Calgary Green Buildings Guide

Draft Performance Criteria

External Engagement Primer Version 1.0

October 2026

DRAFT FOR ENGAGEMENT PURPOSES ONLY

This document contains draft criteria released for engagement and discussion purposes. The content is subject to revision based on feedback received through the engagement process, additional technical analysis, and further review by The City.

The information contained in this document does not represent approved City policy, regulation, bylaw requirements, or development approval requirements. No decisions have been made regarding the final content of the Calgary Green Buildings Guide.

External feedback will be considered in the development of the final Guide. Please submit feedback through The City of Calgary Engage Portal during the engagement period.

Introduction

Context

Calgary's building industry is facing pressure from population growth, affordability, rising utility costs, and climate impacts. At the same time, builders, designers and developers are increasingly seeking guidance on how to deliver higher-performing buildings that go beyond minimum code requirements while remaining practical and cost-conscious.

The City of Calgary is developing the Green Buildings Guide to provide the development industry with clear, practical guidance for delivering higher-performing, lower-carbon and more climate-resilient buildings. Calgary already has strong sustainability direction through its climate, planning and corporate building policies; however, expectations for private development are currently spread across multiple policies, programs and guidance documents. The Guide is intended to bring this direction together into a consistent and accessible framework that improves clarity and predictability for project teams while supporting voluntary adoption of higher-performance practices.

The Guide is also responding to an evolving industry and regulatory context. Calgary is working toward significant emissions reductions and greater climate resilience while accommodating continued growth and housing demand. At the same time, changes to Alberta's City Charters have reaffirmed provincial authority over building codes and limited the City's ability to require building energy or emissions performance beyond provincial minimums. This makes voluntary guidance, incentives, education and alignment with existing planning processes increasingly important tools for advancing sustainability outcomes. Similar shifts are occurring in other Canadian municipalities, reinforcing the need for approaches that provide meaningful performance direction while remaining flexible and implementable for industry.

To inform the Guide, the project team has completed a broad research and gap-analysis phase. This has included a review of Calgary's climate, planning, technical and regulatory framework; analysis of comparable municipal approaches in Canada and internationally; consideration of third-party frameworks including LEED, Zero Carbon Building, Passive House and the National Energy Code of Canada for Buildings (NECB); and discussions with the City of Edmonton regarding approaches within Alberta's legislative context. The research identified opportunities to build on Calgary's existing Sustainable Building Guidance Document while creating a framework better suited to private development. These findings have informed the draft criteria being presented for industry review and feedback.

Within the first phase of the project, Urban Equation worked with City staff to develop guiding principles. These principles underpin the content and format of the entire Green Building Guide and define what a successful Guide looks like:

- A consolidated guide that connects users to The City's sustainable building resources and requirements
- Calgary-specific (market and climate)
- Quantifiable and outcome-based
- Realistic while maintaining ambition
- Practical and easy to use

- Scalable across building types
- Future-ready and evidence-based
- Aligned with existing City plans and policies
- A compilation of Calgary's current resources and guidance, not a duplication

Process

The Green Building Guide (GBG) is being developed through an iterative process of research, internal collaboration, and engagement.

Completed phases:

1. **Research Summary (Fall 2025-Winter 2026):** Review Calgary's existing policies, regulations and market context alongside leading green building standards and best practices to identify gaps, opportunities and baseline inputs for the Guide.
2. **Internal Engagement (Winter-Spring 2026):** Engage City departments and subject matter experts through targeted interviews and written feedback to validate priorities, identify implementation considerations and inform the development of the Guide.
3. **Draft Framework (Spring-Summer 2026):** Develop a Calgary-specific Green Building Guide framework, including sustainability objectives, performance criteria by building archetype, technical guidance and implementation pathways.
4. **Impact Analysis (Summer-Fall 2026):** Assess the environmental, social and financial implications of the proposed criteria, including building performance, incremental costs, lifecycle savings and broader benefits across representative archetypes.

Current phase:

5. **Internal & External Engagement (Fall 2026):** Present the draft Guide and impact analysis to City staff, industry and other interested parties to test feasibility, gather feedback and identify refinements prior to finalization.

Next phases:

6. **Finalization of Green Building Guide (Fall 2026):** Incorporate engagement feedback, refine the Guide and supporting technical content, complete accessibility and quality reviews, and prepare the final framework for City approval.
7. **Guide Release & Uptake (Winter 2027):** Support implementation and adoption through clear user resources, training and communications, alongside monitoring tools and an approach for future updates to the Guide.

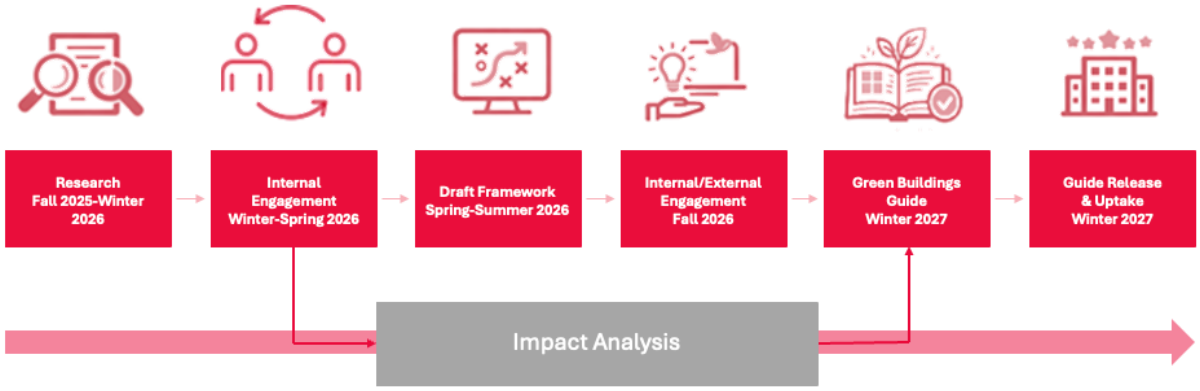


Figure 1: Calgary Green Buildings Guide Phases

Framework Overview

The Calgary Green Buildings Guide is a voluntary resource intended to support higher-performing development and does not create new building code requirements.

The Guide focuses on the building archetypes and development types most commonly found in Calgary and is organized around nine core topic areas: Energy & Carbon, Resilience, Water, Materials & Waste, Indoor Air Quality, Mobility, Accessibility, Commissioning, and Operations & Maintenance. It is intended to provide practical, evidence-based benchmarks informed by building science, technical research, established standards, and real-world implementation experience. Each topic is anchored in measurable metrics or defined proxies (e.g., Thermal Energy Demand Intensity (TEDI), Total Energy Use Intensity (TEUI), Greenhouse Gas Intensity (GHGI), embodied carbon intensity), ensuring clarity and consistency.

Criteria may vary between building archetypes to reflect differences in building form, occupancy, systems, energy and water use, site conditions, and the technical applicability of individual measures, helping ensure that the guidance is relevant and achievable for each development type. Criteria also may differ to make requirements practical and achievable for each building archetype.

Topic Areas

The draft GBG is separated into nine topic areas:



Pathways

The draft GBG uses a three-pathway model to support a range of project conditions and user types:

	Learn	Apply	Excel
What is it	Build understanding of the metrics and strategies that influence building performance.	Implement practical, market-ready approaches to improve building performance.	Pursue high-performance outcomes through advanced design, verification, and innovation.
Intent	An educational and orientation pathway that helps users understand what is being measured and why it matters before progressing to Apply or Excel criteria.	A steppingstone to implementing sustainable building criteria, while remaining affordable and accessible for the average developer.	A best practice guide for sustainable buildings in Calgary, while managing feasibility.
Target User	Individuals or organizations new to sustainable building practices	Typical Calgary development projects	Projects seeking higher levels of sustainability and innovation

Building Archetypes

The draft GBG is created for five groups of building archetypes, however, for this engagement only Low-Density Residential, Mid- to High-Rise Residential, and Commercial archetypes are detailed since they are the most common building types in the Calgary market.

Archetype	Typical Project Examples
Low-Density Residential	Single detached, semi-detached, duplex, rowhouse, townhome
Mid- to High-Rise Residential	Apartment buildings, condominium developments, mixed-use residential buildings
Commercial	Office buildings, retail centres, hotels, restaurants, private recreational facilities
Institutional	Schools, post-secondary buildings, healthcare facilities, libraries, public buildings
Industrial	Warehouses, distribution centres, manufacturing facilities, logistics buildings

This Engagement

What You Are Reviewing

You are reviewing a **final-stage draft (~95% developed)** of the criteria:

- Overall structure is established
- Key metrics and topics are defined
- Thresholds and details are established but not fixed

Where We Need Your Input

We are seeking focused input on:

- Appropriateness of key metrics (e.g., TEDI, TEUI, GHGI, embodied carbon, TSS, EV ready, etc.)
- Feasibility of **Apply pathway targets** within typical project constraints
- Ambition and credibility of **Excel pathway targets**

Performance Criteria: Mid- to –High-Rise Residential

Energy and Carbon

Learn	Apply	Excel
Thermal Energy Demand Intensity (TEDI, GJ/m^2/year)	Calculate both performance levels below. The building envelope should meet the criterion that results in the lower envelope-driven heating demand: • TEDI is at least 10% lower than the NECB 2020 reference building; or • TEDI is 0.30 GJ/m^2/year or less.	Calculate both performance levels below. The building envelope should meet the criterion that results in the lower envelope-driven heating demand: • TEDI is at least 20% lower than the NECB 2020 reference building; or • TEDI is 0.20 GJ/m^2/year or less.
Total Energy Use Intensity (TEUI, GJ/m^2/year)	Calculate both performance levels below. The building should meet the criterion that results in the lower TEUI: • TEUI is at least 10% lower than the NECB 2020 reference building; or • TEUI is 0.50 GJ/m^2/year or less.	Calculate both performance levels below. The building should meet the criterion that results in the lower TEUI: • TEUI is at least 20% lower than the NECB 2020 reference building; or • TEUI is 0.40 GJ/m^2/year or less.
Peak Electrical Demand Management	Calculate the modelled peak electrical demand for the proposed and NECB 2020 reference buildings using consistent operating schedules, weather conditions, load assumptions, and calculation intervals. Assess the systems and end uses contributing most to coincident peak demand, including space heating and cooling, central ventilation, domestic hot water, common-area and amenity loads, elevators, electric vehicle charging, and electric resistance backup heat where applicable. Consider and incorporate practical measures that reduce or shift peak demand, such as reducing building loads, selecting right-sized efficient equipment, staging equipment, optimizing controls,	Meet the Apply criterion. Demonstrate that the proposed building's modelled peak electrical demand is at least 15% lower than the NECB 2020 reference building using consistent operating schedules, weather conditions, load assumptions, and calculation intervals. Evaluate and incorporate a coordinated demand-management strategy that prioritizes reducing building loads and right-sizing equipment before shifting or storing energy. Include applicable measures such as staged operation of heating, cooling and ventilation equipment; limits on electric resistance backup heat; managed central domestic-hot-water heating; staggered morning warm-up or post-outage recovery; managed

	staggering system recovery, and managing domestic hot-water heating or electric vehicle charging. Document the proposed and reference peak demand in kW and W/m^2, calculation method and interval, timing of the modelled peak, principal coincident loads, and demand-management measures incorporated.	electric vehicle charging; and thermal storage, battery storage, or other controls that reduce coincident peak demand. Document the proposed and reference peak demand in kW and W/m^2, calculation method and interval, timing of the modelled peak, principal coincident loads, demand-management measures and control sequences incorporated, and anticipated peak-demand reduction.
Greenhouse Gas Intensity (GHGI, kg CO_2e/m^2/year)	Calculate the building's operational greenhouse gas intensity. Achieve a GHGI of 30 kg CO_2e/m^2/year or less. On-site renewable energy generation, such as solar PV, may be included in the calculation of GHG emissions.	Calculate the building's operational greenhouse gas intensity. Achieve a GHGI of 20 kg CO_2e/m^2/year or less. On-site renewable energy generation, such as solar PV, may be included in the calculation of GHG emissions.
Embodied Carbon Intensity (ECI, kg CO_2e/m^2)	Calculate and document the building's upfront embodied carbon intensity for **A1–A3 life-cycle stages** using a whole-building life cycle assessment or equivalent methodology. Include foundations, structure, enclosure, and interiors and normalize the result by gross floor area. Document the assessment scope, methodology, key assumptions, results, major contributors, and embodied carbon reduction measures considered or incorporated into the project.	Meet the Apply criterion. Use the whole-building life cycle assessment completed for the Apply criterion to assess **A1–A3 life-cycle stages**. Include foundations, structure, enclosure, and interior assemblies and finishes, and normalize the result by gross floor area. The building should meet one of the following A1–A3 embodied carbon performance criteria: • ECI is at least **30% lower** than a functionally equivalent baseline building; or • ECI is **350 kg CO_2e/m^2 or less**. Assess the proposed and baseline buildings using the same gross-floor-area definition, A1–A3 life-cycle stages, foundations, structure, enclosure, and interior assemblies and finishes scope, data sources, and calculation methodology. Exclude biogenic carbon from the compliance value or report it separately. Document the assessment scope, methodology, key assumptions, baseline assumptions where applicable, results, major contributors, and embodied carbon reduction measures incorporated into the project.

Future Energy Systems Readiness	Consider and document opportunities to support future installation or expansion of low-carbon energy systems, including: • Solar photovoltaic readiness, including suitable roof area, structural considerations, pathways for electrical connections and space for associated equipment; and • Electrification readiness, including electrical capacity, equipment space and system configurations that would support future conversion of major fossil-fuel end uses. Documentation may be qualitative and should summarize the opportunities, constraints and provisions identified during design.	Evaluate and document future low-carbon energy system pathways, including: • Feasible solar photovoltaic capacity, expected annual generation and requirements for structural, electrical and controls integration; and • A building electrification pathway identifying the systems, infrastructure changes and electrical capacity required to transition major end uses, including space heating and domestic hot water, to electric technologies. Documentation should identify measures incorporated into the design to facilitate future implementation.
Renewable Electricity Procurement	Calculate and document the building's greenhouse gas intensity before accounting for off-site renewable electricity purchases. Consider opportunities to reduce electricity-related emissions through: • a renewable electricity supply contract; • a power purchase agreement; or • the purchase and retirement of eligible renewable energy certificates. Where renewable electricity procurement is being considered, report the resulting market-based greenhouse gas intensity separately from the building's unadjusted greenhouse gas intensity.	Calculate and document both: Unadjusted GHGI, based on the building's modelled energy use and the prescribed electricity emission factor; and Market-based GHGI, accounting for eligible renewable electricity purchases associated with the building's annual electricity consumption. Where renewable electricity procurement is used, document the procurement method, quantity purchased, applicable emission factor, and resulting change in market-based greenhouse gas intensity.

