

SECTION 11490  
GYMNASIUM EQUIPMENT

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following gymnasium equipment:
1. Basketball equipment.
  2. Wall-mounted and post column safety pads.

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, features, and finishes. Include details of anchors, hardware, and fastenings. If applicable, include assembly, disassembly, and storage instructions.
1. Gymnasium Equipment Operators: Include operating instructions.
- B. Shop Drawings: Show location and extent of fully assembled gymnasium equipment. Show location and extent of disassembled equipment and components and transport and storage accessories. Include elevations, sections, and details not shown in Product Data. Show method of field assembly, connections, installation details, mountings, floor inserts, attachments to other Work, operational clearances, and relationship to adjoining work.
1. Blocking and Reinforcement: Show locations of blocking and reinforcement required for support of gymnasium equipment.
  2. Setting Drawings: For cast-in floor insert sleeves for post standards.
  3. Design Calculations: Signed and sealed by a qualified professional engineer. Calculate requirements for supporting gymnasium equipment and for seismic restraint. Verify capacity of members and connections to support loads and verify loads, point reactions, and locations for attachment of gymnasium equipment to structure with those indicated on Drawings.
- C. Coordination Drawings: Court layout plans and elevations drawn to scale and coordinating floor-insert penetrations and game lines and markers applied to finished flooring.
- D. Samples for Initial Selection: For each type of gymnasium equipment indicated.
- E. Samples for Verification: For the following products:
1. Pad Fabric: Not less than 3 inches square, with specified treatments applied. Mark face of material.
- F. Product Certificates: For each type of gymnasium equipment, signed by product manufacturer.
- G. Manufacturer Certificates: Signed by manufacturers certifying that they comply with requirements. Include evidence of manufacturing experience.
- H. Maintenance Data: For gymnasium equipment to include in maintenance manuals.

- I. LEED Submittal:
  - 1. Credit MR 2.1 and 2.2: Comply with Division 1 Section "Construction Waste Management."
  - 2. Product Data for Credit MR 4.1 and Credit MR 4.2: For products having recycled content, documentation indicating percentages by weight of postconsumer and preconsumer recycled content.
    - a. Include statement indicating costs for each product having recycled content.
  - 3. Credit MR 5.1: Product Data indicating location of material manufacturer for regionally manufactured materials.
    - a. Include statement indicating cost and distance from manufacturer to Project for each regionally manufactured material.

### 1.3 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified installer employing workers trained and approved by manufacturer.
- B. Source Limitations: Obtain each type of gymnasium equipment through one source from a single manufacturer.

### 1.4 PROJECT CONDITIONS

- A. Environmental Limitations: Do not install gymnasium equipment until spaces are enclosed and weatherproof, wet work in spaces is complete and dry, and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.
- B. Field Measurements: Verify position and elevation of floor inserts and layout for gymnasium equipment. Verify dimensions by field measurements.

### 1.5 COORDINATION

- A. Coordinate installation of floor inserts with structural floors and finish flooring installation and with court layout and game lines and markers on finish flooring.
- B. Coordinate layout and installation of overhead-supported gymnasium equipment and suspension system components with other construction that penetrates ceilings or is supported by them, including light fixtures, HVAC equipment, fire-suppression-system components, and partition assemblies.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
  - 1. Basketball Equipment:
    - a. AALCO.
    - b. Institutional Products, Inc.

- c. Jaypro Sports, Inc.
  - d. Performance Sports Systems, Inc.
  - e. Porter Athletic Equipment Co.
2. Wall-Mounted and Post Column Safety Pads:
- a. AALCO.
  - b. Institutional Products, Inc.
  - c. Jaypro Sports, Inc.
  - d. Performance Sports Systems, Inc.
  - e. Porter Athletic Equipment Co.

