ICC A117.1 Comments on 1st Draft

Proposal list to the 2017 A117.1 for the 2023 edition –
9-12-2024
Chapter 7 to 11

CHAPTER 7
COMMUNICATION ELEMENTS AND FEATURES

07-02 – 2021 overview

Proposal number	Proponent	Standard Sections	Committee Actions	Mtg. Date	Notes; Groups; groupings
07-02	Toji	703.1.3	AM 21-2-6	1-19-2023 6-6-2024	Final Action is D

Comment	Proponent	Requested Action	Committee Action	Mtg. Date	Notes; Groups; groupings
BC1	Dain, AIA	Negative	D 15-1-3	6-6-2024	
BC2	Paarlberg, AIA	Affirmative	AS 7-8-2 failed	6-6-2024	

BC= Ballot Comment, PC= Public comment, **Bold Comment number** is proposed revision below

07-02 – 2021
703.1.3

Proponent: Sharon Toji, Access Communications

Revise as follows:

SECTION 703
SIGNS

703.1.3 Pictograms. Where pictograms are provided as designations of permanent interior rooms and spaces, the pictograms shall comply with Section 703.5 and shall have text descriptors located directly below the pictogram field and complying with Sections 703.2 and 703.3. Where the visual and raised characters text descriptors are separate signs, only the visual characters shall be required below the pictogram.

Exception: Pictograms that provide information about a room or space, such as "No Smoking," occupant logos, and the International Symbol of Accessibility, shall not be required to have text descriptors.

REASON: We have found great acceptance of so-called "dual purpose signs" where the visual sign text is separated from the tactile and braille text, both by blind people who do not read braille as well as by people with partial vision who want larger, bolder visual text that exceeds tactile standards. Since we promote using pictograms for restrooms, it is difficult to separate them if we are exacting about the standards, which might mean having to keep the pictogram above both the visual and tactile versions, even though those who read solely by touch do not use the pictograms. Therefore, it seems helpful to indicate that pictograms that designate spaces only need to be included above the visual text. It provides for greater access for the partially sighted readers, as well as greater design freedom for sign designers.

07-02 – 2021 Replacement
703.1.3

Proponent: Sharon Toji, Access Communications

Replace and revise as follows:

703.1.3 Pictograms. Where pictograms are provided as designations of permanent interior rooms and spaces, the pictograms shall comply with Section 703.5. Pictograms ~~and~~ shall have text descriptors ~~located directly below the pictogram field and~~ complying with Sections 703.2 and 703.3 located directly below the pictogram field.

~~**Exception**~~ **Exceptions:**

1. Pictograms that provide information about a room or space, such as "No Smoking," occupant logos, and the International Symbol of Accessibility, shall not be required to have text descriptors.
2. Where room designations with text descriptors for pictograms are provided on separate visual and tactile signs as permitted by Section 703.1, the visual and tactile components of the text descriptor shall be permitted to be displayed separately with the associated visual or tactile sign.

REASON: This modification is offered to clarify that the visual and tactile components of text descriptors for pictograms are permitted to be separated from the pictogram and provided on separate visual and tactile signs. The intent is that the visual text descriptor will remain with the

pictogram which is visual only and that the tactile text descriptor will be located on a signs without a visual pictogram.

Committee Action: Approved as Modified 21-2-6

REPORT OF HEARING:

Modification (if any):
Replace and revise as follows:

703.1.3 Pictograms. Where pictograms are provided as designations of permanent interior rooms and spaces, the pictograms shall comply with Section 703.5. Pictograms ~~and~~ shall have text descriptors ~~located directly below the pictogram field and~~ complying with Sections 703.2 and 703.3 located directly below the pictogram field.

~~Exception~~ Exceptions:

1. Pictograms that provide information about a room or space, such as "No Smoking," occupant logos, and the International Symbol of Accessibility, shall not be required to have text descriptors.
2. Where room designations with text descriptors for pictograms are provided on separate visual and tactile signs as permitted by Section 703.1, the visual and tactile components of the text descriptor shall be permitted to be displayed separately with the associated visual or tactile sign.

Committee Reason: The modification replaced the original proposal. (This modification was not distributed before the meeting.) The new exception two is consistent with the allowances in Section 703.1 for the visual information to be separate from the raised letters and braille. The intent is to allow the pictogram and visual to be on one sign, and the raised and braille located on another sign without a pictogram.

703.1.3-TOJI.doc

07-02 – 2021 Ballot Comments

BALLOT COMMENT 1- FIRST DRAFT: Proponent: *Daniel Dain, AIA*
Desired Action: Negative with comment
Modification:
Reason: 703.1 already applies a blanket statement that two separate signs are permitted, which allows 2 signs – 1 would have the pictogram and visual character text descriptor (703.2), the other sign complies with 703.3 has raised character text descriptor and braille only. 703.1.3 does not need to repeat this. It is also unnecessarily repeated as an exception in 703.2.
BALLOT COMMENT 2- FIRST DRAFT: Proponent: *Kimberly Paarlberg ,ICC*

Desired Action: Affirmative with comment
Modification: See Ballot Comment 2

07-02 – 2021 Ballot Comment 2
703.1.3

Proponent: Kimberly Paarlberg, ICC

Further modify as follows:

703.1.3 Pictograms. Where pictograms are provided as designations of permanent interior rooms and spaces, the pictograms shall comply with Section 703.5. Pictograms shall have text descriptors complying with Sections 703.2 and 703.3 located directly below the pictogram field. Such signs shall be either one sign with the pictograms, visual and tactile characters, or two separate signs, one with the pictogram and visual characters, and one with tactile characters.

~~**Exceptions**~~ **Exception:**

1. ~~1.~~ Pictograms that provide information about a room or space, such as "No Smoking," occupant logos, and the International Symbol of Accessibility, shall not be required to have text descriptors.
2. ~~2. Where room designations with text descriptors for pictograms are provided on separate visual and tactile signs as permitted by Section 703.1, the visual and tactile components of the text descriptor shall be permitted to be displayed separately with the associated visual or tactile sign.~~

REASON: I found the new wording in Exception 2 confusing. I am suggesting the following revision to simplify. This will coordinate with similar wording for signs without pictograms in Section 703.1. This will also coordinate with the terminology in 07-09-2021.

Committee Action for Ballot Comment 2: AS 7-8-2

REPORT OF HEARING:

Modification (if any):

Committee Reason: The requirement is not needed. This is already addressed in Section 703.1. This proposal should be disapproved.

07-02 Paarlberg.doc

Committee Action for First Ballot: Final Action is D 15-1-3

REPORT OF HEARING:

Modification (if any):

Committee Reason: The requirement is not needed. This is already addressed in Section 703.1.

Report for 07-02– 2021		
Committee decision: AM	***Committee Vote at Meeting: 21-2-6***	***Committee Vote on Ballot:38-2-1***
REPORT OF HEARING: Modification (if any): **Replace and revise as follows:** **703.1.3 Pictograms.** Where pictograms are provided as designations of permanent interior rooms and spaces, the pictograms shall comply with Section 703.5. Pictograms ~~and~~ shall have text descriptors ~~located directly below the pictogram field and~~ complying with Sections 703.2 and 703.3 located directly below the pictogram field. ~~**Exception**~~ **Exceptions:** 1. Pictograms that provide information about a room or space, such as "No Smoking," occupant logos, and the International Symbol of Accessibility, shall not be required to have text descriptors. 2. Where room designations with text descriptors for pictograms are provided on separate visual and tactile signs as permitted by Section 703.1, the visual and tactile components of the text descriptor shall be permitted to be displayed separately with the associated visual or tactile sign.		
Committee Reason: The modification replaced the original proposal. (This modification was not distributed before the meeting.) The new exception two is consistent with the allowances in Section 703.1 for the visual information to be separate from the raised letters and braille. The intent is to allow the pictogram and visual to be on one sign, and the raised and braille located on another sign located without a pictogram.		
BALLOT COMMENT 1- FIRST DRAFT: Proponent: *Daniel Dain, AIA*		
Desired Action: Negative with comment		
Modification:		
Reason: 703.1 already applies a blanket statement that two separate signs are permitted, which allows 2 signs – 1 would have the pictogram and visual character text descriptor (703.2), the other sign complies with 703.3 has raised character text descriptor and braille only. 703.1.3 does not need to repeat this. It is also unnecessarily repeated as an exception in 703.2.		
BALLOT COMMENT 2- FIRST DRAFT: Proponent: *Kimberly Paarlberg ,ICC*		
Desired Action: Affirmative with comment		
Modification: Further modify as follows: **703.1.3 Pictograms.** Where pictograms are provided as designations of permanent interior rooms and spaces, the pictograms shall comply with Section 703.5. Pictograms ~~shall~~ have text descriptors complying with Sections 703.2 and 703.3 located directly below the pictogram field. Such signs shall be either one sign with the pictograms, visual and tactile characters, or two separate signs, one with the pictogram and visual characters, and one with tactile characters. ~~**Exceptions**~~ **Exception:** ~~1.~~ Pictograms that provide information about a room or space, such as "No Smoking," occupant logos, and the International Symbol of Accessibility, shall not be required to have text descriptors. ~~2. Where room designations with text descriptors for pictograms are provided on separate visual and tactile signs as permitted by Section 703.1, the visual and tactile components of the text descriptor shall be permitted to be displayed separately with the associated visual or tactile sign.~~		
Reason: I found the new wording in Exception 2 confusing. I am suggesting the following revision to simplify. This will coordinate with similar wording for signs without pictograms in Section 703.1. This will also coordinate with the terminology in 07-09-2021.		
Committee decision: D BC1	***Committee Vote at Meeting: 15-1-3***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		
Committee Reason: The requirement is not needed. This is already addressed in Section 703.1.		
BALLOT COMMENT- SECOND DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
FINAL ACTION: Modification (if any):		
Committee Reason:		

07-04 – 2021 overview

Proposal number	Proponent	Standard Sections	Committee Actions	Mtg. Date	Notes; Groups; groupings
07-04	Paarlberg	703.2.4 (New), 703.3.5 (New)	AM 23-0-2	1-19-2023	Final action is AM

Comment	Proponent	Requested Action	Committee Action	Mtg. Date	Notes; Groups; groupings
BC1	Dain, AIA	Negative	NA	6-6-2024	

BC= Ballot Comment, PC= Public comment, **Bold Comment number** is proposed revision below

07-04 – 2021

703.2.4 (New), 703.3.5 (New)

Proponent: Kimberly Paarlberg, International Code Council

Add new text as follows:

SECTION 703
SIGNS

703.2 Visual Characters

703.2.4 Text orientation: The lines of visual text characters shall be displayed with the base line of the text in either in a vertical or horizontal orientation.

Exception: Numeric characters are permitted to be displayed in a vertical orientation, one under another.

703.3 Raised characters.

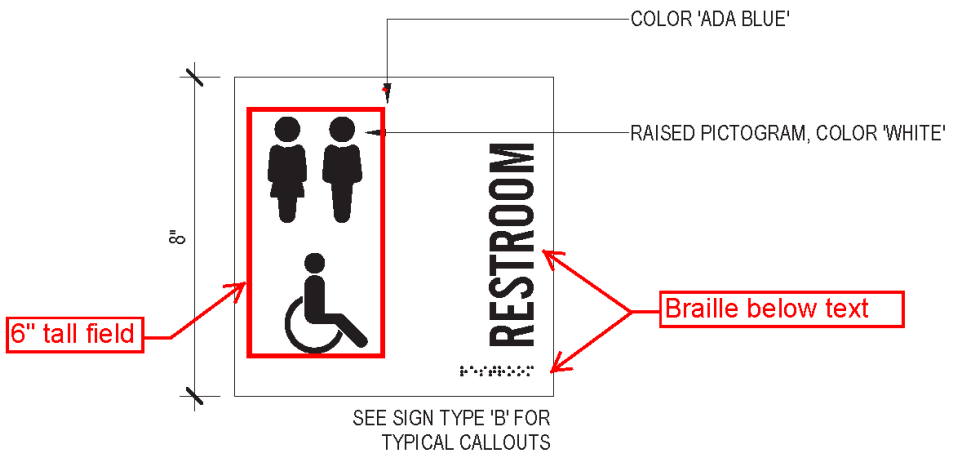
703.3.5 Text orientation: Raised characters shall be displayed in a horizontal orientation.

REASON: The standard does not currently provide any guidance regarding the orientation of either visual or raised characters. We have received several questions regarding whether the standard allows visual characters to be displayed in a vertical line. See the attached image as an example of a sign that was proposed to illustrate the issue that is trying to be addressed by this change.

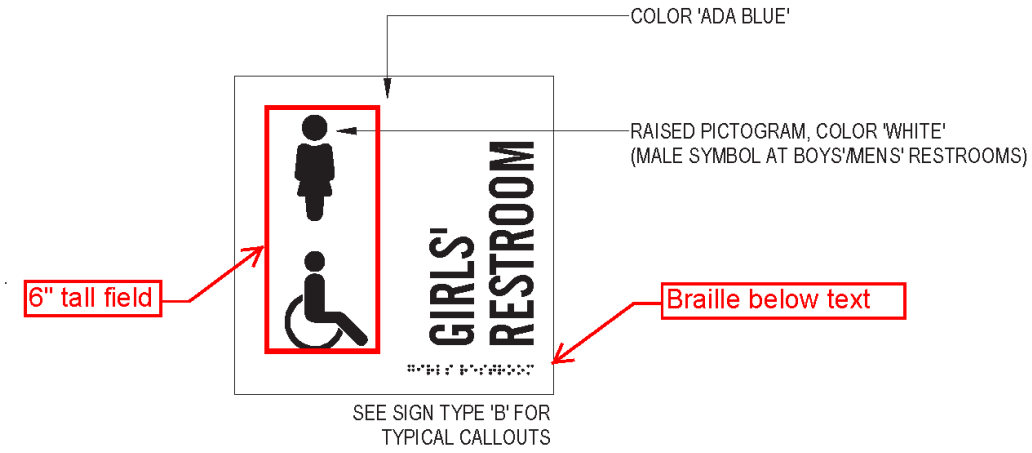
This is an attempt to clarify an issue which is currently unaddressed within the standard. Where a sign is numbers only, there is nothing within the current text that says the numbers cannot be one under another instead of being placed horizontally in a row. However, although not stated, they

should be oriented in a standard vertical manner even if each digit is displayed on a separate line which complies with the appropriate line spacing. As the image shows, numerals cannot be easily read when oriented horizontally (sideways) and thus they should not be rotated.

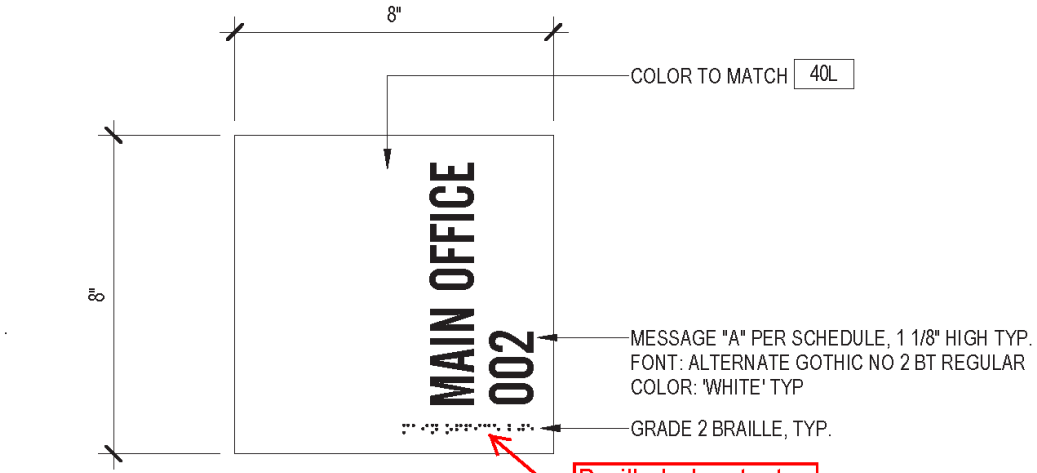
The intent of this proposal is to require that raised characters must be oriented on a horizontal line of text and that numerals be kept in a vertical orientation. Visual characters would be permitted to be oriented onto a vertical line of text. Braille is not addressed by this proposal and is assumed to be adequately addressed by the "contracted (Grade 2) braille" requirement of Section 703.4.1.



TYPE "D"



TYPE "C"



TYPE "B"

07-04 – 2021 Modification 1

Proponent: Kimberly Paarlberg, International Code Council

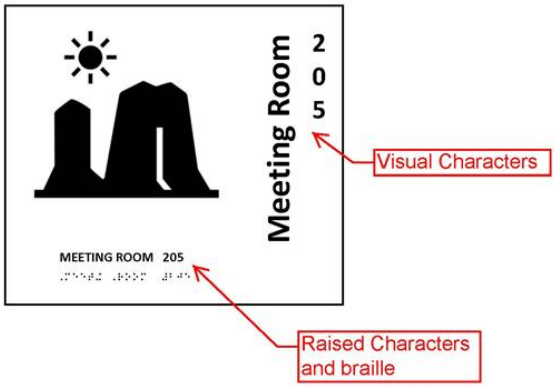
Further revise as follows:

703.4 Braille

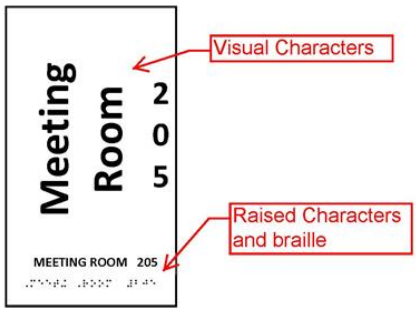
703.4.4 Position. Braille shall be below the corresponding text and displayed in a horizontal orientation. If text is multilined, braille shall be placed below entire text. Braille shall be separated 3/8 inch (9.5 mm) minimum from any other raised characters and 3/8 inch (9.5 mm) minimum from raised borders and decorative elements. Braille provided on elevator car controls shall be separated 3/16 inch (4.8 mm) minimum either directly below or adjacent to the corresponding raised characters or symbols.

Reason: The reason in the original proposal did not show compliant examples, just the issue of signage. There were also concerns that the information for the braille should also include the horizontal requirement. The examples below are compliant examples.

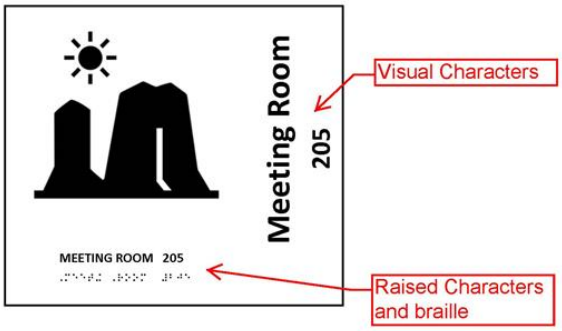
Compliant



compliant



Compliant



07-04 – 2021 Modification 2

Proponent: Sharon Toji, Access Communications

Further revise as follows:

703.2.4 Text orientation: The lines of visual text characters shall be displayed with the base line of the text in ~~either in a vertical or~~ a horizontal orientation.

~~**Exception:** Numeric characters are permitted to be displayed in a vertical orientation, one under another.~~

Reason: Vertical visual text is difficult for persons with partial vision to read. The State of California added text similar to the above for both visual and tactile characters and braille cells quite a few years ago, and has not had a negative response from building owners or designers.

Committee Action: Approved as Modified AM 23-0-2
Mod 2 – AM – 22-0-3
Mod 1 – AM –24-0-4

REPORT OF HEARING:

Modification (if any):

Further revise as follows:

703.2.4 Text orientation: The lines of visual text characters shall be displayed with the base line of the text in ~~either in a vertical or~~ a horizontal orientation.

~~**Exception:** Numeric characters are permitted to be displayed in a vertical orientation, one under another.~~

703.4.4 Position. Braille shall be below the corresponding text and displayed in a horizontal orientation. If text is multilined, braille shall be placed below entire text. Braille shall be separated $^{3}/_{8}$ inch (9.5 mm) minimum from any other raised characters and $^{3}/_{8}$ inch (9.5 mm) minimum from raised borders and decorative elements. Braille provided on elevator car controls shall be separated $^{3}/_{16}$ inch (4.8 mm) minimum either directly below or adjacent to the corresponding raised characters or symbols.

Committee Reason: The current text does not specify a direction of the information on accessible signs. The original proposal direction of that information for visual and raised letters. The modification to new Section 703.2.4 limits the text orientation of visual signage to horizontal. Accessible visual signs should be horizontal for readability for persons with visual or

cognitive disabilities. The modification to Section 703.4.4 is to require braille to be horizontal consistent with the visual and raised characters.

703.2.4-PAARLBERG.doc

07-04 – 2021 Ballot Comments

BALLOT COMMENT- FIRST DRAFT:
Proponent: *Daniel Dain, AIA*
Desired Action: Negative with comment
Modification:
Reason: Agreed with initial proposal, do not agree with modifications to force all signs including all informational and directional signs that have visual characters to have horizontal text only.

Committee Action for First Ballot:

REPORT OF HEARING:

Modification (if any):

Committee Reason:

Report for 07-04– 2021		
Committee decision: AM	***Committee Vote at Meeting: 23-0-2***	***Committee Vote on Ballot:39-1-1***
REPORT OF HEARING: Modification (if any): **Further revise as follows:** **703.2.4 Text orientation:** The lines of visual text characters shall be displayed with the base line of the text in ~~either in a vertical or~~ a horizontal orientation. **~~Exception:~~** ~~Numeric characters are permitted to be displayed in a vertical orientation, one under another.~~ **703.4.4 Position.** Braille shall be below the corresponding text and displayed in a horizontal orientation. If text is multilined, braille shall be placed below entire text. Braille shall be separated $^{3}/_{8}$ inch (9.5 mm) minimum from any other raised characters and $^{3}/_{8}$ inch (9.5 mm) minimum from raised borders and decorative elements. Braille provided on elevator car controls shall be separated $^{3}/_{16}$ inch (4.8 mm) minimum either directly below or adjacent to the corresponding raised characters or symbols.		
Committee Reason: The current text does not specify a direction of the information on accessible signs. The original proposal direction of that information for visual and raised letters. The modification to new Section 703.2.4 limits the text orientation of visual signage to horizontal. Accessible visual signs should be horizontal for readability for persons with visual or cognitive disabilities. The modification to Section 703.4.4 is to require braille to be horizontal consistent with the visual and raised characters.		
BALLOT COMMENT- FIRST DRAFT: Proponent: *Daniel Dain, AIA*		
Desired Action: Negative with comment		
Modification:		
Reason: Agreed with initial proposal, do not agree with modifications to force all signs including all informational and directional signs that have visual characters to have horizontal text only.		
Committee decision: NA	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		
Committee Reason:		
BALLOT COMMENT- SECOND DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***

Report for 07-04– 2021
FINAL ACTION: Modification (if any): Committee Reason:

07-06 – 2021 overview

Proposal number	Proponent	Standard Sections	Committee Actions	Mtg. Date	Notes; Groups; groupings
07-06	Toji	Table 703.2.4	D 23-0-2	2-2-2023 6-6-2024	Final Action is D

Comment	Proponent	Requested Action	Committee Action	Mtg. Date	Notes; Groups; groupings
BC1	Toji, AHLAA	Negative	AS 2-16-2 failed	6-6-2024	

BC= Ballot Comment, PC= Public comment, **Bold Comment number** is proposed revision below

07-06 – 2021
Table 703.2.4

Proponent: Sharon Toji, Access Communications

Revise as follows:

SECTION 703
SIGNS

703.2 Visual characters.

703.2.4 Character height. The uppercase letter "I" shall be used to determine the allowable height of all characters of a font. The uppercase letter "I" of the font shall have a minimum height complying with Table 703.2.4. Viewing distance shall be measured as the horizontal distance between the character and an obstruction preventing further approach towards the sign.

Exception: In assembly seating where the maximum viewing distance is 100 feet (30.5 m) or greater, the height of the uppercase "I" of fonts shall be permitted to be 1 inch (25 mm) for every 30 feet (9145 mm) of viewing distance, provided the character height is 8 inches (205 mm) minimum. Viewing distance shall be measured as the horizontal distance between the character and where someone is expected to view the sign.

TABLE 703.2.4—VISUAL CHARACTER HEIGHT

Height above Floor to Baseline of Character[1]	Horizontal Viewing Distance	Minimum Character Height
	Less than 6 feet (1830 mm)	~~5/8~~ 1 inch (~~16~~ 25 mm)

40 inches (1015 mm) to less than or equal to 70 inches (1780 mm)	6 feet (1830 mm) and greater	~~5/8~~ 1 inch (~~16~~ 25 mm), plus 1/8 inch (3.2 mm) per foot (305 mm) of viewing distance above 6 feet (1830 mm)
Greater than 70 inches (1780 mm) to less than or equal to 120 inches (3050 mm)	Less than 15 feet (4570 mm)	2 inches (51 mm)
	15 feet (4570 mm) and greater	2 inches (51 mm), plus 1/8 inch (3.2 mm) per foot (305 mm) of viewing distance above 15 feet (4570 mm)
Greater than 120 inches (3050 mm)	Less than 21 feet (6400 mm)	3 inches (75 mm)
	21 feet (6400 mm) and greater	3 inches (75 mm), plus 1/8 inch (3.2 mm) per foot (305 mm) of viewing distance above 21 feet (6400 mm)

1. The vertical height is measured from the floor of the viewing position to the baseline of the highest line of characters.

REASON: The reason, I believe, that 5/8 inch was chosen as the minimum size for all visual signs is because the standard was attempting to compromise between the needs of visual readers and tactile readers, who need small characters so they do not need to trace them. Originally, the same characters were used for both visual and tactile aspects of designation signs. Designers tended to choose the minimum size for all signs, both tactile and visual, so the majority of persons with vision impairments but the ability to read visual signs were ignored. They needed larger, bolder characters with high contrast, the exact opposite of what tactile readers needed. Now that we have a standard that allows the tactile and visual characteristics to be separated, not only is there no reason for the majority of visual signs to be so small, but if the new standard is used, it is important that the visual sign letters be larger than those on the tactile sign, or else there is little point in the separation.

I have done studies at a national convention of the American Council of the Blind with 5/8 inch high visual/tactile characters to see how close persons who were self-identified as legally blind had to approach to read the signs. They walked along a measuring tape on the floor, and stopped when they could read the characters on the signs, which were mounted 60 inches on center, and used uppercase Helvetica with compliant stroke width for six randomly chosen characters. Minimum contrast was 70 percent according to the formula. Most subjects had to approach as close as two or three inches, and virtually all complained with comments such as “the sign letters are always way too small for me to read.”

I also recently sent out tactile character plaques in a special font designed for tactile reading only, to about 100 blind and partial vision readers. Those who had the ability to read visually sometimes commented that they would like to have tactile signs using this font because it was so

easy to read, it would be easier for them than the visual signs they often encountered because the visual characters were so small and had other problems like poor contrast.

When certain types of signs need smaller characters, an exception can be easily written to cover that. However, 1 inch characters are still very small, and we can hope that designers will increase the character size still more where space is available to do so.

07-06 – 2021 Modification
Table 703.2.4

Proponent: Kevin Brinkman, NEII

Revise as follows:

703.2.4 Character height. The uppercase letter "I" shall be used to determine the allowable height of all characters of a font. The uppercase letter "I" of the font shall have a minimum height complying with Table 703.2.4. Viewing distance shall be measured as the horizontal distance between the character and an obstruction preventing further approach towards the sign.

~~**Exception**~~ **Exceptions:**

1. In assembly seating where the maximum viewing distance is 100 feet (30.5 m) or greater, the height of the uppercase "I" of fonts shall be permitted to be 1 inch (25 mm) for every 30 feet (9145 mm) of viewing distance, provided the character height is 8 inches (205 mm) minimum. Viewing distance shall be measured as the horizontal distance between the character and where someone is expected to view the sign.
2. Visual characters for elevator landing and car controls shall be permitted to be 5/8 inch (16 mm) minimum in height.

Reason: The exception is needed for visual characters and symbols for elevator hall and car call buttons since the visual and tactile are never two separate signs. For example, the tactile and visual for the phone button are the same character. Users need to be directly in front of the elevator control for operation, so the horizontal viewing distance is significantly less than 6 feet. Also, increasing the size to 1 inch would make the size of the elevator car operating panel much larger and create issues for fitting all of the buttons within the reach ranges. The proponents Reason Statement recognizes that some characters will need to be smaller and notes an exception can be provided for those instances. This is one of those instances.

Committee Action: Disapproval 23-0-2

REPORT OF HEARING:

Modification (if any):

Committee Reason: The proposal was disapproved based on the proponents request that this needed further work. There was concern that signs that were both tactile and visual would have to comply with the additional size requirements for visual, and that would be confusing. There needs to be technical justification.

Table 703.2.4-TOJI.doc

07-06 – 2021 Ballot Comments

BALLOT COMMENT 1- FIRST DRAFT:
Proponent: Sharon Toji. HLAA
Desired Action: Negative with Comment
Modification:
Reason: Comments were made that influences some voters, specifically representatives of the American Council of the Blind, that raising the minimum size of visual characters would also increase the size of tactile characters, and also that tactile characters would not be larger and less readable. More time was needed to prepare aids so that those with no vision could better access charts and prepare material to explain the proposal, which was designed specifically to aid those with low vision.

Committee Action for First Ballot: AS 2-26-2; Final Action is D

REPORT OF HEARING:

Modification (if any):

Committee Reason: This was disapproved to be consistent with the committee's previous action on this proposal. This would increase the size of both visual and raised characters when the sign served as both. This would increase the size of the visual sign by 30%. This could either abbreviate signs or require and alternative location. There was no technical justifications provided.

Report for 07-06– 2021		
Committee decision: D	***Committee Vote at Meeting: 23-0-2***	***Committee Vote on Ballot:42-1-2***
REPORT OF HEARING: Modification (if any):		
Committee Reason: The proposal was disapproved based on the proponents request that this needed further work. There was concern that signs that were both tactile and visual would have to comply with the additional size requirements for visual, and that would be confusing. There needs to be technical justification.		
BALLOT COMMENT 1- FIRST DRAFT: Proponent: Sharon Toji. HLAA		
Desired Action: Negative with Comment		
Modification:		
Reason: Comments were made that influences some voters, specifically representatives of the American Council of the Blind, that raising the minimum size of visual characters would also increase the size of tactile characters, and also that tactile characters would not be larger and less readable. More time was needed to prepare aids so that those with no vision could better access charts and prepare material to explain the proposal, which was designed specifically to aid those with low vision.		
Committee decision: AS	***Committee Vote at Meeting: 2-16-2 failed***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		

Report for 07-06– 2021		
Committee Reason: This was disapproved to be consistent with the committee's previous action on this proposal. This would increase the size of both visual and raised characters when the sign served as both. This would increase the size of the visual sign by 30%. This could either abbreviate signs or require and alternative location. There was not technical justifications provided.		
BALLOT COMMENT- SECOND DRAFT:		
Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
FINAL ACTION:		
Modification (if any):		
Committee Reason:		

07-07 – 2021 overview

Proposal number	Proponent	Standard Sections	Committee Actions	Mtg. Date	Notes; Groups; groupings
07-07	Toji	703.2.9	D 29-0-1	2-2-2023 6-6-2024	Final Action D

Comment	Proponent	Requested Action	Committee Action	Mtg. Date	Notes; Groups; groupings
BC1	Toji, HLAA	Negative	NA	6-6-2024	
PC1	Toji, HLAA	AM	NA	6-6-2024	Comment out of scope

BC= Ballot Comment, PC= Public comment, **Bold Comment number** is proposed revision below

07-07 – 2021
703.2.9

Proponent: Sharon Toji, Access Communications

Revise as follows:

SECTION 703
SIGNS

703.2 Visual characters.

703.2.9 Height above floor. Visual characters shall be 40 inches (1015 mm) minimum above the floor of the viewing position, measured to the baseline of the character. Heights shall comply with Table 703.2.4, based on the size of the characters on the sign.

~~**Exception**~~ **Exceptions:**

1. Visual characters indicating elevator car controls shall not be required to comply with Section 703.2.9.
2. Overhead and low level exit signs shall not be required to comply with Section 703.2.9.

REASON: Exit signs should meet the requirements specific to those type of signs. In the International Building code, these requirements are in Sections 1013.5 and 1013.6 with specific letter size and illumination requirement.

Committee Action: Disapproval 29-0-1

REPORT OF HEARING:

Modification (if any):

Committee Reason: The proposal was disapproved based on the proponents request that this needed further work. Exit signs have specific requirements in the codes for size, illumination and contrast and do not reference ICC A117.1. Therefore, there is a concern that an exception for items that are not scoped would add confusion.

703.2.9-TOJI.doc

07-07 – 2021 Ballot Comments

BALLOT COMMENT 1- FIRST DRAFT: Proponent: Sharon Toji. HLAA
Desired Action: Negative with Comment
Modification:
Reason: See proposed modification. Submission of further information will follow.

07-07 – 2021 Public Comment 1

703.2.9

Proponent: Sharon Toji, Access Communications

Replace with the following:

SECTION 703
SIGNS

703.2 Visual characters.

703.2.9 Height above floor. Visual characters shall be 40 inches (1015 mm) minimum above the floor of the viewing position, measured to the baseline of the character. Heights shall comply with Table 703.2.4, based on the size of the characters on the sign.

~~**Exception**~~ **Exceptions:**

1. Visual characters indicating elevator car controls shall not be required to comply with Section 703.2.9.
2. Visual characters on exterior monuments and post and panel signs shall not be required to comply with Section 703.2.9.

REASON: The below animation is taken directly from "Chapter 7: Signs" of the Access Board's "Guide to the ADA Accessibility Standards". The visual characters on this exterior monument sign are well-below 40 inches from the floor of the viewing position. Further information and examples will be submitted.

Exterior signs labelling permanent rooms and spaces that are not located at a doorway do not have to be tactile but must meet visual criteria.

Committee Action for Public Comment 1: Out of scope

REPORT OF HEARING:

Modification (if any):

Committee Reason:

07-07 Toji.doc

Committee Action for First Ballot: NA – Final Action D

REPORT OF HEARING:

Modification (if any):

Committee Reason:

Report for 07-07– 2021		
Committee decision: D	***Committee Vote at Meeting: 29-0-1***	***Committee Vote on Ballot:42-1-2***
REPORT OF HEARING: Modification (if any):		
Committee Reason: The proposal was disapproved based on the proponents request that this needed further work. Exit signs have specific requirements in the codes for size, illumination and contrast and do not reference ICC A117.1. Therefore, there is a concern that an exception for items that are not scoped would add confusion.		
BALLOT COMMENT 1- FIRST DRAFT: Proponent: Sharon Toji. HLAA		
Desired Action: Negative with Comment		
Modification:		
Reason: See proposed modification. Submission of further information will follow.		
Committee decision: NA	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		
Committee Reason:		
BALLOT COMMENT- SECOND DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
FINAL ACTION: Modification (if any):		
Committee Reason:		

07-08 – 2021 overview

Proposal number	Proponent	Standard Sections	Committee Actions	Mtg. Date	Notes; Groups; groupings
07-08	Toji	703.2.10, 703.2.10.2 , 703.2.10.2 (New), 703.3.12, 703.5.1, 705.3.2, 703.6.2.2	D 26-0-2	2-2-2023 4-25-2024	Final action AM by PC3

Comment	Proponent	Requested Action	Committee Action	Mtg. Date	Notes; Groups; groupings
BC1	Toji, HLAA	Negative	NA	4-25-2024	
PC1	Campbell, Peskin	AM	NA	4-25-2024	
PC2	Toji, HLAA	AM	NA	4-25-2024	
PC3	Communication task group	AM	AS	4-25-2024	Submitted as compromise between PC1 and PC2

BC= Ballot Comment, PC= Public comment, **Bold Comment number** is proposed revision below

07-08 – 2021

703.1.10, 703.2.10.2, 703.2.10.2(New), 703.3.12, 703.5.1, 705.3.2, 703.6.2.2

Proponent: Sharon Toji, Access Communications

Revise as follows:

SECTION 703
SIGNS

703.2 Visual characters.

703.2.10 Finish and contrast. ~~Characters~~ Visual characters and their background shall have a nonglare finish. ~~Characters~~ Visual characters shall contrast with their background, with either light characters on a dark background, or dark characters on a light background.

703.2.10.1 Nonglare finish. The glare from coverings, the finish of visual characters and their background shall not exceed 19 gloss units (gu) as measured on a 60-degree gloss meter.

703.2.10.2 Contrast. The light reflectance value (LVR) of the light or dark characters and their background shall differ by a minimum of 50 points of LRV.

703.3 Raised characters.

703.3.1 General. Raised characters shall comply with Section 703.3, and shall be duplicated in braille complying with Section 703.4.

703.3.12 Finish and contrast. ~~Characters and their background shall have a nonglare finish. Characters shall contrast with their background with either light characters on a dark background, or dark characters on a light background.~~ Where the same characters serve as the visual characters and raised characters, the sign shall comply with the visual character requirement for finish and contrast in Sections 703.2.10, 703.2.10.1 and 703.2.10.2.

Exception: Where separate raised characters and visual characters with the same information are provided, raised characters shall not be required to ~~have nonglare finish or to contrast with their background~~ comply with this section.

703.4 Braille

(Note: Braille does not have finish and contrast requirements)

703.5 Pictograms.

703.5.1 General. Pictograms shall comply with Section 703.5. The text descriptors located below the pictogram shall comply with Section 703.2 and 703.3.

703.5.2 Pictogram field. Pictograms shall have a field 6 inches (150 mm) minimum in height. Characters or braille shall not be located in the pictogram field.

703.5.3 Finish and contrast. Pictograms and their fields shall have a nonglare finish. Pictograms shall contrast with their fields, with either a light pictogram on a dark field or a dark pictogram on a light field.

703.5.3.1 Nonglare finish. The glare from coverings and the finish of pictograms and their fields shall not exceed 19 gloss units (gu) as measured on a 60-degree gloss meter.

703.5.3.2 Contrast. The light reflectance value (LVR) of the light or dark pictogram and their field shall differ by a minimum of 50 points of LRV.

~~**703.5.3.2 Character contrast.** Characters shall contrast with their background, with either light characters on a dark background or dark characters on a light background.~~

703.6 Symbols of accessibility.

703.6.2 Finish and contrast. Symbols of accessibility and their backgrounds shall have a nonglare finish. Symbols of accessibility shall contrast with their backgrounds, with either a light symbol on a dark background or a dark symbol on a light background.

703.6.2.1 Nonglare finish. The glare from coverings and the finish of symbols of accessibility and their backgrounds shall not exceed 19 gloss units (gu) as measured on a 60-degree gloss meter.

703.6.2.2 Contrast. The light reflectance value (LVR) of the light or dark symbol of accessibility and their backgrounds shall differ by a minimum of 50 points of LRV.

REASON: Part of this proposal is organizing the finish and contrast requirements for signs. The raised letters refers back to the visual letters. The text descriptor for the pictograms refers back to the visual and tactile requirements (this is consistent with Section 703.1.3).

Regarding the contrast: I have been trying for some time to move to the simplicity of most of the European countries, and specifically Great Britain, by merely requiring a specific spread between the low LRV and high LRV numbers for the two adjacent colors that would also make sense if you used the Weber 70 percent formula. In my opinion, the British requirement of 70 points for signs is too high, and would be immediately rejected by even those designers who want to provide high contrast.

The extensive exploratory work done by a special committee at NIBS, the National Institute of Building Standards, on architectural standards to aid people with vision impairments who are not functionally blind includes a close look at standards throughout much of the world as well as research by several well known figures in the field. I was shown an early copy of the report, and made extensive comments to the committee. Many of my comments appear to be reflected in the final publication. Two members of our ANSI A117.1 Committee, Marsha Mazz and Eunice Noell-Waggoner, were members of the NIBS committee as well. I believe the NIBS recommendations are well supported by their research.

Their recommendation on contrast, which they do explain is still a work in progress as much more needs to be done to understand how people with such a huge variety and mixture of vision impairments can best access the built environment, is that all signs as well as stair striping use adjacent colors that have LRV differences of at least 50 points. In several instances, they also note the Weber 70 percent formula. I assume this may mean that as I formerly suggested, we start with an LRV for the light color, find the second color, and then apply the formula to determine if the contrast meets a minimum of 70 percent.

In this case, I started with a very dark swatch, with an LRV of 5, compared it with a swatch of 55 to get the 50 points difference, and then also applied the formula. At that end of the scale the percentage is about 90 percent. I moved upward 5 points at a time. Each move produced a lower percentage when the formula was applied. When I reached a lighter color with an LRV of 70, and compared it with a dark color with an LRV of 20, the contrast percentage was 71 percent. Although my conclusion is that it would be preferable at this point to apply the formula, they do not make that definite recommendation, and although I think it would be well founded, I have not done so either. Moving further up the scale into the lighter colors, and requiring a minimum 50 points of difference will not be ideal, but as a minimum, it is still preferable to many of the fashionable tone on tone signs I have seen lately, such as white letters on an ivory or pale beige background.

In further support, I think it is time for us to join the rest of the world. Virtually every country that has an extensive set of requirements for disabled access takes contrast seriously, and uses light reflectance values, or LRV, to measure adjoining colored surfaces for contrast. Some use the Weber formula, but more use a formula referred to as the Michelson formula. All of them have struggled, I believe, with the same concerns we have, that it is almost impossible to carry out a large scale study because the range of vision and vision impairments is so complex. However, it is certainly true that many forms of vision impairment, from common forms of red/green color blindness or Deuteranopia which affects as many as 8 percent of males in our population to more complex conditions like glaucoma or macular degeneration include some degree of inability to distinguish colors. Therefore, the differences in light reflectance are crucial if signs are to be visually accessible. We have listened to experts in contrast, vision and color and heard a report and recommendation from a subcommittee on contrast that worked together for a year and also included several experts. We came close to passing a measurable standard three times. Once it failed by one vote when the Chair broke a tie. None of these efforts at creating a measurable standard was perfect, but neither are most of our other standards. Who is to say, for instance, that our standard for ramps is exactly what is needed for access by the majority of wheelchair users? Almost every successful standard is some sort of compromise that serves many people quite well, some people fairly well, and some people not at all.

Let us finally move forward to the next step, and add contrast to the many issues where we have a measurable standard, though those standards are not always perfect. That is why we return every several years for revisions. We will not ever be able to move forward on this issue unless we start somewhere. Once we have a standard, we may be able to get grant money and do some meaningful research on how adequate that standard is in providing access to persons with partial vision and a variety of vision impairments.

Here are documents and articles that document the use of LRV to measure contrast in support of disabled access from around the world. The NIBS report is included, which refers to much of that material. There is an extensive article that mentions some of our efforts here, but documents that we do not have a measurable standard. There are two articles in German, which I did read in the original. The Google translation will be accurate if you do not read German, but you will need to break up the articles into several parts. One of those articles is especially interested in contrast for stair striping due to the high percentage of accidents on stairs.

https://www.nibs.org/files/pdfs/NIBS_LVDP_Guidelines_2015.pdf

https://www.anec.eu/images/Publications/technical-studies/ANEC-final-report-1503-1700-Lenoir-et-al.pdf

https://nullbarriere.de/din32975.htm

https://www.pro-retina.de/system/files/artikel/broschure_barrierefrei_2019ua_1_0.pdf

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07-08 – 2021 Replacement

703.1.10, 703.2.10.2, 703.2.10.2(New), 703.3.12, 703.5.1, 705.3.2, 703.6.2.2

Proponent: Kimberly Paarlberg, ICC

Further revise as follows:

Revise as follows:

SECTION 703
SIGNS

703.2 Visual characters.

703.2.10 Finish and contrast. ~~Characters~~ Visual characters and their background shall have a nonglare finish complying with Section 703.2.10.1. ~~Characters~~ Visual characters shall contrast with their background, with either light characters on a dark background, or dark characters on a light background complying with 703.2.10.2.

703.2.10.1 Nonglare finish. The glare from coverings, the finish of visual characters and their background shall not exceed 19 gloss units (gu) as measured on a 60-degree gloss meter.

703.2.10.2 Contrast. The light reflectance value (LRV) of the light or dark characters and their background shall differ by a minimum of 50 points of LRV.

703.3 Raised characters.

703.3.1 General. Raised characters shall comply with Section 703.3, and shall be duplicated in braille complying with Section 703.4.

703.3.12 Finish and contrast. ~~Characters~~ Raised characters and their background shall have a nonglare finish complying with Section 703.2.10.1. ~~Characters~~ Raised characters shall contrast with their background with either light characters on a dark background, or dark characters on a light background complying with 703.2.10.2.

Exception: Where separate raised characters and visual characters with the same information are provided, raised characters shall not be required to ~~have nonglare finish or to contrast with their background~~ comply with this section.

703.4 Braille

(Note: Braille does not have finish and contrast requirements)

703.5 Pictograms.

703.5.1 General. Pictograms shall comply with Section 703.5.

703.5.2 Pictogram field. Pictograms shall have a field 6 inches (150 mm) minimum in height. Characters or braille shall not be located in the pictogram field.

703.5.3 Finish and contrast. Pictograms and their fields shall have a nonglare finish complying with Section 703.2.10.1. Pictograms shall contrast with their fields, with either a light pictogram on a dark field or a dark pictogram on a light field complying with 703.2.10.2.

~~**703.5.3.1 Nonglare finish.** The glare from coverings and the finish of pictograms and their fields shall not exceed 19 gloss units (gu) as measured on a 60-degree gloss meter.~~

~~**703.5.3.2 Character contrast.** Characters shall contrast with their background, with either light characters on a dark background or dark characters on a light background.~~

703.6 Symbols of accessibility.

703.6.2 Finish and contrast. Symbols of accessibility and their backgrounds shall have a nonglare finish complying with Section 703.2.10.1. Symbols of accessibility shall contrast with their backgrounds, with either a light symbol on a dark background or a dark symbol on a light background complying with 703.2.10.2.

~~**703.6.2.1 Nonglare finish.** The glare from coverings and the finish of symbols of accessibility and their backgrounds shall not exceed 19 gloss units (gu) as measured on a 60-degree gloss meter.~~

Reason: This is a proposal that has the same intent as the original, but removes redundant language. The specifics for non-glare and LVR should be stated once, so that they will not vary over time. There are two other differences with the original proposal. In Section 703.3.12 the revision says the same thing in the main paragraph and the exception. In Section 703.5.1, you do not need to state that the text descriptors for pictograms have to comply with visual and raised letters, because that is already stated in 703.1.3.

Committee Action: Disapproval 26-0-2

REPORT OF HEARING:

Modification (if any):

Committee Reason: The Communications task group needs additional time for development of LRV requirements.

703.2.10-TOJI.doc

07-08 – 2021 Ballot Comments

BALLOT COMMENT 1- FIRST DRAFT:

Proponent: Sharon Toji. HLAA
Desired Action: Negative with Comment
Modification:
Reason: See proposed modification. Submission of reason statement and examples will follow.

07-08 – 2021 Public Comment 1

106.2.14 thru 106.2.20 (New), 703.1.4(New), 703.2.10, 703.2.10.2(New), 703.3.12, 703.5.1, 705.5.3.2, 703.6.2.2

Proponent: Chris McCampbell, Kenny Peskin

Replace with the following:

106.2.14 Standard for Safety Colors. ANSI/NEMA Z535.1, June 2, 2022, (National Electrical Manufacturers Association 1300 North 17th Street, Suite 900, Rosslyn, VA 22209).

106.2.15 Standard for Fire Safety and Emergency Symbols. NFPA 170, revised 2023-06-16. (National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471).

106.2.16 Graphical Symbols – Safety Colours and Safety Signs. ISO 3864-1:2011, (International Organization for Standardization, Chemin de Blandonnet 8, CP 401 - 1214 Vernier, Geneva, Switzerland,)

106.2.17 Graphical Symbols – Registered Public Information Symbols. ISO 7001:2023. (International Organization for Standardization, Chemin de Blandonnet 8, CP 401 - 1214 Vernier, Geneva, Switzerland,)

106.2.18 Graphical Symbols – Safety Colours and Safety Signs – Registered Safety Signs. ISO 7010:2019. (International Organization for Standardization, Chemin de Blandonnet 8, CP 401 - 1214 Vernier, Geneva, Switzerland,)

106.2.19 Standard for the Safety of Emergency Lighting and Power Equipment. ANSI/UL 924, revised 2022-12-14 (Underwriters Laboratories, LLC, 333 Pfingsten Road, Northbrook, IL 60062).

106.2.20 Standard for Luminous Egress Path Marking Systems. ANSI/UL 1994, revised 2020-07-01 (Underwriters Laboratories, LLC, 333 Pfingsten Road, Northbrook, IL 60062).

SECTION 703 SIGNS

703.1 General.

703.1.4 Contrast. The contrast required by Sections 703.2.10.2, 703.5.3.2, and 703.6.2.2 between the materials of adjacent sign surfaces shall be documented by the suppliers of these materials, and is limited to measurement of the sign's primary surface at the supplier's place of manufacture or by a testing agency, and as determined by Equation 7-1.

Contrast = [(B1 - B2)/B1] x 100 Equation 7-1

where B1 = light reflectance value (LRV) of the lighter surface; and
B2 = light reflectance value (LRV) of the darker surface.

Exceptions: The following signs are not subject to the documentation requirements in 703.1.4 or the calculation of contrast specified in Equation 7-1. Instead, visual characters, pictograms, and symbols of accessibility for the following signs shall contrast with their background as specified in 703.2.10, 703.5.3, and 703.6.2:

1. Photoluminescent signage that incorporates photoluminescent paint coatings that are prepared and applied in the field.
2. Exit signage required by the authority having jurisdiction, including UL924-listed or UL924-conforming Exit Signs.
3. Safety signage and markings, including UL924-conforming Safety Signs and UL1994-listed or UL1994-conforming Egress Path Markings.
4. Inserts that are placed behind a translucent protective cover or signage graphics applied to the subsurface (also known as the second surface) of translucent material.
5. Signage characters, pictograms, and symbols of accessibility installed directly onto wall surfaces.
6. Signage with colors, graphics, and images applied onto the subsurface of transparent or translucent sign material.
7. Signage with colors, graphics, and images produced with CMYK or process color printing processes.
8. Directional map signs.
9. Directional signs composed of three or more colors.
10. Pictograms and Symbols of Accessibility as specified under ANSI/NEMA Z535.1 (Standard for Safety Colors), ISO 3864 (Graphical Symbols – Safety Colours and Safety Signs), ISO 7001 (Graphical Symbols – Registered Public Information Symbols), or ISO 7010 (Graphical Symbols – Safety Colours and Safety Signs – Registered Safety Signs).
11. Pictograms and Symbols of Accessibility as specified under NFPA 170 (Standard for Fire Safety and Emergency Symbols), or the Federal Highway Administration's Manual on Uniform Traffic Control Devices.

703.2 Visual characters.

703.2.10 Finish and contrast. ~~Characters~~ Visual characters and their background shall have a nonglare finish. ~~Characters~~ Visual characters shall contrast with their background, with either light characters on a dark background, or dark characters on a light background.

703.2.10.1 Nonglare finish. The glare from coverings, the finish of visual characters and their background shall not exceed 19 gloss units (gu) as measured on a 60-degree gloss meter.

703.2.10.2 Contrast. Characters and their background shall contrast 65 percent minimum as determined in accordance with Equation 7-1.

703.3 Raised characters.

703.3.1 General. Raised characters shall comply with Section 703.3, and shall be duplicated in braille complying with Section 703.4.

703.3.12 Finish and contrast. ~~Characters and their background shall have a nonglare finish. Characters shall contrast with their background with either light characters on a dark background, or dark characters on a light background.~~ Where the same characters serve as the visual characters and raised characters, the sign shall comply with the visual character requirement for finish and contrast in Section 703.2.10.

Exception: Where separate raised characters and visual characters with the same information are provided, raised characters shall not be required to ~~have nonglare finish or to contrast with their background~~ comply with this section.

703.4 Braille.

(Note: Braille does not have finish and contrast requirements)

703.5 Pictograms.

703.5.1 General. Pictograms shall comply with Section 703.5. The text descriptors located below the pictogram shall comply with Section 703.2 and 703.3.

703.5.2 Pictogram field. Pictograms shall have a field 6 inches (150 mm) minimum in height. Characters or braille shall not be located in the pictogram field.

703.5.3 Finish and contrast. Pictograms and their fields shall have a nonglare finish. Pictograms shall contrast with their fields, with either a light pictogram on a dark field or a dark pictogram on a light field.

703.5.3.1 Nonglare finish. The glare from coverings and the finish of pictograms and their fields shall not exceed 19 gloss units (gu) as measured on a 60-degree gloss meter.

~~**703.5.3.2 Character contrast.** Characters shall contrast with their background, with either light characters on a dark background or dark characters on a light background.~~

703.5.3.2 Contrast. Pictograms and their fields shall contrast 65 percent minimum as determined in accordance with Equation 7-1.

703.6 Symbols of accessibility.

703.6.1 General. Symbols of accessibility shall comply with Section 703.6.

703.6.2 Finish and contrast. Symbols of accessibility and their backgrounds shall have a nonglare finish. Symbols of accessibility shall contrast with their backgrounds, with either a light symbol on a dark background or a dark symbol on a light background.

703.6.2.1 Nonglare finish. The glare from coverings and the finish of symbols of accessibility and their backgrounds shall not exceed 19 gloss units (gu) as measured on a 60-degree gloss meter.

703.6.2.2 Contrast. Symbols or accessibility and their background shall contrast 65 percent minimum as determined in accordance with Equation 7-1.

REASON: This modification seeks to ensure that visual signs are accessible to all persons, including persons with low vision, while stating these new requirements through a means that encourages wide acceptance and adoption by users of the Standard.

This modification proposes to incorporate a contrast formula, based on Weber contrast (referred to as Equation 7-1) to factory-measure contrast for signs covered under the ICC A117.1 Standard, except for those signs named under the proposed exceptions, understanding that signs under the proposed exceptions list will remain covered under the light-on-dark and dark-on-light contrast provisions already in the Standard.

Committee Action Public Comment 1: NA – see PC3

REPORT OF HEARING:

Modification (if any):

Committee Reason:

07-07 Toji Campbell.doc

07-08 – 2021 Public Comment 2

703.1.10, 703.2.10.2, 703.2.10.2(New), 703.3.12, 703.5.1, 705.3.2, 703.6.2.2

Proponent: Sharon Toji

Replace with the following:

SECTION 703
SIGNS

703.2 Visual characters.

703.2.10 Finish and contrast. ~~Characters~~ Visual characters and their background shall have a nonglare finish. ~~Characters~~ Visual characters shall contrast with their background, with either light characters on a dark background, or dark characters on a light background.

703.2.10.1 Nonglare finish. The glare from coverings, the finish of visual characters and their background shall not exceed 19 gloss units (gu) as measured on a 60-degree gloss meter.

703.2.10.2 Contrast. The stated light reflectance value (LVR) of the light and dark characters and their background shall differ by a minimum of 65 points of LRV, as measured by a spectrophotometer under CIE D65 illuminant.

703.3 Raised characters.

703.3.1 General. Raised characters shall comply with Section 703.3, and shall be duplicated in braille complying with Section 703.4.

703.3.12 Finish and contrast. ~~Characters and their background shall have a nonglare finish. Characters shall contrast with their background with either light characters on a dark background, or dark characters on a light background.~~ Where the same characters serve as the visual characters and raised characters, the sign shall comply with the visual character requirement for finish and contrast in Sections 703.2.10, 703.2.10.1 and 703.2.10.2.

Exception: Where separate raised characters and visual characters with the same information are provided, raised characters shall not be required to ~~have nonglare finish or to contrast with their background~~ comply with this section.

703.4 Braille
(Note: Braille does not have finish and contrast requirements)

703.5 Pictograms.

703.5.1 General. Pictograms shall comply with Section 703.5. The text descriptors located below the pictogram shall comply with Section 703.2 and 703.3.

703.5.2 Pictogram field. Pictograms shall have a field 6 inches (150 mm) minimum in height. Characters or braille shall not be located in the pictogram field.

703.5.3 Finish and contrast. Pictograms and their fields shall have a nonglare finish. Pictograms shall contrast with their fields, with either a light pictogram on a dark field or a dark pictogram on a light field.

703.5.3.1 Nonglare finish. The glare from coverings and the finish of pictograms and their fields shall not exceed 19 gloss units (gu) as measured on a 60-degree gloss meter.

703.5.3.2 Character contrast. Characters shall contrast with their background, with either light characters on a dark background or dark characters on a light background.

703.6 Symbols of accessibility.

703.6.2 Finish and contrast. Symbols of accessibility and their backgrounds shall have a nonglare finish Symbols of accessibility shall contrast with their backgrounds, with either a light symbol on a dark background or a dark symbol on a light background.

703.6.2.1 Nonglare finish. The glare from coverings and the finish of symbols of accessibility and their backgrounds shall not exceed 19 gloss units (gu) as measured on a 60-degree gloss meter.

REASON: Having performed the Weber Formula on every possible choice of light and dark color combinations, ranging from a black with LRV 3 to a bright white with LRV 93, I have determined that separating the two LRVs by 65 points provides us with a contrast ratio of 70 percent and higher for every combination. It also sets the lighter color at minimum 68 LRV, quite firmly in the lighter section of the range of colors. It is my impression that the organized blindness community in the United States is in favor of a contrast ratio of at least 70 percent, which this meets, but they do not favor having to perform mathematical formulas to test contrast. By requiring a simple difference of 65 LRV points, we have met both of those preferences.

Committee Action Public Comment 2: NA, see PC3

REPORT OF HEARING:

Modification (if any):

Committee Reason:

07-08 Toji.doc

07-08 – 2021 Public Comment 3

703.2.10, 703.2.10.1, 703.2.10.2(New), 703.2.10.2.1(New), 703.2.10.2.2(New), 703.2.10.2.2.1(New)

Proponent: Communications task group

Replace with the following:

SECTION 703 SIGNS

703.2 Visual characters.

703.2.10 Finish and contrast. ~~Characters and their background shall have a nonglare finish. Characters shall contrast with their background, with either light characters on a dark background, or dark characters on a light background.~~ The finish and contrast for visual characters shall comply Sections 703.2.10.1 and 703.2.10.2.

703.2.10.1 Nonglare finish. Characters and their background shall have a nonglare finish. Characters and their background shall have a nonglare finish. The glare from coverings, the finish of visual characters and their background shall not exceed 19 gloss units (gu) as measured on a 60-degree gloss meter.

703.2.10.2 Contrast. Contrast for signs shall comply with Section 703.2.10.2.1 or 703.2.10.2.2, as applicable.

703.2.10.2.1 Dark and light signs. For the following sign types, visual characters shall contrast with their background, with either light characters on a dark background, or dark characters on a light background.

1. Inserts that are placed behind a translucent protective cover or signage graphics applied to the subsurface, also known as the second surface, of translucent material.
2. Signage with colors, graphics, and images applied onto the subsurface of transparent or translucent sign material.
3. Signage with colors, graphics, and images produced with Cyan Magenta, Yellow, Black (CMYK) or process color printing processes.
4. Maps.
5. Directional signs with color coded information.

703.2.10.2.2 High contrast signs. Visual characters on all other signs shall have high contrast of 65 percent minimum with their background as determined by the following equation:

Contrast = [(B1 - B2)/B1] x 100
where B1 = light reflectance value (LRV) of the lighter surface; and
B2 = light reflectance value (LRV) of the darker surface.

703.2.10.2.2.1 Compliance. Compliance with the Section 703.2.10.2.2 shall be determined by at least one of the following:

1. Documentation provided by the signage manufacturer based on information from the supplier of the material.
2. Documentation of compliance by a testing agency
3. Field measurement.

703.3 Raised characters.

703.3.1 General. Raised characters shall comply with Section 703.3 and shall be duplicated below the corresponding text in braille complying with Section 703.4.

703.3.12 Finish and contrast. Where raised characters also serve as visual characters, they shall comply with Section 703.2.10.2.
~~Characters and their background shall have a nonglare finish. Characters shall contrast with their background with either light characters on a dark background, or dark characters on a light background.~~

~~**Exception:** Where separate raised characters and visual characters with the same information are provided, raised characters shall not be required to have nonglare finish or to contrast with their background.~~

REASON: This proposal seeks to ensure that visual signs are accessible to all persons, including persons with low vision, while stating these new requirements through a means that encourages wide acceptance and adoption by users of the Standard.

This proposal proposes to incorporate a contrast formula, based on Weber contrast, to factory-measure or field-measure contrast for "LRV signs", except for those signs named under the "Dark and light signs" section, understanding that signs included in 703.2.10.2.1 must comply with "high contrast" provisions.

Use of 65% Minimum Contrast (Weber)

In the consensus proposal 01-05 (establishing 4 definitions for contrast terms) proposed by the Communications task group, the Reason statement cites two papers authored by Gregorio Feigusch and Isabella Tiziana Steffan in 2018 and 2021. In recent correspondence, Dr Feigusch is clear that he supports the use of ratio formulas (like this proposed formula) and opposes establishing a fixed lower limit for LRV difference between the visual characters and their background as 65 points minimum:

> In our opinion, **the substitution of simple difference formulas** (as in the previous edition of 21542) **with ratio formulas** (by Weber and/or Michelson) **was a great improvement, since ratio formulas better match the behaviour of human vision.** I don't understand if the proposals now under discussion deal only with text information. In any case, ISO 21542 (both in the 2011 edition and in the 2021 edition) specifies different requirements for large area surfaces, potential hazards and text information.
>
> **Above all, a lower limit of 65 for the LRV difference between characters and background is uselessly too limiting: such a requirement compels designers to choose only a few colors for the lighter surface and for the darker one.**"
>
> -Gregorio Feigusch, 4/2/24 email (emphasis added)

This proposal's rules are consistent with the analysis of researcher Dr. Aries Arditi: (a) This formula is more specific than current "light on dark or dark on light"; (b) 65% minimum contrast (Weber) consistently applied across all colors vs. a simple difference of LRVs that could equate to a requirement for 90+% contrast when selecting black (or other colors with low LRV); (c) without a fixed requirement for a specific numerical value for the lighter of two colors (which could exclude certain color families from use with either black or white).

