

 <p style="text-align: center;"><b>Council Communication</b> Office of the City Manager</p>	<b>Date:</b> July 15, 2013
	<b>Agenda Item No.</b> <b>55B</b> <b>Roll Call No.</b> <b><u>13-1141</u></b> <b>Communication No.</b> <b><u>13-377</u></b> <b>Submitted by:</b> <b>Phillip Delafield, Community Development Director</b>

**AGENDA HEADING:**

Amend Chapter 26 of the Municipal Code to adopt the 2012 editions of the International Building Code (IBC); International Residential Code (IRC); International Existing Building Code (IEBC); International Mechanical Code (IMC); International Fuel Gas Code (IFGC); Uniform Plumbing Code (UPC), and the 2009 edition of the International Energy Conservation Code (IECC).

**SYNOPSIS:**

Approval of this action amends Chapter 26 of Municipal Ordinance by amending and adopting the most recent published editions of the following codes:

- 2012 International Building Code
- 2012 International Residential Code
- 2012 International Mechanical Code
- 2012 International Existing Building Code
- 2012 International Fuel Gas Code
- 2012 Uniform Plumbing Code
- 2009 International Energy Conservation Code

**FISCAL IMPACT: NONE**

**ADDITIONAL INFORMATION:**

The City of Des Moines Building & Fire Code Board of Appeals has reviewed and recommends adoption, renewal, and amendment of the codes listed in this section. Adoption of these codes assures the City’s construction and fire codes remain current and up to date with nationally recognized safety standards.

Each of the referenced codes was reviewed by the Building and Fire Code Board of Appeals, significant changes and impacts identified, public comment considered, and amendments proposed. The board maintained focus on preserving minimum safety requirements and promoting consistency with neighboring communities during this process.

Changes in the 2012 IECC were identified that would significantly impact the construction industry. Because of additional costs associated with these changes, and a consistent metro area approach to defer adoption of the 2012 IECC, the board recommends maintaining the 2009 edition of the IECC until the 2012 edition is mandated by the State of Iowa. This is expected to take place later in 2013.

The board considered adopting the 2012 International Green Construction Code (IgCC), but determined this code would best not be adopted through the typical adoption process. This is the first year the IgCC has been published, and it is expected to be changed significantly in the next edition. The board's decision was based on the additional costs for building design, construction, and lifelong maintenance and monitoring requirements. The IgCC requires a great deal of preliminary planning, calculation, and design work to be provided that is not common in today's construction industry and requires additional features that go above and beyond those required by the 2012 IECC. For example, the IgCC requires solar photovoltaic, solar water heating, or wind energy systems on many buildings and all buildings require additional commissioning for HVAC, plumbing, and electrical system monitoring and maintenance. Many of these requirements are foreign to today's built environment and will require a great deal of education combined with a gradual implementation to be effective. With the right approach, the construction and building maintenance industries will become able to implement and sustain the requirements of this code. However, this effort will require input from additional stakeholders, as the requirements of the IgCC come with additional costs that should be further evaluated prior to being implemented. The IgCC is always an option for those who wish to build green and voluntary designs are a good way for staff to familiarize themselves with the IgCC through actual but not mandatory implementation.

All other codes have been previously adopted and implemented, some for more than 10 years. Adopting the most current editions of these codes allows the City to keep its construction standards current and helps maintain the City's high Insurance Services Organization (ISO) rating.

Stakeholder input was gathered as part of the code review process. Stakeholders, including local mechanical, electrical, and plumbing contractors, the Greater Des Moines Homebuilders Association, and Des Moines Neighborhood Associations, were notified of public hearings held on March 14 and April 11. Public comment was accepted via email and in person at the public hearings.

The new IRC provision for floor joist protection drew public comment from the Iowa Truss Manufacturer's Association, Greater Des Moines Habitat for Humanity, and the Greater Des Moines Homebuilders Association. All were in opposition to the requirement because of increased construction costs. Additional costs identified by Beisser Lumber and the Greater Des Moines Homebuilders Association ranged from \$0.16 to \$0.94 per square foot of unfinished basement area in single family dwellings.

