SECTION 08 41 00 (08 41 00)

FOLDING GLAZED WALL SYSTEMS - EXTERIOR AND INTERIOR

Display hidden notes to specifier. (Don't know how? [Click Here](https://www.arcat.com/sd/display_hidden_notes.shtml))

*Copyright 2010 - 2021 ARCAT, Inc. - All rights reserved*

\*\* NOTE TO SPECIFIER \*\* Nana Wall Systems, Inc.; Opening glass walls, folding glass wall systems, sliding glass wall systems.  
This section is based on the products of Nana Wall Systems, Inc., which is located at:100 Meadow Creek Dr., Suite 250Corte Madera, CA 94925Toll Free Tel: 800-873-5673Tel: 415-383-3148Fax: 415-383-0312Email: [request info (info@nanawall.com)](https://arcat.com/rfi?action=email&company=Nana%252BWall%252BSystems%252C%252BInc.&message=RE%253A%2520Spec%2520Question%2520(08410nan)%253A%2520&coid=34380&spec=08410nan&rep=&fax=415-383-0312)  
Web: <https://www.nanawall.com>   
 [ [Click Here](https://arcat.com/company/nana-wall-systems-inc-34380) ] for additional information.  
Nana Wall redefined the category of opening glass wall systems. During our 30 years in business, we have earned the trust of architects, builders, design professionals, and homeowners as a solutions provider for re-imagining how buildings, people and the elements interact. By combining precision engineering and outstanding design options across more than 20 unique systems, we advance design possibilities beyond the conventional for almost any space.

1. GENERAL
   1. SECTION INCLUDES
      1. Folding Glazed Wall Systems:

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + - 1. Aluminum-framed folding/paired system. (SL45)
      2. Thermally-broken, aluminum-framed folding systems. (SL60 and SL70)
  1. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete sections below not relevant to this project; add others as required.

* + 1. Section 06 10 00 - Rough Carpentry.O. and blocking.
    2. Section 06 20 00 - Finish Carpentry.
    3. Section 07 27 00 - Air Barriers.
    4. Section 07 62 00 - Sheet Metal Flashing and Trim.
    5. Section 07 90 00 - Joint Protection.
    6. Section 08 40 00 - Entrances, Storefronts, and Curtain Walls.
    7. Section 08 41 13 - Aluminum-Framed Entrances and Storefronts.
    8. Section 08 41 26 - All-Glass Entrances and Storefronts.
    9. Section 08 43 29 - Sliding Storefronts.
    10. Section 08 43 33 - Folding Glass Wall System.
    11. Section 08 51 13 - Aluminum Windows.
    12. Section 08 70 00 - Hardware.
    13. Section 08 83 13 - Mirrored Glass Glazing.
    14. Section 09 22 16 - Non-Structural Metal Framing.O. and reinforcement.
    15. Section 10 23 26 - Operable Glass Partition\*.
  1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. American Architectural Manufacturer's Association (AAMA):
       1. AAMA 502 - Voluntary Specification for Field Testing of Newly Installed Fenestration Products.
       2. AAMA 520 - Voluntary Specification for Rating the Severe Wind-Driven Rain Resistance of Windows, Doors and Unit Skylights.
       3. AAMA 611 - Voluntary Specification for Anodized Architectural Aluminum.
       4. AAMA 920 - Operation / Cycling Performance.
       5. AAMA 1303.5 - Voluntary Specifications for Forced-Entry Resistant Aluminum Sliding Glass Doors.
       6. AAMA 1304 - Voluntary Specification for Determining Forced Entry Resistance of Side-Hinged Door Systems.
       7. AAMA 2604 - Voluntary Specifications, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels.
       8. AAMA 2605 - Voluntary Specifications, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels.
       9. AAMA CAWM 300, Forced Entry Resistance for Sliding Glass Doors.
       10. AAMA/WDMA/CSA 101/I.S.2/A440, NAFS, North American Fenestration Standard - Specification for Windows, Doors and Skylights.
    2. American National Standards Institute: ANSI Z97.1 - For Safety Glazing Materials Used in Buildings - Safety Performance Specifications and Methods of Test.
    3. ASTM International (ASTM):
       1. ASTM C1036 - Standard Specification for Flat Glass.
       2. ASTM C1048 - Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass.
       3. ASTM E90- Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
       4. ASTM E283 - Test Method for Rate of Air Leakage through Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.
       5. ASTM E330 - Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.
       6. ASTM E331 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference.
       7. ASTM E413 - Classification for Rating Sound Insulation.
       8. ASTM E547 - Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors by Cyclic Static Air Pressure Differential.
       9. ASTM E1332 - Standard Classification for Rating Outdoor-Indoor Sound Attenuation.
       10. ASTM E2268 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, and Doors by Rapid Pulsed Air Pressure Difference.
       11. ASTM F842 - Standard Test Methods for Measuring the Forced Entry Resistance of Sliding Door Assemblies.
    4. British Standards Institution (BSI Group): PAS 24 (Publicly Available Specification), Enhanced security performance requirements for door assemblies.
    5. California Association of Window Manufacturers (CAWM): CAWM 300 - Forced Entry Resistance Tests for Sliding Glass Doors.
    6. Construction Products Directive (CPD): CE Mark.
    7. Consumer Product Safety Commission (CPSC): CPSC 16CFR-1201, Safety Standard for Architectural Glazing Materials.
    8. German Institute for Standardization (DIN):
       1. DIN EN 1191 - Windows and Pedestrian Doors - Mechanical Durability Test Method.
       2. DIN EN ISO 717-1 - Acoustics - Rating of sound insulation in buildings and building elements.
       3. DIN EN 1627 - Pedestrian door sets, windows, curtain walling, grilles and shutters - Burglar resistance - Requirements and classification.
       4. DIN EN 1630 - Pedestrian door sets, windows, curtain walling, grilles and shutters - Burglar resistance - Test method for the determination of resistance to manual burglary attempts.
       5. DIN EN ISO 10140-1, 2, 4 and 5 - Airborne sound measurement.
       6. DIN EN ISO 12400 - Windows and pedestrian doors - Mechanical durability - Requirements and classification.
       7. DIN 52210-3 - Testing of acoustics in buildings - Airborne and impact sound insulation - Laboratory measurements of sound insulation of building elements and field measurements between rooms.
       8. DIN 52210-4 - Tests in Building Acoustics - Airborne and Impact Sound.
    9. Florida Building Code: TAS 202 - Criteria for Testing Impact and Non-Impact Resistant Building Envelope Components Using Uniform Static Air Pressure.
    10. International Organization for Standardization (ISO):
        1. ISO 9001 - Quality management systems.
        2. ISO 14001 - Environmental management systems.
    11. National Fenestration Rating Council (NFRC):
        1. NFRC 100 - Procedure for Determining Fenestration Product U-factors.
        2. NFRC 200 - Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence.
        3. NFRC 400 - Procedure for Determining Fenestration Product Air Leakage.
        4. NFRC 500 - Procedure for Determining Fenestration Product Condensation Resistance Rating Values.
    12. U.S. Environmental Protection Agency (EPA): Energy Star program.
  1. SUBMITTALS
     1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
     2. Product Data: Manufacturer's data sheets on each product to be used, including:
        1. Preparation instructions and recommendations.
        2. Storage and handling requirements and recommendations.
        3. Independently tested data listing performance criteria.
        4. Product literature for systems incorporated in the Work. Performance test results and details of construction relative to materials, dimensions of individual components, profiles, and colors.
        5. Manufacturers' Instructions: Submit Owner's Manual from manufacturer which includes installation instructions, operation and maintenance data.
        6. Certificates: Submit CE Mark Certificate.
     3. Product Drawings: Including but not limited to the following.
        1. Indicate system component sizes, dimensions and framing R.O., configuration, swing panels, direction of swing, stacking layout, typical head jamb, side jambs and sill details, type of glazing material, handle height and field measurements.
        2. Elevations of rough opening requirements and details for field-applied components.
     4. Contract Closeout Submittal: Owner's Manual from manufacturer. Identify Owner's Manual with project name, location and completion date, type and size of unit installed.
  2. QUALITY ASSURANCE
     1. Regulatory Requirements: CE Mark certified.
     2. Manufacturer: Complete, precision built, engineered, pre-fitted units by a single source manufacturer with 30-year experience in providing folding and sliding door systems for large openings in the North American market.
        1. DIN EN ISO 9001: 2015 quality management system registration.
        2. DIN EN ISO 14001: 2015 environmental management system registration.
     3. Installer Qualifications:
        1. Experienced in installation of manufacturer's products or similar products.
        2. Reference list of 3 projects of similar scale and complexity successfully completed in the last 3 years.
        3. Project names, locations, completion dates, names and telephone numbers of General Contractor and Owner's contact person.

\*\* NOTE TO SPECIFIER \*\* Delete if longer warranty is not required.

* + - 1. Installer trained and certified by manufacturer.
    1. Single Source: Furnish system materials from one manufacturer for entire Project.
  1. DELIVERY, STORAGE, AND HANDLING
     1. Deliver materials to job site in sealed, unopened cartons or crates.
        1. Upon receipt, inspect shipment. Ensure it is complete, in good condition and meets project requirements.
     2. Store products in manufacturer's unopened packaging until installation. Store flat in well ventilated area, no direct sunlight, in a clean and dry location. Protect units against weather and defacement or damage from construction activities, especially to panel edges.
  2. PROJECT CONDITIONS
     1. Mark field measurements on Product Drawing submittal. Contractor shall field verify dimensions including but not limited to rough openings and inset components.
     2. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.
  3. WARRANTY
     1. Manufacturer's warranty against defects in materials and workmanship and as follows:
        1. Rollers: 10 years.
        2. Seal Failure of Insulated Glazing: 10 years.
        3. Other Components (excluding screens): Five years beginning with the earliest of 120 days from date of delivery by manufacturer or date of Substantial Completion.

\*\* NOTE TO SPECIFIER \*\* Delete the following option unless specifying manufacturer's specific system approved or certified installer in Article for Quality Assurance.

* + - 1. Other Components (excluding screens): 10 years beginning with the earliest of 120 days from date of delivery by manufacturer or Date of Substantial Completion if installed by manufacturer's specific system approved or certified trained installer.

1. PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturer: Nana Wall Systems, Incorporated; 100 Meadow Creek Drive, Suite 250 Corte Madera, CA 94925; ASD Toll Free Tel: 800-873-5673; Tel: 415-383-3148; Fax: 415-383-0312; Email: info@nanawall.com; Web: http://www.nanawall.com.

\*\* NOTE TO SPECIFIER \*\* Delete the following two paragraphs; coordinate with requirements of Division 01 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
    2. Requests for Substitutions: Considered in accordance with provisions of Section 01 60 00 - Product Requirements.

\*\* NOTE TO SPECIFIER \*\* Delete article if not required.

