

# BLADE #1 HORIZONTAL ALUMINUM LOUVER SYSTEM

Structural Component Specification  
& Installation Dossier

**APPROVED: High Velocity  
Hurricane Zones (HVHZ)**

|                 |                    |
|-----------------|--------------------|
| Report No.:     | 25-1204.01         |
| FBC Compliance: | 2023 (8th Edition) |

## MANUFACTURER

Paradise Awnings Corporation  
(DBA Paradise Architectural Panels &  
Steel)

Location: Miami, FL.

## EVALUATING ENGINEER



Walter A. Tillit, Jr., P.E.  
Florida License No. 44167  
Tilteco, Inc.



## CODE BASELINE

Verified for compliance with the 2023  
Eighth Edition of the Florida Building  
Code (FBC).

Design wind loads determined per  
ASCE 7-22.

## CAUTION: WIND LOAD CONVERSION

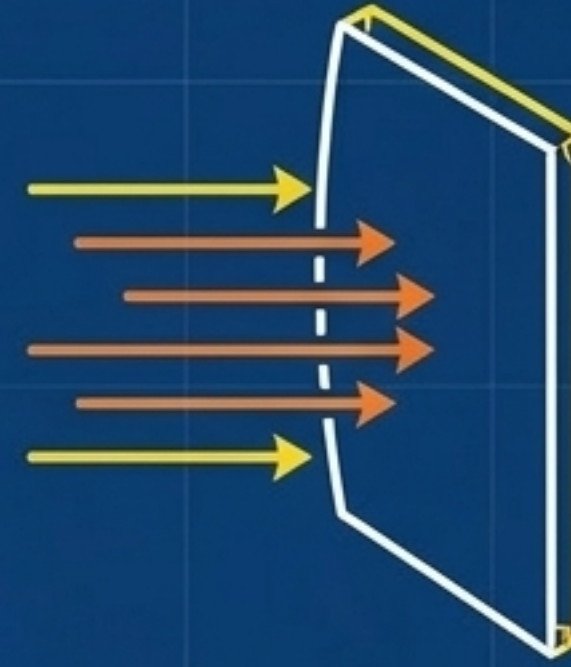
To compare ultimate design wind loads  
determined per ASCE 7-22 to Allowable  
Stress Design (A.S.D.) pressure ratings  
indicated in this dossier, multiply by **0.6**.



### PROTOCOL: TAS 201

**THREAT:**  
Large Missile Impact  
(Airborne Debris)

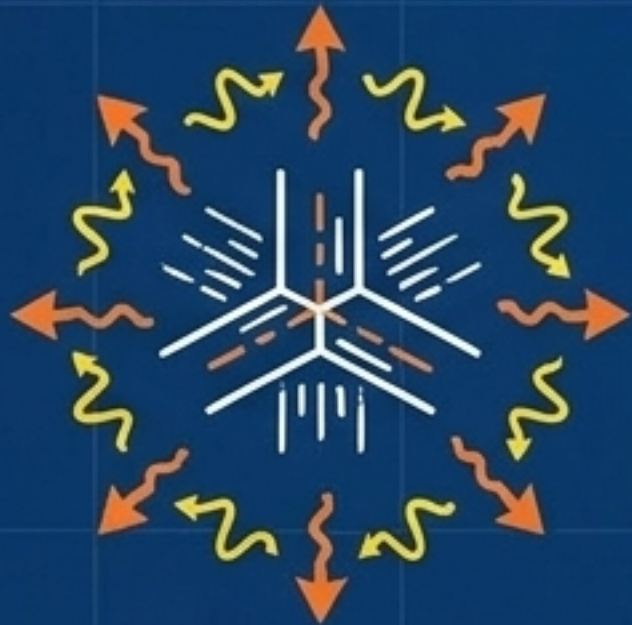
**SPECS:**  
9lb 2"x4" timber  
fired at 50 ft/sec



### PROTOCOL: TAS 202

**THREAT:**  
Uniform Static Loads

**SPECS:** Sustained  
hurricane-force  
wind pressures



### PROTOCOL: TAS 203

**THREAT:**  
Cyclic Loadings

**SPECS:** Rapid pressure  
fluctuations during  
storm events



### PROTOCOL: AMCA 540

**THREAT:**  
Wind-Driven Rain  
& Impact

**SPECS:**  
Water intrusion and  
secondary impacts

System adequacy for impact and fatigue resistance verified by QAI Laboratories (Reports QA-1162a,b,c).

