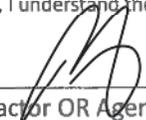


As required by Florida Statute 553.842 and Florida Administrative Code 9B-72, please provide the information and approval numbers on the building components listed below if they will be utilized on the construction project for which you are applying for a building permit. We recommend you contact your local product supplier should you not know the product approval number for any of the applicable listed products. Statewide approved products are listed online @ [www.floridabuilding.org](http://www.floridabuilding.org)

Category/Subcategory	Manufacturer	Product Description	Approval Number(s)
<b>1. EXTERIOR DOORS</b>			
A. SWINGING			
B. SLIDING			
C. SECTIONAL/ROLL UP			
D. OTHER			
<b>2. WINDOWS</b>			
A. SINGLE/DOUBLE HUNG	Pella	Single Hung Window	16812.1,16812.2, 16812.5,
B. HORIZONTAL SLIDER			
C. CASEMENT			
D. FIXED	Pella	Fixed Window	16811.3
E. MULLION	Pella	Mullion	45981.1
F. SKYLIGHTS			
G. OTHER			
<b>3. PANEL WALL</b>			
A. SIDING			
B. SOFFITS			
C. STOREFRONTS			
D. GLASS BLOCK			
E. OTHER			
<b>4. ROOFING PRODUCTS</b>			
A. ASPHALT SHINGLES			
B. NON-STRUCTURAL METAL			
C. ROOFING TILES			
D. SINGLE PLY ROOF			
E. OTHER			
<b>5. STRUCTURAL COMPONENTS</b>			
A. WOOD CONNECTORS			
B. WOOD ANCHORS			
C. TRUSS PLATES			
D. INSULATION FORMS			
E. LINTELS			
F. OTHERS			
<b>6. NEW EXTERIOR ENVELOPE PRODUCTS</b>			

The products listed below did not demonstrate product approval at plan review. I understand that at the time of inspection of these products, the following information must be available to the inspector on the jobsite; 1) copy of the product approval, 2) performance characteristics which the product was tested and certified to comply with, 3) copy of the applicable manufacturers installation requirements.

Further, I understand these products may have to be removed if approval cannot be demonstrated during inspection.

  
 \_\_\_\_\_  
 Contractor OR Agent Signature

11/6/2025  
 \_\_\_\_\_  
 Date

NOTES: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



**Product Approval**  
USER: Public User

[Product Approval Menu](#) > [Product or Application Search](#) > [Application List](#)

OFFICE OF THE  
SECRETARY

**Search Criteria**

[Refine Search](#)

Code Version	2023	FL#	16811.3
Application Type	ALL	Product Manufacturer	ALL
Category	ALL	Subcategory	ALL
Application Status	ALL	Compliance Method	ALL
Quality Assurance Entity	ALL	Quality Assurance Entity Contract Expired	ALL
Product Model, Number or Name	ALL	Product Description	ALL
Approved for use in HVHZ	ALL	Approved for use outside HVHZ	ALL
Impact Resistant	ALL	Design Pressure	ALL
Other	ALL		

**Search Results - Applications**

<a href="#">FL#</a>	<a href="#">Type</a>	<a href="#">Manufacturer</a>	<a href="#">Validated By</a>	<a href="#">Status</a>
<a href="#">FL16811-R7</a> <a href="#">History</a>	Revision	Pella Corporation FL#: FL16811.3 <b>Model:</b> 250 Series Fixed Window <b>Description:</b> 60" x 60" vinyl non-impact single window <b>Category:</b> Windows <b>Subcategory:</b> Fixed	T.E. Lunn, PE, LLC (561) 625-6455	Approved *

\*Approved by DBPR. Approvals by DBPR shall be reviewed and ratified by the POC and/or the Commission if necessary.

[Contact Us](#) :: [2601 Blair Stone Road, Tallahassee FL 32399](#) Phone: 850-487-1824

The State of Florida is an AA/EEO employer. [Copyright 2007-2013 State of Florida](#). :: [Privacy Statement](#) :: [Accessibility Statement](#) :: [Refund Statement](#)

Under Florida law, email addresses are public records. If you do not want your e-mail address released in response to a public-records request, do not send electronic mail to this entity. Instead, contact the office by phone or by traditional mail. If you have any questions, please contact 850.487.1395. \*Pursuant to Section 455.275(1), Florida Statutes, effective October 1, 2012, licensees licensed under Chapter 455, F.S. must provide the Department with an email address if they have one. The emails provided may be used for official communication with the licensee. However email addresses are public record. If you do not wish to supply a personal address, please provide the Department with an email address which can be made available to the public. To determine if you are a licensee under Chapter 455, F.S., please click [here](#).