Climate Resilience

Learn	Apply	Excel

Climate Hazard Risk Screening	Complete the Calgary Green Buildings Guide Climate Resilience Screening Questionnaire. Identify the climate hazards most relevant to the project and consider measures that may improve building resilience, occupant safety, durability, or continuity of operations during climate-related events. Document the climate hazards identified and the resilience measures being considered.	Complete the Calgary Green Buildings Guide Climate Resilience Screening Questionnaire and The City of Calgary's Climate Risk and Resilience Assessment (or equivalent). Evaluate the project's most significant climate risks and consider measures that may reduce risk and improve resilience. Document the significant climate risks identified and the resilience measures incorporated into the project.
Extreme Heat	Conduct a thermal comfort analysis under current summer design conditions. Occupied residential spaces should maintain a maximum indoor operative temperature of 26°C or less.	Conduct a thermal comfort analysis under future climate conditions. Occupied residential spaces should maintain a maximum indoor operative temperature of 26°C or less.
Flooding	For projects identified as exposed to flooding through the Calgary River Flooding maps, review applicable flood-related considerations identified through municipal planning and regulatory frameworks. Assess flood-related risks to the building and consider measures that support protection of critical building systems from flood damage. Document the flood risks identified and the flood resilience measures being considered.	For projects identified as exposed to flooding through the Calgary River Flooding maps, review applicable flood-related considerations identified through municipal planning and regulatory frameworks. Assess flood-related risks to the building and consider measures that support protection and recovery of critical mechanical, electrical, life safety, and communications systems following a flood event. Document the flood risks identified and the flood resilience measures incorporated into the project.
Hail	Assess the project's exposure to hail-related risks and consider measures that may reduce damage to roofing systems, rooftop mechanical equipment, renewable energy systems, and other exposed critical building systems. Where solar photovoltaic systems are being considered, evaluate photovoltaic modules with documented hail-impact performance suitable for Calgary's severe hail environment. Document the hail-related risks identified and the resilience measures being considered.	Assess the project's exposure to hail-related risks and consider measures that may reduce damage, repair needs, and service interruption associated with severe hail events. Evaluate strategies to improve the resilience of roofing systems, exterior wall assemblies, rooftop mechanical equipment, renewable energy systems, and other exposed critical building systems. Where solar photovoltaic systems are being considered, evaluate photovoltaic modules with documented hail-impact performance suitable for Calgary's severe hail environment and design approaches that may reduce the risk of hail-related damage.

		Document the hail-related risks identified and the resilience measures incorporated into the project.
High Winds	Assess the project's exposure to high-wind events and consider measures that may reduce damage to exposed building systems, rooftop equipment, rooftop appurtenances, and other exposed building components. Document the high-wind risks identified and the resilience measures being considered.	Assess the project's exposure to high-wind events and consider measures that may reduce damage, repair needs, and service interruption associated with severe wind events. Evaluate strategies that improve the resilience of exposed building systems, rooftop equipment, rooftop appurtenances, and other critical building systems. Document the high-wind risks identified and the resilience measures incorporated into the project.
Water Intrusion	Assess the project's exposure to water intrusion and moisture-related risks associated with short-duration high-intensity rainfall events. Consider measures that may reduce water intrusion and moisture-related damage through protection of the building envelope, roof drainage systems, and vulnerable building areas. Document the risks identified and the resilience measures being considered.	Assess the project's exposure to water intrusion and moisture-related risks associated with short-duration high-intensity rainfall events. Consider measures that may reduce damage, repair needs, and service interruption resulting from water intrusion events through enhanced protection of the building envelope, roof drainage systems, and vulnerable building areas. Document the risks identified and the resilience measures incorporated into the project.
Refuge Space and Passive Survivability	Assess opportunities to support occupant safety during extreme heat, poor outdoor air quality, power outages, or other climate-related events. Consider the provision of one or more indoor refuge spaces that are accessible to building occupants and provide services appropriate to the climate hazards identified through the project's climate hazard assessment. Where flooding is identified as a climate hazard risk, consider locating refuge spaces outside areas vulnerable to flood impacts and maintaining access during flood events.	Assess opportunities to support occupant safety during extreme heat, poor outdoor air quality, power outages, flooding, and other climate-related events. Evaluate refuge space strategies that support occupant safety and continuity of operations during climate-related disruptions. Where extreme heat is identified as a climate hazard risk, consider refuge spaces capable of maintaining an indoor operative temperature of 24°C or less during extreme heat events. Where flooding is identified as a climate hazard risk, consider

	Document the refuge space strategy being considered and its relationship to the climate hazards identified for the project.	locating refuge spaces outside areas vulnerable to flood impacts and maintaining access during flood events. Document the refuge space strategy incorporated into the project and its relationship to the climate hazards identified for the project.

Water

Learn	Apply	Excel
Erosion and Sediment Control	Consider erosion and sediment control (ESC) measures that align with the City of Calgary's Stormwater Bylaw and Code of Practice for Erosion and Sediment Control (2023). Evaluate opportunities to: • Minimize site disturbance through phased construction; • Stabilize exposed soils as early as practical; • Manage runoff to reduce erosion and sediment transport; • Preserve existing vegetation, drainage features, and natural site characteristics where feasible; • Protect low impact development and green infrastructure features during construction; and • Monitor and adapt ESC measures as site conditions change. Document the ESC measures being considered for the project.	Meet the criteria outlined in the Apply Pathway.
Rainfall Runoff Management	Manage and treat runoff generated by the Calgary Water Quality Design Event (15 mm rainfall) through one or more low impact development (LID) or green infrastructure (GI) practices.	Manage and treat runoff generated by the Calgary Water Quality Design Event (15 mm rainfall) through integrated LID and GI practices that collectively provide, at a minimum, stormwater infiltration, evapotranspiration, and stormwater reuse functions.
Total Suspended Solids (TSS)	Consider design approaches that support: • At least 85 per cent removal of TSS for particles 50 microns or larger from treated stormwater runoff; and	Consider design approaches that support:

	• No net increase in average annual TSS loading where required by the applicable watershed, drainage plan or receiving-water criteria.	• At least 90% removal of total suspended solids for particles 50 microns or larger from treated stormwater runoff; and • No net increase in average annual post-development TSS loading relative to pre-development conditions.
Rainfall Volume Retention	Consider site design strategies that support retention of a minimum of 20% of the projected annual rainfall volume in 2050 (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.	Consider site design strategies that support retention of a minimum of 50% of the projected annual rainfall volume in 2050 (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.
Indoor Water Consumption	Target a reduction in indoor aggregate water consumption of **25% or greater** 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.	Target a reduction in indoor aggregate water consumption of **40% or greater** 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.
Outdoor Water Consumption	Target site design strategies that reduce potable water use for irrigation by at least 50% relative to the site's annual Theoretical Irrigation Requirement (TIR). Consider applicable water-wise landscape design practices identified through The City of Calgary's YardSmart program, including plant selection, soil design, mulch, irrigation efficiency, passive rainwater management, and alternative water sources such as rainwater harvesting.	Target a high-performance landscape design that does not require permanent irrigation beyond an initial establishment period (e.g., up to two years). Use applicable water-wise landscape design practices identified through The City of Calgary's YardSmart program, including drought-tolerant planting, soil design, mulch, lawn alternatives, and passive water management strategies.
Water Use Monitoring and Leak Detection	Assess how building water use will be measured through the utility meter and The City's planned advanced metering infrastructure. Identify significant water uses or potential leak locations that may not be distinguishable through whole-building utility data.	Assess the building's significant water uses and potential leak locations in relation to the information expected to be available through the utility meter and The City's planned advanced metering infrastructure.

	Consider supplemental metering or leak-detection measures for significant common or building-system water uses where the information would support building operations. Document the utility and supplemental metering approach, the water uses being monitored, and how available water-use data and alerts will be accessed by building operations staff.	Evaluate and incorporate supplemental metering, automated leak detection, and controls for major common or building-system water uses where these measures provide actionable information beyond whole-building utility data. Where supported by The City's metering infrastructure, consider integration of available water-use data or alerts with the building automation or water-management system. Document the metering, leak-detection, and controls strategy, including monitored water uses, alert and response procedures, data access, and responsibilities for ongoing review.

Materials and Waste

	Apply	Excel
Sustainable Permanently Installed Materials	Assess and select at least five permanently installed products across three product categories that provide material ingredient transparency or demonstrate preferred material attributes, such as an HPD, Declare label, Cradle to Cradle Material Health Certificate, or at least 25% post-consumer recycled content. Document the qualifying products, categories, and applicable disclosures or attributes.	Assess and select at least eight permanently installed products across four product categories that provide material ingredient transparency or demonstrate preferred material attributes, such as an HPD, Declare label, Cradle to Cradle Material Health Certificate, or at least 25% post-consumer recycled content. Prioritize high-impact or widely used materials and document the qualifying products, categories, and applicable disclosures or attributes.
Design for Deconstruction	Assess and incorporate at least **one design-for-deconstruction strategy** that supports future repair, replacement, adaptation, or material recovery. Strategies may include reversible connections, accessible building services, replaceable enclosure components, demountable partitions, or removable finishes. Document the strategy and affected assemblies.	Assess and incorporate at least **three design-for-deconstruction strategies across different building assemblies** that support future repair, replacement, adaptation, or material recovery. Strategies may include reversible connections, accessible building services, replaceable enclosure components, demountable partitions, or removable finishes. Document the strategies, affected assemblies, and relevant disassembly or replacement information.

Plan for Material Salvage	Prepare a material salvage plan that identifies building materials and assemblies with potential for future reuse or recycling. Document their locations, approximate quantities, and relevant removal or recovery information. Include the plan in the building operations and maintenance documentation.	Prepare a comprehensive material salvage plan that identifies building materials and assemblies with potential for future reuse or recycling. Document their locations, quantities, material specifications, connection and removal methods, disassembly sequencing, and potential reuse or recycling pathways. Include the plan in the building operations and maintenance documentation and provide relevant guidance for future suite and common-area alterations.
Waste Collection	Target building design that supports waste diversion by providing a multi-stream waste collection system for garbage, recycling, and organics. Approaches may include: • A single chute with tri-stream sorting; • Two chutes with integrated multi-stream sorting; • Three separate chutes; or • A centralized waste collection and diversion facility. Systems should support convenient and consistent use by occupants.	Consider additional waste diversion opportunities through building design and waste management infrastructure. In addition to supporting garbage, recycling, and organics collection, consider: • Organic waste collection receptacles; • On-site composting or organics processing systems; and • Building features that support increased waste diversion and occupant participation. Systems should support convenient and consistent use by occupants.
Waste Storage Space	Target building design that provides accessible waste storage space sized to support building operations, including: • A minimum floor area of **25 m²** for the first 50 dwelling units; and • An additional **13 m²** for each additional 50 dwelling units.	In addition to providing accessible waste storage space sized to support building operations, consider dedicated in-unit space for the segregation of recyclables, organics, and garbage. Built-in storage may include separate containers with minimum capacities of approximately: • **8.5 L** for garbage and organics; and • **18 L** for recyclable materials. Consider waste storage designs that support convenient and consistent waste diversion by occupants.
Bulky Waste Management	Target provision of dedicated space for bulky items and materials requiring special collection, sized at approximately **10 m²**.	Target a high-performance building that provides accessible and well-organized space for bulky items and materials requiring

		special collection, sized at approximately **10 m²** and integrated into the overall waste storage design.
Special Waste and Reuse	Not Applicable	Target additional waste diversion and reduction strategies through dedicated space and facilities, including: • Approximately **1 m² per 100 dwelling units** for household hazardous and/or electronic waste; and • A centralized area for donation and reuse of materials.
Construction and Demolition Waste Management	Target development and implementation of a Construction and Demolition Waste Management Plan that identifies strategies to reduce waste generation during design and construction. Consider opportunities to reduce material consumption, support material reuse and recovery, and minimize construction and demolition waste. Document the waste reduction strategies being considered for the project.	Target a high-performance project that develops and implements a comprehensive Construction and Demolition Waste Management Plan to minimize waste generation and support material reuse and recovery. Consider opportunities to reduce material consumption, support material reuse and recovery, and maximize diversion of construction and demolition waste from landfill. Document the waste reduction, material recovery, and diversion strategies incorporated into the project.
Construction Waste Diversion	Target diversion of at least 50% of non-hazardous construction, demolition, and land clearing waste from landfill.	Target diversion of at least 75% of non-hazardous construction, demolition, and land clearing waste from landfill.

Indoor Air Quality

Learn	Apply	Excel
Construction Indoor Air Quality Management	Target implementation of an Indoor Air Quality (IAQ) Management Plan during construction to reduce occupant exposure to contaminants and protect building materials and systems.	Meet the criteria outlined in the Apply Pathway.

	Consider measures that support source control, protection of absorptive materials, management of construction-generated contaminants, and maintenance of acceptable indoor environmental conditions during construction.	
Radon	Incorporate design measures that reduce radon ingress, such as sub-slab and foundation strategies.	Incorporate design measures that reduce radon ingress, such as sub-slab and foundation strategies.
Low-Emitting Base-Building Materials	Target low-emitting base-building materials that support the following: • At least 50% of all adhesives and sealants meet VOC emissions evaluation requirements; • At least 75% of all paints, coatings, adhesives, and sealants meet VOC content requirements; • At least 75% of all ceilings meet VOC emissions evaluation requirements; and • At least 50% of all insulation meets VOC emissions evaluation requirements.	Target low-emitting base-building materials within the building that support the following: • At least **75%** of all adhesives and sealants meet VOC emissions evaluation requirements; • **100%** of all paints, coatings, adhesives, and sealants meet VOC content requirements; • At least **90%** of all ceilings meet VOC emissions evaluation requirements; and • At least **75%** of all insulation meets VOC emissions evaluation requirements.
Low-Emitting Finishes	Target low-emitting building materials within the building that support the following: • At least **50%** of all paints and coatings meet VOC emissions evaluation requirements; • At least **75%** of all flooring meets VOC emissions evaluation requirements; • At least **50%** of all wall panels meet VOC emissions evaluation requirements; • At least **50%** of all furniture within the project scope meet furniture emissions evaluation requirements; and • At least **50%** of all composite wood products meet formaldehyde emissions evaluation requirements.	Target low-emitting building materials within the building that support the following: • At least **75%** of all paints and coatings meet VOC emissions evaluation requirements; • At least **90%** of all flooring meets VOC emissions evaluation requirements; • At least **75%** of all wall panels meet VOC emissions evaluation requirements; • At least **75%** of all furniture within the project scope meet furniture emissions evaluation requirements; and • At least **75%** of all composite wood products meet formaldehyde emissions evaluation requirements.

Ventilation	Target building design that provides continuous mechanical ventilation to dwelling units in accordance with applicable codes or standards, supporting acceptable indoor air quality. Ventilation systems should include means to reduce smoke ingress during periods of poor outdoor air quality.	Target a high-performance building that enhances indoor air quality and occupant protection during periods of poor outdoor air quality, including wildfire smoke events, through integrated ventilation, filtration, and building enclosure design. Provide continuous mechanical ventilation that exceeds ASHRAE 62.1 standards by 10% and incorporate ventilation system controls, filtration performance, and enclosure airtightness measures that work together to reduce smoke ingress and occupant exposure to outdoor airborne contaminants.
Filtration	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 and improving indoor air quality during wildfire smoke events.	Target a high-performance building that provides air filtration systems with a minimum efficiency of MERV 13 (or higher, where compatible with system design) and limits occupant exposure to wildfire smoke by maintaining indoor PM2.5 concentrations at least 80% lower than outdoor concentrations during wildfire smoke events.
Indoor Air Quality Verification	Conduct radon testing where appropriate, with mitigation measures implemented if levels exceed applicable guidelines	Target a high-performance building that verifies indoor air quality and ventilation performance prior to occupancy, including: • Verification of ventilation system performance and air distribution; • Pre-occupancy indoor air quality testing or equivalent measures to demonstrate acceptable conditions (e.g., PM2.5, VOCs, CO where applicable); and • Radon testing where appropriate, with mitigation measures implemented if levels exceed applicable guidelines. IAQ verification may be achieved through testing, commissioning, or other appropriate methods depending on project scope.

