



## **Design Standard Playground Equipment**

### **Purpose**

This design standard has the purpose of creating a consistent installation of playground equipment throughout the South San Francisco Unified School District thereby achieving a standard of safety, aesthetic quality, maintenance and performance throughout all District projects.

### **Design Standard**

#### **General Requirements**

- Play equipment shall have safety matting.
- Provide factory-painted aluminum structures only. Galvanized steel and wood structures are not allowed.
- Sand areas are allowed only when provided with a cover. They must have curbs and provide accommodation for the disabled.

#### **Basketball Standard**

- Support post galvanized schedule 40 pipe with 4-1/2 inch diameter and offset 4 feet from court.
- Diagonal brace to reinforce upper backboard.
- Backboard to be 48 inches high x 72 inches wide 12-gauge galvanized steel; paint white.
- 18 inches inside diameter double ring type with 5/8" galvanized steel ring and 1/2 inch steel ring welded together with 'no-tie' net hooks; painted.
- Netting to be heavy-duty nylon braided.

#### **Playground Structure**

Required components:

- **Children's Centers (Age Group: 2-5 Years)**
  1. Maximum deck height: 4 feet
  2. Number of decks at varying heights: 4-6
  3. Transfer deck station for accessibility compliance
  4. Guardrails and Handrails
    - a) No open railings
    - b) Vertical or horizontal railings shall not exceed spacing of 4" apart
    - c) Height: 30"-42"



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5. Steps
  - a) No open treads
  - b) Height of rise: 6" maximum
6. Slides
  - a) Single slide
  - b) Double slide
  - c) Spiral/Wave slide
  - d) Slides shall have hoods
7. Upper Deck Components (any of the following, min. of 3)
  - a) Tic-Tac-Toe
  - b) Tactile panel
  - c) Trace panel
  - d) Chime panel
  - e) Wheel
  - f) Revolving cylinders
  - g) Balcony
8. Ground Level components (any of the following, min. of 2)
  - a) Chinning bar
  - b) Talk/Phone tubes
  - c) Storefront
  - d) Bench
  - e) Wheel
9. Climbers (any of the following, min. of 1)
  - a) Vertical ladder
  - b) Crawl climber
  - c) Block climber
10. Optional features if construction budget allows
  - a) Roof features or canopies
  - b) Overhead arches
  - c) Independent bouncers (spring components)
11. Age-appropriate sign indicating age group of users mounted on 2 posts (this is in addition to play structure manufacturer's supplied labels applied to posts)
12. Play Surfacing: Poured-in-place rubber matting.
  - a) Minimum of 2 points of access into play area with ADA and CBC compliant accessible rubber ramps at different sides of play



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surfacing footprint. Allow proper clearances for landing at bottom of ramp per ADA and CBC accessibility guidelines.

- b) Locate transfer platform within easy access of accessible ramp

13. Play Structure shall meet ASTM, ANSI, CPSC, NPSI, and ADA guidelines and safety standards.

- a) Tracking Labels (CPSIA Section 103): Applied on post indicating source of product, date of manufacture, and detailed information on manufacturing process, including a batch number.

- **Elementary Schools (Age Group: 5-12 years)**

1. Maximum deck height: 6 feet
2. Number of decks at varying heights: 6-8
3. Transfer deck station for accessibility compliance
4. Guardrails and Handrails
  - a) No open railings
  - b) Vertical or horizontal rails shall not exceed spacing of 4" apart
  - c) Height: 30"-42"
5. Steps/Decks
  - a) No open treads
  - b) Height of riser: 8" maximum
6. Slides (min. of 2 preferred)
  - a) Single slide
  - b) Double slide
  - c) Spiral/Wave slide
  - d) Slides shall have hoods
7. Upper Deck Components (any of the following, min. of 4)
  - a) Tactile panel
  - b) Trace panel
  - c) Chime panel
  - d) Wheel
  - e) Bridge: arch or clatter
  - f) Balcony
  - g) Rings
8. Ground Level Components (any of the following, min. of 3)
  - a) Chinning bar



