Chapters 8 and 9 Items 8-2-12 through 8-15-12; Items 9-1 12 through 9-10-12 August 21, 2014.

This is one of eight documents containing the preliminary actions of the A117.1 Committee regarding public comments received on the First Public Review Draft (October 2013) of proposed changes to the A117.1 Standard, 2009 edition. Each item was discussed at the meeting of Committee during the weeks of January 21<sup>st</sup> and July 14<sup>th</sup> of 2014, in Washington D.C. The Committee took action on each public comment and such action is specified herein. The actions listed here are subject reconfirmation by the Committee via the Committee's ballot process.

Please note: This document does not contain proposals for which no comments were received. Those proposals, and the Committee decision on each one, can be viewed in the Committee Action Report (CAR) under the title: First Draft Standard Development at this following location: <u>http://www.iccsafe.org/cs/standards/A117/Pages/default.aspx</u>

# **Chapter 8**

### 8-2 – 12

#### (This represents the language approved by the committee for the First Public Review Draft)

Revise as follows:

**802.1 General.** Wheelchair spaces and wheel chair space locations in assembly areas with spectator seating shall comply with Section 802. Where tiered seating includes dining surfaces or work surfaces, wheelchair spaces and wheelchair space locations shall comply with Section 802.6, 802.7, 802.9, 802.10 and 902. Team and player seating shall comply with Sections 802.2 through 802.6.

**802.7.2 Companion Seat Alignment.** In row seating, the companion seat shall be located to provide shoulder alignment with the wheelchair space occupant. The shoulder of the wheelchair space occupant shall be measured either 36 inches (915 mm) from the front or 12 inches (305 mm) from the rear of the wheelchair space. The floor surface for the companion seat shall be at the same elevation as the wheelchair space floor surface.

**EXCEPTION:** Companion seat alignment is not required in tiered seating includes dining surfaces or work surfaces.

# 8-2-12 PC1

#### See committee action under 3-6-12 PC2

### 8-3-12

#### (This represents the language approved by the committee for the First Public Review Draft)

#### Revise as follows:

**802.4 Depth.** Where a wheelchair space can be entered from the front or rear, the wheelchair space shall be 48  $\underline{52}$  inches ( $\underline{1220} \underline{1320}$  mm) minimum in depth. Where a wheelchair space can only be entered from the side, the wheelchair space shall be 60 inches ( $\underline{1525}$  mm) minimum in depth.

### 8-3-12 PC1

#### See committee action under 3-6-12 PC2

### 8-4 – 12

(This represents the language approved by the committee for the First Public Review Draft)

#### Revise as follows:

**802.10.1 Horizontal Dispersion.** Wheelchair space locations shall be dispersed horizontally to provide viewing options. <u>Where seating encircles the stage or field, in whole or in part, horizontal dispersion shall include the entire seating area.</u> Two wheelchair spaces shall be permitted to be located side-by-side.

#### **EXCEPTION:**

(No change to the exception)

### 8-4-12 PC1

Curt Wiehle, Minnesota Construction Codes and Licensing, representing self

#### Further revise as follows:

**802.10.1 Horizontal Dispersion.** Wheelchair space locations shall be dispersed horizontally to provide viewing options. Where seating encircles the stage or field, in whole or in part, horizontal dispersion shall include <u>occur around</u> the entire seating area. Two wheelchair spaces shall be permitted to be located side-by-side.

# **EXCEPTION:** (No change to the exception)

**Reason:** Around is the word used in the 2010 ADA guidelines and is more descriptive than include.

#### Committee action on 8-4-12 PC1

**Disapprove Public Comment 8-4-12 PC1** 

**Reason:** The Committee concluded that Mr. Wiehle's proposal doesn't improve the code and could be misinterpreted. Nor does his proposal match the ADA/ABA language..

# 8-6-12

(This represents the language approved by the committee for the First Public Review Draft)

Add new text as follows:

**802.11 Stage Lighting for Sign Language Interpreters.** Lighting shall be provided at each side of a stage for the purposes of illuminating a Sign Language Interpreter. The illuminated presentation area shall be 25 square feet (2.3 m<sup>2</sup>) minimum measured in a vertical plane with the bottom edge at 48 inches (1220 mm) above the finished floor and a minimum of 36 inches (915 mm) measured from the presentation wall. The illumination shall be provided by directional light fixtures controlled independently from the general room lighting. The fixtures shall be located as necessary to provide a diagonal cast of light for facial illumination at no less than 15 degrees from the vertical plane. The illumination shall be 10 foot candles (108 lux) minimum greater than the least light level.

# 8-6-12 PC1

Hansel Bauman representing National Association of the Deaf

Further revise as follows:

**802.11 Stage Lighting for Sign Language Interpreters.** Lighting shall be provided at each side of a stage for the purposes of illuminating a Sign Language Interpreter. The illuminated presentation area shall be 25 square feet (2.3 m<sup>2</sup>) minimum measured in a vertical plane with the bottom edge at 48 inches (1220 mm) above the finished floor and a minimum of 36 inches (915 mm) measured from the presentation wall. The illumination shall be provided by directional light fixtures controlled independently from the general room lighting. The fixtures shall be located as necessary to provide a diagonal cast of light for facial illumination at no less than 15 degrees from the vertical plane. The illumination shall be 10 foot candles (108 lux) minimum greater than the least light level.

802.11 General. Sign language interpreter stations shall comply with 802.11.

**802.11.1 Area.** A sign language interpreter station shall provide a level and clear floor of sufficient floor area necessary to enable a sign language interpreter to produce sign language legible from the seating area identified in 802.11.2 and allow periodic interpreter shift changes to take place.

**802.11.2 Location.** Sign language interpreter stations shall be located so that seating within an arc centered on the station and subtending 120 degrees maximum and not more than 65 feet from the station is provided with sightlines providing unobstructed view of the signers from top of their heads to their waists and to an arm's length to both sides of the signer, all as measured to the center of the station. The vertical viewing angle to the interpreter station shall not exceed 30 degrees.

**802.11.4 Illumination:** The sign language interpreter station shall be illuminated in compliance with 802.11.2 while signing is underway. Illumination of the sign language interpreter station shall comply with the Recommended Maintained Illuminance Targets established for a "Transitional Sermon" by IES Handbook 10<sup>th</sup> Edition, Table 37.2.

**802.11.5 Backdrop.** When a sign language interpreter station is located no grater than 10 feet in front of a permanent wall as measured tangent to the centerline of the arc described in 802.11.2 a portion of the wall measuring 69 inches wide centered on the sign language interpreter station and 96 inches high from the finish floor shall be considered as a backdrop. *The surface treatment of the backdrop shall comply* 

# with 802.11.5 while sign language interpretation is being provided. The backdrop shall provide a flat, smooth surface with a monochromatic, low-luster finish treatment.

**Reason:** The proposed revision to **802.11 Stage Lighting for Sign Language Interpreters** is a complete replacement of the text provided in the Public Review Draft dated October 25, 2013. The revised proposal provides a performance standard for **Sign Language Interpreter Stations** to accommodates a reasonable range of possible performance venues where sign language interpreting would likely be provided rather than providing targeted guidance for a specific location. The revision provides measureable lighting conditions, spatial relationships and adds guidance for the surface treatment for a backdrop which could greatly enhance ones acuity of reading sign language from a prescribed area within audience seating.

In the revised text the sign language interpreter station (the station) is defined in terms of its performance as an area that enables an interpreter to perform visual communication. The station is located in relation to a seating area within the audience that would have reasonable visual access to the station. The dimensions and geometry used to describe the Location / seating area derived from information on acceptable theater viewing angles published in Time Saver Standards for Building Types by De Chiara and Callender.

Measures for lighting are provided by way of reference to the Illuminating Engineering Society (IES) Handbook. The proposed lighting levels and methods for measuring the lighting levels at the station are consistent with lighting levels determined as beneficial for viewing sign language in similar conditions observed over time at public forums held at Gallaudet University where sign-language interpreting is used in public forums on a daily basis. The IES standard substantiates the lighting levels for viewing gestures in sermons that are video recorded. Until further detailed research is provided this the IES standard provides a reasonable measure of light levels in both the vertical and horizontal directions in which sign language is viewed.

Finally the proposal provides guidance for surface treatment for a permanent wall that, because of its proximity to the area identified as the station would serve as a backdrop to the sign language produced by the interpreter. The proposed language seeks to provide a reasonable requirement for an architectural backdrop that would not interfere or be a part of the stage set of the performance being interpreted. Furthermore, the standard for the backdrop intends to allows reasonable flexibility to the wall surface treatment while controlling glare and visual vibrations caused by shadows produced by heavy wall texture and or surface patterns. Controlling these adverse conditions greatly reduces eye strain and enhances acuity.

