

Public Review Draft

Proposed Addendum j to Standard 189.1-2020

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

First Public Review (September 2021)
(Draft Shows Proposed Changes to Current Standard)

This draft has been recommended for public review by the responsible project committee. To submit a comment on this proposed standard, go to the ASHRAE website at www.ashrae.org/standards-research-technology/public-review-drafts and access the online comment database. The draft is subject to modification until it is approved for publication by the Board of Directors and ANSI. Until this time, the current edition of the standard (as modified by any published addenda on the ASHRAE website) remains in effect. The current edition of any standard may be purchased from the ASHRAE Online Store at www.ashrae.org/bookstore or by calling 404-636-8400 or 1-800-727-4723 (for orders in the U.S. or Canada).

This standard is under continuous maintenance. To propose a change to the current standard, use the change submittal form available on the ASHRAE website, www.ashrae.org.

The appearance of any technical data or editorial material in this public review document does not constitute endorsement, warranty, or guaranty by ASHRAE of any product, service, process, procedure, or design, and ASHRAE expressly disclaims such.

© 2021 ASHRAE. This draft is covered under ASHRAE copyright. Permission to reproduce or redistribute all or any part of this document must be obtained from the ASHRAE Manager of Standards, 180 Technology Pkwy, Peachtree Corners, GA 30092. Phone: 404-636-8400, Ext. 1125. Fax: 404-321-5478. E-mail: standards.section@ashrae.org.

ASHRAE, 180 Technology Pkwy, Peachtree Corners, GA 30092



© August 18, 2021 ASHRAE

This draft is covered under ASHRAE copyright. The appearance of any technical data or editorial material in this publication document does not constitute endorsement, warranty, or guaranty by ASHRAE of any product, service, process, procedure, design or the like and ASHRAE expressly disclaims such. Permission to republish or redistribute must be obtained from the MOS.

(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 proposes to delete the current Jurisdictional Option [JO] provisions in Standard 189.1 and replace with a mandatory requirement to follow the requirements in ASHRAE Standard 90.1. Addendum s to ASHRAE Standard 90.1-2019 made several technical improvements in the requirements for cool walls. Addendum s incorporated requirements addressing solar reflectance of walls in a manner that removed the term solar reflectance index (SRI) for walls and replaced it with the more accurate term solar reflectance (SR) and the corresponding ASTM test methods. It deleted the option for vegetation to provide shading, recognizing plants are not durable and unlikely to last the life of the building, and modified the Climate Zones to reflect effectiveness of cool wall strategies.

These changes do not add cost or scope to the existing language of the standard.

[Note to Reviewers: This addendum makes proposed changes to the 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 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 j to 189.1-2020

Revise Section 5.3.5.2 as follows:

5.3.5.2 ~~[JO]~~ Walls. *Building projects shall comply with the provisions of Section 5.5.3.2.2 of ASHRAE/IES Standard 90.1. Above-grade building walls and retaining walls shall be shaded in accordance with this section. The building is allowed to be rotated up to 45 degrees to the nearest cardinal orientation for purposes of calculations and showing compliance. Compliance with this section shall be achieved through the use of shade providing plants, man-made structures, existing buildings, hillsides, permanent building projections, on-site renewable energy systems, or a combination of these, using the following criteria:*

a. ~~Shade shall be provided on at least 30% of the east and west above-grade walls and retaining walls from grade level to a height of 20 ft (6 m) above grade, or the top of the exterior wall, whichever is less. Shade coverage shall be calculated at 10 a.m. for the east walls and 3 p.m. for the west walls on the summer solstice.~~

~~b. Where shading is provided by vegetation, such vegetation shall be existing trees and vegetation or new *biodiverse plantings of native plants and adapted plants*. Such planting shall occur prior to the final approval by the *AHJ* or in accordance with a contract established to require planting no later than 12 months after the final approval by the *AHJ* so as to provide the required shade no later than ten years after the final approval. Vegetation shall be appropriately sized, selected, planted, and maintained so that it does not interfere with overhead or underground utilities. Trees shall be placed a minimum of 5 ft (1.5 m) from and within 50 ft (15 m) of the building or retaining wall.~~

Exceptions to 5.3.5.2:

- ~~1. The requirements of this section are satisfied if 75% or more of the opaque *wall* surfaces on the east and west have a minimum *SRI* of 29. Each *wall* is allowed to be considered separately for this exception.~~
- ~~2. East *wall* shading is not required for buildings located in Climate Zones 5, 6, 7, and 8. West *wall* shading is not required for buildings located in Climate Zones 7 and 8.~~