

APPENDIX A

# WILMOT CREEK NEIGHBOURHOOD SUSTAINABILITY GUIDELINES

Prepared by:



Prepared for:



Inspired by:



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## A note about this Guideline

This Sustainability Guideline is to be read in conjunction with the Wilmot Creek Neighbourhood Secondary Plan. It presents strategies and requirements that address social and environmental sustainability using each of the ten One Planet Living principles.

## Credits

Guideline by: Urban Equation

Secondary Plan by: The Planning Partnership

Prepared for: Municipality of Clarington



# SECTION 1 INTRODUCTION

## 1.1 Vision for Sustainable Clarington

As defined by the Clarington Official Plan (OP), sustainable development in Clarington translates into urban and architectural design that creates a comfortable environment for residents and establishes a positive image for the community. Moreover, the OP recognizes that sustainable design contributes to community and environmental health, a high quality of life, and climate change mitigation and preparedness. The Municipality of Clarington has committed to pursuing a sustainable future, as outlined in the OP and the Priority Green Clarington Development Framework (Priority Green). These documents establish the vision and principles of sustainability in the Municipality. They give direction for development of plans and master plans to achieve a healthy natural environment, vibrant communities, and a strong economy.

## 1.2 Purpose of this Document

The purpose of the Sustainability Guidelines (Guidelines) is to prepare the Municipality of Clarington for future development within the Wilmot Creek Neighbourhood. The Guidelines are to be used as an evaluation tool for development applications. They are to be used by:

- Municipal Council and Committees when evaluating whether an application meets the Municipality’s vision for development in the Wilmot Creek Neighbourhood;
- Municipal staff and external agencies when reviewing development applications and as a reference for design decisions for Municipality proposed studies and projects;

## 1.3 Interpretation & Implementation

The Guidelines are intended to implement the Secondary Plan direction for the Wilmot Creek Neighbourhood and provide greater clarity on urban design, streetscapes, built form, and sustainability initiatives. The Guidelines are to be read in conjunction with and complement the policies of the Wilmot Creek Neighbourhood Secondary Plan, objectives and policies of the Municipality of Clarington Official Plan, the provisions of the Municipality of Clarington Zoning By-law, the Priority Green Development Framework and Implementation Plan, and other guidelines. The Guidelines, in concert with the Secondary Plan policies, will be used to evaluate development applications in order to ensure that a high level of urban design and the intended level of sustainability is achieved. Notwithstanding the foregoing, the provisions of the Secondary Plan shall prevail over the provisions of these Guidelines in the event of any conflict.

- The development industry including but not limited to developers, consultants, and property owners to demonstrate how their proposals align with the Municipal vision for the Wilmot Creek Neighbourhood; and
- The public for use of greater awareness of the benefits of urban design in their community.

The Guidelines will help provide predictability for applicants, the Municipality, and stakeholders, by providing consistent direction about the criteria for the sustainable design of the proposed development.

The provisions and examples in the guidelines should be used as the foundation of design for all development projects in the Wilmot Creek Neighbourhood and will be used in the assessment development proposals. Meeting the requirements of the guidelines does not preclude the necessity to design specific site elements to function properly, be of high-quality construction, and with appropriate attention to details that ensure that site improvements can be properly maintained.



Highlighted, the West portion of the Secondary Plan Area within its context



## SECTION 2 ONE PLANET LIVING

### Overview

Climate change, resource depletion, and poor public health-related to built form have re-emphasized the importance of sustainable planning in recent years. In many municipalities, current development practices are placing a strain on the natural environment and the health of residents. The One Planet Living sustainability framework offers strategies that empower municipalities to reduce their environmental footprint and live within the resources of our one planet.

### 2.1 Why Plan for Sustainability?

There is mounting evidence that suggests that Canadian lifestyles require four planets' worth of resources. Our patterns of behaviour are unsustainable, particularly in the context of a changing climate. In order to reverse course, cities are increasingly relied upon to develop and implement sustainability strategies that consider their streets, buildings, open spaces, and people. When all elements of a community are designed sustainably, the gains become exponential, outweighing the sum of its parts. Sustainable development incorporates decision-making and action that ensures a healthy environment, vibrant communities, and economic vitality for current and future generations. Sustainable development ensures that a community's current resource needs are satisfied without impacting the availability of resources for future generations.

### 2.2 What is One Planet Living?

One Planet Living (OPL) is a sustainability framework that provides developers and community builders with a guide with which to reduce the negative environmental and social impacts associated with the way we design, build, and interact with our communities. It aims to create a future where it is attractive and affordable for people to lead happy and healthy lives using a fair share of the Earth's resources.

OPL's 10 guiding principles provide a framework that embodies all elements of a project. They provide a shared lens and language from which we can map together the different aspects of sustainability each partner brings to a project, demonstrating the collective impact a development team can have on its local community. It brings social, economic and environmental sustainability together.



### 2.3 How One Planet Living Will be Used

While OPL can be used as a third-party certification, it is also commonly employed as an organizing framework for sustainability. OPL addresses all domains of sustainability, including environmental, social and economic. Therefore, it encourages a holistic and integrated approach to sustainability that ensures developments have a meaningful impact on their communities. Unlike other frameworks, One Planet Living is a flexible tool without preassigned credits or prerequisites. This affords a great deal of flexibility, whereby sustainability can be addressed in a context-specific manner. The Sustainability Guidelines will utilize the OPL framework as an outline to structure its sustainability principles and strategies.

-  Health and happiness
-  Equity and local economy
-  Culture and community
-  Land and nature
-  Sustainable water
-  Local and sustainable food
-  Travel and transport
-  Materials and products
-  Zero waste
-  Zero carbon energy



## SECTION 3 PHYSICAL CONTEXT



### Overview

The following section describes the site's locational context and outlines its key physical features using the One Planet Living Framework lens. The existing site's physical and social conditions inform the requirements and strategies that are put forward in Section 5 and 6.

### 3.1 Site location

The Wilmot Creek Neighbourhood Secondary Plan is located south of Highway 401 and north of the Canadian National (CN) rail line and the existing Wilmot Creek Adult Lifestyle Community. Its westerly boundary is Bennett Road and the interchange for Highway 35/115 forms the easterly boundary. The area for the Secondary Plan is approximately 42 hectares (104 acres) in size. Of that total, approximately one third of the area contains natural features, a hydro transmission line easement, and Ministry of Transportation (MTO) lands.

### 3.2 Key Existing Physical Features

The following is a list of key existing physical features of the site. The opportunities and challenges stemming from these features will be addressed throughout this Guideline with a selection of suggested strategies and requirements (Section 5 and 6).



#### Land Use and Nature

- The site is designated as a greenfield in Clarington's Official Plan (Map B, Urban Structure, 2018)
- The site is intersected by Rickard Creek that divides the Secondary Plan area and forms a basis for a naturalized channel that runs north-south
- The geographical center of the site is within 600m of Lake Ontario



#### Travel and Transport

- The site is adjacent to a highway and a railway that act as physical barriers as well as noise sources.
- The site has very little access to transit services



#### Culture and Community

- The site is adjacent to an existing low-density residential community





## SECTION 4 POLICY CONTEXT

### Overview

The need to plan sustainably within the Secondary Plan Area is established in a suite of provincial, regional, and municipal policy documents and plans. Categorized by One Planet Living principles, this section provides an overview of the relevant policies, strategies, and directions that will inform future development.

