

January 27, 2021

Stacey Mulroy, Director Town of Needham Rosemary Recreation Center 178 Rosemary Street Needham MA 02494

RE: Needham Playground Assessment and Recommendation Report

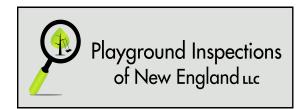
Dear Stacey,

I am pleased to provide this assessment and recommendation report for the list of Needham Playgrounds provided by your Department.

Most of the playgrounds assessed are in fair to good [overall] condition. In order to retain the status level of good – a standard of care plan for the playgrounds should be put in place. The assessments address surfacing, maintenance of grounds, equipment, and basic site furnishings. I have categorized the playgrounds and provided recommendations within the report.

All playground assessments and recommendations were completed by Playground Inspections of NE, LLC and reflect professional judgment. The criteria and format for the data collection and reports were developed based on the specific needs of the Needham Playgrounds. This report does not represent the format typically used by PINE for a Low Frequency Inspection or Audit, but rather captures the immediate needs of the Needham playgrounds in assessing priority safety, accessibility and current condition of each playground and surrounding area. The evaluation criteria include but are not limited to ASTM F1487-17, ASTM F2223-10, ASTM F2049-11 (2017), ASTM F1292-13 CPSC Publication 325, General ADA and MAAB requirements.

Certified Playground Safety Inspector



Note that <u>no</u> safety surface testing using a triax instrument was conducted; rather surfacing evaluation was based on a visual observation only.

I hope this report provides your department with the information needed to be able to make plans for rehabilitation, retrofit and aid in the development of an action plan. I am available to attend any meeting/s you deem necessary to further review the report and address any questions or concerns.

Sincerely,

Nancy

Nancy A. White CPSI Certification # 49311-0923



PLAYGROUND ASSESSMENT AND RECOMMENDATION REPORT

PREPARED FOR THE TOWN OF NEEDHAM MASSACHUSETTS

REPORT CONTENTS

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- Grass Mat Sample over EWF to Transfer Module
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Prepared by:
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PLAYGROUND NA	AME & ADDRESS: Broadmeadow School (1), Broadmeadow Road
DATE OF SITE VISIT	: November 4, 2020
MANUFACTURER/S	i: Miracle Equipment
AGE APPROPRIATE	<u>:</u> : □ 2-5 YRS
	SAFETY CONCERN PRIORTY RATING SYSTEM
	ARD 1: Non-Compliant safety concern that may result in permanent disability, loss of part. Condition should be corrected immediately.
	ARD 2: Non-Compliant safety concern that may result in a serious injury resulting in sability. Condition should be corrected as soon as possible.
	ARD 3: Non-Compliant safety concern that is likely to cause a minor (non-disabling) ion should be corrected when time allows; do not postpone indefinitely.
	: Assessed as compliant; continue with regular maintenance.
1. GENERAL SITE O	
There are tw	o structures at Broadmeadow. The first (this report) is 'tucked in' on the left
side when fa	cing the school. There are sidewalks on both sides of the street.
 ADA access 	for 'route of travel' is excellent, including parking and travel to and around
the playgrou	ınd. However, there is no access into the playground.
The structure	e is age appropriate for 5-12 years, and the placement of the equipment is
very good.	

2. VISUAL SURFACING REVIEW

□ POOR ✓ FAIR □ GOOD □ COMPLIANT

SURFACING: EWF PIP TILES SAND GRASS OTHER

- Over time, replacement surfacing has been added.
- 'Replacement surfacing' is primarily 6' out from the structure and the swings.
- The emphasis for surfacing should be on the use zone of the structure.
- It is not acceptable to only install EWF in a 6" use zone. The swing use zone is 16' to the front, and 16' to the back. The EWF should be installed throughout this entire area.
- The EWF is continuing to wear and become compacted.
- There are wear mats under the swings, but there remains a lack of surfacing.

3. COMPONENT STRUCTURE REVIEW

- ☐ GOOD ☐ COMPLIANT
- The structure is age appropriate for 5-12 years. However, the safety stickers indicate the equipment is for 2-5 years.
- There is a steep angle entry, and a vertical ladder. Both would not be acceptable for Pre-K, if this is the user.
- The overhead ladder is too high from grade if used for the Pre-K age group.
- The structure is in fair condition, due to the status of the transfer module and extensive wear on the decks. In my professional opinion and experience, the Miracle decks fail due to a lack of coating.

4. FREE STANDING EQUIPMENT [INCLUDING SWINGS]

- □ POOR ✓ FAIR ✓ GOOD □ COMPLIANT

- The swings need new hardware and chain.
- The frames are in good condition.
- There is no 'adaptive seat' in any of the bays.
- Pods are in the same area as the structure and are in good condition.

5. SITE AMENITIES

V	POOP	- EAID	GOOD	COMPLIANT
V	POOR		U GOOD	COMPLIANT

- The benches on site are all failing and can cause lacerations. The PVC has worn down to rust.
- These site furnishings are also by Miracle Equipment, and have the same manufacturing process as the equipment.

6. SUMMARY/RECOMMENDATIONS

OVERALL CONDITION OF PLAYGROUND

- □ POOR ✓ FAIR ✓ GOOD □ COMPLIANT
- Review warranty on the decks. The transfer stairs up to a higher deck must be replaced
 ASAP. These may be under warranty.
- Additional wood fiber needed.
- Add an adaptive seat.
- Rake out EWF and add in the swing area to the proper depth of 12".
- Remove and replace hardware chain.
- Suggest to power wash, as additional hazards may be able to be more easily seen.
- Replace safety stickers with proper age category.
- The panel at grade is not working properly, and should be replaced. The internal parts are needed, not the 'poly piece'.
- Tape all open PVC areas, notify the school, and move forward with ordering.

















PLAYGROUND NAME & ADDRESS: Broadmeadow School (2), Broadmeadow Road **DATE OF SITE VISIT: November 4, 2020 MANUFACTURER/S**: Miracle Equipment **AGE APPROPRIATE:** ☐ 2-5 YRS **☑** 5-12 YRS 2-12 YRS ☐ 13+ YRS SAFETY CONCERN PRIORTY RATING SYSTEM POOR: HAZARD 1: Non-Compliant safety concern that may result in permanent disability, loss of life or body part. Condition should be corrected immediately. FAIR: HAZARD 2: Non-Compliant safety concern that may result in a serious injury resulting in temporary disability. Condition should be corrected as soon as possible. • GOOD: HAZARD 3: Non-Compliant safety concern that is likely to cause a minor (non-disabling) injury. Condition should be corrected when time allows; do not postpone indefinitely. • **COMPLIANT:** Assessed as compliant; continue with regular maintenance. 1. GENERAL SITE CONDITION/S □ POOR □ FAIR ☑ GOOD ☑ COMPLIANT **AND APPROACH** Broadmeadow School has two structures - this structure is behind the school, and not

- visible from the street. The two sites abut the school building.
- Access for standard vehicles would be from Kenny Street, behind the school.
- The route of travel is good, but would be better with more curb cuts.

2. VISUAL SURFACING REVIEW

COMPLIANT

☐ FAIR ☐ GOOD

- SURFACING: EWF PIP TILES SAND GRASS OTHER
- The surfacing is EWF, and it is not at the proper depth (12").
- The side curbs and surface markers are visible, which indicate where the surface should be at least 12". I would recommend a depth of 14" 15", due to the 8' height of the structure.
- The filter fabric under the EWF is visible. The fabric should be down 12" below the fiber.
- All wear mats are in poor condition with several holes.
- Weeds are prolific.
- EWF was not spread properly the area needs attention.
- There is a large tree root next to the large post.

3. COMPONENT STRUCTURE REVIEW ☑ POOR ☐ FAIR ☐ GOOD ☐ COMPLIANT

- The structure needs repair asap. The most repairs are needed at decks, stairs and bridges (all walking areas).
- There are 3 separate staircases that go to each level of the structure. All stairs are a hazard and can cause blunt trauma, lacerations, and all are tripping hazards. The tripping hazard is due to the PVC peeling.
- All stair components are rusted, they continue to collect water and rust continues to form (the water has no where to go).

4. FREE STANDING EQUIPMENT [INCLUDING SWINGS]

POOR	\checkmark	FAIR
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- ☐ GOOD ☐ COMPLIANT
- The swings need new hardware, chain and wear pads.
- The frames are in good condition.
- There is an independent play event with black posts. It is in disrepair and has missing parts.

5. SITE AMENITIES

✓ POOR □ FAIR □ GOOD □ COMPLIANT

• The benches and picnic tables are in poor condition (rusting and peeling).

6. SUMMARY/RECOMMENDATIONS

OVERALL CONDITION OF PLAYGROUND

\checkmark	POOR	\checkmark	FAIR		COMPLIANT
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- Immediately replace stairs.
- Replace wear pads at the swings.
- Add an adaptive swing seat.
- The black independent piece should have the 'open holes' closed and the tires removed.
- EWF needs attention/maintenance. It appears that the EWF was dumped and not spread.
- A poor/fair rating is given due to the stairs.
- Powerwash the structure.
- Safety stickers are needed (see samples in report).
- NOTE: due to Covid-19 health concerns the adjacent drinking fountain should be removed asap. Suggest to purchase a 'bottle-filler' type of fountain.



















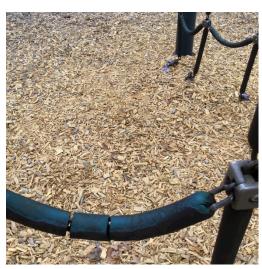
















PLAYGROUND NAME & ADDRESS: Claxton Field, Central Avenue

DATE OF SITE VISIT: November 5, 2020

MANUFACTURER/S: LSI

AGE APPROPRIATE: ✓ 2-5 YRS ✓ 5-12 YRS ✓ 2-12 YRS □ 13+ YRS

SAFETY CONCERN PRIORTY RATING SYSTEM

- POOR: HAZARD 1: Non-Compliant safety concern that may result in permanent disability, loss of life or body part. Condition should be corrected immediately.
- FAIR: HAZARD 2: Non-Compliant safety concern that may result in a serious injury resulting in temporary disability. Condition should be corrected as soon as possible.
- GOOD: HAZARD 3: Non-Compliant safety concern that is likely to cause a minor (non-disabling) injury. Condition should be corrected when time allows; do not postpone indefinitely.
- COMPLIANT: Assessed as compliant; continue with regular maintenance.

1. GENERAL SITE CONDITION/S AND APPROACH

- ☐ POOR ☑FAIR ☐ GOOD ☐ COMPLIANT
- Claxton Field is a multi-use use field with baseball, soccer, football and softball fields, as well as playground equipment.
- It can easily be seen from the road which is a very busy area. The transfer station is across the street. The area is thus visible to citizens on a regular basis.
- There are many older trees, but lack of shade should be a concern.
- There are 4 small separate play areas and none are connected.
- The playground does not meet ADA in any way; there is no way to travel to any
 equipment.
- There is handicapped accessible parking.
- Weeds and overall disrepair contribute to the worn and unattractive look of the area.
- The independent equipment seems 'lost'; but the swings are in good condition and are inviting.
- There are 3 signs that are clustered, which all look worn.

2. VISUAL SURFACING REVIEW

SURFACING: EWF PIP TILES SAND GRASS OTHER

✓ POOR □ FAIR □ GOOD □ COMPLIANT

- The walkways were <u>dense grade</u> which is now overgrown and does not provide the original intention of accessible route of travel.
- There are black tiles leading to the transfer module. Their age would indicate that they would not provide impact attenuation.
- EWF in all areas are poor and considered Hazard 1. This is evident with the tiles that were adhered to concrete.
- The geotextile fabric is visible under the swings. The fabric should be 12" below the EWF.

3. COMPONENT STRUCTURE REVIEW ☑ POOR ☑ FAIR ☐ GOOD ☐ COMPLIANT

- The transfer module and stairs are very dangerous and considered a Hazard 1 safety concern. Remove and block off ASAP. All are peeling with open steel that is rusted.
- No equipment meets ADA.

4. FREE STANDING EQUIPMENT [INCLUDING SWINGS]

- lacktriangle POOR \Box FAIR \Box GOOD \Box COMPLIANT
- There are 4 step pods with no surfacing.
- All swing chain is in poor condition.
- There is a 'cycler' with incorrect surfaces distances.
- There is a sandbox is on site. They are not recommended for public playgrounds (see recommendations).

5. SITE AMENITIES

□ POOR		FAIR			COMPLIANT
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- There are two benches (one is wood, one is recycled), 2 grills, trash receptacles.
- The wood bench nearest the parking area is in disrepair and needs new wood (not recycled).

6. SUMMARY/RECOMMENDATIONS

OVERALL CONDITION OF PLAYGROUND

$\overline{\mathbf{V}}$	POOR		□ COMPLIANT

- Remove the sand box, unless all sand can be removed and new, clean sand added.
 - There are many health concerns with a sandbox, especially one that is next to the woods
 - animal and insect feces.
- Pods are broken and do not have surfacing REMOVE.

- The 'cycler' is compliant, but there is not enough surfacing in its use zone.
- Remove the structure asap. It is a hazard one safety concern.
- Safety labels are needed.
- The best way to bring this area into compliance is to remove the structure, pods, and sandbox.
- Review signage.

PLAYGROUND PHOTOGRAPHS | CLAXTON FIELD











PLAYGROUND PHOTOGRAPHS | CLAXTON FIELD











PLAYGROUND PHOTOGRAPHS | CLAXTON FIELD













PLAYGROUND NAME & ADDRESS: Cricket, Hillside Avenue **DATE OF SITE VISIT:** November 5, 2020 MANUFACTURER/S: LSI ☐ 13+ YRS **AGE APPROPRIATE: ☑** 2-5 YRS **☑** 5-12 YRS □2-12 YRS SAFETY CONCERN PRIORTY RATING SYSTEM POOR: HAZARD 1: Non-Compliant safety concern that may result in permanent disability, loss of life or body part. Condition should be corrected immediately. FAIR: HAZARD 2: Non-Compliant safety concern that may result in a serious injury resulting in temporary disability. Condition should be corrected as soon as possible. • GOOD: HAZARD 3: Non-Compliant safety concern that is likely to cause a minor (non-disabling) injury. Condition should be corrected when time allows; do not postpone indefinitely. • COMPLIANT: Assessed as compliant; continue with regular maintenance. 1. GENERAL SITE CONDITION/S ☑ POOR ☐ FAIR ☐ GOOD ☐ COMPLIANT **AND APPROACH**

- Cricket playground is in a neighborhood 'tucked away' on a slope. This is a typical 'pocket park.' The area is visually attractive and surrounded by trees.
- There is a building owned by the Town next to the playground. The Needham School Dept. utilizes these fields, thus having an adjacent playground allows many ages to use.

2. VISUAL SURFACING REVIEW

SURFACING:

TILES SAND GRASS

☐ COMPLIANT

OTHER

PIP

- Wear pads are under the belt swings.
- At the time of the inspection, the surfacing was covered with leaves. The leaves made the surfacing slippery. It was clear that additional surfacing is needed. However, in many places, height changes or perimeter edging could not be seen.
- The store panel, spring rider, tunnel and see saws have visible footings.
- These events should be at grade.

3. COMPONENT STRUCTURE REVIEW ☐ POOR ☐ FAIR ☑ GOOD ☑ COMPLIANT

- There is one small structure for ages 2-5 years.
- The chain ladder needs to be replaced.
- Neighborhood use is keeping the wear to a minimum.

4. FREE STANDING EQUIPMENT [INCLUDING SWINGS]

- □ POOR □ FAIR ☑ GOOD ☑ COMPLIANT

- All 3 independent pieces of equipment are in excellent condition.
- The 3rd post when facing the swings has a beam on an angle.
- One of the three beams has clamps that have slipped. There is no final rivot (which is the last piece of hardware installed).
- The pressure and heavy use on the two swing seats may cause the beam to fail.

5. SITE AMENITIES

□ POOR □ FAIR ☑ GOOD □ COMPLIANT

- There are four benches with recycled plastic slats.
- The posts on the sign are 'bent'.

6. SUMMARY/RECOMMENDATIONS

OVERALL CONDITION OF PLAYGROUND

□ POOR □ FAIR ☑ GOOD □ COMP

- If this site is to have construction in the near future, review the three individual pieces and structure. They may be in good enough condition to remove and reinstall. The structure will have to be retro-fitted if used at another site. In my professional opinion, I would not 're-use' the swings.
- Despite the harsh install slope, the equipment has held up well.
- The 'quasi' plastic wall, to hold back the sloping material in place was installed well.
- Additional wood fiber needed.
- All leaves should be removed (if not already).
- FYI The trash receptacle near the building was overflowing with trash. Check more frequently.