#### Committee action on 8-6-12 PC1

#### Approve Public Comment 8-6-12 PC1

**Reason:** The public comment is a significant improvement over that previously approved, providing clear design parameters for sign language interpreter stations. The committee hopes including this in the next public review draft will promote comments to improve it further..

### 8-6-12 PC2

Harold Kiewel, representing self

Further revise as follows:

**802.11 Stage Lighting for Sign Language Interpreters.** Lighting shall be provided at each side of a stage for the purposes of illuminating a Sign Language Interpreter. The illuminated presentation area shall be 25 square feet (2.3 m<sup>2</sup>) minimum measured in a vertical plane with the bottom edge at 48 inches (1220 mm) above the finished floor and a minimum of 36 inches (915 mm) measured from the presentation wall. The illumination shall be provided by directional light fixtures controlled independently from the general room lighting. The fixtures shall be located as necessary to provide a diagonal cast of light for facial illumination at no less than 15 degrees from the vertical plane. The illumination shall be 10 foot candles (108 lux) minimum greater than the least light level of the seating area.

**Reason:** I am opposed to changing dimensions to non-modular (odd) numbers. I believe that dimensional requirements of the Standard should, to the maximum extent practicable, be modular in both Imperial and metric (SI) systems. Imperial dimensions should be multiples of 4-inches, and conversion to metric measure should use 4-inches = 100 mm.

As a professional technical writer, I take exception to the modern practice of wasting the first Article of every major sub-part with the phrase "[this work] shall comply with this Standard." If the Standard has a purpose, and the Article has title, the phrase is superfluous. You could save a couple of pages by deleting those lines.

I have not pointed out spelling, tense, or minor grammatical errors. There are some, but I presume that the committee has access to editors who will, in due course, correct those items.

#### Committee action on 8-6-12 PC2

#### **Disapprove Public Comment 8-6-12 PC1**

**Reason:** The Committee approved public comment 8-6-12 PC1 in which there are significant improvements to this proposal. This public comment does not improve on PC1.

### 8-6-12 PC3

Kimberly, Paarlberg, representing ICC

#### Disapprove the change. Return the text to that found in existing standard.

**Reason:** The proposal does not take into consideration the size of the stage. Not all stages would need two locations. I do not understand the language for the size of the presentation area. Are they saying this always has to be a platform 48" above the floor of the auditorium, even if the stage area is higher or lower? Given the slope of the floor and the height of the ceiling, the angle of light may be substantially higher than 15 degrees. Is directly overhead okay? Since theaters typically turn their lights off in the seating area for performances, is the lighting level set for 10 foot candles, or are they measuring the room with he lights on. This is not clear.

#### Committee action on 8-6-12 PC3

#### **Disapprove Public Comment 8-6-12 PC3**

**Reason:** The Committee approved public comment 8-6-12 PC1 in which there are significant improvements to this proposal. The committee preferred to move this concept forward in the process.

### 8-9-12

(This represents the language approved by the committee for the First Public Review Draft)

#### **Revise as follows:**

**804.2.2 U-Shaped Kitchens.** In kitchens enclosed on three contiguous sides, clearance between all opposing base cabinets, countertops, appliances, or walls within kitchen work areas shall be 60 inches (1525 mm) minimum.

**EXCEPTION:** U-shaped kitchens with an island shall be permitted to comply with Section 804.2.1.

**1003.12.1.2 U-Shaped Kitchens.** In kitchens with counters, appliances, or cabinets on three contiguous sides, clearance between all opposing base cabinets, countertops, appliances, or walls within kitchen work areas shall be 60 inches (1525 mm) minimum.

**EXCEPTION:** U-shaped kitchens with an island shall be permitted to comply with Section 1003.12.1.1.

**1004.12.1.2 U-Shaped Kitchens.** In kitchens with counters, appliances, or cabinets on three contiguous sides, clearance between all opposing base cabinets, countertops, appliances, or walls within kitchen work areas shall be 60 inches (1525 mm) minimum.

**EXCEPTION:** U-shaped kitchens with an island shall be permitted to comply with Section 1004.12.1.1.

8-9-12 PC1

#### See committee action under 3-6-12 PC2

### 8-9-12 PC2

#### Harold Kiewel, representing self

**Comment:** The problem with redundancy is every time you change a word, requirement, or exception you also have to make the change in all the places that the language is repeated. It creates an exponential inflation pattern in the size of the Standard and creates the opportunity for one case to be missed, or for one of the iterations to be done incorrectly or incompletely – a coordination nightmare.

#### Committee action on 8-9-12 PC2

#### Disapprove Public Comment 8-9-12 PC2.

**Reason:** The comment did not provide a specific proposal for revision. The Committee did not find Mr. Kiewel's comment led to any changes to the standard as currently proposed.

### 8-10-12

#### (This represents the language approved by the committee for the First Public Review Draft)

#### Revise as follows:

**804.3 Work Surface.** At least one <u>accessible</u> work surface shall be provided in accordance with Section 902. <u>At least one accessible work surface shall be located in accordance with Section 804.5.5.2 or</u> 804.5.5.3.

**EXCEPTION:** Spaces that do not provide a cooktop or conventional range shall not be required to provide an accessible work surface.

**1002.12 Kitchens** and kitchenettes. Kitchens and kitchenettes shall comply with Section 804. At least one work surface, 30 inches (760 mm) minimum in length, shall comply with Section 902.

**EXCEPTION:** Spaces that do not provide a cooktop or conventional range shall not be required to provide an accessible work surface.

**1003.12.3 Work Surface.** At least one section of counter shall provide a<u>n accessible</u> work surface 30 inches (760 mm) minimum in length complying with Section 1003.12.3.

**EXCEPTION:** Spaces that do not provide a cooktop or conventional range shall not be required to provide an accessible work surface.

### 8-10-12 PC1 Harold Kiewel, representing self

Further revise as follow:

**804.3 Work Surface.** At least one accessible work surface shall be provided in accordance with Section 902. At least one accessible work surface shall be located in accordance with Section 804.5.5.2 or 804.5.5.3.

**EXCEPTION:** Spaces that do not provide a cooktop or conventional range shall not be required to provide an accessible work surface.

**1003.12.3 Work Surface.** At least one section of counter shall provide an accessible work surface 30 inches (760 mm) minimum in length complying with Section 1003.12.3.

**EXCEPTION:** Spaces that do not provide a cooktop or conventional range shall not be required to provide an accessible work surface.

**Reason:** This exception implies that micro-wave cooking and other kitchen activities require no preparation which is definitely not the case. Even mixing a salad, or making a cold-cut sandwich, neither of which requires cooking, requires preparation – i.e. a work surface.

#### Committee action on 8-10-12 PC1

Disapprove Public Comment 8-10-12 PC1.

**Reason:** The Committee believes these are important options that should be maintained in the code for kitchen spaces (kitchenettes) that other than full cooking appliances..

# 8-13– 12

(This represents the language approved by the committee for the First Public Review Draft)

**Revise as follows:** 

**804.2 Clearance.** Where a pass-through kitchen is provided, clearances shall comply with Section 804.2.1. Where a U-shaped kitchen is provided, clearances shall comply with Section 804.2.2. <u>Kitchens</u> where a cook top or conventional range are not provided shall comply with Section 804.2.3.

**EXCEPTION:** Spaces that do not provide a cooktop or conventional range shall not be required to comply with Section 804.2 provided there is a 40-inch (1015 mm) minimum clearance between all opposing base cabinets, counter tops, appliances, or walls within work areas.

**804.2.3 Spaces where a cook top or conventional range are not provided.** In a kitchen space where a cooktop or conventional range is not provides, clearance between all opposing base cabinets, counter tops, appliances, or walls within work areas shall be 40-inch (1015 mm) minimum.

**1002.12 Kitchens and kitchenettes.** Kitchens and kitchenettes shall comply with Section 804. At least one work surface, 30 inches (760 mm) minimum in length, shall comply with Section 902.

**EXCEPTION:** Spaces that do not provide a cooktop or conventional range shall not be required to provide an accessible work surface.

**1003.12.3 Work Surface.** At least one section of counter shall provide a work surface 30 inches (760 mm) minimum in length complying with Section 1003.12.3.

**EXCEPTION:** Spaces that do not provide a cooktop or conventional range shall not be required to provide an accessible work surface.

1003.12.4 Sink. Sinks shall comply with Section 1003.12.4.

**Exception:** A parallel approach complying with Section 305 and centered on the sink, shall be permitted to a kitchen sink in a space where a cook top or conventional range is not provided.

#### 8-13-12 PC1 Harold Kiewel, representing self

Further revise as follow:

1003.12.4 Sink. Sinks shall comply with Section 1003.12.4.

**Exception:** A parallel approach complying with Section 305 and centered on the sink, shall be permitted to a kitchen sink in a space where a cook top or conventional range is not provided.