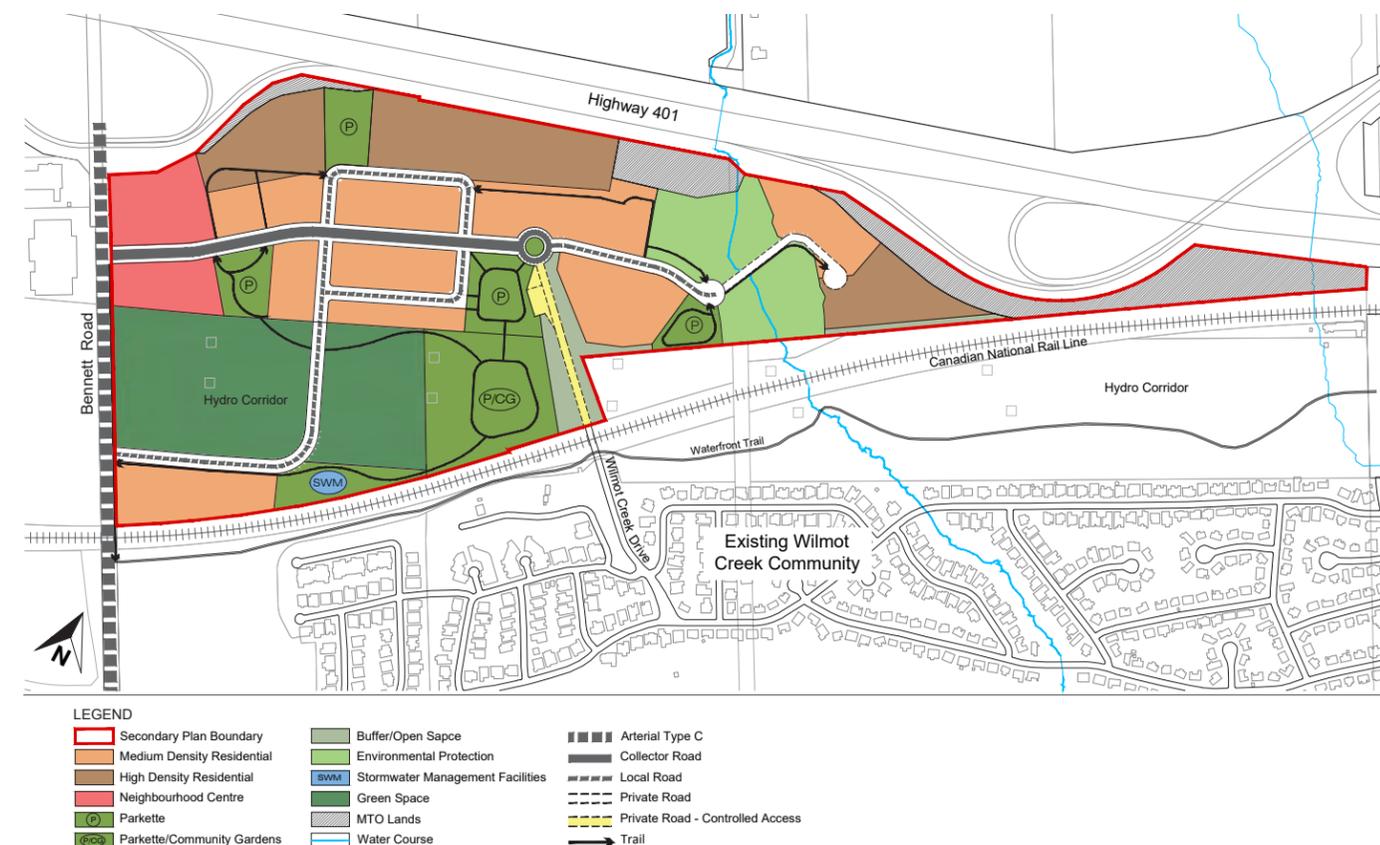
### 4.1 Wilmot Creek Neighbourhood Secondary Plan (2022)

The Secondary Plan builds on the policies of the Clarington Official Plan and provides a framework to guide growth and sustainable development specific to Wilmot Creek Neighbourhood. Its purpose is to establish goals and policies to guide development within the Neighbourhood, as it is implemented through subdivision, zoning, and site plan control. The Secondary Plan Area is expected to accommodate between 700 to 1100 dwelling units, resulting in an estimated population of 1500 to 1800 residents.

The Wilmot Creek Neighbourhood is envisioned as an environmentally sustainable and healthy community with liveable neighbourhoods, integrated green spaces, efficient transportation and trails systems, and a vibrant commercial area. The Secondary Plan Area will be a safe and inclusive pedestrian-oriented community that supports walkability and active living with accessible amenities.

This vision is articulated through the nine following principles:

- Promote an adaptive and resilient community through the responsible use of resources, reduction of greenhouse gas emissions, reduction of demands on energy, water, and waste systems, and the impacts of climate change.
- Promote development and land use patterns that conserve biodiversity, ecological integrity, and function to protect the health of the natural environment.
- Create a healthy, pedestrian-oriented environment that supports opportunities for daily physical activity in a safe, inclusive, and accessible community, meeting the needs of residents of all ages and abilities.
- Ensure the provision of an accessible and connected multimodal transportation network that gives priority to the creation of complete streets and active transportation, to also ensure residents of the existing Wilmot Creek Adult Lifestyle Community have unimpeded access to their community through a controlled access gate and private road.
- Provide for an appropriate mix of housing options, including affordable and rental housing to meet the projected needs of present and future residents throughout all stages of their lives.
- Provide a mix of uses including small scale commercial and office uses within a reasonable walking distance of residents.
- Create a connected parks and trails network that complements the road-based circulation network, including pedestrian and cycling, providing both utilitarian and recreational amenities that support active and healthy living.
- Promote efficient development and land use patterns and coordinated planning for transportation and Municipal services to sustain the financial well-being of the municipality over the long term.
- Strive for design excellence in buildings, roads, and open spaces.



## 4.2 Municipality of Clarington Official Plan (2018)

On June 19th, 2017, the Commissioner of Planning and Economic Development for the Regional Municipality of Durham approved Amendment 107, which ushered in changes to Clarington's Official Plan (OP). The updated OP includes new policies that support sustainable outcomes, including walkable neighbourhoods, great public spaces, complete streets, and complete communities. This Guideline aligns with the following relevant policy direction. Categorized using the OPL framework, the following section provides a high-level overview of the Plan's sustainability guidance.

### Health and Happiness

Enhancing residents' personal and social wellbeing by creating safe, healthy, active, resilient, and vibrant neighbourhoods with parkland, open space and recreational facilities into the community

### Equity and Local Economy

Providing diverse and accessible housing types, tenures, and costs, with affordable housing comprising at least 30%



of all new housing in Urban Areas and encouraging local entrepreneurship and sustainable business practices

### Culture and Community

Protecting cultural heritage by providing arts and culture programs, events, and facilities through systems of community amenities, civic pride, and local identity

### Land Use and Nature

Ensuring planning and development efforts protect the integrity and vitality of natural systems and processes

### Sustainable Water

Reducing per capita water consumption through water efficiency and conservation, incorporating sustainable design practices, and protecting hydrologic systems

### Local and Sustainable Food

Supporting local food production and community or allotment gardens

### Travel and Transport

Promoting smart growth through compact urban form that supports transit, walking, and cycling through higher densities and a mix of uses

### Materials and Products

Promoting resilience and sustainability in built form design by employing environment-first principles and efficient management of resources

### Zero Waste

Minimizing waste during construction and creating programs which meet related Provincial standards, specifically with respect to multi-residential housing forms

### Zero Carbon

Encouraging more resilient infrastructure, and promoting a move towards net zero communities by incorporating techniques to reduce greenhouse gas emissions

## 4.3 Priority Green Clarington (2015)

Priority Green Clarington (PGC) aims to set a new standard for residential development that prioritizes sustainability, promotes innovation and improves quality of life. PGC was designed to address Council's vision of building a sustainable, creative and caring community and to support the Municipality's commitment to sustainable development. The Green Development Guidelines will build on the recommended criteria contained in the Secondary Plan Checklist, as outlined below, to create a site-specific and appropriate plan for the Secondary Plan Area. Organized by OPL principles, the following section provides a non-exhaustive overview of PGC's goals and suggested strategies.

### Equity and Local Economy

Diversity in housing types to achieve target densities and a range of accommodation tenures and affordability

### Culture and Community

Residential areas are designed within walking distance of various community amenities, recreational facilities, shops and parks among others

### Land Use and Nature

Protecting and enhancing the natural environment while ensuring connectivity between natural heritage features and integrating them with public green space

### Sustainable Water

Employing the natural drainage pattern to reduce flooding risk and enhance stormwater retention with minimum impact on natural hydrological systems

- Giving priority to on-lot source controls for stormwater management
- Designing low impact development techniques as functional landscape amenities

### Local and Sustainable Food

Creating space for community gardens and orchards within public spaces adjacent to, or directly within multifamily developments

### Travel and Transport

Designing an interconnected street network and promoting walkability through grid design and mixed-use, transit-connected walkable nodes

### Zero Carbon

Assessing the feasibility of district energy and/or renewable energy systems





## SECTION 5 SUSTAINABILITY PRINCIPLES, TOPICS AND STRATEGIES

### Overview

The following sustainability strategies are the heart of the Guidelines. This section is meant to inspire creativity and innovation throughout the development of the Wilmot Creek Neighbourhood. Organized by the ten One Planet Living principles, the strategies give a holistic overview of how the sustainability vision can be achieved. They offer different possible pathways to achieving the required performances. To facilitate reading, strategies with similar intent and outcomes are organized by topic. For each topic, references (written with the OPL acronym followed by a number) to the relevant requirements detailed in section 6 are provided.

### 5.1 The Guideline's DNA

As illustrated by the graphic below, the hierarchy of the guidelines is structured from the general to the specific. This cascade of Principles, Topics, Strategies and Requirements provide multi-scalar direction for the sustainable design of the future Wilmot Creek Neighbourhood.

