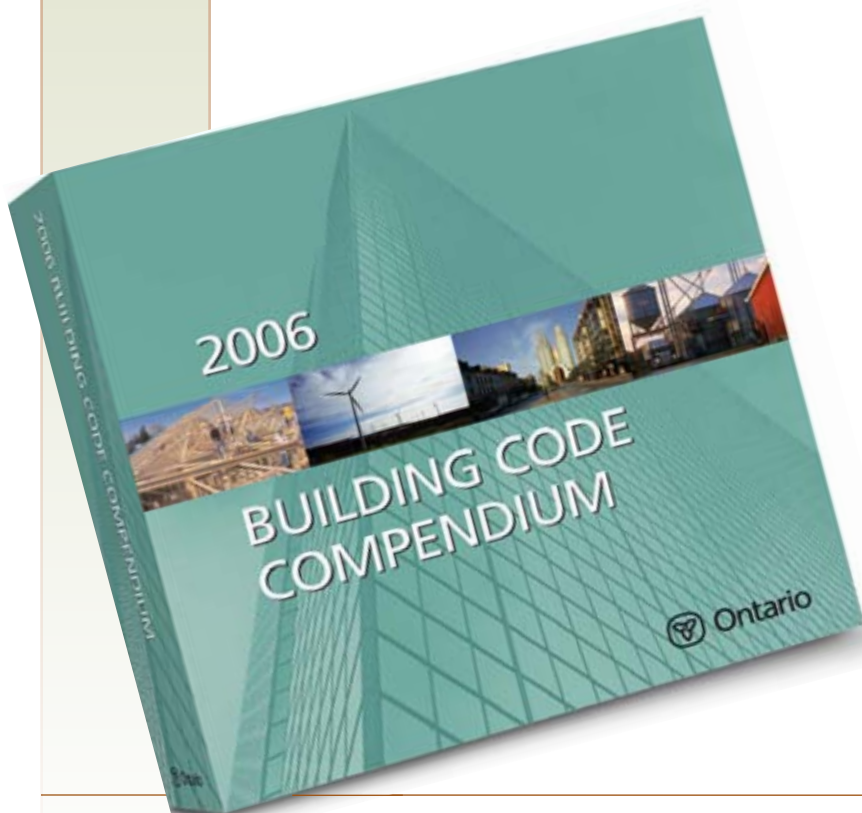


# Potential Changes for the Next Edition of the Building Code:

**Second Round of Consultation  
(February-April 2011)**



**Ministry of Municipal Affairs and Housing**

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## Introduction

Ontario's Building Code establishes the standards for the construction of the buildings in which we live, work and otherwise utilize every day. By providing clear and consistent, yet reasonable and flexible standards for industry to follow, Ontario's Building Code helps builders and developers do their jobs and helps keep Ontarians safe while allowing for the advancement of the government's key priorities.

The Building Code is the result of ongoing work to consolidate building regulation in a single document and eliminate unnecessary overlap and duplication with other building-related regulations such as the Fire Code and the Electrical Safety Code.

Ensuring the Building Code works for Ontarians requires the close collaboration of many partners. The Ministry of Municipal Affairs and Housing is responsible for administering the Building Code. Municipalities, health units and conservation authorities are obligated to enforce the provisions of the Code in their communities. Meanwhile, builders, designers and manufacturers all have a role in assuring that buildings are constructed in compliance with the Code's requirements.

As part of Ontario's commitment to building a streamlined and focused regulatory environment, Ontario is working to create a Building Code that is simpler, open and responsive to the needs and concerns of all its partners. That is why Ontario is always looking for your views on potential changes for the next edition of the Building Code. Your participation is important.

### We want to hear from you

To ensure that Ontario's Building Code stays current and responsive to the needs of businesses, the public and all of its partners, Ontario reviews the Building Code approximately every five years. The last edition of the Code was published in 2006.

This is not something government can do alone, and Ontario relies on the expertise of all its partners to make this process a success. By working together, we can develop a Building Code that meets today's standards and expectations, while being sensitive to current economic realities as Ontario recovers from a global economic recession.

### About the consultation

The Ministry of Municipal Affairs and Housing began working on the next edition of the Building Code in fall 2010. This consultation is designed to generate input from stakeholders involved with the building sector on a variety of fronts, and the public. Your feedback on these proposals will help shape the next edition of the Building Code.

The public consultations are conducted in two rounds.

The first round, held in October and November 2010, set out potential changes that were reflective of the changes being made to the model National Building Code, model National Plumbing Code,

and other Ontario-specific Code change requests from industry stakeholders and the public. This process concluded on November 8, 2010.

The second round of public consultations will focus on potential Building Code changes in a number of key areas, including:

- new Building Code objectives
- Building Code/Electrical Safety Code harmonization
- energy conservation
- water conservation
- environmental protection, including on-site sewage systems
- radon protection in buildings
- mid-rise wood frame construction
- maintaining currency of Building Code knowledge

It is anticipated that the second round will conclude on April 1, 2011.

It is important to note that potential changes contained herein do not represent final government policy. You are not limited to commenting on changes we have proposed. All comments we receive will be considered for future editions of the Building Code.

## How to use this document

This paper describes Ontario's Building Code, the Code development process and the development of the next edition. It also provides clear information on how you can participate in the consultation.

Appendix A provides links to descriptions of the potential changes on the Building Code website and identifies areas for future Code development. These can be accessed throughout the consultation period by visiting [ontario.ca/buildingcode](http://ontario.ca/buildingcode). A compact disc is also available upon request.

If you have ideas for changes to the Code that are not included in Appendix A, Appendix B provides guidelines for submitting proposals for consideration in future editions of Ontario's Building Code.

## About Ontario's Building Code

Ontario's current Building Code is authorized by the Building Code Act, 1992. The Act is the legislative framework governing the construction, renovation, change of use and demolition of buildings in Ontario. The Building Code is a regulation authorized by the Act, and sets out detailed administrative and technical requirements.

Ontario's Building Code has a long tradition of supporting business. Prior to the enactment of the first provincial Building Code Act in 1974, individual municipalities were responsible for developing their own building codes, resulting in a fragmented and potentially confusing regulatory environment. The introduction of a provincial Building Code Act, 1992 and a provincial Building Code addressed this problem by providing for uniform construction standards across Ontario which had the effect of boosting the province's building industry.

The current 2006 edition of the Building Code represents a departure from past editions in that it is written in an “objective-based” format that sets out the rationale underlying the technical provisions of the Code. These relate to: health and safety (including fire protection, structural sufficiency and sanitation), barrier-free accessibility, energy and water conservation and environmental integrity, and conservation of buildings.

The objective-based Building Code establishes a framework for evaluating “alternative solutions” against the traditionally rigid requirements of the Code, which are termed “acceptable solutions”. The objective-based format is intended to encourage innovation in building materials, systems and designs. The Building Code is one of the few regulations in Ontario to enshrine this objective-based approach and offer the industry flexibility in their work.

The move to an objective-based Building Code led to a new structure for the Code:

- Division A sets out definitions, objectives and functional statements, and certain administrative matters
- Division B sets out acceptable solutions
- Division C addresses other administrative matters

The three divisions are subdivided into parts. For example, Part 7 of Division B contains plumbing requirements.

In addition to the move to a new format, the 2006 Building Code also included over 700 changes. Some of the key changes were:

- significant enhancements in energy efficient requirements for houses and large buildings
- promotion of green technologies
- a new and more rigorous approach to earthquake design
- enhanced barrier-free accessibility requirements

Ontario’s Building Code is available at [ontario.ca/e-laws](http://ontario.ca/e-laws).

ServiceOntario publishes the Building Code Compendium, which contains the Code, supplementary standards referenced in the Code, appendix notes and other documentation. The compendium and other Code products can be ordered through the ServiceOntario website at: [ontario.ca/publications](http://ontario.ca/publications).

## Code Development in Ontario

Changes to Ontario’s Building Code are a response to:

- government priorities
- changes in other jurisdictions
- proposals from the public and stakeholders
- changing technology and industry standards

Potential Code changes are evaluated based on a number of considerations:

- stakeholder impacts, including cost and implications for design choice
- effectiveness in meeting stated aims
- consistency with underlying Code objectives
- capacity of the building sector to implement changes in a safe and effective manner
- workload and liability implications for municipalities
- enforceability

New editions of the Building Code and significant interim amendments undergo public review which consists of public consultation on potential Code changes, followed by evaluation by one or more Building Code Technical Advisory Committees. The Technical Advisory Committees in turn make recommendations to the Ministry of Municipal Affairs and Housing. The Technical Advisory Committees are comprised of broad, balanced and independent representation of building industry experts. Members of the committees are selected based on their industry leadership and expertise.

Recommendations submitted by Technical Advisory Committees are considered by the ministry in developing potential Code changes for review by Cabinet. The Building Code is a regulation made by the Lieutenant Governor in Council. Code changes take effect on a date specified in the regulation. A transition period is generally provided for changes that have significant stakeholder impacts.

Changes to the Building Code are delivered in two ways: as interim amendments to an edition of the Building Code, or through the release of a new edition of the Building Code. The development of new editions of the Building Code follows an approximate five year cycle in keeping with the model national codes cycle. Interim amendments are smaller in scope and can be made multiple times throughout the lifetime of an edition. For example, the 2006 Building Code was subject to six sets of interim amendments.

## National Code Development Process

Ontario participates in a Canadian Federal/Provincial/Territorial code development process coordinated by the Canadian Commission on Building and Fire Codes. This process supports the development of provincial codes and model national codes, including the model National Building Code and the model National Plumbing Code of Canada.

Involvement in this national process has resulted in a coordinated Building Code review cycle. The current national codes, for example, were published in 2005, just ahead of the 2006 edition of Ontario's Building Code. The model national codes transitioned to an objective-based format at that time.

Ontario is committed to harmonizing with the technical requirements of the model national codes where appropriate. The structural design requirements of Ontario's Building Code, for example, are now virtually identical to those in the model National Building Code.

However, there are some areas where Ontario has chosen to pursue its own policy priorities, which has led to Ontario's Code differing from the model national codes. For example, Ontario's Building Code supports the consolidation of construction standards by addressing matters not included in the model national codes, including energy and water conservation, on-site sewage systems, public pools, public spas and rapid transit stations. Ontario also has enhanced Code standards in areas such as accessibility and has developed renovation standards that promote the retention and reuse of buildings.

## The Next Edition of the Building Code

The Ontario government has begun work on the development of a new edition of its Building Code to follow the release of the new editions of the model National Building Code and the model National Plumbing Code.

A new edition of Ontario's Code would also be a response to government priorities and the significant number of proposals for changes that have been received from stakeholders and the public, which are partly a reflection of rapid changes in technology and industry priorities related to building materials, systems and designs.