* 1. ALUMINUM-FRAMED FOLDING GLASS WALL SYSTEM
     1. Basis of Design: Model SL45 Aluminum Folding Glass Wall Systems manufactured by Nana Wall Systems, Incorporated. Top-hung system for straight runs, segmented angle changes, and center pivot. Manufacturer's standard frame and panel profiles, with head and floor tracks, side jambs and panels with dimensions as shown on Drawings.
        1. System Components: Aluminum frame, threshold, panels, sliding-folding and locking hardware, weather stripping, glass and glazing, and, accessories as required for a complete working installation.

\*\* NOTE TO SPECIFIER \*\* Delete insect screen if not required. WIZARD INDUSTRIES, INC. which is located at: 4263 Phillips Ave, Burnaby, BC, Canada V5A 2X4; Toll Free: (888) 949-3667; Telephone: (604) 299-8878; Fax: (604) 299-4496; Email: sales@wizardindustries.com; Web: https://www.wizardscreens.com.

* + - * 1. Insect Screen: Fully retractable non-pleated screen. Ultra-strong, UV resistant fiberglass mesh housed in single cartridge riding on a single track.

Basis-of-Design Product by Manufacturer: The Horizon by Wizard Industries, Inc.

* + 1. Performance Criteria: Lab tested.

\*\* NOTE TO SPECIFIER \*\* Delete sill and opening type options not required.  
Weeps, to be drilled in field by installer to manufacturer's requirements.  
Air infiltration and water penetration testing results are only applicable if unit matches tested panel and unit size, direction of opening and type of sill. Results shown apply to odd-odd, odd-even, odd-frame and even-frame configurations and not even-even configurations.  
Structural load testing results are only applicable for the test unit size and type of locking and rods. Comparative analysis charts by manufacturer shows which panel sizes, meet structural loading design pressures specifically required for project. Check for limitations on use of charts in project jurisdiction.  
Forced entry testing results are only applicable for test unit type of locking.  
Check for requirements in jurisdiction of project. See manufacturer's latest published data regarding performance. It is expected installed system's performance would be not more than 2/3rds of the following certified laboratory test data in accordance with AAMA 502.

* + - 1. Standard Sill - Inward or Outward Opening.
         1. Air Infiltration per ASTM E283: At static air pressure difference of 1.57 psf (75 Pa): 0.27 cu ft per min per sq ft (1.38 L per sec per sq m).
         2. Water Penetration per ASTM E331, ASTM E547: Weep holes by others. No uncontrolled water leakage at static test pressure of 1.56 psf (75 Pa).
      2. Low Profile Saddle Sill - Inward or Outward Opening.
         1. Air Infiltration per ASTM E283: At static air pressure difference of 1.6 psf (75 Pa): 0.25 cu ft per min per sq ft (1.28 L per sec per sq m).
         2. Water Penetration per ASTM E331, ASTM E547: Weep holes by others. No uncontrolled water leakage at static test pressure of 3.76 psf (180 Pa).
      3. Flush Sill - Inward or Outward Opening.
         1. Air Infiltration per ASTM E283: At static air pressure difference of 1.6 psf (75 Pa): 0.25 cu ft per min per sq ft (1.28 L per sec per sq m).

\*\* NOTE TO SPECIFIER \*\* ADA Compliant Flush Sill, the U-channel is 1/2 inch (12 mm).

* + - 1. ADA Compliant Flush Sill - Inward or Outward Opening.
         1. Air Infiltration per ASTM E283: At static air pressure difference of 1.6 psf (75 Pa): 0.25 cu ft per min per sq ft (1.28 L per sec per sq m).
      2. Structural Load Deflection per ASTM E330:
         1. Load Structure: At 1.5 times design wind pressure with no glass breakage or permanent damage to fasteners or storefront components.
         2. Design Pressure Positive and Negative: 35 psf (1675 Pa).
      3. Forced Entry per AAMA 1303.5 and AAMA CAWM 300: Meets requirements.
      4. Swing Panel - Operation / Cycling Performance per AAMA 920: 500,000 cycles.
      5. Thermal Performance U-factor: NFRC 100 rated, certified and labeled.
      6. Solar Heat Gain Coefficient Plus Visible Light Transmission: NFRC 200 rated, certified and labeled.

\*\* NOTE TO SPECIFIER \*\* Delete wind loading paragraph below if not required.

* + - 1. Florida Product Approval for Wind Loading: Units tested to AAMA 101/I.S.2/A440 and approved according to the Florida Building Code 2014, Section 1710.5, for panel sizes subject to manufacturer size charts.
         1. Product Approval Number: FL37258: Units with panel sizes up to 43 inch (1.07 m) wide x 120 inch (3.05 m) high; subject to manufacturer size chart.

\*\* NOTE TO SPECIFIER \*\* Units rated STC 30 to STC 36 are possible depending on glass type and panel size track limitations.

* + - 1. Acoustic Performance: STC (Rw).

\*\* NOTE TO SPECIFIER \*\* Acoustical system STC and Rw ratings per ASTM E413 and DIN EN ISO 717-1 are from testing of full panel systems by an independent and accredited acoustical laboratory in accordance with ASTM E90-09 and DIN EN ISO 10140-1, 2, 4 and 5 test procedure. A complete and unedited written test report is available upon request. See manufacturer's latest published data regarding performance. Delete System STC data options not required.

* + - * 1. System STC (Rw) 35 (35) and OITC 30 with 5/16 inch (8 mm) STC 37 laminated glass.
        2. System STC (Rw) 30 (31) and OITC 27 with 1/4 inch (6 mm) STC 32 tempered glass.

\*\* NOTE TO SPECIFIER \*\* Acoustical system STC (Rw) ratings below are engineer-calculated interpolations based on the full panel systems testing with flush sill. Calculations of the system STC (Rw) from the other glazing STC is available on request.

* + - * 1. System STC (Rw) 34 (34) with 1/4 inch (6 mm) STC 36 enhanced laminated glass.
        2. System STC (Rw) 33 (33) with 1/4 inch (6 mm) STC 35 laminated glass.
        3. System STC (Rw) 30 (30) with 1/4 inch (6 mm) STC 31 tempered glass.
    1. Design Criteria:

\*\* NOTE TO SPECIFIER \*\* Go to http://www.nanawall.com/products/sl45/options to see size and configuration options.

* + - 1. Sizes and Configurations: Refer to Drawings for custom dimensions within maximum frame sizes indicated in manufacturer's literature. Refer to Drawings for number of panels and configuration.
      2. Unit Operation: Sliding and folding hardware with top and bottom tracks.

\*\* NOTE TO SPECIFIER \*\* Delete panel configuration options not required.

* + - 1. Panel Configuration: Straight.
      2. Panel Configuration: Segmented curve.
      3. Panel Configuration: 90 degree angle turn.
      4. Panel Configuration: 135 degree angle turn.
      5. Panel Configuration: Window and door combination.

\*\* NOTE TO SPECIFIER \*\* Delete panel operation options not required.

* + - 1. Panel Operation: Inward opening unit. Stack Storage Configuration: Inside jamb.
      2. Panel Operation: Outward opening unit. Stack Storage Configuration: Outside jamb.
      3. Panel Operation: Center pivoted unit. Stack Storage Configuration: Center pivot.
      4. Panel Operation: Inward/outward combination opening unit. Stack Storage Configuration: Inside-outside combination.
      5. Panel Operation: Fold flat, against wall, full 180 degrees movement of door panel stack. Stack Storage Configuration: Fold flat against wall.
      6. Mounting, Top Hung: For each pair of folding panels, cardanic, independently suspended, four wheeled upper running carriage and lower guide carriage. Coated with fiberglass reinforced polyamide.

\*\* NOTE TO SPECIFIER \*\* Delete panel type not required.

* + - 1. Panel Type: Hinged.
      2. Panel Type: Unhinged.

\*\* NOTE TO SPECIFIER \*\* Delete the following paragraph if not required.

* + - 1. Primary Swing Panel of Paired Swing Panels: Swing Direction: Looking from inside.

\*\* NOTE TO SPECIFIER \*\* Delete primary swing panel not required.

* + - * 1. Primary Swing Panel: On the left.
        2. Primary Swing Panel: On the right.
      1. Entry and Egress Panel: Hinged to side jamb.
      2. Panel Pairing Configuration: See Drawings.
    1. Fabrication: Extruded aluminum frame and panel profiles, corner connectors, hinges, sliding and folding hardware, locking hardware, handles, glass and glazing, and weather stripping.
       1. Factory pre-assembled. Ship with system components and installation instructions.
       2. Exposed work matched to produce continuity of line and design with all joints.
       3. No raw edges visible at joints.
    2. Materials:

\*\* NOTE TO SPECIFIER \*\* Delete panels options not required. Single lite is standard. Refer to manufacturer's size chart for glass panel sizes requiring the use of horizontal mullions.

* + - 1. Panels: Single lite; standard.
      2. Panels: Horizontal mullions at specified heights from the bottom of the panel.
      3. Panels: Simulated divided lites in pattern as shown on Drawings.

\*\* NOTE TO SPECIFIER \*\* Maximum panel sizes of 3 ft 7 inches x 8 ft 6 inches (1.1 x 2.8 m) to 2 ft 11 inches x 9 ft 6 inches (0.9 x 2.9 m).

* + - 1. Panel Size (W x H): As indicated on Drawings.
      2. Rail Depth: 1-3/4 inch (45 mm).
      3. Top Rail and Stile Width: 2-1/8 inch (53 mm).

\*\* NOTE TO SPECIFIER \*\* Other bottom rail widths are possible. Kickplate is optional. Delete if not required.

* + - 1. Bottom Rail Width: 2-1/8 inch (53 mm)

\*\* NOTE TO SPECIFIER \*\* Fill in blank with a value from 6 to 12 inches (152 and 305 mm) high.

* + - * 1. Manufacturer's standard kickplate. Height (in/mm): \_\_\_\_\_\_.
      1. Frame: Matching top track and side jambs.
      2. Top Track Width: 2-1/2 inch (64 mm).
      3. Top Track and Side Jambs Depth: 1-3/4 inch (45 mm).

\*\* NOTE TO SPECIFIER \*\* Delete sill type options not required. The surface mounted interior sill does not have any related performance criteria as it is for use only when separating two interior spaces.

* + - 1. Sill Type: Standard sill.
      2. Sill Type: Low profile saddle sill.
      3. Sill Type: Flush sill.
      4. Sill Type: ADA compliant flush sill.
      5. Sill Type: Surface mounted interior sill for interior application.

\*\* NOTE TO SPECIFIER \*\* Delete sill finish options not required. For ADA compliant flush sill, the U-channel is 1/2 inch (12 mm).