The ten overarching One Planet Living principles form the first layer and assure that the following layers form a holistic sustainable whole. The Principles are recognizable throughout the document by their associated colors and rectangular icons. The following level, the topics, help regroup strategies and requirements with similar intent and

outcomes. The Topics are identified with icons circumscribed in circles matching in color with their associated principle. Strategies are on the third level of the hierarchy. Like a toolbox, they give inspiration on different ways to achieve certain requirements. The final level, the Requirements, is a set of mandatory and voluntary performance measures to be addressed in the development Wilmot Creek Neighbourhood. Voluntary measures (under "sustainability ambassador") are listed as pathways to demonstrate sustainability leadership.



**10**

**Principles**



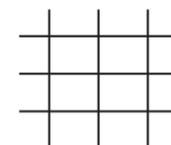
**28**

**Topics**



**>180**

**Strategies**



**110**

**Requirements**

**54** **Mandatory**

**+**

**56** **Voluntary**  
(Sustainability Ambassador)



# HEALTH AND HAPPINESS

Encouraging active, social, meaningful lives to promote good health and wellbeing.



## Public Space, Parks and Open Spaces

Providing access to a variety of green spaces close to residential and work places in an effort to encourage physical and mental health of residents, employees and visitors.

Mandatory Requirements: HH1, HH2

Voluntary Requirements: HH1, HH2

Additional Best Practice Strategies

- Privately Owned Public Space (POPS)
- Play structures
- 4-season walkability



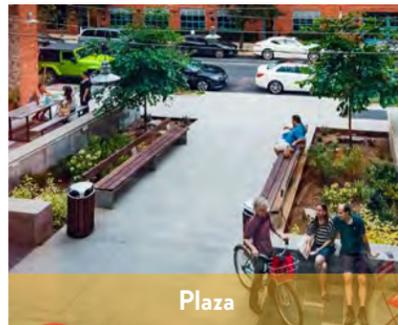
Parkette



Passive Park



Nature Park



Plaza



## Outdoor Comfort

Lowering public health stress by reducing the potential for heat-trapping in urban areas, ambient air contaminants and exposure to noise.

Mandatory Requirements: HH3, HH4, HH5

Voluntary Requirements: HH3, HH4, HH5

Additional Best Practice Strategies

- Shading
- Separation of sensitive land use
- Non-absorptive materials



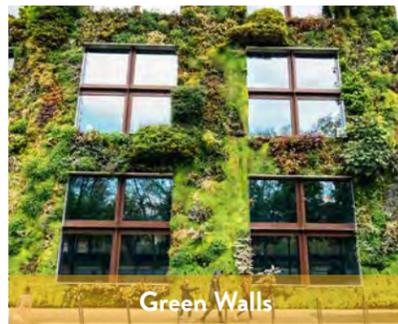
Intensive Green Roof



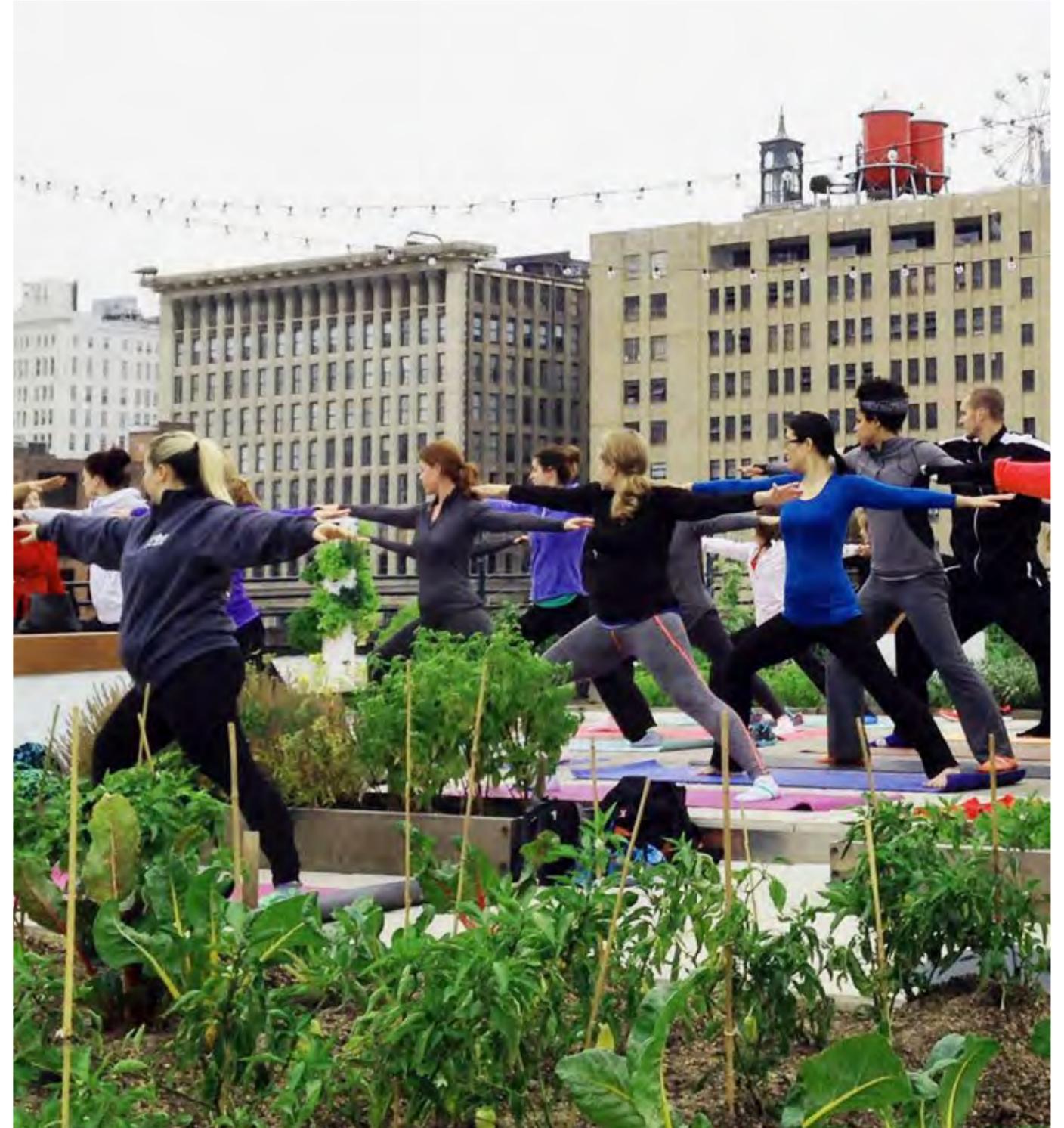
White Roof



Extensive Green Roofs



Green Walls



# EQUITY AND LOCAL ECONOMY



Creating safe, equitable places to live and work which support local prosperity and international fair trade



## Affordable Housing

Providing access to housing at reasonable costs to segments of society requiring assistance.

Mandatory Requirements: ELE1

Voluntary Requirements: ELE1

Additional Best Practice Strategies

- Secure tenancy
- Tenure options
- Preferred pricing programs



Community Housing



Supportive Housing



Purpose-Built Rental Housing



Subsidized Non-Market Housing



## Mix of Housing Types and Sizes

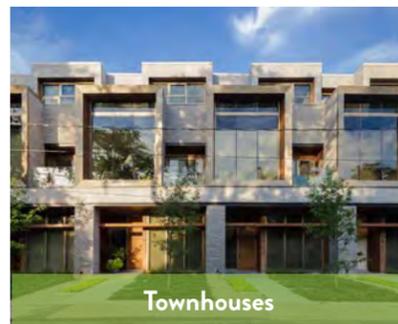
Enabling citizens from a wide range of economic levels, household sizes and age groups to live within the community by providing a sufficient variety of housing sizes and types.

Mandatory Requirements: ELE2

Voluntary Requirements: ELE2

Additional Best Practice Strategies

- Adaptable units
- Special needs housing
- Multigenerational housing



Townhouses



Mid-Rise Apartments



Live/Work Units



Accessory Dwelling Units



## Universal and Accessible Design

Ensuring public spaces and buildings are accessible and easily usable to residents, employees, and visitors of all ages and levels of ability.

Mandatory Requirements: ELE3, ELE4

Voluntary Requirements: ELE3, ELE4

Additional Best Practice Strategies

- Accessibility ramps
- Low porosity grates
- Equitable entrances



Ground Oriented Units



Continuous Cleared Paths



Tactile Surface Indicators



Automated Entrances





# CULTURE AND COMMUNITY

## Nurturing local identity and heritage, empowering communities and promoting a culture of sustainable living



### Public Art

Bolstering local identity, pride and sense of belonging by featuring art throughout the community in a way that contributes value to its cultural, aesthetic and economic vitality.