## Themes of the Next Edition of Ontario's Building Code

The potential changes for the next edition of the Building Code fall into several themes that support broader government priorities:

- support for the economy through promoting innovation, reducing costs, increasing certainty, and increasing harmonization with national codes
- support for enhanced energy and water conservation, greenhouse gas reduction, climate change adaptation, and environmental protection
- enhanced public health and safety

While proposals to enhance accessibility are not included in the current round of consultations, the Ontario government is committed to accessibility and reviewing the recommendations of the Accessible Built Environment Standards Development Committee. Further research and analysis will be needed before formal consultations can take place.

### Support for the Economy

Construction is a key component of Ontario's economy, directly contributing to about five per cent of Ontario's total production. Ontario's construction sector employs a significant number of people – more than 400,000 skilled workers over the last four years. In fact, more than one in 20 Ontarians works in construction.

Construction is also an important activity associated with investment. As businesses grow, they may need additional buildings or the renovation of existing buildings. Ensuring that the building regulatory system is efficient and effective can make investment in Ontario easier.

As Ontario recovers from a world-wide economic recession, it is important to seek new ways to strengthen the province's construction sector. That's why the first round of Building Code consultations included potential amendments that would:

- Lower the cost of construction while ensuring that Building Code objectives such as those related to health and safety are not compromised, e.g., mid-rise wood construction (described below), deleting the requirement for fire hose cabinets in residential buildings and reducing the minimum size of water supply piping.
- Remove technical barriers and increase design flexibility while ensuring the maintenance of health and safety, e.g., no longer requiring standpipe risers to be located in an exit stair shaft or a vertical service space and permitting composting toilets even where a water supply is available.
- Recognize industry innovation by referencing up-to-date industry standards, e.g., introducing new standards for fibrous insulation products that are currently widely used in buildings, and recognizing provisions of a North American wide standard for elevators by requiring automatic emergency elevator recall for elevators located in certain buildings.
- Decrease uncertainty by clarifying requirements, e.g., clarifying what is meant by "fire stop" and "fire block".
- Consolidate and rationalize construction requirements and increase cross-Canada code harmonization, e.g., harmonizing fire stopping provisions for small buildings with those for large buildings as proposed in the 2010 model National Building Code.

## Mid-rise Wood Frame Construction

To provide a greater choice of building types and reduce impediments regarding the construction of mid-rise buildings, the second round of consultation includes opportunity for input regarding potential Code changes that would facilitate greater use of wood in buildings by increasing the maximum height limit of wood frame buildings from four to six storeys.

The Building Code currently limits structural wood framing to buildings of four storeys or less. Increasing the maximum height of mid-rise buildings would support the construction industry by providing lower cost construction methods and increasing design flexibility. Providing more design and cost options for developers could help facilitate the construction of more mid-rise buildings and provide more intensive uses within existing neighbourhoods at a scale that contributes to transit-supportive, pedestrian oriented mixed-use neighbourhoods. This could support implementation of the Growth Plan for the Greater Golden Horseshoe, which contains policies to build compact, complete communities, including intensification policies in built-up areas.

Fire safety, as one of the Building Code's purposes and objectives, was a key consideration in the development of these potential changes. The potential changes include fire safety measures which would help ensure that the Building Code requirements for six storey wood frame buildings will perform at least as well as or better than buildings currently permitted under the Building Code, such as four storey wood frame buildings and six storey non-combustible buildings.

Forestry is a key economic sector identified in the proposed **Growth Plan for Northern Ontario**. Creating new demand for Ontario's wood products would help support the Plan's policies to grow the forestry sector.

Wood is a renewable material that captures and stores carbon for the lifecycle of the building product.

Several jurisdictions around the world have already amended their building codes to allow mid-rise wood frame construction using systems ranging from pre-fabricated and pre-engineered to conventional wood frame products. In April 2009, British Columbia amended its Building Code to allow mid-rise (six storey) residential wood frame buildings.

Whereas recent amendments to British Columbia's Building Code allow six storey wood frame residential buildings, the ministry is inviting input on potential amendments to address a broader group of building occupancies including residential, business and personal services occupancies.

## **Ontario Electrical Safety Code Harmonization**

The second round also includes potential Code changes that would support the harmonization of the Building Code and the Ontario Electrical Safety Code. These changes would eliminate overlap and duplication and support a more efficient regulatory system.

The Ontario Electrical Safety Code governs the installation and maintenance of electrical systems in buildings. However, the Building Code also includes a limited number of provisions that govern electrical equipment and fixtures, primarily with respect to their location in a building. A number of potential Building Code changes have been developed that would eliminate these areas of overlap and decrease the regulatory burden.

## **Energy Conservation**

To help Ontario achieve its commitment to reduce peak energy demand and create a culture of conservation, the 2006 Building Code included increased energy requirements for houses and large buildings. These changes are being phased in, with the final changes scheduled to take effect on December 31, 2011.

The 2006 Code also included a variety of measures to promote the use of green technologies such as solar panels.

The second round of consultations is inviting input on potential changes that would support further energy conservation through enhanced requirements for houses and large buildings. These potential changes may also help promote green technologies.

The potential changes would:

- Reduce electricity consumption in support of Ontario's Long Term Energy Plan.
- Support the Province's climate change strategy by reducing the amount of greenhouse gases produced by the operation of buildings, and reduce greenhouse gas emissions through energy efficiency requirements.

- Support the growth of a green economy by creating a market for energy efficient and renewable energy technologies.

The potential changes have been informed by interim recommendations submitted by the Building Code Energy Advisory Council established under the Green Energy Act, 2009, and by research commissioned by the Ministry of Municipal Affairs and Housing.

The recommendations reflect the Council's view that changes need to consider capital and operating cost impact, affordability and the capacity of industry to safely and effectively implement changes. Under the potential changes, enhanced energy requirements would be phased in over the course of the next Code cycle.

## **Water Conservation**

The Water Opportunities and Water Conservation Act, 2010 received Royal Assent on November 29, 2010. This legislation includes measures to encourage the creation and export of innovative clean water technology, promote water conservation, attract economic development and create jobs. Proposed water conservation changes to the Building Code complement the Water Opportunities and Water Conservation Act, 2010's goals.

The Building Code has promoted water conservation in the use of buildings for many years. The first water conservation requirements were introduced in 1994 and have been enhanced through amendments to the Building Code. For example, the 1997 Building Code required low-flow toilets (maximum six litres per flush) in most new buildings, and the 2006 Building Code clarified that storm sewage and greywater could be used for the flushing of toilets and urinals. More recently, amendments that came into force on January 1, 2011 removed several exemptions to the low flow toilet requirements.

The potential Building Code changes set out in the second round of consultation would enhance water conservation by enhancing efficiency requirements for toilets and shower heads, expanding the allowed uses of non-potable water and setting clearer requirements for non-potable water systems.

These potential changes are consistent with interim recommendations submitted to the Minister of Municipal Affairs and Housing by the Building Code Energy Advisory Council.

## **Greenhouse Gas Reduction**

Reducing greenhouse gas emissions is an essential part of Ontario's climate change strategy. Potential technical amendments to the Code related to energy conservation would support this objective. For example, the first round of consultation proposed potential changes that would allow for the use of "low carbon" concrete.

The second round of consultation on the next edition of the Building Code includes a potential change that would specifically reference greenhouse gas reduction as a Code objective.

## Climate Change Adaptation

A number of potential Code changes proposed in the first round of consultation would enhance the resilience of buildings in the face of more frequent and more extreme weather events associated with climate change.

Examples included requiring sewage backflow prevention devices in more circumstances, and hurricane clips for certain buildings.

## Environmental Protection including On-Site Sewage Systems

Since 1998, the Building Code has regulated small on-site sewage systems. Such regulation contributes to public health and safety and environmental protection through reducing the release of pathogens into ground water and water bodies. Amendments to the 2006 Code made in July 2010 support the effective regulation of on-site sewage systems through requiring and governing the inspection of existing systems.

The second consultation on the next edition of the Code includes potential changes that would address a number of issues, including on-site sewage treatment units, the inclusion of nutrient loading requirements for on-site sewage systems located in certain at-risk areas and the inclusion of standards for dispersal beds, i.e., beds located downstream from an attached treatment unit. Potential changes also reflect recommendations made by the Building Materials Evaluation Commission regarding standards for area beds and treatment units.

In addition, the second round of consultation includes a potential Building Code change that would specifically identify the reduction of pollutants released into the air and water as Code objectives. These objectives would be more specific than the current reference to environmental integrity.

## Improved Fire Safety

Several of the potential changes proposed in these consultations would promote building safety, primarily through changes to fire safety. Examples of potential fire safety changes considered in the first round of consultation included but were not limited to:

- requiring hard-wired smoke alarms to include battery back-up in case of power failure
- limiting the size and concentration of window openings in exposing building faces near lot lines to reduce building-to-building fire spread
- revising cladding requirements for exposing building faces near lot lines to limit fire spread

## Other Technical Matters

The first round of consultation included other health and safety measures including requiring backflow prevention devices in more circumstances to protect potable drinking water.

The second round of consultation will include potential Building Code changes intended to enhance radon protection within buildings.

## Maintaining Currency of Building Code Knowledge

Ensuring that qualified practitioners maintain their knowledge of the Code with each Code cycle will help maintain the integrity and value of the qualification system. The second round of consultation includes a potential Code change related to maintaining knowledge for building practitioners.

The current regulation for updating Building Code qualifications requires that when a replacement exam is developed for one or more qualification categories (e.g., following the release of a new edition of the Code), a practitioner that had previously completed the exam, must within six months of receiving notice from the Director of the Building and Development Branch, successfully complete the replacement exam(s).

The purpose of a potential Code change is to provide a more flexible, less prescriptive knowledge maintenance system that is consistent with stakeholder's requests, best practices in other jurisdictions, public safety, and an efficient, effective building regulatory system.

The Ministry of Municipal Affairs and Housing has been considering this issue with input from a stakeholder committee known as the Training and Qualification Discussion Group which includes representation from builders, designers, Building Code enforcement, the fire safety community, education stakeholders and the broader building industry.

The potential change to the Building Code would revise the current requirements for “updating of qualifications” to allow qualified practitioners – those who have already passed the ministry’s initial examinations — to demonstrate their knowledge of changes in a new edition of the Code through mechanisms beyond the completion of new qualification examinations, including attendance at workshops or courses.

