Meeting Date: **July 17, 2024**

Prepared By: Arnie Marsman, Director Building Services / Chief Building Official

Submitted by: Arnie Marsman, Director Building Services / Chief Building Official

Report No: **BLD-06-2024**

Subject: **Ontario Building Code Update**

Recommendation:

THAT Report BLD-06-2024, re: Ontario Building Code Update be received be received for information.

Purpose:

To advise Council of intended changes to the Ontario Building Code coming into effect January 1, 2025.

Background:

A new edition of the Ontario Building Code (OBC) will come into effect January 1, 2025. The Province has produced summary sheets of code changes which are provided in this report below.

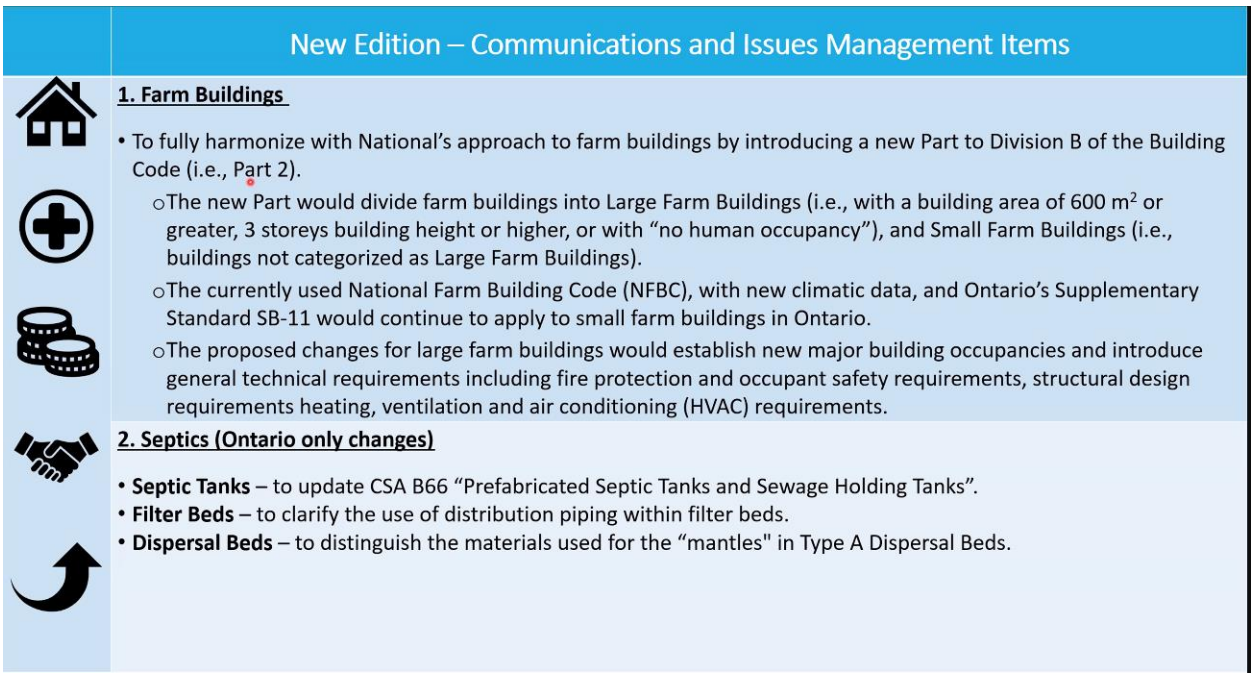
Harmonization between the OBC and the National Building Code including these amendments will bring Ontario 77% towards full harmonization.

