

## SECTION 11 52 13 - PROJECTION SCREENS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section Includes:

- 1. Electrically operated projection screens and controls.

- B. Related Sections:

- 1. Division 26 Sections for electrical service and connections including device boxes for switches and conduit, where required, for low-voltage control wiring.

#### 1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.

- B. Shop Drawings: For projection screens. Show layouts and types of projection screens. Include the following:

- 1. For manually operated projection screens:

- a. Drop lengths.
    - b. Anchorage details.
    - c. Accessories.

- 2. For electrically operated projection screens and controls:

- a. Location of screen centerline relative to ends of screen case.
    - b. Location of wiring connections for electrically operated units.
    - c. Location of seams in viewing surfaces.
    - d. Drop lengths.
    - e. Anchorage details, including connection to supporting structure for suspended units.
    - f. Details of juncture of exposed surfaces with adjacent finishes.
    - g. Accessories.
    - h. Wiring diagrams.

- C. Maintenance Data: For projection screens to include in maintenance manuals.

#### 1.4 QUALITY ASSURANCE

- A. Source Limitations for Projection Screens: Obtain projection screens from single manufacturer. Obtain accessories, including necessary mounting hardware, from screen manufacturer.
- B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

#### 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Environmental Limitations: Do not deliver or install projection screens until spaces are enclosed and weathertight, wet work in spaces is complete and dry, and temporary HVAC system is operating and maintaining ambient temperature and humidity conditions at occupancy levels during the remainder of the construction period.
- B. Store rear-projection screens in manufacturer's protective packaging and according to manufacturer's written instructions.

#### 1.6 COORDINATION

- A. Coordinate layout and installation of projection screens with adjacent construction, including ceiling suspension systems, light fixtures, HVAC equipment, and partitions.

### PART 2 - PRODUCTS

#### 2.1 ELECTRICALLY OPERATED PROJECTION SCREENS

- A. General: Manufacturer's standard units consisting of case, screen, motor, controls, mounting accessories, and other components necessary for a complete installation. Provide units that are listed and labeled as an assembly by UL or another testing and inspecting agency acceptable to authorities having jurisdiction.
  - 1. Controls: Remote three-position control switch installed in recessed device box with flush cover plate matching other electrical device cover plates in room where switch is installed.
    - a. Provide number of control switches indicated
    - b. Provide power supply for low-voltage systems if required.
    - c. Provide locking cover plates for switches.
    - d. Provide video interface control for connecting to projector. Projector provides signal to raise or lower screen.

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2. Motor in Roller: Instant-reversing motor of size and capacity recommended by screen manufacturer; with permanently lubricated ball bearings, automatic thermal-overload protection, preset limit switches to automatically stop screen in up and down positions, and positive-stop action to prevent coasting. Mount motor inside roller with vibration isolators to reduce noise transmission.
3. Screen Mounting: Top edge securely anchored to rigid metal roller and bottom edge formed into a pocket holding a 3/8-inch- diameter metal rod with ends of rod protected by plastic caps.
  - a. Roller for motor in roller supported by vibration- and noise-absorbing supports.

B. Suspended, Electrically Operated Screens without Ceiling Closure: Motor-in-roller units designed and fabricated for suspended mounting, with bottom of case entirely or partially open under screen compartment.

1. Products: Subject to compliance with requirements, provide one of the following:
  - a. Motor in Roller:
    - 1) BEI Audio-Visual Products; Alpine XL.
    - 2) Da-Lite Screen Company; Advantage Electrol.
    - 3) Draper Inc.; Paragon.
    - 4) Stewart Filmscreen Corporation; Model A-B.
2. Provide metal or metal-lined wiring compartment on units with motor in roller.
3. Screen Case: Made from metal.
4. Provide screen case with trim flange to receive ceiling finish.
5. Finish on Exposed Surfaces: Vinyl covering or baked enamel.

## 2.2 FRONT-PROJECTION SCREEN MATERIAL

- A. Matte-White Viewing Surface: Peak gain not less than 0.9, and gain not less than 0.8 at an angle of 50 degrees from the axis of the screen surface.
1. Products: Subject to compliance with requirements, provide one of the following:
    - a. BEI Audio-Visual Products; Matte White.
    - b. Bretford, Inc.; Matte White.
    - c. Da-Lite Screen Company; Da-Mat.
    - d. Draper Inc.; Fiberglass Matte White.
- B. Material: Vinyl-coated, glass-fiber fabric.
- C. Mildew-Resistance Rating: 0 or 1 when tested according to ASTM G 21.
- D. Flame Resistance: Passes NFPA 701.

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- E. Seams: Where length of screen indicated exceeds maximum length produced without seams in material specified, provide screen with horizontal seam placed as follows:
  - 1. At top of screen at juncture between extra drop length and viewing surface.
  - 2. In location indicated.
- F. Seamless Construction: Provide screens, in sizes indicated, without seams.
- G. Edge Treatment: Black masking borders.
- H. Size of Viewing Surface: 10 feet wide by 6 feet high.

### PART 3 - EXECUTION

#### 3.1 FRONT-PROJECTION SCREEN INSTALLATION

- A. Install front-projection screens at locations indicated to comply with screen manufacturer's written instructions.
- B. Install front-projection screens with screen cases in position and in relation to adjoining construction indicated. Securely anchor to supporting substrate in a manner that produces a smoothly operating screen with vertical edges plumb and viewing surface flat when screen is lowered.
  - 1. Install low-voltage controls according to NFPA 70 and complying with manufacturer's written instructions.
    - a. Wiring Method: Install wiring in raceway except in accessible ceiling spaces and in gypsum board partitions where unenclosed wiring method may be used. Use UL-listed plenum cable in environmental air spaces, including plenum ceilings. Conceal raceway and cables except in unfinished spaces.
  - 2. Test electrically operated units to verify that screen controls, limit switches, closures, and other operating components are in optimum functioning condition.

END OF SECTION 11 52 13