Mobility and Transportation

Learn	Apply	Excel

Active Transportation Support	Target site and building design that provides continuous, safe, and accessible pedestrian and cyclist routes between the public active transportation network, principal building entrances, bicycle parking, and end-of-trip facilities. Consider design approaches that: • Connect a principal entrance to every abutting public sidewalk, multi-use pathway, or trail; • Provide a continuous cyclist route from the active transportation network to short- and long-term bicycle parking; • Provide routes that are unobstructed, adequately lit, and separated from vehicle circulation where practical; • Provide clearly marked crossings with appropriate sightlines where routes cross driveways or vehicle aisles; and • Locate bicycle access so cyclists are not required to use stairs or pass through loading, waste storage, or vehicle parking areas. Where no active transportation infrastructure is provided, ensure on-site bicycle parking is directly accessible from a principal entrance.	Target site and building design that prioritizes active transportation through safe, direct, and accessible pedestrian and cyclist routes. Consider design approaches that: • Locate a principal entrance on, or directly visible from, the public sidewalk or active transportation route; • Provide pedestrian and cyclist routes that are at least as direct as the corresponding route between vehicle parking and the principal entrance; • Physically separate primary pedestrian and cyclist routes from vehicle circulation using curbs, landscaping, grade separation, or other durable treatments; • Provide weather protection at principal pedestrian entrances and along outdoor waiting or bicycle-access areas where appropriate; • Provide direct access between long-term bicycle parking, end-of-trip facilities, and occupied building areas without requiring travel through vehicle ramps or loading areas; and • Develop a site circulation plan identifying pedestrian, cyclist, vehicle, loading, and emergency routes and describing how potential conflicts have been minimized. Where no active transportation infrastructure is provided, ensure on-site bicycle parking is directly accessible from a principal entrance.
Bike Parking	Target provision of Class 1 (protected and covered) long-term bicycle parking that exceeds minimum requirements defined in the Land Use Bylaw.	Target a high-performance building that enhances cycling support by providing electrification for bicycle use, such as energized outlets for a portion of bicycle parking spaces (e.g., **15%**). These spaces should continue to provide Class 1 (protected and covered) long-term bicycle parking.
EV-Ready Parking	Target 50% of parking spaces to be EV-capable with a 208V/240V junction box or outlet and sufficient electrical panel capacity to support future Level 2 charging.	Target **100%** of parking spaces to be EV-capable with a 208V/240V junction box or outlet and sufficient electrical panel capacity to support future Level 2 charging.

Accessibility

Learn	Apply	Excel
Barrier-Free Design	Target provision of accessible dwelling units within multi-unit residential buildings, such that at least 15% 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	Target provision of accessible dwelling units within multi-unit residential buildings, such that at least **20%** 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	Target design of common indoor areas that align with accessibility principles outlined in the NBC 2025.	Target design of common indoor areas that align with accessibility principles outlined in the most recent version of Calgary's Access Design Standards.

Commissioning

Learn	Apply	Excel
Commissioning Process	Target implementation of basic commissioning activities to support proper installation and operation of building systems, including: Development of a commissioning (Cx) plan.	Target implementation of a comprehensive commissioning process to support verified system performance, including: • Development and implementation of a commissioning (Cx) plan; • Integration of commissioning requirements into construction documents; • Development of construction checklists; • Development and execution of system test procedures; and • Maintenance of an issues and benefits log throughout the commissioning process.

Commissioned Systems	Target commissioning of key building systems to support proper installation and operation, including central HVAC and ventilation systems, with verification that systems are functioning as intended.	Target enhanced commissioning of major building systems and the building envelope to support verified system performance, including HVAC, ventilation, hydronic and domestic hot water systems, controls, airtightness, and energy metering, supported by functional testing and verification.

Operations and Maintenance

Learn	Apply	Excel
Operations and Maintenance	Target provision of essential operations and maintenance (O&M) documentation and training to support efficient building operation, including: • A building systems overview (e.g., systems narrative or sequence of operations); • Key operating parameters for major systems (e.g., schedules, setpoints); • Training for building operators on system operation and maintenance, including emergency response protocols and maintenance of a refuge space; • Waste Plan; • Plan for Deconstruction; and • Simple labelling of all building controls.	Target implementation of a comprehensive operations and maintenance strategy to support ongoing building performance, including: • A structured operations and maintenance (O&M) plan that supports efficient building operation; • Detailed documentation of system operation (e.g., sequences of operation, schedules, and setpoints); • A preventive maintenance plan for major building systems; • Training for building operators on system operation and maintenance, including emergency response protocols and maintenance of a refuge space; • A structured approach to ongoing performance review, such as periodic commissioning or annual verification of building operation; • Waste Plan; and • Plan for Deconstruction.

Performance Monitoring and Benchmarking	Establish an approach for tracking and reviewing building performance during operations, including: • Energy use and greenhouse gas emissions; • Water use; • Waste generation and diversion, where data are available; and • Relevant operating conditions, such as occupancy, schedules and major changes in building use. • Identify the meters, utility records and other data sources that will be used. Compare initial operating results with design-stage performance estimates and investigate material differences.	Implement an ongoing building performance benchmarking and reporting process that includes: • Energy use, greenhouse gas emissions and water use; • Waste generation and diversion, where data are available; • Tenant or major end-use data, where separately metered or otherwise available; • Comparison against design-stage estimates, prior-year performance and relevant external benchmarks; and • Periodic review of performance trends, anomalies and improvement opportunities. For eligible buildings, report energy, water and greenhouse gas performance through the City of Calgary's BenchmarkYYC program or an equivalent benchmarking platform.

Performance Criteria: Low-Density Residential

Energy and Carbon

Learn	Apply	Excel
Thermal Energy Demand Intensity (TEDI, GJ/m2/year)	Calculate the applicable envelope heat-loss reduction and the absolute TEDI below. The building envelope should meet the criterion that results in the lower envelope-driven heating demand: • Envelope heat loss is at least 20% lower than the NBC-AE 2023 reference building where the total conditioned volume is 300 m³ or less, or at least 30% lower where the total conditioned volume is greater than 300 m³ or is not determined; or • TEDI is 0.24 GJ/m²/year or less.	Calculate the applicable envelope heat-loss reduction and the absolute TEDI below. The building envelope should meet the criterion that results in the lower envelope-driven heating demand: • Envelope heat loss is at least 30% lower than the NBC-AE 2023 reference building where the total conditioned volume is 300 m³ or less, or at least 40% lower where the total conditioned volume is greater than 300 m³ or is not determined; or • TEDI is 0.21 GJ/m^2/year or less.
Total Energy Use Intensity (TEUI, GJ/m2/year)	Calculate the applicable TEUI reduction and the absolute TEUI below. The building should meet the criterion that results in the lower TEUI: • TEUI is at least 10% lower than the NBC-AE 2023 reference building where the total conditioned volume is 300 m³ or less, or at least 20% lower where the total conditioned volume is greater than 300 m³ or is not determined; or • TEUI is 0.50 GJ/m^2/year or less.	Calculate the applicable TEUI reduction and the absolute TEUI below. The building should meet the criterion that results in the lower TEUI: • TEUI is at least 30% lower than the NBC-AE 2023 reference building where the total conditioned volume is 300 m³ or less, or at least 40% lower where the total conditioned volume is greater than 300 m³ or is not determined; or • TEUI is 0.38 GJ/m^2/year or less.
Electrical Demand Management	Calculate the dwelling's electrical demand using the applicable Canadian Electrical Code methodology. Identify the major electrical loads contributing to the calculated demand and consider equipment selection, controls, load management, or scheduling strategies that support electrification while reducing unnecessary coincident demand.	Calculate the dwelling's electrical demand using the applicable Canadian Electrical Code methodology. Incorporate measures that manage or limit coincident demand while supporting building electrification, such as equipment staging, managed electric vehicle charging, thermal storage, battery storage, or controls that coordinate major electrical loads.

		Document the calculated demand before and after the measures are applied.
Greenhouse Gas Intensity (GHGI, kg $CO2e/m^2$/year)	Calculate the building's operational greenhouse gas intensity. Target a GHGI of 20 kg CO_2e/m^2/year or less. On-site renewable energy generation, such as solar PV, may be included in the calculation of GHG emissions.	Calculate the building's operational greenhouse gas intensity. Target a GHGI of 10 kg CO_2e/m^2/year or less. On-site renewable energy generation, such as solar PV, may be included in the calculation of GHG emissions.
Embodied Carbon Intensity (ECI, kg $CO_2e/m2$)	Calculate and document the building's upfront ECI using a simplified assembly- or material-based assessment or equivalent methodology. At a minimum, include A1–A3 life cycle stage emissions and report results as kg CO_2e/m^2. Document the major contributors to embodied carbon emissions and summarize design or specification strategies considered to reduce embodied carbon. Where feasible, teams are encouraged to extend the assessment to include A1–A3 life cycle stage emissions.	Calculate and document the building's upfront ECI using BEAM or MCE2. Target an upfront embodied carbon intensity of **250 kg CO_2e/m^2 or less**. Document the methodology, key assumptions, major contributors, and embodied carbon reduction measures incorporated into the project.
Future Energy Systems Readiness	Consider and document opportunities to support future installation or expansion of low-carbon energy systems, including: • **Solar photovoltaic readiness**, including suitable roof area and orientation, structural considerations, a pathway for electrical connections, panel capacity, and space for associated equipment; and • **Electrification readiness**, including electrical service and panel capacity, equipment space, and practical pathways to support future conversion of major fossil-fuel end uses, such as space heating, domestic hot water, cooking, and vehicles, to electric technologies. Provide the homeowner or end user with a summary of the opportunities, constraints, and provisions identified.	Evaluate and document future low-carbon energy system pathways, including: • Feasible solar photovoltaic capacity, expected annual generation, and requirements for structural and electrical integration; • An electrification pathway identifying the equipment, electrical capacity, space, and infrastructure required to transition major fossil-fuel end uses, including space heating and domestic hot water, to electric technologies; and • Opportunities to accommodate future battery storage or other home energy management systems.

		Incorporate practical provisions that facilitate future implementation, such as reserved electrical capacity, labelled panel space, appropriately sized electrical service, equipment space, and electrical pathways. Provide the homeowner or end user with documentation identifying the provisions incorporated into the dwelling and the remaining steps required for future implementation.
Renewable Electricity Procurement	Where electricity procurement will remain under the control of the building owner, housing provider, or property manager, consider opportunities to reduce electricity-related emissions through eligible renewable electricity procurement. Document the procurement options considered and identify any anticipated implications for operating costs, contract terms, and greenhouse gas emissions. Where electricity procurement will be controlled by individual homeowners or occupants, provide information on renewable electricity purchasing options as part of the homeowner or end-user documentation.	Where electricity procurement will remain under the control of the building owner, housing provider, or property manager, develop a renewable electricity procurement approach for the project's anticipated annual electricity consumption. Document the procurement method, quantity of renewable electricity, applicable emission factor, contract duration, and resulting market-based greenhouse gas intensity separately from the building's unadjusted greenhouse gas intensity. Where electricity procurement will be controlled by individual homeowners or occupants, this criterion is not applicable.

Climate Resilience

Learn	Apply	Excel
Climate Hazard Risk Screening	Complete the City of Calgary Climate Ready Home Guide Home Self-Evaluation Tool and assess the climate hazards most relevant to the dwelling or project. Consider measures that may improve occupant safety, building durability, and resilience during climate-related events. Document the climate hazards identified and the resilience measures being considered.	Complete the City of Calgary Climate Ready Home Guide Home Self-Evaluation Tool and assess the dwelling's significant climate risks using an appropriate residential climate-risk assessment or equivalent methodology. Evaluate measures that may reduce the identified climate risks and improve occupant safety, building durability, and resilience during climate-related events.

		Document the significant climate risks identified and the resilience measures incorporated into the dwelling or project.
Extreme Heat	Assess the dwelling's exposure to overheating and extreme-heat risks under current summer conditions. Consider applicable measures from the City of Calgary Climate Ready Home Guide that may reduce overheating and improve occupant comfort and safety during extreme heat events, including measures that: • Manage seasonal solar heat gain through window orientation, glazing selection, exterior or integrated shading, and deciduous landscaping; • Reduce summer heat transfer through appropriate roof and wall insulation and high-SRI roofing; • Support passive cooling through operable windows and natural ventilation; • Reduce heat-absorbing hard surfaces through trees and other planting, where feasible, and avoid artificial turf; and • Provide efficient mechanical cooling, such as a heat pump or window air-conditioning unit, as appropriate. Provide the homeowner or end user with guidance on operating the dwelling during extreme heat events. Document the extreme-heat risks identified, the resilience measures being considered, and the operating guidance provided to the homeowner or end user.	Assess the dwelling's exposure to overheating and extreme-heat risks under current and future summer conditions. Evaluate and incorporate a coordinated set of measures from the City of Calgary Climate Ready Home Guide that may minimize overheating and improve occupant comfort and safety during extreme heat events. The strategy should: • Manage seasonal solar heat gain through optimized window orientation, high-performance glazing, exterior or integrated shading, and deciduous landscaping; • Reduce summer heat transfer through enhanced roof and wall insulation and high-SRI roofing; • Support passive cooling through operable windows, cross-ventilation, and night ventilation; • Reduce heat-absorbing hard surfaces through trees and other planting, where feasible, and avoid artificial turf; • Limit internal heat gains through efficient lighting, appliances, and equipment; and • Provide efficient mechanical cooling, such as a heat pump, capable of serving principal living and sleeping areas. Document the measures incorporated and provide the homeowner or end user with guidance on operating the dwelling during extreme heat events and power interruptions.
Flooding	For projects identified as exposed to flooding through the Calgary River Flooding maps, demonstrate compliance with applicable flood-related requirements in the Land Use Bylaw. Align the dwelling design with applicable recommendations in the City of Calgary Climate Ready Home Guide for heavy rain and flooding.	For projects identified as exposed to flooding through the Calgary River Flooding maps, demonstrate compliance with applicable flood-related requirements in the Land Use Bylaw. Meet the Apply criterion and incorporate an enhanced flood-resilience strategy based on the City of Calgary Climate Ready Home Guide and the flood risks identified for the dwelling or project.

