

City of Mississauga Green Development Standard

Low-Rise Multi-Unit Residential Developer Checklist

APPLICABILITY: LOW-RISE MULTI-UNIT RESIDENTIAL DEVELOPMENT (≤ 4 STOREYS)

INSTRUCTIONS

The following high-performance checklist is applicable to low-rise multi-unit residential (≤ 4 storeys with 10 units or more) development targeting Tier 2 or Tier 3 performance requirements of Mississauga’s Green Development Standard. The Low-Rise Multi-Unit Residential Development Guidebook provides additional details on the performance requirements, submission and documentation requirements, specifications and applicable site exclusions, and resources to assist applicants in completing their GDS submission. Applicants are required to complete the Developer Checklist using the information provided in the Guidebook.

PROJECT INFORMATION

Project Address

Application Number

Date Received

Theme 1: Energy and Building Performance



METRIC	TIER 2 REQUIREMENTS	TIER 3 REQUIREMENTS	SUBMISSION REQUIREMENTS FOR SITE PLAN APPROVAL	REFERENCE PLAN AND DRAWINGS NUMBER, AND/OR REPORT NAME
EB1: ENERGY PERFORMANCE	Design and construct the building in accordance with the CHBA Net Zero Ready Home Labelling Program	Design and construct the building in accordance with the CHBA Net Zero Home Labelling Program or Passive House Standards.	<ul style="list-style-type: none"> CHBA Net Zero Home Labelling Program: Proof of registration and certification Passive House Canada: Proof of registration, copy of Passive House Design Documentation Review Report and Design Stage Assurance Letter 	

METRIC	TIER 2 REQUIREMENTS	TIER 3 REQUIREMENTS	SUBMISSION REQUIREMENTS FOR SITE PLAN APPROVAL	REFERENCE PLAN AND DRAWINGS NUMBER, AND/OR REPORT NAME
EB2: AIR TIGHTNESS TESTING	<p>Conduct a whole-building air leakage test to improve the quality and airtightness of the building envelope-the project must target equal to or less than 2.0 L/s/m2 (at 75 Pa)</p>	<p>Achieve Tier 2 requirements, plus</p> <p>Target equal to or less than 1.0 L/s/m2 (at 75 Pa)</p>	<ul style="list-style-type: none"> • Construction Document Stage: air leakage testing plan from third-party testing agency • Project Completion: air leakage testing report 	
EB3: BENCHMARKING AND COMMISSIONING	<p>Enrol the project in ENERGY STAR® Portfolio Manager to benchmark and report on operational energy performance</p> <p>Complete the following commissioning (Cx) process activities for mechanical, electrical, plumbing, and renewable energy systems and assemblies, in accordance with ASHRAE Guideline 0-2005 and ASHRAE Guideline 1.1-2007 for HVAC&R Systems, as they relate to energy, water, indoor environmental quality, and durability</p>	<p>Achieve Tier 2 requirements</p>	<ul style="list-style-type: none"> • ENERGY STAR® Portfolio Manager enrolment • Building Commissioning Report 	

