

Appendix: Green Building Certification Summary

This summary provides an overview of green building certification programs that The City of Calgary may consider pursuing when establishing sustainability requirements for a specific project. This list is not intended to be comprehensive and other systems, programs, and tools may also be considered if they align with the project scope.

BOMA Best

The BOMA BEST program is North America’s largest environmental assessment and certification initiative for existing buildings. The acronym “BEST” stands for Building Environmental Standards. Buildings that achieve BOMA BEST certification lead the way in energy and water conservation, waste reduction, indoor air quality, and operational best practices. BOMA BEST provides owners and managers with a consistent framework for assessing and reporting on the smart and sustainable performance of various types and sizes of existing buildings.

Sustainability Concepts Addressed

- Optimize for energy efficiency and reduction of GHG emissions
- Reduce potable water use
- Address occupant comfort, health, and wellbeing
- Design for resilience
- Divert waste from landfill

ENERGY STAR Certification for Buildings

The ENERGY STAR Certification for Buildings is a recognition awarded by the U.S. Environmental Protection Agency (EPA). Buildings that earn ENERGY STAR certification demonstrate superior energy performance. They operate more efficiently and generate fewer greenhouse gas emissions compared to typical buildings. Certification is granted on an annual basis and buildings must maintain their high performance to remain certified year after year.

Sustainability Concepts Addressed

- Optimize for energy efficiency and reduction of GHG emissions
- Reduce potable water use

Envision

The Envision Sustainable Infrastructure framework is a comprehensive system designed to promote sustainable, resilient, and equitable civil infrastructure. Developed by the Institute for Sustainable Infrastructure (ISI), Envision encourages systemic changes in the planning, design, and delivery of infrastructure projects.

Sustainability Concepts Addressed

- Optimize for energy efficiency and reduction of GHG emissions
- Integrate green stormwater infrastructure
- Maintain and improve biodiversity
- Address occupant comfort, health, and wellbeing
- Select sites with access to transportation and minimize environmental impacts
- Design for resilience
- Divert waste from landfill

Fitwel

The Fitwel Certification System is a people-centric real estate certification platform committed to building health for all. Developed by the U.S. Centers for Disease Control and Prevention (CDC) and the General Services Administration (GSA) in collaboration with experts in public health and building design, Fitwel evaluates and rates buildings' health and wellness features. It implements a vision for a healthier future where all buildings and communities are enhanced to strengthen health and well-being.

Sustainability Concepts Addressed

- Address occupant comfort, health, and wellbeing

Green Globes

Green Globes is a science-based, three-in-one whole building certification system developed and maintained by the Green Building Initiative (GBI). It evaluates the environmental sustainability, health, and resilience of various types of commercial real estate. Green Globes allows building owners and managers to select sustainability features that best fit their specific building and occupants. The certification process is personalized, considering factors like building type, location, budget, and occupancy needs.

Sustainability Concepts Addressed

- Optimize for energy efficiency and reduction of GHG emissions
- Reduce potable water use
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- Design for resilience

LEED Green Building Rating System

The LEED (Leadership in Energy and Environmental Design) rating system is the world's most widely used green building framework. Developed by the U.S. Green Building Council (USGBC), LEED certification offers a structured approach for creating healthy, highly efficient, and economical green buildings.

Sustainability Concepts Addressed

- Optimize for energy efficiency and reduction of GHG emissions
- Reduce potable water use
- Integrate green stormwater infrastructure
- Maintain and improve biodiversity
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Living Building Challenge

The Living Building Challenge is a visionary and comprehensive green building certification system. Developed by the International Living Future Institute (ILFI), it aims to create buildings that give more than they take. The Living Building Challenge is a philosophy, advocacy tool, and certification program. It defines the most advanced measure of sustainability in the built environment. The framework applies to all building types and scales, including single buildings, renovations, infrastructure projects, and parks.

Sustainability Concepts Addressed

- Optimize for energy efficiency and reduction of GHG emissions
- Reduce potable water use
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Parksmart

Parksmart is the world's only certification program specifically designed for high-performing, sustainable parking garages. Developed by industry experts, it offers a roadmap for both new and existing parking facilities to adopt innovative, solutions-oriented strategies. The program evaluates structures based on three main categories: management, programs, and technology structure design. Parksmart certification encourages smarter siting, design, and operations while promoting resource efficiency and environmental responsibility.

Sustainability Concepts Addressed

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Passive House

Passive House certification is an internationally recognized building certification system that ensures a building meets the high energy performance and comfort levels of the Passive House standard. Passive House certification provides third-party verification and a stamp of quality assurance. The process-oriented approach to certification involves various audits to ensure compliance.

Sustainability Concepts Addressed

- Optimize for energy efficiency and reduction of GHG emissions
- Address occupant comfort, health, and wellbeing
- Select sites with access to transportation and minimize environmental impacts

SITES

The SITES Rating System is a comprehensive framework for designing, developing, and managing sustainable and resilient outdoor spaces. It evaluates the sustainability of landscapes, parks, gardens, plazas, and neighborhoods.

Sustainability Concepts Addressed

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WELL Building Standard

The WELL Building Standard is a performance-based system designed to measure, certify, and monitor features of the built environment that impact human health and well-being. It focuses on various aspects such as air quality, water quality, nourishment, lighting, fitness, comfort, and mental well-being. Founded and developed by Delos Living LLC in 2014, WELL aims to create healthier and more sustainable spaces for people to live and work in. Every WELL project undergoes on-site testing to verify building performance, emphasizing the relationship between the physical environment and human health.

Sustainability Concepts Addressed

- Address occupant comfort, health, and wellbeing

Zero Carbon Building Standard

The Zero Carbon Building Standard is a made-in-Canada framework developed by the Canada Green Building Council (CaGBC). It serves as a pathway for both new and existing buildings to achieve zero carbon emissions. The standard can be applied to various building types, including commercial, institutional, and multi-family buildings.

Sustainability Concepts Addressed

- Optimize for energy efficiency and reduction of GHG emissions