN
BRAMPTON, RICHMOND HILL AND VAUGHAN
LINKING HEALTHY AND SUSTAINABLE COMMUNITIES
FILE 22.24.1**

The Priorities and Key Initiatives Committee recommends:

- 1) That the recommendation contained in the following report of the Commissioner of Planning, dated March 18, 2013, be approved;
- 2) That staff report back prior to the 2014 budget discussion with the cost and staffing implications of applying the sustainability metrics; and
- 3) That the following presentations and Communications be received;
 - 3.1 Dr. Karim Kurji, Medical Officer of Health for York Region Public Health, and Communication C1, presentation material titled “York Region Public Health Building Healthy Communities”, dated March 18, 2013;
 - 3.2 Mr. Dan Leeming, Planning Partnership, and Communication C2, presentation material titled “Sustainability Guidelines and Metrics”; and
 - 3.3 Ms. Gayle Bursey, Director, Peel Public Health, and Communication C3, presentation material titled “Creating Supporting Environments”, dated March 18, 2013.

Recommendation

The Commissioner of Planning recommends that this report and presentation BE RECEIVED for information.

Contribution to Sustainability

The initiatives outlined in the presentation support priorities previously set by Council in Green Directions Vaughan, the City’s Community Sustainability and Environmental Master Plan. Objective 2.3 speaks to creating a city with sustainable built form. Action Item 2.3.1 refers to developing criteria to measure the sustainability performance of development, specifically to develop “sustainable development evaluation criteria”. Integrating sustainability guidelines and metrics in the development review process for each development application is an important tool to achieve sustainable communities.

Economic Impact

The City has partnered with the City of Brampton and the Town of Richmond Hill in undertaking this study. The total cost to the City of Vaughan under the funding arrangement with municipal partners is \$22,500 of the total project cost of \$180,000. The funding was approved in the 2011 budget.

Communications Plan

The communications plan for the project, Measuring Sustainability Performance of New Development, includes consultation as part of the development of the sustainability guidelines and metrics as well as outreach for the purposes of knowledge transfer. Consultation has

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included two workshops held in Vaughan for staff of the three partner municipalities. Two forums have been held for the development community, one in Brampton and one in Vaughan.

Outreach as part of the knowledge transfer process will continue into the future once the project has been approved by the respective Councils. The partners will seek to present the results of the project at various venues, such as the annual symposium of the Ontario Professional Planners Institute, the annual conference of the Canadian Institute of Planners, the annual conference of the Federation of Canadian Municipalities, the Municipal Leaders Forum (an initiative of the Greater Toronto Chapter of the Canada Green Building Council), and where other opportunities arise.

Purpose

The focus of the presentation is on the broader linkages between public health and sustainable communities. The incorporation of sustainability guidelines and metrics into the development review process, to improve the sustainability performance of communities, is an important means of delivering the City's sustainability agenda. This presentation will also inform work being conducted by the Strategic and Corporate Services Commission and the Office of Environmental Sustainability towards developing performance indicators that can be applied in the City of Vaughan. Opportunities for application of these metrics may be related to staff reporting and monitoring progress on the Strategic Plan, the City's Official Plan and other City Master Plans.

This effort can also support the missions of other partner agencies, such as York Region's Community and Healthy Services department and Peel Region Public Health. This presentation will provide an illustration of the broad range of benefits that can result from this exercise.

Background - Analysis and Options

Status of the Project, Measuring Sustainability Performance of New Development

Previous reports were brought to the Environment Committee of Council in 2009 and 2010 to update Council on the process to establish the project. It evolved as a collaboration with municipal partners, the City of Brampton and Town of Richmond Hill, and environmental partners (TRCA and Clean Air Partnership). An MOU was signed by the municipal collaborators in January 2011 following confirmation of matching funds of \$85,000 from the Green Municipal Fund of the Federation of Canadian Municipalities.

Phase 1 of the project was led by the City of Brampton and began in 2011 with a focus on developing the sustainability guidelines. Phase 2 is being led by the City of Vaughan and has a focus on identifying and testing sustainability metrics within the framework of the guidelines developed in Phase 1. A future report to Council will present the Draft Comprehensive Report of the project, including sustainability guidelines and metrics which will be made available for public comment. Following the public comment period, a Final Comprehensive Report will be brought to Council, which will focus on implementing the findings of the project.

A sample of the sustainability metrics for the site plan and building scales is provided as Attachment 1. The tabulated metrics provides a standard approach to rank the sustainability performance of each development application.

Linking Public Health and Sustainable Communities

The prevalence of overweight and obesity in the population is on the rise globally. Between 1980 and 2010, obesity rates in Canada roughly doubled among both males and females in most age groups in the adult and youth categories (Shields *et al.* 2010). Approximately one in four Canadian adults is obese and almost one in three Canadian children, 31.5 percent, are now overweight or obese. Three-quarters of overweight kids will remain so in adulthood, with health effects ranging from diabetes to certain types of cancer, osteoarthritis and heart disease (Roberts *et al.* 2012).

