

ADDENDA

**ANSI/ASHRAE/IES Addendum am to
ANSI/ASHRAE/IES Standard 90.1-2019**

Energy Standard for Buildings Except Low-Rise Residential Buildings

Approved by the ASHRAE Standards Committee on June 25, 2022; by the ASHRAE Board of Directors on June 29, 2022; by the Illuminating Engineering Society on June 17, 2022; and by the American National Standards Institute on July 29, 2022.

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FOREWORD

Addendum am changes exterior lighting power density values based on improvements in technology and revised lighting practices related to light loss factors. Although there are four lighting zones, the vast majority of the population lives (and therefore buildings and energy use fall) in Lighting Zone 2 or 3. Lighting Zone 4 is reserved for dense urban areas with high light levels (e.g., Las Vegas Strip, Times Square and South Street Seaport in New York City, etc.) Values are established based on criteria for Lighting Zone 3 and then scaled accordingly. Addendum am represents roughly a 40% reduction in the values that were last modified in Standard 90.1-2016.

Addendum am also restructures parts of Section 9 and associated tables. Previous versions of Standard 90.1 contained text related to lighting controls. With this change, which controls should be used in each specific area are explicitly indicated. The previous version also contained two separate lists of exceptions, which are now grouped together, listed in a single table, and relocated to a similar location as the interior exceptions. Few changes are made to the exceptions. Addendum am primarily reorders and restructures the section and tables for easier review and compliance.

Addendum am is cost effective and meets the Standard 90.1 scalar ratio. Prices were supplied by a third party and have remained relatively flat relative to the 2016 options (last time the values were modified), while efficacy improved.

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 am to Standard 90.1-2019

Modify the standard as shown (I-P and SI).

9.2.3.2 Exterior Lighting Power Allowance. ~~The exterior lighting power allowance for a building, or a separately metered or permitted portion of a building,~~ shall be determined by

- a. Section 9.3.2, “Simplified Building Method of Calculating Exterior Lighting Power Allowance,” when using Section 9.3 to determine the *interior lighting power allowance*, or
- b. Section 9.4.2, “Exterior Building Lighting Power,” ~~when using Section 9.5 or Section 9.6 to determine the *interior lighting power allowance*.~~

[. . .]

9.4.1.4 Exterior Lighting Control. For each surface or area, all of the lighting control functions indicated in Table 9.4.2-2 shall be implemented. Lighting for exterior applications not exempted in Section 9.1 shall meet the following requirements defined here and listed in Table 9.4.2-2:

- a. OFF control: There shall be one or more lighting *control(s)* that turns off all of the lighting in the area or surface.
- ~~ab.~~ Daylight OFF control: Lighting shall ~~be controlled by a device that~~ automatically turns off the lighting when sufficient daylight is available or within 30 minutes of sunrise.
- ~~bc.~~ All building façade and landscape Scheduled OFF control: Lighting shall automatically shut off between midnight or business closing, whichever is later, and 6 a.m. or business opening, whichever comes first, or between times established by the authority having jurisdiction.
- ~~ed.~~ Scheduled light reduction control: Lighting ~~not specified in Section 9.4.1.4(b) and lighting for signage shall be controlled by a device that~~ to automatically reduces the connected lighting power by at least 50% ~~for at least one of the following conditions:~~
 1. ~~From~~ at 2 midnight or within one hour of the end of business operations, whichever is later, until 6 a.m. or the beginning of business opening operations, whichever is earlier.
 2. ~~During any period when no activity has been detected for a time of no longer than 15 minutes~~

Table 9.2.3.2 Exceptions to Exterior Lighting Power and Minimum Control Zones

<u>Item #</u>	<u>Equipment/Application</u>	<u>Controlled Separately from General Lighting</u>	<u>Required Controls</u>
1	<u>Specialized signal, directional, and marker lighting associated with transportation</u>	<u>Yes</u>	<u>9.4.1.4(a)</u>
2	<u>Lighting integral to <i>equipment</i> or instrumentation and installed by its <i>manufacturer</i></u>	<u>Yes</u>	<u>9.4.1.4(a)</u>
3	<u>Temporary lighting</u>	<u>Yes</u>	<u>9.4.1.4(a)</u>
4	<u>Searchlights</u>	<u>Yes</u>	<u>9.4.1.4(a)</u>
5	<u>Lighting for hazardous locations</u>	<u>Yes</u>	<u>9.4.1.4(a)</u>
6	<u>Lighting integral to public art^a</u>	<u>Yes</u>	<u>9.4.1.4(a)</u>
7	<u>Lighting used to highlight features of public monuments, public art^a displays, and registered historic landmark structures or buildings.</u>	<u>Yes</u>	<u>9.4.1.4(b)</u>
8	<u>Lighting for theatrical purposes, including performance, stage, film production, and video production</u>	<u>Yes</u>	<u>9.4.1.4(a)</u>
9	<u>Lighting for athletic playing areas for colleges and professional sports venues</u>	<u>Yes</u>	<u>9.4.1.4(a)</u>
10	<u>Lighting for athletic playing areas</u>	<u>Yes</u>	<u>9.4.1.4(a), (b), or (c)</u>
11	<u>Lighting for swimming pools</u>	<u>Yes</u>	<u>9.4.1.4(a)</u>
12	<u>Lighting for water features</u>	<u>Yes</u>	<u>9.4.1.4(b) or (c)</u>
13	<u>Theme elements in theme/amusement parks</u>	<u>Yes</u>	<u>9.4.1.4(c)</u>
14	<u>Lighting that is integral to signage and installed in the signage by the <i>manufacturer</i></u>	<u>Yes</u>	<u>9.4.1.4(d)</u>
15	<u>Lighting for industrial production, material handling, transportation sites, and associated storage areas</u>	<u>Yes</u>	<u>9.4.1.4(b), (d), or (e)</u>

a. **Informative Note:** "Public art" means art funded either with public or private funds but intended and accessible for the general public.

b. ~~Luminaires serving outdoor parking areas and having a rated input wattage of greater than 78 W and a mounting height of 24 ft or less above the ground shall be controlled to automatically reduce the power of each luminaire~~ Occupancy-sensing light reduction control: Lighting shall be controlled to automatically reduce the connected lighting power by a minimum of 50% when no activity has been detected in the area illuminated by the controlled luminaires for a time of no longer than 15 minutes. No more than 1500 W of lighting power shall be controlled together.

All time switches shall be capable of retaining programming and the time setting during loss of power for a period of at least ten hours.

~~Exceptions to 9.4.1.4:~~

- ~~1. Lighting for covered vehicle entrances or exits from buildings or parking structures where required for safety, security, or eye adaptation.~~
- ~~2. Lighting that is integral to signage and installed in the signage by the manufacturer.~~

9.4.2 Exterior Building Lighting Power. The total exterior lighting power allowance for all exterior building applications is the sum of the base site allowance plus the individual allowances for areas that are designed to be illuminated and are permitted in Table 9.4.2-2 for the applicable lighting zone in Table 9.4.2-1. The installed exterior lighting power identified in accordance with Section 9.1.3 shall not exceed the exterior lighting power allowance developed in accordance with this section. Trade-offs are allowed only among exterior lighting applications listed in the Table 9.4.2-2 "Tradable Surfaces" section. The lighting zone for the building exterior applications is determined from Table 9.4.2-1 unless otherwise specified by the local jurisdiction.

~~Exception to 9.4.2:~~

- ~~1. Lighting used for the following exterior applications is exempt when equipped with a control device that complies with the requirements of Section 9.4.1.4 and is independent of the control of the nonexempt lighting:~~

Table 9.4.2-1 Exterior Lighting Zones

Lighting Zone	Description
0	Undeveloped areas within national parks, state parks, forest land, rural areas, and other undeveloped areas as defined by the <i>authority having jurisdiction</i>
1	Developed areas of national parks, state parks, forest land, and rural areas
2	Areas predominantly consisting of <i>residential</i> zoning, neighborhood business districts, light industrial with limited nighttime use and <i>residential</i> mixed-use areas
3	All other areas
4	High-activity commercial districts in major metropolitan areas as designated by the local jurisdiction

- a. ~~Lighting that is integral to signage and installed in the signage by the *manufacturer*.~~
- b. ~~Lighting for athletic playing areas.~~
- c. ~~Lighting for industrial production, material handling, transportation sites, and associated storage areas.~~
- d. ~~Theme elements in theme/amusement parks.~~
- e. ~~Lighting used to highlight features of public monuments, public art displays, and registered *historic* landmark structures or *buildings*.~~
- f. ~~Lighting for water features.~~
- 2. ~~Lighting used for the following exterior applications is exempt when controlled separately:~~
 - a. ~~Specialized signal, directional, and marker lighting associated with transportation.~~
 - b. ~~Lighting integral to *equipment* or instrumentation and installed by its *manufacturer*.~~
 - c. ~~Lighting for theatrical purposes, including performance, stage, film production, and video production.~~
 - d. ~~Temporary lighting.~~
 - e. ~~Lighting for hazardous locations.~~
 - f. ~~Lighting for swimming *pools*.~~
 - g. ~~Searchlights.~~

Table 9.4.2-2 Individual Lighting Power Allowances for Building Exterior Applications (I-P)

	Zone 0	Zone 1	Zone 2	Zone 3	Zone 4	Section 9.4.1.4 Required Controls
Base Site Allowance (Base allowance may be used in tradable or non-tradable surfaces.)						
	No allowance	350 160 W	400 280 W	500 400 W	900 560 W	
Tradable Surfaces (LPD allowance for uncovered parking areas, building grounds, building entrances, exits and loading docks, canopies and overhangs, and outdoor sales areas may be traded.)						
Uncovered Parking Areas						
