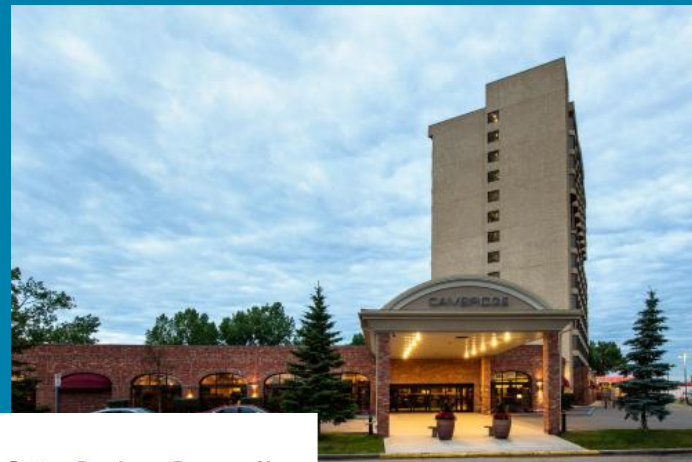


National Building Code- 2023 Alberta Edition Significant Technical Changes

Highlights

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Alberta

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Technical and Corporate Services Division

Community and Technical Support Branch-Building, Energy & Accessibility

Disclaimer

In the event of any discrepancy between the information throughout this presentation and the *Safety Codes Act*, National Fire Code-2023 Alberta Edition and the National Building Code-2023 Alberta Edition, the legislation is considered correct.

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DIVISION C



Schedules of professional involvement a collaboration



The Alberta Association of Architects
Architects and Licensed Interior Designers



The Association of Professional
Engineers and Geoscientists of Alberta



**Safety
Codes
Council**

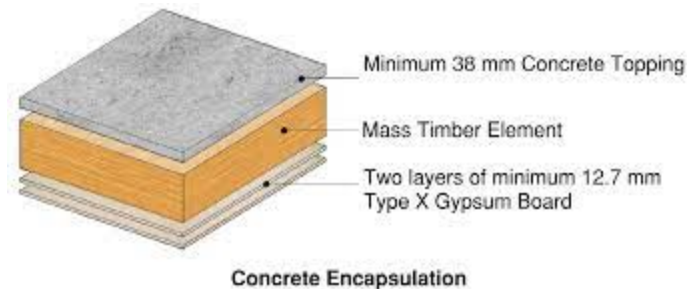


Part 3

Fire Protection, Occupant Safety and Accessibility

Encapsulated mass timber construction

- A new construction type, encapsulated mass timber construction (EMTC), is introduced, enabling the construction of wood buildings with up to 12 storeys. Mass timber elements are encapsulated (using prescriptive or performance solutions) in order to delay their involvement in a fire, and a number of compensatory measures are implemented.



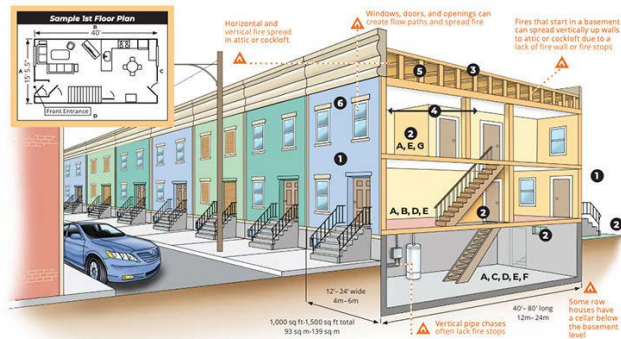
Mid-rise combustible construction

- To increase design options for mid-rise buildings of combustible construction, the requirement that 25% of the building perimeter be located within 15 m of a street may be reduced to 10% if certain criteria are met.



Residential sprinklers

- The application of NFPA 13D, “Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes,” is extended to row houses, allowing more economical and consistent approaches to sprinkler design.