* + - 1. Sill Finish: Aluminum with a clear anodized finish.
      2. Sill Finish: Aluminum with a dark bronze anodized finish.
      3. Sill Finish: Aluminum with finished to match panel (only with standard sill).
      4. For ADA Compliance at Swing Panel: Provide gasket to cover the channel in the sill at swing panels.
      5. Aluminum Extrusions: AIMgSi0.5 alloy, 6063-T5; F-22 - European standard.
         1. Thickness: 0.078 inch (2.0 mm) nominal.

\*\* NOTE TO SPECIFIER \*\* Delete panel and frame finish option not required.

* + - * 1. Panel and Frame Finish: One color inside and outside.

\*\* NOTE TO SPECIFIER \*\* Delete finish type and color options not required.

Finish Type: Anodized per AAMA 611. Clear.

Finish Type: Anodized per AAMA 611. Dark bronze.

Finish Type: Powder coat per AAMA 2604.

Color: Chosen from standard selection of 50 colors. Matte.

Color: Chosen from full RAL selection. High gloss.

Color: Chosen from full RAL selection. Matte.

Finish Type: PVDF Coat per AAMA 2605: Fluoropolymer Kynar with color to match custom finish.

Finish Type: Custom finish.

* + - * 1. Panel and Frame Finish: Different color inside and outside.

\*\* NOTE TO SPECIFIER \*\* Delete finish type and color not required.

Interior: Anodized per AAMA 611. Clear.

Interior: Anodized per AAMA 611. Dark bronze.

Interior: Powder coat per AAMA 2604.

Color: Chosen from standard selection of 50 colors. Matte.

Color: Chosen from full RAL selection. High gloss.

Color: Chosen from full RAL selection. Matte.

Interior: PVDF Coat per AAMA 2605: Fluoropolymer Kynar with color to match custom finish.

Interior: Custom finish.

Exterior: Anodized per AAMA 611. Clear.

Exterior: Anodized per AAMA 611. Dark bronze.

Exterior: Powder coat per AAMA 2604.

Color: Chosen from standard selection of 50 colors. Matte.

Color: Chosen from full RAL selection. High gloss.

Color: Chosen from full RAL selection. Matte.

Exterior: PVDF Coat per AAMA 2605: Fluoropolymer Kynar with color to match custom finish.

Exterior: Custom finish.

* + 1. Glass and Glazing:
       1. Safety Glazing per ASTM C1036, ASTM C1048, ANSI Z97.1 and CPSC 16CFR 1201.
       2. Manufacturer's Glass Lites: Dry glazed with glass stops on the inside.

\*\* NOTE TO SPECIFIER \*\* Delete glass type options not required. Select and edit glass types to meet building code, wind-load design, acoustic, bullet resistant and/or security, and other project requirements with other glass available from manufacturer. Custom layouts with horizontal mullions, simulated divided lites, inserts, and high bottom rails are possible. Contact NanaWall for availability of other commercial glass types. For laminated glass, please check with NanaWall the availability of Vanceva White Collection and other color interlayers.

* + - 1. Glass Lites Tempered.
      2. Glass Lites: Tempered and laminated.
      3. Glass Lites: Laminated.
      4. Glass Type: Reduced iron; standard.

\*\* NOTE TO SPECIFIER \*\* Low iron, solar bronze, solar gray, and bird safe options available upon request. Delete glass lite options not required.

* + - 1. Glass Lite; Single: 1/4 inch (6 mm) STC 36 enhanced laminated glass to achieve unit STC of 34.
      2. Glass Lite; Single: 1/4 inch (6 mm) STC 35 laminated glass to achieve unit STC of 33.
      3. Glass Lite; Single: 1/4 inch (6 mm) STC 31 tempered glass to achieve unit STC of 30.
      4. Glass Lite; Double IGU: 13/16 inch (20 mm) thick.

\*\* NOTE TO SPECIFIER \*\* Delete IGU fill, surface, and spacer, glazing options not required.

* + - 1. IGU Fill: Air filled
      2. IGU Fill: Argon filled.
      3. IGU Surface: Clear.
      4. IGU Surface: Low-E coating on No. 2 surface of double IGU.
      5. IGU Surface: Low-E coating on No. 2 and No. 4 surface of double IGU.
      6. Glass Spacers: Manufacturer's standard.
      7. Glass Spacers: Gray finish with capillary tubes.
      8. Glass Spacers: Black finish with capillary tubes.
      9. Glass Spacers: Gray finish without capillary tubes.
      10. Glass Spacers: Black finish without capillary tubes.
    1. Locking Hardware and Handles:

\*\* NOTE TO SPECIFIER \*\* Delete main entry panel and subsequent options not required. Note other compatible lever handle styles and finishes are available from other suppliers.

* + - 1. Main Entry Panel or Pair of Panels for Models with a Swing Panel or Panels:
         1. Lever Handles: On inside and outside.
         2. Lever Handles: With return on inside and outside.
         3. Standard lockset with lockable latch.
         4. Multi-point locking with concealed dead bolt and rods at top and bottom on primary panel only.
         5. Operation: After turn of key or thumb-turn, depression of handles withdraws latch. Lifting of handles engages rods and key or thumb turn engages deadbolt and operates lock.
         6. Rods to be concealed and not edge mounted.

\*\* NOTE TO SPECIFIER \*\* Delete secondary swing panel if not required.

* + - * 1. Secondary Swing Panel: Two-point locking with flat handles on inside only for secondary swing panel.

\*\* NOTE TO SPECIFIER \*\* Lever handle with return only available in "Brushed satin stainless steel."

* + - * 1. Lever Handles Finish: Brushed satin stainless steel; standard.
        2. Lever Handles Finish: Titanium black stainless steel; standard.

\*\* NOTE TO SPECIFIER \*\* Options below may require an upcharge.

* + - * 1. Lever Handles Finish: Copper- nickel stainless steel antiviral and antimicrobial.
        2. Lever Handles Finish: Oil rubbed bronze solid brass.
        3. Lever Handles Finish: Satin nickel solid brass.
        4. Lever Handles Finish: White solid brass.
        5. Locking: Standard profile cylinder
        6. Locking: Adapter for Small Format Interchangeable Core.
      1. Main Entry Panel for Models with a Swing Panel or a Pair of Swing Panels: Lever handles on inside and outside with single action, emergency egress, interconnected lock.

\*\* NOTE TO SPECIFIER \*\* Option is recommended with a door closer but, in order to slide the swing panel, it needs to be attached to a side jamb or disengaged.

* + - 1. Main Entry Panel or Pair of Panels for Models with a Swing Panel or Swing Panels Attached to a Side Jamb: Manufacturer's push-pull handles with separate lockset and dead bolt.
         1. Push-pull handles Finish: Brushed stainless steel.

\*\* NOTE TO SPECIFIER \*\* Using push/pull handles on panic device hardware by others invalidates manufacturer's design wind-load pressure test.

* + - 1. Main Entry Panel or Pair of Panels for Models with Swing or paired Swing Panels: Field installed panic devices per Section 08 71 00 - Door Hardware.
      2. Main Entry Panel or Pair of Panels for Inswing Models without Swing Panel or Panels: Manufacturer's L-shaped handle on inside, flat handle on outside and lock set with profile cylinder. Operation of lock set is by turn of key from the outside and with a thumb-turn from the inside with a two-point locking hardware operated by 180 degree turn of the handle.

\*\* NOTE TO SPECIFIER \*\* Delete lever options not required.

* + - * 1. L-Shaped Handles: Stainless steel brushed satin finish.
        2. L-Shaped Handles: Stainless steel titanium black finish.

\*\* NOTE TO SPECIFIER \*\* Key operation from the inside may not meet egress requirements.

* + - 1. Main Entry Panel or Pair of Panels for Outswing Models without Swing Panels: Flat handle on both sides and a lock set 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 180 degree turn of the handle.

\*\* NOTE TO SPECIFIER \*\* Note that with option, the main entry panel is operable from inside only and that there is no latch.

* + - 1. Main Entry Panel or Pair of Panels for Models without Swing Panels: Flat handle on inside with concealed two-point locking hardware operated by 180 degree turn of handle.
      2. Secondary Panels and Pairs of Folding Panels: Handles and concealed one or two-point locking hardware operated by 180 degree turn of handle between each pair. Face applied flush bolt locking not acceptable; except for units with paired panels.

\*\* NOTE TO SPECIFIER \*\* Delete handles option not required.

* + - * 1. Handles: Manufacturer's flat handles.

\*\* NOTE TO SPECIFIER \*\* Delete flat handle finish options not required.

Flat Handle Finish: Brushed satin stainless steel.

Flat Handle Finish: Black titanium stainless steel.

\*\* NOTE TO SPECIFIER \*\* Handles below require an upcharge.

Flat Handle Finish: Copper-nickel stainless steel antiviral and antimicrobial.

Flat Handle Finish: Powder coated aluminum with color finish to match frame.

* + - * 1. Handles: Removable custodial handles.
      1. Handle Height: 41-3/8 inch (105 cm) centered from bottom of panel unless otherwise indicated on Drawings.
      2. Locking Rods: End caps top and bottom;. Rod Stroke: 15/16 inch (24 mm).

\*\* NOTE TO SPECIFIER \*\* Delete additional profile cylinders option not required.

* + - 1. Additional Profile Cylinders: Keyed alike.
      2. Additional Profile Cylinders: Keyed differently.
    1. Sliding and Folding Hardware:
       1. Manufacturer's combination sliding and folding hardware with top, bottom tracks.
       2. For Each Pair of Folding Panels: Independent cardanic suspension for 4 wheeled rollers coated with fiberglass reinforced polyamide upper running carriage and lower guide carriage.

\*\* NOTE TO SPECIFIER \*\* Delete swing panel hinges option not required.

* + - 1. Swing Panel Hinges: Zinc die cast with finish closest match to finish of frame and panels and stainless-steel security hinge pins with set-screws.
      2. Swing Panel Hinges: Stainless steel hinges and security hinge pins with set-screws.
      3. Hinge Adjustment: 1/16 inch (1.5 mm) in width per hinge. Adjustments to be made without needing to removing panels from tracks.

\*\* NOTE TO SPECIFIER \*\* Weather stripping is determined at factory by based on design requirements.

* + 1. Weather Stripping: Double layer EPDM between panels and EPDM gasket and Q-Lon 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 bottom edge of door panels, with a recessed sill or on frame, for sealing between panels and between panel and frame.
    2. Fasteners: Stainless steel screws for connecting frame components.
    3. Accessories: Sidelights, transoms, corner posts, or single or double doors as indicated.

\*\* NOTE TO SPECIFIER \*\* Delete article if not required.

* 1. THERMALLY BROKEN ALUMINUM-FRAMED FOLDING/PAIRED GLASS WALL SYSTEMS (SL60)
     1. Basis of Design: Model SL60. Thermally broken aluminum-framed folding/paired glass wall system, top hung, or floor track supported as manufactured by Nana Wall Systems, Incorporated. Manufacturer's standard frame and panel profiles, with head track, side jambs and panels with dimensions as shown on Drawings.
        1. System Components: Aluminum frame, threshold, panels, sliding-folding and locking hardware, weather stripping, glass and glazing, and, accessories as required for a complete working installation.

