



Playground Safety Solutions, LLC
9745 E. 158th Place
Brighton, CO 80602
Phone: 720-917-5739
Email: SafeToPlay@gmail.com

Randy Smith, Operations Division Supervisor
El Paso County Community Services Department
Parks Division
1802 Creek Crossing
Colorado Springs CO 80905

**Re: Fox Run Regional Park Playground Audits,
Oak Meadows and Pine Meadows**

Mr. Smith:

Thank you for giving us the opportunity to provide you with compliance audits of the playground equipment at parks located in Fox Run Regional Park. I congratulate you for making playground safety a priority and taking the necessary steps to ensure your playgrounds are safe.

The audits performed on these playgrounds are based on guidelines and standards provided by:

- U.S. Consumer Products Safety Commission (CPSC) Public Playground Safety Handbook
- American Society for Testing of Materials (ASTM F-1487-11) Standard Consumer Safety Performance Specifications for Playground Equipment for Public Use written for the manufacturing companies of playground products
- Department of Justice (DOJ) 2010 ADA Standards for Accessible Design

Please review the enclosed reports summarizing our findings from the site visits at the Oak Meadows and Pine Meadows playgrounds on **July 21, 2017**. Feel free to contact me should you have any questions.

Thank you,

Tony Jaramillo

Tony Jaramillo,
Certified Playground Safety Inspector
Playground Safety Solutions, LLC

Oak Meadows Playground

This playground has three separate play areas near to each other. One area has a small composite structure designed for children 2 to 5 years of age, the second area has a composite structure for 5 to 12 years of age, and the third area has a freestanding rock climbing structure. All are manufactured by GameTime. The safety surfacing material is engineered wood fiber, contained by concrete borders.



General Environment – Non Compliant

This playground is located approximately 160ft. from the parking lot and approximately 280ft. from a road. The parking lot would classify as a level III hazard. Fence and or barriers should be installed for playgrounds that are located within 200ft. of a hazard such as railroad tracks, bodies of water, streets, highways, roads, parking lots, electrical and other utility fixtures, and other similar life-threatening or debilitating features (ASTM 2049).

Materials and Manufacture – Compliant.

Playground equipment shall be manufactured and constructed only of materials that have demonstrated durability in the playground or similar outdoor setting. Any new material shall be documented or tested accordingly for durability by the playground equipment manufacturer. (ASTM 4.1). Equipment should be free of rust or chipping/peeling paint (CPSC 2.5.4)

1. The play structure is constructed mostly from steel that is powder coated and polyethylene plastic.

Hardware – Compliant

All fasteners connecting and covering devices shall be inherently corrosive resistant or be provided with a corrosive resistant coating (ASTM 4.2.1). They should not present any entanglement hazard, protrusion hazard, or sharp points and edges. Bolts should be tight and not loosen or be removable without the use of tools. There should not be any protruding bolts, exposing more than two threads beyond the end of the nut. (CPSC 3.2)

1. All hardware and fasteners appear to be corrosive resistant or coated.

Maintenance -

The designer or manufacturer of each play structure shall provide to the owner/operator clear and concise inspection, maintenance and repair instructions, including, but not limited to, what, when and how to inspect, maintain and repair (ASTM 13.1). A comprehensive maintenance program should be developed for each playground. The owner/operator shall establish and maintain records for each public use playground equipment area (ASTM 13.3; CPSC 4.1, 4.2, 4.4).

1. If not already developed, the owner of this play equipment should add this to their maintenance responsibilities.
2. There is a play component missing from a play panel on the 5-12 composite structure which allows the torso probe to pass through but not the head probe. This creates a head entrapment hazard.



3. Also on the 5-12 composite structure, the telescope is loose.



Surfacing – Non Compliant.

A shock-absorbing safety surface 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. However, some injuries from falls, including broken limbs, may occur no matter what playground surfacing material is used. Minimum loose-fill surfacing material depths, along with fall height, are provided by CPSC (2.4.2.2 Table 2)

1. Engineered wood Fiber should be a minimum of 9 inches deep to provide adequate fall protection. Around the 2-5 composite structure the depth of the engineered wood fiber safety surfacing is averaging 6 inches.

2. Around the 5-12 composite structure the safety surfacing depths vary greatly. Near its climbing wall it is at 9 inches, under the track ride it is 5½ inches, by the side step climber and overhead triangles it is 6½ inches, and at the slide exit it is only 2 inches.
3. Of most concern is the safety surfacing depth at the opening through the freestanding rock climbing structure. Handgrips are located over the opening and on up to over 8 feet, yet the safety surfacing is only 1½ inches directly below at the bottom of the opening. The rest of the rock climbing structure has depth 4½ - 5¾ inches.