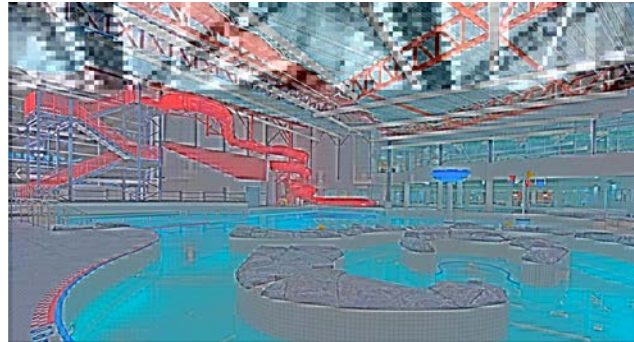
Fire alarm systems

- The effectiveness of fire alarm systems is increased by requiring a low-frequency audible signal in sleeping rooms, as well as visible signals in public corridors, washrooms, and at least 10% of the guest suites in hotels and motels.



Safety glazing (Parts 3 and 9)

- To reduce the hazard posed by wired glass, safety glazing is required in windows and doors where human impact is possible in assembly occupancies. Safety glazing is also required in shower and bathtub enclosures regulated by Parts 3 and 9.

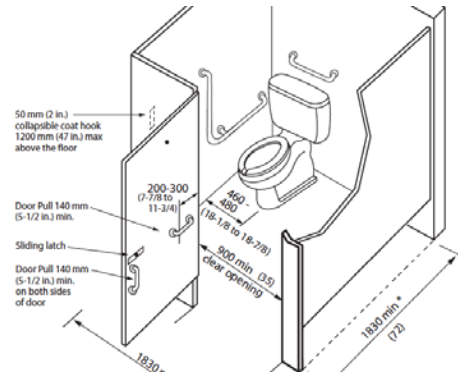


Accessibility

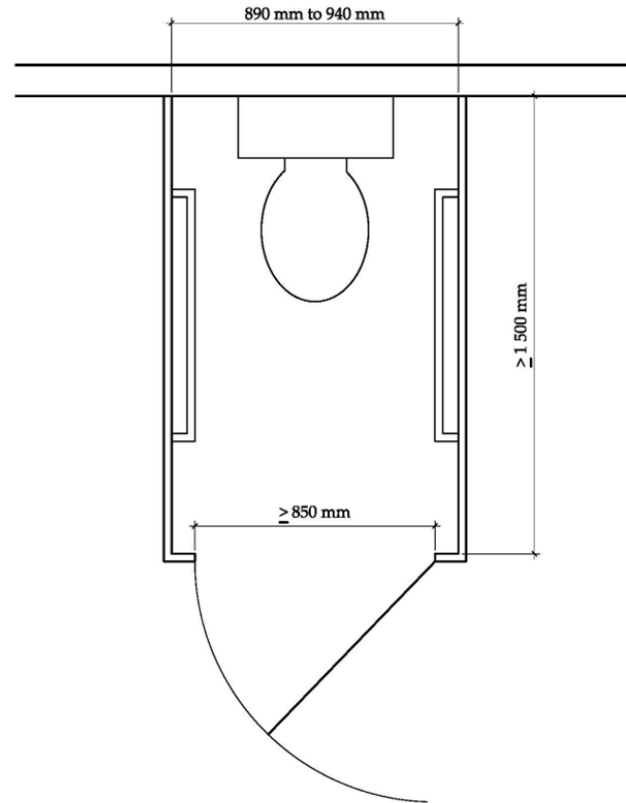
- The accessibility of buildings is improved by revising the minimum dimensions of building elements to accommodate persons using various types of mobility devices and by increasing the visibility, detectability and ease of use of building elements by persons with reduced dexterity, vision or hearing. Requirements are introduced for universal washrooms and shower rooms, for visible and audible feedback signals, and for tactile safety signage. More pedestrian entrances and floor levels are required to be accessible.

Barrier-Free Accessibility Section 3.8

- Water-Closet Stalls and Urinals for Persons with Limited Mobility
- New provision wherein a universal washroom is required at every location where washrooms are provided
- Minimum requirements provided for the design of curb ramps

