1) Name: Robby Schwarz  
Date: 3/25/2019

2) Proposals should be drafted in Word with the only formatting that is needed being **BOLDING**, Strikeout and Underlining. Please do not provide additional formatting such as tabs, columns, etc.

Please use a separate form for each proposal submitted.

Is separate graphic file provided (Yes or No):

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Code Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBC</td>
<td>International Building Code</td>
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<tr>
<td>IECC</td>
<td>International Energy Conservation Code</td>
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<tr>
<td>IEBC</td>
<td>International Existing Building Code</td>
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<tr>
<td>IFC</td>
<td>International Fire Code</td>
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**AMENDMENT PROPOSAL**

Please provide all of the following items in your amendment proposal.

**Code Sections/Tables/ Figures Proposed for Revision:**
R103.2 Information on Construction Documentes

**Note:** If the proposal is for a new section, indicate (new).
Proposal:

R103.2 Information on construction documents. Construction documents shall be drawn to scale on suitable material. Electronic media documents are permitted to be submitted where approved by the code official. Construction documents shall be of sufficient clarity to indicate the location, nature and extent of the work proposed, and show in sufficient detail pertinent data and features of the building, systems and equipment as herein governed. Details shall include the following as applicable:

1. Insulation materials and their R-values.
2. Fenestration $U$-factors and solar heat gain coefficients (SHGC).
3. Area-weighted $U$-factor and solar heat gain coefficients (SHGC) calculations.
4. Mechanical system design criteria.
5. Mechanical and service water-heating systems and equipment types, sizes and efficiencies.
6. Equipment and system controls.
7. Duct sealing, duct and pipe insulation and location.
8. Air sealing details.

R103.2.1 Building thermal envelope depiction. The building thermal envelope shall be represented on the construction documents.

R103.2.2 Vapor Management Declaration. A vapor management strategy shall be documented on the construction documents. The following shall be addressed:

1. Type and class of vapor retarder used throughout the building, or listed per assembly, to manage moisture migration via diffusion as required by Section R402.1.1.

2. Whole house ventilation strategy to be used in accordance with Section R403.6 and Section M1505.3 of the International Residential Code to ensure background ventilation moisture control.

Note: Show the proposal using strikeout, underline format. At the beginning of each section, one of the following instruction lines are also needed:

- Revise as follows
- Add new text as follows
- Delete and substitute as follows
- Delete without substitution
Supporting Information:

Reason Statement:

Currently the IRC allows one of three vapor retarder strategies to be used in a residential dwelling unit all of which require different levels of installation execution and coordination with the rest of the structure and systems that are built and the energy code features that are required by the IECC. In addition, the three strategies only address diffusion which is one of two means of moisture transport that is occurring in a dwelling unit. Moisture moves in a house by diffusion (which the vapor retarder addresses) but also with air. How we expect to control these two moisture transport mechanisms should be made prominent on the plan set to create more efficient and durable structures. This is especially true since more moisture flows into building assemblies through air transport than by the process of diffusion. This code change proposal promotes a subtle shift in our thinking to understand that moisture management is a combination of components and systems working together to protect the building from moisture related failures.

In the prescriptive section R402.1.1 Vapor retarders are required to be installed and the section refers you to the IRC and the IBC. Vapor Retarders discussed in these sections are an important part of gaining control and predictability of the moisture movement within a dwelling unit, but there is a choice that must be made as to which class of retarder will be installed. The installation of class 1 versus class 3 vapor retarder is significantly different and impacts the efficiency and durability of the structure differently.

This declaration will drive moisture management considerations into the design process resulting in assemblies that will be more moisture resistant and more efficient.

Although it is adequate to put vapor retarder information on the plan set there is no requirement to declare which of the three vapor management strategies will be used or to include them on the plan set in the IRC or the IECC. The interaction of the IECC requirements and the vapor management strategy chosen is critical to coordinate, and this proposal ensures that thought is put into it. The language and the requirements are simple in order to be clear. The requirement is not to simply declare which of the three vapor retarders and which of the three ventilation strategies will be used. The requirement ensures the code official knows upfront what to look for, and the design professional considers the interaction of energy and vapor management.

Note: The following items are required to be included:

**Purpose:** The proponent shall clearly state the purpose of the proposed amendment to physical, environmental and customary characteristics that are specific to the City and County of Denver (e.g., clarify the Code; revise outdated material; substitute new or revised material for physical, environmental and customary characteristics; add new requirements to the Code; delete current requirements, etc.)

**Reasons:** The proponent shall justify changing the current Code provisions, stating why the proposal is necessary to reflect physical, environmental and customary characteristics that are specific to the City and County of Denver. Proposals that add or delete requirements shall be supported by a logical explanation which clearly shows why the current does not reflect physical, environmental and customary characteristics that are specific to the City and County of Denver and explains how such proposals will improve the Code.

**Substantiation:** The proponent shall substantiate the proposed amendment based on technical information and substantiation. Substantiation provided which is reviewed and determined as not germane to the technical issues addressed in the proposed amendment shall be identified as such.

**Bibliography** (as needed): The proponent shall submit a bibliography when substantiating material is associated with the amendment proposal. The proponent shall make the substantiating materials available for review.

November 15, 2005
**Impact:**

**Cost**

There would be a small cost increase associated with this proposal as the proposal merely brings existing requirements together to be reported on the plan set. I estimate that this would require no more than 1 hour of time of the designer or architect. Approximately $100 - $200.

**Note:** The proponent shall indicate one of the following regarding the impact of the amendment proposal:
- The effect of the amendment proposal on the cost of construction; Increase, Reduce, No Effect:
- The effect of the amendment proposal on the cost of design; Increase, Reduce, No Effect:
- Is the amendment proposal more- or less-restrictive than the I-Codes; More, Less, Same:

**Departmental Impact:**

Click or tap here to enter text.

**Note:** Indicate one of the following regarding the impact of the amendment proposal:
- The effect of the amendment proposal on the cost of review; Increase, Reduce, No Effect:
- The effect of the amendment proposal on the cost of enforcement/inspection; Increase, Reduce, No Effect: