

BCAC ADM Item #32 Alternative Means

Codes: IEBC, IFC, IFGC, IMC, IPC, IPMC, IPSDC, IRC, ISPSC, IWUIC, IECC (C and R)

Committee: BCAC, FCAC, PMGCAC, SEPCAC

Date: 10-29-2021

Will be submitted to IECC with public review draft.

Manny Muniz had changes to IBC 104.11 with ADM19-19 (AM), ADM20-19 (D), ADM21-19 (D)

Reason from ADM 19-19: This section can be written more clearly as to the various criteria that must be met in order to be approved as an alternate material, design or method of construction. This will make it easier for the building official to make the necessary evaluation and decision. Should the alternate not be approved, it will also make it easier for the building official to cite the reasons for disapproval. There are no changes to the various requirements that the building official must consider.

Reason: ADM19-19 modified IBC Section 104.11, but did not make the same suggestion across all the codes. The changes to this section were primarily formatting, with some slight reordering. This same change to be applicable to all the codes. It was also noted that not all of the codes included a subsection on research reports as an aid to alternative approval.

Cost impact – None. Editorial

IBC

[A] 104.11 Alternative materials, design and methods of construction and equipment. The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been *approved*. An alternative material, design or method of construction shall be *approved* where the *building official* finds that the proposed alternative meets all of the following:

1. The alternative material, design or method of construction is satisfactory and complies with the intent of the provisions of this code,
2. The material, method or work offered is, for the purpose intended, not less than the equivalent of that prescribed in this code as it pertains to the following:
 - 2.1. Quality.
 - 2.2. Strength.
 - 2.3. Effectiveness.
 - 2.4. *Fire resistance*.
 - 2.5. Durability.
 - 2.6. Safety.

Where the alternative material, design or method of construction is not approved, the *building official* shall respond in writing, stating the reasons why the alternative was not approved.

[A] 104.11.1 Research reports. Supporting data, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall consist of valid research reports from *approved* sources.

ICCP – none

IEBC

[A] 104.11 Alternative materials, design and methods of construction, and equipment. The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been *approved*. An alternative material,

design or method of construction shall be *approved* where the *code official* finds that the proposed alternative meets all of the following:

1. The alternative material, design or method of construction is satisfactory and complies with the intent of the provisions of this code, ~~and that~~
2. The material, method or work offered is, for the purpose intended, not less than the equivalent of that prescribed in this code ~~in~~ as it pertains to the following:
 - 2.1. Quality,
 - 2.2. Strength,
 - 2.3. Effectiveness,
 - 2.4. Fire resistance,
 - 2.5. Durability, ~~and~~
 - 2.6. Safety.

Where the alternative material, design or method of construction is not *approved*, the *code official* shall respond in writing, stating the reasons why the alternative was not *approved*.

[A] **104.11.1 Research reports.** Supporting data, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall consist of valid research reports from *approved* sources.

IFC

[A] **104.10 Alternative materials, design and methods of construction and equipment.** The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been *approved*. An alternative material, design or method of construction shall be *approved* where the *fire code official* finds that the proposed alternative meets all of the following:

1. The alternative material, design or method of construction is satisfactory and complies with the intent of the provisions of this code, ~~and that~~
2. The material, method or work offered is, for the purpose intended, not less than the equivalent of that prescribed in this code ~~in~~ as it pertains to the following:
 - 2.1. Quality,
 - 2.2. Strength,
 - 2.3. Effectiveness,
 - 2.4. Fire resistance,
 - 2.5. Durability, ~~and~~
 - 2.6. Safety.

Where the alternative material, design or method of construction is not *approved*, the *fire code official* shall respond in writing, stating the reasons why the alternative was not *approved*.

[A] **104.10.1 Research reports.** Supporting data, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall consist of valid research reports from *approved* sources.

IFGC

[A] **105.2 Alternative materials, design and methods of construction and equipment.** The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been *approved*. An alternative material, design or method of construction shall be *approved* where the *code official* finds that the proposed alternative meets all of the following:

1. The alternative material, design or method of construction is satisfactory and complies with the intent of the provisions of this code, ~~and that~~

2. The material, method or work offered is, for the purpose intended, not less than the equivalent of that prescribed in this code ~~in~~ as it pertains to the following:
 - 2.1. Quality₂
 - 2.2. Strength₂
 - 2.3. Effectiveness₂
 - 2.4. Fire resistance₂
 - 2.5. Durability₂ ~~and~~
 - 2.6. Safety.

Where the alternative material, design or method of construction is not *approved*, the *code official* shall respond in writing, stating the reasons why the alternative was not *approved*.

[A] 105.2.1 **Research reports.** Supporting data, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall consist of valid research reports from *approved* sources.