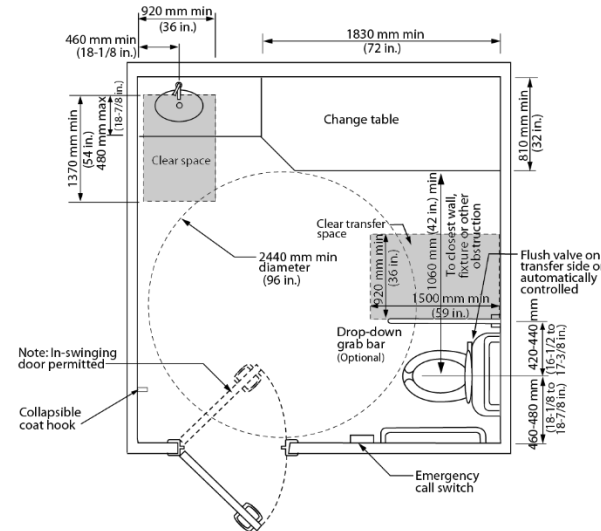


Limited Mobility Stall Section 3.8



Barrier-Free Accessibility Section 3.8

- Minimum requirements provided for an accessible change space (including an adult change table) in universal washrooms in buildings containing Group A, B, Division 2 or Group E major occupancies where at least one of these major occupancies has an occupant load of more than 500



Exit Doors



- Doorways leading from a corridor or public corridor that provide access to a public area or an exit in facilities for persons with cognitive disabilities, are not required to be clearly identifiable (door and/or door frame does not require a readily apparent visual contrast with the adjacent wall surfaces).

Exit Doors



Before



After

Part 5

Environmental Separation

Material standards

New material standards applicable to environmental separators and assemblies exposed to the exterior are added:

- CAN/CSA-A123.16, “Asphalt-coated glass-base sheets,”
- ASTM C1280, “Standard Specification for Application of Exterior Gypsum Panel Products for Use as Sheathing,”
- CAN/CGSB-12.9, “Spandrel glass,”
- CAN/ULC-S717.1:2017, “Standard for Flat Wall Insulating Concrete Form (ICF) Units – Material Properties.”

Air leakage

- Air leakage requirements are revised to establish performance classes for air barrier assemblies and to provide a standardized method of testing both proprietary and generic assemblies.

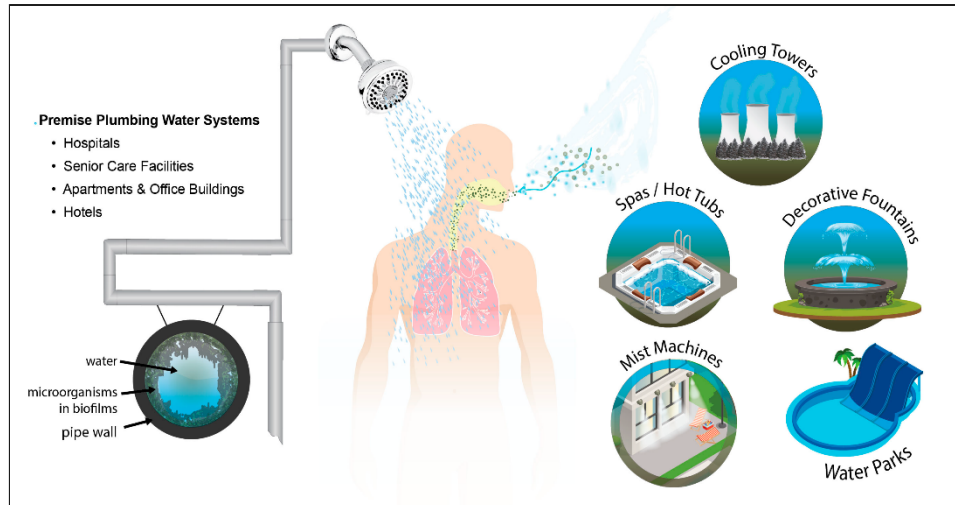


Part 6

Heating, Ventilating and Air-conditioning

Legionella

- Requirements for evaporative equipment and drain pans are revised to minimize the growth and transmission of Legionella and other bacteria.