## Areas for Further Research

### Enhanced Accessibility

Under the Accessibility for Ontarians with Disabilities Act, 2005, the Province is working to make Ontario more accessible by developing, implementing and enforcing accessibility standards in several important areas, including:

- customer service
- employment
- information and communications
- public transportation
- built environment (buildings and other structures)

The Final Proposed Accessible Built Environment Standard provides recommendations to government on how to remove barriers in buildings and outdoor spaces for people with disabilities. The standard was developed by the Accessible Built Environment Standards Development Committee, which included representatives from the disability communities, not-for-profit organizations, the broader public sector, businesses, and the building industry. The proposed standard is not law.

In July 2010, the committee's final proposed Accessible Built Environment Standard was submitted to the Minister of Community and Social Services for consideration. Ontario is currently conducting further research and analysis, in order to ensure that any new requirements are clear, consistent, and enforceable. Ontario will develop and consult on Code amendments based on this work.

## Electric Vehicles

The Ontario government has an ambitious vision to have one out of every 20 vehicles driven in Ontario be electrically powered by 2020. The Ministry of Municipal Affairs and Housing will consider whether and how the Building Code could be amended to support this goal. While the Building Code does not create obstacles to the installation of electric vehicle charging infrastructure, changes to the Code could help encourage the adoption of this technology.

## Other

The Ministry of Municipal Affairs and Housing intends to review certain Building Code requirements in response to changes in practice, technology, and the needs of Ontarians. These include:

- seasonal dwellings, e.g., energy conservation requirements
- solar loading
- transit

## Consultation Process – First Round Summary

The first round of consultation set out potential changes that reflect changes made to the model National Building Code and model National Plumbing Code, and other Ontario-specific Code change requests submitted to the Ministry of Municipal Affairs and Housing by stakeholders and the public.

The first round of consultation covered approximately 450 proposed changes: 330 changes from the national code process, and 120 Ontario-specific change proposals.

Following the consultation, the technical changes and subsequent comments were reviewed by Building Code Technical Advisory Committees. These consist of technical experts representing a balanced cross-section of building sector stakeholders (builders, designers, product manufacturers, enforcement officials). Five Technical Advisory Committees (large buildings, small buildings, structural, plumbing and heating/ventilation) met November 22 to December 1, 2010 following the first round of consultation.

Final reports from the Committee Chairs are pending, but the Technical Advisory Committees have recommended approval of over 370 of the potential Code changes that went out to consultation. Administrative changes are not reviewed by Technical Advisory Committees, but will be considered by the Building Advisory Council. The Ministry of Municipal Affairs and Housing will also consult further with affected stakeholders including the Association of Municipalities of Ontario.

## Consultation Process – Second Round

Building Code Technical Advisory Committees will meet again following the second public consultation. They will review the potential Code changes developed by the government and the consultation results. The Technical Advisory Committees will then provide recommendations to the Ministry of Municipal Affairs and Housing. The committees' recommendations will carefully consider factors such as the technical veracity of potential Code changes, alignment with Code objectives, cost implications, public safety, impact on design flexibility, technical feasibility, capacity of industry to implement and the ability to enforce.

Your participation is important and encouraged, given that consultations and subsequent feedback will help guide the development of the next edition of the Building Code.

## Details of Potential Building Code Changes

The approximately 115 potential Building Code changes included in the second round of consultation are summarized in the tables in Appendix A. These are referenced by subject (e.g., energy conservation) and then organized sequentially based upon the structure of the Building Code, e.g., changes to Division B, Part 3 precede changes to Division B, Part 4.

More than one option is identified for certain potential changes related to new energy efficiency benchmarks for houses, and new energy efficiency benchmarks for large buildings.

The specific content of these potential Code changes and the timing of their implementation take into account strategic advice received from the Building Advisory Council and the Building Code Energy Advisory Council. These Councils have emphasized the importance of affordability and industry capacity in identifying and evaluating potential Code changes. The Building Advisory Council also recommended that the number of implementation dates for any new Code changes over the course of a Building Code cycle be kept to a minimum.

While all changes can be found online, a compact disc containing potential changes is also available upon request.

Requests for a hard copy of the consultation paper and appendix or a CD of the Code change proposals may be directed to:

- Devon Wong, Building Technology Support – Code Development  
Tel: 416-585-6682  
Email: [devon.wong@ontario.ca](mailto:devon.wong@ontario.ca)

## Comment Submission

We look forward to your feedback regarding potential changes for the next edition of the Building Code. Your active involvement helps ensure that potential Code changes are fully informed, are technically and economically feasible, and enforceable. Comments are also appreciated on the timing of the potential changes. As was the case with the 2006 Building Code, it is possible to phase in Code changes over the lifespan of the next Code cycle.

### **Steps to submission:**

- Review this consultation paper and the potential Code change descriptions.
- You can provide feedback by completing the comment form found online at [ontario.ca/buildingcode](http://ontario.ca/buildingcode).
- Complete an additional form for each potential change for which you want to provide input.
- Submit by fax, mail, or email as described below, or complete the online [comment form](#).

You are encouraged to submit additional material in a manner that best allows you to express your views on the potential Building Code amendments.

The Ministry of Municipal Affairs and Housing must receive your response to this consultation by **April 1, 2011**.

In order to maximize the effectiveness of your comments and to fully understand your views, we ask that your comments relate to the specific potential changes listed in this consultation.

A comment that refers to other requirements in the Code, for which no change is proposed, will not be considered as part of this consultation. However, should you wish to provide input on other Code requirements or make suggestions for changes to be included at a later date you may do so by completing the [Building Code Change Request Form](#). A copy of this form is also attached. Please see Appendix B.

If you do not support the potential changes, or would support the changes with modifications, please include an explanation of the rationale for your concerns to help the ministry and the Technical Advisory Committees understand your views.

In reviewing the potential changes, you are encouraged to keep in mind a number of considerations related to the benefits and impacts of the changes. Some possible considerations are set out below.

For tracking purposes, please submit a separate form for each proposed Code amendment on which you are commenting, noting the change number in the appropriate box.

Please remember to include the following on each form:

- your name
- your mailing address
- whether you are responding on behalf of yourself or an organization

Completed Comment Forms and supporting documents may be submitted to the Ministry of Municipal Affairs and Housing using the online [comment form](#). You may also email, fax or mail completed forms to:

Email: [nicole.niedra@ontario.ca](mailto:nicole.niedra@ontario.ca)  
Tel: 416-585-6529  
Fax: 416-585-7531  
Subject Line: 2011 Next Edition Building Code Consultation

**Mail:**

2011 Next Edition Building Code Consultation  
c/o Building and Development Branch  
Ministry of Municipal Affairs and Housing  
777 Bay Street – 2nd Floor  
Toronto, ON  
M5G 2E5

Please use the above contact information if you have any questions on the development of the next edition of the Building Code or the consultation process.

Personal information provided in responses to Building Code consultations is collected under the authority of subsection 38(2) of the Freedom of Information and Protection of Privacy Act for consultative purposes and for contacting you should we need to clarify your response. Responses to consultations (minus addresses, where provided) may be shared with provincial and national building and fire code development committees. Questions about the collection of personal information may be addressed to James Ross, Policy Coordinator, at the address noted above.

**Information Sessions**

Ministry staff will be holding information sessions in communities across the province to explain the potential changes and to answer questions. Information on the dates and locations of the information sessions will be posted at [ontario.ca/buildingcode](http://ontario.ca/buildingcode).

Advanced registration is not required to attend an information session.

## Appendix A: Potential Code Changes for the Second Round of Consultation

**Please note:** To view or print detailed descriptions of each potential change, please click on the appropriate reference number found in the tables below.

This Appendix sets out potential Building Code changes included in the second round of consultation. A number of subject headings are identified, e.g., energy conservation. Information about each change is organized into sections describing:

- current code provisions (related to the subject)
- general description of potential changes to current code provisions
- rationale for potential changes

Following these sections, specific code language for each change can be accessed by clicking on the appropriate reference number in the tables below. If you are using a paper copy of this document, please visit [ontario.ca/buildingcode](http://ontario.ca/buildingcode) and follow the links.

The rationale identified under each heading focuses on the relationship between potential Code changes and government policy priorities. However, a range of other factors also need to be considered, such as technical veracity, alignment with Code objectives, capital and operating cost implications, affordability (especially for new home buyers), impact on design flexibility, capacity of industry to implement, enforceability, and safety and other stakeholder concerns. The importance of these factors was noted in recommendations received from the Building Advisory Council and the Building Code Energy Advisory Council. We are seeking your views as your feedback helps ensure that the potential Code changes are fully informed with respect to these factors.

More than one option is identified for certain potential changes related to new energy efficiency benchmarks for houses and new energy efficiency benchmarks for large buildings.

Unless otherwise stated, the “in force” date for potential changes would be the “in force” date for the next edition. In certain circumstances, however, the potential changes specify a later date, based on an assessment of the impact on the building sector. Two such dates are specified: December 31, 2014, which is considered to be part way through the next Building Code cycle, and December 31, 2016, which is anticipated to be at the end of the next Code cycle. This approach is consistent with recommendations from the Building Advisory Council which supports minimizing the number of “in force” dates for the next Code cycle.

### Code Objectives

#### Current Provisions

Starting with the 2006 edition, Ontario’s Building Code has been “objective-based”. Prescriptive and performance requirements (“acceptable solutions”) set out in the Code are linked to

one or more underlying objectives. These objectives are related to safety, health, barrier-free accessibility, protection of buildings, resource conservation, environmental integrity and conservation of buildings.

Most objectives include sub-objectives. For example, the protection of buildings includes protection from fire, structural collapse and sewage. Resource conservation includes the conservation of energy and water.

The underlying objectives, together with functional statements that specify what function an element of a building is intended to perform in support of an objective, can also be used to evaluate innovative “alternative solutions”. Municipal Chief Building Officials can approve such solutions provided they achieve the same level of performance required by the applicable acceptable solutions in respect of the objectives and functional statements attributed to the applicable acceptable solutions.

## Potential Changes

Potential changes to the Building Code included in the second round of consultation would establish new sub-objectives under the objective of “environmental integrity”. These sub-objectives would include specific reference to:

- greenhouse gas reduction
- reduction of pollutants entering the air, water and soil

In addition, a new sub-objective related to minimizing the impact on infrastructure arising from the construction of buildings would be established under the objective of “resource conservation”.

## Rationale

These new objectives and sub-objectives would support new acceptable solutions and the approval of alternative solutions that align with government priorities related to greenhouse gas reduction, environmental protection, and reducing pressure on existing infrastructure.

