



## **SECTION 03 - PREFoam™ PERMANENT STADIUM SEATING SYSTEM – THREADED ROD SYSTEM**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections and manufacturer's shop drawings apply to this section.

#### **1.2 SUMMARY**

- A. This Section includes the following:
  - 1. Riser system for riser mounted seating;
  - 2. Riser system for seismically reinforced design criteria;
  - 3. Riser system for radius platforms;
  - 4. Intermediate step forms.

#### **1.3 PERFORMANCE REQUIREMENTS**

- A. Structural Performance: Provide hot or cold-formed metal framing capable of withstanding design loads within limits and under conditions indicated.
  - 1. Design Loads: As indicated.

#### **1.4 SUBMITTALS**

- A. Shop Drawings: Show layout and dimensions of each permanent riser platform area. Indicate location, size, and gauge of riser and step forms. Provide cross section of each platform area indicating height and depth of each tier. Provide plan view of each layer of EPS with each part identified and dimensioned.

#### **1.5 DELIVERY, STORAGE, AND HANDLING**

- A. Protect metal parts from corrosion, deformation, and other damage during delivery, storage, and handling.
- B. Store metal parts, protect with a waterproof covering, and ventilate to avoid condensation.
- C. Protect EPS Block as follows:
  - 1. Do not expose to sunlight, except to extent necessary for period of installation and concealment.
  - 2. Protect against ignition at all times.
  - 3. Do not deliver plastic insulating materials to project site before installation time.
  - 4. Complete installation and concealment of plastic materials as rapidly as possible in each area of construction.

## **PART 2 - PRODUCTS**

### **2.1 MANUFACTURER/DISTRIBUTER**

- A. Available Manufacturer/Distributor's: Subject to compliance with requirements, manufacturer's offering hot/cold-formed metal framing and EPS and assembly methods that may be incorporated into the work include the following:

**Stadium Seating Enterprises, Inc.**

28202 Cabot Road, Suite 300

Laguna Niguel, CA 92677

Phone: 949.363.5615

Fax: 949.363.0837

[frankmoson@stadiumseating.com](mailto:frankmoson@stadiumseating.com)

[www.stadiumseating.com](http://www.stadiumseating.com)

### **2.2 MATERIALS**

- A. Steel Sheet: ASTM-A569 Hot-rolled Steel, ASTM-A366 Cold-rolled steel
- B. Molded, Rigid Cellular Polystyrene EPS Blocks: Comply with manufacturer's requirements, for Type 1 EPS and the following:
1. Minimum density: 0.90 pounds per cubic foot
  2. Flame-Spread and Smoke-Developed Indexes: 25 and 450 or less, respectively, per ASTM E 84.
  3. Minimum Compressive Resistance: at 10% deformation; 10-14 pounds psi per ASTM D1621.
  4. Flexural Strength: 25-30 psi per ASTM C203.
  5. Tensile Strength: 16-23 psi per ASTM D1623;
  6. Shear Strength: 280-320 psi
  7. Blocks shall contain no CFC's, HCFC's, HFC's, or formaldehyde

### **2.3 METAL RISERS FOR THREADED ROD ASSEMBLY AND/OR RISER MOUNTED SEATING**

- A. Steel Risers for Radius Rows: Manufacturer's standard Z and C-shaped formed steel riser, drilled for connector brackets and threaded rod connectors, and as follows:
1. Minimum Uncoated-Steel Thickness: 12 Gauge
  2. Height: As indicated on Shop Drawings
  3. Length: As indicated on Shop drawings

### **2.4 CONNECTING HARDWARE:**

- A. Manufacturer's standard 12 Gauge formed steel parts for connecting risers end-to-end drilled for connection as shown on shop drawings.
- B. Step Forms: Manufacturer's standard 16 Gauge steel formed step forms drilled for connection as shown on shop drawings and as follows:

1. Height, Width, and Depth: As indicated on shop drawings.
- C. ½" – 13 all thread rod – 12'-0" lengths field cut as indicated on shop drawings.
- D. ½" – 13 – 1 ¼" coupling nuts – quantity as indicated on shop drawings.
- E. ½" -13 – 1" carriage bolt - quantity as indicated on shop drawings.
- F. Step Forms: Manufacturer's standard 16 Gauge steel formed step forms as follows:
  1. Height, Width, and Depth: As indicated on shop drawings.

## 2.5 FABRICATION

- A. Fabricate EPS blocks, square, and true to dimension.  
Marking and Identification: Individual EPS blocks shall be marked as follows:
  1. Auditorium/Section number identification.
  2. Layer I.D. code identification.

## PART 3 - EXECUTION 3.1

### EXAMINATION

- A. Examine supporting substrates and abutting structural framing for compliance with requirements for installation tolerances and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected.

## 3.2 INSTALLATION, GENERAL

- A. Install system in compliance with SSE installation and shop drawings.
- B. EPS Installation: Install blocks in layers following shop drawings. Hold dimensions on shop drawings and Architect's plans.
  1. Place non-solvent based adhesive between each layer of EPS to tack in place during assembly.
- C. Metal Riser Installation: Install metal risers plumb and square for straight rows and/or field score and bend to radius.
  1. Connect risers end-to-end with connector brackets;
  2. Field score top and bottom flange of riser to bend to shape for radius platforms if required;
  3. Insert threaded rod to stiffener bracket;
  4. Secure threaded rod with hex nuts;
  5. Insert threaded rod through holes at bottom of risers at adjacent rows;
  6. Double nut end of threaded rod to connect risers true and even;

7. Install foam stakes along the bottom risers to anchor risers to EPS.

D. Step Form Installation: Install step forms in locations shown on shop drawings.

1. Screw step forms to metal riser face with self-tapping sheet metal screws.

E. Install bracing/kickers for stability of steel forms during concrete pour. Monitor pour at all times taking necessary precautions to insure stability of steel forms.

NOTE: Do not weld risers or cut risers with torch in the same room as installed or stored EPS. Protect EPS against ignition at all times.

END OF SECTION 03