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A variety of factors play a role in the rise of chronic diseases, such as individual behaviours, genetics and environmental factors. However, at the most fundamental level, overweight and obesity result from an imbalance between caloric intake and usage. In support of this perspective, health and nutrition experts cite increasingly sedentary lifestyles resulting from urban planning and technological changes in the way we live and work. Essentially, physical activity has been engineered out of our lives. The need to be physically active in our jobs and at school has increased with the promotion of sedentary leisure activities.

There is a growing body of evidence demonstrating a relationship between where we live and our health outcomes (Region of Peel 2005). Researchers have noted that the built environment has an impact on health outcomes and risk factors related to: air quality; water quality; extreme heat; climate change; physical inactivity; obesity; cardiovascular disease; diabetes; respiratory disease; and mental illness. Patterns of suburban development are encouraging physical inactivity, namely, low density neighbourhoods with poor street connectivity that encourage the use of the car and discourage active transportation. Suburban sprawl has been associated with social inequities and negative health impacts (Katzmarzyk and Janssen 2004), which result from:

- Increased driving times and emissions from transportation sources which contributes to poor air quality leading to heart and lung conditions, hospital admissions and death;
- Longer commute times and driving through heavy traffic that can lead to increased levels of stress, anxiety, and road rage which may have an immediate impact on work performance and can affect overall mental health and quality of life in the long run;
- Higher automobile use and lower levels of physical activity that can lead to obesity, diabetes and other chronic diseases;
- Less community involvement and social isolation, leading to mental illness due to automobile dependency; and
- Road design and traffic congestion that is associated with motorist and pedestrian injury rates.

In comparison, Canadians living in major urban centres are twice as likely to walk, bike or use public transit to get to work compared to those living in the suburbs.

In addition, building design and infrastructure are important components of the built environment that have an impact on health and support community sustainability. Green buildings and infrastructure increase a community's resiliency to climate change and positively influence human health, for example:

- Reduced urban heat island effects through increased canopy cover, and green roof technology;
- Reduced greenhouse gas emissions through energy and water efficient buildings, district energy systems and orienting buildings to maximize passive solar gain; and,
- Improved indoor air quality through use of low VOC materials.

Based on the strong relationship between public health, community design and the built environment, the fields of Public Health and Planning are working together to design better communities to improve health outcomes. Health-oriented development creates sustainable communities by recognizing the value of: the quality of our air, soil and water; opportunities for and attraction to exercise and recreation; access to healthy foods; social equity and cohesion; and safety and security. This collaboration is an important consideration in the implementation of sustainable community plans at the municipal scale.

York Region Public Health

York Region Public Health has provided input to a wide range of regional and municipal initiatives linking health outcomes to municipal planning objectives, including:

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- York Region Vision 2051;
- Policies related to Healthy Communities, Air Quality and Climate Change in the York Region Official Plan;
- York Region New Communities Guidelines;
- York Region Food Charter;
- York Region Pedestrian and Cycling Master Plan;
- Vaughan Active Together Master Plan;
- Vaughan Active and Safe Routes to School; and
- Maple Go Secondary Plan Area.

York Region Public Health has provided a review (below) linking the indicator areas of the draft sustainability performance metrics to public health programs:

- Energy conservation → air quality, climate change;
- Water conservation → safe water, climate change;
- Stormwater management → safe water, climate change;
- Walkability/Connectivity → physical activity, chronic disease and injury prevention, air quality, climate change,;
- Public/Active transit oriented development → physical activity, air quality, climate change, injury prevention;
- Community tree planting → air quality, climate change, physical activity;
- Local food production/distribution → nutrition, food safety and security, air quality, climate change, physical activity; and
- District energy synergies/connection → air quality, climate change.

Presentation to the Priorities and Key Initiatives Committee of Council

Dr. Kurji, Medical Officer of Health for York Region's Community and Healthy Services Department, will provide an introduction linking health outcomes to sustainable built form. Dr. Kurji will address:

- the health status of York Region residents, and trends within the Region and provincially;
- the links between the built environment and health (e.g. chronic disease and injury prevention, air quality, urban heat island, and climate change); and
- York Region contributions to the built environment.

Dan Leeming of The Planning Partnership will provide the main presentation, "Policy to Action: Sustainable Guidelines and Metrics". While the details of the sustainability guidelines and metrics are not presented at this time, Attachment 1 provides a sample of the sustainability performance metrics to be presented to Council in the near future as a Draft Comprehensive Report. The focus of the presentation is on the broader sustainability linkages between healthy and sustainable communities, and the sustainability metrics as an important planning tool to deliver the City's sustainability agenda.

