

City of Mississauga

Green Development Standard



Low-Rise Multi-Unit Residential Development Guidebook Tier 2 and 3 Voluntary Metrics

Land Acknowledgement

We acknowledge the lands which constitute the present-day City of Mississauga as being part of the Treaty and Traditional Territory of the Mississaugas of the Credit First Nation, The Haudenosaunee Confederacy, and The Huron-Wendat and Wyandot Nations. We recognize these peoples and their ancestors as peoples who inhabited these lands since time immemorial. The City of Mississauga is home to many global Indigenous Peoples.

As a municipality, the City of Mississauga is actively working towards Reconciliation by confronting our past and our present, providing space for Indigenous peoples within their territory, to recognize and uphold their Treaty Rights and to support Indigenous peoples. We formally recognize the Anishinaabe origins of our name and continue to make Mississauga a safe space for all Indigenous peoples.

Prepared for:

City of Mississauga

Prepared by:

Sustainability Solutions Group (SSG)

Prepared:

July 2024



Table of Contents

Land Acknowledgement	1
Guidebook Purpose	3
Green Development Standard Scope	4
Application Process	5
Mandatory Metrics	6
Theme 1: Energy and Building Performance	6
Theme 2: Climate Impact	10
Theme 3: Resilience	16
Theme 4: Ecology	17
Theme 5: Natural Systems	19

Abbreviations

- | | |
|--|--|
| ADC: Alternative daily cover | LEED: Leadership in Energy and Environmental Design |
| BEAM: Building Emissions Accounting for Materials | LID: Low Impact Development |
| BECxA: Building Enclosure Commissioning Agent | MCE2: Material Carbon Emissions Estimation |
| BOD: Basis of Design | MEP: Mechanical, Electricity, and Plumbing |
| BOP: Builder Option Package | MFA: Modelled Floor Area |
| CAGBC: Canadian Green Building Council | MURB: Multi-Unit Residential Building |
| CHBA: Canadian Homebuilder’s Association | NECB: National Energy Code of Canada |
| CO2e: Carbon Dioxide Equivalent | NIBS: National Institute of Building Sciences |
| CSA: Canadian Standards Association | NRCan: Natural Resources Canada |
| EA: Energy Advisor | OBC: Ontario Building Code |
| EV: Electric Vehicle | OESC: Ontario Electrical Safety Code |
| EVSE: Electric Vehicle Supply Equipment | OPR: Owner’s Project Requirements |
| EVEMS: Electric Vehicle Energy Management Systems | Pa: Pascal |
| FLAP: Fatal Light Awareness Program | PAM: Pre-Application Meeting |
| GDS: Green Development Standard | PV: Photovoltaic |
| GHG: Greenhouse Gas | TEDI: Thermal Energy Demand Intensity |
| GHGI: Greenhouse Gas Intensity | TEUI: Total Energy Use Intensity |
| ICI: Institutional, Commercial and Industrial | |

Guidebook Purpose

This Low-Rise Multi-Unit Residential Guidebook provides details on the performance measures, submission and documentation requirements, specifications and applicable site exclusions, and resources to assist applicants in completing their Green Development Standard (GDS) submission. The requirements presented in this Guidebook are applicable to low-rise residential development with 10 units or more, and to a maximum height equal to or less than 4 storeys. Applicants are required to complete the Developer Checklist using the information provided in this Guidebook.

Mississauga’s GDS has been designed as three tiers of performance across five themes: energy and building performance, resilience, climate change, ecology, and natural systems.

- Mandatory Metrics provide the mandatory minimum criteria needed to be met across all themes and measures for the project to be approved. All metrics are mandatory unless a metric exemption is discussed during the application process. The subsequent tiers include increased performance criteria, all of which need to be achieved to meet the next tier. The performance and submission requirements for each mandatory metric are provided in the Mandatory Metrics Section of this Guidebook.
- High-Performance Metrics provide additional criteria for Tier 2 and Tier 3 across all themes and measures. The performance and submission requirements for each high-performance metric are provided in the High-Performance Metrics Section of this Guidebook.

Green Development Standard Scope

The GDS applies to all new residential and non-residential development subject to the City’s Site Plan Control By-law (0293-2006), which is designed to review the location and function of buildings and structures and maintain City standards. Table 1 provides a summary of the City’s GDS scope.

Table 1. Mississauga’s Green Development Standard scope.

GDS SCOPE	
Applicability	As all lands in the city are designated as a Site Plan Control Area (per the City’s Official Plan 19-9), the GDS applies to all new development subject to the Site Plan Control By-law (0293-2006).
Exemptions	<p>The following classes of development are not required to submit a GDS application; however, applicants are encouraged to implement relevant sections of the GDS where possible:</p> <ul style="list-style-type: none"> • Detached single-unit residential buildings with less than 10 residential units. • Limited Site Plans for site alterations, ground-based units, and telecommunications towers; • Renovations and expansions to existing buildings; • Applicants that already have an approved Site Plan as of the proposed approval of the GDS’ March 1, 2025; and • City of Mississauga corporate buildings.

GDS SCOPE	
Building archetypes	<p>Building archetypes align with the City of Mississauga’s Official Plan classification and Ontario Building Type classifications:</p> <ul style="list-style-type: none"> • Multi-unit residential: <ul style="list-style-type: none"> • Low-rise residential buildings include multi-unit residential buildings less than four storeys with 10 or more residential units. • Medium- to high-rise residential buildings include multi-unit residential buildings greater than five storeys. • Non-residential buildings: <ul style="list-style-type: none"> • Institutional buildings include education buildings, nursing homes, retirement homes, care facilities, health care facilities, etc. • Commercial buildings include retail, restaurant, grocery, automotive, repair services, office, hotels and lodging, entertainment, etc. • Industrial buildings include warehouses, distribution centres, research and development facilities, truck and distribution terminals, etc.
Requirements	<p>Mississauga’s GDS is a three tiered system:</p> <ul style="list-style-type: none"> • 2025 - 2027: Tier 1 Mandatory Performance Requirements • 2028 - 2030: Tier 2 Performance Requirements • 2030: Tier 3 Performance Requirements
Financial incentives	<p>The City of Mississauga is exploring financial incentives for high-performance metrics.</p>

Application Process

The Green Development Standards (GDS) is integrated into the City’s existing Site Plan Approval application process managed by the City’s Planning & Building Department - Development and Design Division. The GDS submission materials and supporting documentation will be submitted using the ePlans portal and form a part of a complete application. Table 2 outlines the Site Plan approval process and GDS submission requirements during each phase of the application.

