U.S. CONSUMER PRODUCT SAFETY COMMISSION
5 Research Place, Rockville MD 20850

October 25, 2018

TRANSMITTED VIA EMAIL
Mr. Tim Davis
A-Z Playground Safety, Inc.
1840 W. Seldon Way
Phoenix, AZ 85021

Dear Mr. Davis:

Thank you for contacting the U.S. Consumer Product Safety Commission (CPSC) staff regarding the *Public Playground Safety Handbook* (publication #325) and how to determine the fall height of a composite structure. Please note that, the comments in this letter are those of the CPSC staff and have not been reviewed or approved by, and may not necessarily reflect the views of, the Commission.

CPSC's recommendations for fall heights and use zones for composite structures can be found on page 41, section 5.3.9 of the CPSC's *Public Playground Safety Handbook*:

> 5.3.9 Fall height and use zones for composite structure
> When two or more complementary play components are linked together in a composite structure (e.g., combination climber, slide, and horizontal ladder), the use zone should extend a minimum of 6 feet from the external perimeter of the structure (see Figure 28). Where slides are attached to a platform higher than 6 feet from the protective surfacing, the use zone may need to extend further in front of the slide (see §5.3.6.5).

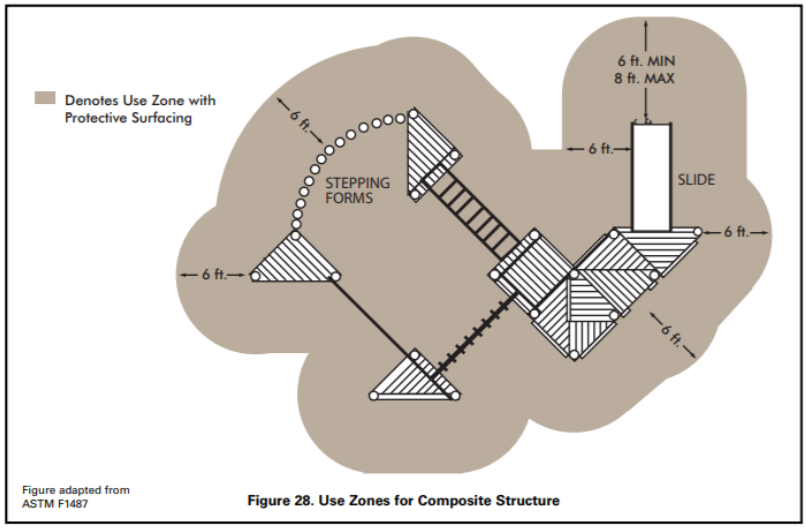

Figure 28. Use Zones for Composite Structure

The boundary and the impact attenuation characteristics of the protective surfacing used within

the use zone were intended to be associated with the individual play component. For example, Figure 28 shows that the use zone of the slide can extend beyond 6 ft. and up to 8 ft. (for slides taller than 6 ft.). The surfacing for the area around and under a 6 ft. high slide platform would require more impact attenuation (depth of loose fill) than the surfacing around the 1ft. high stepping forms.

CPSC staff recognizes that this section of the *Public Playground Safety Handbook* does not clearly specify how to determine the fall height for a composite structure. CPSC staff recommends referring to the following sections in ASTM 1487-07$^{a\varepsilon 1}$ for a more technical discussion of the use zone (section 3.1.50.1) and how it applies for a composite play structure (section 9.7.1):

> 3.1.50.1 *Discussion*—Other than the equipment itself, the use zone shall be free of obstacles that children could run into or fall on top of and thus be injured. The surface area within the use zone shall meet the minimum impact attenuation requirements of Specification F 1292 from the maximum fall height.
>
> 9.7.1 The boundary of the use zone for a composite play structure shall be composed of those use zones that have been established for each individual play structure that, when joined together, comprise the composite play structure.

ASTM 1487-07$^{a\varepsilon 1}$, section 3.1.50.1 states that the use zone contains impact attenuation surfacing for the fall height of the equipment. ASTM 1487-07$^{a\varepsilon 1}$ section 9.7.1 states that for a composite play structure, the use zone (and by definition the fall height) is established for each individual play component.

CPSC staff welcomes the opportunity to clarify the recommendations contained in the *Public Playground Safety Handbook.* CPSC staff agrees with ASTM 1487-07$^{a\varepsilon 1}$ that multiple fall heights are acceptable on a composite structure. In the areas of a composite structure with overlapping fall heights, the greater fall height would be used.

We hope this information answers your inquiry.

Sincerely,

Kevin K. Lee
Mechanical Engineer
Division of Mechanical and Combustion