**Reason:** This exception implies that no "work" will be done at the kitchen sink by the disabled person because a parallel approach the sink allows only one-handed access to the fixture. One may rinse a cup, or leave a plate, but one will not be able to WASH their cup or other dishes. This puts the disabled person in an elitist position; it appears to others that the common courtesy kitchen duties (cleaning up after one-self) are too far beneath him/her.

Also, as an added benefit, knee space at the kitchen sink or a work space builds turning space into the design - it's a win-win situation.

#### Committee action on 8-13-12 PC1

Disapprove Public Comment 8-13-12 PC1.

**Reason:** The Committee believes these are important options that should be maintained in the code for kitchen spaces (kitchenettes) that other than full cooking appliances. This action is consistent with the disapproval of Mr. Kiewel's public comment on 8-10-12..

### 8-15-12

(This represents the language approved by the committee for the First Public Review Draft)

Add new text as follows:

#### Section 808 Acoustics

**808.1 General.** Classrooms not exceeding 20,000 cubic feet (565 m<sup>3</sup>) and required to provide enhanced acoustics shall comply with Section 808.

**808.2 Reverberation Time.** Classrooms shall provide reverberation times complying with Sections 808.2.1 or 808.2.2. Reverberation times shall apply to fully furnished classrooms while not in use.

**808.2.1 Compliance Method A.** In each of the octave frequency bands of 500, 1000, and 2000 Hz, reverberation times for sound to decay by 60 dB (*T*60) shall not exceed the times specified below:

1. 0.6 seconds in classrooms 10,000 cubic feet (285 m<sup>3</sup>) maximum.

2. 0.7 seconds in classrooms more than 10,000 cubic feet (285 m<sup>3</sup>) but not exceeding 20,000 cubic feet (565 m<sup>3</sup>).

<u>Reverberation times shall be field verified and shall be measured over a minimum level decay of 20 dB</u> for which the maximum time shall not exceed 0.2 seconds for classrooms listed in item #1 and 0.23 seconds for classrooms listed in item #2.

**808.2.2 Compliance Method B.** Small classrooms 10,000 cubic feet (285 m<sup>3</sup>) maximum complying with Table 808.2.2(a) for T60 of 0.6 s., and large classrooms more than 10,000 cubic feet (285 m<sup>3</sup>) but not exceeding 20,000 cubic feet (565 m<sup>3</sup>) complying with Table 808.2.2(b) for T60 of 0.7s., shall be deemed to comply with Section 808.2.

Sound				<u>Ceil</u>	ing height, l	<del>l, ft.</del>						
absorption	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>	<u>16</u>			
coefficient,		Ceiling height, H, m.										
<u>α</u> 1	<u>2.44</u>	<u>2.74</u>	<u>3.05</u>	<u>3.35</u>	<u>3.66</u>	<u>3.96</u>	<u>4.27</u>	<u>4.57</u>	<u>4.88</u>			
	Minimum	combined a	rea of wall a	nd ceiling s	ound-absorl	oing materia	l as a perce	ntage of the	floor area			
<u>0.45</u>	<u>112</u>	<u>130</u>	<u>148</u>	<u>167</u>	<u>185</u>	<u>203</u>	<u>221</u>	<u>239</u>	<u>257</u>			
<u>0.50</u>	<u>101</u>	<u>117</u>	<u>134</u>	<u>150</u>	<u>166</u>	<u>183</u>	<u>199</u>	<u>215</u>	<u>232</u>			
<u>0.55</u>	<u>92</u>	<u>107</u>	<u>121</u>	<u>136</u>	<u>151</u>	<u>166</u>	<u>181</u>	<u>196</u>	<u>211</u>			
<u>0.60</u>	<u>84</u>	<u>98</u>	<u>111</u>	<u>125</u>	<u>139</u>	<u>152</u>	<u>166</u>	<u>179</u>	<u>193</u>			
<u>0.65</u>	<u>78</u>	<u>90</u>	<u>103</u>	<u>115</u>	<u>128</u>	<u>141</u>	<u>153</u>	<u>166</u>	<u>178</u>			
<u>0.70</u>	<u>72</u>	<u>84</u>	<u>95</u>	<u>107</u>	<u>119</u>	<u>130</u>	<u>142</u>	<u>154</u>	<u>166</u>			
<u>0.75</u>	<u>67</u>	<u>78</u>	<u>89</u>	<u>100</u>	<u>111</u>	<u>122</u>	<u>133</u>	<u>144</u>	<u>154</u>			
<u>0.80</u>	<u>63</u>	<u>73</u>	<u>83</u>	<u>94</u>	<u>104</u>	<u>114</u>	<u>124</u>	<u>135</u>	<u>145</u>			
<u>0.85</u>	<u>59</u>	<u>69</u>	<u>79</u>	<u>88</u>	<u>98</u>	<u>107</u>	<u>117</u>	<u>127</u>	<u>136</u>			
<u>0.90</u>	<u>56</u>	<u>65</u>	<u>74</u>	<u>83</u>	<u>92</u>	<u>101</u>	<u>111</u>	<u>120</u>	<u>129</u>			
<u>0.95</u>	<u>53</u>	<u>62</u>	<u>70</u>	<u>79</u>	<u>88</u>	<u>98</u>	<u>105</u>	<u>113</u>	<u>116</u>			
<u>1.00</u>	<u>50</u>	<u>59</u>	<u>67</u>	<u>75</u>	<u>83</u>	<u>91</u>	<u>100</u>	<u>108</u>	<u>116</u>			

Table 808.2.2(a) — Minimum surface area of acoustical treatment for small classrooms.
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14610	000.2.2(0)				400401104				
Sound		Ceiling height, H, ft.							
absorption	<u>8</u>	9	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>	<u>16</u>
coefficient,					ing height, l		•		
<u>α</u> 1	2.44	<u>2.74</u>	<u>3.05</u>	<u>3.35</u>	<u>3.66</u>	<u>3.96</u>	<u>4.27</u>	<u>4.57</u>	<u>4.88</u>
	Minimum	combined a	area of wall a	and ceiling s	ound-absort	ping materia	as a percer	tage of the	loor area
<u>0.45</u>	<u>91</u>	<u>107</u>	<u>122</u>	<u>138</u>	<u>154</u>	<u>169</u>	<u>185</u>	<u>200</u>	<u>216</u>
<u>0.50</u>	<u>82</u>	<u>96</u>	<u>110</u>	<u>124</u>	<u>138</u>	<u>152</u>	<u>166</u>	<u>180</u>	<u>194</u>
<u>0.55</u>	<u>75</u>	<u>87</u>	<u>100</u>	<u>113</u>	<u>126</u>	<u>138</u>	<u>151</u>	<u>164</u>	<u>177</u>
<u>0.60</u>	<u>68</u>	<u>80</u>	<u>92</u>	<u>104</u>	<u>115</u>	<u>127</u>	<u>139</u>	<u>150</u>	<u>162</u>
<u>0.65</u>	<u>63</u>	<u>74</u>	<u>85</u>	<u>96</u>	<u>106</u>	<u>117</u>	<u>128</u>	<u>139</u>	<u>149</u>
<u>0.70</u>	<u>59</u>	<u>69</u>	<u>79</u>	<u>89</u>	<u>99</u>	<u>109</u>	<u>119</u>	<u>129</u>	<u>139</u>
<u>0.75</u>	<u>55</u>	<u>64</u>	<u>73</u>	<u>83</u>	<u>92</u>	<u>102</u>	<u>111</u>	<u>120</u>	<u>130</u>
<u>0.80</u>	<u>51</u>	<u>60</u>	<u>69</u>	<u>78</u>	<u>86</u>	<u>95</u>	<u>104</u>	<u>113</u>	<u>121</u>
<u>0.85</u>	<u>48</u>	<u>57</u>	<u>65</u>	<u>73</u>	<u>81</u>	<u>90</u>	<u>98</u>	<u>106</u>	<u>114</u>
<u>0.90</u>	<u>46</u>	<u>53</u>	<u>61</u>	<u>69</u>	<u>77</u>	<u>85</u>	<u>92</u>	<u>100</u>	<u>108</u>
<u>0.95</u>	<u>43</u>	<u>51</u>	<u>58</u>	<u>65</u>	<u>73</u>	<u>80</u>	<u>88</u>	<u>95</u>	<u>102</u>
<u>1.00</u>	<u>41</u>	<u>48</u>	<u>55</u>	<u>62</u>	<u>69</u>	<u>76</u>	<u>83</u>	<u>90</u>	<u>97</u>

Table 808.2.2(b) — Minimum surface area of acoustical treatment for large classrooms.

**808.3 Ambient Sound Level.** Ambient sound levels within a classroom shall comply with Section 808.3. Ambient sound levels from exterior and interior sound sources shall be evaluated individually. The greatest one-hour averaged sound levels shall be evaluated at a height of 36 inches (915 mm) above the floor and no closer than 36 inches (915 mm) from any wall, window, or fixed object. Ambient sound levels shall apply to fully furnished classrooms while not in use.