Examples and information from Kenny Peskins - 07-08 Reason (Consensus version).pdf
Glen Dea's LVR and Munsell Lightness Scales presentation - LRV-and-Munsell_Lightness-Scales_2024-04-25.pdf

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Committee Action Public Comment 3: AS 24-4-4
Modification to add minimum LRV for lighter color failed, 12-14-3

REPORT OF HEARING:

Modification (if any):

Committee Reason:
703.2.10.2.1 - There are types of signs that cannot meet the equation, so the exceptions that fall to the previous option of light on dark is appropriate.
Color coding is important for wayfinding and needs to be an available option.

703.2.10.2.2 - The Weber formula is suited for specifying contrast.
The formula allows for standard warning and hazard sign colors with dark or light characters.
The LRV difference is older technology and would prohibit some very readable signs.
This is an improvement over the current requirements since it provides a measurable option for determining contrast.

703.2.10.2.2.1 – This is good because it provides options for compliance.

07-08 Communication.doc

Committee Action for First Ballot: Final action is AM by PC3 24-4-4

REPORT OF HEARING:

Modification (if any):

Committee Reason:
PC3 - 703.2.10.2.1 - There are types of signs that cannot meet the equation, so the exceptions that fall to the previous option of light on dark is appropriate.
Color coding is important for wayfinding and needs to be an available option.

703.2.10.2.2 - The Weber formula is suited for specifying contrast.
The formula allows for standard warning and hazard sign colors with dark or light characters.
The LRV difference is older technology and would prohibit some very readable signs.
This is an improvement over the current requirements since it provides a measurable option for determining contrast.

703.2.10.2.2.1 – This is good because it provides options for compliance.

Report for 07-08– 2021		
Committee decision: D	***Committee Vote at Meeting: 26-0-2***	***Committee Vote on Ballot: 42-1-2***
REPORT OF HEARING: Modification (if any):		
Committee Reason: The Communications task group needs additional time for development of LRV requirements.		
BALLOT COMMENT 1- FIRST DRAFT: Proponent: Sharon Toji. HLAA		
Desired Action: Negative with Comment		
Modification:		
Reason: See proposed modification. Submission of reason statement and examples will follow.		
Committee decision: AM PC3	***Committee Vote at Meeting: 24-4-4***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		
Committee Reason: **PC3 -** 703.2.10.2.1 - There are types of signs that cannot meet the equation, so the exceptions that fall to the previous option of light on dark is appropriate. Color coding is important for wayfinding and needs to be an available option. 703.2.10.2.2 - The Weber formula is suited for specifying contrast. The formula allows for standard warning and hazard sign colors with dark or light characters. The LRV difference is older technology and would prohibit some very readable signs. This is an improvement over the current requirements since it provides a measurable option for determining contrast. 703.2.10.2.2.1 – This is good because it provides options for compliance.		
BALLOT COMMENT- SECOND DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
FINAL ACTION: Modification (if any):		
Committee Reason:		

07-09 – 2021 overview

Proposal number	Proponent	Standard Sections	Committee Actions	Mtg. Date	Notes; Groups; groupings
07-09	Toji	703.1, 703.1.10, Figure 703.3.10, 703.4.4, 703.4.5, Figure 703.4.5	AM 19-7-3	2-2-2023 6-6-2024	Final Action is AM BC2

Comment	Proponent	Requested Action	Committee Action	Mtg. Date	Notes; Groups; groupings
BC1	Toji, HLAA	Negative	NA	6-6-2024	
BC2	Paarlberg, ICC	Affirmative	AM 16-7-2	6-6-2024	

BC= Ballot Comment, PC= Public comment, **Bold Comment number** is proposed revision below

07-09 – 2021

703.1, 703.1.10, Figure 703.3.10, 703.4.4, 703.4.5, Figure 703.4.5

Proponent: Sharon Toji, Access Communications

Revise as follows:

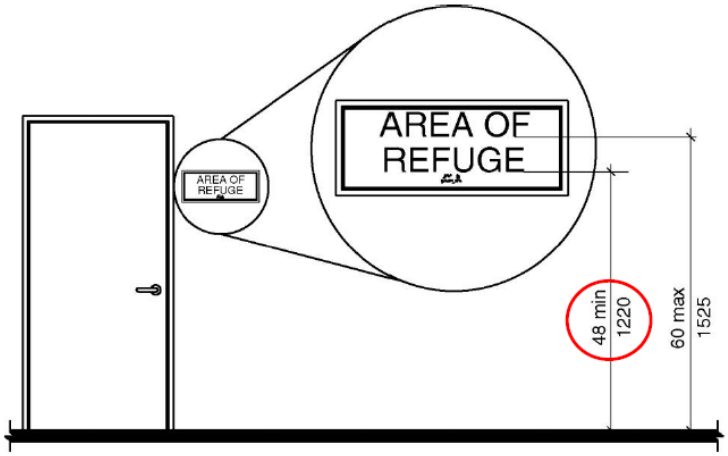
SECTION 703
SIGNS

703.1 General. Signs shall comply with Section 703. Tactile signs shall contain both raised characters and braille. Where signs with ~~both~~ visual characters, ~~and~~ raised characters and braille are required, either one sign with ~~both~~ visual characters, ~~and~~ raised characters and braille, or two separate signs, one sign with visual characters, and one sign with raised characters and braille, shall be provided.

703.3 Raised characters.

703.3.10 Height above floor. Raised characters shall be ~~48~~ 48.75 inches (~~1220~~ 1238 mm) minimum above the floor, measured to the baseline of the lowest raised character and 60 inches (1525 mm) maximum above the floor, measured to the baseline of the highest raised character. For the braille character mounting height below the raised characters see Section 703.4.5.

Exception: Raised characters for elevator car controls shall not be required to comply with Section 703.3.10.



Note: For braille character mounting height see Section 703.4.5

Figure 703.3.10 Height of Raised Characters above Floor

703.3.11 Location. Where a sign containing raised characters and braille is provided at a door, the sign shall be alongside the door at the latch side. Where a sign containing raised characters and braille is provided at double doors with one active leaf, the sign shall be located on the inactive leaf. Where a sign containing raised characters and braille is provided at double doors with two active leaves, the sign shall be to the right of the right-hand door. Where there is no wall space on the latch side of a single door, or to the right side of double doors, signs shall be on the nearest adjacent wall. Signs containing raised characters and braille shall be located so that a clear floor area 18 inches (455 mm) minimum by 18 inches (455 mm) minimum, centered on the raised characters is provided beyond the arc of any door swing between the closed position and 45 degree open position.

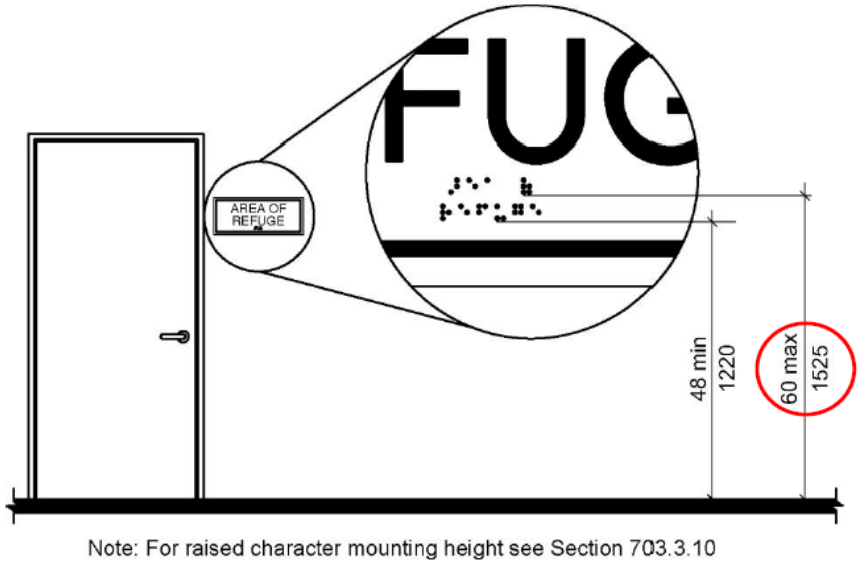
Exception: Signs containing raised characters and braille shall be permitted on the push side of doors with closers and without hold-open devices.

703.4 Braille

703.4.4 Position. Braille shall be below the corresponding ~~text~~ raised characters. If text is multilined, braille shall be placed below entire text. Braille shall be separated $^{3}/_{8}$ inch (9.5 mm) minimum from any other raised characters and $^{3}/_{8}$ inch (9.5 mm) minimum from raised borders and decorative elements. Braille provided on elevator car controls shall be separated $^{3}/_{16}$ inch (4.8 mm) minimum either directly below or adjacent to the corresponding raised characters or symbols.

703.4.5 Mounting height. Braille shall be 48 inches (1220 mm) minimum and ~~60~~ 59-3/8 inches (~~1525~~ 1508 mm) maximum above the floor, measured to the baseline of the braille cells. For the raised character mounting height above the braille see Section 703.3.10/

Exception: Elevator car controls shall not be required to comply with this section.



Note: For raised character mounting height see Section 703.3.10

Figure 703.4.5 Height of Braille Characters above Floor

REASON: This is a clarification of the height and orientation of raised characters and braille. Many people see figures 703.3.10 and 703.4.5 and think there is a conflict.

703.1 – Raised characters are always above braille. This information should be included in the main sign requirements. This would match 703.3.11 and 703.4.4.

703.3.10 – Braille is ¼" from dot 1 to dot 3 and the minimum distance below the raised characters is 3/8" (per Section 703.4.4). Therefore, the actual lowest level of tactile characters is about ¾" above 48".

703.4.5 – Allowing a minimum 3/8" space below the 60 inch base for raised characters, plus a 1⁄4" for braille, so the highest braille could be is actually 5/8 " below 60".

07-09 – 2021 Replacement

703.1, 703.1.10, Figure 703.3.10, 703.4.4, 703.4.5, Figure 703.4.5

Proponent: Kimberly Paarlberg, ICC and Marsha Mazz, USA

Replace and revise as follows:

SECTION 703
SIGNS

703.1 General. Signs shall comply with Section 703. Tactile signs shall contain both raised characters and braille. Where signs with both visual and ~~raised~~ tactile characters are required, either

one sign with both visual and ~~raised~~ tactile characters, or two separate signs, one with visual, and one with ~~raised~~ tactile characters, shall be provided.

703.1.1 Designations. Interior and exterior signs identifying permanent rooms and spaces shall comply with Sections 703.1, 703.2 (visual), and ~~703.3~~ 703.1.4(tactile).

Exception: Exterior signs that are not located at the door to the space they serve shall not be required to comply with Section ~~703.3~~ 703.1.4(tactile).

703.1.2 Directional and informational signs. Signs that provide direction to or information about interior spaces and facilities of the site shall comply with Section 703.2 (visual).

703.1.3 Pictograms. Where pictograms are provided as designations of permanent interior rooms and spaces, the pictograms shall comply with Section 703.5 (pictograms) and shall have text descriptors located directly below the pictogram field and complying with Sections 703.2 (visual) and ~~703.3~~ 703.1.4(tactile).

Exception: Pictograms that provide information about a room or space, such as "No Smoking," occupant logos, and the International Symbol of Accessibility, shall not be required to have text descriptors.

703.1.4 Tactile Signs

703.1.4.1 General. Tactile signs shall contain both raised characters and braille and shall comply with 703.1.4. Raised characters shall comply with Section 703.3 (raised). Braille shall comply with Section 703.4 (braille).

~~**703.3.11**~~ **703.1.4.2 Location and standing space.** Where a tactile sign ~~containing raised characters and braille~~ is provided to designate a permanent room or space, ~~at a door,~~ the sign shall be located ~~alongside~~ at the doorway to the room or space it identifies and shall be installed in accordance with Table 703.1.4.2. ~~Where a sign containing raised characters and braille is provided at double doors with one active leaf, the sign shall be located on the inactive leaf. Where a sign containing raised characters and braille is provided at double doors with two active leaves, the sign shall be to the right of the right-hand door. Where there is no wall space on the latch side of a single door, or to the right side of double doors, signs shall be on the nearest adjacent wall. Signs containing raised characters and braille shall be located so that a clear floor area~~ A standing space 18 inches (455 mm) minimum by 18 inches (455 mm) minimum shall be provided and shall be centered on the raised characters. The arc of any door swing between the closed position and a 45-degree open position, shall not swing into the standing space ~~is provided beyond the arc of any door swing between the closed position and 45 degree open position.~~

~~**Exception:** Signs containing raised characters and braille shall be permitted on the push side of doors with closers and without hold-open devices.~~

Figure ~~703.3.11~~ 703.1.4.2
LOCATION OF SIGNS AT DOORS
(Revise figure to match new table)

Table 703.1.4.2

Tactile Sign Location

Number of Doors in Doorway	Number of Active Leaves	Sign Location
None	None	to the right of the doorway[1]
1	1	on the latch side[1]
		permitted on the door where the door swings inward, has a closer, and does not have a hold-open device
2	1	on the inactive leaf
2	2	on the right-hand leaf where the door swings inward, has a closer, and does not have a hold-open device
		to the right of the right-hand leaf[1]

1. Where there is no wall space signs shall be on the nearest adjacent wall.

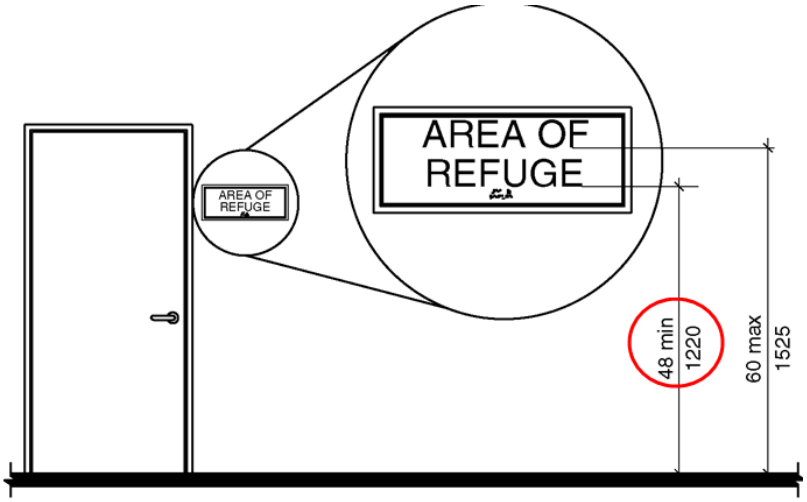
~~703.4.4~~ 703.1.4.3 Position. Tactile characters on signs shall be positioned so that Braille ~~shall be~~ is below the corresponding ~~text~~ raised characters. If text containing raised characters is multilined, braille shall be placed below entire text. Braille shall be separated 3/8 inch (9.5 mm) minimum from any other raised characters and 3/8 inch (9.5 mm) minimum from raised borders and decorative elements. Braille provided on elevator car controls shall be separated 3/16 inch (4.8 mm) minimum either directly below or adjacent to the corresponding raised characters or symbols.

Figure ~~703.4.4~~ 703.1.4.3

POSITION OF BRAILLE

~~703.3.10~~ 703.1.4.4 Height above floor. ~~Raised characters~~ Tactile characters on signs shall be 48 inches (1220 mm) minimum above the floor, measured to the baseline of the ~~lowest raised character~~ braille cell and 60 inches (1525 mm) maximum above the floor, measured to the baseline of the highest raised character.

Exception: Raised characters and braille for elevator car controls shall not be required to comply with Section ~~703.3.10~~ 703.1.4.4.



Note: For braille character mounting height see Section 703.4.5

Figure ~~703.3.10~~ 703.1.4.4 Height of Raised Characters and Braille above Floor

Note: ***Revise Figure to indicate 48" to bottom of braille***

703.2 Visual characters.

703.2.1 General. Visual characters shall comply with one of the following:

1. Visual characters that also serve as raised characters shall comply with Sections 703.2 (visual) and 703.3 (raised)~~, or~~
2. Visual characters on VMS signage shall comply with Section 703.7 (VMS)~~, or~~
3. Visual characters not covered in items 1 and 2 shall comply with Section 703.2 (visual).

Exception: The visual and raised requirements of item 1 shall be permitted to be provided by two separate signs that provide corresponding information provided one sign complies with Section 703.2 (visual) and the second sign complies with Section 703.3 (raised).

703.2.2 Case.

703.2.3 Style.

703.2.4 Character height.

TABLE 703.2.4—VISUAL CHARACTER HEIGHT

703.2.5 Character width.

703.2.6 Stroke width.

703.2.7 Character spacing.

703.2.8 Line spacing.

703.2.9 Height above floor.

703.2.10 Finish and contrast.

703.2.10.1 Nonglare finish.

703.3 Raised characters.

703.3.1 General. Raised characters shall comply with Section 703.3 (raised), and shall be duplicated below the corresponding text in braille complying with Section 703.4 (braille).

703.3.2 Depth.

703.3.3 Case.

703.3.4 Style.

703.3.5 Character height.

703.3.6 Character width.

703.3.7 Stroke width.

703.3.7.1 Maximum.

703.3.7.2 Minimum.

703.3.8 Character spacing.

703.3.9 Line spacing.

~~**703.3.10 Height above floor.**~~ *Relocated to 703.1.4.4*

~~**Figure 703.3.10** HEIGHT OF RAISED CHARACTERS ABOVE FLOOR~~ *Relocated to 703.1.4.4*

~~**703.3.11 Location.**~~ *Relocated to 703.1.4.2*

~~**Figure 703.3.11** LOCATION OF SIGNS AT DOORS~~ *Relocated to 703.1.4.2*

703.3.12 Finish and contrast.

703.4 Braille

703.4.1 General.

703.4.2 Uppercase letters.

703.4.3 Dimensions.

TABLE 703.4.3— BRAILLE DIMENSIONS

Figure 703.4.3 BRAILLE MEASUREMENT

~~**703.4.4 Position.**~~ *Relocated to 703.1.4.3*

~~**Figure 703.4.4** POSITION OF BRAILLE~~ *Relocated to 703.1.4.3*

~~**703.4.5 Mounting height.**~~ *Combined with 703.1.4.4*

~~**Figure 703.4.5** HEIGHT OF BRAILLE CHARACTERS ABOVE FLOOR~~ *Combined with 703.1.4.4*

703.5 Pictograms.

Figure 703.5 PICTOGRAM FIELD

703.5.1 General.

703.5.2 Pictogram field.

703.5.3 Finish and contrast. Pictograms and their fields shall have a nonglare finish. Pictograms shall contrast with their fields, with either a light pictogram on a dark field or a dark pictogram on a light field.

703.5.3.1 Nonglare finish.

~~**703.5.3.2 Character contrast.** Characters shall contrast with their background, with either light characters on a dark background or dark characters on a light background.~~

703.6 Symbols of accessibility.

703.7 Variable message signs.

703.7.1 General. High resolution variable message sign (VMS) characters shall comply with Sections 703.2 (Visual) and 703.7.12 through 703.7.14. Low resolution variable message sign (VMS) characters shall comply with Section 703.7.

703.8 Remote infrared audible sign (RIAS) systems.

703.9 Pedestrian signals.

REASON: This modification combines the concerns for signs with raised letters and braille addressed in 07-09-21 and 07-10-21 regarding the height of the sign and the space to read the sign. This is a combined modification so that the coordination and context are clear.

Section 703.1: The first two sentences are unchanged. The next two sentences merely substitute "tactile" for "raised" to be consistent with the first two sentences which establish that "tactile signs" are those with both raised characters and braille.

Section 703.1.4 Tactile Signs and 703.1.4.1 General: This is a new section that would be part of the general sign requirements and would contain requirements that are common to both raised characters and braille.

Section 703.1.4.2 Location and standing space (current Section 703.3.11) which has been revised as follows:

- "Raised characters and braille" is changed to "tactile sign"
- To acknowledge that sometimes there are no doors to a space, but only a "doorway";
- The term "clear floor area" is changed to "standing space" to better describe its purpose; and
- All the other requirements regarding sign location remain unchanged, but are put into a table (Table 703.1.4.2) to improve comprehensibility.

Section 703.1.4.3 Position: The section deals with the relative location of the raised and braille on the sign to each other. The only change here is to clarify that the "text" referred to is the "text containing raised characters".

Section 703.1.4.4 Height above the floor (current Sections 703.3.10 for raised characters and 703.4.5 for braille). The two sections are basically identical in requirements. The two current requirements are combined. The revision is specific for the highest line of "raised" and the lowest line for "braille".

Figure 703.1.4.4 – this figure will be revised to show the requirements in Section 703.1.4.4.

The remainder of the change is basically correlative –
703.2.1 – this restates the general visual requirement in 703
703.3.1 – reinforcement of 703.1.4.3
703.5.3.2 – this section is a repeat of text in 703.5.3 for pictograms; or if this is the characters under the pictograms, that is addressed in Sections 703.2.10 for visual and 703.3.12 for raised.

Members of the Communication task group asked for a clean version of the new main sign section for readability.

SECTION 703
SIGNS

703.1 General. Signs shall comply with Section 703. Tactile signs shall contain both raised characters and braille. Where signs with both visual and tactile characters are required, either one sign with both visual and tactile characters, or two separate signs, one with visual, and one with tactile characters, shall be provided.

703.1.1 Designations. Interior and exterior signs identifying permanent rooms and spaces shall comply with Sections 703.1, 703.2 (visual), and 703.1.4(tactile).

Exception: Exterior signs that are not located at the door to the space they serve shall not be required to comply with Section 703.1.4(tactile).

703.1.2 Directional and informational signs. Signs that provide direction to or information about interior spaces and facilities of the site shall comply with Section 703.2 (visual).

703.1.3 Pictograms. Where pictograms are provided as designations of permanent interior rooms and spaces, the pictograms shall comply with Section 703.5 (pictograms) and shall have text descriptors located directly below the pictogram field and complying with Sections 703.2 (visual) and 703.1.4(tactile).

Exception: Pictograms that provide information about a room or space, such as "No Smoking," occupant logos, and the International Symbol of Accessibility, shall not be required to have text descriptors.

703.1.4 Tactile Signs

703.1.4.1 General. Tactile signs shall contain both raised characters and braille and shall comply with 703.1.4. Raised characters shall comply with Section 703.3 (raised). Braille shall comply with Section 703.4 (braille).

703.1.4.2 Location and standing space. Where a tactile sign is provided to designate a permanent room or space, the sign shall be located at the doorway to the room or space it identifies and shall be installed in accordance with Table 703.1.4.2. A standing space 18 inches (455 mm) minimum by 18 inches (455 mm) minimum shall be provided and shall be centered on the raised characters. The arc of any door swing between the closed position and a 45-degree open position, shall not swing into the standing space.

Table 703.1.4.2
Tactile Sign Location

Number of Doors in Doorway	Number of Active Leaves	Sign Location
None	None	to the right of the doorway[1]
1	1	on the latch side[1]
		permitted on the door where the door swings inward, has a closer, and does not have a hold-open device
2	1	on the inactive leaf
2	2	on the right-hand leaf where the door swings inward, has a closer, and does not have a hold-open device
		to the right of the right-hand leaf[1]

1.Where there is no wall space signs shall be on the nearest adjacent wall.

703.1.4.3 Position. Tactile characters on signs shall be positioned so that Braille is below the corresponding raised characters. If text containing raised characters is multilined, braille shall be placed below entire text. Braille shall be separated 3/8 inch (9.5 mm) minimum from any other raised characters and 3/8 inch (9.5 mm) minimum from raised borders and decorative

elements. Braille provided on elevator car controls shall be separated 3/16 inch (4.8 mm) minimum either directly below or adjacent to the corresponding raised characters or symbols.

703.1.4.4 Height above floor. Tactile characters on signs shall be 48 inches (1220 mm) minimum above the floor, measured to the baseline of the braille cell and 60 inches (1525 mm) maximum above the floor, measured to the baseline of the highest raised character.

Exception: Raised characters and braille for elevator car controls shall not be required to comply with Section 703.1.4.4.

Committee Action: As modified 19-7-3

REPORT OF HEARING:

Modification (if any):

Replace and modify as follows:

SECTION 703
SIGNS

703.1 General. Signs shall comply with Section 703. Tactile signs shall contain both raised characters and braille. Where signs with both visual and ~~raised~~ tactile characters are required, either one sign with both visual and ~~raised~~ tactile characters, or two separate signs, one with visual, and one with ~~raised~~ tactile characters, shall be provided.

703.1.1 Designations. Interior and exterior signs identifying permanent rooms and spaces shall comply with Sections 703.1, 703.2 (visual), and ~~703.3~~ 703.1.4.

Exception: Exterior signs that are not located at the door to the space they serve shall not be required to comply with Section ~~703.3~~ 703.1.4.

703.1.2 Directional and informational signs. Signs that provide direction to or information about interior spaces and facilities of the site shall comply with Section 703.2.

703.1.3 Pictograms. Where pictograms are provided as designations of permanent interior rooms and spaces, the pictograms shall comply with Section 703.5 and shall have text descriptors located directly below the pictogram field and complying with Sections 703.2 and ~~703.3~~ 703.1.4.

Exception: Pictograms that provide information about a room or space, such as "No Smoking," occupant logos, and the International Symbol of Accessibility, shall not be required to have text descriptors.

703.1.4 Tactile Signs

703.1.4.1 General. Tactile signs shall contain both raised characters and braille and shall comply with 703.1.4. Raised characters shall comply with Section 703.3 (raised). Braille shall comply with Section 703.4.

~~703.3.11~~ 703.1.4.2 Location and standing space. Where a tactile sign ~~containing raised characters and braille~~ is provided to designate a permanent room or space, ~~at a door,~~ the sign shall be located ~~alongside~~ at the doorway to the room or space it identifies and shall be installed in accordance with Table 703.1.4.2. ~~Where a sign containing raised characters and braille is provided at double doors with one active leaf, the sign shall be located on the inactive leaf. Where a sign containing raised characters and braille is provided at double doors with two active leaves, the sign shall be to the right of the right-hand door. Where there is no wall space on the latch side of a single door, or to the right side of double doors, signs shall be on the nearest adjacent wall. Signs containing raised characters and braille shall be located so that a clear floor area~~ A standing space 18 inches (455 mm) minimum by 18 inches (455 mm) minimum shall be provided and shall be centered on the raised characters. The arc of any door swing between the closed position and a 45-degree open position, shall not swing into the standing space ~~is provided beyond the arc of any door swing between the closed position and 45 degree open position.~~

~~**Exception:** Signs containing raised characters and braille shall be permitted on the push side of doors with closers and without hold-open devices.~~

Figure ~~703.3.11~~ 703.1.4.2
LOCATION OF SIGNS AT DOORS
(Revise figure to match new table)

Table 703.1.4.2
Tactile Sign Location

Number of Doors in Doorway	Number of Active Leaves	Sign Location
None	None	to the right of the doorway[1]
1	1	on the latch side[1]
		permitted on the door where the door swings inward, has a closer, and does not have a hold-open device
2	1	on the inactive leaf
2	2	on the right-hand leaf where the door swings inward, has a closer, and does not have a hold-open device
		to the right of the right-hand leaf[1]

2. Where there is no wall space signs shall be on the nearest adjacent wall.

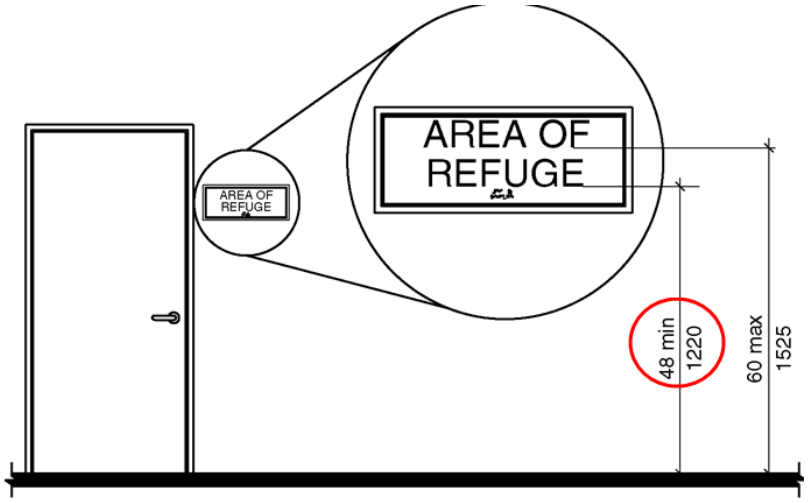
~~703.4.4~~ 703.1.4.3 Position. Tactile characters on signs shall be positioned so that Braille ~~shall be~~ is below the corresponding ~~text~~ raised characters. If text containing raised characters is multilined, braille shall be placed below entire text. Braille shall be separated 3/8 inch (9.5 mm) minimum from any other raised characters and 3/8 inch (9.5 mm) minimum from raised borders and decorative elements. Braille provided on elevator car controls shall be separated 3/16 inch (4.8 mm) minimum either directly below or adjacent to the corresponding raised characters or symbols.

Figure ~~703.4.4~~ 703.1.4.3

POSITION OF BRAILLE

~~703.3.10~~ 703.1.4.4 Height above floor. ~~Raised characters~~ Tactile characters on signs shall be 48 inches (1220 mm) minimum above the floor, measured to the baseline of the ~~lowest raised character~~ braille cell and 60 inches (1525 mm) maximum above the floor, measured to the baseline of the highest raised character.

Exception: Raised characters and braille for elevator car controls shall not be required to comply with Section ~~703.3.10~~ 703.1.4.4.



Note: For braille character mounting height see Section 703.4.5

Figure ~~703.3.10~~ 703.1.4.4 Height of Raised Characters and Braille above Floor

Note: ***Revise Figure to indicate 48" to bottom of braille***

703.2 Visual characters.

703.2.1 General. Visual characters shall comply with one of the following:

1. Visual characters that also serve as raised characters shall comply with Sections 703.2 and 703.3~~, or~~
2. Visual characters on VMS signage shall comply with Section 703.7~~, or~~

3. Visual characters not covered in items 1 and 2 shall comply with Section 703.2.

Exception: The visual and raised requirements of item 1 shall be permitted to be provided by two separate signs that provide corresponding information provided one sign complies with Section 703.2 (visual) and the second sign complies with Section 703.3.

703.3 Raised characters.

703.3.1 General. Raised characters shall comply with Section 703.3, and shall be duplicated below the corresponding text in braille complying with Section 703.4.

703.4 Braille

~~**703.4.5 Mounting height.**~~

~~**Figure 703.4.5** HEIGHT OF BRAILLE CHARACTERS ABOVE FLOOR~~

703.5 Pictograms.

~~**703.5.3.2 Character contrast.** Characters shall contrast with their background, with either light characters on a dark background or dark characters on a light background.~~

Committee Reason: The modification replaces 07-09 and 07-10. Combining the orientation and height requirements from raised letters and braille into a tactile sign requirement will improve clarity. See the reason statement for the modification for a full explanation.
There were concerns about loosing 'adjoining' regarding signs required to be located on a sidelight or not. The 'standing space' needs to be defined.

Figure 703.3.1-TOJI.doc

07-09 – 2021 Ballot Comments

BALLOT COMMENT 1- FIRST DRAFT: Proponent: Sharon Toji. HLAA
Desired Action: Negative with Comment
Modification:
Reason: Proposed modification will be submitted.
BALLOT COMMENT 2- FIRST DRAFT: Proponent: Kimberly Paarlberg, ICC
Desired Action: Affirmative with Comment
Modification: See Ballot comment 2

07-09 – 2021 Ballot Comment 2

703.1.4.2, 703.1.4.4

Proponent: Kimberly Paarlberg, ICC

Further as follows:

703.1.4.2 Location and standing space. Where a tactile sign is provided to designate a permanent room or space, the sign shall be located at the doorway to the room or space it identifies and shall be installed in accordance with Table 703.1.4.2. A standing space 18 inches (455 mm) minimum by 18 inches (455 mm) minimum shall be provided and shall be centered on the raised characters. The arc of any door swing between the closed position and a 45-degree open position, shall not swing into the standing space.

Exception: A tactile sign within the exit stairway or ramp indicating the floor level in accordance with Section 505.15, the standing space is permitted to overlap the flight of stairs.

Table 703.1.4.2
Tactile Sign Location

Number of Doors in Doorway	Number of Active Leaves	Sign Location
None	None	to the right of the doorway[1]
1	1	on the latch side[1]
		permitted on the door where the door swings inward, has a closer, and does not have a hold-open device
2	1	on the inactive leaf
2	2	on the right-hand leaf where the door swings inward, has a closer, and does not have a hold-open device
		to the right of the right-hand leaf[1]

1. Where there is no wall space signs shall be on the nearest adjacent wall.

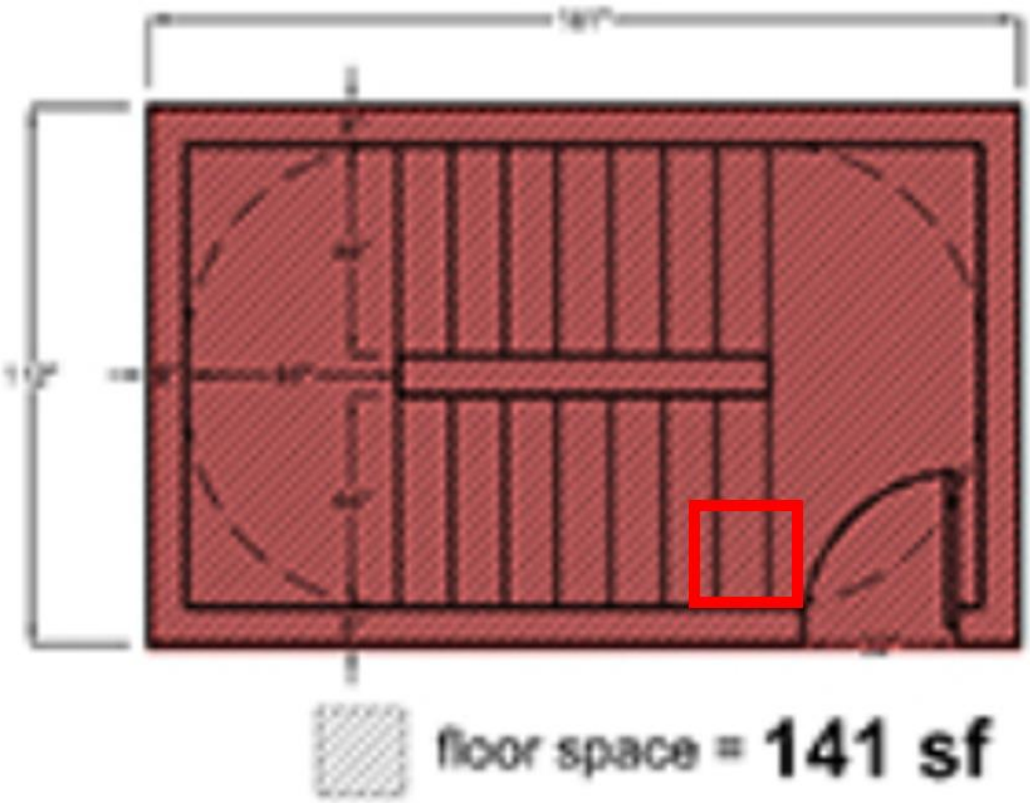
703.1.4.4 Height above floor. Tactile characters on signs shall be 48 inches (1220 mm) minimum above the floor, measured to the baseline of the braille cell and 60 inches (1525 mm) maximum above the floor, measured to the baseline of the highest raised character.

~~**Exception**~~ **Exceptions:**

1. Raised characters and braille for elevator car controls shall not be required to comply with Section 703.1.4.4.

2. Where a tactile sign within the exit stairway or ramp indicating the floor level in accordance with Section 505.15 uses the exception in Section 703.1.4.2, the height above the floor is measured from the landing.

REASON: I strongly support the work that was done for this clarification for signs. However, the committee also approved a requirement for number on the inside of the stairway for use during emergency evacuation. It was recently pointed out to me that the standing space next to the door could result in an increase in landing size, or someone choosing to put the sign on a wall that was away from the door jamb. Therefore, I would like to suggest an exception for this one sign (see Section 505.15.)



05-10-2021 AM ; 05-15-2021 AM both

~~504~~ 505**.15 ~~504.10~~ Tactile signage within the stairway or ramp enclosure.** ~~Stair~~ Floor level identification signs in raised characters and braille complying with Sections 703.3 and 703.4 shall be located at each floor level landing in all enclosed exit stairways or ramps. Such sign shall be located adjacent to the door leading from the ~~stairwell~~ enclosed exit stairway or ramp into the corridor to identify the floor level. The exit door discharging to the outside or to the level of exit discharge shall have a sign with raised characters and braille stating "EXIT."

Committee Action for Ballot Comment 2:

REPORT OF HEARING:

Modification (if any):
Further modify BC2 as follows:
703.1.4.2 Location and standing space. Where a tactile sign is provided to designate a permanent room or space, the sign shall be located at the doorway to the room or space it identifies and shall be installed in accordance with Table 703.1.4.2. A standing space 18 inches (455 mm) minimum by 18 inches (455 mm) minimum shall be provided and shall be centered on the raised characters. The arc of any door swing between the closed position and a 45-degree open position, shall not swing into the standing space.

Exception: ~~A tactile sign within the exit stairway or ramp indicating the floor level in accordance with Section 505.15, the standing space is permitted to overlap the flight of stairs.~~ The standing space shall be permitted to overlap the flight of stairs or ramp run where tactile signs are located within the exit stairway or ramp.

703.1.4.4 Height above floor. Tactile characters on signs shall be 48 inches (1220 mm) minimum above the floor, measured to the baseline of the braille cell and 60 inches (1525 mm) maximum above the floor, measured to the baseline of the highest raised character.

Exceptions:

1. Raised characters and braille for elevator car controls shall not be required to comply with Section 703.1.4.4.
2. ~~Where a tactile sign within the exit stairway or ramp indicating the floor level in accordance with Section 505.15 uses the exception in Section 703.1.4.2, the height above the floor is measured from the landing.~~ The standing space shall be measured from the landing of the stairway or ramp where tactile signs are located within the exit stairway or ramp.

Committee Reason: There was a modification to reorder the phrases in the new exceptions. The committee felt that this exception is a reasonable allowance for the floor designation within an exit stairway or ramp enclosure. It is not the intent of the committee to require an enlarged stairway landing solely for the purpose of reading the floor designations.

07-09 Paarlberg.doc

Committee Action for First Ballot: AM BC2 16-7-2

REPORT OF HEARING:

Modification (if any):
Further modify BC2 as follows:
703.1.4.2 Location and standing space. Where a tactile sign is provided to designate a permanent room or space, the sign shall be located at the doorway to the room or space it

identifies and shall be installed in accordance with Table 703.1.4.2. A standing space 18 inches (455 mm) minimum by 18 inches (455 mm) minimum shall be provided and shall be centered on the raised characters. The arc of any door swing between the closed position and a 45-degree open position, shall not swing into the standing space.

Exception: ~~A tactile sign within the exit stairway or ramp indicating the floor level in accordance with Section 505.15, the standing space is permitted to overlap the flight of stairs.~~ The standing space shall be permitted to overlap the flight of stairs or ramp run where tactile signs are located within the exit stairway or ramp.

703.1.4.4 Height above floor. Tactile characters on signs shall be 48 inches (1220 mm) minimum above the floor, measured to the baseline of the braille cell and 60 inches (1525 mm) maximum above the floor, measured to the baseline of the highest raised character.

Exceptions:

1. Raised characters and braille for elevator car controls shall not be required to comply with Section 703.1.4.4.
2. ~~Where a tactile sign within the exit stairway or ramp indicating the floor level in accordance with Section 505.15 uses the exception in Section 703.1.4.2, the height above the floor is measured from the landing.~~ The standing space shall be measured from the landing of the stairway or ramp where tactile signs are located within the exit stairway or ramp.

Committee Reason: There was a modification to reorder the phrases in the new exceptions. The committee felt that this exception is a reasonable allowance for the floor designation within an exit stairway or ramp enclosure. It is not the intent of the committee to require an enlarged stairway landing solely for the purpose of reading the floor designations.

Report for 07-09– 2021		
Committee decision: AM	***Committee Vote at Meeting: 19-7-3***	***Committee Vote on Ballot:41-2-2***

REPORT OF HEARING:
Modification (if any):

Replace and modify as follows:

SECTION 703
SIGNS

703.1 General. Signs shall comply with Section 703. Tactile signs shall contain both raised characters and braille. Where signs with both visual and ~~raised~~ tactile characters are required, either one sign with both visual and ~~raised~~ tactile characters, or two separate signs, one with visual, and one with ~~raised~~ tactile characters, shall be provided.

703.1.1 Designations. Interior and exterior signs identifying permanent rooms and spaces shall comply with Sections 703.1, 703.2 (visual), and ~~703.3~~ 703.1.4.

Exception: Exterior signs that are not located at the door to the space they serve shall not be required to comply with Section ~~703.3~~ 703.1.4.

703.1.2 Directional and informational signs. Signs that provide direction to or information about interior spaces and facilities of the site shall comply with Section 703.2.

703.1.3 Pictograms. Where pictograms are provided as designations of permanent interior rooms and spaces, the pictograms shall comply with Section 703.5 and shall have text descriptors located directly below the pictogram field and complying with Sections 703.2 and ~~703.3~~ 703.1.4.

Exception: Pictograms that provide information about a room or space, such as "No Smoking," occupant logos, and the International Symbol of Accessibility, shall not be required to have text descriptors.

703.1.4 Tactile Signs

703.1.4.1 General. Tactile signs shall contain both raised characters and braille and shall comply with 703.1.4. Raised characters shall comply with Section 703.3 (raised). Braille shall comply with Section 703.4.

~~**703.3.11**~~ **703.1.4.2 Location and standing space.** Where a tactile sign ~~containing raised characters and braille~~ is provided to designate a permanent room or space, ~~at a door,~~ the sign shall be located ~~alongside~~ at the doorway to the room or space it identifies and shall be installed in accordance with Table 703.1.4.2. ~~Where a sign containing raised characters and braille is provided at double doors with one active leaf, the sign shall be located on the inactive leaf. Where a sign containing raised characters and braille is provided at double doors with two active leaves, the sign shall be to the right of the right-hand door. Where there is no wall space on the latch side of a single door, or to the right side of double doors, signs shall be on the nearest adjacent wall. Signs containing raised characters and braille shall be located so that a clear floor area~~ A standing space 18 inches (455 mm) minimum by 18 inches (455 mm) minimum shall be provided and shall be

centered on the raised characters. The arc of any door swing between the closed position and a 45-degree open position, shall not swing into the standing space is provided beyond the arc of any door swing between the closed position and 45 degree open position.

Exception: Signs containing raised characters and braille shall be permitted on the push side of doors with closers and without hold-open devices.

Figure 703.3.11 703.1.4.2
LOCATION OF SIGNS AT DOORS
(Revise figure to match new table)

Table 703.1.4.2
Tactile Sign Location

Number of Doors in Doorway	Number of Active Leaves	Sign Location
None	None	to the right of the doorway[1]
1	1	on the latch side[1]
		permitted on the door where the door swings inward, has a closer, and does not have a hold-open device
2	1	on the inactive leaf
2	2	on the right-hand leaf where the door swings inward, has a closer, and does not have a hold-open device
		to the right of the right-hand leaf[1]

2. Where there is no wall space signs shall be on the nearest adjacent wall.

703.4.4 703.1.4.3 Position. Tactile characters on signs shall be positioned so that Braille shall be is below the corresponding text raised characters. If text containing raised characters is multilined, braille shall be placed below entire text. Braille shall be separated 3/8 inch (9.5 mm) minimum from any other raised characters and 3/8 inch (9.5 mm) minimum from raised borders and decorative elements. Braille provided on elevator car controls shall be separated 3/16 inch (4.8 mm) minimum either directly below or adjacent to the corresponding raised characters or symbols.

Figure 703.4.4 703.1.4.3
POSITION OF BRAILLE

703.3.10 703.1.4.4 Height above floor. Raised characters Tactile characters on signs shall be 48 inches (1220 mm) minimum above the floor, measured to the baseline of the lowest raised character braille cell and 60 inches (1525 mm) maximum above the floor, measured to the baseline of the highest raised character.

Exception: Raised characters and braille for elevator car controls shall not be required to comply with Section 703.3.10 703.1.4.4.

Report for 07-09– 2021

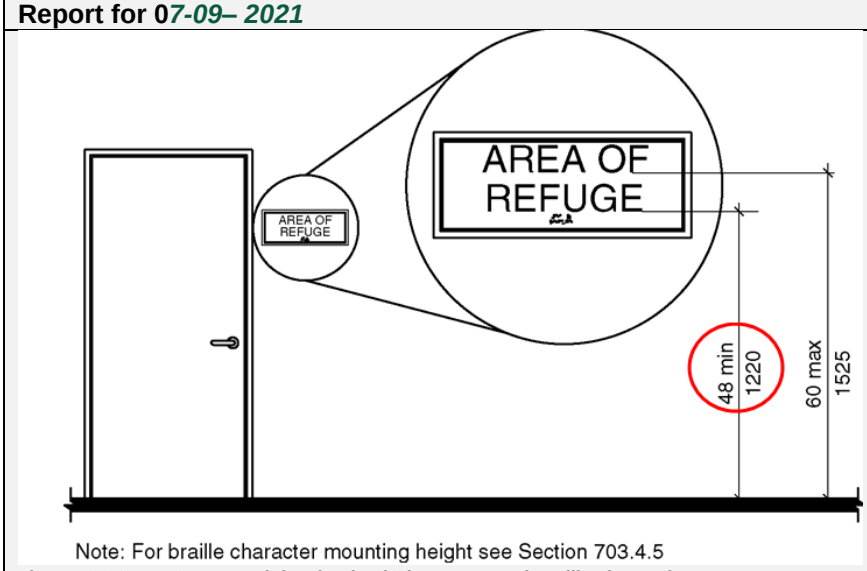


Figure ~~703.3.10~~ 703.1.4.4 Height of Raised Characters and Braille above Floor
Note: ***Revise Figure to indicate 48" to bottom of braille***

703.2 Visual characters.

703.2.1 General. Visual characters shall comply with one of the following:

1. Visual characters that also serve as raised characters shall comply with Sections 703.2 and 703.3~~, or~~
2. Visual characters on VMS signage shall comply with Section 703.7~~, or~~
3. Visual characters not covered in items 1 and 2 shall comply with Section 703.2.

Exception: The visual and raised requirements of item 1 shall be permitted to be provided by two separate signs that provide corresponding information provided one sign complies with Section 703.2 (visual) and the second sign complies with Section 703.3.

703.3 Raised characters.

703.3.1 General. Raised characters shall comply with Section 703.3, and shall be duplicated below the corresponding text in braille complying with Section 703.4.

703.4 Braille

~~**703.4.5 Mounting height.**~~

~~**Figure 703.4.5** HEIGHT OF BRAILLE CHARACTERS ABOVE FLOOR~~

703.5 Pictograms.

~~**703.5.3.2 Character contrast.** Characters shall contrast with their background, with either light characters on a dark background or dark characters on a light background.~~

Committee Reason: The modification replaces 07-09 and 07-10. Combining the orientation and height requirements from raised letters and braille into a tactile sign requirement will improve clarity. See the reason statement for the modification for a full explanation.
There were concerns about loosing 'adjoining' regarding signs required to be located on a sidelight or not. The 'standing space' needs to be defined.

BALLOT COMMENT 1- FIRST DRAFT:
Proponent: Sharon Toji. HLAA

Desired Action: Negative with Comment

Modification:

Reason: Proposed modification will be submitted.

BALLOT COMMENT 2- FIRST DRAFT:
Proponent: Kimberly Paarlberg, ICC

Desired Action: Affirmative with Comment

Modification:

Report for 07-09– 2021

703.1.4.2 Location and standing space. Where a tactile sign is provided to designate a permanent room or space, the sign shall be located at the doorway to the room or space it identifies and shall be installed in accordance with Table 703.1.4.2. A standing space 18 inches (455 mm) minimum by 18 inches (455 mm) minimum shall be provided and shall be centered on the raised characters. The arc of any door swing between the closed position and a 45-degree open position, shall not swing into the standing space.

Exception: A tactile sign within the exit stairway or ramp indicating the floor level in accordance with Section 505.15, the standing space is permitted to overlap the flight of stairs.

Table 703.1.4.2
Tactile Sign Location

Number of Doors in Doorway	Number of Active Leaves	Sign Location
None	None	to the right of the doorway[1]
1	1	on the latch side[1]
		permitted on the door where the door swings inward, has a closer, and does not have a hold-open device
2	1	on the inactive leaf
2	2	on the right-hand leaf where the door swings inward, has a closer, and does not have a hold-open device
		to the right of the right-hand leaf[1]

3. Where there is no wall space signs shall be on the nearest adjacent wall.

703.1.4.4 Height above floor. Tactile characters on signs shall be 48 inches (1220 mm) minimum above the floor, measured to the baseline of the braille cell and 60 inches (1525 mm) maximum above the floor, measured to the baseline of the highest raised character.

~~**Exception**~~ **Exceptions:**

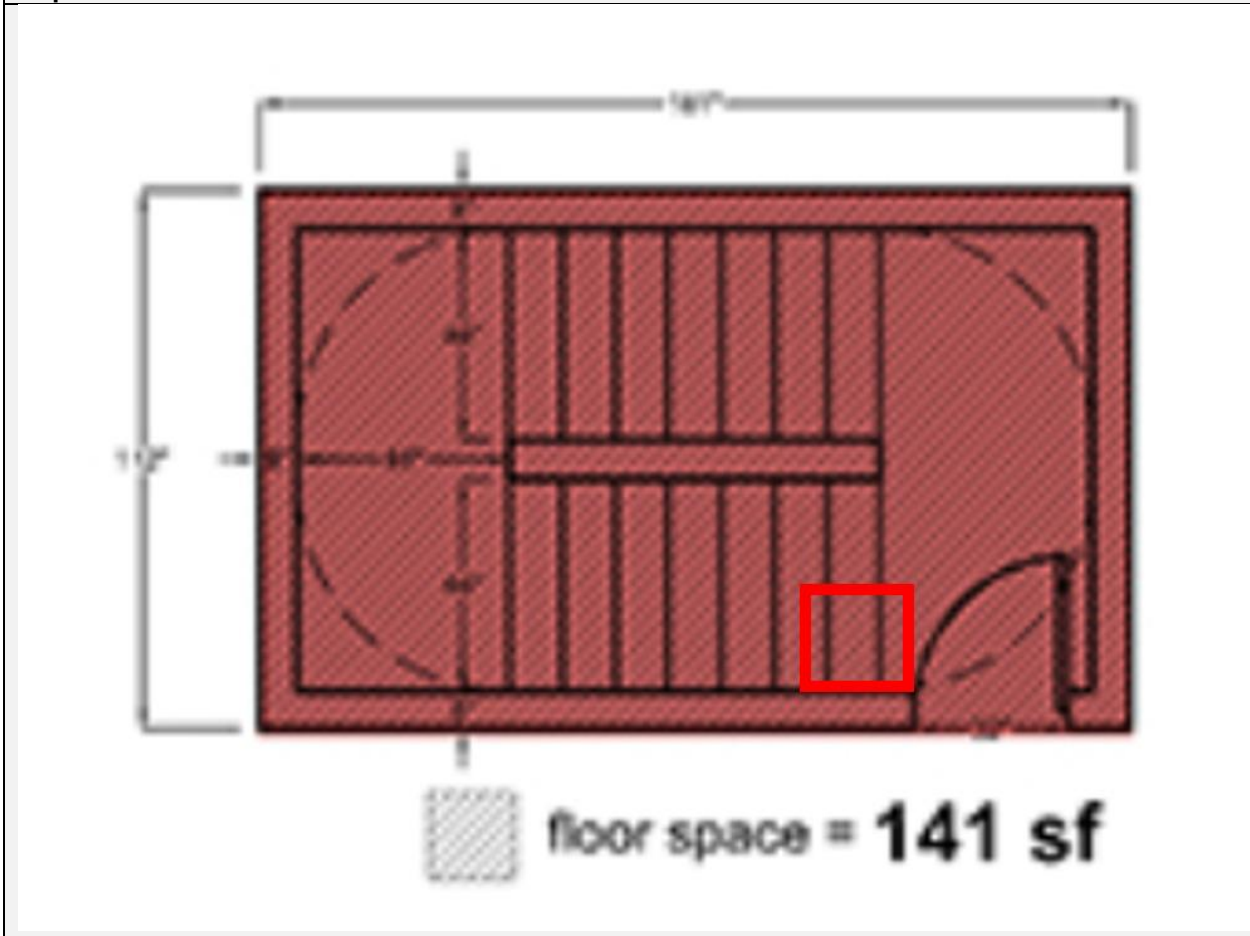
1. Raised characters and braille for elevator car controls shall not be required to comply with Section 703.1.4.4.
2. Where a tactile sign within the exit stairway or ramp indicating the floor level in accordance with Section 505.15 uses the exception in Section 703.1.4.2, the height above the floor is measured from the landing.

Reason: I strongly support the work that was done for this clarification for signs. However, the committee also approved a requirement for number on the inside of the stairway for use during emergency evacuation. It was recently pointed out to me that the standing space next to the door could result in an increase in landing size, or someone choosing to put the sign on a wall that was away from the door jamb. Therefore, I would like to suggest an exception for this one sign (see Section 505.15.)

05-10-2021 AM ; 05-15-2021 AM both

~~504~~ ~~505~~**.15** ~~**504.10**~~ **Tactile signage within the stairway or ramp enclosure.** ~~Stair~~ Floor level identification signs in raised characters and braille complying with Sections 703.3 and 703.4 shall be located at each floor level landing in all enclosed exit stairways or ramps. Such sign shall be located adjacent to the door leading from the ~~stairwell~~ enclosed exit stairway or ramp into the corridor to identify the floor level. The exit door discharging to the outside or to the level of exit discharge shall have a sign with raised characters and braille stating “EXIT.”

Report for 07-09– 2021



Committee decision: AMBC2	*Committee Vote at Meeting: 16-7-2*	*Committee Vote on Ballot:*

REPORT OF HEARING – FIRST DRAFT

Modification (if any):

703.1.4.2 Location and standing space. Where a tactile sign is provided to designate a permanent room or space, the sign shall be located at the doorway to the room or space it identifies and shall be installed in accordance with Table 703.1.4.2. A standing space 18 inches (455 mm) minimum by 18 inches (455 mm) minimum shall be provided and shall be centered on the raised characters. The arc of any door swing between the closed position and a 45-degree open position, shall not swing into the standing space.

Exception: ~~A tactile sign within the exit stairway or ramp indicating the floor level in accordance with Section 505.15, the standing space is permitted to overlap the flight of stairs.~~ The standing space shall be permitted to overlap the flight of stairs or ramp run where tactile signs are located within the exit stairway or ramp.

703.1.4.4 Height above floor. Tactile characters on signs shall be 48 inches (1220 mm) minimum above the floor, measured to the baseline of the braille cell and 60 inches (1525 mm) maximum above the floor, measured to the baseline of the highest raised character.

Exceptions:

1. Raised characters and braille for elevator car controls shall not be required to comply with Section 703.1.4.4.
2. ~~Where a tactile sign within the exit stairway or ramp indicating the floor level in accordance with Section 505.15 uses the exception in Section 703.1.4.2, the height above the floor is measured from the landing.~~ The standing space shall be measured from the landing of the stairway or ramp where tactile signs are located within the exit stairway or ramp.

Committee Reason: There was a modification to reorder the phrases in the new exceptions. The committee felt that this exception is a reasonable allowance for the floor designation within an exit stairway or ramp enclosure. It is not the intent of the committee to require an enlarged stairway landing solely for the purpose of reading the floor designations.

BALLOT COMMENT- SECOND DRAFT:

Proponent:

Report for 0*7-09– 2021*		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
FINAL ACTION: Modification (if any):		
Committee Reason:		

07-12 – 2021 overview

Proposal number	Proponent	Standard Sections	Committee Actions	Mtg. Date	Notes; Groups; groupings
07-12	Toji	703.4.4, Figure 703.4.4	AS 23-6-3 AM BC1 28-1-2	2-2-2023 6-20-2024	Final Action AMBC1

Comment	Proponent	Requested Action	Committee Action	Mtg. Date	Notes; Groups; groupings
BC1	Paarlberg, ICC	Negative	AS 28-1-2	6-20-2024	

BC= Ballot Comment, PC= Public comment, **Bold Comment number** is proposed revision below

07-12 – 2021
703.4.4, Figure 703.4.4

Proponent: Sharon Toji, Access Communications

Revise as follows:

SECTION 703
SIGNS

703.4 Braille

703.4.4 Position. Braille shall be below the corresponding text. If text is multilined, braille shall be placed below entire text. Braille shall be separated $^{3}/_{8}$ inch (9.5 mm) minimum and 1/2 inch (12.5 mm) maximum from any other raised characters and $^{3}/_{8}$ inch (9.5 mm) minimum from raised borders and decorative elements. Braille provided on elevator car controls shall be separated $^{3}/_{16}$ inch (4.8 mm) minimum either directly below or adjacent to the corresponding raised characters or symbols.

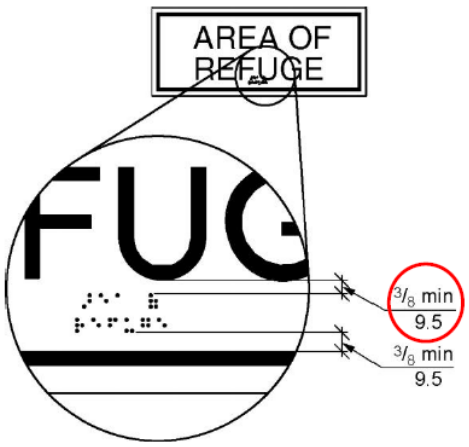


Figure 703.4.4 Position of Braille

Figure 703.4.4 Position of Braille

REASON: The intent of placing the braille below the tactile characters was to make it simple for tactile readers to quickly swipe over the sign, locate the more prominent tactile characters, and then drop immediately below to the braille. Because the federal ADA standard did not add a maximum distance, we often see signs that are designed outside California, which has the 1/2 inch maximum in its standard, with the tactile characters at the very top of the sign, and the braille far below it near the bottom edge of the sign. We have seen braille located as much as 8-10 inches below the corresponding tactile characters. Adding the maximum distance, which has worked very well in California, will simplify finding the braille for tactile readers.

Committee Action: As Submitted 23-6-3

REPORT OF HEARING:

Modification (if any):

Committee Reason: The proposed range for the distance between the braille and raised letters is in the California code. This should provide clarity and consistency in braille location on signs. There were concerned raised that 1/8" of an inch allowance was too small of a range.

Figure 703.4.4-TOJI.doc

07-12 – 2021 Ballot Comments

BALLOT COMMENT 1- FIRST DRAFT: Proponent: Kimberly Paarlberg, ICC
Desired Action: Negative with comment

Modification: See Ballot Comment 1

07-12 – 2021 Ballot Comment 1
703.4.4

Proponent: Kimberly Paarlberg

Further revise as follows:
703.4 Braille

703.4.4 Position. Braille shall be below the corresponding text. If text is multilined, braille shall be placed below entire text. Braille shall be separated $^{3}/_{8}$ inch (9.5 mm) minimum and ~~1/2~~ 1 inch (~~12.5~~ 25 mm) maximum from any other raised characters and $^{3}/_{8}$ inch (9.5 mm) minimum from raised borders and decorative elements. Braille provided on elevator car controls shall be separated $^{3}/_{16}$ inch (4.8 mm) minimum either directly below or adjacent to the corresponding raised characters or symbols.

REASON: While I understand the point of not letting the braille to be too far from the raised letters, only allowing for a different of only 1/8" of an inch is way to limiting. While I don't know if 1 inch is the right answer, it would allow some options and follow the intent of the original proposal.

Committee Action for Ballot Comment 1: AS 28-1-2

REPORT OF HEARING:

Modification (if any):

Committee Reason: The ½" is too small a difference from 3/8". The 1" maximum is appropriate.

Committee Action for First Ballot: AS PC1

REPORT OF HEARING:

Modification (if any):

Committee Reason: The ½" is too small a difference from 3/8". The 1" maximum is appropriate.

