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Proposed Change 1824

Code Reference(s):	NBC20 Div.B 10 (first printing)
Subject:	Alteration of Existing Buildings
Title:	Scope and Application of NBC Part 10
Description:	This proposed change introduces NBC Part 10 and states the scope and application of this proposed Part to the alteration of existing buildings.
Related Proposed Change(s):	PCF 1812, PCF 1813, PCF 1839

This change could potentially affect the following topic areas:

- | | |
|--|---|
| <input type="checkbox"/> Division A | <input checked="" type="checkbox"/> Division B |
| <input type="checkbox"/> Division C | <input checked="" type="checkbox"/> Design and Construction |
| <input type="checkbox"/> Building operations | <input checked="" type="checkbox"/> Housing |
| <input checked="" type="checkbox"/> Small Buildings | <input checked="" type="checkbox"/> Large Buildings |
| <input type="checkbox"/> Fire Protection | <input type="checkbox"/> Occupant safety in use |
| <input type="checkbox"/> Accessibility | <input type="checkbox"/> Structural Requirements |
| <input type="checkbox"/> Building Envelope | <input checked="" type="checkbox"/> Energy Efficiency |
| <input type="checkbox"/> Heating, Ventilating and Air Conditioning | <input type="checkbox"/> Plumbing |
| | <input type="checkbox"/> Construction and Demolition Sites |

General information

See the summary for subject Alteration of Existing Buildings.

Problem

Scope and Application of Part 10

The National Building Code of Canada (NBC) applies to the alteration of existing buildings, but relaxations to Code requirements may be granted by authorities having jurisdiction. The different relaxations between jurisdictions leads to inconsistencies in the level of performance of buildings with alterations and creates confusion about the degree of work necessary for the alteration to meet the Code requirements. The requirements applying to the alteration of existing buildings should be clearly stated in a new Part 10 in the NBC.

The scope of the initial version of Part 10 is limited to requirements applying to the alteration of existing buildings that improve the energy performance of the building. Energy performance requirements applying to the alteration of Part 9 buildings (to which Section 9.36. applies) are located in Part 10. Energy performance requirements applying to the alteration of Part 3 buildings will be located in Part 11 of the National Energy Code of Canada for Buildings. The proposed NBC Part 10 must clearly direct Code users where to find the requirements applying to the alteration of the existing building in question.

Application of the Requirements of Part 10 to Extensions

Extensions to buildings (including additions) create a combination of an existing portion of the building and a newly constructed portion. New construction should meet the requirements of the Code, but additional consideration may be necessary for the existing portion of the extended building as a result of the extension. The requirements that apply to the existing building must be clearly stated to avoid confusion in the case of an extension.

Justification

The voluntary alteration of an existing building represents an opportunity to upgrade the building's safety, accessibility, durability or energy performance. When significant repairs or alterations need to be made is the ideal time to consider upgrading the building's performance where it is cost-effective to do so, thereby minimizing the incremental cost of the upgrade.

To address the alteration of existing buildings, a guiding principle of the development of provisions is that the provisions should be reasonable, pragmatic and avoid placing an undue burden on building owners. Providing exemptions from or relaxations of the Code requirements that are not practical to apply to an existing building, and that do not lead to a decrease in building performance, allows the flexibility to continue using existing functional materials or equipment by extending their service life and deferring replacement costs.

Code users would benefit from a clarification of the requirements that apply to extensions (including additions) and the alteration of existing buildings, as well as a clarification of the applicable permitted relaxations to Code requirements.

PROPOSED CHANGE

NBC20 Div.B 10 (first printing)

[10.] 10 Alteration of Existing Buildings

[10.1.] -- General

[10.1.1.] -- Application and Definitions

[10.1.1.1.] --- Scope

[1] --) This Part is concerned with the energy performance of *existing buildings* or parts thereof subjected to *alteration*. (See Note A-10.1.1.1.(1).)

[10.1.1.2.] --- Application

[1] --) The application of this Part shall be as described in Article 1.3.3.4.-2025 of Division A.

[10.1.1.3.] --- Compliance

[1] --) Except as provided in Sentence (2), the *alteration of existing buildings* or parts thereof shall comply with Part 11-2025 of Division B of the NECB.

[2] --) Except as provided in Sentence (3), the *alteration of existing buildings* or parts thereof shall comply with Section 10.9. for

[a] --) *buildings of residential occupancy* to which Part 9 applies,

[b] --) *buildings containing business and personal services, mercantile or low-hazard industrial occupancies* to which Part 9 applies whose combined total *floor area* does not exceed 300 m², excluding parking garages that serve *residential occupancies*, and

[c] --) *buildings containing a mix of the residential and non-residential occupancies* described in Clauses (a) and (b).

