

# Public Review Draft

Proposed Addendum ar to Standard 189.1-2017

# Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings

First Public Review (February 2020)  
(Draft Shows Proposed Changes to Current Standard)

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**ASHRAE, 1791 Tullie Circle, NE, Atlanta GA 30329-2305**



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**(This foreword is not part of this standard. It is merely informative and does not contain requirements necessary for conformance to the standard. It has not been processed according to the ANSI requirements for a standard and may contain material that has not been subject to public review or a consensus process. Unresolved objectors on informative material are not offered the right to appeal at ASHRAE or ANSI.)**

## Foreword

This addendum adds to Standard 189.1 core definitions used to administer the International Codes. They will improve alignment of the technical content of the International Green Construction Code (Standard 189.1) with the other I-Codes. The I-code definitions for “approved,” “approved agency,” and “approved source” are modified slightly to reference the Authority Having Jurisdiction (AHJ) as the approving authority versus the code official; these are technically synonymous.

The definition for “approved” is needed to give guidance to users of the IgCC and Standard 189.1. “Approved” is specified in Standard 189.1 in Sec. 10.3.1.2.2 (b). The new term also enables each instance in which “approved by the AHJ” is used in the text to be shortened to “approved” as shown in this addendum.

The definitions for “approved agency,” “approved source,” “listed” and “labeled” are needed to give guidance to users of the IgCC and Standard 189.1, as these terms had been used throughout the standard without having been assigned a specific meaning.

*[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and ~~strikethrough~~ (for deletions) except where the reviewer instructions specifically describe some other means of showing the changes. Only these changes to the current standard are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed changes.]*

## Addendum ar to 189.1-2017

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*Add definitions to Section 3.2 as follows:*

**approved:** Acceptable to the *authority having jurisdiction.*

**approved agency:** An established and recognized agency that is regularly engaged in conducting tests, furnishing inspection services or furnishing product certification where such agency has been *approved.*

**approved source:** An independent person, firm or corporation, *approved by the authority having jurisdiction,* who is competent and experienced in the application of engineering principles to materials, methods or systems analyses.

**labeled:** Equipment, materials or products to which has been affixed a label, seal, symbol or other identifying mark of a nationally recognized testing laboratory, *approved* agency or other organization concerned with product evaluation that maintains periodic inspection of the production of the above-labeled items and whose labeling indicates either that the equipment, material or product meets identified standards or has been tested and found suitable for a specified purpose.

**listed:** Equipment, materials, products or services included in a list published by an *approved* organization and concerned with evaluation of products or services that maintains periodic inspection of production of listed equipment or materials or periodic evaluation of services and whose listing states either that the equipment, material, product or service meets identified standards or has been tested and found suitable for a specified purpose.

### *Modify Section 3.1 as follows:*

**3.1 General.** Certain terms, abbreviations, and acronyms are defined in this section for the purposes of this standard. These definitions are applicable to all sections of this standard.

Terms that are not defined herein, but that are defined in standards that are referenced herein (***Informative Note:*** e.g., ANSI/ASHRAE/IES Standard 90.1), shall have the meanings as defined in those standards.

Other terms that are not defined shall have their ordinarily accepted meanings within the context in which they are used. Ordinarily accepted meanings shall be based on American standard English language usage, as documented in an *approved* unabridged dictionary ~~accepted by the authority having jurisdiction.~~

### *Modify Section 3.2 as follows:*

**commissioning (Cx) provider:** an *approved* entity, identified by the *owner* ~~and approved by the AHJ,~~ who manages the commissioning team to implement the building *commissioning process*.

***Informative Note:*** This entity is sometimes known as a “commissioning authority,” “CxA,” or “~~approved agency~~ *approved agency*.” See *commissioning (Cx) process*.

### *Modify Section 5.3.7.2.1 as follows:*

**5.3.7.2.1 Minimum Number of Spaces.** Bicycle parking *spaces* shall be provided for at least 5% of the *occupant load* of each building but not less than two parking *spaces*. Occupants who are nonambulatory, under restraint, or under custodial care need not be included in the total *occupant load* for the building. *Building projects with dwelling units* shall be provided with at least 0.5 bicycle parking *spaces* per bedroom for each building but not less than two parking *spaces*.

#### **Exceptions to 5.3.7.2.1:**

1. *Building projects with dwelling units* that provide each unit with a private garage or private, locked storage *space* of sufficient size to store a bicycle.
2. The number of bicycle parking *spaces* shall be allowed to be reduced ~~subject to AHJ approval of a~~ where a transportation plan, prepared by a *registered design professional*, that demonstrates the likelihood that building occupants will use public transportation and/or walk to the *building project site* has been approved.

### *Modify Section 5.3.7.3 as follows:*

**5.3.7.3 Site Vehicle Provisions.** Where on-site vehicle parking is provided for a building that has a building *occupant load* greater than 100, at least one of the following shall be provided:

**a. Provisions for preferred parking spaces.** Not less than 5% of the parking spaces provided shall be designated as preferred parking for vehicles that meet both the minimum greenhouse gas and air pollution scores as required for USEPA SmartWay designation. Where calculation of the parking spaces yields a fraction, such fractions shall be rounded up to the next whole number. Preferred parking spaces shall be located on the shortest route of travel from the parking facility to a *building entrance* but shall not take precedence over parking spaces that are required to be accessible for individuals with disabilities. Where buildings have multiple entrances with adjacent parking, parking spaces shall be dispersed and located near the entrances. Such parking spaces shall be provided with approved signage ~~approved by the AHJ~~ that specifies the permitted use.

*Modify Section 6.3.2.4 as follows:*

#### **6.3.2.4 Roofs**

a. The use of *potable water* or *reclaimed water* for roof spray systems to thermally condition the *roof* shall be prohibited.