	• Avoid living spaces in basements where feasible; • Seal foundation penetrations and repair foundation cracks; • Provide backwater protection for sewer connections and vulnerable basement fixtures; • Provide a sump pump, where applicable, and water alarms in vulnerable basement areas; • Grade the lot to direct water away from the foundation; • Provide eavestroughs and downspouts that discharge at least 1.5 m from the dwelling without directing water to neighbouring property; • Provide the homeowner or end user with maintenance guidance for roofs, eavestroughs, downspouts, sump pumps, and drainage features; and • Use permeable driveway and sidewalk materials where feasible.	• Locate critical mechanical, electrical, communications, and life-safety equipment above areas vulnerable to flooding or otherwise protect it from flood damage; • Provide a sump pump with backup power and water alarms in vulnerable basement areas; • Use flood- and moisture-resistant materials and assemblies in areas vulnerable to water exposure; • Provide drainage, grading, and roof-water management measures that reduce the likelihood of water reaching the foundation; • Protect below-grade openings, penetrations, and vulnerable service entries from water intrusion; and • Provide the homeowner or end user with a flood-response and recovery plan identifying shutoffs, alarms, backup systems, maintenance needs, and steps for restoring affected systems. Document the flood risks identified, the measures incorporated beyond applicable regulatory requirements, and how critical dwelling systems can be protected and restored following a flood event.
Hail	Assess the dwelling's exposure to hail-related risks. Consider applicable measures from the City of Calgary Climate Ready Home Guide that may reduce hail-related damage to roofing and exterior wall assemblies, windows, doors, exterior equipment, renewable energy systems, and other exposed dwelling components. Where solar photovoltaic systems are being considered, evaluate photovoltaic modules with documented hail-impact performance suitable for Calgary's severe hail environment. Document the hail-related risks identified and the resilience measures being considered.	Assess the dwelling's exposure to severe hail and the potential for damage, repair needs, and service interruption. Evaluate and incorporate a coordinated set of measures from the City of Calgary Climate Ready Homer Guide that may minimize hail-related damage, repair needs, and service interruption. Incorporate measures that improve the hail resistance of roofing and exterior wall assemblies, windows, doors, exterior equipment, renewable energy systems, and other exposed dwelling components. Where solar photovoltaic systems are being considered, evaluate photovoltaic modules with documented hail-impact performance suitable for Calgary's severe hail environment and design approaches that may reduce the risk of hail-related damage.

		Document the hail-related risks identified and the resilience measures incorporated into the dwelling or project.
High Winds	Assess the dwelling's exposure to high-wind events and wind-related risks. Consider applicable measures from the **City of Calgary Climate Ready Home Guide for high winds** that may reduce damage to roofing and exterior wall assemblies, windows, doors, exterior equipment, renewable energy systems, and other exposed dwelling components. Consider wind-resistant materials and assemblies, secure attachment and anchorage of exposed components, protection of vulnerable openings, and tree and landscape placement that may reduce the risk of damage. Document the high-wind risks identified and the resilience measures being considered.	Assess the dwelling's exposure to severe wind events and the potential for damage, repair needs, and service interruption. Evaluate and incorporate a coordinated set of measures from the **City of Calgary Climate Ready Home Guide for high winds** that may minimize wind-related damage, repair needs, and service interruption. Incorporate measures that improve wind resistance and secure attachment of roofing and exterior wall assemblies, windows, doors, exterior equipment, renewable energy systems, and other exposed dwelling components. Coordinate tree placement and landscape design to reduce potential wind-related damage to the dwelling, site infrastructure, and neighbouring properties. Document the high-wind risks identified and the resilience measures incorporated into the dwelling or project.
Water Intrusion	Assess the dwelling's exposure to water intrusion and moisture-related risks associated with short-duration high-intensity rainfall events. Consider measures that may reduce water intrusion and moisture-related damage through protection of the building envelope, roof drainage systems, and vulnerable building areas. Document the water intrusion and moisture-related risks identified and the resilience measures being considered.	Assess the dwelling's exposure to water intrusion and moisture-related risks associated with short-duration high-intensity rainfall events. Evaluate measures that may minimize water intrusion, moisture-related damage, repair needs, and service interruption through enhanced protection of the building envelope, roof drainage systems, and vulnerable building areas. Document the water intrusion and moisture-related risks identified and the resilience measures incorporated into the dwelling or project.

Refuge Space and Passive Survivability	Assess opportunities to support occupant safety during extreme heat, poor outdoor air quality, power outages, flooding, and other climate-related events. Consider one or more indoor refuge spaces that are accessible to occupants and provide services appropriate to the climate hazards identified for the dwelling or project. Where a detached or small residential project does not include a common indoor refuge area, consider a dwelling-level passive-survivability plan or identify access to a nearby community refuge for the relevant climate events. Where flooding is identified as a climate hazard risk, consider locating refuge spaces outside areas vulnerable to flood impacts and maintaining access during flood events. Document the refuge-space or passive-survivability strategy being considered and its relationship to the climate hazards identified for the dwelling or project.	Assess opportunities to support occupant safety and passive survivability during extreme heat, poor outdoor air quality, power outages, flooding, and other climate-related events. Evaluate and incorporate one or more indoor refuge spaces that remain accessible and maintain critical services appropriate to the identified climate hazards for the anticipated duration of a disruption. Where extreme heat is identified as a climate hazard risk, provide a refuge space capable of maintaining an indoor operative temperature of 24°C or less during extreme heat events. Where flooding is identified as a climate hazard risk, locate refuge spaces outside areas vulnerable to flood impacts and maintain access during flood events. Where a detached or small residential project does not include a common indoor refuge area, develop a dwelling-level passive-survivability plan or identify access to a nearby community refuge for the relevant climate events. Document the refuge-space or passive-survivability strategy incorporated into the dwelling or project and its relationship to the identified climate hazards.

Water

Learn	Apply	Excel
Erosion and Sediment Control	Consider erosion and sediment control (ESC) measures that align with the City of Calgary's Stormwater Bylaw and Code of Practice for Erosion and Sediment Control (2023). Evaluate opportunities to:	Meet the criteria outlined in the Apply Pathway.

	• Minimize site disturbance through phased construction; • Stabilize exposed soils as early as practical; • Manage runoff to reduce erosion and sediment transport; • Preserve existing vegetation, drainage features, and natural site characteristics where feasible; • Protect low impact development and green infrastructure features during construction; and • Monitor and adapt ESC measures as site conditions change. Document the ESC measures being considered for the project.	
Rainfall Runoff Management	Manage and treat runoff generated by the Calgary Water Quality Design Event (15 mm rainfall) through one or more low impact development (LID) or green infrastructure (GI) practices.	Manage and treat runoff generated by the Calgary Water Quality Design Event (15 mm rainfall) through integrated LID and GI practices that collectively provide, at a minimum, stormwater infiltration, evapotranspiration, and stormwater reuse functions.
Total Suspended Solids (TSS)	Consider design approaches that support: • At least 85 per cent removal of TSS for particles 50 microns or larger from treated stormwater runoff; and • No net increase in average annual TSS loading where required by the applicable watershed, drainage plan or receiving-water criteria.	Consider design approaches that support: • At least 90% removal of total suspended solids for particles 50 microns or larger from treated stormwater runoff; and • No net increase in average annual post-development TSS loading relative to pre-development conditions.
Rainfall Volume Retention	Consider site design strategies that support retention of a minimum of 20% of the projected annual rainfall volume in 2050 (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.	Consider site design strategies that support retention of a minimum of 50% of the projected annual rainfall volume in 2050 (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.
Indoor Water Consumption	Target a reduction in indoor aggregate water consumption of **25% or greater** from the following baselines: • Toilet: 6 litres per flush. • Restroom faucet: 8.3 litres per minute at 415 kPa. • Kitchen faucet: 8.3 litres per minute at 415 kPa.	Target a reduction in indoor aggregate water consumption of **40% or greater** from the following baselines: • Toilet: 6 litres per flush. • 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.

	• Showerhead: 9.5 litres per minute at 550 kPa per shower stall.	
Outdoor Water Consumption	Assess the annual potable water demand for irrigation based on the landscaping, soil, irrigation systems, and alternative water sources included in the project scope. Target a reduction of at least 50% relative to the site's annual Theoretical Irrigation Requirement. Consider applicable water-wise landscape design practices identified through The City of Calgary's YardSmart program, including plant selection, soil design, mulch, irrigation efficiency, passive rainwater management, and rainwater harvesting. Document the irrigation-demand assessment, key assumptions, and water-wise measures included in the installed landscape design. Where landscaping is not included in the project scope, this criterion is not applicable.	Assess the long-term irrigation demand of the landscaping, soil, irrigation systems, and alternative water sources included in the project scope. Target a landscape design that does not require permanent irrigation after an establishment period of up to two years. Evaluate and incorporate applicable water-wise landscape design practices identified through The City of Calgary's YardSmart program, including drought-tolerant planting, soil design, mulch, lawn alternatives, and passive rainwater management. Document the long-term irrigation-demand assessment, key assumptions, establishment-period watering needs, and water-wise measures included in the installed landscape design. Where landscaping is not included in the project scope, this criterion is not applicable.
Water Leak Detection and Monitoring	Provide a readily accessible main water shut-off for the dwelling. Provide the homeowner or end user with information on accessing available water-use data and leak notifications through The City's water metering system.	Provide an automatic leak-detection and shut-off system for the dwelling that identifies abnormal water flow and automatically isolates the dwelling's water supply. Provide the homeowner or end user with operating, testing, and response guidance for the installed system.

Materials and Waste

Learn	Apply	Excel
Sustainable Permanently Installed Materials	Assess opportunities to select permanently installed building products within the project scope that provide material ingredient transparency or demonstrate preferred material attributes. Consider and select at least five products, representing at least	Assess opportunities to increase the use of permanently installed building products within the project scope that provide material ingredient transparency or demonstrate preferred material attributes.

	three product categories, that have one or more of the following: • A published Health Product Declaration; • A Declare label; • A Cradle to Cradle Certified Material Health Certificate at Bronze level or higher; or • At least 25% post-consumer recycled content documented through an environmental product declaration or equivalent manufacturer documentation. Eligible product categories may include insulation, gypsum board, flooring, paints and coatings, adhesives and sealants, cabinetry, countertops, roofing, cladding, and other permanently installed materials. Document the qualifying products, product categories, and applicable disclosures or material attributes.	Evaluate and select at least eight products, representing at least four product categories, that have one or more of the following: • A published Health Product Declaration; • A Declare label; • A Cradle to Cradle Certified Material Health Certificate at Bronze level or higher; or • At least 25% post-consumer recycled content documented through an environmental product declaration or equivalent manufacturer documentation. Eligible product categories may include insulation, gypsum board, flooring, paints and coatings, adhesives and sealants, cabinetry, countertops, roofing, cladding, and other permanently installed materials. Document the qualifying products, product categories, and applicable disclosures or material attributes incorporated into the dwelling or project.
Design for Deconstruction	Assess opportunities to support future repair, replacement, disassembly, and material recovery using a simplified design-for-deconstruction checklist appropriate to common low-density residential construction. Consider and incorporate at least one design-for-deconstruction strategy, such as mechanical fasteners, reversible connections, replaceable cladding or roofing, accessible service components, or removable interior finishes. Document the strategy incorporated and the assemblies or materials it supports.	Assess opportunities to enhance future repair, replacement, disassembly, adaptability, and material recovery using a simplified design-for-deconstruction checklist appropriate to common low-density residential construction. Evaluate and incorporate at least three design-for-deconstruction strategies across different building assemblies, such as mechanical fasteners, reversible connections, replaceable cladding or roofing, accessible service components, or removable interior finishes. Document the strategies incorporated, the affected assemblies and materials, and guidance that supports future disassembly or replacement.
Salvaged and Reused Materials	Assess opportunities to incorporate salvaged or reused building products into the new construction project. Consider and specify at least one salvaged or reused product, material, or component where it is suitable for the intended application and can meet applicable performance requirements.	Assess opportunities to increase the use of salvaged or reused building products in the new construction project. Evaluate and specify salvaged or reused products, materials, or components representing at least three product categories, where they are suitable for the intended applications and can meet

	Document the product or material selected, its source, intended application, and relevant design or specification requirements.	applicable performance requirements. Document the products and materials selected, their sources, intended applications, quantities, and relevant design or specification requirements.
Construction and Demolition Waste Management	Not Applicable	Not Applicable
Construction Waste Diversion	Not Applicable	Not Applicable
Waste Storage and Collection	Assess the waste collection method applicable to the dwelling or project and the space required for garbage, recycling, and organics. Consider and provide conveniently located storage that accommodates the applicable carts or shared containers and supports safe movement between the storage and collection locations. Coordinate the storage area with pedestrian routes, vehicle access, parking, and other site uses. Document the waste streams accommodated, storage and collection locations, access route, and design measures that support convenient use.	Assess opportunities to improve waste separation within the dwelling. Evaluate and provide dedicated built-in space for separate garbage, recycling, and organics containers. The storage should accommodate at least three containers, with approximate minimum capacities of: • 8.5 L for garbage; • 8.5 L for organics; and • 18 L for recyclables. Locate and configure the storage to support convenient daily use, removal, and cleaning. Document the location and container capacity provided for each waste stream.
Bulky Waste Management	Not Applicable	Not Applicable
Special Waste and Reuse	Provide residents with information on and access to municipal depots or periodic collection programs for household hazardous waste, electronic waste, and reusable materials.	Provide residents with information on and access to municipal depots or periodic collection programs for household hazardous waste, electronic waste, and reusable materials.