PLAYGROUND PHOTOGRAPHS | CRICKET FIELD











PLAYGROUND PHOTOGRAPHS | CRICKET FIELD







PLAYGROUND NAME & ADDRESS: Defazio Complex, Highland Ave

DATE OF SITE VISIT: November 4, 2020

MANUFACTURER/S: LSI, Unknown

AGE APPROPRIATE: ✓ 2-5 YRS ✓ 5-12 YRS □2-12 YRS □ 13+ YRS

SAFETY CONCERN PRIORTY RATING SYSTEM

- POOR: HAZARD 1: Non-Compliant safety concern that may result in permanent disability, loss of life or body part. Condition should be corrected immediately.
- FAIR: HAZARD 2: Non-Compliant safety concern that may result in a serious injury resulting in temporary disability. Condition should be corrected as soon as possible.
- GOOD: HAZARD 3: Non-Compliant safety concern that is likely to cause a minor (non-disabling) injury. Condition should be corrected when time allows; do not postpone indefinitely.
- COMPLIANT: Assessed as compliant; continue with regular maintenance.

1. GENERAL SITE CONDITION/S AND APPROACH

✓ POOR ✓ FAIR ☐ GOOD ☐ COMPLIANT

- DeFazio Complex 'tot lot' playground is an anchor and destination playground for the town of Needham and other nearby towns.
- Site lines are poor the trees which provide tremendous shade, need to be pruned.
- The playground is 100% fenced in which is an attribute for the user. However, fence gates are in poor condition and actually pose a hazard.
- Poor siting of equipment (ie: siting by user and ages, etc) hinders a good flow of traffic.
- The overall visual appearance is poor, due to the lack of maintenance and care for equipment and site furnishings.
- There is no sidewalk. There is no definition for parking spaces.
- The entrance to the park is wide, but signage is poor and not 'readable'.
- There is a drainage issue on the outside of the play area. See photo (note: it had not rained for at least 5 days prior to the inspection).
- There is no ADA access, but there is ADA signage for parking.

2. VISUAL SURFACING REVIEW ☑ POOR ☐ FAIR ☐ GOOD ☐

SURFACING: EWF PIP TILES SAND GRASS OTHER

- In my professional opinion, none of the surfacing in existence would pass an impact attention test. The status of the surfacing is a Hazard One safety concern.
- Recent EWF 'top off' is not enough surfacing. The edging has not been maintained.
- Surface maintenance needed weeding, raking and removal of debris.
- There are wear mats under some of the swings, and new wood fiber top off has been added over them. The mats are 'crumbled' and have holes.

3. COMPONENT STRUCTURE REVIEW ✓ POOR ☐ FAIR ☐ GOOD ☐ COMPLIANT

- The tan and green structure has a Hazard 1 safety concern, as the PVC has pulled away from the decks and rusted steel is showing.
- PVC is peeling throughout the structure. In my professional opinion, the peeling is enough to warrant that the structure be taken out of service.

4. FREE STANDING EQUIPMENT [INCLUDING SWINGS]

- lacktriangledown Poor lacktriangledown Fair lacktriangledown Good lacktriangledown Compliant
- All independent pieces of equipment have hazard safety concerns. This is a 'short list'.
 - o See saw and 1 spring rider is broken.
 - o The wood playhouse is rotted.
 - o The swings to not have a proper use zone.
 - o A climber near the swings is complaint.
 - The climber, turtle sand table and individual sand box are all in poor condition and have not been maintained.

5. SITE AMENITIES

- ✓ POOR ☐ FAIR ☐ GOOD ☐ COMPLIANT
- All benches and picnic tables are rotted.
- The one dedicated bench has rotted slats.
- Both the drinking fountain (see recommendations) and bike rack/s are in fair to poor condition.
- There are a few grills that are in poor condition, and should be reviewed as they are near low hanging trees and branches.
- All individual pieces of equipment are covered in mold.

6. SUMMARY/RECOMMENDATIONS

OVERALL CONDITION OF PLAYGROUND

\checkmark	POOR	\checkmark	FAIR		□ COMPLIANT
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- Review the status of all trees at this site with the Tree Warden.
- Remove and dispose the block climber and wood house, see saw, spring rider, and bus.
- Remove all site furnishings.
- The 'dedicated bench' needs new slats and should be recited for better use.
- Retrofit the structure.
- Keep the swing seats only but remove and dispose of swing frames. They are over 40 years old.
- The play area is beautiful and has both a passive and active area. However, some pieces
 were installed with no relationship to the area or other with the placement of other
 pieces.
- Review the reminder of the equipment with an inspection for reuse either at this site, or another play area.
- A survey and new layout will be needed.
- Remove the drop shot and install elsewhere.
- Remove the grills.
- Remove the drinking fountain (due to Covid 19 concerns) and install a bottle filler type.
- There is 'entry' signage when entering the park. The sign is full of a lot of information,
 which is hard to read. Although it is attractive, it is hard to read due to size, color and
 font changes.

PLAYGROUND PHOTOGRAPHS | DEFAZIO FIELD











PLAYGROUND PHOTOGRAPHS | DEFAZIO FIELD













PLAYGROUND PHOTOGRAPHS | DEFAZIO FIELD











PLAYGROUND NAME & ADDRESS: Eliot School, Wellesley Ave

DATE OF SITE VISIT: November 5, 2020

MANUFACTURER/S: LSI

SAFETY CONCERN PRIORTY RATING SYSTEM

- POOR: HAZARD 1: Non-Compliant safety concern that may result in permanent disability, loss of life or body part. Condition should be corrected immediately.
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- GOOD: HAZARD 3: Non-Compliant safety concern that is likely to cause a minor (non-disabling) injury. Condition should be corrected when time allows; do not postpone indefinitely.
- **COMPLIANT:** Assessed as compliant; continue with regular maintenance.

1. GENERAL SITE CONDITION/S □ POOR □ FAIR ☑ GOOD □ COMPLIANT AND APPROACH

- Eliot School has two playgrounds in the back of the school. There is no vehicular ADA
 parking. However, if gates are open, a car could drive in. Access from the front is 100%
 available without a vehicle.
- A large boulder is an attractive nuisance. The boulder itself could be considered an
 independent playground piece. While the school tries to keep their children off of this
 boulder, the general public will and do use this as a play piece.
- Once in the back, access is excellent with an asphalt walkway and plastic exit/entry squares.
- The second playground is age appropriate for 2-12 years.
- Woods surround the playgrounds.
- The site lines are good and the equipment is set well with sufficient space to move and play.

2. VISUAL SURFACING REVIEW

□ POOR □ FAIR ☑ GOOD ☑ COMPLIANT

SURFACING: EWF PIP TILES SAND GRASS OTHER

- The swings nearest the small structure could use 3 more inches after existing surface is raked.
- The high traffic areas are evident in the 2-5 swing area from the back. In the future, this area needs more EWF raked and spread.
- The boulder and large playground are a heavy traffic area. The large boulder leads to a small boulder, then to asphalt and then to the play area. These are two large areas with additional EWF needs. High traffic areas wear fast and surfacing becomes non-existent quickly.

3. COMPONENT STRUCTURE REVIEW ☐ POOR ☑ FAIR ☐ GOOD ☐ COMPLIANT

- The structures are in good condition.
- Attention is needed at the high use areas. In some areas, the structure is worn and needs retrofitting, including a transfer module and bridge.

4. FREE STANDING EQUIPMENT [INCLUDING SWINGS]

- □ POOR ✓ FAIR □ GOOD ✓ COMPLIANT
- There are some chains, seats, clevises and bolt links that need replacement (see recommendations).
- The 3 additional pieces of equipment are compliant.

5. SITE AMENITIES

□ POOR □ FAIR □ GOOD ☑ COMPLIANT

- Recycled plastic benches and steel benches are both on site.
- One bench (near the swings) appears sited and installed backwards. The opposite side
 of the sidewalk has the same concern.

6. SUMMARY/RECOMMENDATIONS

OVERALL CONDITION OF PLAYGROUND

□ POOR	□ FAIR	\checkmark	GOOD	□ COMPLIANT
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- Better EWF surfacing maintenance is needed, especially in high traffic areas.
- Add wear mats under each swing.
- 3 swings seats need to be replaced.
- Miscellaneous swing hardware needs to be replaced clevis, bolt links and chain. Some
 hardware looks new, some looks worn. In the future, change all the hardware out at the
 same time, to keep the wear and maintenance on a management schedule.
- The 2-5 swings have much more wear, and should be addressed asap.
- Purchase a 'flex seal' type of product to close up open PVC (The 2-5 structure transfer area).
- The 5-12 transfer step PVC is too worn to attempt to close up with PVC. This needs to be replaced.
- Children do not use the sidewalk coming out. Suggest to fill the area with asphalt 3' X
 9'.
- The amount of rocks and stones needs to be addressed. It is not only the boulder that
 presents a problem, but the amount of rocks and stones need to be maintained on a
 regular basis.
- Elliot needs rehabilitation which will be labor intensive (including parts) and should be scheduled for a time certain.

















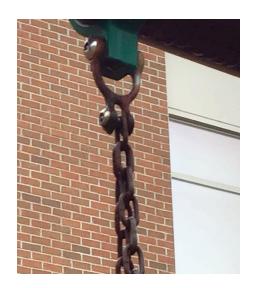




























PLAYGROUND NAME & ADDRESS: Greene's Field, Pickering Street **DATE OF SITE VISIT: November 5, 2020 MANUFACTURER/S**: LSI **AGE APPROPRIATE: ☑** 2-5 YRS **☑** 5-12 YRS 2-12 YRS ☐ 13+ YRS SAFETY CONCERN PRIORTY RATING SYSTEM POOR: HAZARD 1: Non-Compliant safety concern that may result in permanent disability, loss of life or body part. Condition should be corrected immediately. FAIR: HAZARD 2: Non-Compliant safety concern that may result in a serious injury resulting in temporary disability. Condition should be corrected as soon as possible. GOOD: HAZARD 3: Non-Compliant safety concern that is likely to cause a minor (non-disabling) injury. Condition should be corrected when time allows; do not postpone indefinitely. **COMPLIANT:** Assessed as compliant; continue with regular maintenance. 1. GENERAL SITE CONDITION/S □ POOR □ FAIR □ GOOD ☑ COMPLIANT **AND APPROACH** The approach to Greene's Field is compliant. Greene's Field is a destination playground. Greene's Field has a long beautiful play

- area. The siting for the playground is excellent.
- This playground is on of the best playgrounds in the Town of Needham. With diverse play opportunities, and a beautiful setting for sitting and relaxing.
- Donors are acknowledged in signage.
- Bushes separate private residents on one side. There is fencing in the back and front. There is very little to buffer behind the swings to residential area.
- There is a wooden walkway (that has names on each slat) which is not aging well.

2. VISUAL SURFACING REVIEW

□ POOR ☑ FAIR ☑ GOOD □ COMPLIANT

SURFACING: EWF PIP TILES SAND GRASS OTHER

- PIP Surfacing was used as a method of ADA and meets the minimal surface needed for ADA and MAAB. However, not all areas needed for an accessible route of travel have been met.
- The entry to the park is dirt. It was a rainy day at the time of visit and the entry way as complete mud.
- A boardwalk in (with softwood engraved) is starting to fail.

3.	COMPONENT STRUCTURE REVIEW	☐ POOR ☐ FAIR	□ GOOD 🔽	COMPLIANT
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• Two structures are in very good condition and are compliant.

4. FREE STANDING EQUIPMENT

[INCLUDING SWINGS]

- □ POOR □ FAIR □ GOOD ☑ COMPLIANT

- The equipment is in good condition.
- Standard moving parts need to be check regular for wear.
- EWF needs to be spread.

5. SITE AMENITIES

□ POOR □ FAIR ☑ GOOD □ COMPLIANT

- All multiple site amenities, including the pavilion and all are in very good condition.
 - o Recycled plastic picnic tables
 - o Multiple trash steel receptacles
 - o Benches with backs with concrete supports
 - GFRC backless bench
 - o Recycled plastic backless benches
- I recommend considering bench/es with backs and arm. This is a very large park with a
 wide range of users and caregivers. It would be helpful to a person with a disability, or
 an elder person, as they cannot use backless benches.

6. SUMMARY/RECOMMENDATIONS

OVERALL CONDITION OF PLAYGROUND

- The equipment is in good condition.
- The grounds are in 'fair' condition. The play area appears 'unkept'.
- There was a bocce court and it was removed. Consider bringing it back or consider fitness equipment for seniors to enjoy.
- Consider a second area with a concrete play unit.
- The site would be best served with some type of edging due to the large amount of wasted wood fiber.
- Additional surfacing is needed (EWF). There are draining inconsistencies, which should be reviewed. What drainage accommodations were done at installation?
- This site should be considered for more unitary surfacing, as independent play equipment is not reachable by standards.
- Unitary access is needed to at least one bench.
- Surfacing (loose fill) is needed in and around PIP.
- Review is two trash receptacles are needed. If the 55 gallon drum must stay, consider a liner and lid.
- Consider a recycle bin.
- Consider bench with back and arms.
- The PIP is a tripping hazard, since the playground has both loose fill and PIP.

PLAYGROUND PHOTOGRAPHS | GREENE'S FIELD











PLAYGROUND PHOTOGRAPHS | GREENE'S FIELD











PLAYGROUND PHOTOGRAPHS | GREENE'S FIELD













PLAYGROUND NAME & ADDRESS: Mills, Gould Street **DATE OF SITE VISIT: November 5, 2020 MANUFACTURER/S**: LSI AGE APPROPRIATE: **☑** 2-5 YRS **☑** 5-12 YRS ☐ 2-12 YRS ☐ 13+ YRS SAFETY CONCERN PRIORTY RATING SYSTEM POOR: HAZARD 1: Non-Compliant safety concern that may result in permanent disability, loss of life or body part. Condition should be corrected immediately. FAIR: HAZARD 2: Non-Compliant safety concern that may result in a serious injury resulting in temporary disability. Condition should be corrected as soon as possible. GOOD: HAZARD 3: Non-Compliant safety concern that is likely to cause a minor (non-disabling) injury. Condition should be corrected when time allows; do not postpone indefinitely. **COMPLIANT:** Assessed as compliant; continue with regular maintenance. 1. GENERAL SITE CONDITION/S □ POOR □ FAIR □ GOOD ☑ COMPLIANT **AND APPROACH**

- Mills has residents (very close) on 3 sides of the playground.
- Improvements were made in that a few parking spaces were created, and ADA access created with a sidewalk.
- There is ADA accessibility from the street, but once inside the fence, there is no access.
- There is fencing on all 4 sides of the playground.
- 2 very large pine trees provide shade inside fenced area.

2. <u>VISUAL SURFACING REVIEW</u> □ POOR ☑ FAIR □ GOOD □ COMPLIANT

SURFACING: EWF PIP TILES SAND GRASS OTHER

- EWF needs to be spread throughout the play area amount and depth is good.
- The rubber tiles are attached to the walkway into and on the structure. There is no other ADA accessibility.

. COMPONENT STRUCTURE REVIEW	☐ POOR ☐ FAIR	\checkmark	GOOD	☐ COMPLIAN
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• The structure is in very good condition. There is one 'wing type panel' and it has a 'caution' cone on it. This should be replaced, if not already.

4. FREE STANDING EQUIPMENT

[INCLUDING SWINGS]

- □ POOR □ FAIR □ GOOD ☑
- **COMPLIANT**

- Rocket panel
- Rope Climber
- Space Shaper Cube
- See saw
- Adaptive Swing

All of the above are in very good condition; play has high value with a large number of varied play opportunities.

5. SITE AMENITIES

□ POOR □ FAIR □ GOOD ☑

COMPLIANT

- There is a random post inside the playground.
- Multiple benches are in good condition.
- There is a trash barrel outside the play area.
- There are good site lines from all the benches.

6. SUMMARY/RECOMMENDATIONS

OVERALL CONDITION OF PLAYGROUND

□ POOR □ FAIR ☑ GOOD ☑ COMPLIANT

- The playground is in very good condition overall.
- The day of the visit, there were 10 children with Autism accessing the playground, with their teacher. The feedback was very positive, and they were very appreciative of the play area.
- Replace the Lexon bubble in cube and Compass Lexon.
- Replace missing rocket on the Planet Panel.
- Replace the Lexon section on the tunnel slide.
- Cut limbs back on large pine trees.
- Consider the addition of a small oscillating event.

PLAYGROUND PHOTOGRAPHS | MILLS FIELD













PLAYGROUND PHOTOGRAPHS | MILL'S FIELD









PLAYGROUND NAME & ADDRESS: Mitchell School, Brookline Street							
DATE OF SITE VISIT: November 5, 2020							
MANUFACTURER/S: LSI							
AGE APPROPRIATE: ☐ 2-5 YRS ☐ 5-12 YRS ☐ 2-12 YRS ☐ 13+ YRS							
SAFETY CONCERN PRIORTY RATING SYSTEM							
 POOR: HAZARD 1: Non-Compliant safety concern that may result in permanent disability, loss of life or body part. Condition should be corrected immediately. FAIR: HAZARD 2: Non-Compliant safety concern that may result in a serious injury resulting in temporary disability. Condition should be corrected as soon as possible. GOOD: HAZARD 3: Non-Compliant safety concern that is likely to cause a minor (non-disabling) injury. Condition should be corrected when time allows; do not postpone indefinitely. COMPLIANT: Assessed as compliant; continue with regular maintenance. 							
 1. GENERAL SITE CONDITION/S □ POOR □ FAIR ☑ GOOD □ COMPLIANT AND APPROACH • There is access from the front of the school to the back of the school. 							

- There is ADA access from the back of the school (Second Street).
- There is a school building on both sides, with a parking lot and baseball field on the other side.
- This is a very attractive play area with a few older trees providing shade.
- A good use of space allows for multiple play clusters through out the area.
- Very good site lines.

2. VISUAL SURFACING REVIEW

□ POOR □ FAIR □ GOOD ☑ COMPLIANT

SURFACING: EWF PIP TILES SAND GRASS OTHER

- A combination of both EWF and PIP surfaces are throughout the playground.
- The play area is very large and with a combination of EWF and PIP, there tends to be tripping hazards as the PIP is static and the EWF is not.
- The EWF should be maintained as often as possible.
- At the time of the visit, leaves covered the surfacing. Children were tripping, as they could not see the change/transition in surfacing.
- There is one small section on the PIP that has ripped.
- The PIP was not extended enough for use of two sided reach panels. Only one side can be used for ADA, thus half of play value is lost.

3.	COMPONENT STRUCTURE REVIEW	☐ POOR ☐ FAIR		GOOD 🗹	COMPLIAN ³
••			_		~~····

• The structures are in very good condition.

4. FREE STANDING EQUIPMENT

[INCLUDING SWINGS]

□ POOR □ FAIR □ GOOD ☑ COMPLIANT

• All independent pieces are in very good condition.

5. SITE AMENITIES

□ POOR □ FAIR □ GOOD ☑ COMPLIANT

- All site furnishings are compliant.
- One 3 sided table was sited in the wrong area, and thus is not handicap accessible (which defeats the purpose of the table).

6. SUMMARY/RECOMMENDATIONS

OVERALL CONDITION OF PLAYGROUND

DOOR [FAIR		$\overline{\checkmark}$	COMPLIANT
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- Suggest to check with the Tree Warden on the health status of the trees.
- Cut back tree limbs so there are better site lines.
- The track ride indicates age appropriate for age 2-12 years. It is age appropriate for 5-12, and should be re-labeled.
- Although decks are on both sides of the track ride, the low portion is at rest in the middle – that is where the transfer should be – with a direct on and off. PIP should be used for accessibility.
- While there are a few places where PIP is needed, they are not in use zone areas.
- Rake EWF as often as possible.

PLAYGROUND PHOTOGRAPHS | MITCHELL SCHOOL











PLAYGROUND PHOTOGRAPHS | MITCHELL SCHOOL











DATE OF SITE VISIT: November 5, 2020 MANUFACTURER/S: LSI **AGE APPROPRIATE: ✓** 5-12 YRS **☑** 2-5 YRS 2-12 YRS ☐ 13+ YRS SAFETY CONCERN PRIORTY RATING SYSTEM POOR: HAZARD 1: Non-Compliant safety concern that may result in permanent disability, loss of life or body part. Condition should be corrected immediately. FAIR: HAZARD 2: Non-Compliant safety concern that may result in a serious injury resulting in temporary disability. Condition should be corrected as soon as possible. GOOD: HAZARD 3: Non-Compliant safety concern that is likely to cause a minor (non-disabling) injury. Condition should be corrected when time allows; do not postpone indefinitely. **COMPLIANT:** Assessed as compliant; continue with regular maintenance. 1. GENERAL SITE CONDITION/S □ POOR □ FAIR □ GOOD ☑ **COMPLIANT AND APPROACH** Newman Elementary School has 3 play areas in 2 separate locations, with ease of access and good site lines.

PLAYGROUND NAME & ADDRESS: Newman Elementary, Newman Pre-K, Central Street

- The school is very well marked.
- Access to each playground varies due to the age of installation.
- The 2-5 Pre-K equipment is fenced-in (in the back).
- The two 5-12 structures are on the side of the school.

2. <u>VISUAL SURFACING REVIEW</u> ☐ POOR ☐ FAIR ☑ GOOD ☑ COMPLIANT

SURFACING: EWF PIP TILES SAND GRASS OTHER

- Pre-K surfacing is PIP and is in good condition.
- The two Elementary structures have turf surfacing and there are 'worn' areas that need to be addressed.

3. COMPONENT STRUCTURE REVIEW ☐ POOR ☐ FAIR ☐ GOOD ☑ COMPLIANT

- The Pre-K structure, while 'aged', is in good condition.
 - o Safety labels are needed.
- The two Elementary structures are in very good condition and are compliant.

4. FREE STANDING EQUIPMENT [INCLUDING SWINGS]

- □ POOR □ FAIR ☑ GOOD □ COMPLIANT

Pre-K

- o Adaptive swing chains are in poor condition.
- o All 'loose plastic residential' type equipment should be separated from 'commercially' installed (in ground) equipment (ie: plastic blocks being used to jump on and off of commercially installed equipment). Suggest putting all loose residential equipment away at the end of each day.

Elementary

- o All swings need new chain.
- o Independent equipment is compliant.

5. <u>SITE AMENITIES</u> □ POOR □ FAIR □ GOOD ☑ COMPLIANT

- Pre-K
 - o Recycled plastic bench is compliant.
- Elementary
 - o Site furnishings are compliant.
 - o The slope up to the PVC site furnishing/s is collapsing and needs to be reviewed.

6. SUMMARY/RECOMMENDATIONS

OVERALL CONDITION OF PLAYGROUND

□ POOR □ FAIR ☑ GOOD ☑ COMPLIANT

Pre-K

- o Consider a shade structure.
- By state mandate, shade is required for Pre-K. Purchase and install through asphalt and consider a cantilever (versus installing into the PIP).

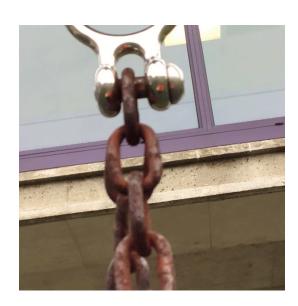
Elementary

- All swing chain needs to be replaced.
- o Chain ladder needs to be replaced.
- Turf surfaces need attention.
- Seams have pulled away in approximately 4 places, and will continue to widen as time goes by.
- o The turf under the swings should be cut out and replaced with PIP or tiles.
- o The round spinner should have a firm unitary surface (turf should be removed).
- The turf needs antimicrobial fill. Contact Turf Manufacturer for replenishing.
 Check to see when this last was done.
- Review and address the slope to the PVC bench, as it is collapsing and has several rocks.

PLAYGROUND PHOTOGRAPHS | NEWMAN PRE-K













PLAYGROUND PHOTOGRAPHS | NEWMAN ELEMENTARY













PLAYGROUND PHOTOGRAPHS | NEWMAN ELEMENTARY





PLAYGROUND NAME & ADDRESS: Perry Park, Beaufort Ave **DATE OF SITE VISIT: November 5, 2020** MANUFACTURER/S: LSI, Kompan **AGE APPROPRIATE:** 2-5 YRS $\overline{\mathbf{Q}}$ 5-12 YRS ☐ 2-12 YRS ☐ 13+ YRS SAFETY CONCERN PRIORTY RATING SYSTEM POOR: HAZARD 1: Non-Compliant safety concern that may result in permanent disability, loss of life or body part. Condition should be corrected immediately. FAIR: HAZARD 2: Non-Compliant safety concern that may result in a serious injury resulting in temporary disability. Condition should be corrected as soon as possible. GOOD: HAZARD 3: Non-Compliant safety concern that is likely to cause a minor (non-disabling) injury. Condition should be corrected when time allows; do not postpone indefinitely. **COMPLIANT:** Assessed as compliant; continue with regular maintenance. 1. GENERAL SITE CONDITION/S POOR FAIR GOOD COMPLIANT **AND APPROACH** The park is in a neighborhood setting and located in a back corner. There is shade and the noise level is low. Beaufort Street is lined with trees, and there is street parking. The day of the site visit, the park was being heavily used. There is no ADA accessibility/surfacing to the playground from the street.

There are plastic residential type toys throughout the playground.

very difficult to cross the street.

This is a busy area; traffic speeds most likely exceed the limit. Due to poor visibility, it is

2. <u>VISUAL SURFACING REVIEW</u> POOR FAIR GOOD COMPLIANT

SURFACING: EWF PIP TILES SAND GRASS OTHER

- EWF is the surfacing. Additional EWF is needed; the surface labels indicate that surfacing should be up to the 'arrow' on the label.
- The perimeter edging is fair and needs maintenance. The edging embraces the EWF and is doing its job. However, EWF is being lost. Review edging.

3. COMPONENT STRUCTURE REVIEW

□ POOR □ FAIR ☑ GOOD □ COMPLIANT

- There are two structures, both in good condition. However, they are 'dirty'. Suggest to power wash.
- A chain climber needs replacement immediately. This may snap. Owner was notified at time of visit.

4. FREE STANDING EQUIPMENT [INCLUDING SWINGS]

- 🚺 POOR 🗆 FAIR 🗹 GOOD 🗆 COMPLIANT
- The sand box is full of leaves and there is not enough sand.
- The clubhouse by Kompan is rotted and is in poor condition.
- Spring Riders are in good condition.

5. SITE AMENITIES

□ POOR □ FAIR ☑ GOOD □ COMPLIANT

- A picnic table, a few benches and barrels (trash receptacles) are on site.
- For better sanitation, line the barrels and add a top/cover.
- Two pieces of hardware need to be 'snapped' on the roof of the picnic table.

6. SUMMARY/RECOMMENDATIONS

OVERALL CONDITION OF PLAYGROUND

□ POOR ✓ FAIR □ GOOD □ COMF

- Remove all sand and EWF, and replace with new material.
- Consider a fence on the back side by the trees.
- Better street signage is needed. Speak to the Town Traffic / Police Officer.
- Consider a bench with arms and another covered picnic table.
- Remove all residential plastic toys.
- Remove the clubhouse (rotting) asap. Consider a new replacement playhouse.
- Fix the broken pieces of edging.
- Cut the limbs up to 2 feet.
- There are 3 pieces of equipment that identify that the playground is for 5-12, as well as 2-5 years. If the desire is for 100% tot age appropriate, remove the 2 climbers and horizontal ladder.

PLAYGROUND PHOTOGRAPHS | PERRY PARK













PLAYGROUND PHOTOGRAPHS | PERRY PARK















PLAYGROUND NAME & ADDRESS: Riverside, Riverside Street							
DATE OF SITE VISIT: November 5, 2020							
MANUFACTURER/S: LSI							
AGE APPROPRIATE: ✓ 2-5 YRS ✓ 5-12 YRS ☐ 2-12 YRS ☐ 13+ YRS							
SAFETY CONCERN PRIORTY RATING SYSTEM							
• POOR: HAZARD 1: Non-Compliant safety concern that may result in permanent disability, loss of life or body part. Condition should be corrected immediately.							
• FAIR: HAZARD 2: Non-Compliant safety concern that may result in a serious injury resulting in temporary disability. Condition should be corrected as soon as possible.							
• GOOD: HAZARD 3: Non-Compliant safety concern that is likely to cause a minor (non-disabling) injury. Condition should be corrected when time allows; do not postpone indefinitely.							
COMPLIANT: Assessed as compliant; continue with regular maintenance.							

- This playground is a town 'gem'. The park has a good deal of shade, and is tree lined.
- Riverside is located on the far end of Needham, near the Newtown town line. Primary users are the Riverside neighborhood.
- There are multiple ways to enter the park, but none are ADA.
- The park is a 'low use' park.

2. <u>VISUAL SURFACING REVIEW</u> □ POOR □ FAIR ☑ GOOD □ COMPLIANT

SURFACING: EWF PIP TILES SAND GRASS OTHER

- There is no perimeter edging. The 'grass edging' is encroaching into the EWF.
- The EWF is in good condition, except at the swing area. Additional EWF is needed.

3. COMPONENT STRUCTURE REVIEW ☐ POOR ☐ FAIR ☐ GOOD ☐ COMPLIANT

N/A

4. FREE STANDING EQUIPMENT [INCLUDING SWINGS]

- □ POOR □ FAIR □ GOOD ☑ COMPLIANT

- The equipment is in good condition, primarily due to the small amount of use at this site.
- If the sand in the sand box has never been replaced, I would recommend removing and replacing with new, clean sand.

5. SITE AMENITIES

□ POOR □ FAIR □ GOOD ☑ COMPLIANT

• Picnic table and benches are complaint and in good condition.

6. **SUMMARY/RECOMMENDATIONS**

OVERALL CONDITION OF PLAYGROUND

POOR	FAIR		$\overline{\mathbf{V}}$	COMPLIANT
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- Powerwash in the spring.
- Watch the GFRC Forklift opening on the rock. Keep it covered with EWF, as animals will burrow.
- Check all equipment that 'moves', at least once a year.
- Better signage and labels are needed.

PLAYGROUND PHOTOGRAPHS | RIVERSIDE, RIVERSIDE STREET











PLAYGROUND PHOTOGRAPHS | RIVERSIDE





DATE OF SITE VISIT: November 5, 2020 MANUFACTURER/S: LSI **AGE APPROPRIATE:** 2-5 YRS 5-12 YRS **☑** 2-12 YRS ☐ 13+ YRS SAFETY CONCERN PRIORTY RATING SYSTEM POOR: HAZARD 1: Non-Compliant safety concern that may result in permanent disability, loss of life or body part. Condition should be corrected immediately. FAIR: HAZARD 2: Non-Compliant safety concern that may result in a serious injury resulting in temporary disability. Condition should be corrected as soon as possible. GOOD: HAZARD 3: Non-Compliant safety concern that is likely to cause a minor (non-disabling) injury. Condition should be corrected when time allows; do not postpone indefinitely. **COMPLIANT:** Assessed as compliant; continue with regular maintenance. 1. GENERAL SITE CONDITION/S ☐ POOR ☐ FAIR ☐ GOOD ☑ **COMPLIANT AND APPROACH** Walker Gordon offers very few pieces of equipment. It was not the original intent at this park to have a larger sized play area. However, additional independent pieces could be

PLAYGROUND NAME & ADDRESS: Walker Gordon, Charles River Street

• The entry is wide and open.

added.

- There is dense grade surfacing, and thus no ADA access.
- Trees line the back of the playground, acting as a natural fence, with a pond behind.
- Signage on fencing should be updated.

2. <u>VISUAL SURFACING REVIEW</u> ✓ POOR ☐ FAIR ☐ GOOD ☐ COMPLIANT

SURFACING: EWF PIP TILES SAND GRASS OTHER

- This park does not have high use, thus existing EWF is deteriorating.
- Additional surfacing is needed at least 7" of EWF.

3. COMPONENT STRUCTURE REVIEW ☐ POOR ☐ FAIR ☐ GOOD ☐ COMPLIANT

N/A

4. FREE STANDING EQUIPMENT □ POOR □ FAIR □ GOOD ☑ COMPLIANT [INCLUDING SWINGS]

• Swing, clubhouse and see saw are in good condition and are compliant.

5. SITE AMENITIES

□ POOR □ FAIR ☑ GOOD □ COMPLIANT

• Picnic table, trash receptacle and wood barrier fence are in good condition.

6. SUMMARY/RECOMMENDATIONS

OVERALL CONDITION OF PLAYGROUND

□ POOR	□ FAIR	$\overline{\checkmark}$	GOOD	□ COMPLIANT
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- After maintaining (clean out) surface, additional EWF is needed.
- Replace all picnic table slats.
- Add an army green bench with arms.
- Review signage a new sign should be considered with current and more relevant information.
- Consider the addition of individual pieces to the playground.

PLAYGROUND PHOTOGRAPHS | WALKER GORDON













OF SITE VISIT: November 4, 2020
<u>UFACTURER/S</u> : LSI
APPROPRIATE : □ 2-5 YRS ☑ 5-12 YRS □ 2-12 YRS □ 13+ YRS
SAFETY CONCERN PRIORTY RATING SYSTEM
POOR: HAZARD 1: Non-Compliant safety concern that may result in permanent disability, loss of life or body part. Condition should be corrected immediately.
FAIR: HAZARD 2: Non-Compliant safety concern that may result in a serious injury resulting in temporary disability. Condition should be corrected as soon as possible.
GOOD: HAZARD 3: Non-Compliant safety concern that is likely to cause a minor (non-disabling) injury. Condition should be corrected when time allows; do not postpone indefinitely.
COMPLIANT: Assessed as compliant; continue with regular maintenance.
ENERAL SITE CONDITION/S □ POOR □ FAIR □ GOOD ☑ COMPLIANT ND APPROACH
The newest (school) playground to Needham is the Sunita Williams School.
The school is linear and has two playgrounds – one on the left side and one in the back
of the school.
ADA access is very good.
There are bushes along the front of the first playground and there is a brown chain link
fence (hard to see).
The setting is very attractive and there are entries in two separate locations.
The back playground is very different in design, but accessible and attractive. A chain
link fence separates it from other activities and provides safety.

PLAYGROUND NAME & ADDRESS: Williams School, Central Avenue

2. <u>VISUAL SURFACING REVIEW</u> □ POOR □ FAIR □ GOOD ☑ COMPLIANT

SURFACING: EWF PIP TILES SAND GRASS OTHER

- Both the front and back playgrounds have PIP (poured in place rubber).
- Based on the 'underfoot, an additional amount of SBR was installed in some of the high wear use zones (IE: swing area).

- Both structures are compliant.
- In my professional opinion a user risk turns into a possible hazard on the flow of the GFRC POD to a dome climber. There is no flat surface for the continuous play-linked event. Nothing needs to change, however, needed supervision in this area should be emphasized.
- Note: The front playground structure is not age appropriate for 2-5 years. The height
 and complexity is age appropriate for 5-12 years and <u>not under</u> 5 years. A new label
 should be affixed.

4. FREE STANDING EQUIPMENT [INCLUDING SWINGS]

- □ POOR □ FAIR □ GOOD ☑ COMPLIANT
- Both the front and back swings and independent pieces of equipment are compliant and in good condition.
- In my professional opinion, the one design flaw is the placement of the one swing bay in the middle of the playground (in the back). Swings should be the furthest away from the equipment. Children are apt to run into swings and other children swinging. Swings are the primary piece of equipment where the most injuries occur.

5. SITE AMENITIES

□ POOR □ FAIR □ GOOD ☑ COMPLIANT

- All site amenities are new and thus do not have any maintenance concerns at this time.
- All furnishings are made of steel/aluminum which tend to get extremely hot. In
 addition to the high temperatures of the PIP, the benches and tables that do get direct
 sun may also burn skin. In my professional opinion, while attractive, they are not
 practical.

6. SUMMARY/RECOMMENDATIONS

OVERALL CONDITION OF PLAYGROUND

□ POOR □ FAIR □ GOOD M COMPLIA	POOR	OR		$\overline{\checkmark}$	COMPLIANT
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- Age appropriate stickers are needed.
- In my professional opinion, as a CPSI, there should be:
 - o Acknowledgement of the owner of the likely hood of an injury at the dome in the front. This is because it is part of a continuous play event and the dome should not be included.
 - Acknowledgement of the owner that the swings in the middle of the playground could cause an accident.
 - I have witnessed at other sites, injuries due to similar situations, as mentioned above.

PLAYGROUND PHOTOGRAPHS | WILLIAMS SCHOOL











PLAYGROUND PHOTOGRAPHS | WILLIAMS SCHOOL













PLAYGROUND PHOTOGRAPHS | WILLIAMS SCHOOL











TOWN OF NEEDHAM | GENERAL SITE OVERVIEW

RESILIENT SURFACING

Inadequate surfacing remains the number one reason why injuries occur on playgrounds. Loose fill, especially sand, engineered wood fiber [EWF], wood chips and pea stone are the least expensive way to meet compliance to ASTM 1292 – which is the 'Standard Specification for Impact Attenuation of Surfacing Materials Within the Use Zone of Playground Equipment'. However, for these surfaces to meet the impact attenuation required, the surfaces need to be maintained on a regular basis. The following types of playground surfacing are considered acceptable on the Federal [DOJ/ADA Dept. of Justice Americans with Disability Act] and State [MAAB – 'Massachusetts Architectural Access Board' level:

- **Sand:** acceptable for playground surfacing, but does not meet ADA and MAAB.
- **Pea Stone:** acceptable for playground surfacing, but does not meet ADA and MAAB.
- Wood chips: acceptable for playground surfacing, but does not meet ADA and MAAB.
- **Engineered Wood Fiber [EWF]**: acceptable for playground surfacing, <u>does</u> meet ADA, but does not meet MAAB.
- Shredded Rubber: acceptable for playground surfacing, but does not meet ADA and MAAB.
- **Poured in Place Rubber [PIP]:** accessible and acceptable to meet ADA and MAAB.
- **Playground Turf:** accessible and acceptable to meet ADA and MAAB.
- **Grass Mats** [the product name]: accessible and acceptable to meet ADA and MAAB.
- Rubber Tiles: accessible and acceptable to meet ADA and MAAB.

There has been a strong effort in Massachusetts to install unitary materials at playgrounds to provide equal access for all abilities of users. MAAB requires that the route of travel into the playground must provide access to every piece of equipment. DOJ/ADA states that you can provide an accessible route to and into the playground with EWF. However, the MAAB overrules the DOJ/ADA guidelines. In Massachusetts, all playgrounds must use unitary materials. In Massachusetts, there are no grandfathered clauses, however variances are acceptable.

THE LACK OF RESILIENT SURFACING

A loose fill surface is a constant challenge in maintaining an acceptable depth. Little attention to the proper depth has been made at all schools and playgrounds. Most sites have less than the standard of 12". Some areas have had EWF spread in the high wear areas with little or no regard to the high wear areas. In some cases, there are areas receiving more surfacing for equipment that is in disrepair.

BRIEF STATEMENT SYNOPSIS

Needham has a large playground system, which are great assets of the town. These playgrounds also come with the responsibility of continual and regular maintenance. There are a number of extreme and visible hazards, that may be 'in the pipeline' for repair. Possible and probable disrepair should have a time certain for repair. For example – 'turf' at Newman, 'decks' at Broadmeadow & Elliot, 'removal of playhouse' at Perry and the many sites that need replacement of swing hardware and chain.

DeFazio would be considered a 'destination playground'. It was a destination/anchor type playground over 20 years ago, but with no attention to maintenance, surfacing and standard of care takes it toll on equipment. From a sanitary and visual standpoint, there is a substantial amount of moss, weeds and trash. The entire playground is considered a Hazard 1 Safety Concern.

If consolidation is a possibility, review equipment that might be retrofitted and ear mark to do so. Equipment lasts longer with proper care.

Surfacing is the number one priority to address. Needham will need to review all sites for future planning to upgrade to meet current ADA law. The lack of proper surfacing is the number one reason children are injured on a playground; it's the fall primarily, not the equipment.

The best use of funds <u>without</u> a full and total rehabilitation would be best served at Perry and Elliot. The best use of <u>full capital rehabilitation</u> would be DeFazio and Broadmeadow.

Playgrounds are visible and important in Needham. Any future rehabilitation should demonstrate to the department the ability to continue to see funds that reap a positive outcome.

Obviously, an action plan with goals and objectives should be developed – a specific master plan for playgrounds only.

Standards of care should be developed. Who inspects, keeps records, orders parts, when needed? Additionally, the playgrounds are only one area of a park – other items/areas to maintain include:

- Parking standard and ADA
- Signage
- Accessible routes of travel
- Proper surfacing
- Safety labels
- Fencing
- Benches, trash receptacles, picnic tables, grills, drinking fountains, etc
- Covid-19 concerns now and in the future: ie: close drinking fountains and only consider 'bottle fill up type stations'.

NEEDHAM PLAYGROUNDS

PLAYGROUND ORDER BY OVERALL CONDITION (BASED ON EQUIPMENT AND SURFACING)

OVERALL BEST CONDITION RANKING

Name of Playground/Park

WILLIAMS
MITCHELL
WALKER GORDON
MILLS

RIVERSIDE

OVERALL WORST CONDITION RANKING

Name of Playground/Park

DEFAZIO
CLAXTON
PERRY
BROADMEADOW
ELLIOT

SIGNAGE and SAFETY LABELING

In general, the signage and labeling is 'fair' at all locations. Signage with the name of the playground is not needed at the schools, but signage with rules would be a good idea to provide consistency throughout the schools. School playgrounds are not usually available for use by the general public during school hours. However, the ownership of the playgrounds at the schools fall under the Park and Recreation Department, so there may be a conflict with the maintenance, accident protocol, etc. For example, the equipment at Eliot is owned by the school Dept, and is used by the schools during the day, and the general public during non-school hours. This type of situation is difficult in creating a standard of care. Who is taking care of equipment at the school? How has all of the obvious hazards and disrepair remain unnoticed and/or addressed (ie: Broadmeadow)?

Safety labels at all sites are required and is the best way to address hazards and comply with CPSC Guidelines. Safety labels are a very small expense. A sampling of signage follows.

EXAMPLE OF PLAYGROUND SAFETY LABELS



Strangulation Warning Label; (3.75" x 3.75") See CPSC Section 3.2.1, pages 14 and 15, and ASTM #F1487-11 Section 14.2.3. This label will inform, warn, and educate about the hazard of a user being strangled on the playground and what steps to take to mitigate it, and provides graphics for complete message clarity.

Note: CPSC says to place this label on or near "slides or other equipment", however, entrances to the entire play area are the best locations so that the "message is conveyed" in a timely manner.



"Hot Surface" Warning Label; (2.5" x 2.5") See CPSC Sections 2.1, 2.4.2.1, 2.5.3, 5.3.6, and ASTM #F1487-11 Section 14.2.4. This label warns the caregiver about the hazard of burn injuries and to check surfacing and/or equipment before use to mitigate burn injuries.



Surfacing Warning Label (version "A") (2.5" x 2.5") complies with ASTM #F1487-11, Section 14.2.5. This label will inform, warn, and educate about the hazard of play equipment located over hard surfaces. The purpose of this label is to serve as a constant reminder to provide and maintain appropriate surfacing.



Surfacing Warning Label (version "B") (2.5" x 2.5") complies with ASTM #F1487-11, Section 14.2.5. This label will inform, warn, and educate about the hazard of play equipment located over hard surfaces. The purpose of this label is to serve as a constant reminder to provide and maintain appropriate surfacing.



"Adult Supervision Is Recommended" Label (2.5" x 2.5") tells users and caregivers that the playground is not intended as a place for unsupervised play. See CPSC Sections 1.6, 2.2.7, and the ASTM #F1487 "Introduction" and Section 14.2.2.







Age Group Labels (2.5" x 2.5" each) help with age separation, which is critical to safety and correct inspection evaluations! "For kids ages 2-5 years", "For kids ages 5-12 years", "For kids ages 2-12 years". CPSC Section 2.2.6 says "Labels posted in the playground area or on the equipment should give some guidance to supervisors as to the age appropriateness of the equipment." Also, CPSC Section 2.2.7 says "Supervisors should look for posted signs indicating the appropriate age of the users and direct children to equipment appropriate for their age." See ASTM Standard #F1487 Section 5.2, and Section 14.2.1 that requires these labels as well.

TOWN OF NEEDHAM STATUS GRID | LIST OF

	PARK OR SCHOOL NAME	, , , , , , , , , , , , , , , , , , , ,	HAZARD ONE SAFETY CONCERN AT SITE	USE ZONE HAZARD		UNITARY SURFACING MAINTENANCE NEEDED (REPAIR OR REPLACE)
1	BROADMEADOW SCHOOL	Broadmeadow Rd.	X		X	
2	CLAXTON	Central Ave.	X		X	
3	CRICKET	Hillside Ave.			X	
4	DEFAZIO	Dedham Ave.	X	X	X	
5	ELLIOT SCHOOL	Wellesley Ave.	X			
6	GREENE'S FIELD	Pickering			X	X

TOWN OF NEEDHAM STATUS GRID | LIST OF

	PARK OR SCHOOL NAME	,	HAZARD ONE SAFETY CONCERN AT SITE	USE ZONE HAZARD		UNITARY SURFACING MAINTENANCE NEEDED (REPAIR OR REPLACE)
7	MILLS	Gould Str.	X	X		
8	MITCHELL SCHOOL	Brookline Str.				X
9	NEWMAN SCHOOL	Central Ave.				X
10	PERRY PARK	Beaufort Ave.	X		X	
11	RIVERSIDE	Riverside Str.				
12	WALKER GORDON	Charles River St.			X	

TOWN OF NEEDHAM STATUS GRID | LIST OF

	PARK OR SCHOOL NAME	ADDRESS	HAZARD ONE SAFETY CONCERN AT SITE	SURFACE MAINTENANCE NEEDED (WEEDS, ADDTL	UNITARY SURFACING MAINTENANCE NEEDED (REPAIR OR REPLACE)
13		Central Ave.			

*COMPROMISED SUPPORTS OR COMPONENTS: IE: POSTS, DECKS AND MINOR MAINTENANC

NEEDS THAT ARE ESSENTIAL TO BRING THE PL

HAZARDOUS LANDSCAPING	SAFETY LABELS AND SIGNAGE	PHYSICAL CONTROL BARRIER IN DISREPAIR: IE: BOLLARDS, FENCE, ETC.	STRUCTURES W/ COMPROMISED EQUIPMENT*	SITE REVIEW: REMOVAL OF EQUIPMENT ASAP	PERIMETER EDGING
	X		X	X	
	X		X	X	Х
X					
X	X	X	X	X	X
X			X		
X	X				

NEEDS THAT ARE ESSENTIAL TO BRING THE PL

	SAFETY LABELS AND SIGNAGE	PHYSICAL CONTROL BARRIER IN DISREPAIR: IE: BOLLARDS, FENCE, ETC.	COMPROMISED	SITE REVIEW: REMOVAL OF EQUIPMENT ASAP	PERIMETER EDGING
	X		X		
	X		, ,		
			· · · · · · · · · · · · · · · · · · ·		
	X		X	X	
X	X		X	X	X

NEEDS THAT ARE ESSENTIAL TO BRING THE PL

HAZARDOUS LANDSCAPING	SAFETY LABELS AND SIGNAGE	PHYSICAL CONTROL BARRIER IN DISREPAIR: IE: BOLLARDS, FENCE, ETC.	STRUCTURES W/ COMPROMISED EQUIPMENT*	SITE REVIEW: REMOVAL OF EQUIPMENT ASAP	PERIMETER EDGING
	X				

E MAY NEED TO INVOLVE THE MANUFACTURERS REP. CHECK WARRANTIES.

AY AREAS INTO COMPLIANCE

SITE FURNISHINGS HAZARD REVIEW: BENCHES, PICNIC TABLES, TRASH	CONSIDER PARTIAL UNITARY SURFACING	CONSIDER FULL UNITARY SURFACING	COMMENTS
X		X	
		X	Consider unitary surfacing after new equipment is installed.
X	X		The site is too large for 100% unitary surfacing.
		X	Consider Unitary surfacing after repairs are complete (at the 2-5 years).
	X		Needs landscaping and surfacing.

AY AREAS INTO COMPLIANCE

SITE FURNISHINGS HAZARD REVIEW: BENCHES, PICNIC TABLES, TRASH	CONSIDER PARTIAL UNITARY SURFACING	CONSIDER FULL UNITARY SURFACING	COMMENTS
		X	Repair support.
	X		The track ride needs safety labels.
X			Swing hardware needed, edging and patching of turf.
		X	
	X		
	X		

AY AREAS INTO COMPLIANCE

SITE FURNISHINGS HAZARD REVIEW: BENCHES, PICNIC TABLES, TRASH	CONSIDER PARTIAL UNITARY SURFACING	CONSIDER FULL UNITARY SURFACING	COMMENTS
			Review for proper age groups, needs better supervision based on design.

PLAYGROUND ASSESSMENT AND RECOMMENDATION REPORT TOWN OF NEEDHAM MASSACHUSETTS

ADDITIONAL INFORMATION

- Playground, Park and Recreation Frequently Used Terminology
- Grass Mat Sample over EWF
- Grass Mat Sample over EWF to Transfer Module
- Accessible Play Areas
- MAAB References
- Disclosure
- CPSI Certificate



PARK AND/OR RECREATION - FREQUENTLY USED TERMINOLOGY

Anchor Park: A prominently located park, in a viable and populated area. This type of park draws people to it for many reasons, other than just the use of the playground equipment. The park itself can be the main reason the area thrives.

ASTM guidelines: ASTM stands for American Society for Testing and Materials. The organization develops over 12,500 voluntary consensus standards. They have over 140 technical standards-writing committees and represent many diverse industries.

CPSC Guidelines: The United States Consumer Product Safety Commission's Handbook for Public Playground Safety (CPSC Handbook) is the recognized standard for playground equipment safety.

Destination Playground: A piece of land, free of homes and buildings that is large and offers a wide variety of activities. People usually congregate in groups, but also offers space for the individual. The area is usually a large open space.

EPDM: E propylene Diene Monomer (M-class) rubber), is a type of synthetic rubber. The M refers to its classification in ASTM standard D-1418; the M class includes rubbers having a chain of the polyethylene type.

EWF: Stands for Engineered Wood Fiber, which is an economical playground surfacing. It has high impact absorbing qualities and still it is a firm, slip resistant surface that will meet accessibility guidelines.

GFRC: Stands for Glass Fiber Reinforced Concrete, this material are used with playground equipment often in a themed or natural play playground.

HIC: The Head Injury Criterion (HIC) is a measure of the likelihood of head injury arising from an impact. This means that the HIC includes the effects of head acceleration and the duration of the acceleration during impact.

Impact Attenuation: Impact attenuation of playground surfacing is a measure of the surface's ability to absorb shock from a falling object such as a child. This attenuation is critical in the ASTM guidelines for prevention of head or bodily injuries.

PARK AND/OR RECREATION - FREQUENTLY USED TERMINOLOGY

Neighborhood Park: Neighborhood parks, which generally range in size, usually take in several blocks of users in a surrounding neighborhood. These parks serve as a social and recreational focal point for a neighborhood. Neighborhood parks usually provide 'relief' and 'rejuvenation' from the environment for residents. In some instances, the neighborhood takes ownership of the playground often helping and contributing to the maintenance and upkeep of the playground.

PIP: Stands for Poured in Place rubber. This is a common surfacing material used in playgrounds.

Play Value: The degree to which a playground and it's equipment offers multiple layers of opportunities to develop social, physical, intellectual, and moral, development through play.

Plumb: Is a measure of the upright position of a post or main support column of a play structure i.e.; a net climber.