## List of Potential Changes

CHANGE #	CODE REFERENCE	SUBJECT
<a href="#">O-A-02-01-01</a>	Div. A 2.2.1.1. 3.2.1.1.	Add new objectives and functional statements to address: <ul style="list-style-type: none"> <li>• Resource Conservation - Infrastructure Capacity</li> <li>• Limitations on Green House Gas Emissions</li> <li>• Limitations on Release of Pollutants</li> <li>• Protection of Water and Soil Quality</li> </ul>

## Mid-rise Wood Frame Construction

### Current Provisions

Currently, the Building Code permits wood frame buildings of up to four storeys for certain occupancies including residential, office and mercantile. To ensure their proper design and support for Code objectives, such buildings are subject to a range of Code requirements, including:

- one-hour fire separations (e.g., between residential suites and around fire exits)
- fire sprinklers (including fire hose cabinets and standpipes) in accordance with National Fire Protection Association (NFPA) 13R standard for residential buildings
- fire hose cabinets and standpipes to the NFPA 14 standard
- noncombustible cladding for exterior walls on or near property line
- two means of exiting
- fire detectors in exit stairs and corridors
- smoke alarms in apartments
- maximum building area (1,800 square metres for residential and mercantile buildings, and 3,600 square metres for office buildings)
- maximum gross floor area (for four storey buildings, the limit is 7,200 square metres for residential and mercantile buildings and 14,400 square metres for office buildings)

Buildings higher than four storeys are permitted if they are of noncombustible construction, meet requirements similar to those for four storey wood frame buildings and comply with a number of other requirements. For example, six storey concrete buildings can be constructed if they meet requirements similar to those for four storey wood frame buildings above. Six storey concrete buildings are permitted a higher gross floor area limit, although fire sprinkler systems must meet a higher standard (NFPA 13).

### Potential Changes

Potential changes to the Building Code included in the second round of consultation include the possibility of allowing wood frame buildings of up to six storeys. Buildings with residential, mercantile, office and mixed use occupancies would be subject to consultation, as would buildings with wood frame construction on top of one or two storey concrete construction ( “podium portion” of a building).

Consistent with the Building Code’s objectives of fire safety and structural sufficiency, potential changes to allow six storey wood frame buildings would have to meet all the requirements of four storey wood frame buildings plus a number of additional measures and appendix notes, including:

- limiting building height to 18 metres between the average grade and the floor level of the top storey
- higher fire sprinkler standard (NFPA 13), plus mandatory sprinklering of crawl spaces, concealed spaces such as attics, and all combustible balconies and roofed decks

- limitations on exterior cladding combustibility for all exterior walls in addition to those walls near or at the property line, in accordance with current Code requirements for noncombustible sprinklered buildings up to six storeys
- clarification of fire blocking requirements in concealed spaces and crawl spaces, which will apply to all buildings subject to NFPA 13 requirements
- increased structural load factors and a requirement for the alignment of shear walls resisting horizontal loads

Appendix notes include:

- clarifying that a large building divided into smaller buildings by fire walls, must have fire department access to each of the smaller buildings
- guidance on the proper design and construction of fire rated assemblies
- addressing potential wood shrinkage after construction in order to take into account matters potentially affected by wood shrinkage, e.g. continuity of fire separations, etc.

The maximum gross floor area that currently applies to four storey wood frame buildings would continue to apply to six storey wood frame buildings. This means that the area of each floor would need to be correspondingly smaller if the height is increased to five or six storeys.

In developing these potential changes, the Ministry of Municipal Affairs and Housing conducted research on Code changes and construction experience in other jurisdictions, including fire safety measures implemented. This research was informed in part by focus group meetings with Ontario stakeholders, including those in the fire safety community.

The potential Code changes are intended to ensure that the Building Code requirements for six storey wood frame buildings would provide a level of safety, including fire safety, for building occupants that is at least equal to the requirements for buildings currently permitted under the Code, such as four storey wood frame buildings and six storey non-combustible buildings.

## Rationale

Allowing mid-rise wood frame buildings would support the construction industry by reducing construction costs and increasing design flexibility. The Professional Engineers Act and the Architects Act require that these buildings be designed by engineers or architects. Should these potential changes be adopted, the Ministry of Municipal Affairs and Housing will work with professional designers to examine the possibility of developing a guideline for the design of mid-rise wood frame buildings.

Providing more design and cost options for developers can help facilitate more mid-rise buildings which provides more intensive uses within existing neighbourhoods at a scale that contributes to transit-supportive, pedestrian-oriented mixed-use neighbourhoods. This supports implementation of the Growth Plan for the Greater Golden Horseshoe which contains policies to build compact, complete communities including intensification policies in built-up areas.

Forestry is a key economic sector identified in the proposed Growth Plan for Northern Ontario. Creating new demand for Ontario's wood products would help support the Plan's policies to

grow the forestry sector. Wood is a renewable material that captures and stores carbon for the lifecycle of the building product.

The government is sensitive to concerns from fire safety stakeholders and will proceed accordingly.

### List of Potential Changes

CHANGE #	CODE REFERENCE	SUBJECT
<a href="#"><u>C-A-01-04-01</u></a>	Div. A 1.4.1.2.	Add a definition for the “podium portion” of a building.
<a href="#"><u>C-B-03-01-01</u></a>	Div. B A-3.1.7.1.	Add an Appendix Note addressing the determination of fire resistance.
<a href="#"><u>C-B-03-01-03</u></a>	Div. B 3.1.9.1.(2)	Add cross-reference to fire stopping of service penetrations through the fire separation above the podium portion of a building.
<a href="#"><u>C-B-03-01-05</u></a>	Div. B 3.1.11.5.	Require firestopping and sprinklering of concealed spaces in accordance with NFPA 13 in mid-rise wood construction.
<a href="#"><u>C-B-03-01-06</u></a>	Div. B 3.1.11.6.	Require firestopping and sprinklering of crawl spaces in accordance with NFPA 13 in mid-rise wood construction.
<a href="#"><u>C-B-03-02-01</u></a>	Div. B 3.2.1.7.	Add new requirements for the “podium portion” of a building.
<a href="#"><u>C-B-03-02-02</u></a>	Div. B 3.2.2.45.	Permit sprinklered Group C buildings, up to 6 storeys and 18 m. building height, with limited building areas, restricted combustibility of exterior cladding and sprinklering of all combustible balconies and roofed decks.
<a href="#"><u>C-B-03-02-03</u></a>	Div. B 3.2.2.52.	Permit sprinklered Group D buildings, up to 6 storeys and 18 m. building height, with limited building areas, restricted combustibility of exterior cladding and sprinklering of all combustible balconies and roofed decks.
<a href="#"><u>C-B-03-02-04</u></a>	Div. B 3.2.2.58.	Permit sprinklered Group E buildings, up to 6 storeys and 18 m. building height, with limited building areas, restricted combustibility of exterior cladding and sprinklering of all combustible balconies and roofed decks.
<a href="#"><u>C-B-03-02-05</u></a>	Div. B A-3.2.5.	Add an Appendix Note addressing fire department access.
<a href="#"><u>C-B-04-01-01</u></a>	Div. B 4.1.8.10.(4)	Add new requirement addressing the design and location of shear walls.
<a href="#"><u>C-B-04-01-02</u></a>	Div. B 4.1.8.11. Div. B 4.1.8.12.	Add requirement addressing the equivalent static force procedures for structures satisfying the condition of Article 4.1.8.7. and increase the seismic force levels specifically for 5 or 6 storey wood frame buildings with respect to the dynamic analysis procedure.
<a href="#"><u>C-B-04-03-01</u></a>	Div. B A-4.3.1.1.	Add an Appendix Note to address wood shrinkage after construction.

# Ontario Electrical Safety Code Harmonization

## Current Provisions

The Ontario Electrical Safety Code governs the installation and maintenance of electrical systems in buildings. The Ontario Electrical Safety Code is administered by the Electrical Safety Authority. However, the current edition of the Building Code also includes a limited number of provisions that govern electrical equipment and fixtures, primarily with respect to their location in a building.

## Potential Changes

Potential changes to the Building Code would eliminate overlap between the Ontario Electrical Safety Code and the Building Code by harmonizing references to electrical systems and fixtures in both Codes. Examples include provisions for service entrance requirements and underground electrical pipe specifications.

In certain areas of overlap, it may be more appropriate to retain the Building Code reference and consider whether the corresponding provision of the Ontario Electrical Safety Code should be removed. The Ministry of Municipal Affairs and Housing will be discussing these provisions with the Electrical Safety Authority and the Ministry of Consumer Services, which has responsibility for the Electrical Safety Authority, to determine whether amendments to the Ontario Electrical Safety Code should be proposed in the future.

## Rationale

The reduction of overlap between the Ontario Electrical Safety Code and the Building Code would support an efficient and effective regulatory system. Requirements would be consolidated to a greater extent in one regulation, the Ontario Electrical Safety Code, and responsibility for enforcement would be consolidated in the hands of the Electrical Safety Authority. Ontario has a long-standing policy of consolidating and harmonizing construction regulations.

## List of Potential Changes

CHANGE #	CODE REFERENCE	SUBJECT
<a href="#">H-B-03-01-01</a>	Div. B 3.1.19. 3.15.5.2.(4)	Harmonize requirements related to clearances between buildings and electrical conductors with requirements of the Ontario Electrical Safety Code.
<a href="#">H-B-03-02-01</a>	Div. B 3.2.4.9.(4)	Require electrical supervision of heat tracing cables for sprinkler, standpipe and heating for a means of egress, if installed.
<a href="#">H-B-03-02-02</a>	Div. B 3.2.7.2. 9.34.1.4.(1)	Add a “signpost” to the Ontario Electrical Safety Code requirements applicable to recessed lighting fixtures located in an insulated ceiling.

<u>H-B-03-02-03</u>	Div. B 3.2.7.9.(6)	Require emergency audible and visual trouble indications for an emergency power supply shall be equipped, as currently required by the Ontario Electrical Safety Code.
<u>H-B-03-03-01</u>	Div. B 3.3.1.3.(11)	Add a “signpost” to the Ontario Electrical Safety Code requirements applicable to access to egress requirements for rooms containing electrical equipment.
<u>H-B-03-04-01</u>	Div. B 3.4.5.1.(4)	Harmonize requirements related to power for electrical illumination of exit signs with requirements of the Ontario Electrical Safety Code.
<u>H-B-03-06-01</u>	Div. B 3.6.2.7.	Relocate requirements from the Ontario Electrical Safety Code that address the design and construction of specific electrical equipment vaults to the Building Code.
<u>H-B-03-12-01</u>	Div. B 3.12.5.1.(3)	Harmonize requirements related to the location of the emergency stop button for the pump of a public spa with the Ontario Electrical Safety Code.
<u>H-B-09-09-01</u>	Div. B 9.9.10.7.(2)	Harmonize requirements related to the illumination of exit signs with the requirements of the Ontario Electrical Safety Code.
<u>H-B-09-19-01</u>	Div. B 9.19.2.1.(4) 3.6.4.4.(2)	Add a “signpost” to the Ontario Electrical Safety Code requirements for access to neon supply equipment.
<u>H-B-09-34-01</u>	Div. B 9.34.2.1.(2)	Harmonize requirements related to lighting fixtures at entrances shared by more than one residential suite with the requirements of the Ontario Electrical Safety Code.
<u>H-B-09-34-02</u>	Div. B 9.34.2.6.(4)	Revise Building Code requirements applicable to the location of a switch for the control of a lighting fixture in a garage or carport in order to harmonize with requirements of the Ontario Electrical Safety Code.
<u>H-B-09-34-03</u>	Div. B 9.34.4.1. 9.34.4.2.	Delete requirements for the mounting of electrical meters.
<u>H-B-09-34-04</u>	Div. B 9.34.4.3.	Delete Building Code requirements applicable to the location of consumer electrical services.
<u>H-B-09-34-05</u>	Div. B 9.34.4.4.	Delete requirements applicable to electrical meter mounting devices.
<u>H-B-09-34-06</u>	Div. B 9.34.4.5.	Delete requirements for the installation of underground consumer electrical services.
<u>H-B-09-35-01</u>	Div. B 9.35.2.2. 3.3.5.4.(8)	Add a “signpost” to the Ontario Electrical Safety Code requirements for an air tight barrier between a repair garage or a storage garage and an adjacent area.

