



OLATHE FIRE DEPARTMENT

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MEMORANDUM:

ATTACHMENT A

Olathe Fire Department – Community Risk Reduction Section Building Codes Division

TO: Michael Wilkes, City Manager
Jeff DeGraffenreid, Fire Chief

FROM: Mark Wassom, Assistant Chief / Chief Building Official

DATE: March 26, 2019

SUBJECT: 2018 Building Codes Adoption Summary Report

Introduction:

The Building Codes Division within the Community Risk Reduction Section of the Olathe Fire Department is proposing to adopt and amend the 2018 Edition of the International Building Codes. This proposal will amend Titles 15 and 16 of the Olathe Municipal Code relating to building, residential, existing buildings, plumbing, mechanical, fuel gas, electrical, energy conservation, swimming pool, property maintenance and fire codes. The City currently enforces the 2012 Edition of these codes that were adopted in April of 2013.

The following codes are proposed for adoption:

- 2018 International Building Code (IBC)
- 2018 International Residential Code (IRC)
- 2018 International Existing Building Code (IEBC)
- 2018 International Plumbing Code (IPC)
- 2018 International Mechanical Code (IMC)
- 2018 International Fuel Gas Code (IFGC)
- 2017 National Electrical Code (NEC)
- 2012 International Energy Conservation Code (IECC)
- 2018 International Swimming Pool and Spa Code (ISPSC)
- 2018 International Property Maintenance Code (IPMC)
- 2018 International Fire Code (IFC)

Note that the Electrical and Energy Codes proposed have different editions. The electrical code is revised on a different cycle since it is published by the National Fire Protection Association rather than the International Code Council. The 2017 Edition proposed is the current edition. The Energy Code is proposed to remain on the 2012 Edition as currently adopted with a few modifications proposed. The industry has mixed feelings on the current state of the Energy Code, and many think it reaches too far with the new updates. We are proposing to maintain current local practice under the 2012 Energy Code until the new code is more fully evaluated by the industry.

Purpose / Goals:

Maintaining current codes is important to support safety, innovation, development, resilience and sustainability. The model codes are updated every three years. The City of Olathe and other jurisdictions in Johnson County have traditionally adopted every other edition, so the local code updates are done on a six-year cycle. Other cities in the County and across the nation have adopted or will be adopting these same codes. The cities of Lenexa, Lee's Summit and Shawnee have recently adopted these codes with similar amendments as what we have proposed for use in Olathe. Codes in Lenexa and Lee's Summit have an effective date of April 1, 2019 and Shawnee has established an effective date of July 1st, 2019. Other surrounding cities are currently in the same process and will be presenting adoption of these same codes to their respective governing bodies in the upcoming weeks.

The International Codes are considered as consensus codes and they are the most widely adopted codes across the nation. The code update process begins with public change proposals. These change proposals are first reviewed by a Code Development Review Committee. The committee's response and action on the change proposals are then discussed during the Development Committee Action Hearings. Following the action hearings, the public has an opportunity to review and comment on the changes and the committee action before they proceed to the Public Action Hearings. At this time, further testimony is presented to either accept the committee action or propose modification of their actions. Change proposals are then voted upon by the ICC membership, which is comprised of governmental building and fire code officials. The point of this summary is to illustrate that the model codes are made up of the proposals, discussion and decisions of thousands of professionals related to the codes industry. The model code provides a consensus-based document that is the foundation for code adoption across the country.

The Building Codes Division developed a set of goals or visions as we reviewed and proposed these codes for adoption. The goals are as follows:

- To make adopted codes throughout County and Metro KC area as consistent as possible.
- Take a reasonable and responsible approach to adoption of new codes to keep up with new technology and research but respect local industry practice.
- Minimize amendments and stay close to model codes.

Having consistent codes throughout the county and region helps architects, engineers, developers and builders design and construct projects more efficiently. Staff participated in multiple task groups focused on consistency in codes across the region dating back to the Spring of 2018. These groups include the Johnson County Building Officials Association Code Committee and the metro wide Code Adoption Task Force sponsored by the Metro Fire Chief's Association. These meetings were also attended by the Home Builder's Association, trade experts and other interested parties and organizations.