Theme 2: Climate Impact



METRIC	TIER 2 REQUIREMENTS	TIER 3 REQUIREMENTS	SUBMISSION REQUIREMENTS FOR SITE PLAN APPROVAL	REFERENCE PLAN AND DRAWINGS NUMBER, AND/OR REPORT NAME
C11: EMBODIED CARBON	Conduct an Upfront Embodied Emissions Assessment for A1–A5 life-cycle stage emissions in accordance with CAGBC Zero Carbon Building Standard - demonstrate an emissions intensity of less than 133 kg CO ₂ /m ²	Achieve Tier 2 requirements, plus demonstrate an emissions intensity of less than 100 kg CO ₂ /m ²	<ul style="list-style-type: none"> Materials Emissions Assessment Report: CAGBC Zero Carbon Building Embodied Carbon Reporting Template (V3 or later) 	
C12: ELECTRIC VEHICLE CHARGING INFRASTRUCTURE	<p>MURBs with garages, driveways, or adjacent parking spaces: provide electrical infrastructure capable of supplying Level 2 charging or higher</p> <p>MURBs with above or below ground parking structures: equip 25% of resident parking spaces with Level 2 or higher EVSE and remaining with EV-Ready outlets. Provide a minimum of 1 visitor parking spaces with Level 2 or higher EVSE</p>	<p>MURBs with garages, driveways, or adjacent parking spaces: provide electrical infrastructure capable of supplying Level 2 charging or higher.</p> <p>MURBs with above or below ground parking structures: equip 25% of resident parking spaces with Level 2 or higher EVSE and remaining with EV-Ready outlets. Provide a minimum of 1 visitor parking spaces with Level 2 or higher EVSE</p>	<ul style="list-style-type: none"> Parking Plans: EV and EV-Ready spaces, performance level Letter of Commitment: number of EVSE and rough-ins provided and the percentage of parking spaces with EVSE and rough-ins Statistics Template: Transportation Section 	

METRIC	TIER 2 REQUIREMENTS	TIER 3 REQUIREMENTS	SUBMISSION REQUIREMENTS FOR SITE PLAN APPROVAL	REFERENCE PLAN AND DRAWINGS NUMBER, AND/OR REPORT NAME
C13: CONSTRUCTION WASTE MANAGEMENT	<p>Develop and implement a construction and demolition waste management plan, and divert at least 75% of total construction and demolition material from landfill OR Produce less than 100 kg/m² of construction and demolition waste through reuse and source reduction design strategies. Salvage or recycle renovation and demolition debris and utilize waste minimizing design strategies for new construction elements</p>	<p>Develop and implement a construction and demolition waste management plan, and divert at least 90% of total construction and demolition material from landfill OR Produce less than 75 kg/m² of construction and demolition waste through reuse and source reduction design strategies. Salvage or recycle renovation and demolition debris and utilize waste minimizing design strategies for new construction elements</p>	<ul style="list-style-type: none"> • Construction and Waste Management Plan • Letter of Commitment: post-construction report 	
C14: INTERIOR WASTE	<p>Provide a shared access to central waste collection and waste diversion, and a minimum of three waste streams are required at each collection station: garbage, recycling, and composting</p> <p>The room must be accessible with a minimum floor space of 25m² for the first 50 units plus an additional 13m² for each additional 50 units</p>	<p>Achieve Tier 2, plus: Provide a minimum of 1m² for every 100 units of dedicated household hazardous waste and electronic waste collection space</p> <p>Provide in-cabinet space in all kitchen sets for three waste stream sorting: garbage, recycling, and composting</p>	<ul style="list-style-type: none"> • Letter Floor Plan: Identify waste collection areas, sizes, and techniques used 	

METRIC	TIER 2 REQUIREMENTS	TIER 3 REQUIREMENTS	SUBMISSION REQUIREMENTS FOR SITE PLAN APPROVAL	REFERENCE PLAN AND DRAWINGS NUMBER, AND/OR REPORT NAME
C15: BICYCLE PARKING AND AMENITIES	<p>Bike repair station: provide at least 1 bike repair station in a publicly accessible location at grade or on the first parking level of the build below grade</p> <p>Electric bicycle charging infrastructure: equip the greater of 15% of the long-term bike parking, or a total of 1 space, with an Energized Outlet (120V) adjacent to the bicycle rack or parking spaces</p>	Achieve Tier 2 requirements	<ul style="list-style-type: none"> Transportation Study indicate the types and locations of cycling amenities included Site Statistics Template: Transportation Section 	

Theme 3: Resilience



METRIC	TIER 2 REQUIREMENTS	TIER 3 REQUIREMENTS	SUBMISSION REQUIREMENTS FOR SITE PLAN APPROVAL	REFERENCE PLAN AND DRAWINGS NUMBER, AND/OR REPORT NAME
R1: EMISSIONS FREE ENERGY AND STORAGE	Provide a minimum of 15% of building's annual energy consumption from one or a combination of acceptable renewable energy sources	Provide a minimum of 50% of building's annual energy consumption from one or a combination of acceptable renewable energy sources	<ul style="list-style-type: none"> Letter of Commitment: quantify percentage of energy consumption from one or combination of renewable energy sources Elevation Plans and Floor Plans: modifications to enable renewable energy systems and storage 	

