MASONRY SUBSTRATE

NON-NAILABLE SUBSTRATE

NAILABLE SUBSTRATE

12" TO 16"

16" TO 24"

COMPONENTS

• located 16" to 24" o.c.

• metal or wood

• pre-formed concrete

• CMU (block)

• exterior gypsum board

• OSB - 1/2" (min) recommended

• plywood - 1/2" (min) recommended

Recommended for this system.

• fl atness tolerance is 1/4" in 20'-0"

• plastic shims recommended

• fastened 12" to 16" along length

• located 16" to 24" o.c.

• metal (hat channels, z-girts) or wood

• fastened 12" to 16" along length

• located 16" to 24" o.c.

• for panels 36" x 36" or larger

• 3/8" bead x 2/3 panel height

• located 16" to 24" o.c.

Contact Citadel for current list.

An approved adhesive must be used.

NOTE: Combine both SECTION and SUBSTRATE

L

• molding - 12" to 16" along length

• panel - secured by sealant/adhesive

B

C

G

A

SinoCore®

TECHNICAL MANUAL

• System Assembly

• Substrates Layout

• SAR-Installation Details

• Physical Properties

• Performance Properties

Lightweight Cladding
In an Easy-To-Install System

STANDARD SIZES

- 48" x 120" (121.9cm x 304.8cm)
- 48" x 96" (121.9cm x 243.8cm)
- 60" x 144" (152.4cm x 365.8cm)
- 60" x 120" (152.4cm x 304.8cm)
- 60" x 96" (152.4cm x 243.8cm)

- Cut-to-size panels are available in any increment up to 60" x 144".

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MASONRY SUBSTRATE
NON-NAILABLE SUBSTRATE
NAILABLE SUBSTRATE

16" TO 24"

B
A
G
16” TO 24”

R
Q
U
P
L
X3
X2
X1
Z

COMPONENTS

• located 16" to 24" o.c.
• metal or wood

• pre-formed concrete
• CMU (block)

• exterior gypsum board
• OSB - 1/2" (min) recommended
• plywood - 1/2" (min) recommended

• flatness tolerance is 1/4" in 20’-0”
• plastic shims recommended

• fastened 12” to 16” along length
• located 16” to 24” o.c.

• 16ga (min) recommended
• fastened 12” to 16” along length
• 22ga (min) recommended
• 1-1/2” (min) x 2/3 panel height
• located 16” to 24” o.c.

• for panels 36” x 36” or larger
• 3/8” bead x 2/3 panel height
• located 16” to 24” o.c.

Contact Citadel for current list.
An approved adhesive must be used.

NOTE: Combine both SECTION and SUBSTRATE

Citadel Architectural Products, Inc. (800) 446-8828  |  www.citadelap.com

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SinoCore® is a registered trademark of Citadel Architectural Products, Inc.
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Indianapolis, Indiana  46226
3131-A North Franklin Road
Non-Nailable Substrate

Nailable Substrate

Air/Moisture Barrier

Shim (not shown)

Furring

Field Strapping

Construction Adhesive

Fastener

One Piece Molding

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Indianapolis, Indiana  46226

3131-A North Franklin Road

Citadel Architectural Products, Inc.

Min. Radius Factory: 12”

Min. Radius On-Site: 25’ (most applications)

Panels With Smooth Face

Post-Industrial: 33.4% to 36.3%

Panels With Textured Face

Post-Industrial: 23.0% to 26.8%

Post-Consumer: 1.0%

RECYCLED CONTENT (BY WEIGHT)

Polyester Finishes: 5 years

Anodized Finishes: 20 years

Panel Composition: 5 years

WARRANTY

In any increment up to 60” x 144”.

Cut-to-size panels are available

in any increment up to 60” x 144”.

60” x 144” (152.4cm x 365.8cm)

60” x 120” (152.4cm x 304.8cm)

60” x 96” (152.4cm x 243.8cm)

48” x 144” (121.9cm x 365.8cm)

48” x 120” (121.9cm x 304.8cm)

48” x 96” (121.9cm x 243.8cm)

Multiple Standard Sizes

Contact Citadel for current list.

An approved adhesive must be used.

A light weight cladding in an easy to install system.

