

**SECTION 102226 OPERABLE PARTITIONS**

**PART 1 - GENERAL**

**1.1 GENERAL REQUIREMENTS**

- A. Work of this Section, as shown or specified, shall be in accordance with the requirements of the Contract Documents.

**1.2 SECTION INCLUDES**

- A. Work of this Section includes all labor, materials, equipment and services necessary to complete the operable partitions as indicated on the drawings and/or specified herein.
  - 1. Electrically-operated, continuously-hinged partitions.

**1.3 RELATED SECTIONS**

- A. Structural steel support - Section 051200.
- B. Wood blocking - Section 062000.
- C. Electrical - Division 26.

**1.4 SUBMITTALS**

- A. Product Data: Submit manufacturer's product literature and installation instructions for each type of operable partition and installation accessory required.
  - 1. Submit written data on physical characteristics, durability, resistance to fading and flame resistance characteristics.
- B. Shop Drawings: Submit shop drawings showing location and extent of operable partitions. Include plans, elevations, and large scale details of anchorages, and accessory items. Indicate location of each unit with building, conditions at openings, typical for special details, location and installation requirements for hardware and operators.
  - 1. Include methods of installation for each type of support structure and fastening condition.
- C. Template Drawings: Submit location template drawings for items supported or anchored by permanent construction.
- D. Maintenance Data: Include complete Maintenance Manual.
- E. Samples for Initial Selection Purposes: Manufacturer's standard color charts showing full range of colors and materials for each component exposed to view, available for each type of operable partition required.
- F. Samples for Verification Purposes
  - 1. 12" square samples of finish selected.
  - 2. Prepare samples from same material to be used for the work.

**1.5 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Firm (material producer) with not less than three (3) years of production experience, whose published literature clearly indicates general compliance of products with requirements of this section.
- B. Installer Qualifications: Firm specializing in operable partition installation with not less than two (2) years of experience in installation of operable partitions similar to those required for this project.
- C. Single Source Responsibility: Provide material produced by a single manufacturer partitions and mounting hardware.
- D. Physical Properties: Provide operable partitions identical to those tested for the following physical properties, according to the test method indicated.
  - 1. Sound Insulation
    - a. Rating: NIC of not less than 42, STC of not less than 52.
    - b. Test Method: ASTM E 336, ASTM C 423.
- E. Certification: Submit manufacturer's certificate stating that materials furnished comply with specified requirements. Include supporting certified laboratory testing data indicating that material meets specified test requirements.

**1.6 REFERENCED STANDARDS**

- A. ASTM C 423: Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method.
- B. ASTM E 84: Test Method for Surface Burning Characteristics of Building Materials.
- C. ASTM E 90: Method for Laboratory of Airborne Sound Transmission Loss of Building Partitions.
- D. ASTM E 557: Practices for Architectural Application and Installation of Operable Partitions.

**1.7 DELIVERY, STORAGE AND HANDLING**

- A. Deliver materials to project site in original factory wrappings and containers, clearly labeled with identification of manufacturer, brand name, quality or grade, fire hazard classification, and lot number. Store materials in original undamaged packages and containers, inside well ventilated area protected from weather, moisture, soiling, extreme temperatures, humidity; laid flat, blocked off ground to prevent sagging and warping. Comply with instructions and recommendations of manufacturer for special delivery, storage, and handling requirements.

**1.8 SEQUENCING AND SCHEDULING**

- A. Sequence operable partition installation with other work to minimize possibility of damage and soiling during remainder of construction period.

1.9 WARRANTY

- A. This warranty shall be in addition to and not a limitation of other rights the Owner may have against the Contractor under the Contract Documents.
  - 1. Warranty period is two (2) years after the date of substantial completion.

1.10 MAINTENANCE

- A. Maintenance Instructions: Submit manufacturer's printed instructions for maintenance of installed work, including methods and frequency recommended for maintaining optimum condition under anticipated use conditions. Include precautions against materials and methods which may be detrimental to finishes and performances.

