



Mississauga Green Development Standards Update

Planning and Development Committee
April 8, 2024



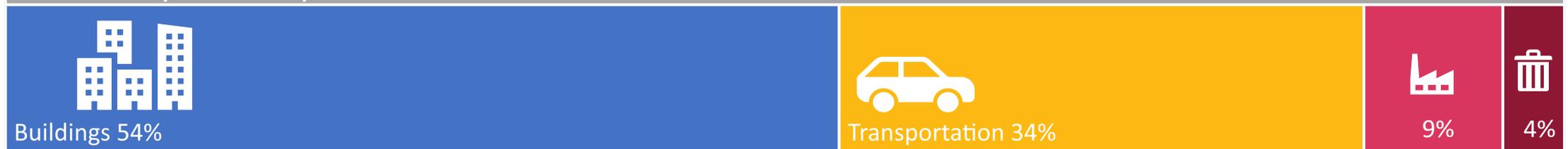
Our Climate Change Commitments



Mississauga's climate change action plan:

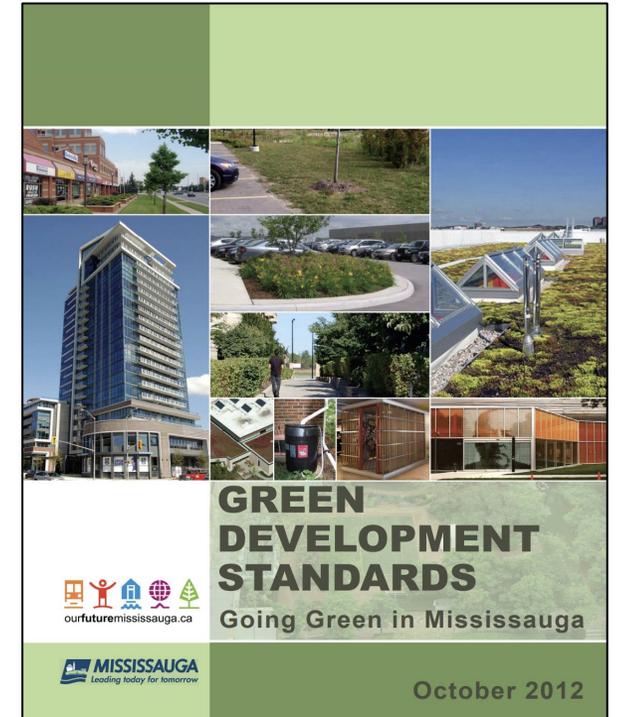
- Action 1.1: Support and encourage developer-led efforts to include low carbon energy systems in new development
- Action 3.1: Update the Green Development Standard to include energy and resilience considerations within building, site features, and boulevard design
- City currently has a target to reduce GHG emissions by 40% by 2030
- Any addition to building stock without climate and energy considerations will compromise ability to meet targets
- Updated GDS will help us advance more low-emission, high performance buildings to meet climate commitments

Community Inventory 2022



2012 Green Development Standards

- The Green Development Standards (GDS) applies to **new** residential and non-residential developments subject to site plan control
- The voluntary GDS 2012 although successful it does not address greenhouse gas emissions and building resilience



GDS 2012

GDS Engagement: 'YourSay' Mississauga



- Resident and industry surveys and draft metrics were available for review from September 7th to October 13th
- Extensive social media campaign along with workshops, individual meetings and numerous email inquires
- Virtual session “The Land Sustains Us - Indigenous Perspectives on Development”

GDS Survey for the Community

Please complete this survey if you have ties to Mississauga, live in the City, work in Mississauga, visit the area, or go to school here.

Take the survey

GDS Survey for Industry

Please complete this survey if you are a member of the development or construction industry, a consultant working for the industry, or an interested party (utility, non-profit organization, renewable energy provider, etc.).

Take the survey

310 industry and resident survey responses

22,000 website views

Ranked climate impacts that are most important to the community:

1. Reduced building embodied carbon
2. Reduced construction waste
3. Improved waste sorting infrastructure

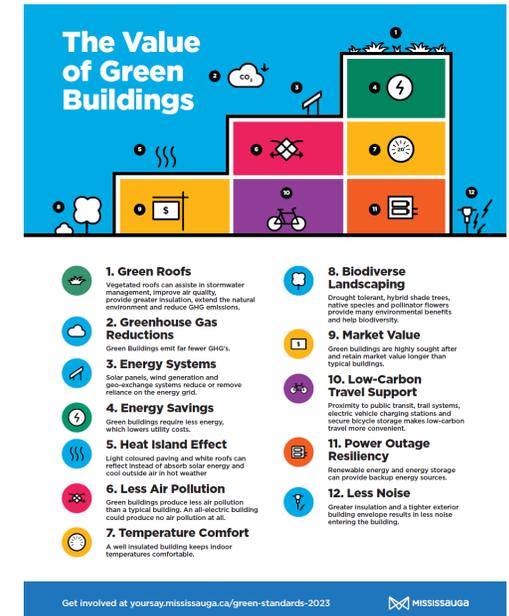
87 comments on the draft metrics

Many detailed, technical and process-oriented comments

What We Heard

Residential, commercial, institutional and industrial developers, youth groups, Indigenous Nations, environmental groups, utilities and the public

- Align the GDS metrics with other municipalities
- Ensure a simple application process with easy documentation
- Questions regarding if the City has the authority to mandate the GDS
- Tiered approach gives developers time to anticipate future metrics
- Tailor specific metrics to industrial building
- Certain building metrics are expensive, consider incentives
- The building industry needs more time to get to net-zero building
- Youth perspective should be heard, as they will inherit the planet