**Product Approval Accepts:**





**Product Approval**  
USER: Public User

[Product Approval Menu](#) > [Product or Application Search](#) > [Application List](#) > **Application Detail**

OFFICE OF THE  
SECRETARY

<p>FL #</p> <p>Application Type</p> <p>Code Version</p> <p>Application Status</p>  <p>Comments</p> <p>Archived</p>  <p>Product Manufacturer</p> <p>Address/Phone/Email</p>  <p>Authorized Signature</p>  <p>Technical Representative</p> <p>Address/Phone/Email</p>  <p>Quality Assurance Representative</p> <p>Address/Phone/Email</p>  <p>Category</p> <p>Subcategory</p>  <p>Compliance Method</p>  <p>Certification Agency</p> <p>Validated By</p>  <p>Referenced Standard and Year (of Standard)</p>  <p>Equivalence of Product Standards</p> <p>Certified By</p>  <p>Product Approval Method</p>	<p>FL16811-R7</p> <p>Revision</p> <p>2023</p> <p>Approved</p> <p><i>*Approved by DBPR. Approvals by DBPR shall be reviewed and ratified by the POC and/or the Commission if necessary.</i></p> <p><input type="checkbox"/></p> <p>Pella Corporation</p> <p>102 Main St. Pella, IA 50219 (641) 621-6096 pellaproductapproval@pella.com</p> <p>TROY FARR tbfarr@pella.com</p> <p>TROY FARR</p> <p>18600 NE WILKES ROAD PORTLAND, OR 97230 (503) 405-9176 tbfarr@pella.com</p> <p>Pat Bortscheller</p> <p>102 Main Street Pella, IA 50219 (641) 621-1000 PJBortscheller@pella.com</p> <p>Windows</p> <p>Fixed</p> <p>Certification Mark or Listing</p> <p>Window and Door Manufacturer Association</p> <p>T.E. Lunn, PE, LLC</p> <p><input checked="" type="checkbox"/> Validation Checklist - Hardcopy Received</p> <table border="0"> <thead> <tr> <th><u>Standard</u></th> <th><u>Year</u></th> </tr> </thead> <tbody> <tr> <td>AAMA/WDMA/CSA 101/I.S.2/A440-08</td> <td>2008</td> </tr> <tr> <td>AAMA/WDMA/CSA 101/I.S.2/A440-11</td> <td>2011</td> </tr> </tbody> </table> <p>Method 1 Option A</p>	<u>Standard</u>	<u>Year</u>	AAMA/WDMA/CSA 101/I.S.2/A440-08	2008	AAMA/WDMA/CSA 101/I.S.2/A440-11	2011
<u>Standard</u>	<u>Year</u>						
AAMA/WDMA/CSA 101/I.S.2/A440-08	2008						
AAMA/WDMA/CSA 101/I.S.2/A440-11	2011						

Date Submitted 12/18/2023  
 Date Validated 12/20/2023  
 Date Pending FBC Approval  
 Date Approved 12/26/2023

**Summary of Products**

FL #	Model, Number or Name	Description
16811.1	250 Series Fixed Window	108" x 60" vinyl non-impact single window
<b>Limits of Use</b> Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: No Design Pressure: +30/-30 Other: Configurations of glass shall conform to the current ASTM E1300 standard and shall be safety glazed when required by FBC.		<b>Certification Agency Certificate</b> <a href="#">FL16811_R7_C_CAC_411-H-1460.22-23.pdf</a> <b>Quality Assurance Contract Expiration Date</b> 08/16/2024 <b>Installation Instructions</b> <a href="#">FL16811_R7_II_Drawing_1866_digitally_sealed.pdf</a> Verified By: Warren W. Schaefer P.E. 44135 Created by Independent Third Party: Yes <b>Evaluation Reports</b> <a href="#">FL16811_R7_AE_Drawing_1866_digitally_sealed.pdf</a> Created by Independent Third Party: Yes
16811.2	250 Series Fixed Window	72" x 72" vinyl non-impact single window
<b>Limits of Use</b> Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: No Design Pressure: +30/-30 Other: Configurations of glass shall conform to the current ASTM E1300 standard and shall be safety glazed when required by FBC.		<b>Certification Agency Certificate</b> <a href="#">FL16811_R7_C_CAC_411-H-1460.18-19-20-21.pdf</a> <b>Quality Assurance Contract Expiration Date</b> 08/08/2024 <b>Installation Instructions</b> <a href="#">FL16811_R7_II_Drawing_1866_digitally_sealed.pdf</a> Verified By: Warren W. Schaefer P.E. 44135 Created by Independent Third Party: Yes <b>Evaluation Reports</b> <a href="#">FL16811_R7_AE_Drawing_1866_digitally_sealed.pdf</a> Created by Independent Third Party: Yes
16811.3	250 Series Fixed Window	60" x 60" vinyl non-impact single window
<b>Limits of Use</b> Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: No Design Pressure: +50/-50 Other: Configurations of glass shall conform to the current ASTM E1300 standard and shall be safety glazed when required by FBC.		<b>Certification Agency Certificate</b> <a href="#">FL16811_R7_C_CAC_411-H-1460.14-15-16-17.pdf</a> <b>Quality Assurance Contract Expiration Date</b> 08/10/2024 <b>Installation Instructions</b> <a href="#">FL16811_R7_II_Drawing_1866_digitally_sealed.pdf</a> Verified By: Warren W. Schaefer P.E. 44135 Created by Independent Third Party: Yes <b>Evaluation Reports</b> <a href="#">FL16811_R7_AE_Drawing_1866_digitally_sealed.pdf</a> Created by Independent Third Party: Yes
16811.4	250 Series Fixed Window	96" x 72" vinyl non-impact multiple window system
<b>Limits of Use</b> Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: No Design Pressure: +30/-30 Other: Configurations of glass shall conform to the current ASTM E1300 standard and shall be safety glazed when required by FBC.		<b>Certification Agency Certificate</b> <a href="#">FL16811_R7_C_CAC_411-H-1460.24-25-26-27.pdf</a> <b>Quality Assurance Contract Expiration Date</b> 09/08/2024 <b>Installation Instructions</b> <a href="#">FL16811_R7_II_Drawing_1866_digitally_sealed.pdf</a> Verified By: Warren W. Schaefer P.E. 44135 Created by Independent Third Party: Yes <b>Evaluation Reports</b> <a href="#">FL16811_R7_AE_Drawing_1866_digitally_sealed.pdf</a> Created by Independent Third Party: Yes

