ANSI/ASHRAE/ICC/USGBC/IES Addendum o to
ANSI/ASHRAE/ICC/USGBC/IES Standard 189.1-2023

Standard for the Design of High-Performance Green Buildings

Except Low-Rise Residential Buildings

The Complete Technical Content of the International Green Construction Code®

Approved by ASHRAE and the American National Standards Institute on January 30, 2026; by the International Code Council on November 17, 2025; by the Illuminating Engineering Society on November 13, 2025; and by the U.S. Green Building Council on December 19, 2025.

This addendum was approved by a Standing Standard Project Committee (SSPC) for which the Standards Committee has established a documented program for regular publication of addenda or revisions, including procedures for timely, documented, consensus action on requests for change to any part of the standard. Instructions for how to submit a change can be found on the ASHRAE® website (www.ashrae.org/continuous-maintenance).

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SPECIAL NOTE

This American National Standard (ANS) is a national voluntary consensus Standard developed under the auspices of ASHRAE. *Consensus* is defined by the American National Standards Institute (ANSI), of which ASHRAE is a member and which has approved this Standard as an ANS, as "substantial agreement reached by directly and materially affected interest categories. This signifies the concurrence of more than a simple majority, but not necessarily unanimity. Consensus requires that all views and objections be considered, and that an effort be made toward their resolution." Compliance with this Standard is voluntary until and unless a legal jurisdiction makes compliance mandatory through legislation.

ASHRAE obtains consensus through participation of its national and international members, associated societies, and public review.

ASHRAE Standards are prepared by a Project Committee appointed specifically for the purpose of writing the Standard. The Project Committee Chair and Vice-Chair must be members of ASHRAE; while other committee members may or may not be ASHRAE members, all must be technically qualified in the subject area of the Standard. Every effort is made to balance the concerned interests on all Project Committees.

The Senior Manager of Standards of ASHRAE should be contacted for

a. interpretation of the contents of this Standard,
b. participation in the next review of the Standard,
c. offering constructive criticism for improving the Standard, or
d. permission to reprint portions of the Standard.

(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

Addendum o introduces a new requirement for bird-friendly glazing design in buildings, which is designated as a jurisdictional option. Research on bird-friendly glazing for collision prevention has guided the development of bird-friendly building design. Creating visual markers on the glass at a specific spacing and geometry to interrupt reflections and transparency has been shown to significantly reduce bird collisions. This addendum specifies requirements for the location and characteristics of this type of glass, termed "bird-friendly glazing." Primary risk areas are addressed, including glazing in vertical fenestration, spandrel, skylights, glazed corners, fly-through conditions, and glazed railings up to 100 ft (30 m) above grade, as well as glazing adjacent to roof areas with vegetation or water features. Different options are provided for compliant bird-friendly characteristics, including glazing with a prescriptively specified pattern of visual markers, glazing compliant with the CSA A460:19 standard, or exterior attachments such as metal screens mounted over glazing. As the risk of bird collisions can vary by location due to different bird populations, migratory patterns, and local environment, this addendum is written as a jurisdictional option.

Informative Note: In this addendum, changes to the current standard are indicated in the text by underlining (for additions) and ~~strikethrough~~ (for deletions) unless the instructions specifically mention some other means of indicating the changes.

Addendum o to Standard 189.1-2023

Modify Table 4.2 as follows.

4.2 Jurisdictional Options. The jurisdictional options listed in Table 4.2 provide jurisdictions the flexibility to adopt the code in a manner that is best suited to meet their unique environmental and regional goals and needs. The informative symbol "[JO]" after the section number indicates jurisdictional option provisions.

Table 4.2 may be used for the code adoption ordinance:

a. Where "No" boxes are provided, the jurisdiction checks the box to indicate where that section is not to be enforced as a requirement in the jurisdiction. Where the "No" box is not checked, that section is adopted.
b. Where a numerical value is listed to specify the level of performance, the jurisdiction shall indicate the required value to be adopted. Where a numerical value is not indicated, the value in the text is adopted without change.

In addition to the jurisdictional options listed in Table 4.2, the standard also provides for optional jurisdictional adoption of Informative Appendix G, "Option for Energy Efficiency Using the IECC Prescriptive Compliance Path." Where the jurisdiction adopts Appendix G, compliance with Sections 7.3 and 7.4 of Standard 189.1 shall be as specified in Appendix G.

Table 4.2 Requirements Determined by the Jurisdiction (Normative in the IgCC)

Section	Section Title, Description and Directives	Jurisdictional Requirement
5.3.7	Bird-Friendly Design	☐ No

Modify Section 5.1 as follows.

5.1 Scope. This section addresses requirements for *building projects* that pertain to site selection, site development, mitigation of *heat island effect*, light pollution reduction, bird-friendly design, and mitigation of transportation impacts.

Add new Section 5.3.7 as follows and renumber subsequent subsections.