METRIC	TIER 2 REQUIREMENTS	TIER 3 REQUIREMENTS	SUBMISSION REQUIREMENTS FOR SITE PLAN APPROVAL	REFERENCE PLAN AND DRAWINGS NUMBER, AND/OR REPORT NAME
R2: REFUGE AND BACK-UP POWER GENERATION	Submit a Resilience Planning Checklist	Achieve Tier 2 requirements	<ul style="list-style-type: none"> Completed Resilience Planning Checklist 	

Theme 4: Ecology

METRIC	TIER 2 REQUIREMENTS	TIER 3 REQUIREMENTS	SUBMISSION REQUIREMENTS FOR SITE PLAN APPROVAL	REFERENCE PLAN AND DRAWINGS NUMBER, AND/OR REPORT NAME
E1: BIRD FRIENDLY GLAZING AND DESIGN	Align bird-friendly designs with Canadian Standards Association (CSA) A460: 19: Bird Friendly Design standards for treatment of glazing materials, building integrated permanent structures, and overall building and site design	Achieve Tier 2 requirements	<ul style="list-style-type: none"> Elevation Plan, Floor Plan, Landscape Plan, and Roof Plan: indicate bird-friendly designs, rooftop vegetation, and ground-level ventilation grate treatments Site Statistics Template: Bird Friendly Design Statistics Section 	

METRIC	TIER 2 REQUIREMENTS	TIER 3 REQUIREMENTS	SUBMISSION REQUIREMENTS FOR SITE PLAN APPROVAL	REFERENCE PLAN AND DRAWINGS NUMBER, AND/OR REPORT NAME
E2: EXTERIOR LIGHTING	All exterior fixtures must be Dark Sky Compliant and all rooftop and exterior facade architectural illumination must be directed downward	Achieve Tier 2 requirements	<ul style="list-style-type: none"> Site Plan, Landscape Plan, and Elevation Plan identify location of all exterior lighting and illumination direction, Dark Sky compliance, and exclusions 	

Theme 5: Natural Systems



METRIC	TIER 2 REQUIREMENTS	TIER 3 REQUIREMENTS	SUBMISSION REQUIREMENTS FOR SITE PLAN APPROVAL	REFERENCE PLAN AND DRAWINGS NUMBER, AND/OR REPORT NAME
NS1: HEAT ISLAND EFFECT	Use combination of the following strategies to treat at least 90% of the site's (non-roof) hardscape: <ul style="list-style-type: none"> High-albedo paving materials Open grid pavement and/or permeable surfaces Shade from existing or new tree canopy Shade from energy generation structures 	Achieve Tier 2 requirements	<ul style="list-style-type: none"> Site Statistics Template: Landscape and Natural Systems Statistics Section Materials List: SRI of high albedo paving Landscape Plan: treated hardscape and soft landscaping 	