Dr. Mowat, Medical Officer of Health, representing Peel Public Health and a national organization, the Urban Public Health Network, will focus concluding remarks on implementation issues. The experience of Peel Public Health emphasizes the critical role of leadership to ensure action and demonstrate tangible results, particularly in the complex field of human health where numerous variables affect health outcomes.

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References

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Region of Peel, Public Health. State of the Region's Health 2005 – Focus on Overweight, Obesity and Related Health Consequences in Adults. 2005.

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Relationship to Vaughan Vision 2020/Strategic Plan

This report is consistent with the priorities previously set by Council and the necessary resources have been allocated and approved.

Regional Implications

The project, Measuring Sustainability Performance of New Development, intended to implement Action Item 2.3.1 of Green Directions Vaughan, is consistent with numerous action items in the Region of York Sustainability Strategy 2007, particularly Section 2 regarding healthy communities and Section 4 regarding a sustainable natural environment. Support from York Region in coordinating information requirements and through new and updated data sharing agreements, training and support will assist staff to implement the findings of the study. The project is consistent with Section 5.2 (Sustainable Cities, Sustainable Communities) of the York Region Official Plan.

Conclusion

The intended result of the project is a user-friendly checklist of environmental performance standards, to integrate into the development review process, that are accepted by industry and consistent among the partner municipalities. This report to the Priorities and Key Initiatives Committee of Council highlights the number of departments at the regional and local municipal levels that are working towards similar sustainability goals. Applying sustainability metrics to the development review process for relevant types of development applications could be an important opportunity towards achieving multiple sustainability objectives identified in Green Directions Vaughan and policy documents adopted by other levels of government and agencies. Applying metrics may require additional staff resources, new information standards that would need to accompany development applications or City-initiated studies to ensure that information can be integrated into both City and Region GIS layers. Assistance and support from Commission staff in the offices of Information & Technology Management and Innovation & Continuous Improvement, along with support from building industry stakeholders, may be required to integrate the information into City processes and the City's Corporate GIS system.

Given the potential increase in growth, congestion and the negative impact on the environment and citizens' health, Vaughan is responding in a progressive, proactive manner by implementing these sustainability guidelines and taking steps to build information requirements to mitigate the challenges faced by many Ontario municipalities.

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Attachments

1. Measuring Sustainability Performance of New Development in Brampton, Richmond Hill and Vaughan - Draft Sustainability Metrics at the Site Plan and Building Scale.

Report prepared by:

Tony Iacobelli, Senior Environmental Planner, ext. 8630

(A copy of the attachments referred to in the foregoing have been forwarded to each Member of Council and a copy thereof is also on file in the office of the City Clerk.)

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Report prepared by:

Tony Iacobelli, Senior Environmental Planner, ext. 8630

Respectfully submitted,

JOHN MACKENZIE
Commissioner of Planning

DIANA BIRCHALL
Director of Policy Planning

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Site (S) & Building (B) Metrics													
Category	Indicator	Applies To	Metric #	Metric	Mandatory Target	Recommended Minimum Target			Aspirational Target			Precedent	Total Available Points
				Building Type		Single Family Home	Multi-Fam Buildings (>3 storeys)	Commercial/Retail/Inst	Single Family Homes (Attached/Detached)	Multi-Fam Buildings (>3 storeys)	Commercial/Retail/Inst		
Built Environment	Compact Development	S&B	1	Floor area ratio/Floor Space Index (usually applies only to multi-unit medium density and high density)	Satisfy Municipal Official Plan requirements							Municipal OP	
	Land use mix and diversity	S&B	2	Proximity to Principal Amenities		50% of DU and jobs are within a 800m walking distance to existing or planned Principal Amenities (Select up to 3 of the Principal Amenities that apply to the plan) Principal amenities include: Grocery store/farmers market, place to buy fresh produce Community/Recreation Centre Pharmacy Library If the amenities are not within the distance specified above and the site is designated as mix use, the mix of population and employment uses achieves a 2:1 ratio on the site. (POINTS AWARDED BASED ON SLIDING SCALE)			75% of DU and jobs are within a 400m walking distance to existing or planned Principal amenities (Select up to 3 of the Principal Amenities that apply to the plan) Principal amenities include: Grocery store/farmers market, place to buy fresh produce Community/Recreation Centre Pharmacy Library If the amenities are not within the distance specified above and the site is designated as mix use, the mix of population and employment uses includes major office space, an anchor commercial/retail tenant or a minimum of 3 stories of employment uses. (POINTS AWARDED BASED ON SLIDING SCALE)			Municipal OP Thinking Green Item 1, 2, 9 LEED NC SSc2	12
		S&B	3	Proximity to Basic Amenities		50% of DU and jobs are within a 800m walking distance to existing or planned basic amenities (Select up to 3 of the Basic Amenities that apply to the plan) Basic Amenities include: General retail convenience store theatre coffee store Hair salon bank Place of worship Other (POINTS AWARDED BASED ON SLIDING SCALE)			75% of DU and jobs are within a 400m walking distance to existing or planned basic amenities (Select up to 3 Basic Amenities that apply to the plan) Basic Amenities include: General retail convenience store theatre coffee store Hair salon bank Place of worship Other (POINTS AWARDED BASED ON SLIDING SCALE)			Municipal OP Thinking Green Item 1, 2, 9 LEED NC SSc2	6
	Green Buildings	S	4	Building(s) designed and/or certified under an accredited "green" rating system	Public Buildings greater than 500m ² must be designed to LEED Silver or alternative equivalent	Site includes 1 or more green buildings certified under a recognized third party standard (i.e. Energy Star, LEED NC, CS, CI, EB, Homes) - (2 POINTS)			100% of buildings on site that are certified to green standards (Green Globes, LEED, ASHRAE 189, Recognized) - (2 POINTS) (On site buildings needs to be greater than 2 for additional aspirational points)			Municipal OP Sustainable Design and Construction Policy for Municipal Buildings LEED ND GIBp1	4
	Site Accessibility	S&B	5	Universal Design	Design 10% of residential units in apartment buildings in accordance with ICC/ANSI A117.1 Universal Design Standards (or equivalent)	Design a minimum of 20% of the DU in accordance with ICC/ANSI A117.1 Universal Design Standards (or equivalent) - (1 POINT)			Design a minimum of 30% of the DU in accordance with ICC/ANSI A117.1 Universal Design Standards (or equivalent) - (1 POINT)			Accessibility Act Municipal Accessibility Plan LEED ND NPdC11 OBC Requirement	2
		S&B	6	Number of universally accessible points of entry to buildings and sites	100% of primary entrances	100% of emergency exits - (1 POINT)			100% of all entries and exits - (1 POINT)			Accessibility Act Municipal Accessibility Plan LEED ND NPdC11	2
	Housing Unit mix	S	7	Design for life cycle housing		The housing types includes a diversified mix that caters to singles, families, multi-generational, live-work, affordable/low income, renters, attached, detached, townhome and med-to-high-rise residential. (POINTS AWARDED BASED ON A SLIDING SCALE)		N/A	The housing mix includes a mix of housing types, catering to singles, families, multi-generational, live-work, affordable/low income, renters, attached, detached, townhome and med-to-high-rise residential. (POINTS AWARDED BASED ON A SLIDING SCALE)		N/A	Municipal OP	7

Category	Indicator	Applies To	Metric #	Metric	Mandatory Target	Recommended Minimum Target	Aspirational Target	Precedent	Total Available Points		
Built Environment	Landscape and Street Tree Planting / Preservation	S	8	% Tree canopy within proximity to building/pedestrian infrastructure	Satisfy municipal planting requirements	Provide shade within 10 years for at least 50% of the walkways/sidewalk lengths All trees should be selected from the applicable municipal tree list. - (2 POINT)	Provide shade within 10 years for at least 75% of the walkways/sidewalk lengths. All trees should be selected from the applicable municipal tree list. - (2 POINTS)	Municipal OP LEED ND NPDc14	4		
		S	9	Maintain existing healthy trees	Arborist Report provided that identifies and evaluates where on-site healthy mature trees will be protected or removed.	Where healthy mature trees must be removed, new trees are provided on site or as determined by the municipality to mitigate the lost canopy coverage of the trees removed. - (2 POINTS)	Healthy mature trees greater than 20 cm. DBH preserved in situ on site. - (2 POINTS) Smaller healthy trees (less than 20 cm. DBH) transplanted. - (1 POINT) (See Glossary for DBH definition)	Municipal Precedent	5		
		S	10	Soil Quantity		Pits, trenches or planting beds should have a topsoil layer with an organic matter content of 10 to 15 % by dry weight and a pH of 6.0 to 8.0. The topsoil layer should have a minimum depth of 60 cm. The subsoil should have a total uncompacted soil depth of 90 cm. Minimum soil volume of 30 cubic metres per tree - (2 POINTS)	TBD	TGS TIER I Canadian Cities with Soil Volume Standards TRCA - Preserving and Restoring Healthy Soils: Best Practice Guide for Urban Construction	2		
	Natural Green Space	S	11	Proximity to natural green space		Visual connections (such as public access blocks, single loaded roads) are provided to the natural heritage system and parks. - (2 POINTS)	Natural green space within 10 minute walk to 100% of DU and Jobs - (2 POINTS)		4		
	Parking	S&B	12	Bicycle Parking		Provide a minimum 0.6 bike parking spots per unit Provide a minimum 5% of bike parking at grade for visitors (1 POINT)	0.13 bike parking spots for permanent employees for every 100m2 GFA (Non residential buildings). Provide 0.15 bike parking spots for visitors for every 100m2 of GFA. Provide a minimum of 1 shower (for men and women) (1 POINT)	Provide a minimum of 0.8 bike parking spots per unit Provide a minimum 10% of bike parking at grade for visitors (1 POINT)	Place bike parking in weather protected areas Provide 1 shower (for men and women) for every 30 bike parking spots (1 POINT)	TIER I & TIER II	4
		S&B	13	Off-Street Parking		N/A	Locate all new off-street parking at the side or rear of buildings - (1 POINT)	N/A	Less than 20% of the total development area is allocated to new, off-street surface parking facilities. - (1 POINT) No surface parking area is greater than 2 acres (8000m2) - (1 POINT) Consolidate surface parking to parking structures in Intensification Areas. - (5 POINT)	LEED ND NDPc5	8
		S&B	14	Surface Parking			Develop and implement a strategy to minimize surface parking for permanent employees and residents (1 POINT)				1
		S&B	15	Carpooling and Efficient Vehicle Parking				3% of the site parking spots (or a minimum of 4 parking spots) to be dedicated to car pooling and fuel efficient / hybrid vehicles (does not apply to compact cars). Dedicated parking spots located in preferred areas close to building entries. - (1 POINT)		5% of the site parking spots to be dedicated to car pooling and fuel efficient / hybrid vehicles (does not apply to compact cars). Dedicated parking spots located in preferred areas close to building entries. - (1 POINT)	TGS LEED NC SSc4.3