\*\* NOTE TO SPECIFIER \*\* Delete insect screen if not required. WIZARD INDUSTRIES, INC. which is located at: 4263 Phillips Ave, Burnaby, BC, Canada V5A 2X4; Toll Free: (888) 949-3667; Telephone: (604) 299-8878; Fax: (604) 299-4496; Email: sales@wizardindustries.com; Web: https://www.wizardscreens.com.

* + - * 1. Insect Screen: Fully retractable non-pleated screen. Ultra-strong, UV resistant fiberglass mesh housed in single cartridge riding on a single track.

Basis-of-Design Product by Manufacturer: The Horizon by Wizard Industries, Inc.

* + 1. Performance Criteria: Lab tested.

\*\* NOTE TO SPECIFIER \*\* Delete sill and opening type options not required.  
 Weeps, to be drilled in field by installer to manufacturer's requirements.  
 Air infiltration and water penetration testing results are only applicable if unit matches tested panel and  
 unit size, direction of opening and type of sill. Results shown apply to odd-odd, odd-even, odd-frame and  
 even-frame configurations and not even-even configurations.  
 Structural load testing results are only applicable for the test unit size and type of locking and rods.  
 Comparative analysis charts by manufacturer shows which panel sizes, meet structural loading design  
 pressures specifically required for project. Check for limitations on use of charts in project jurisdiction.  
 Forced entry testing results are only applicable for test unit type of locking.  
 Check for requirements in jurisdiction of project. See manufacturer's latest published data regarding  
 performance. It is expected installed system's performance would be not more than 2/3rds of the following  
 certified laboratory test data in accordance with AAMA 502.

* + - 1. Standard Flush Sill - Inward and Outward Opening.
         1. Air Infiltration and Exfiltration per ASTM E283:

At static air pressure difference of 1.57 psf (75 Pa):

Infiltration: 0.10 cu ft per min per sq ft (0.5 L per sec per sq m).

Exfiltration: 0.08 cu ft per min per sq ft (0.4 L per sec per sq m).

At 6.24 psf (300 Pa):

Infiltration: 0.37 cfm per sq ft (1.9 L per sec per sq m).

Exfiltration: 0.17 cfm per sq ft (0.9 L per sec per sq m).

* + - * 1. Structural Loading per ASTM E330 Design Pressure:

Positive Inswing or Negative Outswing: 40 psf (1920 Pa).

Negative Inswing or Positive Outswing: 45 psf (2160 Pa).

* + - * 1. Swing Panel with Surface Mounted Hinges - Operation / Cycling Performance per AAMA 920: 500,000 cycles.
      1. Low Profile Saddle Sill - Inward and Outward Opening.
         1. Air Infiltration and Exfiltration per ASTM E283:

At static air pressure difference of 1.57 psf (75 Pa):

Infiltration: 0.10 cu ft per min per sq ft (0.5 L per sec per sq m).

Exfiltration: 0.08 cu ft per min per sq ft (0.4 L per sec per sq m).

At 6.24 psf (300 Pa):

Infiltration: 0.37 cfm per sq ft (1.9 L per sec per sq m).

Exfiltration: 0.17 cfm per sq ft (0.9 L per sec per sq m).

* + - * 1. Water Penetration per ASTM E331, ASTM E547: No uncontrolled water leakage at a static test pressure of 5.43 psf (260 Pa) with weeps by others.
        2. Structural Loading per ASTM E330 Design Pressure:

Positive Inswing or Negative Outswing: 40 psf (1920 Pa).

Negative Inswing or Positive Outswing: 45 psf (2160 Pa).

* + - * 1. Swing Panel with Surface Mounted Hinges - Operation / Cycling Performance per AAMA 920: 500,000 cycles.
      1. Hybrid Sill - Inward Opening.
         1. Air Infiltration per ASTM E283:

At static air pressure difference of 1.57 psf (75 Pa): Infiltration: 0.05 cu ft per min per sq ft (0.09 L per sec per sq m).

At 6.24 psf (300 Pa): Infiltration: 0.13 cfm per sq ft (0.67 L per sec per sq m).

* + - * 1. Water Penetration per ASTM E331, ASTM E547: No uncontrolled water leakage at a static test pressure of 7.5 psf (360 Pa). Not applicable for even-even configurations.
        2. Structural Loading per ASTM E330 Design Pressure:

Positive Inswing or Negative Outswing: 45 psf (2160 Pa).

Negative Inswing or Positive Outswing: 45 psf (2160 Pa).

* + - 1. Hybrid Sill - Outward Opening.
         1. Air Infiltration per ASTM E283:

At static air pressure difference of 1.57 psf (75 Pa): Infiltration: 0.02 cu ft per min per sq ft (0.07 L per sec per sq m).

At 6.24 psf (300 Pa): Infiltration: 0.10 cfm per sq ft (0.51 L per sec per sq m).

* + - * 1. Water Penetration per ASTM E331, ASTM E547: No uncontrolled water leakage at a static test pressure of 7.5 psf (360 Pa). Not applicable for even-even configurations.
        2. Structural Loading per ASTM E330 Design Pressure:

Positive Inswing or Negative Outswing: 45 psf (2160 Pa).

Negative Inswing or Positive Outswing: 45 psf (2160 Pa).

* + - 1. Higher Weather Performance Raised Sill; Inward Opening.
         1. Air Infiltration per ASTM E283:

At static air pressure difference of 1.57 psf (75 Pa): 0.02 cfm per sq ft (0.10 L per sec per sq m) or (0.25 cu m per hour per m).

At 6.24 psf (300 Pa): 0.06 cfm per sq ft (0.31 L per sec per sq m).

* + - * 1. Water Penetration per ASTM E331 and ASTM E547: No uncontrolled water entry at 7.5 psf (360 Pa). Not applicable for even-even configurations.
        2. Structural Loading per ASTM E330:

Design Pressure Positive: 45 psf (2160 Pa).

Design Pressure Negative: 45 psf (2160 Pa).

* + - 1. Higher Weather Performance Raised Sill; Outward Opening.
         1. Air Infiltration per ASTM E283:

At static air pressure difference of 1.57 psf (75 Pa): 0.01 cfm per sq ft (0.05 L per sec per sq m).

At 6.24 psf (300 Pa): 0.01 cfm per sq ft (0.05 L per sec per sq m).

* + - * 1. Water Penetration per ASTM E331 and ASTM E547: No uncontrolled water leakage at 7.5 psf (360 Pa).
        2. Structural Loading per ASTM E330:

Design Pressure Positive: 45 psf (2160 Pa).

Design Pressure Negative: 40 psf (1920 Pa).

\*\* NOTE TO SPECIFIER \*\* For units requiring acoustic performance keep the following paragraph.

* + - 1. Glass Acoustical Performance per DIN 52210-3,4: With 38 Db glass, unit Rw (STC) of 36
      2. System Life Cycle Performance per DIN EN 1191/12400: Pass; 20,000 cycles
      3. Forced Entry per AAMA 1304: Meets requirements

\*\* NOTE TO SPECIFIER \*\* Delete burglary resistance subparagraphs below if not required. These two additional security options are available for an upcharge.

* + - 1. Burglary Resistance: EN 1627-30, Class RC2/ RC2N; Resistance Class 2 certified.
      2. Lockset Burglary Resistance: PAS 24 certified.

\*\* NOTE TO SPECIFIER \*\* Delete wind loading paragraph below if not required.

* + - 1. Florida Product Approval for Wind Loading: Units tested to AAMA/WDMA/CSA 101/I.S.2/A440 and approved according to the Florida Building Code 2014, Section 1710.5, for panel sizes subject to manufacturer size charts.
         1. Product Approval Number: FL37263. Approved for use outside hurricane zones (HVHZ) with Design Pressure plus or minus 45 psf. for tested panel size.

\*\* NOTE TO SPECIFIER \*\* The NFRC 100, 200, 400 and 500 ratings of the Folding Glass Storefront System meet Prescriptive Method requirements for U-factor, SHGC, Air Leakage and CRF of California Title 24, Chapter 3, Building Envelope Requirements. Delete if not required.

* + - 1. Thermal Performance U-factor: NFRC 100 rated, certified and labeled
      2. Solar Heat Gain Coefficient and Visible Light Transmission: NFRC 200 rated, certified and labeled.
      3. Air Leakage: NFRC 400 rated, certified and labeled.
      4. Condensation Resistance Factor (CRF): NFRC 500 rated, certified and labeled.

\*\* NOTE TO SPECIFIER \*\* Energy Star values for Doors with greater than 50 percent glass can be achieved through the use of specific glass units meeting the following requirements:  
Northern and North-Central Region: Less than 0.30 U-factor and 0.40 SHGC  
South-Central and Southern Region: Less than 0.30 U-factor and 0.25 SHGC  
Energy Star Air Leakage Rating Requirements (ASTM E283 in accordance with NFRC 400 or  
 AAMA/WDMA/CSA 101/I.S.2/A440-11):  
Swinging Door: Less than or equal to 0.5 cfm per sq ft (2.56 L per sec per sq meter)  
For guidance only as Nana Wall Systems is not a participant of the Energy Star Program.

* + - 1. EPA Energy Star: Meets requirements with certain, specific glass.
    1. Design Criteria:

\*\* NOTE TO SPECIFIER \*\* Go to http://www.nanawall.com/products/sl60/options to see size and configuration options.

* + - 1. Sizes and Configurations: As indicated by the Drawings for selected number and size of panels, location of swing panels, and stacking.
      2. Operation: Sliding and folding hardware with top and bottom tracks.
      3. Mounting Type: Top-hung.
      4. Mounting Type: Floor track supported.
      5. Panel Configuration: Straight.
      6. Panel Configuration: Window- Door Combination
      7. Panel Type: Hinged.

\*\* NOTE TO SPECIFIER \*\* Delete the following options not required.

* + - * 1. Primary swing panel of paired swing panels, looking from inside: On the left.
        2. Primary swing panel of paired swing panels, looking from inside: On the right.
        3. Entry and Egress panel hinged to side jamb.
      1. Panel Pairing Configuration: See Drawings.

\*\* NOTE TO SPECIFIER \*\* Delete stack storage configuration option not required.

* + - 1. Stack Storage Configuration: Inswing.
      2. Stack Storage Configuration: Outswing.
    1. Fabrication: Extruded aluminum frame and panel profiles, corner connectors, hinges, sliding and folding hardware, locking hardware, handles, glass, glazing, and weather stripping.
       1. Factory pre-assembled. Ship with system components and installation instructions.
       2. Exposed work matched to produce continuity of line and design with joints.
       3. No raw edges visible at joints.
    2. Materials:

\*\* NOTE TO SPECIFIER \*\* Delete panels options not required. Single lite is standard. Refer to manufacturer's size chart for glass panel sizes requiring the use of horizontal mullions.