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- b) Talk/Phone tubes
  - c) Storefront
  - d) Bench
  - e) Wheel
  - f) Balance beam
9. Climbers (any of the following, min. of 2)
- a) Vertical ladder
  - b) Horizontal ladder
  - c) Crawl climber
  - d) Fireman's pole
  - e) Corkscrew
  - f) Block climber
  - g) Panel (lateral) climber with foot cut-outs
  - h) Simulated rock climber (7 feet in height max.)
10. Optional Features if construction budget allows
- a) Roof feature
  - b) Arches
  - c) Canopies
  - d) Independent bouncers (spring components)
11. Age-appropriate sign indicating age group of users mounted on 2 posts (this is in addition to play structure manufacturer's supplied labels applied to posts)
12. Play Surfacing: Poured-in-place rubber matting.
- a) Minimum of 2 points of access into play area with ADA and CBC compliant accessible rubber ramps at different sides of play surfacing footprint. Allow proper clearances for landing at bottom of ramp per ADA and CBC accessibility guidelines.
  - b) b. Locate transfer platform within easy access of accessible ramp
13. Play Structure shall meet ASTM, ANSI, CPSC, NPSI, and ADA guidelines and safety standards.
- a) Tracking Labels (CPSIA Section 103): Applied on post indicate source of product, date of manufacture, and detailed information on manufacturing process, including a batch number.
- **Not allowed:**
    - 1. Climbers exceeding 4 feet in height for CDC structures



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2. Vertical/lateral wall climbers exceeding 7 feet in height for elementary structures
3. Top grabbing portions exceeding 8 feet in height for elementary structures
4. Chain/cargo net climbers
5. Rope climbers (exceptions may apply – review on a case-by-case basis with District)
6. Tunnels
7. Polycarbonate panels
8. Swings

- **Additional Requirements**

1. Playground structures shall be designed to include components that shall encourage group interaction, upper and lower body movement, and strengthening, balancing, and creative thinking
2. The contractor must submit copies of product manufacturer's test report indicating compliance with the latest U.S. Consumer Product Safety Commission's Technical Guidelines for Public Playground Safety with regard to thickness of product beneath various equipment height ranges. Test reports shall be by a certified laboratory, to ASTM- F-1292-91 specifications using the f355-Procedure C Test Method.
3. The contractor must submit a listing of at least five (5) of their installations where the brand of play equipment with similar units to those proposed has been installed and has been in successful service for at least five years. This list shall include owner or purchaser; address of installation; service or maintenance organization; date of installation; and contact person and phone number.
4. The material supplier or equipment manufacturer must submit a statement asserting that the supplied material or equipment meets and is installed according to the specified requirements.
5. A warranty against all defects in materials and workmanship for play equipment must be provided by contractor. Warranty shall include but not be limited to such defects as bubbling, de-lamination, peeling, loss of



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integrity, poor ultraviolet stability, lack of permeability, or general deterioration due to weather.

6. Require the manufacturer to provide a Certificate of Insurance covering both product and general liability, of not less than \$1,000,000. The issuing underwriter shall be AA rated.
7. Require the installer of the play equipment to submit proof of liability insurance of at least \$1,000,000 from a reputable insurance company covering defects in materials, workmanship, and installation. This liability insurance shall cover any bodily harm resulting from a failure of play equipment due to installation defects and must remain in affect for a minimum period of two (2) years.
8. A manufacturer's representative who is experienced in the installation, adjustment, and operation of the playground equipment shall be on-site during installation. Manufacturer's certified installer shall be acceptable to meet this requirement. The representative shall supervise the installation and adjustment of the playground equipment to ensure that the equipment meets the requirements of CPSC and ASTM F 1487.
9. The play area will be inspected by a NPSI certified Playground Inspector as required by the California Playground Safety Regulations. Final Acceptance will not be granted until the project is certified to be compliant.

### Safety Matting

- Surfacing at the play structure shall be non-toxic poured-in-place rubber matting over existing or new asphalt or concrete paving. Recessed installations are not recommended because of the increased site costs to create a paved pit with an area drain system under the tiles.
- Drawings must indicate that the entire surface at the play structure shall have a maximum 2% slope in all directions. Provide a minimum of 2 accessible rubber ramps into the play structure area and beveled edges around the entire perimeter. Beveled edges shall be mechanically fastened with recessed anchor bolts and must conform to DSA access compliance requirements. Bolt heads must be covered.
- Thickness of matting to be determined to match the fall height design of the play structure. Extend full thickness matting a minimum of one (1) foot beyond play structure fall zone or minimum eight (8) feet beyond the edge of the play structure, whichever distance is greater.