Table 2. Green Development Standard submission steps during the Site Plan Application Procedure.

STEP	PURPOSE	OUTCOME
Pre-Application Meeting Request	Applicants submit Site Plan application and GDS checklist via e-Plans portal.	<p>Detailed pre-screen review of application is completed.</p> <p>Pre-application meeting scheduled (PAM 1).</p>
Pre-Application Meeting (PAM) 1	<p>Identify the GDS checklist as a submission requirement.</p> <p>Applicants are advised of the GDS requirements relevant to their development application and the four building types.</p>	<p>Submission requirements for complete application identified.</p>

STEP	PURPOSE	OUTCOME
Revisions (External)	<p>Applicant revises application based on feedback and submission requirements identified through PAM 1.</p> <p>Applicant prepares GDS Checklist and plans/drawings, commitment letters and component studies to verify compliance with GDS.</p>	<p>Updated application, GDS checklist, and supporting documentation are uploaded to e-Plans prior to PAM 2.</p> <p>Pre-application meeting scheduled (PAM 2).</p>
PAM 2	<p>Applicants advise City staff on changes to application and submitted material.</p> <p>City staff provide feedback on the submitted GDS Checklist and plans/drawings and component studies to verify conformance to GDS Terms of Reference documents.</p>	<p>Report on Terms of Reference conformity and any outstanding documents provided by the City to the applicant.</p> <p>Next steps are determined based on applicant's conformance to Terms of Reference documents and supporting documentation.</p>
Pre-Submission Work and Application Submission	<p>Applicant uploads complete Site Plan Application including GDS checklist and supporting documents via ePlans.</p>	<p>Complete Site Plan Application is circulated for internal review.</p>
Circulation/ Technical Review (Internal)	<p>City staff review submitted plans/drawings and component studies to verify compliance with GDS.</p>	<p>Report on application compliance and any outstanding documents or unmet metric targets provided by the City to the applicant.</p> <p>Application review is completed within 30 calendar days of ePlans submission.</p>
Decision Made on Application	<p>At the time of conditional approval, the City will include any outstanding requirements related to the GDS within the Conditions of Site Plan Approval.</p>	<p>Applicants are notified of conditional approval status.</p>
Detailed Design/Site Construction	<p>Applicants demonstrate compliance with GDS requirements in the detailed design submission and clearance of conditions.</p>	<p>Issue final Site Plan Approval in accordance to GDS compliance.</p>

High-Performance Voluntary Metrics

Theme 1: Energy and Building Performance



EB1: ENERGY PERFORMANCE

The Tier 2 and Tier 3 Energy Performance requirements are designed to ensure that new low-rise residential buildings are constructed using energy-efficient and cost-effective best practices identified by the Canadian Home Builders’ Association (CHBA) Net Zero Ready and Net Zero Home Labelling Program, and Passive House Canada. The performance and submission requirements summary for low-rise multi-unit residential buildings are provided in Table 13.

Table 3. Tier 2 and Tier 3 EB1: Energy Performance requirements for low-rise multi-unit residential development.

METRIC	TIER 2 REQUIREMENTS	TIER 3 REQUIREMENTS	SUBMISSION REQUIREMENTS
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.	<p>CHBA Net Zero Home Labelling Program: Proof of registration and certification, including a report prepared by a CHBA Qualified Net Zero Energy Advisor (EA) confirming the requirements for plan evaluation, airtightness, and inspection are met.</p> <p>Passive House Canada: Proof of registration, copy of Passive House Design Documentation Review Report and Design Stage Assurance Letter. The final certification must be submitted to the City following construction.</p>

Submission Specifications

If pursuing the CHBA Net Zero Ready Certification or Net Zero Certification:

1. A CHBA Qualified Net Zero Service Organization (SO) and EA must be used to verify compliance with the Technical Requirements outlined in the CHBA Net Zero Home Labelling Program Administrative Requirements.

2. A CHBA Qualified Net Zero EA must be used to confirm the requirements for plan evaluation, air tightness testing, and inspection are met.

If pursuing Passive House Certification:

1. Complete the Passive House Canada Certification process with a third-party qualified evaluator. A completed Passive House Certification includes the proof of registration, a copy of the Passive House Design Documentation Review Report, and a Design Stage Assurance Letter. The final certification must be submitted to the City following construction.

Resources

- [CHBA Net Zero Home Labelling Program Administrative Requirements](#)—Technical requirements for completing Net Zero Home Labelling (low-rise MURBs).
- [Canadian Association of Consulting Energy Advisors](#)—A list of Energy Advisors familiar with GDS Energy Modelling Reports.

EB2: AIR TIGHTNESS TESTING

The Tier 2 and Tier 3 Air Tightness Testing requirements are designed to measure air tightness and identify issues related to air leakage that will impact the overall building performance, energy efficiency, and indoor air quality. This is achieved through the use of a whole-building air leakage test of the building’s envelop at a pressure of 75 Pascal (Pa), which stimulates the typical conditions experienced by a building due to temperature and wind variations. The practice involves sealing all operable openings and pressurizing the building to gauge resistance to air leakage through the envelope. The performance and submission requirements summary for low-rise multi-unit residential buildings are provided in Table 14.