IMC

[A] 105.2 **Alternative materials, design and methods of construction and equipment.** The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been *approved*. An alternative material, design or method of construction shall be *approved* where the code official finds that the proposed alternative meets all of the following:

1. The alternative material, design or method of construction is satisfactory and complies with the intent of the provisions of this code~~, and that~~
2. The material, method or work offered is, for the purpose intended, not less than the equivalent of that prescribed in this code ~~in~~ as it pertains to the following:
 - 2.1. Quality₂
 - 2.2. Strength₂
 - 2.3. Effectiveness₂
 - 2.4. Fire resistance₂
 - 2.5. Durability₂ ~~and~~
 - 2.6. Safety.

Where the alternative material, design or method of construction is not *approved*, the *code official* shall respond in writing, stating the reasons why the alternative was not *approved*.

[A] 105.2.1 **Research reports.** Supporting data, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall consist of valid research reports from *approved* sources.

IPC

[A] 105.2 **Alternative materials, design and methods of construction and equipment.** The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been *approved*. An alternative material or method of construction shall be *approved* where the code official finds that the proposed alternative meets all of the following:

1. The alternative material, design or method of construction is satisfactory and complies with the intent of the provisions of this code~~, and that~~
2. The material, method or work offered is, for the purpose intended, not less than the equivalent of that prescribed in this code ~~in~~ as it pertains to the following:
 - 2.1. Quality₂
 - 2.2. Strength₂

2.3. Effectiveness;

2.4. Fire resistance;

2.5. Durability, ~~and~~

2.6. Safety.

Where the alternative material, design or method of construction is not *approved*, the *code official* shall respond in writing, stating the reasons why the alternative was not *approved*.

[A] **105.2.1 Research reports.** Supporting data, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall consist of valid research reports from *approved* sources.

IPMC

[A] **106.2 Alternative materials, design and methods of construction and equipment.** The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been *approved*. An alternative material, design or method of construction shall be *approved* where the *code official* finds that the proposed alternative meets all of the following:

1. The alternative material, design or method of construction is satisfactory and complies with the intent of the provisions of this code, ~~and that~~

2. The material, method or work offered is, for the purpose intended, not less than the equivalent of that prescribed in this code ~~in~~ as it pertains to the following:

2.1. Quality;

2.2. Strength;

2.3. Effectiveness;

2.4. Fire resistance;

2.5. Durability, ~~and~~

2.6. Safety.

Where the alternative material, design or method of construction is not *approved*, the *code official* shall respond in writing, stating the reasons why the alternative was not *approved*.

[A] **106.6 Research reports.** Supporting data, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall consist of valid research reports from *approved* sources.

IPSDC

[A] **105.2 Alternative materials, design and methods of construction and equipment.** The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been *approved*. An alternative material, design or method of construction shall be *approved* where the *code official* finds that the proposed alternative meets all of the following:

1. The alternative material, design or method of construction is satisfactory and complies with the intent of the provisions of this code, ~~and that~~

2. The material, method or work offered is, for the purpose intended, not less than the equivalent of that prescribed in this code ~~in~~ as it pertains to the following:

2.1. Quality;

2.2. Strength;

2.3. Effectiveness;

2.4. Fire resistance;

2.5. Durability, ~~and~~

2.6. Safety.

Where the alternative material, design or method of construction is not *approved*, the *code official* shall respond in writing, stating the reasons why the alternative was not *approved*.

[A] 105.2.1 Research reports. Supporting data, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall consist of valid research reports from approved sources.

IRC

R104.11 Alternative materials, design and methods of construction and equipment. The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code. ~~The building official shall have the authority to approve~~ An alternative material, design or method of construction ~~upon application of the owner or the owner's authorized agent. The shall be approved where the building official shall first find finds~~ that the proposed alternative meets all of the following:

1. The alternative material, design or method of construction is satisfactory and complies with the intent of the provisions of this code, ~~and that~~
2. The material, method or work offered is, for the purpose intended, not less than the equivalent of that prescribed in this code ~~in~~ as it pertains to the following:
 - 2.1. Quality;
 - 2.2. Strength;
 - 2.3. Effectiveness;
 - 2.4. Fire resistance;
 - 2.5. Durability; ~~and~~
 - 2.6. Safety.

~~Compliance with the specific performance based provisions of the International Codes shall be an alternative to the specific requirements of this code.~~

Where the alternative material, design or method of construction is not *approved*, the *building official* shall respond in writing, stating the reasons why the alternative was not *approved*.

[A] 104.11.1 Research reports. Supporting data, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall consist of valid research reports from approved sources.

ISPSC

[A] 104.10 Alternative materials, design and methods of construction and equipment. The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been approved. An alternative material, design or method of construction shall be approved where the *code official* finds that the proposed alternative meets all of the following:

1. The alternative material, design or method of construction is satisfactory and complies with the intent of the provisions of this code, ~~and that~~
2. The material, method or work offered is, for the purpose intended, not less than the equivalent of that prescribed in this code ~~in~~ as it pertains to the following:
 - 2.1. Quality;
 - 2.2. Strength;
 - 2.3. Effectiveness;
 - 2.4. Fire resistance;
 - 2.5. Durability; ~~and~~
 - 2.6. Safety.