Parking areas and drives	No allowance	0.03 0.015 W/ft ²	0.04 0.026 W/ft ²	0.06 0.037 W/ft ²	0.08 0.052 W/ft ²	(b) and either (d) or (e)
Parking areas and drives with luminaires >78W and mounting height <24 ft	No allowance	0.015 W/ft ²	0.026 W/ft ²	0.037 W/ft ²	0.052 W/ft ²	(b) and (e)
Building Grounds						
Walkways/ramps less than 10-ft wide	No allowance	0.5 W/linear foot-ft	0.5 W/linear foot-ft	0.6 0.55 W/linear foot-ft	0.7 0.60 W/linear foot-ft	(b) and either (d) or (e)
Walkways/ramps, 10 ft wide or greater Plaza areas Special feature areas	No allowance	0.028 0.10 W/ft ²	0.049 0.10 W/ft ²	0.070 0.10 W/ft ²	0.098 0.14 W/ft ²	(b) and either (d) or (e)
Roof terraces and special features	No allowance	0.04 W/ft ²	0.07 W/ft ²	0.10 W/ft ²	0.140 W/ft ²	(b) and either (d) or (e)
Dining areas	No allowance	0.156 0.65 W/ft ²	0.273 0.65 W/ft ²	0.390 0.75 W/ft ²	0.546 0.95 W/ft ²	(b) and either (d) or (e)
Stairways	No allowance	0.6 W/ft ²	0.7 W/ft ²	0.7 W/ft ²	0.7 W/ft ²	
Pedestrian tunnels	No allowance	0.063 0.12 W/ft ²	0.110 0.12 W/ft ²	0.157 0.14 W/ft ²	0.220 0.21 W/ft ²	(d) or (e)
Landscaping	No allowance	0.014 0.03 W/ft ²	0.025 0.04 W/ft ²	0.036 0.04 W/ft ²	0.050 0.04 W/ft ²	(b) and (c)
Building Entrances, Exits, and Loading Docks						
Pedestrian and vehicular entrances and exits	No allowance	5.6 14 W/linear ft of opening	9.8 14 W/linear ft of opening	14.0 21 W/linear ft of opening	19.6 21 W/linear ft of opening	(b) and either (d) or (e)
Entry canopies	No allowance	0.072 0.20 W/ft ²	0.126 0.25 W/ft ²	0.180 0.40 W/ft ²	0.252 0.40 W/ft ²	(b) and either (d) or (e)
Loading docks	No allowance	0.104 0.35 W/ft ²	0.182 0.35 W/ft ²	0.260 0.35 W/ft ²	0.364 0.35 W/ft ²	(b) and either (d) or (e)
Sales Canopies						
Free standing and attached	No allowance	0.20 0.4 W/ft ²	0.35 0.4 W/ft ²	0.50 0.6 W/ft ²	0.70 W/ft ²	(b) and either (d) or (e)
Outdoor Sales						
Open areas (including vehicle sales lots)	No allowance	0.072 0.2 W/ft ²	0.126 0.2 W/ft ²	0.180 0.35 W/ft ²	0.252 0.50 W/ft ²	(b) and either (d) or (e)
Street frontage for vehicle sales lots in addition to “open area” allowance	No allowance	No allowance	7.2 W/linear ft	10.3 7 W/linear ft	14.4 21 W/linear ft	(b) and either (d) or (e)
Nontradable Surfaces (LPD allowances for the following applications can be used only for the specific application and cannot be traded between surfaces or with other exterior lighting. The following allowances are in addition to any allowance otherwise permitted in the “Tradable Surfaces” section of this table.)						
Stairways	Exempt	Exempt	Exempt	Exempt	Exempt	(b)