[3] --) For the purpose of determining whether Section 10.9. applies in Sentence (2), the *existing buildings* shall be considered together with the *alteration*.

[10.1.1.4.] --- Defined Words

[1] --) Words that appear in italics are defined in Article 1.4.1.2.-2025 of Division A.

[10.1.1.5.] --- Performance

[1] --) An *alteration* to an *existing building* shall not adversely affect any aspect of *building performance*.

[10.1.1.6.] --- Extensions

[1] --) Where an *extension*, including an *addition*, is being added to an *existing building*,

- [a] --) the existing building shall comply with this Part, and
[b] --) the extension shall comply with all other Parts of the Code.

Note A-10.1.1.1.(1) Extent of the Alteration.

Unless they state otherwise, the provisions of Part 10 are not intended to require building owners to undertake work beyond the planned extent of an alteration. Certain provisions do, however, expand the extent of an alteration where it is reasonable and cost effective to do so. Some examples of such an expansion of extent are the following:

- sealing ducts that are accessible,
- insulating piping that is being replaced,
- installing automatic temperature controls on service water heating systems with storage tanks,
- improving impacted or exposed portions of an air barrier system, and
- improving the thermal resistance of exposed wall framing, ceilings or floors.

The overarching principles for the application of the provisions of Part 10 to an alteration are the following:

- to maintain or increase the overall building performance level,
- to avoid negative or unintended consequences and unrealistic expectations,
- to ensure that the building is left in a safe state during the alteration, and
- to encourage alterations without placing an undue burden on building owners.

[10.2.] -- Reserved

[10.3.] -- Reserved

[10.4.] -- Reserved

[10.5.] -- Reserved

[10.6.] -- Reserved

[10.7.] -- Reserved

[10.8.] -- Reserved

[10.9.] -- Energy Efficiency of Housing and Small Buildings

[10.9.1.] -- General

[10.9.1.1.] --- Reserved

[10.9.2.] -- Energy Efficiency

[10.9.2.1.] --- Definitions

[1] --) The definitions provided in Article 9.36.1.2. shall apply to this Subsection.

[10.9.2.2.] --- Replacement Work

[1] --) Where a component is being replaced, the energy performance level of that component shall not be decreased, unless it can be shown that the *building's* overall energy performance level will not be decreased as a result of the replacement.

General information

See the summary for subject Alteration of Existing Buildings.

Impact analysis

It is expected that the proposed Part 10 requirements which apply to the alteration of existing buildings would provide a benefit to both the industry and authorities having jurisdiction by providing a consistent set of provisions to ensure an acceptable level of safety and building performance, and to remove ambiguity with respect to the degree of work required to improve performance in the unaltered portion of the building.

Providing exemptions for maintenance, repair or replacement with a similar component where appropriate would permit extension of the service life of materials and equipment, defer system replacement costs and improve building performance without creating an undue burden on building owners.

This proposed change would help reduce the administrative and enforcement costs of assessing the degree to which any particular requirement could be relaxed without affecting the level of performance of the building with respect to the Code objectives.

Enforcement implications

It is expected that a consistent set of provisions that apply to the alteration of existing buildings would help reduce the administrative and enforcement work of assessing the degree to which any particular requirement could be relaxed without affecting the level of performance of the building with respect to the Code objectives.

The proposed changes would aid enforcement by identifying the work necessary to improve energy performance in the unaltered portion of the building.

Who is affected

Designers, engineers, architects, building officials, manufacturers, suppliers and energy advisors.

OBJECTIVE-BASED ANALYSIS OF NEW OR CHANGED PROVISIONS

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[\[10.1.1.1.\] -- \(\[1\] --\) no attributions](#)

[\[10.1.1.2.\] -- \(\[1\] --\) no attributions](#)

[\[10.1.1.3.\] -- \(\[1\] --\) no attributions](#)

[\[10.1.1.3.\] -- \(\[2\] --\) no attributions](#)

[10.1.1.3.] -- ([3] --) no attributions

[10.1.1.4.] -- ([1] --) no attributions

[10.1.1.5.] -- ([1] --) [F02-OS1.2]

[10.1.1.5.] -- ([1] --) [F55,F61,F63-OH1.1,OH1.2,OH1.3]

[10.1.1.6.] -- ([1] --) no attributions

[10.9.2.1.] -- ([1] --) no attributions

[10.9.2.2.] -- ([1] --) [F91,F93,F95,F96-OE1.1]