

SECTION 11060
PORTABLE STAGING SYSTEM

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. The fabrication, furnishing, delivery and installation of a of Smartstage Platform System.
 - 2. Training of Owner's Staff of the proper operation and maintenance of furnished equipment.
- B. Related Sections:
 - 1. Division 09 - Finishes

1.2 SUBMITTALS

- A. Submit the following within 30 days of award of contract under provisions of Division 1 and according to the Conditions of the Contract:
 - 1. Schedule and time estimate for drawing preparation and fabrication and installation conforming to the project time schedule.
 - 2. Samples for initial selection purposes in the form of manufacturer's standard components.
- B. Submit the following within 90 days of the completion of installation:
 - 1. Equipment warranty documentation.

1.3 QUALITY ASSURANCE

- A. Stage Equipment and Installer Qualifications
 - 1. The Contractor must have successfully completed at least two similar projects within the last five years. Project location, completion date, scope of work and Owner / Specifier contact names are to be furnished upon request.
 - 2. The Contractor must submit written evidence that he maintains a fully equipped field service organization capable of providing prompt inspection, service and repairs of the installed system. The Contractor must assure that replacement parts for all components furnished will remain available for no less than 10 years after acceptance.
 - 3. Only expert installation personnel must be used for this work. The Stage Equipment Contractor must insure that an experienced installation supervisor is present during the entire installation.
 - 4. Known to qualify to the above requirement, this work performed under this section may be by one of the following listed contractors:
 - a. SMARTSTAGE AMERICA INC, CAPE CANAVERAL, FLORIDA 32920
- B. Regulatory Requirements:
 - 1. Comply with governing National, State and City regulations.
 - 2. Comply with prevailing local codes and applicable UL Standards.

- C. Warranty:
 1. The Contractor and Manufacturer must warrant all material and workmanship described herein to be free of defects for a period of one year from acceptance.
 2. Equipment found to be defective during this period must be repaired or replaced within thirty (60) days of notice.
 3. Ordinary wear and damage due to improper usage is not covered by this warranty.

- D. Standards
 1. All equipment, where standards have been established, must be built to recognized standard. Standards are established by the following organizations:
 - a. Underwriters Laboratories.
 - b. National Electric Code.
 - c. 1997 Uniform Building Code.
 - d. National Fire Protection Agency.
 - e. Occupational Safety and Health Administration
 - f. United States Institute for Theatre Technology.
 - g. Entertainment Services and Technology Association Technical Standards.
 - h. "Specifications for Design, Fabrication and Erection of Structural Steel for Buildings," of the American Institute of Steel Construction, 6th Edition.

- E. Fabrication
 1. Fabrication will begin only after approved shop drawings and a written notice to proceed have been delivered to the manufacturer at the manufacturers place of business.

- F. INSPECTION, INSTRUCTION & HANDOVER
 1. A qualified representative employed by the manufacturer must visit the job site after installation is complete and prior to owner turnover to inspect, test and adjust the systems.
 2. Proper instruction of operation and maintenance procedures must be provided to the owner's representatives.

1.4 PROJECT CONDITIONS

- A. Notification
 1. The Stage Equipment Contractor must immediately notify their Contract Holder of any conditions, measurements, quantities and other data, as required for the proper execution, fit and completion of all work, and safe and proper operating clearances.
 2. The Stage Equipment Contractor must notify their Contract Holder of any site conditions or variations that effect the installation or completion of work, and where appropriate, indicate suggested remedial procedures by drawings and/or description.

- B. Environmental Requirements:
 1. Obtain approval of Owner before performing operations that generate contaminants.

- C. Field Measurements
 1. Verify actual stage dimensions by accurate measurements prior to the fabrication of equipment.
 2. Verify actual support steel dimensions and layout prior to the fabrication of equipment.

- D. Trade Coordination
 1. Coordinate the delivery and or installation of the equipment in this section to begin following the completion of work which may conflict with the stage floor finish work and painting of adjacent areas.

PART 2 PRODUCTS

2.1 MATERIALS

1. Design Requirements:
 - a. Portable platform system
2. Design Capacities:
 - a. Platform Size: 4' x 8' x 3-2"
 - b. Surface Thickness:.020"
 - c. Allowable Superimposed Load Capacity: 125 psf.
 - d. Point Load Capacity without Live Load: 1,000 lbs.
3. Material Specifications:
 - a. Platform Surfaces:
 - 1) Anti slip, textured black polyvinyl
 - 2) Durable edge with recessed Velcro strip
 - b. Aluminum Extrusions: 6061-T6 or 6005A-T61
 - c. Core: ¾" Fir Plywood
 - d. Adhesive: 2 part, heat hardened epoxy
4. Components:
 - a. Deck Surfaces: Weather resistant anti-slip laminate
 - b. Frame and support structure: One man operation, no tools required, scissors type, variable height frame with 6" leveling jack
 - c. Storage Carts: Provide manufacturer's standard storage carts
5. Compatabilty: Compatible with competitors decks

Detailed Specifications of Smartstage Portable Stage

1. Deck;

Stage deck is constructed of aluminum outer frame, alloy 6061 T-6, mechanically assembled at a finished size 96" x 48" x 3.2" thick. Extrusion must feature a recessed 1" groove for Velcro hook running the outer perimeter of deck. Frame is to have mechanically riveted inside of frame, running lengthwise, either one or two steel support beams (based on rating). Beam is mild steel 2" x 3" x .125" wall, powder coat black. Deck surface is constructed of standard G2S fir plywood, with PVC vinyl hot melt laminated to both sides. Laminate on top surface is .020 inches, must have "anti-slip" feature, black, and withstand wear & tear of indoor & outdoor event use. Laminate on bottom is basic 4mm black. Deck must feature "dual function" corner, which allows deck to be received on locator plates of Fast-fold frames, and also accept single legs. Special corner must accept leg pipe sizes with an outside diameter range of 1.9" to 2.3" and 2" square.