Table 9.4.2-2 Individual Lighting Power Allowances for Building Exterior Applications (I-P)

	Zone 0	Zone 1	Zone 2	Zone 3	Zone 4	Section 9.4.1.4 Required Controls
<i>Building facades (The allowance for each illuminated facade orientation shall be calculated by multiplying the allowable value by the entire facade area <u>façade area</u> or facade length for that orientation.)</i>	No allowance	No allowance <u>0.056 /ft² of façade area or 1.4 W/linear ft of façade length</u>	0.098 0.1 W/ft² of façade area or 2.4 2.5 W/linear foot-ft <u>ft of façade length</u>	0.140 0.15 W/ft² of façade area or 3.4 3.75 W/linear foot-ft <u>ft of façade length</u>	0.196 0.2 W/ft² of façade area or 4.8 5.0 W/linear foot-ft <u>ft of façade length</u>	<u>(b) and (c)</u>
Automated teller machines and night depositories	No allowance	90 <u>135</u> W per location plus 35 <u>45</u> W per additional ATM per location	90 <u>135</u> W per location plus 35 <u>45</u> W per additional ATM per location	90 <u>135</u> W per location plus 35 <u>45</u> W per additional ATM per location	90 <u>135</u> W per location plus 35 <u>45</u> W per additional ATM per location	<u>(b)</u>
Uncovered entrances and gatehouse inspection stations at guarded facilities	No allowance	<u>0.144 0.5 W/ft²</u>	<u>0.252 0.5 W/ft²</u>	<u>0.360 0.5 W/ft²</u>	<u>0.504 W/ft²</u>	<u>(b) and either (d) or (e)</u>
Uncovered loading areas for law enforcement, fire, ambulance, and other emergency service <u>service</u> vehicles	No allowance	<u>0.104 0.35 W/ft²</u>	<u>0.182 0.35 W/ft²</u>	<u>0.260 0.35 W/ft²</u>	<u>0.364 0.35 W/ft²</u>	<u>(b) and either (d) or (e)</u>
Drive-through windows/ doors	No allowance	53 <u>200</u> W per drive-through	92 <u>200</u> W per drive-through	132 <u>200</u> W per drive-through	185 <u>200</u> W per drive-through	<u>(b) and either (d) or (e)</u>
Parking near 24-hour retail entrances	No allowance	80 <u>400</u> W per main entry	140 <u>400</u> W per main entry	200 <u>400</u> W per main entry	280 <u>400</u> W per main entry	<u>(b) and either (d) or (e)</u>
Roadway/parking entry, trail head, and toilet facility, or other locations approved by the authority having jurisdiction.	A single luminaire of 25 W or less	No additional allowance	No additional allowance	No additional allowance	No additional allowance	
For areas that are not listed in this table or are not comparable to areas listed in this table, use the comparable interior <i>space</i> type from Table 9.6.4.9.5.2.1 as modified by factors in this row.	No allowance	22% <u>65%</u> of the interior lighting power allowance value	39% <u>65%</u> of the interior lighting power allowance value	55% <u>80%</u> of the interior lighting power allowance value	77% <u>100%</u> of the interior lighting power allowance value	<u>(b) and either (d) or (e)</u>
<u>Roadway/parking entry, trail head, and toilet facility, or other locations approved by the authority having jurisdiction.</u>	<u>A single luminaire of 10 W or less</u>	<u>No additional allowance</u>	<u>No additional allowance</u>	<u>No additional allowance</u>	<u>No additional allowance</u>	<u>(b) and either (d) or (e)</u>

