

URBAN
EQUATION

 The Planning
Partnership

Colchester Green Development Standards

Engagement Workshop #1

July 7, 2026



 Colchester
be centred here.

Land Acknowledgement

In peace and friendship, and in the spirit of truth and reconciliation, we acknowledge that the Municipality of Colchester is in Mi'kma'ki, the ancestral and unceded territory of the Mi'kmaq.

We acknowledge the land we are meeting on is the traditional territory of many nations including the Mississaugas of the Credit, the Anishnabeg, the Chippewa, the Haudenosaunee and the Wendat peoples and is now home to many diverse First Nations, Inuit and Métis peoples. We also acknowledge that Toronto is covered by Treaty 13 with the Mississaugas of the Credit.

Team



Meet the Team

URBAN EQUATION

- brings sustainable development innovation into market-ready practice
- sister company, Windmill Developments brings 20+ years of low-carbon, triple-bottom-line development experience
- provide strategic and technical advice that helps municipalities, developers, and partners advance transformative projects, policies, and green development standards

The Planning Partnership

- planning, design, development and public consultation services to public and private sector clients across Canada
- design new neighbourhoods, urban districts, streetscapes, parks, waterfronts, campuses and employment areas
- our projects are grounded in engagement with everyone who has an interest, with engagement through every phase of the work to help shape decision making along the way

Foundation Clean

- helps communities prepare for the realities of a changing climate
- work to protect local environments and build stronger, more resilient places to live and work
- more than 35 years of experience, an environmental organization based in Nova Scotia, in Mi'kma'ki, the ancestral and unceded territory of the Mi'kmaq
- deliver practical, on-the-ground solutions to address complex climate and environmental challenges in communities across the region

Meet the team from Colchester and Foundation Clean



Sarah Lynds



**Program
Coordinator**



Pam Macintosh



**Manager of
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Joanna Burris



**Sustainability
Planner**



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**Community
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Meet the consulting team



Clement Guenard



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Steve Dulmage



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Talina Sen Smet



Analyst



Donna Hinde



**Engagement
Lead**



Stacey McCulloch



Planning Lead

Context and Overview



What is a Green Development Standard

The Green Development Standard is envisioned as an incentive-based **voluntary technical guide** offering **best practices** to advance sustainable, low-carbon, climate-resilient, and high-performance buildings across all sectors for today and future Nova Scotians.



Benefits of Green Development Standards

- **Low-carbon growth for the community:** Green Development Standards help communities grow while reducing energy use, emissions, and long-term environmental impacts.
- **Simpler steps for greener construction:** They provide clear, consistent expectations so developers, municipal staff, and design teams know what sustainability measures to plan for early.
- **Healthier, more comfortable homes:** GDS support better indoor air quality, improved thermal comfort, and homes that are easier to heat, cool, and live in.
- **Better protection from extreme weather:** They encourage buildings and sites that are more prepared for heat, heavy rain, flooding, storms, and other climate-related risks.
- **Lower costs from year one:** More efficient buildings can reduce utility bills for residents and owners from the start, while also lowering long-term operating costs.

How are Green Development Standards Implemented?

1. Green Development standards are embedded into planning approvals

The municipality links the standards to the planning approval process, such as site plan review

2. Municipal staff will screen and review applications against the GDS

Staff use a checklist or scoring tool to confirm which standards apply, review the applicant's submission, and identify any required revisions before approval.

3. Municipality will track commitments

Approved GDS measures are documented through conditions, agreements, drawings, or permits so they can be carried through design, construction, and occupancy.

What are other municipalities doing?

Grey County, Ontario

Single Tier Program

- Native/adapted species and tree canopy
- Stormwater quantity and park access
- Climate risk assessment, EV readiness, transit readiness, mixed housing, embodied carbon and solar readiness

Caledon, Ontario

Tiered Program

- Community design and mobility: housing diversity, active transportation, public spaces, EV charging
- Green infrastructure: soils, planting, urban heat island, stormwater quality, bird-friendly design
- Buildings and energy: operational energy/GHG, resilience, solar readiness, embodied carbon and water

Victoriaville, Quebec

Points-based Program

- Energy efficiency, water conservation and low-impact materials
- Site planning, indoor environmental quality and waste diversion
- Accessibility, sustainable landscaping and stormwater management

