

16937 STAGE LIGHTING RIGGING (PIPE GRID)

SPECIFIER:

CSI MasterFormat 2004 number: 11 61 62
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PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes: Fabrication, furnishing, delivery, labor and installation of the stage and pipe grid, and all incidental or related items necessary to complete the stage lighting grid work.
 - 1. Work required for this Section:
 - a. Pipe grid above stage.
 - b. Galleries, ladders, and catwalks.
- B. All materials shall be listed by an OSHA approved Nationally Recognized Testing Laboratory (NRTL).

1.2 RELATED SECTIONS:

- 1. 01043 - Mechanical and Electrical General Requirements.
- 2. 11062 - Stage Curtains and Tracks.
- 3. Division 16 - Electrical.
- 4. 16936 Stage Lighting Rigging (Counterweight)

1.3 REFERENCES

- A. American Institute of Steel Construction (AISC), latest edition.
- B. American Society for Testing and Materials (ASTM), latest edition:
 - 1. A36 Specification for Carbon Structural Steel.
 - 2. A53 Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.
 - 3. A48 Specification for Gray Iron Castings.
 - 4. A53 Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.

1.4 SUBMITTALS

- A. At the A/E's request, submit for review one representative sample of any device or component required under the contract.
 - 1. The components shall be tagged with the name of the project and shall be shipped to the address specified by the A/E.
 - 2. After review, the component shall be shipped to the project for use as a standard.

3. All charges for these shipments shall be identical with the approved component.
 4. No component used as a sample will be allowed to be installed on the project.
 5. In the event the submissions are disapproved, the components will be returned to the Contractor who shall immediately make a new submission of component meeting the contract requirements.
- B. The Contractor shall submit Shop Drawings for the A/E's approval of a sufficient size to show necessary detail for each component type. Catalog cuts or scale drawings will not be acceptable.
- C. Shop Drawings shall include, but not be limited to:
1. Shop Drawings and samples as requested of components shall be submitted for approval by A/E before fabrication. Details may vary slightly from those shown on drawings provided the changes to performance or appearance.
- D. Contractor shall submit Shop Drawings for acceptance indicating exact method of installation.

1.5 QUALITY ASSURANCE

- A. Materials, equipment, appurtenances, and quality of construction provided under this section shall comply with the highest commercial standard and shall be as specified and as indicated on Drawings. Parts and components not specifically identified or indicated shall be made of materials appropriate for their use or function and resistant to corrosion and thermal and mechanical stress encountered in the normal application and functioning of the components.
- B. All cast parts, including die-cast members, shall be of uniform quality, free from blow holes, pores, hard spots, shrinkage defects, cracks, or other imperfections that affect strength and appearance, or show inferior metals or alloys).
1. Exterior surfaces that do not otherwise receive a finishing coating shall be machined, sanded, or similarly treated areas, such as extruded metal parts.
 2. All such finished castings shall be given a minimum of one coat of flat black painted finish.
- C. Fixtures and components shall be made according to the NEC and bear the UL label.

PART 2 PRODUCTS

2.1 EQUIPMENT

- A. Pipe Grid System:
1. Pipe Battens:
 - a. Battens and pipes shall be 1-1/2" nominal diameter Schedule 40 pipe in lengths as shown on the Drawings.

- b. Joints shall be sleeve spliced with 18 inch long sleeves with 9 inches extending into each pipe and held by two 3/8" hex bolts and lock nuts on each side of the joint.
 - c. Manufacturer: J.R. Clancy No.015-67r 40 ft. long or accepted equivalent.
2. Fittings:
- a. Cable fittings and clips shall conform with wire rope manufacturer's recommendations as to size, number and method of installation.
 - b. Clips shall be drop forged "Crosbys" or malleable as required. Pressed sleeve fittings shall be "Nicropress".
 - c. Eyes shall be formed over wire rope thimbles of correct sizes.
3. Lead Cables:
- a. Lead cables unless otherwise noted shall be 1/4" diameter 7 x 19 construction, galvanized aircraft cable with a breaking strength of 7000 pounds.
 - b. Damaged or deformed cable shall not be used.
 - c. Install wire rope rigging to prevent abrasion of the wire rope against any part of the building construction or other equipment.
4. Trim Chains:
- a. Trim cables shall be 30 inches long with a snap at one end.
 - b. Chain shall be 2/0, passing link with a 500 pound working load.
 - c. Install chains on the batten end of each lead line.
 - d. Provide one safety bolt, one nut and two flat washers per trim chain.
 - e. Manufacturer: J.R. Clancy 015-1192B trim chains or accepted equivalent.
- B. Marking of Components:
- 1. Clear and located to be readily visible to service personnel but shall be invisible from normal viewing angles when lamps are in place.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Install hand operated winch package according to manufacturer's instructions. Details shown on Drawings are approximate.

END OF SECTION