

SECTION 10 22 00

ALL-GLASS ACOUSTICAL SLIDING PARTITION

SECTION 10 22 43

SLIDING GLASS PARTITIONS

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes furnishing and installing a top-hung, individual aluminum and glass door panel system that includes:
 - 1. Aluminum rails
 - 2. Top track with stacking bay(s)
 - 3. Side jambs
 - 4. Sliding panels
 - 5. Non-sliding end single action panel(s)
 - 6. Sliding/swinging hardware
 - 7. Locking hardware
 - 8. Door closer
 - 9. Sealing brushes with fin
 - 10. Self-activated adjustable compression seals
 - 11. Transparent vertical edge acoustical seals
 - 12. Vertical side jamb seals
 - 13. Glass and glazing
 - 14. Suspended ceiling support profile
 - 15. 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 06 10 00, Rough Carpentry: Wood framing R.O. and blocking.
 - 3. Section 06 20 00, Finish CarpentrySection 07 90 00, Joint Protection.
 - 5. 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 611, Voluntary Specification for Anodized Architectural Aluminum
 - b. AAMA 920, Specification for Operating Cycle Performance of Side-Hinged Exterior Door Systems
 - c. AAMA 1304, Voluntary Specification for Forced Entry Resistance of Side-Hinged Door Systems
 - d. AAMA 2604, Voluntary Specifications, Performance Requirements and Test Procedures

for High Performance Organic Coatings on Aluminum Extrusions and Panels

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 D1003, Standard Test Method for Haze and Luminous Transmittance of Transparent Plastics
 - d. ASTM E90, Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements
 - e. 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.
5. DIN. "Deutsches Institut für Normung" (German institute for standardization); www.en-standard.eu/din-standards
 - a. DIN EN 1191, Windows and doors - Resistance to repeated opening and closing - Test method; German version EN 1191:2000
 - b. DIN EN ISO 12400, Windows and pedestrian doors - Mechanical durability - Requirements and classification
6. IBC. International Building Code; www.iccsafe.org
 - a. IBC 2403.4, Differential deflection of two adjacent unsupported All-Glass Acoustical Sliding Glass panels

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 1. Coordinate top-hung head track support with structural drawings. See Section 05 1200.
 2. Coordinate All-Glass Acoustical Sliding Glass Partition system and framing R.O.
- B. Preinstallation 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 All-Glass Acoustical 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. Product Drawings: Indicate All-Glass Acoustical Sliding Glass Partition system component sizes, dimensions, 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. Installation, 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.

NOTE: Delete the following Article if LEED is not applicable; edit to meet project LEED requirements.

- E. Sustainable Design Submittals (USGBC [LEED®](https://www.usgbc.org/)): Refer to Section 01 81 15, LEED Design Requirements.

1. **LEED 2009** (v3) Credits. Complete online LEED forms and submit other required materials

as follows:

a. Materials and Resources (MR) Credits:

- 1). MR Credit 1.1 (MRc1.1): Building Reuse - Maintain Existing Exterior Walls, Floors and Roof
- 2). MR Credit 1.2 (MRc1.2): Building Reuse - Maintain Existing Interior Nonstructural Elements
- 3). MR Credit 2 (MRc2): Construction Waste Management

NOTE: MR Credit 3 below can apply to reusing salvaged All-Glass Acoustical Sliding Glass Partition.

- 4). MR Credit 3: Materials Reuse - 5% (MRc3.1) or 10% (MRc3.2)
 - a). Submit percentage of products made from plant materials with a less than 10-year harvest cycle against the total value of building materials on the project.

b. Indoor Environmental Quality (EQ) Credits:

- 1). IEQ Credit 2 (IEQc2): Increased Ventilation - Case 2 - Naturally Ventilated Spaces
- 2). IEQ Credit 8.1 (IEQc8.1): Daylight & Views - Daylight 75% of Spaces
- 3). IEQ Credit 8.2 (IEQc8.2): Daylight & Views - Views for 90% of Spaces

2. **LEED v4 for Interior Design and Construction (ID&C)** Credits. Complete online LEED forms and submit other required materials as follows:

a. Materials and Resources (MR) Credits:

NOTE: MR Credit 1 below can apply to reusing salvaged All-Glass Acoustical Sliding Glass Partition.