**Exception to 6.3.2.4(a):** Where approved ~~approved by the authority having jurisdiction (AHJ)~~, on-site treated *reclaimed water* may be used for roof spray systems.

**Exception to 6.3.2.4(c):** Where approved ~~approved by the AHJ~~, onsite treated *reclaimed water* may be used for vegetated *roof* irrigation systems during and after the vegetation establishment period.

*Modify Section 7.4.6.1.1 as follows:*

**Exception to Section 7.4.6.1.1(d)(2):** Other merchandise categories included in Retail Areas 2 through 4 where ~~the authority having jurisdiction has approved~~ the documented need for additional lighting power based on visual inspection, contrast, or other critical display has been approved.

*Modify Section 3.2 as follows:*

**8.3.3.2.3.4 Inspection.** Construction of acoustical items required in Sections 8.3.3.2.3 through 8.3.3.2.3.3 shall be visually inspected by an ~~approved agency~~ approved agency.

*Modify Section 8.3.3.3.2.1 as follows:*

**8.3.3.3.2.1 Inspection.** Construction of acoustical items required in Section 8.3.3.3.2 shall be visually inspected by an ~~approved agency~~ approved agency.

*Modify Section 8.4.1.1.3 as follows:*

**8.4.1.1.3 Skylight Optical Diffusion Characteristics.** *Skylights* used to comply with Section 8.4.1.1.1 shall have a glazing material or diffuser that has a measured haze value greater than 90% when tested according to ASTM D1003 or other approved test method ~~approved by the AHJ~~.

*Modify the exception to Section 8.4.1.3 as follows:*

#### **Exceptions to 8.4.1.3:**

1. Facades facing within 45 degrees of true north in the northern hemisphere or facades facing 45 degrees from true south in the southern hemisphere.
2. Translucent panels and glazing systems with a measured haze value greater than 90% when tested according to ASTM D1003 or other approved test method ~~approved by the AHJ~~, and that are entirely 8 ft (2.5 m) above the floor do not require external shading devices.

*Modify Section 9.5.1.2 as follows:*

**9.5.1.2 Procedure. (item e)**

The estimate of structural system material quantities shall be verified by a registered design professional or other ~~approved source~~ approved source.

*Modify Section 9.5.1.3 as follows:*

**9.5.1.3 Reporting.** A report that includes a description of the building alternatives and their physical differences shall be prepared and shall comply with the reporting requirements stated in ASTM E2921. The name and address of the registered design professional or other ~~approved source~~ approved source verifying structural system material quantities shall be included. A critical review shall be performed by an external expert independent of those performing the *LCA*.

*Modify Section 10.3.1.1 as follows:*

**10.3.1.1 Building Systems FPT.** *Functional and performance testing* shall be performed on all building systems specifically referenced in this section using *generally accepted engineering standards* where such standards are approved ~~acceptable to the authority having jurisdiction (AHJ)~~.

*Modify Section 10.3.1.1.2.1.3 as follows:*

**10.3.1.1.2.1.3 Property Line Sound.** Testing shall be performed at the locations and times of day or night that are estimated to most likely result in failure and shall be performed with all equipment operating under normal 100% load operation. If daytime test results comply with the nighttime requirements, nighttime testing is not required. The testing shall be in accordance with ANSI/ASA S1.13. The testing results shall comply with the property line noise levels in Table 8.3.3.5.2. ~~At the discretion of the AHJ~~ Where approved, noise that is not created on the source property need not be included in the reported test results.

*Modify Section 10.3.1.2 as follows:*

**10.3.1.2 Building Project Commissioning (Cx) Process.** The *Cx process* shall be performed in accordance with this section using ANSI/ASHRAE/IES Standard 202 or other *generally accepted engineering standards* ~~acceptable to the AHJ~~ where such standards are approved. The *Cx provider* shall verify that a *Cx process* has been incorporated into the design phases of the project and that commissioning shall be incorporated into the *construction documents*. The *Cx process* documents that the building and its commissioned components, assemblies, and systems comply with the *owner's project requirements (OPR)*. The project requirements, including *OPR*, *BoD*, design and construction record documentation, training plans and records, O&M plans and procedures, and Cx reports shall be assembled in a systems manual that provides information for building operating and maintenance staff.

*Modify Informative Appendix I as follows:*

**I2.6 Record Documents.** Record documents should be provided to the *owner* upon project completion. The record documents should be accessible to the building operations and maintenance personnel, be included in the systems manual, and include all of the following:

- a. ~~Approved~~ Approved *construction documents*, including record plans and specifications.
- b. ~~Approved submittals~~ Submittals and coordination drawings. This documentation should show the actual locations of equipment, systems, and assemblies, such as piping, ductwork, valves, controls, access panels, electrical equipment, plumbing equipment, lighting and other operating components and systems. The record documents should particularly note equipment locations that are concealed or are installed in locations other than those indicated on the *approved construction documents*.

c. Engineering and institutional control information for *sites* that have previously been a *brownfield* or that have required environmental corrective action, remediation, or restoration at the federal, state, or local level.

**I2.7 Systems Manual.** A systems manual should be provided by an *owner* for use in building operations training. The systems manual should be made accessible to building operations and maintenance (O&M) personnel and should be updated and maintained by an *owner* for the life of the building.

A systems manual should include the following:

- a. Facility design and *construction documents*, including the following:
  - 1. *OPR* and *BoD*
  - 2. Construction record documents, including drawings, specifications, and ~~approved~~ submittals
- b. Facility systems and assemblies information, including the following:
  - 1. Manufacturer's O&M data for installed equipment systems and assemblies