

**ANSI/ASHRAE/ICC/USGBC/IES Addenda to
ANSI/ASHRAE/ICC/USGBC/IES Standard 189.1-2020**

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 the ASHRAE Standards Committee on November 4, 2020; by the ASHRAE Board of Directors on November 18, 2020; by the International Code Council on October 22, 2020; by U.S. Green Building Council on November 5, 2020; by the Illuminating Engineering Society on October 29, 2020; and by the American National Standards Institute on December 16, 2020.

These addenda were 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 (<https://www.ashrae.org/continuous-maintenance>).

The latest edition of an ASHRAE Standard may be purchased on the ASHRAE website (www.ashrae.org) or from ASHRAE Customer Service, 180 Technology Parkway NW, Peachtree Corners, GA 30092, telephone: 404-636-8400 (worldwide), or toll free 1-800-527-4723 (for orders in the United States and Canada), or e-mail: orders@ashrae.org. For reprint permission, go to www.ashrae.org/permissions.

© 2020 ASHRAE

ISSN 1041-2336



Cognizant TC: 2.8 Building Environmental Impacts and Sustainability
SPLS Liaison: Walter T Grondzik · ASHRAE Staff Liaisons: Emily Toto
ICC Liaison: Mike Pfeiffer · IES Liaison: Mark Lien · USGBC Liaison: Wes Sullens

Roger Hedrick*, <i>Chair</i>	Michael Cudahy*	Stephen Kanipe	Steven Rosenstock*
Charles Eley*, <i>Co-Vice-Chair</i>	Thomas Culp*	James Kendzel	Loren Ross
Katherine Hammack*, <i>Co-Vice-Chair</i>	David Delaquila	Andrew Klein	Michael Schmeida
Josh Jacobs*, <i>Co-Vice-Chair</i>	Greg Eades*	Vladimir Kochkin	Benjamin Seeley
Michael Jouaneh*, <i>Co-Vice-Chair</i>	Jim Edelson*	Thomas Lawrence	Larry Smith
Lawrence Schoen*, <i>Co-Vice-Chair</i>	Anthony Floyd*	Neil Leslie*	Kent Sovocool*
Costas Balaras	Ellen Franconi	Christine Locklear	Christine Subasic*
James Bogdan	Patricia Fritz	Richard Lord	Dennis Stanke
Jeff Bradley*	Susan Gitlin*	C. Webster Marsh	Wayne Stoppelmoor
Scott Buckley	Gregg Gress*	Joel Martell	Michael Temple
Julie Chandler	Paul Grahovac	Jonathan McHugh*	Martha VanGeem*
Kim Cheslak	Maureen Guttman	Adam McMillen*	Scott West*
Glen Clapper	Thomas Hogarth*	Erik Miller-Klein	Daniel Whittet
Ernest Conrad*	Donald Horn*	Gwelen Paliaga	Joe Winters*
Dru Crawley	Jonathan Humble	Thomas Pape*	Jian Zhang*
John Cribbs	Ksenija Janjic	Jason Radice	
John Cross*	Greg Johnson	Teresa Rainey	

* Denotes members of voting status when the document was approved for publication

ASHRAE STANDARDS COMMITTEE 2020–2021

Drury B. Crawley, <i>Chair</i>	Susanna S. Hanson	Cesar L. Lim	Christian R. Taber
Rick M. Heiden, <i>Vice Chair</i>	Jonathan Humble	James D. Lutz	Russell C. Tharp
Els Baert	Srinivas Katipamula	Karl L. Peterman	Theresa A. Weston
Charles S. Barnaby	Gerald J. Kettler	Erick A. Phelps	Craig P. Wray
Robert B. Burkhead	Essam E. Khalil	David Robin	Jaap Hogeling, <i>BOD ExO</i>
Thomas E. Cappellin	Malcolm D. Knight	Lawrence J. Schoen	William F. McQuade, <i>CO</i>
Douglas D. Fick	Jay A. Kohler	Steven C. Sill	
Walter T. Grondzik	Larry Kouma	Richard T. Swierczynna	

Connor Barbaree, *Senior Manager of Standards*

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

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

DISCLAIMER

ASHRAE uses its best efforts to promulgate Standards and Guidelines for the benefit of the public in light of available information and accepted industry practices. However, ASHRAE does not guarantee, certify, or assure the safety or performance of any products, components, or systems tested, installed, or operated in accordance with ASHRAE's Standards or Guidelines or that any tests conducted under its Standards or Guidelines will be nonhazardous or free from risk.

