Summary of Second Public Review Responses on BSR E1.62, Minimum specifications for mass-produced portable platforms, ramps, stairs, and choral risers for live performance events with resolutions approved at the 26 January 2019 working group meeting

Referenced document: BSR E1.62, Minimum specifications for mass-produced portable platforms, ramps, stairs, and choral risers for live performance events (document number FL/2017-8012r5)

ANSI public review period: 2 November through 17 December 2018

Question: Do you recommend that the standards committee accept BSR E1.62, Minimum specifications for mass-produced portable platforms, ramps, stairs, and choral risers for live performance events (document number FL/2017-8012r5), as an American National Standard, that its requirements are not too lax, too onerous, or too vague, nor that it would unreasonably negatively impact materially affected parties in the entertainment industry? Please indicate "Yes" (accept it), "Yes with comments," or "No with reasons" (don't accept it).

Response summary:

Person	Company or organization	Yes	Yes with comments	No with reasons
Bryan H. Ackler	Bryan H. Ackler		X	

Response comments and resolutions:

#	Commenter	Section cited	Comment or reason	Resolution
1	BHA	1 Scope	Stair units and ramps can be separate, please add the "oxford comma" after the word "units" so the sentence reads: . . .platforms, stair units, and ramps used. . .	Accept
2	BHA	8.2.1 Audience Railing	Both Guardrail paragraphs describe a force applied in any direction. If the load is applied in an upward direction does this imply that the guardrails shall be latched into the supporting structure? Is this attachment method other than gravity, mass, and friction addressed somewhere in referenced standards?	Make no change; none suggested. This standard does not specify an attachment method, nor do the referenced standards. The upward load specification is a simple way to assure that a person in a crowd can't easily lift a guardrail out of his way.
3	BHA	8.3.1 Standard Guardrail	Both Guardrail paragraphs describe a force applied in any direction. If the load is applied in an upward direction does this imply that the guardrails shall be latched into the supporting structure? Is this attachment method other than gravity, mass, and friction addressed somewhere in referenced standards?	Make no change; none suggested. This standard does not specify an attachment method, nor do the referenced standards. The upward load specification is a simple way to assure that a guardrail can't be bumped out of the way.

#	Commenter	Section cited	Comment or reason	Resolution
4	BHA	6.2 Surface finish	Walking services are noted as free from sharp edges, but should we not make exception for mass produced serrated metal decks and planking which might be considered unacceptable by some AHJ or do we went to intentionally exclude such materials? 	Make no change. The products shown in the pictures are used on construction scaffolding and in some industrial spaces, but we can find no portable grandstands, choral risers, seating risers, drum risers, or stage platforms that use them on the market. They would be hazardous to people wearing high heels or barefoot, and would be painful to kneel or to sit on. Music stands, mic stands, tables, and chairs would not stably rest on them. A company could make and market portable choral risers with such decking, but would not be able to truthfully say it complies with E1.62. An AHJ could permit its use or ban it. E1.62 does not restrict what an AHJ can do.

Pete Menzel (Wenger Corp.) comments on BSR E1.62 and responses
Approved at the 26 January 2019 working group meeting