## 2.2 MATERIALS, GENERAL

- A. Aluminum: Alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated; mill finish or decorative, baked-enamel, powder-coat finish.
- 1. Extruded Bars, Profiles, and Tubes: ASTM B 221.
  - 2. Cast Aluminum: ASTM B 179.
- B. Steel: Comply with the following:
- 1. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M, hot-dip galvanized.
  - 2. Steel Pipe: Standard-weight steel pipe complying with ASTM A 53.
  - 3. Cold-Formed Steel Tubing: ASTM A 500, Grade A, unless another grade is required by structural loads.
  - 4. Steel Mechanical Tubing: Cold-rolled, electric-resistance-welded carbon or alloy steel tubing complying with ASTM A 513 or steel tubing fabricated from steel complying with ASTM A 569/A 569M and complying with the dimensional tolerances in ASTM A 500.
  - 5. Malleable-Iron Castings: ASTM A 47, grade required by structural loads.
- C. Equipment Mounting Pads: Wood, transparent finish, size, and quantity as required to mount gymnasium equipment according to manufacturer's written recommendations.
- D. Anchors, Fasteners, Fittings and Hardware: Manufacturer's standard corrosion-resistant or noncorrodible units; concealed. Provide as required for gymnasium equipment assembly, mounting, and secure attachment.

## 2.3 BASKETBALL EQUIPMENT

- A. Overhead-Supported Backstop: Complete assembly spanning height indicated on Drawings, including primary and secondary superstructure support framing to building structure, pipe and cable bracing, adjustable hangers, clamps, cables, chains, pulleys, fittings, hardware, and fasteners.
- 1. Framing: Steel pipe, tubing, and shapes. Design framing to minimize vibration during play.
    - a. Dual-Mast Frame Connections: Welded with cross bracing.
    - b. Finish: Manufacturer's standard factory-applied primer for field finishing.
    - c. Finish: Manufacturer's standard factory-applied, baked powder-coating finish complying with finish manufacturer's written instructions for surface preparation including pretreatment, application, baking, and minimum dry film thickness; black.
  - 2. Stationary Type: Provide manufacturer's standard assembly for stationary backstop.

3. Goal Height Adjuster: Adjustable from 8 to 10 feet with crank mechanism, locking in any position within adjustment range, with visible height scale and finish matching framing.
    - a. Operation: Manual with detachable crank handle.
- B. Basketball Backboard: Provide predrilled holes or preset inserts for mounting goals.
1. Description: Rectangular, 72 by 42 inches width by height, fabricated from the following:
    - a. Glass: Not less than 1/2-inch- thick, transparent tempered glass. Provide glass with impact-absorbing, resilient rubber or PVC gasket around perimeter in a fully welded brushed-natural-finish, extruded-aluminum frame, with steel subframe, reinforcement, and bracing and with mounting slots for mounting backboard frame to backstop support framing.
      - 1) Standard Mount: Provide steel corner reinforcement with mounting slots for mounting backboard frame to backstop support framing at standard mounting centers.
    2. Target Area and Border Markings: Permanently etched in white color, marked in manufacturer's standard pattern and stripe width.
    3. Finish: Manufacturer's standard factory-applied, white background.
    4. Rim-Restraining Device: Complying with NCAA and NFHS rules and designed to ensure that basket remains attached if glass backboard breaks.
- C. Goal Mounting Assembly: Compatible with goal, backboard, and support framing, with manufacturer's standard hole pattern for goal attachment.
1. Glass Backboard Goal Mounting Assembly: Goal support framing and reinforcement designed to transmit load from goal to backboard frame and to minimize stresses on glass backboard.
- D. Basketball Goals: Complete with flanges, braces, attachment plate, and evenly spaced loops welded around underside of ring.
1. Single-Rim Basket Ring Competition Goal: Materials, dimensions, and fabrication per manufacturer's standard design.
  2. Type: Fixed, nonmovable.
  3. Mount: Rear mount.
  4. Net Attachment: No-tie loops for attaching net to rim without tying.
  5. Finish: Manufacturer's standard factory-applied, baked powder-coating finish complying with finish manufacturer's written instructions for surface preparation including pretreatment, application, baking, and minimum dry film thickness; orange.
- E. Basketball Nets: 12-loop-mesh net, between 15 and 18 inches long, sized to fit rim diameter, and as follows:
1. Cord: Made from white nylon.
- F. Safety Pads: Provide safety pads, complying with FIBA, designed for backboard thickness indicated and extending continuously along bottom and up sides of backboard and over goal mounting and backboard supports as per manufacturer's standard design.
1. Safety Pad Attachment: Manufacturer's standard.
  2. Color: Gray.

