Safety Benefits Inc.

Inspection of Community Playground
Buffalo Gap SD
7/11/2024

Safety Benefits, Inc. (SBI) was asked by the City of Buffalo Gap to conduct an inspection of a playground within the City. Todd and Tracie Everson (the inspectors) conducted this inspection. Both inspectors hold the designation of Certified Playground Safety Inspector through the National Recreation and Park Association. The playground was inspected using the recommendations in the Consumer Product Safety Commission Handbook for Public Playground Safety ("CPSC Handbook") as a guide.

The goal of a playground evaluation is not to remove all risk (aka FUN!). Rather following recommendations within the CPSC Handbook is done in an effort to minimize the likelihood of fatal or life altering injuries to children using the playground equipment.

On July 11, 2024, the inspectors met with Glenn Scofield, President of the Buffalo Gap Board of Trustees, and Herman Wells of the Buffalo Gap Playground Committee to conduct this inspection.

COMPOSITE STRUCTURE

PHOTO 1

PHOTO 2

PHOTO 3

CPSC Handbook (pg. 13) 2.6 ASSEMBLY AND INSTALLATION

- Strictly follow *all* instructions from the manufacturer when assembling and installing equipment.
- Secure anchoring is a key factor to stable installation, and the anchoring process should be completed in *strict* accordance with the manufacturer's specifications.

FINDINGS

- The composite structure was manufactured by Landscape Structure and reportedly provided to Buffalo Gap by the City of Hermosa SD. Upon inspection it is clear that the manufacturer's design has been altered/modified. This is of concern as such modifications generally nullify any liability protections that may have been available from the manufacturer.

- PHOTO 1 The legs of the structure were cut off and 4x4 timbers used to anchor the structure to the ground. The slide is supported by a 4x4 timber as well.
- PHOTO 2 The structure is too close to the overhead power line. A child could jump from the structure to the power line.
- PHOTO 3 The structure has broken pieces that could result in harm to a child.
- It is recommended that one of the following actions be taken:
    1. Remove this structure from the playground. If this course of action is taken, it is further recommended that it be effectively blocked from use until it is removed from the playground.
    2. Contact the manufacturer for replacement parts and properly repair the structure. If this course of action is taken, it is further recommended that the structure be effectively blocked from use until it is repaired in compliance with the recommendations of the CPSC Handbook. If repaired and use is continued, the structure needs to be relocated as it is currently too close to the overhead power line.

MERRY-GO-ROUND

PHOTO 4

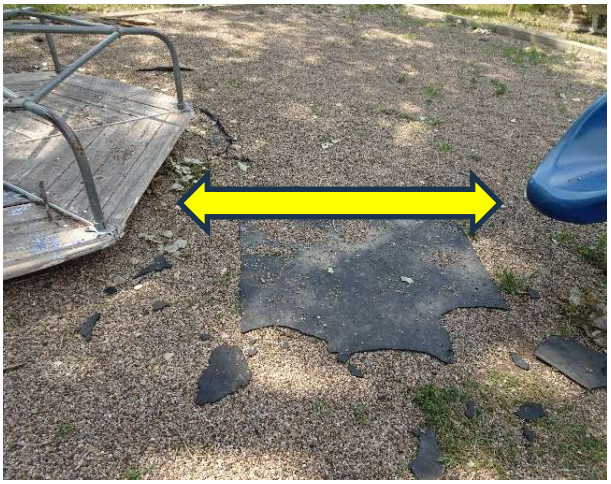

PHOTO 5

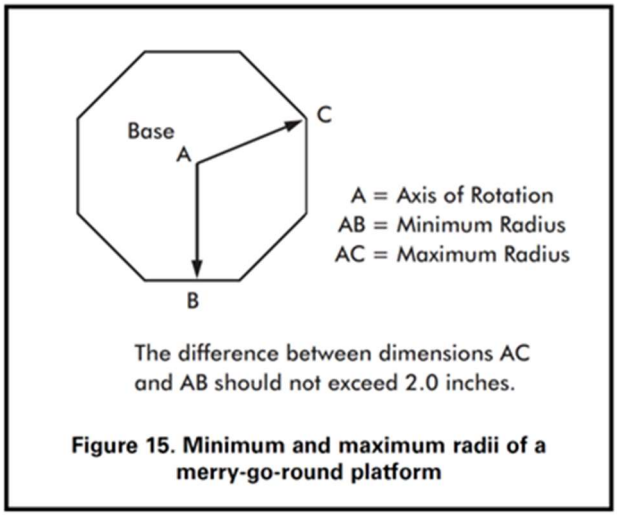

Figure 15. Minimum and maximum radii of a merry-go-round platform

FIGURE 1

CPSC Handbook (pg. 30) 5.3.4 MERRY-GO-ROUNDS

The following recommendations apply when the merry-go-round is at least 20 inches in diameter.

