ICC 300-2020 edition

Public Input Agenda based on input received on 2017 edition of the ICC 300 Standard

For First Ballot
3/6/2022
Meeting – Teleconference

Matrix for ICC 300 proposals

Proposal #	Section Number	Date of meeting proposal considered	Committee Action	Notes
CHAPTER 1 APPLICATION AND ADMINISTRATION				
IS-BLE-01-01-22	105.1, 105.2	11/28/2022	AS (7-0)	New
CHAPTER 2 DEFINITIONS				
IS-BLE-02-01-22	101.1, 102.1, 202, 209.1, Table 303.2, 303.8, 310.1, 402.1, 403.1, 404.2, 406.8.1, 407.4.1, 408.1, 408.2, 409.2.3, 409.4.2, 505.1, 505.1.2, 501.2.1, 501.4, 502.1, 503.1, 505.1	1/9/2023	AM (7-0)	Option 3
CHAPTER 3 CONSTRUCTION				
IS-BLE-03-01-21	302.1, 302.1.1(New), Chapter 6 (New)	2/7/2022	D (8-0)	ASTM E84 and UL 723
IS-BLE-03-02-21	303.1	2/7/2022	D(8-0)	
IS-BLE-03-03-21	303.5.1, 303.5.2	2/7/2022	AS (7-1)	Revised 2/2/2022
IS-BLE-03-04-21	303.8	2/21/2022	AM(6-2)	
CHAPTER 4 EGRESS				
IS-BLE-04-01-21	404.1	10/3/2022	AM(7-0)	E27-21 – tabled till after 04-08-21
IS-BLE-04-02-21	404.5.1	3/7/2022	D(8-0)	
IS-BLE-04-03-21	406.8.1	3/21/2022	AM(5-3)	
IS-BLE-04-04-21	408.1	4/4/2022	AM(8-0)	
IS-BLE-04-05-21	408.2	4/18/2022	AM(5-2-1)	
IS-BLE-04-06-21	408.2	4/18/2022	AM(6-1-1)	
IS-BLE-04-07-21	409.1, 409.1.1, 409.1.3(New), 409.2, 409.2.1(New), 402.2.2(New), 409.2.3(New)	9/19/2022	AM(7-0)	
IS-BLE-04-08-21	409.3, 409.3.1(New), 409.3.2(New)	5/16/2022	Withdrawn	
IS-BLE04-01-22	405.1, 405.2	3-6-2023	AM (9-0-0)	Began discussion 1/23/23, continued 2/6/23, 2/27/23 and finished 3/6/23
IS-BLE 04-01-23	202	2-27-2023	AS(5-0-0)	Aisle
IS-BLE 04-02-23	202	2-27-2023	No action	Exit access
IS-BLE 04-03-23	404.1, Table 404.1, 404.3	2-27-2023	AS(5-0-0)	
IS-BLE 04-04-23	202, 404.3(New), 404.4, 408.1	2-27-2023	AM(6-0-0)	Press Box

IS-BLE 04-05-23	405.6	2-27-2023	No action	
IS-BLE 04-06-23	Table 407.5	2-27-2023	No action	
CHAPTER 5 EXISTING BLEACHERS, FOLDING AND TELESCOPIC SEATING AND GRANDSTANDS				
IS-BLE-05-01-21	506(New), 506.1(New)	11/14/2022	AM (7-0)	
CHAPTER 6 REFERENCED STANDARDS				
IS-BLE-06-01-21	Chapter 6	11/28/2022	AS (7-0)	Automatic update of standards

Chapter 3
CONSTRUCTION

IS-BLE 03-01-21
ICC 300 Sections 302.1, 302.1.1 (New), Chapter 6 (New)

Proponent: Marcelo M. Hirschler, GBH International

Revise as follows:
302.1 Combustibility and flame spread. Bleachers, folding and telescopic seating, and grandstands shall be ~~permitted to be~~ constructed of ~~combustible or noncombustible~~ materials complying with Section 302.1.1. Such installations within a building shall not be considered interior finish relative to the application of the building code.

302.1.1 Materials. The materials of construction shall comply with either one of the following requirements:

1. Materials shall be noncombustible materials in accordance with Section 703.3.1 of the International Building Code.
2. Materials shall exhibit a Class C flame spread index and smoke developed index when tested in accordance with ASTM E84 or UL 723, with the test specimen remaining in place during the test, or shall comply with the requirements of Section 803.1.1 of the International Building Code.

Add new Standard:
ASTM E84—2018B: Standard Test Methods for Surface Burning Characteristics of Building Materials
UL 723—2018: Test for Surface Burning Characteristics of Building Materials

Reason: This proposal requires that the materials of construction of the bleachers meet some minimal fire safety requirements. The existing language in ICC 300 on materials in ICC 300 is not very useful, as it states:
“302.1 Combustibility and flame spread. Bleachers, folding and telescopic seating, and grandstands shall be permitted to be constructed of combustible or noncombustible materials. Such installations within a building shall not be considered interior finish relative to the application of the building code.”
The requirement that bleachers be constructed of "combustible or noncombustible materials" does not exclude anything, since there is no other option for a material. There is a need to ensure the bleachers are not made of a material that is highly combustible. This proposal contains a requirement that is pretty straightforward to meet, since traditional bleacher materials

(including wood) would meet the requirements. This proposal says that they can be made of noncombustible materials (and sends to 703.3.1 of the IBC) or of materials that meet a Class C in accordance with ASTM E84, and sends to section 803.1.1 of the IBC. This requirement ensures that the bleachers cannot simply be made of a highly combustible plastic or plastic composite material (note that wood materials meet a Class C without any treatment), which would introduce a high fuel load into these temporary structures. The added requirement that "the test specimen remain in place during the test" is the same as is required for plastic composites in both the IBC (section 2612) and the IRC (section R507).

Committee Action: Approve (0-8) Disapproval (8-0)
Committee Reason: This proposal would eliminate or significantly reduce the options for plastic seats or wood seats currently on the market. There is not signification fire history due to the bleacher systems themselves. The language is confusing regarding saying that this is not interior finishes, but then the new requirements reference interior finish requirements.

Items that should be addressed are:

- Bleacher definitions so that it is clear that bleachers are furniture and not a building element (see the IBC definition).
- The 'combustible and non-combustible' current language does not provide requirements on what the bleacher should be – this could be clarified since it is not stating any requirements.
- IBC Section 1030.1.1.1 addresses spaces under bleachers (which is what the fire history is from).

Report for *IS-BLE 03-01-21*		
Committee decision: D	***Committee Vote at Meeting: 8-0***	***Committee Vote on Ballot:***
REPORT OF HEARING: Modification (if any):		
Committee Reason: This proposal would eliminate or significantly reduce the options for plastic seats or wood seats currently on the market. There is not signification fire history due to the bleacher systems themselves. The language is confusing regarding saying that this is not interior finishes, but then the new requirements reference interior finish requirements. Items that should be addressed are: • Bleacher definitions so that it is clear that bleachers are furniture and not a building element (see the IBC definition). • The 'combustible and non-combustible' current language does not provide requirements on what the bleacher should be – this could be clarified since it is not stating any requirements. • IBC Section 1030.1.1.1 addresses spaces under bleachers (which is what the fire history is from).		
PUBLIC COMMENT- FIRST DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		
Committee Reason:		
PUBLIC 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:

IS-BLE 03-02-21
ICC 300 Section 303.1

Proponent: Daniel Victor, INTERKAL, LLC

Revise as follows:

303.1 Design. The structural design shall be in accordance with the building code.

Exception: Load tests in accordance with accepted engineering practice shall be permitted in lieu of structural calculations for seating units or portions thereof.

Reason: Load tests have been accepted and sometimes required for decades. Similar statements have been incorporated into NFPA 102, the industry predecessor to ICC 300. California Division of the State Architect Interpretation of Regulation IR 16-5.16 contains provisions for testing. Guard and handrail testing methods are available through ASTM.

Committee Action: Disapproval (8-0)

Committee Reason: Load testing is already permitted under alternative means (103.1), so this language is not needed.

Report for *IS-BLE 03-02-21*		
Committee decision: D	***Committee Vote at Meeting: 8-0***	***Committee Vote on Ballot:***
REPORT OF HEARING: Modification (if any):		
Committee Reason: Load testing is already permitted under alternative means (103.1), so this language is not needed.		
PUBLIC COMMENT- FIRST DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		
Committee Reason:		
PUBLIC 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:		

IS-BLE 03-03-21

ICC 300 Section 303.5.1, 303.5.2

Revised 2/2/2022

Proponent: Amber DellAngelo, Larson Engineering, Inc.

Revise as follows:

303.5.1 Load combinations using strength design or load and resistance factor design. When using strength design or load and resistance factor design the following additional load combination must be considered.

1.2D + 1.0L + 1.6Z (Equation 3-1)
0.9D + 0.4L + 1.6Z (Equation 3-2)
1.2D + 1.6Rr (Equation 3-3)
1.2D + 1.6L + 1.2R_r (Equation 3-4)

303.5.2 Load combinations using allowable stress design. When using allowable stress design, the following additional load combinations must be considered.

D + 0.4L + 1.0Z (Equation 3-5)
D + 0.75L + 0.75Z (Equation 3-6 ~~3-5~~)
0.6D + 0.3L + 1.0Z (Equation 3-7 ~~3-6~~)
D + 1.0R_r (Equation 3-8 ~~3-7~~)
D + L + 0.75R_r (Equation 3-9 ~~3-8~~)

Reason: It has come to my attention that CA DSA will be requiring this load combination in addition to the others already in ICC 300. I believe it prudent to have ICC 300 match California's requirement. Reference California DSA IR 16-5.

Committee Action: Approved (7-1)
Committee Reason: The additional load combination is needed for columns and bracing. This would coordinate with CA DSA.

Report for *IS-BLE 03-03-21*		
Committee decision: AS	***Committee Vote at Meeting: 7-1***	***Committee Vote on Ballot:***
REPORT OF HEARING: Modification (if any):		
Committee Reason: The additional load combination is needed for columns and bracing. This would coordinate with CA DSA.		
PUBLIC COMMENT- FIRST DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		
Committee Reason:		
PUBLIC 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:		

IS-BLE 03-04-21
ICC 300 Sections 303.8

Proponent: Gregory Nelson, FaciliServ, Inc.

Revise as follows:
303.8 Lateral restraint. Outdoor bleachers shall be anchored or have a positive ballast ~~ballasted~~ attached to structural frame members to resist uplift and horizontal sliding forces in accordance to building code or manufacturers requirements, whichever has a greater static value.

Reason:

A: Adding positive attached ballasting to the frame member ensures the ballast would not be able to be inadvertently removed or fail to stay in place if simply places over a frame member and perform its purpose to load the bleachers frame to resist movement.
B: Adding the manufacturers anchoring or ballasting requirement ensures that at minimum the manufacturer's
engineer's values for the specific bleacher configurations are recognized and as such, it would be the designed anchoring on their specification/submittals, where generalized anchoring would not take in consideration for specific or unique configurations that may be present.

An unanchored 5 row x 110' soccer field bleacher twisted upside down at one end resulting in a total loss of a 350 seat bleacher. Had manufacturer's anchoring or ballast been applied, likely no loss would have occurred.

Multiple stands wind swept over the ball field fence and onto the playing field. Had the manufacturers anchoring or properly secured ballast been applied to these bleachers would occur likelihood of total loss would not occurred

Modification:
Replace with the following:

303.8 Lateral restraint. Outdoor bleachers shall be anchored or have ballast ~~ballasted~~ that is positively attached to resist uplift and horizontal sliding forces in accordance ~~to~~ with the building code and manufacturers installation requirements.

Committee Action: Approved as modified (6-2)
Committee Reason: The manufacturers installation instructions do include information on what is needed to resist uplift and horizontal sliding forces. The intent of positively attached is for specific weights that would stay in place, and not allow for something like sandbags that would deteriorate over time. There was discussion on if permanent bleachers should always be anchored. However, it was important to allow for ballasting as an option for bleachers that are moved seasonally, or for events where bleachers are placed on sidewalks or streets where anchors could not be permanently installed. Ballast or anchoring information could be added to the identification tag information in Section 501.2.1.

Report for *IS-BLE 03-04-21*		
Committee decision: AM	***Committee Vote at Meeting: 6-2***	***Committee Vote on Ballot:***
REPORT OF HEARING:		

Modification (if any):
Replace with the following:

303.8 Lateral restraint. Outdoor bleachers shall be anchored or have ballast ~~ballasted~~ that is positively attached to resist uplift and horizontal sliding forces in accordance ~~to~~ with the building code and manufacturers installation requirements.

Committee Reason: The manufacturers installation instructions do include information on what is needed to resist uplift and horizontal sliding forces. The intent of positively attached is for specific weights that would stay in place, and not allow for something like sandbags that would deteriorate over time. There was discussion on if permanent bleachers should always be anchored. However, it was important to allow for ballasting as an option for bleachers that are moved seasonally, or for events where bleachers are placed on sidewalks or streets where anchors could not be permanently installed. Ballast or anchoring information could be added to the identification tag information in Section 501.2.1.

PUBLIC COMMENT- FIRST DRAFT:
Proponent:
Desired Action:
Modification:
Reason:

Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***

REPORT OF HEARING – FIRST DRAFT
Modification (if any):
Committee Reason:

PUBLIC 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 4
EGRESS

IS-BLE 04-01-21
ICC 300 Sections 404.1

Proponent: ICC 300 committee

Revise as follows:
404.1 Minimum number of exits. The minimum number of exits shall be provided from the seating area based on the occupant loads in Table 404.1 and in accordance with the calculated width requirement for egress capacity in Section 404.5. Accessible means of egress shall be provided as required by Section 1009 of the *International Building Code*. The common path of egress travel shall be measured from the wheelchair spaces along the accessible route to that point where the occupants have a choice of two accessible routes to accessible means of egress.

Exception: For open-air assembly seating installations where the means of egress converge, a minimum of two egress paths shall be provided, sized to accommodate the occupant load served.

Reason:
The Building Code Action Committee submitted E27-21 to the IBC Section 1009.1 to point out a common error for bleacher systems. The proposal was disapproved. It was stated that this should be in the ICC 300 instead of the IBC.

Notes 3/7/2022: The committee discussed the proposals and options. Options discussed were extending the common path of travel, or developing a type of exterior area for assisted rescue. The committee tabled the proposal till April 4, 2022 (7-0).

Replace IS-BLE 04-01-21 with the following:
ICC 300 Sections 404.1

Proponent: ICC 300 committee

Revise as follows:

SECTION 404
GENERAL MEANS OF EGRESS

404.1 Minimum number of exits. The minimum number of exits shall be provided from the seating area based on the occupant loads in Table 404.1 and in accordance with the calculated width requirement for egress capacity in Section 404.5. ~~Accessible means of egress shall be provided as required by Section 1009 of the *International Building Code*.~~

Exception: For open-air assembly seating installations where the means of egress converge, a minimum of two egress paths shall be provided, sized to accommodate the occupant load served.

404.1.1 Accessible means of egress. Accessible means of egress shall be provided as required by Section 1009 of the *International Building Code*. The common path of egress travel for accessible means of egress shall be measured from the wheelchair spaces along the accessible route to that point where the occupants have a choice of two accessible routes.

Exception: For ~~exterior installations of~~ open-air assembly seating, exterior areas for assisted rescue at the level of exit discharge shall be located adjacent to the top landing of the exit access stairway and are not required to meet the separation requirements in Section 1009.7.2 of the *International Building Code*.

Table 404.1
MINIMUM NUMBER OF EXITS

OCCUPANT LOAD	REQUIRED MEANS OF EGRESS
0–250	1
251–750	2
751–2,500	3
Over 2,500	4

404.2 Room or space means of egress. Rooms or spaces in which tiered seating is located shall be provided with the required means of egress in accordance with the building code.

404.3 Exterior installations. The exit discharge shall provide a direct and unobstructed access to a public way.

Exception: Where access to a *public way* cannot be provided, a safe dispersal area shall be provided where all of the following are met:

1. The area shall be of a size to accommodate not less than 5 square feet (0.46 m^2) for each person.
2. The area shall be located on the same lot not less than 50 feet (15 240 mm) from the structure requiring egress.
3. The area shall be permanently maintained and identified as a safe dispersal area.
4. The area shall be provided with a safe and unobstructed path of travel from the structure.

404.4 Travel distance. For installations located inside a building, the travel distance from each seat to an exit shall comply with the building code. For ~~exterior installations of~~ open-air assembly seating, the travel distance from each seat to the perimeter of the seating structure shall not

exceed 400 feet (122 m). Where aisles are provided for seating, the distance shall be measured along the aisles and aisle accessway without travel over or on the seats.

SECTION 407
AISLE ACCESSWAYS

407.4 Single access. For rows of seating served by aisles or doorways at only one end of the row, the minimum clear width of 12 inches (305 mm) between rows shall be increased by 0.6 inch (15.2 mm) for every additional seat beyond seven seats where seats have backrests or beyond ten where seats are without backrests. The minimum clear width is not required to exceed 22 inches (559 mm).

Exception: For smoke-protected or open-air assembly seating, the row length limits for a 12-inch-wide (305 mm) aisle accessway, beyond which the aisle accessway minimum clear width shall be increased, are in Table 407.5.

407.4.1 Path of egress travel. For rows of seating served by only one path of egress travel, the common path of egress travel shall not exceed 30 feet (9144 mm) from any seat to a point where a person has a choice of two paths of egress travel to two exits.

Exceptions:

1. In smoke-protected ~~or open-air assembly~~ seating, the common path of egress travel shall not exceed 50 feet (15 240 mm) from any seat to a point where a person has a choice of two paths of egress travel to two exits.

2. For ~~exterior installations of~~ open-air assembly seating the common path of egress travel shall not exceed 100 feet (30 480 mm) from any seat to a point where a person has a choice of two paths of egress travel to two exits.

3.~~2.~~ For areas serving less than 50 occupants, the common path of egress travel shall not exceed 75 feet (22 860 mm) from any seat to a point where a person has a choice of two paths of egress travel to two exits.

4.~~3.~~ Where bench-type seating without backrests is utilized and the top of the bench is no more than 7 inches (178 mm) above the footrest immediately behind, the common path of egress travel shall not exceed 75 feet (22 860 mm) from any seat to a point where a person has a choice of two paths of egress travel to two exits.

Reason: Two means of egress, and therefore two accessible means of egress, are required where bleachers have an occupant load of greater than 250 occupants. Raised bleacher systems are not considered another story, therefore the steps on either end cannot use the option for stairways between stories like you can for upper stories in a building.

Where the wheelchair seating is spaced across the front row, and only one ramp is provided for access up onto a raised bleachers, just the run of the ramp would often exceed the common path of travel allowances – so the current text would basically require two ramps. The committee felt that other alternatives needed to be explored.

The exception is an allowance for an exterior area for assisted rescue at the top of the 2nd way off the bleachers for accessible means of egress. Some people had a concern

about no separation requirements for protection of this area, so this is limited to open air bleachers.

The idea of this proposal is to find justification for a longer common path of travel for the standard outdoor bleacher system.

Exit access travel distance for open air seating is 400 feet, twice the distance for a non-sprinklered building (Section 404.4). Therefore, this proposal provides a similar increase for common path of egress travel (50 feet x 2 = 100 feet).

In looking for other travel distances for a single path of travel allowance -
Dead end aisles can be 21 rows – 21 rows x 2.75 feet row spacing= 57.75' + (40 seats x 1.5 feet width per seat)=117.75'. (Section 405.6)

Committee Action: AM (7-0)

Modification: Further modify the replacement proposal as follows:

404.1 Minimum number of exits. The minimum number of exits shall be provided from the seating area based on the occupant loads in Table 404.1 and in accordance with the calculated width requirement for egress capacity in Section 404.5.

~~**Exception:** For open-air assembly seating installations where the means of egress converge, a minimum of two egress paths shall be provided, sized to accommodate the occupant load served.~~

404.1.1 Accessible means of egress. Accessible means of egress shall be provided as required by Section 1009 of the *International Building Code*. The common path of egress travel for accessible means of egress shall be measured from the wheelchair spaces along the accessible route to that point where the occupants have a choice of two accessible routes.

Exception: For ~~exterior installations of~~ open-air assembly seating, exterior areas for assisted rescue at the level of exit discharge shall be located adjacent to the top landing of the exit access stairway and are not required to meet the separation requirements in Section 1009.7.2 of the *International Building Code.*

404.3 Exterior installations. For ~~exterior installations of~~ open-air assembly seating where two or more exits are required and exit discharge paths from the bleacher or grandstand converge on the grade level, a minimum of two paths of travel shall be provided and sized to accommodate the occupant load served. The exit discharge paths shall provide a direct and unobstructed access to a public way.

Exception: Where access to a *public way* cannot be provided, a safe dispersal area shall be provided where all of the following are met:

1. The area shall be of a size to accommodate not less than 5 square feet (0.46 m^2) for each person.
2. The area shall be located on the same lot not less than 50 feet (15 240 mm) from the structure requiring egress.

3. The area shall be permanently maintained and identified as a safe dispersal area.
4. The area shall be provided with a safe and unobstructed path of travel from the structure.

404.4 Travel distance. For installations located inside a building, the travel distance from each seat to an exit shall comply with the building code. For ~~exterior installations~~ open-air assembly seating, the travel distance from each seat to the perimeter of the seating structure shall not exceed 400 feet (122 m). Where aisles are provided for seating, the distance shall be measured along the aisles and aisle accessway without travel over or on the seats.

407.4.1 Path of egress travel. For rows of seating served by only one path of egress travel, the common path of egress travel shall not exceed 30 feet (9144 mm) from any seat to a point where a person has a choice of two paths of egress travel to two exits.

Exceptions:

1. In smoke-protected seating, the common path of egress travel shall not exceed 50 feet (15 240 mm) from any seat to a point where a person has a choice of two paths of egress travel to two exits.
2. For ~~exterior installations of~~ open-air assembly seating the common path of egress travel shall not exceed 100 feet (30 480 mm) from any seat to a point where a person has a choice of two paths of egress travel to two exits.
3. For areas serving less than 50 occupants, the common path of egress travel shall not exceed 75 feet (22 860 mm) from any seat to a point where a person has a choice of two paths of egress travel to two exits.
4. Where bench-type seating without backrests is utilized and the top of the bench is no more than 7 inches (178 mm) above the footrest immediately behind, the common path of egress travel shall not exceed 75 feet (22 860 mm) from any seat to a point where a person has a choice of two paths of egress travel to two exits.

Committee Reason: The purpose of the modification was to clarify that the number of exits for exterior open air assembly seating was what was required in the table, and that the exception in Section 404.1 was talking about egress after people had gotten off of the bleacher or grandstand. The committee reviewed the change 08-17 that was made during the last cycle and decided that the movement of this text that occurred because of that change did not clarify the issue as intended. The text is revised for clarity and moved back to Section 404.3 since it is only applicable to exterior installations.

The replacement proposal reinforces that two accessible means of egress will be required from bleachers/grandstands with more than 250 seats. The 2nd sentence clarifies how the common path of travel will be measured for the accessible means of egress. The result will be for raised bleacher systems, wheelchair spaces located near the top of a ramp or two ramps. The exception offers an option for raised exterior

installations of an exterior area for assisted rescue for situations where the system does not include two ramps to grade level. The IBC include requirements for exterior areas for assisted rescue that include size, separation, openness and signage. The IBC requires a rated separation wall for exterior areas of assisted rescue from a non-sprinklered building. The outdoor bleachers will not have a sprinkler system, but they are totally open to the outside air, so it was felt that a physical separation for the exterior area for assisted rescue was not needed. An area of refuge will not be an option due to concerns with separation and two-way communication requirements.

Section 407.4.1 Item 2 includes an allowance for an increased common path of travel for exterior bleacher installations. Exit access travel distance for open air seating is 400 feet, twice the distance for a non-sprinklered building (Section 404.4). Therefore, this proposal provides a similar increase for common path of egress travel (50 feet x 2 = 100 feet).

A pictorial example of an exterior area for assisted rescue was provided by Dave Norman to facilitate the committee discussion.

Notes from 10-17-2022: The committee decided that “exterior installation of” was not needed to describe “open-air assembly seating”. This was addressed sufficiently in the definition. Remove in the three places added in this proposal and remove in the one place in current text. This is editorial.

Report for *IS-BLE 04-01-21*		
Committee decision: AM	***Committee Vote at Meeting: 7-0***	***Committee Vote on Ballot:***
REPORT OF HEARING: Modification (if any): **Further modify replacement proposal as follows:**		

404.1 Minimum number of exits. The minimum number of exits shall be provided from the seating area based on the occupant loads in Table 404.1 and in accordance with the calculated width requirement for egress capacity in Section 404.5.

~~Exception:~~ ~~For open-air assembly seating installations where the means of egress converge, a minimum of two egress paths shall be provided, sized to accommodate the occupant load served.~~

404.1.1 Accessible means of egress. Accessible means of egress shall be provided as required by Section 1009 of the *International Building Code*. The common path of egress travel for accessible means of egress shall be measured from the wheelchair spaces along the accessible route to that point where the occupants have a choice of two accessible routes.

Exception: For ~~exterior installations of~~ open-air assembly seating, exterior areas for assisted rescue at the level of exit discharge shall be located adjacent to the top landing of the exit access stairway and are not required to meet the separation requirements in Section 1009.7.2 of the *International Building Code*.

404.3 Exterior installations. For ~~exterior installations of~~ open-air assembly seating where two or more exits are required and exit discharge paths from the bleacher or grandstand converge on the grade level, a minimum of two paths of travel shall be provided and sized to accommodate the occupant load served. The exit discharge paths shall provide a direct and unobstructed access to a public way.

Exception: Where access to a *public way* cannot be provided, a safe dispersal area shall be provided where all of the following are met:

1. The area shall be of a size to accommodate not less than 5 square feet (0.46 m^2) for each person.
2. The area shall be located on the same lot not less than 50 feet (15 240 mm) from the structure requiring egress.
3. The area shall be permanently maintained and identified as a safe dispersal area.
4. The area shall be provided with a safe and unobstructed path of travel from the structure.

404.4 Travel distance. For installations located inside a building, the travel distance from each seat to an exit shall comply with the building code. For ~~exterior installations~~ open-air assembly seating, the travel distance from each seat to the perimeter of the seating structure shall not exceed 400 feet (122 m). Where aisles are provided for seating, the distance shall be measured along the aisles and aisle accessway without travel over or on the seats.

407.4.1 Path of egress travel. For rows of seating served by only one path of egress travel, the common path of egress travel shall not exceed 30 feet (9144 mm) from any seat to a point where a person has a choice of two paths of egress travel to two exits.

Exceptions:

1. In smoke-protected seating, the common path of egress travel shall not exceed 50 feet (15 240 mm) from any seat to a point where a person has a choice of two paths of egress travel to two exits.
2. For ~~exterior installations of~~ open-air assembly seating the common path of egress travel shall not exceed 100 feet (30 480 mm) from any seat to a point where a person has a choice of two paths of egress travel to two exits.
3. For areas serving less than 50 occupants, the common path of egress travel shall not exceed 75 feet (22 860 mm) from any seat to a point where a person has a choice of two paths of egress travel to two exits.
4. Where bench-type seating without backrests is utilized and the top of the bench is no more than 7 inches (178 mm) above the footrest immediately behind, the common path of egress travel shall not exceed 75 feet (22 860 mm) from any seat to a point where a person has a choice of two paths of egress travel to two exits.

Committee Reason: The purpose of the modification was to clarify that the number of exits for exterior open air assembly seating was what was required in the table, and that the exception in Section 404.1 was talking about egress after people had gotten off of the bleacher or grandstand. The committee reviewed the change 08-17 that was made during the last cycle and decided that the movement of this text that occurred because of that change did not clarify the issue as intended. The text is revised for clarity and moved back to Section 404.3 since it is only applicable to exterior installations.

The replacement proposal reinforces that two accessible means of egress will be required from bleachers/grandstands with more than 250 seats. The 2nd sentence clarifies how the common path of travel will be measured for the accessible means of egress. The result will be for raised bleacher systems, wheelchair spaces located near the top of a ramp or two ramps. The exception offers an option for raised exterior installations of an exterior area for assisted rescue for situations where the system does not include two ramps to grade level. The IBC include requirements for exterior areas for assisted rescue that include size, separation, openness and signage. The IBC requires a rated separation wall for exterior areas of assisted rescue from a non-sprinklered building. The outdoor bleachers will not have a sprinkler system, but they are totally open to the outside air, so it was felt that a physical separation for the exterior area for assisted rescue was not needed. An area of refuge will not be an option due to concerns with separation and two-way communication requirements.

Section 407.4.1 Item 2 includes an allowance for an increased common path of travel for exterior bleacher installations. Exit access travel distance for open air seating is 400 feet, twice the distance for a non-sprinklered building (Section 404.4). Therefore, this proposal provides a similar increase for common path of egress travel (50 feet x 2 = 100 feet).

A pictorial example of an exterior area for assisted rescue was provided by Dave Norman to facilitate the committee discussion.

Notes from 10-17-2022: The committee decided that “exterior installation of” was not needed to describe “open-air assembly seating”. This was addressed sufficiently in the definition. Remove in the three places added in this proposal and remove in the one place in current text. This is editorial.

PUBLIC COMMENT- FIRST DRAFT:

Proponent:

Desired Action:

Modification:

Reason:

Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***

REPORT OF HEARING – FIRST DRAFT

Modification (if any):

Committee Reason:

PUBLIC 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:		

IS-BLE 04-02-21
ICC 300 Section 404.5.1

Proponent: Ida Dugas, Hussey Seating Company

Revise as follows:
404.5.1 Measurement. The clear width of aisles and other means of egress shall be measured to walls, edges of seating and tread edges except for permitted projections which includes bleacher aisle steps and~~.~~ ~~There shall be no obstructions in the required width of aisles except for~~ handrails as provided in Section 409.7.

Reason:
Secondary level (balcony) platforms would benefit with the increase of clear space between the first row and balcony face along the upper level. The increase to the calculated clear space due to the aisle steps, often creates sightline issues to the lower main floor level.

Committee Action: Disapprove (8-0)
Committee Reason: The step is a tripping hazard for the cross aisle. There is no limit on the number of steps that could reduce the width. One step could reduce the egress width 11 inches or greater. Safety with proper means of egress should control above sight-lines.

Report for *IS-BLE 04-02-21*		
Committee decision: D	***Committee Vote at Meeting: (8-0)***	***Committee Vote on Ballot:***
REPORT OF HEARING: Modification (if any):		
Committee Reason: The step is a tripping hazard for the cross aisle. There is no limit on the number of steps that could reduce the width. One step could reduce the egress width 11 inches or greater. Safety with proper means of egress should control above sight-lines.		
PUBLIC COMMENT- FIRST DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		
Committee Reason:		
PUBLIC 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:		

IS-BLE 04-03-21
ICC 300 Section 406.8.1

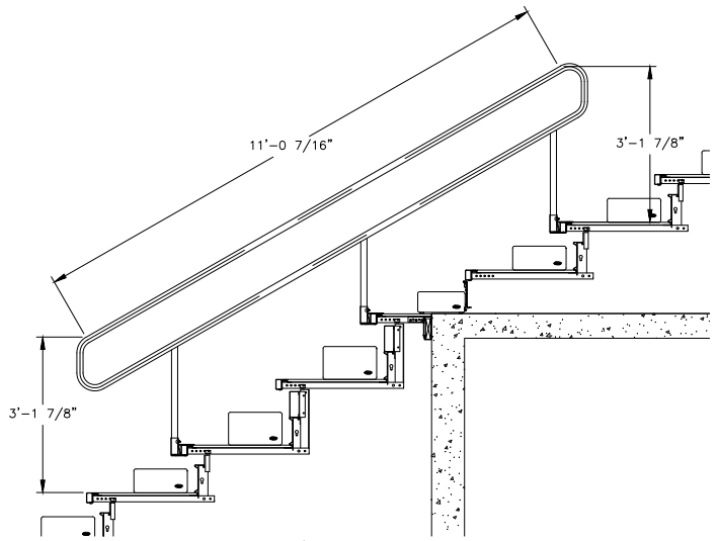
Proponent: Ida Dugas, Hussey Seating Company

Revise as follows:
406.8.1 Tread and riser nonuniformity permitted. Treads and risers located in transition areas between adjacent tiered seating elements, parabolic seating configurations or onto or off of tiered seating are not required to be of uniform depth or height where a ~~mid-aisle~~ aisle handrail is provided. The handrail shall meet the requirements of Section 409. ~~Mid-aisle~~ Aisle handrails in transition areas shall extend the full length of the transition and a minimum of one tread depth, parallel to the run of the stepped aisles, above and below the uppermost and lowermost riser in the transition. Where extensions of the aisle handrail interfere with adjacent means of egress, the handrail extension shall terminate at the riser.

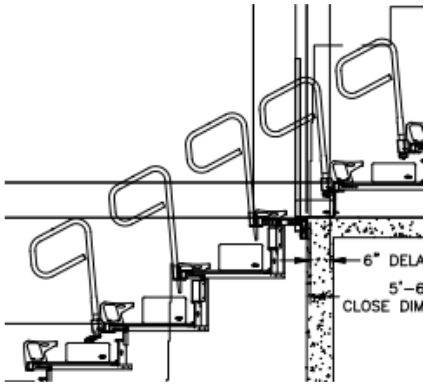
Exception: On folding and telescopic seating the handrail at transitions shall be permitted to be discontinuous in accordance with Section 409.1.1.

Exceptions:
1. For folding and telescopic seating, handrails at transition areas are permitted to be discontinuous with gaps or breaks not greater than 4 inches (102 mm).
2. For portable bleachers, handrails at transition areas are permitted to be discontinuous with gaps or breaks not greater than 4 inches (102 mm).

Reason:
On Folding and Telescopic Seating, handrails that span multiple tiers prevent the operation of the bleacher with the handrail in place. Several tiers may be involved resulting in large heavy rails that require removal every time the bleacher is operated. The image below shows such a rail that would weigh in the vicinity of 35 lbs. Once removed, there is no guarantee that the attachments used to hold the rail to the bleacher will return to the exact location making reinstallation extremely difficult (if not impossible).



By putting the rails and attachments on individual tiers, the rail are lighter and the attachments are not required to repeatedly line up with other moving tiers.



Committee Action: As Modified (5-3)

Replace with the following:

406.8.1 Tread and riser nonuniformity permitted. Treads and risers located in transition areas between adjacent tiered seating elements, parabolic seating

configurations or onto or off of tiered seating are not required to be of uniform depth or height where a ~~mid-aisle~~ aisle handrail is provided. The handrail shall meet the requirements of Section 409. ~~Mid-aisle~~ Aisle handrails in transition areas shall extend the full length of the transition and a minimum of one tread depth, parallel to the run of the stepped aisles, above and below the uppermost and lowermost riser in the transition. Where extensions of the aisle handrail interfere with adjacent means of egress, the handrail extension shall terminate at the riser.

Exceptions:

1. For folding and telescopic seating, handrails at transition areas are permitted to be discontinuous with gaps or breaks not greater than 4 inches (102 mm).
2. For portable bleachers, handrails at transition areas are permitted to be discontinuous with gaps or breaks not greater than 4 inches (102 mm).

Committee Reason: There is a need for discontinuous handrails at these tripping locations to allow for a reasonable solution where handrails would need to removed and re-installed when seating is reconfigured or moved. This would also allow for continuously installed handrails at these locations, but still have a handrail to limit the chance of falls. There were concerns for the allowance for the gap – is this not a operational issue rather than a construction issue? At a transition between a fixed seating and a moveable bleacher, is this an issue where a guard is required at this same transition location (depending on the setup) – there may be better solutions.

Notes 3-7-2022: The committee started discussion of this proposal. If the issue is the transition between fixed seating and bleachers, there could be a break, but not the size in Section 409.1.1 – that was felt to be too large. Kim to try and contact a Hussey seating representative since Ida has retired. Proposal will be the start of the meeting on March 21, 2022.

Report for *IS-BLE 04-03-21*

Committee decision: AM	***Committee Vote at Meeting: (5-3)***	***Committee Vote on Ballot:***

REPORT OF HEARING:
Modification (if any):
Replace with the following:

406.8.1 Tread and riser nonuniformity permitted. Treads and risers located in transition areas between adjacent tiered seating elements, parabolic seating configurations or onto or off of tiered seating are not required to be of uniform depth or height where a ~~mid-aisle~~ aisle handrail is provided. The handrail shall meet the requirements of Section 409. ~~Mid-aisle~~ Aisle handrails in transition areas shall extend the full length of the transition and a minimum of one tread depth, parallel to the run of the stepped aisles, above and below the uppermost and lowermost riser in the transition. Where extensions of the aisle handrail interfere with adjacent means of egress, the handrail extension shall terminate at the riser.

Exceptions:

1. For folding and telescopic seating, handrails at transition areas are permitted to be discontinuous with gaps or breaks not greater than 4 inches (102 mm).
2. For portable bleachers, handrails at transition areas are permitted to be discontinuous with gaps or breaks not greater than 4 inches (102 mm).

Committee Reason: There is a need for discontinuous handrails at these tripping locations to allow for a reasonable solution where handrails would need to removed and re-installed when seating is reconfigured or moved. This would also allow for continuously installed handrails at these locations, but still have a handrail to limit the chance of falls. There were concerns for the allowance for the gap – is this not a operational issue rather than a construction issue? At a transition between a fixed seating and a moveable bleacher, is this an issue where a guard is required at this same transition location (depending on the setup) – there may be better solutions.

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

IS-BLE 04-04-21
ICC 300 Sections 408.1

Proponent: Daniel Victor, INTERKAL, LLC

Revise as follows:

408.1 Required guards. Guards shall be provided in the following areas.

1. Along open-sided walking surfaces, cross aisles, stepped aisles, ramps and landings of tiered seating areas which are located more than 30 inches (762 mm) above the floor or grade below. ~~Such guards shall be not less than 42 inches (1067 mm) high, measured vertically above the leading edge of the tread, adjacent walking surface or adjacent bench seat.~~ Such *guards* shall be not less than 42 inches (1067 mm) high, measured vertically as follows:
    1.1. From the adjacent walking surfaces.
    1.2. Where bench type seating is adjacent to the perimeter, measure from the leading edge of the seat
    1.3. Where the seats are self-rising measured from the walking surface.
    1.4. On *stairways* and stepped *aisles*, from the line connecting the leading edges of the tread *nosings*.
    1.5. On *ramps* and ramped *aisles*, from the *ramp* surface at the guard.

    Exception: A guard is not required where the tiered seating is located adjacent to a wall and the space between the wall and the tiered seating is less than 4 inches (102 mm).
2. Where an elevation change of 30 inches (762 mm) or less occurs between a cross aisle and the adjacent floor or grade below, guards not less than 26 inches (660 mm) above the aisle floor shall be provided.
    Exception: Where the backs of seats on the front of the cross aisle project 24 inches (610 mm) or more above the adjacent floor of the aisle, a guard need not be provided.
3. A guard shall be provided for the full width of an aisle where the lowest point of the aisle is more than 30 inches (762 mm) above the floor or ground below. The guard shall be a minimum of 36 inches (914 mm) high and shall provide a minimum 42 inches (1067 mm) measured diagonally between the top of the rail and the nosing of the nearest aisle step.
4. Unless subject to the requirements of Item 3, a guard with a minimum height of 26 inches (660 mm) shall be provided where the floor or footboard elevation is more than 30 inches (762 mm) above the floor or grade below and the guard would otherwise interfere with the sightlines of immediately adjacent seating.

Reason: Current text does not address self-rising seating. Revised text provides clearer language with modifications noted above.

Modification:

Replace the proposal with the following:

408.1 Required guards. Guards shall be provided in the following areas.

1. Along open-sided walking surfaces, cross aisles, stepped aisles, ramps and landings of tiered seating areas which are located more than 30 inches (762 mm) above the floor or grade below. Such guards shall be not less than 42 inches (1067 mm) high, measured vertically above the leading edge of the tread, adjacent walking surface or adjacent fixed seating surface or bench seat.

    Exception: A guard is not required where the tiered seating is located adjacent to a wall and the space between the wall and the tiered seating is less than 4 inches (102 mm).

(No change to Items 2 through 4)

Committee Action: AM (8-0)
Committee Reason: There is a concern that someone would commonly stand on other types of fixed seats so there would be danger of falling. By defining the seating better, there is no longer a need for a need to address self-rising or folding seats. The committee discussed 503.1, but felt that the existing bleachers should be able to stay with the legacy language in NFPA 102.