Green Development Standards: Framework

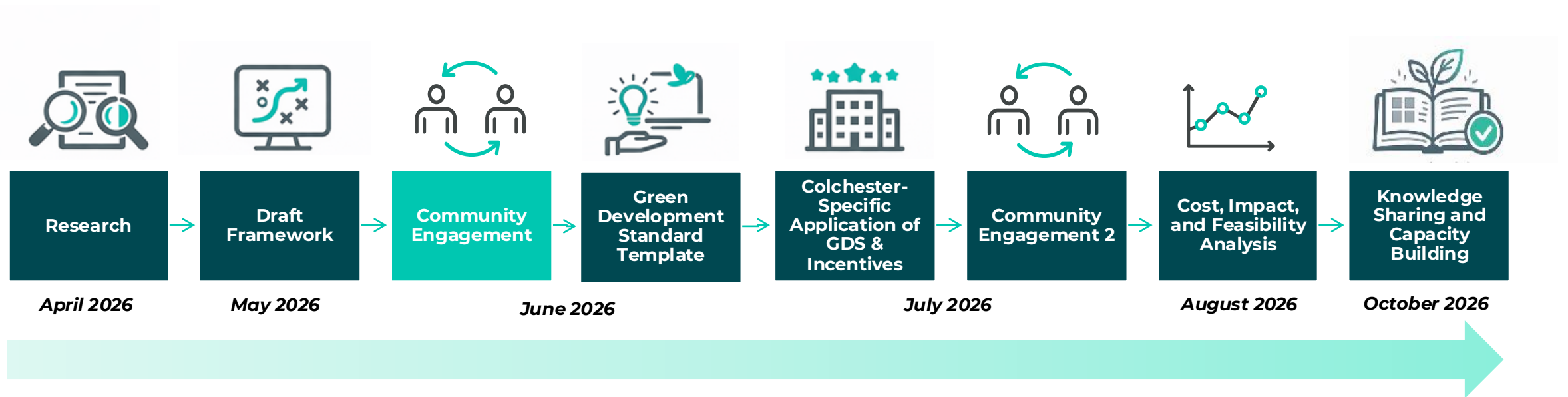
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Green Development Work Program



Guiding Principles: Average Development in Colchester

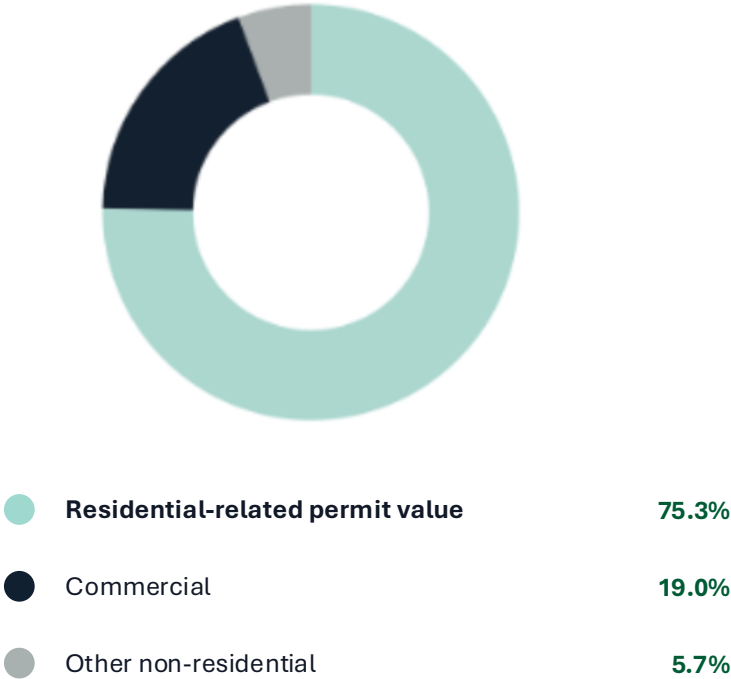
Highest-value permit types

Share of permit value (\$) 2015–2025

1	Single-detached residential		40.5%
2	Multi-unit residential		21.3%
3	Commercial		19.0%
4	Mini homes		8.3%
5	Residential alterations		5.1%

Residential vs. commercial

Residential-related permit value dominates the mix.



Key takeaway:

The top categories account for 94.2% of the permit value mix, while residential-related permits represent 75.3% overall.

