SECTION 10 22 45

1. WOOD FRAMED Sliding GLASS Partitions
2. SECTION 10 22 43
3. SLIDING GLASS PARTITIONS

# **GENERAL**

## SUMMARY

### Section includes furnishing and installing a wood framed single track, sliding glass, or wood panel door, wall or partition panel system that includes:

#### Wood frame

#### Tracks

#### Threshold

#### Sliding panels

#### Swing panels

#### Parking bays

#### Sliding-swinging and locking hardware

#### Sound gasketing

#### Glass and glazing

#### Accessories as required for a complete working installation

### 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:

#### Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 General Requirements, Specification Sections, apply to this Section

#### Section 06 10 00, Rough Carpentry: Wood framing R.O. and blocking

#### Section 06 20 00, Finish Carpentry

#### Section 07 90 00, Joint Protection

#### Section 08 42 23, Glass Entrance Swing Doors

#### Section 08 43 31, Wood Framed Sliding Glass Partitions: NanaWall HSW66

#### Section 08 52 00, Wood Windows: NanaWall WD68, tilt-turn, casement window

#### Section 09 22 16, Non-Structural Metal Framing: Metal framing R.O. and reinforcement

#### Section 10 22 41, Wood Framed Folding Glass Partitions: NanaWall WD65

#### Section 10 22 41, Wood Framed Folding Glass Partitions: NanaWall NW Acoustical 545

## REFERENCES

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

#### AAMA. American Architectural Manufacturers Association; www.aamanet.org

##### AAMA 611, Voluntary Specification for Anodized Architectural Aluminum

##### AAMA 1304, Voluntary Specification for Forced Entry Resistance of Side-Hinged Door Systems

##### AAMA/WDMA/CSA 101/I.S.2/A440, NAFS, North American Fenestration Standard -Specification for Windows, Doors, and Skylights

#### ANSI. American National Standards Institute; www.ansi.org

##### ANSI Z97.1, Safety Performance Specifications and Methods of Test for Safety Glazing Material Used in Buildings

#### ASTM. ASTM International; www.astm.org

##### ASTM C1036, Standard Specification for Flat Glass

##### ASTM C1048, Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass

##### ASTM E413, Classification for Rating Sound Insulation

##### ASTM E1332, Standard Classification for Rating Outdoor-Indoor Sound Attenuation

##### ASTM E2068, Standard Test Method to Determine the Opening and Breakaway Forces of Sliding Windows and Doors

#### CPSC. Consumer Product Safety Commission; www.cpsc.gov

##### CPSC 16CFR-1201, Safety Standard for Architectural Glazing Materials

#### CSA Group (Canadian Standards Association); www.csagroup.org/global/en/home

##### CSA A440S1 - The Canadian supplement to North American (NAFS) standards

## ADMINISTRATIVE REQUIREMENTS

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

### Preinstallation Meetings: See Section 01 30 00.

## SUBMITTALS

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

### Product Data: Submit manufacturer’s printed product literature for each Sliding Glass Storefront 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.

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

### Installation, Operation, and Maintenance Data: Submit Owner’s Manual from manufacturer. Identify with project name, location, and completion data, and type and size of the unit installed.

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

### Sustainable Design Submittals (USGBC [LEED](https://www.epa.gov/sites/production/files/2014-03/documents/018113_0.pdf)®): Refer to Section 01 81 15, LEED Design Requirements.