Indoor Air Quality

Learn	Apply	Excel
Construction Indoor Air Quality Management	Assess construction activities, materials, and building systems that may affect indoor air quality during construction and prior to occupancy. Consider and include project-specific indoor air quality measures in the drawings or specifications, including source control, protection of absorptive materials from moisture and contamination, isolation of dust-producing work, protection of ventilation equipment and ductwork, and replacement of filters before occupancy. Document the measures included in the project requirements and the party responsible for implementation and verification.	Assess construction activities, materials, and building systems that may affect indoor air quality during construction and prior to occupancy. Evaluate and incorporate an enhanced construction indoor air quality approach that includes the Apply measures and additional provisions such as sequencing high-emitting work before installation of absorptive finishes, temporary ventilation or air cleaning where appropriate, and a pre-occupancy flush-out or equivalent air-quality measure. Document the measures included in the drawings or specifications, implementation and verification responsibilities, and the pre-occupancy activities completed.
Radon-Resistant Construction	Assess potential radon entry pathways associated with the foundation and below-grade assemblies. Consider and incorporate radon-resistant design measures beyond applicable minimum requirements, such as a continuous soil-gas barrier, sealed penetrations and joints, and an accessible, labelled rough-in that can support future activation of a soil-depressurization system. Document the radon-resistant measures incorporated, including the location and configuration of the rough-in and provisions for future mitigation equipment.	Assess potential radon entry pathways associated with the foundation and below-grade assemblies. Evaluate and incorporate a complete active soil-depressurization system, including a continuous soil-gas barrier, sealed penetrations and joints, collection piping, an appropriately located fan and discharge point, and accessible components for inspection and maintenance. Document the system design, equipment and discharge locations, installation requirements, and homeowner or end-user operating and maintenance guidance.
Low-Emitting Base-Building Materials	Assess adhesives, sealants, paints, coatings, ceiling products, and insulation included in the project scope for volatile organic compound emissions and content. Consider and specify low-emitting base-building materials that achieve the following targets: • At least 50% of adhesives and sealants meet applicable VOC emissions evaluation requirements;	Assess adhesives, sealants, paints, coatings, ceiling products, and insulation included in the project scope for volatile organic compound emissions and content. Evaluate and specify low-emitting base-building materials that achieve the following enhanced targets: • At least 75% of adhesives and sealants meet applicable VOC emissions evaluation requirements;

	• At least 75% of paints, coatings, adhesives, and sealants meet applicable VOC content requirements; • At least 75% of ceiling products meet applicable VOC emissions evaluation requirements; and • At least 50% of insulation products meet applicable VOC emissions evaluation requirements. Document the products specified, applicable product categories, compliance information, and calculation method used to demonstrate the targets.	• 100% of paints, coatings, adhesives, and sealants meet applicable VOC content requirements; • At least 90% of ceiling products meet applicable VOC emissions evaluation requirements; and • At least 75% of insulation products meet applicable VOC emissions evaluation requirements. Document the specified products, applicable product categories, compliance information, and calculation method used to demonstrate the enhanced targets.
Low-Emitting Finishes and Interior Products	Assess paints, coatings, flooring, wall panels, composite wood products, and furniture included in the project scope for volatile organic compound and formaldehyde emissions. Consider and specify low-emitting finishes and interior products that achieve the following targets: • At least 50% of paints and coatings meet applicable VOC emissions evaluation requirements; • At least 75% of flooring products meet applicable VOC emissions evaluation requirements; • At least 50% of wall-panel products meet applicable VOC emissions evaluation requirements; • At least 50% of furniture products meet applicable furniture emissions evaluation requirements, where furniture is included in the project scope; and • At least 50% of composite wood products meet applicable formaldehyde emissions evaluation requirements. Document the products specified, applicable product categories, compliance information, and calculation method used to demonstrate the targets.	Assess paints, coatings, flooring, wall panels, composite wood products, and furniture included in the project scope for volatile organic compound and formaldehyde emissions. Evaluate and specify low-emitting finishes and interior products that achieve the following enhanced targets: • At least 75% of paints and coatings meet applicable VOC emissions evaluation requirements; • At least 90% of flooring products meet applicable VOC emissions evaluation requirements; • At least 75% of wall-panel products meet applicable VOC emissions evaluation requirements; • At least 75% of furniture products meet applicable furniture emissions evaluation requirements, where furniture is included in the project scope; and • At least 75% of composite wood products meet applicable formaldehyde emissions evaluation requirements. Document the products specified, applicable product categories, compliance information, and calculation method used to demonstrate the enhanced targets.
Ventilation Design	Assess dwelling ventilation needs, outdoor-air intake locations, and potential pathways for smoke and other outdoor	Assess dwelling ventilation needs, outdoor-air intake locations, enclosure airtightness, and potential pathways for smoke and other

	contaminants. Consider and specify a balanced mechanical ventilation system designed in accordance with ASHRAE 62.2-2025 that provides continuous outdoor air to the dwelling and includes accessible controls that allow occupants to reduce smoke ingress during periods of poor outdoor air quality without compromising essential ventilation. Document the design airflow rates, outdoor-air intake and exhaust locations, system controls, and homeowner or end-user operating guidance.	outdoor contaminants. Evaluate and specify a balanced mechanical ventilation system that provides at least 10% more outdoor air than the minimum rate determined in accordance with ASHRAE 62.2-2025. Incorporate controls and operating modes that coordinate ventilation with enclosure airtightness and allow occupants to reduce outdoor-air intake during wildfire smoke events while maintaining essential ventilation and pressure control. Document the design airflow rates, outdoor-air intake and exhaust locations, system controls and operating modes, enclosure coordination measures, and homeowner or end-user operating guidance.
Filtration Design	Assess the filtration requirements and available pressure capacity of the dwelling's mechanical ventilation, heating, and cooling systems. Consider and specify filtration equipment designed to accommodate MERV 13 filters without compromising required airflow or system performance. Provide accessible filter locations, clearly identified replacement requirements, and controls or operating guidance that support use during wildfire smoke events. Document the filter efficiency, design airflow and pressure-drop allowances, filter location and size, replacement requirements, and homeowner or end-user operating guidance.	Assess the dwelling's filtration needs during wildfire smoke events, including outdoor-air intake, recirculation capability, enclosure airtightness, system airflow, and filter pressure drop. Evaluate and specify a coordinated filtration strategy that includes MERV 13 or higher filtration and is designed to maintain indoor PM2.5 concentrations at least 80% lower than outdoor concentrations during wildfire smoke events. Incorporate accessible filter locations, suitable controls and operating modes, and additional air-cleaning equipment where required to achieve the target. Document the filtration and air-cleaning equipment, design assumptions and calculation method used to demonstrate the target, filter replacement requirements, system controls and operating modes, and homeowner or end-user operating guidance.
Indoor Air Quality Verification	Assess the verification activities needed to confirm that the dwelling's ventilation and indoor air quality measures have been installed and are operating as intended. Consider and specify pre-occupancy verification of ventilation airflow, exhaust operation, controls, filter installation, and air distribution. Provide the homeowner or end user with instructions to complete long-term radon testing during the first heating	Assess the verification activities needed to confirm that the dwelling's ventilation, filtration, and indoor air quality measures have been installed and are operating as intended. Evaluate and specify enhanced pre-occupancy verification that includes the Apply measures, functional testing of ventilation and filtration systems, and indoor air quality testing or an equivalent verification method for relevant contaminants such as PM2.5,

	season after occupancy and to undertake mitigation where the measured annual average exceeds the Canadian guideline. Document the verification activities completed, results and corrective actions, and the radon-testing information provided to the homeowner or end user.	volatile organic compounds, and carbon monoxide where applicable. Provide the homeowner or end user with a long-term radon test kit or equivalent arrangement for testing during the first heating season after occupancy and identify the response required where the measured annual average exceeds the Canadian guideline. Document the verification methods, test conditions and results, deficiencies and corrective actions, and the post-occupancy radon-testing arrangement.

Mobility and Transportation

Learn	Apply	Excel
Active Transportation Support	Assess pedestrian and cyclist connections between the dwelling or project, adjacent sidewalks or pathways, and on-site bicycle parking. Consider and provide safe, direct, and accessible routes that minimize conflicts with vehicles, support convenient bicycle movement, and connect principal entrances with the surrounding active transportation network where available. Document the pedestrian and cyclist routes, connections, potential conflict points, and design measures incorporated to support active transportation.	Assess opportunities to prioritize pedestrian and cyclist access between the dwelling or project, adjacent sidewalks or pathways, and on-site bicycle parking. Evaluate and provide safe, direct, and accessible routes that are at least as convenient as vehicle access, use durable separation or traffic-calming measures where routes interact with vehicles, and include weather protection or lighting at key entrances and bicycle-access areas where appropriate. Document the pedestrian and cyclist routes, connections, conflict-reduction measures, weather-protection or lighting features, and how active transportation has been prioritized in the site and building design.
Bicycle Storage and Charging	Assess bicycle-storage needs based on the dwelling form, available private or shared space, and routes between the storage location and the exterior. Consider and provide secure, weather-protected bicycle storage within or directly adjacent to each dwelling. Locate and configure	Assess opportunities to improve bicycle storage and support e-bike or mobility-device charging. Evaluate and provide secure, weather-protected bicycle storage within or directly adjacent to each dwelling, together with an energized outlet suitable for charging. Provide sufficient space and

	the storage to support convenient access without obstructing vehicle parking, pedestrian circulation, or required building functions. Document the storage location, capacity, access route, and security and weather-protection measures provided.	access for larger or adapted cycles where practical and locate charging equipment to support safe use without obstructing circulation or required building functions. Document the storage location, capacity, access route, outlet location and electrical requirements, and security, weather-protection, and accessibility measures incorporated.
EV-Ready Parking	Assess the electrical capacity and infrastructure required to support electric vehicle charging for dwelling parking spaces, garages, or carports included in the project scope. Consider and provide EV-capable infrastructure for at least 50% of these parking spaces, including a 208 V or 240 V junction box or outlet and sufficient electrical service and panel capacity to support future Level 2 charging. Document the number and percentage of EV-capable spaces, electrical service and panel capacity, circuit and pathway provisions, and outlet or junction-box locations.	Assess the electrical capacity, distribution, and controls required to support electric vehicle charging for all dwelling parking spaces, garages, or carports included in the project scope. Evaluate and provide EV-capable infrastructure for 100% of these parking spaces, including a 208 V or 240 V junction box or outlet and sufficient electrical service, panel capacity, and distribution pathways to support future Level 2 charging. Where parking or electrical infrastructure is shared, incorporate an electric vehicle energy management system or equivalent controls where needed to manage charging demand, and consider installed charging equipment consistent with the project charging strategy. Document the number and percentage of EV-capable spaces, electrical service and panel capacity, circuit and pathway provisions, outlet or junction-box locations, load-management approach, and installed charging equipment where provided.

Accessibility

Learn	Apply	Excel
Barrier-Free and Adaptable Dwelling Design	Assess opportunities to improve accessibility within the dwelling, considering the dwelling form, site conditions, entrance configuration, and location of principal living spaces. Consider and incorporate a step-free or low-threshold entrance where practical and a barrier-free path of travel with suitably sized doorways to a kitchen, living area, at least one bedroom, and a full bathroom located on the same level.	Assess opportunities to provide an accessible and adaptable dwelling that can accommodate changing occupant needs over time. Evaluate and incorporate the Apply measures together with enhanced features such as a continuous step-free route from parking or the public sidewalk to the principal entrance, accessible clearances within principal living spaces, reinforced bathroom walls

	Document the accessible route, entrance condition, clear opening widths, rooms served, and any site or dwelling-form constraints affecting the design.	for future grab bars, and adaptable kitchen or bathroom components where practical. Document the accessible and adaptable features incorporated, dimensional criteria used, provisions for future modifications, and any site or dwelling-form constraints affecting the design.
Accessibility for Common and Shared Areas	Assess the entrances, pedestrian routes, and common or shared amenity and service spaces included in the project scope for accessibility. Consider and incorporate accessible routes, entrances, doorways, controls, and circulation clearances that align with the accessibility principles of the NBC 2025 and support convenient use by residents and visitors. Document the spaces and routes assessed, accessibility measures incorporated, and any site or building-form constraints. Where the project does not include common or shared areas, apply this criterion to shared entrances and pedestrian routes; where none exist, this criterion is not applicable.	Assess opportunities to enhance accessibility and usability of entrances, pedestrian routes, and common or shared amenity and service spaces included in the project scope. Evaluate and incorporate accessibility measures aligned with the current City of Calgary Access Design Standards, including accessible routes, entrances, doorways, controls, circulation clearances, rest areas, lighting, wayfinding, and weather protection where applicable to the project. Document the spaces and routes assessed, applicable design criteria, accessibility measures incorporated, and any site or building-form constraints. Where the project does not include common or shared areas, apply this criterion to shared entrances and pedestrian routes; where none exist, this criterion is not applicable.

Commissioning

Learn	Apply	Excel
Commissioning and Quality Assurance Process	Assess the dwelling systems and building-envelope components that require installation, start-up, adjustment, and verification to achieve the design intent. Consider and specify a project-specific commissioning and quality-assurance process proportionate to the dwelling form and system complexity. At a minimum, identify verification activities, responsible parties, required records, and procedures for addressing deficiencies before occupancy.	Assess the dwelling systems and building-envelope components that require coordinated verification to achieve the design intent and performance targets. Evaluate and specify an enhanced commissioning process that includes the Apply measures, integration of verification requirements into the construction documents, trade checklists, functional testing procedures, and an issues log used to track deficiencies through resolution.

	Document the commissioning and quality-assurance requirements in the drawings or specifications and retain completed checklists, start-up records, and deficiency resolutions.	Document the commissioning plan, completed checklists and functional tests, issues identified, corrective actions, and final verification results.
Systems and Envelope Verification	Assess the systems and envelope components included in the dwelling or project scope that require verification. Consider and specify installation, start-up, and basic performance checks for applicable heating, cooling, ventilation, domestic hot water, controls, and building-envelope air-sealing measures. For projects with repeated dwelling types or systems, verification may use representative units or installations where appropriate. Document the systems and assemblies verified, methods used, results, deficiencies, and corrective actions.	Assess the systems and envelope components included in the dwelling or project scope that require enhanced performance verification. Evaluate and specify functional testing for applicable heating, cooling, ventilation, domestic hot water, controls, and other integrated dwelling systems, together with building-envelope verification such as whole-dwelling airtightness testing and targeted inspection or testing of critical air-, water-, and thermal-control details. For projects with repeated dwelling types or systems, define a representative sampling approach appropriate to the project. Document the systems and assemblies tested, sampling approach, test methods and acceptance criteria, results, deficiencies, corrective actions, and final verification.

Operations and Maintenance

Learn	Apply	Excel

Homeowner Operations and Maintenance Information	Assess the information the homeowner or property manager will need to operate and maintain the dwelling's systems, assemblies, and resilience features. Consider and provide a concise project-specific manual covering system controls, routine maintenance, ventilation and filtration, water shut-offs and leak response, emergency procedures, waste management, durability, and applicable salvage or deconstruction information. Document the information provided, responsible party, delivery format, and handover process.	Assess opportunities to support long-term dwelling performance through enhanced homeowner or property-manager information. Evaluate and provide a comprehensive project-specific manual that includes the Apply information together with preventive-maintenance schedules, equipment and filter replacement requirements, seasonal operating guidance, emergency and resilience procedures, warranty information, and a simple process for reviewing energy and water use. Document the information provided, maintenance schedules, responsible party, delivery format, and orientation or handover completed.
Home Energy Rating and Performance Review	Assess the dwelling's completed energy performance using the EnerGuide Rating System for homes. Obtain an EnerGuide rating, label, and report for each completed dwelling. Provide the homeowner or end user with the EnerGuide information and guidance on interpreting the annual energy-use rating, energy-use breakdown, greenhouse gas emissions, and comparison with the reference house. Document the EnerGuide rating, evaluation date, and information provided at handover.	Assess the dwelling's completed energy performance and establish a practical approach for reviewing actual energy and water use after occupancy. Obtain an EnerGuide rating, label, and report for each completed dwelling. Evaluate and provide a homeowner or property-manager performance-review process that compares at least 12 consecutive months of utility data with the EnerGuide estimate or other design-stage energy estimate, considers relevant changes in occupancy and operation, and identifies material differences or opportunities for improvement. Document the EnerGuide rating, utility data sources, review method, comparison results, and homeowner or property-manager guidance provided.