- 1). MR Credit 1 (MRc1): Building Life-Cycle Impact Reduction; Option 3 - Building and Material Reuse
- b. Indoor Environmental Quality (EQ) Credits:
 - 1). EQ Credit 7 (EQc7): Daylight
 - 2). EQ Credit 8 (EQc8): Quality Views
 - 3). EQ Credit 9 (EQc9): Acoustic Performance
 - a). Submit calculations or measurements for occupant spaces to meet sound transmission class ratings between adjacent spaces and reverberation time requirements within a room.

F. LEED Closeout Documentation:

NOTE: Edit below to meet project LEED requirements.

1. **LEED 2009** (v3). Submit completed LEED™ submittal Worksheet Templates for the following credits:
 - a. MRc1.1, MRc1.2, MRc2, MRc3, MRc6, IEQc2, IEQc8.1, IEQc8.2
2. **LEED v4** (ID&C). Submit information and documentation to complete LEED™ Worksheet Templates for the following credits:
 - a. MRc1, EQc7, EQc8, EQc9

1.05 QUALITY ASSURANCE

NOTE: NanaWall has over thirty (30) years' experience in the manufacture of folding-sliding door systems for large openings for the North American market.

- A. Manufacturer Qualifications: Manufacturer capable of providing complete, precision built, engineered, pre-fitted units with a minimum thirty (30) years' experience in the sale of folding-sliding door systems for large openings for the North American market.

1. Manufacturer to have ISO 9001: 2015 quality management system registration.

2. Manufacturer to have ISO 14001: 2015 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.

NOTE: Having a manufacturer trained and certified installer doubles the warranty coverage from five (5) to ten (10) years.

1. Installer to be trained and certified by manufacturer.
 - C. Single Source Responsibility: Furnish All-Glass Acoustical 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 areas, and floor bolt socket locations. Mark field measurements on product drawing submittal.
- 1.08 WARRANTY
- A. Manufacturer Warranty: Provide All Glass Sliding 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 Failure: Ten (10) years
 - b. Transparent Vertical Edge Acoustical Seal UV Resistance: Five (5) years
 - c. All Other Components: Ten (10) years
 - 1). Exception: Five (5) years if NOT installed by manufacturer's specific system approved or certified trained installer.

PART 2 PRODUCTS

2.01 MANUFACTURERS

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

NANA WALL SYSTEMS, INC.
 100 Meadow Creek Drive, Corte Madera, CA 94925
 Toll Free (800) 873-5673
 Telephone: (415) 383-3148
 Fax: (415) 383-0312
 Email: info@nanawall.com

1. Substitution Procedures: See Section 01 20 00; Submit completed and signed:
 - a. Document 00 43 25, Substitution Request Form (During Procurement), or

- b. Document 00 63 25, Substitution Request Form (During Construction).

2.02 PERFORMANCE / DESIGN CRITERIA

A. Performance Criteria (Lab Tested):

NOTE: Forced entry testing results are only applicable for the test unit type of locking.
See manufacturer's latest published data regarding performance.