**808.3.1 Exterior Sound Sources.** Ambient sound levels within a classroom 20,000 cubic feet (565 m<sup>3</sup>) maximum shall not exceed 35 dBA and 55 dBC for noise intrusion from exterior sound sources.

**808.3.2 Interior Sound Sources.** Ambient sound levels within a classroom not larger than 20,000 cubic feet (565 m<sup>3</sup>) shall not exceed 35 dBA and 55 dBC, for noise from interior sound sources.

# 8-15-12 PC1

Maria Haynes, representing self

**Comment:** I am licensed and certified as a Speech/Language Pathologist and also as an Audiologist (MA State Board of Registration, and American Speech/Language Hearing Association. I have worked in the public school system for 30 yrs., have also taught at the college level. My experience is that even in the newest schools the classroom acoustics are poor. All surfaces are hard surfaces( in an attempt to make them easy to clean) but makes them terrible listening situations. At least 25-30% will have difficulty catching all the auditory material – anyone with a hearing loss is doomed, and more than are realized in the rest of the class miss information because of auditory discrimination/processing issue, 2<sup>nd</sup> language learning , and someone with a cold, which is much of the winter in the northeast. They don't complain because they figure everyone else can hear well, and don't know what they missed. Especially now that there is an emphasis on class discussion, they don't hear other children. I have given up being able to do speech therapy within classrooms for several reasons, one of which is I know the kids I am there for are not hearing it all. When we have had hearing impaired children we have treated surfaces with acoustic material. That should be standard in ALL classrooms, plus use FM equipment.

#### Committee action on 8-15-12 PC1

8-15-12 PC1 is a comment in support including classroom acoustic provisions in the standard. No changes are suggested. The comment asks for no action. No motion was made.

### 8-15-12 PC2 Chantal Kealey, representing CASLPA

**Comment:** CASLPA has reviewed and supports the October 25, 2013 changes/amendments to the ICC A117.1 building codes standard, Chapter 8, Section 808. CASLPA has long supported the need for improved classroom acoustics in Canada and has advocated on this issue. <a href="http://www.caslpa.ca/caslpa-work/classroom-acoustics">www.caslpa.ca/caslpa-work/classroom-acoustics</a>

#### Committee action on 8-15-12 PC2

8-15-12 PC2 is a comment in support including classroom acoustic provisions in the standard. No changes are suggested. The comment asks for no action. No motion was made.

# 8-15-12 PC3

Kimberly Paarlberg, representing ICC

**Comment:** I don't know if this will be addressed by the editorial committee or not. The proponent does not use consistent terminology for the ranges in sizes or levels.

#### Committee action on 8-15-12 PC3

As with the balance of the standard, the Editorial task group will review 8-15-12. No motion was made on this public comment.

### 8-15-12 PC4

Robert H. Mallory, FCSI, CCS, CCPR, CCCA, LEED AP BD+C, representing self

Further revise as follows:

#### Section 808 Acoustics

**808.1 General.** Classrooms not exceeding 20,000 cubic feet (565 m<sup>3</sup>) and required to provide enhanced acoustics shall comply with Section 808.

**808.2 Reverberation Time.** Classrooms shall provide reverberation times complying with Sections 808.2.1 or 808.2.2. Reverberation times shall apply to <u>fully furnished</u> <u>unfurnished</u> classrooms while not in use.

**808.2.1 Compliance Method A.** In each of the octave frequency bands of 500, 1000, and 2000 Hz, reverberation times for sound to decay by 60 dB (*T*60) shall not exceed the times specified below:

1. 0.6 seconds in classrooms 10,000 cubic feet (285 m<sup>3</sup>) maximum.

2. 0.7 seconds in classrooms more than 10,000 cubic feet (285  $m^3$ ) but not exceeding 20,000 cubic feet (565  $m^3$ ).

Reverberation times shall be field verified and shall be measured over a minimum level decay of 20 dB for which the maximum time shall not exceed 0.2 seconds for classrooms listed in item #1 and 0.23 seconds for classrooms listed in item #2.

**808.2.2 Compliance Method B.** Small classrooms 10,000 cubic feet ( $285 \text{ m}^3$ ) maximum complying with Table 808.2.2(a) for T60 of 0.6 s., and large classrooms more than 10,000 cubic feet ( $285 \text{ m}^3$ ) but not exceeding 20,000 cubic feet ( $565 \text{ m}^3$ ) complying with Table 808.2.2(b) for T60 of 0.7s., shall be deemed to comply with Section 808.2.

Sound		Ceiling height, H, ft.											
absorption	8	9	10	11	12	13	14	15	16				
coefficient,				Ceil	ing height, H	l, m.							
α <sub>1</sub>	2.44	2.74	3.05	3.35	3.66	3.96	4.27	4.57	4.88				
	Minimum	combined a	rea of wall a	nd ceiling s	ound-absorl	ping materia	l as a perce	ntage of the	floor area				
0.45	112	130	148	167	185	203	221	239	257				
0.50	101	117	134	150	166	183	199	215	232				
0.55	92	107	121	136	151	166	181	196	211				
0.60	84	98	111	125	139	152	166	179	193				
0.65	78	90	103	115	128	141	153	166	178				
0.70	72	84	95	107	119	130	142	154	166				
0.75	67	78	89	100	111	122	133	144	154				
0.80	63	73	83	94	104	114	124	135	145				
0.85	59	69	79	88	98	107	117	127	136				
0.90	56	65	74	83	92	101	111	120	129				
0.95	53	62	70	79	88	98	105	113	116				
1.00	50	59	67	75	83	91	100	108	116				

 Table 808.2.2(a) — Minimum surface area of acoustical treatment for small classrooms.

Table 808.2.2(b) — Minimum surface area of acoustical treatment for large class	ssrooms.
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Sound		Ceiling height, H, ft.											
absorption	8	9	10	11	12	13	14	15	16				
coefficient,		Ceiling height, H, m.											
α1	2.44	2.74	3.05	3.35	3.66	3.96	4.27	4.57	4.88				
	Minimum	combined a	area of wall a	and ceiling s	ound-absorl	oing material	as a percer	ntage of the f	loor area				
0.45	91	107	122	138	154	169	185	200	216				
0.50	82	96	110	124	138	152	166	180	194				
0.55	75	87	100	113	126	138	151	164	177				
0.60	68	80	92	104	115	127	139	150	162				
0.65	63	74	85	96	106	117	128	139	149				
0.70	59	69	79	89	99	109	119	129	139				
0.75	55	64	73	83	92	102	111	120	130				
0.80	51	60	69	78	86	95	104	113	121				
0.85	48	57	65	73	81	90	98	106	114				
0.90	46	53	61	69	77	85	92	100	108				
0.95	43	51	58	65	73	80	88	95	102				
1.00	41	48	55	62	69	76	83	90	97				

**808.3 Ambient Sound Level.** Ambient sound levels within a classroom shall comply with Section 808.3. Ambient sound levels from exterior and interior sound sources shall be evaluated individually. The

greatest one-hour averaged sound levels shall be evaluated at a height of 36 inches (915 mm) above the floor and no closer than 36 inches (915 mm) from any wall, window, or fixed object. Ambient sound levels shall apply to fully furnished unfurnished classrooms while not in use.

**808.3.1 Exterior Sound Sources.** Ambient sound levels within a classroom 20,000 cubic feet (565 m<sup>3</sup>) maximum shall not exceed 35 dBA and 55 dBC for noise intrusion from exterior sound sources.

**808.3.2 Interior Sound Sources.** Ambient sound levels within a classroom not larger than 20,000 cubic feet (565 m<sup>3</sup>) shall not exceed 35 dBA and 55 dBC, for noise from interior sound sources.

**Reason:** Isee that the reverberation times are for fully furnished classrooms. This will make the modeling much more unpredictable and will not provide for flexibility in use of the classroom space. If, for example the room is modeled with 30 desks, plus teacher's desk and appurtenances, then the requirements change to an open classroom with different furniture, the reverberation time could change significantly. I have seen great variation in how standard classrooms are being furnished.

It seems much more predictable to model an unfurnished classroom, and assume that furniture will add to the absorption. The unfurnished method will provide a school district with much more flexibility as the rooms will all be controlled to the same T-60 initially. Plus it will add a standardization to the methodology. I can fore vision continuing arguments with Architects and Designers concerning furnishings, and then have some poor school district end up with spaces with high reverberation times when they change out furniture to something less absorptive than the originally modeled arrangement

#### Committee action on 8-15-12 PC4

Approve Public Comment with modifications - 8-15-12 PC4.

Modified as follows:

**808.2 Reverberation Time.** Classrooms shall provide reverberation times complying with Sections 808.2.1 or 808.2.2. Reverberation times shall apply to fully furnished classrooms while not in use.