- The difference between the minimum and maximum radii of a non-circular platform should not exceed 2.0 inches (FIGURE 1).
- A means should be provided to limit the peripheral speed of rotation to a maximum of 13 ft/sec.

CPSC Handbook (pg. 31) 5.3.4.1 USE ZONE

- The use zone should extend a minimum of 6 feet beyond the perimeter of the platform.

FINDINGS

- PHOTO 4 The difference between the minimum and maximum radii of the platform was measured to be 9 inches in places.
- PHOTO 5 The use zone between the nearby slide exit and the merry-go-round is less than 6 feet.
- Inspection of the merry-go-round confirmed there is no means (governor, brake, etc.) to limit the peripheral speed of rotation.
- It is recommended that this merry-go-round be removed.

SLIDE

PHOTO 6

PHOTO 7

PHOTO 8

PHOTO 9

CPSC Handbook (pg. 32) CPSC 5.3.6 SLIDES

Regardless of the type of slide, avoid using bare metals on the platforms, chutes, and steps. When exposed to direct sunlight the bare metal may reach temperatures high enough to cause serious contact burn injuries in a matter of seconds. Provide shade for bare metal slides or use other materials that may reduce the surface temperature such as, but not limited to, plastic or coated metal.

CPSC Handbook (pg. 15) 3.3.1 HEAD ENTRAPMENT

Head entrapment is a serious concern on playgrounds, since it could lead to strangulation and death. Certain openings could present an entrapment hazard if the distance between any interior opposing surfaces is greater than 3.5 inches and less than 9 inches.

CPSC Handbook (pg. 36) 5.3.6.7. ENTANGLEMENT HAZARD

Children have suffered serious injuries and died by getting parts of their clothing tangled on protrusions or gaps on slides. To reduce the chance of clothing entanglement:

- There should be no gaps at the tops of slides where the slide chute connects with the platform that can entangle clothing or strings.

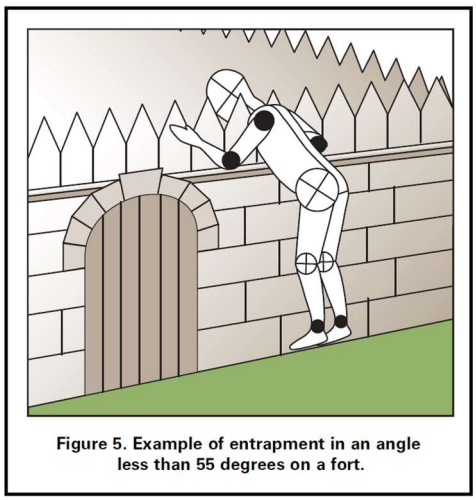

Figure 5. Example of entrapment in an angle less than 55 degrees on a fort.

FIGURE 2

CPSC Handbook (pg. 16) 3.3.2 PARTIALLY BOUND OPENINGS AND ANGLES

Children can become entrapped by partially bound openings, such as those formed by two or more playground parts (FIGURE 2).

- Angles formed by two accessible adjacent parts should be greater than 55 degrees unless the lowest leg is horizontal or below horizontal.

CPSC Handbook (33) pg. 5.3.6.2 SLIDE PLATFORM

All slides should be provided with a platform with sufficient length to facilitate the transition from standing to sitting at the top of the inclined sliding surface. The platform should:

- Be horizontal.
- Not have any spaces or gaps that could trap strings, clothing, body parts, etc. between the platform and the start of the slide chute.

FINDINGS

- PHOTO 6 The slide is metal, but shade is provided by trees in the playground.
- PHOTO 7 The distance of 7.5 inches between the slide and swing structure presents an entrapment hazard.
- PHOTO 8/FIGURE 2 The angled bar on the slide support creates a partially bound angle resulting in an entrapment hazard.
- PHOTO 9 There are gaps between the platform and slide structure creating an entanglement hazard.
- PHOTO 9 The slide platform between the ladder and the slide is not horizontal.
- It is recommended that this slide be removed.

SWINGS

PHOTO 10

CPSC Handbook (pg. 37) 5.3.8.1 GENERAL SWING RECOMMENDATIONS

- Swings should be suspended from support structures that discourage climbing.
- A-frame support structures should not have horizontal crossbars.

CPSC Handbook (pg. 38) 5.3.8.3.1 BELT SEATS USED WITHOUT ADULT ASSISTANCE

- To minimize the likelihood of children being struck by a moving swing, it is recommended that no more than two single-axis swings be hung in each bay of the supporting structure.