Guiding Principles

We want the Green Development Standards Framework to be....

- Appropriate to Colchester (market and climate)
- Quantifiable with measurable outcomes
- Realistic about ambition
- Easy to use
- Applicable across building types
- Future ready
- Aligned with existing plans
- Evidence based
- ***Any to add?***

Core Categories

Core categories were selected based on a jurisdictional scan of several Nova Scotia-based municipalities as well as alignment with Nova Scotia's Climate goals as well as 'Carbon Free Colchester: Community Energy and Emissions Plan'



Community Design
+ Land Use



Sustainable
Transportation



Energy +
Operational Carbon



Embodied Carbon
+ Materials



Water
Efficiency



Stormwater +
Green Infrastructure



Climate
Resilience



Ecology +
Biodiversity



Indoor Environmental
Quality



Equity, Accessibility,
+ Community Benefits

Topic	Metric	Intent	Sample Requirement
Community Design + Land Use			
Mixed-Use Proximity	Mixed-use Proximity	Encourage compact, complete-community development by locating homes and other uses within convenient walking distance of daily needs, services, employment, civic uses, and planned mixed-use areas.	Target site selection and block layout that places residential uses within a convenient walking distance of existing or planned daily-needs destinations, commercial areas, employment areas, civic uses, or community facilities, where such destinations exist or are planned.
	Access to parks, schools, and daily needs	Improve access to parks, schools, open spaces, trails, and daily destinations through safe, direct, accessible pedestrian connections that support active living and inclusive public-realm design.	Target safe and direct pedestrian connections to on-site or adjacent parks, public open spaces, schools, trails, community facilities, and daily-needs destinations. Where parkland or open space is provided on-site, ensure it has street frontage and connects to pedestrian infrastructure by an accessible outdoor path.
Sustainable Transportation			
Active Transportation Support	Travel Demand Management Strategies	Reduce reliance on private automobiles by designing buildings and sites that provide safe, convenient pedestrian and cyclist access to surrounding active transportation networks.	Target building design that supports sustainable transportation by providing clear, safe, and convenient access for building occupants to enter, exit, and move within the building.
	Bike Parking	Support cycling as a practical transportation option by providing secure, convenient, and weather-protected bicycle parking suited to the building type, occupancy, and expected users.	Target bicycle parking that meets or exceeds applicable municipal land use by-law requirements in Nova Scotia, including secure, convenient, and weather-protected long-term bicycle parking where multi-unit, mixed-use, commercial, institutional, or employment-generating uses are proposed.
	Parking Spaces with EV Infrastructure	Enable low-emission vehicle adoption by ensuring parking areas are designed with EV-ready infrastructure and sufficient electrical capacity or pathways for future charging installation.	For detached, semi-detached, and attached homes, run conduit from the electrical panel/electrical room to the garage or main parking location, or design the electrical panel in the garage. For multi-unit and other residential projects, provide an EV Ready Plan or conduit pathway to resident parking spaces to enable future EV charging.