Report for 07-12– 2021		
Committee decision: AS	*Committee Vote at Meeting: 23-6-3*	*Committee Vote on Ballot: 42-1-2*

Report for 07-12– 2021		
REPORT OF HEARING: Modification (if any):		
Committee Reason: The proposed range for the distance between the braille and raised letters is in the California code. This should provide clarity and consistency in braille location on signs. There were concerned raised that 1/8" of an inch allowance was too small of a range.		
BALLOT COMMENT 1- FIRST DRAFT: Proponent: Kimberly Paarlberg, ICC		
Desired Action: Negative with comment		
Modification: **Further revise as follows:** **703.4 Braille** **703.4.4 Position.** Braille shall be below the corresponding text. If text is multilined, braille shall be placed below entire text. Braille shall be separated $^{3}/_{8}$ inch (9.5 mm) minimum and ~~1/2~~ 1 inch (~~12.5~~ 25 mm) maximum from any other raised characters and $^{3}/_{8}$ inch (9.5 mm) minimum from raised borders and decorative elements. Braille provided on elevator car controls shall be separated $^{3}/_{16}$ inch (4.8 mm) minimum either directly below or adjacent to the corresponding raised characters or symbols.		
Reason: While I understand the point of not letting the braille to be too far from the raised letters, only allowing for a different of only 1/8" of an inch is way to limiting. While I don't know if 1 inch is the right answer, it would allow some options and follow the intent of the original proposal.		
Committee decision: AS BC1	***Committee Vote at Meeting: 28-1-2***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		
Committee Reason: The ½" is too small a difference from 3/8". The 1" maximum is appropriate.		
BALLOT COMMENT- SECOND DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
FINAL ACTION: Modification (if any):		
Committee Reason:		

07-13 – 2021 overview

Proposal number	Proponent	Standard Sections	Committee Actions	Mtg. Date	Notes; Groups; groupings
07-13	Mazz	703.6.3.3, Figures 703.6.3.3(A)(New), 703.6.3.3	AS 26-3-2	2-2-2023 5-23-2024	Final Action AS

Comment	Proponent	Requested Action	Committee Action	Mtg. Date	Notes; Groups; groupings
BC1	Pace, HUD	Affirmative	NA	5-23-2024	

BC= Ballot Comment, PC= Public comment, **Bold Comment number** is proposed revision below

07-13 – 2021
703.6.3.3, Figures 703.6.3.3(A)(New) and 703.6.3.3

Proponent: Marsha Mazz, representing United Spinal Association and Sharon Toji, representing Hearing Loss Association of America.

Revise as follows:

SECTION 703
SIGNS

703.6 Symbols of accessibility.

703.6.3.3 Assistive listening systems. Assistive listening systems that provide hearing loops (induction loop-type assistive listening) shall be identified by the International Symbol for Hearing Access with a "T" complying with Figure 703.6.3.3 (A) and with the text descriptor located below the symbol meeting the visual character requirement in Section 703.2 and stating "Hearing Loop". Assistive listening systems that do not provide hearing loops shall be identified by the International Symbol of Access for Hearing Loss complying with Figure 703.6.3.3(B) and with the text descriptor located below the symbol meeting the visual character requirement in Section 703.2 and stating "Assistive Listening System".

FIGURE 703.6.3.3(A)
International Symbol of Access for Hearing Loss with a "T" to indicate a hearing loop

FIGURE 703.6.3.3 (B)
International Symbol of Access for Hearing Loss

REASON: Adopt new Figure 703.6.3.3(a) signage for hearing loops. Section 706 of The ICC A117 2017 and the 2010 ADA Standards both allow a variety of types of assistive listening systems to be installed. Currently, there are three type in uses: Induction Loop (commonly known as a hearing loop), FM, and Infrared. Current Figure 703.6.3.3 in the Standard is the signage for access for hearing loss. This symbol has been internationally modified with the addition of a T (proposed new Figure 706.3.3(a)) to indicate the presence of a hearing loop.

Of the three aforementioned systems 2 require additional equipment, a receiver and a coupling device to use them. The third system, a hearing loop, does not require additional equipment to use for some people whose hearing aids or cochlear implant have telecoils. It can be used by people who do not have a hearing aid or cochlear implant or for those who do not have a telecoil, with the use of a loop receiver. Where hearing loops are provided, people using modern hearing aids or cochlear implants with a telecoil can receive the audio signal directly into their device without obtaining a receiver from the venue operator. The user just flips a switch on their device to immediately connect to the hearing loop.

It is important to add Figure 706.3.3 (a), so users are able to quickly and efficiently identify that a hearing loop is present. Both symbols are in the public domain and are not subject to copywrite.

Additional information about hearing loops is available on the Hearing Loss Association of America website.
https://www.hearingloss.org/programs-events/get-hearing-loop/

Committee Action: As Submitted 26-3-2

REPORT OF HEARING:

Modification (if any):

Committee Reason: The additional symbol improves the information to be provided for assisted listening systems.

703.6.3.3 (a,b)-MAZZ.doc

07-13 – 2021 Ballot Comments

BALLOT COMMENT 1- FIRST DRAFT: Proponent: Rex Pace, HUD
Desired Action: Affirmative with comment
Modification:
Reason: While the intent and proposed symbols are supported, there should be more clarity on the requirements for the text descriptors. The text descriptors appear to be integral with the symbol and required to be used as shown. However, the visual character requirement of 703.2 is referenced does permits text to be upper and lower case. Similar issue with color and contrast, must symbols be blue or sufficient to meet contrast as per 703.6.2. Text and contrast should be covered by the specific referenced sections and not as literally shown on the required symbol. Otherwise, this is a helpful additional requirement.

Committee Action for First Ballot: No Action – Final Action AS

REPORT OF HEARING:

Modification (if any):

Committee Reason: No modification suggested.

Report for 07-13– 2021		
Committee decision: AS	***Committee Vote at Meeting: 26-3-2***	***Committee Vote on Ballot:42-1-2***
REPORT OF HEARING: Modification (if any):		
Committee Reason: The additional symbol improves the information to be provided for assisted listening systems.		
BALLOT COMMENT 1- FIRST DRAFT: Proponent: Rex Pace, HUD		
Desired Action: Affirmative with comment		
Modification:		
Reason: While the intent and proposed symbols are supported, there should be more clarity on the requirements for the text descriptors. The text descriptors appear to be integral with the symbol and required to be used as shown. However, the visual character requirement of 703.2 is referenced does permits text to be upper and lower case. Similar issue with color and contrast, must symbols be blue or sufficient to meet contrast as per 703.6.2. Text and contrast should be covered		

Report for 07-13– 2021		
by the specific referenced sections and not as literally shown on the required symbol. Otherwise, this is a helpful additional requirement.		
Committee decision: NA	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		
Committee Reason: No modification suggested.		
BALLOT COMMENT- SECOND DRAFT:		
Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
FINAL ACTION:		
Modification (if any):		
Committee Reason:		

07-14 – 2021 overview

Proposal number	Proponent	Standard Sections	Committee Actions	Mtg. Date	Notes; Groups; groupings
07-14	Bauman	703.6.3.4 (New), FIGURE 703.6.3.4 (New)	AS 27-1-5	2-2-2023 6-20-2024	Final Action AMBC1

Comment	Proponent	Requested Action	Committee Action	Mtg. Date	Notes; Groups; groupings
BC1	Paarlberg, ICC	Affirmative	AS 24-0-2	6-20-2024	

BC= Ballot Comment, PC= Public comment, **Bold Comment number** is proposed revision below

07-14 – 2021
703.6.3.4(New), FIGURE 703.6.3.4(New)

Proponent: Hansel Bauman, Hansel Bauman Architecture + Planning, representing National Association of the Deaf

Add new text and figure as follows:

SECTION 703
SIGNS

703.6 Symbols of accessibility.

703.6.3.4 Sign language facilities. Sign language interpreter's stations and visual relay booths shall be identified by the International Symbol for Sign Language complying with Figure 703.6.3.4.

FIGURE 703.6.3.4

International Symbol for Sign Language

REASON: Currently the standard does not provide a means for identifying the location of either VRS booths or Sign Language Interpretation making it difficult for users to locate and therefore limiting access. This revision provides a standard signage that may be used in a similar means as TTY and assistive hearing loops have been designated.

The proposed pictogram provided here is in support of the recommended added text for signage to designate the location of Sign Language Interpreter Stations and VRS booths . The proposed pictogram utilizes the ASL hand-sign for "Interpreter" as a widely recognized symbol within the deaf, hard of hearing and interpreter community and is consistent with the dark on light contrast style used to indicate assistive hearing loops and TTY services.

Committee Action: As Submitted 27-1-5

REPORT OF HEARING:

Modification (if any):

Committee Reason: This proposal was approved because the choice of symbol for this information is correct; however, the section for pictograms should not state where a pictogram shall be used. That would be addressed in the committee action on 07-18 and 08-01.

FIGURE 703.6.3-BAUMAN.doc

07-14 – 2021 Ballot Comments

BALLOT COMMENT 1- FIRST DRAFT: Proponent: Kimberly Paarlberg, ICC
Desired Action: Affirmative with comment.
Modification:
Reason: While the symbol is appropriate, this sign should be used to let participants know that this service is available, not at the sign language station itself where it would only be seen by the person signing**. See 07-18 and 08-01 for the location.** **If the committee disagrees with the ballot comment to 08-01, the reference in Section 703.6.4 needs to be deleted.**

Committee Action for First Ballot: AS 24-0-2

REPORT OF HEARING:

Modification (if any):
703.6.3.4 Sign language facilities. ~~Sign language interpreter's stations and~~ visual relay booths shall be identified by the International Symbol for Sign Language complying with Figure 703.6.3.4.

Committee Reason: This is consistent with the committee action on 08-01. A sign is not required at the sign language interpreter's station. This section was also revised by E7-2024 AS.

Report for 07-14– 2021		
Committee decision: AS	***Committee Vote at Meeting: 27-1-5***	***Committee Vote on Ballot: 42-1-2***
REPORT OF HEARING: Modification (if any): Committee Reason: This proposal was approved because the choice of symbol for this information is correct; however, the section for pictograms should not state where a pictogram shall be used. That would be addressed in the committee action on 07-18 and 08-01.		
BALLOT COMMENT 1- FIRST DRAFT: Proponent: Kimberly Paarlberg, ICC Desired Action: Affirmative with comment. Modification: Reason: While the symbol is appropriate, this sign should be used to let participants know that this service is available, not at the sign language station itself where it would only be seen by the person signing**. See 07-18 and 08-01 for the location.** **If the committee disagrees with the ballot comment to 08-01, the reference in Section 703.6.4 needs to be deleted.**		
Committee decision: AS	***Committee Vote at Meeting: 24-0-2***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any): **703.6.3.4 Sign language facilities.** ~~Sign language interpreter's stations and~~ visual relay booths shall be identified by the International Symbol for Sign Language complying with Figure 703.6.3.4.		
Committee Reason: This is consistent with the committee action on 08-01. A sign is not required at the sign language interpreter's station. This section was also revised by E7-2024 AS.		
BALLOT COMMENT- SECOND DRAFT: Proponent: Desired Action: Modification: Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
FINAL ACTION: Modification (if any): Committee Reason:		

07-18 – 2021 overview

Proposal number	Proponent	Standard Sections	Committee Actions	Mtg. Date	Notes; Groups; groupings
07-18	Bauman	704.7.1 (New)	AS 18-6-4	2-2-2023 6-20-2024	Final Action AS

Comment	Proponent	Requested Action	Committee Action	Mtg. Date	Notes; Groups; groupings
BC1	Paarlberg, ICC	Affirmative	NA	6-20-2024	

BC= Ballot Comment, PC= Public comment, **Bold Comment number** is proposed revision below

07-18 – 2021
704.7.1(New)

Proponent: Hansel Bauman, Hansel Bauman Architecture + Planning, representing National Association of the Deaf

Add new text as follows:

SECTION 704
TELEPHONES

704.7 Visual relay service booth. Each public visual relay service booth shall accommodate one user with a seating and privacy enclosure, a two-way video communication system and diffuse lighting with a minimum lighting level of 20 foot candles (215 lux). The background of the seating area, and within range of the two-way video communication system, shall have a flat, non-textured surface and finish color in the bright green or blue range.

704.7.1 Signage. The visual relay service booth shall be identified by the International Symbol for Sign Language in accordance with Section 703.6.3.

REASON: Currently the standard does not provide a means for identifying the location of VRS booths or Sign Language Interpretation making it difficult for users to locate and therefore limiting access. This revision provides a standard signage that may be used in a similar means as TTY and assistive hearing loops have been designated.

Committee Action: As submitted 18-6-4

REPORT OF HEARING:

Modification (if any):

Committee Reason: Providing the symbol for International Symbol for Sign Language at the VMS station is appropriate. The pictogram referenced does not currently exist in the coded. The symbol itself will be addressed in the committee action in 07-15 and 07-14.

703.6.3.5-BAUMAN.doc

07-18 – 2021 Ballot Comments

BALLOT COMMENT 1- FIRST DRAFT:
Proponent: Kimberly Paarlberg
Desired Action: Affirmative with comment
Modification: **See Ballot Comment 1**

07-18 – 2021 Ballot Comment 1

704.3.1(New), 704.4.1(New)

Proponent: Kimberly Paarlberg, ICC

Further revise as follows:

704.3 Volume-control telephones. Public telephones required to have volume controls shall be equipped with a receiver volume control that provides a gain adjustable up to 20 dB minimum. Incremental volume controls shall provide at least one intermediate step of gain of 12 dB minimum. An automatic reset shall be provided.

704.3.1 Signage. The volume control telephone shall be identified by the Volume-controlled telephone Symbol in accordance with Section 703.6.3.5.

704.4 TTY. TTYs required at a public pay telephone shall be permanently affixed within, or adjacent to, the telephone enclosure. Where an acoustic coupler is used, the telephone cord shall be of sufficient length to allow connection of the TTY and the telephone receiver.

704.4.1 Signage. The location of the TTy shall be identified by the International TTY Symbol in accordance with Section 703.6.3.2.

704.7 Visual relay service booth. Each public visual relay service booth shall accommodate one user with a seating and privacy enclosure, a two-way video communication system and diffuse lighting with a minimum lighting level of 20 foot candles (215 lux). The background of the seating area, and within range of the two-way video communication system, shall have a flat, non-textured surface and finish color in the bright green or blue range.

704.7.1 Signage. The visual relay service booth shall be identified by the International Symbol for Sign Language in accordance with Section 703.6.3.

REASON: The committee added a symbol and a requirement for the visual relay service booth. To be consistent, there should also be a signage requirement with the volume controlled telephones and TTY shelves. This will help be with hearing impairments identify the phone service they need.

Committee Action for Ballot comment 1: NA

REPORT OF HEARING:

Modification (if any):

Committee Reason: This was addressed in E6-2024

07-18 Paarlberg.doc

Committee Action for First Ballot: Final Action is AS

REPORT OF HEARING:

Modification (if any):

Committee Reason: The modification for where signs are required is addressed in E6-2024.

Report for 07-18– 2021		
Committee decision: AS	***Committee Vote at Meeting: 18-6-4***	***Committee Vote on Ballot: 42-1-2***
REPORT OF HEARING: Modification (if any):		
Committee Reason: Providing the symbol for International Symbol for Sign Language at the VMS station is appropriate. The pictogram referenced does not currently exist in the coded. The symbol itself will be addressed in the committee action in 07-15 and 07-14.		
BALLOT COMMENT 1- FIRST DRAFT: Proponent: Kimberly Paarlberg		
Desired Action: Affirmative with comment		
Modification: **Further revise as follows:** **704.3 Volume-control telephones.** Public telephones required to have volume controls shall be equipped with a receiver volume control that provides a gain adjustable up to 20 dB minimum. Incremental volume controls shall provide at least one intermediate step of gain of 12 dB minimum. An automatic reset shall be provided. **704.3.1 Signage.** The volume control telephone shall be identified by the Volume-controlled telephone Symbol in accordance with Section 703.6.3.5. **704.4 TTY.** TTYs required at a public pay telephone shall be permanently affixed within, or adjacent to, the telephone enclosure. Where an acoustic coupler is used, the telephone cord shall be of sufficient length to allow connection of the TTY and the telephone receiver. **704.4.1 Signage.** The location of the TTy shall be identified by the International TTY Symbol in accordance with Section 703.6.3.2. **704.7 Visual relay service booth.** Each public visual relay service booth shall accommodate one user with a seating and privacy enclosure, a two-way video communication system and diffuse lighting with a minimum lighting level of 20 foot candles (215 lux).		

Report for 07-18– 2021		
The background of the seating area, and within range of the two-way video communication system, shall have a flat, non-textured surface and finish color in the bright green or blue range. **704.7.1 Signage.** The visual relay service booth shall be identified by the International Symbol for Sign Language in accordance with Section 703.6.3.		
Reason: The committee added a symbol and a requirement for the visual relay service booth. To be consistent, there should also be a signage requirement with the volume controlled telephones and TTY shelves. This will help be with hearing impairments identify the phone service they need.		
Committee decision: NA	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		
Committee Reason: The modification for where signs are required is addressed in E6-2024.		
BALLOT COMMENT- SECOND DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
FINAL ACTION: Modification (if any):		
Committee Reason:		

07-19 – 2021 overview

Proposal number	Proponent	Standard Sections	Committee Actions	Mtg. Date	Notes; Groups; groupings
07-19	Toji	705.3	D 25-0-1	2-2-2023 6-6-2024 9-12-2024	Communications - 01-05, 05-13, 07-08 and 07-19 Final action is AM by BC2 & PC2

Comment	Proponent	Requested Action	Committee Action	Mtg. Date	Notes; Groups; groupings
BC1	Sheehan, ACB	Affirmative	NA	6-6-2024	
BC2	Bentzen, AERBV	Affirmative	AM 17-7-2	6-6-2024	
BC3	Toji, HLAA	Negative	NA	6-6-2024	
BC4	Dea, ISA	Negative	NA	6-6-2024	
BC5	Schrader, SEGD	Negative	NA	6-6-2024	
PC1	Communications	AM	AS 5-14-0 failed	6-6-2024	
PC2	Lozano	AM	AM 17-7-2	6-6-2024	Errata
Reconsideration	Paarlberg	AM	AS 5-16-1 failed	9-12-2024	

BC= Ballot Comment, PC= Public comment, **Bold Comment number** is proposed revision below

07-19 – 2021

705.3

Proponent: Sharon Toji, Access Communications

Revise as follows:

SECTION 705
DETECTABLE WARNING SURFACES

705.3 Contrast. Detectable warning surfaces shall contrast visually with adjacent surfaces, either light-on-dark or dark-on-light. <u>The light reflectance value (LVR) of the light or dark detectable warning surfaces and their adjacent surfaces shall differ by a minimum of 50 points of LRV.</u>

REASON: I have been trying for some time to move to the simplicity of most of the European countries, and specifically Great Britain, by merely requiring a specific spread between the low LRV and high LRV numbers for the two adjacent colors that would also make sense if you used the Weber 70 percent formula. In my opinion, the British requirement of 70 points for signs is

too high, and would be immediately rejected by even those designers who want to provide high contrast.

The extensive exploratory work done by a special committee at NIBS, the National Institute of Building Standards, on architectural standards to aid people with vision impairments who are not functionally blind includes a close look at standards throughout much of the world as well as research by several well known figures in the field. I was shown an early copy of the report, and made extensive comments to the committee. Many of my comments appear to be reflected in the final publication. Two members of our ANSI A117.1 Committee, Marsha Mazz and Eunice Noell-Waggoner, were members of the NIBS committee as well. I believe their recommendations are well supported by their research.

Their recommendation on contrast, which they do explain is still a work in progress as much more needs to be done to understand how people with such a huge variety and mixture of vision impairments can best access the built environment, is that all signs as well as stair striping use adjacent colors that have LRV differences of at least 50 points. In several instances, they also note the Weber 70 percent formula. I assume this may mean that as I formerly suggested, we start with an LRV for the light color, find the second color, and then apply the formula to determine if the contrast meets a minimum of 70 percent.

In this case, I started with a very dark swatch, with an LRV of 5, compared it with a swatch of 55 to get the 50 points difference, and then also applied the formula. At that end of the scale the percentage is about 90 percent. I moved upward 5 points at a time. Each move produced a lower percentage when the formula was applied. When I reached a lighter color with an LRV of 70, and compared it with a dark color with an LRV of 20, the contrast percentage was 71 percent. Although my conclusion is that it would be preferable at this point to apply the formula, they do not make that definite recommendation, and although I think it would be well founded, I have not done so either. Moving further up the scale into the lighter colors, and requiring a minimum 50 points of difference will not be ideal, but as a minimum, it is still preferable to many of the fashionable tone on tone signs I have seen lately, such as white letters on an ivory or pale beige background.

In further support, I think it is time for us to join the rest of the world. Virtually every country that has an extensive set of requirements for disabled access takes contrast seriously, and uses light reflectance values, or LRV, to measure adjoining colored surfaces for contrast. Some use the Weber formula, but more use a formula referred to as the Michelson formula. All of them have struggled, I believe, with the same concerns we have, that it is almost impossible to carry out a large scale study because the range of vision and vision impairments is so complex. However, it is certainly true that many forms of vision impairment, from common forms of red/green color blindness or Deuteranopia which affects as many as 8 percent of males in our population to more complex conditions like glaucoma or macular degeneration include some degree of inability to distinguish colors. Therefore, the differences in light reflectance are crucial if signs are to be visually accessible. We have listened to experts in contrast, vision and color and heard a report and recommendation from a subcommittee on contrast that worked together for a year and also included several experts. We came close to passing a measurable standard three times. Once it failed by one vote when the Chair broke a tie. None of these efforts at creating a

measurable standard was perfect, but neither are most of our other standards. Who is to say, for instance, that our standard for ramps is exactly what is needed for access by the majority of wheelchair users? Almost every successful standard is some sort of compromise that serves many people quite well, some people fairly well, and some people not at all.

Let us finally move forward to the next step, and add contrast to the many issues where we have a measurable standard, though those standards are not always perfect. That is why we return every several years for revisions. We will not ever be able to move forward on this issue unless we start somewhere. Once we have a standard, we may be able to get grant money and do some meaningful research on how adequate that standard is in providing access to persons with partial vision and a variety of vision impairments.

Here are documents and articles that document the use of LRV to measure contrast in support of disabled access from around the world. The NIBS report is included, which refers to much of that material. There is an extensive article that mentions some of our efforts here, but documents that we do not have a measurable standard. There are two articles in German, which I did read in the original. The Google translation will be accurate if you do not read German, but you will need to break up the articles into several parts. One of those articles is especially interested in contrast for stair striping due to the high percentage of accidents on stairs.

https://www.nibs.org/files/pdfs/NIBS_LVDP_Guidelines_2015.pdf

https://www.anec.eu/images/Publications/technical-studies/ANEC-final-report-1503-1700-Lenoir-et-al.pdf

https://nullbarriere.de/din32975.htm

https://www.pro-retina.de/system/files/artikel/broschure_barrierefrei_2019ua_1_0.pdf

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Committee Action: Disapproval 25-0-1

REPORT OF HEARING:

Modification (if any):

Committee Reason: The Communications task group needs additional time for development of LRV requirements.

Figure 705.3-TOJI.doc

07-19 – 2021 Ballot Comments

BALLOT COMMENT 1- FIRST DRAFT: Proponent: Pat Sheehan, ACB

Desired Action: Affirmative with comment
Modification:
Reason: A117.1 Committee Actions report 5-11-2023 Chapter 7 to 11 w comments draft
BALLOT COMMENT 2- FIRST DRAFT: Proponent: Billie Bentzen, Association for the Education and Rehabilitation of the Blind and Visually Impaired
Desired Action: Affirmative with comment
Modification: **See Ballot Comment 2**
BALLOT COMMENT 3- FIRST DRAFT: Proponent: Sharon Toji. HLAA
Desired Action: Negative with Comment
Modification:
Reason: Contrast sub group has prepared modifications and I will submit my proposed modification.
BALLOT COMMENT 4- FIRST DRAFT: Proponent: Glenn Dea, ISA
Desired Action: Negative with Comment
Modification:
Reason: The ISA supports and participated in development of a consensus modification recommended for approval by the Communications Task Group at its July 26, 2023 meeting.
BALLOT COMMENT 5- FIRST DRAFT: Proponent: Jessica Schrader, Society for Experiential Graphic Design
Desired Action: Negative with comment
Modification:
Reason: SEGD supports and participated in development of a consensus modification for approval by the Communications Task Group at its meeting held on July 26, 2023.

07-19 – 2021 Ballot Comment 2

106.2.14(New), 705.3

Proponent: Billie Bentzen, Association for the Education and Rehabilitation of the Blind and Visually Impaired

Replace with the following:

SECTION 106
REFERENCED DOCUMENTS

106.2.14 Aerospace Material Specification - (R) Colors Used in Government Procurement. AMS-STD-595A, revised 2017-02. (SAE International, 400 Commonwealth Drive, Warrendale, PA 15096).

SECTION 705
DETECTABLE WARNING SURFACES

705.3 ~~Contrast.~~ Color. Detectable warning surfaces shall ~~contrast visually with adjacent surfaces, either light-on-dark or dark-on-light.~~ be yellow and approximate Color ID 33538 (Yellow International) of SAE AMS-STD-595A.

REASON: "... light-on-dark or dark-on-light" has been found to be unsatisfactory because it is a totally subjective judgment. Two colors that are the same hue can be said to be dark-on-light or light-on-dark because they differ by a shade. Thus the intent of the existing standard has not been achieved.

Detectable warnings, according to the 1990 and 2010 ADAAG, DWS are “a standardized surface feature built in or applied to walking surfaces or other elements to warn of hazards on a circulation path.” I emphasize "to warn of hazards." Yellow International, or simply yellow, is used in the US and internationally to warn of hazards, so travelers worldwide associate the color yellow with danger or a warning. The MUTCD requires "yellow" to be used for warning indications. Detectable warnings are traffic control devices for people who are vision disabled, functioning much like stop bars for drivers. They mean "Stop, and assess the situation. Stay here until it is safe to proceed." As such, these traffic control devices, detectable warning surfaces, have a standard texture. They also need to have a standard color. Most people who are vision disabled have sufficient vision to see relatively large "patches" of yellow at a useful distance to determine where they should go to wait to cross the street they wish to cross, and to spot where the end of the crosswalk is, as they cross the street. Yellow is highly salient, even in somewhat low contrast situations or somewhat low illumination. It is the single color recommended for detectable warnings by Jenness and Singer (2006). It is the color that is required or used by the most states--and the most countries.

The use of a contrast formula for detectable warning surfaces is inherently unenforceable. Contrast values are greatly affected by illumination, moisture content of the surrounding surface, and age of the two surfaces. Any measured contrast between a detectable warning surface and its surround represents only contrast under specific conditions that can change from moment to moment. Therefore the contrast between any detectable warning color and the surrounding pavement will always vary. This is, of course, also true for International Yellow--but yellow will still be yellow.

Permitting Detectable warning surfaces to be in hues other than yellow, regardless of their contrast with the surround, means that the population they are designed to assist must figure out, in any environment, what color is being used for detectable warnings. Cognitive processing is required, and tactile exploration of the surface may also be required to determine that, in a particular environment, for example, detectable warnings are red. Meanwhile, the traveler with low vision, who is used to relying primarily on visual cues for wayfinding and safety, who is not used to paying attention to tactile cues, may have entered a crosswalk without stopping to be sure it is a safe time to cross because she didn't realize she was stepping into the street. Indications of

hazards need to be quickly recognized as indicating hazards. Permitting multiple colors will simply not result in the immediate communication of hazards. Permitting multiple colors will decrease the safety benefit of detectable warnings for the vulnerable population they are intended to serve. The color of detectable warnings that is selected for a specific project or neighborhood because it is aesthetically pleasing is likely to mean that, however high the contrast, the detectable warnings are less likely to be perceived as indicating hazards.

There has always been the understanding that detectable warning products needed to be slip resistant. However, there has been some variability in slip resistance, and some products that require coatings in order to be International Yellow have been somewhat slippery. However, the manufacturing challenges of producing detectable warning products, even in cast iron (preferred in cold climates), have been overcome, and products in current production meet a requirement for slip resistance. Materials currently being installed, and preferred by many jurisdictions, are all now slip resistant. Lack of slip-resistance in older products is not a valid argument against requiring detectable warning surfaces for new construction and alterations to be International Yellow.

Committee Action for Ballot comment 1: AM 17-7-2
Modification 24-0-1

REPORT OF HEARING:

Modification (if any):
Further modify as follows:
705.3. Color. Detectable warning surfaces shall be yellow ~~and~~ ~~approximate~~ Color ID 33538 (Yellow International) of SAE AMS-STD-595A <u>to the maximum extent practicable</u>.

Committee Reason: The modification removes unenforceable language and matches phrases used elsewhere in the standard. Safety yellow is recognized internationally as a warning color. Some states only allow yellow for detectable warnings currently.

07-19 Bentzen.doc

07-19 – 2021 Public Comment 1

106.2.14(New), 705.3, 705.3.1(New), 705.3.2(New), Table 705.3.2 (New), 705.3.3 (New), Table 705.3.2(New)

Proponent: Sharon Toji, representing the Communications Task Group

Replace with the following:

SECTION 106
REFERENCED DOCUMENTS

…..

106.2.14 Aerospace Material Specification - (R) Colors Used in Government Procurement. AMS-STD-595A, revised 2017-02. (SAE International, 400 Commonwealth Drive, Warrendale, PA 15096).

…..

SECTION 705
DETECTABLE WARNING SURFACES

……

705.3 Contrast and Color. Detectable warning surfaces shall comply with Section 705.3.1 or shall contrast visually with adjacent surfaces, either light-on-dark in compliance with Section 705.3.2 or dark-on-light in compliance with Section 705.3.3.

705.3.1 Color. The color of detectable warning surfaces shall be Yellow International (Color ID 33538) as specified in AMS-STD-595A.

705.3.2 Light-on-Dark Contrast. The color of detectable warning surfaces shall be one of the AMS-STD-595A colors listed in Table 705.3.2, provided that the light reflectance values (LRV) of adjacent walking surfaces that border detectable warning surfaces do not exceed the maximum values stated in Table 705.3.2.

Table 705.3.2 - Allowable Detectable Warning Surface Colors other than Yellow International (Color ID 33538 of SAE AMS-STD-595A) to Achieve Light-on-Dark Contrast

AMS-STD-595A Color ID	AMS-STD-595A Color Group or Name	Common Alternate Color Name	Maximum LRV of adjacent walking surfaces that border the detectable warning surface
37722	Misc	Alabaster White	17
37875	White International	Insignia White	17

705.3.3 Dark-on-Light Contrast. The color of detectable warning surfaces shall be one of the AMS-STD-595A colors listed in Table 705.3.3, provided that the light reflectance values (LRV) of adjacent walking surfaces that border detectable warning surfaces meet or exceed the minimum values stated in Table 705.3.3.

Table 705.3.3 - Allowable Detectable Warning Surface Colors other than Yellow International (Color ID 33538 of SAE AMS-STD-595A) to Achieve Dark-on-Light Contrast

AMS-STD-595A Color ID	AMS-STD-595A Color Group or Name	Common Alternate Color Name	Minimum LRV of adjacent walking surfaces that border the detectable warning surface
20109	F. S. Seminal Brown	Colonial Red	57
22144	Orange	Brick Red	57
31350	Red	Safety Red	57
36118	Gunship Gray	Gray	57
37038	Black International	Black	57

REASON: This proposed modification to 07-19-2021 requires the color of detectable warning surfaces in the ICC A117.1 Standard to be Yellow International (formerly termed "federal yellow") as this color “provides a high level of conspicuity for a given level of luminance contrast” (Jenness and Singer, 2006, p. 65). The modification also permits the option for detectable warning surface installations to be from a limited number of colors other than Yellow International, provided that the light reflectance values (LRV) of adjacent walking surfaces meet specific thresholds named in this modification. The colors named in this modification were selected following a review of the Federal Highway Administration (FHWA) final report, “Visual Detection of Detectable Warning Materials by Pedestrians with Visual Report” (Jenness and Singer, 2006, available via this US Access Board link https://www.access-board.gov/files/research/dw-visual-detection.pdf), including Tables 3, 4, and 15, and identifying possible DWS colors in wide use in the US that correlate with color selections that were found in the Jenness and Singer report to be highly detectable by persons who have low vision.

Committee Action for Public Comment 1: AS 5-14-0

REPORT OF HEARING:

Modification (if any):

Committee Reason: The committee preferred the option in BC2.

07-19 Toji.doc

07-19 – 2021 Public Comment 2
106.2.14, 705.3

Proponent: Eugene Lozano, Jr., California Council of the Blind

Replace with the following:

SECTION 106
REFERENCED DOCUMENTS

106.2.14 Aerospace Material Specification - (R) Colors Used in Government Procurement. AMS-STD-595A, revised 2017-02. (SAE International, 400 Commonwealth Drive, Warrendale, PA 15096).

SECTION 705
DETECTABLE WARNING SURFACES

705.3 Contrast. Detectable warning surfaces shall contrast visually with adjacent surfaces, either light-on-dark or dark-on-light. Detectable warning surfaces shall be yellow and approximate Color ID 33538 (Yellow International) of SAE AMS-STD-595A.

REASON: The California Council of the Blind (CCB) is in opposition to the Communications Task Group and Contrast Subcommittee (CTGCS) 07-19-2021 submission.

We are submitting an alternative text for Item 07-19-2021 to modify section 705.3 “Contrast.”, to require the color of detectable warning surfaces (DWS) in the ICC A117.1 Standard to be Yellow International (also known as "federal yellow") as this color “provides a high level of conspicuity for a given level of luminance contrast” [p. 65 of Jenness, J. and Singer, J. (May 24, 2006). Visual Detection of Detectable Warning Materials by Pedestrians with Visual Impairments, Final Report, (Task Order 18 under Project DTFH61-01-C-00049). Westat, Rockville, MD. Federal Highway Administration, Washington, DC].

The CCB’s position is based on detectable warning and color research; July 8, 2023 presentation from Dr. Qasim Zaidi to the CTGCS; American Council of the Blind Resolution 2011-06 “Detectable Warning Specifications”; Council of Citizens with Low Vision International Resolution 90-06; and CCB Resolutions 2000B-7 “Detectable Warning Specifications” and 2012 B-4 “Federal Yellow”.

Additionally, attached to this public comment modification form are three documents for your information:

- A document containing excerpts from the DOT 1992 Equivalent Facilitation report;
- Don Kimble’s Excel sheet “State DOTS's – revised”; and

- A synthesis of work providing the reader the rationale for requiring Yellow International as the single solid color to be used for DWS installations. The reader will find in this attachment a compilation of available general facts as well as excerpts from articles, correspondence, and studies for requiring yellow.

Under the 2010 ADA Access Standards, in Section 106 “Definitions”, Subsection 106.5 “Defined Terms.”, DWS are defined as “a standardized surface feature built in or applied to walking surfaces or other elements to warn of hazards on a circulation path.”

Below are excerpts taken from a report by the U.S. Department of Transportation (DOT), Federal Transit Administration report “Assessment of Detectable Warning Devices for Specification Compliance or Equivalent Facilitation (Spiller & Multer, 1992)”, explaining the importance of consistency in the defining of DWS as “a standardized surface”:

- “3. HUMAN PERFORMANCE CONSIDERATIONS SUPPORTING THE DEVELOPMENT OF DETECTABLE WARNINGS

Consistency

In order to facilitate unambiguous interpretations, the detectable warning should serve a single, designated function. If a warning surface conveys more than one meaning, the message communicated will be ambiguous and open to interpretation. This may lead to situations in which the surface is detected, but is associated with the incorrect interpretation. The outcome may be an increased likelihood that the visually impaired fail to avoid edge drop-offs. In addition, it is paramount that there be consistency in the design of the warning device. Consistency is important in facilitating expectations in the general population, including the disabled. Consistency in design helps the individual to develop expectations about what constitutes a detectable warning. The ADA guidelines recognize the importance of this concept in the definition of a detectable warning as "a standardized surface feature." This principle also guides the development of traffic control systems in general (Federal Highway Administration, 1983). The Manual on Uniform Traffic Control Devices recognizes the absolute importance of uniformity as a nationwide objective to achieve effective traffic control results, economy in the manufacture, installation, maintenance and administration of control devices, and as a defense against adverse judgements in tort liability cases. The concept of uniformity extends to:

  - uniformity in design, which aids in instant recognition and comprehension; (control device design includes shape, color, size, symbol, wording, lettering, illumination and reflectorization);
  - uniformity in meaning, which aids in complying with the device;
  - uniformity in application, which promotes observance and avoids excessive or unwarranted use of the control devices;
  - uniformity in location, which reduces the possibility of not "seeing" a control device (critical for hazard warning devices!).

Blind travelers also emphasize the importance of consistency of design and layout for navigation both within a transit system and between transit systems (Peck and Bentzen, 1987).” (pp. 3-2 – 3-3).

- “4. APPLICATION OF EQUIVALENT FACILITATION TO DETECTABLE WARNINGS

4.1 CONFLICT BETWEEN A STANDARDIZED WARNING AND EQUIVALENT DESIGN ALTERNATIVES

Consistency in design helps the individual to develop expectations about what constitutes a detectable warning. The more unique the detectable warning is from adjacent surfaces, the more quickly the visually impaired person can recognize it and act to avoid a potential hazard. However, the availability of more than one warning surface places additional information processing demands upon the visually impaired to determine whether a surface represents a detectable warning. Encountering multiple surfaces that are intended to serve as detectable warnings within or between transit systems, or at street intersections in different localities, increases the opportunity for the visually impaired to fail to recognize a detectable warning where one exists and to mistake a surface for a detectable warning where one does not exist.” (p. 4-1).

Accepting the CTGCS 07-19-2021 submission will violate the requirement that DWS are to be a standardized warning surface, as stated above, since it “… permits the option for newly constructed or newly altered detectable warning surface installations to provide detectable warning surfaces of a limited number of colors other than [Yellow International] …”. Therefore, for a DWS to be an effective warning surface, there must be uniformity in its tactile, auditory, and visual/color cues, i.e., CCB’s 07-19-2021 submission.

CCB’s submission will facilitate unambiguous interpretations in color meaning by requiring the use of Yellow International for all DWS, including those at curb ramps and islands or cut-through medians. Otherwise, if a DWS color conveys more than one meaning, as does CTGCS’ submission, the message communicated will be ambiguous and open to interpretation, as well as having safety and access ramifications for people with full or low vision.

CCB’s position for the use of Yellow International has been repeatedly substantiated over the decades by scientific research. Further, the usage of yellow has been integrated into international (ISO 3864-4) and national [ANSI Z535.1 and the Federal Highway Administration (FHWA), Manual on Uniform Traffic Control Devices (MUTCD), Chapter 1A General, Section 1A.12 Color Code) standards, which assign this color to be used for warning, caution signs, and alerts of physical hazards including those concerning falling, tripping, and striking, and designating caution.

More specific DWS color research has found:

1. Using a 70 percent minimum visual contrast is not readily achievable in providing high visual detectability and adequate visual contrast of the DWS with adjacent walking surfaces that use a variety of paving materials in the built environment. Physiologically,

yellow is near the peak of the human photopic luminosity function, and thus is the color that appears brightest to the human eye.

2. Standardizing the light reflectance value of a warning surface should be separate from the light reflectance value of the paving material used for the approach surface.
3. Specifying a single solid color would result in DWS being universally recognized as warnings, reliably visually detectable, and highly salient to people having low vision.
4. Specifying Yellow International as the single solid color would result in a distinct and easily differentiated color from the adjoining walking surfaces, as well as being a unique color to encounter in one's environment, which invariably denotes risk, warning, and the need for caution. This is because yellow or colors close to it are rarely used for walking surfaces. Alternative warning colors, such as black, white, gray, and brown are more likely to lose conspicuousness against certain commonplace backgrounds, as walking surfaces are most commonly of neutral colors; while orange and red are often found in decorative colored pavements.

Furthermore, federally funded research has looked at which detectable warning colors and patterns are visually detectable and conspicuous to pedestrians with visual impairments, such as Jenness and Singer (2006). The general conclusion from research agrees that a standardized color scheme is needed for single-color DWS, and that Yellow International is the best choice.

Additionally, over the last few decades, there has been a serious movement in architectural design towards a user-oriented design approach that emphasizes human needs (physical access) as much as aesthetics.

Nevertheless, despite credible color research and support from color safety codes, the user-oriented design approach with a human needs emphasis has not always been followed by local public works departments, architects, property owners, elected officials, and others in the selection of a single solid predictable color used for DWS. Instead, there has been a favoring in selecting DWS with colors of high aesthetic quality, as found in CTGCS' submission, over the use of Yellow International to minimize these warning surfaces' supposed visual impact to adjoining building designs and the value of these properties.

The use of multiple solid colors (black, blue, green, brown, red, yellow, gray, etc.) for more aesthetically appealing DWS leads to ambiguous interpretations and the unfounded assumption that there is no differential meaning for each color.

In actuality, there is a differential meaning for each color. Furthermore, the CTGCS' submission proposed alternative colors to yellow are already defined as safety code colors in the FHWA MUTCD 2009 Edition with Revisions No. 1, 2, and 3 Incorporated, dated July 2022, Part 1, Chapter 1A, Section 1A.12 "Color Code"; for example, black and white for regulations, brown for recreational and cultural interest areas, orange for temporary traffic control, and red for stop or prohibition.

On the other hand, what safety code color has the FHWA MUTCD (2009) already officially associated with "warnings" and caution/warnings signs? Yellow.

That is to say, regardless of how one may use a DWS as a wayfinding system, their purpose is, as a reminder, "to warn of hazards on a circulation path", i.e., detectable warnings are used for warnings and to denote caution to pedestrians. This is because DWS function in the same way that caution/warning signs do for pedestrians and motorists.

The ambiguity of the use of multiple colors, many of which already have distinct meanings assigned to them, as previously exemplified, can contribute to an increased likelihood for people with low vision to lose the instant recognition and comprehension of DWS, increasing the potential of not seeing edge drop-offs or unknowingly entering vehicular traffic areas. Thus, it is paramount there is consistency in the color of DWS throughout the country, which would achieve an effective uniform warning/caution so as to avoid any potential incidents.

Uniformity of color helps pedestrians with full or low vision to understand quickly the message of a DWS to take caution as they are approaching a surface with a pattern of truncated domes, so to avoid trips and falls, as well as prior to entering a vehicular area. Consistency and predictability are important for pedestrians' attention, respect, and recognition and for proper reaction to the DWS.

Traditionally, color has been used to code safety information because of its ability to attract attention and evoke a rapid response. For ANSI to assign a standard color for all DWS is analogous to the typical highway application for color coding traffic signals, safety information and directions to allow a motorist to see and recognize a color and respond immediately with the desired action, thus further supporting the need for all DWS applications to have a single standardized color, to serve a similar purpose for pedestrians.

To further support the above analogy and the use of a single color, a 2017 study by Eugene A. Bourquin, DHA, COMS, found that, with regards to visual cognition, besides the salience of the color white for long canes, the ubiquity of it and ultimately, the strong memory and association of white canes to people who are blind highly influenced drivers' likeliness to notice and yield to them, which was 22% to 46% greater compared to other colors.

Applying that same logic to DWS, yellow is already the most commonly used and/or required color, not only in California, but also in at least 21 other states, as per Don Kimble's Excel sheet "State DOTS's – revised". In other words, the association of yellow with warning/caution, in general, and also with DWS, to pedestrians is already well-established.

Why break down that recognizability by allowing other colors to be used? This will result in losing the strong recognizability and association of certain colors with distinct messages (e.g., yellow with warning/caution and DWS). Also, by adding more colors to memorize for DWS, it puts more demand on the memory of the aging population with vision loss, whose own memory is often in decline. What then is the point of choice when it risks the safety of the very pedestrians the Standard is to protect and provide access?

Lastly, the prescriptive color of Yellow International will not only work as a defense against adverse judgment in tort liability cases, but also bring about economy in the manufacture of this warning surface. It would be more cost effective for manufacturers to utilize only one color, and

as far as the CCB is aware, there has been no opposition from manufacturers to just using one color.

Thus, we support yellow not only for the purpose of maintaining universality and the scientific research that substantiates its use as a warning/caution color, but also ensuring safety to pedestrians and saving manufacturers from any amount of cost that multiple colors would yield.

Our opposition to allowing the use of multiple colors for the aesthetics of state and local DOT, as well as adjacent property owners, is also based on the larger message that this can send regarding any signs or surface features. Allowing state and local DOT, adjacent property owners, etc., the option to choose any color they want for DWS can be easily extended to and made as an argument for allowing the option for any color to be used for other caution signs/tapes, traffic signs/signals, and other surface features, many of which whose color associations, like DWS, are already well-established de jure or de facto.

In closing, CCB urges the ICC A117.1 Standards Committee to consider and approve the CCB's 07-19-2021 submission for inclusion into the next edition of the Standard, which has the potential to result in color uniformity for all single contiguous detectable warning surface installation sites throughout the country, to ensure the actual safety of all pedestrians, especially those with low vision, and to prevent the breakdown of color associations to distinct meanings for all other surface features.

Three additional documents were submitted.
07-09 CCB DWS – A Synthesis of Work for the Use of Federal Yellow 7-31-23 (Revised)
07-09 CCB Excerpts from DOT 1992 Equivalent Facilitation
07-09 CCB State DOT's - revised

Committee Action for Public Comment 2: There was an errata in this modification. The proponent stated that this should have read the same as BC2.

REPORT OF HEARING:

Modification (if any):

Committee Reason: See the committee action on BC2.

07-19 Lozano.doc

07-19– 2021 Reconsideration

705

Proponent: Kimberly Paarlberg, ICC

07-19 was disapproved in first round, and Ballot Comment 2 was approved in the second round (see Section 705.3)

FURTHER MODIFY BALLOT COMMENT 2 AS FOLLOWS:

SECTION 705
DETECTABLE WARNING SURFACES

705.1 General. Detectable warning surfaces shall comply with Section 705.

705.2 Standardization. Detectable warning surfaces shall be standard within a building, facility, site, or complex of buildings.

705.3 Color. Detectable warnings in interior locations shall be the color in Section 705.3.1. Detectable warning in exterior locations shall be a color in Section 705.3.1 or 705.3.2.
~~**705.3 Color**~~ **705.3.1 Yellow.** Detectable warning surfaces shall be yellow ~~and~~ as indicated for Color ID 33538 (Yellow International) of SAE AMS-STD-595A listed in Section 106.2.1 to the maximum extent practicable.
705.3.2 Dark-on-Light Contrast. The color of detectable warning surfaces shall be one of the colors listed in Table 705.3.3, as indicated in AMS-STD-595A listed in Section 106.2.1 to the maximum extent practicable. Detectable warning surfaces shall contrast visually with adjacent surfaces, dark-on-light.

Table 705.3.3 - Allowable Detectable Warning Surface Colors to Achieve Dark-on-Light Contrast

AMS-STD-595A Color ID	AMS-STD-595A Color Group or Name	Common Alternate Color Name
20109	F. S. Seminal Brown	Colonial Red
22144	Orange	Brick Red
31350	Red	Safety Red
36118	Gunship Gray	Gray
37038	Black International	Black

705.4 Interior locations. Detectable warning surfaces in interior locations shall differ from adjoining walking surfaces in resiliency or sound-on-cane contact.

Reason: Since this change came in the 2nd review and is in a substantially different direction than the original proposal, there has not the same availability of pubic comments on this issue. Therefore, I am asking for reconsideration based on the comments I have received from code officials and city planners.

To provide separate requirements for inside an outside would not be out of line as we already have requirements specific to interior locations in Section 705.4. The committee were concerned about consistency in a color choice – that is already addressed in 705.2.

I am not suggesting removing the requirement for yellow for interior locations. However, there are issues with yellow for outside. Many northern jurisdictions say that they need metal or brick to deal with the weather and to resist snow removal equipment damage. Yellow paint has been proven to rust off or not stay on concrete.

Technical background provided to the Communications task group (below) showed that many states are using colors other than yellow; or are asking for contrast between the adjacent sidewalk and detectable warnings. While yellow might be the best color, this is a minimum standard, not a best practice document. An issue has not been identified in the states using other colors. We should not mandate a change where we have no information saying these other colors are not working.

The report from the Federal Highway Administration, dated May 24, 2006, indicated that the when comparing Federal Yellow, Orange-Red and Black, each contrasted against the same adjacent surface material (a White sidewalk), brick red and black DWS panels have a higher level of contrast than federal yellow.

During the 2nd review discussion, it was stated that yellow was the most common or required color in 21 states. For that reason (among others), it was argued that yellow should be the single color required nationwide. But a deeper look at the compilation of state DOT materials/colors choices shows that the largest group of states (21 states; 119 million people) do not use Yellow for their detectable warning surfaces.

DOT Permitted Colors	**# of States**	**Total Population Within These States**	**% of US Population**
Yellow Only	11	94.1 million	28%
Other Colors Only, Not Yellow	21	118.9 million	36%
2+ Colors, including Yellow	10	80.1 million	24%
“Contrasting” or “Dark-on-Light”	6	36.8 million	11%

The consensus proposal that emerged from the Communications task group aimed to serve the greatest number of people with a solution that would recognize the current choices made with regard to detectable warning surface color, so long as those choices were evaluated to have high conspicuity. The consensus proposal took the existing DOT color/material choices and

compared that to the findings of the Jenness & Singer study. Among the current DOT color choices that would be excluded under this reconsideration proposal are:

DWS Color	**States Currently Permitted**
Only “Contrast With Adjoining”	4 (Illinois, Iowa, Maryland, Mississippi)
Only “Dark-on-Light”/”Light-on-Dark”	2 (Michigan, Nebraska)
Blue	South Carolina
Forest Green	South Carolina
Orange	South Carolina

This proposal for reconsideration would eliminate color choices that either are poor performing or impossible to measure. Instead, it would allow states and jurisdictions to continue specifying the high-contrast colors currently in use.

STATE	**MATERIAL(S)**	**COLOR(S)**
ALABAMA	POLYMER	BRICK RED
	GALVANIZED STEEL	BRICK RED
	CAST IRON	BRICK RED
ALASKA	CAST IRON	YELLOW
ARIZONA	CAST IRON	NATURAL / PATINA
	POLYMER / CONCRETE	COLONIAL RED
	POLYMER	COLONIAL RED
ARKANSAS	POLYMER	YELLOW
CALIFORNIA	POLYMER	YELLOW
	URETHANE MOLDED	YELLOW
	GALVANIZED STEEL	YELLOW
	CAST IRON	YELLOW
COLORADO	POLYMER	COLONIAL RED
	GALVANIZED STEEL	POWDER COATED RUST
		COLONIAL RED
	CAST IRON	POWDER COATED RUST
		COLONIAL RED
Connecticut	POLYMER	BRICK RED
	CAST IRON	BRICK RED

DELAWARE	CONCRETE PAVERS	NATURAL / PATINA
DAKOTA (NORTH)	POLYMER	YELLOW
(both colors / all materials)	GALVANIZED STEEL	BRICK RED
	CAST IRON	both colors
	STAINLESS STEEL	both colors
	CONCRETE PAVERS	both colors
DAKOTA (SOUTH)	CAST IRON	NATURAL / PATINA
FLORIDA	POLYMER	YELLOW
(all colors / all materials)	URETHANE	BRICK RED
	GALVANIZED STEEL	COLONIAL RED
	CAST IRON	BLACK
GEORGIA	POLYMER	YELLOW
	GALVANIZED STEEL	YELLOW
	CAST IRON	YELLOW
HAWAII	POLYMER	YELLOW
	URETHANE	YELLOW
ILLONOIS	POLYMER	Contrast with adjoining material
	GALVANIZED STEEL	Contrast with adjoining material
	CAST IRON	Contrast with adjoining material
INDIANA	POLYMER	BRICK RED
	CAST IRON	BRICK RED
IOWA	POLYMER	Contrast with adjoining material
	GALVANIZED STEEL	Contrast with adjoining material
	CAST IRON	Contrast with adjoining material
KANSAS	POLYMER	BRICK RED
	CONCRETE PAVERS	BRICK RED
	POLYMER CONCRETE	BRICK RED

KENTUCKY	CONCRETE PAVERS	BRICK RED
LOUISIANA	POLYMER	YELLOW
	GALVANIZED STEEL	YELLOW
MAINE	CAST IRON	NATURAL / RUST
MARYLAND	POLYMER	Contrast with adjoining material
	CAST IRON	Contrast with adjoining material
	BRICK PAVERS	Contrast with adjoining material
MASSACHUSETTS	POLYMER	YELLOW
	GALVANIZED STEEL	YELLOW
	CAST IRON	YELLOW
MICHIGAN	GALVANIZED STEEL	Dark on Light / Light on Dark
(both materials)	CAST IRON	Dark on Light / Light on Dark
MINNESOTA	CAST IRON	NATURAL / RUST
MISSISSIPPI	POLYMER	Contrast with adjoining material
	GALVANIZED STEEL	Contrast with adjoining material
MISSOURI	POLYMER	BRICK RED
	GALVANIZED STEEL	BRICK RED
	CAST IRON	BRICK RED
MONTANA	CAST IRON	NATURAL / RUST
NEBRASKA	POLYMER	Dark on Light / Light on Dark
	GALVANIZED STEEL	Dark on Light / Light on Dark
	CAST IRON	Dark on Light / Light on Dark
NEVADA	CONCRETE PAVERS	COLONIAL RED

	CAST IRON	COLONIAL RED
	CAST IRON	NATURAL / RUST
NEW JERSEY	POLYMER	SAFETY RED
	GALVANIZED STEEL	SAFETY RED
	CAST IRON	SAFETY RED
NEW YORK	POLYMER	GRAY
	CONCRETE PAVERS	GRAY
	GALVANIZED STEEL	GRAY
	CAST IRON	GRAY
		NATURAL / RUST
North Carolina	POLYMER	YELLOW
(both colors/all materials)	GALVANIZED STEEL	BLACK
	CAST IRON	both colors
South Carolina	POLYMER	YELLOW
(all colors/all materials)	GALVANIZED STEEL	BRICK RED
		BLACK
		BLUE
		FOREST GREEN
		ORANGE
OHIO	POLYMER	YELLOW
	GALVANIZED STEEL	YELLOW
	CAST IRON	YELLOW
OKLAHOMA	POLYMER	YELLOW
(both colors/all materials)	GALVANIZED STEEL	BRICK RED
	CAST IRON	both colors
OREGON	POLYMER	YELLOW
	CAST IRON	NATURAL / RUST
PENNSYLVANIA	POLYMER	YELLOW
(both colors/all materials)		BRICK RED
	GALVANIZED STEEL	both colors
	CAST IRON	both colors

RHODE ISLAND	CAST IRON	NATURAL / RUST
TENNESSEE	POLYMER	YELLOW
(both colors/all materials)	GALVANIZED STEEL	BRICK RED
	CAST IRON	both colors
TEXAS	POLYMER	BRICK RED
	GALVANIZED STEEL	BRICK RED
	CAST IRON	BRICK RED
UTAH	POLYMER	YELLOW
	CAST IRON	NATURAL / RUST
VERMONT	CAST IRON	NATURAL / RUST
VIRGINIA	POLYMER	YELLOW
(two colors/two materials)	GALVANIZED STEEL	BRICK RED
	CAST IRON	NATURAL / RUST
WEST VIRGINIA	POLYMER	YELLOW
WASHINGTON	POLYMER	YELLOW
	GALVANIZED STEEL	YELLOW
	CAST IRON	YELLOW
WISCONSIN	CAST IRON	YELLOW
WYOMING	CAST IRON	BRICK RED
		NATURAL / RUST

Committee Action for Reconsideration: AS 5-16-1 failed

REPORT OF HEARING:

Modification (if any):

Committee Reason: Yellow has been shown to provide the best visibility. No other options should be permitted. If treated properly, metal, brick and concrete should be able to be provided and maintain the color safety yellow.

Committee Action for First Ballot: Final action is AM by BC2 & PC2– 17-7-2

REPORT OF HEARING:

Modification (if any):
Further modify BC2 as follows:
705.3. Color. Detectable warning surfaces shall be yellow ~~and~~ ~~approximate~~ Color ID 33538 (Yellow International) of SAE AMS-STD-595A to the maximum extent practicable.

Committee Reason:
BC2 - The modification removes unenforceable language and matches phrases used elsewhere in the standard. Safety yellow is recognized internationally as a warning color. Some states only allow yellow for detectable warnings currently.

Report for 0*7-19– 2021*		
Committee decision: D	***Committee Vote at Meeting: 25-0-1***	***Committee Vote on Ballot:41-2-2***
REPORT OF HEARING: Modification (if any):		
Committee Reason: The Communications task group needs additional time for development of LRV requirements.		
BALLOT COMMENT 1- FIRST DRAFT: Proponent: Pat Sheehan, ACB		
Desired Action: Affirmative with comment		
Modification:		
Reason: A117.1 Committee Actions report 5-11-2023 Chapter 7 to 11 w comments draft		
BALLOT COMMENT 2- FIRST DRAFT: Proponent: Billie Bentzen, Association for the Education and Rehabilitation of the Blind and Visually Impaired		
Desired Action: Affirmative with comment		
Modification: **Replace with the following:** **SECTION 106** **REFERENCED DOCUMENTS** **106.2.14 Aerospace Material Specification - (R) Colors Used in Government Procurement.** AMS-STD-595A, revised 2017-02. (SAE International, 400 Commonwealth Drive, Warrendale, PA 15096). **SECTION 705** **DETECTABLE WARNING SURFACES** **705.3 ~~Contrast.~~ Color.** Detectable warning surfaces shall ~~contrast visually with adjacent surfaces, either light-on-dark or dark-on-light.~~ be yellow and approximate Color ID 33538 (Yellow International) of SAE AMS-STD-595A.		
Reason: "... light-on-dark or dark-on-light" has been found to be unsatisfactory because it is a totally subjective judgment. Two colors that are the same hue can be said to be dark-on-light or light-on-dark because they differ by a shade. Thus the intent of the existing standard has not been achieved. Detectable warnings, according to the 1990 and 2010 ADAAG, DWS are “a standardized surface feature built in or applied to walking surfaces or other elements to warn of hazards on a circulation path.” I emphasize "to warn of hazards." Yellow International, or simply yellow, is used in the US and internationally to warn of hazards, so travelers worldwide associate the color yellow with danger or a warning. The MUTCD requires "yellow" to be used for warning indications. Detectable warnings are traffic control devices for people who are vision disabled, functioning much like stop bars for drivers. They mean "Stop, and assess the situation. Stay here until it is safe to proceed." As such, these traffic control devices, detectable warning surfaces, have a standard texture. They also need to have a standard color. Most people who are vision disabled have sufficient vision to see relatively large "patches" of yellow at a useful distance to determine where they should go to wait to cross the street they wish to		

cross, and to spot where the end of the crosswalk is, as they cross the street. Yellow is highly salient, even in somewhat low contrast situations or somewhat low illumination. It is the single color recommended for detectable warnings by Jenness and Singer (2006). It is the color that is required or used by the most states--and the most countries.

The use of a contrast formula for detectable warning surfaces is inherently unenforceable. Contrast values are greatly affected by illumination, moisture content of the surrounding surface, and age of the two surfaces. Any measured contrast between a detectable warning surface and its surround represents only contrast under specific conditions that can change from moment to moment. Therefore the contrast between any detectable warning color and the surrounding pavement will always vary. This is, of course, also true for International Yellow--but yellow will still be yellow.

Permitting Detectable warning surfaces to be in hues other than yellow, regardless of their contrast with the surround, means that the population they are designed to assist must figure out, in any environment, what color is being used for detectable warnings. Cognitive processing is required, and tactile exploration of the surface may also be required to determine that, in a particular environment, for example, detectable warnings are red. Meanwhile, the traveler with low vision, who is used to relying primarily on visual cues for wayfinding and safety, who is not used to paying attention to tactile cues, may have entered a crosswalk without stopping to be sure it is a safe time to cross because she didn't realize she was stepping into the street. Indications of hazards need to be quickly recognized as indicating hazards. Permitting multiple colors will simply not result in the immediate communication of hazards. Permitting multiple colors will decrease the safety benefit of detectable warnings for the vulnerable population they are intended to serve. The color of detectable warnings that is selected for a specific project or neighborhood because it is aesthetically pleasing is likely to mean that, however high the contrast, the detectable warnings are less likely to be perceived as indicating hazards.

There has always been the understanding that detectable warning products needed to be slip resistant. However, there has been some variability in slip resistance, and some products that require coatings in order to be International Yellow have been somewhat slippery. However, the manufacturing challenges of producing detectable warning products, even in cast iron (preferred in cold climates), have been overcome, and products in current production meet a requirement for slip resistance. Materials currently being installed, and preferred by many jurisdictions, are all now slip resistant. Lack of slip-resistance in older products is not a valid argument against requiring detectable warning surfaces for new construction and alterations to be International Yellow.

BALLOT COMMENT 3- FIRST DRAFT:
Proponent: Sharon Toji. HLAA

Desired Action: Negative with Comment

Modification:

Reason: Contrast sub group has prepared modifications and I will submit my proposed modification.

BALLOT COMMENT 4- FIRST DRAFT:
Proponent: Glenn Dea, ISA

Desired Action: Negative with Comment

Modification:

Reason: The ISA supports and participated in development of a consensus modification recommended for approval by the Communications Task Group at its July 26, 2023 meeting.

BALLOT COMMENT 5- FIRST DRAFT:
Proponent: Jessica Schrader, Society for Experiential Graphic Design

Desired Action: Negative with comment

Modification:

Reason: SEGD supports and participated in development of a consensus modification for approval by the Communications Task Group at its meeting held on July 26, 2023.

Committee decision: AM BC2 & PC2	***Committee Vote at Meeting: 17-7-2***	***Committee Vote on Ballot:***

REPORT OF HEARING – FIRST DRAFT

Modification (if any):
Further modify BC2 as follows:
705.3. Color. Detectable warning surfaces shall be yellow ~~and approximate~~ Color ID 33538 (Yellow International) of SAE AMS-STD-595A to the maximum extent practicable.

Committee Reason:
BC2 - The modification removes unenforceable language and matches phrases used elsewhere in the standard. Safety yellow is recognized internationally as a warning color. Some states only allow yellow for detectable warnings currently.