Table 4. Tier 2 and Tier 3 EB2: Air Tightness Testing requirements for low-rise multi-unit residential development.

METRIC	TIER 2 REQUIREMENTS	TIER 3 REQUIREMENTS	SUBMISSION REQUIREMENTS
EB2: AIR TIGHTNESS TESTING	Conduct a whole-building air leakage test to improve the quality and airtightness of the building envelope.	Achieve Tier 2 requirements, plus: Target equal to or less than	Construction Document Stage: Air leakage testing plan from third-party testing agency. Project Completion: Air leakage testing report.
	Target equal to or less than 2.0 L/s/m ² (at 75 Pa) through whole-building air infiltration testing.	1.0 L/s/m ² (at 75 Pa) through whole-building air infiltration testing.	

Submission Specifications

1. During the Construction Document Stage, develop an air leakage testing plan prepared by a third-party testing agency outlining the timing of construction, detailed reviews, envelope mock-ups, site inspections, and the final air infiltration testing and report.
 - a. Air leakage testing plan must follow the [ASTM-3158-18 Standard Test Method for Measuring the Air Leakage Rate of a Large or Multizone Building](#) and the City of Toronto’s: Whole-Building Air Leakage Testing Protocol to demonstrate compliance with specified air leakage rates for the building type.

- b. If whole-building air leakage testing is not feasible (as identified by a third-party agency), guarded testing is permitted. Guarded testing includes sample air leakage testing performed at the podium, base of tower, top of tower, unique floors, and at two contiguous floors every 10 floors.
2. Following project completion, the air leakage testing report must be submitted to the City.
3. If the building is pursuing Passive House Certification as part of the EB1: Energy Performance requirements, testing as per the Passive House requirements can be used to demonstrate compliance with EB2: Air Tightness Testing. Convert the final results to L/s/m² @ 75Pa.

Resources

- [ASTM-3158-18 Standard Test Method for Measuring the Air Leakage Rate of a Large or Multizone Building](#)—Required testing standards for large and multi-zone buildings.
- [BC Housing: Illustrated Guide Achieving Airtight Buildings \(2017\)](#)—Guidance for achieving airtight building envelopes.
- [Toronto Green Standard Guideline: Whole-Building Air Leakage Testing Protocol](#)—Guidance for completing multi-zone buildings.

EB3: BENCHMARKING AND COMMISSIONING

The Tier 2 and Tier 3 Benchmarking and Commissioning requirements are designed to ensure the design, construction, and operation of the building meets energy, water, indoor air quality, and durability best practices. The requirements use the following to achieve the objectives:

- ENERGY STAR® Portfolio Manager: Energy benchmarking tool to monitor, rate, and optimize the building's energy use through an online platform.
- LEED v4 requirements for Fundamental Commissioning and Verification: Provides framework to document and verify the building's performance in accordance with the design documentation and intent and according to the operational requirements from the design phase to one year post construction.

The performance and submission requirements summary for low-rise multi-unit residential buildings are provided in Table 15 (next page).

Table 5. Tier 2 and Tier 3 EB3: Benchmarking and Commissioning requirements for low-rise multi-unit residential developments.

METRIC	TIER 2 REQUIREMENTS	TIER 3 REQUIREMENTS	SUBMISSION REQUIREMENTS
EB3: BENCHMARKING AND COMMISSIONING	Enrol the project in ENERGY STAR® Portfolio Manager to benchmark and report on operational energy performance.		Benchmarking Report: Provide proof of enrollment in ENERGY STAR® Portfolio Manager to benchmark and track energy and water consumption during operations.
	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.	Achieve Tier 2 requirements	Building Commissioning: Report in accordance with ASHRAE Guideline 0-2005 and the National Institute of Building Sciences (NIBS) Guideline 3-2012, exterior enclosure technical requirements for the commissioning process, as they relate to energy, water, indoor environmental quality, and durability.

Submission Specifications

To complete the benchmarking requirements:

1. Enroll project in ENERGY STAR® Portfolio Manager to benchmark and track energy and water consumption. Complete tracking in accordance with [Ontario Regulation 506/18 for privately owned buildings](#).

To complete the building commissioning requirements:

1. Follow [LEED v4 requirements for Fundamental Commissioning and Verification](#), 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 Systems, as they relate to energy, water, indoor environmental quality, and durability.
2. Exterior enclosures are limited to the inclusion of the Owner’s Project Requirements (OPR) and Basis of Design (BOD). The review of exterior enclosure design may be performed by a qualified member of the design or construction team who is not directly responsible for the building envelope design. [NIBS Guideline 3-2012](#) for exterior enclosures provides additional guidance.

Resources

- [NRCan ENERGY STAR® Portfolio Manager](#)—Access page for ENERGY STAR® Portfolio Manager and additional guidance and information on using portfolio.
- ASHRAE Guideline 0-2005 and [ASHRAE Guideline 1.1-2007](#)—Guidance for completing commissioning process activities.

- [ASTM E2947-16: Standard Guide for Building Enclosure Commissioning](#)—Guidance for including for the enclosure commissioning process from its project planning through design, construction and occupancy and operation phases and roles and responsibilities for Building Enclosure Commissioning Agent (BECxA).
- [LEED v4 requirements for Fundamental Commissioning and Verification](#)—Guidance for completing commissioning process activities for mechanical, electrical, plumbing, and renewable energy systems and assemblies.
- [NIBS Guideline 3-2012](#)—Guidance for exterior enclosures BECx process.
- [Ontario Regulation 506/18 for privately owned buildings](#)—Regulation for reporting energy consumption and water use in privately owned buildings.

Theme 2: Climate Impact



C11: EMBODIED CARBON

The Tier 2 and Tier 3 Embodied Carbon requirements are designed to meet the objectives outlined in the C11: Embodied Carbon Section. The performance and submission requirements summary for low-rise multi-unit residential buildings are provided in Table 16.

Table 6. Tier 2 and Tier 3 C11: Embodied Carbon requirements for low-rise multi-unit residential developments.

METRIC	TIER 2 REQUIREMENTS	TIER 3 REQUIREMENTS	SUBMISSION REQUIREMENTS
C11: EMBODIED CARBON	Conduct an Upfront Embodied Emissions Assessment to measure A1-A3 life cycle stage emissions for all structural, enclosure and major finishes- 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 .	Upfront Embodied Emissions Assessment report using Building Emissions Accounting for Materials (BEAM) or Material Carbon Emissions Estimation (MCE2) model and provide the results from the “review tab” to identify all the material selections for the project and their associated emissions.

Submission Specifications

Follow the Submission Specifications outlined in C11: Embodied Carbon, plus:

1. Calculate embodied carbon by each housing typology and provide the total amount for all combined housing typologies in the development site using a weighted average calculated by gross floor area of the entire site.

Resources

- Review Resources outlined in C1: Embodied Carbon Resources

C12: ELECTRIC VEHICLE INFRASTRUCTURE

The Tier 2 and Tier 3 Electric Vehicle (EV) Infrastructure requirements are designed to support the adoption of electric vehicles by providing access to the following electric vehicle charging infrastructure:

- **EV-Capable:** Parking spaces that have the electrical panel capacity and conduit installed during construction to support future implementation of EV charging with 208/240-volt (or greater), 40-ampere (or greater) circuits. This strategy ensures the reduction of up-front costs for EV charging station installation by providing the electrical elements that are difficult to install during a retrofit. Anticipating the use of dual head EVSE, the same circuit may be used to support charging in adjacent EV-Capable spaces.
- **EV-Ready:** Parking spaces that have full circuit installations of 208/240-volt (or greater), 40-ampere (or greater) panel capacity, raceway wiring, receptacle and circuit overprotection devices. This strategy provides all required electrical hardware for the future installation of EV Supply Equipment (EVSE). Anticipating the use of dual head EVSE, the same circuit may be used to support charging in adjacent EV-Ready spaces.
- **EVSE-Installed:** EVSE that is fully installed from the electrical panel to the parking space.

The performance and submission requirements summary for low-rise multi-unit residential buildings are provided in Table 17 (next page).

Table 7. Tier 2 and Tier 3 C12: Electric Vehicle Infrastructure requirements for low-rise multi-unit residential development.

METRIC	TIER 2 REQUIREMENTS	TIER 3 REQUIREMENTS	SUBMISSION REQUIREMENTS
C12: EV CHARGING INFRASTRUCTURE	MURBs with garages, driveways, or adjacent parking spaces: provide electrical infrastructure capable of supplying Level 2 charging or higher.	MURBs with garages, driveways, or adjacent parking spaces: provide electrical infrastructure capable of supplying Level 2 charging or higher.	Parking Plan identifying the total number of parking spaces included per building on the site, the total number of parking spaces that will have EVSE and be EV-Ready, the percentage of parking spaces that will have EVSE and be EV-Ready, and the signage that will indicate parking spots are equipped with EVSE. Letter of Commitment signed by a qualified professional and owner/developer/builder confirming the number of EVSE and rough-ins provided and the percentage of parking spaces with EVSE and rough-ins. Statistics Template indicating the total number of parking spaces and total number of EV-Ready and EVSE spaces.
	MURBs with above or below ground parking structures: <ul style="list-style-type: none"> • Equip 25% of resident parking spaces (including car share) with Level 2 or higher EVSE, and remaining spaces with an energized outlet adjacent to the space for purpose of EV charging (EV-Ready), and 	MURBs with above or below ground parking structures: <ul style="list-style-type: none"> • Equip 30% of resident parking spaces (including car share) with Level 2 or higher EVSE, and remaining spaces with an energized outlet adjacent to the space for purpose of EV charging (EV-Ready), and 	
	<ul style="list-style-type: none"> • Equip a minimum of 1 visitor parking space with Level 2 or higher EVSE. 	<ul style="list-style-type: none"> • Equip a minimum of 1 visitor parking space with Level 2 or higher EVSE. 	

Submission Specifications

1. Follow the City of Mississauga’s [Parking Studies Terms of Reference](#) for completing and submitting a parking study.
2. Refer to the City of Mississauga’s [Parking, Loading, Stacking Lane, and Bicycle Parking Regulations](#) for parking rates and regulations.
3. EV-Ready and EVSE parking spaces must be installed in accordance with the [Ontario Electrical Safety Code \(OESC\)](#) standards for EV charging systems, electric vehicle energy management systems (EVEMS), and EV supply equipment demand factors without EVEMS.¹
4. EV-Ready parking spaces must be equipped with an energized electrical outlet with either a junction box with a cover plate or a receptacle, with Level 2 EVSE capabilities in the future.
5. EVSE parking spaces must be equipped with Level 2 or higher charging capabilities.
6. Signage must be provided indicating the location and use for energized outlets or EVSE parking spaces.
7. In order to ensure installation of EV charging stations, developers and builders must agree to installation prior to installation. This can be achieved through obtaining an agreement at the development stage and implementing at the building stage.

Resources

- [Government of Canada: Zero-Emission Vehicle Infrastructure Program \(ZEVIP\) \(2021\)](#).
- [Electric Mobility Canada: Frequently Asked Questions About EVs in Canada](#)—FAQs for EVs in Canada.
- [Electric Vehicle Association of Canada \(EVAC\): Electric Vehicle Charging Solutions in Canada](#)—Primer for types of EV charging stations.
- [Clean Air Partnership EV Costing Study \(2021\)](#)—EV costing study completed by the Clean Air Partnership.
- [City of Richmond: Costing Analysis](#)—EVSE costing study for electric vehicle charging infrastructure in new multi-family developments.
- [US Department of Energy Alternative Fuels Data Centre](#)—Overview of charging infrastructure terminology and requirements of EVSE installation.
- [Electric Vehicle Chargers Ontario Program Guide \(2015\)](#)—Program guide for grant program designed to cover the purchase and installation cost of public EVSEs along major inter-city transportation corridors and in urban centres.
- [Ontario Electrical Safety Code \(OESC\)](#)—Required standards for EV charging systems, electric vehicle energy management systems (EVEMS), and EV supply equipment demand factors without EVEMS.