Category	Indicator	Applies To	Metric #	Metric	Mandatory Target	Recommended Minimum Target	Aspirational Target	Precedent	Total Available Points
Built Environment	Indoor Air Quality	B	16	Indoor Air Quality		Building interior finishes must comply with low-emitting material requirements listed under LEED NC 2009 IEQc4.1 to IEQc4.4 - (1 POINT)		LEED NC 2009 IEQc4.1-4.4	1
		S	17	Traffic Calming		75% of new residential-only streets designed with traffic calming strategies. - (1 POINT) 50% of new non-residential and/or mixed-use streets are designed with traffic calming strategies - (1 POINTS) (See Glossary for Traffic Calming strategies)	100% of new residential-only streets designed with traffic calming strategies. - (1 POINT) 75% of new non-residential and/or mixed-use streets are designed with traffic calming strategies - (1 POINT) (See Glossary for Traffic Calming strategies)	LEED ND NPDC1	4
	Pedestrian Connections	S	18	School Proximity to Transit routes & Bikeways		All schools are located within a 400m walking distance to transit routes and/or dedicated bike network - (2 POINTS)	All schools are located within a 200m walking distance to transit routes and/or dedicated bike network - (2 POINTS)		4
		S	19	Proximity to school		50% of dwelling units are within 800 meters walking distance to elementary and middle schools - (2 POINTS) and 50% of dwellings units are within 1600 meters to a high school (1 POINT)	N/A 75% of dwelling units are within 400 meters walking distance to elementary and middle schools - (2 POINTS) and 75% of dwellings units are within 1000 meters to a high school - (1 POINT)	N/A	LEED ND NPDC15
	Cultural Heritage Resources	S	20	Cultural Heritage Conservation	Comply with Cultural Heritage Conservation policies under provincial legislation (i.e. the Ontario Heritage Act, Planning Act and PPS, etc), Standards and Guidelines for Historic Places, municipal Official Plan, municipal by-laws, Municipal Register of Cultural Heritage Resources and/or Municipal Heritage Inventory.	100% evaluation of properties included in the Municipal Heritage Inventory and/or Register, and 100% retention and protection of cultural heritage resources in-situ that qualify for designation under the Ontario Heritage Act. (2 POINT)	100% conservation of cultural heritage resources identified in the Municipal Heritage Register or Inventory and their associated landscapes and ancillary structures in-situ in accordance with the Standards and Guidelines for the Conservation of Historic Places in Canada. (2 POINTS)	Municipal OP policies on Cultural Heritage Ontario Heritage Act Municipal Inventory of Buildings of Architectural and Historical Significance	4
	Economy	S	21	Jobs/Residents		1:2 - (2 POINTS)	1:1 - (2 POINTS)		4
	Mobility	Site Permeability	S	22	Connectivity	Connect buildings on the site to off-site pedestrian paths, surface transit stops, parking areas (car and bike), existing trails or pathways, or other destinations (e.g. schools). Outdoor waiting areas located on the site must offer protection from weather. Where a transit stop is located within a walking distance of the project site boundary, the building main entrance should have a direct pedestrian linkage to that transit stop		Provide amenities and street furniture (benches, additional bike parking, landscaping) along connections provided on the site and between the site and adjacent destinations. - (2 POINTS)	TGS TIER II Municipal OP
Transit supportive		S	23	Distance to public transit		Site is within 800m walking distance to an existing or planned commuter rail, light rail, bus rapid transit or subway with stops or Site is within 400m walking distance to 1 or more bus stops with frequent service. (3 POINTS)	Site is within 400m walking distance to an existing or planned commuter rail, light rail, bus rapid transit, or subway with frequent stops (see Glossary) or Site is within 200m walking distance to 1 or more bus stops with frequent service. (3 POINTS)	Regional OP (proximity) Municipal OP (if revised to speak to connectivity) LEED NC 2009 SSc4.1	6
Active Transportation		S	24	Proximity to trail and bike paths		Within 400 meters of 75% of residents/jobs - (2 POINTS)	Within 400 meters of 100% of residents/jobs - (2 POINTS)	ADD PRECEDENT	4
Walkability		S	25	Promote walkable streets	Sidewalks must be in accordance with the applicable Municipal Standards. Sidewalk width must be at least 1.5 meters.		Continuous sidewalks or equivalent provisions must be provided on both sides of streets, where not a mandatory requirement. - (2 POINTS) Provide pedestrian amenities to further encourage walkable streets. "Pedestrian amenities" include: shelter from rain, wind breaks, shade, seating, pedestrian-oriented lighting, etc. Wider sidewalk widths may also be pedestrian amenities in more urban areas. - (2 POINTS)	LEED ND NPDC1	4