Report for *IS-BLE 04-04-21*		
Committee decision: AM	***Committee Vote at Meeting: 8-0***	***Committee Vote on Ballot:***
REPORT OF HEARING: Modification (if any): **Replace the proposal with the following:** **408.1 Required guards.** Guards shall be provided in the following areas. 1. Along open-sided walking surfaces, cross aisles, stepped aisles, ramps and landings of tiered seating areas which are located more than 30 inches (762 mm) above the floor or grade below. Such guards shall be not less than 42 inches (1067 mm) high, measured vertically above the leading edge of the tread, adjacent walking surface or adjacent fixed seating surface or bench seat. **Exception:** A guard is not required where the tiered seating is located adjacent to a wall and the space between the wall and the tiered seating is less than 4 inches (102 mm). *(No change to Items 2 through 4)*		
Committee Reason: There is a concern that someone would commonly stand on other types of fixed seats so there would be danger of falling. By defining the seating better, there is no longer a need for a need to address self-rising or folding seats. The committee discussed 503.1, but felt that the existing bleachers should be able to stay with the legacy language in NFPA 102.		
PUBLIC COMMENT- FIRST DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		
Committee Reason:		
PUBLIC 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:		

IS-BLE 04-05-21
ICC 300 Section 408.2

Proponent: Daniel Victor, INTERKAL, LLC

Revise as follows:
408.2 Opening limitations. Open guards shall be constructed of materials such that a 4-inch-diameter (120 mm) sphere, cannot pass through any opening up to a height of 34 inches (864 mm) measured vertically in accordance with Section 408.1 to the bottom of the sphere. ~~From~~ Above a height of 34 inches (864 mm) ~~to 42 inches (1067 mm) above the adjacent walking~~ ~~surfaces~~, a ~~sphere~~ 8 inches (203 mm) ~~in~~ diameter sphere shall not pass.

Exceptions:

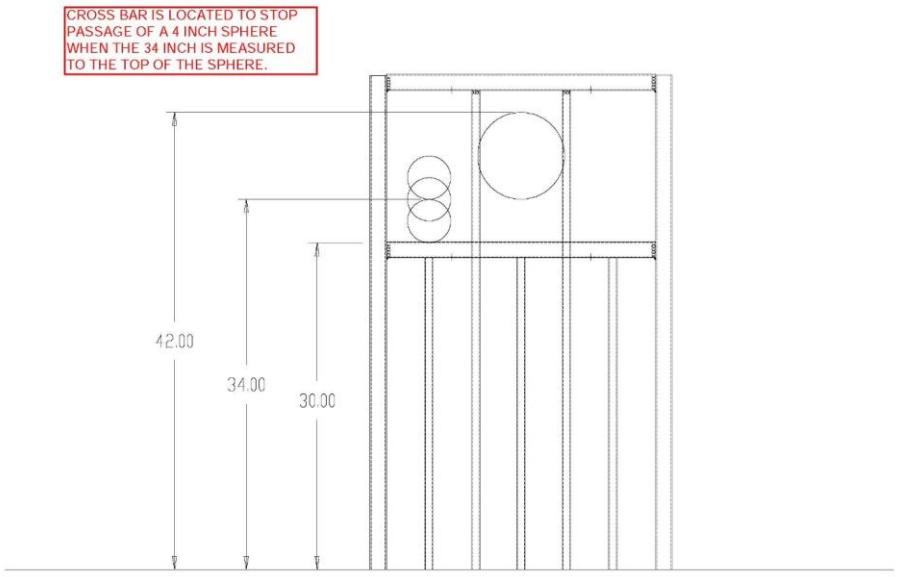
1. The triangular opening formed by the riser, tread and bottom rail at the open side of a stepped aisle or tiered seating shall be of a maximum size such that a ~~sphere of~~ 6 inches (152 mm) ~~in~~ diameter sphere cannot pass through the opening.
2. Guards at the end of aisles where they terminate at a fascia of boxes, balconies and galleries shall have balusters or ornamental patterns such that a 4-inch diameter (102 mm) sphere cannot pass through any opening up to a height of 26 inches (660 mm). From a height of 26 inches (660 mm) or greater above the adjacent walking surfaces, a ~~sphere~~ 8 inches (203 mm) ~~in~~ diameter sphere shall not pass.
3. The opening limitation shall not apply to guards required in accordance with Item 2 of Section 408.1.

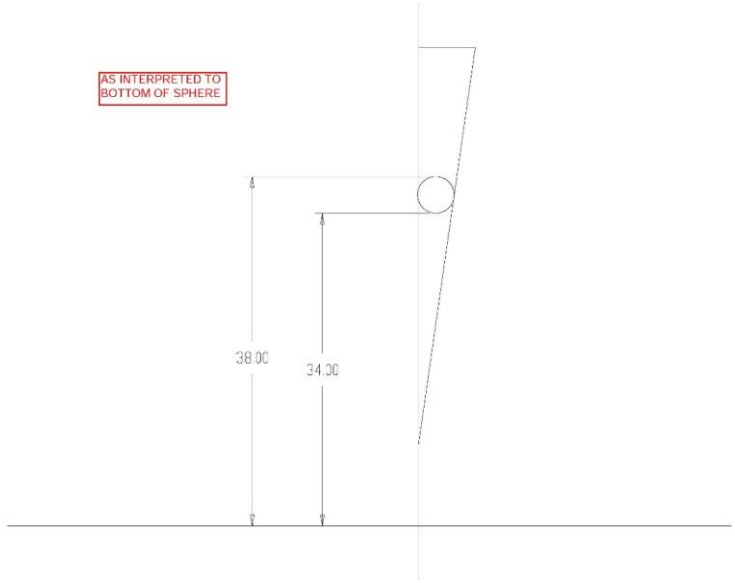
Reason: This proposal assumes that my proposal for revision to section 408.1 is approved. The lower reference is clarified from “the adjacent walking surface” to the enumerated references of the revised 408.1. Adding “to the bottom of the sphere” locates the height of the sphere. Per figure 1 which follows, the cross bar could interpreted to be as low as 30 inches. By adding “to the bottom of the sphere”, the minimum cross bar height is clarified to be 34 inches. I believe that was the original intent.

Figure 2 which follows shows a situation somewhat common in telescopic seating because the guards slope away from the seating for the purpose of making them nest in storage or retraction. If the height of the sphere is not defined, one may not be able to accurately say if an opening is compliant or not.

Working around obstructions in existing buildings, many shapes must be provided with a special guard. Accurately defining the height of the sphere as well as the lower reference helps determine compliance or non-compliance.

The 42 inch height in the original requirement has no meaning. Rail heights are allowed to exceed that height and often do as shown in figure 1. I believe the intent is to stop the 8 inch sphere as high up as the rail goes.





Committee Action: Approved as Modified (5-2-1)

Modification: Replace proposal with the following:

408.2 Opening limitations. ~~Open~~ Required guards shall ~~be constructed of materials~~ not have openings ~~such~~ that allow passage of a sphere 4~~-inch~~ inches (120 mm) in diameter ~~sphere~~, ~~cannot pass through any opening~~ up to a height of 34 inches (864 mm) measured vertically in accordance with Section 408.1 to the bottom of the sphere. ~~From a height of 34 inches (864 mm) to the 42 inches (1067 mm) above the adjacent walking surfaces, a sphere 8 inches (203 mm) in diameter shall not pass.~~ From a height of 34 inches (864 mm) to the required guard height, guards shall not have openings that allow passage of a sphere 8 inches (203 mm) in diameter.

Exceptions:

1. The triangular opening formed by the riser, tread and bottom rail at the open side of a stepped aisle or tiered seating shall be of a maximum size such that a sphere of 6 inches (152 mm) in diameter cannot pass through the opening.
2. Guards at the end of aisles where they terminate at a fascia of boxes, balconies and galleries shall not have openings ~~have balusters or ornamental patterns~~ such that allow passage of a sphere 4~~-inch~~ inches (102 mm) in diameter ~~sphere cannot pass through~~ ~~any opening~~ up to a height of 26 inches (660 mm). From a height of 26 inches (660 mm) ~~or greater~~ to the required height of the guard above the adjacent walking surfaces, guards shall not have an openings that allow passage of a sphere 8 inches (203 mm) in diameter ~~shall not pass~~.

3. The opening limitation shall not apply to guards required in accordance with Item 2 of Section 408.1.

Committee Reason: The text is revised for consistency with the language in the IBC and between the main paragraph and the 2nd exception. This removed unnecessary and interpretive language. By adding 'measured vertically in accordance with Section 408.1', this clarifies that the top of the guard may have to be above the seat in accordance with Section 408.1. By measuring to the bottom of the sphere, this would stop the misinterpretation of allowing for the 8" opening lower than intended.

Report for *IS-BLE 04-05-21*		
Committee decision: AM	***Committee Vote at Meeting: 5-2-1***	***Committee Vote on Ballot:***
REPORT OF HEARING: Modification (if any): **Replace proposal with the following:** **408.2 Opening limitations.** ~~Open~~ Required guards shall ~~be constructed of materials~~ not have openings ~~such~~ that allow passage of a sphere 4 ~~inch~~ inches (120 mm) in diameter ~~sphere, cannot pass through any opening~~ up to a height of 34 inches (864 mm) measured vertically in accordance with Section 408.1 to the bottom of the sphere. ~~From a height of 34 inches (864 mm) to the 42 inches (1067 mm) above the adjacent walking surfaces, a sphere 8 inches (203 mm) in diameter shall not pass.~~ From a height of 34 inches (864 mm) to the required guard height, guards shall not have openings that allow passage of a sphere 8 inches (203 mm) in diameter. **Exceptions:** 1. The triangular opening formed by the riser, tread and bottom rail at the open side of a stepped aisle or tiered seating shall be of a maximum size such that a sphere of 6 inches (152 mm) in diameter cannot pass through the opening. 2. Guards at the end of aisles where they terminate at a fascia of boxes, balconies and galleries shall not have openings ~~have balusters or ornamental patterns~~ such that allow passage of a sphere 4 ~~inch~~ inches (102 mm) in diameter ~~sphere cannot pass through any opening~~ up to a height of 26 inches (660 mm). From a height of 26 inches (660 mm) ~~or greater~~ to the required height of the guard above the adjacent walking surfaces, guards shall not have an openings that allow passage of a sphere 8 inches (203 mm) in diameter ~~shall not pass~~. 3. The opening limitation shall not apply to guards required in accordance with Item 2 of Section 408.1.		
Committee Reason: The text is revised for consistency with the language in the IBC and between the main paragraph and the 2nd exception. This removed unnecessary and interpretive language. By adding 'measured vertically in accordance with Section 408.1', this clarifies that the top of the guard may have to be above the seat in accordance with Section 408.1. By measuring to the bottom of the sphere, this would stop the misinterpretation of allowing for the 8" opening lower than intended.		
PUBLIC COMMENT- FIRST DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		
Committee Reason:		
PUBLIC 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:		

IS-BLE 04-06-21
ICC 300 Section 408.2

Proponent: Gregory Nelson, FaciliServ, Inc.

Revise as follows:
408.2 Opening limitations. Open guards shall be constructed of materials such that a 4-inch-diameter (102 mm) sphere cannot pass through any opening up to a height of 34 inches (864 mm). From a height of 34 inches (864 mm) to 42 inches (1067 mm) above the adjacent walking surfaces, a sphere 8 inches (203 mm) in diameter shall not pass.

Exceptions:

1. ~~The triangular opening formed by the riser, tread and bottom rail at the open side of a stepped aisle or tiered seating shall be of a maximum size such that a sphere of 6 inches (152 mm) in diameter cannot pass through the opening.~~
2. Guards at the end of aisles where they terminate at a fascia of boxes, balconies and galleries shall have balusters or ornamental patterns such that a 4-inchdiameter (102 mm) sphere cannot pass through any opening up to a height of 26 inches (660 mm). From a height of 26 inches (660 mm) or greater above the adjacent walking surfaces, a sphere 8 inches (203 mm) in diameter shall not pass.
3. The opening limitation shall not apply to guards required in accordance with Item 2 of Section 408.1.

Reason:
A deletion of the exception 1 would include this area of the railing system to comply with the 408.2 Opening limitations standard of 4” sphere passage*. that allows 6” sphere passage in the triangular opening. This exception is also contrary to the safety standards set by the US CPSC by the Public Playground Safety Handbook for head entrapment. The triangular opening in the exception would allow an object just under the size of a 6” sphere to pass does not meet the 3.3.1 Head Entrapment portion of the Public Playground Safety Handbook document and poses a risk for young children. The natural shape of a triangle creates an ever-smaller opening at one end of the triangle, posing danger to a panicked child that would be averted by applying the 4” sphere code regulation. This being applied to new construction does not adversely affect manufacturers as conventional manufacturing design already meets this in most instances, but not in all instances. This would bring new construction seating from all manufacturers to the same standard.

The triangular gaps formed by the diagonal end rail lower rung, row rise and row foot planks allows more than a 4" sphere passage, imposing a head entrapment to children.

Committee Action: Disapproval (6-1-1)

Committee Reason: The floor board of a bleacher system is not used the same as a child's play equipment. This would be an issue for panel type guard systems with parallel edges installed on top of the treads – how would you fill in the triangle? This would also make the bleacher standard inconsistent with the IBC allowance for assembly seating and stairways.

Report for *IS-BLE 04-06-21*		
Committee decision: D	***Committee Vote at Meeting: 6-1-1***	***Committee Vote on Ballot:***
REPORT OF HEARING: Modification (if any):		
Committee Reason: The floor board of a bleacher system is not used the same as a child's play equipment. This would be an issue for panel type guard systems with parallel edges installed on top of the treads – how would you fill in the triangle? This would also make the bleacher standard inconsistent with the IBC allowance for assembly seating and stairways.		
PUBLIC COMMENT- FIRST DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		
Committee Reason:		
PUBLIC 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:		

IS-BLE 04-07-21

ICC 300 Section 409.1, 409.1.1, 409.1.3(New), 409.2, 409.2.1(New), 402.2.2(New), 409.2.3(New)

Proponent: Daniel Victor, INTERKAL, LLC

Revise as follows:

SECTION 409
HANDRAILS

409.1 Required handrails. ~~Where seats are located on both sides of a stepped aisle, a minimum of one mid-aisle handrail shall be provided. Where seats are located on one side of a stepped aisle, a minimum of one handrail shall be provided on the side of the stepped aisle where there are no seats.~~ A minimum of one handrail shall be provided in all portions of stepped aisles. Handrails shall be continuous as described in Sections 409.1.1, 409.1.2, or 409.1.3 and shall be provided in accordance with Section 409.2. Handrails shall comply with Sections 409.3 through 409.9.

~~Exceptions~~ Exception:

~~1.~~ A handrail is not required for a stepped aisle serving a single row of seating.

~~2. The mid-aisle handrail is permitted to be on one side of the aisle when the stepped aisle serves less than 50 seats.~~

409.1.1 Continuous Handrails. Continuous handrails shall be parallel to a line connecting the nose of each step, and the handrail shall have rounded terminations or bends.

~~409.1.1~~ 409.1.2 Mid-aisle handrails. ~~Where there is seating on both sides of a stepped aisle, the mid-aisle~~ Mid-aisle handrails shall be discontinuous with gaps or breaks at intervals not exceeding five rows to facilitate access to seating and permit crossing from one side of the aisle to the other. These gaps or breaks shall have a clear width of not less than 22 inches (559 mm) and not greater than 36 inches (914 mm), measured horizontally, and the handrail shall have rounded terminations or bends. ~~Such discontinuities shall also be permitted where there is seating on one or both sides of the aisle, and where there guardrails complying with the graspability requirements for handrails.~~ An additional rail shall be provided below the handrail, located parallel to ~~and approximately 12 inches (305 mm)~~ and 10 inches (254 mm) to 16 inches (406.4 mm) below the handrail. The additional rail need not comply with the graspability provisions of Section ~~409.3~~ 409.4.

409.1.3 Handrails Adjacent to Seats. Handrails in stepped aisles adjacent to the end seats in a row shall provide gaps or breaks between handrails at access aisles to facilitate access to the aisle. The gaps shall have a clear width not less than 22 inches (559 mm) and not greater than 36 inches (914 mm) measured horizontally. The front and back edges of the handrail shall not extend beyond the front and back

edges of the seat. Where chairs have automatic or self-rising seats, the measurement shall be made with the seats in the raised position. Handrails adjacent to seats shall have rounded terminations or bends.

Exception: A 1-7/8 inch (47.6 mm) to 2-7/16 inch (61.9 mm) diameter knob shall be permitted as a handrail adjacent to seats and shall be considered rounded and graspable.

409.2 Allowable handrail locations. Handrails shall be located in accordance with Section 409.2.1, 409.2.2 or 409.2.3.

409.2.1 Portions of stepped aisles with seats on both sides. Portions of stepped aisles with seats on both sides shall be provided with a minimum of one mid-aisle handrail.

Exception: A handrail adjacent to seats shall be provided on both sides of the aisle in lieu of the mid-aisle handrail.

409.2.2 Portions of stepped aisles with seats on one side. Portions of aisles with seats on one side shall be provided with a minimum of one continuous handrail on the side of the aisle where there are no seats.

Exceptions:

1. One discontinuous mid-aisle handrail shall be permitted in lieu of the continuous handrail where there is a guard or wall on the side of the aisle with no seats and a minimum clear width of 23 inches (584 mm) is provided between the handrail and seat and between the handrail and guard or wall.
2. One discontinuous mid-aisle handrail shall be permitted to be placed on the side of the aisle with no seats in lieu of the continuous handrail when the stepped aisle serves less than 50 seats.
3. One handrail adjacent to seats shall be permitted in lieu of the continuous handrail.

409.2.3 Portions of stepped aisles with seats on neither side. Portions of stepped aisles with seats on neither side shall be provided with continuous handrails on both sides of the aisle.

Exceptions:

1. A single mid-aisle handrail shall be permitted in lieu of the two continuous handrails where the stepped aisle is a minimum of 48 inches (1219 mm) wide.
2. A continuous handrail is permitted to be on only one side of the stepped aisle where the stepped aisle is less than 48 inches (1219 mm) wide.

Renumber current Sections 409.2 through 409.9 as 409.3 through 409.10.

Reason: An aisle can have seating on both sides in one portion of it's length, seating on one side in another and seating on neither side in still another. See figures 1, 8, 9 and 10. Wording has been modified to capture requirements in each area separately.

A description of continuous handrails was added.
Under mid-aisle handrails a confusing sentence has been removed. I cannot imagine the intent, so no substitution is made.
A new section has been added for handrails adjacent to seats. For examples, see figures 2 through 6. Handrail systems adjacent to seats are more commonly used in steeper seating found in balconies and upper tiers where providing fall arrest is critical. Use of a knob as an individual handrail is proposed. An example is shown in figure 4.The doorknob industry standard dimension information is provided in figure 6.
A handrail placed at the sides of a stepped aisle is effective when placed at the transition onto or off of tiered seating. This type of rail is shown on the back cover of ICC 300-2017 and Figures 8 and 10. The new text also provides for a single mid-aisle rail as shown in figure 9. On narrower aisles, where seating above is on only one side and the aisle width is allowed to be less than 48 inches (as low as 36 inches). On these narrow aisles extensions where there seating on neither side, an allowance is made to provide a continuous handrail on one side only. Being so narrow it is not likely people will be egressing down both sides of the aisle.
This section of the aisle is not specifically addressed in current text.

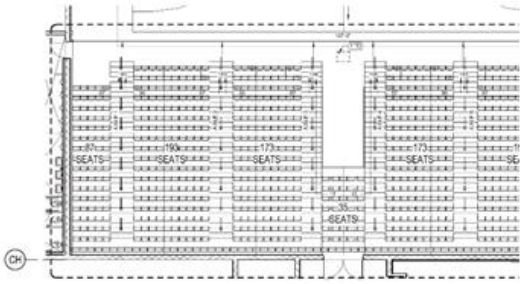


Figure 1

Figure 2 Rod Laver Arena in Melbourne, Australia

Handrail adjacent to seats on both sides of the aisle without mid-aisle handrail.

Figure 3 Rod Laver Arena in Melbourne, Australia

Handrail adjacent to seats on one side of an aisle.

Figure 4 Royal Alexandra Theater in Toronto, Canada

Mid-aisle handrail with additional knob style handrail adjacent to seats.

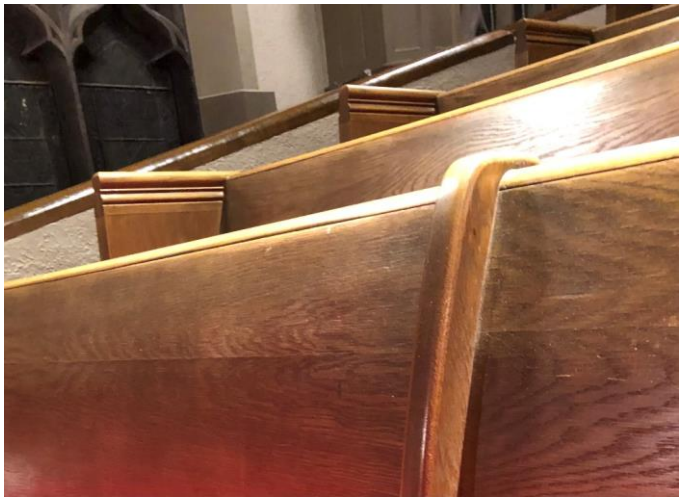


Figure 5 First United Methodist Church in Kalamazoo, Michigan

Graspable end portion of a church pew Adjacent to a stepped aisle having seating on one side.

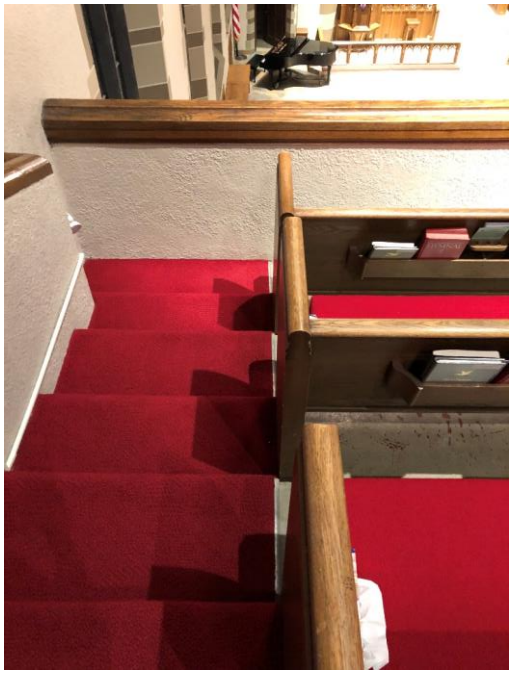
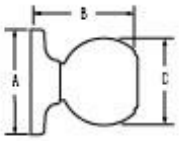


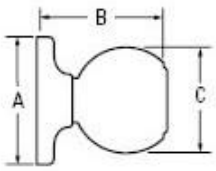
Figure 6 First United Methodist Church in Kalamazoo, MI

Handrail built into end of pew. Stepped aisle with seating on one side.

The knob dimensions sited are common for door knobs.



Design	A	B	C
Huntington	2-5/8"	2-15/16"	2-1/8"
Phoenix	2-5/8"	2-7/16"	2-3/16"
Troy	2-5/8"	2-5/16"	2-1/16"
Laurel	2-5/8"	2-13/32"	2-7/16"



Design	A	B	C
Cove™	2-5/8"	2-19/32"	2-1/4"
Polo®	2-5/8"	2-7/8"	1-7/8"
Tylo®	2-5/8"	2-19/32"	1-7/8"

Figure 7

Figure 8 NASCAR Grandstand with mid-aisle handrail transitioning to handrails on each side where there are seats on neither side.

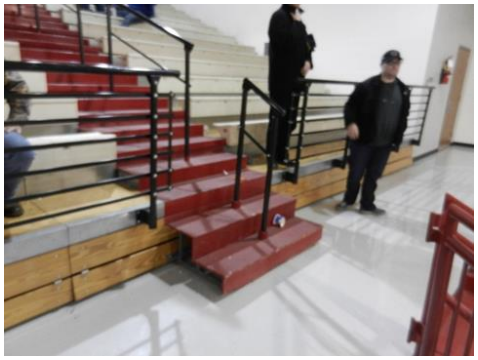


Figure 9

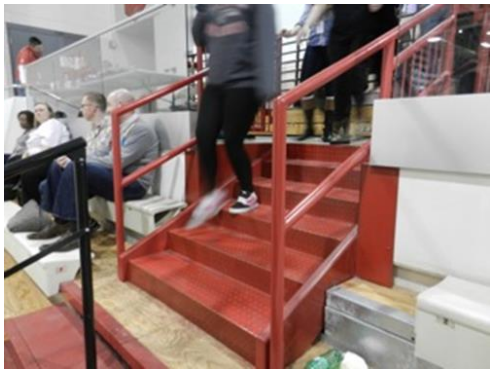


Figure 10

Replace IS-BLE 04-07-21 with the following

ICC 300 Section 409.1, 409.1.1, 409.2, 409.2.1(New), 409.2.2(New), 409.2.3(New), 409.3, 409.3.2(New), 409.4, 409.4.2(New), 409.5, 409.5.1, 409.6, 409.7, 409.8

Proponent: Daniel Victor, INTERKAL, LLC

Revise as follows:

HANDRAIL. A horizontal or sloping rail intended for grasping by the hand for guidance or support.

SECTION 409
HANDRAILS

409.1 General. Handrails shall be provide where required in Section 409.2. Handrails shall be permitted to be discontinuous as described in Sections 409.3. Handrails shall comply with Sections 409.4 through 409.9.

~~**409.1 Required handrails.** Where seats are located on both sides of a stepped aisle, a minimum of one mid-aisle handrail shall be provided. Where seats are located on one side of a stepped aisle, a minimum of one handrail shall be provided on the side of the stepped aisle where there are no seats.~~

~~**Exceptions:**~~

~~1. A handrail is not required for a stepped aisle serving a single row of seating.~~

~~2. The mid-aisle handrail is permitted to be on one side of the aisle when the stepped aisle serves less than 50 seats.~~

409.2 Where required. Provide handrails in accordance with Sections 409.2.1 through 409.2.3.

Exceptions: A handrail is not required for a stepped aisle serving a single row of seating.

409.2.1 Stepped aisles. Where seats are located on both sides of a stepped aisle, provide one of the following:

1. A minimum of one mid-aisle handrail.
2. One handrail adjacent to the seats on each side of the aisle.

Exception: The mid-aisle handrail is permitted to be on one side of the aisle when the stepped aisle serves less than 50 seats.

409.2.2 Seating on one side of a stepped aisle. Where seats are located on one side of a stepped aisle, a minimum of one handrail shall be provided on the side of the stepped aisle where there are no seats.

Exceptions:

1. *Handrails* are not required where, at the side of the stepped *aisle*, there is a *guard* with a top surface that complies with the graspability requirements of *handrails* in accordance with Section 409.6.
2. A mid-aisle handrail is permitted in lieu of the handrail on the side of the stepped aisle where the aisle width is 44 inches or greater.

409.2.3 Flights of stairs. Flights of stairs that connects a stepped aisle to a cross aisles or floor levels at the top or bottom of a bleacher shall have one handrail on each side.

Exception: A mid-aisle handrail is permitted at a flight of *stairs* with a single riser or with two risers and a tread.

409.3 ~~**409.4**~~ **Continuity.** Handrail-gripping surfaces shall be continuous, without interruption by newel posts or other obstructions.

Exceptions:

1. Mid-aisle handrails on stepped aisles in accordance with Section ~~409.1.1~~ 409.3.1.
2. Handrails adjacent to the seats on stepped aisles in accordance with Section 409.3.2.
3. Handrail brackets or balusters attached to the bottom surface of the handrail that do not project horizontally beyond the sides of the handrail within 1.5 inches (38 mm) of the bottom of the handrail shall not be considered to be obstructions.

Commented [KP1]: All text relocated to below.

Commented [KP2]: Current exception (406.1 Exp. 1) could apply to side aisle or center aisle.

Commented [KP3]: Current allowance (406.1)

Commented [KP4]: New upside down U shaped option.

Commented [KP5]: Current exception (406.1 Exp. 2)

Commented [KP6]: Current allowance (406.1). Figures 7 & 8

Commented [KP7]: IBC Section 1030.16; example in Figure 5

Commented [KP8]: Option for center handrail on side aisle per Figure 6 and 9.

Commented [KP9]: New requirement for short flights of handrails at flights of stairs at the top and bottom of stepped aisles. Terminology similar to exception to 406.1.

Commented [KP10]: Consistent with one handrail allowance in IBC Section 1003.5 Exp. 2; similar concept to Figure 10 (but could not find 2 step example)

~~409.1.1~~ 409.3.1 **Mid-aisle handrails.** ~~Where there is seating on both sides of a stepped aisle~~ Mid-aisle handrails shall be discontinuous with gaps or breaks at intervals not exceeding five rows to facilitate access to seating and permit crossing from one side of the aisle to the other. These gaps or breaks shall have a clear width of not less than 22 inches (559 mm) and not greater than 36 inches (914 mm), measured horizontally~~, and the handrail shall have rounded terminations or bends. Such discontinuities shall also be permitted where there is seating on one or both sides of the aisle, and where there guardrails complying with the graspability requirements for handrails. An additional rail shall be provided below the handrail, located parallel to and approximately 12 inches (305 mm) below the handrail. The additional rail need not comply with the graspability provisions of Section 409.3.~~

409.3.2 Handrails adjacent to seats. Handrails provided at each row of seats and located adjacent to the end seats in a row shall be discontinuous with gaps provided to facilitate access from the aisle access way to the aisle. The gaps shall have a clear width not less than the required width of the access aisle in accordance with Section 407.2. The front and back edges of the handrail shall not extend beyond the front and back edges of the seat. Where chairs have automatic or self-rising seats, the measurement shall be made with the seats in the raised position.

409.4 ~~409.5~~ **Handrail termination.** Handrails located on the side of a stepped aisle or flight of stairs that transition to stepped aisles shall return to a wall, guard, post or the walking surface or shall be continuous to the handrail of an adjacent stepped aisle flight. Handrails shall have rounded terminations or bends.

409.4.1 ~~409.5.1~~ **Mid-aisle handrail termination.** Mid-aisle Handrails shall not extend beyond the lowest riser and shall terminate within 18 inches (381 mm) measured horizontally, from the face of the lowest riser. Handrail extensions are not required.

Exception: Mid-aisle handrails shall be permitted to extend beyond the lowest riser where the handrail extensions do not obstruct the width of the cross aisle.

409.4.2 Handrail termination at flights of stairs. Handrail extensions at flights of stairs that connects a stepped aisle to a cross aisles or floor levels at the top or bottom of a bleacher shall comply with Section 1014.6 of the International Building Code.

Exceptions:

1. Handrail extensions shall not be required where the extension would block the required width of cross aisles.
2. Handrail extension shall not be required where the extension block access to the seating or crossover within the aisle.

409.5 ~~409.2~~ **Height.** Handrail height, measured above stepped aisle tread nosings, shall be uniform, not less than 34 inches (864 mm) and not more than 38 inches (965 mm). At mid-aisle handrails an additional rail shall be provided below the handrail, located parallel to and 10 inches (254 mm) minimum to 14 inches (356 mm) maximum below the handrail. The additional rail need not comply with the graspability provisions of Section 409.3.

Exception: Where handrails are adjacent to seating, the height of the handrail shall be permitted to be measured from the stepped aisle tread.

409.6 ~~409.3~~ **Graspability.** Handrails with a circular cross section shall have an outside diameter of at least 1.25 inches (32 mm) and not greater than 2 inches (51 mm) or shall provide equivalent

Commented [KP11]: Already covered in where required (new Section 409.2.1)

Commented [KP12]: Moved to termination

Commented [KP13]: Already covered in where required (new Section 409.2.2)

Commented [KP14]: Moved to height

Commented [KP15]: New figure 4 has handrails down to nosing of step so that step is not a tripping hazard. You could make the gaps smaller than the aisle accessways. Which way to go?

Commented [KP16]: Current text relocated from 409.3.1

Commented [KP17]: Moved from mid-aisle and given a 4" range instead of approximately 12"

Commented [KP18R17]: Got feed back that this was for two reasons – stability of the guard over time and so someone does not go under the handrail.

Commented [KP19]: Allowance for upside down U handrails adjacent to seats.

graspability. If the handrail is not circular, it shall have a perimeter dimension of at least 4 inches (102 mm) and not greater than 6.25 inches (159 mm) with a maximum cross-section dimension of 2.25 inches (57 mm). Edges shall have a minimum radius of 0.01 inch (3.2 mm).

409.7 ~~**409.6**~~ **Clearance.** Clear space between a handrail and a wall or other surface shall be a minimum of 1.5 inches (38 mm). A handrail and a wall or other surface adjacent to the handrail shall be free of any sharp or abrasive elements.

409.8 ~~**409.7**~~ **Projections.** Projections into the required width at each handrail shall not exceed 4.5 inches (11.4 mm) at or below the handrail height.

409.9 ~~**409.8**~~ **Handrail** ~~**design**~~ **loads.** Handrails and their attachment shall be designed to resist the loads indicated in Section 303.

Reason:
Tried to address flights of stairs at the top and bottom of the stepped aisles and stepped aisles. Did not include knobs or pews, but tried to address P and upside down U shaped handrails. Organization is where required, where can you have breaks, and handrail requirements.

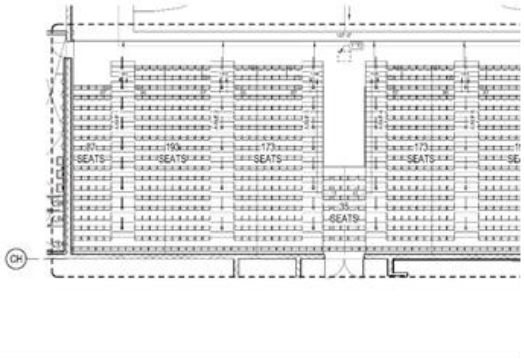


Figure 1

Figure 2 Rod Laver Arena in Melbourne, Australia

Handrail adjacent to seats on both sides of the aisle without mid-aisle handrail.

Figure 3 Rod Laver Arena in Melbourne, Australia

Handrail adjacent to seats on one side of an aisle.

Figure 4 – U handrail on both sides of aisle.

Figure 5 – guard with graspable top rails

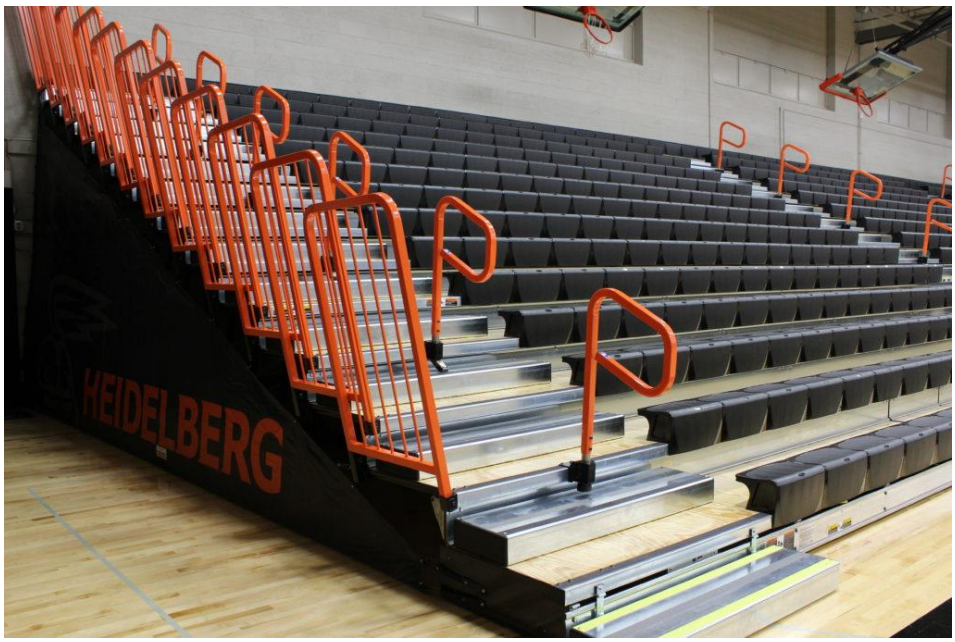


Figure 6 guard does not have graspable handrail at top, so allow for mid-aisle handrail within 30” or seats edge.

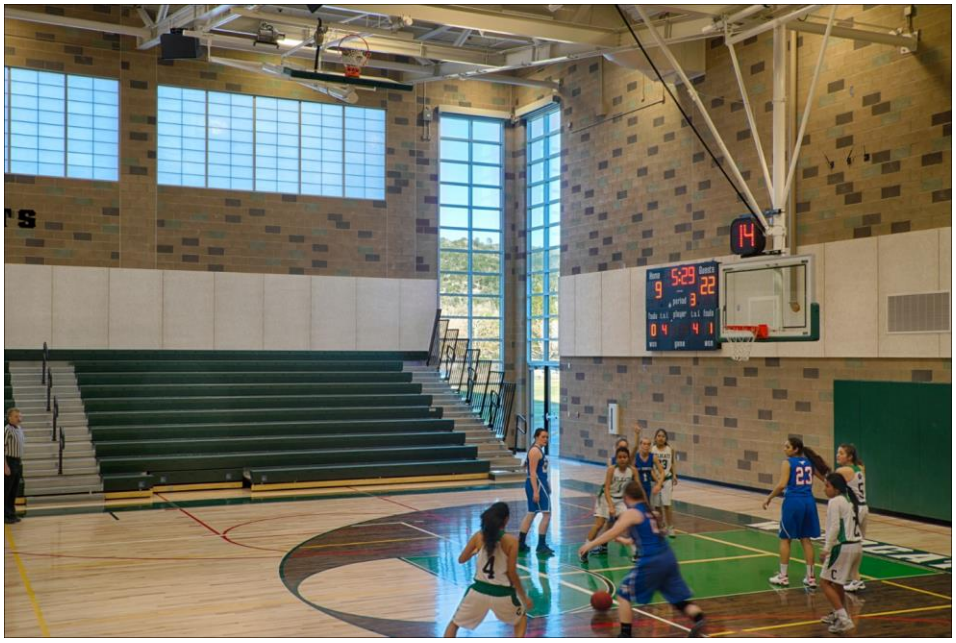


Figure 7 guard does not have graspable handrail at top, so allow for handrail at guard/wall.

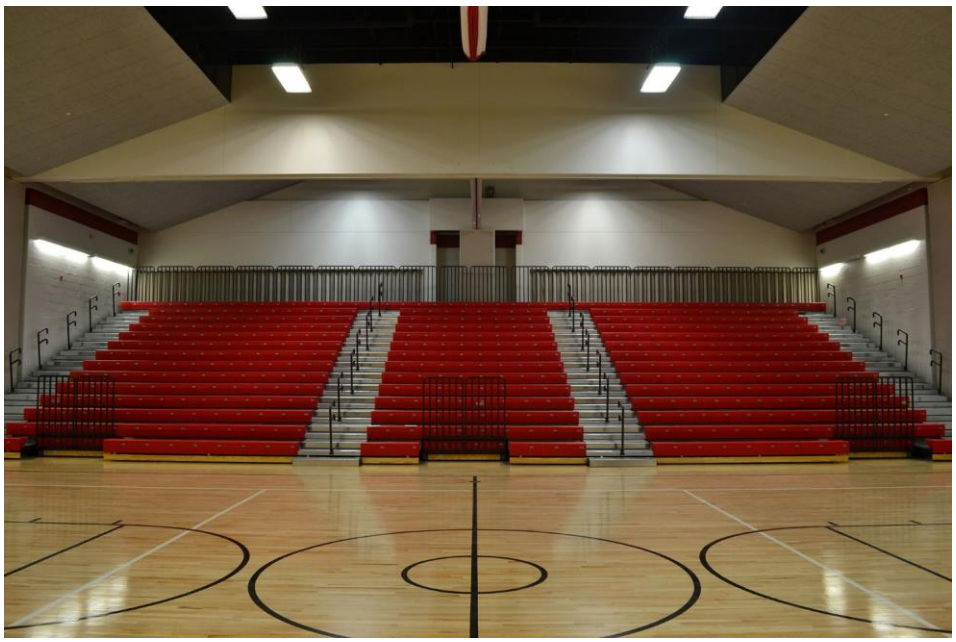


Figure 8 guard does not have graspable handrail at top, so allow for mid-aisle handrail at wall/guard.

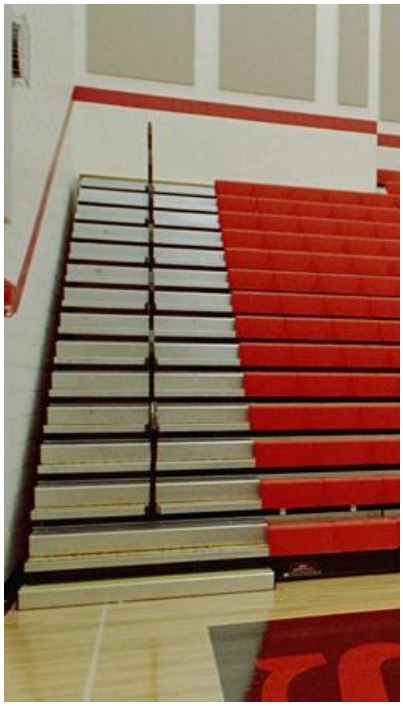


Figure 9 wall gap next to aisle

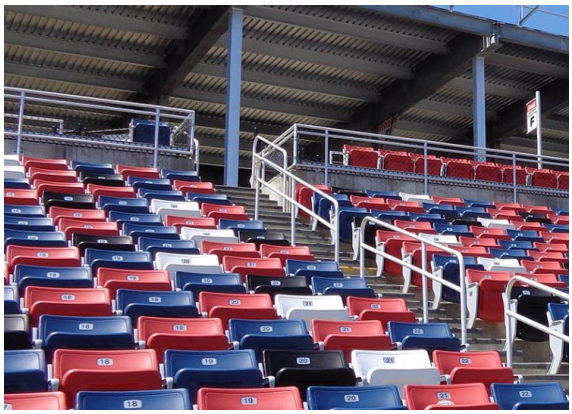


Figure 10 NASCAR Grandstand with mid-aisle handrail transitioning to handrails on each side where there are seats on neither side.