## BLADE #1

Primary louver slat

## CHANNEL JAMB

1"x4"x1"x0.090"  
boundary structure

## MOUNTING ANGLE

1.5"x2"x0.125"  
optional bracket

ALL PRIMARY  
FRAMING  
EXTRUDED FROM  
5052-H32  
ALUMINUM  
ALLOY

## FASTENERS

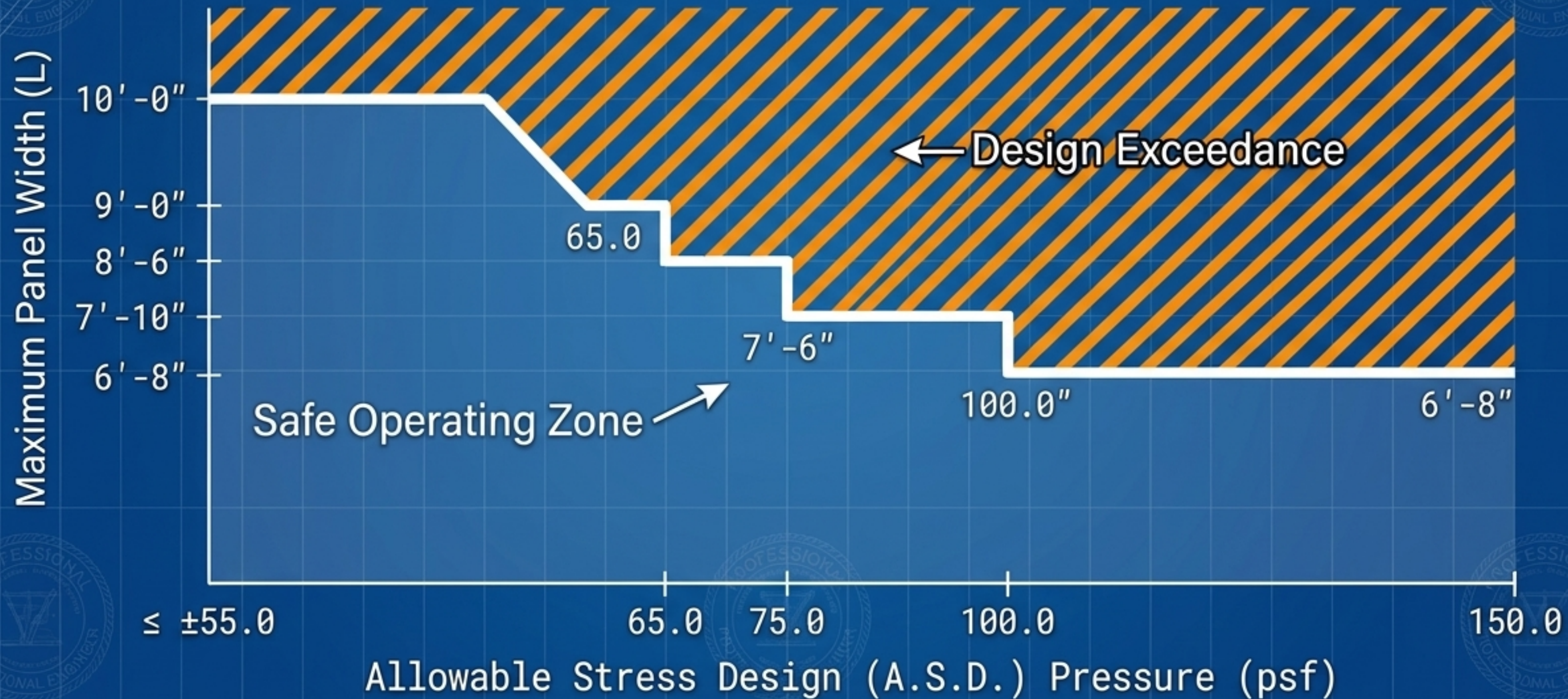
Pop Rivets (Series 9444  
Aluminum) & 304/316  
Series Stainless Steel  
Screws (50 ksi yield,  
90 ksi tensile)