PART 2 - PRODUCTS

2.1 OPERABLE PARTITION SYSTEM

- A. Operable wall shall be "Acousti-Seal 933E" continuously-hinged, electrically-operated, continuously hinged, top-supported wall system with operable floor seals, as manufactured by Modernfold or approved equal.
- B. Panel Construction
  - 1. Panels shall be nominal 3" thick in manufacturer's standard width, 48" maximum. All panel horizontal and vertical framing elements shall be formed steel. Frame shall be fully unitized with overlapped and welded corners to create a rigid structure independent of panel skin and facing materials. Panel frame shall provide concealed steel edge protection of the skin material so as not to require exposed edge trim.
  - 2. Panel skin shall be roll-formed steel wrapping around panel edge. Panel skins shall be lock formed and welded directly to the frame for unitized construction. Acoustical ratings of panels with this construction minimum 52 STC.
  - 3. Hinges for Panels, Closure Panels, Pass Doors, and Pocket Doors shall be full leaf butt hinges, attached directly to the panel frame with welded hinge anchor plates within panel to further support hinge mounting to frame. Hinges mounted into panel edge or vertical astragal are not acceptable.
  - 4. Panels shall not require trim on the vertical edges and shall create a minimal groove at panel-to-panel joints.
- C. Panel Face Finish: Wallcovering selected by Architect.
- D. Pass door shall be of same construction and thickness as the panels. Door shall be equipped with friction latch, flush pulls and acoustic seals.
- E. Sound Seals
  - 1. Vertical Interlocking Sound Seals Between Panels: Aluminum astragals with tongue and groove configuration in each panel edge. Rigid plastic astragals are not acceptable.
  - 2. Horizontal Top Seals shall be "Modernfold SureSet" automatic operable top seals; manually operated top seals not required or permitted.
  - 3. Horizontal bottom floor seals shall be "Modernfold SureSet" bottom seal:

- a. Modernfold SM2 Bottom Seal. Manually activated seals providing nominal 2" operating clearance with an operating range of + 0.50" to -1.50". Seal shall be operable from panel edge or face. Extended seal shall exert nominal 120 pounds downward force to the floor throughout operating range.
- F. Suspension System: Provide manufacturer's #30 suspension system, as follows:
  - 1. Suspension Tracks: Track shall be structural aluminum. Static loading of track with brackets at 48" centers shall show no failure of track or brackets at 5,000 lb. point loading at mid-span. Track shall be supported by adjustable steel hanger brackets connected to structural support by pairs of 3/8" diameter threaded rods.
    - a. Exposed Track Soffit: Track soffit shall be integral to track shape and shall be powder-coated off-white paint finish. Track must accommodate termination of plenum sound barriers on both sides of track.
  - 2. Carriers: One trolley in alternating panels with 3-inch diameter glass-reinforced nylon, all-steel, precision ground, ball-bearing wheels. Steel wheeled or reinforced polymer trolleys on aluminum track are not acceptable. Trolleys shall attach to panels with 1/2-inch diameter pendent bolt-mounted to welded steel mounting plate.
- G. Laboratory acoustical performance of the operable wall shall have been tested in an independent acoustical laboratory in accordance with ASTM E 90 Test Procedures, and shall have attained an STC Rating of no less than 52.

### PART 3 - EXECUTION

#### 3.1 INSPECTION

- A. Examine the areas and conditions where operable partition is to be installed and correct any conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions are corrected to permit proper installation of the work.

#### 3.2 INSTALLATION

- A. Install operable partitions and accessories after finishing operations, including painting, have been completed.
- B. Install operable partitions in conformance with drawings, approved shop drawings and using method indicated in strict compliance with manufacturer's written installation instructions; complying as applicable with ANSI E-557, Standard Recommended Practice for Architectural Application and Installation of Operable Partitions.
- C. Lubricate bearings and sliding parts; adjust to ensure smooth, easy operation.
- D. Match operable partitions for color and pattern by using partitions from cartons in same sequences as manufactured and packaged, if so numbered. Broken, cracked, chipped, or deformed partitions are not acceptable.

**3.3 FIELD TESTS**

- A. Owner will engage an independent testing service to provide in place tests of each operable partition for Noise Isolation Class (NIC). Tests for measurement of noise isolation between rooms will be performed in general conformance with ASTM E-336; NIC rating will be calculated in accordance with ASTM E-413.
- B. If any operable partition does not initially meet NIC requirements stated in 1.5, D, installer will be responsible for modifying and adjusting partition assembly as required, after which partition will be retested until compliance is achieved.
  - 1. Owner will pay cost of initial in place field test for each operable partition. Cost of additional testing will be borne by the Contractor.

**3.4 CLEANING**

- A. Clean all operable partition surfaces and clean adjacent surfaces soiled by work of this Section. Avoid use of abrasive cleaners or solutions containing corrosive solvents.
- B. Remove debris created by operable partition work from work site.
- C. Protect partitions against damage during construction period. Ensure that partitions will be without damage or deterioration at time of substantial completion.

**3.5 DEMONSTRATION**

- A. Demonstrate proper operation and maintenance procedures to Owner's personnel.

END OF SECTION 102226