- 1. Acoustic Performance (ASTM E90): STC 36
- 2. Acoustic Performance (ASTM E1332): OITC 30
- 3. Forced Entry (AAMA 1304, DIN EN 1191): Pass
- 4. Single Action Panels with Offset Hinge - Operation / Cycling Performance
 - a. (DIN EN ISO 12400) 100,000 cycles
 - b. (AAMA 920) 500,000 cycles
- 5. Distributed Load 150 lb across glass (IBC 2403.4):
(Applies between sliding only panels and not for non-sliding end single action panels or end sliding panels)

B. LEED Characteristics:

1. LEED 2009 (v3)

- a. MRc1.1: *NanaWall* exterior glass wall systems, not demolished in a renovation project, are reused in the same location.
- b. MRc1.2: *NanaWall* interior glass wall systems, not demolished in a renovation project, are reused in the same location.
- c. MRc2: *NanaWall* cardboard shipping crates are made of 60% recycled material and are 100% recyclable.
- d. MRc3: *NanaWall's* components easily disassemble and reassemble to "*Use as salvaged... or reused materials.*"
- e. IEQc2: *NanaWall* systems provide natural ventilation in the open position, assisting in the 90% required natural ventilation of occupied spaces of ASHRAE 62.1.
- f. EQc8.1: *NanaWall* glass wall assembly borrowed light brings daylight deeper into the floor plate.
- g. EQc8.2: *NanaWall* glass wall assemblies provide direct outdoor lines of sight.

2. LEED v4 for Interior Design and Construction (ID&C)

- a. MRc1: *NanaWall* can be easily disassembled for salvage and reuse.
- b. EQc7: *NanaWall* glass wall assembly borrowed light brings daylight deeper into the floor plate.
- c. EQc8: *NanaWall* glass wall assemblies provide direct outdoor lines of sight.

C. 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: Non-sliding end single action panel(s) with sliding panels. Adjustable sliding hardware with top track;
- 3. Mounting Type: Top-hung
- 4. Panel Configuration:
 - a. [Straight]
 - b. [90° angle turn/ open corner]
 - c. [T-intersection]

5. Stack Storage Configuration:

NOTE: Select standard stack storage configuration from
<https://www.nanawall.com/products/privasee/options>

- a. Perpendicular to wall: Select from Concepts 1/A, 2, 3, 8/A, and 10/A
- b. Parallel to wall: Select from Concepts 4/E, 5/E, 6/G, 7/G, and 9

NOTE: As NanaWall has literally thousands of custom stack storage configurations, please contact NanaWall Conceptual Drawing Service to customize a solution.

- c. [Custom configuration]

6. Sill Type: Eccentric floor sockets with No floor track.

2.03 MATERIALS

- A. All-Glass Acoustical Sliding Glass Partition Description: All glass, top-hung, single track sliding system with glass and vertical and horizontal acoustic seals. Manufacturer's standard top and bottom rail profiles, with head track, stacking bays, side jambs, non-sliding end single action panels, with dimensions as shown on Drawings.

1. Provide aluminum head track, side jambs, hinges, and face and edges of top and bottom rails.

NOTE: Finishes can be mixed and matched. For example, tracks can be white with all other aluminum extrusions clear anodized.

- a. Finish - Anodized (AAMA 611):
 - 1). [Clear]
 - 2). [Dark bronze]
 - 3). [Black]
 - 4). [Brushed]
 - 5). [Post assembly clear coated]

NOTE: Specify post assembly clear coat for greater corrosion resistance.

- b. Finish - Powder Coat (AAMA 2604):
 - 1). Color as chosen from manufacturer's powder coating finish chart from
 - a). [manufacturer's full RAL selection.]
 - b). [custom finish.]
 - 2). Gloss - Finish:
 - a). [High Gloss]
 - b). [Matte]

2. Panel Size (W x H): As indicated.

NOTE: Max. W x H sliding panel width up to 4'-1" (1.25 m) and unit height up to 10'-6" (3.2 m). Maximum 10'-6" (3.2 m) height is based on GANA recommendation for 1/2 inch (12 mm) glass. Verify glass with authorities having jurisdiction. Maximum height is dependent on-site wind load requirements. W x H non-sliding end single action panel width from 1'-8" (500 mm) up to 3'-7" (1.1 m) and unit height up to 10'-6" (3.2 m). Unless otherwise noted, non-sliding end single action panels are the same width as sliding panels. If a narrower dimension is needed to meet pocket constraints, insert dimensions below to meet project requirements.