Table 9.4.2-2 Individual Lighting Power Allowances for Building Exterior Applications (SI)

	Zone 0	Zone 1	Zone 2	Zone 3	Zone 4	Section 9.4.1.4 Required Controls
Base Site Allowance (Base allowance may be used in tradable or non-tradable surfaces.)						
	No allowance	350 <u>160</u> W	400 <u>280</u> W	500 <u>400</u> W	900 <u>560</u> W	
Tradable Surfaces (LPD allowances for uncovered parking areas, building grounds, building entrances, exits and loading docks, canopies and overhangs, and outdoor sales areas may be traded.)						
Uncovered Parking Areas						
Parking areas and drives	No allowance	0.32 <u>0.161</u> W/m ²	0.43 <u>0.280</u> W/m ²	0.65 <u>0.400</u> W/m ²	0.86 <u>0.560</u> W/m ²	(b) and either (d) or (e)
Parking areas and drives with <u>luminaires >78W and mounting height <7.3 m</u>	No allowance	<u>0.161</u> W/m ²	<u>0.280</u> W/m ²	<u>0.400</u> W/m ²	<u>0.560</u> W/m ²	(b) and (e)
Building Grounds						
Walkways/ramps less than 3 m wide	No allowance	<u>1.6</u> W/linear m	<u>1.6</u> W/linear m	2.0 <u>1.8</u> W/linear m	2.3 <u>2.0</u> W/linear m	(b) and either (d) or (e)
Walkways/ramps, 3 m wide or greater Plaza areas Special feature areas	No allowance	0.301 <u>1.1</u> W/m ²	0.527 <u>1.1</u> W/m ²	0.753 <u>1.2</u> W/m ²	1.05 <u>1.5</u> W/m ²	(b) and either (d) or (e)
<u>Roof terraces and Special Features</u>	No allowance	<u>0.430</u> W/m ²	<u>0.753</u> W/m ²	<u>1.08</u> W/m ²	<u>1.51</u> W/m ²	(b) and either (d) or (e)
Dining areas	No allowance	1.68 <u>7.0</u> W/m ²	2.94 <u>7.0</u> W/m ²	4.20 <u>8.1</u> W/m ²	5.87 <u>10.2</u> W/m ²	(b) and either (d) or (e)
Stairways	No allowance	6.5 <u>7.5</u> W/m ²	7.5 <u>7.5</u> W/m ²	7.5 <u>7.5</u> W/m ²	7.5 <u>7.5</u> W/m ²	
Pedestrian tunnels	No allowance	0.678 <u>1.3</u> W/m ²	1.18 <u>1.3</u> W/m ²	1.69 <u>1.5</u> W/m ²	2.37 <u>2.3</u> W/m ²	(d) or (e)
Landscaping	No allowance	0.150 <u>0.32</u> W/m ²	0.269 <u>0.43</u> W/m ²	0.387 <u>0.43</u> W/m ²	0.538 <u>0.43</u> W/m ²	(b) and (c)
Building Entrances, Exits, and Loading Docks						
Pedestrian and vehicular entrances and exits	No allowance	18.4 <u>46</u> W/linear m of opening	32.1 <u>46</u> W/linear m of opening	45.9 <u>69</u> W/linear m of opening	64.3 <u>69</u> W/linear m of opening	(b) and either (d) or (e)
Entry canopies	No allowance	0.774 <u>2.1</u> W/m ²	1.36 <u>2.7</u> W/m ²	1.94 <u>4.3</u> W/m ²	2.71 <u>4.3</u> W/m ²	(b) and either (d) or (e)
Loading docks	No allowance	1.12 <u>3.8</u> W/m ²	1.96 <u>3.8</u> W/m ²	2.80 <u>3.8</u> W/m ²	3.92 <u>3.8</u> W/m ²	(b) and either (d) or (e)
Sales Canopies						
Free standing and attached	No allowance	2.15 <u>4.3</u> W/m ²	3.77 <u>4.3</u> W/m ²	5.38 <u>6.5</u> W/m ²	7.53 <u>7.5</u> W/m ²	(b) and either (d) or (e)
Outdoor Sales						
Open areas (including vehicle sales lots)	No allowance	0.774 <u>6.5</u> W/m ²	1.36 <u>6.5</u> W/m ²	1.94 <u>6.5</u> W/m ²	2.71 <u>6.5</u> W/m ²	(b) and either (d) or (e)
Street frontage for vehicle sales lots in addition to “open area” allowance	No allowance	No allowance	23.6 <u>23</u> W/linear m	33.4 <u>23</u> W/linear m	47.3 <u>69</u> W/linear m	(b) and either (d) or (e)
Nontradable Surfaces (LPD allowances for the following applications can be used only for the specific application and cannot be traded between surfaces or with other exterior lighting. The following allowances are in addition to any allowance otherwise permitted in the “Tradable Surfaces” section of this table.)						
Stairways	Exempt	Exempt	Exempt	Exempt	Exempt	(b)

Table 9.4.2-2 Individual Lighting Power Allowances for Building Exterior Applications (SI)