* + - 1. Panels: Single lite; standard.
      2. Panels: Horizontal mullions at specified heights from the bottom of the panel.
      3. Panels: Single lite with simulated divided lites in pattern as shown on Drawings.
      4. Panel Size (W x H): As indicated on Drawings.
      5. Rail Depth: 2-5/16 inch (59 mm).
      6. Top Rail and Stile Width: 2-3/8 inch (60 mm).
      7. Bottom Rail Width: 2-3/8 inches (60 mm).

\*\* NOTE TO SPECIFIER \*\* Fill in blank with a value from 6 to 12 inches (152 and 305 mm) high.

* + - * 1. Manufacturer's standard kickplate. Height (in/mm): \_\_\_\_\_\_.
      1. Frame: Matching top track and side jambs.
         1. Top Track Width; Top-Hung: 3-15/16 inch (100 mm).
         2. Top Track Width; Floor Supported: 2-9/16 inch (65 mm).
         3. Side Jambs Width: 2-9/16 inch (65 mm).
         4. Top Track and Side Jambs Depth: 3-1/8 inch (66 mm).

\*\* NOTE TO SPECIFIER \*\* Delete sill type options not required. The surface mounted interior sill does not have any related performance criteria as it is for use only when separating two interior spaces.

* + - 1. Sill Type: Higher weather performance raised sill; thermally broken.
      2. Sill Type: Flush sill; thermally broken.
      3. Sill Type: Low profile saddle sill; thermally broken.
      4. Sill Type: Hybrid sill; thermally broken.
      5. Sill Type: Surface mounted interior sill; not thermally broken, only for floor supported system in interior application.

\*\* NOTE TO SPECIFIER \*\* Delete sill aluminum finish options not required.

* + - 1. Sill Aluminum Finish: Clear anodized finish.
      2. Sill Aluminum Finish: Dark bronze anodized finish.
      3. Sill Aluminum Finish: Finished to match panel only with higher weather performance sill.
      4. Aluminum Extrusions: AIMgSi0.5 alloy, 6063-T5; F-22 - European standard.
         1. Thickness: 0.078 inch (2.0 mm) nominal.
         2. Thermal Break: 7/8 inch (22 mm) wide glass fiber reinforced polyamide plastic. Narrower or poured and de-bridged type thermal breaks not acceptable.

\*\* NOTE TO SPECIFIER \*\* Delete panel and frame finish option not required.

* + - * 1. Panel and Frame Finish: One color inside and outside.

\*\* NOTE TO SPECIFIER \*\* Delete finish type and color options not required.

Finish Type: Anodized per AAMA 611. Clear.

Finish Type: Anodized per AAMA 611. Dark bronze.

Finish Type: Powder coat per AAMA 2604.

Color: Chosen from standard selection of 50 colors. Matte.

Color: Chosen from full RAL selection. High gloss.

Color: Chosen from full RAL selection. Matte.

Finish Type: PVDF Coat (AAMA 2605): Fluoropolymer Kynar with color to match custom finish.

Finish Type: Custom finish.

* + - * 1. Panel and Frame Finish: Different color inside and outside.

\*\* NOTE TO SPECIFIER \*\* Delete finish type and color options not required.

Interior: Anodized per AAMA 611. Clear.

Interior: Anodized per AAMA 611. Dark bronze.

Interior: Powder coat per AAMA 2604.

Color: Chosen from standard selection of 50 colors. Matte.

Color: Chosen from full RAL selection. High gloss.

Color: Chosen from full RAL selection. Matte.

Interior: PVDF Coat (AAMA 2605): Fluoropolymer Kynar with color to match custom finish.

Interior: Custom finish.

Exterior: Anodized per AAMA 611. Clear.

Exterior: Anodized per AAMA 611. Dark bronze.

Exterior: Powder coat per AAMA 2604.

Color: Chosen from standard selection of 50 colors. Matte.

Color: Chosen from full RAL selection. High gloss.

Color: Chosen from full RAL selection. Matte.

Exterior: PVDF Coat (AAMA 2605): Fluoropolymer Kynar with color to match custom finish.

Exterior: Custom finish.

* + 1. Glass and Glazing:
       1. Safety Glazing per ASTM C1036, ASTM C1048, ANSI Z97.1 and CPSC 16CFR 1201.

\*\* NOTE TO SPECIFIER \*\* Delete glazing units options and subsequent options not required.

* + - 1. Glazing Units, Double Insulated: Dry glazed with glass stops on the inside.
         1. Glass Lites: Tempered.
         2. Glass Lites: Laminated.
         3. Glass Lites: Tempered and laminated.
         4. Thickness: 15/16 inch (24 mm) thick.
      2. Glazing Units, Triple Insulated: Dry glazed with glass stops on the inside.
         1. Glass Lites: Tempered.
         2. Glass Lites: Laminated.
         3. Glass Lites: Tempered and laminated.
         4. Thickness: 1-3/8 inch (35 mm) thick.

\*\* NOTE TO SPECIFIER \*\* Delete insulated glazing unit fill options not required.

* + - 1. Insulated Glazing Unit Fill: Air.
      2. Insulated Glazing Unit Fill: Argon.

\*\* NOTE TO SPECIFIER \*\* Delete glass type options not required. Low iron, solar bronze, solar gray, and bird safe available upon request.

* + - 1. Glass Type: Standard.

\*\* NOTE TO SPECIFIER \*\* Delete glass spacers options not required.

* + - 1. Glass Spacers: Gray finish with capillary tube.
      2. Glass Spacers: Black finish with capillary tubes.
      3. Glass Spacers: Gray finish without capillary tubes.
      4. Glass Spacers: Black finish without capillary tubes.

\*\* NOTE TO SPECIFIER \*\* Delete insulated glass unit surfaces option not required.

* + - 1. Insulated Glass Unit Surfaces: Clear.
      2. Insulated Glass Unit Surfaces: Low- E coating on No. 2 surface of double IGU.
      3. Insulated Glass Unit Surfaces: Low- E coating on No. 2 surface and No. 4 surface of double IGU.
      4. Insulated Glass Unit Surfaces: Low-E coating on No. 2 surface and No. 5 surface of triple IGU.
    1. Locking Hardware and Handles:

\*\* NOTE TO SPECIFIER \*\* Delete main entry panel and subsequent options not required. Note other compatible lever handle styles and finishes are available from other suppliers.

* + - 1. Main Entry Panels for Models with a Swing Panel or Pair of Swing Panels:
         1. Lever Handles: On inside and outside.
         2. Lever Handles: With return on inside and outside.
         3. Standard lockset with lockable latch.
         4. Multi-point locking with concealed dead bolt and rods at top and bottom on primary panel only.
         5. Operation: After turn of key or thumb-turn, depression of handles withdraws latch. Lifting of handles engages rods and key or thumb turn engages deadbolt and operates lock.
         6. Rods to be concealed and not edge mounted.

\*\* NOTE TO SPECIFIER \*\* Delete secondary swing panel not required or both if not required.

* + - * 1. Secondary Swing Panel: Dummy lever handles; both sides. Concealed flush bolts operate rods at top and bottom for secondary swing panel.
        2. Secondary Swing Panel: Two-point locking with flat handles on inside only for secondary swing panel.

\*\* NOTE TO SPECIFIER \*\* Lever handle with return only available in "Brushed satin stainless steel."

* + - * 1. Lever Handles Finish: Brushed satin stainless steel; standard.
        2. Lever Handles Finish: Titanium black stainless steel; standard.

\*\* NOTE TO SPECIFIER \*\* Options below may require an upcharge.

* + - * 1. Lever Handles Finish: Copper- nickel stainless steel antiviral and antimicrobial.
        2. Lever Handles Finish: Oil rubbed bronze solid brass.
        3. Lever Handles Finish: Satin nickel solid brass.
        4. Lever Handles Finish: White solid brass.
        5. Locking: Standard profile cylinder
        6. Locking: Adapter for Small Format Interchangeable Core.

\*\* NOTE TO SPECIFIER \*\* Door closer by others is needed to keep panels closed when deadbolt is not engaged.

* + - 1. Main Entry Panels for Models with Swing Panels: Manufacturer�s push/pull handle with separate lock set and dead bolt and one-point locking at the top and bottom consisting of locking rods operating by the 180 turn of a flat handle on the inside.
         1. Push-pull handles in a brushed stainless-steel finish

\*\* NOTE TO SPECIFIER \*\* Delete flat handle finish option not required. Copper-nickel stainless handle may require an upcharge.

* + - * 1. Flat Handle Finish: Brushed satin stainless steel.
        2. Flat Handle Finish: Black titanium stainless steel.
        3. Flat Handle Finish: Copper-nickel stainless steel antiviral and antimicrobial.

\*\* NOTE TO SPECIFIER \*\* Panic device that functions with narrow stiles only.

* + - 1. Main Entry Panel: For models with single swing panel attached to side jamb and with surface mounted hinges. No hardware or locking provided by manufacturer; Field installed panic device per Section 08 71 00 - Door Hardware.

\*\* NOTE TO SPECIFIER \*\* Panic device that functions with narrow stiles only.

* + - 1. Main Entry Panel: For models with paired swing panel attached to side jamb and with surface mounted hinges. No hardware or locking provided by manufacturer; Field installed panic device per Section 08 71 00 - Door Hardware.
      2. Main Entry Pair of Panels on Inswing Models without a Swing Panel: L-shaped handle on inside, flat handle on outside and lock set with profile cylinder.
         1. Operation of Lock Set: By turn of key from outside and with a thumb-turn from inside with a two-point locking hardware operated by 180 degree turn of handle.

\*\* NOTE TO SPECIFIER \*\* Delete lever options not required.

* + - * 1. L-Shaped Handles: Stainless steel brushed satin finish.
        2. L-Shaped Handles: Stainless steel titanium black finish.

\*\* NOTE TO SPECIFIER \*\* Key operation from inside may not meet egress requirements.

* + - 1. Main Entry Panels for Outswing Models without Swing Panels: Flat handle on inside and a lock set with a profile cylinder on outside.
         1. Operation of Lock Set: By turn of key from the outside and from inside with a two-point locking hardware operated by 180 degree turn of handle.

\*\* NOTE TO SPECIFIER \*\* With this option main entry panel is operable from inside only and there is no latch.

* + - 1. Main Entry Panels for Models without Swing Panels: Flat handle on inside only with concealed two-point locking hardware operated by 180 degree turn of handle.
      2. Secondary Panels and Pairs of Folding Panels: Handles and concealed one or two-point locking hardware operated by 180 degree turn of handle between each pair. Face applied flush bolt locking not acceptable; except for units with paired panels.

