



TORONTO: LEED[®] SUPPLEMENT



Summary Comparison

Version 2.0 Toronto Green Standard (TGS)

For New Mid-High Rise Residential,
Commercial, Industrial & Institutional
(4 storeys and higher)

&

LEED[®] Canada

For New Construction &
Major Renovations

2009

Rating System



2014



Purpose

This document is designed to be used in conjunction with the LEED (Leadership in Energy and Environmental Design) Canada NC Green Building Rating System[®], 2009. It provides information on Toronto Green Standard (TGS) requirements, policies and practices.

The purpose of the Supplement is to inform the design community who are familiar with LEED[®], or who are interested in pursuing LEED certification, of the areas of similar intent between LEED and the Toronto Green Standard (TGS) and to identify those cases of selected sustainable design elements where the TGS minimum requirements contribute to LEED credits. The document also helps LEED project teams better understand how their projects may qualify for incentives from the Toronto Green Standard.

Toronto's Sustainable Development Goal

The Toronto Green Standard (TGS) is a set of performance measures for sustainable development that address the City's environmental pressures and priorities. The first voluntary green standard was adopted by City Council in 2006 and the two-tiered TGS was adopted by City Council on October 27, 2009. The revised version 2.0 of the TGS was adopted by City Council on July 16, 2013 and came into full effect on January 1, 2014 for all new planning applications. There are two versions of the TGS, each relating to different building types; low rise town houses and row house with greater than 5 dwelling units and all other development.

Tier 1 includes the minimum set of performance measures that are required by the City of Toronto and secured through the planning process. Tier 2 features a voluntary higher level of environmental performance with incentives. Site Plan applications received on or after January 1, 2014, that achieve Tier 1 and 2, may qualify for a 20% **Development Charge refund**. LEED projects that address Tier 2 requirements may be eligible for the development charge refund.

The basis for the TGS is the *Climate Change Action Plan* an aggressive environmental framework aimed at reducing Toronto's greenhouse gas emissions by 80 per cent by 2050 and the *Toronto Official Plan* which guides land use planning decisions.

[Details of the TGS and how to apply for the development charge refund](#) are available here:

CaGBC's Sustainable Development Goal

LEED Canada NC 2009 is a national, voluntary rating system for new construction and major renovations of commercial, industrial and institutional buildings. It is an initiative of the Canada Green Building Council. Other LEED Canada rating systems address other building sectors (such as homes, commercial interiors, and existing buildings). There are over 3600 LEED projects registered across Canada.



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The rating system is structured into a set of prerequisites and credits. Points are awarded for meeting the requirements of the credits, and the total of the points earned determines the overall certification level achieved (Certified, Silver, Gold or Platinum). LEED credits are similar in function to TGS Development Features; however the LEED credits cover a wider range of possible environmental impacts. [Details of the rating system](#) are available here:

Created By

The Canada Green Building Council developed this document in consultation with the Environmental Planning section of City Planning at the City of Toronto.

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Buildings Covered Under the Current Supplement

This Supplement applies to new development and construction projects covered by the Toronto Green Standard for New Mid to High Rise Residential and Industrial, Commercial and Institutional (ICI) Development.

Naming Conventions

The Toronto Green Standard (TGS) is organized according to the City's top five Environmental Drivers (pressures); then divided into a set of Development Features (e.g. Urban Heat Island Reduction, Water Efficiency). The short form of each is used in naming the performance measures. For example, *SW1 Storage and Collection of Recycling and Organic Waste*. The Environmental Drivers are:

- Air Quality (AQ)
- Green House Gas Emissions / Energy Efficiency (GHG)
- Water Quality, Quantity and Efficiency (WQ)
- Ecology (EC)
- Solid Waste (SW)

LEED credits and prerequisites are organized into 7 groups. The short form of each is used in naming the prerequisites (p) and credits (c). For example, MRp1 Storage and Collection of Recyclables. The groups are:

- Sustainable Sites (SS)
- Water Efficiency (WE)
- Energy and Atmosphere (EA)
- Materials and Resources (MR)
- Indoor Environmental Quality (IEQ)
- Innovation in Design (ID)
- Regional Priority (RP)



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Using this Supplement to LEED Canada NC 2009

This document provides guidance aimed at assisting LEED projects to achieve TGS performance measures as part of their LEED certification. The document should be used in conjunction with the full LEED Canada NC and TGS documents.

The document outlines the LEED Canada NC 2009 documentation that is accepted by the City of Toronto for documenting compliance with the TGS and also sets out where the TGS has additional conditions or requirements that must be met to document compliance to the TGS.