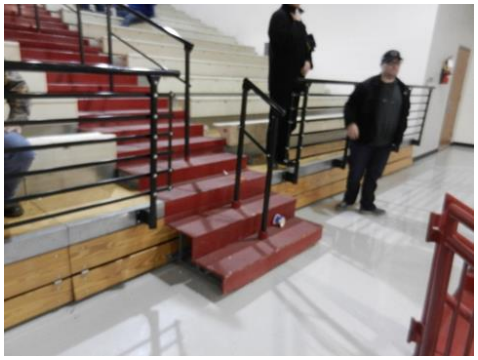


Figure 10

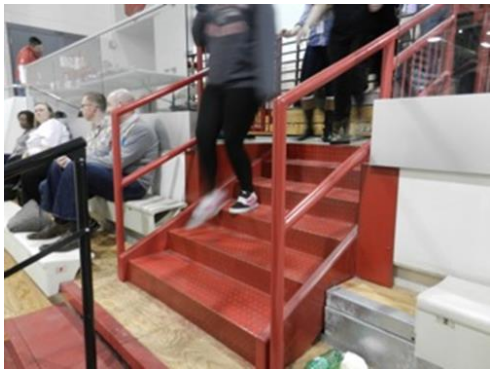


Figure 11

Modification from Dan Victor: Blue is additional revisions after 6-13 meeting.

HANDRAIL. A horizontal or sloping rail intended for grasping by the hand for guidance or support.

SECTION 409
HANDRAILS

409.1 General. Handrails shall be provided where required in Section 409.2. Handrails shall be permitted to be discontinuous as described in Sections 409.3. Handrails shall comply with Sections 409.4 through 409.9.

409.2 Where required. Provide handrails in accordance with Sections 409.2.1 through 409.2.3.
Exceptions: A handrail is not required for a stepped aisle serving a single row of seating.

409.2.1 Stepped aisles with seats on both sides. Where seats are located on both sides of a stepped aisle, provide one of the following:

1. A minimum of one mid-aisle handrail.
2. One handrail adjacent to the seats on each side of the aisle.

Exception: ~~The mid-aisle~~ One handrail adjacent to the seats on one side of the aisle is permitted ~~to be on one side of the aisle when~~ where the stepped aisle serves less than 50 seats.

409.2.2 ~~Seating on one side of a~~ stepped aisle with seats on one side. Where seats are located on one side of a stepped aisle, a minimum of one handrail shall be provided on the side of the stepped aisle where there are no seats.

Exceptions:

1. *Handrails* are not required where, at the side of the stepped *aisle*, there is a *guard* with a top surface that complies with the graspability requirements of *handrails* in accordance with Section 409.6.
2. ~~A mid-aisle handrail is permitted in lieu of the handrail on the side of the stepped aisle where the aisle width is 44 inches or greater.~~
3. A mid-aisle handrail is permitted where there is a minimum of 23 inches (584mm) between the handrail and seat on one side and guard or wall on the other.
4. A mid-aisle handrail is permitted to be provided at the side of the aisle where there are no seats when the aisle serves less than 50 seats.

409.2.3 ~~Flights of stairs~~ Connecting stepped aisles with no adjacent seats. ~~Flights of stairs~~ Stepped aisles with no adjacent seating that connect~~s~~ a stepped aisle within a seating area to a cross aisles or floor levels at the top or bottom of a bleacher shall have one handrail on each side.

Exception: A mid-aisle handrail is permitted at a flight of *stairs* with a single riser or with two risers and a tread.

409.3 Continuity. Handrail-gripping surfaces shall be continuous, without interruption by newel posts or other obstructions.

Exceptions:

1. Mid-aisle handrails on stepped aisles in accordance with Section 409.3.1.
2. Handrails adjacent to the seats on stepped aisles in accordance with Section 409.3.2.
3. Handrail brackets or balusters attached to the bottom surface of the handrail that do not project horizontally beyond the sides of the handrail within 1.5 inches (38 mm) of the bottom of the handrail shall not be considered to be obstructions.

409.3.1 Mid-aisle handrails. Mid-aisle handrails shall be discontinuous with gaps or breaks at intervals not exceeding five rows to facilitate access to seating and permit crossing from one side of the aisle to the other. These gaps or breaks shall have a clear width of not less than 22 inches (559 mm) and not greater than 36 inches (914 mm), measured horizontally. An additional rail shall be provided below the handrail, located parallel to and 10 inches (254 mm) to 16 inches (406.4 mm) below the handrail. The additional rail need not comply with the graspability provisions of Section 409.6 and shall be adequate in strength and attachment in accordance with the infill component requirements of Table 303.2.

409.3.2 Handrails adjacent to seats. Handrails provided at each row of seats and located adjacent to the end seats in a row shall be discontinuous with gaps provided to facilitate access from the aisle access way to the aisle. The gaps shall have a clear width not less

than the required width of the access aisle in accordance with Section 407.2 and not less than 14 inches (356 mm). ~~The front and back edges of the handrail shall not extend beyond the front and back edges of the seat. Where chairs have automatic or self-rising seats, the measurement shall be made with the seats in the raised position.~~

409.4 Handrail termination. Handrails ~~located on the side of a stepped aisle or flight of stairs that transition to stepped aisles~~ shall return to a wall, guard, post or the walking surface or shall be continuous to the handrail of an adjacent stepped aisle flight. Handrails shall have rounded terminations or bends. Handrail extensions are not required.

409.4.1 Mid-aisle handrail termination. Mid-aisle Handrails shall not extend beyond the lowest riser and shall terminate within 18 inches (381 mm) measured horizontally, from the face of the lowest riser. ~~Handrail extensions are not required.~~

Exception: Mid-aisle handrails shall be permitted to extend beyond the lowest riser where the handrail extensions do not obstruct the width of the cross aisle.

~~**409.4.2 Handrail termination at flights of stairs.** Handrail extensions at flights of stairs that connects a stepped aisle to a cross aisles or floor levels at the top or bottom of a bleacher shall comply with Section 1014.6 of the International Building Code.~~

~~**Exceptions:**~~

~~1. Handrail extensions shall not be required where the extension would block the required width of cross aisles.~~

~~2. Handrail extension shall not be required where the extension block access to the seating or crossover within the aisle.~~

409.5 Height. Handrail height, measured above stepped aisle tread nosings, shall be uniform, not less than 34 inches (864 mm) and not more than 38 inches (965 mm). ~~At mid-aisle handrails an additional rail shall be provided below the handrail, located parallel to and 10 inches (254 mm) minimum to 14 inches (356 mm) maximum below the handrail. The additional rail need not comply with the graspability provisions of Section 409.3.~~

Exception: Where handrails are adjacent to seating, the height of the handrail shall be permitted to be measured from the stepped aisle tread.

409.6 Graspability. Handrails with a circular cross section shall have an outside diameter of at least 1.25 inches (32 mm) and not greater than 2 inches (51 mm) or shall provide equivalent graspability. If the handrail is not circular, it shall have a perimeter dimension of at least 4 inches (102 mm) and not greater than 6.25 inches (159 mm) with a maximum cross-section dimension of 2.25 inches (57 mm). Edges shall have a minimum radius of 0.01 inch (3.2 mm).

409.7 Clearance. Clear space between a handrail and a wall or other surface shall be a minimum of 1.5 inches (38 mm). A handrail and a wall or other surface adjacent to the handrail shall be free of any sharp or abrasive elements.

409.8 Projections. Projections into the required width at each handrail shall not exceed 4.5 inches (11.4 mm) at or below the handrail height.

409.9 Handrail loads. Handrails and their attachment shall be designed to resist the loads indicated in Section 303.

Reason: No additional reason was provided. Graphics discussed during the call.

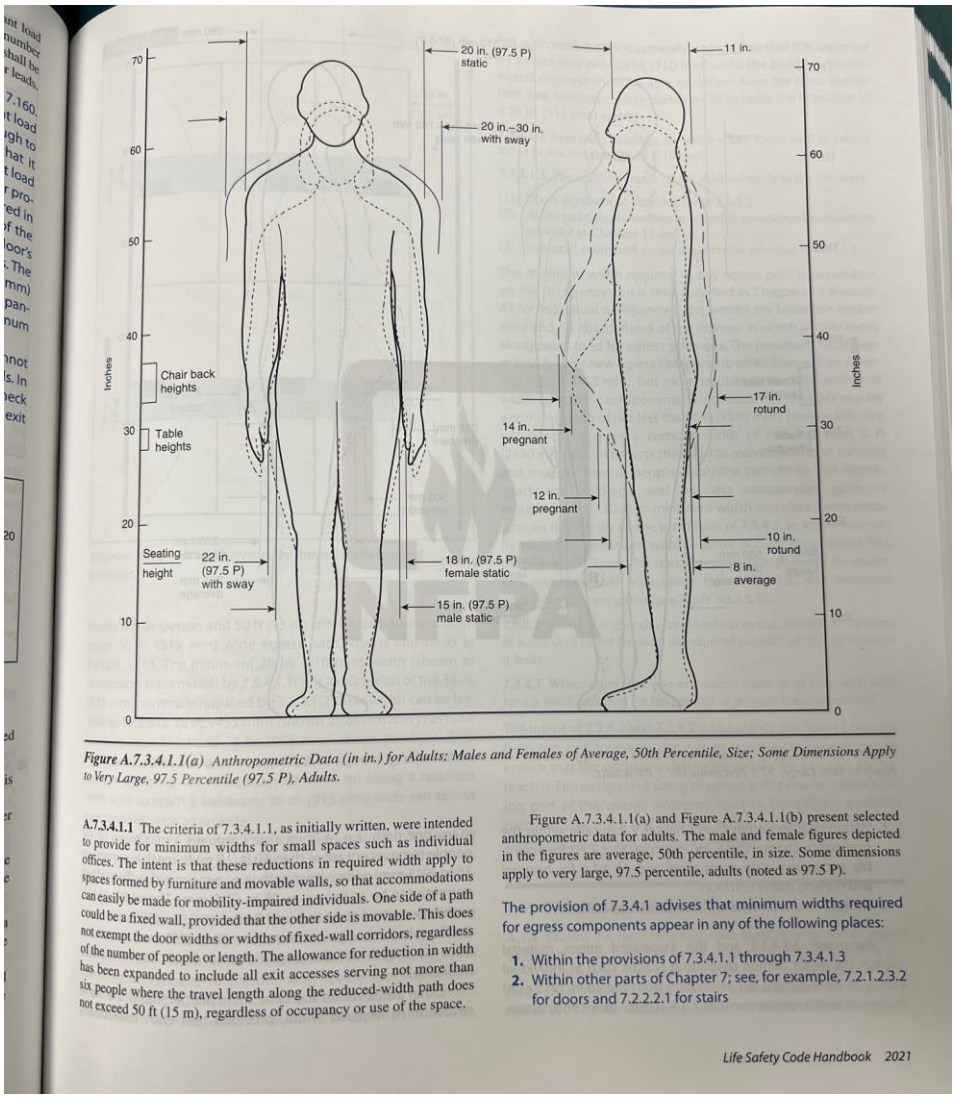


Figure A.7.3.4.1.1(a) Anthropometric Data (in in.) for Adults; Males and Females of Average, 50th Percentile, Size; Some Dimensions Apply to Very Large, 97.5 Percentile (97.5 P), Adults.

A.7.3.4.1.1 The criteria of 7.3.4.1.1, as initially written, were intended to provide for minimum widths for small spaces such as individual offices. The intent is that these reductions in required width apply to spaces formed by furniture and movable walls, so that accommodations can easily be made for mobility-impaired individuals. One side of a path could be a fixed wall, provided that the other side is movable. This does not exempt the door widths or widths of fixed-wall corridors, regardless of the number of people or length. The allowance for reduction in width has been expanded to include all exit accesses serving not more than six people where the travel length along the reduced-width path does not exceed 50 ft (15 m), regardless of occupancy or use of the space.

Figure A.7.3.4.1.1(a) and Figure A.7.3.4.1.1(b) present selected anthropometric data for adults. The male and female figures depicted in the figures are average, 50th percentile, in size. Some dimensions apply to very large, 97.5 percentile, adults (noted as 97.5 P).

The provision of 7.3.4.1 advises that minimum widths required for egress components appear in any of the following places:

1. Within the provisions of 7.3.4.1.1 through 7.3.4.1.3
2. Within other parts of Chapter 7; see, for example, 7.2.1.2.3.2 for doors and 7.2.2.2.1 for stairs

Width of humans for access from the aisle accessway between end handrails

Possible tripping hazard at end of aisle accessway

5-2-2022 Notes: Item discussed but no action taken during this meeting.

6-13-2022 Notes: Item in progress. No final action during this meeting.

6-27-2022 Notes: Item in progress. No final action during this meeting.

7-11-2022 Notes: Item in progress. Modifications outlined below. Committee wanted cleaner version before final vote.

7-25-2022 Notes: Item in progress. Modifications outlined below.

8-8-2022 Notes: Item in progress. Modifications outlined below. Committee would like to see legislative draft with approved modifications before final vote.

8-22-2022 Notes: Committee approved changes to Table 303.2 – (8-0-0)

9-19-2022 Notes: The committee added modifications for the rail below the handrail on mid aisle handrails. The approved the proposal as modified.

Committee Action: Approval as Modified (7-0)

Committee Modification:

HANDRAIL. A horizontal or sloping rail intended for grasping by the hand for guidance or support.

SECTION 409
HANDRAILS

409.1 General. Handrails shall be provided where required in Section 409.2. Handrails shall be permitted to be discontinuous as described in Sections 409.3. Handrails shall comply with Sections 409.4 through 409.9.

409.2 Where required. Provide handrails in accordance with Sections 409.2.1 through 409.2.3.

Exceptions: A handrail is not required for a stepped aisle serving a single row of seating.

409.2.1 Stepped aisles with seats on both sides. Where seats are located on both sides of a stepped aisle, provide one of the following:

1. A minimum of one mid-aisle handrail complying with Section 409.3.1.
2. One handrail adjacent to the seats on each side of the aisle complying with Section 409.3.2.

~~Exception:~~ 3. ~~The mid-aisle~~ Where the stepped aisle serves less than 50 seats, one handrail ~~is permitted to be~~ adjacent to the seats on one side of the aisle complying with Section 409.3.2 ~~when the stepped aisle serves less than 50 seats.~~

409.2.2 ~~Seating on one side of a~~ stepped aisle with seats on one side. Where seats are located on one side of a stepped aisle, a minimum of one handrail shall be provided on the side of the stepped aisle where there are no seats.

Exceptions:

1. *Handrails* are not required where, at the side of the stepped *aisle*, there is a *guard* with a top surface that complies with the graspability requirements of *handrails* in accordance with Section 409.6. Such top surface of the guard shall not be more than 46 inches above the stepped aisle tread nosings. Top surfaces shall be permitted to be discontinuous.
2. ~~A mid-aisle handrail is permitted in lieu of the handrail on the side of the stepped aisle where the aisle width is 44 inches or greater.~~
3. A mid-aisle handrail complying with Section 409.3.1 shall be permitted.
4. Handrails adjacent to seats complying with Section 409.3.2 shall be permitted.
5. In folding and telescopic seating, a handrail complying with Section 409.3.1 is permitted to be on the side of the stepped aisle where there are no seats.

409.2.3 ~~Flights of~~ Stairways. ~~Flights of~~ Stairways that connect~~s~~ a stepped aisle to a cross aisle~~s~~ or floor levels at the top or bottom of a bleacher shall have one handrail on each side.

Exception: A mid-aisle handrail complying with Section 409.3.1 is permitted at ~~a flight of~~ *stairways* with ~~a single riser or with two~~ three risers ~~and a tread~~ maximum.

409.3 Continuity. Handrail-gripping surfaces shall be continuous, without interruption by newel posts or other obstructions.

Exceptions:

1. Mid-aisle handrails on stepped aisles in accordance with Section 409.3.1.
2. Handrails adjacent to the seats on stepped aisles in accordance with Section 409.3.2.
3. Handrail brackets or balusters attached to the bottom surface of the handrail that do not project horizontally beyond the sides of the handrail within 1.5 inches (38 mm) of the bottom of the handrail shall not be considered to be obstructions.

409.3.1 Mid-aisle handrails. Mid-aisle handrails shall be discontinuous with gaps or breaks at intervals not exceeding five rows to facilitate access to seating and permit crossing from one side of the aisle to the other. These gaps or breaks shall have a clear width of not less than 22 inches (559 mm) and not greater than 36 inches (914 mm), measured horizontally.

409.3.2 Handrails adjacent to seats. Handrails provided at each row of seats and located adjacent to the end seats in a row shall be discontinuous with gaps provided to facilitate access from the aisle access way to the aisle. The gaps shall have a clear width not less than the required width of the access aisle in accordance with Section 407.2 2 and not less than 14 inches (356 mm). ~~The front and back edges of the handrail shall not extend beyond the front and back edges of the seat. Where chairs have automatic or self-rising seats, the measurement shall be made with the seats in the raised position.~~

409.4 Handrail termination. Handrails located on the side of a stepped aisle or flight of stairs that transition to stepped aisles shall return to a wall, guard, post or the walking surface or shall be continuous to the handrail of an adjacent stepped aisle flight. Handrails shall have rounded terminations or bends.

409.4.1 Mid-aisle handrail termination. Mid-aisle handrails shall not extend beyond the lowest riser and shall terminate within 18 inches (381 mm) measured horizontally, from the face of the lowest riser. Handrail extensions are not required.

Exception: Mid-aisle handrails shall be permitted to extend beyond the lowest riser where the handrail extensions do not obstruct the width of the cross aisle.

409.4.2 Handrail termination at stairways ~~flights of stairs~~. Handrail extensions at ~~flights of stairs~~ stairways that connect~~s~~ a stepped aisle to a cross aisles or floor levels at the top or bottom of a bleacher shall comply with Section 1014.6 of the International Building Code.

Exceptions:

1. Handrail extensions shall not be required where the extension would block the required width of cross aisles.
2. Handrail extension shall not be required where the extension block access to the seating or crossover within the aisle.

409.5 Height. Handrail height, measured above stepped aisle tread nosings, shall be uniform, not less than 34 inches (864 mm) and not more than 38 inches (965 mm). At mid-aisle handrails, an additional rail or infill component shall be provided below the handrail, located parallel to and 10 inches (254 mm) minimum to 14 inches (356 mm) maximum below the handrail. to limit crossing from one side of the aisle to the other under the handrail. ~~The additional rail need not comply with the graspability provisions of Section 409.3.~~

Exception: Where handrails are adjacent to seating, the height of the handrail shall be permitted to be measured from the stepped aisle tread.

409.6 Graspability. Handrails with a circular cross section shall have an outside diameter of at least 1.25 inches (32 mm) and not greater than 2 inches (51 mm) or shall provide equivalent graspability. If the handrail is not circular, it shall have a perimeter dimension of at least 4 inches (102 mm) and not greater than 6.25 inches (159 mm) with a maximum cross-section dimension of 2.25 inches (57 mm). Edges shall have a minimum radius of 0.01 inch (3.2 mm).

409.7 Clearance. Clear space between a handrail and a wall or other surface shall be a minimum of 1.5 inches (38 mm). A handrail and a wall or other surface adjacent to the handrail shall be free of any sharp or abrasive elements.

409.8 Projections. Projections into the required width at each handrail shall not exceed 4.5 inches (11.4 mm) at or below the handrail height.

409.9 Handrail loads. Handrails and their attachment shall be designed to resist the loads indicated in Section 303. At mid-aisle handrails, the additional rail or infill component below the handrail required in Section 409.5 shall be designed to resist the loads for 'guards, infill components' in Table 303.2.

SECTION 303
STRUCTURAL DESIGN

303.1 Design. The structural design shall be in accordance with the building code.

303.2 Loads. Bleachers, folding and telescopic seating, and grandstands shall be designed for a uniform live load of 100 pounds per square foot (psf) (4788 Pa). Press boxes shall be designed for a uniform live load of 50 psf (2394 Pa). The components of the installation shall be designed to support the loads listed in Table 303.2.

TABLE 303.2
DESIGN LOADS

TIERED SEATING ELEMENT	LOAD TYPE	LOAD
Seats(vertical)	L	120 pounds per linear foot
Treads	L	Stair treads and stepped aisle treads shall be designed to resist a minimum concentrated load of 300 pounds on an area of 4 square inches.
Handrails and guards, uniform load	R_r	Handrails ~~assemblies~~ and the top rails of guards shall be designed to resist a load of 50 pounds per linear-foot ~~(pound per foot)~~ applied in any direction ~~at the top~~. The supporting elements shall transfer this load to the structure.
Handrails and guards, concentrated load	R_r	Handrails ~~assemblies~~ and the top rails of guards shall be able to resist a single load of 200 pounds, applied at any point along the ~~top~~ rail. Attachment devices and supporting elements shall transfer the load to the structure.

Guards, infill components	R_r	~~Intermediate~~ ~~rails (all those except the handrail)~~, Balusters, ~~and~~ panel fillers ~~(including flexible infill components)~~ and guard infill components (including all rails except handrails and the top rails of guards) shall be designed to withstand a horizontally applied load of 50 pounds on an area ~~equal to 1 square foot~~ not to exceed 12 inches by 12 inches including openings and spaces between rails. Such loads shall to located to produce the maximum load effects. ~~Application of the loads shall not allow guard openings greater than permitted by Sections 408.2 and 503.2~~

For SI: 1 square inch = 645.46 mm2, 1 square foot = 0.0929 m2, 1 pound = 4.448 N, 1 pound per linear foot = 14.594 N/m.

303.5 Load combinations. In addition to the load combinations required to be considered for design in accordance with the building code, the additional load combinations in Section 303.5.1 or in Section 303.5.2 shall be considered. Parallel and perpendicular sway loads need not be considered simultaneously. Also uniform, concentrated and infill loads need not be considered simultaneously. Partial loading shall be addressed to account for the full intensity of the appropriately reduced live load applied only to a portion of a structure or member if it produces a more unfavorable load effect than the same intensity applied over the full structure or member.

SECTION 408
GUARDS
408.3 Guard ~~design~~ loads. Guards and their attachment shall be designed to resist the loads indicated in Section 303.

Committee Reason:
The reasons for the modifications to the replacement for 04-07-21 is as follows:

409.2.1 – Adding the references to the requirements for the two type of handrails is for clarity by being specific and consistency with Section 409.2.2. To maintain a minimum aisle width, the exception was reworded as a third option for where a 36" wide aisle is permitted.

409.2.2 – Exception 1 – maximum height was added to make sure the top rail of the guard is usable as a handrail.

Exceptions were added to allow for handrail options for the aisles with seating on one side: allowing for mid-aisle handrails in the middle or one side; and handrails next to seats.

409.2.3 - Revise "flight of stairs" to "stairways" to be consistent with transitions in Section 406.9. Exception revised to three rises maximum to allow for elevation of one tier without changing to two handrails.

409.3.2 – put in minimum clearance for gaps at handrails adjacent to seats. Last two sentences not needed – redundant.

409.5 – the additional rail is not a handrail, so the reference back to except compliance with 409.3 is not needed. Add 'infill component' and the additional language for the rail under the handrail is to allow for options for design of the lower rail, and to clarify that this is acting as a barrier for under the handrail, not as a lower handrail.

409.9 – adds the loading requirements for the additional rail. This would be consistent with ASCE7 and IBC. Good location because this would put a load on handrail attachments. The title was changed for clarity. Add 'infill component' for consistency with 409.5 and Table 303.2.

Make the same title change as 409.9 to Section 408.3 for guard loading.

Table 303.2 – The committee considered the loads on the handrails as part of this discussion. Table 303.2 is revised to be consistent with the terminology in ASCE7-22 Section 4.5. The load combinations for this are addressed in ICC 300 Section 303.5 (ASCE7-22 4.5.1.2).

The reason for the revision for the section on handrails was to allow add some alternatives and for clarifications.

One new alternative is for hairpin style handrails adjacent to seating. This should be equivalent to mid aisle handrails for moving up and down the stepped aisle and may improve safety for the situation where the side of the steps on the stepped aisle overlap the path from the aisle accessway – thus reducing tripping at that location.

Another new alternative is for folding and telescopic seating to use a mid aisle handrail on side aisles. This will allow for self storing handrails and guards rather than requiring installation of these elements when telescopic seating are opened and closed.

Handrails on stairways that are continuations of the stepped aisle at the top and bottom were specifically addressed with the allowances for extensions to not block cross aisles or access to seats.

Where the top surface of guards can be used as a handrail safely was clarified.

The changes to Table 303.2 is for consistency with the terminology in ASCE 7 Section 4.5.

The following is a legislative draft of Sections 408.3, 409 and Table 303.2 including modifications.

SECTION 409
HANDRAILS

409.1 General. Handrails shall be provided where required in Section 409.2. Handrails shall be permitted to be discontinuous as described in Sections 409.3. Handrails shall comply with Sections 409.4 through 409.9.

~~**409.1 Required handrails.** Where seats are located on both sides of a stepped aisle, a minimum of one mid-aisle handrail shall be provided. Where seats are located on one side of a stepped aisle, a minimum of one handrail shall be provided on the side of the stepped aisle where there are no seats.~~

~~**Exceptions:**~~

~~1. A handrail is not required for a stepped aisle serving a single row of seating.~~

~~2. The mid-aisle handrail is permitted to be on one side of the aisle when the stepped aisle serves less than 50 seats.~~

409.2 Where required. Provide handrails in accordance with Sections 409.2.1 through 409.2.3.

Exceptions: A handrail is not required for a stepped aisle serving a single row of seating.

409.2.1 Stepped aisles with seats on both sides Where seats are located on both sides of a stepped aisle, provide one of the following:

1. A minimum of one mid-aisle handrail complying with Section 409.3.1.
2. One handrail adjacent to the seats on each side of the aisle complying with Section 409.3.2.
3. Where the stepped aisle serves less than 50 seats, one handrail adjacent to the seats on one side of the aisle complying with Section 409.3.2.

409.2.2 Stepped aisle with seats on one side. Where seats are located on one side of a stepped aisle, a minimum of one handrail shall be provided on the side of the stepped aisle where there are no seats.

Exceptions:

1. *Handrails* are not required where, at the side of the stepped *aisle*, there is a *guard* with a top surface that complies with the graspability requirements of *handrails* in accordance with Section 409.6. Such top surface of the guard shall not be more than 46 inches above the stepped aisle tread nosings. Top surfaces shall be permitted to be discontinuous.
2. A mid-aisle handrail complying with Section 409.3.1 shall be permitted.
3. Handrails adjacent to seats complying with Section 409.3.2 shall be permitted.
4. In folding and telescopic seating, a handrail complying with Section 409.3.1 is permitted to be on the side of the stepped aisle where there are no seats.

409.2.3 Stairways. Stairways that connect a stepped aisle to a cross aisle or floor levels at the top or bottom of a bleacher shall have one handrail on each side.

Exception: A mid-aisle handrail complying with Section 409.3.1 is permitted at a stairway with three risers maximum.

409.3 ~~409.4~~ Continuity. Handrail-gripping surfaces shall be continuous, without interruption by newel posts or other obstructions.

Exceptions:

1. Mid-aisle handrails on stepped aisles in accordance with Section ~~409.1.1~~ 409.3.1.
2. Handrails adjacent to the seats on stepped aisles in accordance with Section 409.3.2.
3. Handrail brackets or balusters attached to the bottom surface of the handrail that do not project horizontally beyond the sides of the handrail within 1.5 inches (38 mm) of the bottom of the handrail shall not be considered to be obstructions.

~~409.1.1~~ 409.3.1 Mid-aisle handrails. ~~Where there is seating on both sides of a stepped aisle~~ Mid-aisle handrails shall be discontinuous with gaps or breaks at intervals not exceeding five rows to facilitate access to seating and permit crossing from one side of the aisle to the other. These gaps or breaks shall have a clear width of not less than 22 inches (559 mm) and not greater than 36 inches (914 mm), measured horizontally~~, and the handrail shall have rounded terminations or bends. Such discontinuities shall also be permitted where there is seating on one or both sides of the aisle, and where there guardrails complying with the graspability requirements for handrails. An additional rail shall be provided below the handrail, located parallel to and approximately 12 inches (305 mm) below the handrail. The additional rail need not comply with the graspability provisions of Section 409.3.~~

409.3.2 Handrails adjacent to seats. Handrails provided at each row of seats and located adjacent to the end seats in a row shall be discontinuous with gaps provided to facilitate access from the aisle access way to the aisle. The gaps shall have a clear width not less than the required width of the access aisle in accordance with Section 407.2 and not less than 14 inches (356 mm).

409.4 ~~**409.5**~~ **Handrail termination.** Handrails located on the side of a stepped aisle or flight of stairs that transition to stepped aisles shall return to a wall, guard, post or the walking surface or shall be continuous to the handrail of an adjacent stepped aisle flight. Handrails shall have rounded terminations or bends.

409.4.1 ~~**409.5.1**~~ **Mid-aisle handrail termination.** Mid-aisle Handrails shall not extend beyond the lowest riser and shall terminate within 18 inches (381 mm) measured horizontally, from the face of the lowest riser. Handrail extensions are not required.

Exception: Mid-aisle handrails shall be permitted to extend beyond the lowest riser where the handrail extensions do not obstruct the width of the cross aisle.

409.4.2 Handrail termination at stairways. Handrail extensions at stairways that connect a stepped aisle to a cross aisles or floor levels at the top or bottom of a bleacher shall comply with Section 1014.6 of the International Building Code.

Exceptions:

1. Handrail extensions shall not be required where the extension would block the required width of cross aisles.
2. Handrail extension shall not be required where the extension block access to the seating or crossover within the aisle.

409.5 ~~**409.2**~~ **Height.** Handrail height, measured above stepped aisle tread nosings, shall be uniform, not less than 34 inches (864 mm) and not more than 38 inches (965 mm). At mid-aisle handrails an additional rail or infill component shall be provided below the handrail, located parallel to and 10 inches (254 mm) minimum to 14 inches (356 mm) maximum below the handrail to limit crossing from one side of the aisle to the other under the handrail.

Exception: Where handrails are adjacent to seating, the height of the handrail shall be permitted to be measured from the stepped aisle tread.

409.6 ~~**409.3**~~ **Graspability.** Handrails with a circular cross section shall have an outside diameter of at least 1.25 inches (32 mm) and not greater than 2 inches (51 mm) or shall provide equivalent graspability. If the handrail is not circular, it shall have a perimeter dimension of at least 4 inches (102 mm) and not greater than 6.25 inches (159 mm) with a maximum cross-section dimension of 2.25 inches (57 mm). Edges shall have a minimum radius of 0.01 inch (3.2 mm).

409.7 ~~**409.6**~~ **Clearance.** Clear space between a handrail and a wall or other surface shall be a minimum of 1.5 inches (38 mm). A handrail and a wall or other surface adjacent to the handrail shall be free of any sharp or abrasive elements.

409.8 ~~**409.7**~~ **Projections.** Projections into the required width at each handrail shall not exceed 4.5 inches (11.4 mm) at or below the handrail height.

409.9 ~~**409.8**~~ **Handrail** ~~**design**~~ **loads.** Handrails and their attachment shall be designed to resist the loads indicated in Section 303. At mid-aisle handrails, the additional rail or infill component below the handrail required in Section 409.5 shall be designed to resist the loads for 'guards, infill components' in Table 303.2.

SECTION 303
STRUCTURAL DESIGN

303.1 Design. The structural design shall be in accordance with the building code.

303.2 Loads. Bleachers, folding and telescopic seating, and grandstands shall be designed for a uniform live load of 100 pounds per square foot (psf) (4788 Pa). Press boxes shall be designed for a uniform live load of 50 psf (2394 Pa). The components of the installation shall be designed to support the loads listed in Table 303.2.

TABLE 303.2
DESIGN LOADS

TIERED SEATING ELEMENT	LOAD TYPE	LOAD
Seats(vertical)	L	120 pounds per linear foot
Treads	L	Stair treads and stepped aisle treads shall be designed to resist a minimum concentrated load of 300 pounds on an area of 4 square inches.
Handrails and guards, uniform load	R_r	Handrails ~~assemblies~~ and the top rails of guards shall be designed to resist a load of 50 pounds per linear-foot ~~(pound per foot)~~ applied in any direction ~~at the top~~. The supporting elements shall transfer this load to the structure.
Handrails and guards, concentrated load	R_r	Handrails ~~assemblies~~ and the top rails of guards shall be able to resist a single load of 200 pounds, applied at any point along the ~~top~~ rail. Attachment devices and supporting elements shall transfer the load to the structure.
Guards, infill components	R_r	~~Intermediate rails (all those except the handrail~~), Balusters, ~~and~~ panel fillers ~~(including flexible infill components)~~ and guard infill components (including all rails except handrails and the top rails of guards) shall be designed to withstand a horizontally applied load of 50 pounds on an area ~~equal to 1 square foot~~ not to exceed 12 inches by 12 inches including openings and spaces between rails. Such loads shall to located to produce the maximum load effects. ~~Application of the loads shall not allow guard openings greater than permitted by Sections 408.2 and 503.2~~

For SI: 1 square inch = 645.46 mm2, 1 square foot = 0.0929 m2, 1 pound = 4.448 N, 1 pound per linear foot = 14.594 N/m.

303.5 Load combinations. In addition to the load combinations required to be considered for design in accordance with the building code, the additional load combinations in Section 303.5.1 or in Section 303.5.2 shall be considered. Parallel and perpendicular sway loads need not be considered simultaneously. Also uniform, concentrated and infill loads need not be considered

simultaneously. Partial loading shall be addressed to account for the full intensity of the appropriately reduced live load applied only to a portion of a structure or member if it produces a more unfavorable load effect than the same intensity applied over the full structure or member.

SECTION 408
GUARDS
408.3 Guard ~~design~~ loads. Guards and their attachment shall be designed to resist the loads indicated in Section 303.

Report for *IS-BLE 04-07-21*

Committee decision: AM	***Committee Vote at Meeting: (7-0-0)***	***Committee Vote on Ballot:***

REPORT OF HEARING:

Modification (if any):

This is a legislative draft of approved modifications.

Replace the proposal with the following:

TABLE 303.2
DESIGN LOADS

TIERED SEATING ELEMENT	LOAD TYPE	LOAD
Seats(vertical)	L	120 pounds per linear foot
Treads	L	Stair treads and stepped aisle treads shall be designed to resist a minimum concentrated load of 300 pounds on an area of 4 square inches.
Handrails and guards, uniform load	R_r	Handrail<u>s</u> ~~assemblies~~ and <u>the top rails of</u> guards shall be designed to resist a load of 50 pounds per linear-foot ~~(pound per foot)~~ applied in any direction ~~at the top~~. The supporting elements shall transfer this load to the structure.
Handrails and guards, concentrated load	R_r	Handrail<u>s</u> ~~assemblies~~ and <u>the top rails of</u> guards shall be able to resist a single load of 200 pounds, applied at any point along the ~~top~~ <u>rail</u>. Attachment devices and supporting elements shall transfer the load to the structure.
Guards, infill components	R_r	~~Intermediate rails (all those except the handrail)~~, Balusters, ~~and~~ panel fillers ~~(including flexible infill components)~~ <u>and guard infill components (including all rails except handrails and the top rails of guards)</u> shall be designed to withstand a horizontally applied load of 50 pounds on an area ~~equal to 1 square foot~~ <u>not to exceed 12 inches by 12 inches</u> including openings and space<u>s</u> between rails. <u>Such loads shall to located to produce the maximum load effects.</u> ~~Application of the loads shall not allow guard openings greater than permitted by Sections 408.2 and 503.2~~

For SI: 1 square inch = 645.46 mm2, 1 square foot = 0.0929 m2, 1 pound = 4.448 N, 1 pound per linear foot = 14.594 N/m.

SECTION 408
GUARDS

408.3 Guard ~~design~~ loads. Guards and their attachment shall be designed to resist the loads indicated in Section 303.

SECTION 409
HANDRAILS

409.1 General. <u>Handrails shall be provided where required in Section 409.2. Handrails shall be permitted to be discontinuous as described in Sections 409.3. Handrails shall comply with Sections 409.4 through 409.9.</u>

~~**409.1 Required handrails.** Where seats are located on both sides of a stepped aisle, a minimum of one mid-aisle handrail shall be provided. Where seats are located on one side of a stepped aisle, a minimum of one handrail shall be provided on the side of the stepped aisle where there are no seats.~~

~~**Exceptions:**~~

~~1. A handrail is not required for a stepped aisle serving a single row of seating.~~

~~2. The mid-aisle handrail is permitted to be on one side of the aisle when the stepped aisle serves less than 50 seats.~~

409.2 Where required. Provide handrails in accordance with Sections 409.2.1 through 409.2.3.

Exceptions: A handrail is not required for a stepped aisle serving a single row of seating.

409.2.1 Stepped aisles with seats on both sides Where seats are located on both sides of a stepped aisle, provide one of the following:

1. A minimum of one mid-aisle handrail complying with Section 409.3.1.
2. One handrail adjacent to the seats on each side of the aisle complying with Section 409.3.2.
3. Where the stepped aisle serves less than 50 seats, one handrail adjacent to the seats on one side of the aisle complying with Section 409.3.2.

409.2.2 Stepped aisle with seats on one side. Where seats are located on one side of a stepped aisle, a minimum of one handrail shall be provided on the side of the stepped aisle where there are no seats.

Exceptions:

5. *Handrails* are not required where, at the side of the stepped *aisle*, there is a *guard* with a top surface that complies with the graspability requirements of *handrails* in accordance with Section 409.6. Such top surface of the guard shall not be more than 46 inches above the stepped aisle tread nosings. Top surfaces shall be permitted to be discontinuous.
6. A mid-aisle handrail complying with Section 409.3.1 shall be permitted.
7. Handrails adjacent to seats complying with Section 409.3.2 shall be permitted.
8. In folding and telescopic seating, a handrail complying with Section 409.3.1 is permitted to be on the side of the stepped aisle where there are no seats.

409.2.3 Stairways. Stairways that connect a stepped aisle to a cross aisle or floor levels at the top or bottom of a bleacher shall have one handrail on each side.

Exception: A mid-aisle handrail complying with Section 409.3.1 is permitted at a stairway with three risers maximum.

409.3 ~~**409.4**~~ **Continuity.** Handrail-gripping surfaces shall be continuous, without interruption by newel posts or other obstructions.

Exceptions:

4. Mid-aisle handrails on stepped aisles in accordance with Section ~~409.1.1~~ 409.3.1.
5. Handrails adjacent to the seats on stepped aisles in accordance with Section 409.3.2.
6. Handrail brackets or balusters attached to the bottom surface of the handrail that do not project horizontally beyond the sides of the handrail within 1.5 inches (38 mm) of the bottom of the handrail shall not be considered to be obstructions.

~~**409.1.1**~~ **409.3.1 Mid-aisle handrails.** ~~Where there is seating on both sides of a stepped aisle~~ Mid-aisle handrails shall be discontinuous with gaps or breaks at intervals not exceeding five rows to facilitate access to seating and permit crossing from one side of the aisle to the other. These gaps or breaks shall have a clear width of not less than 22 inches (559 mm) and not greater than 36 inches (914 mm), measured horizontally~~, and the handrail shall have rounded terminations or bends. Such discontinuities shall also be permitted where there is seating on one or both sides of the aisle, and where there guardrails complying with the graspability requirements for handrails. An additional rail shall be provided below the handrail, located parallel to and approximately 12 inches (305 mm) below the handrail. The additional rail need not comply with the graspability provisions of Section 409.3.~~

409.3.2 Handrails adjacent to seats. Handrails provided at each row of seats and located adjacent to the end seats in a row shall be discontinuous with gaps provided to facilitate access from the aisle access way to the aisle. The gaps shall have a clear width not less than the required width of the access aisle in accordance with Section 407.2 and not less than 14 inches (356 mm).

409.4 ~~**409.5**~~ **Handrail termination.** Handrails located on the side of a stepped aisle or flight of stairs that transition to stepped aisles shall return to a wall, guard, post or the walking surface or shall be continuous to the handrail of an adjacent stepped aisle flight. Handrails shall have rounded terminations or bends.

409.4.1 ~~**409.5.1**~~ **Mid-aisle handrail termination.** Mid-aisle Handrails shall not extend beyond the lowest riser and shall terminate within 18 inches (381 mm) measured horizontally, from the face of the lowest riser. Handrail extensions are not required.

Exception: Mid-aisle handrails shall be permitted to extend beyond the lowest riser where the handrail extensions do not obstruct the width of the cross aisle.