**808.2.1 Compliance Method A.** In each of the octave frequency bands of 500, 1000, and 2000 Hz, reverberation times for sound to decay by 60 dB (*T*60) shall not exceed the times specified below:

1. 0.6 seconds in classrooms 10,000 cubic feet (285 m<sup>3</sup>) maximum.

2. 0.7 seconds in classrooms more than 10,000 cubic feet (285 m<sup>3</sup>) but not exceeding 20,000 cubic feet (565 m<sup>3</sup>).

<u>Reverberation times shall apply to fully furnished classrooms while not in use.</u> Reverberation times shall be field verified and shall be measured over a minimum level decay of 20 dB for which the maximum time shall not exceed 0.2 seconds for classrooms listed in item #1 and 0.23 seconds for classrooms listed in item #2.

**808.3 Ambient Sound Level.** Ambient sound levels within a classroom shall comply with Section 808.3. Ambient sound levels from exterior and interior sound sources shall be evaluated individually. The greatest one-hour averaged sound levels shall be evaluated at a height of 36 inches (915 mm) above the floor and no closer than 36 inches (915 mm) from any wall, window, or fixed object. Ambient sound levels shall apply to fully furnished unfurnished classrooms while not in use.

**Reason:** The Committee was not convinced that the appropriate condition in which the measurements should be taken is when the classroom is not yet furnished. They maintained the original text regarding

testing when fully furnished. However they concluded that the requirement was misplaced and approved this public comment with the sole purpose of relocating the sentence.

**Staff note:** As both PC4 and PC5 to 8-15-12 were approved, they will both be included in the Second Public Review draft. A merged version of the two will be included.

## 8-15-12 PC5

Mark Schaffer, representing self

Delete and replace as follows:

#### Section 808 Acoustics

**808.1 General.** Classrooms not exceeding 20,000 cubic feet (565 m<sup>3</sup>) and required to provide enhanced acoustics shall comply with Section 808.

**808.2** Reverberation Time. Classrooms shall provide reverberation times complying with Sections 808.2.1 or 808.2.2. Reverberation times shall apply to fully furnished classrooms while not in use.

**808.2.1 Compliance Method A.** In each of the octave frequency bands of 500, 1000, and 2000 Hz, reverberation times for sound to decay by 60 dB (*T*60) shall not exceed the times specified below:

1. 0.6 seconds in classrooms 10,000 cubic feet (285 m<sup>3</sup>) maximum.

2. 0.7 seconds in classrooms more than 10,000 cubic feet (285 m<sup>3</sup>) but not exceeding 20,000 cubic feet (565 m<sup>3</sup>).

Reverberation times shall be field verified and shall be measured over a minimum level decay of 20 dB for which the maximum time shall not exceed 0.2 seconds for classrooms listed in item #1 and 0.23 seconds for classrooms listed in item #2.

**808.2.2 Compliance Method B.** Small classrooms 10,000 cubic feet (285 m<sup>3</sup>) maximum complying with Table 808.2.2(a) for T60 of 0.6 s., and large classrooms more than 10,000 cubic feet (285 m<sup>3</sup>) but not exceeding 20,000 cubic feet (565 m<sup>3</sup>) complying with Table 808.2.2(b) for T60 of 0.7s., shall be deemed to comply with Section 808.2.

Sound	Ceiling height, H, ft.											
absorption	8	9	<del>10</del>	11	<del>12</del>	<del>13</del>	-14	<del>15</del>	<del>16</del>			
coefficient.		Ceiling height, H, m.										
<del>G</del> 1	<del>2.44</del>	<del>2.74</del>	<del>3.05</del>	<del>3.35</del>	<del>3.66</del>	<del>3.96</del>	<del>4.27</del>	4.57	<del>4.88</del>			
•	Minimum	combined a	<del>rea of wall a</del>	nd ceiling s	ound-absorl	oing materia	l as a perce	ntage of the	floor area			
<del>0.45</del>	<del>112</del>	<del>130</del>	<del>148</del>	<del>167</del>	<del>185</del>	<del>203</del>	<del>221</del>	<del>239</del>	<del>257</del>			
<del>0.50</del>	<del>101</del>	<del>117</del>	134	<del>150</del>	<del>166</del>	<del>183</del>	<del>199</del>	<del>215</del>	<u>232</u>			
<del>0.55</del>	<del>92</del>	<del>107</del>	<del>121</del>	<del>136</del>	<del>151</del>	<del>166</del>	<del>181</del>	<del>196</del>	<del>211</del>			
<del>0.60</del>	84	<del>98</del>	<del>111</del>	<del>125</del>	<del>139</del>	<del>152</del>	<del>166</del>	<del>179</del>	<del>193</del>			
<del>0.65</del>	<del>78</del>	<del>90</del>	<del>103</del>	<del>115</del>	<del>128</del>	<del>141</del>	<del>153</del>	<del>166</del>	<del>178</del>			
<del>0.70</del>	<del>72</del>	<del>84</del>	<del>95</del>	<del>107</del>	<del>119</del>	<del>130</del>	<del>142</del>	<del>154</del>	<del>166</del>			

Table 808.2.2(a) — Minimum surface area of acoustical treatment for small classrooms.

<del>0.75</del>	<del>67</del>	<del>78</del>	<del>89</del>	<del>100</del>	<del>111</del>	<del>122</del>	<del>133</del>	<del>144</del>	<del>154</del>
<del>0.80</del>	<del>63</del>	<del>73</del>	<del>83</del>	<del>94</del>	<del>104</del>	<del>114</del>	<del>124</del>	<del>135</del>	<del>145</del>
<del>0.85</del>	<del>59</del>	<del>69</del>	<del>79</del>	<del>88</del>	<del>98</del>	<del>107</del>	<del>117</del>	<del>127</del>	<del>136</del>
<del>0.90</del>	<del>56</del>	<del>65</del>	74	83	<del>92</del>	<del>101</del>	111	<del>120</del>	<del>129</del>
<del>0.95</del>	53	<del>62</del>	<del>70</del>	<del>79</del>	88	<del>98</del>	<del>105</del>	113	<del>116</del>
<del>1.00</del>	<del>50</del>	<del>59</del>	<del>67</del>	<del>75</del>	<del>83</del>	<del>91</del>	<del>100</del>	<del>108</del>	<del>116</del>

#### Table 808.2.2(b) — Minimum surface area of acoustical treatment for large classrooms.

Sound	Ceiling height, H, ft.											
absorption	8	9	<del>10</del>	11	<del>12</del>	<del>13</del>	14	<del>15</del>	<del>16</del>			
coefficient,		Ceiling height, H, m.										
<del>Q</del> 1	<del>2.44</del>	<del>2.74</del>	<del>3.05</del>	<del>3.35</del>	<del>3.66</del>	<del>3.96</del>	4.27	4.57	<del>4.88</del>			
	Minimum	combined a	area of wall a	<del>nd ceiling s</del>	ound-absork	ping material	as a percer	tage of the f	loor area			
<del>0.45</del>	<del>91</del>	<del>107</del>	<del>122</del>	<del>138</del>	<del>154</del>	<del>169</del>	<del>185</del>	<del>200</del>	<del>216</del>			
<del>0.50</del>	<del>82</del>	<del>96</del>	<del>110</del>	<del>124</del>	<del>138</del>	<del>152</del>	<del>166</del>	<del>180</del>	<del>194</del>			
<del>0.55</del>	<del>75</del>	<del>87</del>	<del>100</del>	<del>113</del>	<del>126</del>	<del>138</del>	<del>151</del>	<del>164</del>	<del>177</del>			
<del>0.60</del>	<del>68</del>	<del>80</del>	<del>92</del>	<del>104</del>	<del>115</del>	<del>127</del>	<del>139</del>	<del>150</del>	<del>162</del>			
<del>0.65</del>	<del>63</del>	74	<del>85</del>	<del>96</del>	<del>106</del>	<del>117</del>	<del>128</del>	<del>139</del>	<del>149</del>			
0.70	<del>59</del>	<del>69</del>	<del>79</del>	<del>89</del>	<del>99</del>	<del>109</del>	<del>119</del>	<del>129</del>	<del>139</del>			
<del>0.75</del>	<del>55</del>	64	<del>73</del>	83	<del>92</del>	<del>102</del>	111	<del>120</del>	<del>130</del>			
0.80	<del>51</del>	<del>60</del>	<del>69</del>	<del>78</del>	<del>86</del>	<del>95</del>	<del>104</del>	<del>113</del>	<del>121</del>			
0.85	48	<del>57</del>	<del>65</del>	73	81	<del>90</del>	<del>98</del>	<del>106</del>	<del>114</del>			
<del>0.90</del>	<del>46</del>	<del>53</del>	<del>61</del>	<del>69</del>	77	85	<del>92</del>	<del>100</del>	<del>108</del>			
<del>0.95</del>	<del>43</del>	<del>51</del>	<del>58</del>	<del>65</del>	<del>73</del>	<del>80</del>	<del>88</del>	<del>95</del>	<del>102</del>			
<del>1.00</del>	41	4 <del>8</del>	<del>55</del>	<del>62</del>	<del>69</del>	<del>76</del>	<del>83</del>	<del>90</del>	<del>97</del>			

**808.3 Ambient Sound Level.** Ambient sound levels within a classroom shall comply with Section 808.3. Ambient sound levels from exterior and interior sound sources shall be evaluated individually. The greatest one-hour averaged sound levels shall be evaluated at a height of 36 inches (915 mm) above the floor and no closer than 36 inches (915 mm) from any wall, window, or fixed object. Ambient sound levels shall apply to fully furnished classrooms while not in use.