Technical Manual

Performance Properties

Physical Properties

Substrate Layouts

System Assembly

Batten Profiles

Reveal Profiles

MOLDINGS / EXTRUSIONS PROPERTIES

BATTEN PROFILES

REVEAL PROFILES

Flatness

Squareness

Length & Width Tolerance

Thickness Tolerance

Nominal Thickness

Panel Weight

Property

Standard (in)

Metric (mm)

Value

Unit

0.20 mil to 0.45 mil (depending on color)

0.20 mil primer + 0.80 mil color + 0.70 mil clear

0.20 mil primer + 0.80 mil color

0.80 mil color

±0.79mm

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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<tr>
<td>Flatness</td>
<td>1/64” per lineal ft</td>
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<tr>
<td>Squareness</td>
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<tr>
<td>Length &amp; Width Tolerance</td>
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<tr>
<td>Thickness Tolerance</td>
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Performance Properties

Technical Manual

• System Assembly

• Substrate Layouts

• GAC-Applications/Details

• Physical Properties

• Performance Properties
LAYOUT AND INSTALLATION

1: Parapet

• Horizontal/vertical bead applied to the substrate to the face line of the panel at intermediate locations.
• The length of this bead should extend to the panel height at intermediate locations.
• Construction adhesive secures the field mounted panels to the substrate.
• The substrate should be selected based on the architect’s preference.
• The substrate should have a minimum thickness of 1/2".

2A & 2B: Horizontal

• Metal flashing panel is mounted to the panel face with construction adhesive.
• Flashing panel edge for all linear penetrations.
• Moldings should be used to trim the substrate around the object.
• Moldings should be selected according to the architect’s preference.

3A & 3B: Base/Foundation

• Face assembly - if panels are mixing an impermeable deck at the windowhead and to ensure the finish, the assembly is to face the lateral and waterproofing of the building.
• Jamb Wall - designed to be completely waterproofer to the elements.

DESCRIPTION

• Color matched or painted a complimentary color
• Step in a sequential manner, moving up and across the elevation
• Gypsum and aluminum mixed to exact sizes across the outer material or surface conditionally cut

HORIZONTAL SECTIONS

3A: 3B: Mosser Corner

The corner molding to sit over the panel. The thickness of this molding may be increased. Each panel is to be positioned the same distance from the previous panel to ensure the integrity of the building.

3A: 3B: Corner

• 3/8" bead x 2/3 panel height
• Located 16" to 24" o.c.
• An approved adhesive must be used.

4A: 4B: Interface connection - Horz

• E-306 Horizontal/Vertical (Reveal)
• E-305 Drip Edge
• E-304 Perimeter J
• E-303 Inside Corner
• E-302 Outside Corner
• E-301 Jamb - Start
• E-300 Intermediate Connection - Horz
• E-299 Finish Corner
• E-298 Drip Cap
• E-297 Intermediate Connection - Vert
• E-296 Jamb - End
• E-295 System End
• E-294 Lifetime Edge

VERTICAL SECTIONS

7: Jamb - Start

• Furring strips are mounted directly behind the panel (not recommended for the wall) or held in place with visible fasteners (not recommended for the wall). The next panel in the sequence will be fastened to the previous panel.

8A: 8B: Vertical

• Same condition as the horizontal, the fan is mounted directly behind the panel (not recommended for the wall) or held in place with visible fasteners (not recommended for the wall). The next panel in the sequence will be fastened to the previous panel.

9: Jamb - End

• Same condition as the horizontal, the fan is mounted directly behind the panel (not recommended for the wall) or held in place with visible fasteners (not recommended for the wall). The next panel in the sequence will be fastened to the previous panel.

OUTSIDE CORNERS

10A & 10B: Outside Corner

The corner molding is bent to form the corner. As selected by architect to suit project requirements.

SYSTEM PENETRATIONS

Metal flashing panel is mounted to the face of the panel at intermediate locations. The substrate should be selected based on the architect’s preference.

NOTE: Combine both SECTION and SUBSTRATE drawings for a complete listing of components.

As selected by architect to suit project requirements.

Contact Citadel for current list.

Contact Citadel for current list.

An approved adhesive must be used.

An approved sealant must be used.

B6

B4

B2

B1

A

T

X

Foam Backer Rod

Construction Adhesive

Contact Citadel for current list.