3. Non-sliding End Single Action Panel Width: **< insert dimension >**
4. Head Track Height x Depth: 3-1/16 x 2-3/4 inch (78 x 70 mm)

5. Suspended ceiling support profile

NOTE: Suspended ceiling support profile is optional. This is not recommended for parking bay area. Edit to suit project requirements.

- 6. Top & Bottom Rail Depth: 2-3/16 inch (56 mm)
- 7. Top Rail Height: 4-1/8 inch (104 mm)
- 8. Bottom Rail Height: 4-1/8 inch (104 mm)
- 9. Rail End Cap: Male/female interlock.
- 10. Sill Type: Floor sockets with No floor track.
- 11. Aluminum Extrusions: AIMgSi0.5 alloy, 6063-T5 (F-22 - European standard)
 - a. Thickness: 0.078-inch (2.0 mm) nominal

NOTE: For laminated glass, please check with NanaWall the availability of Vanceva White Collection and other color interlayers.

B. Glass and Glazing:

- 1. Safety Glazing: In compliance with ANSI Z97.1, CPSC 16CFR 1201, ASTM C1036, and ASTM C1048.
- 2. Manufacturer's Standard Single Lite Glass:
 - a. Glass Thickness: 1/2 inch (13 mm)
 - b. Glass Type: Acoustically enhanced laminated
- 3. Edges: Flat butt for all panels.
 - a. Exposed Edges: Flat polished/ground
- 4. Factory Glazing:
 - a. Clamp installed for equal distribution of weight.
 - b. Glass edge top rail clearance to be no more than 1/8-inch (3 mm) with a minimum 7/8 inch (22 mm) bite.
 - c. Glass installed with bolts only NOT acceptable.

C. Sliding Hardware:

- 1. Two (2) unidirectional sliding panel carriers that are attached to each panel with a side adjustable stainless-steel cast shoe and a stainless-steel ball bearing axle.
 - a. Carriers to be glass fiber reinforced polyamide wheels with memory effect and polyamide bumpers

NOTE: Bumpers prevent metal-on-metal contact for quiet and smooth operation.

- b. Metal-on-metal contact between top track and carriers NOT acceptable.
- 2. Maximum carrying capacity of two carriers on a panel to be: 330 lbs (150 kgs).
 - a. Carriers on panels to be installed such that each panel can be intelligently guided into the stacking bay without error and with single hand operation.
 - b. Non-single handed operation, not acceptable.
- 3. Adjustment: Provide system capable of specified amount of adjustments without removing panels from tracks.

D. Hardware on Non-Sliding End Single Action Panel(s) Operable from Both Sides:

- 1. Locking Ladder pull handles in brushed stainless-steel finish with bumpers and locking at handle height with mortise cylinder.

NOTE: Offset hinge is required for all non-sliding end single action panels. Panel can swing 180° if there isn't an adjacent structure interfering with operation.

- 2. Offset hinged panel that can swing 170°.

NOTE: Items 1 and 2 above are standard. 3, 4 and 5 are optional. Edit to suit project requirements.

3. [Standard floor closer with hold-open function.]
 4. [Top door closer with hold-open function that can swing 110°]
 5. ADA compliant (5-1/2 inch (140 mm) high), acrylic chamfer rail adapter, 1-3/8 inch (35 mm) high by 7/8 inch (22 mm) thick
- E. Hardware on Non-sliding End Single Action Panel(s) Operable from Inside Only:
1. Locking bolt with crank handle at the top rail.

NOTE: Offset hinge is required for all non-sliding end single action panels. Panel can swing 180° if there isn't an adjacent structure interfering with operation.

2. Offset hinged panel that can swing 180°.

NOTE: Items 1 and 2 above are standard. Choose from one of 3 or 4 below. Edit to suit project requirements.

3. Floor bolt with mortise cylinder on bottom rail.
4. [Foot activated floor bolt.]

NOTE: 5 and 6 are optional. Edit to suit project requirements.