Pocket Park: Is a small park accessible to the general public. Pocket parks are frequently created on a single vacant building lot or on small, irregular pieces of land. Used primarily by the adjacent abutters.

Professional Judgment/Opinion: The ability of an individual with current knowledge, skill and experience in the field of playground, playground equipment, design, use and operation to form an opinion or make a decision using this level of expertise as a guideline.

PVC Coating: Polyvinyl chloride is a soft rubbery coating on playground equipment made of metal such as decks.

PVC Paste: PVC coating that can be used to fill in areas where the original PVC coating has worn off or has exposed the underlying metal. As well as used in areas where PVC coating cannot reach such as arches and other vulnerable areas.

Residential Play Toys: Any piece of plastic or metal play toy brought from home to add play to a playground. All 'play toys' should be removed.

Retrofit: to modify equipment that is already in service.

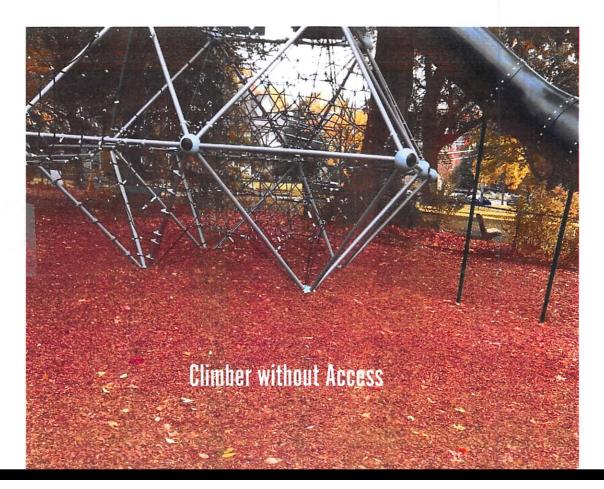
PARK AND/OR RECREATION - FREQUENTLY USED TERMINOLOGY

SBR: Stands for Styrene Butadiene Rubber, is the basemat for poured in place rubber.

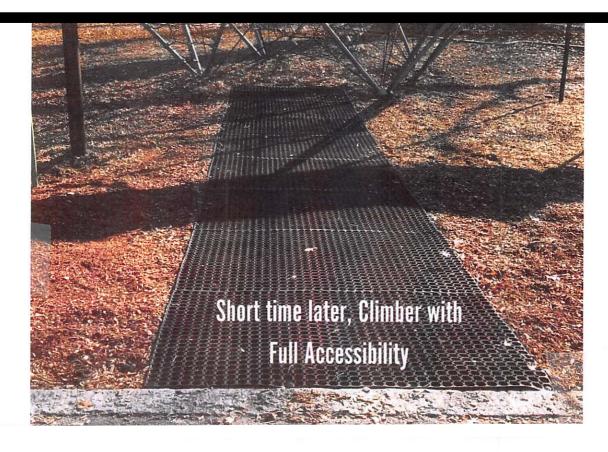
Spalling: Formal definition: break (ore, rock, stone, or concrete) into smaller pieces; to break off in fragments. "Cracks below the surface cause slabs of material to spall off". Hard material, which is starting to, or is currently shedding rust, usually in layers. I.e.: a deck that is PVC coated is losing its PVC from normal wear and tear. The steel shows, starts to rust, and then spalls. Rust flakes and settles on top of itself.

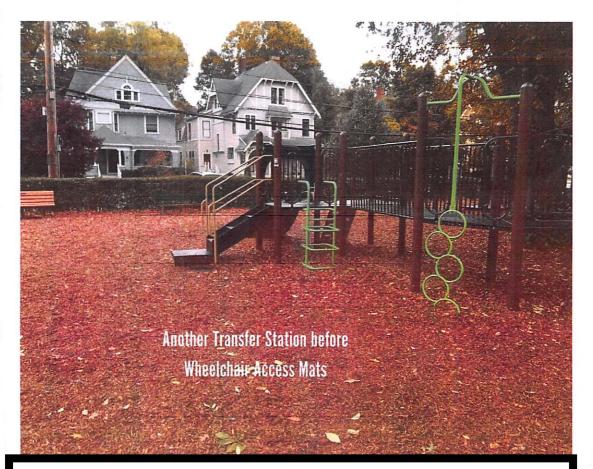
Use Zone: Use zones are typically set with playground equipment such as swings or slides mainly because of safety reasons. These zones help spacing between play structures or components to allow users ample amount of room so injuries are avoided.

3rd Party Playground Inspector: The inspection provided to clients remains free from bias or conflict of interest (i.e.: the 3rd party inspector is not a manufacturer's sales representative, installer of equipment or surfacing, etc.).

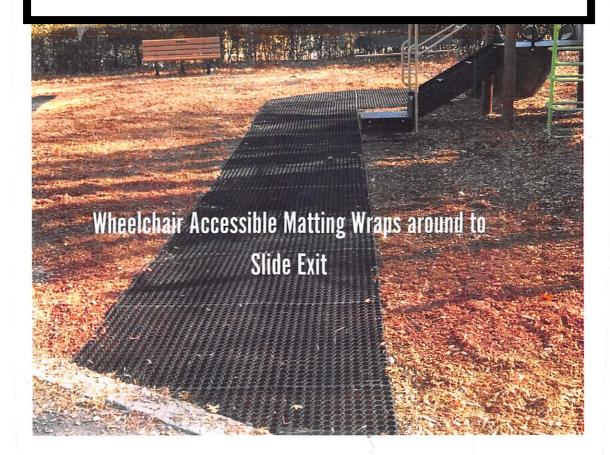


GRASS MAT SAMPLE OVER EWF





GRASS MAT SAMPLE OVER EWF TO TRANSFER MODULE

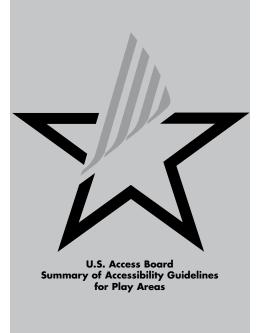


ACCESSIBLE PLAY AREAS

A Summary of Accessibility Guidelines for Play Areas







INTRODUCTION

The Americans with Disabilities Act (ADA) is a comprehensive civil rights law that prohibits discrimination on the basis of disability. The ADA requires that newly constructed and altered State and local government facilities, places of public accommodation, and commercial facilities be readily accessible to, and usable by, individuals with disabilities. Recreational facilities, including play areas, are among the facilities required to comply with the ADA.

The Architectural and Transportation Barriers Compliance Board - often referred to as the "Access Board" - has developed accessibility guidelines for newly constructed and altered play areas. The play area guidelines are a supplement to the Americans with Disabilities Act Accessibility Guidelines (ADAAG). Once these guidelines are adopted as enforceable standards by the Department of Justice, all newly constructed and altered play areas covered by the ADA will be required to comply. These guidelines also apply to play areas covered by the Architectural Barriers Act (ABA).

Summary

This guide is intended to help designers and operators in using the accessibility guidelines for play areas. These guidelines establish minimum accessibility requirements for newly constructed and altered play areas. This guide is not a collection of playground designs. Rather, it provides specifications for elements within a play area to create a general level of usability for children with disabilities. Emphasis is placed on ensuring that children with disabilities are generally able to access the diversity of components provided in a play area. Designers and operators are encouraged to exceed the guidelines where possible to provide increased accessibility and opportunities. Incorporating accessibility into the design of a play area should begin early in the planning process with consideration to layout, circulation paths, and the selection of play components.

The play area guidelines were developed with significant public input and carefully considered the balancing of costs, safety, and accessibility. The Access Board sponsored a Regulatory Negotiation Committee to develop proposed guidelines. The public was given an opportunity to comment on the proposed guidelines and the Access Board made changes to the proposed guidelines based on the public comments. The Regulatory Negotiation Committee represented the following groups and associations:

American Society of Landscape Architects **ASTM Public Playground Committee ASTM Soft Contained Play Committee** ASTM Playground Surfacing Systems Committee

International Play Equipment Manufacturers Association

National Association of Counties

National Association of Elementary School Principals

National Child Care Association

National Council on Independent Living

National Easter Seal Society National League of Cities

National Parent-Teacher Association National Recreation and Park Association Spina Bifida Association of America

TASH

United Cerebral Palsy Association

U.S. Access Board

This guide is designed to assist in using the play area accessibility guidelines and is divided into the following sections:

Where Do the Play Area Guidelines Apply?

What is a Play Component?

How Many Play Components Must Be on an Accessible Route?

What Are the Requirements for Accessible Routes?

What Other Accessibility Requirements Apply to Play Components?

Soft Contained Play Structures

Copies of the play area accessibility guidelines and further technical assistance can be obtained from the U.S. Access Board, 1331 F Street, Suite 1000 NW, Washington, DC 20004-1111; 800-872-2253, 800-993-2822 (TTY); www.access-board.gov. Alternate formats of this document are also available upon request.



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PLAY AREA TERMS

Play Area Terms

Many terms are used throughout this guide to describe the play area guidelines. Familiarity with these terms is important when applying the guidelines. Other definitions are provided in ADA/ABA.

ABA - Architectural Barriers Act

Access Board – An independent Federal agency that develops accessibility guidelines under the ADA and other laws. The Access Board is also known as the Architectural and Transportation Barriers Compliance Board.

Accessible – Describes a site, building, facility, or portion thereof that complies with the play area guidelines.

Accessible Route – A continuous unobstructed path connecting all accessible elements and spaces of a building or facility. Inside the boundary of the play area, accessible routes may include platforms, ramps, elevators, lifts. Outside the boundary of the play area, accessible routes may also include parking access aisles, curb ramps, crosswalks at vehicular ways, walks, ramps, and lifts.

ADA – Americans with Disabilities Act.

Alteration – An alteration is a change to a building or facility that affects or could affect the usability of the building of facility or part thereof. Alterations include, but are not limited to, remodeling, renovation, rehabilitation, reconstruction, historic restoration, resurfacing of circulation paths or vehicular ways, changes or rearrangement of structural parts or elements, and changes or rearrangement in the plan configuration of walls and full-height partitions. Normal maintenance is not an alteration unless it affects the usability of the facility (see section on alterations for more details).

Amusement Attraction – Any facility, or portion of a facility, located within an amusement park or theme park, that provides amusement without the use of an amusement device. Examples include, but are not limited to, fun houses, barrels, and other attractions without seats.

ASTM – American Society for Testing and Materials.

Berm – A sloped surface at ground level designed to ascend or descend in elevation.

Clear - Unobstructed.

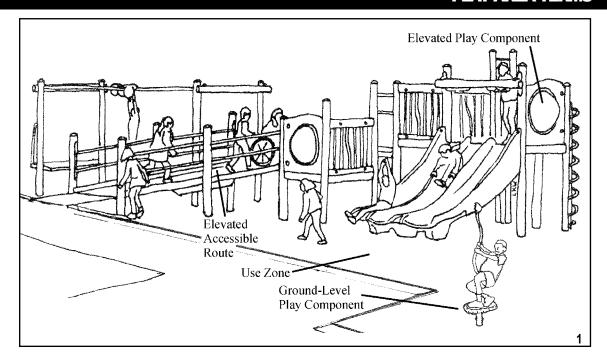
Composite Play Structure – Two or more play structures attached or functionally linked, to create one integral unit that provides more than one play activity (ASTM F 1487-01).

Cross Slope – The slope that is perpendicular to the direction of travel (see running slope).

Elevated Play Component – A play component that is approached above or below grade and that is part of a composite play structure consisting of two or more play components attached or functionally linked to create an integrated unit providing more than one play activity.



PLAY AREA TERMS



Facility – All or any portion of buildings, structures, site improvements, elements and pedestrian routes or vehicle ways located on a site.

Ground Level Play Component – A play component that is approached and exited at the ground level.

Play Area – A portion of a site containing play components designed and constructed for children.

Play Component – An element intended to generate specific opportunities for play, socialization, or learning. Play components may be manufactured or natural, and may be stand alone or part of a composite play structure.

Ramp – A walking surface that has a running slope of greater that 1:20.

Running Slope – The slope that is parallel to the direction of travel (see cross slope).

Site – A parcel of land bounded by a property line or a designated portion of a public right-ofway.

Soft Contained Play Structure – A play structure made up of one or more components where the user enters a fully enclosed play environment that utilizes pliable materials (e.g., plastic, netting, fabric).

Use Zone – The ground level area beneath and immediately adjacent to a play structure or piece of equipment that is designated by ASTM F 1487 Standard Consumer Safety Performance Specification for Playground Equipment for Public Use for unrestricted circulation. This is the play surface upon which it is predicted a user would land when falling from or exiting the equipment.



New Construction

The play area guidelines in this guide apply to all newly designed or constructed play areas for children ages 2 and older.

This includes play areas located in a variety of settings: parks, schools, childcare facilities, shopping centers, and public gathering areas. Owners or operators of newly constructed play areas are responsible for complying with these guidelines.

The play area guidelines do not apply to:

- Family childcare facilities where the proprietor resides
- Amusement attractions
- Religious entities



This large play area designed for the same age group is part of a public park system. The total of all the play components in this play area - which includes multiple composite structures - must be counted when applying the play area guidelines.

Alterations

The play area guidelines also apply to existing play areas where alterations occur. Further information regarding the application of the play area guidelines to altered play areas can be found on page 39.

Equivalent Facilitation

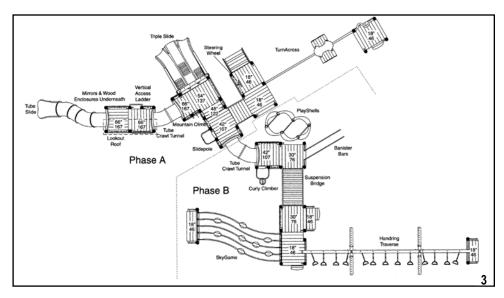
Designs that result in products or technologies as alternatives to those prescribed, provided substantially equivalent or greater accessibilty and usability.

Equivalent facilitation is the concept of utilizing innovative solutions and new technology, design, or materials in order to satisfy the guidelines. These alternative solutions provide equal access and take advantage of new developments, but may differ technically from specific guidelines.



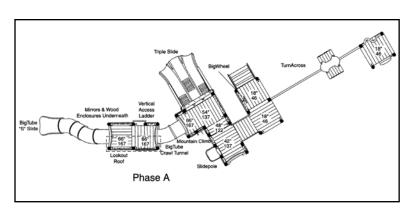
Phasing in Play Areas

When play areas are constructed in phases, they must continue to meet the play area guidelines throughout construction. The initial phase area must meet the guidelines, and then at each successive phase the whole play area must be reassessed to assure compliance.

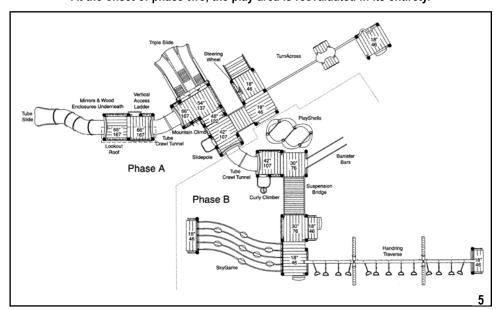


This play area will be installed in two phases. As each phase is completed, the entire play area must be reevaluated for compliance.

Prior to phase one, the first structure is evaluated for compliance, since the guidelines are based on a minimum number of play components required to be on an accessible route.



At the onset of phase two, the play area is reevaluated in its entirety.



"Phased designs" are play areas developed to be installed in different stages, allowing the play area to grow in a planned manner while accommodating budgets, fund raising, or community approval processes.



Play Areas Separated by Age

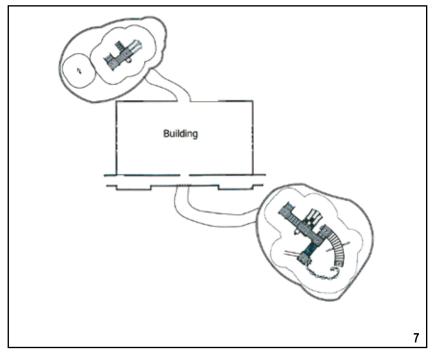
To reduce the risk of injury, safety guidelines recommend separate play areas for different age groups. In applying the guidelines, play areas designed for different age groups should be considered separately.

A play area designed for 2 to 5 year-olds is considered separate from one for 5 to 12 year-olds. Therefore, compliance with the guidelines must be considered for each individual play area.



This dual play area designed for 2 to 5 year-olds and 5 to 12 year-olds shares resilient surfacing. Each section must be evaluated separately.

Geographically Separated Play Areas



Large geographical spaces may contain several play areas within one park setting. Where play areas are geographically separated on a site, they are considered separate play areas. The accessibility guidelines apply to each play area.



Play Components

A play component is an element designed to generate specific opportunities for play, socialization, and learning. Play components may be manufactured or natural, and may be stand alone or part of a composite play structure. Swings, spring riders, water tables, playhouses, slides, and climbers are among the many different play components.

For the purpose of these guidelines, ramps, transfer systems, steps, decks, and roofs are not considered play components. These elements are generally used to link other elements on a composite play structure. Although socialization and pretend play can occur on these elements, they are not primarily intended for play.



