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Product Guide Specification

Specifier Notes: This product guide specification is written according to the Construction Specifications Institute (CSI) 3-Part Format, including *MasterFormat*, *SectionFormat*, and *PageFormat*, as described in *The CSI Construction Specifications Practice Guide*.

This section must be carefully reviewed and edited by the Architect to meet the requirements of the project and local building code. Coordinate this section with other specification sections and the Drawings. Delete all "Specifier Notes" after editing this section.

Section numbers and titles are from *MasterFormat 2012 Update*.

SECTION 12 66 23

DEMOUNTABLE SEATING PLATFORMS

Specifier Notes: This section covers StageRight "ZHD/ML" folding seating risers. Consult StageRight for assistance in editing this section for the specific application.

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Folding seating risers.

1.2 RELATED REQUIREMENTS

Specifier Notes: Edit the following list of related sections as necessary. Limit the list to sections with specific information that the reader might expect to find in this section, but is specified elsewhere.

- A. Section [12 62 00] [] – [Portable Audience Seating] []: Chairs to be placed on folding seating risers.

1.3 REFERENCE STANDARDS

Specifier Notes: List reference standards used elsewhere in this section, complete with designations and titles.

- A. AAMA 611 – Voluntary Specification for Anodized Architectural Aluminum.
- B. ASTM A 36/A 36M – Standard Specification for Carbon Structural Steel.
- C. ASTM A 500/A 500M – Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.

1.4 SUBMITTALS

Specifier Notes: Edit submittal requirements as necessary. Delete submittals not required.

- A. Comply with Section 01 33 00 – Submittal Procedures.
- B. Product Data: Submit manufacturer's product data, including the following:
 - 1. Detailed specification of construction and fabrication.
 - 2. Description of operations, including step by step set-up and take-down tasks.
 - 3. Complete list of deviations from specifications.
- C. Shop Drawings: Submit manufacturer's shop drawings, indicating dimensions, description of materials and finishes, general construction, specific modifications, component connections, anchorage methods, and hardware, plus the following specific requirements.
 - 1. Floor plans of each level indicating seating section numbers, row numbers, seat numbers, and seat count.
 - 2. Seat sizes and aisle widths.
 - 3. Railing locations and attachment details.
 - 4. Closure panel locations and details.
- D. Samples: Submit 2 sets of manufacturer's samples for color selection or verification of the following:
 - 1. Color samples for deck.
 - 2. Color samples for understructure.
 - 3. Color samples for drapes, 6 inches by 6 inches, from standard color palette.
 - 4. Color samples for riser closures.
- E. Manufacturer's Certification: Submit manufacturer's certification that materials comply with specified requirements and are suitable for intended application.
- F. Manufacturer's Project References: Submit manufacturer's list of successfully completed folding seating riser projects, including project name and location, name of architect, and type and quantity of folding seating risers furnished.
- G. Contract Closeout Submittals: Submit contract closeout submittals as follows:
 - 1. Operating and maintenance manuals, including the following:

- a. Operation, maintenance, adjustment, and cleaning instructions.
 - b. Troubleshooting guide.
 - c. Parts list.
 - d. Detailed information required for Owner to properly operate and maintain folding seating risers.
2. Setup configuration layout and details to permit verification of safety design requirements.
 3. Project record documents.
- H. Warranty Documentation: Submit manufacturer's standard warranty.

1.5 EXTRA STOCK MATERIALS

- A. Provide extra stock materials as follows:

Specifier Notes: Edit the quantity of extra stock materials as necessary.

1. Screwfeet: 10.
2. Guard Rail Handles: 10.
3. T-Molding: 10.

1.6 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Minimum 25 years of experience in the manufacturing of folding seating risers.
- B. Manufacturer's Quality Control:
1. Manufacturer shall make or have made, under their control, all parts comprising complete folding seating risers.
 2. Maintain test and inspection procedures, to assure uniform high quality of all raw materials and finished product.
 3. Manufacturer shall have capacity and facilities to furnish quality and quantity required without delaying the Work.
- C. Welder's Qualifications: AWS certified within past 12 months for each type of weld required.

1.7 DELIVERY AND STORAGE

- A. Delivery Requirements: Deliver folding seating risers to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- B. Storage Requirements: Store folding seating risers at location designated by the Owner.

1.8 WARRANTY

- A. Warranty Period: 1 year from date of delivery.

