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-1 specification section, apply to work of this section.
1.2 SECTION INCLUDES
   A.   See plans for location and number of projection screens.
   B.   Types of projection screens required include:
      1.   Electrically operated, remote controlled units
      2.   Manually operated units
      3.   Recessed, ceiling mounted units
      4.   Surface mounted units
   C.   Electrical wiring, connections, and installation of remote control switches for electrically operated projection screens are included in Division 26.
1.3 QUALITY ASSURANCE
   A.   Provide each type of projection screen as a complete unit produced by a single manufacturer including necessary mounting brackets, accessories, fittings and fastenings.
1.4 REFERENCES
   A.   NFPA 255: Standard Test Methods of Surface Burning Characteristics of Building Materials
1.5 SUBMITTALS
   A.   Product Data: Submit copies of manufacturer's specifications and installation instructions for each type of projection screen unit.
   B.   Shop Drawings: Submit complete shop drawings indicating method of attachment to the actual construction including end details and necessary coordination to finish surfaces.
1.6 DELIVERY, STORAGE & HANDLING
   A.   Do not deliver projection screens until building is enclosed and ready for screen installation.
   B.   Protect screens from damage during delivery, handling, storage, and installation.
   C.   Store un-mounted projection screens in accordance with the manufacturer's instructions (typically horizontal, not upright.)

PART 2   PRODUCTS
2.1 ELECTRICALLY OPERATED, AUTOMATIC RECESS CLOSURE SCREENS
   A.   rovide screen units completely housed in a wood case with double top for extra strength and rigidity, with a metal-lined motor compartment, listed by UL, and bearing re-examination markers of UL.
      1.   Mount top of screen fabric to metal roller, with roller supported on two heavy-duty brackets with self-aligning bearings.
   B.   Screen Case:
      1.   Metal- lined motor and wiring compartment, with hinged or removable access panel to motor compartment, electrical outlet box and finished with manufacturer's standard prime coat.
      2.   Equip case with hinged bottom connected to drive mechanism for automatic opening and closing with raising and lowering of screen surface.
      3.   Mount hinges to allow alignment of bottom panel to adjacent ceiling surface.

C. Motor Unit:
   1. Size and capacity recommended by the screen manufacturer.
   2. Use instant reversing, gear drive motor with permanently lubricated ball bearings, automatic thermal overload protection, and preset limit switches that automatically stop screen in "up" and "down" position.
   3. Provide a 3-button remote control switch ("up", "down", and "stop") in a box with cover plate for flush wall-mounting.
   4. Stop action to be positive to prevent coasting.
D. Roller:
   1. Roller shall be of rigid metal at least 3" diameter on screens 12' wide and under.
   2. Roller shall be of rigid metal at least 5¾" diameter on screens over 12' wide.
E. Screen Fabric: Manufacturer's standard, flame retardant and mildew resistant fiberglass with matte white picture surface gain no less than 1.0 :
   1. Black masking borders.
   2. Top extension as required for proper image positioning.
   3. All electric screens to have minimum 4′ black screen drop at top (before white part of screen starts), coordinate with ceiling projector-mounting height and add drop as needed for higher ceiling areas.
   4. Screen Size – 16:10 wide format):
      i) 57.5″ x 92″ in classrooms and conference rooms, Da-Lite Boardroom Electrol Matte White 70145 or pre-approved equal
      ii) 72.5″ x 116″ in media center – reading room and group project area, Da-Lite Boardroom Electrol Matte White 70154 or pre-approved equal
      iii) 100″ x 160″ in cafeteria or cafetorium, Da-Lite Boardroom Electrol Matte White 70160 or pre-approved equal
      iv) 12′6″ x 20′ in auditoriums, Da-Lite Professional Electrol Matte White 81629C (the C in part number indicates a custom order cut down screen from a 15′ x 20′ or pre-approved equal
F. All exposed materials shall be Class A rated per NFPA 255.

2.2 MANUALLY OPERATED SCREENS
A. Provide projection screen units for type of mounting shown, housed in powder coated white 22-gauge steel case with end caps concealing roller ends.
   1. Screen Fabric: Manufacturer's standard, flame and mildew resistant fiberglass with matte white picture surface gain no less than 1.0:
      a. Black masking borders with top extension as required for proper image positioning.
      b. Bottom of fabric securely mounted into tubular steel slat; protect ends of slat with plastic caps, with steel pull bail attached to slat.
      c. Provide 36" pull cord with plastic knob attached to steel pull bail on bottom of screen.
      d. Mount top of screen fabric into metal strip in a metal Camlok roller system without tape, glue, staples, or cords so that the fabric is easier to replace yet cannot be pulled from roller.

e. Screen Size (16:10 wide format):
   i) 57.5″ x 92″ in classrooms and conference rooms, Da-Lite Model B Matte White 36465 or pre-approved equal
   ii) 72.5″ x 116″ in media center – reading room and group project area, Da-Lite Model C Matte White 70304 or pre-approved equal

B. All exposed materials shall be Class "A" rated per NFPA 255.

PART 3 EXECUTION

3.1 INSTALLATION

A. Install projection screen units and accessories at locations shown in accordance with manufacturer's instructions.
   1. Install level, plumb, secure, and at proper height.
   2. Coordinate with other trades for securing projection screen units to finished surfaces.
   3. Repair or replace damaged units as directed by Architect.

B. Classroom wall mounted screens require universal 6" non-adjustable mounting brackets

C. Provide protections for installed units so that they will be in perfect operating condition, without damage at completion of project.

D. In classroom areas with standard 9 feet ceilings, mount the screens such that the top of white area of the screen material is 8′-6″ AFF.
   1. In specialty classroom areas where higher ceilings allow raising the screen, it is recommended that the screen be raised, splitting the difference between the top of the wall and typical mounting height.
   2. This allows digital projector system installation without excessively long down rods.

3.2 INSPECTION

A. Inspect all screens for dirt, damage, and blemishes.

B. Replace screens or units that do not perform as intended.

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