No part of this document allows LEED® Canada NC 2009 to supersede Toronto codes or the Toronto Green Standard.

LEED Canada NC 2009 prerequisites are required and LEED Canada NC 2009 credits are optional. TGS Tier 1 is required under the Planning Act of Ontario. TGS Tier 2 is a voluntary, higher standard with financial incentives.

For each LEED category, meeting the LEED Canada NC 2009 prerequisite or credit DOES NOT NECESSARILY mean you have met the TGS requirement, and vice versa.

Compliance

The use of this Supplement is voluntary. TGS performance measures will be enforced through existing processes used to enforce Toronto standards and by-laws.

Overview of Similarities and Differences

The LEED Canada NC rating system and the TGS are complementary and share many objectives. A number of TGS development features and LEED Canada NC credits and prerequisites overlap in design intent.

The City of Toronto's regional environmental priorities are illustrated by the TGS, and the TGS recognizes Toronto's environmental policies, by-laws and standards. LEED Canada is a national, voluntary standard.

Summary Comparison Tables

There are three summary comparison tables provided, as described below.

Table 1: Tier 1 Development Features

Lists TGS Development Features that have Tier 1 requirements. Corresponding LEED Canada NC 2009 credits and prerequisites are noted directly below each Development Feature. Where



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distinct but related LEED Canada NC 2009 credits or prerequisites exist, these are noted in a distinct row.

Table 2: Tier 2 Development Features

Similar to Table 1 except that TGS Development Features with Tier 2 requirements are covered.

Table 3: Additional LEED Canada NC 2009 Credits

This table lists the LEED Canada NC 2009 credits and prerequisites for which no related TGS Development Feature exists.

Table 4: Accepted LEED Documentation

This table identifies LEED documentation that can be submitted to the City of Toronto as proof of compliance with the Toronto Green Standard, at a similar stage to LEED documentation submission. TGS Tier 1 documentation is provided during the planning approvals process and may be used towards LEED documentation requirements (e.g. plans and drawings).

Terminology

May Satisfy LEED:

The TGS development features are similar to LEED and may satisfy or exceed the requirements of the corresponding LEED Canada NC 2009 credit or prerequisite.

LEED Additional Requirement:

The corresponding TGS development feature does not entirely meet the requirements of the LEED Canada NC 2009 credit or prerequisite.

TGS Additional Requirement:

The corresponding LEED Canada NC 2009 credit or prerequisite does not entirely meet the requirements of the TGS performance measures.

Exclusive to TGS:

There is no corresponding LEED Canada NC 2009 credit or prerequisite.

Exclusive to LEED:

There is no corresponding TGS Development Feature.

Shaded Green: Contributes to LEED Credit

Achieving the TGS contributes to part or all of the LEED Canada NC 2009 credit or prerequisite.



Table 1: Toronto Green Standard Tier 1 Requirements

| TGS Tier 1 Requirements and Related LEED Canada NC Credits | May Satisfy LEED | LEED Additional Requirement | TGS Additional Requirement | Exclusive to TGS | Exclusive to LEED |
|---|------------------|-----------------------------|----------------------------|------------------|-------------------|
| AQ1 Low-Emitting and Fuel-Efficient Vehicle Infrastructure SSc4.3 Alternative Transportation: Low-Emitting & Fuel Efficient Vehicles SSc4.4 Alternative Transportation: Parking Capacity | | ✓ ✓ | ✓ | | |
| AQ2 Cycling Infrastructure SSc4.2 Alternative Transportation: Bicycle Storage & Changing Rooms | ✓ | ✓ | ✓ | | |
| AQ3 Pedestrian Infrastructure | | | | ✓ | |
| Related LEED Canada NC 2009 credit SSc4.1 Alternative Transportation: Public Transportation Access | | | | | ✓ |
| AQ4 Urban Heat Island Reduction: At Grade SSc7.1 Heat Island Effect: Non-Roof | ✓ | | | | |