CI3: CONSTRUCTION WASTE

The Tier 2 and Tier 3 Construction Waste requirements promote the reduction, reuse, and recycling of construction materials in order to conserve natural resources and reduce GHG emissions

¹Note: as per Rule 8-500 EVEMS are permitted to monitor loads and automatically control EVSE, the system can control loads through connecting, disconnecting, increasing, or reducing electric power to the loads.

related to waste disposal. The performance requirements for all building types align with the LEED guidelines to reduce construction and demolition waste disposed of in landfills and incineration facilities by recovering, reusing, and recycling materials. The performance and submission requirements summary for low-rise multi-unit residential buildings are provided in Table 18 (next page).

Table 8. Tier 2 and Tier 3 CI3: Construction Waste requirements for low-rise multi-unit residential developments.

METRIC	TIER 2 REQUIREMENTS	TIER 3 REQUIREMENTS	SUBMISSION REQUIREMENTS
CI3: CONSTRUCTION WASTE MANAGEMENT	Develop and implement a construction and demolition waste management plan, and divert at least 75% of total construction and demolition material from landfill.	Develop and implement a construction and demolition waste management plan, and divert at least 90% of total construction and demolition material from landfill.	Construction and Waste Management Plan identifying reuse and resource reduction strategies. Letter of Commitment for post-construction report of all waste generated, including disposal and diversion rates. Submission of post-construction report for all waste generated.
	OR Produce less than 100 kg/m ² 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.	OR Produce less than 75 kg/m ² 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.	

Submission Specifications

1. Follow the [LEED BD+C: New Construction, Construction, and Demolition Waste Management \(V4\)](#) to develop a Construction and Waste Management Plan to:
 - a. Identify strategies to reduce waste generation during project design and construction;
 - b. Establish waste diversion goals by identifying structural and non-structural materials targeted for diversion;
 - c. Establish the project’s diversion strategies; and
 - d. Identify where materials will be taken, including expected diversion rates for each material.
2. The total waste generation is calculated by tracking all materials generated from

construction to completion, including all waste and diverted materials.

- a. The following waste types are excluded from the total waste generation calculation: hazardous materials, and land-clearing debris.
3. Post-construction waste management report detailing all waste generated, including the disposal and diversion rates. Calculations can be either by weight or volume but must be consistent.
- a. Include all materials sent to alternative daily cover (ADC) waste (not diversion).
 - b. Include materials sent to a commingled recycling facility for processing in the facility’s average recycling rate and include any ADC as waste (not diversion).
 - c. Exclude excavated soil and land-clearing debris.

Resources

- [LEED BD+C: New Construction, Construction, and Demolition Waste Management \(V4\)](#)— Total waste generation calculation template.

CI4: INTERIOR WASTE

Interior waste management strategies play a crucial role in driving behavioural changes among building occupants and residents by installing waste management systems that encompass multi-stream waste collection and centralized facilities for the disposal of hazardous and bulky items. These measures contribute to enhanced sustainability within the building and foster a sense of responsibility among its users. When occupants have convenient access to proper disposal facilities, they are more likely to engage in responsible waste disposal practices, reducing the environmental impact of the building. The performance and submission requirements summary for low-rise multi-unit residential buildings are provided in Table 19.

Table 9. Tier 2 and Tier 3 CI4: Interior Waste requirements for low-rise multi-unit residential development.

METRIC	TIER 2 REQUIREMENTS	TIER 3 REQUIREMENTS	SUBMISSION REQUIREMENTS
CI4: WASTE INFRASTRUCTURE	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.	Achieve Tier 2, plus: Provide a minimum of 1m ² for every 100 units of dedicated household hazardous waste and electronic waste collection space.	Floor Plan: Identify waste collection areas, sizes, and techniques used.
	The room must be accessible with a minimum floor space of 25m ² for the first 50 units plus an additional 13m ² for each additional 50 units.	Provide in-cabinet space in all kitchen sets for three waste stream sorting: garbage, recycling, and composting.	

Submission Specifications

If pursuing Tier 2:

1. The central waste collection room must be accessible, with a minimum floor space of 25 m² for the first 50 units, plus an additional 13 m² for each additional 50 units. A minimum of three waste streams is required at each collection station: garbage, recycling, and composting.

If pursuing Tier 3:

2. The central waste collection room must be accessible, with a minimum floor space of 25 m² for the first 50 units, plus an additional 13 m² for each additional 50 units, and include a minimum of 1 m² for every 100 units of dedicated household hazardous waste and electronic waste collection space.
 - a. Hazardous waste includes car products, motor oil, windshield fluid, household cleaning products, paint, glue, primers, stains, pesticides and garden products, cooking oil, propane tanks, compact fluorescent lamp, syringes, medical sharps, medication, air fresheners, and swimming pool chemicals.
3. In cabinet storage must include three waste stream sorting containers: garbage, recycling, and composting. The minimum size is 8.5 L for garbage and composting containers and 18 L for recycling containers.

Resources

- [LEED ID + C: Storage and Collection of Recyclables \(V4\)](#)—Guidance for waste collection and storage.