Spring rider



Swing



Climber



Slide



Page 9

When applying the play area guidelines, it is important to identify the different play experiences play components can provide.

Different "Types"

At least one of each type of play component provided at ground level in a play area must be on an accessible route.

Different "types" of play components are based on the general experience provided by the play component. Different types include, but are not limited to, experiences such as rocking, swinging, climbing, spinning, and sliding.



A Swinging Type



A Rocking Type



This single play component provides one type of play experience for multiple individuals.



"Rocking"

example of horizontal movement that can be

backwards, forwards,

sideways or even cir-

"Sliding" is an example

of rapid descent that

utilizes the force of

cular in nature.

gravity.

WHAT IS A PLAY COMPONENT?

The number of individuals who can play on a play component at once does not determine the quantity of play components provided in a play area. A play component can hold many children but is considered one type of play experience - or one play component - in the play area.





Examples of Sliding Types

While a spiral slide provides a slightly different experience from a straight slide, the primary experience - a sense of rapid descent or sliding - is common to both activities. Therefore, a spiral slide and a straight slide are considered one "type" of play experience.



WHAT IS A PLAY COMPONENT?

Elevated Play Components

An elevated play component is a play component that is approached above or below grade and is part of a composite play structure. Play components that are attached to a composite play structure and that can be approached from a platform or deck area are considered elevated play components.



This climber is considered an elevated component, since it can be approached or exited from the ground level or above grade from a platform or deck on a composite play structure.

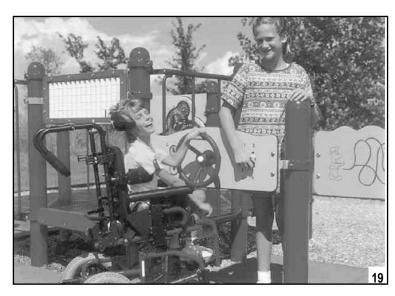




WHAT IS A PLAY COMPONENT?

Ground-Level Play Components

Ground-level play components are items that can be approached and exited at ground level. For example, a child approaches a spring rider at ground level via the accessible route. The child may ride then exit directly back onto the accessible route. The activity is considered ground level because the child approaches and exits it from the ground-level route.



Ground-level play components may be part of a composite structure.





Ground-level components may also be free-standing in a play area.

When more than one ground-level play component is required on an accessible route, the play components must be integrated. Designers should consider the optimal layout of ground-level play components to foster interaction and socialization among all children. Grouping all ground-level play components accessed by children with disabilities in one location does not constitute integration.

"Ground-level components" are approached and exited at ground level.

Ground-level play components may include items such as swings, spring riders, and panels.

Freestanding slides are considered groundlevel components for the purpose of these guidelines. An accessible route must connect to the ladder or steps, and to the exit of the slide. While this solution does not provide access for all children, it gives many individuals the opportunity to access play components.



U.S. Access Board Summary of Accessibility Guidelines for Play Areas

HOW MANY PLAY COMPONENTS MUST BE ON AN ACCESSIBLE ROUTE?

GROUND COMPONENTS PLAY TYPES OFFICENCING ACCESSES ROUTE ACCESSES ROUTE ACCESSES ROUTE COMPONENTS PLAY TYPES OFFICENCING ACCESSES ROUTE TOTAL ROUTE COMPONENTS PLAY TYPES OFFICENCING ACCESSES ROUTE TOTAL ROUTE COMPONENTS PLAY TYPES OFFICENCING ACCESSES ROUTE ACCESSES ROUTE TOTAL ROUTE ACCESSES ROUTE ACCESSES ROUTE TOTAL ROUTE ACCESSES ROUTE TOTAL ACCESSES ROUTE TOTAL ROUTE ACCESSES ACCESSES

Ground-Level Play Components

There are two requirements addressing how many ground-level play components must be on an accessible route:

- One of Each Type
- Ground-Level Requirements based on the number of Elevated Play Components

One of Each Type

At least one of each type of ground-level play component that is present in the play area must be on an accessible route.

As an example, this play area includes a composite play structure, two spring riders and a swing set (see *inset*). To meet the requirement, an accessible route must connect to at least one spring rider and one swing for one of each type of ground-level play experiences which are present in the play area.

The above step-by-step guide is intended to assist when applying the play area guidelines. A detailed description is provided on page 17.

A "ground-level play component" is a play component that is approached and exited at the ground level.





U.S. Access Board Summary of Accessibility Guidelines for Play Areas

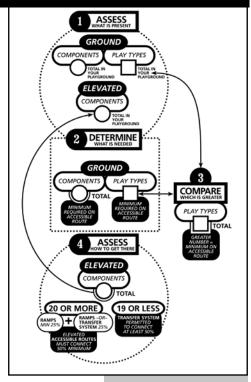
HOW MANY PLAY COMPONENTS MUST BE ON AN ACCESSIBLE ROUTE?

Ground Level Requirements Based on Elevated Play Components

The number and variety of ground-level play components required to be on an accessible route is also determined by the number of elevated components provided in the play area.

The intent of this requirement is to provide a variety of experiences for individuals who choose to remain with their mobility aids, or choose not to transfer to elevated play components.

Table 240.2.1.2		
Number of elevated play components provided	Minimum number of ground-level play components required to be on accessible route	Minimum number of different types of ground-level play components required to be on acessible route
1	Not applicable	Not applicable
2 to 4	1	1
5 to 7	2	2
8 to 10	3	3
11 to 13	4	3
14 to 16	5	3
17 to 19	6	3
20 to 22	7	4
23 to 25	8	4
More than 25	8 plus 1 for each additional 3 over 25, or fraction thereof	5

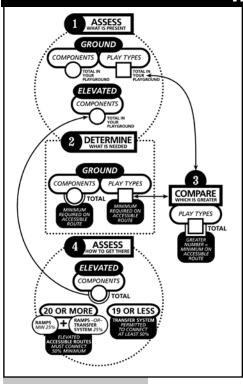


If ramps provide access to at least 50 percent of the elevated play components - which must include at least three different play types - then additional ground-level components are not required.

In the play area shown on page 14, the composite structure has four elevated play components (bubble panel, slide, steering wheel, and tic-tac-toe panel). According to the table, a minimum of one ground level play component must be provided, and a minimum of one different type. The spring rider or swing can be used to meet the "one of each type" requirement and can also be used to meet the minimum number determined by Table 240.2.1.2.



HOW MANY PLAY COMPONENTS MUST BE ON AN ACCESSIBLE ROUTE?



The above step-by-step guide is intended to assist when applying the play area guidelines. A detailed description is provided on page 17.

An "elevated play component" is a play component reached from above or below grade, and is part of a composite play structure.



Page 16

Elevated Play Components

At least 50 percent of the elevated play components must be on an accessible route.



Play areas with 20 or more elevated components must use ramps to connect a minimum of 25 percent of those components. A transfer system or ramps may connect the other elevated play components required on an accessible route.



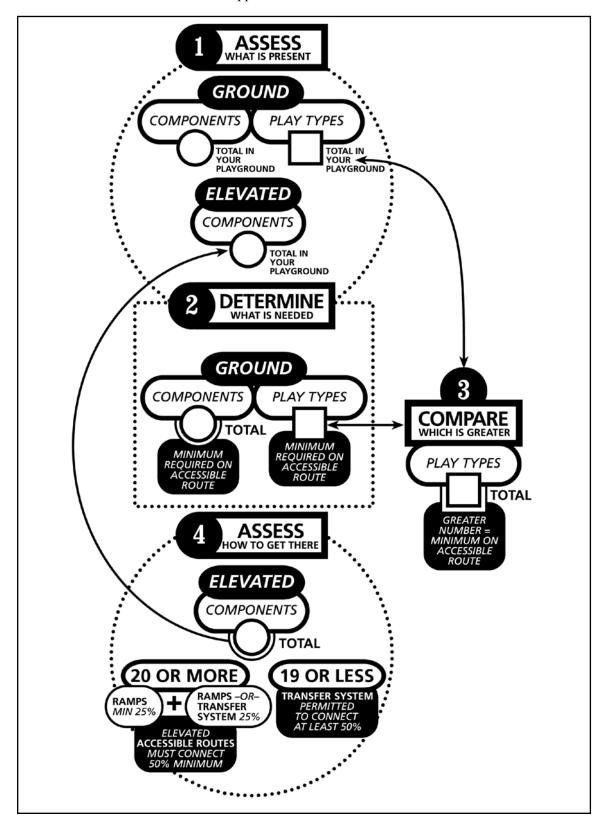
Play areas with less than 20 elevated play components may use a transfer system instead of ramps to connect at least 50 percent of the elevated components.

STEP-BY-STEP GUIDE ON APPLYING GUIDLINES

Step-by-Step Guide

The following step-by-step guide has been provided to assist in evaluating a play area for meeting the minimum requirements of these guidelines. The guide has been arranged in four steps and provides spaces to fill in numeric values of play components for evaluating a specific play area design.

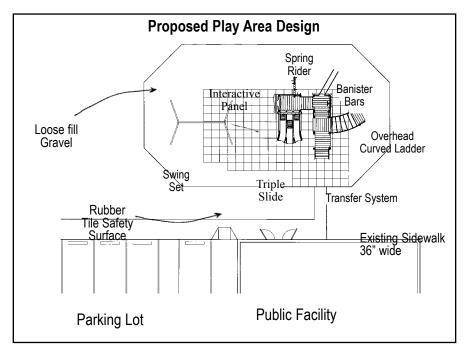
The step-by-step guide is used throughout the remainder of this guide as a key, shown in the upper corner of each new section where it applies.





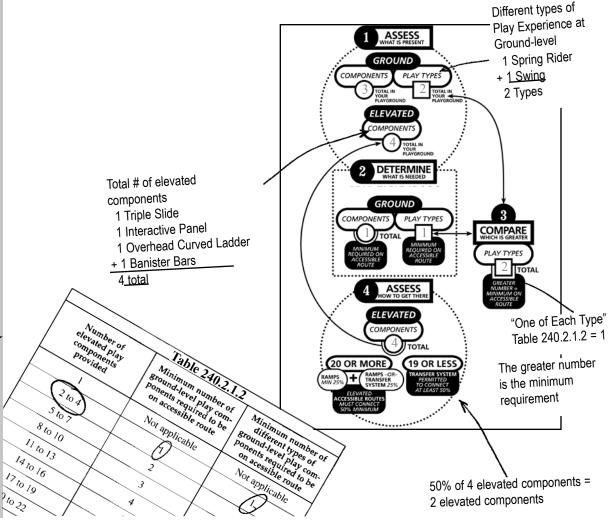
PLAY AREA EVALUATION EXAMPLE

The example below illustrates a proposed design for a new play area. Each section illustrated in the flow chart provides guidelines for the following design tasks:



- Determining the number of play components
- Assessing the variety of play types
- Determining how many play components must be on an accessible route
- Determining when ramps are required and when transfer systems are permitted

Refer to this example while reviewing the concepts explained in this guide, to review how accessibility guidelines are applied to play area designs.



U.S. Access Board
A Summary of Accessibility
Guidelines for Play Areas

ADAAG chapter 4 addresses accessible routes that connect the play area to the school, parking lot, or facility that it serves. Operators or owners of play areas are subject to all the other requirements of the ADA, including the obligation to provide individuals with disabilities an equal opportunity to enjoy the play area provided by that facility.

This section describes the various features of accessible routes within a play area, including location, clear width, slope, and accessible surfaces.

Accessible Routes

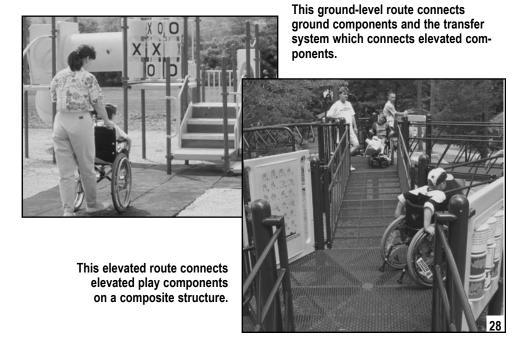
An accessible route is a pathway specifically designed to provide access for individuals with disabilities, including those using wheelchairs or mobility devices.



Accessible routes inside the boundaries of play areas are addressed in the play area guidelines. Technical provisions address the width, slope, and surface of both ground-level and elevated accessible routes.

There are two types of accessible routes:

- Ground-level
- Elevated



The accessible route must connect all entry and exit points of accessible play components.

Clear floor space required at play components and maneuvering space can overlap the accessible route.

Incorporating additional circulation space around high-use play components creates extra room for movement and accessibility for everyone using the play area.

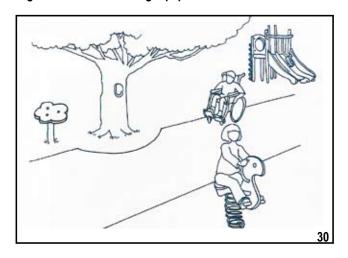


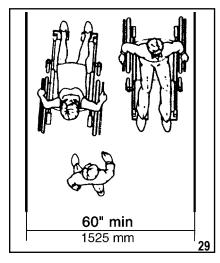
Ground-Level Accessible Routes

A ground-level accessible route connects play components at ground level.

- 60 inches (1525 mm) minimum clear width
- 1:16 maximum slope

The route may narrow down to 36 inches (915 mm) for a distance of 60 inches (1525 mm). This permits flexibility to work around site design features like existing equipment or trees.





The required 60-inch width enables two wheelchairs to pass each other or to change direction.

Smaller play areas - those that are less than 1,000 square feet (93 square meters) - may have ground-level accessible routes that are 44 inches (1120 mm) clear width. A wheelchair turning space must be provided where the route exceeds 30 feet (9.14 mm) in length.

At ground level, objects may not protrude into the 60-inch wide space of an accessible route up to or below the height of 80 inches (2030 mm), measured above the accessible route surface. The 80-inch clearance applies only to the 60-inch accessible route, and is not required for the entire play area.

The play area provides a fun accessible roadway theme. The protective shelters for the benches have been set outside the boundary of the route providing the 80 inches of clearance required on the route.



The 80-inch vertical

clearance applies to

ground-level routes only, and not elevated routes. This allows

features like protective

roofs and sun shelters

to be present.



Ground-Level Accessible Routes

Maximum Slope at Ground Level

The maximum allowable slope for a ground-level accessible route is 1:16.

Berms are sometimes used to provide access to elevated play areas. A berm may be a natural sloped surface that is present in a hilly play area site, or a ground-level route built with slopes.

Designers are encouraged to consider edge protection and handrails on berms where there may be a drop-off. Remember the maximum slope of this "ground-level accessible route" is 1:16.

However, handrails are not required on ground-level accessible routes. This is permitted since the handrails may become a safety hazard in the "use zone."



This play area provides a bermed accessible route.



To accommodate a height change along the perimeter of a play area - like these rubber safety tiles placed on an asphalt surface - an allowable 1:12 slope is utilized for the transition at the boundary of the play area.



The "use zone" is a ground level area beneath and immediately adjacent to a play structure or piece of equipment that is designated for unrestricted circulation around the equipment. It is predicted that a user would fall and land or exit the equipment on the surface of the use

The American Society for Testing and Materials (ASTM) has established safety standards for play areas, including resilient surfaces. For further information or to purchase these standards, contact ASTM, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, www.astm.org.

zone.

Accessible Ground Surfaces

Ground surfaces along accessible routes, clear floor or ground spaces, and maneuvering spaces, must comply with the American Society for Testing and Materials (ASTM) F 1951-99 Standard Specification for Determination of Accessibility to Surface Systems Under and Around Playground Equipment.

This standard assesses the accessibility of a surface by measuring the work an individual must exert to propel a wheelchair across the surface. The standard includes tests of effort for both straight-ahead and turning movements, using a force wheel on a rehabilitation wheelchair as the measuring device. To meet the standard, the force required must be less than that which is required to propel the wheelchair up a ramp with a slope of 1:14.

When selecting ground surfaces, operators should request information about compliance with the ASTM F 1292-04 standard.



Accessible surfaces can include impact-attenuating tiles made of recycled rubber and engineered wood fiber that meet the ASTM requirements for accessibility and safety. The design can be created so safety is not compromised for individuals using the play area where both standards are applied.

Accessible Surfaces Located In The Use Zone

If located within the use zone, accessible ground surfaces must also be impact attenuating and meet ASTM F 1292-04 Standard Specification for Impact Attenuation of Surface Systems Under and Around Playground Equipment.







Accessible and non-accessible surfaces can be combined to provide variety and excitement in the play area.



Rubber surfacing tiles facilitate access in this play area.

Ground surfaces must be inspected and maintained regularly and frequently to ensure continued compliance with the ASTM F 1292-04 standard. The frequency of maintenance and inspection of resilient surfacing depends on the amount of use and the type of surfacing installed.

At the time of this publication, rubber surfacing and some engineered wood fiber products meet the ASTM F 1951-99 standard . The fact that a specific product meets the ASTM 1951-99 standard does not necessarily mean that all other similar products will meet the standard.

Operators interested in selecting surfaces to comply with the play area guidelines, should consult individual product manufacturers to determine compliance with ASTM F 1951-99.