Where the alternative material, design or method of construction is not *approved*, the *code official* shall respond in writing, stating the reasons why the alternative was not *approved*.

[A] 104.10.1 Research reports. Supporting data, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall consist of valid research reports from approved sources.

IWUIC

[A] 105.3 **Alternative materials, design and methods.** The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been *approved*. An alternative material, design or method shall be *approved* where the *building official* **in concurrence with the fire chief** finds that the proposed alternative meets all of the following:

1. The alternative material, design or method of construction is satisfactory and complies with the intent of the provisions of this code, ~~and that~~
2. The material, method or work offered is, for the purpose intended, not less than the equivalent of that prescribed in this code ~~in~~ as it pertains to the following:
 - 2.1. Quality;
 - 2.2. Strength;
 - 2.3. Effectiveness;
 - 2.4. Fire resistance;
 - 2.5. Durability; ~~and~~
 - 2.6. Safety.

Where the alternative material, design or method is not *approved*, the *building official* shall respond in writing, stating the reasons why the alternative was not *approved*.

[A] 105.3.1 Research reports. Supporting data, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall consist of valid research reports from approved sources.

IZC – none

IECC – Commercial

SECTION C102

ALTERNATIVE MATERIALS, DESIGN AND METHODS OF CONSTRUCTION AND EQUIPMENT

C102.1 General. The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been *approved*. ~~The code official shall have the authority to approve~~ An alternative material, design or method of construction ~~upon the written application of the owner or the owner's authorized agent, shall be approved where~~ The *code official* ~~shall first find~~ finds that the proposed alternative meets all of the following:

1. The alternative material, design or method of construction is satisfactory and complies with the intent of the provisions of this code, ~~and that~~
2. The material, method or work offered is, for the purpose intended, not less than the equivalent of that prescribed in this code ~~in~~ as it pertains to the following:
 - 2.1. Quality;
 - 2.2. Strength;
 - 2.3. Effectiveness;
 - 2.4. Fire resistance;

2.5. Durability.

2.6. Energy conservation. and

2.6. Safety.

Where the alternative material, design or method is not approved. The code official shall respond ~~to the applicant,~~ in writing, stating the reasons why the alternative ~~was approved or~~ was not approved.

[A] C102.1 Research reports. Supporting data, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall consist of valid research reports from approved sources.

IECC – Residential

SECTION R102

ALTERNATIVE MATERIALS, DESIGN AND METHODS OF CONSTRUCTION AND EQUIPMENT

R102.1 General. The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been *approved*. ~~The code official shall have the authority to approve.~~ An alternative material, design or method of construction ~~upon the written application of the owner or the owner's authorized agent, shall be approved where~~ The code official ~~shall first find~~ finds that the proposed alternative meets all of the following:

1. The alternative material, design or method of construction is satisfactory and complies with the intent of the provisions of this code, ~~and that~~
2. The material, method or work offered is, for the purpose intended, not less than the equivalent of that prescribed in this code ~~in as it pertains to the following:~~
 - 2.1. Quality.
 - 2.2. Strength.
 - 2.3. Effectiveness.
 - 2.4. Fire resistance.
 - 2.5. Durability.
 - 2.6. Energy conservation. and
 - 2.6. Safety.

Where the alternative material, design or method is not approved, The code official shall respond ~~to the applicant,~~ in writing, stating the reasons why the alternative ~~was approved or~~ was not approved.

[A] R102.1 Research reports. Supporting data, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall consist of valid research reports from approved sources.

IGCC

105.4 ~~Innovative approaches and~~ alternative materials, design, and methods of construction and equipment. The provisions of this code are not intended to prevent the installation of any material or to prohibit any design, ~~innovative approach,~~ or method of construction not specifically prescribed by this code, provided that any such alternative has been *approved*. An alternative material, design, ~~innovative approach~~ or method of construction shall be ~~reviewed and~~ *approved* where the authority having jurisdiction finds that the proposed

1. The alternative material, design or method of construction is satisfactory and complies with the intent of the provisions of this code, ~~and that~~
2. The material, design, method or work offered is, for the purpose intended, not less than at least the equivalent of that prescribed in this code ~~in as it pertains to the following:~~
 - 2.1. Quality.
 - 2.2. Strength.
 - 2.3. Effectiveness.

2.4. Fire resistance.

2.5. Durability.

2.6. Safety.

~~The details of granting the use of alternative materials, designs, innovative approach and methods of construction shall be recorded and entered in the files of the department.~~

Where the alternative material, design or method of construction is not approved, the building official shall respond in writing, stating the reasons the alternative was not approved.

105.4.1 Research reports. Supporting data, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall consist of valid research reports from *approved* sources.