Mandatory Requirements: CC1

Voluntary Requirements: CC1

Additional Best Practice Strategies

- Botanical art
- Artistic water features
- Multi-media art spaces



Sculptures



Murals



Programming with Local Artists



Youth Art Activity



### Community and Recreational Facilities

To enhance community participation and improve public health by providing recreational facilities close to work and home that facilitate physical activity and social networking.

Mandatory Requirements: CC2

Voluntary Requirements: CC2

Additional Best Practice Strategies

- Outdoor recreational spaces
- Community workshop spaces
- Donation centres



Tot lots



Community Book Box



Community Kitchen



Community Tool Shed





# LAND USE AND NATURE

## Protecting and restoring land for the benefit of people and wildlife



### Ecological Health

Protecting and maintaining the health and ecological function of natural resources throughout the community.

Mandatory Requirements: LUN1, LUN2

Voluntary Requirements: LUN1, LUN2

Additional Best Practice Strategies

- Rooftop apiaries
- Plant species diversity
- No invasive species



Wildflower Verges



Soil Quantity and Quality



Pollinator Friendly Landscapes



Insect Hotel



### Natural Heritage

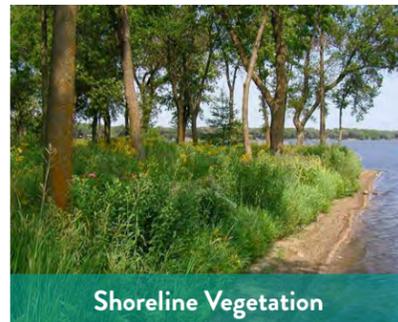
Restoring and enhancing biodiversity, prohibiting land-use change and minimizing the effects of climate change in complex ecosystems and geological structures.

Mandatory Requirements: LUN3, LUN4, LUN5

Voluntary Requirements: LUN3, LUN4, LUN5

Additional Best Practice Strategies

- Educational signage
- Conservation areas
- Habitat management plan



Shoreline Vegetation



Trail Network



Riparian Restoration



Wildlife Friendly Design



### Tree Canopy

Providing adequate tree-lined and shaded streetscapes in order to reduce urban heat island effects, improve air quality, and reduce cooling loads in buildings.

Mandatory Requirements: LUN6, LUN7, LUN8

Voluntary Requirements: LUN6, LUN7, LUN8

Additional Best Practice Strategies

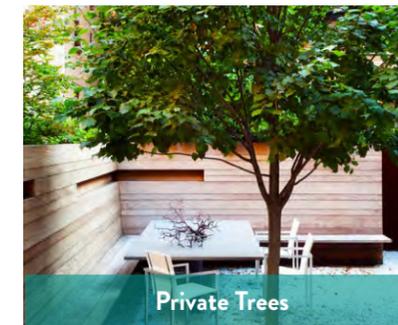
- Urban forestry strategy
- Variety of species
- Micro-forests



Deeproot Urban Landscaping



On Street Trees



Private Trees



Tree Protection and Preservation



### Light Pollution Reduction

Minimizing ambient light levels to protect public and ecological health, increase night sky access, improve nighttime visibility, and reduce the consequences of development for wildlife and people.

Mandatory Requirements: LUN9

Voluntary Requirements: LUN9

Additional Best Practice Strategies

- Design with natural cycles
- Luminary control strategy
- Dark sky compliant lighting



LED Lighting



Downcast Lighting



Minimal Lighting Spaces



Reduce Light Trespass



# SUSTAINABLE WATER

Using water efficiently, protecting local water sources and reducing flooding and drought



## Stormwater

Employing design strategies to reduce runoff volume, prevent erosion, and flooding.

Mandatory Requirements: SW1, SW2, SW3, SW4

Voluntary Requirements: SW1, SW2, SW3, SW4

Additional Best Practice Strategies

- Blue/green infrastructure
- Exposed low impact development
- Pervious paving materials



Bioswales



Off-Street Rain Gardens



Water Retention Ponds



On-Street Rain Garden



## Landscaping

Using water-efficient landscaping strategies to limit the use of potable water for landscape irrigation.

Mandatory Requirements: SW5, SW6, SW7, SW8

Voluntary Requirements: SW5, SW6, SW7, SW8

Additional Best Practice Strategies

- High-density planting
- Topsoil depth and quality
- Infiltration trenches



Stormwater Capture



Self-Sustaining Plantings and Soils



Increased Organic Matter in Soil



Hydrozoned Irrigation Systems



## Efficiency in Buildings

Reducing the burden on potable water supply and wastewater systems by maximizing indoor water efficiency.

Mandatory Requirements: SW9, SW10, SW11

Voluntary Requirements: SW9, SW10, SW11

Additional Best Practice Strategies

- Water Sense certified equipment



Low-Flow Fixtures



Rainwater Capture and Reuse



Dual Plumbing



Water Metering





# LOCAL AND SUSTAINABLE FOOD

Promoting sustainable human farming and healthy diets in local, seasonal organic food and vegetable protein



## Local Food Production

Encouraging local involvement in and education about food production through community gardens, planters, and other design strategies, in an effort to improve health and wellbeing.

Mandatory Requirements: LASF1

Voluntary Requirements: LASF1

Additional Best Practice Strategies

- Indoor Micro Gardens
- Orchards
- Apiaries



Edible Landscaping



Community Garden



Planters and Terrace Growing



Food Forest



## Access to Healthy Food

Providing access to a variety of local, organic, and affordable food sources in order to promote healthy diets and food security.

Mandatory Requirements: LASF2

Voluntary Requirements: -

Additional Best Practice Strategies

- Food education events
- Food-centered festivals



Farmer's Market



Grocery



Food Donation Bins



Food Drive

# MATERIALS AND PRODUCTS

Using materials from sustainable sources and promoting products which help people reduce consumption



## Recycled and Reclaimed Materials

Using recycled and re-purposed materials in building design in order to reduce impacts stemming from material extraction and processing.

Mandatory Requirements: MP1

Voluntary Requirements: MP1

Additional Best Practice Strategies

- Building adaptive reuse
- Recycled aggregate
- Recycled fly ash concrete



Recycled Content Insulation



Reclaimed Bricks



Reclaimed Wood



Pavement Re-Use



## Sustainable Materials

Reducing the environmental impacts of building materials and products through design and operations strategies.

Mandatory Requirements: -

Voluntary Requirements: MP2

Additional Best Practice Strategies

- Sustainable procurement policy
- Producer responsibility programs
- Product disclosure



Low Embodied Carbon Materials



Life Cycle Assessment



Sustainable Labeled Products



Bio-Based and Non-Toxic Materials



# TRAVEL AND TRANSPORT

## Reducing the need to travel, and encouraging walking, cycling and low carbon transport



### Walkability

Encouraging walking by designing accessible and connected sidewalk and crosswalk networks as a means of improving public health and reducing environmental impacts.

Mandatory Requirements: TT1, TT2, TT3

Voluntary Requirements: TT1, TT2, TT3

Additional Best Practice Strategies

- Crime Prevention Through Environmental Design (CPTED)
- Street closures for special events
- Building-height-to-street ratio



Public Space Facing Entries



Sidewalks



Small Blocks



Boardwalk Pedestrian Pathways



### Complete Streets

Designing, operating, and maintaining streets such that users of all ages and abilities, regardless of their transportation mode, are able to navigate in a safe, convenient, and accessible manner.

Mandatory Requirements: TT7

Voluntary Requirements: TT7

Additional Best Practice Strategies

- Street terrace
- Shared street
- Slow traffic measures



Inclusive for All Abilities



Green and Blue Features



Shared Space Between Users



Street Furniture



### Bikeability

Providing access to cycling networks, bike lanes, and related infrastructure to encourage active lifestyles and low carbon transportation.

Mandatory Requirements: TT4, TT5, TT6

Voluntary Requirements: TT4, TT5, TT6

Additional Best Practice Strategies

- Bike repair stations
- Outdoor bike storage
- E-bike plug-ins



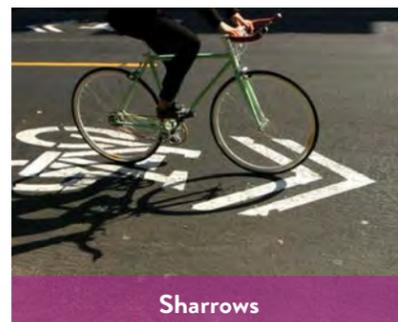
Bike Network



Indoor Bike Storage



Protected Bike Lanes



Sharrows



### Vehicle Parking

Providing sufficient parking space for a variety of vehicle types, including bicycles, scooters, electric and traditional cars.