PART 2 PRODUCTS

2.1 MANUFACTURER

- A. Manufacturer: StageRight, 495 Pioneer Parkway, Clare, Michigan 48617. Toll Free 800-438-4499. Website www.stageright.com. E-mail stageright@rogersgrp.com.
- B. Substitutions: Not permitted.

2.2 SYSTEM DESCRIPTION

- A. Folding Seating Risers: "ZHD/ML" folding seating risers.
- B. Portable riser system shall be designed to be demountable, requiring no more than a 2-person set-up.
- C. Riser System:
 - 1. Honeycomb dual-sided reversible deck panels.
 - 2. Multi levels of 4 to 24-inch rise by 32 to 42-inch run risers using bridging understructure to provide horizontal and vertical stability.
 - 3. Side-to-side and front-to-back bridging shall provide automatic unit-to-unit connection, eliminating need for cam locks, loose connecting hardware, or tools.
 - 4. Bridging or spanning of decks shall create storage space under risers, reducing number of understructure supports, and speeding up leveling process.
 - 5. Loose or plug-in leg-style support systems shall not be acceptable.
- D. Reversible Honeycomb Laminate Deck Panels:
 - 1. Absorb "drumhead" effect, typically associated with single-skin plywood platforms.
 - 2. Provide 2 usable surfaces for increased durability and versatility.
- E. Conical nodes on locator plates shall guide decks into location and proper alignment, securing them in place without use of tools, clamps, or clips.
- F. System Functional Design:
 - 1. Staging system shall consist of deck panels and separate support system.
 - 2. System shall support specified loads without permanent deformation of any component.
 - 3. No tools shall be required to erect or adjust support system nor to attach or remove deck panels.
 - 4. System shall be easily installed manually with no single component requiring more than 2 people for setup or strike.
- G. Fabricate support system from DOM or HREW steel tubing, with members sized as follows:
 - 1. Main Columns: 2-inch-diameter, 14-gauge round.
 - 2. Inner Columns: 1.75-inch-diameter, 14-gauge round.
 - 3. Cross Braces: 1-inch by 2-inch, 14-gauge rectangular.
 - 4. Upper Braces: 1-inch by 1-inch, 14-gauge square.
 - 5. Vertical Diagonals: 1-inch by 1-inch, 14-gauge square.
 - 6. Pivot Tubes: 2-1/4-inch-diameter, 12-gauge round.
 - 7. Retainer Rings: 2-1/4-inch-diameter, 12-gauge round.

- H. Screwfoot Adjuster: 2-1/4-inch-diameter steel pad with molded urethane coating attached to 5/8-inch-diameter zinc-coated, acme-threaded steel shaft allowing fine adjustment of up to 2.5 inches.
- I. Support System:
 - 1. Accordion-fold type.
 - 2. Fully self-contained.
 - 3. No loose parts.
- J. To facilitate rapid setup and leveling, and to provide for wide, open areas underneath alternating riser sections, and alternating levels, support system shall permit lateral suspension, or "bridging", and forward/rear suspension, of compatible modular decks.
- K. Hardclosure Panels: 5/8-inch plywood with laminated poly wear surfaces, attach without tools, and function as both chair stop and trash guards.
- L. Steps:

Specifier Notes: Specify material for steps.

- 1. Material: [Fiberglass, black] [Carpet, standard grey] [Aluminum extrusion tread].
- 2. Attach to decking without tools.

2.3 PERFORMANCE TESTS

- A. Staging system shall be subjected to loads, in addition to its own weight, that average at least 125 psf.
 - 1. Loading shall be applied vertically and cycled 20 percent above and below this average for a minimum of 10,000 cycles.
 - 2. Loading shall be applied so it does not restrain support system.
- B. Side Loads:
 - 1. Staging system shall be subject to side loads in both direction axes plus or minus 2 percent of average vertical load described above.
 - 2. This shall also be cycled in phase through 10,000 cycles.
- C. Deck surface shall support a point load of 1,250 psi applied with an instrument with a 2-inch diameter by 2 inches wide. This shall represent loads being moved about the stage on casters.

2.4 MATERIALS

- A. Structural Steel Shapes, Plates, and Bars: ASTM A 36, except where higher strength steel is indicated or standard with manufacturer.
- B. Uncoated Steel Sheet:
 - 1. ASTM A 36, commercial quality, cold-rolled sheet, and stretcher leveled.
 - 2. Minimum Thickness: 14 gage.
- C. Steel Tubing: ASTM A 500 or ASTM A 513.