ASHRAE INDUSTRIAL ADVERTISING POLICY ON STANDARDS

ASHRAE Standards and Guidelines are established to assist industry and the public by offering a uniform method of testing for rating purposes, by suggesting safe practices in designing and installing equipment, by providing proper definitions of this equipment, and by providing other information that may serve to guide the industry. The creation of ASHRAE Standards and Guidelines is determined by the need for them, and conformance to them is completely voluntary. In referring to this Standard or Guideline and in marking of equipment and in advertising, no claim shall be made, either stated or implied, that the product has been approved by ASHRAE.

(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 bj modifies the landscape design requirements in Section 6 to simplify and clarify that they are intended only for irrigated areas, with the objective of reducing water consumption. The changes also replace the term "adapted plants" with "rainfall- ET_c compatible plants and native plants." The former term is deemed difficult to enforce, while the replacement is not. The replacement term does not change the intent of the requirements.

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

Addendum bj to Standard 189.1-2020

Modify Section 6.3.1.1 as shown.

~~**6.3.1.1 Landscape Design.** A minimum of 60% of the area of the *improved landscape* shall be in *biodiverse planting of native plants and rainfall- ET_c compatible plants*.~~

Exceptions to 6.3.1.1:

- ~~1. The area of dedicated athletic fields, golf courses, driving ranges, and areas dedicated for production of food for human consumption, shall be excluded from the calculation of the *improved landscape* for schools, *residential common areas*, or public recreational facilities.~~
- ~~2. Landscape areas irrigated solely with *alternate on-site sources of water* shall be exempt from these requirements.~~
- ~~3. Where average annual rainfall is less than 12 in. (300 mm), *plants other than turf grass*, with an annual ET_c of 15 in. (380 mm) or less, shall be deemed equivalent to *rainfall- ET_c compatible plants*.~~

~~**6.3.1.1 Irrigation Limitations.** Not more than 40% of the *improved landscape* area shall be irrigated.~~

Exceptions to 6.3.1.1:

1. Dedicated athletic fields, golf courses, and driving ranges.
2. Areas dedicated for production of food for human consumption.
3. Burial grounds.
4. Landscape areas irrigated solely with *alternate on-site sources of water*.
5. Areas dedicated to *plants* with an annual ET_c of 15 in. (380 mm) or less, where average annual rainfall is less than 12 in. (300 mm).
6. Irrigation applied only during the *landscape establishment period*.

Modify Section 6.3.1.2.3 as shown.

~~**6.3.1.2.3 Irrigation of Rainfall- ET_c Compatible Plants and Native Plants.** The use of *potable water or reclaimed water* for irrigation of *adapted plants* is prohibited after the *landscape establishment period*. In-ground irrigation systems servicing for rainfall- ET_c compatible plants or native plants using *potable water* or off-site treated *reclaimed water* are prohibited. After the *landscape establishment period* of ~~*adapted plants*~~, *rainfall- ET_c compatible plants and native plants*, the irrigation system using *potable water* or *reclaimed water* shall be permanently disabled or removed from the site.~~

Exception to 6.3.1.2.3: Areas identified *Plants deemed equivalent to rainfall- ET_c compatible plants* by Section 6.3.1.1, Exception 35, shall be exempt from the requirements of Section 6.3.1.3.

**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.

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.

To stay current with this and other ASHRAE Standards and Guidelines, visit www.ashrae.org/standards, and connect on LinkedIn, Facebook, Twitter, and YouTube.

Visit the ASHRAE Bookstore

ASHRAE offers its Standards and Guidelines in print, as immediately downloadable PDFs, and via ASHRAE Digital Collections, which provides online access with automatic updates as well as historical versions of publications. Selected Standards and Guidelines are also offered in redline versions that indicate the changes made between the active Standard or Guideline and its previous edition. For more information, visit the Standards and Guidelines section of the ASHRAE Bookstore at www.ashrae.org/bookstore.

IMPORTANT NOTICES ABOUT THIS STANDARD

To ensure that you have all of the approved addenda, errata, and interpretations for this Standard, visit www.ashrae.org/standards to download them free of charge.

Addenda, errata, and interpretations for ASHRAE Standards and Guidelines are no longer distributed with copies of the Standards and Guidelines. ASHRAE provides these addenda, errata, and interpretations only in electronic form to promote more sustainable use of resources.