Use Zones - Compliant

The use zone is the area under and around equipment onto which a child falling from or exiting from the equipment would be expected to land. These areas are designated for unrestricted circulation around the equipment. ASTM and CPSC Standards specify the required minimum use zone specific to each type of play component.

1. All equipment at this playground has the required use zones.

Labeling and Signage – Non Compliant

It is the responsibility of the owner/operator of the play equipment to post signs and/or labels that are readily visible to the intended viewer to alert the viewer in time to take appropriate action. The signs or labels may be placed on the equipment or be free standing. The information on the sign or label shall address the following information: 1) age appropriateness of the equipment, 2) recommendation of supervision, 3) strangulation warning message communicating the removal of helmets, drawstrings or accessories around the neck, 4) warning of hot play surfaces and/or surfacing, and 5) warning of the hazard of play equipment located over hard surfaces. (ASTM 14; CPSC 2.2.6)

1. The three structures have stickers attached with the age appropriateness, recommendation of supervision, and warning of equipment over hard surfaces. They do not provide the rest of the required information described above.

Accessibility/ADA (within the play areas only) – Non Compliant

Playgrounds shall comply with the DOJ 2010 Standard for Accessible Design.

1. This playground meets ADA compliance in regards to number of play components.
2. The concrete adjacent to the three play areas is slightly lower which is meant to provide access into the playgrounds, however unless the safety surface material is maintained to the level if the concrete there is an abrupt change in level that does not comply with accessibility requirements. A concrete ramp extending into the play areas is a better option for providing an accessible route into and out of the playground.



Guardrails and Barriers – Non Compliant

The height of elevated platforms and the age of intended user determine if a guardrail or barrier is necessary. Guardrail and barrier measurements are provided by CPSC (5.1.3 Table 4) and ASTM (7.5.6)

1. The entry stairs to the 5-12 composite play structure has guardrails. The top of the guardrail should be no less than 38 inches above the platform/step. It is at 31 inches.



Access and Egress - Compliant

Access to playground equipment takes many forms such as ladders, steps, stairways, rungs, climbers, etc. with each form having specific measurement requirements based on the age of the intended user. (CPSC 5.2.1 Table 6; ASTM 7.2 Table 2)

1. All access/egress are at correct measurements.

Free of Head Entrapment Hazards – Non Compliant

Openings present a head entrapment hazard if the distance between any interior opposing surfaces is greater than 3 ½ inches and less than 9 inches (CPSC 3.3.1, ASTM F1487 6.1). Head entrapment hazards could lead to strangulation and death. Two probes representing a child's torso and head are used to determine if the hazard exists. If the torso probe penetrates the opening, then the head probe must pass through as well.

1. One head entrapment hazard exists on the 5-12 composite structure where a play component is missing from a play panel.



Slides – Non Compliant

1. Slides should not have any spaces or gaps that could trap strings, clothing, etc. between the platform and the start of the slide chute (CPSC 5.3.6.2). The spiral slide has a gap at the top where the slide chute attaches to the platform.



Track Ride – Compliant

1. The hand gripping component is at the correct height for the age of intended user.

Glider – Non Compliant

1. This glider slide does not meet ASTM standards applicable to slides. CPSC has issued a recall to other play equipment manufactures due to multiple injuries. Other play equipment manufacturers have issued a recall on this type of play component and have instructed for the removal of the play component.



Climbers – Non Compliant

1. There is a rigid climber on the 2-5 composite structure. The second from the bottom rung is split/broken.



2. The rock climbing wall on the 2-5 composite structure is missing a handhold.



3. The rock climbing wall structure has a loose bolt at the top of the wavy end section, top level. It also has a cap missing from the first post at the front bottom.





Pine Meadows Playground

There is one play area with a large composite structure designed for children 2 to 12 years of age, a spring teeter, a tire swing, and two single bay swing structures (one has 2 belt seats and the other has 2 bucket seats). All equipment is manufactured by Little Tikes. The safety surfacing material is engineered wood fiber contained by a concrete border and there are also rubber tiles present.



General Environment – Non Compliant.

This playground is located approximately 75ft. from the parking lot and approximately 175ft. from a road. The parking lot would classify as a level II hazard. And the road would classify as a level III hazard. Fence and or barriers should be installed for playgrounds that are located

within 200ft. of a hazard such as railroad tracks, bodies of water, streets, highways, roads, parking lots, electrical and other utility fixtures, and other similar life-threatening or debilitating features (ASTM 2049).

