SECTION 10 22 43

SLIDING GLASS PARTITIONS

PART 1 GENERAL

1.01 SUMMARY

A. Section includes furnishing and installing a single track, sliding thermally broken aluminum framed glass door, wall or partition panel system that includes:

1. Aluminum frame
2. Tracks
3. Threshold
4. Sliding panels
5. Swing glass door/panel
6. Stacking bays
7. Sliding-swinging and locking hardware
8. Glass and glazing
9. Accessories as required for a complete working installation.

B. Related Documents and Sections: Contractor to examine Contract Documents for requirements that directly affect or are affected by Work of this Section. A list of those Documents and Sections include, but is not limited to, the following:

1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 General Requirements, Specification Sections, apply to this Section.
2. Section 07 90 00, Joint Protection
3. Section 09 22 16, Non-Structural Metal Framing: Metal framing R.O. and reinforcement.

1.02 REFERENCES

A. Reference Standards in accordance with Division 01 and current editions from the following:

1. AAMA. American Architectural Manufacturers Association; www.aamanet.org
   a. AAMA 503, Voluntary Specification for Field Testing of Newly Installed Storefronts, Curtain Walls, and Sloped Glazing Systems
   b. AAMA 611, Voluntary Specification for Anodized Architectural Aluminum
   c. AAMA 920, Operation / Cycling Performance
   d. AAMA 2604, Voluntary Specifications, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels
   e. AAMA/WDMA/CSA 101/I.S.2/A440, NAFS, North American Fenestration Standard - Specification for Windows, Doors and Skylights
2. ANSI. American National Standards Institute; www.ansi.org
   a. ANSI Z97.1, Safety Performance Specifications and Methods of Test for Safety Glazing Material Used In Buildings

3. ASTM. ASTM International; www.astm.org
   a. ASTM C1036, Standard Specification for Flat Glass
   b. ASTM C1048, Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass
   c. ASTM E413, Classification for Rating Sound Insulation
   d. ASTM E1332, Standard Classification for Rating Outdoor-Indoor Sound Attenuation
   e. ASTM F842, Standard Test Methods for Measuring the Forced Entry Resistance of Sliding Door Assemblies, Excluding Glazing Impact
   f. ASTM E2068, Standard Test Method to Determine the Opening and Breakaway Forces of Sliding Windows and Doors
4. CPSC. Consumer Product Safety Commission; www.cpsc.gov
   a. CPSC 16CFR-1201, Safety Standard for Architectural Glazing Materials.

1.03 ADMINISTRATIVE REQUIREMENTS

A. Coordination: Coordinate Sliding Glass Partition system and framing R.O.

B. Pre-installation Meetings: See Section 01 30 00.

1.04 SUBMITTALS

A. For Contractor submittal procedures see Section 01 30 00.

B. Product Data: Submit manufacturer’s printed product literature for each Sliding Glass Partition system to be incorporated into the Work. Show performance test results and details of construction relative to materials, dimensions of individual components, profiles and colors.

C. Shop Drawings: Indicate Sliding Glass Partition system component sizes, dimensions and framing R.O., configuration, sliding and swing panels, direction of swing, stacking layout, typical head jamb, side jambs and sill details, type of glazing material, handle height and field measurements.

D. Manufacturers' Instructions: Submit manufacturer's installation instructions.

E. Operation and Maintenance Data: Submit Owner’s Manual from manufacturer. Identify with project name, location and completion date, and type and size of unit installed.
   a. Submit calculations or measurements for occupant spaces to meet sound transmission class ratings between adjacent spaces and reverberation time requirements within a room.

1.05 QUALITY ASSURANCE

A. Manufacturer Qualifications: Manufacturer capable of providing complete, precision built, engineered, pre-fitted units with a minimum twenty-five (25) years’ experience in the sale of folding-sliding door systems for large openings in the North American market.
   1. Manufacturer to have ISO 9001: 2008 quality management system registration.
   2. Manufacturer to have ISO 14001: 2005 environmental management system registration.

B. Installer Qualifications: Installer experienced in the installation of manufacturer's products or other similar products for large openings. Installer to provide reference list of at least three (3) projects of similar scale and complexity successfully completed in the last three (3) years.

1. Installer to be trained and certified by manufacturer.

C. Single Source Responsibility: Furnish Sliding Glass Partition system materials from one manufacturer for entire Project.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Comply with manufacturer's instructions and recommendations, Section 01 60 00 requirements, and as follows:

1. Deliver materials to job site in sealed, unopened cartons or crates.

a. Upon receipt, inspect the shipment to ensure it is complete, in good condition and meets project requirements.

2. Store material under cover in a clean and dry location, protecting units against weather and defacement or damage from construction activities, especially to the edges of panels.

1.07 FIELD CONDITIONS

A. Field Measurements: Contractor to field verify dimensions of rough openings (R.O.), stack storage area, floor bolt socket locations Mark field measurements on shop drawing submittal.