\*\* NOTE TO SPECIFIER \*\* Delete handles option not required.

* + - * 1. Handles: Manufacturer's flat handles.

\*\* NOTE TO SPECIFIER \*\* Delete flat handle finish options not required.

Flat Handle Finish: Brushed satin stainless steel.

Flat Handle Finish: Black titanium stainless steel.

\*\* NOTE TO SPECIFIER \*\* Handles below may require an upcharge.

Flat Handle Finish: Copper-nickel stainless steel antiviral and antimicrobial.

Flat Handle Finish: Powder coated aluminum with color finish to match frame.

* + - * 1. Handles: Removable custodial handles.
      1. Handle Height: 41-3/8 inch (105 cm) centered from bottom of panel unless otherwise indicated on Drawings.
      2. Locking Rods: End caps top and bottom;. Rod Stroke: 15/16 inch (24 mm).

\*\* NOTE TO SPECIFIER \*\* Delete additional profile cylinders option not required.

* + - 1. Additional Profile Cylinders: Keyed alike.
      2. Additional Profile Cylinders: Keyed differently.
    1. Sliding-Folding Hardware: Combination with top and bottom tracks and threshold. Running carriages with sealed, self-lubrication, ball bearing multi-rollers. Surface mounted hinges and running carriages not acceptable.
       1. Each Pair of Folding Panels:

\*\* NOTE TO SPECIFIER \*\* Delete top-hung or floor supported option not required.

* + - * 1. Top-Hung: Independent cardanic suspension for 4 wheeled rollers coated with fiberglass reinforced polyamide upper running carriage and lower guide carriage. Running Carriage: Adjustable height, 1/4 inch (6 mm) up and down.
        2. Floor Supported: Upper guide carriage and lower running carriage, two vertical stainless-steel wheels and two horizontal wheels. Vertical wheels to ride on stainless steel guide track covers over full length of sill track. Lie above water run-off level. Lower Running Carriage Carrying Capacity: 220 lbs. (100 kg)

\*\* NOTE TO SPECIFIER \*\* Corner connectors are only available in powder coat finishes and need close attention for an aesthetic match when anodized panels and frames are specified.

* + - 1. Corner Connectors: On all four corners of panels. Thermally broken die cast zinc multi-functional corner fittings with carriage connectors and hinges.

\*\* NOTE TO SPECIFIER \*\* Delete hinge pin option not required. For Easy Cleaning option of top-hung, inward-opening applications, specify "removable" hinge pins.

* + - * 1. Hinge Pins: Standard.
        2. Hinge Pins: Removable.
        3. Finish: Powder coated, closest match to finish of frame and panel.
        4. Adjustment: 1/16 inch (1.5 mm) in width per hinge adjustments without removing panels from tracks and without needing to remove panels from tracks.

\*\* NOTE TO SPECIFIER \*\* Weather stripping is determined at factory based on design requirements.

* + 1. Weather Stripping: Manufacturer's double layer EPDM between panels and EPDM gasket and Q-Lon gasket or brush seal between panel and frame or brush seals with two-layer polyamide fin attached to inner and outer edge of door panels with a recessed sill or on frame for sealing between panels and between panel and frame.
       1. UniverSILL: For outswing low profile saddle sill, UniverSILL gasket add on available for additional air and water protection.
    2. Fasteners: Tapered pins and stainless-steel screws for connecting frame components.
    3. Accessories: Sidelights, transoms, corner posts, or single or double doors as indicated.

\*\* NOTE TO SPECIFIER \*\* Delete article if not required.

* 1. THERMALLY BROKEN ALUMINUM-FRAMED FOLDING GLASS WALL SYSTEMS (SL70)
     1. Basis of Design: Model SL70. Monumental thermally broken aluminum-framed folding glass wall system, floor track supported as manufactured by Nana Wall Systems, Incorporated. Manufacturer's standard or post reinforced frame and panel profiles, with top track, side jambs and panels with dimensions as shown on Drawings.
        1. System Components: Aluminum frame, threshold, panels, sliding-folding and locking hardware, weather stripping, glass and glazing, and accessories as required for a complete working installation.

\*\* NOTE TO SPECIFIER \*\* Delete insect screen if not required. WIZARD INDUSTRIES, INC. which is located at: 4263 Phillips Ave, Burnaby, BC, Canada V5A 2X4; Toll Free: (888) 949-3667; Telephone: (604) 299-8878; Fax: (604) 299-4496; Email: sales@wizardindustries.com; Web: https://www.wizardscreens.com.

* + - * 1. Insect Screen: Fully retractable non-pleated screen. Ultra-strong, UV resistant fiberglass mesh housed in single cartridge riding on a single track.

Basis-of-Design Product by Manufacturer: The Horizon by Wizard Industries, Inc.

* + 1. Performance Criteria:

\*\* NOTE TO SPECIFIER \*\* Delete the sill and opening type options not required.  
 Weeps, when provided, are to be drilled in the field by the installer to manufacturer's requirements.  
 Air infiltration and water penetration testing results are only applicable if the unit matches the tested panel  
 and unit size, direction of opening and type of sill.  
 Structural load testing results are only applicable for the test unit size and type of locking and rods.  
 Comparative analysis charts published by manufacturer shows which panel sizes, if any, meets the  
 structural loading design pressures specifically required for the project. Check for limitations on the use of   
these charts in the jurisdiction of the project.  
 Forced entry testing results are only applicable for the test unit type of locking. See manufacturer's latest  
 published data regarding performance. It is expected that the installed system's performance would be  
 not more than 2/3rds of the following certified laboratory test data in accordance with AAMA 502.

* + - 1. Performance Criteria (Lab Tested): Standard Flush Sill; Inward Opening:
         1. Air Infiltration per ASTM E283 Inward Opening:

At static air pressure difference of 1.57 psf (75 Pa): 0.15 cfm per sq ft (0.76 L per sec per sq m).

At 6.24 psf (300 Pa): 0.29 cfm per sq ft (1.47 L per sec per sq m).

* + - * 1. Structural Loading per ASTM E330: Inward Opening.

Wind load Resistance: Pass; C4.

Design Pressure Positive and Negative: 70 psf (3350 Pa).

* + - 1. Performance Criteria (Lab Tested): Standard Flush Sill; Outward Opening:
         1. Air Infiltration per ASTM E283: Outward Opening:

At static air pressure difference of 1.57 psf (75 Pa): 0.14 cfm per sq ft (0.71 L per sec per sq m).

At 6.24 psf (300 Pa): 0.30 cfm per sq ft (1.52 L per sec per sq m).

* + - * 1. Structural Loading per ASTM E330: Outward Opening.

Wind load Resistance: Pass; C4.

Design Pressure Positive and Negative: 70 psf (3350 Pa).

* + - 1. Performance Criteria (Lab Tested): Low Profile Saddle Sill - Inward Opening.
         1. Air Infiltration per ASTM E283: Inward Opening:

At static air pressure difference of 1.57 psf (75 Pa): 0.15 cfm per sq ft (0.76 L per sec per sq m).

Without Weeps at 6.24 psf (300 Pa): 0.29 cfm per sq ft (1.47 L per sec per sq m).

* + - * 1. Water Penetration per ASTM E331 and ASTM E547: No uncontrolled water leakage at a static (with weeps) test pressure of 5.25 psf (250 Pa).
        2. Structural Loading per ASTM E330:

Wind load Resistance: Pass; C4.

Design Pressure Positive and Negative: 70 psf (3350 Pa).

* + - 1. Performance Criteria (Lab Tested): Low Profile Saddle Sill - Outward Opening.
         1. Air Infiltration per ASTM E283: Outward Opening:

At static air pressure difference of 1.57 psf (75 Pa): 0.14 cfm per sq ft (0.71 L per sec per sq m).

Without Weeps at 6.24 psf (300 Pa): 0.30 cfm per sq ft (1.52 L per sec per sq m).

* + - * 1. Water Penetration per ASTM E331 and ASTM E547: No uncontrolled water leakage at a static (with weeps) test pressure of 6.00 psf (300 Pa).
        2. Structural Loading per ASTM E330:

Wind load Resistance: Pass; C4.

Design Pressure Positive and Negative: 70 psf (3350 Pa).

* + - 1. Performance Criteria (Lab Tested): Higher Weather Performance Raised Sill - Inward Opening.
         1. Air Infiltration per ASTM E283:

At static air pressure difference of 1.57 psf (75 Pa): 0.16 cfm per sq ft (0.81 L per sec per sq m).

At 6.24 psf (300 Pa): 0.20 cfm per sq ft (1.02 L per sec per sq m).

* + - * 1. Water Penetration per ASTM E331 and ASTM E547: No uncontrolled water leakage at a static test pressure of 9 psf (440 Pa).
        2. Dynamic Water Penetration per AAMA 520 and ASTM E2268:

Performance Level 2 at 6 to 18 psf (300 to 860 Pa).

* + - * 1. Structural Load Deflection per TAS 202 and ASTM E330: DP-40 and DP-45.

Wind load Resistance: Pass.

Design Pressure Positive: 70 psf (3350 Pa); C4.

Design Pressure Negative: 100 psf (4785 Pa); C3.

* + - 1. Performance Criteria (Lab Tested): Higher Weather Performance Raised Sill - Outward Opening.
         1. Air Infiltration per ASTM E283:

At static air pressure difference of 1.57 psf (75 Pa): 0.02 cfm per sq ft (0.10 L per sec per sq m).

At 6.24 psf (300 Pa): 0.08 cfm per sq ft (0.41 L per sec per sq m).

* + - * 1. Water Penetration per ASTM E331 and ASTM E547: No uncontrolled water leakage at a static test pressure of 9 psf (440 Pa).
        2. Dynamic Water Penetration per AAMA 520 and ASTM E2268: Performance Level 1 at 5 to 15 psf (250 to 715 Pa).
        3. Structural Load Deflection per TAS 202 and ASTM E330: DP-40 and DP-45.

Wind load Resistance: Pass.

Design Pressure Positive and Negative: 70 psf (3350 Pa); C3.

* + - 1. Forced Entry per AAMA 1304 and ASTM F842: Meets requirements for plus F1.
      2. Swing Panel - Operation / Cycling Performance per AAMA 920: 500,000 cycles.
      3. System - Life Cycle Performance per DIN EN 1191 and 12400: 20,000 cycles.

\*\* NOTE TO SPECIFIER \*\* Delete wind loading paragraph below if not required.

* + - 1. Florida Product Approval for Wind Loading: Units tested to AAMA/WDMA/CSA 101/I.S.2/A440 and approved according to the Florida Building Code 2014, Section 1710.5, for panel sizes subject to manufacturer size charts.
         1. Product Approval Number: FL35025. Standard Units with panel size up to 3 ft 2-7/8 inches (94 cm) wide x 9 ft 8-3/4 inches (292 cm) high; subject to manufacturer size chart.