Materials and Manufacture – Non Compliant

Playground equipment shall be manufactured and constructed only of materials that have demonstrated durability in the playground or similar outdoor setting. Any new material shall be documented or tested accordingly for durability by the playground equipment manufacturer. (ASTM 4.1). Equipment should be free of rust or chipping/peeling paint (CPSC 2.5.4)

1. There is peeling paint at the ends of the clatter bridge and at the entrance to the elbow slide.



2. Coating is peeling on the clatter bridge.



3. Infill panels cover the space between steps or platforms. There are several infill panels that are cracked along the perimeter where bolts attach them to the structure. The cracked infill panels are located at the main entrance, the next level up at the main entrance, near the double slide, and near the chain climber.



Hardware – Non Compliant

All fasteners connecting and covering devices shall be inherently corrosive resistant or be provided with a corrosive resistant coating (ASTM 4.2.1). They should not present any entanglement hazard, impalement/laceration hazard, or sharp points and edges. Bolts should be tight and not loosen or be removable without the use of tools. There should not be any protruding bolts, exposing more than two threads beyond the end of the nut. (CPSC 3.2)

1. Below two decks there are protruding bolts where infill panels are attached.



2. The bolts at the bottom of the springs of the spring teeter are loose.



Maintenance -

The designer or manufacturer of each play structure shall provide to the owner/operator clear and concise inspection, maintenance and repair instructions, including, but not limited to, what, when and how to inspect, maintain and repair (ASTM 13.1). A comprehensive maintenance program should be developed for each playground. The owner/operator shall establish and maintain records for each public use playground equipment area (ASTM 13.3; CPSC 4.1, 4.2, 4.4).

1. If not already developed, the owner of this play equipment should add this to their maintenance responsibilities.
2. Clatter bridge sections are connected using rods. The rods are then held in place with pins. A few of the rods on this structure's clatter bridge are missing their pins so they are sliding out to one side. Another pin for this bridge is sticking up, and is sharp.



Surfacing – Non Compliant

A shock-absorbing safety surface 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. However, some injuries from

falls, including broken limbs, may occur no matter what playground surfacing material is used. Minimum loose-fill surfacing material depths, along with fall height, are provided by CPSC (2.4.2.2 Table 2)

1. Engineered wood fiber must be maintained at a minimum depth of 9 inches to provide adequate fall protection. The depth of the engineered wood fiber around the composite structure is 5 inches by the tall wavy slide, 8 inches by the short wavy slide, and averaging 7 inches around the rest of the structure. For the spring teeter and the bucket swings, the depth is adequate at 9 inches. Below the belt swing seats it is 6 inches and below the tire swing it is only 4 inches.
2. The rubber tiles are an approved safety surfacing as well; however, they are separating, peeling, and damaged.



3. Along the border, there is water leaking into the play area that has become mossy and muddy. The source of the leaking water should be repaired and that section of the safety surfacing cleaned and/or replaced.



Use Zones – Non Compliant

The use zone is the area under and around equipment onto which a child falling from or exiting from the equipment would be expected to land. These areas are designated for unrestricted circulation around the equipment. ASTM and CPSC Standards specify the required minimum use zone specific to each type of play component.

1. Between the spring teeter and the concrete border there should be a 6 foot use zone with safety surfacing material. It is only 5'6" to the concrete border from one seat and 5'7" to the border from other seat.



2. On the other side of the spring teeter it should have a 6 foot use zone and the slide should have a 6 foot use zone. Because a slide's use zones may not overlap with

another play structure, there should be a total of 12 feet between them. The spring teeter's use zone is encroaching into the slide's use zone.



3. The same issue exists between the support post of the tire swing and the slide. There should be 12 feet there between the tire swing support post and the slide bed.



4. Where the tire swing swings out during use requires a larger use zone. The use zone is equal to the vertical distance between the tire seat and the pivot plus 6 feet (CPSC 5.3.8.4.1). No other structure's use zone may overlap with a tire swing use zone. Between the composite structure, which requires a 6 foot use zone itself, and the tire swing there is only 12 feet. Not enough space was provided between the two structures; the composite structure's use zone encroaches the tire swing's use zone.



Labeling and Signage – Non Compliant

It is the responsibility of the owner/operator of the play equipment to post signs and/or labels that are readily visible to the intended viewer to alert the viewer in time to take appropriate action. The signs or labels may be placed on the equipment or be free standing. The information on the sign or label shall address the following information: 1) age appropriateness of the equipment, 2) recommendation of supervision, 3) strangulation warning message communicating the removal of helmets, drawstrings or accessories around the neck, 4) warning of hot play surfaces and/or surfacing, and 5) warning of the hazard of play equipment located over hard surfaces. (ASTM 14; CPSC 2.2.6)

1. There is a freestanding sign that recommends adult supervision and warns of hot equipment and surfaces. The other required information listed above is not provided on the sign or on any of the play components.