CI5: BIKE PARKING AND AMENITIES

The Tier 2 and Tier 3 Bike Parking and Amenities requirements support the use of long-term and short-term parking (as identified in the City of Mississauga’s Parking, Loading, Stacking Lane, and Bicycle Parking Regulations) by providing electric bike (E-bike) charging, repair stations, and changing and showering facilities. The performance and submission requirements summary for low-rise multi-unit residential buildings are provided in Table 20.

Table 10. Tier 2 and Tier 3 CI5: Bicycle Parking and Amenities requirements for low-rise multi-unit residential buildings.

METRIC	TIER 2 REQUIREMENTS	TIER 3 REQUIREMENTS	SUBMISSION REQUIREMENTS
C15: BICYCLE PARKING AND AMENITIES	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.		
	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.	Achieve Tier 2 requirements.	Transportation Study: Indicate the types and locations of cycling amenities included. Site Statistics Template.

Submission Specifications

1. Refer to the City of Mississauga’s [Parking, Loading, Stacking Lane, and Bicycle Parking Regulations](#) for long- and short-term parking regulations.
2. Provide a minimum of 15% of the long-term bike parking, or a total of one space, with an Energized Outlet (120V) adjacent to the bicycle rack or parking spaces. Energized Outlets must be located within 1100 mm from the bike rack to accommodate the standard manufacturer-supplied power code.
 - a. All Energized Outlets must include signage indicating the location of electric bicycle charging spaces.
 - b. Bike repair stations must be located in an accessible location at grade or on the first parking level of the building below grade.
 - c. All bicycle repair stations must include signage indicating usage and location.

Resources

- [LEED ND: Plan \(V3\), Bicycle Facilities](#)—LEED bike parking requirements for non-residential, multi-unit residential, retail, and mixed-use buildings.
- [City of Mississauga: Parking, Loading, Stacking Lane, and Bicycle Parking Regulations \(2023\)](#)— Building and zoning bike parking requirements.
- [Cycle Safe: LEED Credits for Bike Parking](#)—Primer of LEED credits for bike parking and additional bike parking design recommendations.

Theme 3: Resilience



R1: EMISSIONS-FREE ENERGY AND STORAGE

The Tier 2 and Tier 3 Emissions-Free Energy and Storage requirements are designed to meet the objectives outlined in the R1: Emissions-Free Energy and Storage. The performance and submission requirements summary for low-rise multi-unit residential buildings are provided in Table 21.

Table 11. Tier 2 and Tier 3 R1: Emissions-Free Energy and Storage requirements for low-rise multi-unit residential development.

METRIC	TIER 2 REQUIREMENTS	TIER 3 REQUIREMENTS	SUBMISSION REQUIREMENTS
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.	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.

Submission Specifications

1. Follow submission specifications identified in the R1: Emissions Free Energy and Storage Section.

Resources

- Review resources identified in the R1: Emissions Free Energy and Storage Section.

R2: REFUGE SPACE AND BACK-UP POWER GENERATION

The Tier 2 and Tier 3 Refuge Space and Back-Up Power Generation requirements are designed to meet the objectives outlined in the R2: Refuge Space and Back-Up Power Generation Section. The performance and submission requirements summary for low-rise multi-unit residential buildings are provided in Table 22 (next page).

Table 12. Tier 2 and Tier 3 R2: Refuge Space and Back-Up Power Generation requirements for low-rise multi-unit residential development

METRIC	TIER 2 REQUIREMENTS	TIER 3 REQUIREMENTS	SUBMISSION REQUIREMENTS
R2: REFUGE SPACE AND BACK-UP POWER GENERATION	Submit Resilience Planning Checklist.	Achieve Tier 2 requirements.	Completed Resilience Planning Checklist.

Submission Specifications

1. Follow submission specifications identified in R2: Refuge Space and Back-Up Power Generation Section.

Resources

- Review resources identified in R2: Refuge Space and Back-Up Power Generation Section.

Theme 4: Ecology 

E1: BIRD FRIENDLY DESIGN AND GLAZING

The Tier 2 and Tier 3 Bird Friendly Design and Glazing requirements are designed to meet the objectives outlined in the E1: Bird Friendly Design and Glazing Section. The performance and

submission requirements summary for low-rise multi-unit residential buildings are provided in Table 23 (next page).

Table 13. Tier 2 and Tier 3 E1: Bird-Friendly Design requirements for low-rise multi-unit residential development.

METRIC	TIER 2 REQUIREMENTS	TIER 3 REQUIREMENTS	SUBMISSION REQUIREMENTS
E1: BIRD FRIENDLY GLAZING AND DESIGN	Align bird-friendly designs with Canadian Standards Association 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.	<p>Elevation Plan, Floor Plan, Landscape Plan and Roof Plan (green roofs), indicating:</p> <ul style="list-style-type: none"> • For bird-friendly design: treatment area and material legend showing type, density, and colour of visual markers. • For rooftop vegetation: treated area, type of treatment, surface, density, and colour of visual markers. • For ground-level ventilation grates: location of ground-level exhaust and ventilation systems with grate porosity. <p>Site Statistics Template: Bird-friendly design section.</p>

Submission Specifications

1. Follow submission specifications identified in E1: Bird Friendly Design and Glazing Section.

Resources

- Review resources identified in section R1: Emissions Free Energy and Storage.

E2: EXTERIOR LIGHTING

The Tier 2 and Tier 3 Exterior Lighting requirements are designed to meet the objectives outlined in the E2: Exterior Lighting Section. The performance and submission requirements summary for low-rise multi-unit residential buildings are provided in Table 24 (next page).

Table 14. Tier 2 and Tier 3 E2: Exterior Lighting requirements for low-rise multi-unit residential development.

METRIC	TIER 2 REQUIREMENTS	TIER 3 REQUIREMENTS	SUBMISSION REQUIREMENTS
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	Site Plan, Landscape Plan, and Elevation Plan identify: <ul style="list-style-type: none"> • Location of all exterior lighting and illumination direction; • DarkSky compliance of all exterior lighting; and • Exclusions.