## Energy Conservation

### Current Provisions

The 2006 Building Code included higher energy conservation requirements for buildings. These are being phased in from December 31, 2006 through December 31, 2011.

For houses and other small residential buildings, the Building Code, effective December 31, 2006, sets out a range of prescriptive requirements, including insulation levels in walls and ceilings, energy efficiency requirements for windows and doors and energy efficiency requirements for furnaces. A requirement for near full height basement insulation came into force on December 31, 2008.

Further enhancements to the energy efficiency requirements for houses are scheduled to come into force on December 31, 2011. Houses and small residential buildings will be required to meet the EnerGuide 80 performance standard set by Natural Resources Canada, or prescriptive compliance alternatives set out in Supplementary Standard SB-12 to the Building Code.

Effective December 31, 2006, large buildings and small non-residential buildings are currently required to comply with one of two performance standards set out in the Building Code:

- the 2004 edition of the American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) 90.1 standard, plus certain substantial enhancements to reflect Ontario's climatic conditions and energy goals, or
- the 1997 Model National Energy Code for Buildings (MNECB) with certain enhancements to achieve energy efficiency levels approximately the same as the enhanced ASHRAE 90.1 described above

Details of the enhancements to ASHRAE 90.1 and MNECB are set out in supplementary Standard SB-10 to the Building Code.

Effective December 31, 2011, large buildings and small non-residential buildings will be required to meet an energy conservation target 25 percent higher than the 1997 MNECB.

Certain building types, such as those that are intended primarily for manufacturing, commercial and industrial processing are currently exempt from energy conservation requirements.

The 2006 Building Code also promotes energy conservation by supporting certain green technologies. Examples would be Code requirements that would facilitate the installation of solar panels on the roof of a building required to be of non-combustible construction, and allowing the use of drain water heat recovery systems.

## Potential Changes

Potential changes to the Building Code include a new energy efficiency benchmark for houses and other small residential buildings. This consultation paper sets out three options, based on a percentage increase in energy efficiency over the requirements of the 2006 Building Code scheduled to come into force on December 31, 2011:

Option <sup>1</sup>	Approximate % Increase in (space and water heating) Efficiency over December 31, 2011 requirements <sup>1</sup>	Corresponding approximate EnerGuide® rating based on version of EnerGuide® referenced in the 2006 Code (based on HOT2000 V9.34c <sup>1,2</sup> )	Corresponding approximate EnerGuide® Rating based on the current version of EnerGuide® (based on HOT2000 V10.51 <sup>1,3</sup> )
Option 1	10%	81	79
Option 2	15%	82	80
Option 3	20%	83	81

<sup>1</sup> The options, percentage increases and sample energy ratings in this table are based on archetype houses in southern Ontario's climatic conditions.

<sup>2</sup> HOT2000 is the simulation software that is used by Natural Resources Canada (NRCan) to calculate corresponding EnerGuide® levels. V9.34c is the version that was used to generate the EnerGuide® ratings currently referenced in the Building Code.

<sup>3</sup> V10.51 is the version of HOT2000 now being used by NRCan to calculate EnerGuide® levels. The new version generates different EnerGuide® values than those generated by the "old" software.

For each option, samples of alternative compliance packages are identified. These reflect different conditions based on energy types used for space heating as well as regional climatic variations.

Under all options, the "in force" date for potential changes would be December 31, 2016.

At the same time, potential changes to the Building Code related to energy efficiency in houses and other small residential buildings include a number of incremental changes that would apply regardless of the benchmark selected. These were proposed by the Building Code Energy Advisory Council and include, for example, the mandatory installation of programmable thermostats and the sealing of duct work. These changes would come into force on three different dates, specifically, the date of effect for the next edition of the Code, December 31, 2014, and December 31, 2016.

Potential changes would also set a new energy efficiency benchmark for large buildings and small non-residential buildings. While the Building Code will only set one energy conservation

benchmark, this paper includes two options for consideration: requirements that would achieve 10 per cent or 13 per cent higher than the December 31, 2011 benchmark (Model National Energy Code for Buildings plus 25 per cent). For each of these performance-based options, alternative compliance methods are identified.

As is the case with houses, the new benchmark for large buildings and small non-residential buildings would come into force on December 31, 2016.

In the shorter term, the potential changes identify several alternative compliance paths for meeting the model National Energy Code for Buildings plus 25 per cent benchmark that would remain “in force” until December 31, 2016:

- One compliance alternative included in this consultation is based on the 2010 edition of the ASHRAE 90.1 standard, with certain enhancements, primarily related to the building envelope. In addition to this enhanced ASHRAE standard, Supplementary Standard 10 (SB-10) will be revised to reflect the necessary changes based on the results of the consultation. ASHRAE 90.1 can also be used if the performance is improved by an additional five per cent.
- While the model National Energy Code for Buildings plus 25 per cent continues to be acceptable, a second compliance alternative for future consideration and development would be the anticipated 2011 National Energy Code for Buildings (NECB). However, the 2011 NECB has not yet been finalized by the Canadian Commission on Building and Fire Codes. Further analysis will be required to assess the differences between the draft and final standards.

ASHRAE 90.1 energy efficiency measures apply to almost all types of buildings that are not currently subject to energy efficiency requirements in the current Building Code, such as portable classrooms and manufacturing facilities. Under the potential Code change discussed in this consultation paper, these building types covered by ASHRAE 90.1 would no longer be exempt from certain energy efficiency requirements of the Code.

## Rationale

The potential changes discussed above would support Ontario’s priorities related to:

- reducing electricity consumption in support of Ontario’s Long-Term Energy Plan
- supporting the Province’s climate change strategy by reducing the amount of greenhouse gases produced by the operation of buildings, and reducing greenhouse gas emissions through energy efficiency requirements
- supporting the growth of a green economy by creating a market for energy efficient and renewable energy technologies

The Green Energy and Green Economy Act, 2009, signaled a commitment to support energy priorities through the Building Code. That legislation amended the Building Code Act, 1992 to clarify that the “conservation” purpose of the Code included energy and water conservation,

provide for regular reviews of the energy conservation provisions of the Code, and authorize the establishment of the Building Code Energy Advisory Council. Potential changes to the Code set out in the second round of consultation have been informed by interim recommendations submitted by the Council, and by research commissioned by the Ministry of Municipal Affairs and Housing.

As with all potential Code changes, capital and operating cost impact and industry capacity are critical considerations. The timeline set out in the potential changes, which would defer the establishment of new energy conservation benchmarks to the end of the next Code cycle, recognizes the impact of energy changes on capital costs, and the technical challenges associated with compliance.

### List of Potential Changes

CHANGE #	CODE REFERENCE	SUBJECT
<a href="#">E-A-01-04-01</a>	Div. A 1.4.2.1.(1)	Add new definition for the term “carbon dioxide equivalent”.
<a href="#">E-B-06-02-01</a>	Div. B 6.2.4.3.	Require sealing of joints in all supply and return ducts in dwelling units governed by Part 9.
<a href="#">E-B-09-33-01</a>	Div. B 9.33.2.2.	Require the capacity of heating and cooling systems be based on load calculations for dwelling units governed by Part 9.
<a href="#">E-B-12-01-01</a>	Div. B 12.1 12.2.	Add new requirements that reflect new objectives and functional statements related to protection of the environment and limitations on greenhouse gas emissions.
<a href="#">E-B-12-02-01</a>	Div. B 12.2.1.	Provide energy efficiency compliance alternatives for large buildings prior to January 1, 2017.
<a href="#">E-B-12-02-02</a>	Div. B 12.2.1.2.	Increase energy efficiency design of all buildings after December 31, 2016. This proposal includes a number of options for consideration.
<a href="#">E-B-12-02-03</a>	Div. B 12.2.2.3.	Require programmable thermostats for heating and cooling appliances in dwelling units.
<a href="#">E-B-12-03-01</a>	Div. B 12.3.1.4.	Require electronically commutated motor for space heating furnaces in dwelling units governed by Part 9, effective January 1, 2015.
<a href="#">E-B-12-03-02</a>	Div. B 12.3.1.5.	Require insulation of outlet and inlet piping of storage water heaters and hot water storage tanks in dwelling units governed by Part 9.
<a href="#">E-B-12-03-03</a>	Div. B 12.3.1.6.	Permit a natural gas, propane or electrical energy supply for cooking appliances in kitchens and clothes dryers in laundry rooms in dwelling units governed by Part 9, effective on January 1, 2015.
<a href="#">E-B-12-03-04</a>	Div. B 12.3.2.	Require at least one conduit to facilitate the future installation of a photovoltaic system or a solar domestic hot water system in dwelling unit governed by Part 9, effective on January 1, 2017.