\*\* NOTE TO SPECIFIER \*\* For units requiring acoustic performance keep the following paragraph.

* + - 1. Acoustic Performance per DIN 52210-3,4: STC (Rw)

\*\* NOTE TO SPECIFIER \*\* Acoustical system STC and Rw ratings per ASTM E413 and DIN EN ISO 717-1 are from testing of full panel systems by an independent and accredited acoustical laboratory in accordance with ASTM E90-09 and DIN EN ISO 10140-1, 2, 4 and 5 test procedure. A complete and unedited written test report is available upon request.  
See manufacturer's latest published data regarding performance.  
Delete System STC options not required.

* + - * 1. System STC (Rw) 43 (43) and OITC 35 with 1-1/2 inch (38 mm) double IGU, 10 mm + 8 mm STC 48 laminated glass
        2. System STC (Rw) 41 (41) and OITC 33 with 1-7/16 inch (36 mm) double IGU, 8 mm laminated and 6 mm tempered STC 43 glass
        3. System STC (Rw) 33 (33) and OITC 27 with 15/16 inch (24 mm) double IGU, 4 mm and 4 mm STC 32 tempered glass

\*\* NOTE TO SPECIFIER \*\* Acoustical system STC (Rw) ratings below are engineer-calculated interpolations based on the full panel systems testing with the flush sill. Calculations of system STC (Rw) from the other glazing STC is available on request.

* + - * 1. System STC (Rw) 42 (42) with 1-5/16 inch (34 mm) double IGU, 6 mm + 6 mm STC 44 enhanced laminated glass.
        2. System STC (Rw) 41 (41) with 1 inch (25 mm) double IGU, 6 mm + 6 mm STC 42 laminated glass.
        3. System STC (Rw) 38 (38) with 1/2 inch (12 mm) STC 39 enhanced laminated glass.
        4. System STC (Rw) 36 (36) with 1/4 inch (6 mm) STC 36 enhanced laminated glass.
        5. System STC (Rw) 35 (35) with 1/4 inch (6 mm) STC 35 laminated glass.
        6. System STC (Rw) 32 (32) with 1/4 inch (6 mm) STC 31 tempered glass.

\*\* NOTE TO SPECIFIER \*\* The NFRC 100, 200, 400 and 500 ratings of the Folding Glass Storefront System meet Prescriptive Method requirements for U-factor, SHGC, Air Leakage and CRF of California Title 24, Chapter 3, Building Envelope Requirements. Delete if not required.

* + - 1. Thermal Performance; U-Factor: NFRC 100 rated, certified, and labeled
      2. Solar Heat Gain Coefficient Plus Visible Light Transmission: NFRC 200 rated, certified, and labeled.
      3. Air Leakage: NFRC 400 rated, certified, and labeled.
      4. Condensation Resistance Factor: NFRC 500 rated, certified, and labeled.

\*\* NOTE TO SPECIFIER \*\* Energy Star values for Doors with greater than 50 percent glass can be achieved through the use of specific glass units meeting the following requirements:  
Northern and North-Central Region: Less than 0.30 U-factor and 0.40 SHGC  
South-Central and Southern Region: Less than 0.30 U-factor and 0.25 SHGC  
Energy Star Air Leakage Rating Requirements (ASTM E283 in accordance with NFRC 400 or AAMA/WDMA/CSA 101/I.S.2/A440-11): Swinging Door: Less than or equal to 0.5 cfm per sq ft (2.56 L   
 per sec per sq meter)  
For guidance only as Nana Wall Systems is not a participant of the Energy Star Program.

* + - 1. EPA Energy Star: Meets requirements with specific glass.
    1. Design Criteria:

\*\* NOTE TO SPECIFIER \*\* Go to http://www.nanawall.com/products/sl70/options to see size and configuration options.

* + - 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.
      2. Operation: Sliding and folding hardware with top and bottom tracks.
      3. Mounting Type: Floor track supported.

\*\* NOTE TO SPECIFIER \*\* Delete panel configuration options not required.

* + - 1. Panel Configuration: Straight.
      2. Panel Configuration: Segmented curve.
      3. Panel Configuration: 90 degree angle turn.
      4. Panel Configuration: 135 degree angle turn.
      5. Panel Configuration: Window-Door combination
      6. Panel Type: Hinged.

\*\* NOTE TO SPECIFIER \*\* Delete the following options not required.

* + - * 1. Primary swing panel of paired swing panels, looking from inside: On the left.
        2. Primary swing panel of paired swing panels, looking from inside: On the right.
        3. Entry and Egress panel hinged to side jamb.
      1. Panel Pairing Configuration: See Drawings.

\*\* NOTE TO SPECIFIER \*\* Delete stack storage configuration option not required.

* + - 1. Stack Storage Configuration: Inswing.
      2. Stack Storage Configuration: Outswing.
    1. Fabrication: Extruded aluminum frame and panel profiles, corner connectors, hinges, sliding and folding hardware, locking hardware, handles, glass, glazing, and sound gasketing.
       1. Factory pre-assembled. Ship with system components and installation instructions.
       2. Exposed work matched to produce continuity of line and design with joints.
       3. No raw edges visible at joints.
    2. Materials:

\*\* NOTE TO SPECIFIER \*\* Delete panels options not required. Single lite is standard. Refer to manufacturer's size chart for glass panel sizes requiring the use of horizontal mullions.

* + - 1. Panels: Single lite; standard.
      2. Panels: Multiple lites with horizontal mullions at specified heights from the bottom of the panel.
      3. Panels: Single lite with simulated divided lites in pattern as shown on Drawings.
      4. Panel Size (W x H): As indicated on Drawings.
      5. Rail Depth: 2-3/4 inch (70 mm).
      6. Top Rail and Stile Width: 2-1/4 inch (57 mm)
      7. Bottom Rail Width: 2-1/4 inches (57 mm)

\*\* NOTE TO SPECIFIER \*\* Fill in blank with a value from 6 to 12 inches (152 and 305 mm) high.

* + - * 1. Manufacturer's standard kickplate. Height (in/mm): \_\_\_\_\_\_.
      1. Frame: Matching top track and side jambs.
         1. Top Track and Side Jambs Width: 2-9/16 inch (65 mm).
         2. Top Track and Side Jambs Depth: 3-1/8 inch (80 mm).

\*\* NOTE TO SPECIFIER \*\* Delete sill type options not required. The surface mounted interior sill does not have any related performance criteria as it is for use only when separating two interior spaces.

* + - 1. Sill Type: Higher weather performance raised sill; thermally broken.
      2. Sill Type: Flush sill; thermally broken.
      3. Sill Type: Low profile saddle sill; thermally broken.
      4. Sill Type: Surface mounted interior sill; not thermally broken for interior application.

\*\* NOTE TO SPECIFIER \*\* Delete sill aluminum finish options not required.

* + - 1. Sill Aluminum Finish: Clear anodized finish.
      2. Sill Aluminum Finish: Dark bronze anodized finish.
      3. Sill Aluminum Finish: Finished to match panel only with higher weather performance sill.
      4. For ADA Compliance: Provide gasket to cover the channel in the sill at swing doors.
      5. Aluminum Extrusions: AIMgSi0.5 alloy, 6063-T5; F-22 - European standard.
         1. Thickness: 0.078 inch (2.0 mm) nominal.
         2. Thermal Break: 3/4 to 15/16 inch (20 to 24 mm)wide glass fiber reinforced polyamide plastic. Thinner or poured and de-bridged type thermal breaks not acceptable.

\*\* NOTE TO SPECIFIER \*\* Delete panel and frame finish option not required.

* + - * 1. Panel and Frame Finish: One color inside and outside.

\*\* NOTE TO SPECIFIER \*\* Delete finish type and color options not required.

Finish Type: Anodized per AAMA 611. Clear.

Finish Type: Anodized per AAMA 611. Dark bronze.

Finish Type: Powder coat per AAMA 2604.

Color: Chosen from standard selection of 50 colors. Matte.

Color: Chosen from full RAL selection. High gloss.

Color: Chosen from full RAL selection. Matte.

Finish Type: PVDF Coat (AAMA 2605): Fluoropolymer Kynar with color to match custom finish.

Finish Type: Custom finish.

* + - * 1. Panel and Frame Finish: Different color inside and outside.

\*\* NOTE TO SPECIFIER \*\* Delete finish type and color options not required.

Interior: Anodized per AAMA 611. Clear.

Interior: Anodized per AAMA 611. Dark bronze.

Interior: Powder coat per AAMA 2604.

Color: Chosen from standard selection of 50 colors. Matte.

Color: Chosen from full RAL selection. High gloss.

Color: Chosen from full RAL selection. Matte.

Interior: PVDF Coat (AAMA 2605): Fluoropolymer Kynar with color to match custom finish.

Interior: Custom finish.

Exterior: Anodized per AAMA 611. Clear.

Exterior: Anodized per AAMA 611. Dark bronze.

Exterior: Powder coat per AAMA 2604.

Color: Chosen from standard selection of 50 colors. Matte.

Color: Chosen from full RAL selection. High gloss.

Color: Chosen from full RAL selection. Matte.

Exterior: PVDF Coat (AAMA 2605): Fluoropolymer Kynar with color to match custom finish.

Exterior: Custom finish

* + 1. Glass and Glazing:
       1. Safety Glazing per ASTM C1036, ASTM C1048, ANSI Z97.1 and CPSC 16CFR 1201.

\*\* NOTE TO SPECIFIER \*\* Delete glazing units options and subsequent options not required. For laminated glass, please check with NanaWall the availability of Vanceva White Collection and other color interlayers.

* + - 1. Glazing Units, Single Insulated: Dry glazed with glass stops on the inside.
         1. Glass Lites: Laminated.
         2. Glass Lites: Tempered.
         3. Thickness: 1/2 inch (12 mm) STC 39 enhanced laminated glass to achieve unit STC of 38
         4. Thickness: 1/4 inch (6 mm) STC 36 enhanced laminated glass to achieve unit STC of 36
         5. Thickness: 1/4 inch (6 mm) STC 35 laminated glass to achieve unit STC of 35.
         6. Thickness: 1/4 inch (6 mm) STC 31 tempered glass to achieve unit STC of 32.
      2. Glazing Units, Double Insulated: Dry glazed with glass stops on the inside.
         1. Glass Lites: Laminated.
         2. Thickness: 1-5/16 inch (34 mm), 6 mm + 6 mm STC 44 enhanced laminated glass to achieve unit STC of 42.
         3. Thickness: 1 inch (25 mm), 6 mm + 6 mm STC 42 laminated glass to achieve unit STC of 41.
      3. Glazing Units, Triple Insulated: Dry glazed with glass stops on the inside.
         1. Glass Lites: Tempered.
         2. Glass Lites: Laminated.
         3. Glass Lites: Tempered and laminated.
         4. Thickness: 1-1/2 inch (38 mm) thick.

