



**BSR/ASHRAE/IES Addendum cc  
to ANSI/ASHRAE/IES Standard 90.1-2016**

**Public Review Draft**

# **Proposed Addendum cc to Standard 90.1-2016, Energy Standard for Buildings Except Low-Rise Residential Buildings**

**First Public Review (February 2019)  
(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](http://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](http://www.ashrae.org/bookstore) or by calling 404-636-8400 or 1-800-727-4723 (for orders in the U.S. or Canada).

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## FOREWORD

*The calculation procedures in A9.4.6 are developed from and are specifically for assemblies with a 60-inch purlin and girt spacing. This proposal clarifies the limitations of the calculation procedures in A9.4.6.*

*This proposal has no impact to cost-effectiveness because it is clarifying an existing and intended limitation of calculation procedures.*

*[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and ~~striketrough~~ (for deletions) except where the reviewer instructions specifically describe some other means of showing the changes. Only these changes to the current 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 cc to 90.1-2016

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*Modify the standard as follows (IP and SI Units)*

### **A9.4.6 Metal Building U-Factor Equations**

The calculation procedures in this section shall use a fixed purlin and girt spacing of 60 inches (1.5 m) and the results shall be permitted to be used in accordance with Section A2.3.3 and A3.2.3. For single-layer metal building roof and single-layer compressed metal building wall systems, the calculation procedure outlined in Section [A9.4.6.1](#) shall be used to calculate the assembly *U-factor*. For double-layer metal building roof systems, the calculation procedure outlined in Section [A9.4.6.2](#) shall be used to calculate the assembly *U-factor*. For single-layer in cavity, and the calculation procedure outlined in Section [A9.4.6.3](#) shall be used to calculate the assembly *U-factor*. Each of the above insulation methods and calculation procedures also shall be used where *continuous insulation* is applied to the assembly. The calculation procedures outlined in this section shall not be used for other metal building roof and wall systems.