#### **LEED 2009** (v3) Credits. Complete online LEED forms and submit other required materials as follows:

##### Materials and Resources (MR) Credits:

###### MR Credit 1.1 (MRc1.1): Building Reuse - Maintain Existing Exterior Walls, Floors, and Roof

###### MR Credit 1.2 (MRc1.2): Building Reuse - Maintain Existing Interior Nonstructural Elements

###### MR Credit 2 (MRc2): Construction Waste Management

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

###### MR Credit 3: Materials Reuse - 5% (MRc3.1) or 10% (MRc3.2)

##### Indoor Environmental Quality (EQ) Credits:

###### IEQ Credit 2 (IEQc2): Increased Ventilation - Case 2 - Naturally Ventilated Spaces

###### IEQ Credit 8.1 (IEQc8.1): Daylight & Views - Daylight 75% of Spaces

###### IEQ Credit 8.2 (IEQc8.2): Daylight & Views - Views for 90% of Spaces

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

##### Energy and Atmosphere (EA) Credits:

###### EA Credit 2 (EAc2): Optimize Energy Performance

##### Materials and Resources (MR) Credits:

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

###### MR Credit 1 (MRc1): Building Life-Cycle Impact Reduction; Option 3 - Building and Material Reuse.

##### Indoor Environmental Quality (EQ) Credits:

###### EQ Credit 7 (EQc7): Daylight

###### EQ Credit 8 (EQc8): Quality Views

###### EQ Credit 9 (EQc9): Acoustic Performance

Submit calculations or measurements for occupant spaces to meet sound transmission class ratings between adjacent spaces and reverberation time requirements within a room.

### LEED Closeout Documentation:

NOTE: Edit below to meet project LEED requirements.

#### **LEED 2009** (v3). Submit completed LEEDTM submittal Worksheet Templates for the following credits:

##### MRc1.1, MRc1.2, MRc2, MRc3, MRc6, IEQc2, IEQc8.1, IEQc8.2

#### **LEED v4** (ID&C**).** Submit information and documentation to complete LEEDTM Worksheet Templates for the following credits:

##### EAc2, MRc1, EQc7, EQc8, EQc9

## QUALITY ASSURANCE

### Manufacturer Qualifications: Manufacturer capable of providing complete, precision built, engineered, pre-fitted units with thirty five (35) years’ experience in the sale of folding-sliding door systems for large openings in the North American market.

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

#### Manufacturer to have ISO 14001: 2015 environmental management system registration.

### 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.

#### Installer to be trained and certified by manufacturer.

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

## DELIVERY, STORAGE, AND HANDLING

### Comply with manufacturer’s instructions and recommendations, Section 01 60 00 requirements, and as follows:

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

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

#### Condition wood components to average prevailing relative humidity before installation. Do not subject wood components to extreme nor rapid changes in heat or humidity.

#### Do not use forced heat to dry out building.

#### Store flat in a well-ventilated area out of direct sunlight 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.

## FIELD CONDITIONS

### Field Measurements: Contractor to field verify dimensions of rough openings (R.O.), stack storage area, [ **floor bolt socket locations** ] [ **and threshold depressions to receive sill.** ] Mark field measurements on product drawing submittal.

## WARRANTY

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

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

##### Rollers and Insulated Glass Seal Failure: Ten (10) years

##### All Other Components Except Screens: Ten (10) years

###### Exception: Five (5) years if NOT installed by manufacturer's specific system approved or certified trained installer.

# **PRODUCTS**

## MANUFACTURERS

### Basis-of-Design Product by Manufacturer: **NanaWall** **HSW66** by **NANA WALL SYSTEMS, INC.** ([www.nanawall.com](http://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

#### Substitution Procedures: See Section 01 20 00; Submit completed and signed:

##### Document 00 43 25, Substitution Request Form (During Procurement), or

##### Document 00 63 25, Substitution Request Form (During Construction)

## PERFORMANCE / DESIGN CRITERIA

NOTE: Forced entry testing results are only applicable for the test unit type of locking.

 See manufacturer’s latest published data regarding performance.

### Performance Criteria (Lab Tested):

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

#### Forced Entry - 300 lb. (1330 N) point load (AAMA 1304): Pass

### LEED Characteristics:

#### **LEED 2009** (v3)

##### MRc1.1: *NanaWall* exterior glass wall systems, not demolished in a renovation project, are reused in the same location.

##### MRc1.2: *NanaWall* interior glass wall systems, not demolished in a renovation project, are reused in the same location.

##### MRc2: *NanaWall* cardboard shipping crates are made of 60% recycled material and are 100% recyclable.

##### MRc3: *NanaWall's* components easily disassemble and reassemble to "*Use* as *salvaged... or reused materials*."

##### IEQc2: *NanaWall* systems provide natural ventilation in the open position, assisting in the 90% required natural ventilation of occupied spaces of ASHRAE 62.1.