1.08 WARRANTY

A. Manufacturer Warranty: Provide Sliding Glass Partition system manufacturer's standard limited warranty as per manufacturer's published warranty document in force at time of purchase, subject to change, against defects in materials and workmanship.

1. Warranty Period beginning with the earliest of 120 days from Date of Delivery or Date of Substantial Completion:

a. Rollers and Glass Seal Failure: Ten (10) years

b. All Other Components Except Screens: Ten (10) years

1). Exception: Five (5) years if NOT installed by manufacturer's certified trained installer.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Basis-of-Design Product by Manufacturer: NanaWall HSW60 by NANA WALL SYSTEMS, INC. (www.nanawall.com)

2.02 PERFORMANCE / DESIGN CRITERIA

A. Performance Criteria (Lab Tested):

1. Swing Panel - Operation / Cycling Performance (AAMA 920): 500,000 cycles

2. Sliding Glass Storefront Units tested to AAMA/WDMA/CSA 101/I.S.2/A440.

3. Project Wind Loads (ASCE 7): System designed to withstand 20.0 psf (958 Pa) core required positive and negative pressure as minimum loads normal to the plane of the wall as required by authorities

having jurisdiction.

B. Design Criteria:

1. Sizes and Configurations: As indicated by the drawings for selected number and size of panels, location of swing panels, and location of tracks and stacking bays.
2. Unit Operation: Adjustable sliding and swing hardware with top and bottom tracks;
3. Panel Configuration:
   a. Straight
4. Stack Storage Configuration as shown.
5. Mounting Type: Top hung
6. Sill Type:
   a. Floor sockets without a floor track or sill
7. Panel Type: Multiple unattached
   a. with Entry/Egress panel hinged to side jamb.
8. Panel Size (W x H): As indicated.
9. Glass and Glazing:
   a. Glass Lites:
      1). Single lite
   b. Glass Thickness:
      1). 1/4 inch (6 mm)
   c. Glass Type:
      1). Laminated
   d. Glass Treatment:
      1). Frosted Glass & Clear Glass as indicated.

2.03 MATERIALS

A. Sliding Glass Storefront Description: Standard top-hung, single-track, interlocking aluminum-framed sliding glass storefront system that can be pocketed when open and have a swing door hinged off a side jamb or within a sliding panel. Manufacturer’s standard frame and panel profiles, with head track, stacking bays, side jambs, sliding panels, and swing panels with dimensions as shown on Drawings.

1. Provide clear anodized aluminum head track with aluminum covers on both sides that match aluminum profile finish.
2. Panels:
   a. Multiple lites with horizontal mullion(s) at height(s) indicated from the bottom of the panel.
3. Head Rail Width x Depth: 4-5/16 x 2-5/16 inch (110 x 59 mm)
4. Jamb Rail Width x Depth: 5-1/4 x 2-5/16 inch (134 x 59 mm)
5. Bottom Rail Width:
   a. 2-3/8 inch (60 mm)

b. Manufacturer’s standard kickplate with height as indicated.

6. Aluminum Extrusion: AIMgSi0.5 alloy, 6063-T5 (F-22 - European standard)

   a. Thickness: 0.078 inch (2.0 mm) nominal

7. Aluminum Finish (including head track covers):

   a. Anodized (AAMA 611): Clear

   b. Powder Coat (AAMA 2604):

      1). Color as chosen by Architect from manufacturer's powder coating finish chart from

         a). manufacturer's 50 standard color selection.

B. Glass:

1. Safety Glazing: In compliance with ANSI Z97.1 and CPSC 16CFR 1201.

2. Manufacturer’s standard glass, dry glazed and glass stops on the inside with max. 1-9/16 inch (40 mm) glazing pocket.

   a. [1/4 inch (6 mm) single, laminated glass.]

3. Glass Spacers: Manufacturer’s standard **silver gray** finish;

C. Locking Hardware and Handles:

1. Main Entry Panel(s) for Models WITH Swing Panel(s): Provide manufacturer’s standard lever handles on the inside and outside, and a standard lockset with a lockable latch and multi-point locking with a dead bolt and rods at the top and bottom.

   a. Rods to be concealed and not edge mounted.

   b. After turn of key or thumbturn, depression of handles withdraws latch.

   c. Lifting of handles engages rods and turn of key or thumb turn engages deadbolt and operates lock.

   d. Lever Handles - Finish:

      1). Brushed satin stainless steel

   e. Locking:

      1). Standard profile cylinder

2. Main Entry Panel(s) for Models WITH Swing Panel(s): Provide manufacturer’s push-pull

   a. Push-pull handles in a brushed stainless steel finish and stainless steel flat handles in a

3. Sliding Panel to be Opened First for Models WITHOUT a Swing Panel: Provide manufacturer’s standard L-shaped handle on the inside, flat handle on the outside and lock set with profile cylinder. Operation of lockset is by turn of key from the outside and with a thumbturn from the inside with a two point locking hardware operated by 180° turn of the handle.

   a. L-Shaped Handles - Finish:

      1). Brushed satin stainless steel

4. Sliding Panel to be Opened First for Models WITHOUT a Swing Panel: Provide manufacturer’s standard flat handle on the inside and on the

outside and a lockset with a profile cylinder. Operation of lock set is by turn of key from the outside and from the inside with a two-point locking hardware operated by 180º turn of the handle.