Energy + Operational Carbon

Building Energy and Emissions	Energy Strategy and Modelling	Establish a clear project-level strategy for reducing operational energy use and greenhouse gas emissions beyond code through integrated design, modelling, and identification of practical low-carbon measures.	Target preparation of an energy strategy report that identifies practical pathways for the project to reduce energy use and greenhouse gas emissions beyond minimum Nova Scotia Building Code requirements, including building envelope, heating, cooling, ventilation, domestic hot water, controls, and renewable-readiness opportunities.
	EUI	Reduce total building energy demand by setting measurable energy-use intensity targets that encourage efficient envelopes, systems, controls, and operations.	Target a building that achieves the more stringent of the following performance levels: • Total Energy Use Intensity (TEUI) of XXX kWh/m²/year or less, or • A minimum XX% reduction in TEUI relative to the NECB 2020 reference building
	GHGI	Limit operational greenhouse gas emissions from building energy use by setting a measurable emissions-intensity target and encouraging low-carbon heating, cooling, domestic hot water, and electricity strategies.	Target a building that achieves a greenhouse gas emissions intensity (GHGI) of XX kgCO ₂ e/m ² /year or less.
	TEDI	Improve building-envelope performance and occupant comfort by reducing heating and cooling demand through thermal efficiency, reduced heat loss, and improved enclosure design.	Target a building envelope that achieves the more stringent of the following performance levels: • Envelope heat loss no greater than 80% of a reference building, or • Thermal Energy Demand Intensity (TEDI) of XXX GJ/m²/year or less In practice, the governing target will be the one that results in a more stringent envelope-driven heating performance.
Renewable Energy	Electrification and heat pump systems	Advance practical electrification by encouraging cold-climate heat pumps or hybrid systems that reduce fossil-fuel dependence while maintaining reliable heating, cooling, and domestic hot water performance.	Target efficient electrification by using cold-climate heat pumps or hybrid systems sized for the cooling load or larger, with a design narrative confirming heating, cooling, domestic hot water, and backup systems.
	Renewable energy / solar readiness	Prepare buildings for future renewable-energy installation by reserving suitable roof area, providing conduit pathways, and assessing solar photovoltaic feasibility where appropriate.	For low-rise residential projects, run conduit from the electrical room to the attic or roof area and identify a south/southwest-facing or otherwise feasible roof area for future solar PV. For other residential or mixed-use projects, complete a solar PV feasibility assessment.
Commissioning	Commissioning and O&M	Improve building performance and operational readiness by verifying that key building systems are installed, tested, documented, and capable of operating as intended.	Target implementation of basic commissioning activities, including a commissioning plan, commissioning requirements in construction documents, and verification that key HVAC, ventilation, domestic hot water, controls, and life-safety interface systems are installed and operating as intended.

Embodied Carbon + Materials			
Embodied Carbon	Embodied Carbon Intensity	Reduce embodied carbon by requiring life-cycle assessment of major building materials and encouraging lower-carbon structural and material choices during design and procurement.	Conduct a life-cycle assessment of project for lifecycle phases A1-A3. For residential neighborhood development projects, a single residential structure can be used for this assessment.
Sourcing Raw Materials	Percentage of Sustainable Permanently Installed Materials	Encourage responsible material sourcing by increasing the use of recycled, reused, certified, bio-based, regionally sourced, or otherwise sustainable permanently installed products.	Target selection of building materials such that at least XX% of the total value of permanently installed products supports responsible sourcing practices. Applicable strategies may include recycled content, reused materials, certified wood, bio-based materials, extended producer responsibility programs, and regional sourcing.
Waste Reduction	Waste Reduction	Reduce construction and operational waste by encouraging waste prevention, diversion, reuse, recycling, and design measures that support circular-economy outcomes.	
Ecology + Biodiversity			
Ecology + Biodiversity	Native or Adapted Species	Support local biodiversity, climate resilience, and reduced irrigation demand by prioritizing native or adapted plant species suited to local conditions.	Plant at least 80% native or adapted plant species, including trees, shrubs and herbaceous plants preferably drought-tolerant and pollinator-friendly outside of the buffer area (a protective zone as defined for the site) and within the development limit. All species must be non-invasive.
	Tree Canopy	Protect and expand tree canopy by inventorying existing trees, preserving mature trees where feasible, and replacing or planting trees to increase canopy cover and ecological value.	Conduct a tree inventory within the development footprint. Inventory should include stem counts and diameters at breast height for mature trees. Through either tree preservation and/or replanting, achieve a 10% increase in the total tree diameter at breast height(DBH) or total canopy cover. If the local County/municipality has a tree/ecological offsetting plan it may be used as a pathway to achievement.
	Bird Friendly Design & Light Pollution	Reduce impacts on birds, night skies, neighbouring lands, and ecological systems through bird-friendly glazing strategies and exterior lighting that limits glare, uplight, over-lighting, and blue-rich light.	All exterior lighting to have Dark Sky Approved certification or meet the following requirements: • Restrict the amount of upward-directed light • Avoid glare • Avoid over-lighting • Utilize dimming and other appropriate lighting controls • Minimize short-wavelength (bluish) light in the nighttime environment