Mandatory Requirements: TT8, TT9, TT10

Voluntary Requirements: TT8, TT9, TT10

Additional Best Practice Strategies

- Minimized Visual Impact
- Underground Parking
- Adaptable parking infrastructure



Electric Vehicle Charging Stations



Reduced Parking Footprint



Preferential Parking



Car Sharing



# TRAVEL AND TRANSPORT

Reducing the need to travel, and encouraging walking, cycling and low carbon transport



## Compact Development

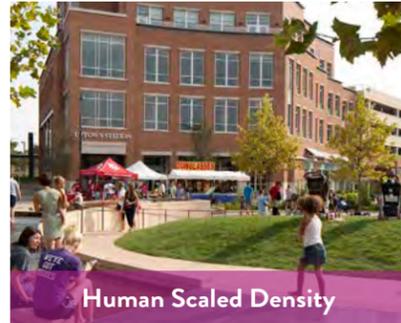
To conserve land, promote livability, walkability, and transportation efficiency and reduce vehicle distance travelled while improving public health by encouraging daily physical activity and access to amenities.

Mandatory Requirements: TT11, TT12

Voluntary Requirements: TT11, TT12

Additional Best Practice Strategies

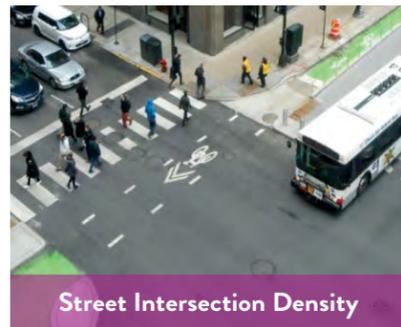
- 15-minute community
- Building-height-to-street ratio
- Walking distance to essential needs



Human Scaled Density



Mix of Uses



Street Intersection Density



Integrated Steet Network



# ZERO WASTE

Reducing consumption, resting and recycling to achieve zero waste and zero pollution



## Occupancy Collection and Storage

Providing adequate waste collection storage space to facilitate effective waste management and disposal.

Mandatory Requirements: ZW1

Voluntary Requirements: ZW1

Additional Best Practice Strategies

- Item swap library for residents
- Donation bin
- Composting bin



Tri-sorter Waste Chutes



Waste Haulers Dedicated Area



Hazardous Waste Disposal Area



Organics Collection (Green Bin)



## Construction Diversion and Collection

Ensuring appropriate treatment and diversion of non-hazardous construction and demolition debris while reducing construction waste sent to landfills

Mandatory Requirements: ZW2, ZW3

Voluntary Requirements: ZW2, ZW3

Additional Best Practice Strategies

- Reuse demolition materials
- Separation strategy
- Channel materials for re-use



Waste Management Plan



Designated Recycling Area



Landfill Diverted Materials



3R Regulations



# ZERO CARBON

## Making building and manufacturing energy efficient and supplying all energy with renewables



### Building Energy Performance

Reducing the environmental and economic impacts associated with excessive energy use by employing various design strategies that promote energy conservation and minimize heat loss.

Mandatory Requirements: ZC1, ZC2

Voluntary Requirements: ZC1, ZC2

Additional Best Practice Strategies

- Thermal Energy Demand Intensity
- Efficient Lighting
- Smart User Controls



Increased Insulation



High-Performance Glazing



Reduced Thermal Bridging



High-Efficiency Mechanical System



### Building Resilience

Employing design strategies that strengthen the resilience of buildings and communities to climate change risks, natural and man-made hazards and extreme events.

Mandatory Requirements: -

Voluntary Requirements: ZC7

Additional Best Practice Strategies

- Building resiliency plan



Refuge Area



Basement Flood Protection



Back-Up Power Generation



Extreme Wind Protection



### Renewable Energy

Increasing the self-supply of renewable energy in an effort to reduce Greenhouse Gas emissions, as well as the environmental and economic harms related to fossil fuel energy.

Mandatory Requirements: ZC4, ZC5, ZC6

Voluntary Requirements: ZC3, ZC4, ZC5, ZC6

Additional Best Practice Strategies

- Photovoltaics
- Purchase Renewable Energy Credits



Solar Readiness



Passive Solar Alignment



Invest in Off-Site Generation



Solar Walls





## SECTION 6 IMPLEMENTATION AND REQUIREMENTS

### Overview

The following section serves as a checklist for the development of the Wilmot Creek Neighbourhood. It includes all the mandatory requirements that must be met to deliver the project’s sustainability ambitions. In addition to meeting all the mandatory requirements, a minimum of three voluntary requirements, labelled under “sustainability ambassador”, must be achieved. To demonstrate sustainability leadership, going beyond these minimal requirements is highly encouraged.

Globally, the requirements have been tailored to address the opportunities and challenges that have emerged through the site context summarized in section 3. They are also informed by the Official Plan, Secondary Plan, and Priority Green as described in section 4.

Requirements apply to both the private and public realm and are organized under the OPL principles. Checkmarks indicate

whether the requirements apply to the public or private realm or both.

Public realm requirements are related to the design of elements within the public realm, including the design of roads, parks, trails, gateways, streetscape design elements, street trees and landscaping, and stormwater management facilities. Guidance is also provided for the interface with natural heritage features and their role as defining character elements in the Town.

The design of the public realm and its relationship to the private realm plays an incredibly important role in place-making, defining the community character, and presenting an attractive and successful image to residents and visitors. The private realm is comprised of the built form and site design within development blocks and their relationship to adjacent open spaces and roads. Private realm requirements are related to building design and site organization.



# HEALTH AND HAPPINESS

Mandatory

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## Public Space, Parks and Open Space

HH1

### ACCESS

Locate and/or design the project such that a civic or passive-use space, such as a square, park, or plaza, at least 675 square metres in area lies within a 400 metre walk distance of 80% of planned and existing dwelling units and nonresidential building entrances. Spaces less than 4,050 square metres must have a proportion no narrower than 1 unit of width to 4 units of length, per LEED ND v4.

### ACCESS

Locate and/or design the project such that a civic or passive-use space, such as a square, park, or plaza, at least 675 square metres in area lies within a 400 metre walk distance of 90% of planned and existing dwelling units and nonresidential building entrances. Spaces less than 4,050 square metres must have a proportion no narrower than 1 unit of width to 4 units of length, per LEED ND v4.



HH2

### VISIBILITY AND SAFETY

Public street frontage is not less than 30% of the perimeter of the public space **AND** All development, with a focus on streetscapes, parks and open spaces, parking lots and other publicly accessible areas, shall include Crime Prevention Through Environmental Design (CPTED) principles as per Official Plan 7.5.25.

### VISIBILITY AND SAFETY

Satisfy the mandatory requirement **AND** Each public space is provided with at least two public street and/or valley land frontages.



## Outdoor Comfort

HH3

### HEAT ISLAND REDUCTION

50% of the non-roof site paving (including roads, sidewalks, courtyards, parking lots, parking structures, and driveways) have a solar reflectance value of at least 0.28 **AND** Residential buildings four storeys or more and non-residential buildings: 50% of the roof area of all new buildings within the project have a minimum solar reflectance index value of 82 (for low-sloped roofs <2.12) or 39 (for steep-sloped roofs >2.12) **OR** Buildings over 4 storeys: Install a vegetated (“green”) roof for at least 50% of the roof area.

### HEAT ISLAND REDUCTION

75% of the non-roof site paving (including roads, sidewalks, courtyards, parking lots, parking structures, and driveways) have a solar reflectance value of at least 0.28 **AND** Residential buildings four storeys or more and non-residential buildings: 50% of the roof area of all new buildings within the project have a minimum solar reflectance index value of 82 (for low-sloped roofs <2.12) or 39 (for steep-sloped roofs >2.12) **OR** Buildings over 4 storeys: Install a vegetated (“green”) roof for at least 75% of the roof area.





# HEALTH AND HAPPINESS

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(Voluntary)

Public Private



## Outdoor Comfort

HH3

### OUTDOOR AIR QUALITY

As per the Secondary Plan, separation of sensitive land-uses from air pollutant sources is done through appropriate separation distances, land use planning, and zoning.



HH4

### NOISE POLLUTION MITIGATION

As per the Secondary Plan, provide a Noise Feasibility Study to the satisfaction of the Municipality that anticipates noise impacts and noise mitigation measures that will be needed.

### NOISE POLLUTION MITIGATION

Design and locate exterior noise sources so that the following project noise levels for residential projects, do not exceed the following noise levels in bedrooms: maximum interior noise level (Lmax) of 45 dBA average interior noise level (Leq, 8h) of 30 dBA.



# EQUITY AND LOCAL ECONOMY

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(Voluntary)

Public Private



## Affordable Housing

ELE1

A minimum of 30% of all new residential units produced are affordable to households of low and moderate income, per the Municipality of Clarington's Official Plan (6.2.2) AND in accordance with Secondary Plan 8.2.14, 8.2.15 and 8.2.16 for land provision and funds contribution.