5.3.7 [JO] Bird-Friendly Design

5.3.7.1 Bird-Friendly Glazing Required Locations. Bird-friendly glazing shall be installed in new buildings and additions and where 25% or more of the *vertical fenestration area* is being replaced during

existing building alterations. Bird-friendly glazing compliant with Section 5.3.7.2 shall be installed in the following locations:

a. Not less than 90% of the area of *vertical fenestration*, glass spandrel, and *skylights* below 100 ft (30 m) above grade
b. For existing buildings, not less than 90% of the area of *vertical fenestration* being replaced below 100 ft (30 m) above grade
c. Not less than 90% of the area of *vertical fenestration*, glass spandrel, and *skylights* adjacent to and within the first three *stories* above roof areas with vegetation or water features
d. Where glazed, all glazed corners, fly-through conditions, glazing adjacent to courtyards, skywalks, building connectors, railings, noise barriers, and wind barriers below 100 ft (30 m) above grade

Exceptions to 5.3.7.1:

1. Buildings listed on the National Register of Historic Places.
2. Places of religious worship.

5.3.7.2 Bird-Friendly Glazing Characteristics. Where required by Section 5.3.7.1, qualifying bird-friendly glazing shall comply with not less than one of the following:

a. The first or second surface of the glazing shall have opaque, translucent, or ultraviolet reflective visual markers not smaller than 1/8 in. (3 mm), not more than 2 in. (50 mm) between linear continuous visual markers, and a density pattern such that a circle with diameter no more than 2.7 in. (69 mm) will fit between discrete point visual markers.
b. Clauses 3.3.1 through 3.3.3 of CSA A460.
c. Glazing shall be covered by permanently attached exterior building-integrated structures that do not have gaps larger than 2 in. (50 mm) in any dimension, including metal screens and fixed solar shading.
d. Glazing shall have a bird-friendly configuration, including markers and surface orientation approved by the *AHJ*.

Informative Note: Refer to NGA DG01-21, *Best Practices for Bird-Friendly Glazing Design*, in Informative Appendix L.

Add informative note at the end of fenestration-related items in Section 7.4.2.9 as follows.

Informative Note: Refer to Section 5.3.7 regarding bird-friendly design for fenestration. Where selected as a jurisdictional option, bird-friendly glazing will be required for fenestration in specified locations.

Modify Section 11 as follows.

11. NORMATIVE REFERENCES

Canadian Standards Association (CSA)
178 Rexdale Blvd.
Toronto, ON, M9W 1R3, Canada
1-800-463-6727 and 1-416-747-4000; www.csa.ca

CSA A460:19
Bird-Friendly Building Design
5.3.7

Modify Informative Appendix L as follows.

INFORMATIVE APPENDIX L
INFORMATIVE REFERENCES AND BIBLIOGRAPHY

National Glass Association
344 Maple Avenue West, Suite 272
Vienna, VA 22180, United States
1-703-442-4890; www.glass.org

NGA DG01-21
Best Practices for Bird-Friendly Glazing Design
5.3.7

POLICY STATEMENT DEFINING ASHRAE'S CONCERN FOR THE ENVIRONMENTAL IMPACT OF ITS ACTIVITIES

ASHRAE is concerned with the impact of its members' activities on both the indoor and outdoor environment. ASHRAE's members will strive to minimize any possible deleterious effect on the indoor and outdoor environment of the systems and components in their responsibility while maximizing the beneficial effects these systems provide, consistent with accepted Standards and the practical state of the art.

ASHRAE's short-range goal is to ensure that the systems and components within its scope do not impact the indoor and outdoor environment to a greater extent than specified by the Standards and Guidelines as established by itself and other responsible bodies.

As an ongoing goal, ASHRAE will, through its Standards Committee and extensive Technical Committee structure, continue to generate up-to-date Standards and Guidelines where appropriate and adopt, recommend, and promote those new and revised Standards developed by other responsible organizations.

Through its *Handbook*, appropriate chapters will contain up-to-date Standards and design considerations as the material is systematically revised.

ASHRAE will take the lead with respect to dissemination of environmental information of its primary interest and will seek out and disseminate information from other responsible organizations that is pertinent, as guides to updating Standards and Guidelines.

The effects of the design and selection of equipment and systems will be considered within the scope of the system's intended use and expected misuse. The disposal of hazardous materials, if any, will also be considered.

ASHRAE's primary concern for environmental impact will be at the site where equipment within ASHRAE's scope operates. However, energy source selection and the possible environmental impact due to the energy source and energy transportation will be considered where possible. Recommendations concerning energy source selection should be made by its members.

ASHRAE · 180 Technology Parkway NW · Peachtree Corners, GA 30092 · www.ashrae.org

Standard 189.1 and the International Green Construction Code

Standard 189.1 serves as the complete technical content of the International Green Construction Code® (IgCC). The IgCC creates a regulatory framework for new and existing buildings, establishing minimum green requirements for buildings and complementing voluntary rating systems. For more information, visit www.iccsafe.org.

About ASHRAE

Founded in 1894, ASHRAE is a global professional society committed to serve humanity by advancing the arts and sciences of heating, ventilation, air conditioning, refrigeration, and their allied fields.

As an industry leader in research, standards writing, publishing, certification, and continuing education, ASHRAE and its members are dedicated to promoting a healthy and sustainable built environment for all, through strategic partnerships with organizations in the HVAC&R community and across related industries.

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