Accessible surfacing can be designed to complement the theme of the play area, while providing full access and visually integrating the surface into the overall design. Individuals of all abilities will enjoy the added benefits of an imaginative design.

Engineered wood fiber surfaces will require frequent maintenance to comply with the ASTM F 1292-04 standard because of surface displacement due to user activity or other factors.

Designers and operators are likely to choose materials that best serve the needs of each play area. The type of material selected will affect the frequency and cost of maintenance.





Elevated Accessible Routes

An elevated accessible route is the path used for connecting elevated play components.

Elevated accessible routes must connect the entry and exit points of at least 50 percent of the elevated play components provided in the play area.

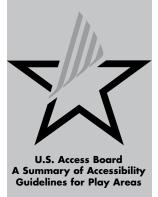
Two common methods for providing access to elevated play components are ramps and transfer systems. Ramps are the preferred method since not all children who use wheelchairs or other mobility devices may be able to use - or may choose not to use - transfer systems.



This photo illustrates an elevated accessible route:

- 36-inch (915 mm) clear width
- 32-inch (815 mm) narrowed width permitted for 24-inch (610 mm) length to accommodate features in the composite structure
- 12-inch (305 mm) rise maximum per ramp run
- Top of handrail gripping surfaces shall be 20 inches (510 mm) minimum to 28 inches (710 mm) maximum above the ramp surface





"Ramps" serve as a continuation of the

accessible route from the ground allowing

individuals who use mobility devices to

access elevated com-

ponents. The guide-

lines require that play areas containing 20 or more elevated play components provide ramp access to at least 25 percent of those elevated components.

The 80-inch vertical clearance height does not apply to elevated accessible routes. This allows for the use of features such as roofs and sun shelters.

When Ramps Are Required

Ramps are required on composite structures with 20 or more elevated play components and must connect to at least 25% of the elevated play components.

Ramps allow individuals who use wheelchairs and mobility devices to access elevated play components in composite play structures without transferring.



This play area has more than 20 play components and provides ramp access to elevated play components. The ramp system, consisting of ramp runs and landings, must connect at least 25 percent of the elevated play components. The balance of the elevated play components required to be on an accessible route may be connected by the ramp system, or by a transfer system.

Rise of a ramp is the amount of vertical distance the inclined or slanted surface ascends or descends. A ramp **run** is a length of a continuous sloped surface that is ascending or descending. For example, to reach a 12-inch high deck or platform, a designer could use a 12-foot ramp with the maximum 1:12 slope, or a 14-foot ramp with a less steeper 1:14 slope.

Platform lifts, also known as "wheelchair lifts," may be considered for providing access to elevated play components when appropriate.

Where applicable, platformlifts complying with ADA/ABA Accessibility Guidelines chapter 4 and applicable state and local codes are permitted as a part of an accessible route. Because lifts must be independently operable, owners and operators should carefully consider the appropriateness of their use in unsupervised settings.



Ramps

"Ramps" are sloped surfaces that provide

individuals who use

mobility devices with

access to elevated com-

ponents.

For each elevated ramp run:

- 12-inch (305 mm) maximum rise
- 1:12 maximum slope
- 36-inch (915 mm) minimum clear width



Landings

Landings are the level surfaces at the top and bottom of each ramp run.

- Must be as wide as the ramp they connect to
- A minimum length of 60-inches (1525 mm)
- If ramps change direction, the minimum landing size must be 60 inches (1525 mm) wide to accommodate a turn

Maneuvering Space Where Ramps are Provided

At least one maneuvering space must be provided on the same level as the play component. The space must have a slope no steeper than 1:48 in all directions (see page 34 for further details).

ADA/ABA Accessibility Guidelines addresses additional requirements for ramps and landings including edge protection, cross slope, surfaces, and outdoor conditions.





Handrails

Handrails are required on both sides of ramps connecting elevated play components. Handrails must comply with the following:

- Clearance between handrail gripping surfaces and adjacent surfaces and shall not be 1 1/2 inches (38mm) minimum.
- Handrail gripping surfaces shall be continuous along their length and shall not be obstructed along their tops or sides. The bottoms of handrail gripping surfaces shall not be obstructed for more than 20 percent of their length. Where provided, horizontal projections shall occur 1 1/2 inches (38mm) minimum below the bottom of the handrail gripping surface.



In this case, additional handrails have been provided.

Handrails are required to comply with ADA/ABA 505. However, extensions on handrails in the play area are not required. This is to prevent children running into protruding rails in the play area.



When Transfer Systems Are Used

A "transfer system" is an alternative to a ramp system in play areas where there are less than 20 total elevated play components.

The transfer system must connect to the ground-level accessible route and provide access to at least 50 percent of the elevated play components.

A transfer system provides access to elevated play components within a composite system by connecting different levels with transfer platforms and steps.

A transfer system provides access to elevated play components without the use of a wheelchair or mobility device. At least 50% of the elevated play components can be connected by a transfer system in play areas with less than 20 elevated components. In play areas with 20 or more elevated play components, transfer systems may be used to connect up to 25% of the elevated play components and the rest of the elevated play components required to be on an accessible route must be connected by a ramp.



A transfer system typically consists of a transfer platform, transfer steps, and transfer supports.

Where a transfer system is provided, a combination of transfer platforms and transfer steps provide a continuous accessible route to elevated play components. A transfer system provides individuals the space necessary to physically transfer up or down in a composite play structure. Where provided, a 24-inch (610 mm) minimum width is necessary for individuals moving around





Playful features can be part of the transfer system, providing interactive experiences from both an elevated or ground level approach.

Consider the distance someone must travel to reach play components accessed by transfer systems. On page 31, the illustration shows a transfer system placed directly next to the slide. Access to this type of elevated play component has been carefully designed to minimize the distance someone must transfer to reach it.



Transfer Platforms

A transfer platform is a platform or landing that an individual who uses a wheelchair or mobility device can use to lift or *transfer* onto the play structure and leave the wheelchair or mobility device behind at ground-level.



- 11 inches (280 mm) to 18 inches (455 mm) height of top surface
- Minimum 24 inches (610 mm) wide
- Minimum 14 inches (355 mm) deep
- Unobstructed side

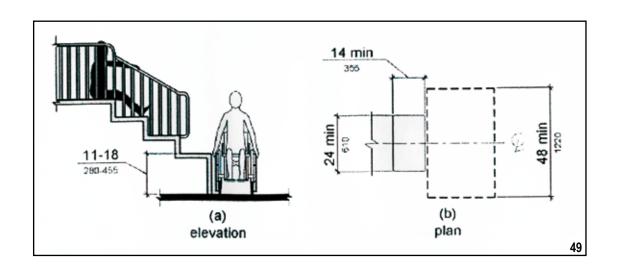
Adding a transfer step that leads to the ground's surface increases access for children exiting components at the ground level.

Transfer steps in a play area are not required to satisfy the general ADAAG stair requirements.

Maneuvering space and clear space is not required on elevated structures or at elevated play components reached by a transfer system.

Clear floor or ground space - used for parking wheelchair or mobility devices (commonly called "wheelchair parking") - is required at the transfer platform.

The 48-inch long side (1200 mm) of the "wheelchair parking" space must be parallel to the 24-inch (610 mm) side of the transfer platform.



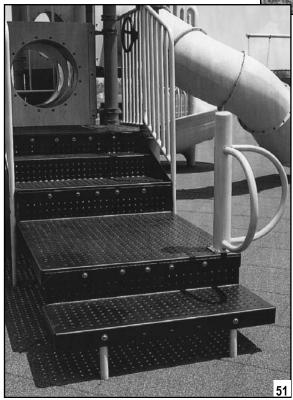


Transfer Steps

- Minimum 24 inches (610 mm) wide
- Minimum 14 inches (355 mm) deep
- 8 inches (205 mm) maximum height



Transfer steps are level surfaces in a composite structure that can be used for transferring from different levels to access play components.



Play areas intended for smaller children should provide steps at smaller height increments. This will accommodate smaller sized children who must lift or "bump" up each step.



A Summary of Accessibility Guidelines for Play Areas

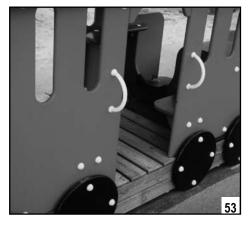
Transfer Supports

Transfer supports must be provided on transfer platforms and transfer steps at each level where transferring is the intended method of access.



Materials in a variety of different shapes and sizes are used to manufacture transfer supports including metal, plastic, and rope. A means of support is required when transferring into the entry or seat of a play component.

Transfer supports assist individuals with transferring and general mobility. They include handrails, handgrips, or custom designed handholds.

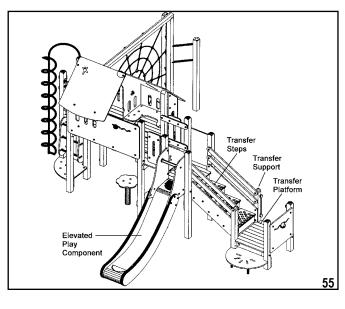




Aesthetically pleasing cut-out shapes and other design enhancements can provide hand supports for transferring.

Consideration must be given to the distance between the transfer system and the elevated play components it is intended to facilitate. Designers should minimize the distance between the point where a child transfers from a wheelchair or mobility device and the elevated play destination.

This transfer system provides access to exciting elevated play experiences like sliding while minimizing the distance individuals must traverse.





Connected Elevated Components

Elevated play components that are connected to other play components count toward fulfilling the requirement for the number of elevated components on an accessible route where transfer systems are used.

When transfer systems are used, an elevated play component may connect to other elevated play components, providing an innovative, accessible route.

A crawl tube is an elevated play component in this composite structure. Going through the tunnel provides access to additional activities on the other side.



Consideration should be given to how a play component is utilized when it is selected to connect to other elevated play events. When a transfer system is provided, children move through a play component like this crawling tube, using their own strength without a mobility device.



Providing variety and excitement through elevated play spaces benefits all children. Tunnels and tubes make "getting there" an activity in itself.



WHAT OTHER ACCESSIBILITY REQUIREMENTS APPLY TO PLAY COMPONENTS?

The play area guidelines address accessible routes connecting play components along with certain spaces that are crucial to making a play area usable for children with disabilities. The other requirements for play components are provided to promote general usability, with application to a variety of play components. Additional features will assist in making play components more accessible to more children. Designers are encouraged to consider components with back support, increased space for maneuvering adjacent to the play component, and other features that promote independent use.

Clear Floor or Ground Space

Clear floor space - also known as ground space - provides unobstructed room to accommodate a single stationary wheelchair and its occupant at a play component on an accessible route.

- 30-inch (760 mm) by 48-inch (1220 mm) minimum area
- May overlap accessible routes and maneuvering spaces
- Slope not steeper than 1:48 in all directions

The clear floor space is permitted to overlap onto the landing area to provide access to this elevated window activity.

Play components come in a variety of shapes and sizes facilitating a broad range of experiences. A specific location for clear floor or ground space has not been designated. Each play component is unique and the spaces must be placed in the best location for the situation.

This interactive play component has a clear ground space that allows front or side reach interaction.



Elevated play components accessed by transfer systems do not require maneuvering or clear floor spaces, since mobility devices are left at ground level.

Clear floor or ground space is also sometimes called "wheelchair parking space."

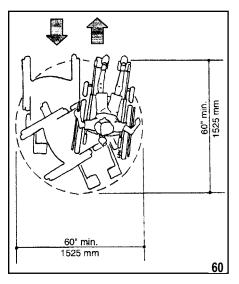
The minimum clear floor or ground space on a composite structure may be positioned for a forward or parallel approach. It may overlap accessible routes and maneuvering spaces.



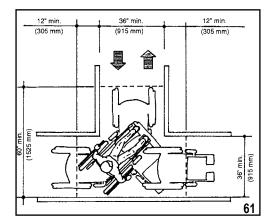
Maneuvering Space

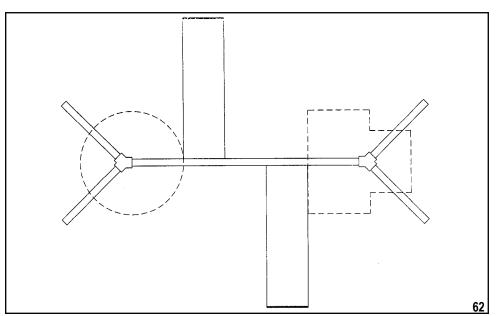
Maneuvering space is defined as the space required for a wheelchair to make a 180-degree turn. At least one maneuvering space must be provided on the same level as elevated play components.

When providing access to ground level and elevated play components by ramps, space allowances to accommodate wheelchairs and mobility devices are required.



- A 60-inch (1525 mm) turning circle permits individuals with mobility devices to turn around
- A 60-inch (1525 mm) T-Shaped turn allows an individual to change directions by making a series of multi-point turns
- Slope not steeper than 1:48 in all directions





Maneuvering space is required for swings and must be located adjacent to the swing. This illustration shows options for either a 60-inch turning circle or a T-shaped turn. While this illustration shows the maneuvering space to the side of the swing, the space may be located behind or in front of the swing as long as it is immediately adjacent to the swing.

Objects are not permitted to protrude into ground level maneuvering spaces at or below 80 inches (2030 mm) above the ground or floor surface.



WHAT OTHER ACCESSIBILITY REQUIREMENTS APPLY TO PLAY COMPONENTS?

Entry Points and Seats

Entry points and seats are features of play components where individuals would transfer, sit, or gain access. When play components are located on an accessible route, the height required to transfer directly to the entry point or seat of a play component has a minimum of 11 inches (280 mm) and a maximum of 24 inches (610 mm). A mid-level height of 18 inches (455 mm) is recommended.

The height of the entry point of a slide is not specified.





Examples of entry points and seats include swing seats, spring rocker seats, and crawl-tube openings.





Consider design features like open sides, back supports, and hand supports to help facilitate easy transfer and access.



WHAT OTHER ACCESSIBILITY REQUIREMENTS APPLY TO PLAY COMPONENTS?

Play Tables

Play tables are surfaces, boards, slabs, or counters that are created for play. This includes tables designed for sand and water play, gathering areas, and other activities. Where play tables are located on an accessible route, the wheelchair knee clearance minimums are:

- 24 inches (610 mm) high minimum
- 30 inches (760 mm) wide minimum
- 17 inches (430 mm) deep minimum





Play tables designed primarily for children under 5-years-old, may provide a parallel approach instead of knee clearance if the rim is a maximum of 31 inches (785 mm) high.



Play tables may be

located at a ground or

elevated level in a composite play structure. Consider the route,

clear floor space and

maneuvering spaces

for tables intended to be accessible to individuals who use

wheelchairs.

The edge of this elevated sand table has been designed to provide access by providing a generous opening. The tops of rims, curbs, or other obstructions that would prevent access to a table surface should be 31 inches (785 mm) maximum in height.



WHAT OTHER ACCESSIBILITY REQUIREMENTS APPLY TO PLAY COMPONENTS?

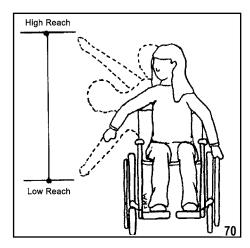
Reach Ranges (Advisory)

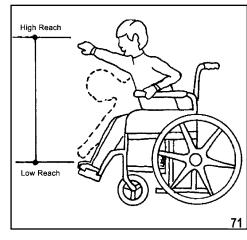
The play area guidelines include advisory information on recommended reach ranges.

Reach ranges are the recommended designated regions of space that a person seated in a wheelchair can reasonably extend their arm or hand to touch, manipulate, move, or interact with an object or play component.

Reach ranges should be considered when providing play components with manipulative or interactive features for children who use wheelchairs. Recommended forward or side reach ranges are:

- 20 to 36 inches for 3 to 4 year-olds
- 18 to 40 inches for 5 to 8 year-olds
- 16 to 44 inches for 9 to 12 year-olds





Side Reach

Forward Reach

The reach ranges appropriate for use by children who use wheelchairs to access play components are intended for ground-level components, and elevated components accessed by ramps. Reach ranges are not appropriate for play components reached by transfer systems.



Appropriate reach range heights will vary depending on how the play component is accessed. This interactive panel is mounted at a height appropriate for a child who uses a wheelchair.

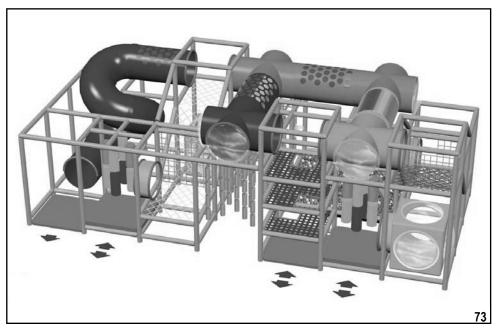
The reach ranges in this guide are recommendations that should be considered when designing play components with manipulative features intended for use by individuals who use wheelchairs.



SOFT CONTAINED PLAY STRUCTURES

Soft contained play structures must provide at least one entry point on an accessible route when three or fewer entry points are provided.

If four or more entry points are provided, at least two entry points must be located on an accessible route.



Soft contained play environments typically have limited entrance and exit locations, with play components integrated into the system design.



Transfer systems or platform lifts can serve as a part of an accessible route connecting entry points on soft-contained play structures.