Clause	Comment	Responses to discuss
6.1	Fire behavior could be stated clearer. Should say "equal to or "better" that class B.	Change to “Class B or Class A” for the less ambiguity. Class A is better than Class B in that the flame spread index is a lower number, but someone only looks at the flame spread index, is 20 better than 50? If we simply specify what is okay, we don't have to worry about what is “better.”
6.2 Surface Finish	Should include a statement regarding coefficient of friction (COF). OSHA states .5. ADA states .6 for walking surfaces and .8 for ramps.	Accept. The ADA specs shall be included. It is conceivable that a slipperier surface would be needed for a special application, but that would be unusual and could be provided by adding a more slippery cover for that special installation
6.2	If painted surfaces are allowed, we do many this way. The should withstand the removal of Gaff tap or equal without failure.	Make no change. This is a desirable feature but is beyond the problem this standard is trying to address. The standard is being written so that when someone buys a generic portable platform system that complies with it, there is a good chance it can be used in accordance with NFPA 102, ICC 300, or Section 410 of the IBC. Those standards don't require a painted surface to withstand the removal of gaffer's tape. Furthermore, there is not standard for the tenacity of tape adhesive or how paint reacts to it, or a recognized way to specify this. It is possible that one brand of tape can be applied and removed with no trouble, but another will tear off the paint surface. Some tape will peel off the outer veneer of raw plywood.
6.2	Second paragraph. Change the word "metal" to "steel". This would allow the use of mill finished aluminum.	Make no change. The clause does not prohibit the use of mill finished aluminum. The sentence says “Corrosion-prone parts of metal must be protected by paint or other coatings.” It is doubtful that anyone would look at an aluminum frame and think that it is “corrosion-prone” and thus needing paint. “Mill Finish” aluminum has a very light oxide film that protects the surface from corrosion in most cases. If pressed, a manufacturer can argue that “mill finish” thus complies in that the aluminum is protected by a coating. This sentence is a translation from DIN 15921, the German standard for aluminum-framed platforms, and German platforms in general do not have painted aluminum frames. This sentence in clause 4.1.4 of DIN 15921-2015 reads: “Korrosionsgefährdete Teile aus Metall müssen durch Anstrich oder andere Beschichtungen geschützt sein.”

6.3.2 Deflection	Change maximum permissible load to 100 psf.	Accept in principle. Make it read ". . . with a 100 pound point load (4.8 kN) at the edge of one unit and no load on the adjacent one." If the load is specified as a pressure of 100 pounds per square foot, 11 pounds applied to square 4" by 4" could be the test. That's not much of a load.
6.3.3.21.1- Proof Test Load	IBC section 1710 calls for 2 times the design load regardless of the material used in the structural members.	The multiplication factors here for steel and aluminum are taken from DIN 15921. The IBC may specify something higher, but experience shows that DIN 15921 is adequate. Note that the International Building Code is generally concerned with buildings, which are usually one-off products and are not mass-produced. Design factors are generally higher with one-off, custom products than with mass-produced products. Someone might argue that Americans will have to comply with the IBC. In that case, the reply can be that the test procedures of 1710.3.1 apply only in the absence of "test procedures, load factors and acceptance criteria" in "applicable referenced standards" per clause 1710.2. The IBC doesn't reference the DIN standard, and can't reference E1.62 because it's not a standard yet, so neither can be an IBC "referenced standard," but they are both reasonable arguments for proof test loads less than double the load.
7.1.2	Vertical Point Load- Too severe. Higher than necessary for narrow portable stairs (36" wide). Recommend 500 lbs.	Make no change. The specification is taken from 29 CFR 1910.25(b)(6), as the appendix note says. This is a point load specification, and is equal to the point loading required for library reading rooms, and half that required for office building corridors per the 2015 New York State building code. It's a fairly big number, but the stairway may have to support someone hopping down the stairs or stumbling and landing with straight legs.
7.2	Ramps - ADA allows 1:12 for barrier free access. Although desirable, 1:16, for the person in the wheel chair makes the ramp easier. It makes the ramp much longer and expensive. The market does not want to pay for it.	Make no change. The slope specifications are copied from a translation of DIN 15921:2015, but the 1:8 (12.5%) maximum is consistent with clause 16.2.5.6.5.1 (2) in NFPA 5000-2018. Per that clause, any assembly occupancy aisle steeper than 1:8 is required to be a stairway. The 1:16 slope for wheelchair access is lower than the 1:12 stated in clause 405.2 in the Department of Justice's *2010 ADA Standards for Accessible Design.* However, that document also says, "Where possible, designers and operators are encouraged to provide ramps with a slope less than the 1:12 maximum." (Advisory 240.2.1). It is understood that the market does not want to pay for easy access for people with mobility problems. This standard does not require them to do so.

9.1.7	Portable Unit Labeling - Maximum vertical deflection and Horizontal deflection are functions of span and elevation respectively. We make many sizes and elevations and don't want to get that specific on a label. We don't have a problem sharing this info. We can print labels on demand. I am afraid our assembly people will mix them up. Would rather see this referenced to be found in the Operating Instructions.	Moved to 9.2.1 and change that clause to “Operating instructions and user information”