

Public Review Draft

Proposed Addendum v to Standard 189.1-2020

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

Second Public Review (September 2022)
(Draft Shows Proposed Independent Substantive
Changes to Previous Public Review Draft)

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(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 ISC modifies Addendum v to further clarify how L_{max} is measured. The new section 8.3.3.2.2 uses the values of Maximum Sound Pressure Level (L_{max}) in Table 8.3.3.2 but measured or calculated using a fast-rating (125 msec interval) whereas all other sections referring to L_{max} in Table 8.3.3.2 L_{max} is measured or calculated based on a slow time rating (1 second interval). Currently in the heading Table 8.3.3.2, L_{max} is described as being valued in terms of slow time rating. With the addition of 8.3.3.2.2, this is no longer true for all references to Table 8.3.3.2. Thus this notation in the heading of Table 8.3.3.2 is deleted editorially and language added to the body of the text in Section 8.3.3.2. 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 current 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 current standard are open for review and comment at this time.]

Addendum v PPR2 ISC

Revise the Section 8.3.3.2 as follows:

8.3.3.2 Interior Background Noise Requirements. *The building envelope, interior spaces within the building, and building systems, including mechanical, electrical, and plumbing systems, shall be designed and constructed such that the interior sound pressure levels created by the combination of building systems noise and exterior sound sources, under normal operation with windows closed and no active sound masking systems, do not exceed the values specified in Table 8.3.3.2. The hourly average sound pressure level L_{eq} and maximum sound pressure level L_{max} shall not exceed the values listed in Table 8.3.3.2. Outdoor noise levels used in the design shall be provided in the construction documents. The maximum sound pressure levels (L_{max}) shall be measured using slow-weighting except as required in 8.3.3.2.2.*

This section is for reference only and the changes shown are approved as editorial changes. The items below this line are not available for comment at this time.

Edit Table 8.3.3.2 as follows:

Table 8.3.3.2 Maximum Interior Background Sound Pressure Levels from Building Systems and Exterior Sound Sources ^a

Room Type	Hourly Average Sound Pressure Level (L_{eq})		Maximum Sound Pressure Level (L_{max} [slow-time weighting])	
	dBA	dBC	dBA	dBC
<i>Residential</i> sleeping areas (nighttime ^b - between 10 p.m. and 7 a.m.)	35	60	45	70
<i>Residential</i> living and sleeping areas (daytime)	40	60	50	70
Hotel and motel guest rooms or suites and dormitories	40	60	50	70
Meeting and banquet rooms	35	60	45	70
Corridors and lobbies	45	65	60	75
Service and support areas	45	65	60	75
Enclosed offices	35	60	45	70
Conference rooms	35	60	45	70
Teleconference rooms	30	55	40	65
Open-plan offices	45	65	55	75
Courtrooms—unamplified speech	35	60	45	70
Courtrooms—amplified speech	40	60	50	70
Laboratories—minimal speech communication	55	75	65	85
Laboratories—extensive phone use and speech communication	50	70	60	80
Laboratories—group teaching	40	60	50	70
Religious—general assembly with music program	30	55	40	65
Library study and reading areas	35	60	45	70
Gymnasiums and natatoriums without speech amplification	50	70	60	80
Gymnasiums and natatoriums with speech amplification	55	75	65	85

a. For high-noise exterior events, refer to Section 8.3.3.2.1.

b. "Nighttime" is defined as the time between 10 p.m. and 7 a.m.

Relevant sections of Addendum v is provided for reference only.

8.3.3.2.2 Interior Noise Impact Events. Airborne and structure-borne noise impacts from tenants and activities within the building shall not exceed the values specified in Table 8.3.3.2. The *maximum sound pressure levels* (L_{max}) shall be measured using fast-weighting for structure-borne events, such as fitness activities and dancing, and for airborne events such as amplified music or speech, and these events shall follow the conformance path defined in 8.3.3.2.4.

8.3.3.2.3 Conformance. Conformance to the requirements in Section 8.3.3.2 shall be demonstrated either through the design requirements of Section 8.3.3.2.4 or the testing requirements of Section 8.3.3.2.5.

NOTE: Remainder renumber subsequent sections accordingly.