A minimum of 35% of all new residential units produced are affordable to households of low and moderate income, per the Municipality of Clarington's Official Plan (6.2.2) AND in accordance with Secondary Plan 8.2.14, 8.2.15 and 8.2.16 for land provision and funds contribution.



## Mix of Housing Types and Sizes

ELE2

Include a sufficient variety of housing sizes and types in the project such that the total variety of planned and existing housing within the project respects the Official Plan and Secondary Plan.

Include a sufficient variety of housing sizes and types in the project such that the total variety of planned and existing housing within the project achieves a Simpson Diversity Index score between 0.5 and 0.6, per LEED ND v4.



## Universal and Accessible Design

ELE3

### BUILDINGS

Accessibility measures and design features are provided in accordance with the Accessibility for Ontarians with Disabilities Act (AODA) AND the Ontario Building Code.

### BUILDINGS

Accessibility measures and design features go beyond the Accessibility for Ontarians with Disabilities Act (AODA) AND the Ontario Building Code.



ELE4

### PUBLIC SPACE

Incorporate Tactile Walking Surface Indicators on all new and repaired infrastructure, per Ontario's Integrated Accessibility Standards including:  
- Stairs that connect to exterior paths of travel  
- Curb ramps and depressed curbs on an exterior path of travel AND Pedestrian infrastructure meets the Accessibility for Ontarians with Disabilities Act (AODA).

### PUBLIC SPACE

Incorporate at least two additional design features not required in Ontario's Integrated Accessibility Standards.





# CULTURE AND COMMUNITY

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## Public Art

CC1

Incorporate at least one public art feature into at least one open public space or a public building

Incorporate at least two public art feature into at least one open public space or a public building **AND** organize a competition for local artists.



## Community and Recreational Facilities

CC2

Locate or design the project so that a publicly accessible outdoor recreation facility at least 1 acre (0.4 hectares) in area, lies within a 800-meter walking distance of 90% of new and existing dwelling units and nonresidential use entrances. Outdoor recreation facilities must consist of physical improvements and may include "tot lots," swimming pools, and sports fields, such as baseball diamonds as per LEED ND V4.

Locate or design the project so that a publicly accessible outdoor recreation facility at least 1 acre (0.4 hectares) in area, lies within a 800-meter walking distance of 90% of new and existing dwelling units and nonresidential use entrances. Outdoor recreation facilities must consist of physical improvements and may include "tot lots," swimming pools, and sports fields, such as baseball diamonds as per LEED ND V4. **AND** Where practical, create a community hub through the joint use of institutional and community facilities at a strategic location adjacent to parks and public open space.



# LAND USE AND NATURE

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(Voluntary)

Public Private



## Ecological Health

LUN1

### SOIL QUANTITY AND QUALITY

Satisfy Municipal topsoil, sodding and seeding requirements **AND** 150 mm topsoil layer for entire landscaped area consists of a native soil / amendment mixture as recommended by a Certified Arborist, based on native soils testing.

### SOIL QUANTITY AND QUALITY

Satisfy mandatory requirements **AND** all sodded areas to have a topsoil layer with an organic matter content of 10 to 15% by dry weight, a soil pH of 6.0 to 8.0 and a minimum depth of 60 centimetres. The subsoil should have a total uncompacted soil depth of 90 centimetres.



LUN2

### BIODIVERSITY

Landscape at least 25% of public park space as biodiversity-friendly and free of invasive species and grass lawns **AND** New trees and landscaping within parks are of a diverse, robust species selection as per the Secondary Plan 11.2.5.b.

### BIODIVERSITY

Landscape at least 35% of public park space as biodiversity-friendly and free of invasive species and grass lawns **AND** New trees and landscaping within parks are of a diverse, robust species selection as per the Secondary Plan 11.2.5.b. **AND** provide each low-density unit with space for planters or flowerbeds at least the size of 10% of the private greenspace.



## Natural Heritage

LUN3

### NATURALIZATION

Every application for development or site alteration shall identify planning, design and construction practices that ensure that no buildings or other site alterations impede the movement of plants and animals within or adjacent to the natural heritage system **AND** Naturalize 50% of the Environmental Protection Area, as identified by the local Conservation Authority, within the site **AND** New development and public realm improvements shall only use native plantings within 30 metres of Environmental Protection Areas as per Secondary Plan 6.3.3.

### NATURALIZATION

Every application for development or site alteration shall identify planning, design and construction practices that ensure that no buildings or other site alterations impede the movement of plants and animals within or adjacent to the natural heritage system **AND** Naturalize more than 90% of the Environmental Protection Area, as identified by the local Conservation Authority, within the site. **AND** New development and public realm improvements shall only use native plantings within 30 metres of Environmental Protection Areas as per Secondary Plan 6.3.3.





# LAND USE AND NATURE

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Public Private



# LAND USE AND NATURE

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Public Private



## Natural Heritage

LUN4

### ECOLOGICAL INTEGRITY

Satisfy Municipal Official Plan requirements **AND** Within the natural heritage system area, undertake enhancement of existing on-site natural heritage features, such as removal of invasive species or stream restoration.

### ECOLOGICAL INTEGRITY

Satisfy mandatory requirements **AND** Undertake enhancement of other existing on-site and adjacent natural heritage features, for the equivalent of at least 10% of the site area.



LUN5

### CONNECTIONS

Satisfy Municipal Official Plan requirements **AND** Visual or managed physical connections (e.g. public access blocks, single loaded roads, trail connections to existing or planned trail network; where appropriate as determined by the Municipality and/or Conservation Authority) are provided to 50% of the natural heritage system and parks network **AND** Visual or managed physical connections are linked to the active transport network.

### CONNECTIONS

Satisfy Municipal Official Plan requirements **AND** Visual or managed physical connections (e.g. public access blocks, single loaded roads, trail connections to existing or planned trail network; where appropriate as determined by the Municipality and/or Conservation Authority) are provided to 75% of the natural heritage system and parks network **AND** Visual or managed physical connections are linked to the active transport network.



## Tree Canopy

LUN6

### TREE REPLACEMENT

Satisfy Municipal Tree Preservation Plan requirements **AND** Globally for the site, any trees removed are replaced by two new trees to increase in the long term the existing tree canopy **AND** Where trees and shrubs are destroyed or harvested pre-maturely prior to proper study and approval, compensation will be calculated at a 3:1 ratio as per Official Plan 6.3.6.

### TREE REPLACEMENT

Satisfy Municipal Tree Preservation Plan requirements **AND** Globally for the site, any trees removed are replaced by three or more new trees to increase in the long term the existing tree canopy **AND** Where trees and shrubs are destroyed or harvested pre-maturely prior to proper study and approval, compensation will be calculated at a 3:1 ratio as per Official Plan 6.3.6.



## Tree Canopy

LUN7

### TREE PLANTING

Provide no less than (1) street tree per ten (10.0) linear metres on public and private streets and roads **AND** Follow spacing requirements per 3.2.1 of the Landscape Design Guidelines for Site Planting.

### TREE PLANTING

Satisfy mandatory requirements **AND** Provide a private front yard/backyard tree program (at no additional cost) available for home buyers.



LUN8

### COVERAGE

Trees provide shade on at least 40% of park benches and multi-use paths within 10 years of plant material installation.

### COVERAGE

Satisfy mandatory requirement **AND** Provide an analysis report to the City's satisfaction that demonstrates a projected 50% tree canopy coverage within a period of 30 years for the Secondary Plan Area.



## Light Pollution Reduction

LUN9

100% of exterior light fixtures are LED **AND** are full cut-off lights, shielded or down-facing to reduce the amount of glare and light trespass experienced by neighbouring properties as per Official Plan.

100% of exterior light fixtures are LED **AND** are full cut-off lights, shielded or down-facing **AND** with the exception of street lights, are installed on timers or motion sensors to turn lights off when not in use, per LEED ND v4.





# SUSTAINABLE WATER

Mandatory

Sustainability Ambassador  
(Voluntary)

Public

Private



# SUSTAINABLE WATER

Mandatory

Sustainability Ambassador  
(Voluntary)

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## Stormwater

SW1

### PAVED AREAS

Reduce the impact of paved surface devoted to parking areas through the use of curbed planting islands and walkway islands that separate and define large parking areas into smaller well-defined areas, while enhancing growing conditions for trees AND include at least one shade tree per island or per at 10 m interval within the same island.

### PAVED AREAS

Satisfy mandatory requirement AND Use porous or permeable pavement instead of standard asphalt and concrete for at least 10% of surfacing sidewalks, driveways, parking areas, and road surfaces AND at least 25% of parking islands include stormwater management features like rain gardens or bioswales.



SW2

### QUALITY

Demonstrate best management practices (BMPs) are used to treat runoff, removing at least 80% of the average annual post-development total suspended solids (TSS).

