

ADDENDA

**ANSI/ASHRAE/IBPSA Addendum e to
ANSI/ASHRAE Standard 209-2018**

Energy Simulation Aided Design for Buildings Except Low-Rise Residential Buildings

Approved by ASHRAE and the American National Standards Institute on July 31, 2024. Approved by the International Building Performance Simulation Association on July 10, 2024.

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Cognizant TC: 4.7, Energy Calculations

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FOREWORD

Addendum e makes changes to Section 6.1, clarifying the purpose and analysis of Modeling Cycle #1. The Purpose is updated to include consideration of sensitivity in addition to distribution. The applicability is unchanged in this addendum. The analysis is expanded to include internal occupancy and equipment-based loads. To make the modeling cycling more enforceable, an action to develop a list of options and share it with the design team has been added. The informative note has also been expanded; this moves the definition of “simple box modeling” into the modeling cycle and out of Informative Appendix C, making the definition easier for users of the standard to find.

Informative 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 e to Standard 209-2018

Modify Section 6 as shown.

6.1 Modeling Cycle # 1—Simple Box Modeling

6.1.1 Purpose. Identify the distribution and sensitivity of energy consumption by end use. ~~Evaluate energy end uses and demand characteristics for building characteristics that affect building conceptual design.~~

6.1.2 Applicability. This *modeling cycle* applies before the building’s geometry and site orientation have been set in the design process. This must be completed before or during the energy *charrette* described in Section 5.5.

6.1.3 Analysis. Create *energy models* to ~~calculate~~ understand annual building energy consumption by end use and peak heating and cooling loads with identical *HVAC systems* and internal occupancy and equipment-based loads. Perform a sensitivity analysis by varying the following building characteristics as applicable based on project considerations:

- a. Building geometry
- b. Window-to-wall ratio, by orientation, and shading options ~~(if applicable)~~
- c. Orientation
- d. Thermal performance of the envelope and structure

6.1.3.1 Develop a list of conceptual design options and the relative energy consumption and peak loads, and share with the design team at the energy *charrette*.

Informative Note: The term “simple box modeling” came from simple energy models made when geometry was entered using a text editor and not a three-dimensional modeling tool. A simple box model may still be a simple rectangular building but isn’t limited to that. Design teams can use nonrectangular geometry for this modeling cycle. See Informative Appendix C for guidance.

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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.

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