\*\* NOTE TO SPECIFIER \*\* Delete insulated glazing unit fill options not required.

* + - 1. Insulated Glazing Unit Fill: Air.
      2. Insulated Glazing Unit Fill: Argon.

\*\* NOTE TO SPECIFIER \*\* Low iron, solar bronze, solar gray, bird safe and thermochromic dynamic available upon request.

* + - 1. Glass Type: Standard.

\*\* NOTE TO SPECIFIER \*\* Delete glass spacers options not required.

* + - 1. Glass Spacers: Gray finish with capillary tube.
      2. Glass Spacers: Black finish with capillary tubes.
      3. Glass Spacers: Gray finish without capillary tubes.
      4. Glass Spacers: Black finish without capillary tubes.

\*\* NOTE TO SPECIFIER \*\* Delete insulated glass unit surfaces option not required.

* + - 1. Insulated Glass Unit Surfaces: Clear.
      2. Insulated Glass Unit Surfaces: Low-E coating on No. 2 surface of double IGU.
      3. Insulated Glass Unit Surfaces: Low-E coating on No. 2 surface and No. 4 surface of double IGU.
      4. Insulated Glass Unit Surfaces: Low-E coating on No. 2 surface and No. 5 surface of triple IGU.
    1. Locking Hardware and Handles:

\*\* NOTE TO SPECIFIER \*\* Delete main entry panel and subsequent options not required. Note other compatible lever handle styles and finishes are available from other suppliers.

* + - 1. Main Entry Panels for Models with a Swing Panel or Pair of Swing Panels:
         1. Lever Handles: On inside and outside.
         2. Lever Handles: With return on inside and outside.
         3. Standard lockset with lockable latch.
         4. Multi-point locking with concealed dead bolt and rods at top and bottom on primary panel only.
         5. Operation: After turn of key or thumb-turn, depression of handles withdraws latch. Lifting of handles engages rods and key or thumb turn engages deadbolt and operates lock.
         6. Rods to be concealed and not edge mounted.

\*\* NOTE TO SPECIFIER \*\* Delete secondary swing panel not required or both if not required.

* + - * 1. Secondary Swing Panel: Matching dummy lever handles on both sides and concealed flush bolts that operate the rods at the top and the bottom for the secondary swing panel.
        2. Secondary Swing Panel: Two-point locking with U-shaped handles on inside only for the secondary swing panel.

\*\* NOTE TO SPECIFIER \*\* Lever handle with return only available in "Brushed satin stainless steel."

* + - * 1. Lever Handles Finish: Brushed satin stainless steel; standard.
        2. Lever Handles Finish: Titanium black stainless steel; standard.

\*\* NOTE TO SPECIFIER \*\* Options below may require an upcharge.

* + - * 1. Lever Handles Finish: Copper- nickel stainless steel antiviral and antimicrobial.
        2. Lever Handles Finish: Oil rubbed bronze solid brass.
        3. Lever Handles Finish: Satin nickel solid brass.
        4. Lever Handles Finish: White solid brass.
        5. Locking: Standard profile cylinder.
        6. Locking: Adapter for Small Format Interchangeable Core.
      1. Main Entry Panel for Models with Swing Panels and Pairs of Swing Panels: Lever handles on inside and outside with single action, emergency egress, interconnected lock.

\*\* NOTE TO SPECIFIER \*\* Recommended with a door closer, but note that, when sliding the swing panel, the door closer will need to be disengaged if swing panel is not attached to a side jamb.

* + - 1. Main Entry Panels for Models with a Swing Panel. Push-pull handles with separate lockset and dead bolt and one-point locking at top and bottom consisting of locking rods operated by a 180 degree turn of a flat handle on the inside.
         1. Push-pull handles in a brushed stainless-steel finish.

\*\* NOTE TO SPECIFIER \*\* Delete flat handle finish option not required.

* + - * 1. Flat Handle Finish: Brushed satin stainless steel.
        2. Flat Handle Finish: Black titanium stainless steel.

\*\* NOTE TO SPECIFIER \*\* Structural test load results will not apply for locking devices by others.

* + - 1. Main Entry Panel for Models with Swing Panels or a Pair of Swing Panels: No hardware or locking provided by manufacturer; Field installed panic device per Section 08 71 00 - Door Hardware.
      2. Main Entry Pair of Panels Models without a Swing Panel: L-shaped handle on inside and outside, including a lock set with profile cylinder.
         1. Operation of Lock Set: By turn of key from outside and with a thumb-turn from inside with a two-point locking hardware operated by 180 degree turn of handle.

\*\* NOTE TO SPECIFIER \*\* Delete lever options not required. Other handle are possible.

* + - * 1. L-Shaped Handles: Stainless steel brushed satin finish.
        2. L-Shaped Handles: Stainless steel titanium black finish.

\*\* NOTE TO SPECIFIER \*\* Main entry panel is operable from inside only and there is no latch.

* + - 1. Main Entry Panel: U and L-shaped handle on inside only with concealed two-point locking hardware operated by 180 degree turn of handle.
      2. Secondary Panels and Pairs of Folding Panels: Handles and concealed two-point locking hardware operated by 180 degree turn of handle between each pair. Face applied flush bolt locking not acceptable.

\*\* NOTE TO SPECIFIER \*\* Delete handles option not required.

* + - * 1. Handles: Manufacturer's standard.

\*\* NOTE TO SPECIFIER \*\* Delete handle finish option not required.

Handle Finish: Brushed satin stainless steel.

Handle Finish: Black titanium stainless steel.

Handle Finish: Brown nylon.

Handle Finish: Gray nylon.

Handle Finish: White nylon.

* + - * 1. Handles: Removable custodial handles.
      1. Handle Height: 41-3/8 inch (105 cm) centered from bottom of panel unless otherwise indicated on Drawings.
      2. Locking Rods: End caps top and bottom; Rod Stroke: 15/16 inch (24 mm).

\*\* NOTE TO SPECIFIER \*\* Delete additional profile cylinders option not required.

* + - 1. Additional Profile Cylinders: Keyed alike.
      2. Additional Profile Cylinders: Keyed differently.
    1. Sliding-Folding Hardware: Combination with top and bottom tracks and threshold. Running carriages with sealed, self-lubrication, ball bearing multi-rollers. Surface mounted hinges and running carriages not acceptable. Weight of panels borne by bottom of guide channel in sill is not acceptable.
       1. Lower Running Carriage Carrying Capacity: 440 lbs. (200 kgs).
       2. Upper guide carriage and lower running carriage provided with four vertical stainless-steel wheels and two horizontal polyamide wheels.
       3. Vertical wheels to ride on top of stainless-steel guide track covers over the full length of the sill track and lie above the water run-off level.
       4. Wheels riding below water run-off level and wheels riding on aluminum surfaces are not acceptable.
       5. Swing Panel Hinges:

\*\* NOTE TO SPECIFIER \*\* Delete finish option not required. Finishes to match are closest matches available by the manufacturer. Review for acceptability.

* + - * 1. Finish: Zinc die cast with finish closest match to finish of frame and panels and stainless-steel security hinge pins with set-screws, standard.
        2. Finish: Stainless-steel hinges and security hinge pins with set-screws.
      1. Adjustment: Folding-sliding hardware capable of compensation and adjustments without needing to remove panels from tracks, in width, 1/16 inch (1.5 mm) per hinge and in height, 5/64 inch (2 mm) up and down.

\*\* NOTE TO SPECIFIER \*\* Weather stripping is determined at factory based on design requirements.

* + 1. Weather Stripping: Manufacturer�s double layer EPDM between panels and EPDM gasket and Q-Lon gasket or brush seal between panel and frame or brush seals with two-layer polyamide fin attached to inner and outer edge of door panels with a recessed sill or on frame for sealing between panels and between panel and frame.
       1. UniverSILL: For outswing low profile saddle sill, UniverSILL gasket add on available for additional air and water protection.
    2. Fasteners: Tapered pins and stainless-steel screws for connecting frame components.
    3. Accessories: Sidelights, transoms, corner posts, or single or double doors as indicated.

1. EXECUTION
   1. EXAMINATION AND PREPARATION
      1. Examine surfaces of openings and verify dimensions. Verify openings are level, plumb, and square, with no unevenness, bowing, or bumps on floor.

\*\* NOTE TO SPECIFIER \*\* Prior to installing, it is recommended building dead loads be applied to header prior to installing 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 requirements of L/720 or 1/4 inch (6 mm). If not, dead and live loads need to be considered. Similar structural support is needed for stacking bays and any upper track leading to it. Structural support for lateral loads such as forced entry, etc. needs to be provided.

* + - 1. Because of large dimensions involved and weight and movement of panels, verify structural integrity of header; maximum deflection with both live and dead loads to be the lesser of L/720 of span or 1/4 inches (6 mm).
      2. Structural support for lateral loads, wind load, and eccentric load when panels are stacked open.
    1. Prepare openings using methods recommended by manufacturer for achieving the best result for the substrate under the project conditions.
       1. If preparation is the responsibility of another installer, notify Architect in writing of deviations from manufacturer's recommended installation tolerances and conditions.
    2. Do not proceed with installation until substrates are prepared using methods recommended by manufacturer and deviations from manufacturer's recommended tolerances are corrected. Commencement of installation constitutes acceptance of conditions.
  1. INSTALLATION
     1. Install per Drawings, submittals, and manufacturer's installation instructions.
        1. Properly flash, seal and waterproof around perimeter of opening.
        2. Attach anchorage devices in place, level, straight, plumb and square. Install frame in proper elevation, plane and location, and in proper alignment with other work.
        3. When lower track is designed to drain, provide connections to allow for drainage.
        4. Install panels, handles, lockset, screens and other accessories in accordance with manufacturer's recommendations and instructions.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Finishing: Field finish under Division 9; seal and finish promptly after installation and prior to exposure to weather in accordance with manufacturer recommendations.
    2. Insect Screens: Install per manufacturer's recommendations and installation instructions.
  1. FIELD QUALITY CONTROL
     1. Field Inspection: Coordinate in accordance with appropriate sections in Division 01.
     2. Verify system operates and functions properly. Adjust hardware for proper operation.
     3. Non-Conforming Work: Repair or replace non-conforming work as directed by the Architect; see General and Supplementary Conditions, and Division 01, General Requirements.

\*\* NOTE TO SPECIFIER \*\* Include if manufacturer provides field quality control with onsite personnel for instruction or supervision of product installation, application, erection or construction. Delete if not required.

* + 1. Manufacturer's Services: Coordinate manufacturer's services in accordance with appropriate sections in Division 01.
  1. CLEANING AND PROTECTION
     1. Protect installed products until completion of project. Keep units closed and protect installation against damage from construction activities.
     2. Remove protective coatings. Use manufacturer recommended methods to clean surfaces.

END OF SECTION