Code Amendment Proposal Form
For public amendments proposed to the 2018 editions of the International Codes

Instructions: Upload this form and all accompanying documentation at www.denvergov.org/BuildingCode. If you are submitting your proposal on a separate sheet, make sure it includes all information requested below.

All proposals must be received by April 26, 2019.

CONTACT INFORMATION

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Signature:

Co-proposed by:

AMENDMENT PROPOSAL

Please use a separate form for each proposal.

1) Code(s) associated with this proposal. Please use acronym: IECC

If you submitted a separate coordination change to another code, please indicate which code: __________________________

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Code Name</th>
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<tbody>
<tr>
<td>DBC-xxxx</td>
<td>Denver Building Code–xxxx (code) amendments</td>
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<td>(e.g., DBC-IBC, DBC-IEBC)</td>
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<tr>
<td>IBC</td>
<td>International Building Code</td>
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<tr>
<td>IEBC</td>
<td>International Existing Building Code</td>
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<tr>
<td>IECC</td>
<td>International Energy Conservation Code</td>
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<tr>
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<tr>
<td>IFC</td>
<td>International Fire Code</td>
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<td>IFGC</td>
<td>International Fuel Gas Code</td>
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<td>IGCC</td>
<td>International Green Construction Code</td>
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<td>IMC</td>
<td>International Mechanical Code</td>
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<td>IPC</td>
<td>International Plumbing Code</td>
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<tr>
<td>IRC</td>
<td>International Residential Code</td>
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2) Please check here if a separate graphic file is provided: ☐

Graphics may also be embedded within your proposal below.

3) Use this template to submit your proposal or attach a separate file, but please include all items requested below in your proposal. The only formatting needed is **BOLDING, STRIKETHROUGH**, and **UNDERLINING**. Please do not provide additional formatting such as tabs, columns, etc., as this will be done by CPD.

Code Sections/Tables/Figures Proposed for Revision:

R202, C202

Proposal:

Revise sections R202 and C202 as follows:

GROUP R. Buildings or portions of buildings that contain any of the following occupancies as established in the International Building Code:

1. Group R-1.
2. Group R-2 where located more than three stories in height above grade plane.
3. Group R-4 where located more than three stories in height above grade plane.

RESIDENTIAL BUILDING. For this code, includes detached one- and two-family dwellings and multiple single-family dwellings (townhouses) and Group R-2, R-3 and R-4 buildings three stories or less in height above grade plane.

Supporting Information:

Purpose:

The purpose of this proposal is to simplify the way that the code applies to multifamily buildings in order to support more consistent energy outcomes.

Reason:

Multifamily poses a conundrum for energy regulation. Generally, these buildings are constructed and renovated more like commercial buildings, but used like residential buildings. As a result, the regulation of multifamily buildings has been split between the residential and the commercial codes. Multifamily buildings that are four stories and higher are considered high-rise and regulated by the commercial chapter of the International Energy Conservation Code (IECC). However, with their residential usage patterns and loads, they don't truly fit a commercial code with its focus on commercial loads and usage patterns. Multifamily buildings that are three stories or lower are regulated by the residential chapter of the IECC. However, with their larger size and higher occupant density, these low-rise multifamily buildings don't truly fit in a residential energy code with its focus on single family homes. The result is energy regulation that does not adequately serve the multifamily market:

Regulation by two different energy codes complicates both code compliance and code enforcement.

- Neither the Commercial nor the Residential code was crafted to address the unique characteristics of the multifamily building type.
- Advancing the energy code for multifamily is hindered by the necessity of pursuing changes simultaneously in two different codes, both of which are dominated by issues of building types other than multifamily.
- The presence of two different code baselines has made it very difficult to create above-code energy standards and efficiency programs that apply to all multifamily buildings.

This proposal will solve these problems by simply placing all R-2 buildings (the occupancy that covers what is traditionally considered multifamily), regardless of height, under the commercial section of the code. Many small commercial buildings are constructed using the same construction methods, materials and equipment that are common in low-rise multifamily, so buildings like low-rise multifamily are already subject to the commercial requirements. This is the solution that has been chosen in Boulder, CO to solve this issue. A more comprehensive proposal that would have minimized the stringency impact of unifying high-rise and low-rise multifamily under one set of requirements was attempted in the 2018 code cycle, but ultimately was disapproved due to its complexity. This solution is far simpler and more straightforward, while still solving all the issues identified above.

If this proposal is adopted, Denver’s energy code will be improved substantially for its use with multifamily buildings:

- Both code compliance and code enforcement will be less complicated and therefore less costly
- The energy code will be able to more directly address multifamily buildings in the future
- A single code baseline will make it easier to create an above-code standard for Green standards, utility programs and recognition programs above-code standards, Green Standards, utility incentive programs, and other recognition efforts
- Multifamily code issues will no longer complicate the development of the Residential code

Referenced Standards:

NA

Note: List any new referenced standards that are proposed to be referenced in the code.

Impact:

The effect of the proposal on the cost of construction: ☒ Increase ☒ Reduce ☐ No Effect

- This proposal could either reduce or increase the cost of low-rise multifamily buildings depending on their design. It would subject them to some requirements that they are not currently subject to, but lower the requirements on the envelope for substantial savings.

The effect of the proposal on the cost of design: ☒ Increase ☒ Reduce ☐ No Effect

- See above
Is the proposal more or less restrictive than the I-codes: ☐ More ☐ Less ☒ Same

- According to an energy analysis performed by the Pacific Northwest National Lab that compared the residential and commercial code when applied to different MF building types, the two codes delivered essentially the same outcomes in low-rise and mid-rise prototypes and the commercial code was about 2% more stringent than the residential code in high-rise for Denver’s climate. Since this proposal would only affect low-rise MF, the stringency would be essentially the same.

**Departmental Impact:** (To be filled out by CPD staff)

**Note:** CITY STAFF ONLY. Discuss the impact of this proposal in this section AND indicate the impact of this amendment proposal for each of the following:

- The effect of the proposal on the cost of review: ☐ Increase ☐ Reduce ☐ No Effect
- The effect of the proposal on the cost of enforcement/inspection: ☐ Increase ☐ Reduce ☐ No Effect