## STIFFENER CONNECTOR

1 1/2" long, critical  
for wider spans

# THE DESIGN PRESSURE ENVELOPE

Valid for all approved substrates at jambs.



# SUBSTRATE ANCHORAGE MATRIX

|                              | <b>CONCRETE</b><br>(f'c=3000 psi min)                              | <b>GROUTED BLOCK</b><br>(C-90 unit)                                | <b>ALUM/STEEL</b><br>(1/8" min, Fy=33ksi)  | <b>WOOD</b><br>(G ≥ 0.55)    |
|------------------------------|--------------------------------------------------------------------|--------------------------------------------------------------------|--------------------------------------------|------------------------------|
| <b>APPROVED ANCHOR</b>       | Dewalt<br>Screw-Bolt+ (1/4")<br>or<br>ITW/Buildex<br>Tapcon (1/4") | Dewalt<br>Screw-Bolt+ (1/4")<br>or<br>ITW/Buildex<br>Tapcon (1/4") | ITW/Buildex<br>Tek-Screws<br>(1/4"-14)     | ITW/Buildex<br>Tapcon (1/4") |
| <b>MINIMUM EMBEDMENT</b>     | 1 5/8" (Dewalt)<br>or<br>1 3/4" (Tapcon)                           | 1 5/8" (Dewalt)<br>or<br>1 1/4" (Tapcon)                           | Fully embedded<br>plus 3 threads<br>beyond | 1 1/2"                       |
| <b>MINIMUM EDGE DISTANCE</b> | 2 1/2"                                                             | 2 1/2"                                                             | 3/4"                                       | 1"                           |