**808.3.1 Exterior Sound Sources.** Ambient sound levels within a classroom 20,000 cubic feet (565 m<sup>3</sup>) maximum shall not exceed 35 dBA and 55 dBC for noise intrusion from exterior sound sources.

**808.3.2 Interior Sound Sources.** Ambient sound levels within a classroom not larger than 20,000 cubic feet (565 m<sup>3</sup>) shall not exceed 35 dBA and 55 dBC, for noise from interior sound sources.

#### Section 808 Acoustics

**808.1 General.** This section applies to classrooms with volumes up to 20,000 cubic feet (565 m<sup>3</sup>)

**808.2 Reverberation Time.** Classroom Reverberation Times shall comply with either section 808.2.1 or section 808.2.2, depending on the size of the room. Reverberation times shall apply to fully-furnished, unoccupied classrooms.

**808.2.1 Performance Method.** For each of the octave frequency bands with center frequencies of 500, 1000, and 2000 Hz, the Reverberation Time (*T*60) shall not exceed the times specified below:

1. 0.6 seconds in classrooms with volumes up to and including 10,000 cubic feet (285 m<sup>3</sup>).

2. 0.7 seconds in classrooms with volumes of more than 10,000 cubic feet (285 m<sup>3</sup>), but less than 20,000 cubic feet (566 m<sup>3</sup>).

Reverberation times shall be field-verified via measurements made in accordance with ASTM E2235-04(2012) "Standard Test Method for Determination of Decay Rates for Use in Sound Insulation Test Methods" over a minimum 20 dB decay in each octave frequency band.

**808.2.2 Prescriptive Method.** The Noise Reduction Coefficient (NRC) ratings for floor, wall and ceiling surface finishes shall conform to the following equations:

For a classroom with a volume less than or equal to 10,000 cubic feet (285 cubic meters):

(NRC<sub>Floor</sub> x S<sub>Floor</sub>)+ (NRC<sub>Ceiling</sub> x S<sub>Ceiling</sub>) + (NRC<sub>Wall</sub> x S<sub>Wall</sub>) ≥ Volume/12

For a classroom with a volume between 10,000 cubic feet (285 cubic meters) and 20,000 cubic feet (565 cubic meters):

(NRC<sub>Floor</sub> x S<sub>Floor</sub>)+ (NRC<sub>Ceiling</sub> x S<sub>Ceiling</sub>) + (NRC<sub>Wall</sub> x S<sub>Wall</sub>) ≥ Volume/14

where	NRC <sub>Floor</sub> = NRC rating of the floor finish material
	S <sub>Floor</sub> = floor area in square feet
	NRC <sub>Ceiling</sub> = NRC rating of the ceiling finish material
	S <sub>Ceiling</sub> = ceiling area in square feet
	NRC <sub>Wall</sub> = NRC rating of the wall acoustical treatment
	S <sub>Wall</sub> = wall treatment area in square feet
	Volume = room volume in cubic feet

Where a floor, ceiling or wall has multiple surface finishes, the NRC x S product for each surface finish shall be added to the left side of the equation.

**808.3 Ambient Sound Level.** Classroom ambient sound levels shall comply with Sections 808.3.1 and 808.3.2. Ambient sound levels from sound sources outside and inside the classroom shall be evaluated individually. The greatest one-hour averaged sound levels shall be evaluated at the loudest usable location in the room at a height of 36 inches (915 mm) to 42 inches (1065 mm) above the floor and no closer than 36 inches (915 mm) from any wall, window, or object. The ambient sound level limits shall apply to fully-furnished, unoccupied classrooms, and with only permanent HVAC, electrical and plumbing systems functioning. Classroom equipment, including, but not limited to, computers, printers, fish tank pumps shall be turned off during these measurements.

**808.3.1 Sound Sources Outside of the Classroom.** Classroom ambient sound levels shall not exceed 35 dBA and 55 dBC due to intruding noise from sound sources outside of the classroom, whether from the exterior or from other interior spaces.

# **808.3.2 Sound Sources Inside the Classroom.** Classroom ambient sound levels shall not exceed 35 dBA and 55 dBC for noise from sound sources inside the classroom.

**Reason:** Includes edits from Mark Schaffer. I'm sorry to not have followed the specified review protocol, but I found that the number of suggested changes made my "Track Changes" document very difficult to read. I offer the wording below with the knowledge that the vast majority of this section's users will not be familiar with acoustical terminology and calculation methods. For example, the tables in paragraph 808.2.2. assume that the reader knows how to calculate an average sound absorption coefficient; I

doubt that this is the case. I know that the NRC method that I suggest below is not as accurate as a calculation method that uses octave band absorption coefficients, but I believe that in the overall scheme of things it is accurate enough, while being more accessible to non-acoustical people.

#### Committee action on 8-15-12 PC5

#### Approve Public Comment 8-15-12 PC5.

**Reason:** The public comment provides an improved organization for this provision. It will prove easier for understandability and compliance.

**Staff note:** As both PC4 and PC5 to 8-15-12 were approved, they will both be included in the Second Public Review draft. A merged version of the two will be included.

# 8-15-12 PC6

David Hall, representing self

#### Disapprove the change.

**Reason:** Delete this entire section! Once again you guys are going way over the line. There is now ay anyone in the field can inspect and verify this proposed requirement. Only a Registered Engineer that specializes in this type of work can understand all this and no builder is ever going to want to build another school in this country if they have to comply with these requirements. Have any of you even considered how a teacher conducts their class? Have you considered what they teachers may

bring into the room and use versus what this code will require the room to look like? Once again the disabled are becoming a special class . . . not "equal" with the "normal people". As I said before . . . you are heading for a huge backlash from the real world.

#### Committee action on 8-15-12 PC6

Disapprove Public Comment 8-15-12 PC6.

**Reason:** The Committee maintained it support of including classroom acoustic provisions in the standard, and also improved the section by accepting public comments to amend it.

# 9-1-12

#### (This represents the language approved by the committee for the First Public Review Draft)

#### Revise as follows:

**901.1 Scope.** Built-in furnishings and equipment required to be accessible by the scoping provisions adopted by the administrative authority shall comply with the applicable provisions of Chapter 9.

905.1 General. Accessible built-in storage facilities shall comply with Section 905.

9-1-12 PC1 Meg Haley, representing self

**Revise Title of Chapter as follows:** 

### Chapter 9. Built-in Furnishings and Equipment

**Reason:** Consistent with accepted revisions in body of chapter and intent of the code to provide that all furnishings, whether fixed or not, should be accessible based on the scoping of IBC Section 1108.2.9 Deletion accepted to strike "built-in" from "901.1 Scope" per revision 9-1-12.

#### Committee action on 9-1-12 PC1

Approve Public Comment 9-1-12 PC1.

Reason: The comment was approved. The Committee viewed this as editorial.

# 9-2-12

(This represents the language approved by the committee for the First Public Review Draft)

Revise as follows:

**1003.12.3 Work Surface.** At least one section of counter shall provide a work surface 30 inches (760 mm) minimum in length complying with Section 1003.12.3.

**1003.12.3.1 Clear Floor Space.** A clear floor space, positioned for a forward approach to the work surface, shall be provided. Knee and toe clearance complying with Section 306 shall be provided. The clear floor space shall be centered on the work surface.

**EXCEPTION:** Cabinetry shall be permitted under the work surface, provided the following criteria are met:

- (a) the cabinetry can be removed without removal or replacement of the work surface,
- (b) the floor finish extends under such cabinetry, and the walls behind and surrounding cabinetry are finished.

### 9-2-12 PC1

# The Chairmen of the Committee ruled that 9-2-12 PC1 was out of order because it was outside the scope of the original change.

### 9-4– 12

(This represents the language approved by the committee for the First Public Review Draft)

**Revise as follows:** 

**903.2 Clear Floor Space.** A clear floor space complying with Section 305, positioned for a parallel approach to the bench seat, shall be provided. at the end of the bench seat and parallel to the short axis of the bench.

