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Playground Review - 5 pages written/2 pages pictures
Butler School – Belmont, MA
Completed: October 21, 2011
John LaRue – CPSI - #8336-1112 (expires November, 2012)

The following report is accompanied by a group of photographs identified with a DSCO number as a reference. We are attaching this report and a Thumbnail Print Sheet electronically – and will place both originals in US Mail. If you would like to receive digital copies of all individual pictures please notify and we can do a bulk email via YOUSENDIT.

You may reference the U.S. Consumer Product Safety Commission Guidelines for public playgrounds – available at no charge on our resource web site – www.playgroundregs.com.

Butler School – Surfacing: material is a pea stone/gravel mix. This is heavily worn and heavily compacted – leaving a +/- 2" loose fill depth throughout entire play area. If pea-stone is to remain choice of surfacing:

- This should be dug up immediately and turned over (roto-tillar) – to maintain a 9" - 12" depth – but note USCPSC rates a 9" loose-fill depth of pea-stone to protect up to a 5' fall height (all of your swings – and any decks over 5' tall would not have adequate protection)
- March, 2012 – ADA regulations for play areas become enforceable – pea stone does not meet that regulation
- **ADA statement** - play surface and existing equipment does not meet current ADA regulations – new/altered play apparatus must be made compliant by the mandatory March 2012 date.

Pictures 888, 889, 890, 891, 893 and 894

- Two bay swings – 7' 6" height
- Swing Bearings are intact
- Infant Style swing passes torso probe
- "S" Hooks are not aligned properly – assuming a proper tool was not used to crimp these – results in an entanglement
- There are several bolts that exceed required length (protrusions) – all bolt threads should be trimmed to less than 1/8" beyond the nut (width of a nickel)

- Tree branches should be trimmed to be no closer than 7’ above the crossbar
- Safety zones
    - Compliant - To the right towards fence
    - Compliant – To the front facing circle monkey bars
    - Compliant – To the left towards other swings
    - Compliant – Infant seats towards rear fence
    - Non-Compliant – Belt Seats to the fence; need 15’ and have 13’)
- Loose-fill surface measures +/- 2”” – the remaining gravel-based surface is highly compacted and is non-resilient
- Excavated two random steel footings to concrete – did not note any steel deterioration

Pictures 892, 895, 896, 899 and 900

- Close-ended nuts make it impossible to check every bolt to ensure there is a proper thread length – based on visual review – unit is structurally sound and solid
- There is one bolt (895) that is not seated properly – extends and would called an entanglement hazard
- There is a loose bolt (899) that has a gap (string entanglement) – needs to be tightened and closed
- Safe Zones:
    - Compliant – facing swings
    - Compliant – facing fence
    - Compliant – facing large wood climber
    - Non-Compliant – facing the 4 plastic pod/seats (7.6” is measure/need 9’)
- Excavated two random steel footings to concrete – did not note any steel deterioration
- There are loose-laid rubber tiles at base of climber (pic 900) – the white peg would be construed as a protrusion (kids can move the tiles – can be placed facing up) – the tiles should be firmly attached (adhesive)

Pictures 897 and 898

- 4-Pod system - the sleeved system does not work well – the hardware is tight – but because this design only has one connector, and the sleeve sizes do not have a flush system – they have movement – and create a pinch hazard)(place your finger next to painted pipe and galvanized pipe and move the pod)
- The footings in to the ground are secure
- Safe zones are intact facing swing (but as noted that the Circular Climber is only 7’6” away – and requires 9’)

Pictures 901, 902, 903, 904, 905 and 906

- 4 – bay swing - 8’ swing arc – this unit to be closed
- Safety Zones:

    - Non Compliant towards grass (only have 7' – need 2X height of crossbar – need at least 16')
    - Compliant – facing the side of the 2-Bay swing
    - Compliant – as facing the side of the infant swing
    - Compliant – side towards fence
- Far end of swing (903) shows tree branches – these need to be trimmed to be a minimum of 7' above the crossbar
- Swing Bearings, chains and seats – all but one are new (unable to determine if commercial grade)
- Noted one bolt installed upside down (901) - entanglement
- The framework is structurally sound – dug up two random footings to the concrete – did not note any steel decay
- The swing bays range between 9' and 10' (too narrow) – Figure 23 in the US/CPSC Booklet details a formula for swing bay width)
- We noted five (5) areas where the concrete footings are exposed (pic 906) – exposed concrete on a playground – is one of the highest red flags you can get. This concrete should be removed – and should be 2" – 3" into the sub-grade (dirt) – hence – reason to have this closed

Pictures 907, 908, 909, 910, 911, 912, 913, 914 and 915

- 2 – bay Swing – 10' arc – this unit to be closed
- Safety Zones:
    - Non Compliant towards grass (only have 7' – need 2X height of crossbar – need at least 20')
    - Compliant – facing the side of the 2-Bay swing
    - Non - Compliant – as facing wood climber (have 24' need 26')
    - Compliant – side towards landscape timber
- Swing Seats – structurally sound (no exposed metal on these commercial grade swings)
- "S" hook connectors to belt seats are all passable
- Swing Bearings – Some are badly worn – some totally missing – some are simply attached to the chain and not even attached (907). In some instances (907) there is a connector that is steel to steel on the pin – and the pins are all badly rusted
- Pic 913 shows one of several) locations of excess chain – these measure +/- 18" and can be looped into a 5" strangulation – this chain should be trimmed so it is a maximum of 7"
- This swing unit has 3 swings per bay – since 1994 – we have only been allowed to provide a max of 2 swings per bay – while we are not aware of a federal recall – our position is that because the removal of one swing – and repositioning of the two remaining is readily achievable – it is our recommendation to make this happen
- Our suggestion is to remove all swings, chains as well as the top bar brackets – and purchase complete new setups (contact American Swing Company at 800.433.2573 and request swing parts catalog)