5. Standard overhead door closer with hold-open function
6. ADA compliant (5-1/2 inch (140 mm) high), acrylic chamfer rail adapter, 1-3/8 inch (35 mm) high by 7/8 inch (22 mm) thick
7. Handles:

NOTE: Push/pull handles with black bumpers are on each side to minimize impact with glass.

- a. Standard push/pull handles on both sides in brushed stainless-steel finish; 11-13/16 inch (350 mm) long.
- b. [Push/pull handles on both sides in brushed stainless steel finish in custom sizes.]
- c. [Pull handle with push plate set in brushed stainless steel finish with length of 13-13/16 inch (350 mm).]
- d. [Custom push/pull handles (by others).]

NOTE: Provide template for holes and cut outs needed in glass.

- e. [No handles but with pull knob in brushed stainless steel finish.]
 - f. [No handles and no knob.]
- F. Mortise Cylinder: 1-1/8 inch mortise lockset, Yale cam clear anodized finish, as a temporary construction core.
1. Final locking by others: key operation
 - a. Key operation from either side
 - b. Key operation inside or outside only
 - c. Key operation from outside with a thumb turn on the inside
 2. Final locking by others: format
 - a. [Small Format Interchangeable Core (SFIC).]
 - b. [Large Format Interchangeable Core (LFIC).]
 - c. [Furnished by Section 08 71 00.]
- G. Panels with Push/Pull Handles or Knobs: Provide handle height centered at 41-3/8 inch (105 cm) from bottom of the panel or as indicated otherwise.
- H. Other Locking:
1. Between Sliding Panels, provide self-activated automatic interlock for floor bolts.

2. For Floor Bolts, provide:
 - a. 1-3/16 inch (30 mm) deep, adjustable, eccentric floor sockets.

NOTE: Self-activated automatic interlock and seal is a key feature triggered by simply moving one panel into another.

- I. Other Components:
 1. Horizontal Seals: At bottom rails, provide sealing brush with double fins on the inside and self-activated adjustable compression seal on the outside. At top rails provide sealing brush with double fins on both sides.
 2. Transparent Vertical Edge Acoustical Seals: Between panels, provide UV resistant edge mounted gaskets.
 - a. Light Transmission (LT): 75 percent or higher per ASTM D1003.

NOTE: Acoustical seals help reduce sound transmission, glass-to-glass contact, and airflow.

3. Vertical Side Jamb Seals: Between side jambs and panels, provide double EPDM seals.

2.04 FABRICATION

- A. Extruded aluminum frame and rail profiles, sliding hardware, locking hardware and handles, and glass to construct All-Glass Acoustical Sliding Glass Partition.
 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. Sidelights with finish to match, as indicated. See Door Schedule.

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, tolerance, levelness, plumbness, cleanliness and other conditions are 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 ¼ inch (6 mm). Provide structural support for lateral loads and eccentric load when the panels are stacked open.

NOTE: Similar structural support is needed for the stacking bay(s) and any upper track leading to it. It's recommended that all building dead loads be applied to the header prior to installing the unit.

If so, and if a reasonable amount of time has been allowed for the effect of this dead load on the header, only then can the building live load be used to meet the above requirements of L/720 or 1/4 inch (6 mm).

If not, both dead and live loads need to be considered.

2. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION

- A. General: Install All-Glass Acoustical 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 top head track and stacking bay in place, level, straight, plumb and square. Install frame in proper elevation, plane and location, and in proper alignment with other work
3. Install glass panels, handles, lockset 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 All-Glass Acoustical 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 All-Glass Acoustical 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

DISCLAIMER:

Nana Wall Systems, Inc. takes no responsibility for product selection or application, including, but not limited to, compliance with building codes, safety codes, laws, or fitness for a particular purpose. This guide specification is not intended to be verbatim as a project specification without appropriate modifications for the specific use intended and the requirements of a specific construction project.

<https://www.nanawall.com/>