- D. Extruded Aluminum: Manufacturer's standard extrusions of sizes and profiles required to achieve tread and riser dimensions indicated, Alloys 6005, 6061, 6063, or 6105, Temper T5 or T6.
 - 1. Minimum Thickness: 0.094 inch.
- E. Fasteners:
 - 1. Size and material standard with manufacturer.
 - 2. Vibration proof.

2.5 DECKS

- A. Composite structure with skins of 1/4-inch exterior-grade Douglas fir plywood bonded to 3/8-inch cell-treated honeycomb-core material with waterproof urethane adhesive.
- B. Deck Playing Surfaces: 2.
 - 1. Carpet: Commercial grade, polyolefin.

Specifier Notes: Specify color of carpet. Gray is standard. Consult StageRight for availability of other colors.

- a. Color: [Gray] [_____].
- 2. Fiberglass: "TechStage", 0.095-inch-thick sheeting, textured surface.

Specifier Notes: Specify color of "TechStage". Black is standard. Consult StageRight for availability of other colors.

- a. Color: [Black] [_____].

- C. Edging:
 - 1. Enclose deck.
 - 2. Aluminum alloy 6005-T5.
 - 3. Interlock track to receive accessories such as stair brackets, skirting, and interlock clips.
 - 4. Attach to deck with adhesives and riveted corner brackets.
 - a. Corner Brackets: 1-piece polycarbonate castings.
 - 5. Finish: Clear anodize or powder coat.
- D. Decks shall not be permanently committed to a given support system, but shall function with several support structures available from the manufacturer.
- E. Design deck to support a load of 125 psf.
- F. No bolts or welded joining of components in deck construction.
- G. Laminate structure with adhesives.

2.6 GUARDRAILS AND HANDRAILS

- A. Guardrails and Handrails: Welded construction using 1-1/2-inch-diameter steel tubing.

- B. Side Guardrails:
 1. 36-inch-high top rail with 6 mid rails spaced to prevent 4-inch-diameter sphere from passing through the rail up to 34 inches.
 2. 8-inch-diameter sphere cannot pass beyond 34 inches.
- C. Back Guardrails:
 1. 42-inch-high top rail with 16 mid rails spaced to prevent 4-inch diameter sphere from passing through the rail up to 34 inches.
 2. 8-inch-diameter sphere cannot pass beyond 34 inches.
- D. Vertical Pickets: 5/8-inch-diameter steel tubing spaced at a maximum of 4 inches on center.
- E. Attach guardrails to decks.
- F. Handrails:
 1. Position on tapered locator nodes.
 2. Locator Nodes: Fit in a 1-inch-diameter hole drilled into bottom on a 2-inch-square steel locator block welded to bottom of handrail.
- G. Rail Loads:
 1. Structurally design to support a concentrated load of 200 lbs. at any point and a uniform load of 50 lbs. per foot applied in any direction.
 2. Concentrated and uniform loading conditions shall not be required to be applied simultaneously.

2.7 HARDCLOSURE BOARDS

- A. Closure Boards:
 1. Sectioned 5/8-inch plywood.
 2. Effectively close the normal rise gap between each level of riser.
 3. Finish: Textured ABS sheeting.
- B. Edging: 5/8-inch black plastic T-molding applied to entire perimeter of each hardclosure board.
- C. Mount 4-inch extruded aluminum clip to back of each hardclosure board at regular intervals to facilitate attachment of hardclosure panel to deck interlock track.

2.8 TRANSPORTS

- A. Transports for decks, supports, stairways, guardrails, and hardclosures shall be welded steel tubing construction with fork truck access on 4 sides.
- B. Casters: Minimum of 4 heavy-duty casters, 2 swivel and 2 fixed.
- C. Each Transport: Contain their intended load in a secure and organized manner.

2.9 FINISHES

- A. Aluminum: Clear anodized, AA-M12C22A41, AAMA 611.

- B. Steel:
 - 1. Surface Preparation:
 - a. Solvent-clean surfaces to remove dirt, oil, grease, and other contaminants that could impair paint bond.
 - b. Remove mill scale and rust, if present, from uncoated steel.
 - 2. Powder-Coat Finish:
 - a. Immediately after cleaning and pretreatment, apply manufacturer's standard, non-glare, baked-on powder-coat finish.

Specifier Notes: Specify color of powder-coat finish. Black is standard. Consult StageRight for availability of custom colors.

- b. Color: [Black] [_____].

PART 3 EXECUTION

3.1 TRAINING

- A. Provide instruction and training of Owner's personnel in the operation and maintenance of folding seating risers.
- B. Provide instruction and training by factory-trained and certified representative of manufacturer.

END OF SECTION