

## **SECTION 11 68 23.33**

### **TENNIS EQUIPMENT**

#### **PART 1 - GENERAL**

##### **1.01 SECTION INCLUDES**

- A. Exterior tennis athletic equipment.
- B. Benches.

##### **1.02 RELATED SECTIONS**

- A. Section 32 13 13 - Concrete Paving: Concrete playing surface underlayment.
- B. Section 32 18 23.53 - Tennis Court Surfacing: Colored playing surface and line marking.
- C. Section 32 31 13 - Chain-Link Fencing: Perimeter fencing and windscreen.

##### **1.03 REFERENCES**

- A. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design; 2010.
- B. 11
- C. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2017.
- D. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2016a.
- E. ASTM A307 - Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60 000 PSI Tensile Strength; 2014, with Editorial Revision (2017).
- F. ASTM A500/A500M - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes; 2018.
- G. ASTM A563 - Standard Specification for Carbon and Alloy Steel Nuts; 2015.
- H. NCAA (TF) - Men's and Women's Track and Field and Cross Country Rules; current edition.
- I. NFHS (Guide) - Court and Field Diagram Guide; current edition.
- J. USTA (Tech. Specs) - United States Tennis Association Technical Specifications; Current.

##### **1.04 SUBMITTALS**

- A. Shop Drawings: Submit shop drawings showing sizes, details of construction, assembly, and other pertinent information. Provide diagrams, templates, and installation instructions as required for the installation of items.
  - 1. Submit manufacturer's shop drawings, including plans, elevations, sections, and details, indicating locations, quantities, dimensions, tolerances, materials, fabrication, connections, hardware, fasteners, finish, electrical wiring diagrams, options, and accessories.
  - 2. Show location, implied loads to and detail of attachment to building structure or footing.
- B. Product Data: Submit manufacturer's literature and brochures, and catalog cuts, showing complete details of all manufactured and fabricated items.
- C. Samples: Submit manufacturer's color samples.

- D. Operation and Maintenance Manual: Submit manufacturer's operation and maintenance manual; including operation, maintenance, adjustment, and cleaning instructions; trouble shooting guide; parts list; and electrical wiring diagrams.
- E. Warranty: Submit manufacturer's standard, lifetime, and additional warranties.

#### **1.05 QUALITY ASSURANCE**

- A. Single Source Responsibility: Provide gymnasium and play field equipment from single manufacturer.
- B. Manufacturer's Qualifications: Minimum of 5 consecutive years experience manufacturing gymnasium and play field equipment similar to that specified.
- C. Installer's Qualifications: Trained and approved by manufacturer.

#### **1.06 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver material in time to insure uninterrupted progress of the construction.
- B. Store materials in a manner to preclude damage and permit access for inspection and identification. Store steel materials, either plain or fabricated, above the ground upon platforms, pallets, skids, or other supports. Keep materials free from dirt, grease, and other foreign matter, and protect from corrosion.
- C. Material showing evidence of damage shall be rejected; immediately remove from the site.

#### **1.07 WARRANTY**

- A. Manufacturers warranties shall pass to the Owner and certification made that the product materials meet all applicable grade trademarks or conform to industry standards and inspection requirements.
- B. Provide 1-year warranty against defects in materials and workmanship, unless otherwise specified.

### **PART 2 - PRODUCTS**

#### **2.01 REGULATORY REQUIREMENTS**

- A. Provide equipment meeting the requirements for the physically disabled of the California Code of Regulations (CCR), Title 24, Part 2, and ADA Standards Accessibility Guidelines for Buildings and Facilities, as amended.
  - 1. Equipment shall have accessible points of entry and use.
- B. Comply with applicable requirements of the following standards. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.
  - 1. American Sport Builders Association (1)
  - 2. National Federation of State High School Associations (1)
  - 3. National Collegiate Athletic Association (1)
  - 4. United States Tennis Association (USTA (Tech. Specs))
  - 5. Manufacturers Data and Recommended Installation Requirements.

- C. Except as modified by the requirements indicated or specified herein, exterior athletic equipment shall meet the requirements of 1.