409.4.2 Handrail termination at stairways. Handrail extensions at stairways that connect a stepped aisle to a cross aisles or floor levels at the top or bottom of a bleacher shall comply with Section 1014.6 of the International Building Code.

Exceptions:

3. Handrail extensions shall not be required where the extension would block the required width of cross aisles.

4. Handrail extension shall not be required where the extension block access to the seating or crossover within the aisle.

409.5 ~~409.2~~ Height. Handrail height, measured above stepped aisle tread nosings, shall be uniform, not less than 34 inches (864 mm) and not more than 38 inches (965 mm). At mid-aisle handrails an additional-rail or infill component shall be provided below the handrail, located parallel to and 10 inches (254 mm) minimum to 14 inches (356 mm) maximum below the handrail to limit crossing from one side of the aisle to the other under the handrail.

Exception: Where handrails are adjacent to seating, the height of the handrail shall be permitted to be measured from the stepped aisle tread.

409.6 ~~409.3~~ Graspability. Handrails with a circular cross section shall have an outside diameter of at least 1.25 inches (32 mm) and not greater than 2 inches (51 mm) or shall provide equivalent graspability. If the handrail is not circular, it shall have a perimeter dimension of at least 4 inches (102 mm) and not greater than 6.25 inches (159 mm) with a maximum cross-section dimension of 2.25 inches (57 mm). Edges shall have a minimum radius of 0.01 inch (3.2 mm).

409.7 ~~409.6~~ Clearance. Clear space between a handrail and a wall or other surface shall be a minimum of 1.5 inches (38 mm). A handrail and a wall or other surface adjacent to the handrail shall be free of any sharp or abrasive elements.

409.8 ~~409.7~~ Projections. Projections into the required width at each handrail shall not exceed 4.5 inches (11.4 mm) at or below the handrail height.

409.9 ~~409.8~~ Handrail ~~design~~ loads. Handrails and their attachment shall be designed to resist the loads indicated in Section 303. At mid-aisle handrails, the additional rail or infill component below the handrail required in Section 409.5 shall be designed to resist the loads for 'guards, infill components' in Table 303.2.

Committee Reason:

The reasons for the modifications to the replacement for 04-07-21 is as follows:

409.2.1 – Adding the references to the requirements for the two type of handrails is for clarity by being specific and consistency with Section 409.2.2. To maintain a minimum aisle width, the exception was reworded as a third option for where a 36" wide aisle is permitted.

409.2.2 – Exception 1 – maximum height was added to make sure the top rail of the guard is usable as a handrail.

Exceptions were added to allow for handrail options for the aisles with seating on one side: allowing for mid-aisle handrails in the middle or one side; and handrails next to seats.

409.2.3 - Revise "flight of stairs" to "stairways" to be consistent with transitions in Section 406.9. Exception revised to three rises maximum to allow for elevation of one tier without changing to two handrails.

409.3.2 – put in minimum clearance for gaps at handrails adjacent to seats. Last two sentences not needed – redundant.

409.5 – the additional rail is not a handrail, so the reference back to except compliance with 409.3 is not needed. Add 'infill component' and the additional language for the rail under the handrail is to allow for options for design of the lower rail, and to clarify that this is acting as a barrier for under the handrail, not as a lower handrail.

409.9 – adds the loading requirements for the additional rail. This would be consistent with ASCE7 and IBC. Good location because this would put a load on handrail attachments. The title was changed for clarity. Add 'infill component' for consistency with 409.5 and Table 303.2.

Make the same title change as 409.9 to Section 408.3 for guard loading.

Table 303.2 – The committee considered the loads on the handrails as part of this discussion. Table 303.2 is revised to be consistent with the terminology in ASCE7-22 Section 4.5. The load combinations for this are addressed in ICC 300 Section 303.5 (ASCE7-22 4.5.1.2).

The reason for the revision for the section on handrails was to allow add some alternatives and for clarifications.

One new alternative is for hairpin style handrails adjacent to seating. This should be equivalent to mid aisle handrails for moving up and down the stepped aisle and may improve safety for the situation where the side of the steps on the stepped aisle overlap the path from the aisle accessway – thus reducing tripping at that location.

Another new alternative is for folding and telescopic seating to use a mid aisle handrail on side aisles. This will allow for self storing handrails and guards rather than requiring installation of these elements when telescopic seating are opened and closed.

Handrails on stairways that are continuations of the stepped aisle at the top and bottom were specifically addressed with the allowances for extensions to not block cross aisles or access to seats.

Where the top surface of guards can be used as a handrail safely was clarified.

The changes to Table 303.2 is for consistency with the terminology in ASCE 7 Section 4.5.

PUBLIC COMMENT- FIRST DRAFT:

Proponent:

Desired Action:

Modification:

Reason:

Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***

REPORT OF HEARING – FIRST DRAFT

Modification (if any):

Committee Reason:

PUBLIC 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:		

IS-BLE 04-08-21
ICC 300 Section 409.3, 409.3.1(New), 409.3.2(New)

Proponent: Daniel Victor, INTERKAL, LLC

Revise as follows:

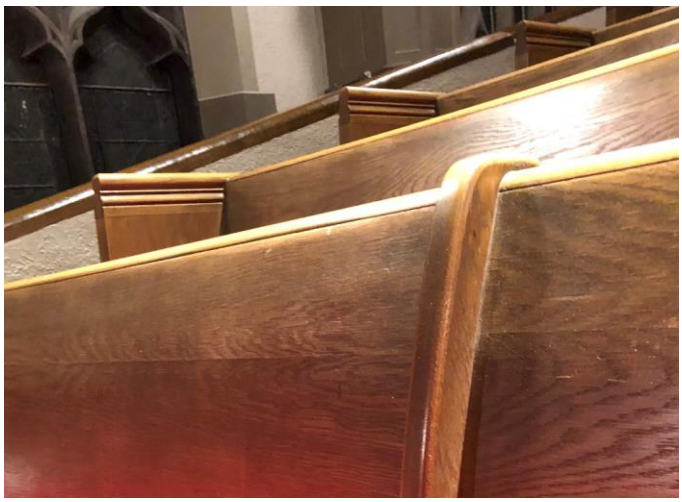
409.3 Graspability. Required *handrails* shall comply with Section 409.3.1or shall provide equivalent graspability.

> **Exception:** Where the handrail is the end cap of pew type seating, handrails shall be in accordance with Section 409.3.1, 409.3.2 or shall provide equivalent graspability.

409.3.1 Type I. Handrails with a circular cross section shall have an outside diameter of at least 1.25 inches (32 mm) and not greater than 2 inches (51 mm) or shall provide equivalent graspability. If the handrail is not circular, it shall have a perimeter dimension of at least 4 inches (102 mm) and not greater than 6.25 inches (159 mm) with a maximum crosssection dimension of 2.25 inches (57 mm). Edges shall have a minimum radius of 0.01 inch (3.2 mm).

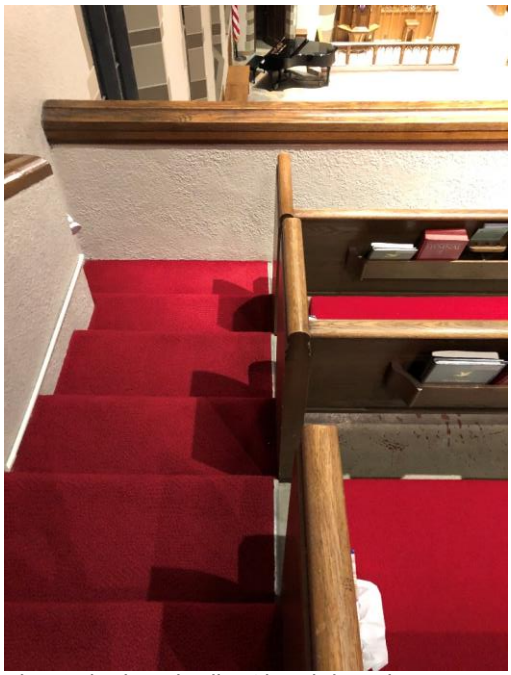
409.3.2 Type II. *Handrails* with a perimeter greater than 61/4 inches (160 mm) shall provide a graspable finger recess area on both sides of the profile. The finger recess shall begin within a distance of 3/4 inch (19 mm) measured vertically from the tallest portion of the profile and achieve a depth of not less than 5/16 inch (8 mm) within 7/8 inch (22 mm) below the widest portion of the profile. This required depth shall continue for not less than 3/8 inch (10 mm) to a level that is not less than 13/4 inches (45 mm) below the tallest portion of the profile. The width of the *handrail* above the recess shall be not less than 11/4 inches (32 mm) to not greater than 23/4 inches (70 mm). Edges shall have a minimum radius of 0.01 inch (0.25 mm).

Reason: This proposal picks up the handrail graspability options in IBC Section 1014.3. This is based on recent studies sponsored by the Stairway Manufacturers Association.



First United Methodist Church in Kalamazoo, Michigan

Graspable end portion of a church pew Adjacent to a stepped aisle having seating on one side.



First United Methodist Church in Kalamazoo, MI

Handrail built into end of pew. Stepped aisle with seating on one side.

5-2-2022 Notes: Item discussed but no action taken during this meeting.

Replace Proposal IS-BLE 04-08-21 with the following:

Revise as follows:

409.1 Where Required ~~handrails.~~ Where seats are located on both sides of a stepped aisle, a minimum of one mid-aisle handrail or one handrail adjacent to the seats on each side of the aisle shall be provided. Where seats are located on one side of a stepped aisle, a minimum of one handrail shall be provided on the side of the stepped aisle where there are no seats or within 30 inches horizontally of the end of the row of seats.

Exceptions:

1. A handrail is not required for a stepped aisle serving a single row of seating.
2. The mid-aisle handrail is permitted to be on one side of the aisle when the stepped aisle serves less than 50 seats.
3. *Handrails* are not required where, at the side of the stepped *aisle*, there is pew type seating with endcaps with a top surface that complies with the graspability requirements of *handrails* in accordance with Section 409.3.

409.2 Height. Handrail height, measured above stepped aisle tread nosings, shall be uniform, not less than 34 inches (864 mm) and not more than 38 inches (965 mm).

Exception: Where handrails are the end cap of pew type seating, the height of the guard shall be permitted to be measured from the stepped aisle tread.

409.3 Graspability. Required *handrails* shall be Type 1 in accordance with Section 409.3.1 or shall provide equivalent graspability.

Exceptions:

1. Where the handrail is the end cap of pew type seating, handrails shall be permitted to be Type 2 in accordance with Section 409.3.2 or shall provide equivalent graspability.
2. Where the top rail of a guard is serving as a handrail in accordance with Section 409.1.1, handrails shall be permitted to be Type 2 in accordance with Section 409.3.2 or shall provide equivalent graspability.

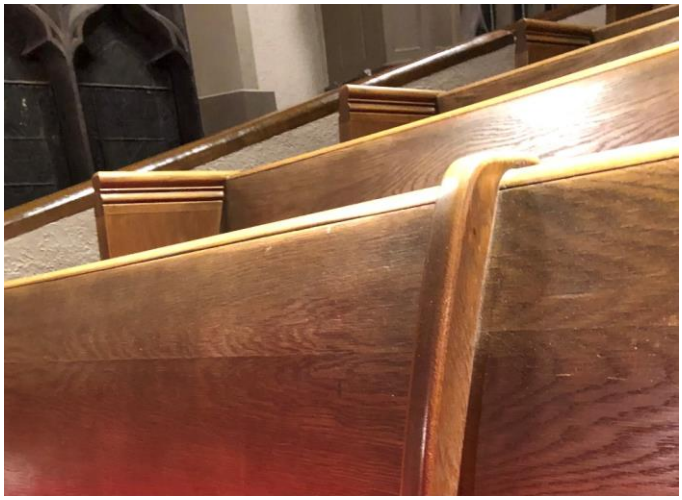
409.3.1 Type I. Handrails with a circular cross section shall have an outside diameter of at least 1.25 inches (32 mm) and not greater than 2 inches (51 mm) or shall provide equivalent graspability. If the handrail is not circular, it shall have a perimeter dimension of at least 4 inches (102 mm) and not greater than 6.25 inches (159 mm) with a maximum crosssection dimension of 2.25 inches (57 mm). Edges shall have a minimum radius of 0.01 inch (3.2 mm).

409.3.2 Type II. *Handrails* with a perimeter greater than 6-1/4 inches (160 mm) shall provide a graspable finger recess area on both sides of the profile. The finger recess

shall begin within a distance of 3/4 inch (19 mm) measured vertically from the tallest portion of the profile and achieve a depth of not less than 5/16 inch (8 mm) within 7/8 inch (22 mm) below the widest portion of the profile. This required depth shall continue for not less than 3/8 inch (10 mm) to a level that is not less than 1-3/4 inches (45 mm) below the tallest portion of the profile. The width of the *handrail* above the recess shall be not less than 1-1/4 inches (32 mm) to not greater than 2-3/4 inches (70 mm). Edges shall have a minimum radius of 0.01 inch (0.25 mm).

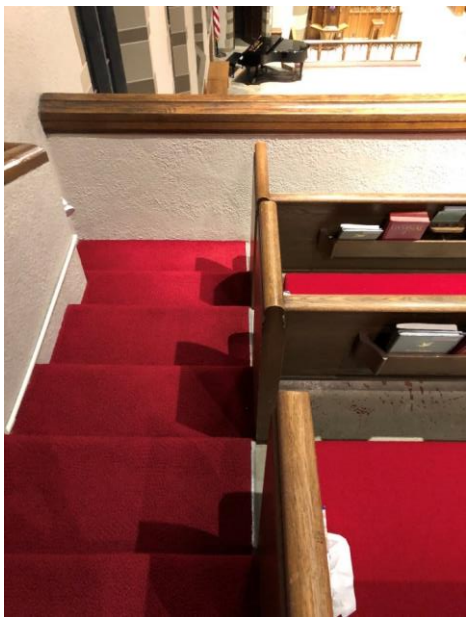
Reason: This is separate from the proposal 04-07-21. Some coordination of section numbers would be needed to combine, but they would not conflict.

This proposal picks up the handrail graspability options in IBC Section 1014.3. This is based on recent studies sponsored by the Stairway Manufacturers Association.



First United Methodist Church in Kalamazoo, Michigan

Graspable end portion of a church pew Adjacent to a stepped aisle having seating on one side.



First United Methodist Church in Kalamazoo, MI

Handrail built into end of pew. Stepped aisle with seating on one side.

Dan Victor requested withdrawal.

Notes 5-16-2022: Type 2 handrail is currently only permitted in the IBC within individual dwelling units. Without further research, it is not apparent that this provides 'equivalent graspability' for assembly spaces. Additional research is needed. Jake Pauls provided a presentation demonstrating the differences between Type 1 and 2 handrails.

Committee Action: Withdrawn by proponent
Committee Reason:

Report for *IS-BLE 04-08-21*		
Committee decision: Withdrawn	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
REPORT OF HEARING: Modification (if any):		
Committee Reason:		
PUBLIC COMMENT- FIRST DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		

Committee Reason:		
PUBLIC 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 5
EXISTING BLEACHERS, FOLDING AND TELESCOPIC SEATING AND GRANDSTANDS

IS-BLE 05-01-21
ICC 300 Sections 506 (New), 506.1(New)

Proponent: Gregory Nelson, FaciliServ, Inc.

Revise as follows:

SECTION 506
AISLES AND HANDRAILS

506.1 Aisle and handrails. On existing bleachers where aisle or handrails are altered or added, the aisles shall comply with Sections 405, 406 and 407 and handrails shall comply with Section 409.

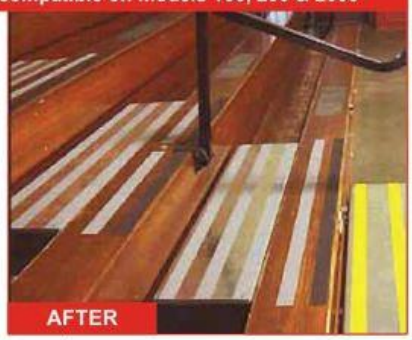
Exceptions:

1. Where the uppermost seat is located less than or equal to 55 inches (1397 mm) above the floor or ground below.
2. Where it is physically infeasible to comply with section, aisle shall comply to the maximum extent feasible.
3. Where physically infeasible for risers to comply with Section 406.6, risers shall be permitted to exceed 8 inches (203 mm) in height where a handrail complying with Section 409 is provided. A written warning shall be posted in a conspicuous location visible to patrons using the aisle in both directions stating that the aisle exceeds the riser height and handrails are provided for stabilization of the user.

Reason: This allows safer egress on existing bleachers with the exception that applies in **503.1 Required guards**, exception 1, as it does not apply to seating equal to or less than 55" high.
The proposed exceptions1 & 2, allow partial compliance to raise egress safety standards on existing bleachers without resorting to an infeasible application. Allowing higher than 8" rise between step surfaces with the application of handrails and provisions in **409.1.1 Mid-aisle handrails** for aisle step clear widths that will allow seating areas to have the handrail safety improvement incorporated where other wise it would not be able to due to as built design/features that do not practically allow full compliance with step rises between 4" and 8".

The following pictures were submitted to aid the discussion.

Seat-Level Aisle Step & Handrail Solution: compatible on models 100, 200 & 2000



48" wide steps are inserted into the foot area and handrails are secured

Exhibit 1a: No egress aisle system This bleacher system design was offered with seat level (behind te seat step at the same level) and foot level aisles as options (front of deck open at the front with an intermediate step at the rear portion of the row) 24" row spacing, 10" rise.

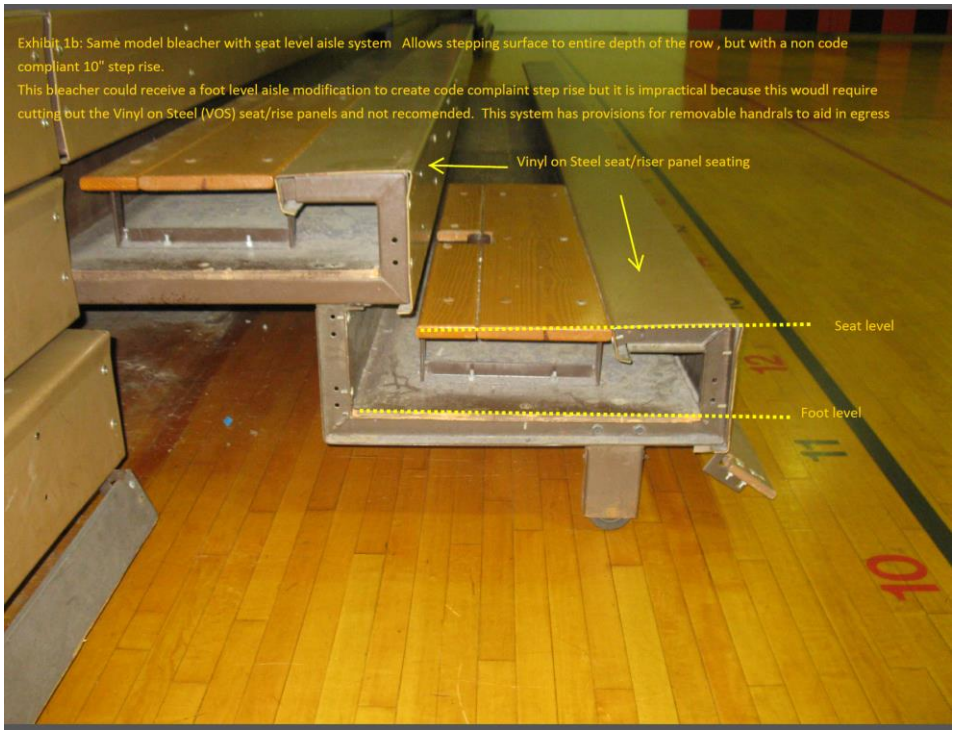


Exhibit 1b: Same model bleacher with seat level aisle system Allows stepping surface to entire depth of the row , but with a non code compliant 10" step rise.
This bleacher could receive a foot level aisle modification to create code complaint step rise but it is impractical because this woudl require cutting out the Vinyl on Steel (VOS) seat/rise panels and not recomended. This system has provisions for removable handrals to aid in egress
Vinyl on Steel seat/riser panel seating
Seat level
Foot level

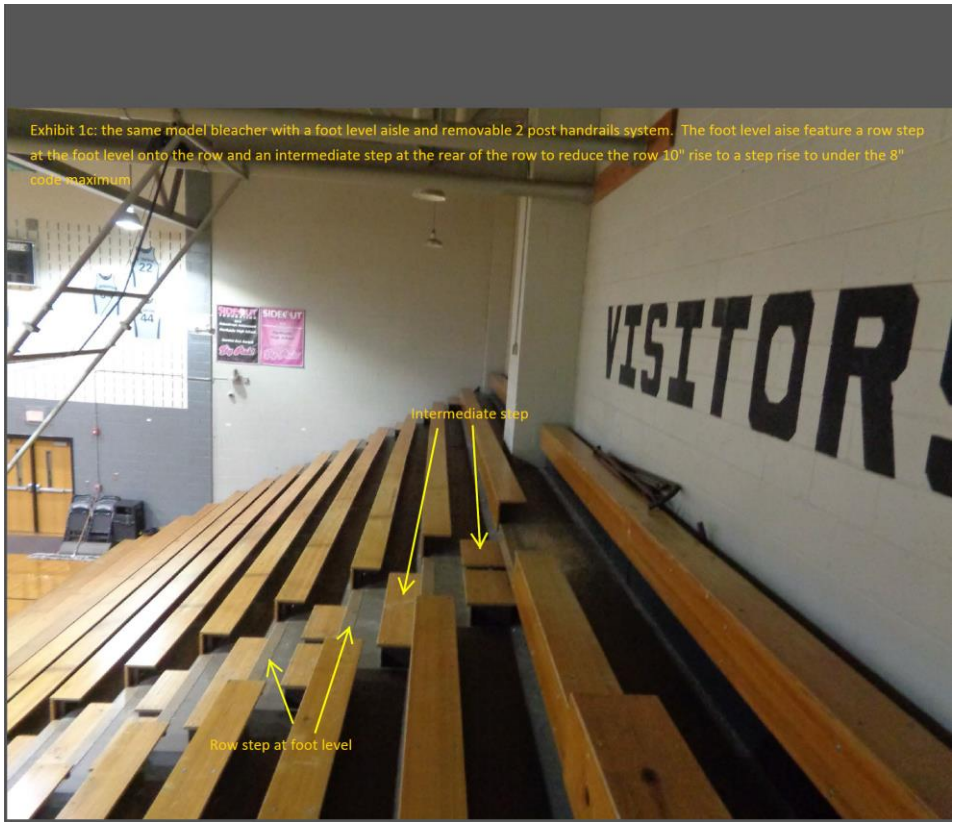
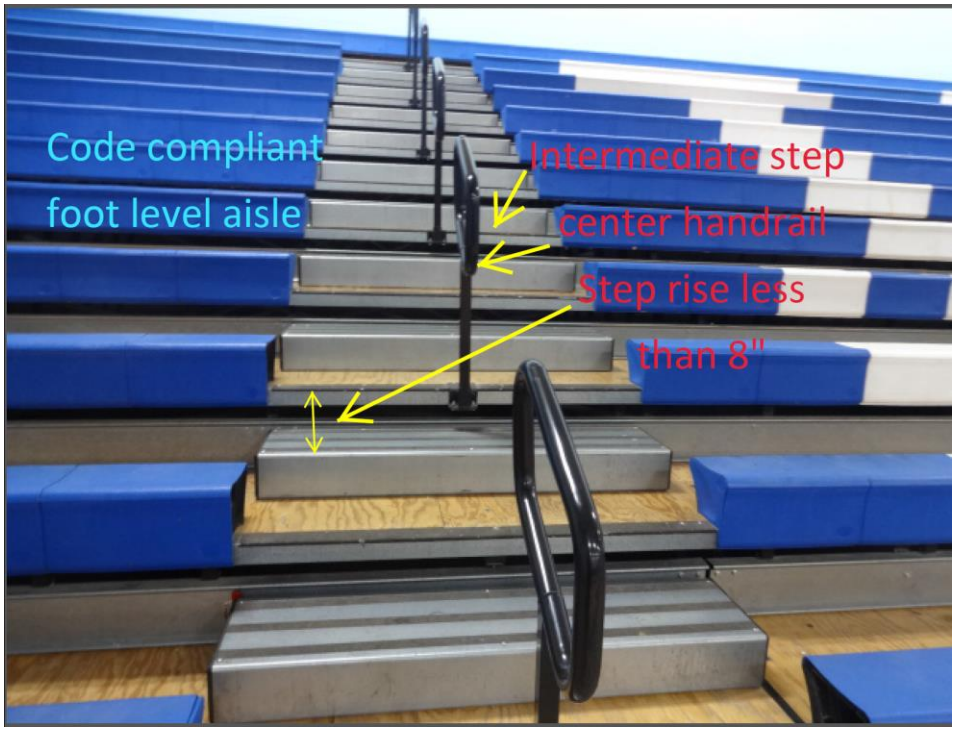


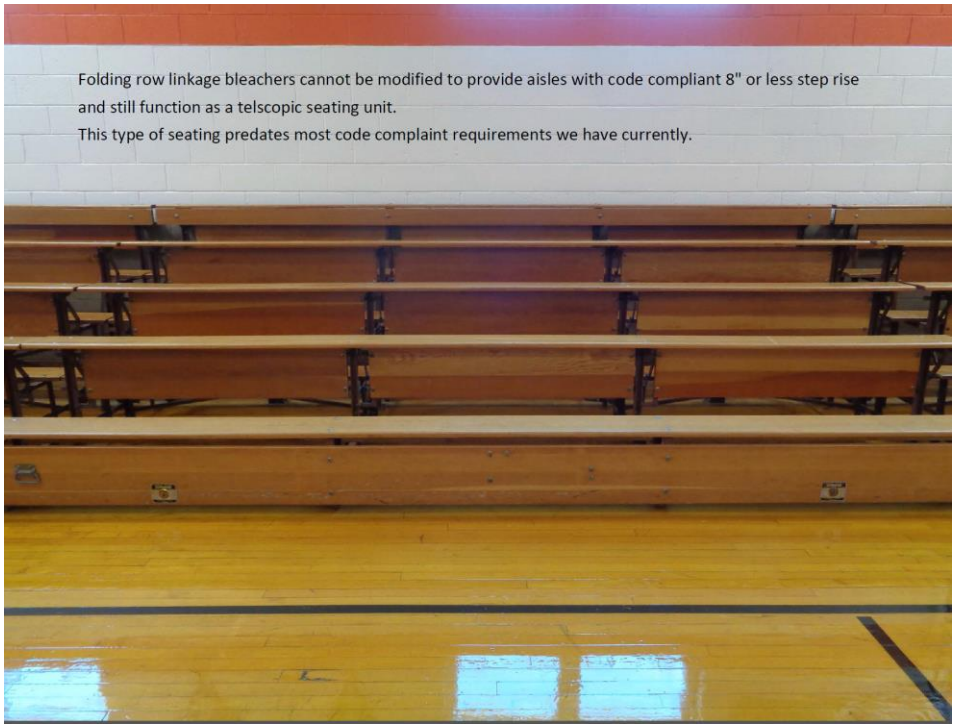
Exhibit 1c: the same model bleacher with a foot level aisle and removable 2 post handrails system. The foot level aise feature a row step at the foot level onto the row and an intermediate step at the rear of the row to reduce the row 10" rise to a step rise to under the 8" code maximum
VISITOR
Intermediate step
Row step at foot level

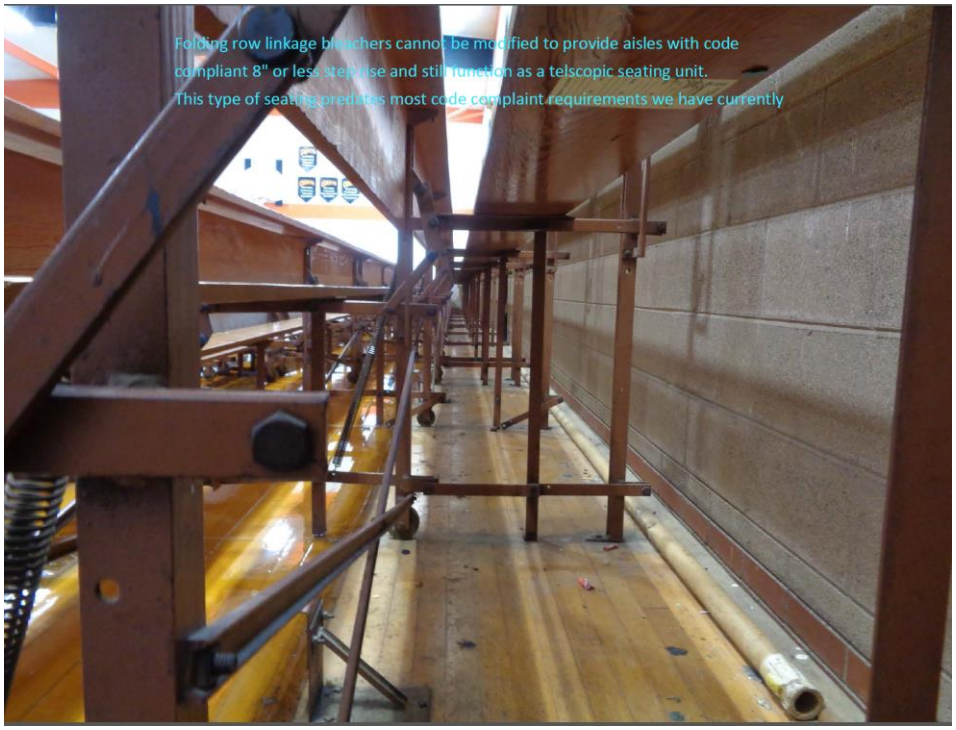

Center hand rails
Intermediate steps to reduce the rise step to 8" or less

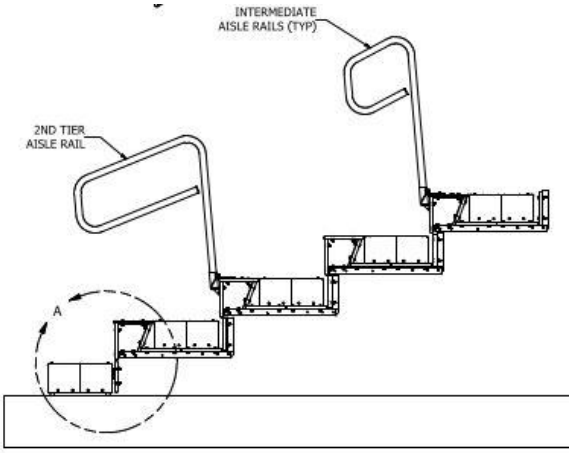

Handrails covering 2 rows and
with cross aisle breaks
8" rise (no intermedaite step required)


Code compliant
foot level aisle
Intermediate step
center handrail
Step rise less
than 8"

Folding row linkage bleachers cannot be modified to provide aisles with code compliant 8" or less step rise and still function as a telscopic seating unit.
This type of seating predates most code complaint requirements we have currently.



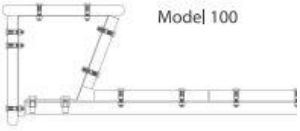

Folding row linkage bleachers cannot be modified to provide aisles with code
compliant 8" or less step rise and still function as a telscopic seating unit.
This type of seating predates most code complaint requirements we have currently


INTERMEDIATE
AISLE RAILS (TYP)
2ND TIER
AISLE RAIL
A

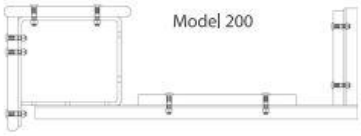
Telescopic Gym Seats (Bleachers)

Model 100 - 300 series Hussey Bleachers, installed from the mid-1950's thru the early 1970's.

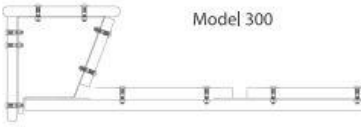
Model 100



Model 200

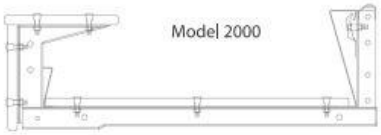


Model 300



Model 2000 & 2400 series Hussey Bleachers, installed from the early 1970's thru the early 1990's.

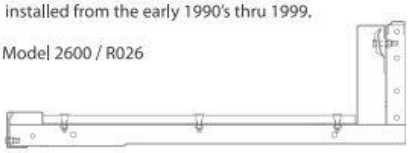
Model 2000



Model 2400 (Steel Top Guide)

Model 2600 & 3000 series Hussey Bleachers, installed from the early 1990's thru 1999.

Model 2600 / R026

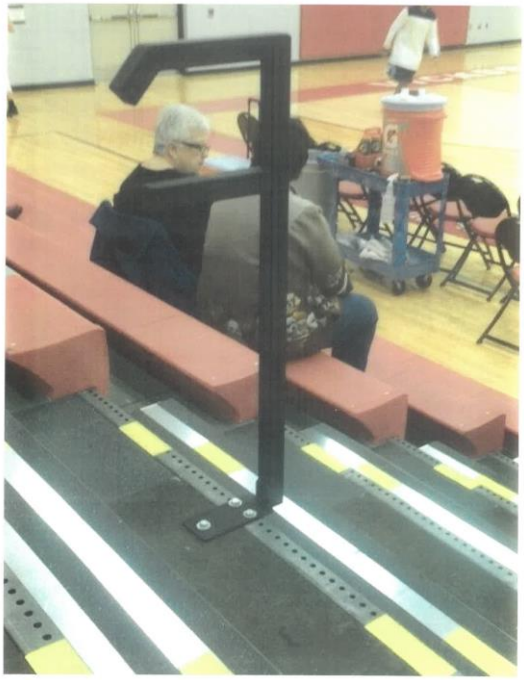


Model 3000 / R033 (3000 - Roller Top Guide) (RO 33 Steel Top Guide)

MAXAM & MAXAM+ series Hussey Bleachers, installed since 1999.

MAXAM 22" - 26" RS

MAXAM+ 30" - 33" RS



IS-BLE 05-01-21 modification

ICC 300 Sections 506 (New), 506.1(New)

Proponent:

Revise as follows:

SECTION 506
AISLES AND HANDRAILS

506.1 Aisle and handrails. On existing bleachers where aisle or handrails are altered or added, the aisles shall comply with Sections 404, 405, and 406 ~~and 407~~ and handrails shall comply with Section 409.

Exceptions:

1. Where the uppermost seat is located less than or equal to 55 inches (1397 mm) above the floor or ground below handrails are not required on the aisle.
2. Where it is ~~physically~~ technically infeasible for aisles to comply with section, aisle shall comply to the maximum extent feasible.
3. Where ~~physically~~ technically infeasible for risers to comply with Section 406.6, ~~risers shall be permitted to exceed 8 inches (203 mm) in height where~~ a handrail ~~complying with Section 409~~ ~~is~~ shall be provided. ~~A written warning shall be posted in a conspicuous location visible to patrons using the aisle in both directions stating that the aisle exceeds the riser height and handrails are provided for stabilization of the user.~~

Reason:
Main paragraph - References should be to Section 404 (means of egress for width), 405 (aisles) and 406 (stepped aisles). Reference to 407 (aisle accessways) is not needed – that is existing and will not be changed.
Exception 1 –
The exception as written would literally mean that adding aisles in the lower seats would not be required to meet anything. I believe the intent was to allow low rise bleachers to now have handrails required on the aisles?
Exception 2 –
"Technically infeasible" is used in the IEBC – maybe better than 'physically infeasible".
Add 'for aisles' to be specific.
Exception 3:
"Technically infeasible" is used in the IEBC – maybe better than 'physically infeasible".
Since Section 406.6 allows for a 9" rise, and 409 is referenced above, the additional words are not needed.
It is not clear where a sign could be located that could be seen for up and down the aisle.
Treads on stepped aisles are required to have marking stripes (406.4). Requiring a handrail to be added and the stripes should be sufficient warning.

Committee Action: As modified 7-0

Modification:

Replace with the following:

SECTION 506
AISLES AND HANDRAILS

506.1 Aisle and handrails. On existing bleachers where aisle or handrails are altered or added, the aisles shall comply with Sections 404, 405, and 406 and handrails shall comply with Section 409.

Exception: Where technically infeasible for riser height to comply with Section 406.6, riser height shall comply to the maximum extent feasible. Where there is one riser between rows and the aisle tread is at the height of the seat, the tread shall be the full depth of the row.

Committee Reason:
The proposal is consistent with Section 501.4 to require new aisles and handrails to meet new construction requirements. The exception would allow for infills of the aisle accessways to create aisles in bleachers that did not have aisles before to improve safety for exiting. The exception would allow for taller risers where fully compliant systems would require reconfiguration of the structural support under the bleacher. There was discussion as to if there should also be an exception for aisle width, or if this should be maintained for exiting.

Report for *IS-BLE 05-01-21*		
Committee decision: AM	***Committee Vote at Meeting: 7-0***	***Committee Vote on Ballot:***
REPORT OF HEARING: Modification (if any): **Replace with the following:** **506.1 Aisle and handrails.** On existing bleachers where aisle or handrails are altered or added, the aisles shall comply with Sections 404, 405, and 406 and handrails shall comply with Section 409. **Exception:** Where technically infeasible for riser height to comply with Section 406.6, riser height shall comply to the maximum extent feasible. Where there is one riser between rows and the aisle tread is at the height of the seat, the tread shall be the full depth of the row.		
Committee Reason: The proposal is consistent with Section 501.4 to require new aisles and handrails to meet new construction requirements. The exception would allow for infills of the aisle accessways to create aisles in bleachers that did not have aisles before to improve safety for exiting. The exception would allow for taller risers where fully compliant systems would require reconfiguration of the structural support under the bleacher. There was discussion as to if there should also be an exception for aisle width, or if this should be maintained for exiting.		
PUBLIC COMMENT- FIRST DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		
Committee Reason:		
PUBLIC 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 6
REFERENCED STANDARDS

IS-BLE 06-01-21
ICC 300 Chapter 6

Proponent: ICC 300 committee

Revise as follows:

IBC—~~18~~ 24 International Building Code® 309.1, 404.1
IPMC—~~18~~ 24International Property Maintenance Code®. 502.2.2

Reason: Update of referenced standard

Committee Action: As Submitted 7-0
Committee Reason: Correct edition references for adoption of ICC 300 into the 2024 I-codes.

Report for *IS-BLE 06-01-21*		
Committee decision: AS	***Committee Vote at Meeting: 7-0***	***Committee Vote on Ballot:***
REPORT OF HEARING: Modification (if any):		
Committee Reason: Correct edition references for adoption of ICC 300 into the 2024 I-codes.		
PUBLIC COMMENT- FIRST DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		
Committee Reason:		
PUBLIC 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 1
APPLICATION AND ADMINSTRATION

IS-BLE 01-01-22
ICC 300 105.1, 105.2

Proponent: Dan Victor

Revise as follows:

105.1 Required installation and construction inspection. After construction or installation, an inspection shall be performed by a qualified person to evaluate compliance with this standard.

105.2 Yearly inspection required. The owner shall cause all bleachers, folding and telescopic seating, and grandstands to be inspected at least once a year by a qualified person in order to verify that the structure is maintained in compliance with the provisions of this standard. All folding and telescopic seating shall also be inspected to evaluate compliance with the manufacturer's installation and operation instructions, including an inspection during opening and closing of such seating.

Exception: Existing installations shall be inspected in accordance with the provisions of chapter 5.

Reason: A "qualified person" has a definition in chapter 2. The wording is presently found in section 501.2, but has been omitted in these two sections. This wording is necessary to ensure the inspection is done by qualified individuals.

> **QUALIFIED PERSON.** A professional trained in the proper and safe use, operation and repair of bleachers, folding and telescopic seating and grandstands and is knowledgeable in the requirements of this standard.

Committee Action: As Submitted 7-0
Committee Reason: Using a defined term ('qualified person' - Chapter 2) is appropriate in this context and will coordinate with Section 501.2 for inspections of existing bleachers.

Report for *IS-BLE 01-01-22*		
Committee decision: AS	***Committee Vote at Meeting: 7-0***	***Committee Vote on Ballot:***
REPORT OF HEARING: Modification (if any):		
Committee Reason: Using a defined term ('qualified person' - Chapter 2) is appropriate in this context and will coordinate with Section 501.2 for inspections of existing bleachers.		
PUBLIC COMMENT- FIRST DRAFT: Proponent:		
Desired Action:		
Modification:		
Reason:		

Committee decision: AS/AM/D	*Committee Vote at Meeting:*	*Committee Vote on Ballot:*
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		
Committee Reason:		
PUBLIC 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 2
DEFINTIONS

IS-BLE 02-01-22

ICC 300 101.1, 102.1, 202, 209.1, Table 303.2, 303.8, 310.1, 402.1, 403.1, 404.2, 406.8.1, 407.4.1, 408.1, 408.2, 409.2.3, 409.4.2, 505.1, 505.1.2, 501.2.1, 501.4, 502.1, 503.1, 505.1

Proponent:

Revise as follows:

SECTION 101
GENERAL

101.1 Purpose. The purpose of this standard is to establish the minimum requirements to safeguard public health, safety and general welfare through structural strength, means of egress facilities, stability, and safety to life and property relative to the construction, alteration, repair, operation and maintenance of new and existing temporary and permanent ~~bench~~ bleachers, folding and telescopic seating and grandstands. This standard is intended for adoption by government agencies and organizations setting model codes to achieve uniformity in technical design criteria in building codes and other regulations.