	Zone 0	Zone 1	Zone 2	Zone 3	Zone 4	Section 9.4.1.4 Required Controls
<i>Building facades</i> (The allowance for each illuminated facade <i>orientation</i> shall be calculated by multiplying the allowable value by the entire facade area <u>facade area</u> or facade length for that <i>orientation</i> .)	No allowance	No allowance <u>0.60 W/m² of facade area or 4.59 W/linear m of facade length</u>	<u>1.05 1.1 W/m² of facade area or 7.9 66 W/linear m of facade length</u>	<u>1.51 1.6 W/m² of facade area or 11.2 12.3 W/ linear m of facade length</u>	<u>2.11 2.2 W/m² of facade area or 15.7 16.4 W/ linear m of facade length</u>	(b) and (c)
Automated teller machines and night depositories	No allowance	90 35 W per location plus 35 45 W per additional ATM per location	<u>90 35 W per location plus 35 45 W per additional ATM per location</u>	<u>90 35 W per location plus 35 45 W per additional ATM per location</u>	<u>90 35 W per location plus 35 45 W per additional ATM per location</u>	(b)
Uncovered entrances and gatehouse inspection stations at guarded facilities	No allowance	<u>1.55 5.4 W/m²</u>	<u>2.71 5.4 W/m²</u>	<u>3.88 5.4 W/m²</u>	<u>5.43 5.4 W/m²</u>	(b) and either (d) or (e)
Uncovered loading areas for law enforcement, fire, ambulance, and other emergency service <u>service</u> vehicles	No allowance	<u>1.12 3.8 W/m²</u>	<u>1.96 3.8 W/m²</u>	<u>2.80 3.8 W/m²</u>	<u>3.92 3.8 W/m²</u>	(b) and either (d) or (e)
Drive-through windows/doors	No allowance	53 200 W per drive-through	<u>92 200 W per drive-through</u>	<u>132 200 W per drive-through</u>	<u>185 200 W per drive-through</u>	(b) and either (d) or (e)
Parking near 24-hour retail entrances	No allowance	80 400 W per main entry	<u>140 400 W per main entry</u>	<u>200 400 W per main entry</u>	<u>280 400 W per main entry</u>	(b) and either (d) or (e)
Roadway/parking entry, trail head, and toilet facility, or other locations approved by the authority having jurisdiction.	A single luminaire of 25 W or less	No additional allowance	No additional allowance	No additional allowance	No additional allowance	
For areas that are not listed in this table or are not comparable to areas listed in this table, use the comparable interior <i>space</i> type from Table 9.6.1 9.5.2.1 as modified by factors in this row.	No allowance	<u>22% 65% of the interior lighting power allowance value</u>	<u>39% 65% of the interior lighting power allowance value</u>	<u>55% 80% of the interior lighting power allowance value</u>	<u>77% 100% of the interior lighting power allowance value</u>	(b) and either (d) or (e)
Roadway/parking entry, trail head, and toilet facility, or other locations approved by the authority having jurisdiction.	A single luminaire of 10 W or less	No additional allowance	No additional allowance	No additional allowance	No additional allowance	(b) and either (d) or (e)

POLICY STATEMENT DEFINING ASHRAE'S CONCERN FOR THE ENVIRONMENTAL IMPACT OF ITS ACTIVITIES

ASHRAE is concerned with the impact of its members' activities on both the indoor and outdoor environment. ASHRAE's members will strive to minimize any possible deleterious effect on the indoor and outdoor environment of the systems and components in their responsibility while maximizing the beneficial effects these systems provide, consistent with accepted Standards and the practical state of the art.

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.

ASHRAE will take the lead with respect to dissemination of environmental information of its primary interest and will seek out and disseminate information from other responsible organizations that is pertinent, as guides to updating Standards and Guidelines.

The effects of the design and selection of equipment and systems will be considered within the scope of the system's intended use and expected misuse. The disposal of hazardous materials, if any, will also be considered.

ASHRAE's primary concern for environmental impact will be at the site where equipment within ASHRAE's scope operates. However, energy source selection and the possible environmental impact due to the energy source and energy transportation will be considered where possible. Recommendations concerning energy source selection should be made by its members.

About ASHRAE

Founded in 1894, ASHRAE is a global professional society committed to serve humanity by advancing the arts and sciences of heating, ventilation, air conditioning, refrigeration, and their allied fields.

As an industry leader in research, standards writing, publishing, certification, and continuing education, ASHRAE and its members are dedicated to promoting a healthy and sustainable built environment for all, through strategic partnerships with organizations in the HVAC&R community and across related industries.

To stay current with this and other ASHRAE Standards and Guidelines, visit www.ashrae.org/standards, and connect on LinkedIn, Facebook, Twitter, and YouTube.

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IMPORTANT NOTICES ABOUT THIS STANDARD

To ensure that you have all of the approved addenda, errata, and interpretations for this Standard, visit www.ashrae.org/standards to download them free of charge.

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