# MAXIMUM ANCHOR SPACING MATRIX



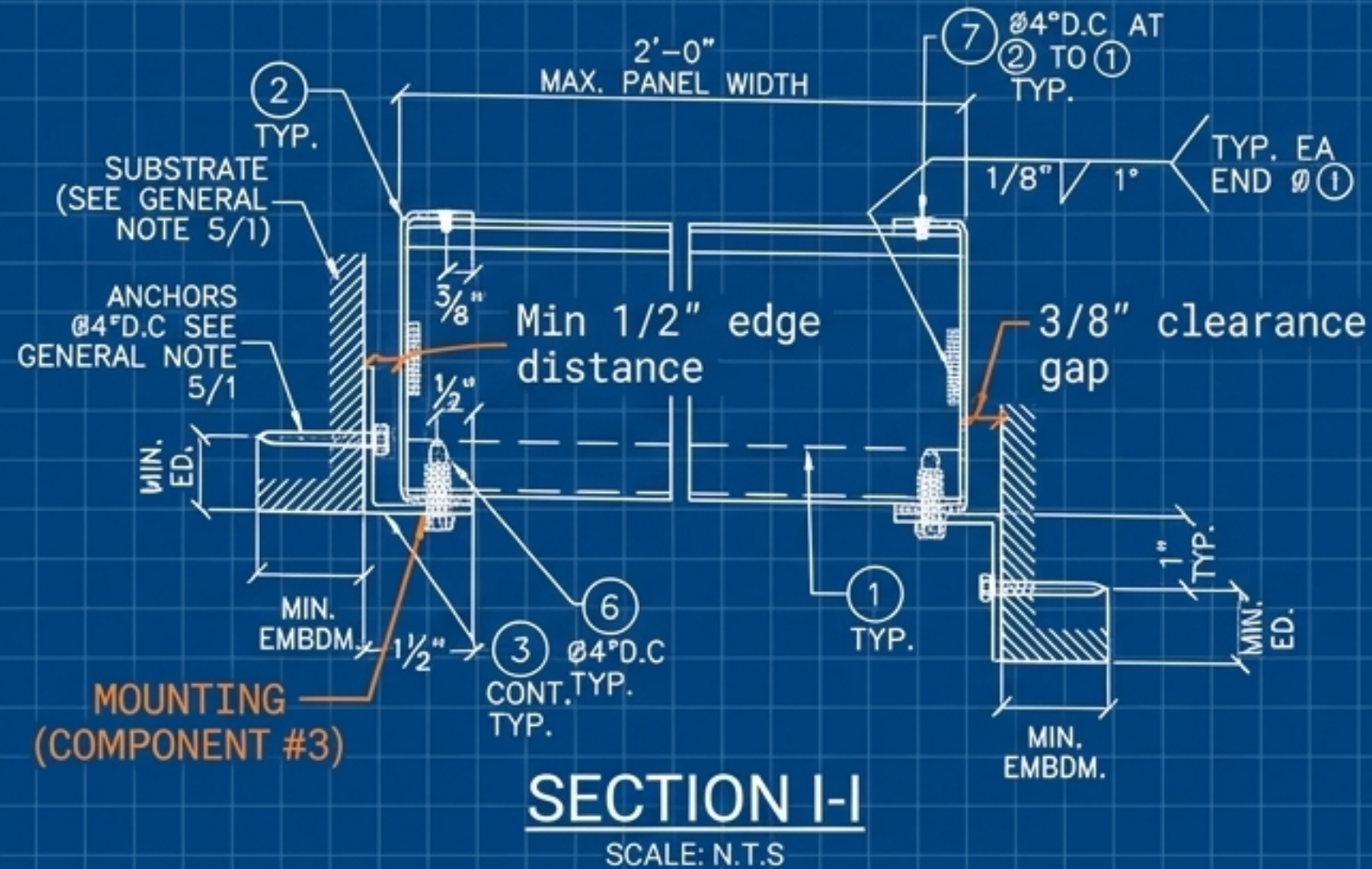
|                                                  | ≤55.0 psf | >55.0 to 65.0 psf | >65.0 to 75.0 psf | >75.0 to 100.0 psf | >100.0 to 150.0 psf |
|--------------------------------------------------|-----------|-------------------|-------------------|--------------------|---------------------|
| CONCRETE,<br>GROUTED<br>BLOCK, ALUM.<br>OR STEEL | 8" O.C.   | 8" O.C.           | 8" O.C.           | 8" O.C.            | 8" O.C.             |
| WOOD                                             | 8" O.C.   | 8" O.C.           | 8" O.C.           | 4" O.C.            | 4" O.C.             |

→ **CRITICAL CODE SHIFT:** High-pressure applications (over 75 psf) on wood structures require double the anchor density.