Johnson County Building Officials Code Adoption Task Group

The Johnson County Building Officials Association Code Committee was comprised of jurisdictions from across the county and the metropolitan area. The following jurisdictions participated in the Committee:

Johnson County	Wyandotte County	Fairway, KS	Kansas City, MO
Kansas City, KS	Overland Park, KS	Olathe, KS	Lenexa, KS
Gardner, KS	Prairie Village, KS	Douglas County, KS	Mission Hills, KS
Mission, KS	Leawood, KS	Shawnee, KS	

Other associated agencies that participated in this group include the following:

Kansas City Home Builders Association	Johnson County Fire Marshals
Performance Plus Homes	Concrete Promotional Group
Johnson County Contractor Licensing	

The group met approximately monthly beginning last spring on the following dates:

3/1/18	4/12/18	5/3/18	6/7/18	7/12/18
8/2/18	9/6/18	10/4/18	11/1/18	12/6/18

Metro Association of Fire Chiefs Code Committee

A code adoption committee was also initiated as a subgroup under the Metro Association of Fire Chiefs to promote consistency across the metro region. The following jurisdictions participated in this task group:

Belton, MO	Gladstone, MO	Grandview, MO	Independence, MO
Kansas City, MO	Kearney, MO	Lee's Summit, MO	Lenexa, KS
Olathe, KS	Overland Park, KS	Raytown, MO	Shawnee, KS

This group met approximately monthly on the following dates:

6/26/18	8/8/18	8/28/18	9/25/18	10/23/18	11/27/18
12/7/18					

Board of Code Review

The Board of Code Review serves as the appeals board for building, fire and property maintenance appeals; however, they have an additional task of serving as an advisory board for the Building Codes Division on the adoption and application of the codes. The board is made up of industry representatives from engineering, architecture/consulting, commercial and residential builders, and mechanical, electrical and plumbing experts. The Board has reviewed the proposed adoption and amendments and has provided valuable guidance and direction. The Board met for discussion on the documents on January 3, 2019 and March 13th, 2019. Several members also participated in the public forum described further below. The board will meet again to review the final documents prior to the City Council vote.

Associated Agency / Public Meetings

In addition to the task group and board meetings, an important component of our code adoption process was to involve associated agency groups and the public. This is to ensure that we are meeting our goal of a responsible and reasonable approach towards adoption while respecting local industry practice. The Kansas City Homebuilder's Association is one the primary stakeholders in this process. Their association representatives joined us through many of the County task force meetings and discussions. Staff also met with them separately to review our proposed amendments and to discuss any concerns that they had with the approach.

We also held a public meeting / builder's forum on March 20, 2019 to review the proposed amendments and to hear any concerns or comments. We had 42 persons in attendance at our forum. Staff is happy to report that concerns were minor, but several good points were raised for discussion. Through our meetings with the Board of Code Review, Home Builder's Association and the public forum, we revised or removed several amendment proposals to address the concerns and comments. A summary of the revised sections is as follows:

- We clarified that architecture and engineering seal requirements for residential projects applies only to new structures, not minor remodels or modifications such as decks and basement finish projects.
- We added an exception for the new storm shelter requirements to clarify that they will not be required for existing buildings.
- The storm shelter requirements were clarified to indicate that a room below the front steps, that is commonly provided in new residential projects, will meet the requirements regardless of the basement being a walkout or garden style.
- Residential Code appendix sections F and P concerning radon mitigation and plumbing pipe sizing were originally proposed for adoption but were removed from the proposal due to concerns addressed with the sections.
- We removed the 25% threshold for enforcement of peeling and flaking paint in our property maintenance codes to allow more flexibility in enforcing these blighting conditions.
- New code language for plumbing code section 308.10 was modified to maintain current industry practice for support of hot water system thermal expansion tanks.
- Energy Code and Residential Code requirements for insulation of hot-water system piping were modified to clarify that they will only apply when the hot water piping leaves the conditioned area.

Through our extensive meetings with interested parties, we have received only minor questions and opposition to proposals which we have worked to address through these modifications where they were possible and did not compromise life safety. If you or the City Council receive comments pertaining to any further concerns or opposition, we would be glad to review the concerns to determine if adjustments need to be made. Our contact with the Home Builder's Association has shared that they are satisfied with the discussions and work we have done and do not plan to attend the Council meeting with any objections.

Significant Change Summary

Finally, we acknowledge that these proposed adoptions and amendments are lengthy and contain a lot of information. Staff has invested a significant amount of time in the review and preparation of this proposed adoption through careful study of the significant changes throughout more than 4,000 pages of code text within the eleven model codes proposed for adoption. Our recommendations are built upon the review and recommendations of the county and metro task groups, which were then fine tuned to suit the conditions and procedures for our City. In an effort to condense this extensive work, we have prepared a summary of the most significant amendment changes for each of the codes. This summary will make up the remainder of this report. We also have additional documentation available, upon request, outlining differences between the 2012 and 2018 Editions of the Codes.

1) International Building Code (IBC)

- a) 107.2.9 – Code footprint drawings are required for certain occupancies where required by the State Fire Marshal's Office.
 - i) Group A >2000 occupants; Group E, community colleges, vocational schools; Group I, Group R-1 and R-2 more than 3 stories or 12,000 sf; R-4.
- b) 423.5 – Storm shelter areas are required for R-1, R-2, R-3, R-4 residential, I-1 and I-2 institutional occupancies.
- c) [F] 903.2.9(6) – The threshold for fire sprinkler protection for S-1 mini storage reduced to 2,500 SF.
- d) [F] 903.3.1.2.1 – Sprinkler protection shall be provided for balconies and decks of multi-family dwelling buildings, regardless of construction type.
- e) [F] 903.3.1.2.1 – Sprinkler protection, or other measures required for combustibles attics of multi-family dwelling buildings, regardless of height.
- f) 3001.6 – Elevator certificates will be required for occupancy and annual inspections. Additional requirements for permits and fees have been deleted.
- g) Appendix B – Board of Code Review. Policies and procedures for the Board of Code Review are consolidated into the building code. OMC Section 2.74 is repealed. No technical changes are proposed.