Accessibility/ADA – Non Compliant

Playgrounds shall comply with the DOJ 2010 Standard for Accessible Design. This playground meets ADA compliance in regards to number of play components.

1. A transfer platform is for individuals to transfer from a wheelchair or other mobility device onto the play structure. Although there is a transfer platform, there should be at least one means of support for transferring. This does not meet current standards.



2. The vertical change in level between the two safety surfaces should not exceed 1/2 inch.



Guardrails and Barriers – Non Compliant

The height of elevated platforms and the age of intended user determine if a guardrail or barrier is necessary. Guardrail and barrier measurements are provided by CPSC (5.1.3 Table 4) and ASTM (7.5.6).

1. A barrier by the spiral slide is cracked in the bottom corner.



2. By the wavy slide, a barrier is cracked in both bottom corners.



3. Guardrails and Barriers with an access opening to a play component should have an opening no greater than 15 inches (ASTM 7.5.5.2; CPSC 5.1.3). Nearly all of the openings with the loop styled handles exceed 15 inches.



4. The top of this curly climber should not exceed the height of the deck platform and it should also have a barrier with a 15 inch opening on the platform to access the climber.



Access and Egress – Non Compliant

Access to playground equipment takes many forms such as ladders, steps, stairways, rungs, climbers, etc. with each form having specific measurement requirements based on the age of the intended user. (CPSC 5.2.1 Table 6; ASTM 7.2 Table 2)

1. The final stepping surface of a climber shall not be above the platform it serves (ASTM 7.4.3). The final stepping rung of the arch climber is above the platform.



Free of Head Entrapment Hazards – Non Compliant

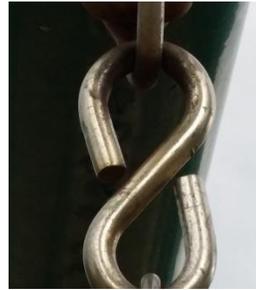
Openings present a head entrapment hazard if the distance between any interior opposing surfaces is greater than 3 ½ inches and less than 9 inches (CPSC 3.3.1, ASTM F1487 6.1). Head entrapment hazards could lead to strangulation and death. Two probes representing a child's torso and head are used to determine if the hazard exists. If the torso probe penetrates the opening, then the head probe must pass through as well.

1. There is a head entrapment hazard below each of the two bubble panels on the composite structure. Pictures below show where the torso probe was able to pass through.



Swings – Non Compliant.

1. S-hooks are considered closed if there is no gap or space greater than 0.04 inches (about the thickness of a dime). Open S-hooks can catch a child's clothing and present an entanglement/strangulation hazard (CPSC 5.3.8.1). S-hooks at the bottom of the chains of the red belt seat and at the top of the chains of the blue bucket seat are open.



2. Hangers require bearings, bushings, or other means of reducing friction and wear (ASTM 8.6.3). Bearings for the red belt seat and the blue bucket seat are worn. They should be replaced before the friction breaks through the hangers.
3. The swing hangers are rusted.



4. There is sharp metal at the ends of the green belt seat.



5. The chains on both belt swings and the yellow bucket swing are very heavy. Although there is not a standard specifically addressing the weight of the chain, there are standards on the weight of swing seats to reduce the severity of impact injuries. It is my professional opinion that the weight of the heavy duty chain used on these swings will increase impact injury severity. All playground manufacturers sell swing chain designed for the playground environment.

Tire Swing – Non Compliant.

1. U-bolts are used to attach the tire to the suspension chains. The u-bolts on this tire swing are worn extremely thin. The tire swing should be removed until the u-bolts can be replaced.



2. The chains for the tire swing are very heavy. Although there is not a standard specifically addressing the weight of the chain, there are standards on the weight of swing seats to reduce the severity of impact injuries. It is my professional opinion that the weight of the heavy duty chain used on this swing will increase impact injury severity. All playground manufacturers sell swing chain designed for the playground environment.

Slides – Compliant.

1. All slides have slopes and exits within correct ranges and there are no entanglement hazards found.

Upper Body Equipment – Compliant.

1. Because of the height of the two overhead ladders on the composite structure, it is assumed they are intended for users 5-12 years of age.

Spring Rocking Equipment – Compliant.

1. Seats are at correct heights and the handles are the correct length.