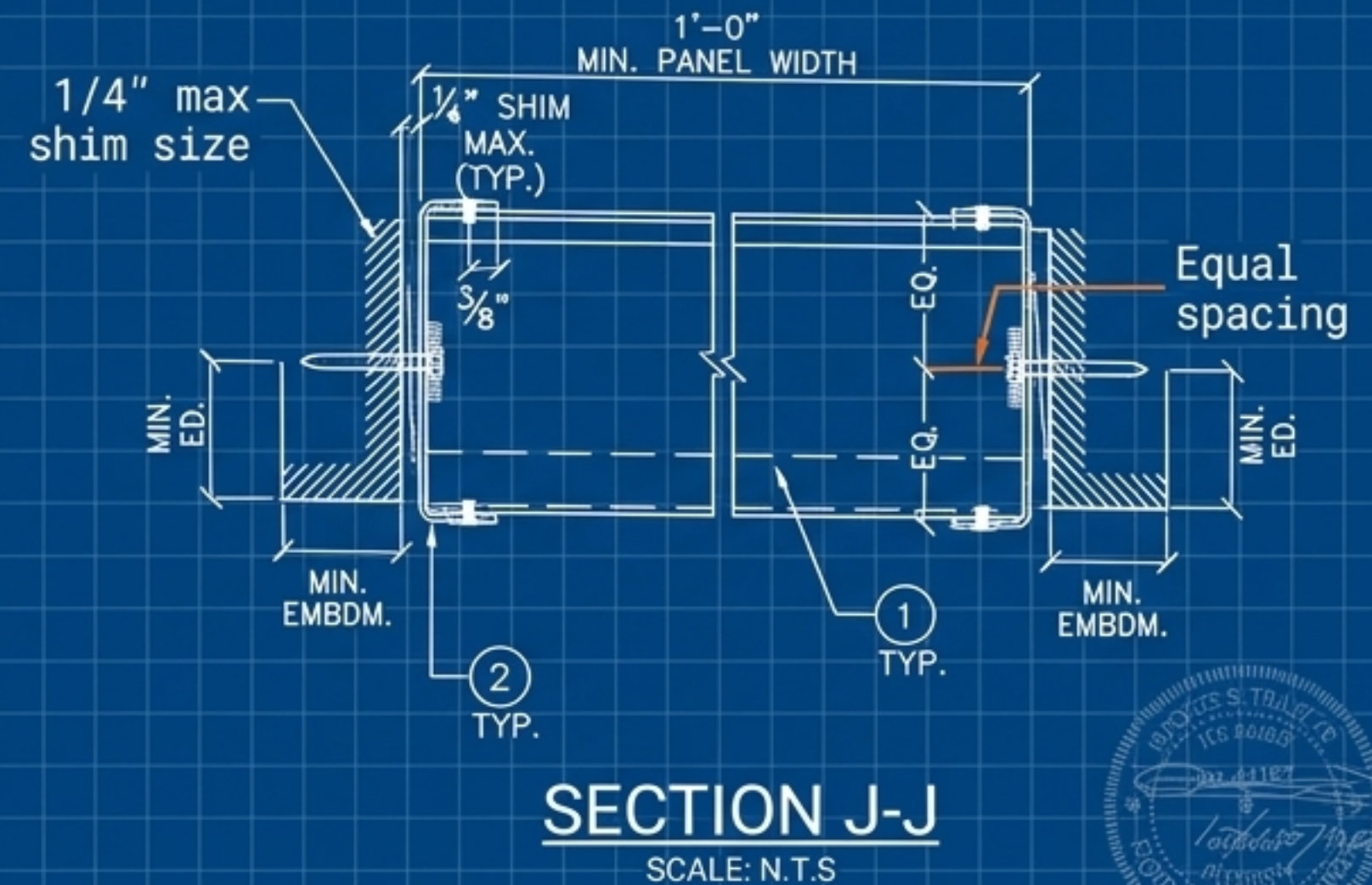


# PERMITTED STRUCTURAL CONFIGURATIONS

## JAMB WITH MOUNTING ANGLE



## JAMB WITHOUT MOUNTING ANGLE



General anchor spacing and embedment rules apply equally to both configurations.



