



**BSR/ASHRAE/IES Addendum d
to ANSI/ASHRAE/IES Standard 100-2024**

Public Review Draft

**Proposed Addendum d to
Standard 100-2024, Energy and
Emissions Building Performance
Standard for Existing Buildings**

**First Public Review (March 2026)
(Draft Shows Proposed Changes to Current Standard)**

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FOREWORD

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. Only these changes 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 substantive changes.

This addendum modifies the way that Standard 100 applies to historic buildings, addressing issues with the definition of historic buildings within the standard and the process for accommodation.

The existing language in STD 100 for historic buildings does not align with the way that preservation designation and practice generally works:

“designated by a government body for long-term preservation in its existing state, such as historical monuments.”

All preservation designation is intended for long-term preservation. However, preservation regulations typically do not require that a building be strictly maintained in its existing state. Their intent is to manage proposed alterations to historic buildings in order to determine whether an alteration is appropriate for a particular historic building. While “historic monuments” might tolerate few to no appropriate alterations, some historic buildings will tolerate far more extensive alterations while preserving character-defining or historically significant features. The current wording suggests that only historic buildings that are more “frozen in time” like historical monuments are eligible for this exception.

Section 4.4.2 is meant to apply to buildings with performance targets. While the exception to 4.4.2.3 does allow historic buildings to avoid compliance with individual measures that would compromise their historical integrity, it still requires those buildings to meet the performance target. Many (or even most) historic buildings should be able to meet STD 100 performance targets without compromising their architectural or historic integrity, but some will not be able to. Under the current wording, these historic buildings that cannot meet performance targets without compromising their architectural or historic integrity would be exempt from deleterious changes but would still end up in non-compliance with the standard, with no path to compliance.

The current location for the historic building accommodation for buildings without performance targets (4.4.3.3) separates the exceptions for deleterious Energy Efficiency Measures (EEMs) and Emissions

Reduction Measures (ERMs) from the location for all other EEM and ERM exceptions in 9.1.1.2.2 and 9.1.1.2.3. This can create confusion and can make this accommodation easier to get lost in the process.

The existing language is also silent on who makes the determination about compromising historical integrity, leaving it to the BPS administrator. BPS are energy/emissions regulations, and AHJ administrators may not have the background in historic preservation that would allow them to make that kind of determination. This raises the risk of administrators being too strict or too lenient with historic buildings. Too strict – due to a desire to maximize energy savings – may require historic buildings to compromise their integrity or even come in conflict with preservation regulations. Too lenient – due to fear over harming a historic building – may compromise the effectiveness of the BPS.

The proposed modification addresses these issues through a handful of modifications:

- It introduces a clear definition of “historic building.” This definition recognizes that governmental bodies sometimes delegate the authority to designate historic buildings to non-governmental or quasi-governmental bodies.
- It modifies the exception to 4.4.2.3. Instead of exempting historic buildings from deleterious measures, it allows historic buildings that cannot comply with the performance targets (without compromising architectural or historic integrity) to comply with Section 4.4.3 instead as a building that does not have a performance target. This solves the problem of historic buildings getting stuck in non-compliance. The 4.4.3 compliance path is based on an audit and the identification of a package of discrete measures instead of an overall target. It also contains an exception for measures that would impact the historical integrity of the building, which would fully protect the historic building while still providing a path to compliance. Historic buildings that can meet their target would stay in 4.4.2 and would not be bumped into the more complex path in 4.4.3.
- It moves, modifies and clarifies the exemption in 4.4.3 for EEMs and ERMs that would be deleterious to the architectural or historical character of a historic building that is complying with Standard 100 without a performance target. This modification places the exception in Section 9.1.1.2.2 for EEMs and 9.1.1.2.3 for ERMs. The exceptions also require the disclosure of excluded EEMs and ERMs to ensure that there is documentation and accountability for this accommodation.
- For all historic building accommodations (4.4.2.3, 9.1.1.2.2 and 9.1.1.2.3), it makes it clear who determines if a requirement will compromise historic integrity. It allows the local preservation authority to make the determination, since that is the authority that is generally responsible for preservation regulations and generally has the expertise to make such a determination. The preservation authority is identified as the body to either designate or regulate. Not every historic preservation authority has both the authority to regulate historic buildings, sometimes they only have the authority to designate historic buildings or (less commonly) only have the authority to regulate them. This wording ensures that the language captures a broader spectrum of how local preservation authorities are constituted. The language does still allow the BPS administrator to make the determination. This allows clear-cut cases to minimize the regulatory complexity that would result from a mandatory inclusion of the preservation authority in every project.