##### EQc8.1: *NanaWall* glass wall assembly borrowed light brings daylight deeper into the floor plate.

##### EQc8.2: *NanaWall* glass wall assemblies provide direct outdoor lines of sight.

#### **LEED v4 for Interior Design and Construction** (ID&C)

##### EAc2: *NanaWall* systems using low U-Value designed double or triple IGU and thermally/ acoustically broken frames can provide significant energy performance.

##### MRc1: *NanaWall* can be easily disassembled for salvage and reuse.

##### EQc7: *NanaWall* glass wall assembly borrowed light brings daylight deeper into the floor plate.

##### EQc8: *NanaWall* glass wall assemblies provide direct outdoor lines of sight.

### Design Criteria:

#### Sizes and Configurations: As indicated by the drawings for selected number and size of panels, location of swing panels, and location of tracks and parking bays.

#### Unit Operation: Adjustable sliding type; sliding and swing hardware with top and bottom tracks.

#### Panel Configuration:

##### [ Straight ]

##### [ Segmented curve ]

##### [ 90º angle turn ]

##### [ 135º angle turn ]

##### [ Window/ door combination ]

#### Stack Storage Configuration:

##### [ Remote pocket ]

##### [ Jamb wall ]

##### [ Behind swing door ]

##### [ Straight wall ]

##### [ Jamb wall pocket(s) ]

NOTE: Sizes and Configurations: <https://www.nanawall.com/resources/hsw66>

 See manufacturer drawings for selected custom dimensions within maximum frame sizes possible as indicated in manufacturer’s literature.

 See drawings for selected number of panels and configuration.

#### Mounting Type: Top-hung

#### Panel Type: Multiple unattached

##### [ with Entry/Egress panel hinged to side jamb. ]

##### [ with Entry/Egress panel attached to last sliding panel going into a stack. ]

## MATERIALS

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

#### Provide clear anodized aluminum head track with [ **aluminum** ] [ **wood fascia** ] covers on both sides that match finish.

#### Panels and Frames:

##### Panels:

###### Single lite.

NOTE: Single lite above is standard; other options below may require an upcharge.

 Refer to manufacturer's size chart for glass panel sizes requiring the use of horizontal mullions.

###### [ Multiple lites with horizontal mullion(s) at height(s) indicated from the bottom of the panel. ]

###### [ Single lite with simulated divided lites in pattern indicated. ]

###### [ Solid wood ]

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

NOTE: Maximum panel sizes up to 10' 0" by 3' 3" (3.05 m by 1 m) for swing panels and 4' 6" (1.385 m) wide for sliding panels.

 Panels over 8' 4" (2.54 m) high require an intermediate horizontal mullion.

###### Rail Depth: 2-5/8 inch (66 mm)

###### Top Rail Width: 3-3/4 inch (93 mm)

###### Bottom Rail Width:

3-3/84 inch (93 mm)

[ Manufacturer’s standard kickplate with height indicated. ]

NOTE: Indicate kickplate height. Select height between 6 and 12 inches (152 and 305 mm) high.

##### Frames:

###### Top Track Depth: 3-15/16 inch (100 mm)

###### Top Track Width: 4-1/2 inch (115 mm)

###### Side Jambs Width: 1-9/16 inch (40 mm)

NOTE: Select from the following Sill Types, edit to suit, and delete those not meeting project requirements.

##### Sill Type:

###### [ Low profile saddle sill (thermally broken) ]

###### [ Standard flush sill (thermally broken) ]

###### [ No sill, floor sockets without a floor track ]

###### [ Surface mounted interior sill for interior application ]

###### Finish: Aluminum with a [ **clear** ] [ **dark** **bronze** ] anodized finish

#### Top Track: Aluminum Extrusion with wood clad with thermal isolating polyamide connectors.

##### Alloy: AIMgSi0.5; 6063-T5 (F-22 - European standard)

##### Thickness: 0.078 inch (2.0 mm) nominal

##### Finish (AAMA 611): Clear, anodized

#### Wood: Cross-grained, solid, triple laminated wood with mortise and tenon, and glued and pinned corners.

NOTE: Sapeli Mahogany is LEED credit qualified. Others available upon request.