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| TGS Tier 1 Requirements and Related LEED Canada NC Credits | May Satisfy LEED | LEED Additional Requirement | TGS Additional Requirement | Exclusive to TGS | Exclusive to LEED |
|---|------------------|-----------------------------|----------------------------|------------------|-------------------|
| AQ5 Urban Heat Island Reduction: Roof SSc7.2 Heat Island Effect: Roof | √ | | √ | | |
| GHG/E1 Minimum Energy Performance¹ EAc1 Optimize Energy Performance | √ | √ | √ | | |
| WQ1 Construction Activity SSp1 Erosion and Sediment Control | √ | | | | |
| WQ2 Stormwater Retention (Water Balance) SSc6.1 Stormwater Design: Quantity Control | √ | √ | √ | | |
| WQ3 Water Quality : Stormwater Runoff SSc6.2 Stormwater Design: Quality Control | | √ | √ | | |
| WQ4 Water Efficiency WEc1 Water Efficient Landscaping | √ | √ | | | |
| EC1 Urban Forest: Tree Protection | | | | √ | |
| EC2 Urban Forest: Increase Tree Canopy | | | | √ | |

¹ Energy Modelling reports prepared for TGS Tier 1 compliance may include process loads required for LEED compliance.



| TGS Tier 1 Requirements and Related LEED Canada NC Credits | May Satisfy LEED | LEED Additional Requirement | TGS Additional Requirement | Exclusive to TGS | Exclusive to LEED |
|--|------------------|-----------------------------|----------------------------|------------------|-------------------|
| EC3 Natural Heritage SSc5.1 Site Development Reduced Site Disturbance: Protect or Restore Habitat | | √ | √ | | |
| EC4 Bird Collision Deterrence Pilot Credit 55: Bird Collision Deterrence | √ | √ | √ | | |
| EC5 Light Pollution SSc8 Light Pollution Reduction | | √ | √ | | |
| SW1 Storage and Collection of Recycling and Organic Waste MRp1 Storage and Collection of Recyclables | √ | | √ | | |

Possible additional credits for TGS projects

The LEED Canada NC 2009 rating system offers projects the opportunity to be awarded points for exceptional performance above the requirements set by the rating system, and/or innovative performance in Green Building categories not specifically addressed by the rating system. TGS development features might be eligible for an Innovation in Design credit (IDc1) if they have significant environmental and occupant benefits that are not already addressed in LEED.



Table 2: Toronto Green Standard Tier 2 Voluntary Enhanced Level

| TGS Tier 2 Voluntary Enhanced Level and Related LEED Canada NC Credits | May satisfy LEED | LEED Additional Requirement | TGS Additional Requirement | Exclusive to TGS | Exclusive to LEED |
|--|------------------|-----------------------------|----------------------------|------------------|-------------------|
| AQ1 Low-Emitting and Fuel-Efficient Vehicle Infrastructure SSc4.3 Alternative Transportation: Low-Emitting & Fuel Efficient Vehicles | √ | √ | √ | | |
| AQ2 Cycling Infrastructure SSc4.2 Alternative Transportation: Bicycle Storage & Changing Rooms | √ | √ | √ | | |
| AQ4 Urban Heat Island Reduction: At Grade SSc7.1 Heat Island Effect: Non-Roof | √ | | √ | | |
| GHG/E1 Minimum Energy Performance ² EAc1 Optimize Energy Performance EAc2 On-site Renewable Energy | √ √ | √ √ | √ | | |
| GHG/E2 Operational Systems EAp1 Fundamental Commissioning of Building Energy Systems EAc5 Measurement and Verification | √ | √ √ | √ | | |
| Related LEED Canada NC 2009 credit EAc3 Enhanced Commissioning | | | | | √ |
| WQ2 Stormwater Retention (Water Balance) SSc6.1 Stormwater Design: Quantity Control | √ | √ | √ | | |

² Energy Modelling reports prepared for TGS Tier 1 compliance show projected energy savings and may include process loads and cost savings required for LEED compliance.



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| TGS Tier 2 Voluntary Enhanced Level and Related LEED Canada NC Credits | May satisfy LEED | LEED Additional Requirement | TGS Additional Requirement | Exclusive to TGS | Exclusive to LEED |
|---|------------------|-----------------------------|----------------------------|------------------|-------------------|
| WQ4 Water Efficiency WEc1 Water Efficient Landscaping WEc3 Water Use Reduction | √ √ | √ | | | |
| EC 2 Urban Forest: Increase Tree Canopy | | | | √ | |
| EC3 Natural Heritage SSc5.1 Site Development: Protect or Restore Habitat | √ | √ | | | |
| EC4 Bird Collision Deterrence | | | | √ | |
| EC5 Light Pollution SSc8 Light Pollution Reduction | | √ | | | |
| SW1 Storage and Collection of Recycling and Organic Waste MRp1 Storage and Collection of Recyclables | √ | | √ | | |
| SW2 Building Reuse MRc1.1 Building Reuse: Maintain existing walls, floors, and roof | √ | | | | |
| SW3 Construction and Demolition Waste Management MRc2 Construction Waste Management | √ | | | | |
| SW4 Recycled Content MRc4 Recycled Content | √ | | | | |
| SW5 Regional Materials MRc5 Regional Materials | √ | | | | |