### QUALITY

Demonstrate best management practices (BMPs) are used to treat runoff, removing at least 90% of the average annual post-development total suspended solids (TSS).



SW3

### QUANTITY

Provide quantity or flood control in accordance with applicable Municipal and Conservation Authority and Official Plan requirements.

### QUANTITY

Retain runoff volume from the 10 millimetre rainfall event on site.



SW4

### FACILITY DESIGN FEATURES

Satisfy Municipal stormwater pond planting requirements AND Provide an internal trail network connecting to the surrounding area or integrated with an adjacent trail network(s).

### FACILITY DESIGN FEATURES

Satisfy Municipal stormwater pond planting requirements AND Provide an internal trail network connecting to the surrounding area or integrated with an adjacent trail network(s) AND Provide amenity features acceptable to the Municipality that provide functional and/or aesthetic benefit to the site (e.g. site furniture, shade structure).



## Landscaping

SW5

### IRRIGATION

Design the landscape to not require a permanent irrigation system OR Reduce the project's landscape water requirement (using strategies listed in Section 5 of this Guide) by at least 30% from the calculated baseline for the site's peak watering month, per LEED BD+C v4.1.

### IRRIGATION

Design the landscape to not require a permanent irrigation system OR Reduce the project's landscape water requirement (using strategies listed in Section 5 of this Guide) by at least 50% from the calculated baseline for the site's peak watering month, per LEED BD+C v4.1.



SW6

### RAINWATER MANAGEMENT

In a manner best replicating natural site hydrology processes, retain (i.e. infiltrate, evapotranspire, or collect and reuse) on-site the runoff from the developed site for, at minimum, the 80th percentile of regional or local rainfall events using low-impact development (LID) and green infrastructure (GI) practices, per LEED BD+C v4.1.

### RAINWATER MANAGEMENT

In a manner best replicating natural site hydrology processes, retain (i.e. infiltrate, evapotranspire, or collect and reuse) on-site the runoff from the developed site for, at minimum, the 85th percentile of regional or local rainfall events using low-impact development (LID) and green infrastructure (GI) practices, per LEED BD+C v4.1.



SW7

### LOW-IMPACT DEVELOPMENT

Retain rainfall on site through at least one low-impact development feature.

### LOW-IMPACT DEVELOPMENT

Create an innovative stormwater management design plan that demonstrates less reliance on end-of-pipe facilities with at least two low-impact development features.



SW8

### NATIVE, DROUGHT-TOLERANT PLANTS

Native, drought-tolerant plants used for 50% of the landscaped area.

### NATIVE, DROUGHT-TOLERANT PLANTS

Native, drought-tolerant plants used for more than 60% of the landscaped area.





# SUSTAINABLE WATER

Mandatory

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(Voluntary)

Public Private



# LOCAL AND SUSTAINABLE FOOD

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## Efficiency in Buildings

### FIXTURES AND FAUCETS

Satisfy Ontario Building Code requirements **AND** Include at least 10% of water fixtures and faucets that are Water Sense certified or equivalent.

### FIXTURES AND FAUCETS

Reduce indoor aggregate water consumption by 20% from the following baselines:  
- Toilet: 6 litres per flush  
- Urinal: 3.8 litres per flush  
- Public restroom faucet: 1.9 litres per minute at 415 kPa  
- Private restroom faucet: 8.3 litres per minute at 415 kPa  
- Kitchen faucet: 8.3 litres per minute at 415 kPa  
- Showerhead: 9.5 litres per minute at 550 kPa per shower stall per LEED BD+C v4.1.

SW9



### WATER METERING

In at least 75% of all buildings, install permanent water meters that measure the total potable water use for the building and associated grounds.

### WATER METERING

Per LEED BD+C v4.1, install permanent water meters for two of the following water subsystems, as applicable to the project:  
- Irrigation  
- Indoor plumbing and fixtures  
- Domestic hot water  
- Boiler with aggregate projected annual water use of 378,500 litres or more  
- Reclaimed water  
- Other process water

SW10



### RAINWATER REUSE

At least one building is designed to accommodate a rainwater harvesting system (i.e. plumbing infrastructure roughed in, adequate utility room design) **OR** Rainwater reuse system installed for low-grade functions (e.g. toilet flushing, irrigation).

### RAINWATER REUSE

More than 25% of the buildings are designed to accommodate a rainwater harvesting system (i.e. plumbing infrastructure roughed in, adequate utility room design) **OR** Rainwater reuse system installed for low-grade functions (e.g. toilet flushing, irrigation) **OR** has a roof drainage system that is redirected towards landscaping.

SW11



## Local Food Production

Include at least one permanent and viable growing space or related facility (ex. community garden, greenhouse, etc.) with a total size of at least 3000 sqm **AND** Ensure solar access and provide fencing, watering systems, garden bed enhancements (such as raised beds), secure storage space for tools, and pedestrian access for these spaces. Per LEED ND v4, permanent and viable

growing space or related facilities (such as greenhouses) has been dedicated according to the following density ranges (dwelling unit/hectare):  
- 17.5 and 35 du/ha: 18.5 sqm growing space  
- 35 and 55 du/ha: 9 sqm growing space  
- 55 and 69 du/ha: 7.5 sqm growing space  
- 69 and 87 du/ha: 6.5 sqm growing space  
- 87 du/ha: 5.5 sqm growing space

LSF1



## Access to Healthy Food

Include an outdoor temporary or permanent space where food can be sold (ex. market stands)

LSF2





# TRAVEL AND TRANSPORT

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(Voluntary)

Public Private



# TRAVEL AND TRANSPORT

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## Walkability

TT1

### FUNCTIONAL ENTRIES

At least 70% of new buildings have a main entrance onto the circulation network or other public space, such as a park or plaza, but not a parking lot AND In Medium Density Residential areas dwelling units shall have their main entrance visible and accessible from the public street as per Secondary Plan (12.3.7.).

### FUNCTIONAL ENTRIES

At least 90% of new buildings have a functional entry onto the circulation network or other public space, such as a park or plaza, but not a parking lot, per LEED ND v4.



TT2

### BLOCK LENGTHS

Provide neighbourhood permeability by designing blocks to be generally no more than 200 metres in length to promote active transportation, discourage excessive driver speed, and disperse traffic movements. Avoid the use of cul de sacs except where necessary for grading and topography.

### BLOCK LENGTHS

All blocks are no more than 150 metres in length and no cul de sacs are used.



TT3

### SIDEWALK PROVISION

Design the public realm to ensure efficient walking routes forming a continuous network to key destinations with continuous sidewalks, or equivalent provisions for walking like multi-use paths.

### SIDEWALK PROVISION

Continuous sidewalks OR equivalent all-weather routes for walking are provided along both sides of at least 90% of the circulation network block length within the project, including the project side of circulation network bordering the project, per LEED ND v4.



## Bikeability

TT3

### SHORT TERM STORAGE

90% of all new residential buildings four storeys or more and non-residential buildings provide the following short-term bike storage rates per LEED ND v4:  
- Non-residential: 2.5% of peak visitors  
- Multit-unit residential: 2.5% of peak visitors  
- Retail: 2 spaces for every 465 sqm  
- Mixed-use: See above requirements.

### SHORT TERM STORAGE

95% of new buildings provide the following short-term bike storage rates per LEED ND v4:  
- Non-residential: 2.5% of peak visitors  
- Multit-unit residential and townhouses: 2.5% of peak visitors  
- Retail: 2 spaces for every 465 sqm  
- Mixed-use: See above requirements.



## Bikeability

TT5

### LONG TERM STORAGE

90% of all new residential buildings four storeys or more and non-residential buildings provide the following short-term bike storage rates per LEED ND v4:  
- Non-residential: 5% of all regular building occupants  
- Multit-unit residential: 30% of all regular building occupants  
- Retail: 5% of regular building occupants  
- Mixed-use: See above requirements.

### LONG TERM STORAGE

95% of new buildings provide the following long-term bike storage rates per LEED ND v4:  
- Non-residential: 5% of all regular building occupants  
- Multit-unit residential and townhouses: 30% of all regular building occupants  
- Retail: 5% of regular building occupants  
- Mixed-use: See above requirements.



TT6

### BIKE NETWORK

Meet the bike network design requirements of the Clarington Transportation Master Plan (CTMP) and the Region of Durham Regional Cycling Plan.

### BIKE NETWORK

Go beyond the bike network design requirements of the Clarington Transportation Master Plan (CTMP) and the Region of Durham Regional Cycling Plan by incorporating additional cycling infrastructure.



## Complete Streets

TT7

All public streets are designed as complete streets (as per Municipality of Clarington OP 5.3.1 and Secondary Plan) by addressing diversified needs in mobility, green infrastructure, safety and equity.