Submission Specifications

1. Follow submission specifications identified in the E2: Exterior Lighting Section.

Resources

- Review resources identified in the E2: Exterior Lighting Section.

Theme 5: Natural Systems



NS1: HEAT ISLAND EFFECT

The Tier 2 and Tier 3 Heat Island Effect requirements are designed to meet the objectives outlined in the NS1: Heat Island Effect Section. The performance and submission requirements summary for low-rise multi-unit residential buildings are provided in Table 25.

Table 15. Tier 2 and Tier 3 NS1: Heat Island Effect requirements for low-rise multi-unit residential development.

METRIC	TIER 2 REQUIREMENTS	TIER 3 REQUIREMENTS	SUBMISSION REQUIREMENTS
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.	Site Statistics Template indicating the percentage of urban-heat island-treated areas to total non-roof hardscape area. Materials list includes SRI of high-albedo paving. Landscape Plan indicating location of treated hardscape and soft landscaping.

Submission Specifications

1. Follow submission specifications identified in the NS1: Heat Island Effect Section.

Resources

- Review resources identified in the NS1: Heat Island Effect Section.

NS2: TREE GROWTH

The Tier 2 and Tier 3 Tree Growth requirements are designed to meet the objectives outlined in the NS2: Tree Growth Section. The performance and submission requirements summary for low-rise multi-unit residential buildings are provided in Table 26.

Table 16. Tier 2 and Tier 3 NS2: Tree Growth requirements for low-rise multi-unit residential development.

METRIC	TIER 2 REQUIREMENTS	TIER 3 REQUIREMENTS	SUBMISSION REQUIREMENTS
NS2: TREE GROWTH	Plant 'shade trees' 6-8 m (20- 27 ft.) apart along the street frontages, and should be drought tolerant and non-invasive.	Achieve Tier 2 requirements	Landscape Plan indicating location of all new tree plantings and a species list.
	Provide adequate rooting space to support tree health and growth, through the minimum soil volume of 30m ³ for each new tree.		Soils Report signed by a qualified professional. Site Statistics Template.

Submission Specifications

1. Follow submission specifications identified in the NS2: Tree Growth Section.

Resources

- Review resources identified in the NS2: Tree Growth Section.

NS3: CLIMATE-RESILIENT LANDSCAPES

The Tier 2 and Tier Climate-Resilient Landscapes requirements are designed to meet the objectives outlined in the NS3: Climate-Resilient Landscapes Section. The performance and submission requirements summary for low-rise multi-unit residential buildings are provided in Table 27 (next page).

Table 17. Tier 2 and Tier 3 NS3: Climate-Resilient Landscapes requirements for low-rise multi-unit residential development.

METRIC	TIER 2 REQUIREMENTS	TIER 3 REQUIREMENTS	SUBMISSION REQUIREMENTS
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, including:</p> <ul style="list-style-type: none"> • Minimum of 2 native flowering species to provide continuous bloom throughout the growing season to support pollinators. • Preference for drought tolerant native species. <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:</p> <ul style="list-style-type: none"> • Minimum of 2 native flowering species to provide continuous bloom throughout the growing season to support pollinators. • Preference for drought tolerant native species. <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>Landscape Plan indicating:</p> <ul style="list-style-type: none"> • Location and percentage of native plantings. • Plant list including information about common name, scientific name, size, quantity, stock type, native or non-native, drought-tolerance, and pollinator-friendly species. • Irrigation requirements. • Compliance with Ontario Invasive Plant Council Guidelines. <p>Natural Heritage Restoration Plan and/or Enhancement Plan identifying natural heritage restoration, design specifications, and ecological restoration.</p>

Submission Specifications

1. Follow submission specifications identified in the NS3: Climate-Resilient Landscapes Section.

Resources

- Review resources identified in the NS3: Climate-Resilient Landscapes Section.

NS4: SUSTAINABLE ROOFS

The Tier 2 and Tier 3 Sustainable Roofs requirements are designed to meet the objectives outlined in the NS4: Sustainable Roofs Section. The performance and submission requirements summary for low-rise multi-unit residential buildings are provided in Table 28 (next page).

Table 18. Tier 2 and Tier 3 NS4: Sustainable Roofs requirements for low-rise multi-unit residential development.

METRIC	TIER 2 REQUIREMENTS	TIER 3 REQUIREMENTS	SUBMISSION REQUIREMENTS
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. • Cool roof installed for 100% of Available Roof Space. • Use a combination of a green, blue, cool roof or solar PV for at least 75% of Available Roof Space. 	Achieve Tier 2 requirements.	<p>On Floor and Roof Plans indicate green roof, cool roof, and/or blue roof locations identified on elevations and roof plan.</p> <ul style="list-style-type: none"> • Notations include green roof, blue roof, and/or solar PV locations identified on elevations and roof plans. • Notations include SRI of cool roof on roof plan and location of solar panels. <p>For Green Roofs: On a landscape plan, indicate the potable irrigation systems servicing the green roof and submit maintenance plan.</p> <p>For Blue Roofs: On stormwater management report and stormwater management plan quantify blue roof storage and run-off.</p> <p>Sustainable Roofs Statistics Template copied directly onto the Roof Plan.</p>

Submission Specifications

1. Follow submission specifications identified in the NS4: Sustainable Roofs Section.

Resources

- Review resources identified in the NS4: Sustainable Roofs Section.

NS5: STORMWATER MANAGEMENT

The Tier 2 and Tier 3 Stormwater Management requirements are designed to reduce flood risk, improve water quality and erosion control, and create climate-resilient environments. With more intense and frequent storms, stormwater management requirements in new developments help communities adapt to these changing climate conditions by ensuring that infrastructure and drainage systems can manage increased runoff. The performance and submission requirements summary for low-rise multi-unit residential buildings are provided in Table 29 (next page).