**Exception.** A clear floor space positioned for a parallel approach to the front of the bench seat, shall be permitted where a clear floor space is also positioned at the end the bench seat.

### 9-4-12 PC1

Kim Paarlberg, representing ICC

Further revise as follow:

**903.2 Clear Floor Space.** A clear floor space complying with Section 305, positioned at the end of the bench seat and parallel to the short axis of the bench.

**Exception.** A clear floor space positioned for a parallel approach to the front of the bench seat, shall be permitted where a clear floor space is also positioned at the end the bench seat.

**Reason:** There is no need for an exception that says you can exceed the minimum requirement. At a minimum the exception has to be deleted. If the committee believes that someone can transfer to a bench from the front vs. the end, then the original text should be restored.

#### Committee action on 9-4-12 PC1 and PC2

These two public comments requested approval of the 9-4-12 change with the same modifications. The committee took one action which addressed both comments.

Approve Public Comments 9-4-12 PC1 and PC2.

**Reason:** The language of the exception provides additional clear floor space in addition to what is required by the text of 903.2. The standard doesn't need to state that you can provide additional space.

### 9-4-12 PC2 Larry Perry, representing self

Further revise as follow:

903.2 Clear Floor Space. A clear floor space complying with Section 305, positioned at the end of the bench seat and parallel to the short axis of the bench.

**Exception.** A clear floor space positioned for a parallel approach to the front of the bench seat, shall be permitted where a clear floor space is also positioned at the end the bench seat.

Reason: The proposed exception is either meaningless or is unclear and needs to be re-written.

As written, it appears to state that you can provide additional space at the bench, as long as you provide the clear floor space as specified in the base paragraph. If that is the intent, the exception is meaningless and should be deleted.

If the intent is that by providing additional clear floor space in front of the bench, the orientation or position of the clear floor space at the end of the bench can change, that needs to be more clearly stated.

#### See Committee action on 9-4-12 PC1

# 9-4-12 PC3

Curt Wiehle, Minnesota Construction Codes and Licensing, representing self

Disapprove the change. Return the text to that found in existing standard.

Reason: Do not make the proposed change shown above. This change only serves to provide compliance with a provision of the 2010 ADA standard that is nonfunctional. A non-ambulatory, non-weight bearing wheelchair user is not able to transfer from a clear floor space at the end of the bench (see comment to Proposal 6-46-12) unless the wheelchair is positioned facing the back of the bench which, after transferring, will put the person sitting sideways on the end of the bench.

At the very least, delete the pointless exception.

#### Committee action on 9-4-12 PC3

**Disapprove Public Comment 9-4-12 PC3.** 

**Reason:** The original change was made to provide consistency with the ADA/ABA. Mr. Wiehle's proposed action would set up a discrepancy between the two standards.

# 9-6-12

(This represents the language approved by the committee for the First Public Review Draft)

**Revise as follows:** 

904.3 Sales and Service Counters. Sales and service counters shall comply with Section 904.3.1 or 904.3.2. The accessible portion of the countertop shall extend the same depth as the sales and service countertop.

**EXCEPTION:** In *alterations*, when the provision of a counter complying with Section 904.4 would result in a reduction of the number of existing counters at work stations or a reduction of the number of existing mail boxes, the counter shall be permitted to have a portion which is 24 inches (610 mm)

long minimum complying with Section 904.4.1 provided that the required clear floor space is centered on the *accessible* length of the counter.

### 9-6-12 PC1 Harold Kiewel, representing self

**Comment:** The exception is too broadly written and could permit some owners or operators to side-step the intention of the regulations.

In the ADA, this provision is intended to prevent financial hardship among small retailers, who may, if required to bring their existing facility into full compliance with the Standard, trim their profit margin to a point that risks their very viability.

The opening phrase of the Exception, "In alterations," is a wide door, open to any owner making any change. It does not differentiate between the Owner fitting up an abandoned or empty shell space and the Owner of a small, long-standing business trying to modernize its layout. The former should not have access to this provision, where the later, with the concurrence of administrative authority, is more likely to pass this hardship test. This language belongs in the Administrative rules (IBC Chapter 11) that control application of the Standard, where it can be set among other building modernization regulations and be thereby constrained by concepts like change-of-use, existing facilities, historic properties, etc.

#### Committee action on 9-6-12 PC1

Disapprove Public Comment 9-6-12 PC1.

**Reason:** The comment did not provide a specific proposal for revision. The Committee did not find Mr. Kiewel's comment led to any changes to the standard as currently proposed.

### 9-10-12

(This represents the language approved by the committee for the First Public Review Draft)

**Revise as follows:** 

**904.3 Sales and Service Counters.** Sales and service counters <u>and windows</u> shall comply with Sections 904.3.1 or <u>and</u> 904.3.2 or <u>904.3.3</u>. <u>Where a counter is provided</u>, the accessible portion of the countertop shall extend the same depth as the sales and service countertop <u>provided for standing customers</u>.

**904.3.1 Vertical separation.** At service windows or service counters, any vertical separation shall be at a height of 43 inches (1090 mm) maximum above the floor.

**Exception:** Transparent security glazing is permitted above the 43 inches (1090 mm) maximum height.

**904.3.1 904.3.2 Parallel Approach.** A portion of the counter surface 36 inches (915 mm) minimum in length and <u>26 inches (660 mm) minimum to</u> 36 inches (915 mm) maximum in height above the floor shall be provided. Where the counter surface is less than 36 inches (915 mm) in length, the entire counter surface shall be <u>26 inches (660 mm) minimum to</u> 36 inches (915 mm) maximum in height above the floor. A clear floor space complying with Section 305, positioned for a parallel approach adjacent to the accessible counter, shall be provided. The space between the accessible counter surface and any projecting objects above the accessible counter shall be 12 inches (305 mm) minimum.

**904.3.2 904.3.3 Forward Approach.** A portion of the counter surface 30 inches (760 mm) minimum in length and 36 inches (915 mm) maximum in height above the floor shall be provided. A clear floor space complying with Section 305, positioned for a forward approach to the accessible counter, shall be provided. Knee and toe clearance complying with Section 306 shall be provided under the accessible counter. The

space between the accessible counter surface and any projecting objects above the accessible counter shall be 12 inches (305 mm) minimum.

### 9-10-12 PC1 Karen Gridley, representing Target Corporation

#### Further revise as follow:

**904.3.2 Parallel Approach.** A portion of the <u>public side of the</u> counter surface <u>36 inches (915 mm) 24</u> <u>inches (610 mm)</u> minimum in length and 26 inches (660 mm) minimum to 36 inches (915 mm) maximum in height above the floor shall be provided. Where the counter surface is less than 36 inches (915 mm) in length, the entire counter surface shall be 26 inches (660 mm) minimum to 36 inches (915 mm) maximum in height above the floor. A clear floor space complying with Section 305, positioned for a parallel approach adjacent to the accessible counter, shall be provided. The space between the accessible counter surface and any projecting objects above the accessible counter shall be 12 inches (305 mm) minimum.

**904.3.3 Forward Approach.** A portion of the <u>public side of the</u> counter surface 30 inches (760 mm) minimum in length and 36 inches (915 mm) maximum in height above the floor shall be provided. A clear floor space complying with Section 305, positioned for a forward approach to the accessible counter, shall be provided. Knee and toe clearance complying with Section 306 shall be provided under the accessible counter. The space between the accessible counter surface and any projecting objects above the accessible counter shall be 12 inches (305 mm) minimum.

#### Balance of 9-10-12 remains unchanged

**Reason:** For reference, we have submitted an additional and separate comment with alternate language changes for consideration on this item.

This code change proposal is to remove the ambiguous language over the 36 inch length provided for public use. In one sentence the requirement states the counter *shall* be 36 inches in length. But in a following sentence it states "...where the counter *surface is less than 36 inches...*", which implies it is OK to have a length less than 36, and seems to provide an allowance or exception to the length. The language in the two sentences conflict with each other and are confusing because there is no clear exception stated.

Considering that the implication is that it is ok to have a length less than 36 inches, this proposal provides clear criteria on the dimension allowance for a shorter length of 24 inches. Effective lengths could vary depending on the purpose for which a counter is in place.

For example:

In current real world applications we see a variety of existing counters where the pass-through portion of the counter is clearly less than 36 inches in length; some as narrow as 12 inches, and they work extremely well in their intended application. Counters where this would be beneficial are food & beverage hand-off counters, pass-through windows, quick service style counters, teller windows and ticket windows, to name a few, where the only action occurring is to hand off or pass through small items such as food or beverages, tickets, or payment.

#### Committee action on 9-10-12 PC1

#### Disapprove Public Comment 9-10-12 PC1.

Reason: The Committee approved 9-10-12 PC2. Based on that approval, PC1 is unnecessary.