Performance Criteria: Commercial

Energy and Carbon

Learn	Apply	Excel
Thermal Energy Demand Intensity (TEDI, GJ/m^2/year)	Calculate both performance levels below. The building envelope should meet the criterion that results in the lower envelope-driven heating demand: • TEDI is at least 10% lower than the NECB 2020 reference building; or • TEDI is 0.60 GJ/m^2/year or less for warehouse uses, or 0.65 GJ/m^2/year or less for retail uses.	Calculate both performance levels below. The building envelope should meet the criterion that results in the lower envelope-driven heating demand: • TEDI is at least 20% lower than the NECB 2020 reference building; or • TEDI is 0.45 GJ/m^2/year or less for warehouse uses, or 0.50 GJ/m^2/year or less for retail uses.
Total Energy Use Intensity (TEUI, GJ/m^2/year)	Calculate both performance levels below. The building should meet the criterion that results in the lower TEUI: • TEUI is at least 10% lower than the NECB 2020 reference building; or • TEUI is 0.70 GJ/m^2/year or less for warehouse uses, or 0.90 GJ/m^2/year or less for retail uses.	Calculate both performance levels below. The building should meet the criterion that results in the lower TEUI: • TEUI is at least 20% lower than the NECB 2020 reference building; or • TEUI is 0.55 GJ/m^2/year or less for warehouse uses, or 0.75 GJ/m^2/year or less for retail uses.
Peak Electrical Demand Management	Calculate the modelled peak electrical demand for the proposed and NECB 2020 reference buildings using consistent operating schedules, weather conditions, load assumptions, and calculation intervals. Assess the systems and end uses contributing most to coincident peak demand. Consider and incorporate practical measures that reduce or shift peak demand, such as reducing building loads, selecting right-sized efficient equipment, staging equipment, optimizing controls, and managing flexible loads such as domestic hot water or electric vehicle charging.	Meet the Apply criterion. Demonstrate that the proposed building's modelled peak electrical demand is at least 15% lower than the NECB 2020 reference building using consistent operating schedules, weather conditions, load assumptions, and calculation intervals. Evaluate and incorporate a coordinated demand-management strategy that prioritizes reducing building loads and right-sizing equipment before shifting or storing energy. Include applicable measures such as equipment staging, optimized controls, managed domestic hot-water heating, managed electric vehicle charging,

	Document the proposed and reference peak demand in kW and W/m^2, calculation method and interval, timing of the modelled peak, principal coincident loads, and demand-management measures incorporated.	thermal storage, battery storage, or other strategies that reduce coincident peak demand. Document the proposed and reference peak demand in kW and W/m^2, calculation method and interval, timing of the modelled peak, principal coincident loads, demand-management measures incorporated, and anticipated peak-demand reduction.
Greenhouse Gas Intensity (GHGI, kg CO_2e/m^2/year)	Calculate the building's operational greenhouse gas intensity. Achieve a GHGI of 40 kg CO_2e/m^2/year or less for warehouse uses, or 55 kg CO_2e/m^2/year or less for retail uses. On-site renewable energy generation, such as solar PV, may be included in the calculation of GHG emissions.	Calculate the building's operational greenhouse gas intensity. Achieve a GHGI of 25 kg CO_2e/m^2/year or less for warehouse uses, or 40 kg CO_2e/m^2/year or less for retail uses. On-site renewable energy generation, such as solar PV, may be included in the calculation of GHG emissions.
Embodied Carbon Intensity (ECI, kg CO_2e/m^2)	Calculate and document the building's upfront embodied carbon intensity for **A1–A3 life-cycle stages** using a whole-building life cycle assessment or equivalent methodology. Include foundations, structure, and enclosure, and normalize the result by gross floor area. • Identify the materials and assemblies that contribute most to the A1–A3 embodied carbon result; and • Evaluate practical design and specification strategies to reduce embodied carbon, such as material efficiency, structural optimization, lower-carbon material choices, and increased use of reused or recycled materials. Where a functionally equivalent baseline building is developed to evaluate reduction opportunities, assess the proposed and baseline buildings using the same gross-floor-area definition, A1–A3 life-cycle stages, foundations, structure and enclosure scope, data sources, and calculation methodology. Document the assessment scope, methodology, key assumptions, results, major contributors, and embodied carbon reduction measures considered or incorporated into the project.	Meet the Apply criterion and use a whole-building life cycle assessment to demonstrate that the building meets the applicable **A1–A3 embodied carbon performance criterion** below: • For warehouse and storage uses, achieve an A1–A3 embodied carbon intensity of **230 kg CO_2e/m^2 or less**, or at least a **30% reduction** relative to a functionally equivalent baseline building; or • For retail uses, achieve an A1–A3 embodied carbon intensity of **430 kg CO_2e/m^2 or less**, or at least a **30% reduction** relative to a functionally equivalent baseline building. Assess the proposed and baseline buildings using the same gross-floor-area definition, A1–A3 life-cycle stages, foundations, structure and enclosure scope, data sources, and calculation methodology. Document the assessment scope, methodology, key assumptions, baseline assumptions where applicable, results, major contributors, and embodied carbon reduction measures incorporated into the project.

Future Energy Systems Readiness	Assess opportunities and constraints for future solar photovoltaic systems and building electrification based on the warehouse or retail building form, anticipated landlord and tenant loads, utility accounts, and metering and electrical distribution configuration. Consider and incorporate practical readiness provisions, including: • Preservation of suitable roof area and structural capacity for future solar photovoltaic equipment; • Electrical and communications pathways and space for inverters, controls, utility interconnection, and other associated equipment; • Identification of the landlord, common-area, and tenant loads and utility meters that a future on-site generation system could serve; and • Electrical capacity, equipment space, and distribution pathways that support future conversion of major fossil-fuel end uses to electric technologies. Document the opportunities, constraints, and provisions identified; the loads and utility meters a future system could serve; and any ownership, lease, or utility-account decisions requiring resolution by the owner, utility, or tenants.	Meet the Apply criterion. Evaluate and document an implementable future energy systems concept that includes: • Feasible solar photovoltaic capacity and expected annual generation; • The proposed point of interconnection and the landlord, common-area, and tenant loads and utility meters that the system could serve; • Structural, electrical, communications, equipment-space, metering, and controls provisions required for future implementation; • An electrification pathway identifying the major fossil-fuel systems to be converted and the associated electrical capacity, distribution, and equipment-space requirements; and • Opportunities for future battery storage, managed electric vehicle charging, or energy-management controls where these measures support on-site renewable energy use or electrification. Incorporate practical provisions that facilitate future implementation, such as reserved roof area, structural allowances, electrical and communications pathways, equipment space, labelled spare capacity, and a metering and electrical distribution configuration that can accommodate future landlord- or tenant-serving systems. Document the provisions incorporated, point of interconnection, loads and utility meters that could be served, and any ownership, lease, cost-allocation, or utility-account decisions requiring resolution by the owner, utility, or tenants before implementation.
Renewable Electricity Procurement	Assess the anticipated utility-account and metering arrangement for the warehouse or retail building, including landlord-controlled, common-area, and tenant-controlled electricity consumption. Where electricity procurement will remain under the control of the owner, landlord, or property manager, consider eligible renewable	Meet the Apply criterion. Develop a renewable electricity procurement approach for the anticipated annual electricity consumption under the control of the owner, landlord, or property manager. Identify the procurement method, quantity and proportion of electricity addressed, applicable

	electricity procurement for those accounts through a renewable electricity supply contract, power purchase agreement, or the purchase and retirement of eligible renewable energy certificates. Document the electricity consumption under landlord control, procurement options considered, and tenant-controlled accounts excluded from the assessment. Report any resulting market-based greenhouse gas intensity separately from the building's unadjusted greenhouse gas intensity. Where all electricity accounts will be controlled by individual tenants, document this condition and identify renewable electricity procurement as a tenant operational opportunity.	emission factor, contract term, ownership and retirement of environmental attributes, and responsibility for renewal. Where tenant electricity is separately metered, identify whether participation can be supported through lease provisions, tenant information, or voluntary tenant procurement without assuming that tenant-controlled consumption will be included. Calculate and document the building's unadjusted GHGI based on modelled energy use and prescribed emission factors, and the market-based GHGI accounting only for eligible renewable electricity procurement associated with the applicable utility accounts.

Climate Resilience

Learn	Apply	Excel
Climate Hazard Risk Screening	Complete the Calgary Green Buildings Guide Climate Resilience Screening Questionnaire. Identify the climate hazards most relevant to the project and consider measures that may improve building resilience, occupant safety, durability, or continuity of operations during climate-related events. Document the climate hazards identified and the resilience measures being considered.	Complete the Calgary Green Buildings Guide Climate Resilience Screening Questionnaire and The City of Calgary's Climate Risk and Resilience Assessment (or equivalent). Evaluate the project's most significant climate risks and consider measures that may reduce risk and improve resilience. Document the significant climate risks identified and the resilience measures incorporated into the project.
Extreme Heat	Assess overheating and extreme-heat risks under current summer conditions, focusing on regularly occupied areas. Consider design measures that reduce heat exposure and cooling demand, such as solar-control glazing, exterior shading, high-reflectance roofing, appropriate insulation, reduced internal heat gains, efficient cooling, and ventilation strategies suited to the anticipated occupancy.	Meet the Apply criterion. Assess overheating and extreme-heat risks under future summer conditions. Evaluate and incorporate a coordinated strategy to reduce heat exposure in regularly occupied areas through applicable measures such as envelope design, solar control, roof performance, efficient cooling and ventilation, controls, and management of significant internal heat gains.

	Document the areas assessed, significant overheating risks identified, design assumptions, and measures being considered.	Identify any additional measures that should be addressed through future tenant improvements. Document the conditions assessed, measures incorporated into the building design, and items requiring future coordination.
Flooding	For projects identified as exposed to flooding through the Calgary River Flooding maps, review applicable flood-related considerations identified through municipal planning and regulatory frameworks. Assess flood-related risks to the building and consider measures that support protection of critical building systems from flood damage. Document the flood risks identified and the flood resilience measures being considered.	For projects identified as exposed to flooding through the Calgary River Flooding maps, review applicable flood-related considerations identified through municipal planning and regulatory frameworks. Assess flood-related risks to the building and consider measures that support protection and recovery of critical mechanical, electrical, life safety, and communications systems following a flood event. Document the flood risks identified and the flood resilience measures incorporated into the project.
Hail	Assess the building's exposure to hail-related damage, focusing on roofing and exterior wall assemblies, glazing, doors, canopies, rooftop equipment, renewable energy systems, and other exposed building components. Consider design and specification measures that may reduce damage and repair needs, including hail-resistant roofing and exterior materials, protection of vulnerable rooftop equipment and openings, and suitable placement or shielding of exposed components. Where solar photovoltaic systems are included or anticipated, consider modules and mounting systems with documented hail-impact performance suitable for Calgary's severe hail environment. Document the components assessed, hail-related risks identified, and resilience measures being considered.	Meet the Apply criterion. Evaluate and incorporate a coordinated hail-resilience strategy that reduces damage, repair needs, and disruption to shared or essential building systems. Include enhanced protection for applicable roofing and exterior wall assemblies, glazing, overhead doors, canopies, rooftop equipment, renewable energy systems, and other exposed components. Where solar photovoltaic systems are included or anticipated, specify modules and mounting systems with documented hail-impact performance suitable for Calgary's severe hail environment and incorporate design measures that reduce the risk of damage. Document the hail-resilience measures incorporated, affected building components, product-performance information, and provisions supporting inspection, repair, or replacement following a hail event.

High Winds	Assess the building's exposure to high-wind risks, focusing on roofing and exterior wall assemblies, windows, doors, canopies, rooftop equipment, renewable energy systems, signage, and other exposed building components. Consider design and specification measures that may reduce wind-related damage, including secure attachment and anchorage, protection of vulnerable openings, appropriate placement of rooftop and exterior equipment, and coordination of landscaping near the building. Document the components assessed, high-wind risks identified, and resilience measures being considered.	Meet the Apply criterion . Evaluate and incorporate a coordinated high-wind resilience strategy that reduces damage, repair needs, and disruption to shared or essential building systems. Include enhanced attachment, anchorage, or protection for applicable roofing and exterior wall assemblies, windows, doors, canopies, rooftop equipment, renewable energy systems, signage, and other exposed components. Coordinate equipment placement, screening, and landscaping to reduce wind-related hazards and avoid damage to the building, site infrastructure, and adjacent properties. Document the high-wind resilience measures incorporated, affected building components, applicable product or assembly information, and provisions supporting inspection, repair, or replacement following a high-wind event.
Water Intrusion	Assess water-intrusion and moisture-related risks associated with short-duration, high-intensity rainfall events, focusing on the building envelope, roof drainage systems, openings, penetrations, below-grade areas, and other vulnerable building components. Consider design and specification measures that may reduce water entry and moisture-related damage, such as coordinated water-shedding and drainage details, protection of vulnerable openings and service penetrations, adequate roof drainage and overflow provisions, and moisture-resistant materials in areas at risk. Document the vulnerable areas assessed, water-intrusion risks identified, design assumptions, and resilience measures being considered.	Meet the Apply criterion. Evaluate and incorporate a coordinated water-intrusion resilience strategy that reduces moisture-related damage, repair needs, and disruption to shared or essential building systems. Include enhanced protection for applicable roof and wall assemblies, drainage and overflow systems, openings, penetrations, below-grade areas, loading and service entrances, and other vulnerable building components. Coordinate the design to support inspection, maintenance, drainage, drying, and replacement following a water-intrusion event. Identify any additional measures that should be addressed through future tenant improvements. Document the water-intrusion risks identified, resilience measures incorporated into the building design, and items requiring future coordination.

Emergency Refuge and Passive Survivability	Assess whether the anticipated occupancy, building location, or climate hazards create a need for occupants to remain safely within the building during a short-term disruption. Where a need is identified, consider an accessible indoor area that can provide temporary protection from applicable hazards such as extreme heat, poor outdoor air quality, flooding, or power outages. Coordinate the space with emergency lighting, communications, ventilation, filtration, and other services appropriate to the identified risks. Document the need for temporary refuge, the hazards addressed, the area being considered, and the supporting building systems.	Meet the Apply criterion. Where temporary refuge is required, evaluate and incorporate an accessible refuge area designed to maintain suitable conditions for the anticipated occupants and duration of the disruption. Coordinate the space with applicable ventilation, filtration, temperature control, emergency power, lighting, communications, and accessible routes. Locate the refuge area outside locations vulnerable to the identified hazards and identify any additional measures that should be addressed through future tenant improvements or operating plans. Document the refuge-area design, hazards addressed, anticipated occupancy and duration, supporting systems, and items requiring future coordination.

Water

Learn	Apply	Excel
Erosion and Sediment Control	Consider erosion and sediment control (ESC) measures that align with the City of Calgary's Stormwater Bylaw and Code of Practice for Erosion and Sediment Control (2023). Evaluate opportunities to: • Minimize site disturbance through phased construction; • Stabilize exposed soils as early as practical; • Manage runoff to reduce erosion and sediment transport; • Preserve existing vegetation, drainage features, and natural site characteristics where feasible; • Protect low impact development and green infrastructure features during construction; and • Monitor and adapt ESC measures as site conditions change. Document the ESC measures being considered for the project.	Meet the criteria outlined in the Apply Pathway.