METRIC	TIER 2 REQUIREMENTS	TIER 3 REQUIREMENTS	SUBMISSION REQUIREMENTS FOR SITE PLAN APPROVAL	REFERENCE PLAN AND DRAWINGS NUMBER, AND/OR REPORT NAME
NS2: TREE GROWTH	<p>Plant 'shade trees' 6-8 m (20- 27 ft.) apart along the street frontages, and should be drought tolerant and non-invasive</p> <p>Provide adequate rooting space to support tree health and growth, through the minimum soil volume of 30m³ for each new tree</p>	Achieve Tier 2 requirements	<ul style="list-style-type: none"> • Landscape Plan: location of all new tree plantings, and species list • Soils Report signed by qualified professional • Site Statistics Template: Tree Growth Section 	
NS3:CLIMATE-RESILIENT LANDSCAPES	<p>In all landscaped areas, including green roofs, plant a minimum of 75% native plants and comply with Ontario Invasive Plant Council Guidelines. Refer to GDS Guidebook for native flowering and drought tolerant species requirements.</p> <p>For vegetated buffer areas, adjacent Significant Natural Features, plant 100% native plants</p> <p>Provide a natural heritage restoration and/or enhancement plan with the proposed locations of natural heritage restoration, design specifications, and ecological function</p>	<p>In all landscaped areas, including green roofs, plant a minimum of 90% native plants and comply with Ontario Invasive Plant Council Guidelines, including. Refer to GDS Guidebook for native flowering and drought tolerant species requirements.</p> <p>For vegetated buffer areas, adjacent Significant Natural Features, plant 100% native plants</p> <p>Provide a natural heritage restoration and/or enhancement plan with the proposed locations of natural heritage restoration, design specifications, and ecological function</p>	<ul style="list-style-type: none"> • Landscape Plan: native plantings, plant list, and irrigation requirements • Natural Heritage Restoration Plan and/or Enhancement Plan 	

METRIC	TIER 2 REQUIREMENTS	TIER 3 REQUIREMENTS	SUBMISSION REQUIREMENTS FOR SITE PLAN APPROVAL	REFERENCE PLAN AND DRAWINGS NUMBER, AND/OR REPORT NAME
NS4: SUSTAINABLE ROOFS	<p>Buildings with an available roof area larger than 500m² must include one or a combination of green roof, cool roof, blue roof and/or solar PV:</p> <ul style="list-style-type: none"> • Green roof and/or blue roof for at least 50% of Available Roof Space (calculated using Guidebook) • Cool roof installed for 100% of Available Roof Space (calculated using Guidebook) • Use a combination of a green, blue, cool roof or solar PV for at least 75% of Available Roof Space 	Achieve Tier 2 requirements	<ul style="list-style-type: none"> • Floor Plan, and Roof Plan: green roof, cool roof, and/or blue roof locations identified on elevations and roof plan • Landscape Plan (Green Roofs): the potable irrigation systems servicing the green roof and submit maintenance plan • Stormwater Management Report and Plan (Blue Roofs): quantifying blue roof storage and run-off • Site Statistics Template: Sustainable Roofs Section 	
NS5: STORMWATER MANAGEMENT	<p>Retain 80% runoff generated from a minimum of 27 mm depth of rainfall from all site surfaces using rain barrels integrated to supplement non-potable water uses (required), and a combination of the Stormwater Management Practices outlined in the Stormwater Management Planning and Design Manual Infill Development</p>	<p>Retain 100% runoff generated from a minimum of 27 mm depth of rainfall from all site surfaces using rain barrels integrated to supplement non-potable water uses (required), and a combination of the Stormwater Management Practices outlined in the Stormwater Management Planning and Design Manual Infill Development</p>	<ul style="list-style-type: none"> • Stormwater Management Plan 	

METRIC	TIER 2 REQUIREMENTS	TIER 3 REQUIREMENTS	SUBMISSION REQUIREMENTS FOR SITE PLAN APPROVAL	REFERENCE PLAN AND DRAWINGS NUMBER, AND/OR REPORT NAME
NS6: WATER CONSUMPTION	<p>Reduce irrigation water consumption by 60% using a combination of treatment measures for reuse of greywater and blackwater (e.g., rain barrels, cisterns, green roofs, filtration ponds)</p> <p>Reduce building water consumption (not including irrigation) by 20% using water fixtures or non-potable water sources</p>	<p>Reduce irrigation water consumption by 80% using a combination of treatment measures for reuse of greywater and blackwater (e.g., rain barrels, cisterns, green roofs, filtration ponds)</p> <p>Reduce building water consumption (not including irrigation) by 40% using water fixtures or non-potable water sources</p>	<ul style="list-style-type: none"> Letter of Commitment confirming potable and non-potable water reduction strategies 	