



# ADDENDA

**ANSI/ASHRAE/IES Addendum I to  
ANSI/ASHRAE/IES Standard 90.1-2019**

# Energy Standard for Buildings Except Low-Rise Residential Buildings

Approved by ASHRAE and the American National Standards Institute on October 30, 2020, and by the Illuminating Engineering Society on October 6, 2020.

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

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

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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.

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## FOREWORD

*Addendum I makes several editorial changes to Appendix G requirements related to the area and orientation of the vertical fenestration in the baseline design. In addition, it describes the methodology that must be used by projects where the baseline vertical fenestration area that must be allocated to a certain building face exceeds the gross above-grade wall area of that building face.*

*For example, a grocery store with 500 ft<sup>2</sup> gross above-grade exterior wall area facing east and west, and 4000 ft<sup>2</sup> gross above-grade exterior wall area facing south and north, must have baseline vertical fenestration area of  $7\% \times (4000 \times 2 + 500 \times 2) = 630 \text{ ft}^2$  following Table G3.1.1-1. If a proposed design has vertical fenestration only on an east-facing wall, then all vertical fenestration in the baseline must also be allocated to that face. However, it was previously unclear if the requirement could be implemented as described, as the gross exterior above-grade wall area of this face (500 ft<sup>2</sup>) is less than the baseline vertical fenestration area (630 ft<sup>2</sup>). This addendum clarifies that the spillover fenestration area must be assigned to other faces of the building (west, south, and north) in proportion to their areas.*

*This addendum impacts an optional performance path in the standard designed to provide increased flexibility and therefore was not subjected to cost-effectiveness analysis.*

**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 I to Standard 90.1-2019

*Revise the Standard as follows (I-P and SI units).*

**Table G3.1 Modeling Requirements for Calculating Proposed and Baseline Building Performance**

No.	Proposed Building Performance	Baseline Building Performance
5. Building Envelope		
[...]	[...]	<p data-bbox="764 212 828 241">[...]</p> <p data-bbox="764 254 1404 661">c. <b>Vertical Fenestration Areas.</b> For <i>building area types</i> included in Table G3.1.1-1, <i>vertical fenestration areas</i> for new <i>buildings</i> and additions shall equal <del>the percentage that in Table G3.1.1-1 based on the area multiplied by the gross area of gross above-grade walls</del> that separate <i>conditioned spaces</i> and <i>semiheated spaces</i> from the exterior. Where a <i>building</i> has multiple <i>building area types</i>, each type shall use the values in the table. <del>The vertical fenestration shall be distributed on each face of the building in the same proportion as in the proposed design.</del> For <i>building areas</i> not shown in Table G3.1.1-1, <i>vertical fenestration areas</i> for new <i>buildings</i> and additions shall equal that in the <i>proposed design</i> or 40% of gross <i>above-grade wall area</i>, whichever is smaller, and shall be distributed on each face of the <i>building</i> in the same proportions in the <i>proposed design</i>.</p> <p data-bbox="800 674 1404 913"><u>The vertical fenestration shall be distributed on each face of the building in the same proportion as in the proposed design. If this would cause the combined vertical fenestration and opaque door area on a given face to exceed the gross above-grade wall area on that face, then the vertical fenestration area on other faces shall be increased in proportion to the gross above-grade wall area of these faces such that the total baseline building vertical fenestration area is equal to that calculated following Table G3.1.1-1.</u></p> <p data-bbox="800 934 1404 1039">The <i>fenestration area</i> for an <i>existing building</i> shall equal the existing <i>fenestration area</i> prior to the proposed work and shall be distributed on each face of the <i>building</i> in the same proportions as the <i>existing building</i>.</p>

**Table G3.1.1-1 Baseline Building Vertical Fenestration Percentage of Gross Above-Grade-Wall Area**

Building Area Types <sup>a</sup>	Baseline Building Vertical Fenestration Area as a Percentage of Gross Above-Grade-Wall Area
[...]	[...]

## **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.

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