<a href="#">E-B-12-03-05</a>	Div. B 12.3.4.1. 12.3.4.2.	Revise the prescriptive energy efficiency design alternatives for non-residential buildings governed by Part 9 to reflect the performance requirements that are already scheduled to take effect after December 31, 2011.
<a href="#">E-B-12-03-06</a>	Div. B Table 12.3.4.5.	Increase the minimum thickness of pipe insulation for non-residential buildings governed by Part 9 to reflect the performance requirements that are already scheduled to take effect after December 31, 2011.
<a href="#">E-B-12-03-07</a>	Div. B Table 12.3.4.8.	Decrease the maximum interior lighting power densities for non-residential buildings governed by Part 9 to reflect the performance requirements that are already scheduled to take effect after December 31, 2011.
<a href="#">E-B-12-03-08</a>	Div. B Table 12.3.4.10.	Decrease the maximum exterior lighting power densities for non-residential buildings governed by Part 9 to reflect the performance requirements that are already scheduled to take effect after December 31, 2011.
<a href="#">E-SB-10-02-01</a>	Supplementary Standard SB-10 Chapter 2	Revise Supplementary Standard SB-10 as a result of changes made in the ANSI/ASHRAE/IESNA 90.1-2010 Standard.
<a href="#">E-SB-10-03-01</a>	Supplementary Standard SB-10 Chapter 3	Replace Chapter 3 with additional requirements to the ANSI/ASHRAE/IESNA 90.1-2010 Standard to increase the energy efficiency design of large buildings after December 31, 2016. This proposal includes, for consideration, options for increasing the energy efficiency by 10% and 13% above those requirements that are already scheduled to take effect after December 31, 2011.
<a href="#">E-SB-12-02-01</a>	Supplementary Standard SB-12 2.1.1.1. 2.1.1.2. 2.1.1.3.	Provide prescriptive increased energy efficiency solutions for residential buildings governed by Part 9 after December 31, 2016. This proposal includes, for consideration, options for increasing the energy efficiency by 10%, 15% and 20% above those requirements that are already scheduled to take effect after December 31, 2011.
<a href="#">E-SB-12-02-02</a>	Supplementary Standard SB-12 2.1.1.2. 2.1.1.3.	Provide new optional compliance packages with building envelope design expressed in U-values for increased energy efficiency requirements established in Code Change E-SB-12-02-01 for Part 9 residential buildings after December 31, 2016.

## Water Conservation

### Current Provisions

The current Building Code includes “water conservation” as an objective, and sets out requirements for the water efficiency of certain fixtures. Toilets are limited to a maximum flow of six litres per flush. A number of exemptions to this requirement were removed through amendments to the 2006 Building Code which took effect January 1, 2011. The Building Code also restricts urinals to a maximum flow of 3.8 litres per flush and showerheads to a flow rate of 9.5 litres per minute.

The 2006 Building Code also introduced enabling measures that allow for the use of storm sewage or the reuse of greywater for certain applications such as the flushing of water closets and the priming of traps.

### Potential Changes

Potential changes to the Building Code would include enhanced requirements for certain plumbing fixtures. Toilets and urinals in residential buildings would be required to use less water (4.8 litres per flush and 1.9 litres per flush, respectively). Similarly, the potential changes would reduce the flow rate for showerheads installed in residential buildings to 7.6 litres per minute.

The potential changes introduce a new definition of rainwater that recognizes rainwater’s superior quality compared to other non-potable water. Consistent with this recognition, the proposed changes would allow rainwater to be used for certain cleaning and irrigation applications in addition to the existing allowed uses of flushing water closets and priming traps.

The potential changes would introduce new and clarified requirements for the design of non-potable water systems. The potential changes would require these systems to be designed, made, and installed in accordance with good engineering practice as described in various documents, such as the Canadian Standards Association B128.1 Standard, “Design and Installation of Non-potable Water Systems”. This new requirement would provide more guidance on how to design and install a non-potable water system and would help establish a quality baseline.

The proposed changes would also clarify the labelling requirements for non-potable water systems and allow for the use of potable water as make-up water in a non-potable water system.

### Rationale

Water conservation is a key priority of the Ontario government. This is reflected in the Water Opportunities and Water Conservation Act, 2010, which received Royal Assent on November 29, 2010. This legislation includes measures to encourage the creation and export of innovative clean water technology, promote water conservation, attract economic development, and create jobs. Proposed water conservation changes to the Building Code complement the Water Opportunities and Water Conservation Act, 2010’s goals.

As is currently the case, the Building Code can support water conservation through mandatory efficiency measures and enabling provisions that promote the use of non-potable water for a range of purposes. At the same time, it is important that the Building Code contains provisions to ensure that such systems operate in accordance with the health and safety objectives of the Code.

The potential changes set out in this consultation paper support interim recommendations submitted to the Minister of Municipal Affairs and Housing by the Building Code Energy Advisory Council. The council recognizes that water conservation is also an energy issue, as a significant amount of electrical power is used to treat and pump water.

### List of Potential Changes

CHANGE #	CODE REFERENCE	SUBJECT
<a href="#">W-A-01-04-01</a>	Div. A 1.4.1.2.	Add a new definition for “rainwater”.
<a href="#">W-B-07-01-01</a>	Div. B 7.1.5.3.(2)	Permit the re-use of storm sewage or greywater for sub-surface irrigation and include a new list of permitted use for rainwater.
<a href="#">W-B-07-06-01</a>	Div. B Table 7.6.4.1.	Increase the water efficiency requirements for shower heads in residential occupancies.
<a href="#">W-B-07-06-02</a>	Div. B 7.6.4.2.	Editorial change to replace the term “flush cycle” with “maximum water consumption per flush cycle”.
<a href="#">W-B-07-06-03</a>	Div. B 7.6.4.2.	Increase the water efficiency requirements for water closets and urinals.
<a href="#">W-B-07-07-01</a>	Div. B 7.7.1.1.	Clarify requirements for the selection of backflow prevention devices.
<a href="#">W-B-07-07-02</a>	Div. B 7.7.2.1.	Clarify the marking requirements for non-potable water systems.
<a href="#">W-B-07-07-03</a>	Div. B 7.7.3.2.	Permit rainwater to be used for clothes washing.
<a href="#">W-B-07-07-04</a>	Div. B 7.7.4.	Add new requirements to regulate the design for the re-use of non-potable water systems.
<a href="#">W-B-09-31-01</a>	Div. B 9.31.4.1(1)	Permit a drainless composting water closet to be provided as an alternative to a water closet in every dwelling unit where a piped water supply is available.

## On-Site Sewage Systems

### Current Provisions

Since 1998, the Building Code has set requirements for the construction, operation and maintenance of small on-site sewage systems. Such systems have a design capacity of 10,000 litres per day or less, and serve a single lot. Larger systems are regulated by the Ministry of the Environment.

The Building Code requirements are intended to minimize pathogens released into the environment, thereby supporting the Code objectives of “environmental integrity” and “health” and “safety”. The Building Code currently does not contain requirements for nutrient abatement (phosphorous and nitrates).

The Building Code regulates a number of different classes of on-site sewage systems. Class 4 systems typically consist of a septic tank and a leaching bed that provides treatment of effluent.

Class 4 systems may also include a secondary or tertiary treatment unit located “downstream” from the septic tank. Because such treatment units provide effluent treatment prior to discharge into the leaching bed, the size of the bed can be reduced.

Treatment units must meet performance criteria set out in the Building Code. Treatment units listed in Supplementary Standard SB-5 to the Building Code are deemed to meet these requirements. Treatment unit technologies are evaluated by MMAH for inclusion in SB-5 based on a number of criteria, including:

- testing and certification by the NSF International (U.S.-based) standard
- consideration of Ontario’s environmental/climatic conditions
- evidence of in-field performance

Under the Building Code, tertiary treatment units may discharge into traditional leaching beds or shallow buried trench systems. However, another soil absorption system, known as an area bed, is currently permitted as an innovative technology under authorizations issued by the Building Materials Evaluation Commission. A total of nine area bed authorizations have been issued since 1999.

Recent amendments to the 2006 Code, made in July 2010, support the effective regulation of on-site sewage systems by requiring and governing the inspection of existing systems. These regulations are consistent with the implementation of the Clean Water Act, 2006, and the Lake Simcoe Protection Plan.

### Potential Changes

Potential changes to the Building Code included in the second round of consultation would reference the new national standard for testing wastewater residential treatment technologies established by the Bureau de normalisation du Québec (BNQ). This reference would replace the current performance criteria for treatment units set out in the Code, and the list of treatment units

set out in Supplementary Standard SB-5 which are deemed to meet these Code requirements. Specifically, criteria for secondary treatment units would be replaced with Levels 2 and 3 of the BNQ standard, while criteria for tertiary treatment units will be replaced with Level 4 of the BNQ standard. In addition, these units would be required to meet a given effluent disinfection standard in the BNQ with a given level being determined by the design of the dispersal bed.

A “sunset” date of December 31, 2016 would be established for Supplementary Standard SB-5, so that treatment unit manufacturers would need to certify their units under the BNQ standard by that date. Administratively, new treatment units would no longer be considered by MMAH for inclusion in Supplementary Standard SB-5 as of December 31, 2014.

The BNQ standard for treatment units includes protocols for testing these units over the course of the one-year certification period. The testing protocol allows for testing the unit under different effluent temperatures. The potential changes to the Building Code set out in this consultation paper would recognize effluent testing conducted either at uncontrolled temperatures, or temperature-controlled at  $11\text{C} \pm 1$  degrees Celsius.

In addition to assessing the efficacy of treatment units in removing pathogens, the BNQ standard can also test for the abatement of nutrients (i.e., phosphorous and nitrates). Potential changes to the Building Code include a requirement that on-site sewage systems in certain at-risk areas be required to be equipped with a tertiary treatment unit certified under the BNQ to abate nutrients. These requirements would come into force on December 31, 2016.

At-risk areas would initially include those areas which are subject to mandatory on-site sewage re-inspection on that date, and potentially other lakes considered to be “at capacity” from the perspective of nutrient loading. These lakes would be identified in conjunction with the ministries of the Environment and Natural Resources, and would be subject to further public consultations.

Other potential changes to the on-site sewage system provisions of the Building Code in the second round of consultation include an amendment to clarify the sampling requirements for Tertiary Treatment Units following installation to more accurately gauge their performance.

In addition, potential changes to the Building Code would establish standards for “dispersal beds” in the Code. Such beds would be downstream from a treatment unit certified to tertiary quality or the new BNQ criteria. The second round of consultation would set out two different compliance paths:

- requirements similar to those consulted on in winter 2008
- requirements based on a review of on-site sewage standards in other jurisdictions.

The Ministry of Municipal Affairs and Housing would undertake field testing of dispersal beds constructed to the new Building Code requirements along with dispersal beds that meet other design parameters. Dispersal beds would be evaluated using effluent equivalent to that discharging from a treatment unit that meets BNQ Level 4 criteria. Results of testing would inform the development of future dispersal bed requirements in the Building Code.

## Rationale

Building Code regulation of on-site sewage systems contributes to public health and safety and environmental protection by reducing the release of pathogens into ground water and water bodies.

Developing requirements for nutrient abatement in selected areas would further support these Code objectives as well as the Clean Water Act, 2006 and the Lake Simcoe Protection Plan. Under the Lake Simcoe Protection Plan, the government has committed to exploring the potential use of on-site sewage systems regulation to achieve nutrient reduction. Under the Clean Water Act, 2006 nutrient reduction tools are key to meeting the objectives of the Clean Water Act in protecting sources of drinking water.