Part 7

Plumbing Services and Health

7.1.1.2. Application

1) This Part applies to the design, construction, extension, *alteration*, renewal or repair of

a) *plumbing systems*, [and](#)

b) aquatic facilities,

~~c) food establishments and personal service facilities, and~~

~~d) laboratories using biological agents.~~



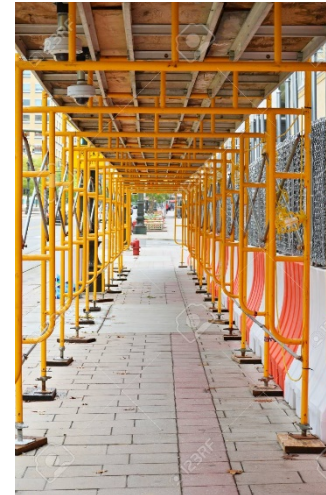
Part 8

Safety Measures at Construction and Demolition Sites

8.2.1.2. Covered Way Construction

1) A covered way shall

~~h) have, at each opening for pedestrian access, a gate not less than 1 200 mm high that can be locked or bolted in a closed position.~~



8.2.3.2. ~~Protection from Dangerous~~ Activities Overhead Activities

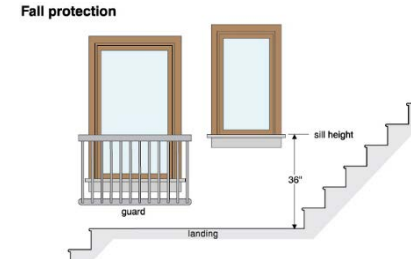
~~2) If the safety of pedestrians cannot be assured during hoisting or the undertaking of other hazardous operations, then the gates required by Clause 8.2.1.2.(1)(h) and Sentence 8.2.1.3.(3) that are located in the danger zone shall be closed and locked and pedestrians shall be redirected away from the danger.~~

Part 9

Housing and Small Buildings

Protection of windows

- To minimize the risk of falls through windows, requirements for the protection of openable windows in residential occupancies are strengthened by removing exemptions related to dwelling type and window opening size, increasing the minimum sill height for unprotected windows, and prescribing more reliable control mechanisms.



Home-type care occupancy

- Provisions for a new home-type care occupancy (Group B, Division 4) are introduced to allow safe and affordable care in a home-type setting.



Flat insulating concrete form (ICF) construction

- The use of flat ICF construction is expanded to all types of Part 9 buildings with up to 2 storeys. Lateral support of flat ICF foundation walls is clarified. Screw sizes and spacings are specified for the attachment of cladding to the web fastening strips of ICF units.

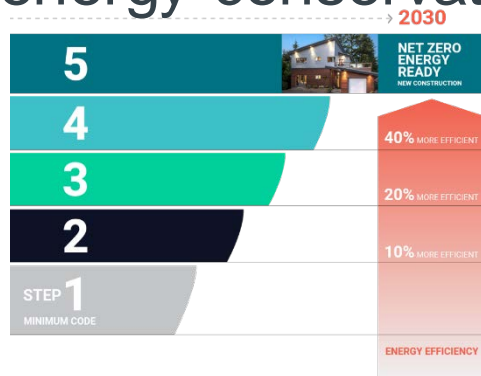


Section 9.36

Energy Efficiency

Tiered energy performance compliance

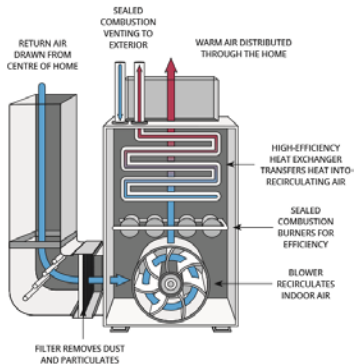
- A performance compliance path is established with 5 tiers, each successive tier being increasingly stringent in terms of house energy consumption and heat loss. In addition, a prescriptive compliance path based on energy conservation points is provided for Tier 2.



Tier	Overall Energy Performance Improvement of Proposed Building Compared to Reference Energy Building
1	NECB 2020
2	25% better
3	50% better
4	60% better

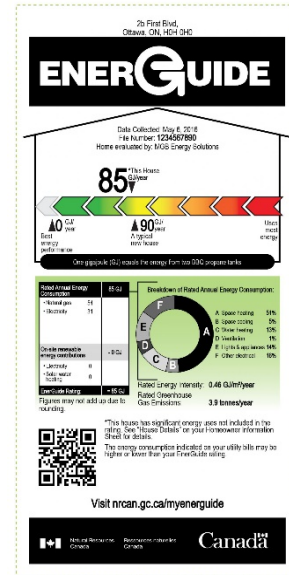
HVAC and service water heating

- Performance requirements for HVAC and service water heating equipment are updated to align them with Canada's Energy Efficiency Regulations and relevant standards, and to add new equipment types.