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- Consider surfaces (ground and structural), which are light-colored to reduce heat islands.
- Provide extra materials to District Facilities for future patching.
- Playground safety matting is intended for access by children with disabilities and shall meet the requirements of CPSC and ASTM F 1951-9. The intent of the playground equipment should be that it is usable by children with disabilities, not merely accessible.
- Playground safety matting within playground equipment use zones shall meet or exceed the performance requirements of CPSC and ASTM F 1292 that a surface yield both a peak deceleration of no more than 200g, and a Head Injury Criteria (HIC) value of no more than 1,000 g, for a head first fall from the highest accessible portion of play equipment being installed. The contractor is responsible for obtaining a determination from the safety surfacing manufacturer of the product depth required to meet performance requirements for all play equipment.
- The impact attenuation performance of the synthetic safety surfacing proposed for installation shall be documented as being appropriate for the playground structures as part of the design by certificates of compliance.
- Playground safety matting intended to serve as accessible paths of travel for persons with disabilities shall be firm, stable and slip resistant and shall meet the requirements of CPSC and ASTM F 1951-9.
- Require the installer to submit a listing of at least five (5) of their installations where products similar to those proposed for use have been installed and have been in successful service for a minimum period of three (3) years. This list shall include owner or purchaser; address of installation; service or maintenance organization; date of installation; contact person; and phone number of the contact person.
- An official authorized to certify on behalf of the playground safety matting shall sign a statement attesting that the surfacing meets the requirements of ASTM F 1292 for a head-first fall from the highest accessible portion of installed play equipment. The impact attenuating qualities of the surfacing system shall not be diminished in the surface areas covering hardware. Testing of product shall include tests conducted over hardware. The statement shall be dated after the award of the Contract, shall state the Contractor's name and address, and shall name the project and location. The statement shall also provide the name, address, and telephone number of the testing company, the date of the test, and the test results.



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- The authorized manufacturer's representative shall certify upon completion of the installation that the safety surfacing has been installed in accordance with manufacturer's instructions and complies with all specifications. Require the manufacturer to provide a Certificate of Insurance covering both product and general liability, of not less than \$1,000,000 for a period of not less than two (2) years. The issuing underwriter shall be AA rated.
- Require the installer of the play equipment to submit proof of liability insurance of at least \$1,000,000 for a period of not less than two (2) years from a reputable insurance company covering defects in materials, workmanship, and installation. This liability insurance shall cover any bodily harm resulting from a failure of play equipment due to installation defects.
- A manufacturer's representative, or manufacturer's certified or authorized installer, who is experienced in installation of the specified playground safety surface, shall supervise or inspect the installation to ensure that the safety surfacing meets the impact attenuation requirements.
- The play area will be inspected by a NPSI certified Playground Inspector as required by the California Playground Safety Regulations. Final Acceptance will not be granted until the project is certified to be compliant.
- Do not locate Safety Matting over existing area drains or other appurtenances.

### Approved Manufacturers

1. Landscape Structures ([www.playlsi.com](http://www.playlsi.com), local rep: Ross Recreation Equipment, Santa Rosa)
2. Gametime ([www.gametime.com](http://www.gametime.com), local rep: California Sports and Recreation, Novato)
3. Playworld Systems ([www.playworldsystems.com](http://www.playworldsystems.com))
4. Miracle Playsystems Inc. ([www.miracleplaygroup.com](http://www.miracleplaygroup.com))

### Substitutes Allowed?

Yes, if performance and quality equivalency can be evidenced.





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### Associated Design Standards

- Playground structures shall meet the Safety Guidelines of United States Consumer Product Safety Commission (CPSC) and Specifications of the American Society of Testing and Materials (ASTM).
- CPSC (1991) Handbook for Public Playground Safety U.S. Consumer Product Safety Commission Washington, D.C. 20207, (301) 504-0494.
- American Society for Testing and Materials Safety Performance Specification for Playground Equipment for Public Use ASTM F 1487– 05
- All playground structures shall be accessible to and usable by children with disabilities and shall meet the requirements of CPSC Publication #325, ASTM F 1487-05. and ADAAG guidelines for play areas. Drawings for play structures shall indicate the distribution of ground level and upper deck components to comply with ADA requirements.
- Playground safety matting shall meet the Safety Guidelines of United States Consumer Product Safety Commission (CPSC) and Specifications of the American Society of Testing and Materials (ASTM).
- CPSC (1991) Handbook for Public Playground Safety U.S. Consumer Product Safety Commission Washington, D.C. 20207, (301) 504-0494.
- American Society for Testing and Materials Safety Performance Specification for Playground Equipment for Public Use ASTM F 1951.

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