Water Efficiency

Water Consumption	Indoor Water Consumption Reduction	Conserve potable water and reduce utility demand by encouraging efficient fixtures, low-flow plumbing, and measurable reductions in indoor water consumption.	Target a building that achieves the more stringent of: • A XX% reduction in indoor potable water use relative to baseline, or • An indoor water use intensity of 1.3–1.5 m³/m² Option 1: Water Use Reduction Reduce indoor aggregate water consumption by 20% from the following baselines: • Toilet: 6 litres per flush. • Urinal: 3.8 litres per flush. • Public restroom faucet: 1.9 litres per minute at 415 kPa. • Private restroom faucet: 8.3 litres per minute at 415 kPa. • Kitchen faucet: 8.3 litres per minute at 415 kPa. • Showerhead: 9.5 litres per minute at 550 kPa per shower stall. Option 2: WaterSense Plumbing Fixtures • All toilets, urinals, faucets, and showerheads used in the project are US EPA WaterSense certified.
	Outdoor Water Consumption Reduction	Reduce potable water use for irrigation by encouraging drought-tolerant landscapes, efficient irrigation, improved soils, and alternative water sources such as rainwater harvesting.	Target site design strategies that reduce potable water use for irrigation by at least XX% relative to the site's annual Theoretical Irrigation Requirement (TIR). Reductions may be achieved through plant selection, irrigation efficiency, and/or alternative water sources such as rainwater harvesting. Where detailed assessment is not undertaken, simple rainwater collection systems (e.g., rain barrels) may be used as an alternative approach.
	Water Metering	Enable water-use monitoring, leak detection, and occupant awareness by encouraging submetering or other systems that track water consumption at an appropriate scale.	
Rainwater	Rainwater Reuse	Reduce potable water demand and stormwater runoff by evaluating and implementing rainwater harvesting, greywater reuse, or other non-potable water systems where technically feasible.	Target evaluation of rainwater harvesting or non-potable water reuse for irrigation, hose bibs, toilet flushing, or other appropriate non-potable demands, considering public health, plumbing, maintenance, and winterization requirements.

Stormwater + Green Infrastructure

Storm Water Quality	ESC Measures during Construction	Protect receiving water bodies and adjacent lands during construction by preventing erosion, sediment release, and construction-related water-quality impacts through planned controls and inspections.	Prepare and implement an Erosion and Sediment Control Plan for construction activities that may cause erosion on site or sediment release to the environment, identifying risks, control measures, inspection requirements, maintenance responsibilities, and sequencing.
	Low Impact Development: Rainfall Runoff	Manage rainfall close to where it lands by using low impact development practices that replicate natural hydrology, reduce runoff, and support infiltration, evapotranspiration, and reuse.	Use best management practices replicating natural site hydrology processes, retain (i.e. infiltrate, evapotranspiration, or collect and reuse) on-site the runoff from the developed site; reducing the local rainfall event runoff by an additional XX%, on top of erosion and water balance targets established through applicable Watershed/EA/Stormwater Studies and Geotech/Hydrog Reports for this Development, using low-impact development (LID) and green infrastructure (GI) practices.
	Low Impact Development: TSS	Improve stormwater quality by reducing suspended solids and other pollutants in runoff before discharge to receiving systems or natural water bodies.	Provide an enhanced level of protection for water quality through the long-term average removal of XX% of Total Suspended Solids (TSS)
Storm Water Quantity	Rainfall Volume Retention	Reduce runoff volume and downstream flooding risk by retaining a defined portion of annual rainfall on site through infiltration, evapotranspiration, reuse, or other approved practices.	Retain a minimum of XX% of the total average annual rainfall volume (or equivalent 5 mm from each rainfall event) generated from all site surfaces through infiltration, low impact development strategies, evapotranspiration, water harvesting and/or reuse.

Climate Resilience

Climate Risk Screening	Hazard Identification	Improve climate-risk awareness by requiring early screening for coastal, flood, heat, storm, wildfire, and other hazards that may affect the site over the project life cycle.	Use Nova Scotia's coastal hazard map AND/OR ClimatAtlantic's Coast Adaptation Toolkit to determine if your property is subject to coastal hazards. By filling out the form, you will be presented with strategies to help mitigate coastal risks.
Climate Resilience + Hazard Mitigation	Rising Temperatures	Reduce heat-related climate risks and urban heat island effects through cool roofs, reflective or vegetated surfaces, shading, and landscape strategies that moderate site temperatures.	Implement one of the following options: Option 1: Heat Island - Roof XX% of the roof area of all new buildings within the project have a minimum solar reflectance index value of 82 (for low-sloped roofs <2.12) or 39 (for steep-sloped roofs >2.12). Option 2: Heat Island - Non-Roof Provide any combination of the following strategies for XX% of the site hardscape (including roads, sidewalks, courtyards, and parking lots): 1. Shade (within 5 years of occupancy if addressed through tree canopy) 2. Paving materials with a Solar Reflectance Index (SRI) of at least 29 3. Open grid pavement system
	Changing Precipitation Patterns	Address changing precipitation patterns by ensuring stormwater and site design measures account for increased rainfall intensity, runoff volumes, and long-term climate variability.	Addressed through stormwater items
	Frequent and Intense Storms	Improve resilience to severe storm events by encouraging site and building design measures that reduce exposure to flooding, wind, power disruption, and stormwater system overload.	Addressed through stormwater items