EnerGuide Rating System

- NBC Subsection 9.36.5. is aligned with the EnerGuide Rating System, and this system is established as an acceptable compliance path.



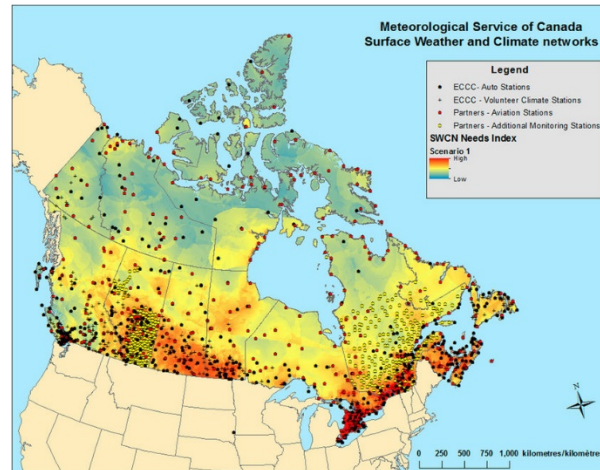
Appendix C



Climatic and Seismic Information

Climatic data

- The wind data in Table C-2, Climatic Design Data for Selected Locations in Canada, are updated based on the latest observed data to ensure that recent climate trends are reflected.



Seismic data

- The seismic data in Table C-3, Seismic Design Data for Selected Locations in Canada for Part 9 Design, are limited to use in the application of prescriptive requirements in Part 9. Seismic hazard values for design under Part 4 are updated and, for 679 locations in Canada, relocated to the NRC Publications Archive. The values for these locations can also be obtained from the [2020 National Building Code of Canada Seismic Hazard Tool](#), which provides seismic hazard values for any site in Canada. In general, seismic hazard values for design under Part 4 have increased across Canada.

NATIONAL ENERGY CODE OF CANADA FOR BUILDINGS (NECB)

Application

- The application of the NECB is extended to cover alterations, such as tenant improvements, to buildings originally constructed in accordance with the Code.



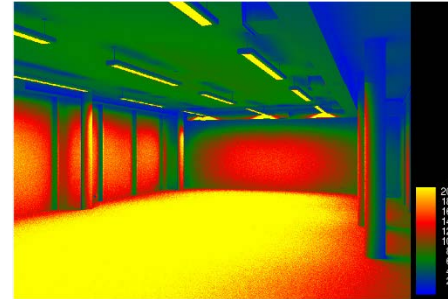
Building envelope

- Whole-building airtightness testing is introduced as an option for complying with air leakage requirements. Maximum overall thermal transmittance values for opaque building assemblies and fenestration are reduced to improve the thermal performance of the building envelope.



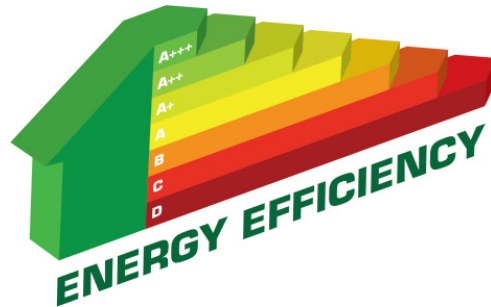
Lighting

- Lighting power densities are updated to reflect improvements in the efficacy of lighting products available in the North American market. Lighting power allowances are provided for use in additional exterior applications, including applications not listed in the Code.



HVAC and service water systems

- The trade-off compliance paths for HVAC and service water systems, which were complex and not widely used, are removed. Performance requirements for HVAC and service water heating equipment are updated to align them with Canada's Energy Efficiency Regulations and relevant standards. and to add new equipment types.



Tiered energy performance compliance

- New Part 10 is introduced to establish a performance compliance path with 4 tiers, each successive tier being increasingly stringent in terms of building energy consumption.

Tier	Overall Energy Performance Improvement of Proposed Building Compared to Reference Energy Building
1	NECB 2020
2	25% better
3	50% better
4	60% better

Questions?