Bond Breaker Tape

Silicone Sealant

E-306 Horizontal/Vertical (Reveal)

E-305 Drip Edge

E-304 Perimeter J

E-303 Inside Corner

E-302 Outside Corner

E-301 Jamb - Start

E-299 Finish Corner

E-298 Drip Cap

E-297 Intermediate Connection - Vert

E-296 Jamb - End

E-295 System End

E-294 Lifetime Edge

E-293 Lifetime Corner

E-292 Intermediate Connection - Horz

E-291 Finish Corner

E-290 Jamb - Start

E-289 Jamb - End

E-288 System End

E-287 Lifetime Edge

E-286 Lifetime Corner

E-285 Intermediate Connection - Horz

SinoCore®
LAYOUT AND INSTALLATION

**2A & 2B**

- **Horizontal Sections**
  - Metal framing member located 16" to 24" o.c. and oriented horizontally. The framing may be supported with a ledger and/or ledger board. Each framing member is oriented horizontally and may be supported at 16" o.c.
  - **Exterior Wall** - Horizontal (Reveal) - Panel is secured by sealant/adhesive. Use an approved adhesive. The adhesive spacing may be dependent upon the type of substrate the panel is to be applied to. Use an approved adhesive to secure the panel. The length of this bead should extend to the substrate to the cover a majority of the panel.
  - **Intermediate Connection** - Vertical - The length of this bead should extend to the face of the dissimilar material. A sealant joint should be used behind the cladding system. This molding may be applied to the horizontal, the vertical, or both horizontal and vertical sections.
  - **Intermediate Connection** - Horizontal - The panel should be aligned so that they are flush. If this is the last panel in the sequence, molding is held in place with sealant and adhesive. The next panel in the sequence begins at the left edge after sealant has been applied. For a dissimilar material, a sealant joint should be used behind the cladding system.
  - **Linear (Square or Rectangular)** - The last molding in the sequence will be bent to form the corner.

**3A & 3B**

- **Vertical Sections**
  - This molding is placed in the channel. As an option for non-standard corners (or for visual preference), the panels may be routed and bent to form the corner. However, if that is not possible, a proper panel edge for all linear penetrations should be used. Moldings should be used to trim the face of the panel.
  - **Intermediate Connection** - Vertical - The panel should be aligned so that they are flush. If this is the last panel in the sequence, molding is held in place with sealant and adhesive. The next panel in the sequence begins at the left edge after sealant has been applied. For a dissimilar material, a sealant joint should be used behind the cladding system.
  - **Linear (Square or Rectangular)** - The last molding in the sequence will be bent to form the corner.

**NOTE:** Combine both SECTION and SUBSTRATE project requirements.

**COMPONENTS**

- **SinoCore®**
- **E-306 Horizontal/Vertical (Reveal)**
- **E-305 Drip Edge**
- **E-304 Perimeter J**
- **E-303 Inside Corner**
- **E-302 Outside Corner**
- **E-301 Horizontal/Vertical**
- **E-300 Horizontal**
- **Fastener**
- **Bond Breaker Tape**
- **Silicone Sealant**
- **Construction Adhesive**
- **Foam Backer Rod**
- **Flash Beater Nail**
- **Flash Beater Rod**

Contact Citadel for current list.
1. Parapet — flashing is continued to the top of the wall to cover all linear penetrations.

2. Sill — flashing should be used to direct water away and prevent moisture intrusion. A drip edge molding is also recommended. A liner must be used behind the cladding system. This molding may be applied as a strip or held in place with visible fasteners (not shown) or held in place with sealant and adhesive.

3. Window Head & Sill — flashing extends from the base condition, flashing must be used to prevent moisture intrusion. A drip edge molding is also recommended. A liner must be used behind the cladding system. This molding may be applied as a strip or held in place with visible fasteners (not shown) or held in place with sealant and adhesive.

4. Jamb - Start — flashing should be used to direct water away and prevent moisture intrusion. A liner must be used behind the cladding system. This molding may be applied as a strip or held in place with visible fasteners (not shown) or held in place with sealant and adhesive.

5. Jamb - End — flashing should be used to direct water away and prevent moisture intrusion. A liner must be used behind the cladding system. This molding may be applied as a strip or held in place with visible fasteners (not shown) or held in place with sealant and adhesive.

6. Sill — similar to the horizontal, the vertical molding is bent to form the corner. The panels may be routed and non-standard corners (or for visual preference) inserted into the molding after sealant is applied. The corner molding is slid over the panel edge after sealant has been applied.

7. Intermediate Connection — horizontal: identical to the vertical connection. Vertical section connections may be used as a transition from horizontal to vertical when abutting non-standard materials. This molding is held in place with visible fasteners (not shown) or held in place with sealant and adhesive.

8. Vertical (Square or Rectangular) — flashing should be used to direct water away and prevent moisture intrusion. A liner must be used behind the cladding system. This molding may be applied as a strip or held in place with visible fasteners (not shown) or held in place with sealant and adhesive.