Table 19. Tier 2 and Tier 3 NS5: Stormwater Management requirements for low-rise multi-unit residential buildings.

METRIC	TIER 2 REQUIREMENTS	TIER 3 REQUIREMENTS	SUBMISSION REQUIREMENTS
NS5: STORMWATER MANAGEMENT	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.	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.	Stormwater Management Plan identifying the Stormwater Management Practices implemented to meet the requirements.

Submission Specifications

1. Follow the [City of Mississauga’s Stormwater Management Report Terms of Reference](#) to complete the Stormwater Management Plan.
2. The 27 mm of runoff shall be retained on-site and managed by way of infiltration, evapotranspiration, re-use or filtration. This is calculated as the product of impervious site area times 27 mm, excluding initial abstraction.
 - a. Methods to achieve this can include measures such as permeable pavements, infiltration systems, rainwater harvesting tanks, bioretention systems or green roofs.
 - b. Recognizing that the City requires roof leader downspouts to be disconnected, other measures that can be implemented include: Incorporation of rain barrels at the roof leader downspouts or rain gardens to absorb flows Use of infiltration galleries, if soil conditions are conducive, located on the property considering Ontario Building Code requirements Incorporation of permeable materials within the driveway where permitted by applicable zoning by-law Increase of topsoil depth around the property to 300 mm to allow for greater absorption
3. Follow the [Stormwater Management Practices outlined in the Stormwater Management Planning and Design Manual for Infill Development](#) to identify practices implemented to meet the runoff requirements.
4. Follow the [Sustainable Technologies Evaluation Program](#) for low-impact development stormwater management planning and design guides.
5. Follow the [Ontario Guidelines for Residential Rainwater Harvesting Systems](#) for rainwater harvesting.

Resources

- [Ontario Ministry of the Environment, Conservation, and Parks: Ontario's Low Impact Development Stormwater Management Planning and Design Guide \(2018\)](#)—Stormwater management practices for infill development.
- [Toronto and Region Conservation Authority: Stormwater Management and Design Guidance Manual](#)—Stormwater management guidelines from the Toronto and Region Conservation Authority.

- [Credit Valley Conservation Authority: Stormwater Management Guidelines for the Credit River Watershed](#)—Stormwater management guidelines for the Credit River Watershed.
- [Lake Simcoe Region Conservation Authority: Lake Simcoe Region Conservation Authority - Stormwater Management Technical Guidelines \(2019\)](#)—Stormwater management guidelines from Lake Simcoe Region Conservation Authority.
- [STEP LID Planning and Design Wiki Guide](#)—Guidance on how to design Low Impact Development (LID) features to meet the design criteria.
- [Sustainable Technologies Resource Library](#)—Guidance and publications for LID, water quality, bioretention, inspection, maintenance, etc.

NS6: WATER CONSUMPTION

The Tier 2 and Tier 3 Water Consumption requirements are designed to reduce potable and non-potable water consumption and achieve the following objectives:

- **Sustainable Water Management:** Conserving water ensures that water supplies remain sufficient and reliable, even during periods of drought or water scarcity.
- **Mitigating Water Stress:** Many regions are experiencing water stress due to population growth, climate change, and over-extraction of groundwater. Conservation and efficient use can alleviate water stress and preserve natural water sources.
- **Energy Efficiency:** Water treatment and distribution require significant energy inputs. By reducing water consumption, new developments can indirectly lower energy demands, leading to reduced GHG emissions.
- **Climate Resilience:** As climate change brings more frequent and severe droughts, water-efficient practices in new developments can enhance resilience by minimizing water-related risks and ensuring sustainable water availability.

The performance and submission requirements summary for low-rise multi-unit residential buildings are provided in Table 30 (next page).

Table 20. Tier 2 and Tier 3 NS6: Water Consumption requirements for low-rise multi-unit residential development.

METRIC	TIER 2 REQUIREMENTS	TIER 3 REQUIREMENTS	SUBMISSION REQUIREMENTS
NS6: WATER CONSUMPTION	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).	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)	Letter of Commitment confirming the project will: <ul style="list-style-type: none"> • Be designed to reduce potable water requirements for irrigation; • Feature a percent reduction in potable water used to irrigate relative to a mid-summer baseline; • Implement strategies to reduce potable water demands; and • Implement strategies to reduce building water consumption.
	Reduce building water consumption (not including irrigation) by 20% using water fixtures or non-potable water sources.	Reduce building water consumption (not including irrigation) by 40% using water fixtures or non-potable water sources.	

Submission Specifications

1. Follow [LEED v4 BD+C WE Credit: Outdoor Water Use Reduction Option 2](#), and use the calculation tool to demonstrate reduction in irrigation consumption compared to a mid-summer baseline.
2. Follow [LEED v4.1 BD+C: WE Credit Indoor Water Use Reduction](#) to calculate the water consumption based on estimated occupant usage and baseline fixtures for toilets, urinals, faucets, and shower heads. As per the LEED Credit, the following baseline fixtures should be used:
 - a. Toilets: 6.0 L
 - b. Urinals: 3.8 L
 - c. Residential faucets: 8.3 LPM at 414 kPa
 - d. Shower heads: 9.5 LPM at 550 kPa
3. Reduce the project’s irrigation requirements from the calculated baseline of the site’s peak water month (mid-summer baseline). Reductions can be achieved using plant species (NS3: Climate-Resilient Landscapes), a combination of treatment measures for reuse of greywater and blackwater (e.g., rain barrels, cisterns, green roofs, and filtration ponds), alternative water sources, and smart-scheduling technologies.

Resources

- [LEED BD+C: WE Outdoor Water Use Reduction](#)—Calculation requirements to demonstrate irrigation water consumption.
- [Sustainable Technologies Resource Library](#)—Guidance and publications for LID, water quality, bioretention, inspection, maintenance, etc.