Category	Indicator	Applies To	Metric #	Metric	Mandatory Target	Recommended Minimum Target	Aspirational Target	Precedent	Total Available Points	
Natural Environment & Open Space	Parks	S	26	Urban Square/Open Space		Size: 200m ² Visibility (road frontage): Distinct edge, defined as focal point Accessibility: 400m walk: 75% of dwelling units Facilities: Benches, Tree canopy, draught tolerant & native plants, public art, hard surfaces (1 POINT IF 2/3 SATISFIED) 2 POINTS IF ALL CRITERIA SATISFIED)	Size: 200m ² Visibility (road frontage): Distinct edge, defined as focal point Accessibility: 400m walk: 90% of dwelling units Facilities: Benches, Tree canopy, draught tolerant & native plants, public art, hard surfaces (1 POINT IF ALL CRITERIA SATISFIED)	LEED ND Cornell Community Mt. Pleasant Village Brampton Development Design Guideline Existing Policies	3	
		S	27	Parkette		Size: 0.5ha Visibility (road frontage): 3 sides Accessibility: 200m walk: 75% of dwelling units Facilities: Play structure, benches, bicycle parking, tree canopy, benches, draught tolerant & native plants (1 POINT IF 2/3 SATISFIED) 2 POINTS IF ALL CRITERIA SATISFIED)	Size: 0.5ha Visibility (road frontage): 4 sides or 100% Accessibility: 200m walk: 90% of dwelling units Facilities: Play structure, benches, bicycle parking, tree canopy, benches, draught tolerant & native plants (1 POINT IF ALL CRITERIA SATISFIED)		3	
		S	28	Neighbourhood Park	Visibility (road frontage): 1 side	Size: 1.5ha Visibility (road frontage): 3 sides Accessibility: 400m walk: 75% of dwelling units Facilities: Proximity to elementary school, local transit access, active sports field (soccer, basketball, baseball), play structure, benches, bicycle parking, tree canopy, benches, draught tolerant & native plants (1 POINT IF 2/3 SATISFIED) 2 POINTS IF ALL CRITERIA SATISFIED)	Size: 1.5ha Visibility (road frontage): 4 sides or 100% Accessibility: 400m walk: 90% of dwelling units Facilities: Proximity to elementary school, local transit access, active sports field (soccer, basketball, baseball), play structure, benches, bicycle parking, tree canopy, benches, draught tolerant & native plants (1 POINT IF ALL CRITERIA SATISFIED)		3	
		S	29	Community Park	Visibility (road frontage): 2 sides	Size: 4ha to 6ha Visibility (road frontage): 2 sides Accessibility: 800m to 1200m walk: 50% of dwelling units Facilities: Proximity to community facilities (high school, community centre, library), local transit access, active sports field (soccer, basketball, baseball), play structure, benches, bicycle parking, tree canopy, benches, draught tolerant & native plants (1 POINT IF 2/3 SATISFIED) 2 POINTS IF ALL CRITERIA SATISFIED)	Size: 4ha to 6ha Visibility (road frontage): 3 sides Accessibility: 800m to 1200m walk: 75% of dwelling units Facilities: Proximity to community facilities (high school, community centre, library), local transit access, active sports field (soccer, basketball, baseball), play structure, benches, bicycle parking, tree canopy, benches, draught tolerant & native plants (1 POINT IF ALL CRITERIA SATISFIED)		3	
	Stormwater	S	30	Stormwater Quantity	Provide quantity control in accordance with the applicable Municipal Standards. Retain runoff volume from the 5mm rainfall event on site.	Retain runoff volume from the 10mm rainfall event on site. Pre to Post Peak Flow Control for Flood Control is required as per TRCA and municipal requirements (2 POINTS) Strategies should include use of Low Impact Development techniques such as: Greenroofs, bioswales, tree planting, absorbent landscaping, downspot disconnect, rain barrels, rainwater harvesting, permeable	Retain runoff volume from the 15mm rainfall event on site. Strategies should include use of Low Impact Development techniques such as: Greenroofs, bioswales, tree planting, absorbent landscaping, downspot disconnect, rain barrels, rainwater harvesting, permeable pavers/hard surfaces, and rainwater cisterns. (2 POINTS)	TRCA's Stormwater Management Criteria TRCA SWM Criteria Document	4	
		S&B	31	Stormwater Quality	Remove 80% of Total Suspended Solids (TSS) on an annual loading basis from all runoff leaving the site (based on the post development level of imperviousness). All ponds will be designed with Enhance Level of Protection (Level 1). Enhanced protection corresponds to the end-of-pipe storage volumes required for the long-term average removal of 80% of suspended solids. Strategies include low impact development measures such as: Stormwater ponds, oil-grit separators, bioswales, filters, treatment train approach, etc... (See Glossary for TSS definition)	N/A	N/A	90% to 100% of Total Suspended Solids (TSS) removed from a 25mm rainfall event. Strategies should include low impact development measures such as: Stormwater ponds, oil-grit separators, bioswales, filters, treatment train approach, etc. (4 POINTS) (See Glossary for TSS definition)	TGS TIER II	4
		S&B	32	Rainwater Re-use		Buildings designed for rainwater re-use readiness (i.e. plumbing infrastructure included in building) (1 POINT)	Rainwater captured on-site and used for low-grade functions (i.e. toilet/urinal flushing, irrigation) (3 POINTS)			4
		S	33	Stormwater Architecture/Features		Introduce stormwater amenities that provide both functional and aesthetic benefit to the site. (2 POINTS - see glossary for examples)				2
	Urban Agriculture	S	34	Dedicate land for local food production		Provide the following garden space per site density: DU Density Growing space/DU 17-35 DU/ha 200ft ² /DU 36-54 DU/ha 100ft ² /DU >54 DU/ha 80ft ² /DU (2 POINTS) (See Glossary for Growing Space definition)	N/A	Dedicate 15% of roofspace for local food production (2 POINTS)	N/A	LEED ND NPdC13 4