2. Fast-fold Frame, locator plates;

Support structure is to be aluminum alloy 6061-T6, with a "scissor action" fold up feature. Frame must have a device which sets opening position correctly. All diagonal bracing is to be integral, with no additional parts or braces. Leg loading capacity must be 6600 lbs per, with variable height internal leg with adjustments every 2". Steel pin, 5/8" diameter must be on a spring-loaded mechanism, hand operated, and concealed within the support structure framework. Support frame must have four legs, each with a removable 6" leveling jack. Each leg will also have removable locator plates with one, two or four plastic nodes. Locator plates will guide deck into position for lock-off by tightening of deck corner tightening knob. There are to be no loose bolts, or pins on lanyards.

3. Deck Clamp

Deck Clamp is required to be formed from ¼" x 1" steel flatbar with a hook mechanism to lock onto underside of one deck. Clamp is to have bolt or lever to lock clamp onto opposing deck. Purpose of clamp

is to lock two decks together midsection to prevent pull-away, and provide vertical stability. Clamp is to be zinc plated.

4. Stair Section

Stair sections must have a built in feature for variations of height. All stair treads must remain horizontal when stair section is attached at any height. Tread size must be no less than 10" x 36". Bottom of stair section must have pivoting, gripping feet to adjust to variation in terrain. Stair section must have lock-off device to hold stair position during use. Top of stair section must have clamp device, which will hold stair to platform edge. Stair clamp must hold stairs to platform on the horizontal plane, and the vertical plane to avoid any risk of clamp rotation. Stair sections must also have handrail, tube size minimum of 2" and a height of 36" above the tread. Handrail position must adjust proportionately with stair section adjustment. Handrail ends must have lead-in, be curved, and capped. All stair components are to be zinc plated, and / or black textured powder coat paint.

5. Guardrail

Stage guardrail sections must be formed from a 2" OD, minimum 16G wall, steel. Radius on out curves must not exceed 6", and have a finished height of 36" from deck level. Guardrail section length must be such that sections leave a 1" gap between sections after installation, including corners of stage. Guardrail sections must have a sure-lock clamping device, which connects guardrail to platform in a manner, which prevent guardrail movement in any direction, and will resist outward impact resistance at the top portion of the guardrail.

Guardrail must contain internal network of tubing designed to prevent people or objects from slipping through. Guardrail section must be finished in a textured black baked on powder coat paint.

6. Leg Clamp

Leg clamp must be designed to hold in position two, three or four single stage legs, without pulling legs out of vertical position, and irregardless of leg length. It must have a tightening device, which will stiffen legs while in operating position. Clamp must be cast or formed steel or aluminum, and have a plated or baked on paint finish.

7. Transport Cart

Stage transport carts must structured to support and contain the product to be carried on it. Wheels must be rated for 4 times the actual load to be implemented. Six wheels for most carts is recommended. Where cart is to be stacked, vertical posts must provide proper stacking feet. Where cart is to be forkliftable, proper understructure must accommodate forks of forklift from both ends of cart. Carts must also have proper bars for hands to push, and carts must roll on hard floor, and carpeted floor with ease. Where decks are to be loaded in vertical position, a holding device must exist to contain any number of decks already in cart from falling over during loading. Carts must be galvanized, or painted with a baked on powdercoat finish.

8. Stage Skirt

Stage skirt must be pre-pleated with a 50% gather. Top of skirt must align with top of stage surface, and remain stiff and vertical with backing material. Skirt must also have a built in velcro loop strip to adhere to stage edge. Skirting must contain flameproof agent. Skirting must be manufactured using a fabric which will maintain wrinkle free performance, and non-shrinking or fading after washing.

Skirt width should be 12' and height be either fixed at stage height exactly within ¼" tolerance. Where skirt is multi-height, an adjusting device must exist in the back of skirt, which will provide the user the option to "pull" the skirt up to be level with the floor, and remain in that position for the duration of use without risk of detachment from people bumping up against it.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verification of Conditions:
 - 1. Examine areas and conditions under which work is to be performed; identify conditions detrimental to proper or timely completion.
 - 2. Do not proceed until unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Provide, erect and maintain barricades, lighting and guardrails as required to protect general public, workers and adjoining property.

3.3 INSTALLATION

- A. Position all items accurately as indicated on the drawing and true, plumb and level.
- B. Note any deviations required to adjust for field obstructions and report to required persons to incorporate changes on as-built drawings.
- C. Coordinate work with trades performing adjoining work
- D. Use only qualified riggers for installation, trim and adjustment.

END OF SECTION