

**Part 1 General**

**1.01 RELATED SECTIONS**

- .1 Section 05 12 23 - Structural Steel for Buildings.

**1.02 REFERENCES**

- .1 American Society for Testing and Materials (ASTM).
  - .1 ASTM E90-09. Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
  - .2 ASTM E557-12. Standard Guide for Architectural Design and Installation Practices for Sound Isolation between Spaces Separated by Operable Partitions.

**1.03 DESIGN REQUIREMENTS**

- .1 Design and fabricate folding partitions to obtain minimum STC of 52 when tested to ASTM E90.

**1.04 SUBMITTALS**

- .1 Provide Submittals as specified in Section 01 33 00 - Submittal Procedures.
- .2 Submit Manufacturer's Product Data. Include material descriptions, component details, construction details, finishes and accessories.
- .3 Submit Shop Drawings. Show location and extent of operable partition. Include plans, elevations, sections, details, attachments to other construction and accessories. Indicate dimensions, weights, conditions at openings, and at storage areas. Indicate required installation, storage and operating clearances. Indicate location and installation requirements for hardware and track, including floor tolerances required and direction of travel. Indicate blocking to be provided by others. Include dimensions, head and jamb conditions, track layout, stacking arrangement, switching, hardware, finish and colour, operating mechanism and location.
- .4 Submit installation details. Submit setting drawings. Indicate imbedded items and cutouts required in other work, including support beam punching template.
- .5 Submit duplicate 300 x 300 mm samples of partition finish for each colour selected. Include color samples demonstrating full range of available finishes. Provide samples in same thickness specified.
- .6 Submit test reports from an independent acoustical laboratory to confirm compliance with design criteria regarding sound transmission classification. Test partitions in accordance with ASTM E90 test procedure to confirm the STC rating specified. Provide a complete and unedited written test report by the testing laboratory.
- .7 Provide data for folding partitions and hardware for incorporation into manual specified in Section 01 78 00 - Closeout Submittals. Submit operation and maintenance instructions.

**1.05 QUALITY ASSURANCE**

- .1 Manufacturer Qualifications. Manufacturer who is regularly engaged in the design, manufacture and fabrication of custom folding panel partitions. Manufacturer to provide written documentation to demonstrate to the satisfaction of the Consultant that they have successfully performed on comparable projects for a minimum period of ten years.

- .2 Installer Qualifications. Certified in writing by the partition manufacturer as qualified to install the specified partition systems with a minimum 3 years documented experience installing and maintenance of units similar in material, design, and extent to that indicated for this Project.

#### **1.06 DELIVERY STORAGE AND HANDLING**

- .1 Clearly mark packages and panels with numbering systems used on Shop Drawings. Do not use permanent markings on panels.
- .2 Protect panels during delivery, storage, and handling in accordance with manufacturer's recommendations.

#### **1.07 WASTE MANAGEMENT AND DISPOSAL**

- .1 Separate and recycle waste materials in accordance with Waste Management And Disposal Plan.
  - .1 Remove from site and dispose of all packaging materials at appropriate recycling facilities.
  - .2 Collect and separate for disposal paper, plastic, polystyrene and corrugated cardboard packaging material in appropriate on-site bins for recycling.
  - .3 Divert unused wood from landfill to recycling facility.
  - .4 Fold up metal banding, flatten and place in designated area for recycling.