Category	Indicator	Applies To	Metric #	Metric	Mandatory Target	Recommended Minimum Target	Aspirational Target	Precedent	Total Available Points	
Infrastructure and Buildings	Energy conservation	S&B	35	Solar Readiness		100% of all new building designed for solar readiness (i.e. electrical conduit/plumbing riser roughed in) - (1 POINT)	On-site energy generation from renewable energy source (points awarded based on % of renewable energy generated relative to total building) (POINTS AWARDED BASED ON A SLIDING SCALE OF % RENEWABLE ENERGY GENERATION)	LEED NC EAc2	8	
		S	36	Passive solar alignment		Applies to 50% of new buildings: The building(s)'s long axis is within 15degrees of E-W The building(s) E-W lengths are at least as long as the N-S lengths (3 POINTS)	Applies to 75% of new buildings: The building(s)'s long axis is within 15degrees of E-W The building(s) E-W lengths are at least as long as the N-S lengths (3 POINTS)	LEED ND GIBc10	6	
		S&B	37	Building energy efficiency	Design all buildings in accordance with OBC.	Single family homes or multiunit residential buildings (3 storey or lower) must be built to EnerGuide B3 (or equivalent) (3 POINTS)	Buildings must be designed to 35% better than MNECB (3 POINTS - MAXIMUM)	Single family homes or multiunit residential buildings (3 storey or lower) must be built to EnerGuide B5 (or equivalent) (1 POINT) Buildings energy performancne exceeds MNECB by 35% or more (SLIDING SCALE TOTAL OF 8 POINTS 1 PT AWARDED PER 5% ENERGY IMPROVEMENT OVER 35%) Building commissioning required for all buildings (multi unit res above 3 storeys, commercial, inst) - (3 POINTS) Building electricity sub-metering required for all tenants and per residential suite (3 POINTS)	LEED ND GIBp2 TGS TIER I & TIER II	17
		S	38	District energy viability		Develop an energy strategy for the development, identifying opportunities for conservation, energy sharing, renewables, etc... (2 POINTS)	In an intensification area, where district energy has been deemed viable by the municipality, carry out a district energy feasibility study. The feasibility study should include a high level assessment of the thermal and electricity load profiles (seasonally and hourly) and potential thermal network maps (3 POINTS)		5	
	Potable Water	S&B	39	Reduce potable water used for irrigation		Redcue potable water used for irrigation by 50%, compared to a midsummer baseline case. (2 POINTS) Achieved by: - planting drought tolerant and native plants - efficient irrigation controls (drip irrigation, soil moisture sensors) - rainwater harvesting - recycled/treated greywater	No potable water is used for irrigation. (4POINTS)	LEED NC WEc1 TIER I	6	
		S&B	40	Water Conserving Fixtures	Include plumbing fixtures with the following maximum flow rates: Residential: Toilets: 6LPF Faucets: 8.3LPM Showerhead: 9.5LPM CRI Same as Residential with: Urinals 3.8LPF Faucets 8.3LPM (private applications only), 1.9LPM all other	Include water fixtures that obtain a 20% reduction over the baseline fixture (Mandatory target fixture)	Include water fixtures that obtain a 30% reduction over the baseline fixture (Mandatory target fixture) - (3 POINTS)	LEED ND GIBp3 TIER I and TIER II TGS	6	
	Lighting	S&B	41	Parking garage lighting	Minimum level of illumination of 50 lux		Use occupancy sensors (motion and thermal) on 2/3 of parking lighting fixtures, while always maintaining a minimum illumination of at least 10 lux (1 POINT)			1
		S&B	42	Reduce light pollution	Satisfy applicable municipal standards	Shield exterior light fixtures >1000 lumens to provide night sky lighting No uplighting allowed - (1 POINT)		Develop lighting controls that reduces night time spillage of light by 50% from 11pm to 5am (non residential) No architectural lighting allowed between 11pm and 5am - (1 POINT)	LEED NC SSc8 TIER I and TIER II	2