SECTION 102
APPLICABILITY

102.1 Applicability. The construction of new temporary and permanent bleachers, folding and telescopic seating and grandstands shall comply with Chapters 1 through 4. Existing temporary and permanent installations shall comply with Chapters 1, 2 and 5. Temporary installations are those that are erected for a period of less than 180 days in a calendar year.

SECTION 105
INSPECTION

105.2 Yearly inspection required. The owner shall cause all bleachers, folding and telescopic seating, and grandstands to be inspected at least once a year in order to verify that the structure is maintained in compliance with the provisions of this standard. All folding and telescopic seating shall also be inspected to evaluate compliance with the manufacturer's installation and operational instructions, including an inspection during the opening and closing of such seating.

Exception: Existing installations shall be inspected in accordance with the provisions of Chapter 5.

SECTION 202
DEFINED TERMS

BLEACHER-TYPE SEATING. Bleachers, grandstands and folding and telescopic seating.

BLEACHERS. Tiered seating supported on a dedicated structural system and two or more rows high (see "Grandstands").

GRANDSTAND. Tiered seating supported on a dedicated structural system and two or more rows high (see "Bleachers").

FOLDING AND TELESCOPIC SEATING. Tiered seating capable of being reduced in overall size and shape for purposes of moving or storing.

MEANS OF EGRESS. A continuous and unobstructed path of vertical and horizontal egress travel from any point on a bleacher, folding and telescopic seating, and grandstand to a public way. A means of egress consists of three separate and distinct parts: exit access, exit and exit discharge.

QUALIFIED PERSON. A professional trained in the proper and safe use, operation and repair of bleachers, folding and telescopic seating and grandstands and is knowledgeable in the requirements of this standard.

PRESS BOX. A limited-size structure attached to ~~tiered~~ bleacher-type seating intended for limited use.

TRANSITION AREA. Changes in slope of tiered seating sections or access to a platform or balcony from ~~tiered~~ bleacher-type seating.

SECTION 301
GENERAL

301.1 General. The construction or installation of new bleachers, folding and telescopic seating, and grandstands and press boxes shall comply with the provisions of this this chapter.

SECTION 302
PERMITTED MATERIALS

302.1 Combustibility and flame spread. Bleachers, folding and telescopic seating, and grandstands shall be permitted to be constructed of combustible or noncombustible materials. Such installations within a building shall not be considered interior finish relative to the application of the building code.

SECTION 303
STRUCTURAL DESIGN

303.2 Loads. Bleachers, folding and telescopic seating, and grandstands shall be designed for a uniform live load of 100 pounds per square foot (psf) (4788 Pa). Press

boxes shall be designed for a uniform live load of 50 psf (2394 Pa). The components of the installation shall be designed to support the loads listed in Table 303.2.

TABLE 303.2
DESIGN LOADS

~~TIERED~~ BLEACHER-TYPE SEATING ELEMENT	LOAD TYPE	LOAD
Seats (vertical)	L	120 pounds per linear foot.
Treads	L	Stair treads and stepped aisle treads shall be designed to resist a minimum concentrated load of 300 pounds on an area of 4 square inches.
Handrails and guards, uniform load	R_r	Handrail assemblies and guards shall be designed to resist a load of 50 pounds per linear foot (pound per foot) applied in any direction at the top. The supporting elements shall transfer this load to the structure.
Handrails and guards, concentrated load	R_r	Handrail assemblies and guards shall be able to resist a single concentrated load of 200 pounds, applied in any direction at any point along the top. Attachment devices and supporting elements shall transfer this load to the structure.
Guards, infill components	R_r	Intermediate rails (all those except the handrail), balusters, and panel fillers (including flexible infill components) shall be designed to withstand a horizontally applied normal load of 50 pounds on an area equal to 1 square foot, including openings and space between rails. Application of the loads shall not allow guard openings greater than that permitted by Sections 408.2 and 503.2.

For SI: 1 square inch = 645.46 mm_2, 1 square foot = 0.0929 m_2, 1 pound = 4.448 N, 1 pound per linear foot = 14.594 N/m.

303.3 Other loads. Bleachers, folding and telescopic seating and grandstands, and press boxes and platforms attached to such installations, subject to wind, snow, seismic and other loads, shall be designed in accordance with the building code.

303.4 Horizontal sway loads. Bleachers, folding and telescopic seating, and grandstands shall be designed to resist lateral forces produced by the sudden and concerted motion of spectators.

303.8 Lateral restraint. Outdoor ~~bleachers~~ bleacher-type seating shall be anchored or ballasted to resist uplift and horizontal sliding forces in accordance with the building code.

SECTION 309
FIRE PROTECTION

309.1 Fire protection. Fire protection systems shall be provided where required by the building code.

Exceptions:

1. An emergency voice/alarm system is not required for outdoor bleacher-type seating provided all of the following are met:
   1.1. The bleacher-type seating has an occupant load of less than 15,000;
   1.2. A public address system with standby power is provided;
   1.3. Enclosed spaces attached or immediately adjacent to the bleacher-type seating comprise, in the aggregate, 10 percent or less of the overall area of the bleacher-type seating or 1,000 square feet (92.9 m^2), whichever is less.
   1.4. Spaces under the bleacher-type seating shall be separated from the bleacher-type seating in accordance with Section 1029.8.1.1.1 of the *International Building Code*.
   1.5. All means of egress from the bleacher-type seating are open to the outside.
2. An emergency voice/alarm system is not required for outdoor bleacher-type seating with an occupant load of 300 or less.
3. An emergency voice/alarm system is not required for temporary outdoor bleacher-type seating providing all of the following are met:
   3.1. There are no enclosed spaces under or attached to the bleacher-type seating;
   3.2. The bleacher-type seating is erected for a period of less than 180 days;
   3.2. Evacuation of the bleacher-type seating is included in an approved fire safety plan.

SECTION 310
ACCESSIBILITY

310.1 Accessibility. ~~Tiered~~ Bleacher-type seating shall be accessible as required by the building code.

SECTION 401
GENERAL

401.1 General. The means of egress for new bleachers, folding and telescopic seating, and grandstands shall comply with this chapter.

SECTION 402
TRAVEL

402.1 Exit access. Travel within ~~tiered~~ bleacher-type seating shall be considered exit access. Exit access includes aisles, cross-aisles, sloped or level walking surfaces, vomitories, tunnels, stairs and ramps connecting the ~~tiered~~ bleacher-type seating structure to other portions of a building, structure or grade.

SECTION 403
OCCUPANT LOAD

403.1 Occupant load. Where bench seating is used, the number of persons shall be based on one person for each 18 inches (457 mm) of length of the bench. Where individual seats are provided, the occupant load shall be based on one person per seat. The occupant load of reviewing stands and press boxes shall be based on 5 square feet (0.465 m2) per person for standing space and 7 square feet (0.65 m2) per person for movable chair seating space. The occupant load for security, audio and camera platforms shall be based on the actual number of occupants.

SECTION 404
GENERAL MEANS OF EGRESS

404.2 Room or space means of egress. Rooms or spaces in which ~~tiered~~ bleacher-type seating is located shall be provided with the required means of egress in accordance with the building code.

SECTION 405
AISLES

405.1 Aisles. The minimum width of aisles shall be in accordance with Section 404.5, but not less than that required by this section. An aisle is not required in seating facilities where all of the following conditions exist.

1. Seats are without backrests.
2. The rise from row to row does not exceed 6 inches (152 mm) per row.
3. The row spacing does not exceed 28 inches (711 mm) unless the seatboards and footboards are at the same elevation.
4. The number of rows does not exceed 16 rows in height.
5. The first seating board is not more than 12 inches (305 mm) above the ground or floor below or a cross aisle.
6. Seatboards have a continuous flat surface.
7. Seatboards provide a walking surface with a minimum width of 11 inches (279 mm).
8. Egress from seating is not restricted by rails, guards or other obstructions.

405.6 Dead ends. The length of a dead-end aisle shall not exceed 16 rows in nonsmoke-protected assembly seating and 21 rows in smoke-protected assembly seating.

Exceptions: Dead-end aisles terminating at a cross aisle or vomitory providing access to an exit at only one end and complying with any one of the following shall be permitted.

1. In assembly seating without smoke protection, dead-end aisles exceeding 16 rows are permitted where seats beyond the 16th row are no more than 24 seats from another aisle, measured along a row of seats having an aisle accessway with a minimum clear width of 12 inches (305 mm) plus 0.6 inch (15.2 mm) for every additional seat beyond seven where seats have backrests or beyond ten where seats are without backrests in the row.

2. For smoke-protected or open-air assembly seating, dead-end aisles exceeding 21 rows are permitted where seats beyond the twenty-first row are no more than 40 seats from another aisle, measured along a row of seats having an aisle accessway with a minimum clear width of 12 inches (305 mm) plus 0.3 inch (7.6 mm) for each additional seat beyond seven where seats have backrests or beyond ten where seats are without backrests in the row.

SECTION 406
STAIRS AND STEPPED AISLES

(IS-BLE 04-03-21 AM)
406.8.1 Tread and riser nonuniformity permitted. Treads and risers located in transition areas between adjacent ~~tiered~~ bleacher-type seating elements, parabolic seating configurations or onto or off of ~~tiered~~ bleacher-type seating are not required to be of uniform depth or height where a ~~mid-aisle~~ aisle handrail is provided. The handrail shall meet the requirements of Section 409. ~~Mid-aisle~~ Aisle handrails in transition areas shall extend the full length of the transition and a minimum of one tread depth, parallel to the run of the stepped aisles, above and below the uppermost and lowermost riser in the transition. Where extensions of the aisle handrail interfere with adjacent means of egress, the handrail extension shall terminate at the riser.

Exceptions:
1. For folding and telescopic seating, handrails at transition areas are permitted to be discontinuous with gaps or breaks not greater than 4 inches (102 mm).
2. For portable bleachers~~-type seating~~, handrails at transition areas are permitted to be discontinuous with gaps or breaks not greater than 4 inches (102 mm).

SECTION 407
AISLE ACCESSWAYS

407.1 Required aisle accessways. Aisle accessways shall be provided above the first row of seating. Aisle accessways located more than 30 inches (762 mm) above the floor or ground below shall be constructed such that openings shall not allow the passage of a sphere greater than 4 inches (102 mm) in diameter. Where bleacher-type seating is utilized, such seats shall be a minimum depth of 9 inches (229 mm). Row-to row spacing shall be a minimum of 22 inches (559 mm).

407.3 Dual access. For rows of seating served by aisles or doorways at both ends, there shall not be more than 100 seats per row. The minimum clear width of 12 inches (305 mm) between rows shall be increased by 0.3 inch (7.6 mm) for every additional seat beyond 14 where seats have backrests or beyond 21 where seats are without backrests. The minimum clear width is not required to exceed 22 inches (559 mm).

Exception: For smoke-protected or open-air assembly seating, the row length limits for a 12-inch-wide (305 mm) aisle accessway, beyond which the aisle accessway minimum clear width shall be increased in accordance with Section 407.5.

407.4 Single access. For rows of seating served by aisles or doorways at only one end of the row, the minimum clear width of 12 inches (305 mm) between rows shall be increased by 0.6 inch (15.2 mm) for every additional seat beyond seven seats where seats have backrests or beyond ten where seats are without backrests. The minimum clear width is not required to exceed 22 inches (559 mm).

Exception: For smoke-protected or open-air assembly seating, the row length limits for a 12-inch-wide (305 mm) aisle accessway, beyond which the aisle accessway minimum clear width shall be increased, are in Table 407.5.

407.4.1 Path of egress travel. For rows of seating served by only one path of egress travel, the common path of egress travel shall not exceed 30 feet (9144 mm) from any seat to a point where a person has a choice of two paths of egress travel to two exits.

Exceptions:

1. In smoke-protected or open-air assembly seating, the common path of egress travel shall not exceed 50 feet (15 240 mm) from any seat to a point where a person has a choice of two paths of egress travel to two exits.
2. For areas serving less than 50 occupants, the common path of egress travel shall not exceed 75 feet (22 860 mm) from any seat to a point where a person has a choice of two paths of egress travel to two exits.
3. Where ~~bench-type~~ seating without backrests is utilized and the top of the ~~bench~~ seating is no more than 7 inches (178 mm) above the footrest immediately behind, the common path of egress travel shall not exceed 75 feet (22 860 mm) from any seat to a point where a person has a choice of two paths of egress travel to two exits.

407.4.2 Path through adjacent rows. Where one of the two paths of travel is across the aisle through a row of seats to another aisle, there shall not be more than 24 seats between the two aisles; and the minimum clear width between rows for the row between the two aisles shall be 12 inches (305 mm) plus 0.6 inch (15.2 mm) for each additional seat beyond seven where seats have backrests or beyond ten where seats are without backrests in the row between aisles.

Exception: For smoke-protected or open-air assembly seating there shall not be more than 40 seats between the two aisles and the minimum clear width shall be 12 inches (305 mm) plus 0.3 inch (7.6 mm) for each additional seat beyond seven where seats have backrests or beyond ten where seats are without backrests in the row between aisles.

407.5 Aisle accessways. The design of aisle accessways in smoke-protected or open-air assembly seating shall comply with Table 407.5.

TABLE 407.5
AISLE ACCESSWAYS IN SMOKE-PROTECTED OR OPEN-AIR ASSEMBLY SEATING

TOTAL NUMBER OF SEATS IN THE SMOKE-	MAXIMUM NUMBER OF SEATS PER ROW PERMITTED TO HAVE A MINIMUM 12-INCH CLEAR WIDTH AISLE ACCESSWAY

PROTECTED OR OPEN-AIR ASSEMBLY OCCUPANCY	Aisle or doorway at both ends of row		Aisle or doorway at one end of row only	
	Seats with backrests	Seats without backrests	Seats with backrests	Seats without backrests
Less than 4,000	14	21	7	10
4,000	15	22	7	10
7,000	16	23	8	11
10,000	17	24	8	11
13,000	18	25	9	12
16,000	19	26	9	12
19,000	20	27	10	13
22,000 and greater	21	28	11	14

For SI: 1 inch = 25.4 mm.

SECTION 408
GUARDS

408.1 Required guards. Guards shall be provided in the following areas.

1. Along open-sided walking surfaces, cross aisles, stepped aisles, ramps and landings of ~~tiered~~ bleacher-type seating areas which are located more than 30 inches (762 mm) above the floor or grade below. Such guards shall be not less than 42 inches (1067 mm) high, measured vertically above the leading edge of the tread, adjacent walking surface or adjacent bench seat.

   Exception: A guard is not required where the ~~tiered~~ bleacher-type seating is located adjacent to a wall and the space between the wall and the ~~tiered~~ bleacher-type seating is less than 4 inches (102 mm).

2. Where an elevation change of 30 inches (762 mm) or less occurs between a cross aisle and the adjacent floor or grade below, guards not less than 26 inches (660 mm) above the aisle floor shall be provided.

   Exception: Where the backs of seats on the front of the cross aisle project 24 inches (610 mm) or more above the adjacent floor of the aisle, a guard need not be provided.

408.2 Opening limitations. Open guards shall be constructed of materials such that a 4-inch-diameter (102 mm) sphere cannot pass through any opening up to a height of 34 inches (864 mm). From a height of 34 inches (864 mm) to 42 inches (1067 mm) above the adjacent walking surfaces, a sphere 8 inches (203 mm) in diameter shall not pass.

Exceptions:

1. The triangular opening formed by the riser, tread and bottom rail at the open side of a stepped aisle or ~~tiered~~ bleacher-type seating shall be of a maximum size such that a sphere of 6 inches (152 mm) in diameter cannot pass through the opening.

2. Guards at the end of aisles where they terminate at a fascia of boxes, balconies and galleries shall have balusters or ornamental patterns such that a 4-inchdiameter (102 mm) sphere cannot pass through any opening up to a height of 26 inches (660 mm). From a height of 26 inches (660 mm) or greater above the adjacent walking surfaces, a sphere 8 inches (203 mm) in diameter shall not pass.
3. The opening limitation shall not apply to guards required in accordance with Item 2 of Section 408.1.

SECTION 409
HANDRAILS

(IS-BLE 04-07-21 AM)

409.2.3 Stairways. Stairways that connect a stepped aisle to a cross aisle or floor levels at the top or bottom of ~~a~~ bleacher-type seating shall have one handrail on each side.

Exception: A mid-aisle handrail complying with Section 409.3.1 is permitted at a stairway with three risers maximum.

(IS-BLE 04-07-21 AM)

409.4.2 Handrail termination at stairways. Handrail extensions at stairways that connect a stepped aisle to a cross aisles or floor levels at the top or bottom of ~~a~~ bleacher-type seating shall comply with Section 1014.6 of the International Building Code.

Exceptions:

1. Handrail extensions shall not be required where the extension would block the required width of cross aisles.
2. Handrail extension shall not be required where the extension block access to the seating or crossover within the aisle.

CHAPTER 5
EXISTING BLEACHERS, FOLDING AND TELESCOPIC SEATING, AND GRANDSTANDS

SECTION 501
APPLICATION AND ADMINISTRATION

501.1 General. Existing bleachers, folding and telescopic seating, and grandstands that exist prior to the adoption of this standard shall comply with this chapter and the applicable provisions of Chapter 1.

Exception: ~~Tiered~~ Bleacher-type seating where the top of footboards, seatboards, aisles and cross aisles are not more than 30 inches (762 mm) above the floor or grade below, unless judged by the code official to represent a distinct hazard.

501.2 Inspection. All existing ~~tiered~~ bleacher-type seating shall be inspected and evaluated at least once a year by a qualified person for compliance with the provisions

of this chapter. All folding and telescopic seating shall be inspected to evaluate compliance with the manufacturer's installation and operational instructions, including an inspection during the opening and closing of such seating.

501.2.1 Inspection and Identification tag. A permanent tag or plaque, shall be installed in a visible location to document annual compliance inspections. The tag or plaque shall include the following:

1. Manufacturer
2. Date of installation of the ~~tiered~~ bleacher-type seating
3. Seating capacity
4. Name of the inspector
5. Date of the inspection

This tag or plaque is required on ~~tiered~~ bleacher-type seating with a capacity of 75 or more. A record of the inspections shall be maintained by the owner or the owner's representative.

501.4 Alterations. Alterations to any ~~tiered~~ bleacher-type seating shall conform with the requirements of this standard for new construction. Portions of the structure not altered and not affected by the alteration are not required to comply with the requirements in this standard for a new structure.

SECTION 502
MAINTENANCE AND REPAIRS

502.1 Structural. Existing ~~tiered~~ bleacher-type seating shall be maintained structurally sound as follows.

1. Components or fasteners shall not be broken, damaged, badly deteriorated or missing.
2. Adequate bearing shall be provided. The structure shall bear uniformly on the floor or ground in a manner so as to safely support the structure.
3. All components and systems shall be in proper working condition.

502.2.1 Application. Bleachers, folding and telescopic seating and grandstand systems included in this standard must be maintained in good repair and structurally sound so not to pose a threat to the public health, safety or welfare.

SECTION 503
GUARDS

503.1 Required guards. Guards shall be provided in the following areas.

1. Along open-sided walking surfaces, cross aisles, stepped aisles, ramps and landings of ~~tiered~~ bleacher-type seating areas which are located more than 30 inches (762 mm) above the floor or grade below. Existing guards shall be not less than 36 inches (914 mm) high, measured vertically above the leading edge of the tread, adjacent walking surface or center of adjacent bench seat.
   Exceptions:

1. Where the uppermost seat is located less than or equal to 55 inches (1397 mm) above the floor or ground below.
2. Where located adjacent to a wall and the space between the wall and the ~~tiered~~ bleacher-type seating is less than 4 inches (102 mm).

2. Unless subject to the requirements of Item 3, a guard with a minimum height of 26 inches (660 mm) shall be provided where the floor or footboard elevation is more than 30 inches (762 mm) above the floor or grade below and the guard would otherwise interfere with the sightlines of immediately adjacent seating.
3. A guard shall be provided for the full width of the aisle where the foot of the aisle is more than 30 inches (762 mm) above the floor or ground below. The guard shall be a minimum of 36 inches (914 mm) high.

503.2 Opening limitations. Open guards shall be constructed of materials such that a 4-inch-diameter (102 mm) sphere cannot pass through any opening.

Exception: The triangular opening formed by the riser, tread and bottom rail at the open side of a stepped aisle or ~~tiered~~ bleacher-type seating shall be of a maximum size such that a sphere of 6 inches (152 mm) in diameter cannot pass through the opening.

SECTION 505
SEATING RELOCATION

505.1 Relocating existing ~~bleachers~~ bleacher-type seating. Relocating existing ~~bleachers~~ bleacher-type seating to a new location shall be permitted provided the existing ~~bleacher~~ bleacher-type seating complies with Sections 303.7, 304, 306, 307, 308 and 310 and Chapter 5.

Exception: Where full compliance with Sections 310.1 and 501.4 is technically infeasible, the relocated existing ~~bleachers~~ bleacher-type seating shall provide access in compliance with the building code to the maximum extent technically feasible.

IS-BLE 05-01-21 AM

SECTION 506
AISLES AND HANDRAILS

IS-BLE 05-01-21 AM

506.1 Aisle and handrails. On existing ~~bleachers~~ bleacher-type seating where aisle or handrails are altered or added, the aisles shall comply with Sections 404, 405, and 406 and handrails shall comply with Section 409.

Exception: Where technically infeasible for riser height to comply with Section 406.6, riser height shall comply to the maximum extent feasible. Where there is one riser between rows and the aisle tread is at the height of the seat, the tread shall be the full depth of the row.

Reason: There are inconsistencies in the terminology in ICC 300. The text says 'bleachers', 'bleacher-type seating', 'tiered seating' or 'bleachers, folding and telescopic seating and grandstands' where all three defined terms are applicable - 'bleachers, folding and telescopic seating and grandstands'. Since we came up with provisions specific to 'folding and telescopic seating' this round, the provisions could be read to not apply to all three types where it should apply.

Using 'tiered seating' could be read to include systems other than bleachers, grandstands and folding and telescopic seating'.

Repeating all three all the time seemed to cumbersome.

The proposal defines 'bleacher-type seating' (already used) and uses that throughout except where bleachers, grandstands and folding and telescopic seating' was already specifically called out.

Bill Elliott also mentioned that 'bleachers' are defined by NFPA 102 as tiered seating without backs. NFPA being applicable to all assembly seating, has a much broader scope than ICC 300. This may already be addressed by the provisions for seats with or without backrests in the ICC 300.

IS-BLE 02-01-22 Replacement 1

ICC 300 101.1, 102.1, 202, 209.1, Table 303.2, 303.8, 310.1, 402.1, 403.1, 404.2, 406.8.1, 407.4.1, 408.1, 408.2, 409.2.3, 409.4.2, 505.1, 505.1.2, 501.2.1, 501.4, 502.1, 503.1, 505.1

Proponent: Committee requested 'seating governed by this standard' instead of 'bleacher type' or 'tiered seating'.

Revise as follows:

SECTION 101
GENERAL

101.1 Purpose. The purpose of this standard is to establish the minimum requirements to safeguard public health, safety and general welfare through structural strength, means of egress facilities, stability, and safety to life and property relative to the construction, alteration, repair, operation and maintenance of new and existing temporary and permanent ~~bench~~ bleachers, folding and telescopic seating and grandstands. This standard is intended for adoption by government agencies and organizations setting model codes to achieve uniformity in technical design criteria in building codes and other regulations.

SECTION 102

APPLICABILITY

102.1 Applicability. The construction of new temporary and permanent bleachers, folding and telescopic seating and grandstands shall comply with Chapters 1 through 4. Existing temporary and permanent installations shall comply with Chapters 1, 2 and 5. Temporary installations are those that are erected for a period of less than 180 days in a calendar year.

SECTION 105
INSPECTION

105.2 Yearly inspection required. The owner shall cause all bleachers, folding and telescopic seating, and grandstands to be inspected at least once a year in order to verify that the structure is maintained in compliance with the provisions of this standard. All folding and telescopic seating shall also be inspected to evaluate compliance with the manufacturer's installation and operational instructions, including an inspection during the opening and closing of such seating.

Exception: Existing installations shall be inspected in accordance with the provisions of Chapter 5.

SECTION 202
DEFINED TERMS

SEATING GOVERNED BY THIS STANDARD. Bleachers, grandstands and folding and telescopic seating complying with this standard.

Note: may not need definition for this.

BLEACHERS. Tiered seating supported on a dedicated structural system and two or more rows high (see "Grandstands").

GRANDSTAND. Tiered seating supported on a dedicated structural system and two or more rows high (see "Bleachers").

FOLDING AND TELESCOPIC SEATING. Tiered seating capable of being reduced in overall size and shape for purposes of moving or storing.

MEANS OF EGRESS. A continuous and unobstructed path of vertical and horizontal egress travel from any point on a bleacher, folding and telescopic seating, and grandstand to a public way. A means of egress consists of three separate and distinct parts: exit access, exit and exit discharge.

QUALIFIED PERSON. A professional trained in the proper and safe use, operation and repair of bleachers, folding and telescopic seating and grandstands and is knowledgeable in the requirements of this standard.

PRESS BOX. A limited-size structure attached to ~~tiered~~ seating governed by this standard intended for limited use.

TRANSITION AREA. Changes in slope of tiered seating sections or access to a platform or balcony from ~~tiered~~ seating governed by this standard.

SECTION 301
GENERAL

301.1 General. The construction or installation of new ~~bleachers, folding and telescopic seating, and grandstands~~ seating governed by this standard and press boxes shall comply with the provisions of this this chapter.

SECTION 302
PERMITTED MATERIALS

302.1 Combustibility and flame spread. ~~Bleachers, folding and telescopic seating, and grandstands~~ seating governed by this standard shall be permitted to be constructed of combustible or noncombustible materials. Such installations within a building shall not be considered interior finish relative to the application of the building code.

SECTION 303
STRUCTURAL DESIGN

303.2 Loads. ~~Bleachers, folding and telescopic seating, and grandstands~~ Seating governed by this standard shall be designed for a uniform live load of 100 pounds per square foot (psf) (4788 Pa). Press boxes shall be designed for a uniform live load of 50 psf (2394 Pa). The components of the installation shall be designed to support the loads listed in Table 303.2.

TABLE 303.2
DESIGN LOADS

~~TIERED~~ SEATING ELEMENT GOVERNED BY THIS STANDARD	LOAD TYPE	LOAD
Seats (vertical)	L	120 pounds per linear foot.
Treads	L	Stair treads and stepped aisle treads shall be designed to resist a minimum concentrated load of 300 pounds on an area of 4 square inches.
Handrails and guards, uniform load	R_r	Handrail assemblies and guards shall be designed to resist a load of 50 pounds per linear foot (pound per foot) applied in any direction at the top. The supporting elements shall transfer this load to the structure.
Handrails and guards, concentrated load	R_r	Handrail assemblies and guards shall be able to resist a single concentrated load of 200 pounds, applied in any direction at any point along the top. Attachment devices and supporting elements shall transfer this load to the structure.
Guards, infill components	R_r	Intermediate rails (all those except the handrail), balusters, and panel fillers (including flexible infill components) shall be designed to withstand a horizontally applied

		normal load of 50 pounds on an area equal to 1 square foot, including openings and space between rails. Application of the loads shall not allow guard openings greater than that permitted by Sections 408.2 and 503.2.

For SI: 1 square inch = 645.46 mm_2, 1 square foot = 0.0929 m_2, 1 pound = 4.448 N, 1 pound per linear foot = 14.594 N/m.

303.3 Other loads. ~~Bleachers, folding and telescopic seating and grandstands~~ Seating governed by this standard, and press boxes and platforms attached to such installations, subject to wind, snow, seismic and other loads, shall be designed in accordance with the building code.

303.4 Horizontal sway loads. ~~Bleachers, folding and telescopic seating, and grandstands~~ Seating governed by this standard shall be designed to resist lateral forces produced by the sudden and concerted motion of spectators.

303.8 Lateral restraint. Outdoor ~~bleachers~~ seating governed by this standard shall be anchored or ballasted to resist uplift and horizontal sliding forces in accordance with the building code.

SECTION 309
FIRE PROTECTION

309.1 Fire protection. Fire protection systems shall be provided where required by the building code.

Exceptions:

1. An emergency voice/alarm system is not required for outdoor ~~bleacher-type~~ seating governed by this standard provided all of the following are met:
   1.1. The ~~bleacher-type~~ seating governed by this standard seating has an occupant load of less than 15,000;
   1.2. A public address system with standby power is provided;
   1.3. Enclosed spaces attached or immediately adjacent to the ~~bleacher-type~~ seating governed by this standard comprise, in the aggregate, 10 percent or less of the overall area of the ~~bleacher-type~~ seating governed by this standard or 1,000 square feet (92.9 m^2), whichever is less.
   1.4. Spaces under the ~~bleacher-type~~ seating governed by this standard shall be separated from the bleacher-type seating in accordance with Section 1029.8.1.1.1 of the *International Building Code*.
   1.5. All means of egress from the ~~bleacher-type~~ seating governed by this standard are open to the outside.
2. An emergency voice/alarm system is not required for outdoor ~~bleacher-type~~ seating governed by this standard with an occupant load of 300 or less.
3. An emergency voice/alarm system is not required for temporary outdoor ~~bleacher-type~~ seating governed by this standard providing all of the following are met:
   3.1. There are no enclosed spaces under or attached to the ~~bleacher-type~~ seating governed by this standard;

3.2. The ~~bleacher type~~ seating governed by this standard is erected for a period of less than 180 days;
3.2. Evacuation of the ~~bleacher type~~ seating governed by this standard is included in an approved fire safety plan.

SECTION 310
ACCESSIBILITY

310.1 Accessibility. ~~Tiered~~ Seating governed by this standard shall be accessible as required by the building code.

SECTION 401
GENERAL

401.1 General. The means of egress for new bleachers, folding and telescopic seating, and grandstands shall comply with this chapter.

SECTION 402
TRAVEL

402.1 Exit access. Travel within ~~tiered~~ seating governed by this standard shall be considered exit access. Exit access includes aisles, cross-aisles, sloped or level walking surfaces, vomitories, tunnels, stairs and ramps connecting the ~~tiered~~ seating structure to other portions of a building, structure or grade.

SECTION 403
OCCUPANT LOAD

403.1 Occupant load. Where ~~bench seating is~~ seats without backrests are used, the number of persons shall be based on one person for each 18 inches (457 mm) of length of the bench. Where individual seats are provided, the occupant load shall be based on one person per seat. The occupant load of reviewing stands and press boxes shall be based on 5 square feet (0.465 m2) per person for standing space and 7 square feet (0.65 m2) per person for movable chair seating space. The occupant load for security, audio and camera platforms shall be based on the actual number of occupants.

SECTION 404
GENERAL MEANS OF EGRESS

404.2 Room or space means of egress. Rooms or spaces in which ~~tiered~~ seating governed by this standard is located shall be provided with the required means of egress in accordance with the building code.

SECTION 405
AISLES

405.1 Aisles. The minimum width of aisles shall be in accordance with Section 404.5, but not less than that required by this section. An aisle is not required in seating facilities where all of the following conditions exist.

1. Seats are without backrests.
2. The rise from row to row does not exceed 6 inches (152 mm) per row.
3. The row spacing does not exceed 28 inches (711 mm) unless the seatboards and footboards are at the same elevation.
4. The number of rows does not exceed 16 rows in height.
5. The first seating board is not more than 12 inches (305 mm) above the ground or floor below or a cross aisle.
6. Seatboards have a continuous flat surface.
7. Seatboards provide a walking surface with a minimum width of 11 inches (279 mm).
8. Egress from seating is not restricted by rails, guards or other obstructions.

405.6 Dead ends. The length of a dead-end aisle shall not exceed 16 rows in nonsmoke-protected assembly seating and 21 rows in smoke-protected assembly seating.

Exceptions: Dead-end aisles terminating at a cross aisle or vomitory providing access to an exit at only one end and complying with any one of the following shall be permitted.

1. In assembly seating without smoke protection, dead-end aisles exceeding 16 rows are permitted where seats beyond the 16th row are no more than 24 seats from another aisle, measured along a row of seats having an aisle accessway with a minimum clear width of 12 inches (305 mm) plus 0.6 inch (15.2 mm) for every additional seat beyond seven where seats have backrests or beyond ten where seats are without backrests in the row.
2. For smoke-protected or open-air assembly seating, dead-end aisles exceeding 21 rows are permitted where seats beyond the twenty-first row are no more than 40 seats from another aisle, measured along a row of seats having an aisle accessway with a minimum clear width of 12 inches (305 mm) plus 0.3 inch (7.6 mm) for each additional seat beyond seven where seats have backrests or beyond ten where seats are without backrests in the row.

SECTION 406
STAIRS AND STEPPED AISLES

(IS-BLE 04-03-21 AM)

406.8.1 Tread and riser nonuniformity permitted. Treads and risers located in transition areas between adjacent ~~tiered~~ seating elements, parabolic seating configurations or onto or off of ~~tiered~~ seating governed by this standard are not required to be of uniform depth or height where a ~~mid-aisle~~ aisle handrail is provided. The handrail shall meet the requirements of Section 409. ~~Mid-aisle~~ Aisle handrails in transition areas shall extend the full length of the transition and a minimum of one tread depth, parallel to the run of the stepped aisles, above and below the uppermost and lowermost riser in the transition. Where extensions of the aisle handrail interfere with adjacent means of egress, the handrail extension shall terminate at the riser.

Exceptions:

3. For folding and telescopic seating, handrails at transition areas are permitted to be discontinuous with gaps or breaks not greater than 4 inches (102 mm).
4. For portable ~~bleachers~~ seating governed by this standard, handrails at transition areas are permitted to be discontinuous with gaps or breaks not greater than 4 inches (102 mm).

SECTION 407
AISLE ACCESSWAYS

407.1 Required aisle accessways. Aisle accessways shall be provided above the first row of seating. Aisle accessways located more than 30 inches (762 mm) above the floor or ground below shall be constructed such that openings shall not allow the passage of a sphere greater than 4 inches (102 mm) in diameter. Where ~~bleacher-type~~ seating governed by this standard is utilized, such seats shall be a minimum depth of 9 inches (229 mm). Row-to row spacing shall be a minimum of 22 inches (559 mm).

407.3 Dual access. For rows of seating served by aisles or doorways at both ends, there shall not be more than 100 seats per row. The minimum clear width of 12 inches (305 mm) between rows shall be increased by 0.3 inch (7.6 mm) for every additional seat beyond 14 where seats have backrests or beyond 21 where seats are without backrests. The minimum clear width is not required to exceed 22 inches (559 mm).

Exception: For smoke-protected or open-air assembly seating, the row length limits for a 12-inch-wide (305 mm) aisle accessway, beyond which the aisle accessway minimum clear width shall be increased in accordance with Section 407.5.

407.4 Single access. For rows of seating served by aisles or doorways at only one end of the row, the minimum clear width of 12 inches (305 mm) between rows shall be increased by 0.6 inch (15.2 mm) for every additional seat beyond seven seats where seats have backrests or beyond ten where seats are without backrests. The minimum clear width is not required to exceed 22 inches (559 mm).

Exception: For smoke-protected or open-air assembly seating, the row length limits for a 12-inch-wide (305 mm) aisle accessway, beyond which the aisle accessway minimum clear width shall be increased, are in Table 407.5.

407.4.1 Path of egress travel. For rows of seating served by only one path of egress travel, the common path of egress travel shall not exceed 30 feet (9144 mm) from any seat to a point where a person has a choice of two paths of egress travel to two exits.

Exceptions:

1. In smoke-protected or open-air assembly seating, the common path of egress travel shall not exceed 50 feet (15 240 mm) from any seat to a point where a person has a choice of two paths of egress travel to two exits.
2. For areas serving less than 50 occupants, the common path of egress travel shall not exceed 75 feet (22 860 mm) from any seat to a point where a person has a choice of two paths of egress travel to two exits.

3. Where ~~bench-type~~ seating without backrests is utilized and the top of the ~~bench~~ seating is no more than 7 inches (178 mm) above the footrest immediately behind, the common path of egress travel shall not exceed 75 feet (22 860 mm) from any seat to a point where a person has a choice of two paths of egress travel to two exits.

407.4.2 Path through adjacent rows. Where one of the two paths of travel is across the aisle through a row of seats to another aisle, there shall not be more than 24 seats between the two aisles; and the minimum clear width between rows for the row between the two aisles shall be 12 inches (305 mm) plus 0.6 inch (15.2 mm) for each additional seat beyond seven where seats have backrests or beyond ten where seats are without backrests in the row between aisles.

Exception: For smoke-protected or open-air assembly seating there shall not be more than 40 seats between the two aisles and the minimum clear width shall be 12 inches (305 mm) plus 0.3 inch (7.6 mm) for each additional seat beyond seven where seats have backrests or beyond ten where seats are without backrests in the row between aisles.

407.5 Aisle accessways. The design of aisle accessways in smoke-protected or open-air assembly seating shall comply with Table 407.5.

TABLE 407.5
AISLE ACCESSWAYS IN SMOKE-PROTECTED OR OPEN-AIR ASSEMBLY SEATING

TOTAL NUMBER OF SEATS IN THE SMOKE-PROTECTED OR OPEN-AIR ASSEMBLY OCCUPANCY	MAXIMUM NUMBER OF SEATS PER ROW PERMITTED TO HAVE A MINIMUM 12-INCH CLEAR WIDTH AISLE ACCESSWAY			
	Aisle or doorway at both ends of row		Aisle or doorway at one end of row only	
	Seats with backrests	Seats without backrests	Seats with backrests	Seats without backrests
Less than 4,000	14	21	7	10
4,000	15	22	7	10
7,000	16	23	8	11
10,000	17	24	8	11
13,000	18	25	9	12
16,000	19	26	9	12
19,000	20	27	10	13
22,000 and greater	21	28	11	14

For SI: 1 inch = 25.4 mm.

SECTION 408
GUARDS

408.1 Required guards. Guards shall be provided in the following areas.

1. Along open-sided walking surfaces, cross aisles, stepped aisles, ramps and landings of ~~tiered~~ seating governed by this standard areas which are located more than 30 inches (762 mm) above the floor or grade below. Such guards shall be not less than 42 inches (1067 mm) high, measured vertically above the leading edge of the tread, adjacent walking surface or adjacent bench seat.
   Exception: A guard is not required where the ~~tiered~~ seating governed by this standard is located adjacent to a wall and the space between the wall and the ~~tiered~~ seating governed by this standard is less than 4 inches (102 mm).
2. Where an elevation change of 30 inches (762 mm) or less occurs between a cross aisle and the adjacent floor or grade below, guards not less than 26 inches (660 mm) above the aisle floor shall be provided.
   Exception: Where the backs of seats on the front of the cross aisle project 24 inches (610 mm) or more above the adjacent floor of the aisle, a guard need not be provided.

408.2 Opening limitations. Open guards shall be constructed of materials such that a 4-inch-diameter (102 mm) sphere cannot pass through any opening up to a height of 34 inches (864 mm). From a height of 34 inches (864 mm) to 42 inches (1067 mm) above the adjacent walking surfaces, a sphere 8 inches (203 mm) in diameter shall not pass.

Exceptions:

1. The triangular opening formed by the riser, tread and bottom rail at the open side of a stepped aisle or ~~tiered~~ seating governed by this standard shall be of a maximum size such that a sphere of 6 inches (152 mm) in diameter cannot pass through the opening.
2. Guards at the end of aisles where they terminate at a fascia of boxes, balconies and galleries shall have balusters or ornamental patterns such that a 4-inchdiameter (102 mm) sphere cannot pass through any opening up to a height of 26 inches (660 mm). From a height of 26 inches (660 mm) or greater above the adjacent walking surfaces, a sphere 8 inches (203 mm) in diameter shall not pass.
3. The opening limitation shall not apply to guards required in accordance with Item 2 of Section 408.1.

SECTION 409
HANDRAILS

(IS-BLE 04-07-21 AM)

409.2.3 Stairways. Stairways that connect a stepped aisle to a cross aisle or floor levels at the top or bottom of ~~a bleacher~~ seating governed by this standard shall have one handrail on each side.

Exception: A mid-aisle handrail complying with Section 409.3.1 is permitted at a stairway with three risers maximum.

(IS-BLE 04-07-21 AM)

409.4.2 Handrail termination at stairways. Handrail extensions at stairways that connect a stepped aisle to a cross aisles or floor levels at the top or bottom of ~~a bleacher~~ seating governed by this standard shall comply with Section 1014.6 of the International Building Code.

Exceptions:

3. Handrail extensions shall not be required where the extension would block the required width of cross aisles.
4. Handrail extension shall not be required where the extension block access to the seating or crossover within the aisle.