"Soft contained play equipment" is a play

structure made of one

or more components, on which an individual enters a fully enclosed play environment that uses pliable materials such as plastic, soft padding, and fabric.

ALTERATIONS

The play area guidelines apply to alterations made to existing play areas that affect, or could affect, the usability of the play area. Examples include removing a climbing play component and replacing it with a spring rocker, or changing the ground surfacing.

Alterations provide an opportunity to improve access to existing play areas. Where play components are altered and the ground surface is not, the ground surface does not have to comply with the ASTM F 1951-99 standard for accessible surfaces unless the cost of providing an accessible surface is less than 20 percent of the cost of the alterations to the play components.

If the entire ground surface of an existing play area is replaced, the new ground surface must provide an accessible route to connect the required number and types of play components. The requirements for accessible routes are explained on page 19.



This play area was altered by adding two spring rockers. The seat of at least one spring rocker is between 11 inches (280mm) and 24 inches (610mm) maximum, and clear floor or ground space and maneuvering space is provided. If the ground surface is replaced in the future, an accessible route would have to be provided to the spring rocker.

Normal maintenance activities such as replacing worn ropes or topping off ground surfaces are not considered alterations.

If play components are relocated in an existing play area to create safe use zones, the guidelines do not apply, provided that the ground surface is not changed or extended for more than one use zone.

Replacing the entire ground surface does not require the addition of more play components.



ACKNOWLEDGEMENTS

The Access Board would like to thank the following manufacturers for their generous assistance and for supplying appropriate photographs or illustrations: Bob Leathers, Columbia Cascade, GameTime, KOMPAN, Landscape Structures, Little Tikes, Miracle, Olympic Recreation, Playworld Systems, and Recreation Creations.

The numerical listing below shows the source of each photo or illustration.

Top Cover Photo - KOMPAN Bottom Cover Photo - Miracle

- 1. KOMPAN
- 2. Little Tikes
- 3. KOMPAN
- 4. KOMPAN
- 5. KOMPAN
- 6. Little Tikes
- 7. KOMPAN
- 8. Little Tikes
- 9. KOMPAN
- 10 KOMPAN
- 11. Landscape Structures
- 12. Miracle
- 13. KOMPAN
- 14. Little Tikes
- 15. GameTime
- 16. Playworld Systems
- 17. GameTime
- 18. Little Tikes
- 19. Landscape Structures
- 20. Miracle
- 21. Recreation Creations
- 22. Miracle
- 23. Miracle
- 24. Landscape Structures
- 25. Miracle
- 26. Columbia Cascade
- 27. Playworld Systems
- 28. GameTime
- 29. KOMPAN
- 30. Elizabeth Garufi
- 31. Little Tikes
- 32. Playworld Systems
- 33. KOMPAN
- 34. Columbia Cascade
- 35. KOMPAN
- 36. KOMPAN
- 37. Little Tikes

- 38. KOMPAN
- 39. KOMPAN
- 40. GameTime
- 41. GameTime
- 42. GameTime
- 43. Playworld Systems
- 44. Landscape Structures
- 45. Miracle
- 46. Landscape Structures
- 47. Little Tikes
- 48. Landscape Structures
- 49. KOMPAN
- 50. Game Time
- 51. Recreation Creations
- 52. Miracle
- 53. KOMPAN
- 54. Playworld Systems
- 55. KOMPAN
- 56. KOMPAN
- 57. KOMPAN
- 58. Olympic Recreation
- 59. Playworld Systems
- 60. KOMPAN
- 61. KOMPAN
- 62. Access Board
- 63. Playworld Systems
- 64. Little Tikes
- 65. Landscape Structures
- 66. GameTime
- 67. Playworld Systems
- 68. Landscape Structures
- 69. Bob Leathers
- 70. KOMPAN
- 71. KOMPAN
- 72. Miracle
- 73. GameTime
- 74. Access Board
- 75. Miracle



This manual was developed in part through a contract with KOMPAN, Inc., 7717 New Market Street, Olympia, WA 98501.

MASSACHUSETTS ARCHITECTURAL ACCESS BOARD (MAAB)

* CMR 521

* STILL EVOLVING

*PUBLIC MEETINGS HELD IN 2018

*UNDERSTAFFED TO ENFORCE.

* NO "GRAND-FATHERING" IN.

ENORMOUS FINANCIAL IMPLICATIONS FOR

ALL GOVERNMENTAL ENTITIES

* IF COMPLAINT IS MADE WITH

MAAB, MUNICIPAL ENTITY WILL BE PLACED

ON NOTICE TO RECTIFY OTHERWISE FINED.

* NOTE ENTIRE SECTION IS RED LINED IDENTIFYING THAT ENTIRE CMR 521 FOR PLAYGROUNDS WILL BE CHANGING.

19.759.00: PLAYGROUNDS PLAY AREAS

An accessible route, complying with 521 CMR 208.00: ACCESSIBLE ROUTE shall be provided to reach playground equipment and around the playground.

59.1 GENERAL

Play areas for children ages 2 and over shall comply with the following requirements. Exceptions:

- 1. Play areas located in family child care facilities where the proprietor actually resides.
- 2. In existing *play areas*, where *play components* are relocated for the purposes of creating safe use zones and the ground surface is not altered or extended for more than one (1) *use zone*.

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3. Amusement attractions; however they shall comply with the requirements of **521 CMR 48.00**: **AMUSEMENT RIDES**.

59.2 NUMBER AND TYPES

Ground Level Play Components or Elevated Play Components: Where provided, at least one (1) of each type shall be on an accessible route and shall comply with **521 CMR 59.3, Location**.

59.2.1 Where *elevated play components* are provided, *ground level play components* shall be provided in accordance with **Table 59.2**. Where two (2) or more required *ground level play components* or *elevated play components* are provided, per **Table 59.2**, they shall be dispersed throughout the *play area* and integrated with other *play components*.

Exception:

If at least 50 percent of the *elevated play components* are connected by a *ramp* and at least three (3) of the *elevated play components* connected by the *ramp* are different types of *play components*, the *play area* shall not be required to comply with **521 CMR 59.2.1**.

Table 59.2 Number and Types of Ground Level Play Components Required to be on Accessible Routes		
Number of Elevated Play Components Provided	Minimum Number of Ground Level Play Components Required to be on an Accessible Route	Minimum Number of Different Types of Ground Level Play Components Required to be on an Accessible Route
1	Not applicable	Not applicable
2 to 4	1	1
5 to 7	2	2
8 to 10	3	3
11 to 13	4	3
14 to 16	5	3
17 to 19	6	3
20 to 22	7	4
23 to 25	8	4
26 and over	8, plus 1 for each additional 3, or fraction thereof, over 25	5

59.3 LOCATION

Where separate *play areas* are provided within a *site* for specific age groups (e.g., preschool (ages 2 to 5) and school age (ages 5 to 12)), each *play area* shall independently comply with the requirements of **521 CMR 59.00: PLAY AREAS**. Where *play areas* are provided for the same age group on a *site* but are geographically separated (e.g., one is located next to a picnic area and another is located next to a softball field), they are considered separate *play areas* and each *play area* must comply with this section.

59.4 ACCESSIBLE ROUTES

An *accessible route* shall be provided to reach playground equipment and around the perimeter of the playground for the following *play components*:

- a. Ground Level Play Components and Elevated Play Components: At least one (1) accessible route shall be provided within the play area. The accessible route shall connect ground level play components and elevated play components required to comply with 521 CMR 59.2, Number and Types, including entry and exit points of the play components. Exceptions:
 - 1. Transfer systems complying with **521 CMR 59.5**, **Transfer Systems**, shall be permitted to connect *elevated play components*, except where 20 or more *elevated play components* are provided no more than 25 percent of the *elevated play components* shall be permitted to be connected by transfer systems.
 - 2. Where transfer systems are provided, an *elevated play component* shall be permitted to connect another *elevated play component* as part of an *accessible route*.
- b. Soft Contained Play Structures: Where three (3) or fewer entry points are provided for soft contained play structures, at least one (1) entry point shall be on an accessible route. Where four (4) or more entry points are provided for soft contained play structures, at least two (2) entry points shall be on an accessible route.

Exception:

- Transfer systems complying with **521 CMR 59.5**, **Transfer Systems** shall be permitted to be used as part of an *accessible route*.
- c. Water Play Components: Where the surface of the accessible route, clear floor or ground spaces, or turning spaces serving water play components is submerged, it shall comply with 521 CMR 54.8, Sloped Entries. Transfer systems complying with 521 CMR 59.5, Transfer Systems, shall be permitted to connect elevated play components in water.
- 59.4.1 The ground surface of *use zones*, *accessible routes* and turning spaces within *play areas* shall be firm, stable and slip resistant, permanent, and constructed of materials such as rubber resilient surfacing, urethane rubber composites or similar; and comply with commonly accepted impact attenuation criteria for safety surfacing materials within the *use zones* of *play area* equipment. Loose fill surfaces and aggregate surfaces including wood fiber, bark mulch, wood chips, shredded rubber, shredded foam, etc. are not acceptable for *accessible routes* within the playground. Molded rubber mats, if utilized, require adhesion to a permanent surface beneath.
- 59.4.2 The clear width of accessible routes to play components shall comply with the following:
 - a. At ground level, the *clear* width of *accessible routes* shall be 60 inches (1524 mm) minimum. Exceptions:
 - 1. In *play areas* less than 1000 square feet (93 m²), the *clear* width of *accessible routes* shall be permitted to be 44 inches (1118 mm) minimum, if at least one (1) turning space complying with **521 CMR 6.2, Wheelchair Turning Space** is provided where the restricted *accessible route* exceeds 30 feet (9144 mm) in length.
 - 2. The *clear* width of *accessible routes* shall be permitted to be 36 inches (914 mm) minimum for a distance of 60 inches (1524 mm) maximum provided that multiple reduced width segments are separated by segments that are 60 inches (1524 mm) wide minimum and 60 inches (1524 mm) long minimum.
- 59.4.3 The *clear* width of *accessible routes* connecting *elevated play components* shall be 36 inches (914 mm) minimum.

Exceptions:

- 1. The *clear* width of *accessible routes* connecting *elevated play components* shall be permitted to be reduced to 32 inches (813 mm) minimum for a distance of 24 inches (610 mm) maximum provided that reduced width segments are separated by segments that are 48 inches (1219 mm) long minimum and 36 inches (914 mm) wide minimum.
- 2. The *clear* width of transfer systems connecting *elevated play components* shall be permitted to be 24 inches (610 mm) minimum.
- 59.4.4 Where *play components* require transfer to entry points or seats, the entry points or seats shall be 11 inches (280 mm) minimum and 24 inches (610 mm) maximum from the *clear floor or ground space*. Where *play components* require transfer to entry points or seats, at least one (1) means of support for transferring shall be provided per **521 CMR 59.6.3**.

Exception:

Entry points of slides shall not be required to comply with the requirements of **521 CMR 59.5.2**, **Entry Points and Seats**.

- 59.4.5 At least one (1) turning space complying with **521 CMR 6.2, Wheelchair Turning Space**, shall be provided on the same level as *play components*. Where swings are provided, the turning space shall be located immediately adjacent to the swing.
- 59.4.6 Clear floor or ground space complying with **521 CMR 6.1, Clear Floor or Ground Space for Wheelchairs** shall be provided at *play components*. Clear floor or ground spaces, turning spaces, and accessible routes are permitted to overlap within *play areas*.
- 59.4.7 Within *play areas*, *ramps* connecting *ground level play components* and *ramps* connecting *elevated play components* shall comply with the following:
 - a. Ramp runs connecting ground level play components shall have a running slope not steeper than 1:16.
 - b. The rise for any *ramp* run connecting *elevated play components* shall be 12 inches (305 mm) maximum.
- 59.4.8 Where required on *ramps* serving *play components*, the handrails shall comply with the following: Exceptions:
 - 1. Handrails shall not be required on *ramps* located within ground level *use zones*.
 - 2. Handrail extensions shall not be required.
 - a. Handrail gripping surfaces with a circular cross section shall have an outside diameter of 0.95 inch (24 mm) minimum and 1.55 inches (39 mm) maximum. Where the shape of the gripping surface is non-circular, the handrail shall provide an equivalent gripping surface.
 - b. The top of handrail gripping surfaces shall be 20 inches (508 mm) minimum and 28 inches (711 mm) maximum above the *ramp* surface.

59.5 TRANSFER SYSTEMS

Where transfer systems are provided, consideration should be given to the distance between the transfer system and the *elevated play components*. Moving between a transfer platform and a series of transfer steps requires extensive exertion for some children. Designers should minimize the distance between the points where a child transfers from a wheelchair or mobility device and where the *elevated play components* are located. Where *elevated play components* are used to connect to another *elevated play*

component instead of an accessible route, careful consideration should be used in the selection of the play components used for this purpose.

- 59.5.1 Transfer platforms shall be provided where transfer is intended from wheelchairs or other mobility aids. Transfer platforms shall comply with the following (See **Figure 59.5a**):
 - a. Transfer platforms shall have *level* surfaces 14 inches (356 mm) deep minimum and 24 inches (610 mm) wide minimum.
 - b. The height of transfer platforms shall be 11 inches (280 mm) minimum and 18 inches (457 mm) maximum measured to the top of the surface from the ground or floor surface.

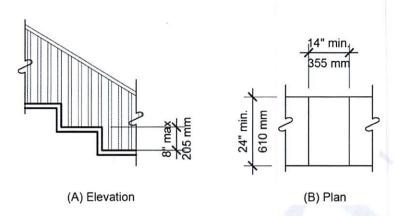
Figure 59.5a

(A) Elevation

(B) Plan

- 59.5.2 A transfer space complying with **521 CMR 6.1, Clear Floor or Ground Space for Wheelchairs**, shall be provided adjacent to the transfer platform. The 48 inch (1219 mm) long minimum dimension of the transfer space shall be centered on and parallel to the 24 inch (610 mm) long minimum side of the transfer platform. The side of the transfer platform serving the transfer space shall be unobstructed.
- 59.5.3 At least one (1) means of support for transferring shall be provided. Transfer supports are required on transfer platforms and transfer steps to assist children when transferring. Some examples of supports include a rope loop, a loop type handle, a slot in the edge of a flat horizontal or vertical member, poles or bars, or D rings on the corner posts.
- 59.5.4 Transfer steps shall be provided where movement is intended from transfer platforms to levels with *elevated play components* required to be on *accessible routes*. Transfer steps shall comply with the following (See **Figure 59.5b**):
 - a. Transfer steps shall have *level* surfaces 14 inches (356 mm) deep minimum and 24 inches (610 mm) wide minimum.
 - b. Each transfer step shall be 8 inches (203 mm) high maximum.

Figure 59.5a



59.6 PLAY TABLES

Where play tables are provided, knee clearance 24 inches (610 mm) high minimum, 17 inches deep (432 mm) minimum, and 30 inches (762 mm) wide minimum shall be provided. The tops of rims, curbs, or other obstructions shall be 31 inches (787 mm) high maximum.

Exception:

Play tables designed and constructed primarily for children five (5) years and younger shall not be required to provide knee clearance where the *clear floor or ground space* required by **521 CMR 59.5.4**, **Clear Floor or Ground Space** is arranged for a parallel approach.

DISCLAIMER

Playground Inspection Disclaimer (either Low, High, ReVisit or Assessment):

Playground Inspections of New England, LLC ("PINE") bases its playground inspection procedures on the standards of both the American Society for Testing and Materials ("ASTM") and the U.S. Consumer Product Safety Commission ("CPSC"), as those may be amended from time to time.

At the completion of the inspection or assessment, PINE will furnish to the customer a written report (the "Inspection or Assessment Report") which shall identify possible noncompliance with ASTM 1487-17 and CPSC standards and which shall make recommendations with regard to further investigation (the "Inspection or Assessment Results"). The inspection or assessment and the Inspection or Assessment Report shall cover only the playground with respect to which PINE has been engaged to inspect (the "Playground"). The Inspection or Assessment Report shall only reference the conditions of the Playground on the date of the inspection or assessment, which date shall be specifically provided for in the Report (the "Inspection or Assessment Date"). It is specifically understood that PINE shall not perform any repairs or maintenance on the Playground as that is the sole responsibility of the customer.

PINE shall have no liability whatsoever with regard to any change in the condition of the Playground from and after the Inspection or Assessment Date.

PINE shall have no liability relating to the Playground or the Inspection Report or relating in any way to any loss, cost, liability, damages, claims or suits whatsoever relating to the same unless due solely to the gross negligence or willful act of PINE.

An inspection or assessment of a playground is not an audit of said playground, but is rather a more generalized review designed to alert the customer to possible noncompliance with ASTM 1487-17 and CPSC and the Inspection Report is not to be deemed to be a certification as to the safety of the playground or its compliance with ASTM 1487-17 and CPSC.



National Recreation and Park Association

Let it be known that

NANCY WHITE

has met the requirements of the standards set forth by the National Certification Board and is hereby granted certification as a



DE Releci CHAIRPERSON

NRPA PRESIDENT AND CEO

August 26, 2020

DATE CERTIFIED

49311-0923

CERTIFICATION NUMBER

September 01, 2023

EXPIRATION DATE