Category	Indicator	Applies To	Metric #	Metric	Mandatory Target	Recommended Minimum Target	Aspirational Target	Precedent	Total Available Points
Infrastructure and Buildings		S&B	43	Energy Conserving Lighting		Use LEDs and photocells on all exterior (exposed) lighting fixtures (2 POINTS)			2
	Bird friendly design	S&B	44	Bird Friendly Design		Use a combination of strategies listed below to treat at least 85% of the exterior glazing located within the first 12m of the building above-grade (including interior courtyards). Visual markers on the glass should have a spacing no greater than 10cm x 10cm Where a greenroof is constructed with adjacent glass surfaces, ensure the glass is treated 12m above greenroof surface (2 POINT) Bird friendly design strategies include: window frit, films, decals, grills, louvres, internal screens, awnings, overhangs, artwork, etc.		TGS TIER 1 City of Toronto Bird Friendly Design Guidelines	2
	Materials & Solid Waste Management	S&B	45	Solid Waste	Satisfy applicable municipal standards	Storage and collection areas for recycling and organic waste are within or attached to the building or deep collection recycling and organic waste storage facilities are provided. (1 POINT)	Three chute system is provided. (1POINT)	TGS TIER I	2
		S&B	46	Recycled / Reclaimed Materials		Minimum 25% of recycled/reclaimed materials should be used for new infrastructure including roadways, parking lots, sidewalks, unit paving, etc. - (1POINT)	Minimum 30% of recycled/reclaimed materials should be used for new infrastructure including roadways, parking lots, sidewalks, unit paving, etc. - (1POINT)	LEED ND GIBC15	2
		S&B	47	Material Re-use and Recycled Content		At least 5% reused content in building materials and/or landscaping materials (hardscaping such as paving or walkways) is provided. - (1POINT) At least 10% recycled content in building materials and/or landscaping materials (hardscaping such as paving or walkways).- (1POINT)	At least 10% reused content in building materials and/or landscaping materials (hardscaping such as paving or walkways) is provided. - (1POINT) At least 15% recycled content in building materials and/or landscaping materials (hardscaping such as paving or walkways). - (1POINT)	TGS TIER II	4
	Heat Island	S&B	48	Reduce heat island effect from the built form		<p><i>Cool Roof</i> For 75% of the roof area, include roofing materials with solar reflective index (SRI) of: Low-sloped roof: 78 Steep-sloped roof: 29 (2 POINTS)</p> <p><i>Vegetated Roof</i> Install vegetated roof for 50% of the roof area (4 POINTS) An additional 2 points is awarded if a <i>Cool</i> roof is installed on the remaining 50%</p> <p><i>NonRoof</i> For 50% of the site's hardscape, include any combination of the following: - Underground/covered parking - Hardscape shading - Hardscape material with an SRI > 29 - Open grid pavers (>50% pervious) (2 POINTS)</p>	<p><i>Cool Roof</i> For 90% of the roof area, include roofing materials with solar reflective index (SRI) of: Low-sloped roof: 78 Steep-sloped roof: 29 (1 POINT)</p> <p><i>Vegetated Roof</i> Install vegetated roof for 75% of the roof area (2 POINT) An additional 1 point is awarded if a <i>Cool</i> roof is installed on the remaining 25%</p> <p><i>NonRoof</i> For 75% of the site's hardscape, include any combination of the following: - Underground/covered parking - Hardscape shading - Hardscape material with an SRI > 29 - Open grid pavers (>50% pervious) (1 POINT)</p>	Municipal OP LEED NC SSC7.1/7.2 TGS TIER I & II	11