The requirement calls for all floor joists in single family dwellings to perform as well as solid lumber joists common in older homes. This will impact I-joist floor systems above unfinished basements in new homes. It will require these floors to be constructed of solid sawn joists (+\$0.16/sf), constructed of fire treated I-joists (+\$0.75/sf), or have a layer of sheetrock added to the ceiling (+\$0.94/sf). This provision comes in response to the increased popularity of engineered lightweight floor joists in single family dwellings that are more susceptible to failure when exposed to fire. Additional fire resistive requirements such as this are expected to be seen in future editions of the IRC as residential fire sprinkler provisions continue to be deleted and amended.

The board considered the comments, the additional construction costs, and the approach of other metro area communities who plan to delete this provision. After taking all of these into consideration, the board determined the fire safety benefits provided by the code provision outweigh the additional construction costs and recommend adopting the provision as written.

No public comment was received on other proposals.

The following summarizes the proposed amendments and functions of Chapter 26.

**Article I:**

Includes all administrative provisions common to the codes. It includes structure of the Permit and Development Center and Building & Fire Code Board of Appeals, requirements for permits and fees, inspections, and enforcement provisions. The major content of this article is unchanged but has been reordered to increase usability and to be more navigable for those accessing it online.

**Article II: Reserved**

**Article III:**

Adopts the IRC, IBC, IEBC, and IECC. The IRC, IBC, and IEBC are currently adopted by reference and will be upgraded to the latest edition. The 2009 edition of the IECC will be maintained until State mandates require enforcement of the 2012 edition.

**Article IV:**

Adopts the National Electrical Code (NEC) and contains electrical code amendments. The electrical code is updated when mandated by the State of Iowa and is largely unaltered in this proposal.

**Articles V:**

Adopts the IMC and IFGC. Amendments were made that clarify equipment clearances and simplify application of how gas piping size is calculated and locations where rigid gas piping materials are required.

**Article VI:**

Adopts the UPC. This is consistent with State of Iowa law. Redundant amendments were deleted from this article to improve usability.

**Article VII:**

Regulates steam and power operating equipment and remains unchanged.

**Article VIII:**

Regulates construction of signs and billboards. These provisions were previously located in Article III and were relocated to improve usability.

**PREVIOUS COUNCIL ACTION(S):**

Date: November 22, 2010

Roll Call Number: [10-1959](#), [10-1960](#) and [10-1961](#)

Action: [On](#) Amendment of Chapter 26 of the Municipal Code to adopt the 2009 editions of the International Building Code; International Residential Code; International Existing Building Code; International Mechanical Code; International Fuel Gas Code; International Energy Conservation Code and the Uniform Plumbing Code. ([Council Communication No. 10-704](#)) Moved by Hensley to adopt. Motion Carried 6-1. Nays: Moore.

(A) [First](#) consideration of ordinance above. Moved by Hensley that this ordinance be considered and given first vote for passage on all sections, excluding Sections 26- 328 and

26-329 of the International Residential Code; refer those sections to the City Manager for review and recommendation regarding how suburbs are handling sprinklers. Motion Carried 6-1. Nays: Moore.

(B) [First](#) consideration of ordinance on amendment of Chapter 46 of the Municipal Code regarding adoption of the International Fire Code and amendments and additions. ([Council Communication No. 10-689](#)) Moved by Hensley that this ordinance be considered and given first vote for passage. Motion Carried 6-1. Nays: Moore.

**BOARD/COMMISSION ACTION(S):**

Board: Building and Fire Code Board of Appeals

Date: May 9, 2013

Resolution Number: N/A

Action: Motion to recommend Council adopt the 2012 editions of the Uniform Plumbing Code, International Mechanical Code, International Fuel Gas Code, International Residential Code, International Building Code, International Existing Building Code, and the International Fire Code with amendments as proposed by the Building and Fire Code Board of Appeals. Motion carried 9-1 (Martie Mendenhall opposed).

**ANTICIPATED ACTIONS AND FUTURE COMMITMENTS:**

New editions of the building codes are published every three (3) years. The Community Development Department anticipates future code adoptions to occur on a three (3) year cycle.

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