CHAPTER 5
EXISTING BLEACHERS, FOLDING AND TELESCOPIC SEATING, AND GRANDSTANDS

SECTION 501
APPLICATION AND ADMINISTRATION

501.1 General. Existing bleachers, folding and telescopic seating, and grandstands that exist prior to the adoption of this standard shall comply with this chapter and the applicable provisions of Chapter 1.

Exception: ~~Tiered~~ seating governed by this standard where the top of footboards, seatboards, aisles and cross aisles are not more than 30 inches (762 mm) above the floor or grade below, unless judged by the code official to represent a distinct hazard.

501.2 Inspection. All existing ~~tiered~~ seating governed by this standard shall be inspected and evaluated at least once a year by a qualified person for compliance with the provisions of this chapter. All folding and telescopic seating shall be inspected to evaluate compliance with the manufacturer's installation and operational instructions, including an inspection during the opening and closing of such seating.

501.2.1 Inspection and Identification tag. A permanent tag or plaque, shall be installed in a visible location to document annual compliance inspections. The tag or plaque shall include the following:

1. Manufacturer
2. Date of installation of the ~~tiered~~ seating governed by this standard
3. Seating capacity
4. Name of the inspector
5. Date of the inspection

This tag or plaque is required on ~~tiered~~ seating governed by this standard with a capacity of 75 or more. A record of the inspections shall be maintained by the owner or the owner's representative.

501.4 Alterations. Alterations to any ~~tiered~~ seating governed by this standard shall conform with the requirements of this standard for new construction. Portions of the

structure not altered and not affected by the alteration are not required to comply with the requirements in this standard for a new structure.

SECTION 502
MAINTENANCE AND REPAIRS

502.1 Structural. Existing ~~tiered~~ seating governed by this standard shall be maintained structurally sound as follows.

1. Components or fasteners shall not be broken, damaged, badly deteriorated or missing.
2. Adequate bearing shall be provided. The structure shall bear uniformly on the floor or ground in a manner so as to safely support the structure.
3. All components and systems shall be in proper working condition.

502.2.1 Application. ~~Bleachers, folding and telescopic seating and grandstand~~ Seating systems governed by this standard included in this standard must be maintained in good repair and structurally sound so not to pose a threat to the public health, safety or welfare.

SECTION 503
GUARDS

503.1 Required guards. Guards shall be provided in the following areas.

1. Along open-sided walking surfaces, cross aisles, stepped aisles, ramps and landings of ~~tiered~~ seating governed by this standard areas which are located more than 30 inches (762 mm) above the floor or grade below. Existing guards shall be not less than 36 inches (914 mm) high, measured vertically above the leading edge of the tread, adjacent walking surface or center of adjacent bench seat.
   Exceptions:
   1. Where the uppermost seat is located less than or equal to 55 inches (1397 mm) above the floor or ground below.
   2. Where located adjacent to a wall and the space between the wall and the ~~tiered~~ seating governed by this standard is less than 4 inches (102 mm).
2. Unless subject to the requirements of Item 3, a guard with a minimum height of 26 inches (660 mm) shall be provided where the floor or footboard elevation is more than 30 inches (762 mm) above the floor or grade below and the guard would otherwise interfere with the sightlines of immediately adjacent seating.
3. A guard shall be provided for the full width of the aisle where the foot of the aisle is more than 30 inches (762 mm) above the floor or ground below. The guard shall be a minimum of 36 inches (914 mm) high.

503.2 Opening limitations. Open guards shall be constructed of materials such that a 4-inch-diameter (102 mm) sphere cannot pass through any opening.

Exception: The triangular opening formed by the riser, tread and bottom rail at the open side of a stepped aisle or ~~tiered~~ seating governed by this standard shall

be of a maximum size such that a sphere of 6 inches (152 mm) in diameter cannot pass through the opening.

SECTION 505
SEATING RELOCATION

505.1 Relocating existing ~~bleachers~~ seating governed by this standard. Relocating existing ~~bleachers~~ seating governed by this standard to a new location shall be permitted provided the existing ~~bleacher~~ seating governed by this standard complies with Sections 303.7, 304, 306, 307, 308 and 310 and Chapter 5.

Exception: Where full compliance with Sections 310.1 and 501.4 is technically infeasible, the relocated existing ~~bleachers~~ seating governed by this standard shall provide access in compliance with the building code to the maximum extent technically feasible.

IS-BLE 05-01-21 AM

SECTION 506
AISLES AND HANDRAILS

IS-BLE 05-01-21 AM

506.1 Aisle and handrails. On existing ~~bleachers~~ seating governed by this standard where aisle or handrails are altered or added, the aisles shall comply with Sections 404, 405, and 406 and handrails shall comply with Section 409.

Exception: Where technically infeasible for riser height to comply with Section 406.6, riser height shall comply to the maximum extent feasible. Where there is one riser between rows and the aisle tread is at the height of the seat, the tread shall be the full depth of the row.

IS-BLE 02-01-22 Replacement 2

ICC 300 101.1, 102.1, 202, 209.1, Table 303.2, 303.8, 310.1, 402.1, 403.1, 404.2, 406.8.1, 407.4.1, 408.1, 408.2, 409.2.3, 409.4.2, 505.1, 505.1.2, 501.2.1, 501.4, 502.1, 503.1, 505.1

Proponent: Committee requested 'bleachers, folding and telescopic seating or grandstands' instead of 'bleacher type' or 'tiered seating'.

Revise as follows:

SECTION 101
GENERAL

101.1 Purpose. The purpose of this standard is to establish the minimum requirements to safeguard public health, safety and general welfare through structural strength,

means of egress facilities, stability, and safety to life and property relative to the construction, alteration, repair, operation and maintenance of new and existing temporary and permanent ~~bench~~ bleachers, folding and telescopic seating and grandstands. This standard is intended for adoption by government agencies and organizations setting model codes to achieve uniformity in technical design criteria in building codes and other regulations.

SECTION 102
APPLICABILITY

102.1 Applicability. The construction of new temporary and permanent bleachers, folding and telescopic seating and grandstands shall comply with Chapters 1 through 4. Existing temporary and permanent installations shall comply with Chapters 1, 2 and 5. Temporary installations are those that are erected for a period of less than 180 days in a calendar year.

SECTION 105
INSPECTION

105.2 Yearly inspection required. The owner shall cause all bleachers, folding and telescopic seating, and grandstands to be inspected at least once a year in order to verify that the structure is maintained in compliance with the provisions of this standard. All folding and telescopic seating shall also be inspected to evaluate compliance with the manufacturer's installation and operational instructions, including an inspection during the opening and closing of such seating.

> **Exception:** Existing installations shall be inspected in accordance with the provisions of Chapter 5.

SECTION 202
DEFINED TERMS

BLEACHERS. Tiered seating supported on a dedicated structural system and two or more rows high (see "Grandstands").
GRANDSTAND. Tiered seating supported on a dedicated structural system and two or more rows high (see "Bleachers").
FOLDING AND TELESCOPIC SEATING. Tiered seating capable of being reduced in overall size and shape for purposes of moving or storing.
MEANS OF EGRESS. A continuous and unobstructed path of vertical and horizontal egress travel from any point on a bleacher, folding and telescopic seating, and grandstand to a public way. A means of egress consists of three separate and distinct parts: exit access, exit and exit discharge.
QUALIFIED PERSON. A professional trained in the proper and safe use, operation and repair of bleachers, folding and telescopic seating and grandstands and is knowledgeable in the requirements of this standard.

PRESS BOX. A limited-size structure attached to ~~tiered~~ ~~seating~~ *bleachers, folding and telescopic seating and grandstands* intended for limited use.
TRANSITION AREA. Changes in slope of tiered seating sections or access to a platform or balcony from ~~tiered~~ ~~seating~~ *bleachers, folding and telescopic seating and grandstands*.

SECTION 301
GENERAL

301.1 General. The construction or installation of new bleachers, folding and telescopic seating, and grandstands and press boxes shall comply with the provisions of this this chapter.

SECTION 302
PERMITTED MATERIALS

302.1 Combustibility and flame spread. Bleachers, folding and telescopic seating, and grandstands shall be permitted to be constructed of combustible or noncombustible materials. Such installations within a building shall not be considered interior finish relative to the application of the building code.

SECTION 303
STRUCTURAL DESIGN

303.2 Loads. Bleachers, folding and telescopic seating, and grandstands shall be designed for a uniform live load of 100 pounds per square foot (psf) (4788 Pa). Press boxes shall be designed for a uniform live load of 50 psf (2394 Pa). The components of the installation shall be designed to support the loads listed in Table 303.2.

TABLE 303.2
DESIGN LOADS

~~TIERED~~ SEATING ELEMENT	LOAD TYPE	LOAD
Seats (vertical)	L	120 pounds per linear foot.
Treads	L	Stair treads and stepped aisle treads shall be designed to resist a minimum concentrated load of 300 pounds on an area of 4 square inches.
Handrails and guards, uniform load	R_r	Handrail assemblies and guards shall be designed to resist a load of 50 pounds per linear foot (pound per foot) applied in any direction at the top. The supporting elements shall transfer this load to the structure.
Handrails and guards, concentrated load	R_r	Handrail assemblies and guards shall be able to resist a single concentrated load of 200 pounds, applied in any direction at any point along the top. Attachment devices

		and supporting elements shall transfer this load to the structure.
Guards, infill components	R_r	Intermediate rails (all those except the handrail), balusters, and panel fillers (including flexible infill components) shall be designed to withstand a horizontally applied normal load of 50 pounds on an area equal to 1 square foot, including openings and space between rails. Application of the loads shall not allow guard openings greater than that permitted by Sections 408.2 and 503.2.

For SI: 1 square inch = 645.46 mm_2, 1 square foot = 0.0929 m_2, 1 pound = 4.448 N, 1 pound per linear foot = 14.594 N/m.

303.3 Other loads. Bleachers, folding and telescopic seating and grandstands, and press boxes and platforms attached to such installations, subject to wind, snow, seismic and other loads, shall be designed in accordance with the building code.

303.4 Horizontal sway loads. Bleachers, folding and telescopic seating, and grandstands shall be designed to resist lateral forces produced by the sudden and concerted motion of spectators.

303.8 Lateral restraint. Outdoor ~~bleachers~~ *bleachers, folding and telescopic seating and grandstands* shall be anchored or ballasted to resist uplift and horizontal sliding forces in accordance with the building code.

SECTION 309
FIRE PROTECTION

309.1 Fire protection. Fire protection systems shall be provided where required by the building code.

Exceptions:

1. An emergency voice/alarm system is not required for outdoor ~~bleacher-type seating~~ *bleachers, folding and telescopic seating and grandstands* provided all of the following are met:
   - 1.1. The ~~bleacher-type seating~~ *bleachers, folding and telescopic seating and grandstands* has an occupant load of less than 15,000;
   - 1.2. A public address system with standby power is provided;
   - 1.3. Enclosed spaces attached or immediately adjacent to the ~~bleacher-type seating~~ *bleachers, folding and telescopic seating and grandstands* comprise, in the aggregate, 10 percent or less of the overall area of the ~~bleacher-type seating~~ *bleachers, folding and telescopic seating and grandstands* or 1,000 square feet (92.9 m^2), whichever is less.
   - 1.4. Spaces under the ~~bleacher-type seating~~ *bleachers, folding and telescopic seating and grandstands* shall be separated from the bleacher-type seating in accordance with Section 1029.8.1.1.1 of the *International Building Code*.

1.5. All means of egress from the ~~bleacher-type seating~~ *bleachers, folding and telescopic seating and grandstands* are open to the outside.

2. An emergency voice/alarm system is not required for outdoor ~~bleacher-type seating~~ *bleachers, folding and telescopic seating and grandstands* with an occupant load of 300 or less.

3. An emergency voice/alarm system is not required for temporary outdoor ~~bleacher-type seating~~ *bleachers, folding and telescopic seating and grandstands* providing all of the following are met:

3.1. There are no enclosed spaces under or attached to the ~~bleacher-type seating~~ *bleachers, folding and telescopic seating and grandstands*;

3.2. The ~~bleacher-type seating~~ *bleachers, folding and telescopic seating and grandstands* is erected for a period of less than 180 days;

3.2. Evacuation of the ~~bleacher-type seating~~ *bleachers, folding and telescopic seating and grandstands* is included in an approved fire safety plan.

SECTION 310
ACCESSIBILITY

310.1 Accessibility. ~~Tiered~~ ~~seating~~ *Bleachers, folding and telescopic seating and grandstands* shall be accessible as required by the building code.

SECTION 401
GENERAL

401.1 General. The means of egress for new bleachers, folding and telescopic seating, and grandstands shall comply with this chapter.

SECTION 402
TRAVEL

402.1 Exit access. Travel within ~~tiered~~ ~~seating~~ *bleachers, folding and telescopic seating and grandstands* shall be considered exit access. Exit access includes aisles, cross-aisles, sloped or level walking surfaces, vomitories, tunnels, stairs and ramps connecting the ~~tiered~~ seating structure to other portions of a building, structure or grade.

SECTION 403
OCCUPANT LOAD

403.1 Occupant load. Where ~~bench seating is~~ seats without backrests are used, the number of persons shall be based on one person for each 18 inches (457 mm) of length of the bench. Where individual seats are provided, the occupant load shall be based on one person per seat. The occupant load of reviewing stands and press boxes shall be based on 5 square feet (0.465 m2) per person for standing space and 7 square feet (0.65 m2) per person for movable chair seating space. The occupant load for security, audio and camera platforms shall be based on the actual number of occupants.

SECTION 404
GENERAL MEANS OF EGRESS

404.2 Room or space means of egress. Rooms or spaces in which ~~tiered~~ ~~seating~~ *bleachers, folding and telescopic seating and grandstands* is located shall be provided with the required means of egress in accordance with the building code.

SECTION 405
AISLES

405.1 Aisles. The minimum width of aisles shall be in accordance with Section 404.5, but not less than that required by this section. An aisle is not required in seating facilities where all of the following conditions exist.

1. Seats are without backrests.
2. The rise from row to row does not exceed 6 inches (152 mm) per row.
3. The row spacing does not exceed 28 inches (711 mm) unless the seatboards and footboards are at the same elevation.
4. The number of rows does not exceed 16 rows in height.
5. The first seating board is not more than 12 inches (305 mm) above the ground or floor below or a cross aisle.
6. Seatboards have a continuous flat surface.
7. Seatboards provide a walking surface with a minimum width of 11 inches (279 mm).
8. Egress from seating is not restricted by rails, guards or other obstructions.

405.6 Dead ends. The length of a dead-end aisle shall not exceed 16 rows in nonsmoke-protected assembly seating and 21 rows in smoke-protected assembly seating.

Exceptions: Dead-end aisles terminating at a cross aisle or vomitory providing access to an exit at only one end and complying with any one of the following shall be permitted.

1. In assembly seating without smoke protection, dead-end aisles exceeding 16 rows are permitted where seats beyond the 16th row are no more than 24 seats from another aisle, measured along a row of seats having an aisle accessway with a minimum clear width of 12 inches (305 mm) plus 0.6 inch (15.2 mm) for every additional seat beyond seven where seats have backrests or beyond ten where seats are without backrests in the row.
2. For smoke-protected or open-air assembly seating, dead-end aisles exceeding 21 rows are permitted where seats beyond the twenty-first row are no more than 40 seats from another aisle, measured along a row of seats having an aisle accessway with a minimum clear width of 12 inches (305 mm) plus 0.3 inch (7.6 mm) for each additional seat beyond seven where seats have backrests or beyond ten where seats are without backrests in the row.

SECTION 406
STAIRS AND STEPPED AISLES

(IS-BLE 04-03-21 AM)

406.8.1 Tread and riser nonuniformity permitted. Treads and risers located in transition areas between adjacent ~~tiered~~ seating elements, parabolic seating configurations or onto or off of ~~tiered~~ ~~seating~~ *bleachers, folding and telescopic seating and grandstands* are not required to be of uniform depth or height where a ~~mid-aisle~~ aisle handrail is provided. The handrail shall meet the requirements of Section 409. ~~Mid-aisle~~ Aisle handrails in transition areas shall extend the full length of the transition and a minimum of one tread depth, parallel to the run of the stepped aisles, above and below the uppermost and lowermost riser in the transition. Where extensions of the aisle handrail interfere with adjacent means of egress, the handrail extension shall terminate at the riser.

Exceptions:

5. For folding and telescopic seating, handrails at transition areas are permitted to be discontinuous with gaps or breaks not greater than 4 inches (102 mm).
6. For portable *bleachers*, *folding and telescopic seating and grandstands*, handrails at transition areas are permitted to be discontinuous with gaps or breaks not greater than 4 inches (102 mm).

SECTION 407
AISLE ACCESSWAYS

407.1 Required aisle accessways. Aisle accessways shall be provided above the first row of seating. Aisle accessways located more than 30 inches (762 mm) above the floor or ground below shall be constructed such that openings shall not allow the passage of a sphere greater than 4 inches (102 mm) in diameter. Where ~~bleacher-type seating~~ *bleachers, folding and telescopic seating and grandstands* is utilized, such seats shall be a minimum depth of 9 inches (229 mm). Row-to row spacing shall be a minimum of 22 inches (559 mm).

407.3 Dual access. For rows of seating served by aisles or doorways at both ends, there shall not be more than 100 seats per row. The minimum clear width of 12 inches (305 mm) between rows shall be increased by 0.3 inch (7.6 mm) for every additional seat beyond 14 where seats have backrests or beyond 21 where seats are without backrests. The minimum clear width is not required to exceed 22 inches (559 mm).

Exception: For smoke-protected or open-air assembly seating, the row length limits for a 12-inch-wide (305 mm) aisle accessway, beyond which the aisle accessway minimum clear width shall be increased in accordance with Section 407.5.

407.4 Single access. For rows of seating served by aisles or doorways at only one end of the row, the minimum clear width of 12 inches (305 mm) between rows shall be increased by 0.6 inch (15.2 mm) for every additional seat beyond seven seats where seats have backrests or beyond ten where seats are without backrests. The minimum clear width is not required to exceed 22 inches (559 mm).

Exception: For smoke-protected or open-air assembly seating, the row length limits for a 12-inch-wide (305 mm) aisle accessway, beyond which the aisle accessway minimum clear width shall be increased, are in Table 407.5.

407.4.1 Path of egress travel. For rows of seating served by only one path of egress travel, the common path of egress travel shall not exceed 30 feet (9144 mm) from any seat to a point where a person has a choice of two paths of egress travel to two exits.

Exceptions:

1. In smoke-protected or open-air assembly seating, the common path of egress travel shall not exceed 50 feet (15 240 mm) from any seat to a point where a person has a choice of two paths of egress travel to two exits.
2. For areas serving less than 50 occupants, the common path of egress travel shall not exceed 75 feet (22 860 mm) from any seat to a point where a person has a choice of two paths of egress travel to two exits.
3. Where ~~bench-type~~ seating without backrests is utilized and the top of the ~~bench~~ seating is no more than 7 inches (178 mm) above the footrest immediately behind, the common path of egress travel shall not exceed 75 feet (22 860 mm) from any seat to a point where a person has a choice of two paths of egress travel to two exits.

407.4.2 Path through adjacent rows. Where one of the two paths of travel is across the aisle through a row of seats to another aisle, there shall not be more than 24 seats between the two aisles; and the minimum clear width between rows for the row between the two aisles shall be 12 inches (305 mm) plus 0.6 inch (15.2 mm) for each additional seat beyond seven where seats have backrests or beyond ten where seats are without backrests in the row between aisles.

Exception: For smoke-protected or open-air assembly seating there shall not be more than 40 seats between the two aisles and the minimum clear width shall be 12 inches (305 mm) plus 0.3 inch (7.6 mm) for each additional seat beyond seven where seats have backrests or beyond ten where seats are without backrests in the row between aisles.

407.5 Aisle accessways. The design of aisle accessways in smoke-protected or open-air assembly seating shall comply with Table 407.5.

TABLE 407.5
AISLE ACCESSWAYS IN SMOKE-PROTECTED OR OPEN-AIR ASSEMBLY SEATING

TOTAL NUMBER OF SEATS IN THE SMOKE-PROTECTED OR OPEN-AIR ASSEMBLY OCCUPANCY	MAXIMUM NUMBER OF SEATS PER ROW PERMITTED TO HAVE A MINIMUM 12-INCH CLEAR WIDTH AISLE ACCESSWAY			
	Aisle or doorway at both ends of row		Aisle or doorway at one end of row only	
	Seats with backrests	Seats without backrests	Seats with backrests	Seats without backrests
Less than 4,000	14	21	7	10
4,000	15	22	7	10
7,000	16	23	8	11

10,000	17	24	8	11
13,000	18	25	9	12
16,000	19	26	9	12
19,000	20	27	10	13
22,000 and greater	21	28	11	14

For SI: 1 inch = 25.4 mm.

SECTION 408
GUARDS

408.1 Required guards. Guards shall be provided in the following areas.

1. Along open-sided walking surfaces, cross aisles, stepped aisles, ramps and landings of ~~tiered seating areas~~ *bleachers, folding and telescopic seating and grandstands* which are located more than 30 inches (762 mm) above the floor or grade below. Such guards shall be not less than 42 inches (1067 mm) high, measured vertically above the leading edge of the tread, adjacent walking surface or adjacent bench seat.

   Exception: A guard is not required where the ~~tiered seating~~ *bleachers, folding and telescopic seating and grandstands* is located adjacent to a wall and the space between the wall and the ~~tiered seating~~ *bleachers, folding and telescopic seating and grandstands* is less than 4 inches (102 mm).
2. Where an elevation change of 30 inches (762 mm) or less occurs between a cross aisle and the adjacent floor or grade below, guards not less than 26 inches (660 mm) above the aisle floor shall be provided.

   Exception: Where the backs of seats on the front of the cross aisle project 24 inches (610 mm) or more above the adjacent floor of the aisle, a guard need not be provided.

408.2 Opening limitations. Open guards shall be constructed of materials such that a 4-inch-diameter (102 mm) sphere cannot pass through any opening up to a height of 34 inches (864 mm). From a height of 34 inches (864 mm) to 42 inches (1067 mm) above the adjacent walking surfaces, a sphere 8 inches (203 mm) in diameter shall not pass.

Exceptions:

1. The triangular opening formed by the riser, tread and bottom rail at the open side of a stepped aisle or ~~tiered seating~~ *bleachers, folding and telescopic seating and grandstands* shall be of a maximum size such that a sphere of 6 inches (152 mm) in diameter cannot pass through the opening.
2. Guards at the end of aisles where they terminate at a fascia of boxes, balconies and galleries shall have balusters or ornamental patterns such that a 4-inchdiameter (102 mm) sphere cannot pass through any opening up to a height of 26 inches (660 mm). From a height of 26 inches (660 mm) or greater above the adjacent walking surfaces, a sphere 8 inches (203 mm) in diameter shall not pass.
3. The opening limitation shall not apply to guards required in accordance with Item 2 of Section 408.1.

SECTION 409
HANDRAILS

(IS-BLE 04-07-21 AM)

409.2.3 Stairways. Stairways that connect a stepped aisle to a cross aisle or floor levels at the top or bottom of ~~a~~ *bleachers, folding and telescopic seating and grandstands* shall have one handrail on each side.

Exception: A mid-aisle handrail complying with Section 409.3.1 is permitted at a stairway with three risers maximum.

(IS-BLE 04-07-21 AM)

409.4.2 Handrail termination at stairways. Handrail extensions at stairways that connect a stepped aisle to a cross aisles or floor levels at the top or bottom of ~~a~~ *bleachers, folding and telescopic seating and grandstands* shall comply with Section 1014.6 of the International Building Code.

Exceptions:

5. Handrail extensions shall not be required where the extension would block the required width of cross aisles.
6. Handrail extension shall not be required where the extension block access to the seating or crossover within the aisle.

CHAPTER 5
EXISTING BLEACHERS, FOLDING AND TELESCOPIC SEATING, AND GRANDSTANDS

SECTION 501
APPLICATION AND ADMINISTRATION

501.1 General. Existing bleachers, folding and telescopic seating, and grandstands that exist prior to the adoption of this standard shall comply with this chapter and the applicable provisions of Chapter 1.

Exception: ~~Tiered~~ ~~seating~~ *Bleachers, folding and telescopic seating and grandstands* where the top of footboards, seatboards, aisles and cross aisles are not more than 30 inches (762 mm) above the floor or grade below, unless judged by the code official to represent a distinct hazard.

501.2 Inspection. All existing ~~tiered~~ ~~seating~~ *bleachers, folding and telescopic seating and grandstands* shall be inspected and evaluated at least once a year by a qualified person for compliance with the provisions of this chapter. All folding and telescopic seating shall be inspected to evaluate compliance with the manufacturer's installation and operational instructions, including an inspection during the opening and closing of such seating.

501.2.1 Inspection and Identification tag. A permanent tag or plaque, shall be installed in a visible location to document annual compliance inspections. The tag or plaque shall include the following:

1. Manufacturer
2. Date of installation of the ~~tiered~~ ~~seating~~ *bleachers, folding and telescopic seating and grandstands*
3. Seating capacity
4. Name of the inspector
5. Date of the inspection

This tag or plaque is required on ~~tiered~~ ~~seating~~ *bleachers, folding and telescopic seating and grandstands* with a capacity of 75 or more. A record of the inspections shall be maintained by the owner or the owner's representative.

501.4 Alterations. Alterations to any ~~tiered~~ ~~seating~~ *bleachers, folding and telescopic seating and grandstands* shall conform with the requirements of this standard for new construction. Portions of the structure not altered and not affected by the alteration are not required to comply with the requirements in this standard for a new structure.

SECTION 502
MAINTENANCE AND REPAIRS

502.1 Structural. Existing ~~tiered~~ ~~seating~~ *bleachers, folding and telescopic seating and grandstands* shall be maintained structurally sound as follows.

1. Components or fasteners shall not be broken, damaged, badly deteriorated or missing.
2. Adequate bearing shall be provided. The structure shall bear uniformly on the floor or ground in a manner so as to safely support the structure.
3. All components and systems shall be in proper working condition.

502.2.1 Application. Bleachers, folding and telescopic seating and grandstand systems included in this standard must be maintained in good repair and structurally sound so not to pose a threat to the public health, safety or welfare.

SECTION 503
GUARDS

503.1 Required guards. Guards shall be provided in the following areas.

1. Along open-sided walking surfaces, cross aisles, stepped aisles, ramps and landings of ~~tiered~~ ~~seating areas~~ *bleachers, folding and telescopic seating and grandstands* which are located more than 30 inches (762 mm) above the floor or grade below. Existing guards shall be not less than 36 inches (914 mm) high, measured vertically above the leading edge of the tread, adjacent walking surface or center of adjacent bench seat.

   Exceptions:

   1. Where the uppermost seat is located less than or equal to 55 inches (1397 mm) above the floor or ground below.

2. Where located adjacent to a wall and the space between the wall and the ~~tiered~~ ~~seating~~ *bleachers, folding and telescopic seating and grandstands* is less than 4 inches (102 mm).

2. Unless subject to the requirements of Item 3, a guard with a minimum height of 26 inches (660 mm) shall be provided where the floor or footboard elevation is more than 30 inches (762 mm) above the floor or grade below and the guard would otherwise interfere with the sightlines of immediately adjacent seating.
3. A guard shall be provided for the full width of the aisle where the foot of the aisle is more than 30 inches (762 mm) above the floor or ground below. The guard shall be a minimum of 36 inches (914 mm) high.

503.2 Opening limitations. Open guards shall be constructed of materials such that a 4-inch-diameter (102 mm) sphere cannot pass through any opening.

Exception: The triangular opening formed by the riser, tread and bottom rail at the open side of a stepped aisle or ~~tiered~~ ~~seating~~ *bleachers, folding and telescopic seating and grandstands* shall be of a maximum size such that a sphere of 6 inches (152 mm) in diameter cannot pass through the opening.

SECTION 505
SEATING RELOCATION

505.1 Relocating existing *bleachers, folding and telescopic seating and grandstands*. Relocating existing *bleachers, folding and telescopic seating and grandstands* to a new location shall be permitted provided the existing *bleachers, folding and telescopic seating and grandstands* complies with Sections 303.7, 304, 306, 307, 308 and 310 and Chapter 5.

Exception: Where full compliance with Sections 310.1 and 501.4 is technically infeasible, the relocated existing *bleachers, folding and telescopic seating and grandstands* shall provide access in compliance with the building code to the maximum extent technically feasible.

IS-BLE 05-01-21 AM

SECTION 506
AISLES AND HANDRAILS

IS-BLE 05-01-21 AM

506.1 Aisle and handrails. On existing *bleachers, folding and telescopic seating and grandstands* where aisle or handrails are altered or added, the aisles shall comply with Sections 404, 405, and 406 and handrails shall comply with Section 409.

Exception: Where technically infeasible for riser height to comply with Section 406.6, riser height shall comply to the maximum extent feasible. Where there is one riser between rows and the aisle tread is at the height of the seat, the tread shall be the full depth of the row.

IS-BLE 02-01-22 Replacement 3

ICC 300 101.1, 102.1, 202, 209.1, Table 303.2, 303.8, 310.1, 402.1, 403.1, 404.2, 406.8.1, 407.4.1, 408.1, 408.2, 409.2.3, 409.4.2, 505.1, 505.1.2, 501.2.1, 501.4, 502.1, 503.1, 505.1

Proponent: Option to apply all three types to 'seating' unless stated otherwise.

Revise as follows:

SECTION 101
GENERAL

101.1 Purpose. The purpose of this standard is to establish the minimum requirements to safeguard public health, safety and general welfare through structural strength, means of egress facilities, stability, and safety to life and property relative to the construction, alteration, repair, operation and maintenance of new and existing temporary and permanent ~~bench~~ bleachers, folding and telescopic seating and grandstands. This standard is intended for adoption by government agencies and organizations setting model codes to achieve uniformity in technical design criteria in building codes and other regulations.

SECTION 102
APPLICABILITY

102.1 Applicability. The construction of new temporary and permanent bleachers, folding and telescopic seating and grandstands shall comply with Chapters 1 through 4. Existing temporary and permanent installations shall comply with Chapters 1, 2 and 5. Temporary installations are those that are erected for a period of less than 180 days in a calendar year.

SECTION 105
INSPECTION

105.2 Yearly inspection required. The owner shall cause all bleachers, folding and telescopic seating, and grandstands to be inspected at least once a year in order to verify that the structure is maintained in compliance with the provisions of this standard. All folding and telescopic seating shall also be inspected to evaluate compliance with the manufacturer's installation and operational instructions, including an inspection during the opening and closing of such seating.

Exception: Existing installations shall be inspected in accordance with the provisions of Chapter 5.

SECTION 202

DEFINED TERMS

201.1 General. For the purpose of this standard, the terms listed in Section 202 have the indicated meaning.

201.2 Undefined terms. The meaning of terms not specifically defined in this document or in referenced standards shall have ordinarily accepted meanings such as the context implies.

201.3 Interchangeability. Words, terms and phrases used in the singular include the plural and the plural the singular.

201.4. Seating. For application of the requirements in this standard, the term 'seating' will apply to bleachers, folding and telescopic seating and grandstands unless specifically stated for one type.

BLEACHERS. Tiered seating supported on a dedicated structural system and two or more rows high (see "Grandstands").
GRANDSTAND. Tiered seating supported on a dedicated structural system and two or more rows high (see "Bleachers").
FOLDING AND TELESCOPIC SEATING. Tiered seating capable of being reduced in overall size and shape for purposes of moving or storing.
MEANS OF EGRESS. A continuous and unobstructed path of vertical and horizontal egress travel from any point on a bleacher, folding and telescopic seating, and grandstand to a public way. A means of egress consists of three separate and distinct parts: exit access, exit and exit discharge.
QUALIFIED PERSON. A professional trained in the proper and safe use, operation and repair of bleachers, folding and telescopic seating and grandstands and is knowledgeable in the requirements of this standard.
PRESS BOX. A limited-size structure attached to ~~tiered~~ seating intended for limited use.
TRANSITION AREA. Changes in slope of tiered seating sections or access to a platform or balcony from ~~tiered~~ seating.

SECTION 301
GENERAL

301.1 General. The construction or installation of new bleachers, folding and telescopic seating, and grandstands and press boxes shall comply with the provisions of this this chapter.

SECTION 302
PERMITTED MATERIALS

302.1 Combustibility and flame spread. Bleachers, folding and telescopic seating, and grandstands shall be permitted to be constructed of combustible or noncombustible

materials. Such installations within a building shall not be considered interior finish relative to the application of the building code.

SECTION 303
STRUCTURAL DESIGN

303.2 Loads. Bleachers, folding and telescopic seating, and grandstands shall be designed for a uniform live load of 100 pounds per square foot (psf) (4788 Pa). Press boxes shall be designed for a uniform live load of 50 psf (2394 Pa). The components of the installation shall be designed to support the loads listed in Table 303.2.

TABLE 303.2
DESIGN LOADS

~~TIERED~~ SEATING ELEMENT	LOAD TYPE	LOAD
Seats (vertical)	L	120 pounds per linear foot.
Treads	L	Stair treads and stepped aisle treads shall be designed to resist a minimum concentrated load of 300 pounds on an area of 4 square inches.
Handrails and guards, uniform load	R_r	Handrail assemblies and guards shall be designed to resist a load of 50 pounds per linear foot (pound per foot) applied in any direction at the top. The supporting elements shall transfer this load to the structure.
Handrails and guards, concentrated load	R_r	Handrail assemblies and guards shall be able to resist a single concentrated load of 200 pounds, applied in any direction at any point along the top. Attachment devices and supporting elements shall transfer this load to the structure.
Guards, infill components	R_r	Intermediate rails (all those except the handrail), balusters, and panel fillers (including flexible infill components) shall be designed to withstand a horizontally applied normal load of 50 pounds on an area equal to 1 square foot, including openings and space between rails. Application of the loads shall not allow guard openings greater than that permitted by Sections 408.2 and 503.2.

For SI: 1 square inch = 645.46 mm_2, 1 square foot = 0.0929 m_2, 1 pound = 4.448 N, 1 pound per linear foot = 14.594 N/m.

303.3 Other loads. Bleachers, folding and telescopic seating and grandstands, and press boxes and platforms attached to such installations, subject to wind, snow, seismic and other loads, shall be designed in accordance with the building code.

303.4 Horizontal sway loads. Bleachers, folding and telescopic seating, and grandstands shall be designed to resist lateral forces produced by the sudden and concerted motion of spectators.

303.8 Lateral restraint. Outdoor ~~bleachers~~ seating shall be anchored or ballasted to resist uplift and horizontal sliding forces in accordance with the building code.

SECTION 309
FIRE PROTECTION

309.1 Fire protection. Fire protection systems shall be provided where required by the building code.

Exceptions:

1. An emergency voice/alarm system is not required for outdoor ~~bleacher-type~~ seating provided all of the following are met:
   - 1.1. The ~~bleacher-type~~ seating has an occupant load of less than 15,000;
   - 1.2. A public address system with standby power is provided;
   - 1.3. Enclosed spaces attached or immediately adjacent to the ~~bleacher-type~~ seating comprise, in the aggregate, 10 percent or less of the overall area of the ~~bleacher-type~~ seating or 1,000 square feet (92.9 m^2), whichever is less.
   - 1.4. Spaces under the ~~bleacher-type~~ seating shall be separated from the bleacher-type seating in accordance with Section 1029.8.1.1.1 of the *International Building Code*.
   - 1.5. All means of egress from the ~~bleacher-type~~ seating are open to the outside.
2. An emergency voice/alarm system is not required for outdoor ~~bleacher-type~~ seating with an occupant load of 300 or less.
3. An emergency voice/alarm system is not required for temporary outdoor ~~bleacher-type~~ seating providing all of the following are met:
   - 3.1. There are no enclosed spaces under or attached to the ~~bleacher-type~~ seating;
   - 3.2. The ~~bleacher-type~~ seating is erected for a period of less than 180 days;
   - 3.2. Evacuation of the ~~bleacher-type~~ seating is included in an approved fire safety plan.

SECTION 310
ACCESSIBILITY

310.1 Accessibility. ~~Tiered~~ Seating shall be accessible as required by the building code.

SECTION 401
GENERAL

401.1 General. The means of egress for new bleachers, folding and telescopic seating, and grandstands shall comply with this chapter.

SECTION 402

TRAVEL

402.1 Exit access. Travel within ~~tiered~~ seating shall be considered exit access. Exit access includes aisles, cross-aisles, sloped or level walking surfaces, vomitories, tunnels, stairs and ramps connecting the ~~tiered~~ seating structure to other portions of a building, structure or grade.

SECTION 403
OCCUPANT LOAD

403.1 Occupant load. Where ~~bench seating is~~ seats without backrests are used, the number of persons shall be based on one person for each 18 inches (457 mm) of length of the bench. Where individual seats are provided, the occupant load shall be based on one person per seat. The occupant load of reviewing stands and press boxes shall be based on 5 square feet (0.465 m2) per person for standing space and 7 square feet (0.65 m2) per person for movable chair seating space. The occupant load for security, audio and camera platforms shall be based on the actual number of occupants.

SECTION 404
GENERAL MEANS OF EGRESS

404.2 Room or space means of egress. Rooms or spaces in which ~~tiered~~ seating is located shall be provided with the required means of egress in accordance with the building code.

SECTION 405
AISLES

405.1 Aisles. The minimum width of aisles shall be in accordance with Section 404.5, but not less than that required by this section. An aisle is not required in seating facilities where all of the following conditions exist.

1. Seats are without backrests.
2. The rise from row to row does not exceed 6 inches (152 mm) per row.
3. The row spacing does not exceed 28 inches (711 mm) unless the seatboards and footboards are at the same elevation.
4. The number of rows does not exceed 16 rows in height.
5. The first seating board is not more than 12 inches (305 mm) above the ground or floor below or a cross aisle.
6. Seatboards have a continuous flat surface.
7. Seatboards provide a walking surface with a minimum width of 11 inches (279 mm).
8. Egress from seating is not restricted by rails, guards or other obstructions.

405.6 Dead ends. The length of a dead-end aisle shall not exceed 16 rows in nonsmoke-protected assembly seating and 21 rows in smoke-protected assembly seating.

Exceptions: Dead-end aisles terminating at a cross aisle or vomitory providing access to an exit at only one end and complying with any one of the following shall be permitted.

1. In assembly seating without smoke protection, dead-end aisles exceeding 16 rows are permitted where seats beyond the 16th row are no more than 24 seats from another aisle, measured along a row of seats having an aisle accessway with a minimum clear width of 12 inches (305 mm) plus 0.6 inch (15.2 mm) for every additional seat beyond seven where seats have backrests or beyond ten where seats are without backrests in the row.
2. For smoke-protected or open-air assembly seating, dead-end aisles exceeding 21 rows are permitted where seats beyond the twenty-first row are no more than 40 seats from another aisle, measured along a row of seats having an aisle accessway with a minimum clear width of 12 inches (305 mm) plus 0.3 inch (7.6 mm) for each additional seat beyond seven where seats have backrests or beyond ten where seats are without backrests in the row.

SECTION 406
STAIRS AND STEPPED AISLES

(IS-BLE 04-03-21 AM)
406.8.1 Tread and riser nonuniformity permitted. Treads and risers located in transition areas between adjacent ~~tiered~~ seating elements, parabolic seating configurations or onto or off of ~~tiered~~ seating are not required to be of uniform depth or height where a ~~mid-aisle~~ aisle handrail is provided. The handrail shall meet the requirements of Section 409. ~~Mid-aisle~~ Aisle handrails in transition areas shall extend the full length of the transition and a minimum of one tread depth, parallel to the run of the stepped aisles, above and below the uppermost and lowermost riser in the transition. Where extensions of the aisle handrail interfere with adjacent means of egress, the handrail extension shall terminate at the riser.

Exceptions:
1. For folding and telescopic seating, handrails at transition areas are permitted to be discontinuous with gaps or breaks not greater than 4 inches (102 mm).
2. For portable ~~*bleachers*~~ seating, handrails at transition areas are permitted to be discontinuous with gaps or breaks not greater than 4 inches (102 mm).

SECTION 407
AISLE ACCESSWAYS

407.1 Required aisle accessways. Aisle accessways shall be provided above the first row of seating. Aisle accessways located more than 30 inches (762 mm) above the floor or ground below shall be constructed such that openings shall not allow the passage of a sphere greater than 4 inches (102 mm) in diameter. Where ~~bleacher-type~~ seating is utilized, such seats shall be a minimum depth of 9 inches (229 mm). Row-to row spacing shall be a minimum of 22 inches (559 mm).

407.3 Dual access. For rows of seating served by aisles or doorways at both ends, there shall not be more than 100 seats per row. The minimum clear width of 12 inches (305 mm) between rows shall be increased by 0.3 inch (7.6 mm) for every additional seat

beyond 14 where seats have backrests or beyond 21 where seats are without backrests. The minimum clear width is not required to exceed 22 inches (559 mm).

Exception: For smoke-protected or open-air assembly seating, the row length limits for a 12-inch-wide (305 mm) aisle accessway, beyond which the aisle accessway minimum clear width shall be increased in accordance with Section 407.5.