Other potential Building Code changes would recognize industry-based standards for treatment units and acknowledge that dispersal bed technology has been used widely across Ontario for 12 years and should be incorporated into the Code.

The proposed changes also reflect recommendations made by the Building Materials Evaluation Commission regarding standards for on-site sewage systems.

## List of Potential Changes

CHANGE #	CODE REFERENCE	SUBJECT
<a href="#">S-A-01-04-01</a>	Div. A 1.4.1.2.	Add new definition of “Type A dispersal bed”.
<a href="#">S-A-01-04-02</a>	Div. A 1.4.1.2.	Add new definition of “Type B dispersal bed”.
<a href="#">S-B-08-01-01</a>	Div. B 8.1.3.1.	Require grease interceptors to conform to CSA B481.1 or B481.2.
<a href="#">S-B-08-02-01</a>	Div. B 8.2.1.2.(2)	Add an alternate method of determining percolation time.
<a href="#">S-B-08-02-02</a>	Div. B 8.2.3.1. & 8.2.3.2.	Require subsurface detection of leaching bed components.
<a href="#">S-B-08-06-01</a>	Div. B 8.6.2.1.	Specify particle size and area for effluent filters.
<a href="#">S-B-08-06-02</a>	Div. B 8.6.2.2.(1)	Reference the BNQ 3680-600 treatment classifications.
<a href="#">S-B-08-06-03</a>	Div. B 8.6.2.2.(2)	Set minimum treatment levels for treatment units used with shallow buried trench and dispersal bed systems.
<a href="#">S-B-08-06-04</a>	Div. B 8.6.2.2.(5)	Recognize the classification of treatment units by the BNQ 3680-600 standard.
<a href="#">S-B-08-06-05</a>	Div. B 8.6.2.2.(6)	Recognize the classification of treatment units by the BNQ 3680-600 standard in at-risk areas.
<a href="#">S-B-08-06-06</a>	Div. B Table 8.6.2.2.A.	Revise the effluent quality table to make it consistent with the BNQ 3680-600 standard’s classifications of treatment units.
<a href="#">S-B-08-07-01</a>	Div. B 8.7.3.1.	Clarify the sizing of absorption trenches for revised classification of treatment units.

<u>S-B-08-07-02</u>	Div. B 8.7.3.3.	Clarify the construction of distribution piping within a leaching bed.
<u>S-B-08-07-03</u>	Div. B 8.7.3.3.	Modify the graduation parameters for septic stone.
<u>S-B-08-07-04</u>	Div. B 8.7.3.3.(1)(d)	Require pressure dosing of certain leaching beds.
<u>S-B-08-07-05</u>	Div. B 8.7.4.2.(1)	Clarify that shallow buried trench construction is permitted in fill.
<u>S-B-08-07-06</u>	Div. B 8.7.5.1.	Adopt the BNQ 3680-600 standard's classes for filter beds.
<u>S-B-08-07-07</u>	Div. B 8.7.5.3.	Modify filter bed construction to provide better aeration to ensure better fecal removal.
<u>S-B-08-07-08</u>	Div. B 8.7.5.3.(8)	Modify filter bed construction to ensure better fecal removals through uniform distribution of effluent.
<u>S-B-08-07-09</u>	Div. B 8.7.5.3.(9) & (10)	Provide for dosing rates for both pump and siphon applications.
<u>S-B-08-07-10</u>	Div. B 8.7.6.2.	Utilize the BNQ 3680-600 standard's levels of treatment for shallow buried trenches.
<u>S-B-08-07-11</u>	Div. B 8.7.7.	Add design and construction requirements related to "type A dispersal beds".
<u>S-B-08-07-12</u>	Div. B 8.7.8.	Add design and construction requirements related to "type B dispersal beds". 2 options are proposed. See proposed Change Number S-B-08-07-13 for the other option.
<u>S-B-08-07-13</u>	Div. B 8.7.8.	Add design and construction requirements related to "type B dispersal beds". 2 options are proposed. See proposed Change Number S-B-08-07-12 for the other option.
<u>S-B-08-09-01</u>	Div. B 8.9.2.4.	Revise the sampling requirements to allow for variances when a grab sample is taken.
<u>S-B-08-09-02</u>	Div. B 8.9.2.4.(1)(2)	Clarify the obligations of manufacturers where a treatment unit is not in compliance.
<u>S-B-08-09-03</u>	Div. B 8.9.3.3.	Require interceptors to be maintained in accordance with the CSA B481.4 "Maintenance of Grease Interceptors" standard.
<u>S-B-11-03-01</u>	Div. B 11.3.1.1.(2)	Require vertical separation to the water table to be in accordance with Part 8.

# Enhancing Radon Protection

## Current Provisions

The current edition of the Building Code addresses radon gas in buildings throughout Ontario, with certain exemptions.

## Potential Changes

Potential changes to the Building Code would enhance radon protection requirements by removing current exemptions. The exemptions to be removed include:

- garages and unenclosed portions of buildings,
- buildings in areas where soil gas does not constitute a hazard, and
- single family dwellings having a sub floor depressurization system.

## Rationale

Radon is an invisible, odorless, radioactive gas. It is formed by the disintegration of radium. Radon particles can be inhaled with air and deposit in the lungs, and increase the risk of lung cancer. Radon is emitted by radium in the ground and certain building materials. In buildings, radon can accumulate in confined spaces such as basements. Radon protection, therefore, is an important public health concern.

In 2007, Health Canada recommended a new threshold for maximum annual average radon concentration lower than the current one in Ontario. The previous edition of the model National Building Code (2005) had similar provisions dealing with radon gas but limited the annual average radon concentration to a higher amount than specified in Ontario.

Health Canada has also concluded that there is a high degree of uncertainty about where radon might be an issue. Furthermore, in a given circumstance, the potential for high levels of radon infiltration may be very difficult to evaluate prior to the construction of a building, and a radon problem may only become apparent once the building is completed and occupied.

The 2010 edition of the model National Building Code includes enhanced radon protection provisions similar to those set out below.

## List of Potential Changes

CHANGE #	CODE REFERENCE	SUBJECT
<u>R-B-05-04-01</u>	Div. B 5.4.1.1.(1)(e)	Clarify that measures that minimize the ingress of airborne radon from the ground need to be considered. Revise a related Appendix A note.
<u>R-B-06-02-01</u>	Div. B 6.2.1.1.(1)	Add the EPA standard related to radon prevention in buildings to the list of standards that are considered as guidelines for “good engineering practice”.
<u>R-B-09-13-01</u>	Div. B 9.13.4.	Revise the general requirements for soil gas control.
<u>R-B-09-13-02</u>	Div. B 9.13.4.4.	Revise and relocate requirements for sub floor depressurization and include a new Appendix Note.
<u>R-B-09-18-01</u>	Div. B 9.18.6.2.	Clarify that the performance of the ground cover in heated crawl spaces shall be equivalent to that of an air barrier.
<u>R-B-09-25-01</u>	Div. B 9.25.3.	Relocate and revise requirements for soil gas control.
<u>R-B-09-32-01</u>	Div. B 9.32.3.8.(3)	Clarify that make-up air is not required for a sub floor depressurization system.

## Maintaining Currency of Building Code Knowledge

### Current Provisions

As a result of amendments to the Building Code Act, 1992 and the Building Code resulting from the Building Code Statute Law Amendment Act, 2002, a broad range of building practitioners are subject to qualification requirements set out in the Building Code. These requirements, which came into force on January 1, 2006, apply to building officials, staff employed by private registered code agencies, certain classes of designers, and on-site sewage installers.

There are 14 categories of qualification, e.g., “house”, “building services”, “structural” and “large buildings”. Qualification in a given category requires, among other things, the completion of technical and administrative examinations and the filing of applicable information with the Director of the Building and Development Branch at the Ministry of Municipal Affairs and Housing.

The Building Code provides for the updating of qualifications when new examinations are issued. This would likely be the case following the release of the next edition of the Building Code, as examination(s) would need to be revised to reflect new and revised Code requirements.

The Code requires that when an examination that is part of an examination program is replaced with a new examination, the Director must give notice of the new examination to persons who have qualified in the applicable category. The persons involved must successfully complete the new examination within 180 days and file information with the Director.

## Potential Changes

Potential changes to the Building Code would replace the current Building Code requirements related to the updating of qualifications with new requirements that would give qualified persons a longer period to comply, and that would provide a range of alternative compliance paths.

The “trigger” for the updating of qualifications would remain the same (i.e., notification by the Director of the issuance of a new examination required with respect to a given category of qualification). However, practitioners would be given 18 months to update their qualifications and have the required information filed with the Director.

Successful completion of the new examinations would remain a requirement for new practitioners – those that do not have a Building Code Identification Number (BCIN) – or for those expanding their area of practice. Qualified practitioners – those who have already passed the ministry’s examinations - would not be required to take the new examinations. Instead they would be required to successfully complete a “knowledge maintenance program” that could include a number of alternative compliance paths including successful completion of:

- a “gap examination” that assesses a practitioner’s knowledge of changes since the beginning of the previous Code cycle. Gap examinations would be developed and delivered by MMAH, as is currently the case for qualification examinations. The gap examination (s) could be customized based on qualification categories, or
- a “gap” course that assesses a practitioner’s knowledge of changes since the beginning of the previous Code cycle. A given course could cover Building Code changes related to a number of different categories of qualification. These courses as well as a test or other proof of learning would be developed by the Ministry of Municipal Affairs and Housing, and delivered through Ministry approved organizations such as practitioner associations, municipalities, or colleges. A similar delivery model is currently used for a range of Ministry of Municipal Affairs and Housing Building Code courses, or
- a mandatory course or code instruction based on Code changes, developed and administered by a stakeholder organization, a municipality or an educational institution as part of their continuing education program. The instruction would cover the Ministry specified code content, assess a practitioner’s knowledge of changes since the beginning of the previous Code cycle and be administered by Ministry approved organizations.

The views of stakeholders and the public are sought as to which of these compliance paths should be included in the next edition of the Code.

The ministry would establish criteria for approving knowledge maintenance delivery organizations, and would have some capacity to audit or monitor these organizations.

## Rationale

Ensuring that Building Code knowledge is maintained following the release of a next edition of the Building Code supports public safety and an efficient/effective building regulatory system.

The potential Code change described above offers more flexibility for building practitioners while maintaining ministry oversight. The potential approach is more consistent with the approach to knowledge maintenance across most professions, where there is a focus on continuing education or completion of courses that address changes to the required area of knowledge.

This approach takes into consideration the views of the Training and Qualification Discussion Group, which includes representation from builders, designers, Building Code enforcement, the fire safety community, education stakeholders and the broader building industry.