BALLOT COMMENT- SECOND DRAFT:
Proponent:

Report for 0*7-19– 2021*		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
FINAL ACTION: Modification (if any):		
Committee Reason:		

CHAPTER 8
SPECIAL ROOMS AND SPACES

08-01 – 2021 overview

Proposal number	Proponent	Standard Sections	Committee Actions	Mtg. Date	Notes; Groups; groupings
08-01	Bauman	802.11.6 (New)	D 27-1-2	2-2-2023 6-20-2024	Final Action D

Comment	Proponent	Requested Action	Committee Action	Mtg. Date	Notes; Groups; groupings
BC1	Paarlberg, ICC	Negative with comment	AM 8-12-5 failed	6-20-2024	
PC1	Bauman, NAD	AS	AS 0-24-3 failed	6-20-2024	Staff note

BC= Ballot Comment, PC= Public comment, **Bold Comment number** is proposed revision below

08-01 – 2021
802.11.6(New)

Proponent: Hansel Bauman, Hansel Bauman Architecture + Planning, representing National Association of the Deaf

Add new text as follows:

SECTION 802
ASSEMBLY AREAS

802.11 Sign language interpreter stations.

802.11.6 Signage. The location of the sign language interpreter station shall be identified by the International Symbol for Sign Language in accordance with Section 703.6.3. The sign shall be embossed in or flush-mounted on the floor surface at the center point of the sign language interpreter station

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REASON: The Standard currently designates the specific size and location of sign language interpreter stations but does not provide a means for identifying their location. Sign language

interpreter stations are located within larger open floor areas such as stages, platforms, meeting rooms etc., making them difficult to easily locate. Their specific location is related to light fixture locations, background and audience seating making it necessary for interpreters to easily find the station quickly during interpreter shift-changes during public presentations. This proposed additional language provides for a pictogram to be located at the center point of the station making it easy to locate.

Committee Action: Disapproval 27-1-2

REPORT OF HEARING:

Modification (if any):

Committee Reason: The sign language station should be obvious based on the current criteria in Section 802.11. An exact placement on the floor provides no information to the audience and would be limiting to the flexibility of the options in the room. It was suggested that this should be at the entrance to the room or the ticket box like the assisted listening and audio loop information.
The pictogram referenced does not currently exist in the coded. The symbol itself will be addressed in the committee action in 07-15 and 07-14.

802.11.5-BAUMAN.doc

08-01 – 2021 Ballot Comments

BALLOT COMMENT 1- FIRST DRAFT: Proponent: Kimberly Paarlberg, ICC
Desired Action: Negative with comment.
Modification: See Ballot Comment 1

08-01 – 2021 Ballot Comment 1

802.11.6(New)

Proponent: Kimberly Paarlberg, ICC

Replace with the following:

802.11.6 Signs. Where signs are provided indicating the availability of sign language interpreter stations, signs shall be located adjacent to and outside of the entrance to the room or space. Pictograms shall comply with Section 703.6.3.4.

Exception: Signs are not required to be provided at the entrance to the room where signs are provided at the ticket office or window.

Modification:
802.11.6 Signs. ~~Where~~ When signs are provided indicating the availability of sign language interpreter ~~stations~~ services, signs shall be located adjacent to and outside of the entrance to the room or space. Pictograms shall comply with Section 703.6.3.4.

Exception: Signs are not required to be provided at the entrance to the room where signs are provided at the ticket office or window.

REASON: The symbol for sign language interpreters stations was added by 7-14-2021. However, this information should be provided for the public to know this service is available, not on the station itself. This proposal is consistent with what the committee approved for assistive listening systems in Section 706.8 by 07-18-2021 AM.

If the committee disagrees with the ballot comment to 08-01, the reference in Section 703.6.4 needs to be deleted as coordination with the committee action.

703.6.3.4 Sign language facilities. ~~Sign language interpreter's stations and~~ visual relay booths shall be identified by the International Symbol for Sign Language complying with Figure 703.6.3.4.

Committee Action for Ballot Comment 1: AM 8-12-5 failed; modification 19-3-4

REPORT OF HEARING:

Modification (if any):
Further revise as follows:
802.11.6 Signs. ~~Where~~ When signs are provided indicating the availability of sign language interpreter ~~stations~~ services, signs shall be located adjacent to and outside of the entrance to the room or space. Pictograms shall comply with Section 703.6.3.4.

Exception: Signs are not required to be provided at the entrance to the room where signs are provided at the ticket office or window.

Committee Reason: The modification would require a sign wherever sign language interpretation serives were provides, not just where there was a sign language interpretors station. The proposal was disapproved because as revised this would be an operational requirement, not a permanent sign. The committee did feel that the sign language pictogram would be the appropriate sign to use where these services are provided, but as an operational issue, this is better information for the commentary.

08-01 Paarlberg

08-01 – 2021 Public Comment 1

802.11.6

Proponent: Hansel Bauman, representing NAD

Request Approval as Submitted

REASON: Retract proposed 802.11.6 entirely for the reason indicated in the Committee Report. Do not modify the location for the proposed signage for the Sign Language Interpreter Station as suggested in the Committee Report : to "*be at the entrance to the room or the ticket box like the assisted listening and audio loop information"* For the reason that the provision of sign language interpretation is an administrative accommodation provided at-will. Unlike built-in assisted and audio loop systems sign language interpretation is not a given. Therefore, permanent signage indicating access to ASL interpretation would often untrue and misleading.

Staff Note: Based on committee actions, coordination is required with Section 703.6.3.4.

Committee Action for Public Comment 2: AS 0-24-3 failed

REPORT OF HEARING:

Modification (if any):

Committee Reason: The committee agreed with the original committee action and reason.

08-01 Bauman.doc

Committee Action for First Ballot: Final Action is D

REPORT OF HEARING:

Modification (if any): The committee agreed with the original committee action and reason.

Committee Reason:

Report for 0*8-01– 2021*		
Committee decision: D	***Committee Vote at Meeting: 27-1-2***	***Committee Vote on Ballot: 42-1-2***
REPORT OF HEARING: Modification (if any):		
Committee Reason: The sign language station should be obvious based on the current criteria in Section 802.11. An exact placement on the floor provides no information to the audience and would be limiting to the flexibility of the options in the room. It was suggested that this should be at the entrance to the room or the ticket box like the assisted listening and audio loop information. The pictogram referenced does not currently exist in the coded. The symbol itself will be addressed in the committee action in 07-15 and 07-14.		
BALLOT COMMENT 1- FIRST DRAFT: Proponent: Kimberly Paarlberg, ICC		
Desired Action: Negative with comment.		
Modification: **Replace with the following:** **802.11.6 Signs.** Where signs are provided indicating the availability of sign language interpreter stations, signs shall be located adjacent to and outside of the entrance to the room or space. Pictograms shall comply with Section 703.6.3.4. **Exception:** Signs are not required to be provided at the entrance to the room where signs are provided at the ticket office or window.		
Reason: The symbol for sign language interpreters stations was added by 7-14-2021. However, this information should be provided for the public to know this service is available, not on the station itself. This proposal is consistent with what the committee approved for assistive listening systems in Section 706.8 by 07-18-2021 AM.		

Report for 0*8-01– 2021*		
If the committee disagrees with the ballot comment to 08-01, the reference in Section 703.6.4 needs to be deleted as coordination with the committee action. **703.6.3.4 Sign language facilities.** ~~Sign language interpreter's stations and~~ visual relay booths shall be identified by the International Symbol for Sign Language complying with Figure 703.6.3.4.		
Committee decision: NA	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		
Committee Reason: The committee agreed with the original committee action and reason.		
BALLOT COMMENT- SECOND DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
FINAL ACTION: Modification (if any):		
Committee Reason:		

08-06 – 2021 overview

Proposal number	Proponent	Standard Sections	Committee Actions	Mtg. Date	Notes; Groups; groupings
08-06	Mazz	804.3	AM 17-5-3	3-16-2023 5-23-2024	Final Action is AMBC1

Comment	Proponent	Requested Action	Committee Action	Mtg. Date	Notes; Groups; groupings
BC1	Paarlberg, ICC	Affirmative	AS 8-6-3	5-23-2024	
BC2	Buuck, NAHB	Affirmative	NA	5-23-2024	
PC1	Buuck, NAHB	AM	NA	5-23-2024	

BC= Ballot Comment, PC= Public comment, **Bold Comment number** is proposed revision below

08-06 – 2021
804.3

Proponent: Marsha Mazz, representing United Spinal Association

Revise as follows:

SECTION 804
KITCHENS

804.3 Work surface. At least one accessible work surface 30 inches minimum in length shall be provided in accordance with Section 902. The work surface shall be located in accordance with Section 804.5.5.2 or 804.5.5.3. <u>The space above the leading 10 inches (255 mm) of the work surface shall be unobstructed. From 10 inches (255 mm) back from the leading edge to the wall or backsplash the space above the work surface shall be unobstructed to a height of 14 inches (355 mm) minimum.</u>

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

REASON: The purpose of the kitchen work surface is to provide one countertop in the kitchen where someone using a wheelchair might prepare a meal. None of the other countertops are required to be at the appropriate height nor are they required to provide a forward approach which enables a person to use both hands to perform a task. Our inspectors frequently find microwaves or other equipment installed on the work surface defeating its intended purpose.

We believe that keeping the work surface clear is not only reasonable but fair. However, our proposal would allow a deep cabinet, shelf, or other element 12-14 inches deep to be installed above the work surface because it will not interfere with the usability of the work surface and could prove useful as a place to install countertop lighting.

08-06 – 2021 Replacement
804.3

Proponent: Marsha Mazz, representing United Spinal Association

Replace the proposal and revise as follows:

804.3 Work surface. At least one accessible work surface 30 inches minimum in length shall be provided in accordance with Section 902. The work surface shall be located in accordance with Section 804.5.5.2 or 804.5.5.3. Microwaves, cabinets, and shelving installed at the work surface shall be installed 14 inches (355 mm) minimum above the work surface.

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

REASON: Our original proposal would have required the space on a work surface to be unobstructed to specified heights. However, if approved, A117 task group proposals addressing receptacle outlets will require the operable parts of such receptacle outlets to be installed in these locations. Rather than exempt the outlets, we are proposing to prohibit the installation of microwaves, cabinets, and shelves on the worksurface and to a height of 14 inches above the countertop. This will still permit typical over counter cabinets and shelves as well as receptacle outlets in or above the work surface.

Committee Action: Approval as modified 17-5-3

REPORT OF HEARING:

Modification (if any):
Replace the proposal and revise as follows:

804.3 Work surface. At least one accessible work surface 30 inches minimum in length shall be provided in accordance with Section 902. The work surface shall be located in accordance with Section 804.5.5.2 or 804.5.5.3. Where located above the worksurface, microwaves, cabinets, and shelving shall be installed 14 inches (355 mm) minimum above the work surface.

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

Committee Reason: The movement of "where located above the worksurface' to the front of the added sentence adds some clarity. This clarifies that permanent items should be installed high enough above the accessible work surface that the person at that work space can use common small appliances, like blenders or mixers. There was concern that including microwaves would be misleading since installed microwaves have to have controls within the reach ranges.

08-06 – 2021 Ballot Comments

BALLOT COMMENT 1- FIRST DRAFT: Proponent: Kimberly Paarlberg, ICC
Desired Action: Affirmative with comment
Modification: See Ballot Comment 1
BALLOT COMMENT 2- FIRST DRAFT: Proponent: Dan Buuck, NAHB
Desired Action: Affirmative with comment
Modification:
Reason: See the public comment from NAHB.

08-06 – 2021 Ballot Comment 1

102.1

Proponent: Kimberly Paarlberg, ICC

Further revise as follows;

804.3 Work surface. At least one accessible work surface 30 inches minimum in length shall be provided in accordance with Section 902. The work surface shall be located in accordance with Section 804.5.5.2 or 804.5.5.3. ~~Where located above the worksurface, microwaves, cabinets, and shelving~~ Vertical clearance above the work surface to any obstruction shall be ~~installed~~ 14 inches (355 mm) minimum ~~above the work surface~~.

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

REASON: In an Accessible or Type A unit, a microwave needs to be installed with the controls within reach range, so including it here would be confusing. This proposal will help clarify clearance over the work surface, without providing a list.

Committee Action for Ballot Comment 1: AS 8-6-3

REPORT OF HEARING:

Modification (if any):

Committee Reason: The modification would remove the possible conflict with microwaves being over the work surface and therefore not have the controls within reach range. By saying

'obstruction', this would allow for interpretation for items such as shelves or upper cabinets without a laundry list.

08-06 Paarlberg.doc

08-06 – 2021 Public Comment 1
804.3

Proponent: Dan Buuck, National Association of Home Builders (NAHB)

Further revise as follows:

SECTION 804
KITCHENS

804.3 Work surface. At least one accessible work surface 30 inches minimum in length shall be provided in accordance with Section 902. The work surface shall be located in accordance with Section 804.5.5.2 or 804.5.5.3. Where located above the required work surface, fixed microwaves, cabinets, and shelving shall be installed 14 inches (355 mm) minimum above the work surface.

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

REASON: In this change the word "required" was added in front of work surface where establishing a minimum height above the surface for fixed cabinets and shelving. The word "fixed" was added in front of microwave so it's understood that countertop appliances can be placed anywhere in the kitchen space. This change is necessary because without limiting the minimum height requirement to only above the portion of the countertop providing the required work surface, it could be interpreted to limit other popular kitchen features like appliance garages and spice racks that are often above the countertop but wouldn't meet this minimum height.

Committee Action Public comment 1: No action

REPORT OF HEARING:

Modification (if any):

Committee Reason:

08-06

Buuck.doc

Committee Action for First Ballot: AFM by PC1

REPORT OF HEARING:

Modification (if any):

Committee Reason: BC1 - The modification would remove the possible conflict with microwaves being over the work surface and therefore not have the controls within reach range. By saying 'obstruction', this would allow for interpretation for items such as shelves or upper cabinets without a laundry list.

Report for *08-06– 2021*		
Committee decision: AM	***Committee Vote at Meeting: 17-5-3***	***Committee Vote on Ballot:41-2-2***
REPORT OF HEARING: Modification (if any): **Replace the proposal and revise as follows:** **804.3 Work surface.** At least one accessible work surface 30 inches minimum in length shall be provided in accordance with Section 902. The work surface shall be located in accordance with Section 804.5.5.2 or 804.5.5.3. Where located above the worksurface, microwaves, cabinets, and shelving shall be installed 14 inches (355 mm) minimum above the work surface. **Exception:** Spaces that do not provide a cooktop or conventional range shall not be required to provide an accessible work surface.		
Committee Reason: The movement of "where located above the worksurface' to the front of the added sentence adds some clarity. This clarifies that permanent items should be installed high enough above the accessible work surface that the person at that work space can use common small appliances, like blenders or mixers. There was concern that including microwaves would be misleading since installed microwaves have to have controls within the reach ranges.		
BALLOT COMMENT 1- FIRST DRAFT: Proponent: Kimberly Paarlberg, ICC		
Desired Action: Affirmative with comment		
Modification: **Further revise as follows;** **804.3 Work surface.** At least one accessible work surface 30 inches minimum in length shall be provided in accordance with Section 902. The work surface shall be located in accordance with Section 804.5.5.2 or 804.5.5.3. ~~Where located above the worksurface, microwaves, cabinets, and shelving~~ Vertical clearance above the work surface to any obstruction shall be ~~installed~~ 14 inches (355 mm) minimum ~~above the work surface~~. **Exception:** Spaces that do not provide a cooktop or conventional range shall not be required to provide an accessible work surface.		
Reason: In an Accessible or Type A unit, a microwave needs to be installed with the controls within reach range, so including it here would be confusing. This proposal will help clarify clearance over the work surface, without providing a list.		
BALLOT COMMENT 2- FIRST DRAFT: Proponent: Dan Buuck, NAHB		
Desired Action: Affirmative with comment		
Modification:		
Reason: See the public comment from NAHB.		
Committee decision: AS BC1	***Committee Vote at Meeting: 8-6-3***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		
Committee Reason: BC1 - The modification would remove the possible conflict with microwaves being over the work surface and therefore not have the controls within reach range. By saying 'obstruction', this would allow for interpretation for items such as shelves or upper cabinets without a laundry list.		
BALLOT COMMENT- SECOND DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***

Report for *08-06– 2021*
FINAL ACTION: Modification (if any): Committee Reason:

08-08 – 2021 overview

Proposal number	Proponent	Standard Sections	Committee Actions	Mtg. Date	Notes; Groups; groupings
08-08	Mazz	804.6(New), 905.1, 905.4, 905.5(New), 1102.14, 1103.14	AM 19-2-3	2-16-2023 9-12-2024	

Comment	Proponent	Requested Action	Committee Action	Mtg. Date	Notes; Groups; groupings
BC1	Pace, HUD	Affirmative	NA	9-12-2024	
BC2	Paarlberg, ICC	Negative	NA	9-12-2024	
PC1	Terminology	AM	NA	9-12-2024	Editorial
PC2	Mazz, USA	AM	NA	9-12-2024	
PC3	Buuck, NAHB	AM	NA	9-12-2024	
PC2 replacement	Mazz	AM	AS 27-0-1	9-12-2024	

BC= Ballot Comment, PC= Public comment, **Bold Comment number** is proposed revision below

08-08 – 2021

804.6(New), 905.1, 905.4, 905.5(New), 1102.14, 1103.14

Proponent: Marsha Mazz, representing United Spinal Association

Add new section as follows:

SECTION 804
KITCHENS

804.6 Kitchen storage. Kitchen storage shall comply with Section 905.

Exception: Spaces that do not provide a cooktop or conventional range shall not be required to comply with this section.

Revise as follows:

SECTION 905
STORAGE FACILITIES

905.1 General. Built-in storage facilities, other than kitchen base cabinets and cabinets over counters, sinks and appliances, shall comply with ~~Section 905~~ Section 905.2 through 905.4. Kitchen base cabinets shall comply with Sections 905.2 and 905.5. Kitchen cabinets and cabinets over sinks and appliances shall comply with Section 905.2.

~~Exception:~~ ~~Kitchen cabinets shall not be required to comply with this section.~~

905.2 Clear floor space. A clear floor space shall be provided.

905.3 Height. Storage elements shall comply with at least one of the reach ranges specified in Section 308.

905.4 Operable parts. Operable parts of storage facilities shall comply with Section 309.

Exception: Operable parts of kitchen base cabinet storage space required to be moveable by Section 905.5 shall not be required to comply with Section 309.

905.5 Kitchen Cabinets. Kitchen base cabinets shall provide storage space capable of moving out beyond the face of the cabinet or revolving within the cabinet.

SECTION 1102
ACCESSIBLE UNITS

1102.14 Storage facilities. Where storage facilities are provided, ~~at least one of each type~~ they shall comply with Section 905.

~~Exception:~~ ~~Kitchen cabinets shall not be required to comply with Section 1102.14.~~

SECTION 1103
TYPE A UNITS

1103.14 Storage facilities. Where storage facilities are provided, ~~at least one of each type~~ they shall comply with Section 905.

Exception: ~~Kitchen cabinets shall not be required to comply with Section 1103.14.~~ Removable base cabinets permitted beneath sinks or work surfaces required to be accessible shall not be required to comply with this section.

REASON: This proposal attempts to solve a long-standing conflict between the ADA Standards which require 50% of kitchen storage to be within reach although it still may not be usable and, the ICC A117.1 which requires none of the storage to be within reach. We find both ADA and the 2017 Standard to be inadequate for different reasons and are attempting a compromise. If approved, these requirements would not apply to Type B units or to kitchens without a cooktop or conventional range.

Most aging-in-place and accessibility specialists agree that pull-out and revolving (lazy Susan-style) shelving affords better access to storage space than static shelving. Pull-out and revolving storage is commonplace in all types of kitchens, not just those designed to be accessible.

Therefore, we believe it is reasonable to require this type of storage for kitchens that will be used by people with disabilities to prepare meals. To maintain balance between cost and benefit, we:

1. applied the requirement only to base cabinets;
2. included an exception for spaces such as break rooms in business occupancies that do not provide cooktops or ranges; and
3. did not require the storage to be within reach because specifying reach begs the question as to which portion of the storage must be within reach e.g., the controls, the full depth of a shelf, or only the leading edge.

Committee Action: Approval as Modified 19-2-3; modification 22-4-2

REPORT OF HEARING:

Modification (if any):

Further modify as follows:

804.6 Kitchen storage. Kitchen storage shall comply with Section 905.

~~**Exception:** Spaces that do not provide a cooktop or conventional range shall not be required to comply with this section.~~

Committee Reason: The modification to delete the exception in Section 804.6 was because members felt that kitchenettes should include accessible storage. Better clarification might be for 'where provided' so as to not require base cabinets in very small kitchens.
The committee agreed that there should be some requirements for better access to storage in Accessible kitchens, however, there were several concerns expressed about the language. The language in Section 804.6 appears to require all storage in a kitchen to comply with Section 905. Specifics in Section 905 were only added for base cabinets and some upper cabinets. That could be read to require all kitchen storage of all types to be accessible. This would be a series issue for panty style cabinets and upper cabinets. This is considerably past the 50% storage requirement currently in the 2010 ADA standard (that has caused many issues on it's own). No clear indication is provided for drawers or counter storage – includes or excluded? There is already a requirement for a clear floor space at the sink and appliances, so the last sentence of 905.1 is not needed and confusing. What about cabinets that are very narrow and used for vertical storage – such as cookie sheets? These do not need pull outs for access, and could lead to some smaller cabinet areas being closed off rather than have a pull out.
Removal of 'one of each type' for Accessible and Type A units would require all elements of every storage element to be accessible. The intent of the proposal was only for all kitchen base cabinets – so this needs to be restored for other storage.

905.1et al-MAZZ.doc

08-08 – 2021 Ballot Comments

BALLOT COMMENT 1- FIRST DRAFT:

Proponent: Rex Pace, HUD
Desired Action: Affirmative with comment
Modification:
Reason: The modification is supported as it does represent progress. However, additional work is needed on the kitchen storage requirements to achieve an appropriate level of access relative to other design and construction concerns.
BALLOT COMMENT 2- FIRST DRAFT: Proponent: Kimberly Paarlberg, ICC
Desired Action: Negative with comment
Modification: See Ballot comment 2

08-08 – 2021 Ballot Comment 2

804.6, 905.1, 905.4, 905.5, 1102.14,

Proponent: Kimberly Paarlberg, ICC

Further modify as follows:

SECTION 804
KITCHENS

804.6 Kitchen storage. Kitchen ~~storage~~ base cabinets shall comply with Section 905. Where kitchen pantry closets with full height shelves are provided, 50% of the shelving shall comply with Section 905.

Reason: Typical kitchens have base and upper cabinets, full height pantries with shelves, closets for cleaning equipment with only upper shelves. Butlers pantries can include upper and lower cabinets and counters. You cannot ask for all shelves to be within reach, which is what the reference to Section 905 does. Just exempt them here and do not send them to 905.

SECTION 905
STORAGE FACILITIES

905.1 General. Built-in storage facilities, other than kitchen base cabinets ~~and cabinets over counters, sinks and appliances,~~ shall comply with Section 905.2 through 905.4. Kitchen base cabinets shall comply with Sections 905.2 and 905.5. ~~Kitchen cabinets and cabinets over sinks and appliances shall comply with Section 905.2.~~

Reason: The first phrase is not needed if they are not sent set. The last sentence is an issue because upper cabinets in a corner of an L are set back a foot. How can you even argue that they have a clear floor space? There is already space by the nature of the requirements for space in the kitchen and access to appliances and work surfaces. Do not overcomplicate this for no gain.

905.2 Clear floor space. A clear floor space shall be provided.

905.3 Height. Storage elements shall comply with at least one of the reach ranges specified in Section 308.

905.4 Operable parts. Operable parts of storage facilities shall comply with Section 309.

~~**Exception:** Operable parts of kitchen base cabinet storage space required to be moveable by Section 905.5 shall not be required to comply with Section 309.~~

Reason: Base cabinets are not sent to this section, so exception is not required.

905.5 Kitchen Cabinets. At least one Kitchen base cabinets shall provide ~~storage space capable of moving out beyond the face of the cabinet or revolving within the cabinet~~ drawers, pull-out shelving or lazy susans.

Reason: I could read this language to say that a base cabinet with a top drawer would comply – nothing say 'all'. The approved text would literally allow for something to pull out 1 inch. Would this allow for a ¾ lazy susan in a corner cabinet? In my kitchen I have cabinets with odd shapes where I would not have side walls to mount pull out shelves too. I have narrow cabinets for cookie sheets, so a pull out shelf is not helpful. I have some cabinets with tall appliances like blenders, food processors and mixers where I do not want a 2nd shelf. Would this require that?
This might be a convenience, but should not be an all or nothing requirement. These shelves can be added as a modification!

SECTION 1102
ACCESSIBLE UNITS

1102.14 Storage facilities. Kitchen base cabinets shall comply with Section 905. Where kitchen pantry closets with full height shelves are provided, 50% of the shelving shall comply with Section 905.Where other storage facilities are provided, at least one of each type ~~they~~ shall comply with Section 905.

Reason: This is a general storage requirement. Think about all the storage options you have in your home – coat closets, bedroom closets, cleaning supply storage with tall items like brooms and vacuums, food pantries, medicine cabinets, linen closets, sports equipment. Is it reasonable to have everything with reach ranges? That is what removal of one of each type does – it would not allow for a high low closet rod in a bedroom closet because of 905.4. And that does not even start on the requirements for the kitchen.

SECTION 1103
TYPE A UNITS

1103.14 Storage facilities. Kitchen base cabinets shall comply with Section 905. Where kitchen pantry closets with full height shelves are provided, 50% of the shelving shall comply with Section 905.Where other storage facilities are provided, at least one of each type ~~they~~ shall comply with Section 905.

Exception: Removable base cabinets permitted beneath sinks or work surfaces required to be accessible shall not be required to comply with this section.

Reason: Same as Accessible units – entire proposal is onerous. This is not just affecting kitchens!

REASON: While I appreciate the intent, I have several problems with the approved text. I did try for a fix – as indicated above – but I found too many issues. This is not just kitchen cabinets, this is affecting (and is detrimental) to all storage facilities in a unit.

For Accessible and Type A dwellings, this change is much more significant than providing pull out shelves in base cabinets.

The current scoping for storage facilities is limited and is as shown below. However, the requirements for storage within dwelling units is determined by 1102.14 and 1103.14.

1110.10 Storage. Where fixed or built-in storage elements such as cabinets, coat hooks, shelves, medicine cabinets, lockers, closets and drawers are provided in required accessible spaces, at least 5 percent, but not less than one of each type shall be *accessible*.

1110.10.1 Equity. *Accessible* facilities and spaces shall be provided with the same storage elements as provided in the similar nonaccessible facilities and spaces.

1110.10.2 Shelving and display units. Self-service shelves and display units shall be located on an *accessible route*. Such shelving and display units shall not be required to comply with reach-range provisions.

Removal of 'at least one of each type' in Section 1102.14 and 1103.14 with a straight reference back to Section 905 would not allow for closets to use organizers that set rods at two or more heights, or pantries to have <u>any</u> shelving out of reach range. Medicine cabinets in bathrooms would be prohibited because the requirement would be for <u>all</u> shelves to be within reach range. This greatly limits the storage availability and options for families where one person needs the lower reach, so their partner uses the higher closet rods or shelves.

Regarding the upper cabinets –

- with the requirements for clearances between cabinets and the clearances at appliances, you would have a really hard time not have a clear floor space at cabinets – so the reference is not needed.
- You will also get the misinterpretation that this clear floor space has to be adjacent – which would not allow for recessed upper cabinets.

Regarding pull out shelves in all base cabinets.

Application:

- Would you require a pull out shelf under a side approach sink in a kitchenette in break rooms? There will be issues with where the drain pipes leave the cabinet.
- Most Accessible units do not have kitchens. Accessible units are required in hotels, dorms, assisted living facilities, nursing homes and hospitals. Commercial kitchens are

exempted as employee work areas, but there are shared kitchens in community centers, Social Service Clubs (Lions, Kiwanis), church basements, etc. These provisions would also apply to all kitchenettes in break rooms. These are not spaces people are independently making daily meals in. Given the anticipated need – is this really justified?

Configurations:

- Standard sizes range from 9" to 36" wide and increase in increments of 3". Most are 24" deep, but the come in depths from 12" to 24" and increase in increments of 3".
- I am going to use my own kitchen as an example. My kitchen has 8 base cabinets. Two are at the ends of an island and very shallow in depth. One has only a bottom shelf because it is 12" wide and used for cookie sheets, cutting boards and broiler pans. One I had removed the top shelf so I can use it for tall objects, like my blender and standing mixer. I actually have two cabinets with two pull out shelves – which I love. However, the shallow and tall cabinets are reachable without pull out shelves and a pull out shelf would not work.
- There are multiple add in options for pull out shelves – with a wide variety of costs. While they are easy to add as a modification, they are difficult to remove if you need a tall cabinet. In a Type A unit, this sees like this would be better as an adaptable feature based on need and personal preference?

Regarding other language concerns –

- In Section 905.5 the phrase "capable of moving past the face of the cabinet" is not going to guarantee a shelf that pulls all the way out. It literally would meet requirements by coming forward 1 inch – which is not the intent for sure.

- With the current proposal, it is not clear if the requirement is for one or two pull out shelves per base cabinet. Is a base cabinet with a drawer acceptable? It appears to indicate that all shelves provided had to be pull out? Would someone not install upper shelves on lower cabinets to so they did not have to supply two (to reduce cost)? Blind base cabinets are fairly common in L-shape and U-shape kitchens. Pull out shelves for these types of spaces seem to range between $500 and $1000. With that kind of costs – I believe the most common choice would be to block off that extra storage space.

I did try to come up with a proposal to address the concerns I had, but I was unsuccessful. A percentage did not work, because that would be a greater detriment to small kitchens and kitchenettes.

Committee Action for Ballot Comment 2:

REPORT OF HEARING:

Modification (if any):

Committee Reason:

08-08 – 2021 Public Comment 1

905.4

Proponent: Marsha Mazz, representing the Terminology Task Group

Further revise as follows:

SECTION 904
SALES AND SERVICE COUNTERS AND WINDOWS

905.4 Operable parts. ~~Operable parts~~ Hardware of storage facilities shall comply with ~~Section 309~~ operable parts.

Exception: ~~Operable parts of~~ kitchen base cabinet storage space required to be moveable by Section 905.5 shall not be required to comply with ~~Section 309~~ operable parts.

REASON: This is part of a proposal from the Terminology task group to define the building blocks so that a reference is not required. This public comment is included here because it was part of new text. Please see the complete proposal for additional information.

Committee Action from Public Comment 1:

REPORT OF HEARING:

Modification (if any):

Committee Reason:

08-08– 2021 Public Comment 2

905.5

Proponent: Marsha Mazz, United Spinal Association.

Revise as follows:

SECTION 804
KITCHENS

905.5 Kitchen Cabinets. Kitchen base cabinets, other than those under sinks, shall provide storage space capable of moving out beyond the face of the cabinet or revolving within the cabinet.

REASON: We promised the committee to consider what base cabinets should not have to comply with these requirements and could only think of those under sinks which typically contain plumbing features that obstruct the usable space.

08-08– 2021 Public Comment 2 Replacement

905.5

Proponent: Marsha Mazz, United Spinal Association.

Replace follows:

SECTION 804
KITCHENS

804.6 Kitchen storage. In kitchens within Accessible and Type A dwelling units or sleeping units, and kitchens accessory to Accessible or Type A sleeping units without kitchens, kitchen storage shall comply with Section 905.4 and 905.5.

> **Exception:** In spaces that do not provide a cooktop or conventional range, kitchen storage shall not be required to comply with Section 905.5.

SECTION 905
STORAGE FACILITIES

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

~~**Exception:** Kitchen cabinets shall not be required to comply with this section.~~

905.2 Clear floor space. A clear floor space shall be provided.

905.3 Height. Storage elements shall comply with at least one of the reach ranges specified in Section 308.

905.4 Operable parts. Operable parts of storage facilities, other than kitchen base and upper cabinets, shall comply with Section 309. Operable parts of kitchen base and upper cabinets shall comply with Section 309.4.

905.5 Shelves in kitchen base cabinets. Storage shelves in kitchen base cabinets shall provide storage space capable of moving out beyond the face of the cabinet or revolving within the cabinet.

Exceptions:

1. Base cabinets designed for vertical storage
2. Base cabinets that are 12 inches or less in width.

SECTION 1102
ACCESSIBLE UNITS

1102.14 Storage facilities. Where storage facilities are provided, other than kitchen storage, at least one of each type shall comply with Section 905. Kitchen storage shall comply with Section 804.6.

~~Exception:~~ ~~Kitchen cabinets shall not be required to comply with Section 1102.14.~~

SECTION 1103
TYPE A UNITS

1103.14 Storage facilities. Where storage facilities are provided, other than kitchen storage, at least one of each type shall comply with Section 905. Kitchen storage shall comply with Section 804.6.

Exception: ~~Kitchen cabinets shall not be required to comply with Section 1103.14.~~
Removable base cabinets in beneath sinks or work surfaces and in accordance with Sections 1103.12.3.1 and 1103.12.4.1 shall not be required to comply with Section 1103.14.

Reason: The intent of this proposal is to apply to kitchens where individuals with disabilities are doing their primary cooking. Thus, this proposal addresses kitchens base cabinets within the dwelling and sleeping units, or shared kitchens for SROs, shelters, boarding houses, dorms, assisted living or group homes where there are no kitchens in the units themselves. Where there are shelves in the base cabinets (most cabinets have a bottom and center shelf), the shelves must pull out to assist access to storage. Drawers in the base cabinet already pull out, so drawers are not addressed since they already satisfy the intent. Pantries are not addressed as they are not base cabinets.

These new provisions do not reference reach and clear floor space. Reach is not referenced so that this will not be read to prohibit upper cabinets and to allow for the lower base cabinet shelves to stay at about 4" above the floor. Clear floor space is not addressed so that people don't interpret that a clear floor space has to be immediately in front and parallel to all cabinets.

The hardware (operable parts) on all cabinets is required to comply with 309.4 (one hand operation and force requirements). This will allow for people to be able to open cabinets and drawers where they can reach.

Committee Action for PC2 replacement: AS 27-0-1

REPORT OF HEARING:

Modification (if any):

Committee Reason: This public comment provides for a reasonable compromise to provide better accessibility for storage requirements within a person's home where they are doing their primary food preparation. The editorial committee should look at clarifying what vertical storage is in Section 905.5 Exception 1.

08-08 – 2021 Public Comment 3
804.6, 905.1, 905.4, 905.5, 1102.14, 1103.14

Proponent: Dan Buuck, NAHB

Further revise as follows:

SECTION 804
KITCHENS

804.6 Kitchen storage. Kitchen storage shall comply with Section 905.

SECTION 905
STORAGE FACILITIES

905.1 General. Built-in storage facilities, other than kitchen base cabinets and cabinets over counters, sinks and appliances, shall comply with Section 905.2 through 905.4. Kitchen base cabinets shall comply with ~~Sections 905.2 and~~ Section 905.5. ~~Kitchen cabinets and cabinets over sinks and appliances shall comply with Section 905.2.~~

905.2 Clear floor space. A clear floor space shall be provided.

905.3 Height. Storage elements shall comply with at least one of the reach ranges specified in Section 308.

905.4 Operable parts. Operable parts of storage facilities shall comply with Section 309.
~~**Exception:** Operable parts of kitchen base cabinet storage space required to be moveable by Section 905.5 shall not be required to comply with Section 309.~~

905.5 Kitchen Cabinets. Kitchen base cabinets 24 inches (610 mm) or greater in width shall provide at least one storage ~~space~~ element capable of moving out beyond the face of the cabinet or revolving within the cabinet.

SECTION 1102
ACCESSIBLE UNITS

1102.14 Storage facilities. Where storage facilities are provided, at least one of each type ~~they~~ shall comply with Section 905.

SECTION 1103
TYPE A UNITS

1103.14 Storage facilities. Where storage facilities are provided, at least one of each type ~~they~~ shall comply with Section 905.

Exception: Removable base cabinets permitted beneath sinks or work surfaces required to be accessible shall not be required to comply with this section.

REASON: In Section 905.1, remove the portion of the sentence "Kitchen base cabinets shall comply with Sections 905.2 and 905.5." and the last sentence entirely "Kitchen cabinets and cabinets over sinks and appliances shall comply with Section 905.2" because by way of the minimum design dimensions in kitchens, kitchen base cabinets have a clear floor space. Cabinets over sinks and appliances cannot comply with the requirement to have a clear floor space immediately adjacent unless base cabinets are removed or at a minimum are made the same depth as the upper cabinet.

In 905.5 changes were made to clarify that only the larger sized cabinets require at least one pull-out storage element be provided. This removes the incentive to install inoperable cabinet faces on narrower cabinets.

Remove the full exception to 905.4. There is no other language in these sections that require kitchen cabinets to comply with 905.4, therefore it is unnecessary.

In 1102.14 and 1102.15, restore the language "at least one of each type" because removing this language requires that the only storage features that could be provided must be within the prescribed reach ranges and have a clear floor space as required. This will drastically limit the storage options that could be provided within a space, that may have persons of multiple abilities living there at the same time with differing needs.

Committee Action for Public Comment 3:

REPORT OF HEARING:

Modification (if any):

Committee Reason:

08-08 Buuck.doc

Committee Action for First Ballot:

REPORT OF HEARING:

Modification (if any):

Committee Reason:

Report for *08-08– 2021*		
Committee decision: AM	***Committee Vote at Meeting: 19-2-3***	***Committee Vote on Ballot: 41-2-2***
REPORT OF HEARING: Modification (if any): **Further modify as follows:** **804.6 Kitchen storage.** Kitchen storage shall comply with Section 905. **~~Exception:~~** ~~Spaces that do not provide a cooktop or conventional range shall not be required to comply with this section.~~		
Committee Reason: The modification to delete the exception in Section 804.6 was because members felt that kitchenettes should include accessible storage. Better clarification might be for 'where provided' so as to not require base cabinets in very small kitchens. The committee agreed that there should be some requirements for better access to storage in Accessible kitchens, however, there were several concerns expressed about the language. The language in Section 804.6 appears to require all storage in a kitchen to		

comply with Section 905. Specifics in Section 905 were only added for base cabinets and some upper cabinets. That could be read to require all kitchen storage of all types to be accessible. This would be a series issue for panty style cabinets and upper cabinets. This is considerably past the 50% storage requirement currently in the 2010 ADA standard (that has caused many issues on it's own). No clear indication is provided for drawers or counter storage – includes or excluded? There is already a requirement for a clear floor space at the sink and appliances, so the last sentence of 905.1 is not needed and confusing. What about cabinets that are very narrow and used for vertical storage – such as cookie sheets? These do not need pull outs for access, and could lead to some smaller cabinet areas being closed off rather than have a pull out.

Removal of 'one of each type' for Accessible and Type A units would require all elements of every storage element to be accessible. The intent of the proposal was only for all kitchen base cabinets – so this needs to be restored for other storage.

BALLOT COMMENT 1- FIRST DRAFT:

Proponent: Rex Pace, HUD

Desired Action: Affirmative with comment

Modification:

Reason: The modification is supported as it does represent progress. However, additional work is needed on the kitchen storage requirements to achieve an appropriate level of access relative to other design and construction concerns.

BALLOT COMMENT 2- FIRST DRAFT:

Proponent: Kimberly Paarlberg, ICC

Desired Action: Negative with comment

Modification:

Further modify as follows:

SECTION 804
KITCHENS

804.6 Kitchen storage. Kitchen ~~storage~~ base cabinets shall comply with Section 905. Where kitchen pantry closets with full height shelves are provided, 50% of the shelving shall comply with Section 905.

Reason: Typical kitchens have base and upper cabinets, full height pantries with shelves, closets for cleaning equipment with only upper shelves. Butlers pantries can include upper and lower cabinets and counters. You cannot ask for all shelves to be within reach, which is what the reference to Section 905 does. Just exempt them here and do not send them to 905.

Further revise as follows:

SECTION 905
STORAGE FACILITIES

905.1 General. Built-in storage facilities, other than kitchen base cabinets ~~and cabinets over counters, sinks and appliances,~~ shall comply with Section 905.2 through 905.4. Kitchen base cabinets shall comply with Sections 905.2 and 905.5. ~~Kitchen cabinets and cabinets over sinks and appliances shall comply with Section 905.2.~~

Reason: The first phrase is not needed if they are not sent set. The last sentence is an issue because upper cabinets in a corner of an L are set back a foot. How can you even argue that they have a clear floor space? There is already space by the nature of the requirements for space in the kitchen and access to appliances and work surfaces. Do not overcomplicate this for no gain.

905.2 Clear floor space. A clear floor space shall be provided.

905.3 Height. Storage elements shall comply with at least one of the reach ranges specified in Section 308.

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~~**Exception:** Operable parts of kitchen base cabinet storage space required to be moveable by Section 905.5 shall not be required to comply with Section 309.~~

Reason: Base cabinets are not sent to this section, so exception is not required.

905.5 Kitchen Cabinets. At least one Kitchen base cabinets shall provide ~~storage space capable of moving out beyond the face of the cabinet or revolving within the cabinet~~ drawers, pull-out shelving or lazy susans.

Reason: I could read this language to say that a base cabinet with a top drawer would comply – nothing say 'all'. The approved text would literally allow for something to pull out 1 inch. Would this allow for a ¾ lazy susan in a corner cabinet? In my kitchen I have cabinets with odd shapes where I would not have side walls to mount pull out shelves too. I have narrow cabinets for cookie sheets, so a pull out shelf is not helpful. I have some cabinets with tall appliances like blenders, food processors and mixers where I do not want a 2nd shelf. Would this require that?

Report for *08-08– 2021*

This might be a convenience, but should not be an all or nothing requirement. These shelves can be added as a modification!

SECTION 1102
ACCESSIBLE UNITS

1102.14 Storage facilities. Kitchen base cabinets shall comply with Section 905. Where kitchen pantry closets with full height shelves are provided, 50% of the shelving shall comply with Section 905.Where other storage facilities are provided, at least one of each type ~~they~~ shall comply with Section 905.

Reason: This is a general storage requirement. Think about all the storage options you have in your home – coat closets, bedroom closets, cleaning supply storage with tall items like brooms and vacuums, food pantries, medicine cabinets, linen closets, sports equipment. Is it reasonable to have everything with reach ranges? That is what removal of one of each type does – it would not allow for a high low closet rod in a bedroom closet because of 905.4. And that does not even start on the requirements for the kitchen.

SECTION 1103
TYPE A UNITS

1103.14 Storage facilities. Kitchen base cabinets shall comply with Section 905. Where kitchen pantry closets with full height shelves are provided, 50% of the shelving shall comply with Section 905.Where other storage facilities are provided, at least one of each type ~~they~~ shall comply with Section 905.

Exception: Removable base cabinets permitted beneath sinks or work surfaces required to be accessible shall not be required to comply with this section.

Reason: Same as Accessible units – entire proposal is onerous. This is not just affecting kitchens!

Reason: While I appreciate the intent, I have several problems with the approved text. I did try for a fix – as indicated above – but I found too many issues. This is not just kitchen cabinets, this is affecting (and is detrimental) to all storage facilities in a unit.

For Accessible and Type A dwellings, this change is much more significant than providing pull out shelves in base cabinets.

The current scoping for storage facilities is limited and is as shown below. However, the requirements for storage within dwelling units is determined by 1102.14 and 1103.14.

> **1110.10 Storage.** Where fixed or built-in storage elements such as cabinets, coat hooks, shelves, medicine cabinets, lockers, closets and drawers are provided in required accessible spaces, at least 5 percent, but not less than one of each type shall be *accessible*.
>
> **1110.10.1 Equity.** *Accessible* facilities and spaces shall be provided with the same storage elements as provided in the similar nonaccessible facilities and spaces.
>
> **1110.10.2 Shelving and display units.** Self-service shelves and display units shall be located on an *accessible route*. Such shelving and display units shall not be required to comply with reach-range provisions.

Removal of 'at least one of each type' in Section 1102.14 and 1103.14 with a straight reference back to Section 905 would not allow for closets to use organizers that set rods at two or more heights, or pantries to have any shelving out of reach range. Medicine cabinets in bathrooms would be prohibited because the requirement would be for all shelves to be within reach range. This greatly limits the storage availability and options for families where one person needs the lower reach, so their partner uses the higher closet rods or shelves.

Regarding the upper cabinets –

- with the requirements for clearances between cabinets and the clearances at appliances, you would have a really hard time not have a clear floor space at cabinets – so the reference is not needed.
- You will also get the misinterpretation that this clear floor space has to be adjacent – which would not allow for recessed upper cabinets.

Regarding pull out shelves in all base cabinets.

Application:

- Would you require a pull out shelf under a side approach sink in a kitchenette in break rooms? There will be issues with where the drain pipes leave the cabinet.
- Most Accessible units do not have kitchens. Accessible units are required in hotels, dorms, assisted living facilities, nursing homes and hospitals. Commercial kitchens are exempted as employee work areas, but there are shared kitchens in community centers, Social Service Clubs (Lions, Kiwanis), church basements, etc. These provisions would also apply to all kitchenettes in break rooms. These are not spaces people are independently making daily meals in. Given the anticipated need – is this really justified?

Report for *08-08– 2021*

Configurations:

- Standard sizes range from 9” to 36” wide and increase in increments of 3”. Most are 24” deep, but the come in depths from 12” to 24” and increase in increments of 3”.
- I am going to use my own kitchen as an example. My kitchen has 8 base cabinets. Two are at the ends of an island and very shallow in depth. One has only a bottom shelf because it is 12” wide and used for cookie sheets, cutting boards and broiler pans. One I had removed the top shelf so I can use it for tall objects, like my blender and standing mixer. I actually have two cabinets with two pull out shelves – which I love. However, the shallow and tall cabinets are reachable without pull out shelves and a pull out shelf would not work.
- There are multiple add in options for pull out shelves – with a wide variety of costs. While they are easy to add as a modification, they are difficult to remove if you need a tall cabinet. In a Type A unit, this sees like this would be better as an adaptable feature based on need and personal preference?

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- In Section 905.5 the phrase “capable of moving past the face of the cabinet” is not going to guarantee a shelf that pulls all the way out. It literally would meet requirements by coming forward 1 inch – which is not the intent for sure.

- With the current proposal, it is not clear if the requirement is for one or two pull out shelves per base cabinet. Is a base cabinet with a drawer acceptable? It appears to indicate that all shelves provided had to be pull out? Would someone not install upper shelves on lower cabinets to so they did not have to supply two (to reduce cost)? Blind base cabinets are fairly common in L-shape and U-shape kitchens. Pull out shelves for these types of spaces seem to range between $500 and $1000. With that kind of costs – I believe the most common choice would be to block off that extra storage space.

I did try to come up with a proposal to address the concerns I had, but I was unsuccessful. A percentage did not work, because that would be a greater detriment to small kitchens and kitchenettes.

Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		
Committee Reason:		
BALLOT COMMENT- SECOND DRAFT:		
Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
FINAL ACTION:		
Modification (if any):		
Committee Reason:		

08-09 – 2021 overview

Proposal number	Proponent	Standard Sections	Committee Actions	Mtg. Date	Notes; Groups; groupings
08-09	Bentzen	805.2.5(New)	AS 21-0-2	2-16-2023	Final Action AMPC1

Comment	Proponent	Requested Action	Committee Action	Mtg. Date	Notes; Groups; groupings
PC1	Bentzen AER, Mazz USA	AM	AS 25-0-2	7-18-2024	

BC= Ballot Comment, PC= Public comment, **Bold Comment number** is proposed revision below

08-09 – 2021

805.2.5(New)

Proponent: Billie Louise (Beezy) Bentzen, PhD., Accessible Design for the Blind, representing Association for the Education and Rehabilitation of the Blind and Visually Impaired (AER)

SECTION 805
TRANSPORTATION FACILITIES

805.2 Bus boarding and alighting areas. Bus boarding and alighting areas shall comply with Section 805.2.

Add new text as follows:

805.2.5 Platform edges. Platform edges not protected by platform screens or guards shall have a detectable warning complying with Section 705 extending the full length of the public use areas of the platform.

REASON: Draft PROWAAG requires detectable warnings at bus boarding platforms (See R305.1.4 below). This is very important in bus rapid transit systems These may not have been anticipated when the 2017 A117 was being developed.

R305.1.4 Size. Detectable warning surfaces shall extend 610 mm (2.0 ft) minimum in the direction of pedestrian travel. At curb ramps and blended transitions, detectable warning surfaces shall extend the full width of the ramp run (excluding any flared sides), blended transition, or turning space. At pedestrian at-grade rail crossings not located within a street or highway, detectable warnings shall extend the full width of the crossing. At boarding platforms for buses and rail vehicles, detectable warning surfaces shall extend the full length of the public use areas of the platform. At boarding and alighting areas at sidewalk or street level transit stops for rail vehicles, detectable warning surfaces shall extend the full length of the transit stop.

The 2017 A117 does require detectable warnings at rail platforms (805.5.2).

Committee Action: As submitted 21-0-2

REPORT OF HEARING:

Modification (if any):

Further modify as follows:

> **805.2.5 Platform edges.** Platform edges not protected by platform screens or guards shall have a detectable warning surface complying with Section 705 extending the full length of the public use areas of the platform.

Committee Reason: The modification to add 'surface' is consistent with the terminology in Section 705. The chair decided that this was editorial in nature, but suggested that this should be something the editorial committee could address in other locations.
This proposal is consistent with PROWAG for bus stations and ICC A117.1 for train platforms in Section 805.5.2. However, this may change in the final rule for PROWAG.

805.2.5-BENTZEN.doc

08-09 – 2021 Public Comment 1

107.5, 805.2.5

Proponent: Billie Louise (Beezy) Bentzen, PhD., Accessible Design for the Blind, representing Association for the Education and Rehabilitation of the Blind and Visually Impaired (AER), Marsha Mazz, United Spinal Association.

Further revise as follows:

107.5 Definitions
Boarding Platform. A platform raised above standard curb height used for transit vehicle boarding and alighting.

SECTION 805
TRANSPORTATION FACILITIES

805.2 Bus boarding and alighting areas. Bus boarding and alighting areas shall comply with Section 805.2.

Add new text as follows:

805.2.5 Boarding Platform edges. Boarding Platform edges not protected by platform screens or guards shall have a detectable warning complying with Section 705 extending the full length of the public use areas of the platform.

REASON: The Access Board included a definition of "Boarding Platform" in the ROW final rule to ensure that people don't construe street level boarding such as at light rial provided in a city street to require detectable warnings.

Committee Action for Public Comment 1: AS 25-0-2

REPORT OF HEARING:

Modification (if any):

Committee Reason: The definition is the same as for boarding platforms in PROWAG. This will help clarify that the detectable warnings are not required where the bus stop is on a standard sidewalk rather than raised.

08-09 Bentzen Mazz.doc

Committee Action for First Ballot:

REPORT OF HEARING:

Modification (if any):

Committee Reason:

Report for 0*8-09– 2021*		
Committee decision: AS	***Committee Vote at Meeting: 21-0-2***	***Committee Vote on Ballot:43-0-2***
REPORT OF HEARING: Modification (if any): **Further modify as follows:** **805.2.5 Platform edges.** Platform edges not protected by platform screens or guards shall have a detectable warning surface complying with Section 705 extending the full length of the public use areas of the platform.		
Committee Reason: The modification to add 'surface' is consistent with the terminology in Section 705. The chair decided that this was editorial in nature, but suggested that this should be something the editorial committee could address in other locations. This proposal is consistent with PROWAG for bus stations and ICC A117.1 for train platforms in Section 805.5.2. However, this may change in the final rule for PROWAG.		
BALLOT COMMENT- FIRST DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS PC1	***Committee Vote at Meeting: 25-0-2***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		
Committee Reason: The definition is the same as for boarding platforms in PROWAG. This will help clarify that the detectable warnings are not required where the bus stop is on a standard sidewalk rather than raised.		

Report for 0*8-09– 2021*		
BALLOT COMMENT- SECOND DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
FINAL ACTION: Modification (if any):		
Committee Reason:		

08-11 – 2021 overview

Proposal number	Proponent	Standard Sections	Committee Actions	Mtg. Date	Notes; Groups; groupings
08-11	Bentzen	805.6.1, 805.6.2	D 24-0-1	2-16-2023	Final Action D

Comment	Proponent	Requested Action	Committee Action	Mtg. Date	Notes; Groups; groupings
BC1	Toji, HLAA	Negative	NA	7-18-2024	

BC= Ballot Comment, PC= Public comment, **Bold Comment number** is proposed revision below

08-11 – 2021
805.6.1, 805.6.2

Proponent: Billie Louise (Beezy) Bentzen, PhD., Accessible Design for the Blind, representing Association for the Education and Rehabilitation of the Blind and Visually Impaired (AER)

Revise as follows:

SECTION 805
TRANSPORTATION FACILITIES

805.6. Rail station signs. Rail station signs shall comply with Section 805.6.

Exception: Signs shall not be required to comply with Sections 805.6.1 and 805.6.2 where audible signs are remotely transmitted to hand-held receivers or are user- or proximity-actuated.

~~**805.6.1 Entrances.** Where signs identify a station or a station entrance, at least one sign with raised characters and braille complying with Sections 703.3 and 703.4 shall be provided at each entrance.~~

805.6.2 Routes and destinations. Lists of stations, routes and destinations served by the station, boarding area, platform, or mezzanine, that are located on boarding areas, platforms, or mezzanines shall have visual characters complying with Section 703.2. Signs with raised characters and braille, containing lists of stations, routes and destinations served by the station, boarding area, platform, or mezzanine, containing the same information as is provided elsewhere on print signs, shall be mounted at the tops and bottoms of stairs and escalators and at elevator doors. ~~A minimum of one sign with raised characters and braille complying with Sections 703.3 and 703.4 shall be provided on each platform or boarding area to identify the specific station.~~

REASON: While tactile signs at station entrances, and a single tactile sign on platforms or boarding areas have been required by ADAAG since, I believe, the first edition, I have always opposed these requirements. In more than 50 years as an orientation and mobility specialist teaching independent travel skills to people who are blind or who have low vision, I have never had a client who would consider even attempting to find such signs. They feel very vulnerable and conspicuous trying to find what is nearly a "needle in a haystack," and are also reluctant to tactually explore around station entrances or each wall, post or pylon where a tactile sign might be mounted because the surfaces may be disgustingly unsanitary. This is not a skill that is taught or recommended in any textbook on teaching orientation and mobility.

On the other hand, tactile signs in predictable locations such as at the tops and bottoms of stairs and escalators as well as near elevator call buttons are relatively easy to find, and can contain information such as lists of stations, routes and destinations served by the station that greatly facilitates the independent use of transportation facilities by people with vision disabilities.

Asking strangers for wayfinding information has been found to be the least preferred way by people who are not vision disabled to get needed information. If the passenger cannot see or hear another person who is close by, and cannot judge whether a person they do detect is a person they would feel safe engaging with, and who is likely to have and be able to provide the answer to their question, asking a fellow passenger becomes an even more undesirable way to get information. Fear of getting confused or disoriented when traveling in transit environments often results in isolation for people who are vision disabled, or the use of alternative means of travel, such as paratransit (which is expensive for the traveler and even more so for the transit system), taxi, or friends or relatives whom they do not want to inconvenience. They have a civil right to this kind of wayfinding information in transit stations.

Committee Action: Disapproval 25-0-1

REPORT OF HEARING:

Modification (if any):

Committee Reason: The committee felt that signs at a station entrance is needed information. While 'at least one sign' at the platform is not adequate, placing the signs at the stairways and escalators could be a safety issue if people need to stop to read the sign and a crowd is coming behind them trying to reach the train. Similar to 08-10-21, alternative technologies may be needed for wayfinding as a better solution than signs. While the committee understood the desire to locate signage at decision points, not all stations have stairways, escalators or elevators.

805.6.1-BENTZEN.doc

08-11 – 2021 Ballot Comments

BALLOT COMMENT 1- FIRST DRAFT:
Proponent: Sharon Toji. HLAA

Desired Action: Negative with Comment
Modification:
Reason: The requirements for tactile lists should be included in these standards.

Committee Action for First Ballot: No Action

REPORT OF HEARING:

Modification (if any):

Committee Reason: The comment appears to agree with the committee action.

Report for 0*8-11– 2021*		
Committee decision: D	***Committee Vote at Meeting: 25-0-1***	***Committee Vote on Ballot: 42-1-2***
REPORT OF HEARING: Modification (if any):		
Committee Reason: The committee felt that signs at a station entrance is needed information. While 'at least one sign' at the platform is not adequate, placing the signs at the stairways and escalators could be a safety issue if people need to stop to read the sign and a crowd is coming behind them trying to reach the train. Similar to 08-10-21, alternative technologies may be needed for wayfinding as a better solution than signs. While the committee understood the desire to locate signage at decision points, not all stations have stairways, escalators or elevators.		
BALLOT COMMENT 1- FIRST DRAFT: Proponent: Sharon Toji. HLAA		
Desired Action: Negative with Comment		
Modification:		
Reason: The requirements for tactile lists should be included in these standards.		
Committee decision: NA	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		
Committee Reason: The comment appears to agree with the committee action.		
BALLOT COMMENT- SECOND DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
FINAL ACTION: Modification (if any):		
Committee Reason:		

08-12 – 2021 overview

Proposal number	Proponent	Standard Sections	Committee Actions	Mtg. Date	Notes; Groups; groupings
08-12	Wilson	808.2.1	AM 22-1-3	3-16-2023	Final Action AM by committee action

Comment	Proponent	Requested Action	Committee Action	Mtg. Date	Notes; Groups; groupings
PC1	Multiple (13)	AM by the committee	NA	7-18-2024	

BC= Ballot Comment, PC= Public comment, **Bold Comment number** is proposed revision below

08-12 – 2021
808.2.1

Proponent: Stephen Wilson, representing Educational Audiology Parent Partnership Classroom Acoustics Committee

Revise as follows:

SECTION 808
ENHANCED ACOUSTICS FOR CLASSROOMS

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.

808.2.1 Performance method. For each of the octave frequency bands with center frequencies of 500, 1000, and 2000 Hz, the reverberation time (T60) 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^3). <u>These classrooms shall also be readily adaptable to allow reduction in reverberation time to 0.3 seconds.</u>
2. 0.7 seconds in classrooms with volumes of more than 10,000 cubic feet (285 m^3), but less than 20,000 cubic feet (566 m^3).

Reverberation times shall apply to fully-furnished, unoccupied classrooms. Reverberation times shall be field verified via measurements over a minimum 20 dB decay in each octave frequency band in accordance with ASTM E2235 listed in Section 106.2.13.

REASON:
Part A: Purpose and Reason of the Proposed Revision
The purpose of the technical requirements of A117.1, per Section 102.1, is to "make sites, facilities, buildings and elements accessible to and usable by people with such physical

disabilities," that include deafness and hearing impairment. We propose the reverberation requirement in Section 808.2.1 for classrooms up to and including 10,000 cubic feet be amended, as it does not provide an adequate reverberation time for students with hearing disabilities.

The reverberation times included in Section 808.2.1 are based on those developed as part of the ANSI/ASA S12.60-2010 standard. However, the reverberation time of 0.6 seconds for classrooms up to and including 10,000 cubic feet, is referenced in S12.60-2010 as the optimal hearing time for students with typical hearing, not those with disabilities.

Students with hearing impairments, including those that use assistive listening devices such as hearing aids or cochlear implants, require rooms with lower reverberation times in order to properly hear and understand the instructor. For students with these disabilities, a reverberation time of 0.3 seconds is preferrable. This is addressed in the ANSI/ASA S12.60-2010 Standards as follows:

- Table 1, footnote e) to 0.6 s RT: "See 5.3.2 for the requirement that core learning spaces ≤ 283 m3 (≤ 10 000 ft3) shall be readily adaptable to allow reduction in reverberation time to 0.3 s."
- Section 5.3 Performance criteria for reverberation times, Subsection 5.3.2: "Core learning spaces ≤ 283 m3 (≤ 10 000 ft3) shall be readily adaptable to allow reduction in reverberation time to 0.3 s ..."
- Annex B, Commentary-5.3.1: "A reverberation time of 0.3, shorter than stated in Table 1, is necessary for children with hearing impairment and/or other communicative issues. ..."
- Annex B, Commentary-5.3.2: "One possible method to readily permit further reduction in reverberation time to 0.3 s in a core learning space may be the installation, at the time of initial construction or major renovation, of hardware (e.g., hooks) in the ceiling or on walls that facilitate installation of additional or more-acoustically absorbent materials, or both."

Adding the requested text to Section 808.2.1 (indicated in Section 7 of the comment form) will ensure that the enhanced acoustical requirements for students with hearing impairment and/or other communicative issues, which were developed as part of the ANSI /ASA S12.60-2010 standard, are being properly implemented into A117.1.

The proposed language requiring classrooms to be "readily adaptable" to a 0.3s reverberation time allows for accommodation of students with the need for enhanced acoustics, while minimizing the financial burden on building owners. This is consistent with the approach towards other accessible accommodations in the A117.1 standard, such as the grab bar and sink adaptability requirements for Type B units found in Section 1104.11.

Part B: Studies on Short Reverberation Times and Children with Normal Hearing

Research studies over the past 40+ years have investigated the effects of reverberation times below 0.6 s on the perception of speech in children with normal hearing. We and colleagues have located all the peer-reviewed studies we could which provide data addressing this issue. Each study tested with different RTs, and some did not use 0.3 s as a listening condition. For brevity, summarized are only those results from listening conditions of less than 0.6 s RT:

- Four studies report that reductions in RT below 0.6 s significantly benefit children with normal hearing – 0.0s RT: Wroblewski et al., 2012; Yacullo and Hawkins, 1987; 0.3 s: Neuman et al., 2010; 0.4 s: Neuman and Hochberg, 1983.
- Two studies describe non-significant improvement in scores with reductions in RT – 0.0 s: Finitzo-Hieber and Tillman, 1978; 0.3 s: Iglehart, 2016.
- Two studies summarize that short RTs allow for higher speech perception scores – 0.3 s: Yang and Bradley, 2009; 0.4 s: Bradley, 1986.
- No study reports that RTs shortened below 0.6 s have detrimental effects on speech perception in children with normal hearing.