407.4 Single access. For rows of seating served by aisles or doorways at only one end of the row, the minimum clear width of 12 inches (305 mm) between rows shall be increased by 0.6 inch (15.2 mm) for every additional seat beyond seven seats where seats have backrests or beyond ten where seats are without backrests. The minimum clear width is not required to exceed 22 inches (559 mm).

Exception: For smoke-protected or open-air assembly seating, the row length limits for a 12-inch-wide (305 mm) aisle accessway, beyond which the aisle accessway minimum clear width shall be increased, are in Table 407.5.

407.4.1 Path of egress travel. For rows of seating served by only one path of egress travel, the common path of egress travel shall not exceed 30 feet (9144 mm) from any seat to a point where a person has a choice of two paths of egress travel to two exits.

Exceptions:

1. In smoke-protected or open-air assembly seating, the common path of egress travel shall not exceed 50 feet (15 240 mm) from any seat to a point where a person has a choice of two paths of egress travel to two exits.
2. For areas serving less than 50 occupants, the common path of egress travel shall not exceed 75 feet (22 860 mm) from any seat to a point where a person has a choice of two paths of egress travel to two exits.
3. Where ~~bench-type~~ seating without backrests is utilized and the top of the ~~bench~~ seating is no more than 7 inches (178 mm) above the footrest immediately behind, the common path of egress travel shall not exceed 75 feet (22 860 mm) from any seat to a point where a person has a choice of two paths of egress travel to two exits.

407.4.2 Path through adjacent rows. Where one of the two paths of travel is across the aisle through a row of seats to another aisle, there shall not be more than 24 seats between the two aisles; and the minimum clear width between rows for the row between the two aisles shall be 12 inches (305 mm) plus 0.6 inch (15.2 mm) for each additional seat beyond seven where seats have backrests or beyond ten where seats are without backrests in the row between aisles.

Exception: For smoke-protected or open-air assembly seating there shall not be more than 40 seats between the two aisles and the minimum clear width shall be 12 inches (305 mm) plus 0.3 inch (7.6 mm) for each additional seat beyond seven where seats have backrests or beyond ten where seats are without backrests in the row between aisles.

407.5 Aisle accessways. The design of aisle accessways in smoke-protected or open-air assembly seating shall comply with Table 407.5.

TABLE 407.5
AISLE ACCESSWAYS IN SMOKE-PROTECTED OR OPEN-AIR ASSEMBLY SEATING

TOTAL NUMBER OF SEATS IN THE SMOKE-PROTECTED OR OPEN-AIR ASSEMBLY OCCUPANCY	MAXIMUM NUMBER OF SEATS PER ROW PERMITTED TO HAVE A MINIMUM 12-INCH CLEAR WIDTH AISLE ACCESSWAY			
	Aisle or doorway at both ends of row		Aisle or doorway at one end of row only	
	Seats with backrests	Seats without backrests	Seats with backrests	Seats without backrests
Less than 4,000	14	21	7	10
4,000	15	22	7	10
7,000	16	23	8	11
10,000	17	24	8	11
13,000	18	25	9	12
16,000	19	26	9	12
19,000	20	27	10	13
22,000 and greater	21	28	11	14

For SI: 1 inch = 25.4 mm.

SECTION 408
GUARDS

408.1 Required guards. Guards shall be provided in the following areas.

1. Along open-sided walking surfaces, cross aisles, stepped aisles, ramps and landings of ~~tiered~~ seating areas which are located more than 30 inches (762 mm) above the floor or grade below. Such guards shall be not less than 42 inches (1067 mm) high, measured vertically above the leading edge of the tread, adjacent walking surface or adjacent bench seat.
   Exception: A guard is not required where the ~~tiered~~ seating is located adjacent to a wall and the space between the wall and the ~~tiered~~ seating is less than 4 inches (102 mm).
2. Where an elevation change of 30 inches (762 mm) or less occurs between a cross aisle and the adjacent floor or grade below, guards not less than 26 inches (660 mm) above the aisle floor shall be provided.
   Exception: Where the backs of seats on the front of the cross aisle project 24 inches (610 mm) or more above the adjacent floor of the aisle, a guard need not be provided.

408.2 Opening limitations. Open guards shall be constructed of materials such that a 4-inch-diameter (102 mm) sphere cannot pass through any opening up to a height of 34 inches (864 mm). From a height of 34 inches (864 mm) to 42 inches (1067 mm) above the adjacent walking surfaces, a sphere 8 inches (203 mm) in diameter shall not pass.

Exceptions:

1. The triangular opening formed by the riser, tread and bottom rail at the open side of a stepped aisle or ~~tiered~~ seating shall be of a maximum size such that a sphere of 6 inches (152 mm) in diameter cannot pass through the opening.
2. Guards at the end of aisles where they terminate at a fascia of boxes, balconies and galleries shall have balusters or ornamental patterns such that a 4-inchdiameter (102 mm) sphere cannot pass through any opening up to a height of 26 inches (660 mm). From a height of 26 inches (660 mm) or greater above the adjacent walking surfaces, a sphere 8 inches (203 mm) in diameter shall not pass.
3. The opening limitation shall not apply to guards required in accordance with Item 2 of Section 408.1.

SECTION 409
HANDRAILS

(IS-BLE 04-07-21 AM)

409.2.3 Stairways. Stairways that connect a stepped aisle to a cross aisle or floor levels at the top or bottom of ~~a~~ ~~*bleacher*~~ seating, shall have one handrail on each side.

Exception: A mid-aisle handrail complying with Section 409.3.1 is permitted at a stairway with three risers maximum.

(IS-BLE 04-07-21 AM)

409.4.2 Handrail termination at stairways. Handrail extensions at stairways that connect a stepped aisle to a cross aisles or floor levels at the top or bottom of ~~a~~ ~~*bleacher*~~ seating shall comply with Section 1014.6 of the International Building Code.

Exceptions:

1. Handrail extensions shall not be required where the extension would block the required width of cross aisles.
2. Handrail extension shall not be required where the extension block access to the seating or crossover within the aisle.

CHAPTER 5
EXISTING BLEACHERS, FOLDING AND TELESCOPIC SEATING, AND GRANDSTANDS

SECTION 501
APPLICATION AND ADMINISTRATION

501.1 General. Existing bleachers, folding and telescopic seating, and grandstands that exist prior to the adoption of this standard shall comply with this chapter and the applicable provisions of Chapter 1.

Exception: ~~Tiered~~ Seating where the top of footboards, seatboards, aisles and cross aisles are not more than 30 inches (762 mm) above the floor or grade below, unless judged by the code official to represent a distinct hazard.

501.2 Inspection. All existing ~~tiered~~ seating shall be inspected and evaluated at least once a year by a qualified person for compliance with the provisions of this chapter. All folding and telescopic seating shall be inspected to evaluate compliance with the manufacturer's installation and operational instructions, including an inspection during the opening and closing of such seating.

501.2.1 Inspection and Identification tag. A permanent tag or plaque, shall be installed in a visible location to document annual compliance inspections. The tag or plaque shall include the following:

1. Manufacturer
2. Date of installation of the ~~tiered~~ seating
3. Seating capacity
4. Name of the inspector
5. Date of the inspection

This tag or plaque is required on ~~tiered~~ seating with a capacity of 75 or more. A record of the inspections shall be maintained by the owner or the owner's representative.

501.4 Alterations. Alterations to any ~~tiered~~ seating shall conform with the requirements of this standard for new construction. Portions of the structure not altered and not affected by the alteration are not required to comply with the requirements in this standard for a new structure.

SECTION 502
MAINTENANCE AND REPAIRS

502.1 Structural. Existing ~~tiered~~ seating shall be maintained structurally sound as follows.

1. Components or fasteners shall not be broken, damaged, badly deteriorated or missing.
2. Adequate bearing shall be provided. The structure shall bear uniformly on the floor or ground in a manner so as to safely support the structure.
3. All components and systems shall be in proper working condition.

502.2.1 Application. Bleachers, folding and telescopic seating and grandstand systems included in this standard must be maintained in good repair and structurally sound so not to pose a threat to the public health, safety or welfare.

SECTION 503
GUARDS

503.1 Required guards. Guards shall be provided in the following areas.

1. Along open-sided walking surfaces, cross aisles, stepped aisles, ramps and landings of ~~tiered~~ seating areas which are located more than 30 inches (762 mm) above the floor or grade below. Existing guards shall be not less than 36 inches

(914 mm) high, measured vertically above the leading edge of the tread, adjacent walking surface or center of adjacent bench seat.

Exceptions:

1. Where the uppermost seat is located less than or equal to 55 inches (1397 mm) above the floor or ground below.
2. Where located adjacent to a wall and the space between the wall and the ~~tiered~~ seating is less than 4 inches (102 mm).

2. Unless subject to the requirements of Item 3, a guard with a minimum height of 26 inches (660 mm) shall be provided where the floor or footboard elevation is more than 30 inches (762 mm) above the floor or grade below and the guard would otherwise interfere with the sightlines of immediately adjacent seating.
3. A guard shall be provided for the full width of the aisle where the foot of the aisle is more than 30 inches (762 mm) above the floor or ground below. The guard shall be a minimum of 36 inches (914 mm) high.

503.2 Opening limitations. Open guards shall be constructed of materials such that a 4-inch-diameter (102 mm) sphere cannot pass through any opening.

Exception: The triangular opening formed by the riser, tread and bottom rail at the open side of a stepped aisle or ~~tiered~~ seating shall be of a maximum size such that a sphere of 6 inches (152 mm) in diameter cannot pass through the opening.

SECTION 505
SEATING RELOCATION

505.1 Relocating existing ~~bleachers~~ seating. Relocating existing ~~*bleachers*~~ seating to a new location shall be permitted provided the existing ~~*bleachers*~~ seating complies with Sections 303.7, 304, 306, 307, 308 and 310 and Chapter 5.

Exception: Where full compliance with Sections 310.1 and 501.4 is technically infeasible, the relocated existing ~~*bleachers*~~ seating shall provide access in compliance with the building code to the maximum extent technically feasible.

IS-BLE 05-01-21 AM

SECTION 506
AISLES AND HANDRAILS

IS-BLE 05-01-21 AM

506.1 Aisle and handrails. On existing ~~*bleachers*~~ seating where aisle or handrails are altered or added, the aisles shall comply with Sections 404, 405, and 406 and handrails shall comply with Section 409.

Exception: Where technically infeasible for riser height to comply with Section 406.6, riser height shall comply to the maximum extent feasible. Where there is one riser between rows and the aisle tread is at the height of the seat, the tread shall be the full depth of the row.

Committee Action: As Modified (7-0)
Committee Reason: The committee felt that the replacement modification in Option 3 provided the greatest clarity and consistency in the ICC 300. 'Seating' as clarified in Section 201.4 include 'bleachers', 'folding and telescopic seating' and 'grandstands' for application of this standard.

While the definitions for 'bleachers' and 'grandstands' differ from NFPA 101, the safety concern is addressed for means of egress for seats with or without backs.

Report for *IS-BLE 02-01-22*

Committee decision: AM	***Committee Vote at Meeting: 7-0***	***Committee Vote on Ballot:***

REPORT OF HEARING:
Modification (if any):
Replace with the following:

SECTION 101
GENERAL

101.1 Purpose. The purpose of this standard is to establish the minimum requirements to safeguard public health, safety and general welfare through structural strength, means of egress facilities, stability, and safety to life and property relative to the construction, alteration, repair, operation and maintenance of new and existing temporary and permanent ~~bench~~ bleachers, folding and telescopic seating and grandstands. This standard is intended for adoption by government agencies and organizations setting model codes to achieve uniformity in technical design criteria in building codes and other regulations.

SECTION 202
DEFINED TERMS

201.4. Seating. For application of the requirements in this standard, the term 'seating' will apply to bleachers, folding and telescopic seating and grandstands unless specifically stated for one type.

PRESS BOX. A limited-size structure attached to ~~tiered~~ seating intended for limited use.
TRANSITION AREA. Changes in slope of tiered seating sections or access to a platform or balcony from ~~tiered~~ seating.

SECTION 303
STRUCTURAL DESIGN

TABLE 303.2
DESIGN LOADS

~~TIERED~~ **SEATING ELEMENT**	**LOAD TYPE**	**LOAD**
Seats (vertical)	L	120 pounds per linear foot.
Treads	L	Stair treads and stepped aisle treads shall be designed to resist a minimum concentrated load of 300 pounds on an area of 4 square inches.
Handrails and guards, uniform load	Rr	Handrail assemblies and guards shall be designed to resist a load of 50 pounds per linear foot (pound per foot) applied in any direction at the top. The supporting elements shall transfer this load to the structure.
Handrails and guards, concentrated load	Rr	Handrail assemblies and guards shall be able to resist a single concentrated load of 200 pounds, applied in any direction at any point along the top. Attachment devices and supporting elements shall transfer this load to the structure.
Guards, infill components	Rr	Intermediate rails (all those except the handrail), balusters, and panel fillers (including flexible infill components) shall be designed to withstand a horizontally applied normal load of 50 pounds on an area equal to 1 square foot, including openings and space between rails. Application of the loads shall not allow guard openings greater than that permitted by Sections 408.2 and 503.2.

For SI: 1 square inch = 645.46 mm2, 1 square foot = 0.0929 m2, 1 pound = 4.448 N, 1 pound per linear foot = 14.594 N/m.

303.8 Lateral restraint. Outdoor ~~bleachers~~ seating shall be anchored or ballasted to resist uplift and horizontal sliding forces in accordance with the building code.

SECTION 309
FIRE PROTECTION

309.1 Fire protection. Fire protection systems shall be provided where required by the building code.

Exceptions:

1. An emergency voice/alarm system is not required for outdoor ~~bleacher-type~~ seating provided all of the following are met:
   - 1.1. The ~~bleacher-type~~ seating has an occupant load of less than 15,000;
   - 1.2. A public address system with standby power is provided;
   - 1.3. Enclosed spaces attached or immediately adjacent to the ~~bleacher-type~~ seating comprise, in the aggregate, 10 percent or less of the overall area of the ~~bleacher-type~~ seating or 1,000 square feet (92.9 m^2), whichever is less.
   - 1.4. Spaces under the ~~bleacher-type~~ seating shall be separated from the bleacher-type seating in accordance with Section 1029.8.1.1.1 of the *International Building Code*.
   - 1.5. All means of egress from the ~~bleacher-type~~ seating are open to the outside.
2. An emergency voice/alarm system is not required for outdoor ~~bleacher-type~~ seating with an occupant load of 300 or less.
3. An emergency voice/alarm system is not required for temporary outdoor ~~bleacher-type~~ seating providing all of the following are met:
   - 3.1. There are no enclosed spaces under or attached to the ~~bleacher-type~~ seating;
   - 3.2. The ~~bleacher-type~~ seating is erected for a period of less than 180 days;
   - 3.2. Evacuation of the ~~bleacher-type~~ seating is included in an approved fire safety plan.

SECTION 310
ACCESSIBILITY

310.1 Accessibility. ~~Tiered~~ Seating shall be accessible as required by the building code.

SECTION 402
TRAVEL

402.1 Exit access. Travel within ~~tiered~~ seating shall be considered exit access. Exit access includes aisles, cross-aisles, sloped or level walking surfaces, vomitories, tunnels, stairs and ramps connecting the ~~tiered~~ seating structure to other portions of a building, structure or grade.

SECTION 403
OCCUPANT LOAD

403.1 Occupant load. Where ~~bench seating is~~ seats without backrests are used, the number of persons shall be based on one person for each 18 inches (457 mm) of length of the bench. Where individual seats are provided, the occupant load shall be based on one person per seat. The occupant load of reviewing stands and press boxes shall be based on 5 square feet (0.465 m2) per person for standing space and 7 square feet (0.65 m2) per person for movable chair seating space. The occupant load for security, audio and camera platforms shall be based on the actual number of occupants.

SECTION 404
GENERAL MEANS OF EGRESS

404.2 Room or space means of egress. Rooms or spaces in which ~~tiered~~ seating is located shall be provided with the required means of egress in accordance with the building code.

SECTION 406
STAIRS AND STEPPED AISLES

(IS-BLE 04-03-21 AM)
406.8.1 Tread and riser nonuniformity permitted. Treads and risers located in transition areas between adjacent ~~tiered~~ seating elements, parabolic seating configurations or onto or off of ~~tiered~~ seating are not required to be of uniform depth or height where a ~~mid-aisle~~ aisle handrail is provided. The handrail shall meet the requirements of Section 409. ~~Mid-aisle~~ Aisle handrails in transition areas shall extend the full length of the transition and a minimum of one tread depth, parallel to the run of the stepped aisles, above and below the uppermost and lowermost riser in the transition. Where extensions of the aisle handrail interfere with adjacent means of egress, the handrail extension shall terminate at the riser.

Exceptions:

3. For folding and telescopic seating, handrails at transition areas are permitted to be discontinuous with gaps or breaks not greater than 4 inches (102 mm).
4. For portable ~~*bleachers*~~ seating, handrails at transition areas are permitted to be discontinuous with gaps or breaks not greater than 4 inches (102 mm).

SECTION 407
AISLE ACCESSWAYS

407.1 Required aisle accessways. Aisle accessways shall be provided above the first row of seating. Aisle accessways located more than 30 inches (762 mm) above the floor or ground below shall be constructed such that openings shall not allow the passage of a sphere greater than 4 inches (102 mm) in diameter. Where ~~bleacher-type~~ seating is utilized, such seats shall be a minimum depth of 9 inches (229 mm). Row-to row spacing shall be a minimum of 22 inches (559 mm).

407.4.1 Path of egress travel. For rows of seating served by only one path of egress travel, the common path of egress travel shall not exceed 30 feet (9144 mm) from any seat to a point where a person has a choice of two paths of egress travel to two exits.

Exceptions:

1. In smoke-protected or open-air assembly seating, the common path of egress travel shall not exceed 50 feet (15 240 mm) from any seat to a point where a person has a choice of two paths of egress travel to two exits.

2. For areas serving less than 50 occupants, the common path of egress travel shall not exceed 75 feet (22 860 mm) from any seat to a point where a person has a choice of two paths of egress travel to two exits.
3. Where ~~bench-type~~ seating without backrests is utilized and the top of the ~~bench~~ seating is no more than 7 inches (178 mm) above the footrest immediately behind, the common path of egress travel shall not exceed 75 feet (22 860 mm) from any seat to a point where a person has a choice of two paths of egress travel to two exits.

SECTION 408
GUARDS

408.1 Required guards. Guards shall be provided in the following areas.

1. Along open-sided walking surfaces, cross aisles, stepped aisles, ramps and landings of ~~tiered~~ seating areas which are located more than 30 inches (762 mm) above the floor or grade below. Such guards shall be not less than 42 inches (1067 mm) high, measured vertically above the leading edge of the tread, adjacent walking surface or adjacent bench seat.
   Exception: A guard is not required where the ~~tiered~~ seating is located adjacent to a wall and the space between the wall and the ~~tiered~~ seating is less than 4 inches (102 mm).
2. Where an elevation change of 30 inches (762 mm) or less occurs between a cross aisle and the adjacent floor or grade below, guards not less than 26 inches (660 mm) above the aisle floor shall be provided.
   Exception: Where the backs of seats on the front of the cross aisle project 24 inches (610 mm) or more above the adjacent floor of the aisle, a guard need not be provided.

408.2 Opening limitations. Open guards shall be constructed of materials such that a 4-inch-diameter (102 mm) sphere cannot pass through any opening up to a height of 34 inches (864 mm). From a height of 34 inches (864 mm) to 42 inches (1067 mm) above the adjacent walking surfaces, a sphere 8 inches (203 mm) in diameter shall not pass.

Exceptions:

1. The triangular opening formed by the riser, tread and bottom rail at the open side of a stepped aisle or ~~tiered~~ seating shall be of a maximum size such that a sphere of 6 inches (152 mm) in diameter cannot pass through the opening.
2. Guards at the end of aisles where they terminate at a fascia of boxes, balconies and galleries shall have balusters or ornamental patterns such that a 4-inchdiameter (102 mm) sphere cannot pass through any opening up to a height of 26 inches (660 mm). From a height of 26 inches (660 mm) or greater above the adjacent walking surfaces, a sphere 8 inches (203 mm) in diameter shall not pass.
3. The opening limitation shall not apply to guards required in accordance with Item 2 of Section 408.1.

SECTION 409
HANDRAILS

(IS-BLE 04-07-21 AM)

409.2.3 Stairways. Stairways that connect a stepped aisle to a cross aisle or floor levels at the top or bottom of ~~a *bleacher*~~ seating, shall have one handrail on each side.

Exception: A mid-aisle handrail complying with Section 409.3.1 is permitted at a stairway with three risers maximum.

(IS-BLE 04-07-21 AM)

409.4.2 Handrail termination at stairways. Handrail extensions at stairways that connect a stepped aisle to a cross aisles or floor levels at the top or bottom of ~~a *bleacher*~~ seating shall comply with Section 1014.6 of the International Building Code.

Exceptions:

3. Handrail extensions shall not be required where the extension would block the required width of cross aisles.
4. Handrail extension shall not be required where the extension block access to the seating or crossover within the aisle.

SECTION 501
APPLICATION AND ADMINISTRATION

501.1 General. Existing bleachers, folding and telescopic seating, and grandstands that exist prior to the adoption of this standard shall comply with this chapter and the applicable provisions of Chapter 1.

Exception: ~~Tiered~~ Seating where the top of footboards, seatboards, aisles and cross aisles are not more than 30 inches (762 mm) above the floor or grade below, unless judged by the code official to represent a distinct hazard.

501.2 Inspection. All existing ~~tiered~~ seating shall be inspected and evaluated at least once a year by a qualified person for compliance with the provisions of this chapter. All folding and telescopic seating shall be inspected to evaluate compliance with the manufacturer's installation and operational instructions, including an inspection during the opening and closing of such seating.

501.2.1 Inspection and Identification tag. A permanent tag or plaque, shall be installed in a visible location to document annual compliance inspections. The tag or plaque shall include the following:

1. Manufacturer
2. Date of installation of the ~~tiered~~ seating
3. Seating capacity
4. Name of the inspector
5. Date of the inspection

This tag or plaque is required on ~~tiered~~ seating with a capacity of 75 or more. A record of the inspections shall be maintained by the owner or the owner's representative.

501.4 Alterations. Alterations to any ~~tiered~~ seating shall conform with the requirements of this standard for new construction. Portions of the structure not altered and not affected by the alteration are not required to comply with the requirements in this standard for a new structure.

SECTION 502
MAINTENANCE AND REPAIRS

502.1 Structural. Existing ~~tiered~~ seating shall be maintained structurally sound as follows.

1. Components or fasteners shall not be broken, damaged, badly deteriorated or missing.
2. Adequate bearing shall be provided. The structure shall bear uniformly on the floor or ground in a manner so as to safely support the structure.
3. All components and systems shall be in proper working condition.

SECTION 503
GUARDS

503.1 Required guards. Guards shall be provided in the following areas.

1. Along open-sided walking surfaces, cross aisles, stepped aisles, ramps and landings of ~~tiered~~ seating areas which are located more than 30 inches (762 mm) above the floor or grade below. Existing guards shall be not less than 36 inches (914 mm) high, measured vertically above the leading edge of the tread, adjacent walking surface or center of adjacent bench seat.
   Exceptions:
   1. Where the uppermost seat is located less than or equal to 55 inches (1397 mm) above the floor or ground below.
   2. Where located adjacent to a wall and the space between the wall and the ~~tiered~~ seating is less than 4 inches (102 mm).
2. Unless subject to the requirements of Item 3, a guard with a minimum height of 26 inches (660 mm) shall be provided where the floor or footboard elevation is more than 30 inches (762 mm) above the floor or grade below and the guard would otherwise interfere with the sightlines of immediately adjacent seating.
3. A guard shall be provided for the full width of the aisle where the foot of the aisle is more than 30 inches (762 mm) above the floor or ground below. The guard shall be a minimum of 36 inches (914 mm) high.

503.2 Opening limitations. Open guards shall be constructed of materials such that a 4-inch-diameter (102 mm) sphere cannot pass through any opening.

Exception: The triangular opening formed by the riser, tread and bottom rail at the open side of a stepped aisle or ~~tiered~~ seating shall be of a maximum size such that a sphere of 6 inches (152 mm) in diameter cannot pass through the opening.

SECTION 505
SEATING RELOCATION

505.1 Relocating existing ~~bleachers~~ seating. Relocating existing ~~*bleachers*~~ seating to a new location shall be permitted provided the existing ~~*bleachers*~~ seating complies with Sections 303.7, 304, 306, 307, 308 and 310 and Chapter 5.

Exception: Where full compliance with Sections 310.1 and 501.4 is technically infeasible, the relocated existing ~~*bleachers*~~ seating shall provide access in compliance with the building code to the maximum extent technically feasible.

SECTION 506
AISLES AND HANDRAILS

IS-BLE 05-01-21 AM

506.1 Aisle and handrails. On existing ~~*bleachers*~~ seating where aisle or handrails are altered or added, the aisles shall comply with Sections 404, 405, and 406 and handrails shall comply with Section 409.

Exception: Where technically infeasible for riser height to comply with Section 406.6, riser height shall comply to the maximum extent feasible. Where there is one riser between rows and the aisle tread is at the height of the seat, the tread shall be the full depth of the row.

Committee Reason: The committee felt that the replacement modification in Option 3 provided the greatest clarity and consistency in the ICC 300. 'Seating' as clarified in Section 201.4 include 'bleachers', 'folding and telescopic seating' and 'grandstands' for application of this standard.

While the definitions for 'bleachers' and 'grandstands' differ from NFPA 101, the safety concern is addressed for means of egress for seats with or without backs.

PUBLIC COMMENT- FIRST DRAFT:		
Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		
Committee Reason:		
PUBLIC 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 4
EGRESS

IS-BLE 04-01-22
ICC 300 405.1, 405.2

Proponent: Dan Victor

Revise as follows:

SECTION 405
AISLES

405.1 Aisles required. ~~The minimum width of aisles shall be in accordance with Section 404.5, but not less than that required by this section.~~ Aisle are required in bleacher-type seating.

Exceptions:

1. An aisle is not required in seating facilities where all of the following conditions exist.
   1.1. Seats are without backrests.
   1.2. The rise from row to row does not exceed 6 inches (152 mm) per row.
   1.3. The row spacing does not exceed 28 inches (711 mm) unless the seatboards and footboards are at the same elevation.
   1.4. The number of rows does not exceed 16 rows in height.
   1.5. The first seating board is not more than 12 inches (305 mm) above the ground or floor below or a cross aisle.
   1.6. Seatboards have a continuous flat surface.
   1.7. Seatboards provide a walking surface with a minimum width of 11 inches (279 mm).
   1.8. Egress from seating is not restricted by rails, guards or other obstructions.
2. Where an aisle accessway is interrupted by wheelchair spaces or columns, access to an aisle is not required for the seats served by that interrupted aisle accessway where the seats on the row immediately below do not have backrests and the riser height between the walking surfaces of the two rows is 16 inches (406mm) or less.

405.2 Minimum aisle width. The minimum width of aisles shall be in accordance with Section 404.5, but not less than that required by this section. The minimum clear width of aisles shall be as follows.

1. Forty-eight inches (1219 mm) for stepped aisles having seating on each side.
   Exception: Thirty-six inches (914 mm) where the aisle serves less than 50 seats.
2. Thirty-six inches (914 mm) for stepped aisles having seating on only one side.
   Exception: Twenty-three inches (584 mm) between a stepped aisle handrail and seating where an aisle does not serve more than five rows on one side.

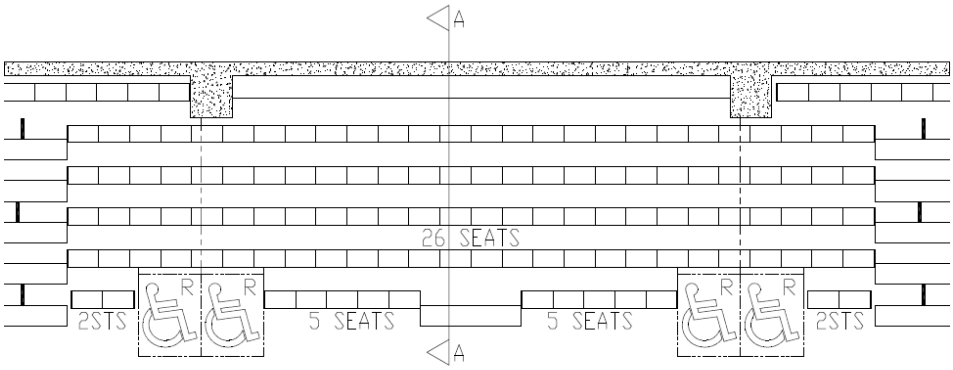
3. Twenty-three inches (584 mm) between a stepped aisle handrail or guard and seating where the aisle has a mid-aisle handrail.
4. Forty-two inches (1067 mm) for level or ramped aisles having seating on both sides.
   Exceptions:
   1. Thirty-six inches (914 mm) where the aisle serves less than 50 seats.
   2. Thirty inches (762 mm) where the aisle does not serve more than 14 seats.
5. Thirty-six inches (914 mm) for level or ramped aisles having seating on only one side.
   Exception: Thirty inches (762 mm) where the aisle does not serve more than 14 seats.

405.3 Aisle width. The aisle width shall provide sufficient egress capacity for the number of persons accommodated by the catchment area served by the aisle in accordance with Section 404.5. The catchment area served by an aisle is that portion of the total space that is served by that section of the aisle. In establishing catchment areas, the assumption shall be made that there is a balanced use of all means of egress, with the number of persons in proportion to egress capacity.

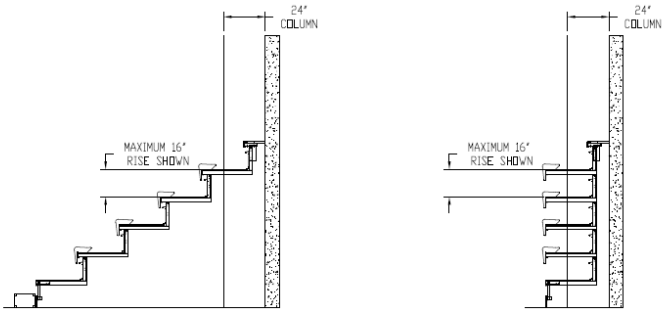
Reason: Although perhaps obvious that aisles are required, it is not clearly stated anywhere in ICC 300. The title of 2021 IBC Section 1030.9 is “Assembly aisles are required”.

Requirements of the stricken sentence are already found in sections 405.2 and 405.3. The sentence is redundant. If left in place, it would allow confusion as to whether the exception was for the requirement for aisles, the minimum aisle width, or both.

Two very common situations found in telescopic seating are illustrated below. Under current code requirements, without the proposed exception no. 2, seats must be omitted between the building columns due to lack of access to an aisle and a two step aisle is required between wheelchair spaces. Seats are lost and the appearance of the seating is often found objectionable due to seats missing where one would expect them to be. Since the majority of the population is easily able to traverse over a row of seating to a cross aisle or an aisle access below, it is reasonable to allow this one row exception, but only where seats are without backrest. Under Uniform Building Code requirements as late as the mid-1990s, bleacher seating (without backrests) was provided without any aisles up to a limit of 11 rows. Many of these bleachers without aisles are still in service today.



CURRENT REQUIREMENT PLAN VIEW



SECTION A-A CURRENT REQUIREMENT SIDE ELEVATION

Notes 1-9-2023 – Discussion on item. Dan Victor will have mofidications for the 1/23/2023 meeting.

Notes 1-23-2023 – Further discussion on item. Dan Victor will have modification for the 2/6/2023 meeting.

IS-BLE 04-01-22 Replacement

OPTION #1

405.7 Aisles connecting aisle accessways. Aisles connecting the aisle accessways of two rows of seating shall be permitted where one of the two accessways leads to an aisle and it's width complies with Section 407 based on the combined seat count of the

two rows. In telescopic seating, where a handrail is provided for the connecting stepped aisle, the maximum riser height shall be permitted to be a maximum of 10.5 inches (267 mm). No risers shall be permitted within an aisle accessway.

Kim's suggestion:
This connection is not an aisle, it is a transition between aisle accessways. Aisle have to have a direct connection to a cross aisle or exit. Proposal does not set height change or handrails for any other type of bleacher than telescopic seating. No minimum width of that step.

OPTION #2

407.1 Required aisle accessways. Aisle accessways shall be provided above the first row of seating and shall lead to an aisle. Aisle accessways located more than 30 inches (762 mm) above the floor or ground below shall be constructed such that openings shall not allow passage of a sphere greater than 4 inches (102 mm) in diameter. Where ~~bleacher-type~~ bench seating is utilized, such seats shall be a minimum depth of 9 inches (229 mm). Row-to-row spacing shall be a minimum of 22 inches (559 mm).

Exception:

An aisle accessway which does not lead directly to an aisle shall be permitted where egress through an aisle accessway of an adjacent row is provided and all of the following are met:

1. The two aisle accessways are connected by a single riser or two risers and an additional tread at mid-height between the elevations of the two accessways.
2. Where a tread is provided, it shall be a minimum of 11 inch (280 mm) in depth and a minimum of 22 inches (559 mm) in width and shall be within the accessway which does not have direct access to an aisle.
3. Risers shall have a minimum height of 4 inches (102 mm) and a maximum height of 8 inches (204 mm). The maximum riser is permitted to be a maximum of 10.5 inches (267 mm) within telescopic seating.
4. The leading edges of treads comply with Section 406.5.
5. A handrail complying with Section 409 is provided adjacent to the risers. There shall be a minimum of 23 inches (584 mm) between the handrail and an adjacent seat.
6. The aisle accessway which leads to an aisle shall comply, as applicable, with Sections 407.3, 407.4, and 407.5 based on the combined number of seats in the two rows.

Kim's suggestion:
407.1 Required aisle accessways. Aisle accessways shall be provided above the first row of seating and shall lead to an aisle. Aisle accessways located more than 30 inches (762 mm) above the floor or ground below shall be constructed such that openings shall not allow passage of a sphere greater than 4 inches (102 mm) in diameter. Where

~~bleacher-type~~ bench seating is utilized, such seats shall be a minimum depth of 9 inches (229 mm). Row-to-row spacing shall be a minimum of 22 inches (559 mm).

Exception: An aisle accessway shall be permitted to egress through the adjacent aisle accessway where all of the following are met:

1. The elevation change between aisle accessways shall consist of one or two risers.
2. Where a tread is provided, the depth is 11 inch (280 mm) minimum and the width isf 22 inches (559 mm) minimum. The tread shall not obstruct the required aisle accessway width.
3. Riser height is 4 inches (102 mm) minimum and 8 inches (204 mm) maximum.
   Exception: For folding and telescopic seating, the riser height is 10.5 inches (267 mm) maximum.
4. A handrail complying with Section 409 is provided adjacent to the riser.
5. The minimum width of the adjacent aisle accessway shall accommodate the combined number of seats in the two rows.

Reason for modification from first proposal:
Item 1 – simpler way to refer to connection
Item 2 – break long sentence into 2 sentences, less confusing wording
Item 3 – current text give two requirements, 2nd sentence is an exception
Item 4 – deleted, already required
Item 5 (4) – already said handrail was adjacent. Confusing with 23" here and 22" in Item 2
Item 6 (5) – referenced sections are incorrect. Minimum width is 407.2. Just state requirement and let rest of section handle width.

Notes 2-6-2023: *Committee divided the question between 407.1 main paragraph and the exceptions.*

405.1 and 405.2 agreed to during 1-23-2023 meeting. Committee needs to officially vote for modification.

SECTION 405
AISLES

405.1 Aisles required. ~~The minimum width of aisles shall be in accordance with Section 404.5, but not less than that required by this section.~~ Aisle are required in bleachers, folding and telescopic seating and grandstands.

Exception: An aisle is not required in seating facilities where all of the following conditions exist:

1. Seats are without backrests.
2. The rise from row to row does not exceed 6 inches (152 mm) per row.

3. The row spacing does not exceed 28 inches (711 mm) unless the seatboards and footboards are at the same elevation.
4. The number of rows does not exceed 16 rows in height.
5. The first seating board is not more than 12 inches (305 mm) above the ground or floor below or a cross aisle.
6. Seatboards have a continuous flat surface.
7. Seatboards provide a walking surface with a minimum width of 11 inches (279 mm).
8. Egress from seating is not restricted by rails, guards or other obstructions.

405.2 Minimum aisle width. The minimum width of aisles shall be in accordance with Section 404.5, but not less than that required by this section. The minimum clear width of aisles shall be as follows.

1. Forty-eight inches (1219 mm) for stepped aisles having seating on each side.
   Exception: Thirty-six inches (914 mm) where the aisle serves less than 50 seats.
2. Thirty-six inches (914 mm) for stepped aisles having seating on only one side.
   Exception: Twenty-three inches (584 mm) between a stepped aisle handrail and seating where an aisle does not serve more than five rows on one side.
3. Twenty-three inches (584 mm) between a stepped aisle handrail or guard and seating where the aisle has a mid-aisle handrail.
4. Forty-two inches (1067 mm) for level or ramped aisles having seating on both sides.
   Exceptions:
   1. Thirty-six inches (914 mm) where the aisle serves less than 50 seats.
   2. Thirty inches (762 mm) where the aisle does not serve more than 14 seats.
5. Thirty-six inches (914 mm) for level or ramped aisles having seating on only one side.
   Exception: Thirty inches (762 mm) where the aisle does not serve more than 14 seats.

405.3 Aisle width. The aisle width shall provide sufficient egress capacity for the number of persons accommodated by the catchment area served by the aisle in accordance with Section 404.5. The catchment area served by an aisle is that portion of the total space that is served by that section of the aisle. In establishing catchment areas, the assumption shall be made that there is a balanced use of all means of egress, with the number of persons in proportion to egress capacity.

2-6-2023 meeting proposal

407.1 Required aisle accessways. Aisle accessways shall be provided ~~above the first row of seating~~ for all rows of seating and shall lead to an aisle. Aisle accessways located more than 30 inches (762 mm) above the floor or ground below shall be constructed such that openings shall not allow passage of a sphere greater than 4 inches (102 mm) in diameter. Where ~~bleacher-type~~ bench seating is utilized, such seats shall be a minimum depth of 9 inches (229 mm). Row-to-row spacing shall be a minimum of 22 inches (559 mm).

Modification to 407.1 Approved as modified 8-0-1

Reason: Consistent with the rest of the standard with respect to changing bleacher type to bench. Aisle accessways have to apply to all rows.

Question 2: Revise exception to read as follows:

407.1 Required aisle accessways. Aisle accessways shall be provided ~~above the first row of seating~~ for all rows of seating and shall lead to an aisle. Aisle accessways located more than 30 inches (762 mm) above the floor or ground below shall be constructed such that openings shall not allow passage of a sphere greater than 4 inches (102 mm) in diameter. Where ~~bleacher type~~ bench seating is utilized, such seats shall be a minimum depth of 9 inches (229 mm). Row-to-row spacing shall be a minimum of 22 inches (559 mm).

Exception: Aisle accessways shall be permitted to be connected to an aisle through an adjacent aisle accessway in accordance with Section 408.

SECTION 408
Inter-aisle Accessway Stairs.

408.1 Inter-aisle Accessway Stairs. An aisle accessway shall be permitted to egress through the adjacent aisle accessway where all of the following are met:

1. The elevation change between aisle accessways shall consist of one or two risers.
2. Where a tread is provided, the depth shall be 11 inch (280 mm) minimum and the width shall be 22 inches (559 mm) minimum. The tread shall not obstruct the ~~required clear~~ aisle accessway ~~width~~.
3. For other than folding and telescopic seatings, Riser height shall be 4 inches (102 mm) minimum and 8 inches (204 mm) maximum. For folding and telescopic seating, the riser height shall be 4 inches (102 mm) minimum and 10.5 inches (267 mm) maximum.
4. A handrail complying with Section 409 shall be provided adjacent to the riser.
5. The minimum width of the adjacent aisle accessway shall accommodate the combined number of seats in the two rows.

Notes 2-6-2023: Committee to continue discussion with a graphic representation on question 2.

Staff notes: See 2/6/2023 meeting minutes for questions. Need official committee motion and vote on changes to section 405.1 and 405.2.

Notes: 2-27-2023: The committee reviewed several illustrations of how the new text is proposed to be constructed. The committee felt that the steps should not be an obstruction to the clear width of the aisle accessway so that people could walk around

them and not over the step. The requirements should be in a separate section for clarity, but technically there needs to be an exception to reference that section. Dave Nelson will provide an example for a possible figure to be referenced.

IS-BLE-04-01-22

Complete revised proposal for final review during 3/6/2023 meeting.

SECTION 405
AISLES

405.1 Aisles required. ~~The minimum width of aisles shall be in accordance with Section 404.5, but not less than that required by this section.~~ Aisle are required in bleachers, folding and telescopic seating and grandstands.

Exception: An aisle is not required in seating facilities where all of the following conditions exist:

1. Seats are without backrests.
2. The rise from row to row does not exceed 6 inches (152 mm) per row.
3. The row spacing does not exceed 28 inches (711 mm) unless the seatboards and footboards are at the same elevation.
4. The number of rows does not exceed 16 rows in height.
5. The first seating board is not more than 12 inches (305 mm) above the ground or floor below or a cross aisle.
6. Seatboards have a continuous flat surface.
7. Seatboards provide a walking surface with a minimum width of 11 inches (279 mm).
8. Egress from seating is not restricted by rails, guards or other obstructions.