Indoor Environmental Quality

Indoor Air Quality	Indoor Air Quality Plan (during Construction)	Protect indoor environmental quality during construction by controlling dust, moisture, pollutants, and material contamination before occupancy.	Target implementation of an Indoor Air Quality (IAQ) Management Plan during construction to reduce occupant exposure to contaminants and protect building materials and systems.
	Source Control Strategies	Reduce occupant exposure to indoor contaminants by prioritizing low-emitting materials and design measures that limit radon, VOCs, and other pollutants at the source.	Target reduction of indoor air contaminants through material selection and building design strategies, including: • Use of low-emitting materials (e.g., low-VOC paints, adhesives, sealants, flooring, and composite wood), guided by limits defined in the Technical References, and • Incorporation of design measures to reduce radon ingress (e.g., sub-slab and foundation strategies)
	Ventilation Design	Support healthy indoor air quality through ventilation design	Target building design that provides continuous mechanical ventilation to dwelling units in accordance with applicable codes or standards, supporting acceptable indoor air quality.
	Filtration	Improve indoor air quality by encouraging filtration systems capable of reducing airborne particles and contaminants while remaining compatible with mechanical system design.	Target provision of air filtration systems with a minimum efficiency of MERV 13 (or highest compatible with system design), supporting reduction of indoor airborne contaminants.
	Verification Measures	Confirm indoor air quality performance before occupancy through ventilation verification, testing, commissioning, or other measures that demonstrate acceptable indoor conditions.	

Equity, Accessibility, and Community Benefits

Accessibility	Barrier Free Design	Increase housing accessibility by encouraging a meaningful share of dwelling units to include barrier-free paths of travel and basic accessibility features.	Target provision of accessible dwelling units within multi-unit residential buildings, such that at least xx% of suites include basic accessibility features. Accessible features should include a barrier-free path of travel and doorways into the following areas: Kitchen, Bedroom, Living room, Full bathroom
	Accessibility for Common Indoor Areas	Improve equitable access within buildings by designing common indoor areas in accordance with recognized accessibility principles and standards.	Target design of common indoor areas that align with accessibility principles outlined in CSA/ASC B651:23 – Accessible Design for the Built Environment (Section 7.2).
Affordability	Affordable Housing Units	Support housing affordability and community inclusion by encouraging a defined share of units to meet affordable ownership or rental criteria.	Target xx% of total units as affordable housing. Affordable housing may be defined as: • In the case of ownership housing, the least expensive of: - o Housing for which the purchase price results in annual accommodation costs which do not exceed 30 percent of gross annual household income for low- and moderate-income households; or - o Housing for which the purchase price is at least 10 percent below the average purchase price of a resale unit in the municipality. • In the case of rental housing, the least expensive of: - o A unit for which the rent does not exceed 30 percent of gross annual household income for low- and moderate-income households; or - o A unit for which the rent is at or below the average market rent of a unit in the municipality.
	Community Benefits	Encourage development that delivers tangible social, economic, and public-realm benefits that improve quality of life, equity, accessibility, and community well-being.	Submit a brief Community Benefits Plan demonstrating how the development will provide at least one community benefit, such as affordable or accessible housing, publicly accessible open space, enhanced active transportation connections, community-serving amenities, local hiring, social procurement, public art, or other municipally approved benefit.
	Mixed Housing Types	Promote housing choice and demographic diversity by encouraging a mix of dwelling or unit types that can serve different household sizes, incomes, and life stages.	Provide a diverse mix of housing types, including at least two of the following: • Semi-detached homes • Townhomes • Units containing Additional Residential Units (ARU) • Multi-unit residential (must meet the multi-unit residential requirements below to count)