2) International Residential Code (IRC)

- a) R309.6 – Minimum thickness and slope of residential driveways is established.
- b) R313.1 – Automatic fire sprinkler systems are required in multi-family dwelling units with 3 or more units. This will apply to townhome projects with 3 or more units.
- c) R314.2 – Requirements are clarified for the location of smoke alarms in dwelling units.
- d) R319 – Illumination of address numbers is required.
- e) R323.2 – A storm shelter area or basement is required in residential occupancies.
- f) N1101.13 – Home Energy Rating System (HERS) energy code compliance method rating modified from 85 to 80.
- g) E3902.2, E3902.5 – Additional exceptions are provided for GFCI electrical receptacles.

3) International Existing Building Code (IEBC)

- a) No significant changes

4) International Plumbing Code (IPC)

- a) 403.1 – Exceptions are added for service sinks; reducing the number of occupancies where they are required.
- b) 410.4 – Provisions are added allowing more substitutions for drinking fountains.

5) International Mechanical Code (IMC)

- a) No significant changes.

6) International Fuel Gas Code (IFGC)

- a) No significant changes.

7) National Electrical Code (NEC)

- a) 210.8(A)(2) – Additional exceptions are provided for GFCI receptacles in garages.
- b) 210.8(A)(5) – Additional exceptions are provided for GFCI receptacles in basements.

8) International Energy Conservation Code (IECC)

- a) The 2012 IECC will be maintained as the energy code.
- b) C402.3 – Modifications to the maximum fenestration percentages are deleted.
- c) R403.4.2. Hot water pipe insulation requirements are returned to the code requirements; however, they are revised to only apply when the hot water pipe is buried or otherwise leaves the conditioned space.
- d) R401.2.1 – The Home Energy Rating System score is revised from 85 to 80.
- e) R406 – Provisions for Energy Rating Index Compliance Alternative is brought from the 2018 code; however this is maintaining current practice and no technical changes are proposed.

9) International Swimming Pool and Spa Code (ISPSC)

- a) 305.4 – An additional provision is provided permitting the use of a home security system in lieu of a separate alarm for doors and windows leading to a pool area.

10) International Property Maintenance Code (IPMC)

- a) Property maintenance requirements in OMC Section 15.22 and 15.38 are consolidated into this section. OMC 15.38 is proposed to be repealed.
- b) No technical changes are proposed, although the inclusion of IPMC sections that were previously deleted will improve property maintenance provisions.

11) International Fire Code (IFC)

- a) 105.6 – Operational permit requirements are modified. Permits are required for:
 - i) Special Amusement Buildings.
 - ii) Explosives.
 - iii) Hazardous Materials.
 - iv) Mobile Food Preparation Vehicles.
 - v) Open Burning.
 - vi) Temporary tents over 900 SF.
- b) 308.1.4 – Open flame cooking appliances prohibited on combustibile balconies and decks in multi-family occupancies. Gas cooking appliances are permitted when fire sprinklers are provided.
- c) 407.5, 407.6 – HMMP and HMIS are required for facilities requiring a hazardous materials permit.
- d) 1103.5.1 – Group A-2 retroactive fire sprinkler requirements. Date of compliance is set at December 31, 2020.
- e) 1103.5.3 – Group I-2 retroactive fire sprinkler requirements. Date of compliance is set at December 31, 2020.
- f) 3310.1 – Fire access is required during construction before combustibile construction commences.
- g) Appendix D – fire apparatus turnaround requirements for cul-de-sacs reduced to 78-foot diameter.

In closing, we hope that this memo has provided a valuable summary of the extensive work that Staff has performed over the past year. Our goal is to present a codes package that is acceptable to our citizens, visitors, building owners, developers and builders; while also maintaining consistency with the surrounding jurisdictions in our county and across the metro Kansas City area. We have additional information that can be easily shared upon request concerning the code changes, process, and proposed amendments. Staff will be happy to discuss any and every concern or comment that you may have during your review of these documents.

Staff will provide this report, a presentation and the proposed ordinances at the April 2nd City Council meeting. We then plan to return on April 16th for a vote on these proposed adoptions and amendments. Please do not hesitate to contact me if you require any further information on these proposals.

Sincerely,



Mark S. Wassom, P.E., FM, CBO
Assistant Chief of Community Risk Reduction / Chief Building Official