

# Public Review Draft

Proposed Addendum ae to Standard 189.1-2017

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

First Public Review Draft (July 2019)  
(Draft Shows Proposed Changes to Current Standard)

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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 addendum adds a jurisdictional option to select the minimum percentage of construction and demolition waste to be diverted from landfills and incinerators. The ability to divert construction waste varies across the country based on local recycling markets. All waste diversion for this section will be tracked by weight to simplify calculations for tracking and to provide consistency.

This addendum introduces the concept of “deconstruction” to the waste diversion provisions. While not currently a common practice in construction or demolition, it is used widely in such demolition subsets as historic preservation and for voluntary green and sustainable projects. Including “deconstruction” in the Standard makes it a legitimate option for diverting waste and removes barriers such as special permission to use this option.

The addendum clarifies that the total waste provision is for new construction only. It increases the total waste threshold to a value that can be achieved by a majority of building projects based on analyses of over 3,000 projects from a variety of sources identified by the committee. It provides an exception to the total waste provision for projects diverting a large percentage of construction waste.

Additional modifications were made to clean up language and coordinate like provisions for consistency. We are recommending that the informative note be removed from 9.3.1.1, as it is more suitable for inclusion in the next user’s manual.

*[Note to Reviewers: This public review draft makes proposed independent substantive changes to the previous public review draft. 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 ae to 189.1-2017

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*Revise Section 9.3.1 as follows:*

### 9.3.1 Construction and Demolition Waste Management

**9.3.1.1 Diversion.** A minimum of 50% of nonhazardous construction ~~and~~, demolition, or deconstruction waste material ~~generated prior to the issuance of the final certificate of occupancy~~ shall be diverted from disposal in landfills and incinerators ~~by~~ through reuse, recycling, repurposing and/or composting. Excavated soil and land-clearing debris shall not be included in the ~~waste diversion~~ calculation. *Alternative daily cover* and waste-to-energy incineration shall not be included

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as diverted material. All diversion calculations shall be based on ~~either weight or volume, but not both~~, throughout the construction process.

~~**Informative Note:** Reuse includes donation of materials to charitable organizations; salvage of existing materials onsite; reclamation of products by manufacturers; and return of packaging materials to the manufacturer, shipper, or other source for reuse as packaging in future shipments.~~

**9.3.1.2 [JO] Total Waste.** For new ~~building projects on sites with less than 5% existing buildings, structures or hardscape, construction only~~, the total amount of construction waste generated prior to the issuance of the final certificate of occupancy on the project shall not exceed 20 lbs per ft<sup>2</sup> (100 kg per m<sup>2</sup>)~~42 yd<sup>3</sup> or 12,000 lbs per 10,000 ft<sup>2</sup> (35 m<sup>3</sup> or 6000 kg per 1000 m<sup>2</sup>)~~ of new building floor area. This shall apply to all waste, whether diverted, landfilled, incinerated, or otherwise disposed of. Excavated soil, ~~and~~ land-clearing debris, and demolition debris shall not be included in the calculation. The amount of waste shall be tracked throughout the construction process in accordance with the construction waste management plan required in Section 9.3.1.3.

**Exception to 9.3.1.2:** Projects where the waste diversion in accordance with Section 9.3.1.1 is 75% or greater.

**9.3.1.3 Construction and Demolition Waste Management Plan.** Prior to ~~issuance of a demolition or building permit~~ the start of any construction, demolition, or deconstruction, a ~~pre-construction~~ and demolition waste management plan shall be ~~submitted~~ prepared and made available to the *owner* and AHJ. The plan shall

- a. identify the construction and demolition waste materials expected to be diverted,
- b. identify materials or building elements to be deconstructed,
- ~~b.c. determine~~ indicate whether construction and demolition waste materials are to be source-separated or comingled,
- e.d. identify service providers and designate destination facilities for construction and demolition waste materials generated at the job *site*, ~~and~~
- e.d. identify the average diversion rate for facilities that accept or process comingled construction and demolition materials. Separate average percentages shall be included for those materials collected by construction and demolition materials processing facilities that end up as *alternative daily cover* and incineration,
- f. specify a method for tracking, and
- g. specify a reporting mechanism for disposition of waste using items a through f.