405.2 Minimum aisle width. The minimum width of aisles shall be in accordance with Section 404.5, but not less than that required by this section. The minimum clear width of aisles shall be as follows.

1. Forty-eight inches (1219 mm) for stepped aisles having seating on each side.
   Exception: Thirty-six inches (914 mm) where the aisle serves less than 50 seats.
2. Thirty-six inches (914 mm) for stepped aisles having seating on only one side.
   Exception: Twenty-three inches (584 mm) between a stepped aisle handrail and seating where an aisle does not serve more than five rows on one side.
3. Twenty-three inches (584 mm) between a stepped aisle handrail or guard and seating where the aisle has a mid-aisle handrail.
4. Forty-two inches (1067 mm) for level or ramped aisles having seating on both sides.
   Exceptions:
   1. Thirty-six inches (914 mm) where the aisle serves less than 50 seats.
   2. Thirty inches (762 mm) where the aisle does not serve more than 14 seats.
5. Thirty-six inches (914 mm) for level or ramped aisles having seating on only one side.
   Exception: Thirty inches (762 mm) where the aisle does not serve more than 14 seats.

405.3 Aisle width. The aisle width shall provide sufficient egress capacity for the number of persons accommodated by the catchment area served by the aisle in accordance with Section 404.5. The catchment area served by an aisle is that portion of the total space that is served by that section of the aisle. In establishing catchment areas, the assumption shall be made that there is a balanced use of all means of egress, with the number of persons in proportion to egress capacity.

SECTION 407
AISLE ACCESSWAYS

407.1 Required aisle accessways. Aisle accessways shall be provided ~~above the first row of seating~~ for all rows of seating and shall lead to an aisle. Aisle accessways located more than 30 inches (762 mm) above the floor or ground below shall be constructed such that openings shall not allow passage of a sphere greater than 4 inches (102 mm) in diameter. Where ~~bleacher type~~ bench seating is utilized, such seats shall be a minimum depth of 9 inches (229 mm). Row-to-row spacing shall be a minimum of 22 inches (559 mm).

Exception: Aisle accessways shall be permitted to be connected to an aisle through an adjacent aisle accessway in accordance with Section 408.

408.1 Aisle accessways egres stairs. An aisle accessway shall be permitted to egress through the adjacent aisle accessway where all of the following are met:

1. The elevation change between aisle accessways shall consist of one or two risers.
2. Where a tread is provided, the depth shall be 11 inch (280 mm) minimum and the width shall be 22 inches (559 mm) minimum. The tread shall not obstruct the required clear aisle accessway width.
3. For other than folding and telescopic seatings, riser height shall be 4 inches (102 mm) minimum and 8 inches (204 mm) maximum. For folding and telescopic seating, the riser height shall be 4 inches (102 mm) minimum and 10.5 inches (267 mm) maximum.
4. A handrail complying with Section 409 shall be provided adjacent to the riser.
5. The minimum width of the adjacent aisle accessway shall accommodate the combined number of seats in the two rows.

See Figure 408.1 for examples.

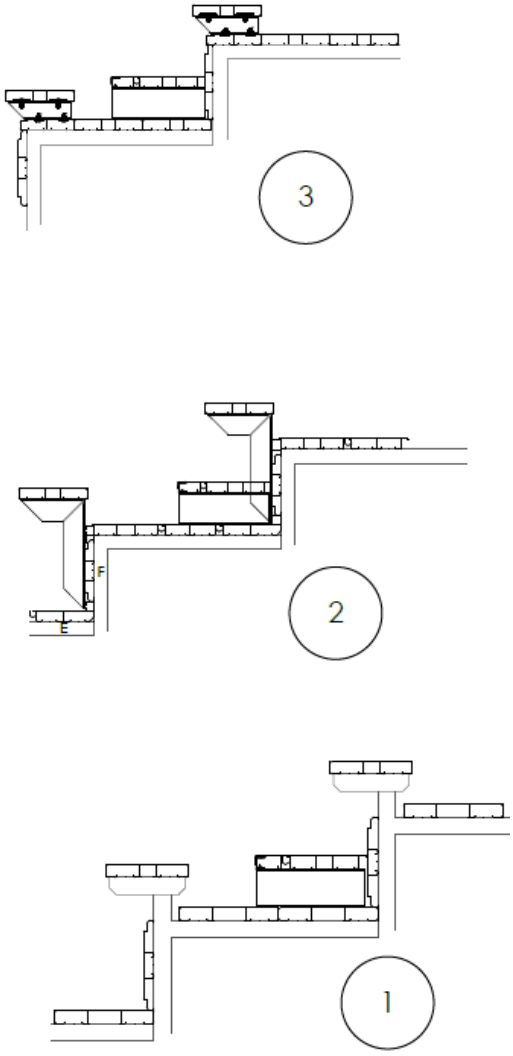


Figure 408.1
Aisle accessway egress stairs
(Note: Dave Norman working on graphic to show tread depth and clear aisle accessway width on three examples)

Notes 3-6-2023:
The committee approved the following revision (7-1-0)

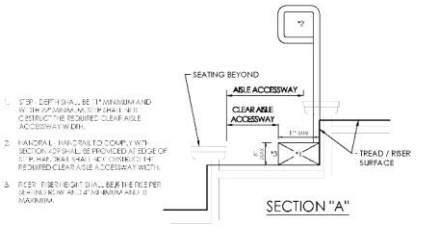
Replace with the following:

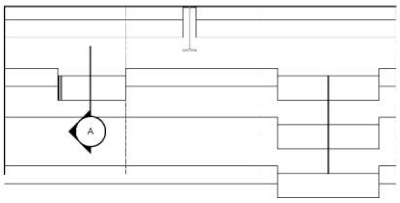
SECTION 408
AISLE ACCESSWAYS EGRESS STAIRS.

408.1 Aisle accessways egress stairs. An aisle accessway shall be permitted to egress through the adjacent aisle accessway where all of the following are met:

1. The elevation change between aisle accessways shall consist of one or two risers.
2. Where a tread is provided, the depth shall be 11 inch (280 mm) minimum and the width shall be 22 inches (559 mm) minimum.
3. The tread shall not obstruct the required clear aisle accessway width.
4. Riser height shall be 4 inches (102 mm) minimum and 8 inches (204 mm) maximum. Where there are 2 risers, the riser height shall be half of the rise between aisle accessways.
5. A handrail complying with Section 409 shall be provided adjacent to the riser and shall not obstruct the required clear aisle accessway width.
6. The minimum width of the adjacent aisle accessway shall accommodate the combined number of seats in the two rows.

The following was a suggested figure:





Upon further consideration, the committee voted to modify the proposal to delete the exception to Section 407.1 and the new 408. 7-2-0
The current text had some concerns about obstruction of the aisle accessway. There were concerns about this being too broadly used by designers when this should have limited application. There was concern about the possible drop off if the seats in front of the step were removed to meet the clear aisle accessway width at this location.

The committee felt that this option was a very limited situation and could be addressed on a case-by-case basis via alternative means. There were alternative layouts of the aisles or removal of seats in front of the columns that could provide access without moving up and down between aisle accessways.

The final vote for this proposal for as modified – 405.1, 405.2 and 407.1 without the exception – 9-0-0

Committee Action: As Modified 9-0-0
Modification (if any):

Replace with the following:

SECTION 405
AISLES

405.1 Aisles required. ~~The minimum width of aisles shall be in accordance with Section 404.5, but not less than that required by this section.~~ Aisle are required in bleachers, folding and telescopic seating and grandstands.

Exception: An aisle is not required in seating facilities where all of the following conditions exist:

1. Seats are without backrests.
2. The rise from row to row does not exceed 6 inches (152 mm) per row.
3. The row spacing does not exceed 28 inches (711 mm) unless the seatboards and footboards are at the same elevation.
4. The number of rows does not exceed 16 rows in height.
5. The first seating board is not more than 12 inches (305 mm) above the ground or floor below or a cross aisle.
6. Seatboards have a continuous flat surface.
7. Seatboards provide a walking surface with a minimum width of 11 inches (279 mm).
8. Egress from seating is not restricted by rails, guards or other obstructions.

405.2 Minimum aisle width. The minimum width of aisles shall be in accordance with Section 404.5, but not less than that required by this section. The minimum clear width of aisles shall be as follows.

1. Forty-eight inches (1219 mm) for stepped aisles having seating on each side.
   Exception: Thirty-six inches (914 mm) where the aisle serves less than 50 seats.
2. Thirty-six inches (914 mm) for stepped aisles having seating on only one side.
   Exception: Twenty-three inches (584 mm) between a stepped aisle handrail and seating where an aisle does not serve more than five rows on one side.
3. Twenty-three inches (584 mm) between a stepped aisle handrail or guard and seating where the aisle has a mid-aisle handrail.
4. Forty-two inches (1067 mm) for level or ramped aisles having seating on both sides.
   Exceptions:
   1. Thirty-six inches (914 mm) where the aisle serves less than 50 seats.
   2. Thirty inches (762 mm) where the aisle does not serve more than 14 seats.

5. Thirty-six inches (914 mm) for level or ramped aisles having seating on only one side.
   Exception: Thirty inches (762 mm) where the aisle does not serve more than 14 seats.

405.3 Aisle width. The aisle width shall provide sufficient egress capacity for the number of persons accommodated by the catchment area served by the aisle in accordance with Section 404.5. The catchment area served by an aisle is that portion of the total space that is served by that section of the aisle. In establishing catchment areas, the assumption shall be made that there is a balanced use of all means of egress, with the number of persons in proportion to egress capacity.

SECTION 407
AISLE ACCESSWAYS

407.1 Required aisle accessways. Aisle accessways shall be provided ~~above the first row of seating~~ for all rows of seating and shall lead to an aisle. Aisle accessways located more than 30 inches (762 mm) above the floor or ground below shall be constructed such that openings shall not allow passage of a sphere greater than 4 inches (102 mm) in diameter. Where ~~bleacher-type~~ bench seating is utilized, such seats shall be a minimum depth of 9 inches (229 mm). Row-to-row spacing shall be a minimum of 22 inches (559 mm).

Committee Reason: The modification to Section 405.1 is to clarify what seating arrangements require an aisle. The deleted sentence regarding width in Section 405.1 is moved to Section 405.2 since this section deals aisle width, so this is a more appropriate location. While the definition for aisle accessways does say this is an element that connects to an aisle, the change to Section 407.1 is to state this as a requirement in the text. The change from 'bleacher-type' to 'bench' is consistent with IS-BLE 02-01-22 and to clarify the application of the 9 inch depth limitation.

Report for *IS-BLE 04-01-22*

Committee decision: AM	***Committee Vote at Meeting: 9-0-0***	***Committee Vote on Ballot:***

REPORT OF HEARING:
Modification (if any):
Replace with the following:

SECTION 405
AISLES

405.1 Aisles required. ~~The minimum width of aisles shall be in accordance with Section 404.5, but not less than that required by this section.~~ Aisle are required in bleachers, folding and telescopic seating and grandstands.

Exception: An aisle is not required in seating facilities where all of the following conditions exist:

1. Seats are without backrests.
2. The rise from row to row does not exceed 6 inches (152 mm) per row.
3. The row spacing does not exceed 28 inches (711 mm) unless the seatboards and footboards are at the same elevation.
4. The number of rows does not exceed 16 rows in height.
5. The first seating board is not more than 12 inches (305 mm) above the ground or floor below or a cross aisle.
6. Seatboards have a continuous flat surface.
7. Seatboards provide a walking surface with a minimum width of 11 inches (279 mm).
8. Egress from seating is not restricted by rails, guards or other obstructions.

405.2 Minimum aisle width. The minimum width of aisles shall be in accordance with Section 404.5, but not less than that required by this section. The minimum clear width of aisles shall be as follows.

1. Forty-eight inches (1219 mm) for stepped aisles having seating on each side.
   Exception: Thirty-six inches (914 mm) where the aisle serves less than 50 seats.
2. Thirty-six inches (914 mm) for stepped aisles having seating on only one side.
   Exception: Twenty-three inches (584 mm) between a stepped aisle handrail and seating where an aisle does not serve more than five rows on one side.
3. Twenty-three inches (584 mm) between a stepped aisle handrail or guard and seating where the aisle has a mid-aisle handrail.

4. Forty-two inches (1067 mm) for level or ramped aisles having seating on both sides.
   Exceptions:
   1. Thirty-six inches (914 mm) where the aisle serves less than 50 seats.
   2. Thirty inches (762 mm) where the aisle does not serve more than 14 seats.
5. Thirty-six inches (914 mm) for level or ramped aisles having seating on only one side.
   Exception: Thirty inches (762 mm) where the aisle does not serve more than 14 seats.

405.3 Aisle width. The aisle width shall provide sufficient egress capacity for the number of persons accommodated by the catchment area served by the aisle in accordance with Section 404.5. The catchment area served by an aisle is that portion of the total space that is served by that section of the aisle. In establishing catchment areas, the assumption shall be made that there is a balanced use of all means of egress, with the number of persons in proportion to egress capacity.

SECTION 407
AISLE ACCESSWAYS

407.1 Required aisle accessways. Aisle accessways shall be provided ~~above the first row of seating~~ for all rows of seating and shall lead to an aisle. Aisle accessways located more than 30 inches (762 mm) above the floor or ground below shall be constructed such that openings shall not allow passage of a sphere greater than 4 inches (102 mm) in diameter. Where ~~bleacher-type~~ bench seating is utilized, such seats shall be a minimum depth of 9 inches (229 mm). Row-to-row spacing shall be a minimum of 22 inches (559 mm).

Committee Reason: The modification to Section 405.1 is to clarify what seating arrangements require an aisle. The deleted sentence regarding width in Section 405.1 is moved to Section 405.2 since this section deals aisle width, so this is a more appropriate location. While the definition for aisle accessways does say this is an element that connects to an aisle, the change to Section 407.1 is to state this as a requirement in the text. The change from 'bleacher-type' to 'bench' is consistent with IS-BLE 02-01-22 and to clarify the application of the 9 inch depth limitation.

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

Proposal drafts 1-23-2023

During previous meetings the ICC 300 committee looked at a comparison matrix between the means of egress requirements in ICC 300 and the 2024 IBC. The committee requested suggestion for propose text for 6 different areas – 1) definition of aisles; 2) definition of exit access; 3) consistent use of 'exit' vs. 'means of egress'; 4) criteria for press boxes; 5) coordination with dead ends; 6) coordination with aisle accessway.

The ICC 300 committee decided to move forward with 3 of the 6 proposals for coordination with 2024 IBC. Since these are new items, the committee has the option of No action. No action is that the committee has decided not to move the proposal forward for consideration, so this is effectively a withdrawal.

- Key:
- Yellow highlights shows code change proposals already approved in legislative format.
- Blue highlights are where ICC 300 are identifying where a term is used currently in the standard.
- The red text is suggested revisions for consistent use of terms s.

IS-BLE 04-01-23

ICC 300 202

Proponent: ICC 300 Committee

SECTION 202
DEFINED TERMS

AISLE. An unenclosed exit access component that defines and provides a path of egress travel.

Reason: Coordination with IBC

2024 IBC
[BE] AISLE. An unenclosed *exit access* component that defines and provides a path of egress travel.

Committee Action: As Submitted (5-0-0)
Modification (if any):
Committee Reason: Coordination with IBC

Report for *IS-BLE 04-01-23*		
Committee decision: AS	***Committee Vote at Meeting: 5-0-0***	***Committee Vote on Ballot:***
REPORT OF HEARING: Modification (if any):		

Committee Reason: Coordination with IBC		
PUBLIC COMMENT- FIRST DRAFT:		
Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		
Committee Reason:		
PUBLIC 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:		

IS-BLE 04-02-23
ICC 300 202

Proponent: ICC 300 Committee

SECTION 202
DEFINED TERMS

EXIT ACCESS. That portion of a means of egress system from any point on a bleacher, folding and telescopic seating, or grandstand that leads to an exit. For the purposes of this standard, aisle accessways, aisles and cross aisles are considered components of exit access.

Reason: Revise for consistency with the ICC 300 scope.

2024 IBC

[BE] EXIT ACCESS. That portion of a *means of egress* system that leads from any occupied portion of a building or structure to an *exit*.

Committee Action: No action
Modification (if any):
Committee Reason:

Notes 2-27-2023: Current definition is clearer. Adding scope could be read to require direct access to and exit. The 2nd current sentence in the definition is sufficient.

Report for *IS-BLE 04-02-23*		
Committee decision: No action	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
REPORT OF HEARING:		
Modification (if any):		
Committee Reason:		
PUBLIC COMMENT- FIRST DRAFT:		
Proponent:		
Desired Action:		
Modification:		

Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		
Committee Reason:		
PUBLIC 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:		

IS-BLE 04-03-23
ICC 300 404.1, Table 404.1, 404.3

Proponent: ICC 300 Committee

SECTION 404
GENERAL MEANS OF EGRESS

(04-01-21 AM)
404.1 Minimum number of ~~exits~~ means of egress. Bleachers, folding and telescopic seating, and grandstands shall be provided with The minimum number of ~~exits~~ means of egress ~~shall be provided~~ from the seating area based on the occupant loads in Table 404.1 and in accordance with the calculated width requirement for egress capacity in Section 404.5. ~~Accessible means of egress shall be provided as required by Section 1009 of the *International Building Code*.~~

> **~~Exception:~~** ~~For open-air assembly seating installations where the means of egress converge, a minimum of two egress paths shall be provided, sized to accommodate the occupant load served.~~

(04-01-21 AM)

> **404.1.1 Accessible means of egress.** Accessible means of egress shall be provided as required by Section 1009 of the *International Building Code*. The common path of egress travel for accessible means of egress shall be measured from the wheelchair spaces along the accessible route to that point where the occupants have a choice of two accessible routes.
>
> > **Exception:** For open-air assembly seating, exterior areas for assisted rescue at the level of exit discharge shall be located adjacent to the top landing of the exit access stairway and are not required to meet the separation requirements in Section 1009.7.2 of the *International Building Code*.

Table 404.1
MINIMUM NUMBER OF ~~EXITS~~ MEANS OF EGRESS

OCCUPANT LOAD	REQUIRED MEANS OF EGRESS
0–250	1
251–750	2
751–2,500	3
Over 2,500	4

404.2 Room or space means of egress. Rooms or spaces in which tiered seating is located shall be provided with the required means of egress in accordance with the building code.

(04-01-21 AM)
404.3 Exterior installations. For open-air assembly seating where two or more ~~exits~~ means of egress are required and exit discharge paths from the bleacher or grandstand converge on the grade level, a minimum of two paths of travel shall be provided and sized to accommodate the occupant load served. The exit discharge paths shall provide a direct and unobstructed access to a public way.

Exception: Where access to a *public way* cannot be provided, a safe dispersal area shall be provided where all of the following are met:

1. The area shall be of a size to accommodate not less than 5 square feet (0.46 m^2) for each person.
2. The area shall be located on the same lot not less than 50 feet (15 240 mm) from the structure requiring egress.
3. The area shall be permanently maintained and identified as a safe dispersal area.
4. The area shall be provided with a safe and unobstructed path of travel from the structure.

Reason: Yellow highlights shows code change proposals already approved. Blue highlights are where ICC 300 uses “means of egress”. The red text is suggested revisions for consistent use of terms in the means of egress requirements. Elements on a bleacher are listed under ‘exit access’ in the defined terms. The path from the bleacher to the doors out of the space are also exit access.

Committee Action: As Submitted (5-0-0)
Modification (if any):
Committee Reason: Consistency in term for means of egress.

Report for *IS-BLE 04-03-23*		
Committee decision: AS	***Committee Vote at Meeting: 5-0-0***	***Committee Vote on Ballot:***
REPORT OF HEARING:		
Modification (if any):		
Committee Reason: Consistency in term for means of egress.		
PUBLIC COMMENT- FIRST DRAFT:		
Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		
Committee Reason:		
PUBLIC 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:		

IS-BLE 04-04-23
ICC 300 202, 404.3(New), 404.4, 408.1

Proponent: ICC 300 Committee

PRESS BOX. A limited-size structure attached to tiered seating intended for limited use.

SECTION 301
GENERAL
301.1 General. The construction or installation of new bleachers, folding and telescopic seating, and grandstands and press boxes shall comply with the provisions of this chapter.

SECTION 303
STRUCTURAL DESIGN
303.2 Loads. Bleachers, folding and telescopic seating, and grandstands shall be designed for a uniform live load of 100 pounds per square foot (psf) (4788 Pa). Press boxes shall be designed for a uniform live load of 50 psf (2394 Pa). The components of the installation shall be designed to support the loads listed in Table 303.2.

303.3 Other loads. Bleachers, folding and telescopic seating and grandstands, and press boxes and platforms attached to such installations, subject to wind, snow, seismic and other loads, shall be designed in accordance with the building code.

SECTION 403
OCCUPANT LOAD
403.1 Occupant load. Where bench seating is used, the number of persons shall be based on one person for each 18 inches (457 mm) of length of the bench. Where individual seats are provided, the occupant load shall be based on one person per seat. The occupant load of reviewing stands and press boxes shall be based on 5 square feet (0.465 m2) per person for standing space and 7 square feet (0.65 m^2) per person for movable chair seating space. The occupant load for security, audio and camera platforms shall be based on the actual number of occupants.

SECTION 404
GENERAL MEANS OF EGRESS
404.2 Room or space means of egress. Rooms or spaces in which tiered seating is located shall be provided with the required means of egress in accordance with the building code.

404.4 Press boxes. Press boxes shall be provided with the required means of egress in accordance with the building code except as permitted by Section 404.4. Security, audio and camera platforms with limited access shall be permitted to be accessed by a fixed ladder or an alternating tread device complying with the International Building Code.

(renumber subsequent sections)

404.4 Travel distance. For installations located inside a building, the travel distance from each seat to an exit shall comply with the building code. For exterior installations, the travel distance from each seat to the perimeter of the seating structure shall not exceed 400 feet (122 m). Where aisles are provided for seating, the distance shall be measured along the aisles and aisle accessway without travel over or on the seats. Press boxes shall have the same travel distance requirements as the adjacent seating.

SECTION 408
GUARDS
408.1 Required guards. Guards shall be provided in the following areas.

1. Along open-sided walking surfaces, cross aisles, stepped aisles, ramps and landings of tiered seating areas which are located more than 30 inches (762 mm) above the floor or grade below. Such guards shall be not less than 42 inches (1067 mm) high, measured vertically above the leading edge of the tread, adjacent walking surface or adjacent bench seat.
   Exception: A guard is not required where the tiered seating is located adjacent to a wall and the space between the wall and the tiered seating is less than 4 inches (102 mm).
2. Where an elevation change of 30 inches (762 mm) or less occurs between a cross aisle and the adjacent floor or grade below, guards not less than 26 inches (660 mm) above the aisle floor shall be provided.
   Exception: Where the backs of seats on the front of the cross aisle project 24 inches (610 mm) or more above the adjacent floor of the aisle, a guard need not be provided.
3. A guard shall be provided for the full width of an aisle where the lowest point of the aisle is more than 30 inches (762 mm) above the floor or ground below. The guard shall be a minimum of 36 inches (914 mm) high and shall provide a minimum 42 inches (1067 mm) measured diagonally between the top of the rail and the nosing of the nearest aisle step.
4. Unless subject to the requirements of Item 3, a guard with a minimum height of 26 inches (660 mm) shall be provided where the floor or footboard elevation is more than 30 inches (762 mm) above the floor or grade below and the guard would otherwise interfere with the sightlines of immediately adjacent seating.
5. Guards shall be required around the perimeter of security, audio and camera platforms which are located more than 30 inches (762 mm) above the floor or grade below.

Reason: The ICC 300 committee asked for what items currently addressed press boxes and where some additional criteria may need to be added. The blue highlight is

current press box text. There was discussion about what to require for camera platforms on top of press boxes.

> **2024 IBC**
> **1030.5 Interior balcony and gallery means of egress.** For balconies, galleries or press boxes having a seating capacity of 50 or more located in a building, room or space used for assembly purposes, not less than two *means of egress* shall be provided, with one from each side of every balcony, gallery or press box.

Committee Action: As modified (6-0-0)
Modification (if any):
Further modify as follows:

PRESS BOX. A ~~limited-size~~ structure attached to ~~tiered~~ seating intended for limited use.

404.4 Press boxes. Press boxes shall be provided with the required means of egress in accordance with the building code except as permitted by Section 404.4. Security, audio and camera platforms ~~with limited access~~ restricted to authorized personnel shall be permitted to be accessed by a fixed ladder or an alternating tread device complying with the International Building Code.

408.1 Required guards. Guards shall be provided in the following areas.

1. Along open-sided walking surfaces, cross aisles, stepped aisles, ramps and landings of tiered seating areas which are located more than 30 inches (762 mm) above the floor or grade below. Such guards shall be not less than 42 inches (1067 mm) high, measured vertically above the leading edge of the tread, adjacent walking surface or adjacent bench seat.
   Exception: A guard is not required where the tiered seating is located adjacent to a wall and the space between the wall and the tiered seating is less than 4 inches (102 mm).
2. Where an elevation change of 30 inches (762 mm) or less occurs between a cross aisle and the adjacent floor or grade below, guards not less than 26 inches (660 mm) above the aisle floor shall be provided.
   Exception: Where the backs of seats on the front of the cross aisle project 24 inches (610 mm) or more above the adjacent floor of the aisle, a guard need not be provided.
3. A guard shall be provided for the full width of an aisle where the lowest point of the aisle is more than 30 inches (762 mm) above the floor or ground below. The guard shall be a minimum of 36 inches (914 mm) high and shall provide a minimum 42 inches (1067 mm) measured diagonally between the top of the rail and the nosing of the nearest aisle step.
4. Unless subject to the requirements of Item 3, a guard with a minimum height of 26 inches (660 mm) shall be provided where the floor or footboard elevation is more than 30 inches (762 mm) above the floor or grade below and the guard would otherwise interfere with the sightlines of immediately adjacent seating.
5. Guards shall be required ~~around the perimeter~~ at the edges of security, audio and camera platforms ~~which are~~ where the platform is located more than 30 inches (762 mm) above the floor or grade below.

Committee Reason: The modification to the definition of press box was for consistency with the tiered seating revision in IS-BLE 02-21-22 AM; and because the phrase 'limited-size' is unnecessary and not enforceable language.
The modification to Section 404.3 provided a clearer understanding of the restricted access to these spaces.
The modification to the new guard requirement for platforms is to make clear that guards are expected to reduce the chance of falls for the operators of equipment.
This proposal would provide a more complete package for what is expected for press boxes that are accessed from bleachers.

Report for *IS-BLE 04-04-23*

Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***

REPORT OF HEARING:
Modification (if any):
Further modify as follows:

PRESS BOX. A ~~limited-size~~ structure attached to ~~tiered~~ seating intended for limited use.

404.3 Press boxes. Press boxes shall be provided with the required means of egress in accordance with the building code except as permitted by Section 404.4. Security, audio and camera platforms ~~with limited access~~ restricted to authorized personnel shall be permitted to be accessed by a fixed ladder or an alternating tread device complying with the International Building Code.

408.1 Required guards. Guards shall be provided in the following areas.

1. Along open-sided walking surfaces, cross aisles, stepped aisles, ramps and landings of tiered seating areas which are located more than 30 inches (762 mm) above the floor or grade below. Such guards shall be not less than 42 inches (1067 mm) high, measured vertically above the leading edge of the tread, adjacent walking surface or adjacent bench seat.
   Exception: A guard is not required where the tiered seating is located adjacent to a wall and the space between the wall and the tiered seating is less than 4 inches (102 mm).
2. Where an elevation change of 30 inches (762 mm) or less occurs between a cross aisle and the adjacent floor or grade below, guards not less than 26 inches (660 mm) above the aisle floor shall be provided.
   Exception: Where the backs of seats on the front of the cross aisle project 24 inches (610 mm) or more above the adjacent floor of the aisle, a guard need not be provided.
3. A guard shall be provided for the full width of an aisle where the lowest point of the aisle is more than 30 inches (762 mm) above the floor or ground below. The guard shall be a minimum of 36 inches (914 mm) high and shall provide a minimum 42 inches (1067 mm) measured diagonally between the top of the rail and the nosing of the nearest aisle step.
4. Unless subject to the requirements of Item 3, a guard with a minimum height of 26 inches (660 mm) shall be provided where the floor or footboard elevation is more than 30 inches (762 mm) above the floor or grade below and the guard would otherwise interfere with the sightlines of immediately adjacent seating.
5. Guards shall be required ~~around the perimeter~~ at the edges of security, audio and camera platforms ~~which are~~ where the platform is located more than 30 inches (762 mm) above the floor or grade below.

Committee Reason: The modification to the definition of press box was for consistency with the tiered seating revision in IS-BLE 02-21-22 AM; and because the phrase 'limited-size' is unnecessary and not enforceable language.
The modification to Section 404.3 provided a clearer understanding of the restricted access to these spaces.
The modification to the new guard requirement for platforms is to make clear that guards are expected to reduce the chance of falls for the operators of equipment.
This proposal would provide a more complete package for what is expected for press boxes that are accessed from bleachers.

PUBLIC COMMENT- FIRST DRAFT:
Proponent:
Desired Action:
Modification:
Reason:

Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***

REPORT OF HEARING – FIRST DRAFT
Modification (if any):
Committee Reason:

PUBLIC 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:

IS-BLE 04-05-23
ICC 300 405.6

Proponent: ICC 300 Committee

405.6 Dead ends. The length of a dead-end aisle shall not exceed ~~16 rows~~ 20 feet (6096 mm) in nonsmoke-protected assembly seating and 21 rows in smoke-protected assembly seating.

Exceptions: Dead-end aisles terminating at a cross aisle or vomitory providing access to an exit at only one end and complying with any one of the following shall be permitted.

1. In assembly seating without smoke protection, dead-end aisles exceeding ~~16 rows~~ 20 feet (6096 mm) are permitted where seats beyond the ~~16th row~~ 20 feet (6096 mm) are no more than 24 seats from another aisle, measured along a row of seats having an aisle accessway with a minimum clear width of 12 inches (305 mm) plus 0.6 inch (15.2 mm) for every additional seat beyond seven where seats have backrests or beyond ten where seats are without backrests in the row.
2. For smoke-protected or open-air assembly seating, dead-end aisles exceeding 21 rows are permitted where seats beyond the twenty-first row are no more than 40 seats from another aisle, measured along a row of seats having an aisle accessway with a minimum clear width of 12 inches (305 mm) plus 0.3 inch (7.6 mm) for each additional seat beyond seven where seats have backrests or beyond ten where seats are without backrests in the row.
3. Dead-end aisles serving fewer than 50 seats shall be permitted in accordance with Section 407.4.1.

Reason: There were questions about if the information on dead-end aisles needed to be added to the ICC 300. The 16 rows was revised, but the 21 rows was not changed.

2024 IBC

(E108-21) AS

1030.8 Common path of egress travel. The *common path of egress travel* for a room or space used for assembly purposes having fixed seating shall not exceed 30 feet (9144 mm) from any seat to a point where an occupant has a choice of two paths of egress travel to two *exits*.

Exceptions:

1. For areas serving less than 50 occupants, the *common path of egress travel* shall not exceed 75 feet (22 860 mm).
2. For *smoke-protected* or *open-air assembly seating*, the *common path of egress travel* shall not exceed 50 feet (15 240 mm).

(E109-21) AS; (E110-21) AS

1030.9.5 Dead-end aisles. Each end of an *aisle* shall be continuous to a cross *aisle*, foyer, doorway, vomitory, concourse or *stairway* in accordance with Section 1030.9.7 having access to an *exit*.

Exceptions:

1. Dead-end *aisles* shall be not greater than 20 feet (6096 mm) in length.
2. Dead-end *aisles* longer than ~~16 rows~~ 20 feet (6096 mm) are permitted where seats beyond the ~~16th row~~ 20 feet (6096 mm) dead-end *aisle* are not more than 24 seats from another *aisle*, measured along a row of seats having a minimum clear width of 12 inches (305 mm) plus 0.6 inch (15.2 mm) for each additional seat above seven in the row where seats have backrests or beyond 10 where seats are without backrests in the row.
3. Dead-end aisles serving fewer than 50 seats shall be permitted in accordance with Section 1030.8.
4. ~~3.~~ For *smoke-protected* or *open-air assembly seating*, the dead-end *aisle* length of vertical *aisles* shall not exceed a distance of 21 rows.
5. ~~4.~~ For *smoke-protected* or *open-air assembly seating*, a longer dead-end *aisle* is permitted where seats beyond the 21-row dead-end *aisle* are not more than 40 seats from another *aisle*, measured along a row of seats having an *aisle* accessway with a minimum clear width of 12 inches (305 mm) plus 0.3 inch (7.6 mm) for each additional seat above seven in the row where seats have backrests or beyond 10 where seats are without backrests in the row.

E109-21

IBC: 1030.9.5(IFC:[BE]1030.9.5)

Proponents: William Conner, representing American Society of Theatre Consultants (bill@bcaworld.com)

2021 International Building Code

Revise as follows:

1030.9.5 Dead-end aisles. Each end of an *aisle* shall be continuous to a cross *aisle*, foyer, doorway, vomitory, concourse or *stairway* in accordance with Section 1030.9.7 having access to an *exit*.

Exceptions:

1. Dead-end *aisles* shall be not greater than 20 feet (6096 mm) in length.
2. Dead-end *aisles* longer than ~~16 rows~~ 20 feet (6096 mm) are permitted where seats beyond the ~~16th row~~ 20 feet (6096 mm) dead-end *aisle* are not more than 24 seats from another *aisle*, measured along a row of seats having a minimum clear width of 12 inches (305 mm) plus 0.6 inch (15.2 mm) for each additional seat above seven in the row where seats have backrests or beyond 10 where seats are without backrests in the row.
3. For *smoke-protected* or *open-air assembly seating*, the dead-end *aisle* length of vertical *aisles* shall not exceed a distance of 21 rows.
4. For *smoke-protected* or *open-air assembly seating*, a longer dead-end *aisle* is permitted where seats beyond the 21-row dead-end *aisle* are not more than 40 seats from another *aisle*, measured along a row of seats having an *aisle* accessway with a minimum clear width of 12 inches (305 mm) plus 0.3 inch (7.6 mm) for each additional seat above seven in the row where seats have backrests or beyond 10 where seats are without backrests in the row.

Reason: Currently, dead end aisles are permitted to be 20' or less; or 16 rows or more. (In an auditorium 20 feet is typically 5 or 6 rows; 16 rows is typically 50 to 60 feet.) This change is to permit more than 5 or 6 rows and fewer than 16 or more rows to be served by a dead end aisle; and delete the overly permissive 16 or more without increasing the width of aisle and aisle accessways. This is consistent with 1029.8 common path of travel requirements. (Editorially it would seem better code if instead of repeating the increase in widths here, it simply referenced a modified 1029.8 instead of repeating similar but not equal requirements.)

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This should not change the typical assembly seating layouts. This is a more specific requirement.

E109-21

Committee Action: **As Submitted**

Committee Reason: This proposal was approved as it fixes a hole in the code and provides consistency by providing the length versus number of rows. Theater designers spoke in support and stated that this is common design practice. (Vote: 13-0)

E110-21

IBC: 1030.9.5 (IFC:[BE]1030.9.5)

Proponents: William Conner, representing American Society of Theatre Consultants (bill@bcaworld.com)

2021 International Building Code

Revise as follows:

1030.9.5 Dead-end aisles. Each end of an *aisle* shall be continuous to a cross *aisle*, foyer, doorway, vomitory, concourse or *stairway* in accordance with Section 1030.9.7 having access to an *exit*.

Exceptions:

1. Dead-end *aisles* shall be not greater than 20 feet (6096 mm) in length.
2. Dead-end *aisles* longer than 16 rows are permitted where seats beyond the 16th row dead-end *aisle* are not more than 24 seats from another *aisle*, measured along a row of seats having a minimum clear width of 12 inches (305 mm) plus 0.6 inch (15.2 mm) for each additional seat above seven in the row where seats have backrests or beyond 10 where seats are without backrests in the row.
3. Dead-end aisles serving fewer than 50 seats shall be permitted in accordance with Section 1030.8.

~~3.~~ 4. For *smoke-protected* or *open-air assembly seating*, the dead-end *aisle* length of vertical *aisles* shall not exceed a distance of 21 rows.

~~4.~~ 5. For *smoke-protected* or *open-air assembly seating*, a longer dead-end *aisle* is permitted where seats beyond the 21-row dead-end *aisle* are not more than 40 seats from another *aisle*, measured along a row of seats having an *aisle* accessway with a minimum clear width of 12 inches (305 mm) plus 0.3 inch (7.6 mm) for each additional seat above seven in the row where seats have backrests or beyond 10 where seats are without backrests in the row.

Reason: This added exception permits a low number of seats to be served by a longer dead end aisle as has been the case and is consistent with 1030.8 common path of travel for fewer than 50 and general egress requirements.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This will increase options in theater layouts.

E110-21

Committee Action: **As Submitted**

Committee Reason: This proposal was approved as the new exception is has minimal occupants and a common path of travel distance that is reasonable and provides design options. (Vote: 13-0)

Committee Action: No action
Modification (if any):
Committee Reason:

Notes 2-27-2023: Not needed. Leave as is.

Report for *IS-BLE 04-05-23*		
Committee decision: No action	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
REPORT OF HEARING:		
Modification (if any):		
Committee Reason:		
PUBLIC COMMENT- FIRST DRAFT:		
Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		
Committee Reason:		
PUBLIC 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:		

IS-BLE 04-06-23
ICC 300 Table 407.5

Proponent: ICC 300 Committee

TABLE 407.5
AISLE ACCESSWAYS IN SMOKE-PROTECTED OR OPEN-AIR ASSEMBLY SEATING

~~TOTAL~~ NUMBER OF SEATS IN THE SMOKE-PROTECTED OR OPEN-AIR ASSEMBLY OCCUPANCY	MAXIMUM NUMBER OF SEATS PER ROW PERMITTED TO HAVE A MINIMUM 12-INCH CLEAR WIDTH AISLE ACCESSWAY			
	Aisle or doorway at both ends of row		Aisle or doorway at one end of row only	
	Seats with backrests	Seats without backrests	Seats with backrests	Seats without backrests
Less than 4,000	14	21	7	10
4,000 to 6,999	15	22	7	10
7,000 to 9,999	16	23	8	11
10,000 to 12,999	17	24	8	11
13,000 to 15,999	18	25	9	12
16,000 to 18,999	19	26	9	12
19,000 to 21,999	20	27	10	13
22,000 and greater	21	28	11	14

Reason: Coordination with IBC E105-18

E105-18
IBC: TABLE 1029.13.2.1, (IFC[BE] TABLE 1029.13.2.1)

Proponents: Kevin Scott, representing KH Scott & Associates LLC (khscottassoc@gmail.com)

2018 International Building Code

Revise as follows:

TABLE 1029.13.2.1 SMOKE-PROTECTED OR OPEN-AIR ASSEMBLY AISLE ACCESSWAYS

~~TOTAL~~ NUMBER OF SEATS IN	THE SMOKE-PROTECTED OR	OPEN-AIR ASSEMBLY SEATING		
Aisle or doorway at both	**ends of row**		**Aisle or doorway at one end of row only**	
Seats with backrests	**Seats without backrests**		**Seats with backrests**	**Seats without backrests**
Less than 4,000	14	21	7	10
4,000 to 6,999	15	22	7	10
7,000 to 9,999	16	23	8	11
10,000 to 12,999	17	24	8	11
13,000 to 15,999	18	25	9	12
16,000 to 18,999	19	26	9	12
19,000 to 21,999	20	27	10	13
22,000 and greater	21	28	11	14

For SI: 1 inch = 25.4 mm.

Reason: This proposal is editorial and only for clarification.
The first entry in the table is clear that is applies to less than 4,000. But the following entries only indicate a single value, with no indication of whether the number of seats must be exactly that number or not. Based on the Heading for the first column which states "Total Number of Seats...", you could apply both "Less than 4,000" and "4,000" to a facility with 3,500 seats. This obviously was not the intent.

This proposal fills in the gaps and leaves no question as to how to apply the values in the table.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
This is editorial and does not change the application of the code requirements.

E105-18

Committee Action: **As Submitted**

Committee Reason: This revision clarifies what happens within the range of seats. (Vote 14-0)

Committee Action:
Modification (if any):
Committee Reason:

2-27-2023 Notes: Not needed. Understandable with current text. Does not follow typical format of other tables.

Report for *IS-BLE 04-06-23*		
Committee decision: No action	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
REPORT OF HEARING:		
Modification (if any):		
Committee Reason:		
PUBLIC COMMENT- FIRST DRAFT:		
Proponent:		
Desired Action:		
Modification:		
Reason:		
Committee decision: AS/AM/D	***Committee Vote at Meeting:***	***Committee Vote on Ballot:***
REPORT OF HEARING – FIRST DRAFT		
Modification (if any):		
Committee Reason:		
PUBLIC 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:		