##### Species:

###### [ Sapeli Mahogany ]

###### [ European Pine ]

###### [ Red Grandis ]

###### [ Western Hemlock ]

###### [ Meranti ]

NOTE: Below listed wood options may require an upcharge. Maple and Cherry available for interior application only.

###### [ European Oak ]

###### [ Maple ]

###### [ Cherry ]

##### Wood Finish: See Section 09 90 00; Water-based, open pore with

###### [ clear sanding sealer for stain. ]

###### [ base coat applied for paint. ]

NOTE: Before installation, field finish units with a minimum two coats for final protective finish.

### Glass and Glazing:

#### Safety Glazing: In compliance with ASTM C1036, ASTM C1048, ANSI Z97.1 and CPSC 16CFR 1201.

##### Glass Acoustical Performance (ASTM E413 and ASTM E1332): STC

NOTE: Unlike wet glazing, NanaWall's standard dry glazing method helps reduce instances of seal failure.

#### Manufacturer’s [ **tempered** ] [ **and** ] [ **laminated** ] glass lites in [ **single** ] [ **double** ] insulated glazing units, dry glazed with glass stops on the inside.

NOTE: Select and edit glass type(s) to meet building code, 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.

##### Glass Lite / Insulated Glass Unit (IGU):

###### Single: [ 1/4 inch (6 mm) thick. ]

###### Double IGU: [ 15/16 inch (24 mm) thick. ]

NOTE: Subparagraphs below are options for Double and Triple IGU items above.

###### IGU Fill: Air filled

###### Glass Lite Type:

Standard (Light Transmission LT 89%)

NOTE: Items below are options and may require an upcharge.

[ Low iron (Light Transmission LT 91%) ]

[ Solar bronze ]

[ Solar gray ]

###### Glass Spacers: Manufacturer’s standard

[ silver gray finish with capillary tubes ]

[ black finish with capillary tubes ]

[ silver gray finish without capillary tubes ]

[ black finish without capillary tubes ]

###### IGU Surface: Clear

### Locking Hardware and Handles:

NOTE: Select one of the below Main Entry Panel paragraphs WITH or WITHOUT Swing Panels, deleting all others. Edit to suit project requirements.

#### Main Entry Panel(s) for Models WITH a [ **Pair of** ] Swing Panel: Provide manufacturer’s [ **Standard lever handles** ] or [ **Lever handles with return** ] on the inside and outside, and a lockset with a lockable latch and multi-point locking with a dead bolt and rods at the top and bottom on primary panel [ **only** ].

NOTE: Locking is independently tested for structural, air, water, and forced entry.

##### Locking:

###### Standard European profile cylinder

###### [ Adapter accommodating a 5-7 pin Small Format Interchangeable Core (SFIC) (SFIC core supplied by others) ]

##### Rods to be concealed and not edge mounted.

##### After turn of key or thumb-turn, depression of handles withdraws latch.

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

##### Lever Handle - Finish:

###### Brushed satin stainless steel

###### [ Black titanium stainless steel ]

NOTE: Handles above are standard; optional handle types below may require an upcharge. Lever handle with return only available in "Brushed satin stainless steel."

###### [ Oil rubbed bronze solid brass ]

###### [ Satin nickel solid brass ]

###### [ White solid brass ]

#### Main Entry Panel(s) for Models WITH Swing Panel(s): Provide manufacturer’s push-pull handles with separate lockset and dead bolt.

##### Locking:

###### Standard European profile cylinder

###### [ Adapter accommodating a 5-7 pin Small Format Interchangeable Core (SFIC) (SFIC core supplied by others) ]

##### Push-pull handles in a brushed stainless-steel finish and stainless steel flat handles in a [ **brushed satin finish.** ] [ **black titanium finish.** ]

NOTE: Option below is recommended with a door closer but note that this will not be possible for a swing panel on a Swing-Slide unit.

