**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](http://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**.

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**CONTACT INFORMATION**

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Signature: [Signature]

Co-proposed by: Amber Wood, Denver Department of Public Health and Environment  
Jim Meyers, Southwest Energy Efficiency Project

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**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>
</tr>
</thead>
<tbody>
<tr>
<td>DBC-xxxxx</td>
<td>Denver Building Code–xxxx (code) amendments (e.g., DBC-IBC, DBC-IEBC)</td>
</tr>
<tr>
<td>IBC</td>
<td>International Building Code</td>
</tr>
<tr>
<td>IEBC</td>
<td>International Existing Building Code</td>
</tr>
<tr>
<td>IECC</td>
<td>International Energy Conservation Code</td>
</tr>
</tbody>
</table>

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**, **STRIKEOUT** AND **UNDERLINING**. Please do not provide additional formatting such as tabs, columns, etc., as this will be done by CPD.

<table>
<thead>
<tr>
<th>Code Sections/Tables/Figures Proposed for Revision:</th>
</tr>
</thead>
<tbody>
<tr>
<td>IECC -R403.3</td>
</tr>
</tbody>
</table>

**Proposal:**

Modify the text as follows:
**R403.3 Ducts.** Ducts and air handlers shall be installed in accordance with Sections R403.3.1 through R403.3.7. Ducts shall be located entirely within the building thermal envelope. Ducts located in the attic shall be considered entirely within the building thermal envelope if they are covered by no less than R-30 of insulation.

R403.3.1 Insulation (Prescriptive). Supply and return ducts in attics shall be insulated to an R-value of not less than R-8 for ducts 3 inches (76 mm) in diameter and larger and not less than R-6 for ducts smaller than 3 inches (76 mm) in diameter. Supply and return ducts in other portions of the building shall be insulated to not less than R-6 for ducts 3 inches (76 mm) in diameter and not less than R-4.2 for ducts smaller than 3 inches (76 mm) in diameter. **Exception:** Ducts or portions thereof located completely inside the building thermal envelope.

**Supporting Information:**

**Purpose:**

The purpose of this proposal is to prohibit the practice of locating ductwork outside of the thermal envelope.

**Reason:**

Ductwork that is outside the conditioned space presents a major energy loss that is only partly mitigated by current duct insulation requirements. The temperature differential between the inside of ducts and exterior temperatures is higher than the temperature differential between the conditioned space and the exterior, yet the insulation requirements for ductwork in unconditioned space is a mere fraction of what is required even in opaque walls. The larger delta-T and lower insulation drives higher energy losses per square foot of surface area. This proposal prohibits the location of ductwork in unconditioned space in the prescriptive path in order to eliminate this energy loss potential.

**Referenced Standards:**

NA

**Impact:**

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

- The code change proposal may increase the cost of construction since it will require the accommodation of ductwork within the conditioned space. However, this can be mitigated through conscientious design and duct insulation savings may even make this a less costly solution in some applications.

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

- The code change proposal may increase the cost of design, especially in order to avoid additional construction cost.

Is the proposal more or less restrictive than the I-codes: ☑ More ☐ Less ☐ 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