### **Part 2 Products**

#### **2.01 PARTITIONS**

- .1 Top hung, manually operated partition system consisting of a series of paired flat panels, hinged together with automatic floor seals. Acoustical rating: STC 52.
- .2 Acceptable Materials: Acousti-Seal Model 932 by Modernfold.
- .3 Panel Construction; nominal 76 mm thick panels in standard 1220 mm widths. Fabricate panel horizontal and vertical framing members from minimum 18 gauge formed steel with overlapped and welded corners to create rigid assembly. Reinforce top channel to support suspension system components. Design frame so that full vertical edges of panels are of formed steel and provide concealed protection of the edges of the panel skin.
  - .1 Panel core: proprietary insulated core construction to obtain specified STC Rating.
  - .2 Panel Skin: roll formed steel wrapping around panel edge. Form and weld panel skin directly to the frame for unitized construction. Gauge of skin as required to obtain specified STC Rating.
  - .3 Panel weight: 11.0 pounds per square foot not including finish.
  - .4 Trim: no applied trim at vertical edges of panels. Minimal groove appearance at vertical joints.
  - .5 Face finish: high pressure plastic laminate on MDF. Colour: White. Final colour to be selected by Consultant from full and extended range of available colours, textures and finishes.
  - .6 Exposed panel trim: manufacturer's standard. Provide single colour for all expose trim components.
  - .7 Hinges: full leaf butt hinges. Attach hinge directly to panel frame with welded hinge anchor plates within panel to further support hinge mounting to frame.

## 2.02 COMPONENTS

- .1 Overhead suspension system:
  - .1 Track: manufacturer's standard, extruded structural aluminum channel housing designed to support partitions. Equip track with brackets for hanger attachment. Provide pairs of 9.5 mm diameter threaded steel rods and nuts with carrier type hanger assembly and stabilizers connected to building structural steel framing. Provide switching for L and T track intersections where required by layout.
  - .2 Soffit: exposed track soffit. Integral to track shape. Finish: powder coated paint. Colour: manufacturers standards off white. Track to accommodate termination of sound barriers on both sides of track for maximum sound control.
  - .3 Carriers: provide one trolley per panel. Wheels: 76 mm diameter glass reinforced nylon all steel precision ground with ball bearings. Attach trolley to panels with 13 mm diameter pendent bolt mounted to welded steel mounting plate.
  - .4 Acceptable Material: Aluminum track system. Model number 30 by Modernfold.
- .2 Hardware: equip partition with manufacturer's standard hardware. Hardware finish selected from manufacturer's special finishes.
- .3 Sound seals:
  - .1 Vertical interlocking seals between panels: roll formed steel astragals with reversible tongue and groove configuration in each panel edge for universal panel operation. Manufacturer's standard astragal inserts for panel joint seal.
  - .2 Horizontal top seals: continuous contact extruded vinyl bulb shape with pairs of non-contacting vinyl fingers to prevent distortion without the need for mechanically operated parts.
  - .3 Horizontal bottom seals: automatic operable seals providing nominal 51 mm operating clearance with an operating range of plus 13 mm to minus 38 mm. Seal automatically drops as panels are positioned without the need for tools or cranks. Design retractable seals to secure panel in position.
  - .4 Lead jamb: compressible bulb seal.

## 2.03 ACCESSORIES

- .1 Final jamb closure: manufacturer's standard, horizontally expanding panel edge with removable crank.

## Part 3 Execution

### 3.01 PREPARATION

- .1 Prepare the opening as recommended by the partition manufacturer to obtain tolerances for plumbness, squareness and level.
- .2 Examine flooring, structural support, and opening for compliance with requirements for installation tolerances and other conditions affecting performance of partitions. Proceed with installation only after unsatisfactory conditions have been corrected.
- .3 Prepare the opening to the criteria specified in ASTM E557.

### 3.02 INSTALLATION

- .1 Comply with ASTM E557. Install system in accordance with manufacturer's written installation instructions and approved Shop Drawings.

- .2 Install operable partitions and accessories after other finishing operations, including painting have been completed.
- .3 Secure and level track.
- .4 Match operable partitions by installing panels from marked packages in numbered sequence indicated on Shop Drawings.
- .5 Replace any broken, cracked, chipped, deformed, or unmatched panels. Touch up damaged finishes, repair damage to partitions to match original finish.

**3.03 CLEANING AND PROTECTION**

- .1 Clean partition surfaces upon completing installation to remove dust, dirt, adhesives, and other foreign materials according to manufacturer's written instructions
- .2 Protect from damage in accordance with manufacturer's recommendations.

**3.04 ADJUSTING**

- .1 Adjust partitions to operate smoothly, easily, and quietly, free from binding, warp, excessive deflection, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Lubricate hardware and other moving parts.
- .2 Demonstrate proper operation and maintenance procedures to Owner's representative.

**END OF SECTION**