Satisfy mandatory requirement **AND** one residential shared street is present on site as per National Association of City Transportation Officials (NACTO).





# TRAVEL AND TRANSPORT

Mandatory

Sustainability Ambassador  
(Voluntary)

Public Private



# TRAVEL AND TRANSPORT

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(Voluntary)

Public Private



## Vehicle Parking

TT8

### ELECTRIC VEHICLE CHARGING STATIONS

For residential buildings four storeys or more and non-residential buildings:  
At least 20% of parking spaces are equipped with electric vehicle charging stations. All remaining spaces are designed to enable future charging station installation, per the Ontario Building Code.

### ELECTRIC VEHICLE CHARGING STATIONS

At least 50% of dwelling units/buildings designed and constructed "electric vehicle ready."



TT9

### FLEXIBLE PARKING STRUCTURES

For each major parking structure, develop a strategy that details how the parking structure could be adapted to accommodate a 50% reduction in parking stalls.



TT10

### SURFACE PARKING

Structured parking is explored for higher density forms of development in the High Density, Medium Density, and Neighbourhood Centre designations. Where it is not feasible to locate parking in structures either below or above grade, parking should be located to the rear of the principal buildings or within the interior side yard. Appropriate landscaping and screening measures shall be provided as per Secondary Plan 7.5.18 AND Surface parking lots should be screened from view from roads, open spaces, and adjacent residential areas with low fencing, architectural features, landscaping and/or other mitigating design measures, such as lowered parking surfaces with landscaped buffers as per Secondary Plan 12.5.10.

### SURFACE PARKING

Less than 20% of the total development footprint area is used for new off-street surface parking facilities, with no individual surface parking lot larger than 0.8 hectares, per LEED ND v4.



## Compact Development

TT11

### DENSITY

Minimum residential density requirements as per Official Plan and Secondary Plan targets.

### DENSITY

Achieve a density that is greater than the minimum density targets applicable to the area, but is consistent with the policies of the Official Plan regarding compatibility with the built form OR For areas in a Secondary Plan, provide the maximum when there is a minimum/maximum range given for density and/or storeys.



TT12

### ACCESS TO DAILY NEEDS

50% of dwelling units are within a 400-meter walking distance of at least to 2 diverse uses, per LEED ND v4.

### ACCESS TO DAILY NEEDS

50% of dwelling units are within a 400-meter walking distance of at least to 3 diverse uses, per LEED ND v4 AND One of these uses is food-related (ex. Convenience store, grocery store, etc.).





# MATERIALS AND PRODUCTS

Mandatory

Sustainability Ambassador  
(Voluntary)

Public Private



# ZERO WASTE

Mandatory

Sustainability Ambassador  
(Voluntary)

Public Private



## Recycled and Reclaimed Materials

MP1

At least 5% reused/reclaimed content in building materials and/or landscaping materials (hardscaping such as paving or walkways) is provided **AND** At least 5% recycled content in building materials and/or landscaping materials (hardscaping such as paving or walkways).

At least 10% reused/reclaimed content in building materials and/or landscaping materials (hardscaping such as paving or walkways) is provided **AND** At least 10% recycled content in building materials and/or landscaping materials (hardscaping such as paving or walkways).



## Sustainable Materials

MP2

Per LEED BD+C v4.1, conduct at least one life cycle assessment of a building's structure and enclosure that demonstrates a minimum of 5% reduction, compared with a baseline building in at least three of the six impact categories listed below, one of which must be global warming potential:  
- global warming potential (greenhouse gases), in kg CO<sub>2</sub>e;  
- depletion of the stratospheric ozone layer, in kg CFC-11e;  
- acidification of land and water sources, in moles H<sup>+</sup> or kg SO<sub>2</sub>e;  
- eutrophication, in kg nitrogen eq or kg phosphate eq;  
- formation of tropospheric ozone, in kg NO<sub>x</sub>, kg O<sub>3</sub> eq, or kg ethene; and  
- depletion of nonrenewable energy resources, in MJ using CML / depletion of fossil fuels in TRACI.



## Occupancy Collection and Storage

ZW1

Provide dedicated areas accessible to waste haulers and building occupants for the collection and storage of recyclable materials for the entire building, per LEED BD+C v4.1. Collection and storage areas may be separate locations. Recyclable materials must include mixed paper, corrugated cardboard, glass, plastics, and metals **AND** Take appropriate measures for the safe collection, storage, and disposal of two of the following: batteries, mercury-containing lamps, electronic waste.

Meet at least two of the following requirements and publicize their availability and benefits.  
- Include as part of the project at least one drop-off point, available to all project occupants, for potentially hazardous office or household wastes and establish a plan for post-collection disposal or use; or locate the project in a local government jurisdiction that provides collection services.  
- Include as part of the project at least one compost station or location, available to all project occupants  
- On every mixed-use or nonresidential block or at least every 245 metres, whichever is shorter, include recycling containers either adjacent to or integrated into the design of other receptacles.



## Construction Diversion and Collection

ZW2

### NONHAZARDOUS DEBRIS

Recycle and/or salvage at least 75% of non-hazardous construction and demolition debris and locate a designated area on site during construction for recyclable materials

### NONHAZARDOUS DEBRIS

Recycle and/or salvage at least 90% of non-hazardous construction and demolition debris and locate a designated area on site during construction for recyclable materials



ZW3

### CONSTRUCTION WASTE MANAGEMENT

Satisfy provincial "3R's" regulations for construction activities **AND** A construction waste management plan is submitted and implemented to attain a diversion target for construction, demolition and land clearing waste from landfill.

### CONSTRUCTION WASTE MANAGEMENT

Per LEED BD+C v4.1, develop and implement a construction and demolition waste management plan:  
- Establish waste diversion goals for the project by identifying at least five materials (both structural and nonstructural) targeted for diversion.  
- Specify whether materials will be separated or comingled and describe the diversion strategies planned for the project. Describe where the material will be taken and how the recycling facility will process the material including expected diversion rates for each material stream **AND** Provide a final report detailing all major waste streams generated, including disposal and diversion rates **AND** achieve a diversion of approximately 50% or more of construction, demolition and land clearing waste from landfill.





# ZERO CARBON

Mandatory

Sustainability Ambassador  
(Voluntary)

Public Private



## Building Energy Performance

ZC1

### ENERGY USE

Buildings are designed to meet Ontario Building Code energy requirements.

### ENERGY USE

Buildings are designed to use 15% less energy than Ontario Building Code requirement.



ZC2

### THERMAL ENERGY DEMAND INTENSITY

Buildings are designed to meet Ontario Building Code energy requirements.

### THERMAL ENERGY DEMAND INTENSITY

Design and demonstrate that multi-unit residential buildings (≥4 Storeys) **AND** commercial/retail buildings meet or exceed 70 KWh/m<sup>2</sup> performance.



## Renewable Energy

ZC3

### GENERATION

Incorporate on-site nonpolluting renewable energy generation with production capacity of at least 5% of the project's annual electrical and thermal energy cost (exclusive of existing buildings), per LEED ND v4.



ZC4

### PASSIVE SOLAR ALIGNMENT

For 50% of new streets or buildings, the street or building(s) axis is within 15 degrees of E-W The building(s) E-W lengths are at least as long as the N-S lengths.

### PASSIVE SOLAR ALIGNMENT

For residential buildings four storeys or more and non-residential buildings, design and orient the project or locate the project on existing blocks such that one axis of 75% or more of the blocks is within ±15 degrees of geographical east-west, and the east-west lengths of those blocks are at least as long as the north-south lengths, per LEED ND v4.



# ZERO CARBON

Mandatory

Sustainability Ambassador  
(Voluntary)

Public Private



## Renewable Energy

ZC5

### SOLAR READINESS 1

For residential buildings four storeys or more and non-residential buildings, 50% of the buildings are designed to accommodate connections to solar PV or solar thermal technologies.

### SOLAR READINESS 1

For residential buildings four storeys or more and non-residential buildings, all buildings are designed to accommodate connections to solar PV or solar thermal technologies.



ZC6

### SOLAR READINESS 2

For low-rise residential development, 50% of the buildings are designed to accommodate connections to solar PV or solar thermal technologies.

### SOLAR READINESS 2

For low-rise residential development, all buildings are designed to accommodate connections to solar PV or solar thermal technologies.



## Building Resilience

ZC7

For residential buildings four storeys or more and non-residential building, provide a refuge area with heating, cooling, lighting, potable water, and power available and 72 hours of backup power to the refuge area and essential building systems **OR** Implement the primary measures for basement flood protection, extreme wind protection, and extreme heat protection from the most recent version of the Durham Region Climate Resilience Standard for New Houses.



# APPENDIX REFERENCES

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**URBAN  
EQUATION**

*Clarrington*