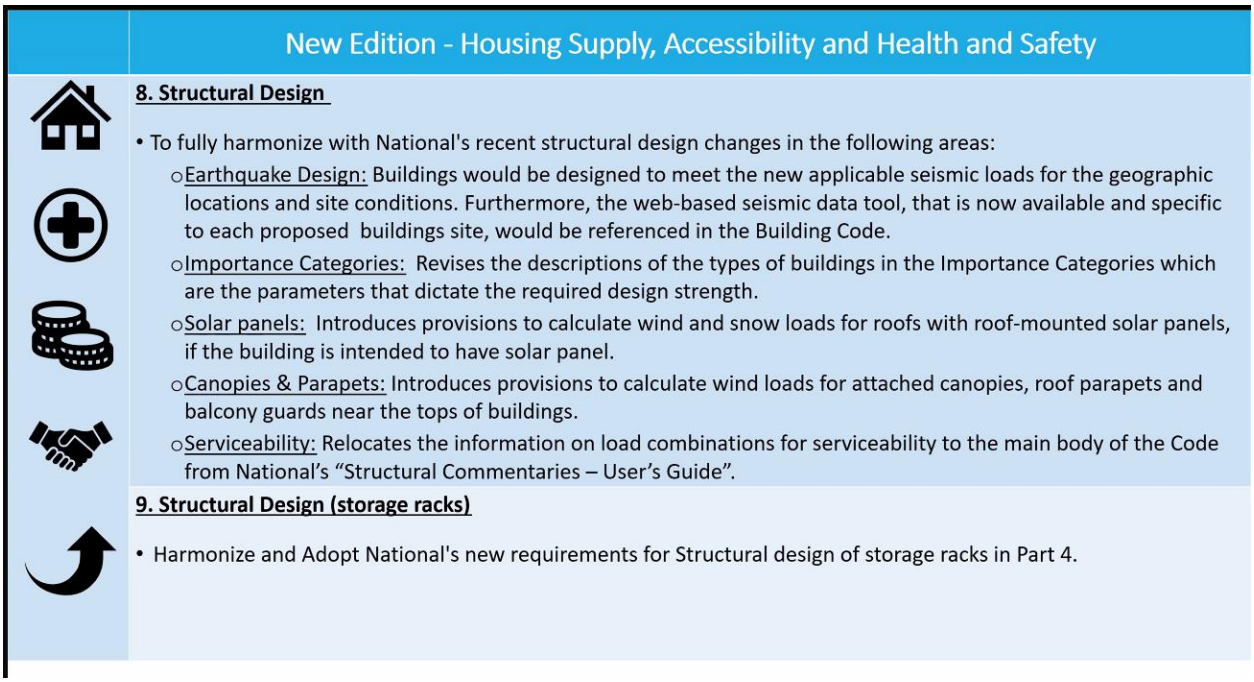
Most significant changes noted thus far include:

- The installation of farm buildings into the OBC as a new classification of occupancy including design standards. We expect this will eliminate the requirement to cross reference with the National Farm Code,
- The requirement for installation of a roughed in radon gas mitigation system. Middlesex County has not been identified as a region where radon gas is considered a concern, so this will be a new requirement in this region.
- Accessibility standards yet to be introduced.
- The new code will include a transition period for existing permits and applications in design or under review.

Analysis:

Staff has shared the following slides with the local building community and has committed to sharing training details as they are released by the Ministry of Municipal affairs and Housing.





New Edition – Housing Supply, Accessibility and Health and Safety

3. Two Unit Houses/Secondary Suites

- To harmonize Ontario's two-unit house provisions with National's requirements for secondary suites, **except** for National's limitations around minimum suite sizes. Ontario should maintain its flexibility on suite sizes to support the government's housing objectives and minimize costs.

4. Large Buildings (Accessibility)

- To harmonize with the 2020 National Building Code accessibility requirements where they enhance current Ontario Building Code requirements.

5. Carbon Monoxide

- To harmonize with National carbon monoxide (CO) alarm requirements by expanding the requirements to Care Occupancies (e.g., long term care etc.).
- To expand the application of CO alarm requirements further to additional spaces in residential occupancies and to some commercial establishments in response to the Office of the Fire Marshal's request (Ontario only proposal).

6. Radon

- To harmonize with the National Building Code on mitigating the effects of radon in buildings across Ontario.
- Ontario would adopt a proactive approach to address soil gas/radon by requiring new houses to have a rough-in for a subfloor depressurization system if subsequently required.
- The changes would include corresponding revisions to reference Supplementary Standard SB-9 and a new Appendix note to clarify that buildings occupied for a few hours a day may not be required to implement soil gas protection methods.

New Edition - Housing Supply, Accessibility and Health and Safety

7. a) Large Buildings (Fire Safety)

- To fully harmonize Ontario's provisions for fire protection systems (standpipe, fire alarms, and fire sprinklers) with National Building Code (NBC) requirements.
  - Standpipe system design will fully align with the international standard (NFPA 14) for design, construction, installation and testing of a standpipe system. The proposed design approach allows the standpipe riser to be located within the exit stair, provides more coverage for the hose system, and requires higher system demand (min. pressure and flow rate).
  - Buildings required to be sprinklered must also be equipped with a fire alarm system. For buildings containing superimposed major occupancies (occupancy types stacked vertically within a building), sprinkler coverage would be required on storeys below those storeys already requiring sprinkler protection due to the nature of the occupancy.
- To fully harmonize design approach for mezzanine and interconnected floor space design with National's requirements including changes to exit/egress facilities, fire compartments, smoke control design, combustible contents limitations, and floor area and travel distance limitations.
- To reference the new materials standard used in the construction of plastic signs (Ontario only).

7. b) Large Buildings (Exterior Cladding)

- To harmonize with the National Building Code and address combustible cladding and combustible wall components separately.
  - To remove the 6-storey limitation, which limited building height restrictions for the use of combustible cladding and combustible wall components in a building required to be non-combustible construction (e.g., concrete) provided the exterior wall assembly is still tested to ULC standard for performance under fire conditions.
  - To permit combustible wall components, other than the cladding, to be protected by concrete or masonry cladding.

New Edition - Housing Supply, Accessibility and Health and Safety

8. Structural Design

- To fully harmonize with National's recent structural design changes in the following areas:
  - Earthquake Design: Buildings would be designed to meet the new applicable seismic loads for the geographic locations and site conditions. Furthermore, the web-based seismic data tool, that is now available and specific to each proposed buildings site, would be referenced in the Building Code.
  - Importance Categories: Revises the descriptions of the types of buildings in the Importance Categories which are the parameters that dictate the required design strength.
  - Solar panels: Introduces provisions to calculate wind and snow loads for roofs with roof-mounted solar panels, if the building is intended to have solar panel.
  - Canopies & Parapets: Introduces provisions to calculate wind loads for attached canopies, roof parapets and balcony guards near the tops of buildings.
  - Serviceability: Relocates the information on load combinations for serviceability to the main body of the Code from National's "Structural Commentaries – User's Guide".

9. Structural Design (storage racks)

- Harmonize and Adopt National's new requirements for Structural design of storage racks in Part 4.

New Edition - Housing Supply, Accessibility and Health and Safety

10. Plumbing (Harmonization changes)

Uniformity in terminology:
- To harmonize code terminology to align with construction industry terminology.

Providing flexibility and more choices:
- To allow alternative temperature limiting devices.
- To introduce new acceptable plumbing materials.

Improving health and safety:
- To reduce the maximum water temperature from 49 to 43 °C in health care facilities and seniors' residence facilities.
- To harmonize with National's non-potable (rainwater harvesting/greywater collection) water systems requirements.
- There are also proposed requirements related to backwater valves, floor drains, and ball test (not recommended).

11. Plumbing (Ontario only changes)

- To clarify numerous technical requirements including those for shower heads, domestic water tanks, and grease interceptors.
- To require hot water temperature control devices in childcare centres. This would minimize hot water injuries to children.

12. Heating and Ventilation

- Harmonize with the National's house ventilation requirements and general HVAC requirements, except the carbon monoxide level for repair garages where Ontario's standards are higher which includes:
  - To further harmonize requirements regarding equipment and design to minimize the growth and transmission of Legionella and other bacteria,
  - To change maximum temperature for exposed piping to 52°C from 70°C.
  - To update the referenced edition of the Ventilation Standard applicable to large buildings and to further harmonize Ontario's requirements with National's including ventilation of storage and repair garages, and ducts and duct linings.