## **2.02 TENNIS EQUIPMENT**

- A. Basis of Design Product: Power Tennis System 502106 as manufactured by Draper, Inc., or approved equal.
- B. Acceptable Manufacturers:
  - 1. Draper, Inc.; Power Tennis System 502106: [www.draperinc.com](http://www.draperinc.com).
  - 2. L.A. Steelcraft; Model NG 400 (with TP3-ZT 3-1/2 inch OD posts): [www.lasteelcraft.com](http://www.lasteelcraft.com).
  - 3. Porter Athletic Inc.; Model 884 - Essentials Tennis System, Model 865-200: [www.porterathletic.com](http://www.porterathletic.com).
  - 4. Substitutions: See Section 01 60 00 - Product Requirements.
- C. System Description for each court:
  - 1. Tennis Net Posts: Galvanized steel pipe with top caps, complete with racket net tightener.
    - a. Winch post with cast aluminum cap and pulley. Provide bottom pin tie down loop to set post at 42 inch height.
    - b. Winch: Cast aluminum ratcheting type, removable handle.
    - c. Provide matching fixed post.
    - d. Color: Gloss black powder coat.
    - e. Size: 3-1/2 inch OD, 11 gauge galvanized tubing with a wall thickness of 0.120 inch.
    - f. Overall Length: 60 inches to allow for 18 inches depth in concrete footing or optional ground sleeve.
  - 2. Ground Sleeve: Provide 3-1/2 inch by 24 inch steel ground sleeve with neoprene seal safety cap and wrench.
  - 3. Tennis Net:
    - a. Heavy-Duty Tennis net body: 3.0 mm hollow braid polyethylene cord.
    - b. Headband: 36 oz. single layer vinyl, treated with UV and mildew inhibitors. Sewn with four rows of lock stitching using Tex 270 bonded polyester thread.
    - c. Side and bottom Tapes: 18 oz. coated vinyl with brass grommets and sewn with Tex 210 bonded polyester thread.
    - d. Net Tensioner: Vinyl coated galvanized aircraft cable at the top and 1/2 inch diameter fiberglass end dowels.
  - 4. Center Tie Down:
    - a. Center Strap: Heavy duty polyester webbing with black oxide coated brass slide buckles, nickel-plated double ended snap and reinforced ends
    - b. Center Ground Anchor: 1-1/2 inch OD, 10 gauge galvanized tubing and a stainless steel pin.
      - 1) Overall length: 9 inches.
- D. All hardware to be zinc plated.

## **2.03 MATERIALS**

- A. Steel Tubing: ASTM A500/A500M, seamless.
- B. Aluminum Alloy Products:
  - 1. Aluminum Castings: Alloy and temper recommended by aluminum producer or finisher for casting process used.
- C. Anchors, Bolts, and Fastenings: ASTM A307, Grade A and ASTM A307.
- D. Galvanizing: Zinc coating meeting the requirements of ASTM A123/A123M. Zinc coating for threaded products shall meet the requirements of ASTM A153/A153M.
- E. Quick Setting Hydraulic Cement: Provide one of the following acceptable products or equal product approved in accordance with Section 01 60 00:
  - 1. The Burke Co.; Burke Plug.
  - 2. Minwax Construction Products Div.; Super Por-Rok.
  - 3. Tamms Industries Co.; Tammstech Rapid Rock.
  - 4. Master Builders; Masterflow 713.
- F. Concrete: Provide concrete for footings consisting of 5.25 sacks of cement per cubic yard, 1 inch maximum size aggregate, a maximum slump of 6 inches and minimum compressive strength of 2,500 psi at 28 days.
  - 1. Provide concrete materials, mixing and placing in conformance with applicable requirements specified in Section 03 30 00 - Cast-In-Place Concrete.

## **2.04 BENCHES**

- A. Players Bench: Surface Mounted with back.
  - 1. Basis of Design Product: Model K, No.10698; distributed by Tomark Sports; [www.tomark.com](http://www.tomark.com), or approved equal.
  - 2. Seating Capacity: 14 Seats.
  - 3. Length: 21 feet.
  - 4. Finish: Clear Anodized Aluminum.

## **PART 3 - EXECUTION**

### **3.01 INSTALLATION**

- A. Concrete Footings: Provide footing size, width and depth in accordance with the manufacturer's recommendations. Place evenly on all sides of pipe posts, lightly vibrate and screed flush with adjacent surfaces.
- B. Install posts true and plumb.
- C. Connections shall be secure, fittings, pipes and welds shall be free of burrs, sharp edges and shall be smooth to the touch.
- D. Welds made after galvanizing shall be touched up with materials specified applied in strict accordance with manufacturer's specifications.

**END OF SECTION**