#### Main Entry Panel(s) for Models WITH [ **a** ] Swing Panel(s): No hardware or locking provided by manufacturer; Field installed panic device by Section 08 71 00 prepped for commercial application.

NOTE: Using panic device hardware by others invalidates manufacturer's design wind-load pressure test.

##### Panic hardware (prepped, supplied, and installed by others):

###### [ Von Duprin 33/35A Series Narrow Stile Rim Exit Device ]

#### Sliding Panel to be Opened First for Models WITHOUT a Swing Panel: Provide manufacturer’s standard L-shaped handle on the inside, flat handle on the outside, and lock set with profile cylinder. Operation of 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 180º turn of the handle.

##### L-Shaped Handles - Finish:

###### Brushed satin stainless steel

###### [ Black titanium stainless steel ]

NOTE: Key operation from the inside for the option below may not meet egress requirements. Locking is independently tested for structural, air, water, and forced entry.

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

#### Main Entry Panel: Provide manufacturer’s standard flat handle on inside only with concealed two-point locking hardware operated by 180º turn of handle.

NOTE: With option above the main entry panel is operable from inside only and that there is no

 latch. Other compatible lever, L-shaped, and push-pull handle styles and finishes are

 available from other suppliers.

#### Secondary Panels: Provide manufacturer’s [ **Standard flat handles** ] [ **Removable custodial handles** ] and concealed one or two-point locking hardware operated by 180º turn of handle.

NOTE: Flat handles are standard. Removable custodial handles may require an upcharge.

##### Flat Handle - Finish:

###### Brushed satin stainless steel

###### [ Black titanium stainless steel ]

NOTE: Handles above are standard; optional handle types below may require an upcharge.

###### [ Dark brown powder coated ]

###### [ Sliver gray powder coated ]

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

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

#### Additional profile cylinders to be [ **keyed alike.** ] [ **keyed differently.** ]

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

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

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

##### Hinges - Swing Panel:

###### Clear anodized aluminum

NOTE: Finish above is standard; finish option below may require an upcharge.

###### [ Dark bronze anodized aluminum ]

NOTE: The manufacturer's sound gasketing is determined at the factory by the direction of swing, the panel configuration, the type of locking, and the type of sill.

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

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

## FABRICATION

### Extruded aluminum head and threshold frame profiles, solid triple-laminated wood side jamb profiles, tracks, parking bays, with male-female interlocking solid triple-laminated wood panel profiles, hinges, sliding/swinging hardware, locking hardware and handles, glass and glazing, and sound gasketing components to construct a single track sliding opening glass wall.

#### Wood frame and panel members to be sealed with a clear sand sealer or primer.

#### Each unit factory pre-assembled and shipped with all components and installation instructions.

#### Exposed work to be carefully matched to produce continuity of line and design with all joints.

#### No raw edges visible at joints.

## ACCESSORIES

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

# **EXECUTION**

## EXAMINATION

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

#### Carefully examine rough openings with Installer present, for compliance with requirements affecting Work performance.

##### Verify that field measurements, substrates, tolerances, levelness, plumbness, cleanliness and other conditions are as required by the manufacturer, and ready to receive Work.

##### Verify the structural integrity of the header for deflection with live and dead loads limited to 1/4 inch (6 mm). Provide structural support for lateral loads, and both wind load and eccentric load when the panels are stacked open.

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

## INSTALLATION

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

#### Properly seal around opening perimeter.

#### Securely attach anchorage devices to rigidly fit frame in place, level, straight, plumb, and square. Install frame in proper elevation, plane and location, and in proper alignment with other work.

#### Install panels, handles, lockset, sound gasketing, and other accessories in accordance with manufacturer’s recommendations and instructions.

## FIELD QUALITY CONTROL

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

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

### Non-Conforming Work: Repair or replace non-conforming work as directed by the Architect; see General and Supplementary Conditions, and Division 01, General Requirements.

## CLEANING AND PROTECTION

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

### 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.

 [www.nanawall.com](file:///C%3A%5CUsers%5Caalia.ismail%5CDropbox%20%28NanaWall%29%5CSpecs%202019%5CPublished%20FINALS%20%5B2019%5D%5Cwww.nanawall.com)