Rainfall Runoff Management	Manage and treat runoff generated by the Calgary Water Quality Design Event (15 mm rainfall) through one or more low impact development (LID) or green infrastructure (GI) practices.	Manage and treat runoff generated by the Calgary Water Quality Design Event (15 mm rainfall) through integrated LID and GI practices that collectively provide, at a minimum, stormwater infiltration, evapotranspiration, and stormwater reuse functions.
Total Suspended Solids (TSS)	Consider design approaches that support: • At least 85 per cent removal of TSS for particles 50 microns or larger from treated stormwater runoff; and • No net increase in average annual TSS loading where required by the applicable watershed, drainage plan or receiving-water criteria.	Consider design approaches that support: • At least 90% removal of total suspended solids for particles 50 microns or larger from treated stormwater runoff; and • No net increase in average annual post-development TSS loading relative to pre-development conditions.
Rainfall Volume Retention	Consider site design strategies that support retention of a minimum of 20% of the projected annual rainfall volume in 2050 (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.	Consider site design strategies that support retention of a minimum of 50% of the projected annual rainfall volume in 2050 (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.
Indoor Water Consumption	Assess the plumbing fixtures included in the project scope and calculate the aggregate indoor water consumption relative to the applicable baseline fixture flow and flush rates below. Achieve a reduction of at least **25%**: • 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; and • Showerhead: 9.5 litres per minute at 550 kPa per shower stall. Include only fixture categories provided within the project scope. For shell or base-building projects, include landlord-controlled, common-area, and other installed fixtures. Where future tenant fixtures are excluded, identify applicable maximum flow and flush rates in the tenant fit-out requirements.	Meet the Apply criterion and achieve an aggregate indoor water-consumption reduction of at least **40%** relative to the applicable baseline fixture flow and flush rates. Evaluate and specify enhanced water-efficient fixtures and controls for all applicable landlord-controlled, common-area, and installed tenant-space fixtures. Where future tenant fixtures are excluded, include maximum flow and flush rates consistent with the Excel target in the tenant fit-out requirements. Where significant water-using equipment or processes are included in the project scope, assess additional opportunities to reduce those uses separately from the plumbing-fixture calculation. Document the fixtures and equipment included and excluded, baseline and proposed consumption, occupancy and use assumptions, tenant fit-out provisions, and calculated reduction.

	Document the fixtures included and excluded, baseline and proposed flow or flush rates, occupancy and use assumptions, and calculated reduction.	
Outdoor Water Consumption	Assess the annual potable water demand for irrigation based on the landscaping, soil, irrigation systems, and alternative water sources included in the project scope. Achieve a reduction of at least **50%** relative to the site's annual Theoretical Irrigation Requirement. Consider applicable water-wise landscape design practices identified through The City of Calgary's YardSmart program, including plant selection, soil design, mulch, irrigation efficiency, passive rainwater management, and alternative water sources such as rainwater harvesting. Document the irrigation-demand calculation, key assumptions, landscaping and irrigation included in the project scope, and water-wise measures incorporated into the design. Where landscaping is not included in the project scope, this criterion is not applicable. Where future tenant-controlled landscaping is anticipated, identify applicable water-wise design and irrigation provisions in the tenant fit-out requirements.	Meet the Apply criterion. Evaluate and provide a landscape design that does not require permanent irrigation after an establishment period of up to two years. Incorporate applicable water-wise landscape design practices identified through The City of Calgary's YardSmart program, including drought-tolerant planting, soil design, mulch, lawn alternatives, passive rainwater management, and alternative water sources where appropriate. Permanent irrigation may be retained only for specifically identified uses that cannot reasonably meet the no-irrigation target. Document the long-term irrigation-demand assessment, establishment-period watering needs, permanent irrigation retained and its intended use, and water-wise measures incorporated into the design. Apply the same provisions to future tenant-controlled landscaping through the tenant fit-out requirements. Where landscaping is not included in the project scope, this criterion is not applicable.
Water Use Monitoring and Leak Detection	Assess the proposed utility-metering arrangement and the water-use information expected to be available through the utility meter and The City's planned advanced metering infrastructure. Identify significant landlord-controlled water uses, tenant water services, and potential leak locations that may not be distinguishable through whole-building utility data. Consider supplemental metering or leak-detection measures where they would provide actionable information for building operations or tenant water management. Applicable uses may include irrigation, make-up water, shared washrooms, commercial	Meet the Apply criterion. Evaluate and incorporate supplemental metering, automated leak detection, and automatic shut-off or isolation controls for significant landlord-controlled water uses and tenant water services where these measures provide actionable information beyond whole-building utility data. Configure alerts so they are directed to the owner, property manager, tenant, or other party responsible for responding. Where supported by The City's metering infrastructure, consider integration of available water-use data or alerts with the building

	kitchens, process-water connections, and separately serviced tenant spaces where these uses are included in the project scope. Document the utility and supplemental metering approach, landlord- and tenant-controlled water services, monitored water uses, data and alert access, and the parties responsible for responding to identified leaks. Where future tenant water uses are not included in the project scope, identify applicable metering or leak-detection provisions in the tenant fit-out requirements.	automation or water-management system. Coordinate the metering and controls design so landlord-controlled and tenant-controlled water use can be distinguished where practical. Document the metering, leak-detection, and controls strategy, including monitored water uses and tenant services, alert and response procedures, automatic isolation functions, data access, and responsibilities for ongoing review and response. Apply relevant provisions to future tenant water services through the tenant fit-out requirements.

Materials and Waste

	Apply	Excel
Sustainable Permanently Installed Materials	Assess and select at least **five permanently installed products across three product categories** that provide material ingredient transparency or demonstrate preferred material attributes, such as an HPD, Declare label, Cradle to Cradle Material Health Certificate, or at least 25% post-consumer recycled content. Document the qualifying products, categories, and applicable disclosures or attributes. For multi-tenant buildings, include only products within the owner or base-building scope.	Assess and select at least **eight permanently installed products across four product categories** that provide material ingredient transparency or demonstrate preferred material attributes, such as an HPD, Declare label, Cradle to Cradle Material Health Certificate, or at least 25% post-consumer recycled content. Prioritize high-impact materials such as concrete, steel, insulation, roofing, cladding, gypsum board, flooring, and coatings. Document the qualifying products, categories, and applicable disclosures or attributes. For multi-tenant buildings, include only products within the owner or base-building scope.
Design for Deconstruction	Assess and incorporate at least one design-for-deconstruction strategy that supports future repair, replacement, adaptation, or material recovery. Strategies may include reversible connections, mechanically attached cladding or roofing, accessible building services, demountable partitions, or removable finishes.	Assess and incorporate at least **three design-for-deconstruction strategies across different building assemblies** that support future repair, replacement, adaptation, or material recovery. Strategies may include reversible connections, mechanically attached cladding or roofing, accessible building services, demountable partitions, or removable finishes.

	Document the strategy and affected assemblies. For multi-tenant buildings, include only owner or base-building work unless tenant improvements are part of the project scope.	Document the strategies, affected assemblies, and guidance for future disassembly or replacement. For multi-tenant buildings, include only owner or base-building work unless tenant improvements are part of the project scope.
Plan for Material Salvage	Prepare a material salvage plan that identifies building materials and assemblies with potential for future reuse or recycling. Document their locations, approximate quantities, and relevant removal or recovery information. Include the plan in the building operations and maintenance documentation. For multi-tenant buildings, apply the criterion to the owner or base-building scope.	Prepare a comprehensive material salvage plan that identifies building materials and assemblies with potential for future reuse or recycling. Document their locations, quantities, material specifications, connection and removal methods, disassembly sequencing, and potential reuse or recycling pathways. Include the plan in the building operations and maintenance documentation and provide relevant guidance for future tenant alterations. For multi-tenant buildings, apply the criterion to the owner or base-building scope.
Construction and Demolition Waste Management	Develop and implement a Construction and Demolition Waste Management Plan that identifies project-specific measures to reduce waste generation, material consumption, and contamination of recoverable materials. Document the waste streams, reduction and recovery measures, responsible parties, and tracking approach. For multi-tenant buildings, apply the plan to the owner or base-building construction scope.	Develop and implement a comprehensive Construction and Demolition Waste Management Plan that identifies project-specific measures to reduce waste generation, material consumption, and contamination of recoverable materials. Include source-reduction measures, material take-back or reuse opportunities, trade coordination, on-site sorting and storage requirements, responsible parties, tracking procedures, and corrective actions where performance is below target. For multi-tenant buildings, apply the plan to the owner or base-building construction scope and establish waste-management requirements for tenant improvements undertaken before initial occupancy.
Construction Waste Diversion	Divert at least 50% by weight of non-hazardous construction, demolition, and land-clearing waste from landfill through reuse, recycling, or other approved recovery pathways. Document the waste generated, diversion method, receiving facility, and diversion rate.	Divert at least 75% by weight of non-hazardous construction, demolition, and land-clearing waste from landfill through reuse, recycling, or other approved recovery pathways. Document the waste generated, diversion method, receiving facility, and diversion rate.

	For multi-tenant buildings, include waste from the owner or base-building construction scope and any tenant improvements completed before initial occupancy.	For multi-tenant buildings, include waste from the owner or base-building construction scope and any tenant improvements completed before initial occupancy.
Waste Collection	Assess anticipated waste streams and provide a multi-stream collection system for garbage, recycling, and organics within the owner or base-building scope. Locate and configure collection points to support convenient use, safe movement of materials, and transfer to the centralized waste storage area. Document the waste streams, collection locations, and movement routes. For multi-tenant buildings, provide infrastructure that can accommodate separate tenant collection.	Assess anticipated waste streams and provide a coordinated multi-stream collection system for garbage, recycling, and organics within the owner or base-building scope. Include conveniently located collection points, clear identification of waste streams, and safe movement routes to the centralized waste storage area. Provide infrastructure for additional project-relevant streams, such as cardboard, pallets, reusable materials, or tenant-specific waste. Document the waste streams, collection locations, movement routes, and measures supporting tenant participation.
Waste Storage Space	Assess anticipated waste volumes and provide a centralized waste storage area sized for garbage, recycling, and organics generated within the owner or base-building scope. Configure the area to accommodate collection containers, safe access and servicing, and movement of materials from tenant spaces. Document the sizing assumptions, waste streams, collection frequency, container requirements, and access routes.	Assess anticipated waste volumes and provide a centralized waste storage area sized for garbage, recycling, organics, and additional project-relevant waste streams. Configure the area to support separation of materials, safe access and servicing, movement from tenant spaces, and future changes in tenant mix or collection requirements. Provide dedicated space for applicable streams such as cardboard, pallets, reusable materials, electronic waste, or other tenant-generated materials. Document the sizing assumptions, waste streams, collection frequency, container requirements, access routes, and flexibility measures incorporated.
Bulky Waste Management	Assess anticipated bulky and special waste materials and provide a dedicated holding area sized to support building operations and collection requirements. Locate and configure the area for safe access, temporary storage, and removal without obstructing waste servicing or circulation. Document the anticipated materials, sizing assumptions, location, and collection approach. For multi-tenant buildings, apply the criterion to the owner or base-building scope.	Assess anticipated bulky and special waste materials and provide a dedicated, accessible holding area sized to support building operations, tenant needs, and collection requirements. Integrate the area with the centralized waste storage design and configure it to separate reusable, recyclable, and special-collection materials. Document the anticipated materials, sizing assumptions, location, collection approach, and measures supporting reuse or recovery.

		For multi-tenant buildings, apply the criterion to the owner or base-building scope and accommodate tenant fit-out materials where practical.
Special Waste and Reuse	Not Applicable	Assess anticipated special waste and reusable material streams, such as electronic waste, batteries, lamps, furnishings, fixtures, equipment, and tenant fit-out materials. Provide designated, secure collection areas for special waste and materials intended for donation, exchange, or reuse. Document the materials, storage and collection approach, responsible parties, and reuse or recovery pathways. For multi-tenant buildings, provide guidance for tenant participation.

Indoor Air Quality

Learn	Apply	Excel
Construction Indoor Air Quality Management	Assess construction activities, materials, and building systems that may affect indoor air quality during construction and before occupancy. Develop and implement a construction IAQ management plan that addresses source control, protection of absorptive materials, isolation of dust-producing work, protection of ventilation equipment and ductwork, housekeeping, and replacement of filters before occupancy. Document the measures, responsible parties, and verification activities. For multi-tenant buildings, apply the plan to the owner or base-building construction scope.	Assess construction activities, materials, and building systems that may affect indoor air quality during construction and before occupancy. Develop and implement an enhanced construction IAQ management plan that addresses source control, protection of absorptive materials, isolation of dust-producing work, protection of ventilation equipment and ductwork, housekeeping, and replacement of filters before occupancy. Include sequencing of high-emitting work before absorptive finishes, temporary ventilation or air cleaning where appropriate, and a pre-occupancy flush-out or equivalent air-quality measure. Document the measures, responsible parties, verification activities, and pre-occupancy measures completed. For multi-tenant buildings, apply the plan to the owner or base-building construction

		scope and establish applicable IAQ requirements for tenant improvements completed before initial occupancy.
Radon-Resistant Construction	Assess potential radon entry pathways and incorporate radon-resistant construction measures, including a continuous soil-gas barrier and sealed foundation penetrations and joints. Provide an accessible, labelled rough-in for future soil depressurization. Document the measures and areas served.	Assess potential radon entry pathways and incorporate radon-resistant construction measures, including a continuous soil-gas barrier, sealed foundation penetrations and joints, and an accessible, labelled soil-depressurization rough-in. Complete post-construction radon testing in regularly occupied ground-contact areas. Where testing exceeds the applicable Canadian guideline, activate or install a soil-depressurization system and verify its performance. Document the measures, testing locations and results, and any mitigation completed.
Low-Emitting Base-Building Materials	Assess adhesives, sealants, paints, coatings, ceiling products, and insulation included in the owner or base-building scope for VOC emissions and content. Specify low-emitting materials that achieve the following: • At least **50%** of adhesives and sealants meet applicable VOC emissions requirements; • At least **75%** of paints, coatings, adhesives, and sealants meet applicable VOC content requirements; • At least **75%** of ceiling products meet applicable VOC emissions requirements; and • At least **50%** of insulation products meet applicable VOC emissions requirements. Document the products, compliance information, and calculation method. Assess only applicable products installed inside the weatherproofing system.	Assess adhesives, sealants, paints, coatings, ceiling products, and insulation included in the owner or base-building scope for VOC emissions and content. Specify low-emitting materials that achieve the following: • At least **75%** of adhesives and sealants meet applicable VOC emissions requirements; • **100%** of paints, coatings, adhesives, and sealants meet applicable VOC content requirements; • At least **90%** of ceiling products meet applicable VOC emissions requirements; and • At least **75%** of insulation products meet applicable VOC emissions requirements. Document the products, compliance information, and calculation method. Assess only applicable products installed inside the weatherproofing system.
Low-Emitting Finishes	Assess paints, coatings, flooring, wall panels, composite wood products, and furniture included in the owner or base-building scope for VOC and formaldehyde emissions.	Assess paints, coatings, flooring, wall panels, composite wood products, and furniture included in the owner or base-building scope for VOC and formaldehyde emissions.