References

Bradley, J. S. (1986) Speech intelligibility studies in classrooms. *The Journal of the Acoustical Society of America*, 80(3), 846-854.

Finitzo-Heiber, T., & Tillman, T. W. (1978). Room acoustics effects on monosyllabic word discrimination ability for normal and hearing-impaired children. *Journal of Speech, Language,and Hearing Research*, 21, 440–458.

Iglehart, F. (2016). Speech perception in classroom acoustics by children with cochlear implants and with typical hearing. *American Journal of Audiology*, 25(2), 100–109.

Neuman, A. C., & Hochberg, I. (1983). Children's perception of speech in reverberation. *The Journal of the Acoustical Society of America*, 73, 2145–2149.

Neuman, A. C., Wroblewski, M., Hajicek, J., & Rubinstein, A. (2010). Combined effects of noise and reverberation on speech recognition performance of normal-hearing children and adults. *Ear and Hearing*, 31, 336–344.

Wroblewski, M., Lewis, D. E., Valente, D. L., & Stelmachowicz, P. G. (2012). Effects of reverberation on speech recognition in stationary and modulated noise by school-aged children and young adults. *Ear and Hearing*, 33, 731–744.

Yacullo, W. S., & Hawkins, D. B. (1987). Speech recognition in noise and reverberation by school-age children. *Audiology*, 26, 235–246.

Yang, W., & Bradley, J. S. (2009). Effects of room acoustics on the intelligibility of speech in classrooms for young children. *The Journal of the Acoustical Society of America*, 125, 922–933.

Part C: Background Information on the Committee Proposing the Requested Change

Educational Audiology Parent Partnership Classroom Acoustics Committee

The Educational Audiology Association (EAA) represents audiologists who work in educational settings. EAA advocates for appropriate classroom acoustics for all children, especially for those with special listening needs, based on the ANSI S.12.60 standards. EAA has partnered with

Hands & Voices, a parent-based support and advocacy organization for parents and their deaf and hard of hearing children to promote implementation of classroom acoustic standards. Educational audiologists and parents have direct experience regarding the listening and learning challenges of children caused by poor classroom acoustics. The partnership between EAA and Hands & Voices is intended to maximize efforts to advocate for adoption of ANSI/ASA standards at the state and local levels through *ICC/ANSI A117.1-2017: Accessible and Usable Buildings and Facilities*.
Committee Members:

Andy Carballeira is a Principal Consultant at Acentech, a national firm specializing in acoustics, noise control, and AV system design. Their practice includes the design of schools for high acoustical performance, with several staff members playing active roles in the committees of ANSI, ASA, and ASTM. Andy holds a Board Certification from the Institute of Noise Control Engineering, and is the proud dad of a 2-year old explorer.

Frank Iglehart, Ph.D., has worked as an audiologist specializing in the listening needs of children with hearing impairments in the classroom. He was a member of Working Group S12/WG 52, Revision of ANSI S12.60-2002. He has conducted research studies on speech perception in children with and without hearing loss when listening in classroom levels of noise and reverberation. The National Institute on Disability and Rehabilitation Research funded this work. Some of his peer-reviewed research papers most relevant to this BALLOT COMMENT may be accessed at:
https://pubs.asha.org/doi/10.1044/2016_AJA-15-0064
https://pubs.asha.org/doi/full/10.1044/2019_AJA-19-0010

Cheryl Johnson, Ed.D., has been a member of the ASA/Access Board Classroom Acoustics S.12 Working Group since 2000 representing educational audiology. She is also a founding member of Hands & Voices. In her roles as a parent, an educational audiologist and an educator Cheryl has been an advocate for accessibility to communication and learning for all students and especially for children who are deaf or hard of hearing or who have other special listening needs.

Kym Meyer, Ph.D., CCC-A is is an educational audiologist and deaf educator, working with deaf/hard of hearing children for 30 years. She participated as a member of the ANSI Standards S12.60 on Classroom Acoustics work group and recently received her PhD in Special Education Policy.

Kathleen J. Riley, AuD, CCC-A is the VP of Advocacy for the Educational Audiology Association and an adjunct professor teaching courses in Audiology and Aural Rehabilitation. Dr. Riley has worked in the field of Educational Audiology for 38 years. She serves on several boards at the local, state and national levels.

Stephen M. Wilson, AIA, is a Quality Control Architect at The Collaborative, an architectural design firm that specializes in the design of spaces for K-12 and higher education. As a parent of a child with a hearing disability, he represents Hands & Voices on the Classroom Acoustics Committee. Stephen is a licensed architect in the State of Michigan.

08-12 – 2021 Replacement
808.2.1

Proponent: Stephen Wilson, representing Educational Audiology Parent Partnership Classroom Acoustics Committee

Replace the proposal with the following:

SECTION 808
ENHANCED ACOUSTICS FOR CLASSROOMS

808.1 General. Classrooms with volumes ~~not exceeding~~ 20,000 cubic feet (565 m^3) or less and required to provide enhanced acoustics shall comply with Section 808.

808.2 Reverberation time. Classroom reverberation times shall comply with either Section 808.2.1 or Section 808.2.2, depending on the ~~size~~ volume of the classroom. Classrooms with volumes 10,000 cubic feet (285 m^3) or less shall also comply with Section 808.2.3.

Exception: Classrooms with reverberation times (T60) of 0.4 seconds or less, calculated in accordance with Section 808.2.1, are not required to comply with Section 808.2.3.

808.2.1 Performance method. For each of the octave frequency bands with center frequencies of 500, 1000, and 2000 Hz, the reverberation time (T60) shall not exceed the times specified below:

1. 0.6 seconds in classrooms with volumes ~~up to and including~~ of 10,000 cubic feet (285 m^3) or less.
2. 0.7 seconds in classrooms with volumes ~~of more than~~ greater than 10,000 cubic feet (285 m^3), ~~but less than~~ and 20,000 cubic feet (566 m^3) or less.

Reverberation times shall apply to fully-furnished, unoccupied classrooms. Reverberation times shall be field verified via measurements over a minimum 20 dB decay in each octave frequency band in accordance with ASTM E2235 listed in Section 106.2.13.

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~~ of 10,000 cubic feet (285 m3) or less:

(NRCFloor x SFloor)+ (NRCCeiling x SCeiling) + (NRCWall x SWall) >=Volume/12

For a classroom with a volume ~~between~~ greater than 10,000 cubic feet (285 m3) and 20,000 cubic feet (565 m3) or less:

(NRCFloor x SFloor)+ (NRCCeiling x SCeiling) + (NRCWall x SWall) >= Volume/14

Where:

NRCFloor = NRC rating of the floor finish material
SFloor = floor area in square feet
NRCCeiling = NRC rating of the ceiling finish material
SCeiling = ceiling area in square feet

NRCWall = NRC rating of the wall acoustical treatment
SWall = 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.

808.2.3 Adaptability. Classrooms with volumes of 10,000 cubic feet or less shall comply with Sections 808.2.3.1 or 808.2.3.2.

808.2.3.1 Performance method. The classroom shall be configured such that the reverberation time (T60) can be reduced to 0.4 seconds or less, calculated in accordance with Section 808.2.1, with the future installation of acoustic treatments.

808.2.3.2 Prescriptive method. A wall surface area 30 percent or greater than the classroom's floor area shall be free of permanent fixtures and casework. This wall surface area shall be distributed on at least two wall surfaces that are not parallel. These wall surfaces shall be capable of supporting the future installation of acoustic wall treatments with an NRC rating of 0.80 or greater.

Reason The above modifications were made to this proposal for the following reasons:

1. Eliminate ambiguity on the term "readily adaptable."
2. Allow for the reduction in reverberation time provided by typical classroom occupants.
3. Modify wording in Section 808 for consistency within the section.

The reasons for these modifications are as follows:

Item 1: Adaptability:

This modification provides clarification on how a room would be "adaptable" to a lower reverberation time as specified in the original proposed modification to Section 808. As with the existing language of Section 808.2, a performance-based and a prescriptive option are provided.

In the performance-based method noted in 808.2.3.1, the classroom must be able to be adapted to a 0.4 seconds reverberation time using only the installation of acoustic treatments. The specific type and location of treatments are not prescribed. However, the room must be adaptable to the lower reverberation time needed by students with hearing disabilities without renovating or reconfiguring the space.

In the prescriptive methodology provided in 808.2.3.2, The combined requirement of 30% of wall area, along with the 0.8 NRC rating for the acoustic wall treatments, is sufficient to reduce a typical classroom's RT from 0.6s to 0.4s while unoccupied. (This calculation is based on a classroom area of 840 SF, and a volume of 8400 cubic feet, which is typical for a contemporary classroom environment.) The requirement for placing the area on non-coplanar wall surfaces is a best practice for acoustical materials in order to prevent reverberant sound from interfering with a speaker's voice.

Item 2: Change from 0.3s to 0.4s RT for adaptability:

A 0.3 seconds reverberation time (RT) was recommended for classrooms up to 10,000 cubic feet for children with reduced hearing by the American National Standards Institute and the Acoustical Society of America in 2010. In practice, the requirement for this RT will be in an occupied classroom. Research demonstrates a typical unoccupied classroom with an RT of 0.4 seconds will have its reverberation time reduced to 0.3 seconds once it is occupied by 20 people, due to the sound absorption of the occupants in the space.

To account for the inherent reverberation reduction of occupants in a room, this modification changes the target RT for adapting an unoccupied, furnished classroom to 0.4 seconds.

Item 3: Wording Consistency:

This modification adjusts language in Section 808 to consistently use the terms "classroom" rather than "room," and "volume" rather than "size." The wording for room volume comparison has also been modified for clarity. These modifications do not affect the intent of the section and are clerical in nature.

Committee Action: Approved as Modified 22-1-3

REPORT OF HEARING:

Modification (if any):
Replace the proposal with the following:

SECTION 808
ENHANCED ACOUSTICS FOR CLASSROOMS

808.1 General. Classrooms with volumes ~~not exceeding~~ 20,000 cubic feet (565 m^3) or less and required to provide enhanced acoustics shall comply with Section 808.

808.2 Reverberation time. Classroom reverberation times shall comply with either Section 808.2.1 or Section 808.2.2, depending on the ~~size~~ volume of the classroom. Classrooms with volumes 10,000 cubic feet (285 m^3) or less shall also comply with Section 808.2.3.

Exception: Classrooms with reverberation times (T60) of 0.4 seconds or less, calculated in accordance with Section 808.2.1, are not required to comply with Section 808.2.3.

808.2.1 Performance method. For each of the octave frequency bands with center frequencies of 500, 1000, and 2000 Hz, the reverberation time (T60) shall not exceed the times specified below:

1. 0.6 seconds in classrooms with volumes ~~up to and including~~ of 10,000 cubic feet (285 m^3) or less.
2. 0.7 seconds in classrooms with volumes ~~of more than~~ greater than 10,000 cubic feet (285 m^3), ~~but less than~~ and 20,000 cubic feet (566 m^3) or less.

Reverberation times shall apply to fully-furnished, unoccupied classrooms. Reverberation times shall be field verified via measurements over a minimum 20 dB decay in each octave frequency band in accordance with ASTM E2235 listed in Section 106.2.13.

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~~ of 10,000 cubic feet (285 m3) or less:

(NRCFloor x SFloor)+ (NRCCeiling x SCeiling) + (NRCWall x SWall) >=Volume/12

For a classroom with a volume ~~between~~ greater than 10,000 cubic feet (285 m3) and 20,000 cubic feet (565 m3) or less:

(NRCFloor x SFloor)+ (NRCCeiling x SCeiling) + (NRCWall x SWall) >= Volume/14

Where:

NRCFloor = NRC rating of the floor finish material
SFloor = floor area in square feet
NRCCeiling = NRC rating of the ceiling finish material
SCeiling = ceiling area in square feet
NRCWall = NRC rating of the wall acoustical treatment
SWall = 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.

808.2.3 Adaptability. Classrooms with volumes of 10,000 cubic feet or less shall comply with Sections 808.2.3.1 or 808.2.3.2.

808.2.3.1 Performance method. The classroom shall be configured such that the reverberation time (T60) can be reduced to 0.4 seconds or less, calculated in accordance with Section 808.2.1, with the future installation of acoustic treatments.

808.2.3.2 Prescriptive method. A wall surface area 30 percent or greater than the classroom's floor area shall be free of permanent fixtures and casework. This wall surface area shall be distributed on at least two wall surfaces that are not parallel. These wall surfaces shall be capable of supporting the future installation of acoustic wall treatments with an NRC rating of 0.80 or greater.

Committee Reason: The adaptability of classrooms would allow for adjustment based on the needs of children in the classroom that would benefit from a reduced reverberation time. The performance option (808.2.3) and the exception (808.2) would give credit for classrooms with better performance. The consistency with terminology throughout the section will improve understanding.

808.2.1 Wilson.doc

08-12 – 2021 Public Comment 1

808.2, 808.2.3(New), 808.2.3.1(New), 808.2.3.2(New)

Proponent:
Robert M. Augustine, PhD, CCC-SLP, 2023 ASHA President
Julie Bossenberry
Jessie Bradley, Au.D., CCC-A
Megan Carter, Better Hearing Clinic Inc. – Audiologist
Martha Martin Conner
Charles Hopkins, M.Ed., Ed.D. (Ret.), Public Schools of South Hadley, MA,
Kimberly Keane
Andrea McMahan
Kathleen J Riley, AuD, CCC-A, Educational Audiologist
Carrie Spangler, Summit Educational Service Center
Derik Stiles
Laura Sylvia
Julie Martinez Verhoff, AuD, PhD, CCC-A, Nemours Children's Health, Delaware, DE Valley Audiology Department

Support the committee action.

REASON:
Augustine: We appreciate the opportunity to comment on ICC/ANSI A117.1-2023. The American Speech-Language-Hearing Association (ASHA) is the national professional, scientific, and credentialing association for 228,000 members and affiliates who are audiologists; speech-language pathologists; speech, language, and hearing scientists; audiology and speech-language pathology assistants; and students.

Improving acoustics (i.e., auditory access) in classrooms benefits children with hearing difficulties and students with typical hearing alike. Poor acoustics, specifically high levels of background noise and/or excessive reverberation, negatively affect speech perception abilities, response time, listening effort, and self-reported happiness in children and can impact academic performance and psychosocial development.[1,2,3,4,5] This is especially true for children who are deaf or hard of hearing, children who have articulation disorders, children with language-

[1] Astolfi, A., Puglisi, G., Murgia, S., Minelli, G., Pellerey, F., Prato, A., et al. (2019). Influence of Classroom Acoustics on Noise Disturbance and Well-Being for First Graders. *Frontiers in Psychology*. 10. 2736. 10.3389/fpsyg.2019.02736.
[2] Iglehart, F. (2016). Speech perception in classroom acoustics by children with cochlear implants and with typical hearing. *American Journal of Audiology*, *25*(2), 100-109.
[3] Lewis, D., Schmid, K., O'Leary, S., Spalding, J., Heinrichs-Graham, E., & High, R. (2016). Effects of noise on speech recognition and listening effort in children with normal hearing and children with mild bilateral or unilateral hearing loss. *Journal of Speech, Language, and Hearing Research, 59*(5), 1218-1232.
[4] Prodi, N., Visentin, C., Peretti, A., Griguolo, J., Battista, G., & Bartolucci, B. (2019). Investigating listening effort in classrooms for 5- to 7-year-old children. *Language, Speech, and Hearing Services in Schools, 50*(2), 196-210.
[5] Nelson, P., & Blaeser, S. (2010). Classroom acoustics: What possibly could be new. *The ASHA Leader, 15*(11).

learning disorders, children with attention disorders and/or learning disabilities, and children who are non-native English speakers.[6,7,8]

It is well documented that when reverberation times are decreased speech perception improves in children with typical hearing and those with hearing loss.[9,10,11,12] Neuman et al found that children with cochlear implants required significantly higher signal-to-noise ratios [13] Reducing reverberation time from 0.6s to 0.3s results in significant improvements in speech perception scores in children with hearing loss.[14] Findings support ANSI/ASA S12.60-2010's requirement that core learning spaces $\leq$ 10,000 ft^3 be readily adaptable to allow reduction in reverberation time to 0.3 s for children who are deaf or hard of hearing.

Importantly, the ANSI/ASA S12.60-2010 sound performance criteria assumes that the classrooms are occupied with students. Occupancy decreases reverberation time by approximately 0.1s; thus, ensuring that a classroom can be readily adaptable to a reverberation time of 0.4s (unoccupied) is recommended. This recommendation is supported by research done by Bistafa and Bradley, which showed that reverberation time should not exceed 0.4-0.5s.[15] Based on the data outlined above, ASHA supports modification 08-12 as currently written to ensure audibility in the classroom for children who are deaf or hard of hearing or have special listening needs.

[1] Astolfi, A., Puglisi, G., Murgia, S., Minelli, G., Pellerey, F., Prato, A., et al. (2019). Influence of Classroom Acoustics on Noise Disturbance and Well-Being for First Graders. *Frontiers in Psychology*. 10. 2736. 10.3389/fpsyg.2019.02736.
[1] Iglehart, F. (2016). Speech perception in classroom acoustics by children with cochlear implants and with typical hearing. *American Journal of Audiology, 25*(2), 100-109.
[1] Lewis, D., Schmid, K., O'Leary, S., Spalding, J., Heinrichs-Graham, E., & High, R. (2016). Effects of noise on speech recognition and listening effort in children with normal hearing and children with mild bilateral or unilateral hearing loss. *Journal of Speech, Language, and Hearing Research, 59*(5), 1218-1232.
[1] Prodi, N., Visentin, C., Peretti, A., Griguolo, J., Battista, G., & Bartolucci, B. (2019). Investigating listening effort in classrooms for 5- to 7-year-old children. *Language, Speech, and Hearing Services in Schools, 50*(2), 196-210.
[1] Nelson, P., & Blaeser, S. (2010). Classroom acoustics: What possibly could be new. *The ASHA Leader, 15*(11).
[1] Coalition for Classroom Acoustics. (1998). *Coalition for Classroom Acoustics' response to Federal Access Board's request for information for classroom acoustics* [online]. www.nonoise.org.
[1] Nelson, P., & Blaeser, S. (2010). Classroom acoustics: What possibly could be new. *The ASHA Leader, 15*(11).
[1] Neuman, A., Wroblewski, M., Hajicek, J., & Rubinstein, A. (2012). Measuring speech recognition in children with cochlear implants in a virtual classroom. *Journal of Speech, Language, and Hearing Research, 55*(2), 532-540.
[1] Bistafi, S., & Bradley, J. (2000). Reverberation time and maximum background-noise level for classrooms from a comparative study of speech intelligibility metrics. *Journal of the Acoustical Society of America, 107*(2), 861-875.
[1] Iglehart, F. (2020). Speech Perception in Classroom Acoustics by Children With Hearing Loss and Wearing Hearing Aids. *American Journal of Audiology, 29*(1), 6-17.
[1] Ibid.

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[6] Coalition for Classroom Acoustics. (1998). *Coalition for Classroom Acoustics' response to Federal Access Board's request for information for classroom acoustics* [online]. www.nonoise.org.
[7] Nelson, P., & Blaeser, S. (2010). Classroom acoustics: What possibly could be new. *The ASHA Leader, 15*(11).
[8] Neuman, A., Wroblewski, M., Hajicek, J., & Rubinstein, A. (2012). Measuring speech recognition in children with cochlear implants in a virtual classroom. *Journal of Speech, Language, and Hearing Research, 55*(2), 532-540.
[9] Bistafi, S., & Bradley, J. (2000). Reverberation time and maximum background-noise level for classrooms from a comparative study of speech intelligibility metrics. *Journal of the Acoustical Society of America, 107*(2), 861-875.
[10] Iglehart, F. (2020). Speech Perception in Classroom Acoustics by Children With Hearing Loss and Wearing Hearing Aids. *American Journal of Audiology, 29*(1), 6-17.
[11] Ibid.
[12] Neuman, A., Wroblewski, M., Hajicek, J., & Rubinstein, A. (2010). Combined effects of noise and reverberation on speech recognition performance of normal-hearing children and adults. *Ear & Hearing, 31*(3), 336-344.
[13] Ibid.
[14] Iglehart, F. (2020). Speech Perception in Classroom Acoustics by Children with Hearing Loss and Wearing Hearing Aids. *American Journal of Audiology, 29*(1), 6-17.
[15] Ibid.

[1] Neuman, A., Wroblewski, M., Hajicek, J., & Rubinstein, A. (2010). Combined effects of noise and reverberation on speech recognition performance of normal-hearing children and adults. *Ear & Hearing, 31*(3), 336-344.
[1] Ibid.
[1] Iglehart, F. (2020). Speech Perception in Classroom Acoustics by Children with Hearing Loss and Wearing Hearing Aids. *American Journal of Audiology, 29*(1), 6-17.
[1] Ibid.

Bossenberry: Stricter acoustical standards are needed for students with hearing loss and other listening difficulties (such as Auditory Processing Disorder and sound sensitivities). Students with listening challenges are at a disadvantage with respect to accessing instruction. They need a quieter environment with very low reverberation than their normal hearing peers. Noise and reverberation contribute to listening fatigue, lost information and poorer working memory. These students are already at risk due to language deprivation so having quiet classrooms with very low reverberation is essential.
Bradley and Sylvia: I support modification 08-12 as currently written.
Carter: The EAA Classroom Acoustics Coalition consists of EAA members, Hands & Voices representatives, and an architect and acoustical engineer who are involved with school design and construction. The Coalition has submitted proposed reverberation time (RT) changes to ICC A117.1-2017, Accessible Buildings and Facilities. The purpose of the technical requirements of A117.1, per Section 102.1, is to "make sites, facilities, buildings and elements accessible to and usable by people with such physical disabilities," that include deafness and hearing impairment. We propose the reverberation requirement in Section 808.2.1 for classrooms up to and including 10,000 cubic feet be amended, as it does not provide an adequate reverberation time for students with hearing disabilities or others with special listening needs. The reverberation times included in Section 808.2.1 are based on those developed as part of the ANSI/ASA S12.60-2010 standard. However, the reverberation time of 0.6 seconds for classrooms up to and including 10,000 cubic feet, is referenced in S12.60-2010 as the optimal hearing time for students with typical hearing, not those with disabilities. Students with hearing and listening disorders, including those that use hearing aids or cochlear implants, require rooms with lower reverberation times to properly hear and understand the instructor. The proposed language requiring classrooms to be "readily adaptable" to a 0.4s reverberation time or less allows for accommodation of students with the need for enhanced acoustics, while minimizing the financial burden on building owners.
Conner and Spangler: The reverberation times included in Section 808.2.1 are based on those developed as part of the ANSI/ASA S12.60-2010 standard. However, the reverberation time of 0.6 seconds for classrooms up to and including 10,000 cubic feet, is referenced in S12.60-2010 as the optimal hearing time for students with typical hearing, not those with disabilities. Students with hearing and listening disorders, including those that use hearing aides or cochlear implants, require rooms with lower reverberation times to properly hear and understand the instructor. The proposed language required classrooms to be 'readily adaptable" to a 0.4s reverberation time or less allows for the accommodation of students with the need for enhances acoustics while minimizing the financial burden on building owners.
Hopkins: I am a special educator with over 40 years of experience working directly with students and teachers, including students with auditory disabilities. The current standard for a reverberation time of 0.6 seconds for classrooms up to and including 10,000 cubic feet is based upon the optimal hearing time for students with typical hearing, not on the needs of students with hearing and listening disorders. In education the ability to hear and quickly process directions and to gather relevant information from the speech of the teacher and fellow students often determines the success or failure of students with such disorders. The typical classroom by its

nature of working in groups in what would be considered a crowded workspace presents challenges to any student with less than typical hearing ability. It becomes an environment in which the worst fear of these students is the embarrassment of misunderstanding or simply missing information while simultaneously being in a space that affords no privacy. It often leads to a student who gives up, withdraws, or becomes a "behavior problem". From the student's perspective, it is better to be a behavior problem than to be thought stupid because of missed directions or information. Visiting district students placed at the former Clarke School for the Deaf in Northampton, MA, it became clear that controlling the sound characteristics of the school's physical space in terms of reverberation reduction by use of soft surfaces and acoustical modifications did much to ameliorate the often severe hearing issues of their students. Since then it has been my hope that in the design of classrooms and other school spaces that all students, particularly those with auditory processing issues and high frequency hearing impairment, could have equal access to a quality hearing environment. I respectfully request that the proposed modification be included in future building codes as a step towards a more equitable school environment.

Keane: This revision is important to support students with hearing loss, hearing disabilities and special listening needs to have equal access to auditory information in classrooms.

McMahan: Children with hearing loss and other special listening needs are not adequately assisted by a reverberation time standard of 0.6 seconds. These children require a less reverberant environment in order to be able to understand and have equal access to their education at the same level as their peers who do not experience listening challenges. The proposed modification requiring rooms to be adaptable to reduce reverberation to 0.4 seconds if a child with listening needs is in the classroom would make the learning environment equitable for all.

Riley: Many students are adversely impacted by noise and reverberation in the classroom. These include deaf, hard of hearing, auditory processing disorders, second language learners, ADD/ADHD, students with concussions, intellectual delays and autism spectrum disorders as documented in numerous studies. This modification would reduce the additional cognitive load placed on every student to decipher and understand novel vocabulary and concepts.

Stiles: Children with hearing loss have physiological differences in their auditory systems that affect how well they can perceive speech in environments with poor acoustics, such as increased reverberation times and background noise levels. Klatte et al 2010 showed the detriment of reverberation on speech understanding in children; performance is even worse in children with hearing loss (McCreery et al 2019). We have the architectural technology to make sure children with hearing loss can participate in school activities; we should implement it.

Verhoff: Decreasing reverberation time improves speech recognition for individuals with hearing loss, especially for children who are learning new language, concepts, and ideas to be successful in the classroom. It recommended that reverberation time should be less than .4 seconds. Research shows that reverberation time of greater than .5 seconds significantly interferes with speech perception. Longer reverberation times degrade important temporal information such as gaps in speech that are needed in the speech signal to understand clearly.

Bistafa, S., & Bradley, J. (2000). Reverberation time and maximum background-noise level for classrooms from a comparative study of speech intelligibility metrics. Journal of the Acoustical Society of America, 107, 861-875.
Boothroyd, A. (2012). Speech perception in the classroom. In J. Smaldino & C. Flexer (Eds.), Handbook of acoustic accessibility. New York, NY: Thieme.
Bradley, J., Sato, H., & Picard, M. (2003). On the importance of early reflections for speech in rooms. Journal of the Acoustical Society of America, 113, 3233-3244.

Crandell, C., & Smaldino, J. (2000a). Classroom acoustics for children with normal hearing and with hearing impairment. Language, Speech, and Hearing Services in Schools, 31, 362-370.
Nelson, E., Smaldino, J., Erler, S., & Garstecki, D. (2007). Background noise levels and reverberation times in old and new elementary school classrooms. Journal of Educational Audiology, 14, 16-22.
Neuman, A., Wroblewski, M., Hajicek, J., & Rubinstein, A. (2010). Combined effects of noise and reverberation on speech recognition performance of normal-hearing children and adults. Ear and Hearing, 31(3), 336-344.
Smurzynski, J. (2007). Acoustic foundations of signal enhancement and room acoustics. In G. Chermak & F. Musiek (Eds.), Handbook of (central) auditory processing disorder: Auditory Neuroscience and diagnostics (pp.51-73). San Diego, CA: Plural Publishing.

Committee Action for First Ballot: NA

REPORT OF HEARING:

Modification (if any):

Committee Reason: The comments agreed with the committee action.

Report for *08-12– 2021*		
Committee decision: AM	***Committee Vote at Meeting: 22-1-3***	***Committee Vote on Ballot: 43-0-2***

REPORT OF HEARING:

Modification (if any):

Replace the proposal with the following:

SECTION 808
ENHANCED ACOUSTICS FOR CLASSROOMS

808.1 General. Classrooms with volumes ~~not exceeding~~ 20,000 cubic feet (565 m^3) or less and required to provide enhanced acoustics shall comply with Section 808.

808.2 Reverberation time. Classroom reverberation times shall comply with either Section 808.2.1 or Section 808.2.2, depending on the ~~size~~ volume of the classroom. Classrooms with volumes 10,000 cubic feet (285 m^3) or less shall also comply with Section 808.2.3.

Exception: Classrooms with reverberation times (T60) of 0.4 seconds or less, calculated in accordance with Section 808.2.1, are not required to comply with Section 808.2.3.

808.2.1 Performance method. For each of the octave frequency bands with center frequencies of 500, 1000, and 2000 Hz, the reverberation time (T60) shall not exceed the times specified below:

1. 0.6 seconds in classrooms with volumes ~~up to and including~~ of 10,000 cubic feet (285 m^3) or less.
2. 0.7 seconds in classrooms with volumes ~~of more than~~ greater than 10,000 cubic feet (285 m^3), ~~but less than~~ and 20,000 cubic feet (566 m^3) or less.

Reverberation times shall apply to fully-furnished, unoccupied classrooms. Reverberation times shall be field verified via measurements over a minimum 20 dB decay in each octave frequency band in accordance with ASTM E2235 listed in Section 106.2.13.

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~~ of 10,000 cubic feet (285 m3) or less:

(NRCFloor x SFloor)+ (NRCCeiling x SCeiling) + (NRCWall x SWall) >=Volume/12

For a classroom with a volume ~~between~~ greater than 10,000 cubic feet (285 m3) and 20,000 cubic feet (565 m3) or less:

(NRCFloor x SFloor)+ (NRCCeiling x SCeiling) + (NRCWall x SWall) >= Volume/14

Where:

NRCFloor = NRC rating of the floor finish material
SFloor = floor area in square feet
NRCCeiling = NRC rating of the ceiling finish material
SCeiling = ceiling area in square feet
NRCWall = NRC rating of the wall acoustical treatment
SWall = wall treatment area in square feet
Volume = room volume in cubic feet

Report for *08-12– 2021*		
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. **808.2.3 Adaptability.** Classrooms with volumes of 10,000 cubic feet or less shall comply with Sections 808.2.3.1 or 808.2.3.2. **808.2.3.1 Performance method.** The classroom shall be configured such that the reverberation time (T60) can be reduced to 0.4 seconds or less, calculated in accordance with Section 808.2.1, with the future installation of acoustic treatments. **808.2.3.2 Prescriptive method.** A wall surface area 30 percent or greater than the classroom's floor area shall be free of permanent fixtures and casework. This wall surface area shall be distributed on at least two wall surfaces that are not parallel. These wall surfaces shall be capable of supporting the future installation of acoustic wall treatments with an NRC rating of 0.80 or greater.		
Committee Reason: The adaptability of classrooms would allow for adjustment based on the needs of children in the classroom that would benefit from a reduced reverberation time. The performance option (808.2.3) and the exception (808.2) would give credit for classrooms with better performance. The consistency with terminology throughout the section will improve understanding.		
BALLOT COMMENT- FIRST DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: NA	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		
Committee Reason: The comments agreed with the committee action.		
BALLOT COMMENT- SECOND DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
FINAL ACTION: Modification (if any):		
Committee Reason:		

CHAPTER 9
FURNISHINGS AND EQUIPMENT

09-03 – 2021 overview

Proposal number	Proponent	Standard Sections	Committee Actions	Mtg. Date	Notes; Groups; groupings
09-03	Paarlberg	904.4.2, 904.4.3, 904.4.5 (New)	AM 29-1-2	3-2-2023 7-18-2024 9-12-2024	Final Action AFM BC1 and PC1

Comment	Proponent	Requested Action	Committee Action	Mtg. Date	Notes; Groups; groupings
BC1	Williams, Gillilland, WABO	Affirmative	AS 21-1-1	7-18-2024	
PC1	Terminology	AM	Editorial	9-12-2024	Editorial
PC2	Ditman	AM	NA	7-18-2024	

BC= Ballot Comment, PC= Public comment, **Bold Comment number** is proposed revision below

09-03 – 2021
904.4.2, 904.4.3, 904.4.5(New)

Proponent: Kimberly Paarlberg, International Code Council

Revise as follows:

SECTION 904
SALES AND SERVICE COUNTERS AND WINDOWS

904.4 Checkout aisles. Checkout aisles shall comply with Section 904.4.

904.4.1 Aisle. Aisles shall comply with Section 403.

904.4.2 <u>Cashier serviced check-out</u> counters. <u>Where cashier serviced check-out counters are provided,</u> the checkout counter surface shall be 38 inches (965 mm) maximum in height above the floor. The top of the counter edge protection shall be 2 inches (51 mm) maximum above the top of the counter surface on the aisle side of the checkout counter.

<u>904.4.3 Self-service check-out counters.</u> <u>Where self-service check-out counters are provided, the check-out counter surface and built-in scanner shall be 38 inches (965 mm) maximum in</u>

height above the floor. The operable parts, touch screen are permitted to be located 54 inches (1372 mm) maximum above the floor. Key pads shall comply with Sections 707.5 and 707.6.

~~**904.4.3**~~ **904.4.4 Check Writing Surfaces.** Where provided, check writing surfaces shall comply with Section 902.4.

904.4.5 Self-bagging surfaces. Self bagging surfaces, where provided, shall be located within the reach ranges in accordance with Section 308.

REASON: The intent of this proposal is to provide criteria for the self-service style check out aisles.

Committee Action: Approved as Modified – 29-1-2
Modification to 1st sentence – 25-1-2
Modification to 2nd sentence – 29-0-2

REPORT OF HEARING:

Modification (if any):
Further modify as follows:

904.4.3 Self-service check-out counters. Where self-service check-out counters are provided, the check-out counter surface and built-in scanner shall be ~~38~~ 34 inches (~~965~~ 864 mm) maximum in height above the floor. The operable parts, and the operable parts of touch screens ~~are permitted to~~ shall be located 48 ~~54~~ inches (~~1372~~ 1219 mm) maximum above the floor. Key pads shall comply with Sections 707.5 and 707.6.

Committee Reason: The modification to the scanner height is to allow for standard side reach over the scanner and that the 38 inches is not needed to accommodate the belt and edge on a typical check out counter.
The modification to the operate parts would allow for the control area of the touch screen to be within standard reach, but also allow for larger screens for viewing above the reach. Screens on the market are programmable to have the control buttons at the bottom or the top of the screen. This item was approved because provisions are needed to address this common type of check-out aisles.

904.4-PAARLBERG.doc

09-03 – 2021 Ballot Comments

BALLOT COMMENT 1- FIRST DRAFT: Proponent: Williams, Gilliland, WABO
Desired Action: Affirmative with comment
Modification: See Ballot Comment 1

09-03 – 2021 Ballot Comment 1

904.4.3

Proponent: Williams, Gilliland, WABO

Further modify as follows:

904.4.3 Self-service check-out counters. Where self-service check-out counters are provided, the check-out counter surface and built-in scanner shall be 34 inches (864 mm) maximum in height above the floor. The operable parts, and the operable parts of touch screens shall be located ~~48 inches (1219 mm) maximum above the floor~~ within reach ranges in accordance with Section 308. Key pads shall comply with Sections 707.5 and 707.6.

REASON: The original proposal sets a maximum height of 48” for operable parts and the operable height of touch screens. This 48”maximum height correlates with the high side reach range maximum specified in Section 308.3.2 where the reach depth over the obstruction (most

likely a scanner) is 10” maximum. 308.3.2 also sets a 46” maximum high side reach range where the reach depth over the obstruction is over 10”. However, the original proposal doesn’t account for the impact of an obstruction with a reach depth that exceeds 10” on the optimal height of the operable parts or the operable height of the touchscreen. In addition, the maximum reach depth over the obstruction could theoretically be more than 24" in depth since no maximum reach depth is specified. The addition of a reference to 308 aligns the placement of operable parts and the operable parts of touch screens with generally accepted reach ranges already established in A117.1.

The assumption often is that these self-service checkout counters will always be accessed using a parallel approach with a side reach. Adding a general reference to 308 Reach Ranges allows for an increase in the variety of configurations of the self-service check-out counter using accepted reach ranges.

Committee Action for Ballot Comment 1: AS 21-1-1

REPORT OF HEARING:

Modification (if any):

Committee Reason: The revision would address both unobstructed and obstructed reach to the touch screen.

102.1-CARPENTER.doc

09-03 – 2021 Public Comment 1
904.4.5

Proponent: Marsha Mazz, representing the Terminology Task Group

Further revise as follows:

SECTION 904
SALES AND SERVICE COUNTERS AND WINDOWS

904.4.5 Self-bagging surfaces. Self bagging surfaces, where provided, shall be located within the applicable reach ranges ~~in accordance with Section 308~~.

REASON: This is part of a proposal from the Terminology task group to define the building blocks so that a reference is not required. This public comment is included here because it was part of new text. Please see the complete proposal for additional information.

Committee Action for Public Comment 1: Editorial

REPORT OF HEARING:

Modification (if any):

Committee Reason:

09-03 – 2021 Public Comment 2

904.4.3

Proponent: Tim Ditman

Further revise as follows:

SECTION 904
SALES AND SERVICE COUNTERS AND WINDOWS

904.4.3 Self-service check-out counters. Where self-service check-out counters are provided, the tops of the check-out counter surface and built-in scanner shall be 28 inches (710 mm) minimum and 34 inches (865 mm) maximum in height above the floor. The operable parts, and the operable parts of touch screens shall be located within the reach ranges in accordance with Section 308 ~~48 inches (1372 mm) maximum above the floor~~. Key pads shall comply with Sections 707.5 and 707.6.

904.4.5 Self-bagging surfaces. Where self ~~Self~~ -bagging surfaces are~~, where~~ provided, the tops of the self-bagging surfaces shall be ~~within the reach ranges in accordance with Section 308~~ 28 inches (710 mm) minimum and 34 inches (865 mm) maximum in height above the floor.

REASON:
For Section 904.4.3: A117.1 design standards need an appropriate design range that includes a minimum height. Using A117.1 – 2017 Section 902.4 as guidance, the counter surface should have a minimum height of 28 inches. Additionally, A117.1 Section 308 needs to be updated so that there is one general design standard for operable parts that is based on current research of lower and upper reach ranges.

The ICC needs to update the unobstructed low reach to “24 inches (610 mm) minimum above the floor” in ICC A117.1 Sections 308.2.1 and 308.3.1, along with any other low reach limit requirements. Section 308 of the 2024 A117.1 update should reflect current research from 2010 rather than continue to use standards derived from antiquated research conducted almost fifty years ago. The ICC established an Electrical Receptacles Task Group for A117.1 2024 and was, among other things, assigned to “7. Review available data on the reach ranges of

individuals using wheeled mobility devices." (https://www.iccsafe.org/wp-content/uploads/asc_a117_1/Residential-Receptacles-Task-Group-Scope-and-Objectives-2022-03-09-FIN.pdf) Despite being providing with the following information in March of 2023, which clearly highlights the importance of raising the lower reach range to a height that is safe for individuals using wheeled mobility devices, the only change that came from this task group was clarification for where to measure for operable parts, which does nothing to improve the safety of electrical receptacles.

"The technical requirements of the ICC/ANSI A117.1 (1998) Accessible and Usable Buildings and Facilities (ICC/ANSI) were generated from research completed from 1974 -1978 using a research sample that included about 60 individuals who used wheelchairs (see Steinfeld et al., 1979)." *See* The 2010 Anthropometry of Wheeled Mobility Project final report, December 31, 2010, PDF page 5 of 173, *available at* http://idea.ap.buffalo.edu/wp-content/uploads/sites/110/2020/01/AnthropometryofWheeledMobilityProject_FinalReport.pdf). The 2010 research study had a sample of 495 wheeled mobility devices ("WhMD") users, and documented that **none** of the WhMD users could safely achieve the unobstructed low reach of 15 inches. (*See* PDF page 71 of 173, Figure 3-15 and PDF page 73 of 173, Figure 3-16) Below are two key observations with respect to minimum low reach.

1. PDF page 9 of 173, "12. Reach limits: A majority of WhMD users cannot complete a forward reach to the minimum forward reach height in U.S. standards on a vertical plane in front of their anterior most point (toes or device). The current high side reach limit accommodates WhMD users. The low reach limit, as defined, is currently **inappropriate for safety reasons**." (emphasis added)

2. PDF page 70 of 173, "The lower limit of the U.S. standard would need to be raised from 380 mm (15 in.) to at least 600 mm (23.6 in.) in order to accommodate over 70%, 50% and 38% of our study's manual wheelchair users, powered chair users and scooter users, respectively."

Electrical outlets are just one example of operable parts that WhMD users encounter. In the December 2017 issue of Consumer Reports' magazine, the article entitled, "Make Your Home Elder-Friendly" (*available at* https://www.consumerreports.org/home-improvement-remodeling/elder-friendly-home/) addresses affordable upgrades using universal design when renovating a home. The article noted that design and construction upgrades could benefit persons with mobility disabilities by stating, "These [universal] design elements can also make a big difference if you lose mobility—after all, more than 35 percent of people age 65 and older in the U.S. are disabled, according to a 2016 report from the University of New Hampshire's Institute on Disability." Consumer Reports addressed minimum height of electrical receptacles and recommended, "setting new electrical outlets 24 inches off the floor instead of the usual 12 to 18" which would, "eliminate the stooping usually required to plug in a vacuum". Consumer Reports added that there is, "no cost for resetting outlets" at this accessible location.

Additionally, there should not be any child safety concerns about raising the receptacles to an accessible height for mobility-impaired individuals because Tamper Resistant (TR) receptacles have been mandated in dwelling units since 2008 to address this potential issue (*See* National Electrical Code (NEC) 2008 Section 406.12, Tamper-Resistant Receptacles in Dwelling Units).

When amending the Fair Housing Act in 1988, Congress clearly intended to cover 'persons with mobility impairments' by stating that 'switches and other controls must be in convenient locations', Congress also did not want mobility-impaired persons going through the financial burden and inconvenience of resetting outlet heights when they could have been set at an actual accessible and safe height at the time of construction for **zero** cost.

> "Because persons with mobility impairments need to be able to get into and around a dwelling unit (or else they are in effect excluded because of their handicap), the bill requires that in the future covered multifamily dwellings be accessible and adaptable. This means that the doors and hallways must be wide enough to accommodate wheelchairs, switches and other controls must be in **convenient** locations, most rooms and spaces must be on an accessible route, and disabled persons should be able to easily make additional accommodations if needed, such as installing grab bars in the bathroom, without major renovation or structural change." (emphasis added)
>
> Fair Housing Amendments Act of 1988 House Report (Judiciary Committee) No. 100-711, at 18 (June 17, 1988), *reprinted in* 1988 U.S.C.C.A.N. 2173, 2179.

For Section 904.4.5: Modifying Section 904.4.5 to follow the sentence structure of 904.4.3 will improve clarity and understanding for the reader/user. Self-bagging surfaces inherently involve picking up and moving weighted objects. In the 2010 Anthropometry of Wheeled Mobility Project final report (*available at* http://idea.ap.buffalo.edu/wp-content/uploads/sites/110/2020/01/AnthropometryofWheeledMobilityProject_FinalReport.pdf), PDF pages 153, 157, and 161 show that wheeled mobility users experience diminished reach capability "to retrieve and place a 5 lb object on a target shelf". Therefore, it is not appropriate to reference Section 308 since self-bagging often requires a mobility-impaired individual to lift a bag weighing over five pounds. In the final report, weighted reach ranges seem to coincide with the already established counter height range from A117.1 – 2017 Section 902.4. One of the authors, Dr. Edward Steinfeld, is listed as Principal for RESNA on the A117.1 organization roster. Please consult with Dr. Steinfeld to ensure his team's current research is reflected in appropriate height for self-bagging surfaces.

Committee Action for public comment 2: NA

REPORT OF HEARING:

Modification (if any):

Committee Reason: The committee agreed with the reasoning for the heights for the scanner and bagging area addressed in the original proposal and modifications.

09-03 Ditman.doc

Committee Action for First Ballot: AM BC1 21-1-1

REPORT OF HEARING:

Modification (if any):

Committee Reason: The revision would address both unobstructed and obstructed reach to the touch screen.

Report for 09-03– 2021		
Committee decision: AM	***Committee Vote at Meeting: 29-1-2***	***Committee Vote on Ballot: 42-1-2***
REPORT OF HEARING: Modification (if any): **Further modify as follows:** **904.4.3 Self-service check-out counters.** Where self-service check-out counters are provided, the check-out counter surface and built-in scanner shall be ~~38~~ 34 inches (~~965~~ 864 mm) maximum in height above the floor. The operable parts, and the operable parts of touch screens ~~are permitted to~~ shall be located 48 ~~54~~ inches (~~1372~~ 1219 mm) maximum above the floor. Key pads shall comply with Sections 707.5 and 707.6.		
Committee Reason: The modification to the scanner height is to allow for standard side reach over the scanner and that the 38 inches is not needed to accommodate the belt and edge on a typical check out counter. The modification to the operate parts would allow for the control area of the touch screen to be within standard reach, but also allow for larger screens for viewing above the reach. Screens on the market are programmable to have the control buttons at the bottom or the top of the screen. This item was approved because provisions are needed to address this common type of check-out aisles.		
BALLOT COMMENT 1- FIRST DRAFT: Proponent: Williams, Gilliland, WABO		
Desired Action: Affirmative with comment		
Modification: Further modify as follows: **904.4.3 Self-service check-out counters.** Where self-service check-out counters are provided, the check-out counter surface and built-in scanner shall be 34 inches (864 mm) maximum in height above the floor. The operable parts, and the operable parts of touch screens shall be located ~~48 inches (1219 mm) maximum above the floor~~ within reach ranges in accordance with Section 308. Key pads shall comply with Sections 707.5 and 707.6.		
Reason: The original proposal sets a maximum height of 48" for operable parts and the operable height of touch screens. This 48"maximum height correlates with the high side reach range maximum specified in Section 308.3.2 where the reach depth over the obstruction (most likely a scanner) is 10" maximum. 308.3.2 also sets a 46" maximum high side reach range where the reach depth over the obstruction is over 10". However, the original proposal doesn't account for the impact of an obstruction with a reach depth that exceeds 10" on the optimal height of the operable parts or the operable height of the touchscreen. In addition, the maximum reach depth over the obstruction could theoretically be more than 24" in depth since no maximum reach depth is specified. The addition of a reference to 308 aligns the placement of operable parts and the operable parts of touch screens with generally accepted reach ranges already established in A117.1. The assumption often is that these self-service checkout counters will always be accessed using a parallel approach with a side reach. Adding a general reference to 308 Reach Ranges allows for an increase in the variety of configurations of the self-service check-out counter using accepted reach ranges.		
Committee decision: BC1 AS and PC1	***Committee Vote at Meeting: BC1 21-1; PC1 editorial***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		
Committee Reason: BC1 - The revision would address both unobstructed and obstructed reach to the touch screen.		
BALLOT COMMENT- SECOND DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
FINAL ACTION: Modification (if any):		
Committee Reason:		

09-05 – 2021 overview

Proposal number	Proponent	Standard Sections	Committee Actions	Mtg. Date	Notes; Groups; groupings
09-05	Paarlberg	908(New)	AS–18-12-1	4-21-2022 10-26-23 7-18-24 8-1-24	Final Action AM PC3 and PC3 reconsideration

Comment	Proponent	Requested Action	Committee Action	Mtg. Date	Notes; Groups; groupings
BC1	Pace, HUD	Affirmative	**NA**	10-26-23	
PC1	Terminology	AM	**NA**		This proposal was errata
PC2	Stratton	AM	**NA** **AS 17-1-2**	10-26-23 7-18-24	
PC3	Gilliland, Williams	AM	AM 23-5-3	10-26-23	
PC3 reconsideration	Mazz	AFM	**AFM** Part 1 AS 18-1-4; Part 2 AS 2-21-0	8-1-24	

BC= Ballot Comment, PC= Public comment, **Bold Comment number** is proposed revision below

09-05 – 2021
908(New)

Proponent: Kimberly Paarlberg, International Code Council

Add new text as follows:

SECTION 908
TRASH OR LINEN CHUTES

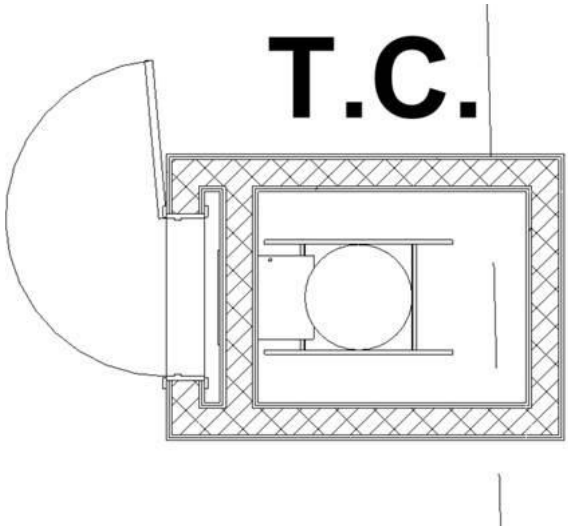
908.1 General. Waste, recycling and linen chutes serving Accessible and Type A units are required to be on an accessible route and comply with Section 908.2 through 908.4.

908.2 Doors to trash or linen chutes. Doors to waste, recycling and linen chutes rooms or trash or linen chute access panels shall comply with 404.

908.3 Trash or linen chute access panels. Access panels for waste, recycling and linen chutes shall have hardware complying with 404.2.6. The access panel opening forces shall have the minimum opening force allowable by the scoping provisions adopted by the appropriate administrative authority.

908.4 Room requirements. Where there is a room in front of the access panel for waste, recycling or linen chutes, a turning space shall be provided in the room and maneuvering clearances shall be provided on both sides of the door. Where the access panel for the waste, recycling or linen chute is located behind a corridor door, the door shall have a magnetic hold open that allows for automatic-closing upon the detection of smoke.

REASON: The purpose of this proposal is to provide technical criteria for accessibility for trash chutes and linen chutes. Since these are vertical shafts, the walls are required to be fire resistance rated. Both the door to the access the chute, and the door to the chute itself are required to be fire resistance rated. That requires closures and latches on the door.



2021 IBC
713.13 Waste, recycling and linen chutes and incinerator rooms. Waste, recycling and linen chutes shall comply with the provisions of NFPA 82, Chapter 6 and shall meet the requirements of Sections 712 and 713.13.1 through 713.13.6. Incinerator rooms shall meet the provisions of Sections 713.13.4 and 713.13.5.
Exception: Chutes serving and contained within a single *dwelling unit.*

713.13.1 Waste, recycling and linen chute enclosures. A *shaft enclosure* containing a recycling, waste or linen chute shall not be used for any other purpose and shall be enclosed in accordance with Section 713.4. A *shaft enclosure* shall be permitted to contain recycling and waste chutes. Openings into the *shaft*, from access rooms and discharge rooms, shall be protected in accordance with
this section and Section 716. Openings into chutes shall not be located in *corridors*. Doors into chutes shall be *self-closing*. Discharge doors shall be self-or automatic closing upon the actuation of a smoke detector in accordance with Section 716.2.6.6, except that heat-activated closing devices shall be permitted between the *shaft* and the discharge room.

713.13.2 Materials. A *shaft enclosure* containing a waste, recycling, or linen chute shall be constructed of materials as permitted by the building type of construction.

713.13.3 Chute access rooms. Access openings for waste, recycling or linen chutes shall be located in rooms or compartments enclosed by not less than 1-hour *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 711, or both. Openings into the access rooms shall be protected by opening protectives having a *fire protection rating* of not less than 3/4 hour. Doors shall be self- or automatic-closing upon the detection of smoke in accordance with Section 716.2.6.6. The room or compartment shall be configured to allow the access door to the room or compartment to close and latch with the access panel to the chute in any position.

Committee Action: 18-12-1 AS

REPORT OF HEARING:
Modification (if any):

Committee Reason: This is a common issue that needs to be moved forward. The proposal provides technical criteria for accessibility for trash chutes and linen chutes. Since these are vertical shafts, the walls are required to be fire resistance rated. Both the door to the access the chute, and the door to the chute itself are required to be fire resistance rated, and that requires closures and latches on the door.

908-PAARLBERG.doc

09-05 – 2021 Ballot Comments

BALLOT COMMENT 1- FIRST DRAFT: *Proponent:* **Rex Pace representing HUD**
Desired Action: Affirmative with Comment
Modification:
Reason: Believe that the specific requirements for trash or linen chutes are helpful and address many questions that arise. However, it was still not clear from the requirements alone if a closet containing only a trash chute would have to provide a turning space. Assume the intent was not to require this, and one would apply the requirements for clear space/clearances as appropriate for operable parts and doors. Please discuss in commentary.

09-05 – 2021 Public Comment 1

904.6

Proponent: Marsha Mazz, representing the Terminology Task Group

Further revise as follows:

SECTION 904
SALES AND SERVICE COUNTERS AND WINDOWS

904.6 Security glazing. Where counters or teller windows have security glazing to separate personnel from the public, a method to facilitate voice communication shall be provided. Telephone handset devices, if provided, shall comply with Section 704.3. Where provided, ~~operable parts~~ controls of a voice communication system shall comply with ~~Section 309~~ operable parts.

REASON: This is part of a proposal from the Terminology task group to define the building blocks so that a reference is not required. This public comment is included here because it was part of new text. Please see the complete proposal for additional information.

Committee Action for Public Comment 1: Errata, not association with this proposal. See E-03.

REPORT OF HEARING:

Modification (if any):

Committee Reason:

09-05 Terminology.doc

09-05 – 2021 Public Comment 2
102.1

Proponent: Peter Stratton, Steven Winter Associates, Inc.

Further revise as follows:

SECTION 908
TRASH OR LINEN CHUTES

908.1 General. Waste, recycling and linen chutes ~~serving Accessible and Type A units~~ are required to be on an accessible route and comply with Section 908.2 through 908.4.

REASON: Trash chutes service all units and not just Type A and Accessible.

Committee Action for Public Comment 2: AS 17-1-2

REPORT OF HEARING:

Modification (if any):

Committee Reason: Consistent with PC3

09-05 Stratton.doc

09-05 – 2021 Public Comment 3
102.1

Proponent: Jenifer Gilliland and Richard Williams, Washington Association of Building Officials (WABO), Kimberly Paarlberg, ICC

Further revise as follows:

SECTION 908
TRASH OR LINEN CHUTES

908.1 General. Waste, recycling and linen chutes ~~serving Accessible and Type A units~~ are required to be on an accessible route and comply with Section 908.2 through 908.4.

908.2 Doors ~~to trash or linen chutes~~. Doors to ~~waste, recycling and linen chutes~~ rooms that provide access to the chute ~~or trash or linen chute access panels~~ shall comply with Section 404. Where the access panel for the chute is located behind a corridor door, the door shall comply with Section 404 on the corridor side, shall have a magnetic hold open that allows for automatic-closing upon the detection of smoke.

908.2 Doors ~~to trash or linen chutes~~. Doors to ~~waste, recycling and linen chutes~~ rooms that provide access to the chute ~~or trash or linen chute access panels~~ shall comply with Section 404. Where the access panel for the chute is located behind a corridor door, the door shall comply with Section 404 on the corridor side, and shall have a magnetic hold open that allows for automatic-closing upon the detection of smoke.

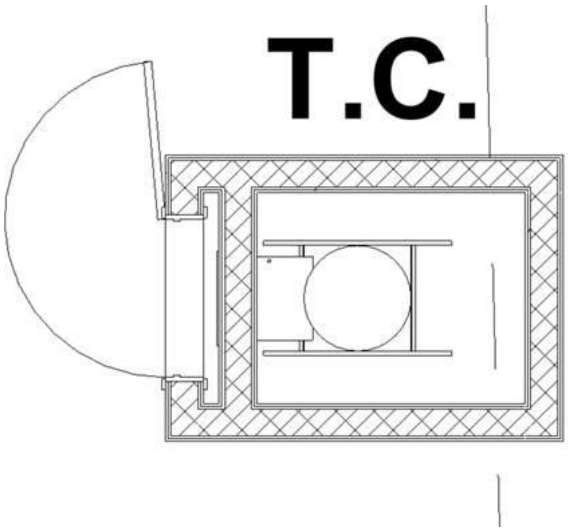


Figure 908.2 Door and access panel
(Drawing should include maneuvering clearance at outside and indication of the hold open devices.)

908.3 Trash or linen chute access panels. Access panels for waste, recycling and linen chutes shall have hardware complying with 404.2.6. The access panel opening forces shall have the minimum opening force allowable by the scoping provisions adopted by the appropriate administrative authority.

908.4 Room requirements. Where there is a room in front of the access panel for waste, recycling or linen chutes, a turning space shall be provided in the room and maneuvering clearances shall be provided on both sides of the door. ~~Where the access panel for the waste, recycling or linen chute is located behind a corridor door, the door shall have a magnetic hold open that allows for automatic closing upon the detection of smoke.~~

REASON: While waste, recycling and linen chutes are typically found in R occupancies, it is not clear why the requirements in 908.1 are limited to Accessible and Type A units. These chutes are also found in offices, factories, etc. Should employees and others who use these building features be denied their use on an accessible route just because it is not in a residential building? This modification eliminates language limiting application of the requirements to just Accessible and Type A units.

The revision to Section 908.2 should read as a standalone section address all the requirements for doors. IBC Section 713.13 and NFPA 82 require a rated room or rated door in front of the chute access. Section 908.3 addresses trash or linen chute access panels. A figure would add clarity.

Section 908.1 contains scoping language requiring waste, recycling, and linen chutes to be on an accessible route. I does not have to be repeated.

Committee Action for Public Comment 3: AM 23-5-3

REPORT OF HEARING:

Modification (if any):

Committee Reason: The trash chute requirements are needed in occupancies other than residential. The hold open on the door in Section 908.2 addresses the fire prevention concerns in NFPA 82 and improves access by providing a way for the door to be held open while someone puts items in the chutes. The reorganization provides clarity by grouping door requirements together.

09-05 WABO.doc

09-05 – 2021 Public Comment 3 reconsideration
908

Modification: from Marsh Mazz United Spinal Association

908.2 Doors. Doors to rooms that provide access to ~~the~~ chutes shall comply with Section 404. Where a corridor door that is not for user passage conceals an ~~the~~ access panel for the chute ~~is located behind a corridor door~~, the door shall comply with Section 404 on the corridor side and, shall have a magnetic hold open that allows for automatic-closing upon the detection of smoke.

908.3 ~~Trash or linen~~ Chute access panels and chutes. Access panels for ~~waste, recycling and linen~~ chutes shall have hardware complying with 404.2.6. The access panel opening forces shall have the minimum opening force allowable by the scoping provisions adopted by the appropriate administrative authority. Chutes shall provide a clear floor space for a parallel approach.

Committee Action for Public Comment 3 reconsideration: Part 1 AS 18-1-4; Part 2 AS 2-21-0

REPORT OF HEARING:

Modification (if any):

908.3 Chute access panels ~~and chutes~~. Access panels for chutes shall have hardware complying with 404.2.6. The access panel opening forces shall have the minimum opening force allowable by the scoping provisions adopted by the appropriate administrative authority. ~~Chutes shall provide a clear floor space for a parallel approach.~~

Committee Reason: The modifications are a clarification of which doors are being discussed. The committee felt that a front approach for a chute hatch will work. There was a concern that a

side approach could conflict with the NFPA requirements for hatch and door clearances, which are important fire safety features.

Committee Action for First Ballot:
AM by PC3 23-5-3; AM by PC3 reconsideration Part 1 AS 18-1-4; Part 2 AS 2-21-0

REPORT OF HEARING:

Modification (if any): See PC3 and reconsideration

Committee Reason: The trash chute requirements are needed in occupancies other than residential. The hold open on the door in Section 908.2 addresses the fire prevention concerns in NFPA 82 and improves access by providing a way for the door to be held open while someone puts items in the chutes. The reorganization provides clarity by grouping door requirements together.

Report for 09-05– 2021		
Committee decision: AS	***Committee Vote at Meeting: 18-12-1***	***Committee Vote on Ballot:39-1-1***
REPORT OF HEARING: Modification (if any):		
Committee Reason: This is a common issue that needs to be moved forward. The proposal provides technical criteria for accessibility for trash chutes and linen chutes. Since these are vertical shafts, the walls are required to be fire resistance rated. Both the door to the access the chute, and the door to the chute itself are required to be fire resistance rated, and that requires closures and latches on the door.		
BALLOT COMMENT 1- FIRST DRAFT: *Proponent:* **Rex Pace representing HUD**		
Desired Action: Affirmative with Comment		
Modification:		
Reason: Believe that the specific requirements for trash or linen chutes are helpful and address many questions that arise. However, it was still not clear from the requirements alone if a closet containing only a trash chute would have to provide a turning space. Assume the intent was not to require this, and one would apply the requirements for clear space/clearances as appropriate for operable parts and doors. Please discuss in commentary.		
Committee decision: AMPC3 and reconsideration	***Committee Vote at Meeting:*** PC3 23-5-3; PC3 reconsideration Part 1 AS 18-1-4; Part 2 AS 2-21-0	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any): See PC3 and PC3 reconsideration		
Committee Reason: PC3 -The trash chute requirements are needed in occupancies other than residential. The hold open on the door in Section 908.2 addresses the fire prevention concerns in NFPA 82 and improves access by providing a way for the door to be held open while someone puts items in the chutes. The reorganization provides clarity by grouping door requirements together. **PC3 reconsideration -** The modifications are a clarification of which doors are being discussed. The committee felt that a front approach for a chute hatch will work. There was a concern that a side approach could conflict with the NFPA requirements for hatch and door clearances, which are important fire safety features.		
BALLOT COMMENT- SECOND DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
FINAL ACTION: Modification (if any):		
Committee Reason:		

CHAPTER 10
RECREATION FACILITIES

10-01 – 2021 overview

Proposal number	Proponent	Standard Sections	Committee Actions	Mtg. Date	Notes; Groups; groupings
10-01	Paarlberg	1008.4.1.3.1	AS 24-3-2	3-2-2023 8-1-2024	Final Action AS

Comment	Proponent	Requested Action	Committee Action	Mtg. Date	Notes; Groups; groupings
PC1	Skulski	AM	D 24-0-1	8-1-2024	
PC2	Forsthoffer, Kinsley	D	AS 7-14-4 failed	8-1-2024	

BC= Ballot Comment, PC= Public comment, **Bold Comment number** is proposed revision below

10-01 – 2021
1008.4.1.3.1

Proponent: Kimberly Paarlberg, International Code Council

Revise as follows:

SECTION 1008
PLAY AREAS

1008.4.1.3 Ground surfaces. Ground surfaces on accessible routes, clear floor spaces, and turning spaces shall comply with Section 1008.4.1.3.