**1 MAXIMUM PANEL HEIGHT**  
8'-3 7/16"

**2 BLADE PITCH**

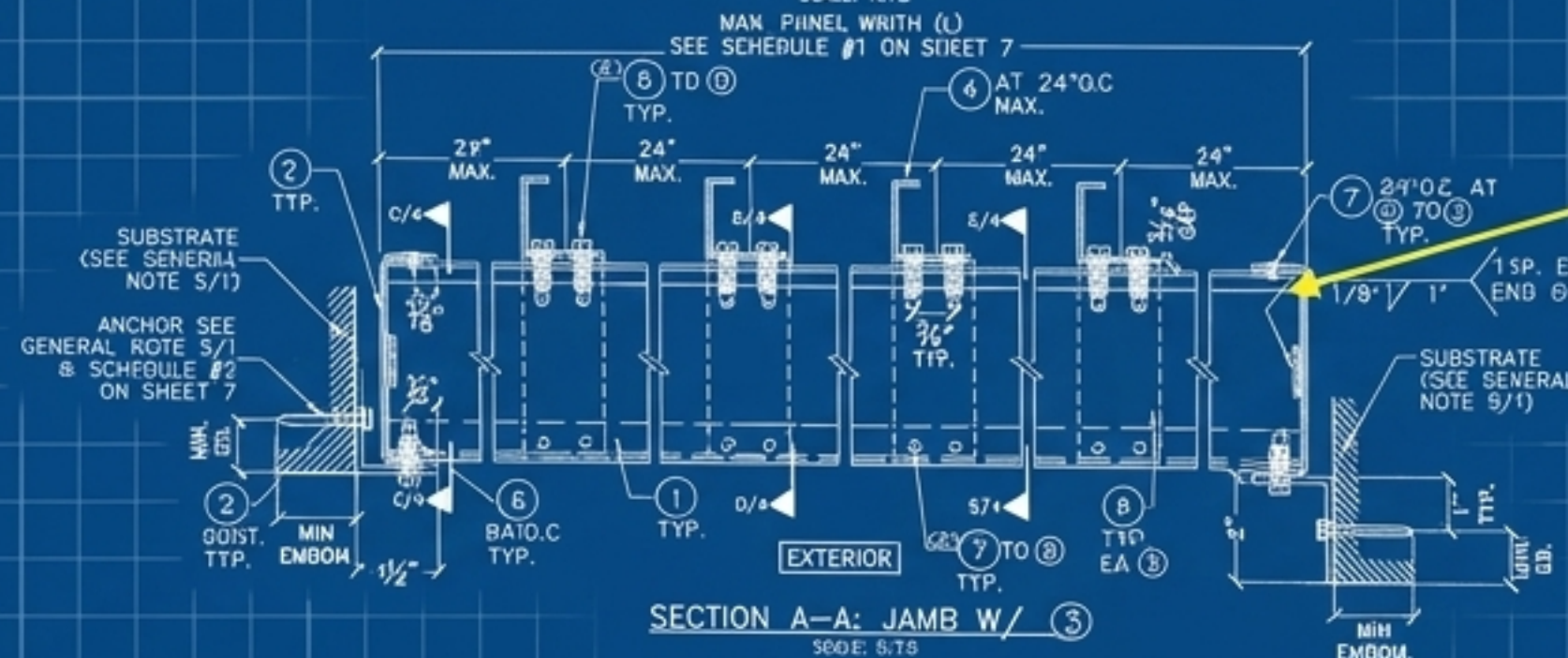
Installed continuously  
at 4" O.C.