GDS Poster

GDS Metrics

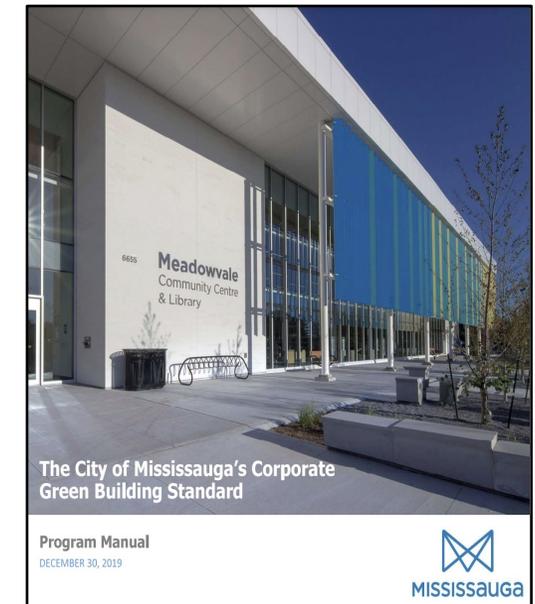
The City hired **Sustainability Solutions Group (SSG)** a consultant with extensive expertise in green buildings to assist with the GDS update

Metrics align:

- City's Corporate Building Standards
- Toronto Green Standards and other GTA municipalities

Metrics – four building categories:

1. Medium to High-rise Residential Buildings (greater than 5 storeys)
2. Low-rise Residential Buildings (greater than 10 units and 4 storeys high)
3. Institutional and Commercial Buildings
4. Industrial Buildings



Mississauga Corporate Green Building

GDS Metrics

Objective: reduce greenhouse gas emissions and ensure building resilience

5 Themes, 12 Performance Metrics

- **Energy** – 3 Energy Targets, Operational Carbon
- **Resiliency** – Emissions-Free Energy/Refuge Area
- **Ecology** – Bird Friendly Design/Dark-Sky Lighting
- **Natural Systems** – Heat Island/Tree Growth/Resilient landscaping/Sustainable-Green Roofs
- **Climate Change** – Embodied Carbon



Solar Railings



GDS Metrics

- Tier 1 Mandatory Metrics (2025 - 2027)
- Tier 2 Voluntary Metrics (Mandatory 2028 - 2029)
- Tier 3 Voluntary Metrics (Mandatory 2030) Near Net-Zero/Climate targets

CITY OF MISSISSAUGA UPDATED GREEN DEVELOPMENT STANDARDS				
RESIDENTIAL BUILDINGS (MEDIUM TO HIGH RISE ≥ 5 STOREYS)				Terms of Reference (TofR)
	TIER 1 MANDATORY REQUIREMENTS (2025-2027)	TIER 2 VOLUNTARY REQUIREMENTS (2028-2029)	TIER 3 VOLUNTARY REQUIREMENTS (2030)	SUBMISSION REQUIREMENTS
THEME 1: ENERGY AND BUILDING PERFORMANCE				
EB1: Energy Performance	Meet the following energy performance targets: GHGI: 15 CO ₂ e/m ² /yr TEUI: 135 kWh/m ² TEDI: 50 kWh/m ²	Meet the following energy performance targets: GHGI: 10 CO ₂ e/m ² /yr TEUI: 100 kWh/m ² TEDI: 30 kWh/m ²	Meet the following energy performance targets: GHGI: 0 CO ₂ e/m ² /yr TEUI: 75 kWh/m ² TEDI: 15 kWh/m ²	Energy Modelling Report A Terms of Reference will be available.
THEME 2: CLIMATE IMPACTS				
CI1: Embodied Carbon	Conduct a Materials Emissions Assessment to measure A1-A3, stage emissions for all structural, enclosure and major finishes.	Conduct a Materials Emissions Assessment to measure A1-A3, stage emissions for all structural, enclosure and major finishes. The report must demonstrate an emissions intensity of less than 330 kg CO ₂ /m ² .	Conduct a Materials Emissions Assessment to measure A1-A3, stage emissions for all structural, enclosure and major finishes. The report must demonstrate an emissions intensity of less than 250 kg CO ₂ /m ² .	Using BEAM (Building Emissions Accounting Materials tool or an equivalent tool conduct a Life Cycle Assessment (LCA) and report carbon footprint as the LCA impact measure 'global warming potential' (GWP) in kilograms of carbon dioxide equivalent (CO ₂ e). A Terms of Reference will be available.
THEME 3: RESILIENCE				
	Provide a minimum of 5% of building's annual energy consumption from renewable energy	Provide a minimum of 15% of building's annual energy consumption from renewable energy	Provide a minimum of 50% of building's annual energy consumption from renewable energy	



Implementation

- Staff are proposing that a feasibility study be undertaken to determine appropriate incentives to increase the uptake of the Tier 2 and Tier 3 voluntary metrics by the development industry
- The GDS program will be enforced starting March 2025. This will give the building industry time to understand the process and provide the appropriate documentation. In addition, it will give staff time to monitor internal resources, determine staffing requirements, and implement internal process refinements as necessary



GDS Logo

PDC Report

Recommendation:

That the mandatory and voluntary Green Development Standards metrics, as detailed in Appendices 4 and 5, respectively, that apply to all residential and non-residential site plan applications described in the body of the report dated March 20, 2024, from the Commissioner of Planning and Building, be approved.



**Climate Change
Action Plan**

Thank You