Pictures 916 thru 943

- Wood Climber (Henderson Playground from Canada)
- Safety zones on all sides are intact*
    - Only 24' to swing – should be 26'
    - Keep the green picnic table at least 6' from side of ramp (918)
- **Pics 919, 920, 921 and 922 – Glider**
    - Rails are 3' apart (should be minimum of 4')
    - Visible hardware/connectors are intact – however – the only way to determine if the connector that support the track at the point of movement is intact – is to remove the unit to visually inspect (920)
    - This is an antiquate Glider...Pic 921 shows the rail pitched to one side...pic 922 pitched to the opposite – the pinch point between the rail and bolt is a potential finger crush point
    - The steel handle – while this is indeed heavy – rungs should be placed between 64" and 78" above the surface – THIS MEASUREMENT WAS MISSED – CAN SOMEONE FROM MAINTENANCE MEASURE FROM THE RUBBER TILES TO THE BASE OF THE RUNG – OTHERWISE – I CAN RUN OUT THE WEEK OF 1/24. – IF RUNG IS LOWER THAN 64" – IT SHOULD BE REMOVED FROM SERVICE

- **Pics 923, 924, 925, 942 and 943**
    - This is the Double Overhead Ladder Unit
    - The six swinging grab bars (pic 924) all show protrusions (12)
    - The bolt/chain connectors – quite antiquated and extremely worn. Pic 925 is rung closest to platform – failure is immanent.
    - There is a 7th bar that was apparently removed at an earlier date
    - There is no head/torso entrapment an the STATIONARY Bars
    - The SWINGING Bars (pics 942 and 943) show pinch points as bars can touch. Rungs are stationed 12" apart – but there is a 9" swing rotation – which allows the bars to overlap – creating an entrapment space as the torso probe passes.
- **Pics 926, 927, 928, 929 and 940**
    - We have identified a total of four entrapment spaces
        - Pics 928 and 929 – adjacent to the green steering wheel under the climber – top of the ramp. – This space should be filled in
        - Pics 927, 926 and 928....as you go up the ramp to the climber – immediately to the right corner – there is a wood vertical access ladder – there are two entrapments at the top of the ladder and one ½ up the ladder – these will be challenging to retrofit.
- Footings in general – dug up a half dozen miscellaneous wood post uprights – dug to the concrete level – and can report there is very minimal decay – wood is solid

- **Pic 930** – Rope/Wall Climb. Unit is missing a rope – therefore that section of the climber would not meet Guardrail/Barrier criteria (+/- 69" open platform). This should be either closed off – or the original rope climb activity be provided.
- **Pics 931, 932 and 932** – Chain Log Inclined Walk. All of these logs are extremely worn, weathered and decaying. Chains have stretched – in two points logs touch the wooden deck below (pinch/crush hazard)
- **Pics 934 and 935** – Underside of the elevated suspension bridge – appears these boards have been replaced in the past and new hardware used. The bolt threads extend to far from the end of the nut – creating 32 protrusion points. Children actively play underneath this activity – bolts should be trimmed to approx 1/8" (width of nickel). The support cable appears to be strong and not worn
- **Pic 936** – On the small tube slide – there is a curvy piece of plastic just above the slide exit – this is to prevent kids from sliding down the top of the tube...this should be unbolted – gravel removed then re-bolted – the current gap would be considered a string entanglement. Both slides were reviewed and both are intact – no cracking noted
- **Pic 937** – in general – the wood on this unit is quite deteriorated – and frankly – the lifespan of this climber is reaching its end. Hardware connectors are exposed, wood split – to bring this unit back up to meet current USCPSC would be a huge under taking. Playgrounds across the USA are usually replaced on the 15 year mark – not sure of the age with this unit....but guessing early 90's?
- **Pics 938 and 939** – at the base of both tube slides – there are wood platforms that support rubber tiles – two notes: First – the rubber tiles do not cover 100% of the top of the wood platform – proper size rubber tiles should be provided. Second – the sides of the wood platform should also be covered – with rubber designing or with safety surfacing. The exposed wood decking within a fall zone is critical item to address. Short term solution is to remove the wood platforms and simply place the rubber tile on top of the pea stone – but note that the distance between the top of the rubber tile to the slide bed should range in the 7" – 15" range

The Henderson Playground Company is from Canada – they make a wonderful product. Items in the US/CPSC change as the Handbook is updated – and manufacturers are dutiful in issuing any recall or alert notices. A suggestion is to contact the manufacturer – give them the name/address of the school and ask if anything on their playground climber has ever been issued a recall or consumer alert.

This playground review does not test structural abilities of connectors, chains, hardware, footings, etc – it's the end-users responsibility to adhere to manufacturer's regular maintenance schedule to monitor use/abuse.

In my opinion – this playground should be closed – pending installation of resilient surfacing. Current protection is next to nothing.

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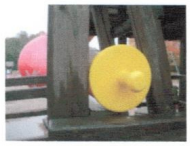
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