



Designation: F2631 – 07

Standard Practice for Installation of Chain-Link Fence for Outdoor Sports Fields, Sports Courts and Other Recreation Facilities¹

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1. Scope

1.1 This practice is designed to be used for developing the chain-link fence, design, layout and installation for sports and recreation facilities such as sports fields, sports courts, waterfront areas, docks and marinas and other specific facilities.

1.2 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:²

- A392 Specification for Zinc-Coated Steel Chain-Link Fence Fabric
- A491 Specification for Aluminum-Coated Steel Chain-Link Fence Fabric
- A824 Specification for Metallic-Coated Steel Marcellised Tension Wire for Use With Chain Link Fence
- F552 Terminology Relating to Chain Link Fencing
- F567 Practice for Installation of Chain-Link Fence
- F626 Specification for Fence Fittings
- F668 Specification for Polyvinyl Chloride (PVC), Polyolefin and Other Polymer-Coated Steel Chain Link Fence Fabric
- F900 Specification for Industrial and Commercial Steel Swing Gates
- F934 Specification for Colors for Polymer-Coated Chain Link Fence Materials
- F969 Practice for Construction of Chain-Link Tennis Court Fence
- F1043 Specification for Strength and Protective Coatings on Steel Industrial Fence Framework
- F1083 Specification for Pipe, Steel, Hot-Dipped Zinc-Coated (Galvanized) Welded, for Fence Structures

F1184 Specification for Industrial and Commercial Horizontal Slide Gates

F1345 Specification for Zinc-5 % Aluminum-Mischmetal Alloy-Coated Steel Chain-Link Fence Fabric

F1553 Guide for Specifying Chain Link Fence

F1664 Specification for Poly(Vinyl Chloride) (PVC) and Other Conforming Organic Polymer-Coated Steel Tension Wire Used with Chain-Link Fence

2.2 Other Standards:

Federal Specification RR-F-191/3E Fencing, Wire and Post Metal (and Gates, Chain-Link, Fence Fabric and Accessories) Posts, top rail, braces

WL 2445 A Guide for the Selection of Line Post Spacings for Chain Link Fence³

3. Terminology

3.1 *Definitions*—See Terminology F552 for the definitions and terms used in this practice.

4. Summary of Practice

4.1 This practice is intended primarily to guide those responsible for or concerned with planning, designing and installing chain link fencing for sport fields, sports courts, waterfront zones, and other recreation facilities.

4.2 This practice does not intend to preclude any practice that has proven equal to or given better performance under varying conditions such as location, weather, intended use or anticipated use.

5. Significance and Use

5.1 The intended use of this practice is for chain link fencing of varying heights and designs to be used to enclose a sports field, sport court or recreation facility including the internal fencing required for safety, separation of activities, security, crowd control, access and egress or other requirements.

5.2 Consideration should be given to fence offset distances from the activity field to provide a safety area for the participants and viewers.

¹ This practice is under the jurisdiction of ASTM Committee F14 on Fences and is the direct responsibility of Subcommittee F14.10 on Specific Applications .
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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ Available from Chain Link Fence Manufacturers Institute, 10015 Old Columbia Road, Suite B-215, Columbia, MD 21046, <http://www.chainlinkinfo.org>.

5.3 This practice is not intended for applications where fencing higher than 12 ft (3660 mm) is desired by the owner.

5.4 Follow Guide **F1553** format to specify the chain link fence material and installation.

5.5 *Warning Regarding Windscreens and Added Fence Padding*—If windscreens or padding are to be installed at the time of fence erection or at a later time, it is advisable to use stronger framework, closer post spacing or back bracing of posts depending on the type of screening material to be used, area of the fence covered and the local wind and weather conditions. Post size and spacing based on wind load can be calculated using the Chain Link Fence Manufacturers Institute's (CLFMI) Guide WL 2445.

6. Ordering Information

6.1 Purchase orders or construction contracts should include the following information; construction specifications, detail dimensioned drawings, typical elevations, special details peculiar to the project and the dimensional layout of fence.