1008.4.1.3.1 Surface condition. Ground surfaces shall be stable, firm and slip resistant. Ground surfaces shall be inspected and maintained regularly and frequently to ensure continued compliance with this requirement. Artificial turf on the accessible route shall comply with Section 302.2.

1008.4.1.3.2 Use zones. Ground surfaces located within use zones shall comply with ASTM F 1292 listed in Section 106.2.10.

REASON: Jennifer Skulski suggested we address artificial turf.

Committee Action: As Submitted 24-3-2

REPORT OF HEARING:

Modification (if any):

Committee Reason: Requirements in Section 302.2 are appropriate for artificial turf where it is used as part of the accessible route in play areas. This would not be applied to artificial turf on sports fields.

1008.4.3-PAARLBERG.doc

10-01 – 2021 Public Comment 1
106.2, 1008.4.1.3.1

Proponent: Jennifer Skulski, Skulski Consulting LLC

Further revise as follows:

106.2 Documents.
106.2.12 Standard Specification for Impact Attenuation of Surfacing Materials Within the Use Zone of Playground Equipment. ASTM F 1292~~-13~~ 18e1(ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA, 19428-2959).

106.2.14 Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment. ASTM F 1951-21(ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA, 19428-2959).

SECTION 1008
PLAY AREAS

1008.4.1.3 Ground surfaces. Ground surfaces on accessible routes, clear floor spaces, and turning spaces shall comply with Section 1008.4.1.3.

1008.4.1.3.1 Surface condition. Ground surfaces shall be stable, firm and slip resistant. Ground surfaces shall be inspected and maintained regularly and frequently to ensure continued compliance with this requirement. ~~Artificial turf on the accessible route shall comply with Section 302.2.~~ Ground surfaces shall comply with ASTM F 1951 listed in Section 106.2.14.

1008.4.1.3.2 Use zones. Ground surfaces located within use zones shall comply with ASTM F 1292 listed in Section 106.2.12.

REASON: The ASTM F1951 Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment was updated in 2021 to include the technical provisions consistent with the 2010 Standards for Accessible Design. The updated F1951-21 standard includes technical provisions for the accessible route including slope, cross slope, openings, and changes in level. Commonly referenced as the "wheelchair work method," the F1951-21 standard also requires in Section 5.5 that "The test used to determine accessibility of materials specified for use in a playground shall have been conducted no more than five years prior to the date of installation of the playground surface." As a best practice, playground owners are encouraged to collect documentation of performance from playground surface manufacturers during the bid process. It is hoped that these updates to F1951-21 will eliminate misinterpretation of the standard and misuse of the test method while setting performance criteria for playground surfaces that are more accessible to people with disabilities.

As the task group chair to F1951-21, I would request that the ANSI A117.1 committee consider updating the playground surface condition requirement such that it is consistent with the 2010 ADA Standards for Accessible Design and reference the newer 2021 ASTM F1951 standard.

For some further explanation -
1951 is the wheelchair work method test that applies to the accessible route (which may include the use zone) The accessible route is only required to the accessible play components – to the points of entry and egress. So if there are 3 swings, the accessible route only has to go to one swing.

1292 is the "head drop test" for impact attenuation – it only applies to the use zone. 1292 has to apply under all 3 swings

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Committee Action for Public Comment 1: D 24-0-1

REPORT OF HEARING:

Modification (if any):

Committee Reason: The proposal was disapproved because the proponent felt that there were still questions about the correct application of ASTM F 1951 for artificial turf and other ground surfaces.

10-01 Skulski.doc

10-01 – 2021 Public Comment 2

1008.4.1.3.1

Proponent: David Forsthoffer, GoGreen Synthetic Turf; Kevin Kinsley, Forever Lawn

Request disapproval.

REASON:
Forsthoffer and Kinsley: Synthetic (artificial) turf is used for numerous installations including sports fields, playgrounds, outdoor landscape, pet areas, and service animal relief areas. While there continues to be discussion among the synthetic turf industry about the application of 302.2 and the maximum carpet height to synthetic turf, it is not appropriate to specify the product in this proposed addition to 1008.4.1.3.1. ICC A117.1 does not specifically address any products or materials for surfaces such as concrete, asphalt, gravel, sane, crushed stone, wood boards, marble, brick, pavers, wood plank, laminate floor, tile, cork, poured in place rubber, engineered wood fiver, wood chips, pea gravel, ceramic tile, bamboo or a myriad of others. There is no perfect surface material or system. If one type of surface or product is called out in the standards, it is necessary to address ALL different materials, products and surface systems. As such, we encourage the committee to refrain from addressing specific products and categories of products until such time that the committee fully addressed objective measurements for floor and ground surface in Section 302.

Committee Action for Public Comment 2: AS 7-11-4 – Final Action is D

REPORT OF HEARING:

Modification (if any):

Committee Reason: While how to apply Section 302.2 to artificial turf is subjective when infill is present, this reference would provide appropriate guidance until something more specific is studied and provided. This should be addressed in all locations where it occurs along a required accessible route, not just in playgrounds. People are using this in outdoor dining areas, animal relief areas in airports, occupied roofs, etc.

10-01

Forsthoffer.doc; 10-01 Kinsley.doc

Committee Action for First Ballot:
PC1 D 24-0-1
PC2 AS 7-11-4 – Final Action is D

REPORT OF HEARING:

Modification (if any):

Committee Reason:
PC1 The proposal was disapproved because the proponent felt that there were still questions about the correct application of ASTM F 1951 for artificial turf and other ground surfaces.

PC2 While how to apply Section 302.2 to artificial turf is subjective when infill is present, this reference would provide appropriate guidance until something more specific is studied and

provided. This should be addressed in all locations where it occurs along a required accessible route, not just in playgrounds. People are using this in outdoor dining areas, animal relief areas in airports, occupied roofs, etc.

Report for *10-01– 2021*		
Committee decision: AS	***Committee Vote at Meeting: 24-3-2***	***Committee Vote on Ballot: 43-0-0***
REPORT OF HEARING: Modification (if any):		
Committee Reason: Requirements in Section 302.2 are appropriate for artificial turf where it is used as part of the accessible route in play areas. This would not be applied to artificial turf on sports fields.		
BALLOT COMMENT- FIRST DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: D	***Committee Vote at Meeting:*** ***PC1 D 24-0-2*** ***PC2 AS 7-11-4 failed***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		
Committee Reason: **PC1** The proposal was disapproved because the proponent felt that there were still questions about the correct application of ASTM F 1951 for artificial turf and other ground surfaces. **PC2** While how to apply Section 302.2 to artificial turf is subjective when infill is present, this reference would provide appropriate guidance until something more specific is studied and provided. This should be addressed in all locations where it occurs along a required accessible route, not just in playgrounds. People are using this in outdoor dining areas, animal relief areas in airports, occupied roofs, etc.		
BALLOT COMMENT- SECOND DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
FINAL ACTION: Modification (if any):		
Committee Reason:		

10-03 – 2021 overview

Proposal number	Proponent	Standard Sections	Committee Actions	Mtg. Date	Notes; Groups; groupings
10-03	Paarlberg	1009, 1009.1, 1009.1.1, 1009.1.3	AS 23-6-1	3-2-2023 7-18-2024	Final action AMBC1

Comment	Proponent	Requested Action	Committee Action	Mtg. Date	Notes; Groups; groupings
BC1	Paarlberg, ICC	Affirmative	AS 21-0-1	7-18-2024	

BC= Ballot Comment, PC= Public comment, **Bold Comment number** is proposed revision below

10-03 – 2021

1009, 1009.1, 1009.1.1, 1009.1.3

Proponent: Kimberly Paarlberg, International Code Council

Revise as follows:

SECTION 1009
SWIMMING POOLS, WADING POOLS, <u>COLD BATHS,</u> HOT TUBS AND SPAS

1009.1 General. Swimming pools, wading pools, <u>cold baths,</u> hot tubs and spas shall comply with Section 1009.

1009.1.1 Swimming pools. At least two accessible means of entry shall be provided for swimming pools. Accessible means of entry shall be swimming pool lifts complying with Section 1009.2; sloped entries complying with Section 1009.3; transfer walls complying with Section 1009.4, transfer systems complying with Section 1009.5; and pool stairs complying with Section 1009.6. At least one accessible means of entry provided shall comply with Section 1009.2 or 1009.3

Exceptions:

1. Where a swimming pool has less than 300 linear feet (91 m) of swimming pool wall, no more than one accessible means of entry shall be required.
2. Wave action pools, leisure rivers, sand bottom pools, and other pools where user access is limited to one area shall not be required to provide more than one accessible means of entry provided that the accessible means of entry is a swimming pool lift complying with Section 1009.2, a sloped entry complying with Section 1009.3, or a transfer system complying with Section 1009.5.
3. <u>A catch pool</u> ~~Catch pools~~ or a designated section of a pool used as a terminus for a water slide flume shall not be required to provide an accessible means of entry, provided that a portion of the catch pool edge is on an accessible route <u>or, where the</u>

area at the catch pool edge is restricted to use by staff and persons exiting the pool, and an accessible route serves the gate or area where participants discharge from the activity.

1009.1.2 Wading pools. At least one sloped entry complying with Section 1009.3 shall be provided in wading pools.

1009.1.3 Cold baths, Hot tubs and spas. At least one accessible means of entry shall be provided for cold baths, hot tubs and spas. Accessible means of entry shall comply with swimming pool lifts complying with Section 1009.2; transfer walls complying with Section 1009.4; or transfer systems complying with Section 1009.5.

Exception: Where cold baths, hot tubs or spas are provided in a cluster, no more than 5 percent, but not less than one cold bath, hot tub or spa in each cluster shall be required to comply with Section 1009.1.3.

REASON: The change to the title of the section and Section 1009.1.3 are coordination with IBC code change E134-18 by Gene Boecker.
His reason was:
The proposal includes two changes: clarification that the intent is to have access to at least one of each type of aquatic element and the addition of cold baths.

As written, it could be interpreted that if a cluster included a hot tub and a spa as a cluster, access would only be required to one of those although they are different types of elements - with bubbles and without. The change makes the language consistent with the intent of the federal ADA.

The second is a change to include cold baths as another type. This is a different thermal experience and should be included, consistent with the intent of the ADA for equal access.

The change to 1009.1.1 is coordination with IBC code change E144-21 submitted by Marsha Mazz. *Her reason was*:

The "pool edge" of a catch pool serving a water slide is often located above ground on a platform. The purpose of the accessible route requirement to the "pool edge" is to ensure that parents and others with disabilities can meet-up with their parties after they disembark from the ride. This is particularly true for children who need to be under their parent's supervision once they exit the pool. Generally, persons entering and exiting amusement rides are surveilled when inside the pay area. So, when the pool edge is on a platform, an accessible route to the exit point should suffice.

Note: This interpretation does not represent a clearly settled matter under the 2010 ADA Standards. However, we would question the value of a ramp up to a pool edge on a raised platform given that the ride, itself, need not provide an accessible means of entry for a person with a mobility disability. Furthermore, people can often exit a catch pool at multiple points - nothing in the current provision ensures that the location of the accessible route is exactly the same place where any one rider will exit.

Committee Action: As Submitted 23-6-1

REPORT OF HEARING:

Modification (if any):

Committee Reason: This is a coordination item with the scoping language in the IBC. Some of the committee felt a general description would be better than a list that could get longer over time.

1008.4.3-PAARLBERG.doc

10-03 – 2021 Ballot Comments

BALLOT 1 COMMENT- FIRST DRAFT:
Proponent: Kimberly Paarlberg, ICC
Desired Action: Affirmative with comment
Modification: See Ballot Comment 1

10-03 – 2021 Ballot Comment 1

107.5, 1009, 1009.1, 1009.1.3

Proponent: Kimberly Paarlberg, ICC

Revise as follows:

SPA. A product intended for the immersion of persons in temperature-controlled water circulated in a closed system, and not intended to be drained and filled with each use.

SECTION 1009
SWIMMING POOLS, WADING POOLS, ~~COLD BATHS, HOT TUBS~~ AND SPAS

1009.1 General. Swimming pools, wading pools, ~~cold baths, hot tubs~~ and spas shall comply with Section 1009.

1009.1.1 Swimming pools. At least two accessible means of entry shall be provided for swimming pools. Accessible means of entry shall be swimming pool lifts complying with Section 1009.2; sloped entries complying with Section 1009.3; transfer walls complying with Section 1009.4, transfer systems complying with Section 1009.5; and pool stairs complying with Section 1009.6. At least one accessible means of entry provided shall comply with Section 1009.2 or 1009.3

Exceptions:

1. Where a swimming pool has less than 300 linear feet (91 m) of swimming pool wall, no more than one accessible means of entry shall be required.
2. Wave action pools, leisure rivers, sand bottom pools, and other pools where user access is limited to one area shall not be required to provide more than one accessible means of

entry provided that the accessible means of entry is a swimming pool lift complying with Section 1009.2, a sloped entry complying with Section 1009.3, or a transfer system complying with Section 1009.5.

3. A catch pool or a designated section of a pool used as a terminus for a water slide flume shall not be required to provide an accessible means of entry, provided that a portion of the catch pool edge is on an accessible route or, where the area at the catch pool edge is restricted to use by staff and persons exiting the pool, and an accessible route serves the gate or area where participants discharge from the activity.

1009.1.2 Wading pools. At least one sloped entry complying with Section 1009.3 shall be provided in wading pools.

1009.1.3 ~~Cold baths, Hot tubs and~~ spas. At least one accessible means of entry shall be provided for ~~cold baths, hot tubs and~~ spas. Accessible means of entry shall comply with swimming pool lifts complying with Section 1009.2; transfer walls complying with Section 1009.4; or transfer systems complying with Section 1009.5.

Exception: Where ~~cold baths, hot tubs or~~ spas are provided in a cluster, no more than 5 percent, but not less than one ~~cold bath, hot tub or~~ of each type of spa in each cluster shall be required to comply with Section 1009.1.3.

REASON: There is a code change being proposed to the IBC for the next edition to define 'spa' as all types, so the laundry list will not need to add the new kinds appearing – tempered water, salt water, natural spring – in addition to hot and cold. This will be consistent with the committees question about laundry lists.

Committee Action: AS 21-0-1

REPORT OF HEARING:

Modification (if any):

Committee Reason: This definition will be consistent with the I-codes. The definition vs. a laundry list eliminates someone claiming their type of spa is not listed.

10-03

Paarlberg.doc

Committee Action for First Ballot: BC1 AS 21-0-1

REPORT OF HEARING:

Modification (if any):

Committee Reason: This definition will be consistent with the I-codes. The definition vs. a laundry list eliminates someone claiming their type of spa is not listed.

Report for *10-03– 2021*		
Committee decision: AS	***Committee Vote at Meeting: 23-6-1***	***Committee Vote on Ballot:43-1-1***
REPORT OF HEARING: Modification (if any):		
Committee Reason: This is a coordination item with the scoping language in the IBC. Some of the committee felt a general description would be better than a list that could get longer over time.		
BALLOT COMMENT 1- FIRST DRAFT: Proponent: Kimberly Paarlberg, ICC		
Desired Action: Affirmative with comment		

Modification:

Revise as follows:

SPA. A product intended for the immersion of persons in temperature-controlled water circulated in a closed system, and not intended to be drained and filled with each use.

SECTION 1009
SWIMMING POOLS, WADING POOLS, ~~COLD BATHS, HOT TUBS~~ AND SPAS

1009.1 General. Swimming pools, wading pools, ~~cold baths, hot tubs~~ and spas shall comply with Section 1009.

1009.1.1 Swimming pools. At least two accessible means of entry shall be provided for swimming pools. Accessible means of entry shall be swimming pool lifts complying with Section 1009.2; sloped entries complying with Section 1009.3; transfer walls complying with Section 1009.4, transfer systems complying with Section 1009.5; and pool stairs complying with Section 1009.6. At least one accessible means of entry provided shall comply with Section 1009.2 or 1009.3

Exceptions:

1. Where a swimming pool has less than 300 linear feet (91 m) of swimming pool wall, no more than one accessible means of entry shall be required.
2. Wave action pools, leisure rivers, sand bottom pools, and other pools where user access is limited to one area shall not be required to provide more than one accessible means of entry provided that the accessible means of entry is a swimming pool lift complying with Section 1009.2, a sloped entry complying with Section 1009.3, or a transfer system complying with Section 1009.5.
3. A catch pool or a designated section of a pool used as a terminus for a water slide flume shall not be required to provide an accessible means of entry, provided that a portion of the catch pool edge is on an accessible route or, where the area at the catch pool edge is restricted to use by staff and persons exiting the pool, and an accessible route serves the gate or area where participants discharge from the activity.

1009.1.2 Wading pools. At least one sloped entry complying with Section 1009.3 shall be provided in wading pools.

1009.1.3 ~~Cold baths, Hot tubs and~~ spas. At least one accessible means of entry shall be provided for ~~cold baths, hot tubs and~~ spas. Accessible means of entry shall comply with swimming pool lifts complying with Section 1009.2; transfer walls complying with Section 1009.4; or transfer systems complying with Section 1009.5.

Exception: Where ~~cold baths, hot tubs or~~ spas are provided in a cluster, no more than 5 percent, but not less than one ~~cold bath, hot tub or~~ of each type of spa in each cluster shall be required to comply with Section 1009.1.3.

Reason: There is a code change being proposed to the IBC for the next edition to define 'spa' as all types, so the laundry list will not need to add the new kinds appearing – tempered water, salt water, natural spring – in addition to hot and cold. This will be consistent with the committees question about laundry lists.

Committee decision: BC1 AS	***Committee Vote at Meeting: 21-0-1***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		
Committee Reason: This definition will be consistent with the I-codes. The definition vs. a laundry list eliminates someone claiming their type of spa is not listed.		
BALLOT COMMENT- SECOND DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
FINAL ACTION: Modification (if any):		
Committee Reason:		

10-05 – 2021 overview

Proposal number	Proponent	Standard Sections	Committee Actions	Mtg. Date	Notes; Groups; groupings
10-05	Boecker	1009.2.2	AS 21-1-1	3-2-2023 7-18-2024	Final Action AM BC1

Comment	Proponent	Requested Action	Committee Action	Mtg. Date	Notes; Groups; groupings
BC1	Paarlberg, ICC	Negative	AM 21-1-1	7-18-2024	

BC= Ballot Comment, PC= Public comment, **Bold Comment number** is proposed revision below

10-05 – 2021
1009.2.2

Proponent: Gene Boecker, Code Consultants, Inc.

Revise as follows:

SECTION 1009
SWIMMING POOLS, WADING POOLS, HOT TUBS AND SPAS

1009.2.2 Seat location. In the raised position, the centerline of the seat shall be located over the deck and 16 inches (405 mm) minimum from the edge of the pool. The deck surface between the centerline of the seat and the pool edge shall have a slope not steeper than 1:48.

Exception: In exterior locations, changes in level complying with Section 303.3 shall be permitted between the centerline of the seat and the pool edge to limit rainwater from entering the pool area.

REASON: Although exterior deck should be designed to slope away from the pool to limit rainwater intrusion, in many places the rate of rainfall is insufficient to prevent rainwater from doing that very thing. Rainwater dilutes that chemical treatment of the pool water and may render the pool unusable for a substantial period of time depending on the dilution. Whether the 1/2-inch change is already allowed or not is subject to opinion. Adding the exception makes it clear that the condition is acceptable as an added protection against rainwater intrusion.

Committee Action: As Submitted 21-1-1

REPORT OF HEARING:

Modification (if any):

Committee Reason: Adding the exception makes it clear that a raised lip is acceptable as an added protection against rainwater intrusion along pools.

1009.2.2-BOECKER.doc

10-05 – 2021 Ballot Comments

BALLOT COMMENT 1- FIRST DRAFT:
Proponent: Kimberly Paarlberg, ICC
Desired Action: Negative with comment
Modification:
Reason: Request disapproval. The changes in level are applicable to the accessible route and the clear floor space at the lift. The location indicated is the space where the lift swings over. This area for slope and change so of level should be dealt with by pool experts in the ISPSC. We have no information on if this is adequate to keep the pool water safe and healthy for users.

Committee Action for First Ballot: D 9-13-1 (failed) AM 21-1-1

REPORT OF HEARING:
Modification:

1009.2.2 Seat location. In the raised position, the centerline of the seat shall be located over the deck and 16 inches (405 mm) minimum from the edge of the pool. The deck surface between the centerline of the seat and the pool edge shall have a slope not steeper than 1:48.

Exception: ~~In exterior locations,~~ changes in level complying with Section 303.3 shall be permitted between the centerline of the seat and the pool edge to limit ~~rain~~water from entering the pool area.

Committee Reason: Since the lift moves over the edge of the pool, a curb to prevent water on the pool deck from rain or other surfaces is not an obstruction for access. The exception was modified to provide additional flexibility.

Report for *10-05– 2021*		
Committee decision: AS	***Committee Vote at Meeting: 21-1-1***	***Committee Vote on Ballot: 43-1-1***
REPORT OF HEARING: Modification (if any):		
Committee Reason: Adding the exception makes it clear that a raised lip is acceptable as an added protection against rainwater intrusion along pools.		
BALLOT COMMENT 1- FIRST DRAFT: Proponent: Kimberly Paarlberg, ICC		
Desired Action: Negative with comment		
Modification:		
Reason: Request disapproval. The changes in level are applicable to the accessible route and the clear floor space at the lift. The location indicated is the space where the lift swings over. This area for slope and change so of level should be dealt with by pool experts in the ISPSC. We have no information on if this is adequate to keep the pool water safe and healthy for users.		
Committee decision: BC1 AM	***Committee Vote at Meeting: 21-1-1***	***Committee Vote on Ballot:***

Report for *10-05– 2021*		
REPORT OF HEARING – FIRST DRAFT		
Modification (if any): **1009.2.2 Seat location.** In the raised position, the centerline of the seat shall be located over the deck and 16 inches (405 mm) minimum from the edge of the pool. The deck surface between the centerline of the seat and the pool edge shall have a slope not steeper than 1:48. **Exception:** ~~In exterior locations,~~ changes in level complying with Section 303.3 shall be permitted between the centerline of the seat and the pool edge to limit ~~rain~~water from entering the pool area.		
Committee Reason: Since the lift moves over the edge of the pool, a curb to prevent water on the pool deck from rain or other surfaces is not an obstruction for access. The exception was modified to provide additional flexibility.		
BALLOT COMMENT- SECOND DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
FINAL ACTION: Modification (if any):		
Committee Reason:		

CHAPTER 11
DWELLING UNITS AND SLEEPING UNITS

11-03 – 2021 overview

Proposal number	Proponent	Standard Sections	Committee Actions	Mtg. Date	Notes; Groups; groupings
11-03	Paarlberg	1102.5	AS 13-7-5	3-16-2023 7-18-2024	Final Action D

Comment	Proponent	Requested Action	Committee Action	Mtg. Date	Notes; Groups; groupings
BC1	Toji, HLAA	Negative	D 12-7-4	7-18-2024	

BC= Ballot Comment, PC= Public comment, **Bold Comment number** is proposed revision below

11-03 – 2021
1102.5

Proponent: Kimberly Paarlberg, International Code Council

Revise as follows:

SECTION 1102
ACCESSIBLE UNITS

1102.5 Doors and doorways. The primary entrance door to the unit, and all other doorways intended for user passage, shall comply with Section 404.

Exceptions:

1. ~~Existing~~ ~~doors~~ Doors to hospital patient sleeping rooms shall be exempt from the requirement for space at the latch side provided the door is 44 inches (1120 mm) minimum in width.
2. In toilet rooms and bathrooms not required to comply with Section 1102.11.2, maneuvering clearances required by Section 404.2.3 shall not be required on the toilet room or bathroom side of the door.
3. A turning space between doors in a series as required by Section 404.2.5 is not required.
4. Storm and screen doors shall not be required to comply with Section 404.2.5.
5. Communicating doors between individual sleeping units shall not be required to comply with Section 404.2.5.

6. At other than the primary entrance door, where exterior space dimensions of balconies are less than the required maneuvering clearance, door maneuvering clearance is not required on the exterior side of the door.
7. The maneuvering clearances required by Section 404 shall not be required within a closet or pantry complying with Exception 2 of Section 1102.3.2.

REASON: The intent of this proposal is to coordinate requirements for hospital patient rooms with the 2010 ADA Exception to Section 404.2.4. The trade-offs here need to be considered. The extra width (44") of the door allows for additional space to operate the door if the door is closed. Hospitals typically need to design bathrooms that are not only accessible; but may allow for assisted toileting and bathing. The typical configuration of hospital rooms has the bathroom at the corridor side of the room. The extra space at the door would result in less space for the toilet rooms. In hospitals the staff needs to maintain direct supervision of patients, so doors are typically not closed. So the loss of the space in the bathroom for a maneuvering clearances that would very seldom, if ever, needed, is not a good trade off and actually could decease accessibility in the bathroom.

404.2.4 Maneuvering Clearances. Minimum maneuvering clearances at doors and gates shall comply with 404.2.4. Maneuvering clearances shall extend the full width of the doorway and the required latch side or hinge side clearance.

EXCEPTION: Entry doors to hospital patient rooms shall not be required to provide the clearance beyond the latch side of the door.

Committee Action: As Submitted 13-7-5

REPORT OF HEARING:

Modification (if any):

Committee Reason: This coordinates with the allowance for hospitals in 2010 ADA Standard. This takes into consideration the standard hospital room design and modular construction for patient sleeping rooms.

1102.5-PAARLBERG.doc

11-03 – 2021 Ballot Comments

BALLOT COMMENT 1- FIRST DRAFT: Proponent: Sharon Toji. HLAA
Desired Action: Negative with Comment
Modification:

Reason: Removing space on the latch side removes space for the room designation. Needs amendment to provide space. Signs are important for personnel and visitors.

Committee Action for First Ballot: D 12-7-4

REPORT OF HEARING:

Modification (if any):

Committee Reason: The committee felt that the need for general circulation during normal operation or for other emergencies should allow for maneuvering clearances in the rooms. There are no studies for maneuvering clearances at the wider doors. The committee wants to exceed ADA in this regard.

Report for *11-03– 2021*		
Committee decision: AS	***Committee Vote at Meeting: 13-7-5***	***Committee Vote on Ballot:42-1-2***
REPORT OF HEARING: Modification (if any):		
Committee Reason: This coordinates with the allowance for hospitals in 2010 ADA Standard. This takes into consideration the standard hospital room design and modular construction for patient sleeping rooms.		
BALLOT COMMENT 1- FIRST DRAFT: Proponent: Sharon Toji. HLAA		
Desired Action: Negative with Comment		
Modification:		
Reason: Removing space on the latch side removes space for the room designation. Needs amendment to provide space. Signs are important for personnel and visitors.		
Committee decision: D	***Committee Vote at Meeting: 12-7-4***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		
Committee Reason: The committee felt that the need for general circulation during normal operation or for other emergencies should allow for maneuvering clearances in the rooms. There are no studies for maneuvering clearances at the wider doors. The committee wants to exceed ADA in this regard.		
BALLOT COMMENT- SECOND DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
FINAL ACTION: Modification (if any):		
Committee Reason:		

11-04 – 2021 overview

Proposal number	Proponent	Standard Sections	Committee Actions	Mtg. Date	Notes; Groups; groupings
11-04	Boecker	1102.15.1, 1102.15.2	AS 25-0-1	3-16-2023 9-12-2024	Final Action is AMPC1

Comment	Proponent	Requested Action	Committee Action	Mtg. Date	Notes; Groups; groupings
PC1	Terminology	AM	Editorial	9-12-2024	Editorial

BC= Ballot Comment, PC= Public comment, **Bold Comment number** is proposed revision below

11-04 – 2021
1102.15.1, 1102.15.2

Proponent: Gene Boecker, Code Consultants, Inc.

Revise as follows:

SECTION 1102
ACCESSIBLE UNITS

1102.15.1 Clear floor space. A clear floor space complying with Section 305 shall be provided on both sides of the bed. The clear floor space shall be positioned for parallel approach to the side of the bed with the entire length of the wheelchair space positioned next to the mattress.

Exception: Where a single clear floor space positioned for parallel approach is provided between two beds, a clear floor space shall not be required on both sides of the bed.

1102.15.2 Bed frames. At least one bed shall be provided with an open bed frame. Where the exception to Section 1102.15.1 is used, both beds shall have open frames.

REASON: A transfer from a mobility device to the bed needs to happen next to the bed. However, the current text does not address where the wheelchair space needs to be. We have always argued that it needs to be adjacent to the mattress for its entire length, but the text does not specifically state that. Nor does the location address the reason for the open frame. This proposal addresses both.

The change to 1102.15.1 specifically requires the wheelchair space to have the long side adjacent to the mattress.

The change to 1102.15.2 is to correct an oversight. If the exception to 1102.15.1 is used and only one bed has an open frame, then the transfer to the bed may not be possible as intended. Requiring both beds to have an open frame will allow the option intended by the exception to 1102.15.1.

Committee Action: As submitted 25-0-1

REPORT OF HEARING:

Modification (if any):

Further revise as follows: Editorial

1102.15.1 Clear floor space. A clear floor space complying with Section 305 shall be provided on both sides of the bed. The clear floor space shall be positioned for parallel approach to the side of the bed with the entire length of the ~~wheelchair~~ clear floor space positioned next to the mattress.

Exception: Where a single clear floor space positioned for parallel approach is provided between two beds, a clear floor space shall not be required on both sides of the bed.

1102.15.2 Bed frames. At least one bed shall be provided with an open bed frame. Where the exception to Section 1102.15.1 is used, both beds shall have open frames.

Committee Reason: The change from 'wheelchair' to 'clear floor' is editorial and is consistent with the terminology in the rest of the section. This will clarify the location of the space for someone to transfer to the bed. The change to 1102.15.2 will allow for Hoyer lifts where only a center aisle is provided.

The reference to Section 305 for the clear floor space should be sent to the editorial committee to consider a consistent approach throughout the document.

1102.15-BOECKER.doc

11-04 – 2021 Public Comment 1

1102.15.1

Proponent: Marsha Mazz, representing the Terminology Task Group

Further revise as follows:

SECTION 1102
ACCESSIBLE UNITS

1102.15.1 Clear floor space. A clear floor space ~~complying with Section 305~~ shall be provided on both sides of the bed. The clear floor space shall be positioned for parallel approach to the side of the bed with the entire length of the clear floor space positioned next to the mattress.

Exception: Where a single clear floor space positioned for parallel approach is provided between two beds, a clear floor space shall not be required on both sides of the bed.

REASON: This is part of a proposal from the Terminology task group to define the building blocks so that a reference is not required. This public comment is included here because it was part of new text. Please see the complete proposal for additional information.

Committee Action for Public comment: Editorial

REPORT OF HEARING:

Modification (if any):

Committee Reason:

11-04 Terminology.doc

Committee Action for First Ballot: AMPC1

REPORT OF HEARING:

Modification (if any):

Committee Reason:

Report for *11-04– 2021*		
Committee decision: AS	***Committee Vote at Meeting: 25-0-1***	***Committee Vote on Ballot: 43-0-2***
REPORT OF HEARING: Modification (if any): **Further revise as follows: Editorial** **1102.15.1 Clear floor space.** A clear floor space complying with Section 305 shall be provided on both sides of the bed. The clear floor space shall be positioned for parallel approach to the side of the bed with the entire length of the ~~wheelchair~~ clear floor space positioned next to the mattress. **Exception:** Where a single clear floor space positioned for parallel approach is provided between two beds, a clear floor space shall not be required on both sides of the bed. **1102.15.2 Bed frames.** At least one bed shall be provided with an open bed frame. Where the exception to Section 1102.15.1 is used, both beds shall have open frames.		
Committee Reason: The change from 'wheelchair' to 'clear floor' is editorial and is consistent with the terminology in the rest of the section. This will clarify the location of the space for someone to transfer to the bed. The change to 1102.15.2 will allow for Hoyer lifts where only a center aisle is provided. The reference to Section 305 for the clear floor space should be sent to the editorial committee to consider a consistent approach throughout the document.		
BALLOT COMMENT- FIRST DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AMPC1	***Committee Vote at Meeting: Editorial***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		
Committee Reason:		
BALLOT COMMENT- SECOND DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
FINAL ACTION: Modification (if any):		
Committee Reason:		

11-05 – 2021 overview

Proposal number	Proponent	Standard Sections	Committee Actions	Mtg. Date	Notes; Groups; groupings
11-05	Boecker	1103.3.2	AS 24-0-3	3-16-2023 9-12-2024	Final Action AMPC1

Comment	Proponent	Requested Action	Committee Action	Mtg. Date	Notes; Groups; groupings
PC1	Terminology	AM	Editorial	9-12-2024	

BC= Ballot Comment, PC= Public comment, **Bold Comment number** is proposed revision below

11-05 – 2021
1103.3.2

Proponent: Gene Boecker, Code Consultants, Inc.

Revise as follows:

SECTION 1103
TYPE A UNITS

1103.3.2 Turning space. All rooms served by an accessible route shall provide a turning space complying with Section 304.

Exceptions:

1. A turning space is not required in toilet rooms and bathrooms that are not required to comply with Section 1103.11.2.
2. A turning space is not required within closets or pantries that are 48 inches (1220 mm) maximum in depth.

REASON: The added text points to the section of the standard where turning spaces are described. It is not intended to be a technical change. This is only for clarity. But since the turning space provision changed it would be helpful to let the reader know where to look for the requirement.

Committee Action: As Submitted 24-0-3

REPORT OF HEARING:

Modification (if any):

Committee Reason: This does add clarity to the requirement. The reference to Section 304 for the turning space should be sent to the editorial committee to consider a consistent approach throughout the document.

1103.3.2-BOECKER.doc

11-05 – 2021 Public Comment 1

1103.3.2

Proponent: Marsha Mazz, representing the Terminology Task Group

Further revise as follows:

SECTION 1103
TYPE A UNITS

1103.3.2 Turning space. All rooms served by an accessible route shall provide a turning space ~~complying with Section 304~~.

Exceptions:

1. A turning space is not required in toilet rooms and bathrooms that are not required to comply with Section 1103.11.2.
2. A turning space is not required within closets or pantries that are 48 inches (1220 mm) maximum in depth.

REASON: This is part of a proposal from the Terminology task group to define the building blocks so that a reference is not required. This public comment is included here because it was part of new text. Please see the complete proposal for additional information.

Committee Action for Public Comment 1: Editorial

REPORT OF HEARING:

Modification (if any):

Committee Reason:

Committee Action for First Ballot: Final Action AMPC1

REPORT OF HEARING:

Modification (if any):

Committee Reason:

Report for *11-05– 2021*		
Committee decision: AS	***Committee Vote at Meeting: 24-0-3***	***Committee Vote on Ballot:42-1-2***
REPORT OF HEARING: Modification (if any):		
Committee Reason: This does add clarity to the requirement. The reference to Section 304 for the turning space should be sent to the editorial committee to consider a consistent approach throughout the document.		
BALLOT COMMENT- FIRST DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AMPC1	***Committee Vote at Meeting: Editorial***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		
Committee Reason:		
BALLOT COMMENT- SECOND DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
FINAL ACTION: Modification (if any):		
Committee Reason:		

11-07 – 2021 overview

Proposal number	Proponent	Standard Sections	Committee Actions	Mtg. Date	Notes; Groups; groupings
11-07	Paarlberg	1103.9	AM 22-0-1	3-16-2023 11-9-2023	Reach over counters Final Action AFM by replacement PC that combined 03-10, 11-07 and 11-21

Comment	Proponent	Requested Action	Committee Action	Mtg. Date	Notes; Groups; groupings
PC1	Receptacle	AM	NA	11-9-2023	
PC2	Terminology	AM	NA	11-9-2023	Editorial

BC= Ballot Comment, PC= Public comment, **Bold Comment number** is proposed revision below

11-07 – 2021
1103.9

Proponent: Kimberly Paarlberg, International Code Council

Revise as follows:

SECTION 1103
TYPE A UNITS

1103.9 Operable parts. Lighting controls, electrical panelboards, electrical switches and receptacle outlets, environmental controls, appliance controls, plumbing fixture controls, and user controls for security or intercom systems shall comply with Section 309.

Exception: Within kitchens and bathrooms, lighting controls, electrical switches and receptacle outlets are permitted to be located over cabinets with countertops 36 inches (915 mm) maximum in height and $25^1/_2$ inches (650 mm) maximum in depth.

REASON: The purpose of this proposal is to allow for Type A units to use standard kitchen cabinets with an 'adaptable' area for the sink and work surface. This is the same allowance as currently in Type B units, Section 1104.9 Exception 8.

I believe this was always the intent for these units. While it is not 'adaptable' to lower all the cabinets, if someone is permanently living in a space, they can leave items plugged in or have extension cords or power strips. The lower counters cause an issue with the height of undercounter appliances like dishwashers and trash compactors; and create a 2" drop on each side of a standard range. Being able to slide pots off the cooking surface onto a countertop is an important safety feature for person with limited strength. The lower cabinets are also an additional cost over stock

cabinets. Let the money be spent on items that improve access, like pull out shelves or more drawers.

The argument of Type A units costing too much and residents objecting to the lower counters has resulted in Indiana totally deleting Type A units as a requirement in the state.

11-07 – 2021 Replacement
1103.9

Proponent: Reach Task Group

Replace and modify as follows:

1103.9 Operable Parts. Lighting controls, electrical panelboards, electrical switches, and receptacle outlets, environmental controls, appliance controls, plumbing fixture controls, and user controls for security intercom systems shall comply with Section 309.

> **Exception:** Receptacle outlets serving counters in kitchens shall be permitted to comply with Section 1103.9.1.

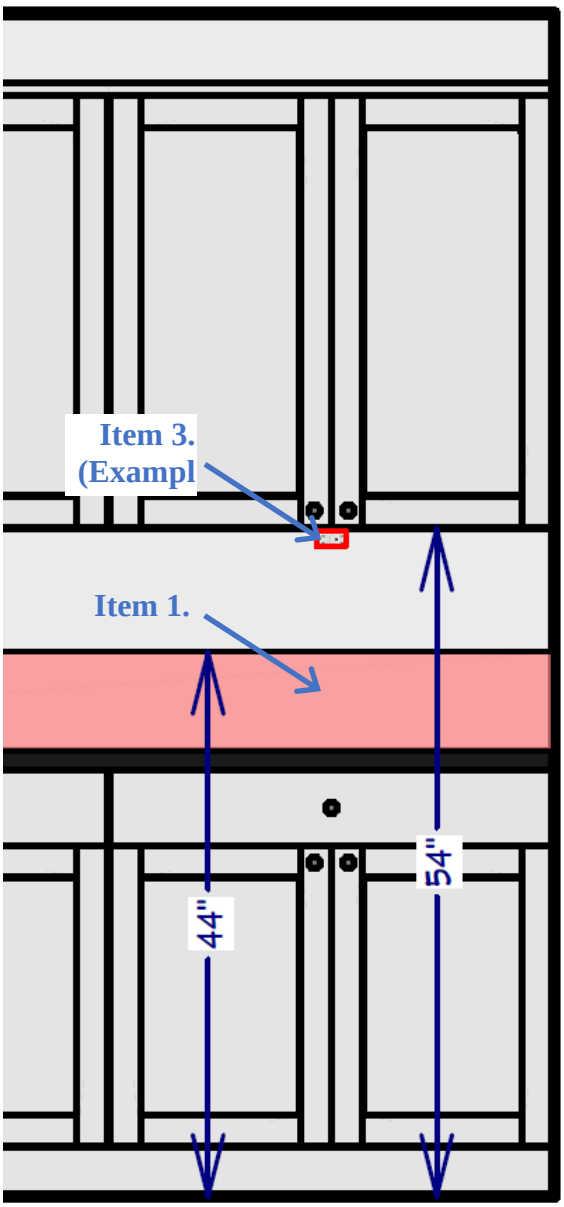
1103.9.1 Receptacle Outlets Serving Counters in Kitchens. In kitchens, at least two receptacle outlets serving counters shall comply with Section 309. Where a work surface is required by Section 1103.12.3, at least one such receptacle outlet shall be located at the work surface. All other receptacle outlets serving the counters shall comply with at least one of the following:

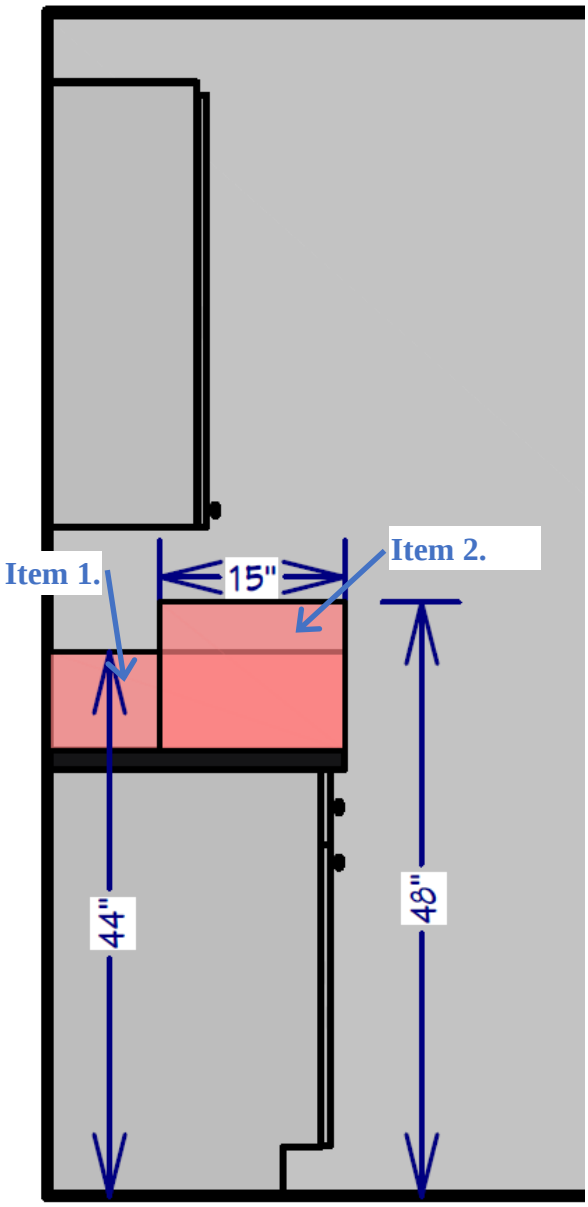
1. Operable parts of receptacle outlets shall be 44 inches maximum above the floor.
2. Operable parts of receptacle outlets located on the side wall over the counter shall be 48 inches maximum above the floor and 15 inches maximum from front edge of the counter.
3. Operable parts of receptacle outlets located at the face of the upper cabinets shall be 54 inches maximum from the floor and 15 inches maximum from the front edge of the counter and with a forward plug insertion.

Reason: This proposed change simplifies and streamlines the criteria for locating receptacle outlets in kitchens of Type A units.

If all items in the list are adopted, this change would allow four options for receptacle outlets serving kitchen counters in Type A units once the requirement for two accessible receptacle outlets is satisfied: (1) install them at 44 inches maximum above the floor, (2) install them on a side wall at the end of a counter run 15 inches maximum from the front of the counter edge at 48 inches maximum above the floor, (3) install them at the face of the upper cabinets no more than 15 inches from the front counter edge and 54 inches maximum above the floor, or (4) fully comply with the general reach range and clear floor space requirements of the standard. (See Figures 1. and 2. below.)

Fig. 1. Back Wall Elevation **Fig. 2. Side Wall Elevation**





The proposed revisions are:

- **New exception** is added to allow receptable outlets serving kitchen counters to comply with new Section 1103.9.1.
- **New Section 1103.9.1** requires at least two accessible receptacle outlets, fully complying with Section 309, to be installed, and at least one of those must be located at the work surface required by Section 1103.12.3.
- **A list of optional receptacle outlet locations** (described above) is available once the requirements of 1103.9.1 are met. The requirements in Section 309 do not need to be met by the receptacle outlets complying with one of the listed locations.

This revised approach eliminates the need to address/consider the following when locating receptacle outlets to serve kitchen counters:

- Counter height
- Reach depth across counter
- Clear floor space for each operable part
- Projection of appliances beyond adjacent counters

Coordination with Type B Units

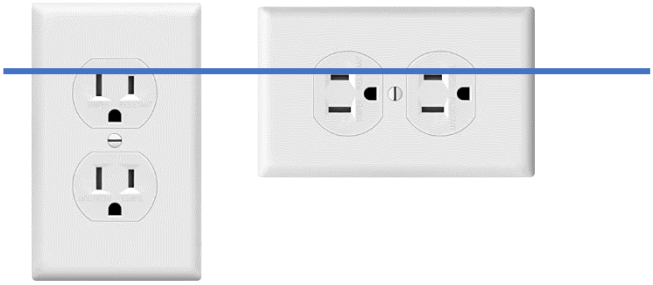
Regarding Items 1., 2. and 3.: The Residential Receptacles Task Group discussed adopting the same provisions in this list as are adopted for Type B units. Items 1., 2. and 3. in this change correspond with Items 12., 13. and 14. in the Task Group replacement proposal for Type B units respectively. Type A units will, therefore, be incrementally more restrictive by requiring two receptacle outlets to comply with Section 309.

Receptacle Outlet Height

- **Required:** Two receptacle outlets must fully comply with Section 309.
- **Item 1:** Setting a height of 44 inches allows a typical 36-inch-high counter with a typical 4-inch backsplash. Where taller backsplashes are desired, the receptacle outlets can be installed in the backsplash. The 44-inch height is 2 inches lower than the typical 46-inch obstructed side reach height that is typically currently used.
- **Item 2:** This option allows a slightly larger area to located receptacle outlets on a side wall at the end of a counter run compared to an unobstructed side reach. This could be useful where counter height prevents putting the receptacle outlet at or below 44 inches. For example, with a 42-inch-high bar top, an outlet could be located at 48 inches high (up 15-inch reach depth).
- **Item 3:** Bringing the receptacle outlet away from the back wall while increasing the height to a maximum of 54 inches allows roughly 50% of wheeled mobility users to reach it. Studies did not address the effort needed to insert or pull out a plug. However, researchers stated that a horizontal insertion was likely easier for more of the population than an upward insertion. For this reason, a forward plug insertion is required.

Measuring to Operable Parts

Based on its definition, an Operable Part can be "a component of an element used to … activate [or] deactivate … the element." The Task Group reasoned that the openings in the face of a receptacle that accept the prongs of a plug meet this definition. The intent is to measure to the highest opening of a receptacle, regardless of orientation, as depicted by the line in the following figure. If clarification of this intent is necessary, it should be done consistently for operable parts throughout the standard, not just within Type A unit criteria. Height above floor was considered more appropriate measurement than height above counter.



Counter Height and Depth: There are several public proposals seeking to specifically address or exempt appliance counter height and depth with regard to operable parts. The assumption is that the vast majority of installations, besides the required accessible work surface, will be typical 36-inch-high and 25-1/2-inch-deep counters. It is the intent to allow for such standard cabinetry.

Clear Floor Space/Appliance Projections

- There are several public proposals seeking to specifically address or exempt appliance projections with regard to operable parts.
- The group felt that neither Fair Housing nor the A117.1 Type A unit provisions were intended to use operable parts (and specifically, receptacle outlets) as a major factor in driving kitchen design.
- The standard does require specific clear floor spaces at each kitchen appliance, the kitchen sink, and 40-inch minimum (60-inch in U-shaped) overall kitchen clearance.
- The standard already eliminates the height and reach depth requirement above the counter, in order to allow standard kitchens (as permitted by Fair Housing).
- The task group feels that setting a more stringent height limit (44 inches) for Option 1 provides a benefit for many users.
- The complexity of requiring clear floor space for each receptacle outlet above kitchen counters, particularly if appliance projections are considered, would introduce a level of design and construction complexity that is not warranted.

The NEC and ICC A117.1

The Task Group spent a lot of effort considering how to coordinate requirements and terminology between the National Electrical Code and ICC A117.1. Discussions included the following points.

- The NEC provides the base requirements for receptacle outlets serving kitchen counters, including the minimum number allowed, their spacing, and limitations on their locations. The A117 provisions act as an overlay to narrow the allowable locations with consideration of accessibility.
- Some terminology in the proposed change was chosen to coordinate with the NEC. An example is the retention of the term outlet receptacle which is defined in the NEC. (See the reference definitions below.)
- Some terminology has yet to be coordinated. Examples include the terms “accessible” and “work surface.” This work falls under the scope of the Terminology Task Group.

The task group welcomes input from the full committee.

NFPA 70: National Electrical Code Definitions for Reference

Outlet.
A point on the wiring system at which current is taken to supply utilization equipment.

Receptacle.
A contact device installed at the outlet for the connection of an attachment plug, or for the direct connection of electrical utilization equipment designed to mate with the corresponding contact

device. A single receptacle is a single contact device with no other contact device on the same yoke or strap. A multiple receptacle is two or more contact devices on the same yoke or strap.

Informational Note: A duplex receptacle is an example of a multiple receptacle that has two receptacles on the same yoke or strap.

Receptacle Outlet.
An outlet where one or more receptacles are installed.

Committee Action: Approved as modified 22-0-1

REPORT OF HEARING:

Modification (if any): Proposal from Reach Task Group

Replace and modify as follows:

1103.9 Operable Parts. Lighting controls, electrical panelboards, electrical switches, and receptacle outlets, environmental controls, appliance controls, plumbing fixture controls, and user controls for security intercom systems shall comply with Section 309.

> **Exception:** Receptacle outlets serving counters in kitchens shall be permitted to comply with Section 1103.9.1.

1103.9.1 Receptacle Outlets Serving Counters in Kitchens. In kitchens, at least two receptacle outlets serving counters shall comply with Section 309. Where a work surface is required by Section 1103.12.3, at least one such receptacle outlet shall be located at the work surface. All other receptacle outlets serving the counters shall comply with at least one of the following:

1. Operable parts of receptacle outlets shall be 44 inches maximum above the floor.
2. Operable parts of receptacle outlets located on the side wall over the counter shall be 48 inches maximum above the floor and 15 inches maximum from front edge of the counter.
3. Operable parts of receptacle outlets located at the face of the upper cabinets shall be 54 inches maximum from the floor and 15 inches maximum from the front edge of the counter and with a forward plug insertion.

Committee Reason: This proposal balances access to outlets with access to counters, sinks and appliances in the kitchen. This will address concerns for access to outlets driving the design of kitchens. There have been many questions about reach of standard counters and locations where adjacent appliances might stick out slightly from the front of the counters. This coordinates with NEC removing the option of installing outlets on the front of side of the cabinets.

1103.9-PAARLBERG.doc

11-07 – 2021 Public Comment 1

1103.9, 1103.9.1

Proponent: Dan Buuck, National Association of Home Builders (NAHB), representing Receptacle Task Group

Further revise as follows:

SECTION 1103
TYPE A UNITS

1103.9 Operable Parts. Operable parts of lighting ~~Lighting~~ controls, electrical panelboards, electrical switches, and receptacle outlets, environmental controls, appliance controls, plumbing fixture controls, and user controls for security intercom systems shall comply with Section 309.

> **Exception:** Operable parts of receptacle ~~Receptacle~~ outlets serving counters in kitchens shall be permitted to comply with Section 1103.9.1.

1103.9.1 Receptacle Outlets Serving Counters in Kitchens. In kitchens, at least two receptacle outlets serving counters shall comply with Section 309. Where a work surface is required by Section 1103.12.3, at least one such receptacle outlet shall serve ~~be located at~~ the work surface. The operable parts of each additional ~~All other~~ receptacle outlet ~~outlets~~ serving the counters shall comply with at least one of the following:

1. ~~Operable parts of receptacle outlets~~ They shall be 44 inches maximum above the floor.
2. ~~Operable parts of receptacle outlets~~ Where located on the side wall over the counter, they shall be 48 inches maximum above the floor and 15 inches maximum from front edge of the counter.
3. ~~Operable parts of receptacle outlets~~ Where located at the face of the upper cabinets, they shall be 54 inches maximum from the floor and 15 inches maximum from the front edge of the counter and with a forward plug insertion.

REASON: The Task Group felt it was logical to call out the operable parts of the items listed in 1103.9 and its exception, since it is only the operable parts of those items that need to comply.

During committee discussion, it was suggested that the sections on receptacles be reorganized to reduce repetition. To do this, the language on "operable parts" was added to the main paragraph and removed from the list of items.

Another suggestion was to align the language by changing the phrase from "located at the work surface" to "serve the work surface" similar to what is used for counters. This term aligns with the National Electrical Code which will lead to more uniform enforcement.

Committee Action for Public Comment 1: NA – See combined proposal under 03-10-21

Committee voted AS 20-2-1 on 7-18-2024; however this is already addressed.

REPORT OF HEARING:

Modification (if any):

Committee Reason:

11-07 – 2021 Public Comment 2

1103.9, 1103.9.1

Proponent: Marsha Mazz, representing the Terminology Task Group

Further revise as follows:

SECTION 1103
TYPE A UNITS

1103.9 Operable Parts. Lighting controls, electrical panelboards, electrical switches, and receptacle outlets, environmental controls, appliance controls, plumbing fixture controls, and user controls for security intercom systems shall comply with ~~Section 309~~ operable parts.

Exception: Receptacle outlets serving counters in kitchens shall be permitted to comply with Section 1103.9.1.

1103.9.1 Receptacle Outlets Serving Counters in Kitchens. In kitchens, at least two receptacle outlets serving counters shall comply with ~~Section 309~~ operable parts. Where a work surface is required by Section 1103.12.3, at least one such receptacle outlet shall be located at the work surface. All other receptacle outlets serving the counters shall comply with at least one of the following:

1. Operable parts of receptacle outlets shall be 44 inches maximum above the floor.
2. Operable parts of receptacle outlets located on the side wall over the counter shall be 48 inches maximum above the floor and 15 inches maximum from front edge of the counter.
3. Operable parts of receptacle outlets located at the face of the upper cabinets shall be 54 inches maximum from the floor and 15 inches maximum from the front edge of the counter and with a forward plug insertion.

REASON: This is part of a proposal from the Terminology task group to define the building blocks so that a reference is not required. This public comment is included here because it was part of new text. Please see the complete proposal for additional information.

Committee Action for Public Comment 2: NA – See combined proposal under 03-10-21

REPORT OF HEARING:

Modification (if any):

Committee Reason:

11-07 Terminology.doc

Committee Action for First Ballot:

REPORT OF HEARING: AFM by replacement PC that combined 03-10, 11-07 and 11-21

Modification (if any):

Committee Reason: See 03-10

Report for *11-07– 2021*		
Committee decision: AM	***Committee Vote at Meeting: 22-0-1***	***Committee Vote on Ballot:42-1-2***
REPORT OF HEARING: Modification (if any): **Replace and modify as follows:** **1103.9 Operable Parts.** Lighting controls, electrical panelboards, electrical switches, and receptacle outlets, environmental controls, appliance controls, plumbing fixture controls, and user controls for security intercom systems shall comply with Section 309. **Exception:** Receptacle outlets serving counters in kitchens shall be permitted to comply with Section 1103.9.1. **1103.9.1 Receptacle Outlets Serving Counters in Kitchens.** In kitchens, at least two receptacle outlets serving counters shall comply with Section 309. Where a work surface is required by Section 1103.12.3, at least one such receptacle outlet shall be located at the work surface. All other receptacle outlets serving the counters shall comply with at least one of the following: 1. Operable parts of receptacle outlets shall be 44 inches maximum above the floor. 2. Operable parts of receptacle outlets located on the side wall over the counter shall be 48 inches maximum above the floor and 15 inches maximum from front edge of the counter. 3. Operable parts of receptacle outlets located at the face of the upper cabinets shall be 54 inches maximum from the floor and 15 inches maximum from the front edge of the counter and with a forward plug insertion.		
Committee Reason: This proposal balances access to outlets with access to counters, sinks and appliances in the kitchen. This will address concerns for access to outlets driving the design of kitchens. There have been many questions about reach of standard counters and locations where adjacent appliances might stick out slightly from the front of the counters. This coordinates with NEC removing the option of installing outlets on the front of side of the cabinets.		
Committee decision: AFM by combined PC to 03-10	***Committee Vote at Meeting: 20-1-4***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		
Committee Reason: See 03-10		
BALLOT COMMENT- SECOND DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
FINAL ACTION: Modification (if any):		
Committee Reason:		

11-14 – 2021 overview

Proposal number	Proponent	Standard Sections	Committee Actions	Mtg. Date	Notes; Groups; groupings
11-14	Mazz	1103.12.1.1, 1103.12.1.2, 1104.12.1.1, 1104.12.1.2	AS – 23-2-3	4-21-2022 7-18-2024	Final Action AM BC1

Comment	Proponent	Requested Action	Committee Action	Mtg. Date	Notes; Groups; groupings
BC1	Paarlberg, ICC	Negative	AS 21-0-0	7-18-2024	

BC= Ballot Comment, PC= Public comment, **Bold Comment number** is proposed revision below

11-14 – 2021
1103.12.1.1, 1103.12.1.2, 1104.12.1.1, 1104.12.1.2

Proponent: Marsha Mazz, representing United Spinal Association

Revise as follows:

SECTION 1103
TYPE A UNITS

1103.12.1.1 Minimum clearance. Clearance between all opposing base cabinets, countertops, appliances, or walls within kitchen work areas shall be 40 inches (1015 mm) minimum measured at the narrowest point, excluding hardware and appliance controls.

1103.12.1.2 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 measured at the narrowest point, excluding hardware and appliance controls.

Exception: U-shaped kitchens with an island complying with Section 1103.12.1.1.

SECTION 1104
TYPE B UNITS

1104.12.1.1 Minimum clearance. Clearance between all opposing base cabinets, countertops, appliances, or walls within kitchen work areas shall be 40 inches (1015 mm) minimum measured at the narrowest point, excluding hardware and appliance controls.

1104.12.1.2 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 measured at the narrowest point, excluding hardware and appliance controls.

Exception: U-shaped kitchens with an island complying with Section 1104.12.1.1.

REASON: Kitchens in Accessible units and those outside dwelling units must comply with Section 804. This proposal addresses Type A and Type B units. Please see our companion proposals to make the same change to Section 804.2.

Some inspectors include hardware and appliance controls when measuring between base cabinets and appliances, others do not. This proposal is intended to establish a clear measurement point. The narrowest kitchen clearance is 40 inches in width which is at least 4 inches wider than an accessible route, 8 inches where Exception 1 to Section 403.5.1 allows the route to reduce to 32 inches for a distance of 24 inches.

For Type B units (Section 1104.12.1), HUD's Fair Housing Design Manual makes clear that hardware and appliance controls are to be excluded when measuring kitchen clearances.

> "The Guidelines require a clearance of at least 40 inches between all opposing base cabinets, countertops, appliances, and walls. The 40-inch clearance is measured from any countertop or the face of any appliance (excluding handles and controls) that projects into the kitchen to the opposing cabinet, countertop, appliance, or wall. Refrigerators vary greatly in depth and may extend up to eight inches beyond cabinet faces. Standard free-standing and drop-in ranges may project up to three inches. Appliance depths (excluding door handles) must be included when calculating the 40-inch clearances."

Requirement #7 (1)(b) of the Fair Housing Act Accessibility Guidelines says it a little differently.

> "Clearance between counters and all opposing base cabinets, countertops, appliances, or walls is at least40 inches".

Unfortunately, neither the Design Manual or the Guidelines shed any light on where the measurement is to be taken when the countertop overhangs the face of the cabinet or an appliance, such as a dishwasher. This proposal clarifies what we believe is the intent of the HUD requirement by requiring the measurement to be taken at the narrowest point. We have proposed the same change for Sections 804 and 1103.12.1.

Committee Action: AS 23-2-3

REPORT OF HEARING:

Modification (if any):

Committee Reason: The committee agreed with the proponent's reason statement - that the measurement for kitchens should not include handles on cabinets and appliance controls or handles. There are some reviewers that are misinterpreting this. For consistency, this should also be considered for the kitchen requirements in Section 804.

1103.12.1-MAZZ.doc

11-14 – 2021 Ballot Comments

BALLOT COMMENT 1- FIRST DRAFT: *Proponent:* **Kim Paarlberg representing ICC**
Desired Action: Negative with comment
Modification: See Ballot Comment 1

11-14 – 2021 Ballot Comment 1

804.2.1, 804.2.2, 804.2.3, 1103.12.1.1, 1103.12.1.2, 1104.12.1.1, 1104.12.1.2

Proponent: Kimberly Paarlberg, ICC

Further 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. Kitchens where a cook top or conventional range is not provided shall comply with Section 804.2.3.

804.2.1 Pass-through kitchens. In pass-through kitchens where counters, appliances or cabinets are on two opposing sides, or where counters, appliances or cabinets are opposite a parallel wall, clearance between all opposing base cabinets, countertops, appliances, or walls within kitchen work areas shall be 40 inches (1015 mm) minimum measured at the narrowest point, excluding hardware and appliance controls and handles. Pass-through kitchens shall have two entries.

