**FEBRUARY 2015**

**Notes to Specifier — 2 ¾" Wall Windborne Debris Panel (Panel Unit) Specification**

Specifier- please consult Kalwall for assistance at [info@kalwall.com](mailto:info@kalwall.com) or 1-800-258-9777. Some specification choices are very involved and should require consultation in order for the project's performance to be as desired by the Owner and Architect.

Note: Panels may be factory unitized (called panel units) with optional Large Missile Impact E-Series windows.

**1.1 SUMMARY**

1.1.A. Specifier: indicate components appropriate for the project listed in the Summary. DELETE references not required.

1.1.A.4. Thermal break windows. Refer to section 2.5 and Fact Sheet for optional Large Missile Impact [E-Series windows](http://www.kalwall.com/spec/eseries.htm)

1.1.B. Related Sections. ENTER any and all sections that may affect this spec.

**1.2 SUBMITTALS**

1.2.E.1.r. Standard Test Method for Performance of Exterior Windows, Curtain Walls, Doors, and Impact Protective Systems Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials and Standard Specification for Performance of Exterior Windows, Curtain Walls, Doors, and Impact Protective Systems Impacted by Windborne Debris in Hurricanes.

1.2.E.1.s. [LEED](http://www.kalwall.com/spec/leed-wall-spec.doc) submittal requirements need to be written in consultation with manufacturer for accuracy.

1.2.E.1.t. Daylight Autonomy Report submittal requirements need to be coordinated with manufacturer prior to final specification. Large projects should be modeled to assist in achieving desired results. [More information about Daylight Modeling](http://www.daylightmodeling.com).

**1.4** **PERFORMANCE REQUIREMENTS**

1.4.A.3.a./b. ENTER any and all loads required for structural design in PSF, not wind speed.

1.4.A.3.c. In seismically active areas, provide SDS and IP (from structural drawings). Delete if not required.

1.4.B. Refer to [Windborne Debris Resistance – Hurricane Prone Regions](http://www.kalwall.com/spec/windborne-region.htm) for information needed to determine Missile Impact Requirements: Level of Protection, Wind Zone and Elevation above grade determine required missile. More than one type may be required on a project (walls and roofs may vary).

**1.6** **WARRANTY**

1.6.B. Extended warranties may be available depending on project design, scope, location and exposure. Consult manufacturer; all additional cost. Options are:

* Up to 5 year Materials and Workmanship.
* Up to 10 year Limited Warranty covering separation of faces from grid core, and/or abnormal color change of the exterior face.
* Up to 20 year Limited Warranty against reinforcing fiberbloom.

Extended Warranties will not apply to all systems, designs, or applications. Please consult manufacturer.

**2.2 PANEL COMPONENTS**

2.2.A.2.a. Flame Spread

* Specify 50 for the standard panel, which meets IBC Class B Interior Finish requirements for most building spaces.
* Specify 25 which meets IBC Class A, which may be required in unsprinklered, occupied spaces -see IBC Chapter 8.

ENTER 50 or 25

2.2.A.4.a. Appearance exterior face sheets

* Missile D: ENTER .060” Hurricane Hi-impact (thick) and white (color).
* Missile C: ENTER .052” Hi-Impact (thick) and white (color).
* Missile A: ENTER .070” (thick) and white or crystal (standard color) or Kal-Tints (optional color).

CAUTION: Face colors affect solar properties. View [Light Transmission/SHGC Chart](http://www.kalwall.com/spec/lt-shgc.htm). Best to confer with Kalwall.

2.2.A.4.b. Appearance interior face sheets

* Standard interior faces, either flame spread, are .045” thick in white or crystal.
* Optional Hi-Impact face is .052” thick in white only.

ENTER 0.045” or 0.052” and appropriate color

2.2.B.1. The grid core may be aluminum or a thermally broken composite of aluminum and fiberglass for maximum thermal efficiency for flat panels only.

ENTER Aluminum or Thermally Broken Composite

**2.3 PANEL CONSTRUCTION**

2.3.A.2./3./4. Light Transmission, Solar Heat Gain Coefficient (SHGC) and panel U-factor are closely linked and must be specified accordingly. [View Light Transmission/SHGC Chart](http://www.kalwall.com/spec/lt-shgc.htm).

ENTER appropriate values for each

Furthermore, light transmission needs to be carefully chosen to meet the daylighting expectations of the owner to avoid too much light with resulting unwanted glare and overwhelming solar heat, or too little light to be useful. Kalwall offers a modeling service – see [www.DaylightModeling.com](http://www.DaylightModeling.com), which should be performed and agreed upon prior to final design and specification.

DELETE grid type (thermally broken or aluminum) not used in 2.3.A.4.

2.3.A.5. Panel U-factors specified above are for just the panel itself. The National Fenestration Rating Council has established standardized procedures for comparing fenestration systems based on a complete installed system. View the [NFRC Certified Systems values chart](http://www.kalwall.com/spec/nfrc.htm) for most Kalwall systems. In order to find the appropriate value, specifier must know the properties of the panel specified above as well as the nature of the installation system for the project**. (.05 U-factor not available for Windborne Debris Panel)**

ENTER the NFRC Certified System U-value

2.3.A.6. Grid Pattern

Nominal size is 12” x 24” vertically oriented along the panel length, called Shoji pattern. Other common sizes are 8” x 20”; Square patterns, called Tuckerman - commonly 8” x 8” or 12” x 12”; custom sizes and patterns offered.

ENTER Nominal grid size(s) and Pattern

Caution, span charts are based on 12” x 24”, other patterns affect span capability. Contact Kalwall regarding other patterns such as Reverse Shoji.

**2.4** **BATTENS AND PERIMETER CLOSURE SYSTEM**

2.4.A. Closure System ENTER Standard or Thermally Broken

Note: There are several alternative system designs with varying structural, thermal and aesthetic properties and have substantial cost impact; including:

* Back Fasten Closure System
* Wide Battens
* Structural Battens
* Concealed Fasteners

Specifier will want to refer to drawings in this case.

2.4.D. Finish

The standard finish for the perimeter system is factory applied paint in 13 standard colors meeting the performance requirements of AAMA 2604. View the [color chart](http://www.kalwall.com/colorchip.htm).

ENTER Kalwall KCRF color and number

Options are anodized or unfinished “mill”. Alternate finishes are discouraged due to cost and delivery delay, but may be available for specific projects.

DELETE Finish not selected

**2.5** **WINDOWS (OPTIONAL)**

DELETEsection if windows are not an option.

2.5.E.2. ENTER Glazing Specification

2.5.G. Insect Screens

ENTER shall or shall not