6.2 Quantity or total measurements in lineal feet or metres of fence and gates.

6.3 Types and class of chain link fabric including selvage.

6.4 Group and class of framework and size of members.

6.5 Fitting material, gauge, and size.

6.6 Type and design of gates with opening dimensions including latch and hinge requirements.

6.7 Color if polymer coated fabric or system shall be in accordance with Specification **F934**.

6.8 Height of fence.

6.9 Number and location of horizontal top, mid or bottom rails.

6.10 Tension wire located at top or bottom of fence if horizontal rails not specified.

6.11 Depth and diameter of concrete footings if other than as indicated in Practice **F567**.

6.12 Spacing of line posts, if other than as indicated in Practice **F567**.

7. Materials

7.1 Chain Link Fabric:

7.1.1 Select chain link fabric having a 2-in. (50.8-mm) mesh or less and a wire of minimum 9 gauge, 0.148-in. (3.76-mm) diameter.

7.1.2 Fabric selvage finish at the top and bottom shall be knuckled.

7.1.3 Height of fabric 3 ft (914 mm) up to and including 12 ft (3660 mm).

7.1.4 Select the type and coating class of the chain link fabric listed below.

7.1.4.1 **A392** zinc-coated, Class 1 or Class 2.

7.1.4.2 **A491** Aluminum-coated.

7.1.4.3 **F668** Polymer-coated, Class 1, Class 1a, or Class 2b. Select the color in accordance with Specification **F934**.

7.1.4.4 **F1345** Zinc-5 % Aluminum-Mischmetal Alloy-Coated, Class 1 or Class 2.

7.2 Posts:

7.2.1 Galvanized steel post shall be in accordance with Specification **F1043** Table 3 Heavy Industrial or Specification **F1083**.

7.2.2 When polymer coated specify type of coating in accordance with Specification **F1043** and color in accordance with Specification **F934**.

7.2.3 Select the size of the post based on the height of the fence in accordance with Federal Specification RR-F-191/3E.

7.2.4 Fences containing windscreens require sturdier framework, see **5.5**.

7.3 Horizontal and Brace Rails :

7.3.1 Horizontal rails when specified for top, middle or bottom of fence and terminal post bracing shall be in accordance with Specification **F1043**, Table 3 Heavy Industrial or Specification **F1083**.

7.3.2 When polymer coated, specify the type of coating in accordance with Specification **F1043** and color in accordance with Specification **F934**.

7.4 Tension Wire:

7.4.1 Tension wire shall be used at the top or bottom of the fence when horizontal rails are not specified.

7.4.2 Tension wire when specified shall match the coating of the fence fabric in accordance with Specification **A824** for metallic coated and Specification **F1664** for polymer coated.

7.5 Fittings:

7.5.1 Fittings shall conform to Specification **F626**.

7.5.1.1 When a polymer-coated system is specified the fittings shall be polymer coated to match the framework coating and color specification.

7.5.2 Tie wire for posts and horizontal rail shall be minimum 11 gauge 0.120-in. (3.05-mm) steel.

7.5.2.1 When a polymer-coated system is specified, ties shall be polymer-coated color to match the fabric coating and color specification.

7.6 Gates:

7.6.1 Gates shall be fabricated in accordance with Specification **F900** swing gates or Specification **F1184** slide gates.

7.6.2 Polymer coated gates when specified shall be of the same coating specification and color as the framework in accordance with Specification **F1043**.

7.6.3 Swing gates shall be installed to swing outward to ensure the safety of players.

8. Installation

8.1 Layout fence to provide proper safety offset for player and viewer participants.

8.2 Chain link fence shall be installed in accordance with Practice **F567**.

8.3 Install chain link fabric on the playing side of the fence for installations adjacent to all facilities.

8.4 Install bottom rail on fence adjacent to play areas or in areas of high use to avoid possible injury by having ones foot catch on the bottom of the fence fabric.