Figure 804.2.1 (A)
PASS-THROUGH KITCHEN CLEARANCE
Figure 804.2.1 (B)
PASS-THROUGH KITCHEN CLEARANCE

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 measured at the narrowest point, excluding hardware and appliance controls and handles.

Exception: U-shaped kitchens with an island complying with Section 804.2.1.

Figure 804.2.2 (A)
U-SHAPED KITCHEN CLEARANCE
Figure 804.2.2 (B)
U-SHAPED KITCHEN CLEARANCE
Figure 804.2.2 (C)
U-SHAPED KITCHEN CLEARANCE - EXCEPTION

804.2.3 Spaces where a cook top or conventional range is not provided. In a kitchen space where a cooktop or conventional range is not provided, clearance between all opposing base

cabinets, countertops, appliances and walls within kitchen work areas shall be 40-inch (1015 mm) minimum measured at the narrowest point, excluding hardware and appliance controls and handles.

SECTION 1103
TYPE A UNITS

1103.12.1.1 Minimum clearance. Clearance between all opposing base cabinets, countertops, appliances, or walls within kitchen work areas shall be 40 inches (1015 mm) minimum measured at the narrowest point, excluding hardware and appliance controls and handles.

1103.12.1.2 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 measured at the narrowest point, excluding hardware and appliance controls and handles.

Exception: U-shaped kitchens with an island complying with Section 1103.12.1.1.

SECTION 1104
TYPE B UNITS

1104.12.1.1 Minimum clearance. Clearance between all opposing base cabinets, countertops, appliances, or walls within kitchen work areas shall be 40 inches (1015 mm) minimum measured at the narrowest point, excluding hardware and appliance controls and handles.

1104.12.1.2 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 measured at the narrowest point, excluding hardware and appliance controls and handles.

Exception: U-shaped kitchens with an island complying with Section 1104.12.1.1.

REASON: I agree with the intent. But should this not also include appliance handles? This clarification is also needed in Section 804 for Accessible kitchens.

Committee Action for Ballot Comment 1: AS 21-0-1

REPORT OF HEARING:

Modification (if any):

Committee Reason: The modification provides additional clarification to the original proposal.

11-14 Paarlberg

Committee Action for First Ballot:

REPORT OF HEARING:

Modification (if any):

Committee Reason:

Report for *11-14– 2021*		
Committee decision: AS	***Committee Vote at Meeting: 23-2-3***	***Committee Vote on Ballot:39-1-1***
REPORT OF HEARING: Modification (if any): Committee Reason: The committee agreed with the proponent's reason statement - that the measurement for kitchens should not include handles on cabinets and appliance controls or handles. There are some reviewers that are misinterpreting this. For consistency, this should also be considered for the kitchen requirements in Section 804.		
BALLOT COMMENT 1- FIRST DRAFT: *Proponent:* **Kim Paarlberg representing ICC**		
Desired Action: Negative with comment		
Modification: **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. Kitchens where a cook top or conventional range is not provided shall comply with Section 804.2.3. **804.2.1 Pass-through kitchens.** In pass-through kitchens where counters, appliances or cabinets are on two opposing sides, or where counters, appliances or cabinets are opposite a parallel wall, clearance between all opposing base cabinets, countertops, appliances, or walls within kitchen work areas shall be 40 inches (1015 mm) minimum measured at the narrowest point, excluding hardware and appliance controls and handles. Pass-through kitchens shall have two entries. **Figure 804.2.1 (A)** PASS-THROUGH KITCHEN CLEARANCE **Figure 804.2.1 (B)** PASS-THROUGH KITCHEN CLEARANCE **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 measured at the narrowest point, excluding hardware and appliance controls and handles. **Exception:** U-shaped kitchens with an island complying with Section 804.2.1. **Figure 804.2.2 (A)** U-SHAPED KITCHEN CLEARANCE **Figure 804.2.2 (B)** U-SHAPED KITCHEN CLEARANCE **Figure 804.2.2 (C)** U-SHAPED KITCHEN CLEARANCE - EXCEPTION **804.2.3 Spaces where a cook top or conventional range is not provided.** In a kitchen space where a cooktop or conventional range is not provided, clearance between all opposing base cabinets, countertops, appliances and walls within kitchen work areas shall be 40-inch (1015 mm) minimum measured at the narrowest point, excluding hardware and appliance controls and handles. **SECTION 1103** **TYPE A UNITS** **1103.12.1.1 Minimum clearance.** Clearance between all opposing base cabinets, countertops, appliances, or walls within kitchen work areas shall be 40 inches (1015 mm) minimum measured at the narrowest point, excluding hardware and appliance controls and handles. **1103.12.1.2 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 measured at the narrowest point, excluding hardware and appliance controls and handles. **Exception:** U-shaped kitchens with an island complying with Section 1103.12.1.1. **SECTION 1104** **TYPE B UNITS** **1104.12.1.1 Minimum clearance.** Clearance between all opposing base cabinets, countertops, appliances, or walls within kitchen work areas shall be 40 inches (1015 mm) minimum measured at the narrowest point, excluding hardware and appliance controls and handles. **1104.12.1.2 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 measured at the narrowest point, excluding hardware and appliance controls and handles. **Exception:** U-shaped kitchens with an island complying with Section 1104.12.1.1.		
Reason: I agree with the intent. But should this not also include appliance handles? This clarification is also needed in Section 804 for Accessible kitchens.		
Committee decision: AS BC1	***Committee Vote at Meeting: 21-0-1***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		
Committee Reason: The modification provides additional clarification to the original proposal.		

Report for *11-14– 2021*		
BALLOT COMMENT- SECOND DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
FINAL ACTION: Modification (if any):		
Committee Reason:		

11-15 – 2021 overview

Proposal number	Proponent	Standard Sections	Committee Actions	Mtg. Date	Notes; Groups; groupings
11-15	Paarlberg	1103.12.1.3 (New), 1104.12.1.3 (New)	AS 27-6-1	3-30-2023 8-15-2024	Final Action AS

Comment	Proponent	Requested Action	Committee Action	Mtg. Date	Notes; Groups; groupings
BC1	Pace, HUD	Negative	NA	8-15-2024	

BC= Ballot Comment, PC= Public comment, **Bold Comment number** is proposed revision below

11-15 – 2021

1103.12.1.3(New), 1104.12.1.3(New)

Proponent: Kimberly Paarlberg, International Code Council

Add new text as follows:

SECTION 804
KITCHENS

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. Kitchens where a cook top or conventional range is not provided shall comply with Section 804.2.3.

804.2.1 Pass-through kitchens. In pass-through kitchens where counters, appliances or cabinets are on two opposing sides, or where counters, appliances or cabinets are opposite a parallel wall, clearance between all opposing base cabinets, countertops, appliances, or walls within kitchen work areas shall be 40 inches (1015 mm) minimum. Pass-through kitchens shall have two entries.

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 complying with Section 804.2.1.

804.2.3 Spaces where a cook top or conventional range is not provided. In a kitchen space where a cooktop or conventional range is not provided, clearance between all opposing base

cabinets, countertops, appliances and walls within kitchen work areas shall be 40-inch (1015 mm) minimum.

SECTION 1102
ACCESSIBLE UNITS

1102.12 Kitchens. Kitchens shall comply with Section 804.

SECTION 1103
TYPE A UNITS

1103.12 Kitchens. Kitchens shall comply with Section 1103.12.

1103.12.1 Clearance. Clearance complying with Section 1103.12.1 shall be provided.

1103.12.1.1 Minimum clearance. Clearance between all opposing base cabinets, countertops, appliances, or walls within kitchen work areas shall be 40 inches (1015 mm) minimum.

1103.12.1.2 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 complying with Section 1103.12.1.1.

1103.12.1.3 Spaces where a cook top or conventional range is not provided. In a kitchen space where a cooktop or conventional range is not provided, clearance between all opposing base cabinets, countertops, appliances and walls within kitchen work areas shall be 40-inch (1015 mm) minimum.

SECTION 1104
TYPE B UNITS

1104.12 Kitchens. Kitchens shall comply with Section 1104.12.

1104.12.1 Clearance. Clearance complying with Section 1104.12.1 shall be provided.

1104.12.1.1 Minimum clearance. Clearance between all opposing base cabinets, countertops, appliances, or walls within kitchen work areas shall be 40 inches (1015 mm) minimum.

1104.12.1.2 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 complying with Section 1104.12.1.1.

1104.12.1.3 Spaces where a cook top or conventional range is not provided. In a kitchen space where a cooktop or conventional range is not provided, clearance between all opposing

base cabinets, countertops, appliances and walls within kitchen work areas shall be 40-inch (1015 mm) minimum.

REASON: The current requirements for Accessible kitchen in public spaces and Accessible units allows for kitchenettes, wet bars, etc., but this same option is not addressed in Type A and Type B units. This proposal would add that option for these Type A and Type B units.

Committee Action: Approval as submitted 27-6-1

REPORT OF HEARING:

Modification (if any):

Committee Reason: These kitchenettes are typically not used for everyday cooking but rather in family rooms or as a bar area. This would put the same allowance for Type A and Type B units that is permitted in Accessible units.

1103-PAARLBERG.doc

11-15 – 2021 Ballot Comments

BALLOT COMMENT 1- FIRST DRAFT: Proponent: Rex Pace, HUD
Desired Action: Negative with comment
Modification:
Reason: Considerations for a Type A kitchen are not parallel with those in a Type B kitchen or an office kitchenette. As such this change is not supported for type A units where a person would be living full time and is intended to offer a higher level of accessibility than that for a Type B unit or in many public settings where a kitchenette may only be occasionally used. U-shaped kitchens in Type A units and accessible units where people live must always provide the 60 inches minimum regardless of the appliances provided.

Committee Action for First Ballot: No action

REPORT OF HEARING:

Modification (if any):

Committee Reason:

Report for *11-15– 2021*		
Committee decision: AS	***Committee Vote at Meeting: 27-6-1***	***Committee Vote on Ballot: 42-1-2***
REPORT OF HEARING: Modification (if any):		

Report for *11-15– 2021*		
Committee Reason: These kitchenettes are typically not used for everyday cooking but rather in family rooms or as a bar area. This would put the same allowance for Type A and Type B units that is permitted in Accessible units.		
BALLOT COMMENT 1- FIRST DRAFT: Proponent: Rex Pace, HUD		
Desired Action: Negative with comment		
Modification:		
Reason: Considerations for a Type A kitchen are not parallel with those in a Type B kitchen or an office kitchenette. As such this change is not supported for type A units where a person would be living full time and is intended to offer a higher level of accessibility than that for a Type B unit or in many public settings where a kitchenette may only be occasionally used. U-shaped kitchens in Type A units and accessible units where people live must always provide the 60 inches minimum regardless of the appliances provided.		
Committee decision: NA	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		
Committee Reason:		
BALLOT COMMENT- SECOND DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
FINAL ACTION: Modification (if any):		
Committee Reason:		

11-16 – 2021 overview

Proposal number	Proponent	Standard Sections	Committee Actions	Mtg. Date	Notes; Groups; groupings
11-16	Steinfeld	1103.12.3.1, 1103.12.3.2, Figure 1103.12.3	1103.12.3.1 Ex 1 & 2 – D 24-0-4 1103.12.3.1 Ex 2 & 3 – AM 17-3-5 1103.12.3.2 D 25-2-1	4-13-2023 8-15-2024	Final Action D

Comment	Proponent	Requested Action	Committee Action	Mtg. Date	Notes; Groups; groupings
BC1	Paarlberg, ICC	Negative	D 18-0-6	8-15-2024	

BC= Ballot Comment, PC= Public comment, **Bold Comment number** is proposed revision below

11-16 – 2021

1103.12.3.1, 1103.12.3.2, Figure 1103.12.3

Proponent: Edward Steinfeld, IDEA Center, University at Buffalo, represented RESNA

Revise as follows:

SECTION 1103
TYPE A UNITS

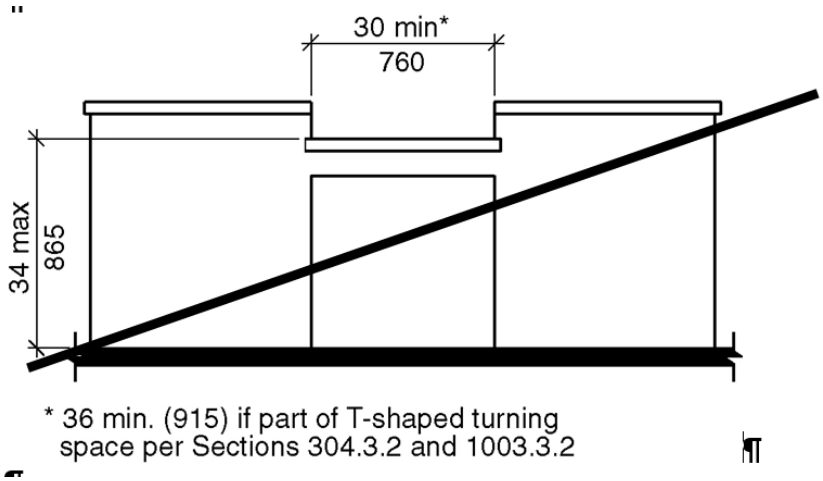
1103.12.3.1 Clear floor space. A clear floor space, positioned for a forward approach to the work surface, shall be provided. Knee and toe clearance complying with Section 306 shall be provided. The floor finish shall extend under the cabinetry and the walls behind and surrounding the cabinetry shall be finished.

Exception: Cabinetry shall be permitted under the work surface, provided either of the following criteria are met:

1. The cabinetry can be removed to provide the knee clearance without removal or replacement of the work surface,
2. The cabinetry and countertop can be removed and replaced as a unit to provide the knee clearance.

~~2. The floor finish extends under the cabinetry, and~~

~~3. The walls behind and surrounding the cabinetry are finished.~~



~~FIGURE 1103.12.3~~
~~WORK SURFACE IN KITCHEN FOR TYPE A UNITS~~

1103.12.3.2 Height. The work surface shall be 34 inches (865 mm) maximum above the floor.

Exception: A counter that is adjustable to provide a work surface at variable heights 29 inches (735 mm) minimum and 36 inches (915 mm) maximum above the floor~~, or that can be relocated within that range without cutting the counter or damaging adjacent cabinets, walls, doors, and structural elements,~~ shall be permitted.

REASON: The floor and cabinets in the knee space should always be finished. That should not be part of the exception. The option of replacing the cabinetry as a unit was removed in a previous version of the standard. This eliminated a good option that would benefit tenants. The limitation on cutting the counter is problematic because it is undesirable to cut a countertop as shown in the current Fig. 1103.12.4. Cracks are unattractive and collect dirt. Note that accessible work centers are best to locate in the same counter section as sinks to create adaptable counters that can be adjusted in height; thus, this proposal is related to the one we submitted for revisions to 1103.12.4.1 and 1103.12.4.2. It is easier and more effective to replace the entire cabinet section and counter, especially when the sink is located in the same section. Many building owners have skilled workmen who can modify a kitchen quickly and provide a more customized solution than simply removing the cabinet doors and base and lowering the counter. Fig. 1103.12.4 is misleading and unnecessary. It implies that the lowered counter must be only a portion of a counter area. The clear floor space requirements and the requirement for clearances between counters automatically provide the T space for turning so the note is not needed either..

Committee Action: Approval as Modified
Split the question:
1103.12.3.1 Exception 1 and 2 – D 24-0-4
1103.12.3.1 Main text and Exception 3 and 4; AM 17-3-5
Modification to change ‘cabinetry’ to ‘work surface in two locations - AS 18-5-5;
1103.12.3.2 – AS 4-22-3; D 25-2-1

REPORT OF HEARING:

Modification (if any):

Replace the proposal with the following:

1103.12.3.1 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 floor finish shall extend under the work surface and the walls behind and surrounding the work surface shall be finished.

Exception: Cabinetry shall be permitted under the work surface, provided the ~~following criteria are met:~~

~~1. The~~ cabinetry can be removed without removal or replacement of the work surface,

~~2. The floor finish extends under the cabinetry, and~~

~~3. The walls behind and surrounding the cabinetry are finished.~~

Committee Reason:
1103.12.3.1 Exception 1 and 2 – The new exception 2 was removed for consistency with 11-10-2021.
1103.12.3.1 Relocate current Exception 2 and 3 – The committee agreed that the floor and walls under the work surface should be provided if there was clear floor space or removeable cabinetry. The modification to change 'cabinetry' to 'work surface' because just moving the current exception assumed that there was a cabinet. There was a question about if 'surrounding the work surface' was clear, or this was just intended to apply to below the work surface.
1103.12.3.2 – The removal of the text would take away an important option for adaptability at a kitchen work surface. The proposal would require the counter to be adaptable – that could be interpreted that this required a motor or crank and not allow for a relocated fixed counter.

1103.12.3.1-STEINFELD.doc

11-16 – 2021 Ballot Comments

BALLOT COMMENT 1- FIRST DRAFT: Proponent: Kimberly Paarlberg, ICC
Desired Action: Negative with comment
Modification:
Reason: Request disapproval. This should be disapproved because the same language is used in 1103.11.2.2, 1103.12.4.1 and 1104.11.3.1.1. This change would make the standard inconsistent. In addition, 'behind and around' the work surface is inaccurate. The wall to be finished is below the work surface. The current text saying the walls behind and surrounding the 'removable' cabinetry is more accurate and gets you the side of the adjacent base cabinets – not just the wall of the room. **1103.11.2.2 Lavatory.** Lavatories shall comply with Section 606. **Exception:** Cabinetry shall be permitted under the lavatory, provided the following criteria are met:

1. The cabinetry can be removed without removal or replacement of the lavatory;
2. The floor finish extends under the cabinetry; and
3. The walls behind and surrounding the cabinetry are finished.

1103.12.4.1 Clear floor space. A clear floor space, positioned for a forward approach to the sink, shall be provided. Knee and toe clearance complying with Section 306 shall be provided.

Exceptions:

1. The requirement for knee and toe clearance shall not apply to more than one bowl of a multi-bowl sink.
2. Cabinetry shall be permitted to be added under the sink, provided the following criteria are met:
   2.1 The cabinetry can be removed without removal or replacement of the sink,
   2.2 The floor finish extends under the cabinetry, and
   2.3 The walls behind and surrounding the cabinetry are finished.
3. A clear floor space providing a parallel approach ~~and centered on~~ that is offset 8 inches (200 mm) maximum from the centerline of the sink shall be permitted at a kitchen sink in a space where a cook top or conventional range is not provided.
4. A clear floor space providing a parallel approach ~~and centered on~~ that is offset 8 inches (200 mm) maximum from the centerline of the sink shall be permitted at wet bars.

1104.11.3.1.1 Lavatory. A clear floor space positioned for a parallel approach shall be provided at a lavatory. The clear floor space shall be ~~centered on~~ offset 8 inches (200 mm) maximum from the centerline of the lavatory.

Exception: A lavatory complying with Section 606 ~~Sections 606.3, 606.4 and~~ except with a clear floor space complying with Section 1104.1.1 shall be permitted. Cabinetry shall be permitted under the lavatory provided the following criteria are met:

1. The cabinetry can be removed without removal or replacement of the lavatory, and
2. The floor finish extends under the cabinetry, and
3. The walls behind and surrounding the cabinetry are finished.

Committee Action for First Ballot: Final Action D – 18-0-6

REPORT OF HEARING:

Modification (if any):

Committee Reason: This modification is not consistent with similar locations in the code. The work surface is the counter, so the 2nd half of the new sentence is the wall above the counter, not under the counter. That does not match the intent stated.

Report for *11-16– 2021*		
Committee decision: AM	***Committee Vote at Meeting: 17-3-5***	***Committee Vote on Ballot: 42-1-2***
REPORT OF HEARING: Modification (if any):		

Report for *11-16– 2021*

Replace the proposal with the following:

1103.12.3.1 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 floor finish shall extend under the work surface and the walls behind and surrounding the work surface shall be finished.

Exception: Cabinetry shall be permitted under the work surface, provided the ~~following criteria are met:~~

~~1. The~~ cabinetry can be removed without removal or replacement of the work surface,

~~2. The floor finish extends under the cabinetry, and~~

~~3. The walls behind and surrounding the cabinetry are finished.~~

Committee Reason:

1103.12.3.1 Exception 1 and 2 – The new exception 2 was removed for consistency with 11-10-2021.

1103.12.3.1 Relocate current Exception 2 and 3 – The committee agreed that the floor and walls under the work surface should be provided if there was clear floor space or removeable cabinetry. The modification to change 'cabinetry' to 'work surface' because just moving the current exception assumed that there was a cabinet. There was a question about if 'surrounding the work surface' was clear, or this was just intended to apply to below the work surface.

1103.12.3.2 – The removal of the text would take away an important option for adaptability at a kitchen work surface. The proposal would require the counter to be adaptable – that could be interpreted that this required a motor or crank and not allow for a relocated fixed counter.

BALLOT COMMENT 1- FIRST DRAFT:

Proponent: Kimberly Paarlberg, ICC

Desired Action: Negative with comment

Modification:

Reason:

Request disapproval. This should be disapproved because the same language is used in 1103.11.2.2, 1103.12.4.1 and 1104.11.3.1.1. This change would make the standard inconsistent. In addition, 'behind and around' the work surface is inaccurate. The wall to be finished is below the work surface. The current text saying the walls behind and surrounding the 'removable' cabinetry is more accurate and gets you the side of the adjacent base cabinets – not just the wall of the room.

1103.11.2.2 Lavatory. Lavatories shall comply with Section 606.

Exception: Cabinetry shall be permitted under the lavatory, provided the following criteria are met:

1. The cabinetry can be removed without removal or replacement of the lavatory;
2. The floor finish extends under the cabinetry; and
3. The walls behind and surrounding the cabinetry are finished.

1103.12.4.1 Clear floor space. A clear floor space, positioned for a forward approach to the sink, shall be provided. Knee and toe clearance complying with Section 306 shall be provided.

Exceptions:

1. The requirement for knee and toe clearance shall not apply to more than one bowl of a multi-bowl sink.
2. Cabinetry shall be permitted to be added under the sink, provided the following criteria are met:
   - 2.1 The cabinetry can be removed without removal or replacement of the sink,
   - 2.2 The floor finish extends under the cabinetry, and
   - 2.3 The walls behind and surrounding the cabinetry are finished.
3. A clear floor space providing a parallel approach ~~and centered on~~ that is offset 8 inches (200 mm) maximum from the centerline of the sink shall be permitted at a kitchen sink in a space where a cook top or conventional range is not provided.
4. A clear floor space providing a parallel approach ~~and centered on~~ that is offset 8 inches (200 mm) maximum from the centerline of the sink shall be permitted at wet bars.

1104.11.3.1.1 Lavatory. A clear floor space positioned for a parallel approach shall be provided at a lavatory. The clear floor space shall be ~~centered on~~ offset 8 inches (200 mm) maximum from the centerline of the lavatory.

Exception: A lavatory complying with Section 606 ~~Sections 606.3, 606.4 and~~ except with a clear floor space complying with Section 1104.1.1 shall be permitted. Cabinetry shall be permitted under the lavatory provided the following criteria are met:

1. The cabinetry can be removed without removal or replacement of the lavatory, and
2. The floor finish extends under the cabinetry, and
3. The walls behind and surrounding the cabinetry are finished.

Committee decision: D	***Committee Vote at Meeting: 18-0-6***	***Committee Vote on Ballot:***

REPORT OF HEARING – FIRST DRAFT

Modification (if any):

Committee Reason: This modification is not consistent with similar locations in the code. The work surface is the counter, so the 2nd half of the new sentence is the wall above the counter, not under the counter. That does not match the intent stated.

BALLOT COMMENT- SECOND DRAFT:

Proponent:

Desired Action:

Modification:

Reason:

Report for *11-16– 2021*		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
FINAL ACTION: Modification (if any):		
Committee Reason:		

11-18 – 2021 overview

Proposal number	Proponent	Standard Sections	Committee Actions	Mtg. Date	Notes; Groups; groupings
11-18	Boecker	1104.4.3(New)	AS 15-8-2	4-13-2023 8-15-2024	Changes in level Final Action is D

Comment	Proponent	Requested Action	Committee Action	Mtg. Date	Notes; Groups; groupings
BC1	Paarlberg, ICC	Negative	D 22-2-4	8-15-2024	

BC= Ballot Comment, PC= Public comment, **Bold Comment number** is proposed revision below

11-18 – 2021
1104.4.3(New)

Proponent: Gene Boecker, Code Consultants, Inc.

Add new text as follows:

SECTION 1104
TYPE B UNITS

1104.4.3 Openings. Openings in the floor shall comply with Section 302.3.

REASON: While it is uncommon inside a dwelling unit to have floor openings of the kind that are a concern, it is not uncommon to have them on a deck or patio. This would address floor drains on balconies and decks as well as gaps at the perimeter of a balcony. We have recently seen guardrail details where there is a 2-inch horizontal dimension between the edge of the balcony and the supports for the guardrail. This revision is also needed to address sliding door details with channels in the door track significantly wider and deeper than 1/2 inch. This revision creates a reasonable surface expectation. Openings in walking surfaces are covered for Type A units in Section 1103.4 by reference to Section 403 which refers to Section 302 in Section 403.2. This revision closes a loophole for Type B units.

Committee Action: Approval as Submitted 15-8-2

REPORT OF HEARING:

Modification (if any):

Committee Reason: The committee felt that there should not be large openings in floor drains or large openings if there is a grated surface on a deck, so they approved this proposal. However, the committee did not agree that this would address gaps at the perimeter of a balcony as mentioned in the reason. The question about door tracks for sliding doors, or gaps between deck boards where there is not a set direction of travel, should be addressed by a revision/clarification to Section 302.3 for all floors.

1104.4.3-BOECKER.doc

11-18 – 2021 Ballot Comments

BALLOT COMMENT 1- FIRST DRAFT:
Proponent: Kimberly Paarlberg, ICC
Desired Action: Negative with comment
Modification:
Reason: Request disapproval. As a general requirement for walking surfaces in Type B units, this is going to cause a lot of issues. In a bathroom, the newest form of shower drain is a long bar along one end, at the threshold or at one end. There is no discernable direction of travel in these areas, to they would not be able to make the slot direction requirement in Section 302.3. We continue to have a question with this along accessible routes for items such as spaces between boards in decks, grooves in thresholds for sliding doors – which are much more common in Type B units. The proposal did not address the gaps at the edge of balconies described in the reason. This should not be compounded by adding this to Type B units until we have it correctly addressed in other areas. This has not been identified as an issue that needs to be addressed for Type B units.

Committee Action for First Ballot: Final Action is D 22-2-4

REPORT OF HEARING:

Modification (if any):

Committee Reason: This new section should be deleted. This is a broader issue for gaps in threshold and deck boards that needs to be address throughout the standard. This change does not address the concern raised for a gap at the edge of the balcony like mentioned in the reason.

Report for *11-18– 2021*		
Committee decision: AS	***Committee Vote at Meeting: 15-8-2***	***Committee Vote on Ballot: 42-1-2***
REPORT OF HEARING: Modification (if any):		
Committee Reason: The committee felt that there should not be large openings in floor drains or large openings if there is a grated surface on a deck, so they approved this proposal. However, the committee did not agree that this would address gaps at the perimeter of a balcony as mentioned in the reason. The question about door tracks for sliding doors, or gaps between deck boards where there is not a set direction of travel, should be addressed by a revision/clarification to Section 302.3 for all floors.		
BALLOT COMMENT 1- FIRST DRAFT: Proponent: Kimberly Paarlberg, ICC		
Desired Action: Negative with comment		
Modification:		

Report for *11-18– 2021*		
Reason: Request disapproval. As a general requirement for walking surfaces in Type B units, this is going to cause a lot of issues. In a bathroom, the newest form of shower drain is a long bar along one end, at the threshold or at one end. There is no discernable direction of travel in these areas, to they would not be able to make the slot direction requirement in Section 302.3. We continue to have a question with this along accessible routes for items such as spaces between boards in decks, grooves in thresholds for sliding doors – which are much more common in Type B units. The proposal did not address the gaps at the edge of balconies described in the reason. This should not be compounded by adding this to Type B units until we have it correctly addressed in other areas. This has not been identified as an issue that needs to be addressed for Type B units.		
Committee decision: D	***Committee Vote at Meeting: 22-2-4***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		
Committee Reason: This new section should be deleted. This is a broader issue for gaps in threshold and deck boards that needs to be address throughout the standard. This change does not address the concern raised for a gap at the edge of the balcony like mentioned in the reason.		
BALLOT COMMENT- SECOND DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
FINAL ACTION: Modification (if any):		
Committee Reason:		

11-19 – 2021 overview

Proposal number	Proponent	Standard Sections	Committee Actions	Mtg. Date	Notes; Groups; groupings
11-19	Paarlberg	1104.5.1	AS 19-9-4	3-30-2023	Final Action D

Comment	Proponent	Requested Action	Committee Action	Mtg. Date	Notes; Groups; groupings
BC1	Pace, HUD	Negative	D	22-3-2	
PC1	Terminology	AM	NA		Editorial

BC= Ballot Comment, PC= Public comment, **Bold Comment number** is proposed revision below

11-19 – 2021
1104.5.1

Proponent: Kimberly Paarlberg, International Code Council

Revise text as follows:

SECTION 1104
TYPE B UNITS

1104.5.1 Primary entrance door. The primary entrance door to the unit shall comply with Section 404.

Exceptions:

1. Storm and screen doors serving individual dwelling or sleeping units shall not be required to comply with Section 404.2.5.
2. For the maneuvering clearance at swinging doors for the front approach direction on the push side, the dimension perpendicular to the door shall be 48 inches (1220 mm) minimum.
3. For the maneuvering clearance at sliding and folding doors for the front approach direction, the dimension perpendicular to the door shall be 48 inches (1220 mm) minimum.
4. For doorways without doors, the dimension perpendicular to the doorway for the front direction shall be 48 inches (1220 mm) minimum.
5. Doors from individual *dwelling* or *sleeping units* are permitted to be equipped with a night latch, dead bolt or security chain at any height, provided such devices are openable from the inside without the use of a key or tool.

REASON: The reference to Section 404 picks up door hardware in Section 404.2.6. Type B units should be permitted to have additional security locking devices if desired. This would be

consistent with IBC Sections 1010.2.3 and 1010.2.4 Exception 5. If someone lives there, they can have the locks relocated as a modification, or not use them – just use the regular lock on the door. There is another proposal to Section 404.1. This is not the same since a security locking system would be considered normal operation.

Committee Action: Approval as submitted 19-9-4

REPORT OF HEARING:

Modification (if any):

Committee Reason: The general building hardware will be addressed in the general door provisions and the egress requirements from the building code. This allowance would allow for secondary security devices to be located on the door where they will be the most effective. This is needed because Section 404.2.6 no longer has the exception for security devices. Section 404.1 only allows for locks that are operated by security personnel.

1104.5-PAARLBERG.doc

11-19 – 2021 Ballot Comments

BALLOT COMMENT 1- FIRST DRAFT: Proponent: Rex Pace, HUD
Desired Action: Negative with comment
Modification:
Reason: All operable parts provided in covered areas of accessible dwelling units must accessible. The exception is too broad to support. A higher height allowance or permitting later modifications by the occupant to suit their preference are understandable given the competing interests and other hardware height requirements. But the standard should focus on issues at the time of construction and any fixed features used by an occupant should require an acceptable level of accessibility, particularly one that involves safety and possible egress concerns such as a latch or dead bolt.

11-19 – 2021 Public Comment 1

1104.9, 1104.10.1

Proponent: Marsha Mazz, representing the Terminology Task Group

Further revise as follows:

SECTION 1104
TYPE B UNITS

1104.9 Operable Parts. Lighting controls, electrical switches and receptacle outlets, environmental controls, electrical panelboards, and user controls for security or intercom systems shall comply with Sections 309.3 and ~~1104.1.1~~ clear floor spaces for Type B units.

Exceptions:

1. Receptacle outlets serving a dedicated use.
2. Floor receptacle outlets.
3. HVAC diffusers.
4. Controls mounted on ceiling fans.
5. Controls or switches mounted on appliances.
6. Plumbing fixture controls.
7. Reset buttons and shut-offs serving appliances, piping and plumbing fixtures.
8. Where redundant controls other than light switches are provided for a single element, one control in each space shall not be required to comply with Sections 309.3 and ~~1104.1.1~~ clear floor space for Type B units.
9. Operable parts of lighting controls, electrical switches, and receptacle outlets serving counters in kitchens and bathrooms shall not be required to comply with Sections 309.3 and ~~1104.1.1~~ clear floor space for Type B units where located 44 inches maximum above the floor.
10. Operable parts of lighting controls, electrical switches, and receptacle outlets serving counters in kitchens and bathrooms shall not be required to comply with Sections 309.3 and ~~1104.1.1~~ clear floor space for Type B units where located on the side wall over the counter 48 inches maximum above the floor and 15 inches maximum from front edge of the counter.
11. Operable parts of receptacle outlets serving counters in kitchens and bathrooms shall not be required to comply with Sections 309.3 and ~~1104.1.1~~ clear floor space for Type B units where located at the face of the upper cabinets 54 inches maximum from the floor and 15 inches maximum from the front edge of the counter and with a forward plug insertion.

1104.10 Laundry equipment. Washing machines and clothes dryers shall comply with Section 1104.10.

1104.10.1 Clear floor space. A clear floor space for Type B units shall be provided for each washing machine and clothes dryer. A parallel approach shall be provided for a top loading machine. A forward or parallel approach shall be provided for a front loading machine. The centerline of the clear floor space for Type B units shall be offset 24 inches (610 mm) maximum from the centerline of the appliance.

REASON: This is part of a proposal from the Terminology task group to define the building blocks so that a reference is not required. This public comment is included here because it was part of new text. Please see the complete proposal for additional information.

Committee Action for Public Comment 1: No action. Incorrect section indicated.

REPORT OF HEARING:

Modification (if any):

Committee Reason:

11-19 Terminology.doc

Committee Action for First Ballot: Final Action is Disapproval

REPORT OF HEARING:

Modification (if any):

Committee Reason: Security devices on apartment doors should all be within reach ranges.

Report for *11-19– 2021*		
Committee decision: AS	***Committee Vote at Meeting: 19-9-4***	***Committee Vote on Ballot: 42-1-2***
REPORT OF HEARING: Modification (if any):		
Committee Reason: The general building hardware will be addressed in the general door provisions and the egress requirements from the building code. This allowance would allow for secondary security devices to be located on the door where they will be the most effective. This is needed because the Section 404.2.6 no longer has the exception for security devices. Section 404.1 only allows for locks that are operated by security personnel.		
BALLOT COMMENT 1- FIRST DRAFT: Proponent: Rex Pace, HUD		
Desired Action: Negative with comment		
Modification:		
Reason: All operable parts provided in covered areas of accessible dwelling units must accessible. The exception is too broad to support. A higher height allowance or permitting later modifications by the occupant to suit their preference are understandable given the competing interests and other hardware height requirements. But the standard should focus on issues at the time of construction and any fixed features used by an occupant should require an acceptable level of accessibility, particularly one that involves safety and possible egress concerns such as a latch or dead bolt.		
Committee decision: D	***Committee Vote at Meeting: 22-3-2***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		
Committee Reason: Security devices on apartment doors should all be within reach ranges.		
BALLOT COMMENT- SECOND DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
FINAL ACTION: Modification (if any):		
Committee Reason:		

11-21 – 2021 overview

Proposal number	Proponent	Standard Sections	Committee Actions	Mtg. Date	Notes; Groups; groupings
11-21	Pitts	1104.9	AM 24-2-4	3-30-2023 11-9-2023	Reach over counters Final Action AFM by replacement PC that combined 03-10, 11-07 and 11-21

Comment	Proponent	Requested Action	Committee Action	Mtg. Date	Notes; Groups; groupings
PC1	Receptacle	AM	NA	11-9-2023	

BC= Ballot Comment, PC= Public comment, **Bold Comment number** is proposed revision below

11-21 – 2021
1104.9

Proponent: Ashley Pitts, Jensen Hughes, Inc.

Revise as follows:

SECTION 1104
TYPE B UNITS

1104.9 Operable parts. Lighting controls, electrical switches and receptacle outlets, environmental controls, electrical panelboards, and user controls for security or intercom systems shall comply with Sections 309.3 and 1104.1.1.

Exceptions:

1. Receptacle outlets serving a dedicated use.
2. In a kitchen where two or more receptacle outlets are provided above a length of countertop that is uninterrupted by a sink or appliance, only one receptacle outlet shall be required to comply with this section.
3. In a kitchen where a clear floor space for a parallel approach cannot be located at a countertop in a corner between appliances, receptacle outlets over the counter-top shall not be required to comply with this section provided that the countertop area does not exceed 9 square feet (0.835 m2) maximum.
4. Floor receptacle outlets.
5. HVAC diffusers.
6. Controls mounted on ceiling fans.
7. Controls or switches mounted on appliances.
8. Plumbing fixture controls.
9. Reset buttons and shut-offs serving appliances, piping and plumbing fixtures.

10. Where redundant controls other than light switches are provided for a single element, one control in each space shall not be required to comply with this section.
11. Within kitchens and bathrooms, lighting controls, elec-trical switches and receptacle outlets are permitted to be located over cabinets with countertops 36 inches (915 mm) maximum in height and 25 1/2 inches (650 mm) maximum in depth. Freestanding or slide-in kitchen appliances are not considered to impact the reach depth to receptacle outlets, switches or controls over the countertop.

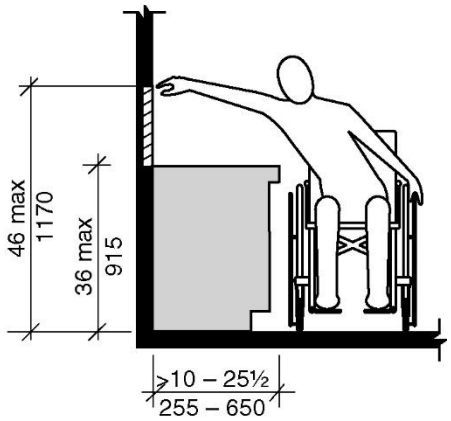
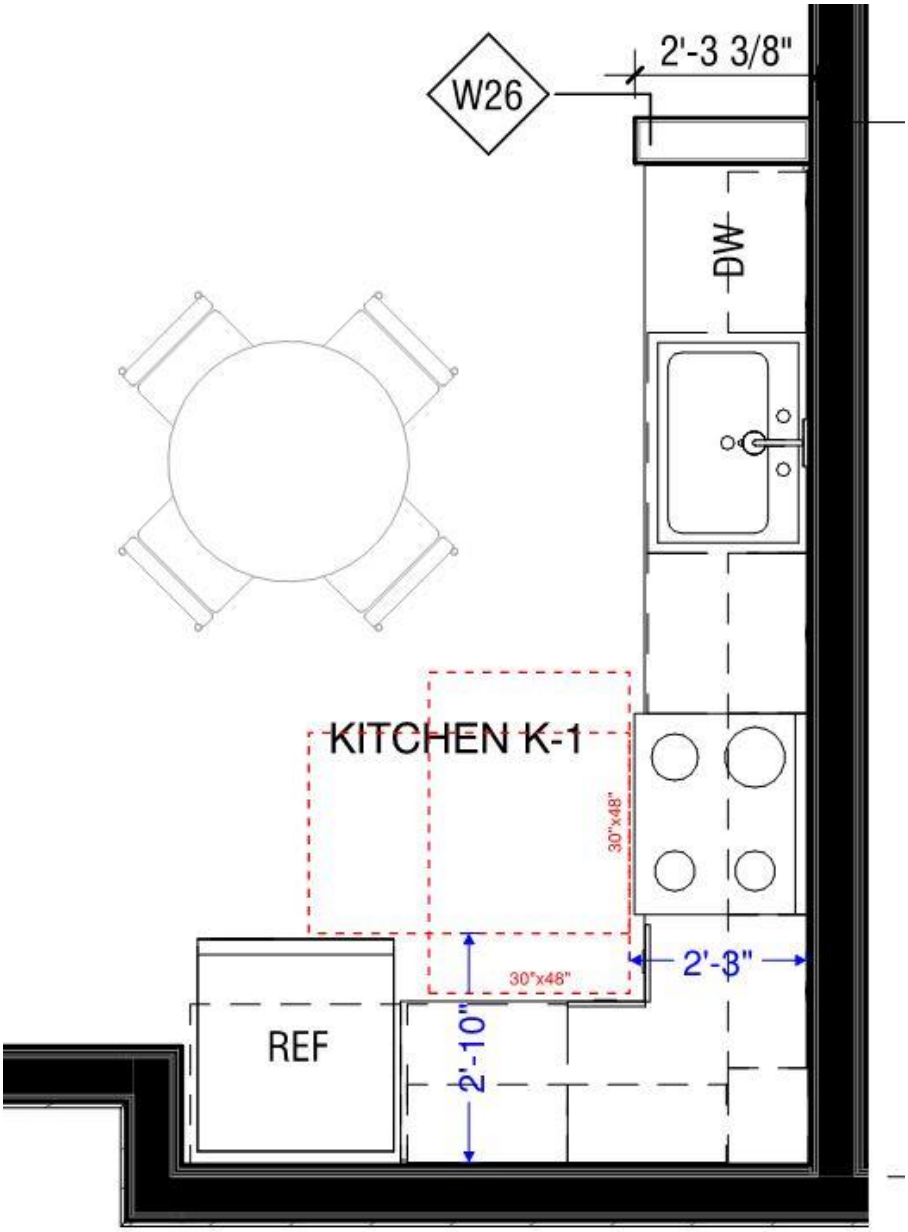
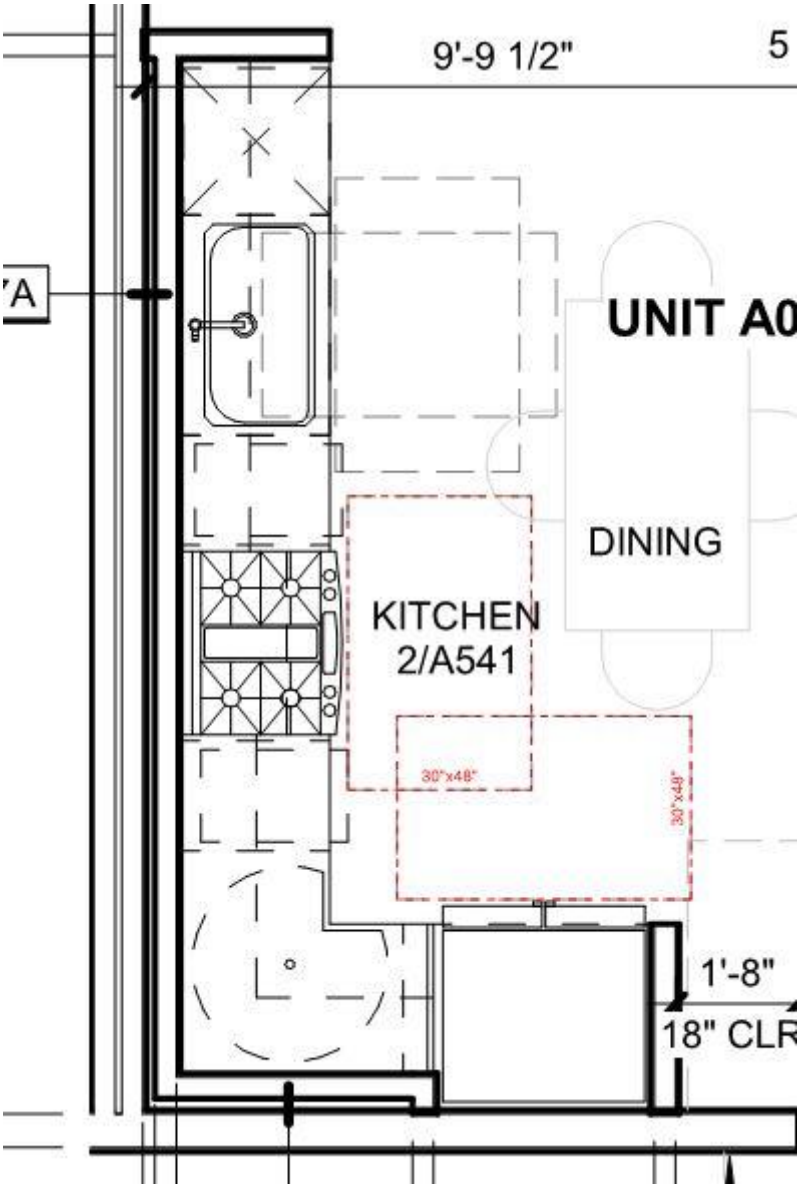


FIGURE 1104.9
REACH OVER A KITCHEN OR BATHROOM CABINET

Reason: The proposed change affects kitchens in Type B dwelling units or sleeping units. The standard should clarify whether appliance protrusions, such as range and refrigerator protrusions, can be ignored for purposes of complying with the limitations for side reach over kitchen counters. Standard appliances such as ranges and refrigerators protrude beyond the face of the countertop several inches. In typical kitchen arrangements, there are commonly sections of countertop between these appliances, or between these appliances and other elements, where a parallel clear floor space cannot be positioned directly adjacent to the countertop due to an appliance protrusion. This issue does not only occur at “inside corners,” but also commonly occurs at linear kitchens with less than 48” between appliance protrusions.


W26
2'-3 3/8"
DW
KITCHEN K-1
30"x48"
30"x48"
2'-3"
REF
2'-10"



11-21 – 2021 Replacement
1104.9

Proponent: Reach Task Group

Replace 11-20-21, 11-21-21 and 11-22-21 and revise as follows:

1104.9 Operable Parts. Lighting controls, electrical switches and receptacle outlets, environmental controls, electrical panelboards, and user controls for security or intercom systems shall comply with Sections 309.3 and 1104.1.1.

Exceptions:

1. Receptacle outlets serving a dedicated use.

~~2. In a kitchen where two or more receptacle outlets are provided above a length of countertop that is uninterrupted by a sink or appliance, only one receptacle is required to comply with this section.~~

~~3. In a kitchen where a clear floor space for parallel approach cannot be located at a countertop in a corner between appliances, receptacle outlets over the countertop shall not be required to comply with this section provided that the countertop area does not exceed 9 square feet (0.835 m2) maximum.~~

4. Floor receptacle outlets.
5. HVAC diffusers.
6. Controls mounted on ceiling fans.
7. Controls or switches mounted on appliances.
8. Plumbing fixture controls.
9. Reset buttons and shut-offs serving appliances, piping and plumbing fixtures.
10. Where redundant controls other than light switches are provided for a single element, one control in each space shall not be required to comply with ~~this section~~ Sections 309.3 and 1104.1.1.

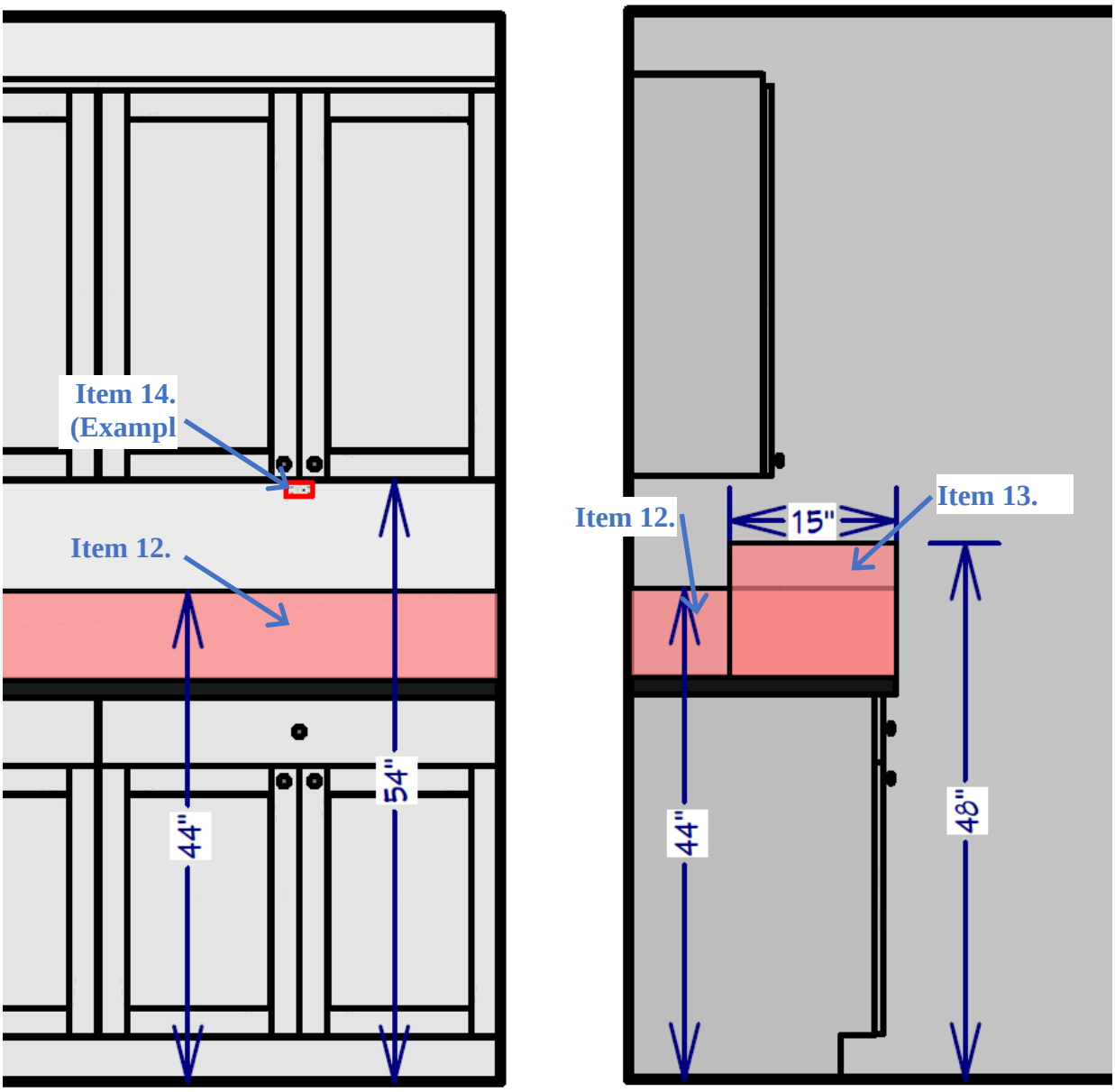
~~11. Within kitchens and bathrooms, lighting controls, electrical switches and receptacle outlets are permitted to be located over cabinets with counter tops 36 inches (915 mm) maximum in height and 25 1/2 inches (650 mm) maximum in depth.~~

12. Operable parts of lighting controls, electrical switches, and receptacle outlets serving counters in kitchens and bathrooms shall not be required to comply with Sections 309.3 and 1104.1.1 where located 44 inches maximum above the floor.
13. Operable parts of lighting controls, electrical switches, and receptacle outlets serving counters in kitchens and bathrooms shall not be required to comply with Sections 309.3 and 1104.1.1 where located on the side wall over the counter 48 inches maximum above the floor and 15 inches maximum from front edge of the counter.
14. Operable parts of receptacle outlets serving counters in kitchens and bathrooms shall not be required to comply with Sections 309.3 and 1104.1.1 where located at the face of the upper cabinets 54 inches maximum from the floor and 15 inches maximum from the front edge of the counter and with a forward plug insertion.

Reason: This proposed change significantly simplifies and streamlines the criteria for locating operable parts in kitchens and bathrooms of Type B units.

If all items in the list are adopted, this change would allow four options for receptacle outlets serving kitchen counters in Type B units: (1) install them at 44 inches maximum above the floor, (2) install them on a side wall at the end of a counter run 15 inches maximum from the front of the counter edge at 48 inches maximum above the floor, (3) install them at the face of the upper cabinets no more than 15 inches from the front counter edge and 54 inches maximum above the floor, or (4) fully comply with the general reach range and clear floor space requirements of the standard. (See Figures 1. and 2. below.)

Fig. 1. Back Wall Elevation **Fig. 2. Side Wall Elevation**



The proposed revisions are:

- **Deletion of Exception 11.** A separate exception addressing the height of the counters and reach depth to the operable parts is not needed with this new approach. As long as the control is at 44 inches maximum above the floor, the height of the counter and reach depth can be ignored, recognizing that the vast majority of installations, especially in kitchens, will be above counters that are the typical 36 inches high, ~25-1/2 inches deep
- **Deletion of Exceptions 2 and 3.** These two exceptions attempt to address placement of outlets at corner conditions, where a diagonal reach across the counter may be required. (Note that previous editions of A117.1 included different language attempting similar things.)

- **New exceptions provide optional receptacle outlet locations** (described above) is available once the requirements of 1103.9.1 are met. The requirements in Section 309 do not need to be met by the receptacle outlets complying with one of the listed locations.

This revised approach eliminates the need to address/consider the following when locating receptacle outlets to serve kitchen counters:

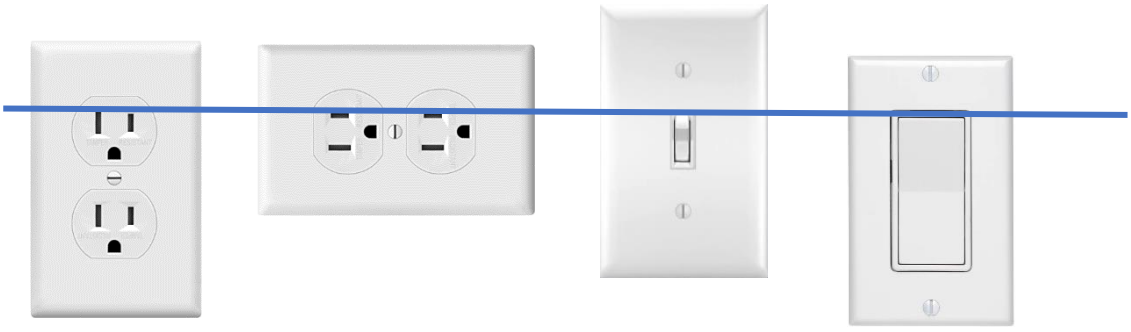
- Counter height
- Reach depth across counter
- Clear floor space for each operable part
- Projection of appliances beyond adjacent counters

Coordination with Type A Units

Regarding Items 12., 13. and 14.: The Residential Receptacles Task Group discussed adopting the same provisions in this list as are adopted for Type A units. Items 12., 13. and 14. in this change correspond with Items 1., 2. and 3. in the Task Group replacement proposal for Type A units respectively. Type A units will be incrementally more restrictive by requiring two receptacle outlets to comply with Section 309.

Measuring to Operable Parts

Based on its definition, an Operable Part can be "a component of an element used to … activate [or] deactivate … the element." The Task Group reasoned that the openings in the face of a receptacle that accept the prongs of a plug meet this definition. The intent is to measure to the highest opening of a receptacle, regardless of orientation, as depicted by the line in the following figure. The measurement of lighting controls and electrical switches would be to the highest point of the switch. If clarification of this intent is necessary, it should be done consistently for operable parts throughout the standard, not just within Type B unit criteria. Height above floor was considered more appropriate measurement than height above counter.



Operable Part Height

- **Item 12:** Setting a height of 44 inches allows a typical 36-inch-high counter with a typical 4-inch backsplash. Where taller backsplashes are desired, the receptacle outlets can be installed in the backsplash. The 44-inch height is 2 inches lower than the typical 46-inch obstructed side reach height that is typically currently used.
- **Item 13:** This option allows a slightly larger area to located receptacle outlets on a side wall at the end of a counter run compared to an unobstructed side reach. This could be

useful where counter height prevents putting the receptacle outlet at or below 44 inches. For example, with a 42-inch-high bar top, an outlet could be located at 48 inches high (up 15-inch reach depth).

- **Item 14:** Bringing the receptacle outlet away from the back wall while increasing the height to a maximum of 54 inches allows roughly 50% of wheeled mobility users to reach it. Studies did not address the effort needed to insert or pull out a plug. However, researchers stated that a horizontal insertion was likely easier for more of the population than an upward insertion. For this reason, a forward plug insertion is required.

Counter Height: The current exception allowing 36-inch-high counters is deleted, but the proposed new exception does not set a maximum counter height. Assumption is that the vast majority of installations will be typical 36-inch counters.

Reach Depth. The current text (exception 11) allows a reach depth of up to 25-1/2 inches, specifically to permit the use of standard cabinets and countertops, as permitted by Fair Housing. This exception is deleted, but the proposed new exception does not establish a maximum reach depth. Assumption is that the vast majority of installations will be typical 25-1/2-inch-deep counters.

Clear Floor Space/Appliance Projections. The current text is unclear regarding projections of appliances when assessing operable parts in Type B unit kitchens. The current exception 11 allows controls above 36-inch-high, 25-1/2-inch-deep counters. The exception does not repeat the base paragraph requirement that operable parts have compliant reach and compliant clear floor space.

- There are several public proposals seeking to specifically address or exempt appliance projections with regard to operable parts.
- The group felt that neither Fair Housing nor the A117.1 Type A unit provisions were intended to use operable parts (and specifically, receptacle outlets) as a major factor in driving kitchen design.
- The standard does require specific clear floor spaces at each kitchen appliance, the kitchen sink, and 40-inch minimum (60-inch in U-shaped) overall kitchen clearance and clear floor space bathroom lavatories.
- The standard already eliminates the height and reach depth requirement above the counter, in order to allow standard kitchens (as permitted by Fair Housing).
- The task group feels that setting a more stringent height limit (44 inches) for operable parts in Item 12. provides a benefit for many users.
- The complexity of requiring clear floor space for each receptacle outlet above kitchen counters, particularly if appliance projections are considered, would introduce a level of design and construction complexity that is not warranted.

Corner Conditions. The current standard includes two exceptions to exempt some or all the receptacle outlets at corner conditions above intersecting counters. Previous editions included language that would exempt one outlet max at corners, as long as one accessible outlet was provided. The proposed modified text would not exempt any receptacle outlets; it would require all to be at 44-inch maximum height, but it would not include any language to address the horizontal location of controls at corner conditions.

- There was discussion about the possibility of corner conditions where all the receptacle outlets would be above the intersecting portion of counter, requiring a diagonal reach across the counter.
- Similarly, there was some discussion regarding light switches, garbage disposal switches, or other controls located above intersecting counters. As proposed, if using the new exception, these would all be at 44-inch max, but there would be nothing to prevent them from being above the intersecting counters.

The task group welcomes input from the full committee

The NEC and ICC A117.1

The Task Group spent a lot of effort considering how to coordinate requirements and terminology between the National Electrical Code and ICC A117.1. Discussions included the following points.

- The NEC provides the base requirements for receptacle outlets serving kitchen counters, including the minimum number allowed, their spacing, and limitations on their locations. The A117 provisions act as an overlay to narrow the allowable locations with consideration of accessibility.
- Some terminology in the proposed change was chosen to coordinate with the NEC. An example is the retention of the term outlet receptacle which is defined in the NEC. (See the reference definitions below.)
- Some terminology has yet to be coordinated. Examples include the terms “accessible” and “work surface.” This work falls under the scope of the Terminology Task Group.

The task group welcomes input from the full committee.

NFPA 70: National Electrical Code Definitions for Reference

Outlet.
A point on the wiring system at which current is taken to supply utilization equipment.

Receptacle.
A contact device installed at the outlet for the connection of an attachment plug, or for the direct connection of electrical utilization equipment designed to mate with the corresponding contact device. A single receptacle is a single contact device with no other contact device on the same yoke or strap. A multiple receptacle is two or more contact devices on the same yoke or strap.

Informational Note: A duplex receptacle is an example of a multiple receptacle that has two receptacles on the same yoke or strap.

Receptacle Outlet.
An outlet where one or more receptacles are installed.

Committee Action: Approval as Modified 24-2-4

REPORT OF HEARING:

Modification (if any):

Replace 11-20-21, 11-21-21 and 11-22-21 and revise as follows:

1104.9 Operable Parts. Lighting controls, electrical switches and receptacle outlets, environmental controls, electrical panelboards, and user controls for security or intercom systems shall comply with Sections 309.3 and 1104.1.1.

Exceptions:

1. Receptacle outlets serving a dedicated use.
2. ~~In a kitchen where two or more receptacle outlets are provided above a length of countertop that is uninterrupted by a sink or appliance, only one receptacle is required to comply with this section.~~
3. ~~In a kitchen where a clear floor space for parallel approach cannot be located at a countertop in a corner between appliances, receptacle outlets over the countertop shall not be required to comply with this section provided that the countertop area does not exceed 9 square feet (0.835 m2) maximum.~~
4. Floor receptacle outlets.
5. HVAC diffusers.
6. Controls mounted on ceiling fans.
7. Controls or switches mounted on appliances.
8. Plumbing fixture controls.
9. Reset buttons and shut-offs serving appliances, piping and plumbing fixtures.
10. Where redundant controls other than light switches are provided for a single element, one control in each space shall not be required to comply with ~~this section~~ Sections 309.3 and 1104.1.1.
11. ~~Within kitchens and bathrooms, lighting controls, electrical switches and receptacle outlets are permitted to be located over cabinets with counter tops 36 inches (915 mm) maximum in height and 25 1/2 inches (650 mm) maximum in depth.~~
12. Operable parts of lighting controls, electrical switches, and receptacle outlets serving counters in kitchens and bathrooms shall not be required to comply with Sections 309.3 and 1104.1.1 where located 44 inches maximum above the floor.
13. Operable parts of lighting controls, electrical switches, and receptacle outlets serving counters in kitchens and bathrooms shall not be required to comply with Sections 309.3 and 1104.1.1 where located on the side wall over the counter 48 inches maximum above the floor and 15 inches maximum from front edge of the counter.
14. Operable parts of receptacle outlets serving counters in kitchens and bathrooms shall not be required to comply with Sections 309.3 and 1104.1.1 where located at the face of the upper cabinets 54 inches maximum from the floor and 15 inches maximum from the front edge of the counter and with a forward plug insertion.