## 2.4 WALL-MOUNTED SAFETY PADS

- A. Safety Pad Surface-Burning Characteristics: Provide safety pads with flame-spread index of 25 or less and smoke-developed index of 450 or less, as determined by testing identical products per ASTM E 84 by UL or another testing and inspecting agency acceptable to authorities having jurisdiction.
- B. Pad Covers: Provide safety pad fabric covers fabricated from puncture- and tear-resistant, not less than 14-oz. PVC-coated polyester or nylon-reinforced PVC fabric treated with fungicide for mildew resistance, with the fire-test-response characteristics indicated.
  - 1. Flame-Resistance Ratings: Passes NFPA 701.
- C. Wall Safety Pads: Padded wall wainscot panels designed to be attached in a continuous row; each panel section consisting of fill laminated to backer board with visible surfaces fully covered by seamless fabric cover, free from sag and wrinkles and firmly attached to back of backer board.
  - 1. Backer Board: Not less than 3/8-inch- thick plywood, mat-formed, or composite panel.
  - 2. Fill: Multiple-impact-resistant foam not less than 2-inch- thick polyurethane, 3.5-lb density.
  - 3. Size: Each panel section, 24 inches wide by not less than 60 inches long.
  - 4. Number of Panel Sections: As indicated on Drawings modular panel sections.
  - 5. Installation Method: Manufacturer's standard.
  - 6. Fabric Cover Color: As selected by Architect from manufacturer's full range for color.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for play court layout, alignment of mounting substrates, installation tolerances, operational clearances, and other conditions affecting performance.
  - 1. Verify critical dimensions.
  - 2. Examine supporting structure and below finished floor for subfloors and footings.
  - 3. Examine wall assemblies, where reinforced to receive anchors and fasteners, to verify that locations of concealed reinforcements have been clearly marked for installers. Locate reinforcements and mark locations if not already done.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION, GENERAL

- A. General: Comply with manufacturer's written installation instructions. Complete equipment field assembly, where required.
- B. Unless otherwise indicated, install gymnasium equipment after other finishing operations, including painting, have been completed.
- C. Permanently Placed Gymnasium Equipment and Components: Rigid, level, plumb, square, and true; anchored securely to supporting structure; positioned at locations and elevations indicated on Shop Drawings; in proper relation to adjacent construction; and aligned with court layout.

1. Operating Gymnasium Equipment: Verify clearances for movable components of gymnasium equipment throughout entire range of operation and for access to operating components.
- D. Wall Safety Pads: Mount with bottom edge at 4 inches above finished floor.
- E. Anchoring to In-Place Construction: Use anchors and fasteners where necessary for securing built-in and permanently placed gymnasium equipment to structural support and for properly transferring load to in-place construction.
- F. Portable Gymnasium Equipment and Components: Assemble in place to verify that equipment and components are complete and in proper working order. Instruct Owner's designated personnel in properly handling, assembling, adjusting, disassembling, transporting, storing, and maintaining units. Disassemble portable gymnasium equipment after assembled configuration has been approved by Architect, and store units in location indicated on Drawings.

### 3.3 ADJUSTING

- A. Adjust movable components of gymnasium equipment to operate safely, smoothly, easily, and quietly, free from binding, warp, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Lubricate hardware and moving parts.

### 3.4 CLEANING AND PROTECTION

- A. After completing gymnasium equipment installation, inspect components. Remove spots, dirt, and debris and touch up damaged shop-applied finishes according to manufacturer's written instructions.
- B. Provide final protection and maintain conditions acceptable to manufacturer and Installer that ensure gymnasium equipment is without damage or deterioration at time of Substantial Completion.
- C. Replace gymnasium equipment and finishes that cannot be cleaned and repaired, in a manner approved by Architect, before time of Substantial Completion.

END OF SECTION