*Revise Section 10.3.1.10 as follows:*

**10.3.1.10 Construction and Demolition Waste Management**

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**10.3.1.10.1 Collection.** Specific area(s) on the construction *site* shall be designated for the collection of recyclable and reusable materials. Alternatively, off-site storage and sorting of materials shall be permitted. Diversion efforts shall be tracked throughout the construction process.

**10.3.1.10.2 Documentation.** Where requested by the AHJ, Prior-prior to issuance of the final certificate of occupancy, a final construction waste management report documenting compliance with Section 9.3.1 shall be submitted to the ~~owner and AHJ~~.

**Addendum t to 189.1-2017**

*Note to reviewers:* Section 9.3.1.2 is also modified by addendum t, as follows. Addendum t is in the process of comment resolution and is shown for informational purposes only. The changes shown in this section are not open for public review.

*Add new informative text to Section 4.1 including a new informative Table 4.2:*

**4. ADMINISTRATION AND ENFORCEMENT**

**4.1 General.** *Building projects* shall comply with Sections 4 through 11. Within each of those sections, *building projects* shall comply with all mandatory provisions (x.3) and, where offered, either the

- a. Prescriptive Option (x.4) or
- b. Performance Option (x.5).

**Informative Note – to become normative in IgCC:**

**4.2 Requirements determined by the jurisdiction.** The jurisdiction shall indicate the following information in Informative Table 4.2 for inclusion in its code adopting ordinance:

- 1. Where “No” boxes are provided, the jurisdiction shall check the box to indicate where that section is not to be enforced as a requirement in the jurisdiction. Where the “No” box is not checked, that section is to be enforced.
- 2. Where a numerical value is required to specify the level of performance required, the jurisdiction shall indicate the required value. Where a numerical value is not indicated, the value in the text is to be enforced.

**Informative Note:** *The jurisdictional requirements listed in Table 4.2 are formatted to afford jurisdictions the flexibility to adapt the code in a manner that is best suited to meet their unique environmental and regional goals and needs. Enforcement of these jurisdictional requirements will result in higher performing buildings, but may go beyond the needs of specific jurisdictions. Jurisdictional option provisions are indicated in the body of the standard with the symbol [JO] after the section number.*

**INFORMATIVE TABLE 4.2 – to become normative in IgCC**  
**REQUIREMENTS DETERMINED BY THE JURISDICTION**

<b><u>SECTION</u></b>	<b><u>SECTION TITLE OR DESCRIPTION AND DIRECTIVES</u></b>	<b><u>Jurisdictional Requirement</u></b>
9.3.1.2	Total Waste	___ No

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### **4.3 References and Appendices.**

**4.13.1 Referenced Standards.** The standards referenced in this standard and listed in Section 11 shall be considered part of the requirements of this standard to the prescribed extent of such reference. Where differences exist between provisions of this standard and a referenced standard, the provisions of this standard shall apply. Informative references in Informative Appendix G are cited to acknowledge sources and are not part of this standard.

**4.13.2 Normative Appendices.** The normative appendices to this standard are considered to be integral parts of the mandatory requirements of this standard, which for reasons of convenience are placed apart from all other normative elements.

**4.13.3 Informative Appendices.** The informative appendices to this standard, and informative notes located within this standard, contain additional information and are not mandatory or part of this standard.

**4.13.4 Reference Standard Reproduction Annexes.** The reference standard reproduction annexes contain material that is cited in this standard but that is contained in another standard. The reference standard reproduction annexes are not part of this standard but are included in its publication to facilitate its use.

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*Add [JO] following the section number to indicate that Section 9.3.1.2 is a jurisdictional option:*

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**9.3.1.2 [JO] Total Waste.** For new *building projects* on *sites* with less than 5% existing buildings, structures, or *hardscape*, the total amount of construction waste generated prior to the issuance of the final certificate of occupancy on the project shall not exceed 42 yd<sup>3</sup> or 12,000 lbs per 10,000 ft<sup>2</sup> (35 m<sup>3</sup> or 6000 kg per 1000 m<sup>2</sup>) of new building floor area. This shall apply to all waste, whether diverted, landfilled, incinerated, or otherwise disposed of. Excavated soil and land-clearing debris shall not be included in the calculation. The amount of waste shall be tracked throughout the construction process in accordance with the construction waste management plan required in Section 9.3.1.3.