Committee Reason: This is coordinated with what the Reach Task Group developed for Type A units and approved in 11-07 and 11-08. This proposal balances access to lighting controls, electrical switches and outlets with access to counters, sinks and appliances in the kitchen and sinks in bathrooms. This will address concerns for access to outlets driving the design of kitchens or bathrooms. There have been many questions about reach of standard counters and locations where adjacent appliances might stick out slightly from the front of the counters. This coordinates with NEC removing the option of installing outlets on the front of side of the cabinets in kitchens.

1104.9-PITTS.doc

11-21 – 2021 Public Comment 1
1104.9

Proponent: Dan Buuck, National Association of Home Builders (NAHB), representing Receptacle Task Group

Further revise as follows:

SECTION 1104
TYPE B UNITS

1104.9 Operable Parts. Operable parts of lighting ~~Lighting~~ controls, electrical switches and receptacle outlets, environmental controls, electrical panelboards, and user controls for security or intercom systems shall comply with Sections 309.3 and 1104.1.1.

Exception ~~**Exceptions**~~**:** The operable parts of the following items are not required to comply with Sections 309.3 and 1104.1.1:

1. Receptacle outlets serving a dedicated use.
2. Floor receptacle outlets.
3. HVAC diffusers.
4. Controls mounted on ceiling fans.
5. Controls or switches mounted on appliances.
6. Plumbing fixture controls.
7. Reset buttons and shut-offs serving appliances, piping and plumbing fixtures.
8. One control in each space where ~~Where~~ redundant controls other than light switches are provided for a single element~~, one control in each space shall not be required to comply with Sections 309.3 and 1104.1.1~~.
9. ~~Operable parts of lighting~~ Lighting controls, electrical switches, and receptacle outlets serving counters in kitchens and bathrooms complying with either of the following: ~~shall not be required to comply with Sections 309.3 and 1104.1.1 where~~
   9.1. Where located 44 inches maximum above the floor.
10. ~~Operable parts of lighting controls, electrical switches, and receptacle outlets serving counters in kitchens and bathrooms shall not be required to comply with Sections 309.3 and 1104.1.1 where~~

9.2. Where located on the side wall over the counter 48 inches maximum above the floor and 15 inches maximum from front edge of the counter.

~~11.~~ 10. ~~Operable parts of receptacle~~ Receptacle outlets serving counters in kitchens and bathrooms ~~shall not be required to comply with Sections 309.3 and 1104.1.1~~ where located at the face of the upper cabinets 54 inches maximum from the floor and 15 inches maximum from the front edge of the counter and with a forward plug insertion.

REASON: The Task Group felt it was logical to call out the operable parts of the items listed in 1104.9 and its exception, since it is only the operable parts of those items that need to comply.

The changes to the list are an attempt to simplify the language which can hopefully be seen in the clean version of the text below.

1104.9 Operable Parts. Operable parts of lighting controls, electrical switches and receptacle outlets, environmental controls, electrical panelboards, and user controls for security or intercom systems shall comply with Sections 309.3 and 1104.1.1.

Exception: The operable parts of the following items are not required to comply with Sections 309.3 and 1104.1.1:

1. Receptacle outlets serving a dedicated use.
2. Floor receptacle outlets.
3. HVAC diffusers.
4. Controls mounted on ceiling fans.
5. Controls or switches mounted on appliances.
6. Plumbing fixture controls.
7. Reset buttons and shut-offs serving appliances, piping and plumbing fixtures.
8. One control in each space where redundant controls other than light switches are provided for a single element.
9. Lighting controls, electrical switches, and receptacle outlets serving counters in kitchens and bathrooms complying with either of the following:
   9.1. Where located 44 inches maximum above the floor.
   9.2. Where located on the side wall over the counter 48 inches maximum above the floor and 15 inches maximum from front edge of the counter.
10. Receptacle outlets serving counters in kitchens and bathrooms where located at the face of the upper cabinets 54 inches maximum from the floor and 15 inches maximum from the front edge of the counter and with a forward plug insertion.

Committee Action Public Comment 1: NA – see combined proposal 03-10

REPORT OF HEARING:

Modification (if any):

Committee Reason:

11-21 Buuck.doc

Committee Action for First Ballot: AFM by replacement PC that combined 03-10, 11-07 and 11-21 20-1-4

REPORT OF HEARING:

Modification (if any):

Committee Reason: See 03-10

Report for *11-21– 2021*

Committee decision: AM	***Committee Vote at Meeting: 24-2-4***	***Committee Vote on Ballot: 42-1-2***

REPORT OF HEARING:

Modification (if any):

Replace 11-20-21, 11-21-21 and 11-22-21 and revise as follows:

1104.9 Operable Parts. Lighting controls, electrical switches and receptacle outlets, environmental controls, electrical panelboards, and user controls for security or intercom systems shall comply with Sections 309.3 and 1104.1.1.

Exceptions:

12. Receptacle outlets serving a dedicated use.
13. ~~In a kitchen where two or more receptacle outlets are provided above a length of countertop that is uninterrupted by a sink or appliance, only one receptacle is required to comply with this section.~~
14. ~~In a kitchen where a clear floor space for parallel approach cannot be located at a countertop in a corner between appliances, receptacle outlets over the countertop shall not be required to comply with this section provided that the countertop area does not exceed 9 square feet (0.835 m2) maximum.~~
15. Floor receptacle outlets.
16. HVAC diffusers.
17. Controls mounted on ceiling fans.
18. Controls or switches mounted on appliances.
19. Plumbing fixture controls.
20. Reset buttons and shut-offs serving appliances, piping and plumbing fixtures.
21. Where redundant controls other than light switches are provided for a single element, one control in each space shall not be required to comply with ~~this section~~ Sections 309.3 and 1104.1.1.
22. ~~Within kitchens and bathrooms, lighting controls, electrical switches and receptacle outlets are permitted to be located over cabinets with counter tops 36 inches (915 mm) maximum in height and 25 1/2 inches (650 mm) maximum in depth.~~
23. Operable parts of lighting controls, electrical switches, and receptacle outlets serving counters in kitchens and bathrooms shall not be required to comply with Sections 309.3 and 1104.1.1 where located 44 inches maximum above the floor.
24. Operable parts of lighting controls, electrical switches, and receptacle outlets serving counters in kitchens and bathrooms shall not be required to comply with Sections 309.3 and 1104.1.1 where located on the side wall over the counter 48 inches maximum above the floor and 15 inches maximum from front edge of the counter.
25. Operable parts of receptacle outlets serving counters in kitchens and bathrooms shall not be required to comply with Sections 309.3 and 1104.1.1 where located at the face of the upper cabinets 54 inches maximum from the floor and 15 inches maximum from the front edge of the counter and with a forward plug insertion.

Committee Reason: This is coordinated with what the Reach Task Group developed for Type A units and approved in 11-07 and 11-08. This proposal balances access to lighting controls, electrical switches and outlets with access to counters, sinks and appliances in the kitchen and sinks in bathrooms. This will address concerns for access to outlets driving the design of kitchens or bathrooms. There have been many questions about reach of standard counters and locations where adjacent appliances might stick out slightly from the front of the counters. This coordinates with NEC removing the option of installing outlets on the front of side of the cabinets in kitchens.

Committee decision: AFM by replacement PC that combined 03-10, 11-07 and 11-21	***Committee Vote at Meeting:*** 20-1-4	***Committee Vote on Ballot:***

REPORT OF HEARING – FIRST DRAFT

Modification (if any):

Committee Reason: See 03-10

BALLOT COMMENT- SECOND DRAFT:

Proponent:

Desired Action:

Modification:

Report for *11-21– 2021*		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
FINAL ACTION: Modification (if any):		
Committee Reason:		

11-24 – 2021 overview

Proposal number	Proponent	Standard Sections	Committee Actions	Mtg. Date	Notes; Groups; groupings
11-24	Paarlberg	1104.11.1.3.1.1	AS 32-0-2	3-30-23 9-12-24	Final action is AMPC1

Comment	Proponent	Requested Action	Committee Action	Mtg. Date	Notes; Groups; groupings
PC1	Terminology	AM	Editorial	9-12-2024	Editorial

BC= Ballot Comment, PC= Public comment, **Bold Comment number** is proposed revision below

11-24– 2021
1104.11.1.3.1.1

Proponent: Kimberly Paarlberg, International Code Council

Revise as follows:

SECTION 1104
TYPE B UNITS

1104.11.3.1.1 Lavatory. A clear floor space positioned for a parallel approach shall be provided at a lavatory. The clear floor space shall be centered on the lavatory.

Exception: A lavatory complying with Section 606 ~~Sections 606.3, 606.4 and~~ except with a clear floor space complying with Section 1104.1.1 shall be permitted. Cabinetry shall be permitted under the lavatory provided the following criteria are met:

1. The cabinetry can be removed without removal or replacement of the lavatory, and
2. The floor finish extends under the cabinetry, and
3. The walls behind and surrounding the cabinetry are finished.

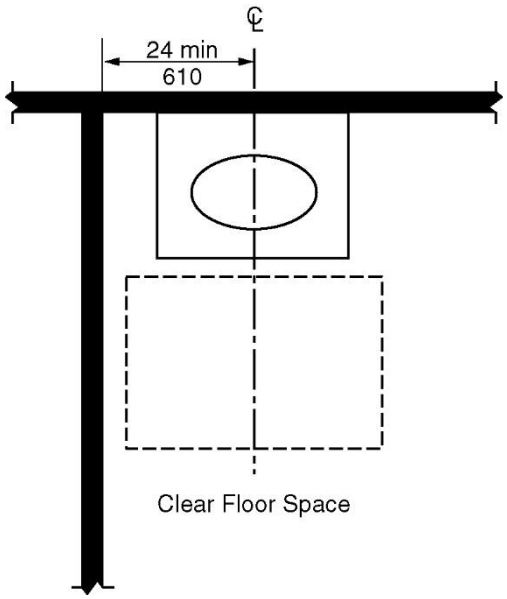


FIGURE 1104.11.3.1.1
LAVATORY IN TYPIE B UNITS – OPTION A BATHROOMS

REASON: The original intent of the committee for the exception was to allow for a front approach lavatory without adding the larger clear floor space size. By not including the reference to Section 606.2 the current text does not address the front approach or the knee and toe clearance. This is Option A. Option B references this section so this is a glitch for both options in Type B units.

Committee Action: Approval as submitted 32-0-2

REPORT OF HEARING:

Modification (if any):

Committee Reason: The revisions will allow for Type B units to also use the Type A option for either a front approach lavatory, or a front approach lavatory with removeable cabinets. This would match the original intent and address a technical glitch.

1104.11.1.3.1.1-PAARLBERG.doc

11-24 – 2021 Public Comment 1
1104.11.3.1.1

Proponent: Marsha Mazz, representing the Terminology Task Group

Further revise as follows:

SECTION 1104
TYPE B UNITS

1104.11.3.1.1 Lavatory. A clear floor space for Type B units positioned for a parallel approach shall be provided at a lavatory. The clear floor space for Type B units shall be centered on the lavatory.

Exception: A lavatory complying with Section 606 except with a clear floor space for Type B units ~~complying with Section 1104.1.1~~ shall be permitted. Cabinetry shall be permitted under the lavatory provided the following criteria are met:

1. The cabinetry can be removed without removal or replacement of the lavatory, and
2. The floor finish extends under the cabinetry, and
3. The walls behind and surrounding the cabinetry are finished.

REASON: This is part of a proposal from the Terminology task group to define the building blocks so that a reference is not required. This public comment is included here because it was part of new text. Please see the complete proposal for additional information.

Committee Action or Public comment 1: Editorial

REPORT OF HEARING:

Modification (if any):

Committee Reason:

11-24 Terminology.doc

Committee Action for First Ballot: Final Action AMPC1

REPORT OF HEARING:

Modification (if any):

Committee Reason:

Report for *11-24– 2021*		
Committee decision: AS	***Committee Vote at Meeting: 32-0-2***	***Committee Vote on Ballot: 43-0-2***
REPORT OF HEARING: Modification (if any):		
Committee Reason: The revisions will allow for Type B units to also use the Type A option for either a front approach lavatory, or a front approach lavatory with removeable cabinets. This would match the original intent and address a technical glitch.		
Committee decision: AMPC1	***Committee Vote at Meeting: Editorial***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		
Committee Reason:		
BALLOT COMMENT- SECOND DRAFT:		

Report for *11-24– 2021*		
Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
FINAL ACTION: Modification (if any): Committee Reason:		

11-25 – 2021 overview

Proposal number	Proponent	Standard Sections	Committee Actions	Mtg. Date	Notes; Groups; groupings
11-25	Paarlberg	1104.11.3.1, 1104.11.3.1.3.3	Part 1 D 28-2-3 Part 2 AS 27-3-1	3-30-2023 8-15-2024	Final Action AM by committee action

Comment	Proponent	Requested Action	Committee Action	Mtg. Date	Notes; Groups; groupings
BC1	Paarlberg, ICC	Negative	AM 6-10-4 failed	8-15-2024	
BC2	Paarlberg, ICC	Negative	NA	8-15-2024	

BC= Ballot Comment, PC= Public comment, **Bold Comment number** is proposed revision below

11-25– 2021
1104.11.3.1, 1104.11.3.1.3.3

Proponent: Kimberly Paarlberg, International Code Council

Revise as follows:

SECTION 1104
TYPE B UNITS

1104.11.3 Toilet and bathing areas. Either all toilet and bathing areas provided shall comply with Section 1104.11.3.1 (Option A), or one toilet and bathing area shall comply with Section 1104.11.3.2 (Option B).

1104.11.3.1 Option A. ~~Each~~ One of each type of fixture provided shall comply with Section 1104.11.3.1.

~~Exceptions~~ Exception:

1. ~~Where multiple lavatories are provided in a single toilet and bathing area such that travel between fixtures does not require travel through other parts of the unit, not more than one lavatory is required to comply with Section 1104.11.3.1.~~
2. ~~2.~~ A lavatory and a water closet in a room containing only a lavatory and water closet, provided the room does not contain the only lavatory or water closet on the accessible level of the unit.

1104.11.3.1.3 Bathing fixtures. Where provided, a bathtub shall comply with Section 1104.11.3.1.3.1 or 1104.11.3.1.3.2 and a shower compartment shall comply with Section 1104.11.3.1.3.3.

1104.11.3.1.3.3 Shower compartment. If a shower compartment is the ~~only~~ accessible bathing ~~facility~~ fixture in the bathroom, the shower compartment shall have dimensions of 36 inches (915 mm) minimum in width and 36 inches (915 mm) minimum in depth. A clearance of 48 inches (1220 mm) minimum in length, measured perpendicular from the control wall, and 30 inches (760 mm) minimum in depth, measured from the face of the shower compartment, shall be provided.

Exceptions:

1. A shower compartment with dimensions of 30 inches (760 mm) minimum in depth and 44 inches (1120 mm) minimum in width shall be permitted.
2. A shower door assembly shall be permitted where the assembly can be removed without removal or replacement of the surrounding walls and floor to which it is affixed.

1104.11.3.2 Option B. One of each type of fixture provided shall comply with Section 1104.11.3.2. These fixtures shall be in a single toilet/bathing area, such that travel between fixtures does not require travel through other parts of the unit.

1104.11.3.2.3.2 Shower compartment. A shower compartment shall comply with Section 1104.11.3.1.3.3.

REASON: The purpose of this proposal is to clarify requirements for bathtubs and showers.
1104.11.3.1 – When FHA was written, two lavatories in the same bathroom or a separate bathtub and shower in the same bathroom was almost unheard off. Now that is a common configuration. The current text already allows for one lavatory in each bathroom in Option A and Option B. The proposal would also allow for a choice of a bathtub or shower in each Option A bathroom. This would consistent with the more accessible Option B bathrooms which already allows this choice. When bathrooms have a tub and a shower, often tubs are standing tubs or there adjacent windows, so they don't have walls to comply with blocking requirements, so those would not be the converted bathing elements. Not to mention that they are not nearly as 'user friendly' to getting into bath if you compare the side of a tub to the threshold of a shower.

1104.11.3.1.3.3 - There are often questions about "if a shower compartment is the only bathing facility". Does this literally mean that if there is an accessible tub somewhere in the unit, the shower can be any size? Even if it is the accessible bathing fixture? This proposal would set the minimum useable size if the shower was the accessible fixture in that bathroom.

If there is concern that this would be misread over time, an alternative is adding the bathroom or shower choice in the exceptions –

1104.11.3.1 Option A. Each fixture provided shall comply with Section 1104.11.3.1.

Exceptions:

1. Where multiple lavatories are provided in a single toilet and bathing area such that travel between fixtures does not require travel through other parts of the unit, not more than one lavatory is required to comply with Section 1104.11.3.1.

2. Where a bathtub and shower are provided in a single bathing area, either the bathtub or shower shall be accessible in accordance with Section 1104.3.1.3.
3. A lavatory and a water closet in a room containing only a lavatory and water closet, provided the room does not contain the only lavatory or water closet on the accessible level of the unit.

Committee Action: The committee split the question.
Part 1- Section 1104.11.3.1 Approval as Submitted 8-20-2; Disapproval 28-2-3
Part 2 – Section 1104.11.3.1.3.3 Approval as Submitted 27-3-1
REPORT OF HEARING:

Modification (if any):

Replace with the following:

1104.11.3.1.3.3 Shower compartment. If a shower compartment is the ~~only~~ accessible bathing ~~facility~~ fixture in the bathroom, the shower compartment shall have dimensions of 36 inches (915 mm) minimum in width and 36 inches (915 mm) minimum in depth. A clearance of 48 inches (1220 mm) minimum in length, measured perpendicular from the control wall, and 30 inches (760 mm) minimum in depth, measured from the face of the shower compartment, shall be provided.

Exceptions:

1. A shower compartment with dimensions of 30 inches (760 mm) minimum in depth and 44 inches (1120 mm) minimum in width shall be permitted.
2. A shower door assembly shall be permitted where the assembly can be removed without removal or replacement of the surrounding walls and floor to which it is affixed.

Committee Reason: The committee split the question. The change to Section 1104.11.3.1 was disapproved. The committee agrees with only one lavatory being accessible, however there was concern that the text is not clear for bathing fixtures – bathtubs and showers. This could be read to require two bathing fixtures in the same bathroom to be accessible.
The change to Section 1104.11.3.1.3.3 would require any shower that will serve as the accessible fixture to meet a minimum size. Current text allows for any size shower if the unit has more than just a shower. This will improve access and will exceed Fair Housing.

1104.11.3.1.3.3-PAARLBERG.doc

11-25 – 2021 Ballot Comments

BALLOT COMMENT 1- FIRST DRAFT: Proponent: Kimberly Paarlberg, ICC
Desired Action: Negative with comment
Modification: See Ballot Comment 1
BALLOT COMMENT 2- FIRST DRAFT: Proponent: Kimberly Paarlberg, ICC
Desired Action: Negative with comment
Modification: See Ballot Comment 2

11-25 – 2021 Ballot Comment 1
1104.11.3.1

Proponent: Kimberly Paarlberg, ICC

Replace the modification to Section 1104.11.3.1 with the following:

1104.11.3.1 Option A. ~~Each fixture~~ Where provided, a lavatory, a water closet and either a bathtub or a shower shall comply with Section 1104.11.3.1.

~~Exceptions~~ Exception:

1. ~~Where multiple lavatories are provided in a single toilet and bathing area such that travel between fixtures does not require travel through other parts of the unit, not more than one lavatory is required to comply with Section 1104.11.3.1.~~
2. ~~2.~~ A lavatory and a water closet in a room containing only a lavatory and water closet, provided the room does not contain the only lavatory or water closet on the accessible level of the unit.

REASON: The committee split the question. The change to Section 1104.11.3.1 was disapproved. The committee agrees with only one lavatory being accessible, however there was concern that the text is not clear for bathing fixtures – bathtubs and showers. This could be read to require two bathing fixtures in the same bathroom to be accessible.
The change to Section 1104.11.3.1.3.3 would require any shower that will serve as the accessible fixture to meet a minimum size. Current text allows for any size shower if the unit has more than just a shower. This will improve access and will exceed Fair Housing.

Committee Action for Ballot Comment 1: AM 6-10-4

REPORT OF HEARING:

Modification (if any):

Committee Reason: By not requiring both the tub and shower to be accessible, this could be interpreted as a reduction in accessibility. There should be a study group to address the differences between HUD requirements for the style of bathrooms in the 1980s and the style of bathrooms today.

11-25 BC1 Paarlberg

11-25 – 2021 Ballot Comment 2
1104.11.3.1.3.3

Proponent: Kimberly Paarlberg, ICC

Replace this section with the following:

1104.11.3.1.3.3 Shower compartment. ~~If a shower compartment is the only bathing facility the~~ The shower compartment shall have dimensions of 36 inches (915 mm) minimum in width and 36 inches (915 mm) minimum in depth.
A clearance of 48 inches (1220 mm) minimum in length, measured perpendicular from the control wall, and 30 inches (760 mm) minimum in depth, measured from the face of the shower compartment, shall be provided.

Exceptions:

1. A shower compartment with dimensions of 30 inches (760 mm) minimum in depth and 44 inches (1120 mm) minimum in width shall be permitted.
2. A shower door assembly shall be permitted where the assembly can be removed without removal or replacement of the surrounding walls and floor to which it is affixed.

REASON: 11-25 and 11-30 have provided two options to the first paragraph of 1104.11.3.1.3.3. What is shown would combine the two. (This section was also revised by 06-72, 11-27, and 11-28)

Committee Action for Ballot comment 2: No action

REPORT OF HEARING:

Modification (if any):

Committee Reason: See committee action to BC1

11-25 BC2 Paarlberg

Committee Action for First Ballot: Final action is AM Part 2 by committee action.

REPORT OF HEARING:

Modification (if any):

Committee Reason:
BC1 - By not requiring both the tub and shower to be accessible, this could be interpreted as a reduction in accessibility. There should be a study group to address the differences between HUD requirements for the style of bathrooms in the 1980s and the style of bathrooms today.

Report for *11-25– 2021*		
Committee decision: Part 1 D/Part 2 AM	***Committee Vote at Meeting: Part 1 - 28-2-3/Part 2 - 27-3-1***	***Committee Vote on Ballot: 42-1-2***
REPORT OF HEARING: Modification (if any):		

Report for *11-25– 2021*

Replace with the following:

1104.11.3.1.3.3 Shower compartment. If a shower compartment is the ~~only~~ accessible bathing ~~facility~~ fixture in the bathroom, the shower compartment shall have dimensions of 36 inches (915 mm) minimum in width and 36 inches (915 mm) minimum in depth. A clearance of 48 inches (1220 mm) minimum in length, measured perpendicular from the control wall, and 30 inches (760 mm) minimum in depth, measured from the face of the shower compartment, shall be provided.

Exceptions:

1. A shower compartment with dimensions of 30 inches (760 mm) minimum in depth and 44 inches (1120 mm) minimum in width shall be permitted.
2. A shower door assembly shall be permitted where the assembly can be removed without removal or replacement of the surrounding walls and floor to which it is affixed.

Committee Reason: The committee split the question. The change to Section 1104.11.3.1 was disapproved. The committee agrees with only one lavatory being accessible, however there was concern that the text is not clear for bathing fixtures – bathtubs and showers. This could be read to require two bathing fixtures in the same bathroom to be accessible.
The change to Section 1104.11.3.1.3.3 would require any shower that will serve as the accessible fixture to meet a minimum size. Current text allows for any size shower if the unit has more than just a shower. This will improve access and will exceed Fair Housing.

BALLOT COMMENT 1- FIRST DRAFT:
Proponent: Kimberly Paarlberg, ICC

Desired Action: Negative with comment

Modification:

Replace the modification to Section 1104.11.3.1 with the following:

1104.11.3.1 Option A. ~~Each fixture~~ Where provided, a lavatory, a water closet and either a bathtub or a shower shall comply with Section 1104.11.3.1.

~~Exceptions~~ Exception:

1. ~~Where multiple lavatories are provided in a single toilet and bathing area such that travel between fixtures does not require travel through other parts of the unit, not more than one lavatory is required to comply with Section 1104.11.3.1.~~
2. ~~2.~~ A lavatory and a water closet in a room containing only a lavatory and water closet, provided the room does not contain the only lavatory or water closet on the accessible level of the unit.

Reason:

Comment 1

The committee supported the requirement to make accessible showers comply with 1004.11.3.1.3.3, even if there are other bathing facilities in the unit.
For this part of the proposal, the committee were concerned the language not being clear. This proposal tries to address that concern by being very specific to fixtures in the bathroom. Styles for bathrooms have significantly changed. See the reason and photos in the original proposal for examples.

BALLOT COMMENT 2- FIRST DRAFT:
Proponent: Kimberly Paarlberg, ICC

Desired Action: Negative with comment

Modification:

Replace this section with the following:

1104.11.3.1.3.3 Shower compartment. ~~If a shower compartment is the only bathing facility the~~ The shower compartment shall have dimensions of 36 inches (915 mm) minimum in width and 36 inches (915 mm) minimum in depth.
A clearance of 48 inches (1220 mm) minimum in length, measured perpendicular from the control wall, and 30 inches (760 mm) minimum in depth, measured from the face of the shower compartment, shall be provided.

Exceptions:

1. A shower compartment with dimensions of 30 inches (760 mm) minimum in depth and 44 inches (1120 mm) minimum in width shall be permitted.
2. A shower door assembly shall be permitted where the assembly can be removed without removal or replacement of the surrounding walls and floor to which it is affixed.

Reason:

Comment 2:

11-25 and 11-30 have provided two options to the first paragraph of 1104.11.3.1.3.3. What is shown would combine the two. (This section was also revised by 06-72, 11-27, and 11-28)

Committee decision: AM BC1	***Committee Vote at Meeting: 6-10-4***	***Committee Vote on Ballot:***

REPORT OF HEARING – FIRST DRAFT

Modification (if any):

Committee Reason:

Report for *11-25– 2021*		
BC1 - By not requiring both the tub and shower to be accessible, this could be interpreted as a reduction in accessibility. There should be a study group to address the differences between HUD requirements for the style of bathrooms in the 1980s and the style of bathrooms today. BC2 – No action		
BALLOT COMMENT- SECOND DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
FINAL ACTION: Modification (if any):		
Committee Reason:		

11-30 – 2021 overview

Proposal number	Proponent	Standard Sections	Committee Actions	Mtg. Date	Notes; Groups; groupings
11-30	Paarlberg	1004.11.3.1.3, 1004.11.3.1.3.3, 1004.11.3.1.3.4 (New)	AM 21-1-1	4-13-2023 9-12-2024	Final action is AFM BC2 and PC1

Comment	Proponent	Requested Action	Committee Action	Mtg. Date	Notes; Groups; groupings
BC1	Braitmayer, DREDF	Affirmative	NA	9-12-2024	
BC2	Paarlberg, ICC	Affirmative	AS 24-0-3	9-12-2024	Editorial
PC1	Paarlberg, ICC	AM	AS 25-0-1	9-12-2024	

BC= Ballot Comment, PC= Public comment, **Bold Comment number** is proposed revision below

11-30– 2021

1004.11.3.1.3, 1004.11.3.1.3.3, 1004.11.3.1.3.4(New)

Proponent: Kimberly Paarlberg, International Code Council

Revise as follows:

SECTION 1104
TYPE B UNITS

1104.11.3.1 Option A. Each fixture provided shall comply with Section 1104.11.3.1.

Exceptions:

1. Where multiple lavatories are provided in a single toilet and bathing area such that travel between fixtures does not require travel through other parts of the unit, not more than one lavatory is required to comply with Section 1104.11.3.1.
2. A lavatory and a water closet in a room containing only a lavatory and water closet, provided the room does not contain the only lavatory or water closet on the accessible level of the unit.

1104.11.3.1.3 Bathing fixtures. Where provided, a bathtub shall comply with Section 1104.11.3.1.3.1 or 1104.11.3.1.3.2 and a shower compartment shall comply with Section 1104.11.3.1.3.3 or 1104.3.1.3.4. A bathtub or shower enclosure is permitted where the assembly can removed without removal or replacement of the surrounding walls and floor to which it is affixed.

1104.11.3.1.3.1 Parallel approach bathtubs. A clearance 60 inches (1525 mm) minimum in length and 30 inches (760 mm) minimum in width shall be provided in front of bathtubs with a parallel approach. Lavatories complying with Section 606 shall be permitted in the clearance. A lavatory complying with Section 1104.11.3.1.1 shall be permitted at one end of the bathtub if a clearance 48 inches (1220 mm) minimum in length and 30 inches (760 mm) minimum in width is provided in front of the bathtub.

1104.11.3.1.3.2 Forward approach bathtubs. A clearance 60 inches (1525 mm) minimum in length and 48 inches (1220 mm) minimum in width shall be provided in front of bathtubs with a forward approach. A water closet and a lavatory shall be permitted in the clearance at one end of the bathtub.

1104.11.3.1.3.3 Parallel approach Shower compartment. ~~If a shower compartment is the only bathing facility, the~~ The shower compartment shall have dimensions of 36 inches (915 mm) minimum in width and 36 inches (915 mm) minimum in depth. A clearance of 48 inches (1220 mm) minimum in length, measured perpendicular from the control wall, and 30 inches (760 mm) minimum in depth, measured from the face of the shower compartment, shall be provided.

~~Exceptions~~ Exception:

1. ~~1.~~ A shower compartment with dimensions of 30 inches (760 mm) minimum in depth and 44 inches (1120 mm) minimum in width shall be permitted.
2. ~~2. A shower door assembly shall be permitted where the assembly can be removed without removal or replacement of the surrounding walls and floor to which it is affixed.~~

1104.11.3.1.3.4 Forward approach Shower compartment. The shower compartment shall have dimensions of 30 inches (760 mm) minimum in depth and 44 inches (1120 mm) minimum in width. A clearance 60 inches (1525 mm) minimum in length and 48 inches (1220 mm) minimum in width shall be provided in front of shower compartment with a forward approach. A water closet and a lavatory shall be permitted in the clearance at one side of the shower compartment.

REASON: The purpose of this proposal is to clarify enclosure requirements for bathtubs and showers, and to provide another option for showers.

1104.11.3.1.3 - Both bathtubs and showers may have enclosures. HUD confirmed that this was acceptable for Type B units last cycle (1104.11.3.1.3.3 exception 2), so the current language is relocated to make it generally applicable to tubs and showers.

1104.11.3.1.3.3 - There are often questions about "if a shower compartment is the only bathing facility". Does this literally mean that if there is an accessible tub, the shower can be anything? This would set a minimum shower size.

1104.11.3.1.3.4 – This new option uses the 30" x 44" shower with the forward approach for bathtubs clearances. There are many existing Type B units that want to modify the bathrooms by switching out the bathtubs for showers. Moving the walls has many ramifications for the unit. Providing a shower with a 4" threshold is safer than asking someone to step over a bathtub side.

It is my interpretation that this is a safer and more accessible option. If a person in a wheelchair could approach a bathtub in this configuration, there is no reason that same approach could not be equivalent or better for a shower.

Below are what is currently permitted, and what is proposed.

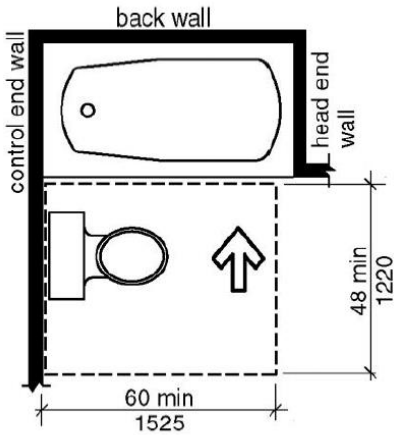


Figure 1104.11.3.1.3.2
Forward approach bathtubs in Type B units Option A bathrooms

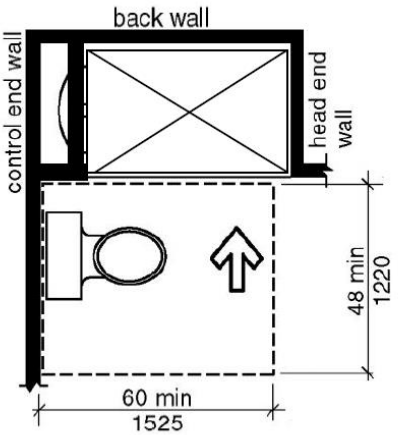


Figure 1104.11.3.1.3.4
Forward approach showers in Type B units Option A bathrooms

11-30– 2021 Replacement

1004.11.3.1.3, 1004.11.3.1.3.3, 1004.11.3.1.3.4(New)

Proponent: Kimberly Paarlberg, International Code Council

Replace and modify as follows:

1104.11.3.1.3 Bathing fixtures. Where provided in a bathroom, at least one bathing fixture shall comply with Section 1104.11.3.1.3. A ~~a~~ bathtub shall comply with Section 1104.11.3.1.3.1 or 1104.11.3.1.3.2 and a shower compartment shall comply with Section 1104.11.3.1.3.3 or 1104.3.1.3.4. A bathtub or shower enclosure is permitted where the assembly can removed without removal or replacement of the surrounding walls and floor to which it is affixed.

1104.11.3.1.3.3 Parallel approach Shower compartment. ~~If a shower compartment is the only bathing facility, the~~ The shower compartment shall have dimensions of 36 inches (915 mm) minimum in width and 36 inches (915 mm) minimum in depth. A clearance of 48 inches (1220 mm) minimum in length, measured perpendicular from the control wall, and 30 inches (760 mm) minimum in depth, measured from the face of the shower compartment, shall be provided.

Exceptions

1. A shower compartment with dimensions of 30 inches (760 mm) minimum in depth and 44 inches (1120 mm) minimum in width shall be permitted.
2. A shower door assembly shall be permitted where the assembly can be removed without removal or replacement of the surrounding walls and floor to which it is affixed.

1104.11.3.1.3.4 Forward approach Shower compartment. The shower compartment shall have dimensions of 30 inches (760 mm) minimum in depth and 44 inches (1120 mm) minimum in width. A clearance 60 inches (1525 mm) minimum in length and 48 inches (1220 mm) minimum in width shall be provided in front of shower compartment with a forward approach. A water closet and a lavatory shall be permitted in the clearance at one side of the shower compartment.

Reason: The provisions for shower doors were addressed in proposals 06-72-21 AM and 11-28-21 AM, so that has been removed from the proposal. The change to 1104.11.3.1.3.3 is very similar to what was approved in 11-25-21 AM and may even be a better approach.

Many master bathrooms now have both a shower and a tub. This was not the case when Fair Housing was written in the 1980s. Providing for one to be accessible allows for a person to bath, and this option is permitted with the plumbing code requirements. The Bathing Work group repeatedly said how a shower provided a better option for accessibility than a tub. If you require both the tub and shower to be accessible, and it is not too difficult to make both accessible (e.g., standing tubs) the designer could just pull one, so that does not allow for families who like to have both.

The front approach shower may not have the same transfer location as a side approach shower, but it is a better option than the front approach tub which is currently permitted.

Committee Action: Approval as Modified 21-1-1

REPORT OF HEARING:

Modification (if any):

Replace and modify as follows:

1104.11.3.1.3 Bathing fixtures. Where provided in a bathroom, at least one bathing fixture shall comply with Section 1104.11.3.1.3. A ~~a~~ bathtub shall comply with Section 1104.11.3.1.3.1 or 1104.11.3.1.3.2 and a shower compartment shall comply with Section 1104.11.3.1.3.3 or 1104.3.1.3.4. A bathtub or shower enclosure is permitted where the assembly can removed without removal or replacement of the surrounding walls and floor to which it is affixed.

1104.11.3.1.3.3 Parallel approach Shower compartment. ~~If a shower compartment is the only bathing facility, the~~ The shower compartment shall have dimensions of 36 inches (915 mm) minimum in width and 36 inches (915 mm) minimum in depth. A clearance of 48 inches (1220 mm) minimum in length, measured perpendicular from the control wall,

and 30 inches (760 mm) minimum in depth, measured from the face of the shower compartment, shall be provided.

Exceptions

1. A shower compartment with dimensions of 30 inches (760 mm) minimum in depth and 44 inches (1120 mm) minimum in width shall be permitted.
2. A shower door assembly shall be permitted where the assembly can be removed without removal or replacement of the surrounding walls and floor to which it is affixed.

1104.11.3.1.3.4 Forward approach Shower compartment. The shower compartment shall have dimensions of 30 inches (760 mm) minimum in depth and 44 inches (1120 mm) minimum in width. A clearance 60 inches (1525 mm) minimum in length and 48 inches (1220 mm) minimum in width shall be provided in front of shower compartment with a forward approach. A water closet and a lavatory shall be permitted in the clearance at one side of the shower compartment.

Committee Reason: The committee approved the replacement proposal. The change to 1104.11.3.1.3.3 is very similar to what was approved in 11-25-21 AM and clarifies that tubs and showers are both types of bathing fixtures. The front approach shower may not have the same transfer location as a side approach shower, but it provides a more accessible and safer option than the front approach tub, which is currently permitted.

1104.11.3.1.3.3-PAARLBERG.doc

11-30 – 2021 Ballot Comments

BALLOT COMMENT 1- FIRST DRAFT: Proponent: Karen Braitmayer, DREDF
Desired Action: Affirmative with Comment
Modification:
Reason: I agree with the committee action, but want more specific language on how to ensure that CFS is available for forward approach. The diagram on page 955 of the committee report appears to assume a substantial plumbing chase behind the control wall that may or may not be provided in new construction, thereby reducing the length of the shower opening beyond the leading edge of the adjacent water closet.
BALLOT COMMENT 2- FIRST DRAFT: Proponent: Kimberly Paarlberg, ICC
Desired Action: Affirmative with Comment
Modification: See Ballot Comment 2

11-30 – 2021 Ballot Comment 2

1004.11.3.1.3.3, 1104.11.3.1.3.4

Proponent: Kimberly Paarlberg, ICC

Further revise as follows:

Figure 1104.11.3.1.3.3 (A)
~~TRANSFER-TYPE~~ PARALLEL APPROACH SHOWER COMPARTMENT IN TYPE B UNITS
Figure 1104.11.3.1.3.3 (B)
~~TRANSFER-TYPE~~ PARALLEL APPROACH SHOWER COMPARTMENT IN TYPE B UNITS EXCEPTION

Figure 1104.11.3.1.3.4
FORWARD APPROACH SHOWER COMPARTMENT IN TYPE B UNITS

REASON: Revise title of the figures to match the text. Add figure for new section 1104.11.3.1.3.4.

Committee Action for Ballot Comment 2: AS 24-0-3

REPORT OF HEARING:

Modification (if any):

Committee Reason: The changes to the titles of the figure are correlative. The editorial committee will be reviewing a figure for the revised text. See PC1 for a recommendation.

102.1-CARPENTER.doc

11-30 – 2021 Public Comment 1
1104.3.1.3.4

Proponent: Kimberly Paarlberg, ICC

Further revise as follows:

1104.11.3.1.3.4 Forward approach Shower compartment. The shower compartment shall have dimensions of 30 inches (760 mm) minimum in depth and 44 inches (1120 mm) minimum in width. A clearance of 60 inches (1525 mm) minimum in length measured perpendicular from a side wall and 48 inches (1220 mm) minimum in width shall be provided in front of shower compartment with a forward approach. A water closet and a lavatory shall be permitted in the clearance at one side of the shower compartment opposite the side wall from which the clearance is measured.

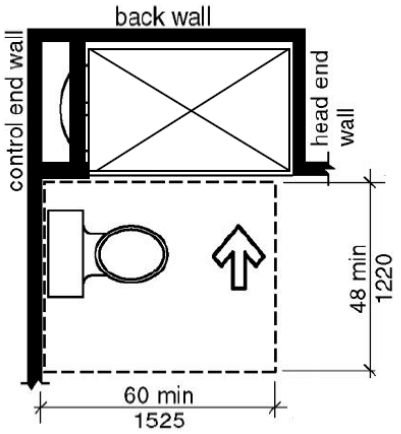


Figure 1104.11.3.1.3.4
FORWARD APPROACH SHOWER COMPARTMENT IN TYPE B UNITS
(Note: Figure similar to this. I don't have access to new graphic at this time.)

REASON: I had some people ask if someone installed this shower even with the water closet instead of as shown. I believe the text revision will address this concern. Measuring from the front of the water closet is not a good option, because the walls have to be in place way before the water closet is installed, and what you planned on is not always the one get gets installed.
Please see the reason for the original proposal for what is permitted for tubs. We do not address smaller tubs, so this is actually a higher level of access for both clearance and not having to step over the edge of the tub.

Committee Action for Public comment 1: AS 25-0-1

REPORT OF HEARING:

Modification (if any):

Committee Reason: This comment is an improvement to address that the shower compartment should have the best access to the maneuvering clearance possible with the front approach option.

11-30 Paarlberg

Committee Action for First Ballot: AFM by BC2 and PC1

REPORT OF HEARING:

Modification (if any):

Committee Reason:
BC2 – The changes to the titles of the figure are correlative. The editorial committee will be reviewing a figure for the revised text. See PC1 for a recommendation.

PC1 - This comment is an improvement to address that the shower compartment should have the best access to the maneuvering clearance possible with the front approach option.

Report for *11-30– 2021*

Committee decision: AM	***Committee Vote at Meeting: 21-1-1***	***Committee Vote on Ballot: 41-2-2***

REPORT OF HEARING:

Modification (if any):

Replace and modify as follows:

1104.11.3.1.3 Bathing fixtures. Where provided in a bathroom, at least one bathing fixture shall comply with Section 1104.11.3.1.3. A ~~a~~ bathtub shall comply with Section 1104.11.3.1.3.1 or 1104.11.3.1.3.2 and a shower compartment shall comply with Section 1104.11.3.1.3.3 or 1104.3.1.3.4. A bathtub or shower enclosure is permitted where the assembly can removed without removal or replacement of the surrounding walls and floor to which it is affixed.

1104.11.3.1.3.3 Parallel approach Shower compartment. ~~If a shower compartment is the only bathing facility, the~~ The shower compartment shall have dimensions of 36 inches (915 mm) minimum in width and 36 inches (915 mm) minimum in depth. A clearance of 48 inches (1220 mm) minimum in length, measured perpendicular from the control wall, and 30 inches (760 mm) minimum in depth, measured from the face of the shower compartment, shall be provided.

Exceptions

1. A shower compartment with dimensions of 30 inches (760 mm) minimum in depth and 44 inches (1120 mm) minimum in width shall be permitted.
2. A shower door assembly shall be permitted where the assembly can be removed without removal or replacement of the surrounding walls and floor to which it is affixed.

1104.11.3.1.3.4 Forward approach Shower compartment. The shower compartment shall have dimensions of 30 inches (760 mm) minimum in depth and 44 inches (1120 mm) minimum in width. A clearance 60 inches (1525 mm) minimum in length and 48 inches (1220 mm) minimum in width shall be provided in front of shower compartment with a forward approach. A water closet and a lavatory shall be permitted in the clearance at one side of the shower compartment.

Committee Reason: The committee approved the replacement proposal. The change to 1104.11.3.1.3.3 is very similar to what was approved in 11-25-21 AM and clarifies that tubs and showers are both types of bathing fixtures. The front approach shower may not have the same transfer location as a side approach shower, but it provides a more accessible and safer option than the front approach tub, which is currently permitted.

BALLOT COMMENT 1- FIRST DRAFT:

Proponent: Karen Braitmayer, DREDF

Desired Action: Affirmative with Comment

Modification:

Reason: I agree with the committee action, but want more specific language on how to ensure that CFS is available for forward approach. The diagram on page 955 of the committee report appears to assume a substantial plumbing chase behind the control wall that may or may not be provided in new construction, thereby reducing the length of the shower opening beyond the leading edge of the adjacent water closet.

BALLOT COMMENT 2- FIRST DRAFT:

Proponent: Kimberly Paarlberg, ICC

Desired Action: Affirmative with Comment

Modification:

Further revise as follows:

Figure 1104.11.3.1.3.3 (A)
~~TRANSFER-TYPE~~ PARALLEL APPROACH SHOWER COMPARTMENT IN TYPE B UNITS

Figure 1104.11.3.1.3.3 (B)
~~TRANSFER-TYPE~~ PARALLEL APPROACH SHOWER COMPARTMENT IN TYPE B UNITS EXCEPTION

Figure 1104.11.3.1.3.4
FORWARD APPROACH SHOWER COMPARTMENT IN TYPE B UNITS

Reason: Revise title of the figures to match the text. Add figure for new section 1104.11.3.1.3.4.

Committee decision: AM BC2 and PC1	***Committee Vote at Meeting: BC2 AS 24-0-3; PC1 AS 25-0-1***	***Committee Vote on Ballot:***

REPORT OF HEARING – FIRST DRAFT

Modification (if any):

Committee Reason:

BC2 – The changes to the titles of the figure are correlative. The editorial committee will be reviewing a figure for the revised text. See PC1 for a recommendation.

Report for *11-30– 2021*		
PC1 - This comment is an improvement to address that the shower compartment should have the best access to the maneuvering clearance possible with the front approach option.		
BALLOT COMMENT- SECOND DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
FINAL ACTION: Modification (if any):		
Committee Reason:		

11-32 – 2021 overview

Proposal number	Proponent	Standard Sections	Committee Actions	Mtg. Date	Notes; Groups; groupings
11-32	Roberts	1106.2.5 (New), 1106.2.1 (New)	D 32-1-1	4-27-2023	New standard IBC Final Action D

Comment	Proponent	Requested Action	Committee Action	Mtg. Date	Notes; Groups; groupings
PC1	Roberts	AM	AS 1-21-2 failed	9-12-2024	

BC= Ballot Comment, PC= Public comment, **Bold Comment number** is proposed revision below

11-32 – 2021

106.2.5(New), 1106.2.1 (New)

Proponent: Richard Roberts, Honeywell, representing National Electrical Manufacturers Association (NEMA)

Add new text as follows:

SECTION 1106
UNITS WITH COMMUNICATION FEATURES

1106.1 General. Units required to have communication features shall comply with Section 1106.

1106.2 Unit smoke detection. Where provided, unit smoke detection shall include audible notification complying with NFPA 72 listed in Section 106.2.4.

1106.2.1 Unit smoke detection in sleeping rooms. Where provided in dwelling units of apartment buildings, unit smoke detection with 520 Hz low frequency audible alarm signal shall be provided in accordance with Section 907.5.2.1.3 of the International Building Code listed in Section 106.2.5.

SECTION 106
REFERENCED DOCUMENTS

106.2.5 International Building Code. International Code Council (ICC) International Building Code-2021.

REASON: This Proposal adds a new section to Standard that seeks to enhance the waking effectiveness of at-risk segments of the population such as people over 65, people who are hard of hearing, school age children and people who are alcohol or drug impaired. Section 907.5.2.1.3 of the International Building Code requires the 520 Hz low frequency signal in sleeping areas of new Group R-1 and R-2 buildings that are required to have a fire alarm system because peer-reviewed research, referenced below, has concluded the 520 Hz low frequency is superior to the traditional 3 KHz audible alarm signal in awakening high at-risk segments of the population.

Peer reviewed Research:
Optimizing Fire Alarm Notification for High Risk Groups Research Project
Waking effectiveness of alarms (auditory, visual and tactile) for adults who are hard of hearing

Staff note: The *2021 International Building Code* can be viewed on the ICC website at https://codes.iccsafe.org/content/IBC2021P2.

Committee Action: Disapproval 32-1-1

REPORT OF HEARING:

Modification (if any):

Committee Reason: The committee needs to know what is currently in the IBC for scoping and NFPA 72 for technical requirements in regard to this proposal for the 520 Hz? The title does not match the text. The proposal limits the scope to apartments, while the 2024 edition of the IBC references Group R-1, R-2 and I-1. Are there products on the market that can meet this? This system requires a hard wire system with a building fire alarm. The committee asked if this product is not available at this time for single-station smoke alarm on battery backup – the proponent indicated one manufacturer has plans to provide this product.

1106.2.1-ROBERTS.doc

11-32 – 2021 Public Comment 1

106.2.5, 1106.2.1

Proponent: Richard Roberts, Honeywell, National Electrical Manufactures Association (NEMA)

Further revise with the following:

SECTION 1106
UNITS WITH COMMUNICATION FEATURES

1106.2.1 ~~Unit smoke detection in sleeping rooms~~ Audible alarm signal frequency. Where provided in dwelling units ~~of apartment buildings~~ and sleeping units, ~~unit smoke detection with 520 Hz low frequency~~ the audible alarm signal frequency for single- or multiple-station smoke

alarms shall ~~be provided in accordance~~ comply with Section 907.5.2.1.3 of the International Building Code listed in Section 106.2.5.

REASON: This public comment (PC), relating to disapproved proposal 11-32-2021, seeks to add a new section to Standard that will enhance the waking effectiveness of at-risk segments of the population. Even though the Committee supported the intent of proposal 11-32-2021, they pointed out it conflicts with section 907.5.2.1.3 of the International Building Code (IBC). Specifically, the scope of 907.5.2.1.3 of the IBC covers R-1, I-1, and the other types of R-2 occupancies, whereas proposal 11-32-2021 is just for apartment buildings. This PC modifies proposal 11-32-2021 to remove the conflict with the IBC.

The reason for requiring the 520 Hz low frequency signal in sleeping areas is because peer-reviewed research, referenced below, has concluded the 520 Hz low frequency is superior to the traditional 3 KHz audible alarm signal in awakening high at-risk segments of the population such as people over 65, people who are hard of hearing, school age children and people who are alcohol or drug impaired.

Currently there are no listed smoke alarms with an integral low frequency sounder. However, the last sentence in 907.5.2.1.3.2 specifies other options that are currently available.

Below are the low frequency requirements in the IBC.

907.5.2.1.3 Audible signal frequency in Group R-1 and R-2 sleeping rooms. Audible signal frequency in Group R-1 and R-2 occupancies shall be in accordance with Sections 907.5.2.1.3.1 and 907.5.2.1.3.2.

907.5.2.1.3.1 Fire alarm system signal. In sleeping rooms of Group R-1 and R-2 occupancies, the audible alarm activated by a fire alarm system shall be a 520-Hz low-frequency signal complying with NFPA 72.

907.5.2.1.3.2 Smoke alarm signal in sleeping rooms. In sleeping rooms of Group R-1 and R-2 occupancies that are required by Section 907.2.8 or 907.2.9 to have a fire alarm system, the audible alarm signal activated by single- or multiple-station smoke alarms in the dwelling unit or sleeping unit shall be a 520-Hz signal complying NFPA 72.
Where a sleeping room smoke alarm is unable to produce a 520-Hz signal, the 520-Hz alarm signal shall be provided by a *listed* notification appliance or a smoke detector with an integral 520-Hz sounder.

Peer reviewed Research:

Optimizing Fire Alarm Notification for High Risk Groups Research Project

Waking effectiveness of alarms (auditory, visual and tactile) for adults who are hard of hearing

Cost Impact: The proposed change proposal will increase the cost of construction. The proposal will increase the cost of construction. The total installation cost will only increase in new R-1

and R-2 occupancies where a fire alarm system is required by Section 907 by requiring the use of the 520 Hz low frequency audible fire alarm signal

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Committee Action for Public Comment 1: AS 1-21-2 fail

REPORT OF HEARING:

Modification (if any):

Committee Reason: The prescribed type of smoke detectors is not yet available in the marketplace. In addition, this is a generally applicable concern that belongs in the International Fire Code.

11-32 Roberts.doc

Committee Action for First Ballot: Final Action D

REPORT OF HEARING:

Modification (if any):

Committee Reason: The prescribed type of smoke detectors is not yet available in the marketplace. In addition, this is a generally applicable concern that belongs in the International Fire Code.

Report for *11-32– 2021*		
Committee decision: D	***Committee Vote at Meeting: 32-1-1***	***Committee Vote on Ballot: 43-0-2***
REPORT OF HEARING: Modification (if any):		
Committee Reason: The committee needs to know what is currently in the IBC for scoping and NFPA 72 for technical requirements in regard to this proposal for the 520 Hz? The title does not match the text. The proposal limits the scope to apartments, while the 2024 edition of the IBC references Group R-1, R-2 and I-1. Are there products on the market that can meet this? This system requires a hard wire system with a building fire alarm. The committee asked if this product is not available at this time for single-station smoke alarm on battery backup – the proponent indicated one manufacturer has plans to provide this product.		
Committee decision: AS	***Committee Vote at Meeting: 1-21-2 failed***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		
Committee Reason:		
BALLOT COMMENT- SECOND DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
FINAL ACTION: Modification (if any):		
Committee Reason:		

11-33 – 2021 overview

Proposal number	Proponent	Standard Sections	Committee Actions	Mtg. Date	Notes; Groups; groupings
11-33	Roberts	1106.2.5 (New), 1106.3	D 30-1-0	4-27-2023	Final Action D

Comment	Proponent	Requested Action	Committee Action	Mtg. Date	Notes; Groups; groupings
BC1	Paarlberg, ICC	Negative	NA	9-12-2024	
PC1	Roberts	AS	AS 7-14-4 Fail	9-12-2024	

BC= Ballot Comment, PC= Public comment, **Bold Comment number** is proposed revision below

11-33 – 2021
106.2.5(New), 1106.3

Proponent: Richard Roberts, Honeywell, representing National Electrical Manufacturers Association (NEMA)

Revise as follows:

SECTION 1106
UNITS WITH COMMUNICATION FEATURES

1106.3 Building fire alarm system. Where a building fire alarm system is provided, the system wiring shall ~~be extended to a point within the unit in the vicinity of the unit smoke detection system~~ comply with Section 907.5.2.3.3 of the International Building Code listed in Section 106.2.5.

SECTION 106
REFERENCED DOCUMENTS

106.2.5 International Building Code. International Code Council (ICC) International Building Code-2021.

REASON: This proposal amends Section 1106.3 to align with a change made to Section 907.5.2.3.3 of the 2021 edition of the International Building Code that provide reasonable, clear, and enforceable language for system designers and code enforcement officials unit for the possibility of installing strobes lights after the dwelling unit was retrofitted for hearing impaired

occupants. The proposal is needed because the current requirement in 1106.3 is vague and costly. Many code enforcement officials and engineers require **every** dwelling unit and bedroom to be pre-wired for the future possibility of installing visual notification device(s) that are connected to the building fire alarm system. In summary Section 907.5.2.3.3 now requires the following:

- Permits building fire alarm system wireless equipment as an acceptable technology for providing visible notification for hearing impaired occupants.
- The building fire alarm system circuits are **only** required to be run to a single access point on every story and they are not required to be extended beyond that single access point.
- Allows connecting a strobe light to the existing dwelling unit smoke alarm
- Provides the fire alarm industry with a standardized basis for designing excess power capacity into systems. The system is now required to have a minimum 5% excess power capacity to accommodate the possibility of installing strobes lights after the dwelling unit is retrofitted for hearing impaired occupants.

Below is the actual requirement of Section 907.5.2.3.3 of the 2021 edition of the International Building Code.

907.5.2.3.3 Group R-2. In Group R-2 occupancies required by Section 907 to have a fire alarm system, each story that contains dwelling units and sleeping units shall be provided with the capability to support future visible alarm notification appliances in accordance with Chapter 11 of ICC A117.1. Such capability shall accommodate wired or wireless equipment.

907.5.2.3.3.1 Wired equipment. Where wired equipment is used to comply with the future capability required by Section 907.5.2.3.3, the system shall include one of the following capabilities:

1. The replacement of audible appliances with combination audible/visible appliances or additional visible notification appliances.
2. The future extension of the existing wiring from the unit smoke alarm locations to required locations for visible appliances.
3. For wired equipment, the fire alarm power supply and circuits shall have not less than 5% excess capacity to accommodate future addition of visible alarm notification appliances, and a single access point to such circuits shall be available on every story. Such circuits shall not be required to be extended beyond a single access point on a story. The fire alarm system shop drawings required by Section 907.1.2 of the Code shall include the power supply and circuit documentation to accommodate future addition of visible notification appliances

Staff note: The *2021 International Building Code* can be viewed on the ICC website at https://codes.iccsafe.org/content/IBC2021P2.

Committee Action: Disapproval 30-1-0

REPORT OF HEARING:

Modification (if any):

Committee Reason: The reference back to the IBC is circular since IBC sends you back to ICC A117.1 for requirements. Does the modifications to IBC Section 907.5.2.3.3 addresses this? Wireless systems should be addressed.

1106.3 ROBERTS.doc

11-33 – 2021 Ballot Comments

BALLOT COMMENT 1- FIRST DRAFT: Proponent: Kimberly Paarlberg, ICC
Desired Action: Negative with comment.
Modification:
Reason: Request approval as submitted. The IBC provides a lot of additional information for these types of systems. Therefore, the reference is appropriate. There would need to be a correlative change in the IBC to take out the reference to ICC A117.1 so that the references were not circular

11-33 – 2021 Public Comment 1

102.1

Proponent: Richard Roberts, Honeywell, National Electrical Manufactures Association (NEMA)

Request As Submitted

REASON: This proposal amends Section 1106.3 to align with a change made to Section 907.5.2.3.3 of the 2021 edition of the International Building Code that provide reasonable, clear, and enforceable language for system designers and code enforcement officials unit for the possibility of installing strobes lights after the dwelling unit was retrofitted for hearing impaired occupants. The proposal is needed because the current requirement in 1106.3 is vague and costly. Many code enforcement officials and engineers require **every** dwelling unit and bedroom to be pre-wired for the future possibility of installing visual notification device(s) that are connected to the building fire alarm system. In summary Section 907.5.2.3.3 now requires the following:

- Permits building fire alarm system wireless equipment as an acceptable technology for providing visible notification for hearing impaired occupants.
- The building fire alarm system circuits are **only** required to be run to a single access point on every story and they are not required to be extended beyond that single access point.
- Allows connecting a strobe light to the existing dwelling unit smoke alarm
- Provides the fire alarm industry with a standardized basis for designing excess power capacity into systems. The system is now required to have a minimum 5% excess power

capacity to accommodate the possibility of installing strobes lights after the dwelling unit is retrofitted for hearing impaired occupants.

Below is the actual requirement of Section 907.5.2.3.3 of the 2021 edition of the International Building Code.

907.5.2.3.3 Gro up R-2. In Group R-2 occupancies required by Section 907 to have a fire alarm system, each story that contains dwelling units and sleeping units shall be provided with the capability to support future visible alarm notification appliances in accordance with Chapter 11 of ICC A117.1. Such capability shall accommodate wired or wireless equipment.

907.5.2.3.3.1 Wired equipment. Where wired equipment is used to comply with the future capability required by Section 907.5.2.3.3, the system shall include one of the following capabilities:

4. The replacement of audible appliances with combination audible/visible appliances or additional visible notification appliances.
5. The future extension of the existing wiring from the unit smoke alarm locations to required locations for visible appliances.
6. For wired equipment, the fire alarm power supply and circuits shall have not less than 5% excess capacity to accommodate future addition of visible alarm notification appliances, and a single access point to such circuits shall be available on every story. Such circuits shall not be required to be extended beyond a single access point on a story. The fire alarm system shop drawings required by Section 907.1.2 of the Code shall include the power supply and circuit documentation to accommodate future addition of visible notification appliances

Cost Impact: The code change proposal will not increase or decrease the cost of construction. The requirement for future expansion capability already exists in this section.

Committee Action for Public Comment 1: AS 7-14-4 failed

REPORT OF HEARING:

Modification (if any):

Committee Reason: Since Section 907.5.2.3.3 still contains a reference to A117.1, this could be a circular reference. A wireless system is permitted in IBC. A wireless system should not be accepted if all the other units are wired. Section 907.5.2.3.3.1 Option 3 appears to allow for the connection to be at only one location on the floor. The connections should be available at each apartment.

11-33 Roberts.doc

Committee Action for First Ballot: Final action D

REPORT OF HEARING:

Modification (if any):

Committee Reason: Since Section 907.5.2.3.3 still contains a reference to A117.1, this could be a circular reference. A wireless system is permitted in IBC. A wireless system should not be accepted if all the other units are wired. Section 907.5.2.3.3.1 Option 3 appears to allow for the connection to be at only one location on the floor. The connections should be available at each apartment.

Report for *11-33– 2021*		
Committee decision: D	***Committee Vote at Meeting: 30-1-0***	***Committee Vote on Ballot: 42-1-2***
REPORT OF HEARING: Modification (if any):		
Committee Reason: The reference back to the IBC is circular since IBC sends you back to ICC A117.1 for requirements. Does the modifications to IBC Section 907.5.2.3.3 addresses this? Wireless systems should be addressed.		
BALLOT COMMENT 1- FIRST DRAFT: Proponent: Kimberly Paarlberg, ICC		
Desired Action: Negative with comment.		
Modification:		
Reason: Request approval as submitted. The IBC provides a lot of additional information for these types of systems. Therefore, the reference is appropriate. There would need to be a correlative change in the IBC to take out the reference to ICC A117.1 so that the references were not circular		
Committee decision: AS	***Committee Vote at Meeting: 7-14-4 failed***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		
Committee Reason: Since Section 907.5.2.3.3 still contains a reference to A117.1, this could be a circular reference. A wireless system is permitted in IBC. A wireless system should not be accepted if all the other units are wired. Section 907.5.2.3.3.1 Option 3 appears to allow for the connection to be at only one location on the floor. The connections should be available at each apartment.		
BALLOT COMMENT- SECOND DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
FINAL ACTION: Modification (if any):		
Committee Reason:		