	Specify low-emitting products that achieve the following: • At least **50%** of paints and coatings meet applicable VOC emissions requirements; • At least **75%** of flooring products meet applicable VOC emissions requirements; • At least **50%** of wall-panel products meet applicable VOC emissions requirements; • At least **50%** of furniture products meet applicable emissions requirements, where furniture is included in the project scope; and • At least **50%** of composite wood products meet applicable formaldehyde emissions requirements. Document the products, applicable categories, compliance information, and calculation method.	Specify low-emitting products that achieve the following: • At least **75%** of paints and coatings meet applicable VOC emissions requirements; • At least **90%** of flooring products meet applicable VOC emissions requirements; • At least **75%** of wall-panel products meet applicable VOC emissions requirements; • At least **75%** of furniture products meet applicable emissions requirements, where furniture is included in the project scope; and • At least **75%** of composite wood products meet applicable formaldehyde emissions requirements. Document the products, applicable categories, compliance information, and calculation method. For multi-tenant buildings, establish equivalent low-emitting material requirements for initial tenant improvements.
Ventilation	Assess ventilation requirements, outdoor-air intake locations, and potential sources of outdoor contamination for regularly occupied spaces. Provide mechanical ventilation in accordance with ASHRAE 62.1 and incorporate controls that allow outdoor-air intake to be reduced during periods of poor outdoor air quality while maintaining essential ventilation and building pressure control. Document the design airflow rates, intake and exhaust locations, controls, operating modes, and areas served. For multi-tenant buildings, apply the criterion to owner or base-building systems and establish applicable requirements for tenant systems.	Assess ventilation requirements, outdoor-air intake locations, enclosure airtightness, and potential sources of outdoor contamination for regularly occupied spaces. Provide mechanical ventilation in accordance with ASHRAE 62.1 and incorporate demand-controlled ventilation or other controls that adjust outdoor airflow based on occupancy and indoor conditions. Include a smoke-response operating mode that coordinates outdoor-air intake, recirculation, filtration, and building pressure to reduce contaminant ingress while maintaining essential ventilation. Document the design airflow rates, intake and exhaust locations, controls and operating modes, enclosure coordination measures, and areas served. For multi-tenant buildings, apply the criterion to owner or base-building systems and establish equivalent requirements for tenant systems.

Filtration	Assess filtration needs and available system pressure capacity for regularly occupied spaces. Specify filtration systems designed to accommodate MERV 13 filters, or the highest efficiency compatible with the system, without compromising required airflow or performance. Provide accessible filter locations and document filter efficiency, pressure-drop allowances, replacement requirements, and areas served.	Assess filtration needs during wildfire smoke events, including outdoor-air intake, recirculation capability, enclosure airtightness, system airflow, and filter pressure drop. Specify a coordinated filtration strategy using MERV 13 or higher filtration and additional air cleaning where required to maintain indoor PM2.5 concentrations at least 80% lower than outdoor concentrations during the defined wildfire smoke design condition. Document the equipment, design assumptions, calculation method, controls, filter replacement requirements, and areas served.
Indoor Air Quality Verification	Verify prior to occupancy that ventilation and filtration systems serving regularly occupied areas are installed and operating as intended. Confirm ventilation airflow, exhaust operation, controls, air distribution, and filter installation. Document the verification methods, results, deficiencies, and corrective actions. For multi-tenant buildings, apply the criterion to owner or base-building systems and initial tenant systems included in the project scope.	Verify prior to occupancy that ventilation, filtration, and indoor air quality measures serving regularly occupied areas are installed and operating as intended. Include functional testing of ventilation and filtration systems and pre-occupancy indoor air quality testing or an equivalent verification method for relevant contaminants, such as PM2.5, volatile organic compounds, and carbon monoxide where applicable. Conduct radon testing in representative ground-contact occupied areas and implement mitigation where results exceed the applicable Canadian guideline. Document the verification methods, test conditions and results, deficiencies, corrective actions, and any mitigation completed. For multi-tenant buildings, apply the criterion to owner or base-building systems and initial tenant systems included in the project scope.

Mobility and Transportation

Learn	Apply	Excel

Active Transportation Support	Assess pedestrian and cyclist connections between the site boundary, public sidewalks or pathways, principal building entrances, bicycle parking, and end-of-trip facilities. Provide safe, direct, accessible, and adequately lit routes that minimize conflicts with vehicle, loading, and waste-servicing areas. Provide clearly marked crossings where routes intersect vehicle circulation. Document the routes, connections, conflict points, and design measures incorporated. Where no public active transportation infrastructure is available, provide direct access between on-site bicycle parking and a principal entrance.	Assess pedestrian and cyclist connections between the site boundary, public sidewalks or pathways, principal building entrances, bicycle parking, and end-of-trip facilities. Provide safe, direct, accessible, and adequately lit routes that are at least as convenient as vehicle access. Use durable separation or traffic-calming measures where routes interact with parking, drive-through, loading, or truck circulation. Provide direct access between long-term bicycle parking, end-of-trip facilities, and occupied building areas, and incorporate weather protection at key entrances or waiting areas where appropriate. Document pedestrian, cyclist, vehicle, loading, waste-servicing, and emergency routes and the measures incorporated to minimize conflicts. Where no active public transportation infrastructure is available, provide direct access between on-site bicycle parking and a principal entrance.
Bike Parking	Assess bicycle parking needs based on anticipated employees, visitors, customers, and tenant uses. Provide short-term bicycle parking near principal entrances and secure, weather-protected long-term bicycle parking that exceeds the applicable Land Use Bylaw requirement by at least 10%. Locate parking to provide safe, direct access without travel through loading, waste-servicing, or truck circulation areas. Document the number, type, location, and access route of bicycle parking spaces provided.	Assess bicycle parking needs based on anticipated employees, visitors, customers, and tenant uses. Provide short-term bicycle parking near principal entrances and secure, weather-protected long-term bicycle parking that exceeds the applicable Land Use Bylaw requirement by at least 25%. Locate parking to provide safe, direct access without travel through loading, waste-servicing, or truck circulation areas. Provide energized outlets for at least 15% of long-term bicycle parking spaces to support e-bike charging. Document the number, type, location, access route, and charging provisions of bicycle parking spaces provided.
EV-Ready Parking	Assess the electrical capacity and infrastructure required to support future electric vehicle charging. Provide EV-capable infrastructure for at least 50% of passenger-vehicle parking spaces, including electrical distribution pathways, connection points, and sufficient electrical capacity—with load management where required—to support future Level 2 charging.	Assess the electrical capacity, distribution, and controls required to support future electric vehicle charging. Provide EV-capable infrastructure for **100% of passenger-vehicle parking spaces**, including electrical distribution pathways and connection points. Provide sufficient electrical capacity, supported by an electric vehicle energy management system or equivalent

	Document the number and percentage of EV-capable spaces, electrical capacity, distribution pathways, connection points, and load-management approach. Exclude loading, trailer, and equipment parking spaces.	controls, to enable future Level 2 charging across the parking facility. Document the number and percentage of EV-capable spaces, electrical capacity, distribution pathways, connection points, load-management approach, and any charging stations installed. Exclude loading, trailer, and equipment parking spaces.

Accessibility

Learn	Apply	Excel
Barrier-Free Design	Assess public and common areas included in the base-building scope for accessibility. Design principal entrances, pedestrian routes, common corridors, elevators, washrooms, shared amenity areas, service counters, and other publicly accessible spaces to meet the accessibility requirements of the NBC 2023–Alberta Edition. Coordinate base-building and tenant areas so that accessible routes and features remain continuous between the site, common areas, and tenant entrances. Document the assessed areas, accessibility measures incorporated, and any elements that will require coordination through tenant design or fit-out.	Meet the Apply criterion. Evaluate and incorporate applicable measures from the most recent version of The City of Calgary's Access Design Standards for public and common areas included in the project scope. Consider accessible parking and loading areas, exterior and interior paths of travel, entrances, doors, elevators, washrooms, service counters, transaction areas, signage, lighting, acoustics, and communication features, as applicable to the building. For multi-tenant buildings, prepare accessibility requirements or tenant design guidance that identifies the accessible routes, entrances, washrooms, service areas, controls, and other features that must be maintained or completed within tenant spaces. Document the City standards applied, measures incorporated into the base building, and measures delegated to future tenant fit-outs.
Accessibility for Common Indoor Areas	Assess common and publicly accessible indoor areas included in the base-building scope for accessibility.	Meet the Apply criterion. Evaluate and incorporate applicable measures from the most recent version of **The City of Calgary's Access Design**

	Target design of entrances, common corridors, elevators, washrooms, shared amenity spaces, service counters, and other publicly accessible areas that aligns with the accessibility provisions of the **NBC 2025**. Coordinate the base building and tenant spaces to maintain continuous accessible routes to tenant entrances. Document the areas assessed, accessibility measures incorporated, and any requirements to be completed through tenant fit-out.	**Standards** for common and publicly accessible indoor areas included in the project scope. Consider interior paths of travel, entrances and doors, elevators, washrooms, service and transaction counters, controls, signage, lighting, acoustics, and communication features, as applicable. For multi-tenant buildings, identify accessibility requirements that must be maintained or completed through tenant fit-out. Document the City standards applied, measures incorporated into the base building, and measures delegated to future tenant spaces.

Commissioning

Learn	Apply	Excel
Commissioning Process	Assess the base-building systems that require commissioning to confirm they are installed and operating in accordance with the design intent. Develop and implement a project-specific commissioning plan that identifies: • Systems included in the commissioning scope; • Commissioning activities and documentation requirements; • Roles and responsibilities of the owner, design team, contractors, commissioning provider, and building operator; and • Procedures for identifying, tracking, and resolving deficiencies. For multi-tenant buildings, distinguish between base-building systems, landlord-controlled systems, and tenant systems, and identify any commissioning requirements to be completed or coordinated through tenant fit-out.	Meet the Apply criterion. Implement a comprehensive commissioning process that includes: • Integration of commissioning requirements into the construction documents; • Review of design documents for commissioning-related issues; • Development and completion of construction and installation checklists; • Verification of equipment start-up and control sequences; • Development and execution of functional performance tests; • Maintenance of an issues and benefits log through resolution; • Verification that deficiencies have been corrected; and • Preparation of a final commissioning report. For multi-tenant buildings, coordinate commissioning of base-building and tenant systems where their operation is interdependent, including ventilation, heating and cooling, controls,

	Document the commissioning scope, responsible parties, completed activities, deficiencies identified, and corrective actions.	metering, domestic hot water, lighting controls, and other systems shared across landlord and tenant areas. Document the systems commissioned, test procedures and results, outstanding issues, corrective actions, and responsibilities for commissioning work deferred to tenant fit-out or seasonal testing.
Commissioned Systems	Assess the base-building systems that require commissioning to confirm proper installation, start-up, controls, and operation. Target commissioning of applicable landlord-controlled and common-area systems, including: • Central heating, cooling, and ventilation systems; • Hydronic systems and pumps; • Domestic hot water systems; • Building automation and system controls; • Common-area lighting controls; • Energy and water meters; and • Other systems that affect base-building performance. Verify that commissioned systems are installed and operating as intended. Document the systems commissioned, verification methods, results, deficiencies, and corrective actions. For multi-tenant buildings, identify systems or components that require coordination or further verification during tenant fit-out.	Target enhanced commissioning of major building systems and the building envelope, including: • Functional performance testing of HVAC, ventilation, hydronic, domestic hot water, controls, lighting controls, and metering systems; • Verification of interactions between base-building and tenant systems; • Testing of system operating modes, control sequences, alarms, and energy-management functions; • Whole-building airtightness testing and targeted enclosure inspections or testing; and • Verification of energy and water metering, data collection, and reporting functions. Document the systems and envelope assemblies tested, test procedures and acceptance criteria, results, deficiencies, corrective actions, and responsibilities for testing deferred to tenant fit-out, seasonal conditions, or post-occupancy.

Operations and Maintenance

Learn	Apply	Excel

Operations and Maintenance	Assess the operations and maintenance information needed to support efficient operation of landlord-controlled, common-area, and base-building systems. Target provision of essential project-specific O&M documentation and training, including: • A base-building systems overview and applicable sequences of operation; • Key operating parameters, including schedules, setpoints, control modes, and tenant interfaces; • Preventive maintenance requirements for major building systems; • Clear labelling of building controls, meters, shut-offs, and major equipment; • Training for building operators and property-management staff on system operation, maintenance, emergency response, and operation of any refuge space or resilience features; • An operational waste-management plan; and • Relevant material-salvage and deconstruction information developed under the Materials and Waste criteria. For multi-tenant buildings, distinguish landlord and tenant responsibilities and identify operating requirements that must be communicated through tenant manuals, design criteria, or lease documentation. Document the O&M information provided, responsible parties, delivery format, and training completed.	Meet the Apply criterion. Target implementation of a comprehensive O&M strategy that includes: • Detailed documentation of system operation, sequences, schedules, setpoints, alarms, and operating modes; • A preventive maintenance program for major building systems, controls, meters, envelope components, and resilience features; • Training and refresher training for building operators and property-management staff; • Procedures for emergency operation, seasonal changeover, after-hours use, and maintenance of any refuge space; • A structured approach to ongoing performance review, such as annual operational verification, periodic recommissioning, or monitoring-based commissioning; • Procedures for reviewing landlord and tenant energy, water, and waste data where available; • An operational waste-management plan; and • Relevant material-salvage and deconstruction information developed under the Materials and Waste criteria. For multi-tenant buildings, establish a process for coordinating landlord- and tenant-controlled systems, communicating operating requirements to tenants, and updating O&M documentation following tenant fit-outs or major system changes. Document the O&M strategy, maintenance schedules, training completed, performance-review process, landlord and tenant responsibilities, and procedures for keeping documentation current.

Performance Monitoring and Benchmarking	Assess how operational performance will be measured and reviewed for landlord-controlled, common-area, and base-building systems. Establish an approach for tracking: • Energy use and greenhouse gas emissions; • Water use; • Waste generation and diversion, where data are available; • Landlord, common-area, and tenant consumption, where separately metered or otherwise available; and • Relevant operating conditions, including occupancy, schedules, weather, vacancies, tenant fit-outs, and major changes in building use. Identify the meters, utility records, building automation system outputs, tenant data, and other sources that will be used. Compare initial operating results with design-stage estimates and investigate material differences. Document the monitoring approach, available data sources, landlord and tenant responsibilities, performance indicators, review frequency, and process for investigating unexpected results.	Meet the Apply criterion. Implement an ongoing building performance benchmarking and reporting process that includes: • Energy use, greenhouse gas emissions, and water use; • Waste generation and diversion, where data are available; • Landlord, common-area, tenant, and major end-use data, where separately metered or otherwise available; • Normalization or contextual information for weather, occupancy, operating hours, vacancies, and material changes in building use; • Comparison with design-stage estimates, prior-year performance, and relevant external benchmarks; and • Periodic review of performance trends, anomalies, and improvement opportunities. For eligible buildings, report energy, water, and greenhouse gas performance through **The City of Calgary's BenchmarkYYC program** or an equivalent benchmarking platform. Establish a process for communicating relevant performance information to property-management staff and tenants and for identifying and tracking operational improvements. Document the benchmarking platform, reporting boundaries, utility accounts and meters included, excluded tenant-controlled data, review frequency, performance findings, and improvement actions.