### 9-10-12 PC2 Karen Gridley, representing Target Corporation

Further revise as follow:

**904.3.2 Parallel Approach.** A portion of the <u>public side of the</u> counter surface 36 inches (915 mm) minimum in length and 26 inches (660 mm) minimum to 36 inches (915 mm) maximum in height above the floor shall be provided. At pass-through or hand-off portions of counters, the counter surface shall be <u>12 inches minimum in length</u>. Where the counter surface <u>at pass-through or hand-off elements of a counter</u> is less than 36 inches (915 mm) in length, the entire <u>pass-through or hand-off element of the</u> counter surface shall be 26 inches (660 mm) minimum to 36 inches (915 mm) maximum in height above the floor. A clear floor space complying with Section 305, positioned for a parallel approach adjacent to the accessible counter, shall be provided. The space between the accessible counter surface and any projecting objects above the accessible counter shall be 12 inches (305 mm) minimum.

**904.3.3 Forward Approach.** A portion of the <u>public side of the</u> counter surface 30 inches (760 mm) minimum in length and 36 inches (915 mm) maximum in height above the floor shall be provided. A clear floor space complying with Section 305, positioned for a forward approach to the accessible counter, shall be provided. Knee and toe clearance complying with Section 306 shall be provided under the accessible counter. The space between the accessible counter surface and any projecting objects above the accessible counter shall be 12 inches (305 mm) minimum.

#### Balance of 9-10-12 remains unchanged

**Reason:** For reference, we have submitted an additional and separate comment with alternate language changes for consideration on this item.

This code change proposal is the second of two comments we have submitted for this item. It is an attempt to remove the ambiguous language over the 36 inch length provided for public use. In one sentence the requirement states the counter *shall* be 36 inches in length. But in a following sentence it states "...where the counter surface is less than 36 inches...", which implies it is OK to have a length less than 36, and seems to provide an allowance or exception to the length. The language in the two sentences conflict with each other and are confusing because there is no clear exception stated.

Considering the implication is that it is ok to have a length less than 36 inches, this proposal provides clear criteria on the dimension allowance for a shorter length of 12 inches at pass-through or hand-off elements of counters. Effective lengths could vary depending on the purpose for which a counter is in place.

For example:

In current real world applications we see a variety of existing counters where the pass-through portion of the counter is clearly less than 36 inches in length; some as narrow as 12 inches, and they work extremely well in their intended application. Counters where this would be beneficial are food & beverage hand-off counters, pass-through windows, quick service style counters, teller windows and ticket windows, to name a few, where the only action occurring is to hand off or pass through small items such as food or beverages, tickets, or payment.

This comment also introduces the idea of identifying different elements of counters that might have different length requirements, such as the pass-through portion of the counter versus the front public side, and which widths are appropriate at those different counter elements.

#### Committee action on 9-10-12 PC2

Approve Public Comment with modifications – 9-10-12 PC2.

#### Modified as follows:

**904.3.2 Parallel Approach.** A portion of the public <u>use</u> side of the counter surface 36 inches (915 mm) minimum in length and 26 inches (660 mm) minimum to 36 inches (915 mm) maximum in height above the floor shall be provided. At pass-through or hand-off portions of counters, the counter surface shall be 12 inches minimum in length. Where the counter surface at pass-through or hand-off elements of a counter

is less than 36 inches (915 mm) in length, the entire pass through or hand off element of the counter surface shall be 26 inches (660 mm) minimum to 36 inches (915 mm) maximum in height above the floor. A clear floor space complying with Section 305, positioned for a parallel approach adjacent to the accessible counter, shall be provided. The space between the accessible counter surface and any projecting objects above the accessible counter shall be 12 inches (305 mm) minimum.

**Exception:** At pass-through or hand-off portions of counters, the counter surface shall be 12 inches minimum in length. Where the counter surface at pass-through or hand-off elements of a counter is less than 36 inches (915 mm) in length, the entire pass-through or hand-off element of the counter surface shall be 26 inches (660 mm) minimum to 36 inches (915 mm) maximum in height above the floor

**904.3.3 Forward Approach.** A portion of the public <u>use</u> side of the counter surface 30 inches (760 mm) minimum in length and 36 inches (915 mm) maximum in height above the floor shall be provided. A clear floor space complying with Section 305, positioned for a forward approach to the accessible counter, shall be provided. Knee and toe clearance complying with Section 306 shall be provided under the accessible counter. The space between the accessible counter surface and any projecting objects above the accessible counter shall be 12 inches (305 mm) minimum.

**Reason:** The committee clarified the proposal by adding 'use' so that the phrasing was 'public use side of the counter', therefore making the application of the section clear. Through the discussion, the Committee realized that middle third of Section 904.3.2 was essentially an exception; and, therefore voted to amend the proposal to pull it out of the paragraph and make it an overt exception.

# 9-10-12 PC3

#### Kim Paarlberg, representing ICC

#### Further revise as follow:

**904.3 Sales and Service Counters.** Sales and service counters and windows shall comply with Sections 904.3.1 and <u>either</u> 904.3.2 or Section 904.3.3. Where a counter is provided, the accessible portion of the countertop shall extend the same depth as the sales and service countertop provided for standing customers.

**904.3.1 Vertical separation.** At service windows or service counters, any vertical separation shall be at a height of 43 inches (1090 mm) maximum above the floor.

**Exception:** Transparent security glazing is permitted above the 43 inches (1090 mm) maximum height.

**904.3.2 Parallel Approach.** A portion of the counter surface 36 inches (915 mm) minimum in length and 26 inches (660 mm) minimum to 36 inches (915 mm) maximum in height above the floor shall be provided. Where the counter surface is less than 36 inches (915 mm) in length, the entire counter surface shall be 26 inches (660 mm) minimum to 36 inches (915 mm) maximum in height above the floor. A clear floor space complying with Section 305, positioned for a parallel approach adjacent to the accessible counter, shall be provided. The space between the accessible counter surface and any projecting objects above the accessible counter shall be 12 inches (305 mm) minimum.

**904.3.3 Forward Approach.** A portion of the counter surface 30 inches (760 mm) minimum in length and 36 inches (915 mm) maximum in height above the floor shall be provided. A clear floor space complying with Section 305, positioned for a forward approach to the accessible counter, shall be provided. Knee and toe clearance complying with Section 306 shall be provided under the accessible counter. The space

between the accessible counter surface and any projecting objects above the accessible counter shall be 12 inches (305 mm) minimum.

**Reason:** Clarification to show that the counters have to allow for visual interaction between the customer and employee over the counter, but can do either a parallel or forward approach.

# The following is the combined section: 904 Sales and Service Counters

**904.3 Sales and Service Counters and Windows.** Sales and service counters and windows shall comply with Sections 904.3.1 and <u>either</u> 904.3.2 or Section 904.3.3. Where counters are provided, the accessible portion of the countertop shall extend the same depth as the public portion of the sales and service countertop provided for standing customers. (9-7-12) (9-9-12)(9-10-12)

**EXCEPTION:** In *alterations*, when the provision of a counter complying with Section 904.4 would result in a reduction of the number of existing counters at work stations or a reduction of the number of existing *mail boxes*, the counter shall be permitted to have a portion which is 24 inches (610 mm) long minimum complying with Section 904.4.1 provided that the required clear floor *space* is centered on the *accessible* length of the counter. (9-6-12)

# 904.3.1 Vertical separation. At service windows or service counters, any vertical separation shall be at a height of 43 inches (1090 mm) maximum above the floor. (9-10-12)

Exception: Transparent security glazing is permitted above the 43 inches (1090 mm) maximum height. (9-10-12)

**904.3.2 Parallel Approach.** A portion of the counter surface 36 inches (915 mm) minimum in length and 26 inches (660 mm) minimum to 36 inches (915 mm) maximum in height above the floor shall be provided. Where the counter surface is less than 36 inches (915 mm) in length, the entire counter surface shall be 26 inches (660 mm) minimum to 36 inches (915 mm) maximum in height above the floor. A clear floor space complying with Section 305, positioned for a parallel approach adjacent to the accessible. The space between the accessible counter surface and any projecting objects above the accessible counter shall be 12 inches (305 mm) minimum. (9-10-12)

**904.3.3 Forward Approach.** A portion of the counter surface 30 inches (760 mm) minimum in length and 36 inches (915 mm) maximum in height above the floor shall be provided. A clear floor space complying with Section 305, positioned for a forward approach to the accessible counter, shall be provided. Knee and toe clearance complying with Section 306 shall be provided under the accessible counter. The space between the accessible counter surface and any projecting objects above the accessible counter shall be 12 inches (305 mm) minimum. (9-10-12)

#### Committee action on 9-10-12 PC3

Approve Public Comments 9-10-12 PC3.

Reason: The addition of the word 'either' clarifies the application of the 3 sections listed in the provision.