**3 STIFFENER SPACING**

24" Max distance  
between stiffeners

**4 REQUIRED GAPS**

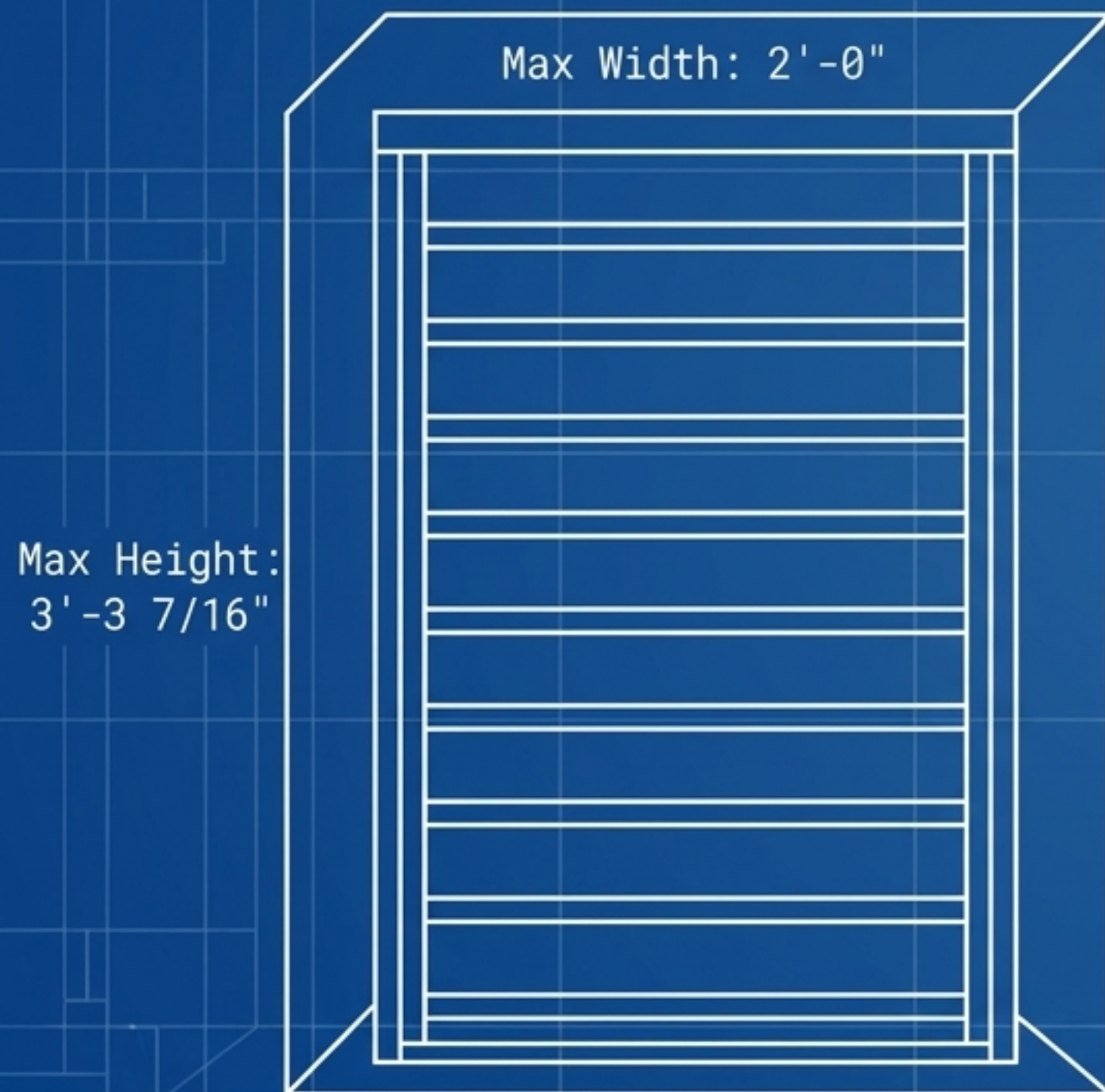
3/16" gap required  
between horizontal  
blade sections



To achieve maximum structural envelopes, continuous blades must be backed by stiffeners and brace angles spaced no wider than 24 inches on center.

**SINGLE PANEL ELEVATION:** Limits for standalone units lacking Component #4 (Blade Brace Angle).

MAXIMUM ENVELOPE



MINIMUM ENVELOPE



# CRITICAL CONDITIONS OF USE



## **1 DISSIMILAR MATERIALS WARNING:**

Aluminum members in contact with dissimilar materials SHALL comply with Section III-6 of the 2020 Aluminum Design Manual to prevent galvanic corrosion.

## **2 ENVIRONMENTAL PLACEMENT:**

Louver system shall ONLY be installed in locations where the room behind is designed to drain water penetrating into the room, OR the room will house water-resistant equipment.

## **3 LABELING REQUIREMENT:**

Product Manufacturer's label must be placed on a readily visible location per section 1703.5 of FBC. One label required per opening.

SYSTEM READY FOR HVHZ INTEGRATION

UNDER 2023 FBC