13. Division A and C Administrative Changes

- To introduce multiple **definitions** supporting harmonization with the National Building Code and Ontario-only requirements, update existing definitions and to introduce two new **functional statements.**

Proposals not proceeding in the New Edition

Home-type care (B4) Occupancy - not proceeding

- To harmonize with the National Building Code by including new Home-type Care Occupancy (B4 occupancy) classification
- The B4 occupancy classification added as a new building type in the 2020 National Building Code is intended for smaller house-sized buildings where care is provided for a limited number of occupants.

Guards (Ontario only changes) - not proceeding

- To retain Ontario's existing restrictions around guards but add clarifying appendix notes and/or create a guide on guards for industry, which would potentially provide some additional flexibility around guard design while ensuring child safety.

Energy Efficiency for Houses and Large Buildings- not proceeding

- To adopt the 2020 National Building Code's energy efficiency requirements for houses with modifications, replacing Ontario's current requirements (SB-12)
- Adopt **Tier 3** by establishing a 20-point system – based on credits accumulated from energy saving measures - as a minimum for prescriptive compliance path and equivalent criteria for a performance path. Only 10 points would be required for small houses.
- To incorporate the newly created proposed changes to the National Code in advance of National's New Edition to allow more cost optimized options.
- To adopt the energy efficiency requirements in the 2020 National Energy Code of Canada for Buildings (NECB) in lieu of Ontario's current Supplementary Standard SB-10.
- To select National's **Tier 1** level for adoption by Ontario for large buildings.

Tornado Resiliency of Houses - not proceeding

- To increase the resiliency of houses and reduce the likelihood of severe damage from tornados.
  - The proposal, submitted by the City of Barrie, includes changes that would modify current construction practices for how to design houses, and how to construct exterior walls and roofs, and their connection to each other and the foundation walls.

Septics (Ontario only changes) - not proceeding

- **Chambers Systems** - to allow for the use of three "low profile" chambers and to remove the requirement for a distribution pipe in chambers 150 m and longer.
- **New Leaching Bed Type** – to add new requirements related to Combined Treatment and Dispersal Beds units/systems.

Supporting the Sector to Ensure a Smooth Transition

Both comprehensive training for building practitioners and adequate time are vital to ensure a smooth transition to the new edition of the Ontario Building Code that will minimize disruption in the construction industry and will best support housing supply.

Timing and Transition Provisions

- The 2024 Building Code comes into effect on January 1, 2025, with a three-month grace period until March 31, 2025, for applications for which the working drawings were substantially complete before January 1, 2025. The province has also planned a training program to support the sector and keep current projects on track.
  - This approach provides balance and flexibility that allows developers, builders, designers, and other industry professionals, the ability to use either the current 2012 or the 2024 Building Code when submitting a building permit depending on their circumstances during the transition period.

- During the transition period, only one edition of the Building Code, either the 2012 or 2024, could be used in the design and construction of a building.
  - The version of the Building Code that applies at the time of the permit application is the version that will continue to apply to the building throughout the processes of plans review, permit issuance, construction, inspection and occupancy of the building.

Supporting the Sector to Ensure a Smooth Transition – Cont.

Please take careful note of the following dates in the transition timeline:

- **April 10, 2024** – Release of the 2024 Building Code
- **January 1, 2025** – 2024 Building Code in effect
- **March 31, 2025** – deadline for permit applications using the 2012 Building Code, where working drawings were substantially complete before January 1, 2025
- **April 1, 2025** – all permit applications must use the 2024 Building Code

Key Transition Period Dates (December 31, 2024 – March 31, 2025):

April 10, 2024 – December 31, 2024	January 1, 2025	March 31, 2025	April 1, 2025
9 Months	3 Months		
permit applications must be submitted using the *2012 Building Code* until December 31, 2024	Permit applicants may use the new 2024 Building Code	Last day to submit permit applications using the 2012 Building Code where working drawings were substantially complete before January 1	All permit applications must now be submitted using the 2024 Building Code

Financial Implications:

None

Strategic Plan:

This matter aligns with following strategic priorities:

- Responsive Municipal Government

  Objective 5.3 – Foster a culture of innovation, continuous improvement, and cost-effective service delivery

  - By sharing information and gathering input, continuing our timely and effective communication to the public.

  Objective 5.4 – Expand our Partnerships

  - By working with the development community in sharing information and training opportunities.

Attachments:

N/A