Possible additional credits for TGS projects

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Table 3: Additional LEED Canada NC 2009 Credits

| LEED Canada NC 2009 Credits | Exclusive to LEED |
|---|-------------------|
| SSc1 Site Selection | √ |
| SSc2 Development Density and Community Connectivity | √ |
| SSc3 Brownfield Redevelopment | √ |
| SSc5.2 Site Development: Maximize Open Space | √ |
| WEc2 Innovative Wastewater Technologies | √ |
| EAp3 Fundamental Refrigerant Management | √ |
| EAc4 Enhanced Refrigerant Management | √ |
| EAc6 Green Power | √ |
| MRC1.2 Building Reuse: Maintain Existing Interior Non-Structural Elements | √ |
| MRC6 Rapidly Renewable Materials | √ |
| MRC7 Certified Wood | √ |
| EQp1 Minimum Indoor Air Quality (IAQ) Performance | √ |
| EQp2 Environmental Tobacco Smoke (ETS) Control | √ |
| EQc1 Outdoor Air Delivery Monitoring | √ |
| EQc2 Increased Ventilation | √ |
| EQc3.1 Construction IAQ Management Plan: During Construction | √ |
| EQc3.2 Construction IAQ Management Plan: Before Occupancy | √ |
| EQc4.1 Low-Emitting Materials: Adhesives & Sealants | √ |
| EQc4.2 Low-Emitting Materials: Paints & Coatings | √ |
| EQc4.3 Low-Emitting Materials: Flooring Systems | √ |
| EQc4.4 Low-Emitting Materials: Composite Wood & Agrifibre Products | √ |
| EQc5 Indoor Chemical and Pollutant Source Control | √ |
| EQc6.1 Controllability of Systems: Lighting | √ |
| EQc6.2 Controllability of Systems: Thermal Comfort | √ |
| EQc7.1 Thermal Comfort: Design | √ |
| EQc7.2 Thermal Comfort: Verification | √ |
| EQc8.1 Daylight and Views: Daylight | √ |
| EQc8.2 Daylight and Views: Views | √ |
| IDc1.1-1.4 Innovation in Design | √ |
| IDc2 LEED Accredited Professional | √ |
| RPc1 Durable Building | √ |
| RPc2 Regional Priority Credit | √ |



Allowable Documentation Exchange:

For the purpose of this document, LEED Canada NC 2009 documentation will be accepted by the City of Toronto as proof of compliance for the Tier 2 features identified in Table 4 below. These represent TGS development features/LEED credits where the requirements and documentation are very similar allowing an exchange of LEED submittals to the City of Toronto. All Tier 2 applications and LEED documentation exchanges must be coordinated through the Environmental Planning Section of City Planning as part of Tier 2 development charge refund verification procedures.

See [the City's green development website](#) for more details.

Table 4: Accepted LEED Documentation

| Toronto Green Standard Development Feature | LEED Canada NC 2009 Credits with Accepted Documentation |
|---|---|
| Tier 1 GHG/E1 Minimum Energy Performance | EAc1 Optimize Energy Performance |
| Tier 2 GHG/E1 Minimum Energy Performance ³ | EAc1 Optimize Energy Performance |
| Tier 2 GHG/E2 Systems Commissioning | EAp1 Fundamental Commissioning of Buildings Energy Systems |
| Tier 2 WQ4.3 Water Efficiency ⁴ | WEc1 Water Efficient Landscaping WEc3 Water Use Reduction |
| Tier 2 SW2.1 Reuse of Building Materials | M Rc1.1 Building Reuse: Maintain existing walls, floors, and roof |
| Tier 2 SW3.1 Construction and Demolition Waste Management | M Rc2 Construction Waste Management |
| Tier 2 SW4.1 Recycled Content | M Rc4 Recycled Content |
| Tier 2 SW5.1 Regional Materials | M Rc5 Regional Materials |

³ Energy Modelling reports prepared for TGS Tier 2 compliance will show energy savings based on As-built drawings and may include process loads and cost savings included for LEED compliance.

⁴ Calculations for TGS Tier 2 will use Ontario Building Code (OBC) base fixtures and appliances.



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