Addendum d to Std. 100-2024

Revise Section 3 (definitions) as follows:

historic building: Any building or structure that has been designated or recognized as architecturally or historically significant by a government body or body delegated with such authority by a government body.

Revise Section 4.4.2.3 as follows:

4.4.2.3 Building Does not Meet the Performance Targets. If either the *building's* measured *EUI* is greater than the *EUI target* or the *building's* measured *GHGI* is greater than the *GHGI target*, then an energy audit with decarbonization assessment shall be performed. A *qualified energy auditor* shall complete an energy audit according to Section 8. *EEMs* and *ERMs* that will reduce energy use and *GHG emissions* to meet the *EUI target* and *GHGI target* shall be implemented according to Section 9. Upon completion of the implementation of all required *EEMs* and *ERMs*, a *building* shall be granted *conditional compliance*.

Exception to 4.4.2.3: ~~No individual requirement need be met that would compromise the historical integrity of a *building* or part of a *building* designated by a government body for long term preservation in its existing state, such as historical monuments. Where the AHJ or a body with statutory authority to designate or regulate *historic buildings* has determined that compliance with this section would compromise the historical or architectural integrity of a *historic building*, the *historic building* shall be permitted to comply with Section 4.4.3 instead of Section 4.4.2. and comply with Sections 8 and 9 as a building without performance targets.~~

Revise Section 4.4.3.3 as follows:

4.4.3.3 Implement Energy Efficiency Measures and Emissions Reduction Measures. The entire *optimized bundle* of *ERMs* shall be implemented. Upon completion of the implementation of the *optimized bundle* of *ERMs*, a *building* shall be granted *conditional compliance* in accordance with Section 9.1.1.2.

Exception to 4.4.3.3: ~~No individual requirement need be met has determined that it that would compromise the historical integrity of a *building* or part of a *building* designated by a government body for long term preservation in its existing state, such as historical monuments.~~

Revise Section 9.1.1.2.2 as follows:

9.1.1.2.2 The *optimized bundle* of *EEMs* shall use all *EEMs* with a combined *simple payback* less than or equal to five years.

Exceptions to 9.1.1.2.2:

1. A life-cycle approach may be used with the *optimized bundle of EEMs* with an *internal rate of return (IRR)* greater than or equal to 20% using the Federal Energy Management Program's BLCC5 6 software with the current BLCC5 defaults.

2. *EEMs* that have *simple payback* greater than the effective useful life of the equipment shall be excluded from the *optimized bundle of EEMs*.
3. *EEMs* that are no longer appropriate due to deeper retrofits specified for the same equipment in the *optimized bundle of EEMs* described in Section 9.1.1.2.2 can be excluded from the *optimized bundle of EEMs*.
4. *EEMs* that would compromise the historical or architectural integrity of a *historic building*, as determined by the *AHJ* or a body with statutory authority to designate or regulate *historic buildings*, provided the excluded *EEM* is disclosed to the *AHJ*.

Revise Section 9.1.1.2.3 as follows:

9.1.1.2.3 The *optimized bundle of EEMs* shall use all *EEMs* identified in Section 9.1.1.2.2 and *ERMs* with a combined *simple payback* less than or equal to ten years. For the purposes of this combined *simple payback* calculation, *EEM* energy savings shall be translated into *GHG emissions* reductions and shall include *carbon cost* to account for the impact of the measures where the *energy cost* does not already include *carbon costs*.

Exceptions to 9.1.1.2.3:

1. A life-cycle approach may be used with the *optimized bundle of EEMs* with an *internal rate of return (IRR)* greater than or equal to 15% using BLCC5 with the current BLCC5 defaults. BLCC5 is a free-market tool and can be found online.
2. *ERMs* that have *simple payback* greater than the effective useful life of the equipment shall be excluded from the *optimized bundle of EEMs*.
3. *ERMs* that require the replacement of equipment that has an estimated useful life of greater than five years shall not be required to be implemented. Where the *ERM* is not implemented, a specific plan for replacement of equipment at the end of its useful life shall be filed with the *authority having jurisdiction (AHJ)* and included in the *capital management plan*, and the measure shall be excluded from verification under Section 9.2. On end of life of the equipment, the *ERM* must be implemented.
4. *ERMs* that would compromise the historical or architectural integrity of a *historic building*, as determined by the *AHJ* or a body with statutory authority to designate or regulate *historic buildings*, provided the excluded *ERM* is disclosed to the *AHJ*.