9. Round Connection — flashing should be used to direct water away and prevent moisture intrusion. A liner must be used behind the cladding system. This molding may be applied as a strip or held in place with visible fasteners (not shown) or held in place with sealant and adhesive.

10. Outside Corner — flashing should be used to direct water away and prevent moisture intrusion. A liner must be used behind the cladding system. This molding may be applied as a strip or held in place with visible fasteners (not shown) or held in place with sealant and adhesive.

11. Intermediate Connection — horizontal: identical to the vertical connection. Vertical section connections may be used as a transition from horizontal to vertical when abutting non-standard materials. This molding is held in place with visible fasteners (not shown) or held in place with sealant and adhesive.

12. Vertical (Square or Rectangular) — flashing should be used to direct water away and prevent moisture intrusion. A liner must be used behind the cladding system. This molding may be applied as a strip or held in place with visible fasteners (not shown) or held in place with sealant and adhesive.

13. Round Connection — flashing should be used to direct water away and prevent moisture intrusion. A liner must be used behind the cladding system. This molding may be applied as a strip or held in place with visible fasteners (not shown) or held in place with sealant and adhesive.

14. Linear (Square or Rectangular) — flashing should be used to direct water away and prevent moisture intrusion. A liner must be used behind the cladding system. This molding may be applied as a strip or held in place with visible fasteners (not shown) or held in place with sealant and adhesive.

**Horizontal Sections**
- Metal flashing serves as the primary component of a successful cladding system. This molding may be applied either to the exterior or interior of the building without disturbing the structural wall assembly. When installed to the interior of the building, the space between the metal extrusion and the adjacent wall assembly should be filled with sealant or adhesive.
- Metal extrusion used for the horizontal section is fabricated from 1/2" thick aluminum. To speed up installation, the extrusion molding is cut to meet the design requirements of the project at the factory. For projects requiring a dissimilar material, a sealant joint should be utilized to maintain system integrity.
- Transported to the job site as complete extrusions, the metal extrusion is bent to form the corner.
- A 3/8" bead x 2/3 panel height of construction adhesive secures the field assembled molding to the panel edge. The length of this bead should extend to 1/2" past the edge of the panel at intermediate locations. A 1/2" bead of silicone sealant is applied to the top lip of the molding as the metal is bent. A 3/8" bead of construction adhesive is then applied to the panel edge for all linear penetrations. A 3/8" bead of construction adhesive is then applied to the panel edge for all linear penetrations. A 3/8" bead of construction adhesive is then applied to the panel edge for all linear penetrations. A 3/8" bead of construction adhesive is then applied to the panel edge for all linear penetrations. A 3/8" bead of construction adhesive is then applied to the panel edge for all linear penetrations.
- An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used. An approved adhesive must be used. An approved sealant must be used.
**Description**

• Step in a sequential manner, moving up and across the elevation
• To protect the structural wall assembly of the building
• Are cut-to-size in the field, saving significant time and money

**Joints**

- Progressive Barrier Wall
- Field Assembled - all panels and moldings are shipped directly to the jobsite
- One piece aluminum moldings capture the panel edges and may be designed to be completely sealed against moisture intrusion
- Each step of the installation process builds off the previous step

**Installation**

1. Parapet
2. Horizontal
3. Inside Corner
4. Outside Corner
5. Head
6. Sill
7. Jamb - Start
8. Jamb - End
9. Jamb - End - Linear (Square or Rectangular)
10. Intermediate Connection - Horz
11. Intermediate Connection - Vert
12. Intermediate Connection - Linear
13. Round
14. Linear (Square or Rectangular)

**System Penetrations**

- Metal flashing serves as the primary barrier for water penetration
- Metal flashing must be secured to the substrate with sealant and fasteners

**Component**

- **Adhesive**
- **Fastener**
- **Bond Breaker Tape**
- **Construction Adhesive**
- **Foam Backer Rod**
- **Flash Flange**
- **Flashing**
- **SinoCore®**
- **Window Head & Sill**

**Horizontal Sections**

- Metal flashing membrane covering the perimeter
- Metal flashing is utilized as the primary water barrier in the system
- The metal flashing is secured to the substrate with sealant and fasteners

**Vertical Sections**

- Metal flashing membrane covering the perimeter
- Metal flashing is utilized as the primary water barrier in the system
- The metal flashing is secured to the substrate with sealant and fasteners

**Intermediate Connection**

- All connections must occur at member or support locations
- Connections must occur at member or support locations
- Connections must occur at member or support locations

**Penetrations**

- All penetrations must occur at member or support locations
- Connections must occur at member or support locations
- Connections must occur at member or support locations