CPSC Handbook (pg. 6) 2.2.2 AGE SEPARATION

For playgrounds intended to serve children of all ages, the layout of pathways and the landscaping of the playground should show the distinct areas for the different age groups. This separation . . . will reduce the chance of injury from older, more active children running through areas filled with younger children with generally slower movement and reaction times.

FINDINGS

- PHOTO 10 There are more than 2 swings in the bay.
- PHOTO 10 There is a crossbar on the a-frame structure that may encourage climbing.
- PHOTO 10 The toddler swing is in the same bay as the school-age swings introducing a mixed use that is not recommended.
- It is recommended that the toddler swing be removed.

SEESAW

PHOTO 11

PHOTO 12

CPSC Handbook (pg. 16) 3.4 SHARP POINTS, CORNERS, AND EDGES
Sharp points, corners, or edges on any part of the playground or playground equipment may cut or puncture a child's skin. Sharp edges can cause serious lacerations if protective measures are not taken. To avoid the risk of injury from sharp points, corners and edges:

- Wood parts should be smooth and free from splinters.
- If steel-belted radials are used as playground equipment, they should be closely examined regularly to ensure that there are no exposed steel belts/wires.
- Conduct frequent inspections to help prevent injuries caused by splintered wood, sharp points, corners, or edges that may develop as a result of wear and tear on the equipment.

CPSC Handbook (pg. 14) 3.2 ENTANGLEMENT AND IMPALEMENT
Projections on playground equipment should not be able to entangle children's clothing nor should they be large enough to impale.

FINDINGS

- PHOTO 11 The boards on this seat are chipped. It is recommended that the seat be repaired to prevent user injury.
- PHOTO 12 The hand holds on the seesaw create an impalement hazard. The handle could poke a child in the eye or temple causing serious injury. It is recommended that the handle be retrofitted or replaced to eliminate this hazard.

GEODOME

PHOTO 13

CPSC Handbook (pg. 9) 2.4.2 SELECTING A SURFACING MATERIAL
Grass and dirt are not considered protective surfacing because wear and environmental factors can reduce their shock absorbing effectiveness

CPSC Handbook (pg. 25) 5.3.2.1.2 FALL HEIGHT
The fall height for climbers is the distance between the highest part of the climbing component and the protective surfacing beneath it.

CPSC Handbook (pg. 26) 5.3.2.1.4 USE ZONE
- The use zone should extend a minimum of 6 feet in all directions from the perimeter of the standalone climber.

FINDING
- PHOTO 13 The geodome sits on grass/dirt. It is recommended that proper surfacing material be installed beneath and in the use zone around the geodome.

OTHER

SURFACING

CPSC Handbook (pg. 8) 2.4 SURFACING
The surfacing under and around playground equipment is one of the most important factors in reducing the likelihood of life-threatening head injuries. A fall onto a shock absorbing surface is less likely to cause a serious head injury than a fall onto a hard surface.

See pages 8-11 of the CPSC Handbook for guidance on playground surfacing materials.

Table 2. Minimum compressed loose-fill surfacing depths

Inches	Of	(Loose-Fill Material)	Protects to	Fall Height (feet)
6*		Shredded/recycled rubber		10
9		Sand		4
9		Pea Gravel		5
9		Wood mulch (non-CCA)		7
9		Wood chips		10

* Shredded/recycled rubber loose-fill surfacing does not compress in the same manner as other loose-fill materials. However, care should be taken to maintain a constant depth as displacement may still occur.

FIGURE 3

FINDINGS
- The current surfacing throughout the playground is not of adequate depth. While pea gravel can be used as a loose fill surfacing material, the current depths due to the material compacting and areas of wear are not sufficient.
- It is recommended that proper surfacing be installed throughout the playground and appropriate maintenance (raking, tilling, etc.) be conducted as needed.

ACCESSIBILITY

CPSC Handbook (pg. 6) 2.2.1 ACCESSIBILITY
Special consideration should be given to providing accessible surfaces in a play area that meets the ASTM Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment, ASTM F1951. Equipment selection and location along with the type of protective surfacing are key components to ensuring the opportunity for children with disabilities to play on the playground.

FINDING
- With any playground renovation or improvement, the Americans with Disabilities Act (ADA) must be considered to ensure the playground complies with ASTM F1951.
- It is recommended that a qualified vendor be consulted when renovating this playground to ensure that accessibility to the playground itself and the structures/amenities within are addressed.

PICNIC TABLE

PHOTO 13

PHOTO 14

PHOTO 15

FINDING
While not addressed in the CPSC Handbook, a picnic table adjacent to the playground area was inspected. There are multiple sharp edges on the picnic table where one could get injured. It is recommended that this picnic table be removed.

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