### List of Potential Changes

CHANGE #	CODE REFERENCE	SUBJECT
<a href="#">K-C-03-01-01</a>	Div. C 3.1.5.1.	Clarify, in the case of persons who have already completed qualification exams, that when an examination is replaced by new examination, such persons must successfully complete a knowledge maintenance program as described in a new Supplementary Standard SC-2 (“Knowledge Maintenance for Qualified Persons”) for the category of qualification to which the new examination referred to in the notice, applies. <sup>a</sup>
<a href="#">K-C-03-01-02</a>	Div. C 3.1.6.1.	Revise the information that must be provided by inspectors to the Director about examinations and knowledge maintenance programs that have been successfully completed.
<a href="#">K-C-03-02-01</a>	Div. C 3.2.4.2.	Require compliance with the knowledge maintenance program as a condition of registration and renewal of registration for registered designers.
<a href="#">K-C-03-02-02</a>	Div. C 3.2.4.7.	Replace the existing reference to new examinations with a reference to compliance with the knowledge maintenance program as a condition of registration for registered designers.
<a href="#">K-C-03-02-04</a>	Div. C 3.2.5.2.	Clarify, in the case of “other designers” who have already completed qualification exams, that when an examination is replaced by new examination, such persons must successfully complete a knowledge maintenance program as described in a new Supplementary Standard SC-2 (“Knowledge Maintenance Options for Qualified Persons”) for the category of qualification to which the new examination referred to in the notice, applies.
<a href="#">K-C-03-02-05</a>	Div. C 3.2.5.3	Revise the information that must be provided by other designers to the Director about examinations and knowledge maintenance programs that have been successfully completed.
<a href="#">K-C-03-03-01</a>	Div. C 3.3.3.2.	Require compliance with the knowledge maintenance program as a condition for registration renewal for septic system installers.
<a href="#">K-C-03-03-02</a>	Div. C 3.3.3.7.	Replace the existing reference to new examinations with a reference to compliance with the knowledge maintenance program for persons engaged in the business of constructing, installing, repairing, cleaning or emptying on-site sewage systems.

<a href="#">K-C-03-04-01</a>	Div. C 3.4.3.2.	Add a reference to compliance with the knowledge maintenance program as a requirement for registration renewal of RCAs.
<a href="#">K-C-03-04-02</a>	Div. C 3.4.3.7.	Add a reference to compliance with the knowledge maintenance program as a requirement for registration renewal of RCAs.

## Miscellaneous

A number of additional potential changes related to ventilation, fire safety, and the elimination of redundant Code provisions are addressed in this consultation.

CHANGE #	CODE REFERENCE	SUBJECT
<a href="#">M-A-01-03-01</a>	Div. A 1.1.2.2. & 1.3.1.1.	Add permanent solid nutrient storage facilities with supporting walls with an exposed height of more than 1 m. to the list of designated structures and as a structure requiring Part 4 design.
<a href="#">M-B-03-01-01</a>	Div. B 3.1.8.12.(2) & (3)	Replace the reference to NFPA 80 with CAN/ULC S-524 "Installation of fire alarm systems" for the location of the required smoke detector.
<a href="#">M-B-03-01-02</a>	Div. B 3.1.8.8.(6)	Revise fire dampers requirements for ducts that serve commercial cooking equipment.
<a href="#">M-B-03-02-01</a>	Div. B 3.2.6.7.(2)	Clarify emergency power requirements and 2 way communication requirements for elevator cars.
<a href="#">M-B-03-03-01</a>	Div. B 3.3.4.4.	Delete redundant requirements for egress from dwelling units.
<a href="#">M-B-03-09-01</a>	Div. B 3.9.3.4.(1)(c)	Delete redundant requirements for portable classrooms
<a href="#">M-B-09-09-01</a>	Div. B 9.9.6.7.(1)(b)	Clarify the 90N door release requirement for buildings governed by Part 9.
<a href="#">M-B-09-13-01</a>	Div. B 9.13.2.2.	Add the CGSB 37-GP-56M, "Membrane, Modified, Bituminous, Prefabricated, and Reinforced for Roofing" as a material standard for damp proofing.
<a href="#">M-B-09-13-02</a>	Div. B 9.13.3.2.	Add the CGSB 37-GP-56M, "Membrane, Modified, Bituminous, Prefabricated, and Reinforced for Roofing" as a material standard for waterproofing.
<a href="#">M-B-09-15-01</a>	Div. B 9.15.3.4.	Clarify supported joist spans for exterior walls and interior walls.
<a href="#">M-B-11-04-01</a>	Div. B 11.4.3. C191	Revise Compliance Alternative C191 to permit natural ventilation to serve existing buildings containing up to four dwellings.

## **Appendix B: Requesting Additional Changes to the Building Code**

### **Guideline for Requesting Changes to the Building Code**

#### **Request a Code Change**

The Building Code improves with each edition thanks to the contributions of building officials, designers, builders, contractors, product manufacturers, researchers, building owners and the public. Typical changes accommodate new materials, systems and building design, clarify requirements, or update references to standards.

The Building Code is a regulation made under the Building Code Act, 1992. Given the joint Federal/Provincial/Territorial Code development process, changes developed by CCBFC for the mNBC and the mNPC are considered for inclusion in Ontario's Building Code. Suggestions for changes to the Building Code made by members of the public may also be considered. Potential changes to the Building Code are generally developed following a public consultation process and review by a Building Code technical committee.

Suggestions to improve the Building Code may be submitted to the Building and Development Branch of the Ministry of Municipal Affairs and Housing. The following points should be considered in developing a request for a Building Code change:

#### **Clarity**

Code change requests should clearly identify the specific change being proposed, current Code provisions that would be affected by the change, and the rationale for proposing the change. Proposed language for new Code provisions is helpful.

#### **Supporting Documentation**

Code change requests should be accompanied by sufficient documentation to support the need for the change. Documentation may include research, testing results, statistics, case studies, etc.

#### **Cost/Benefit Analysis**

Code change requests should include information on implementation costs and the benefits likely to be achieved.

#### **Assessment of Conformance**

Code change requests may not be viable if there are no practical means of assessing conformance with the proposed new requirement. Requests should consider whether there are existing tools or models that can be used to assess the conformance of designs or construction with the requirements of the proposed Code change.

Requests also need to consider whether the implementation of Code changes would have implications for enforcement bodies.

## Timing

Although requests for changes to the 2006 Building Code can be made at any time, it is likely that most changes will be considered for inclusion in the next edition the Building Code. However, “interim” Code changes to the 2006 Code are possible.

## Objectives

The objectives of the Building Code’s requirements (“acceptable solutions”) are set out in Division A. Code change requests should link proposed changes to one of the Code’s stated objectives. The addition of a provision that cannot be linked to one of the currently stated objectives would require the addition of new objectives.

## Focus on Generic/Widespread Issues

The Building Code’s standards are of general application and it is therefore impractical for the Building Code to deal with specific products or with situations that arise only rarely.

However, innovative products that are not yet covered by standards or mentioned in the Codes are not necessarily excluded from use. Current administrative procedures to enable the use of innovative products are listed in Division C, and include Alternative Solutions, the Building Code Commission, the Building Materials Evaluation Commission and Minister’s Rulings.

The attached form should accompany requested changes, although its use is not mandatory provided the criteria stated above are considered. Where the form does not provide sufficient space for the information you wish to include, you are encouraged to attach additional pages as necessary. Additional electronic copies of the Building Code change request form may be obtained from the Building Code website at: [ontario.ca/buildingcode](http://ontario.ca/buildingcode).



If you would like to suggest a change to the Building Code that has not been addressed in this consultation, please use this form.

**Building Code Change Request Form**

**CONTACT INFORMATION:**

Do you agree to permit sharing all information on this form with the Canadian Commission on Building and Fire Codes and Building Code Review Committees for the purposes of code development?

- YES
- NO

I am submitting this on behalf of:

- Myself, or
- Organization: \_\_\_\_\_

Your Title: \_\_\_\_\_

Your Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_

Province: \_\_\_\_\_

Postal Code: \_\_\_\_\_

Telephone: \_\_\_\_\_

Facsimile: \_\_\_\_\_

Email: \_\_\_\_\_

**Your function:**

- Builder/Contractor (if submitting on behalf of yourself)
- Building Owner/Manager
- Home Owner/General Public
- Other: \_\_\_\_\_
- Building Official
- Designer / Architect / Engineer
- Supplier / Manufacturer

**CODE CHANGE REQUEST:**

- To an existing code provision: \_\_\_\_\_  
Code Reference of the Requested Change:  
Division, Part, Section, Subsection, Article, Sentence, etc.eg: Div. B, 9.32.3.5.(1)
- Add a new code provision

Have you forwarded this change to the Canadian Commission on Building and Fire Codes as a proposed amendment to the model National Building or Plumbing Codes?  YES  NO

Personal information provided on this form is collected under the authority of the Building Code Act, 1992 and will be used for the purpose of code development. Please direct any questions about the collection of information by mail to the following address:

Manager, Code Development Unit  
 Building and Development Branch  
 777 Bay Street 2nd Fl., Toronto, Ontario, M5G 2E5  
 telephone: 416-585-6666  
 fax: 416-585-7531  
 email: codeinfo@ontario.ca

<p><b>REQUESTED CHANGE/ADDITION:</b>                  What wording do you propose for the change?</p>	
<p><b>PROBLEM:</b>                  Why should the existing provision be revised?                  If requesting an addition to the Code, what is missing?</p>	
<p><b>JUSTIFICATION/EXPLANATION:</b>                  How does the requested change address the problem?</p>	
<p><b>OBJECTIVE(S):</b>                  Which of the Code's objectives does the requested change address?                  See Part 2 of Division A of the Building Code for the list of objectives.</p>	
<p><b>COST/BENEFIT IMPLICATIONS:</b>                  Will the change entail any added costs?                  Will it provide benefits that are measurable?</p>	
<p><b>ENFORCEMENT IMPLICATIONS:</b>                  Can the requested change/addition be enforced by the infrastructure available to enforce this Code? Will its enforcement require an increase in resources?</p>	
<p><b>OTHER COMMENTS:</b>                  For example, identify other Code requirements affected by the requested change, etc.</p>	
<p><b>ATTACHED SUPPORTING MATERIAL:</b></p>	

Present only one change request per form. Duplicate the form as necessary. You may attach additional pages or use any other format to submit your request as long as all the information indicated above is included. Mail or fax to:

Manager, Code Development Unit  
 Building and Development Branch  
 Ministry of Municipal Affairs and Housing  
 777 Bay Street 2<sup>nd</sup> Floor  
 Toronto, Ontario, M5H 2E5  
 Fax: 416-585-7531  
 Email: [alek.antoniuk@ontario.ca](mailto:alek.antoniuk@ontario.ca)