5.

a. Flat Handle - Finish:

1). Brushed satin stainless steel

6. Handle Height: 41-3/8 inch (105 cm) centered from bottom of panel or as otherwise indicated.

7. Aluminum locking rods with standard fiberglass reinforced polyamide end caps at the bottom (and top on certain panels). Rods to have a stroke of 15/16 inch (24 mm).

8. Incorporated Swing Panel: Provide crank handle stored in flap on panel stile to convert sliding panel to a swing panel and vice versa.

a. Conversion Box located on upper arm of top rail to be polyamide in silver gray finish.

9. Swing Door Attachment: Geared positive attachment only to affix swing door to the frame for incorporated swing doors for ease of operation and rigid security.

10. Pinch Resistance: Provide rounded extrusions on pivot side of incorporated swing panels.

D. Sliding-Swinging Hardware: Provide manufacturer’s standard hardware.

1. For each sliding panel, provide two (2) two-three wheeled, sintered bronze (oil impregnated) unidirectional sliding panel carriers with a one wheeled, polyamide guide rollers that are attached to the panels with stainless steel rods.

a. Maximum carrying capacity of two carriers on a panel to be 330 lbs (150 kgs).

b. Provide on all four corners of sliding panels and incorporated swing panels, thermally broken, die cast zinc multifunctional corner fittings with carrier connectors, male and female locking receptacles, hinges and hinge pins as required.

c. Finish: Powder coated, closest match to finish of frame and panels.

d. Provide on the pivot side corner of the upper arm of the top rail of the incorporated swing panel a circular cover in polyamide with a silver gray finish.

e. Adjustment: Provide system capable of specified amount of adjustments without removing panels from tracks.

2. Threshold - No Sill: Adjustable clear anodized aluminum floor sockets.

E. Sound Gasketing: Manufacturer’s double layer EPDM between panels and EPDM gasket, or brush seal between panel and frame, or brush seals with a two-layer fiberglass reinforced polyamide fin attached at both inner and outer edge of bottom of door panels with a recessed sill or on frame for sealing between panels and between panel and frame.

F. Fasteners: Stainless steel machine screws for connecting frame components.

2.04 FABRICATION

A. Extruded aluminum frame and panel profiles, corner connectors and hinges, sliding hardware, locking hardware and handles, glass and glazing and sound gasketing components to construct sliding glass wall with stacking bays.

1. Each unit factory pre-assembled and shipped with all components and installation instructions.
2. Exposed work to be carefully matched to produce continuity of line and design with all joints.
3. No raw edges visible at joints.

2.05 ACCESSORIES

A. Provide sidelights, transoms, corner posts, or single or double doors as indicated.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examination and Acceptance of Conditions per Section 01 70 00 and as follows:

1. Carefully examine rough openings with Installer present, for compliance with requirements affecting Work performance.
   a. Verify that field measurements, substrates, tolerances, levelness, plumbness, cleanliness and other conditions are as required by the manufacturer, and ready to receive Work.
   b. Verify the structural integrity of the header for deflection with live and dead loads limited to the lesser of L/720 of the span or 1/4 inch (6 mm). Provide structural support for lateral loads, and both wind load and eccentric load when the panels are stacked open.
2. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION

A. General: Install Sliding Glass Partition system in accordance with the Drawings, approved submittals, manufacturers' recommendations and installation instructions, and as follows:

1. Properly seal around opening perimeter.
2. Securely attach anchorage devices to rigidly fit frame in place, level, straight, plumb and square. Install frame in proper elevation, plane and location, and in proper alignment with other work
3. Install panels, handles, lock set, sound gasketing and other accessories in accordance with manufacturer’s recommendations and instructions.

3.03 FIELD QUALITY CONTROL

A. Field Tests and Inspections per Section 01 40 00 of the following:

1. Verify the Sliding Glass Partition system operates and functions properly. Adjust hardware for proper operation.

B. Non-Conforming Work: Repair or replace non-conforming work as directed by the Architect; see General and Supplementary Conditions, and

Division 01, General Requirements.

3.04 CLEANING AND PROTECTION

A. Keep units closed and protect Sliding Glass Partition installation against damage from construction activities.

B. Remove protective coatings and use manufacturer recommended methods to clean exposed surfaces.

END OF SECTION