[Back](#) [Next](#)

[Contact Us](#) :: [2601 Blair Stone Road, Tallahassee FL 32399](#) Phone: 850-487-1824

The State of Florida is an AA/EEO employer. [Copyright 2007-2013 State of Florida.](#) :: [Privacy Statement](#) :: [Accessibility Statement](#) :: [Refund Statement](#)

Under Florida law, email addresses are public records. If you do not want your e-mail address released in response to a public-records request, do not send electronic mail to this entity. Instead, contact the office by phone or by traditional mail. If you have any questions, please contact 850.487.1395. \*Pursuant to Section 455.275(1), Florida Statutes, effective October 1, 2012, licensees licensed under Chapter 455, F.S. must provide the Department with an email address if they have one. The emails provided may be used for official communication with the licensee. However email addresses are public record. If you do not wish to supply a personal address, please provide the Department with an email address which can be made available to the public. To determine if you are a licensee under Chapter 455, F.S., please click [here](#).

**Product Approval Accepts:**



Credit Card  
**Safe**  
securityMETRICS

**GENERAL NOTES:**

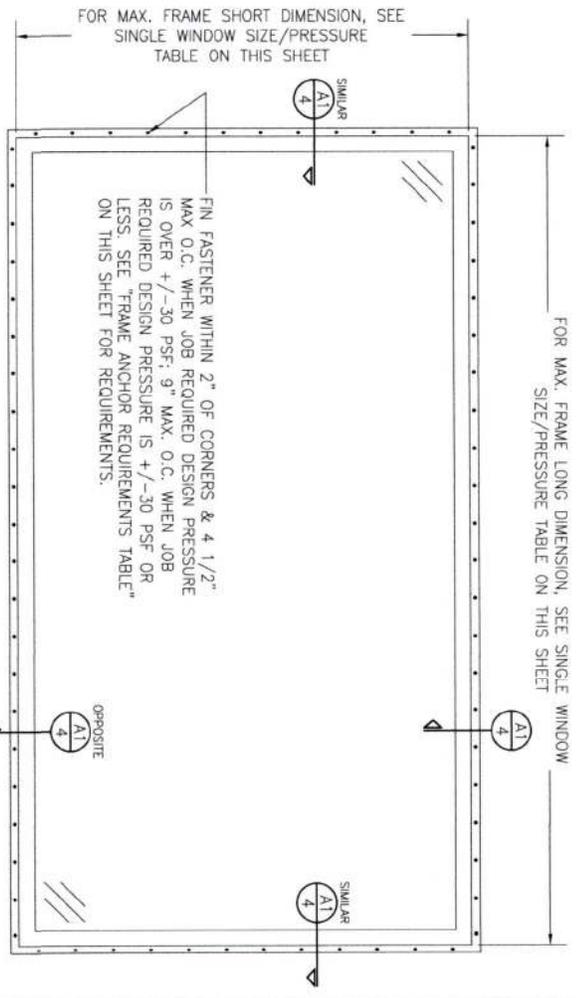
1. ALL FASTENERS SHALL BE IN ACCORDANCE WITH THESE DRAWINGS. SPECIFIED ANCHOR EMBED TO BASE MATERIAL SHALL BE BEYOND WALL FINISH OR STUCCO.
2. OPENINGS, BUCKING & BLOCKING FASTENERS MUST BE PROPERLY DESIGNED & INSTALLED TO TRANSFER WIND LOADS TO THE STRUCTURE.
3. THESE NON-IMPACT RATED PRODUCT INSTALLATIONS ARE IN ACCORDANCE WITH AND MEET THE REQUIREMENTS OF THE FLORIDA BUILDING CODE (FBC).
4. PRODUCT FRAMES TO PRESSURE TREATED BUCK OR WOOD FRAMING SHALL BE CAPABLE OF RESISTING CORROSION CAUSED BY THE PRESSURE TREATING CHEMICALS IN THE WOOD.
5. MATERIALS, INCLUDING BUT NOT LIMITED TO STEEL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF FLORIDA BUILDING CODE CHAPTER 20.
6. TO THE BEST OF OUR KNOWLEDGE, THE PRODUCT SHOWN HEREIN IS CERTIFIED & QUALITY ASSURED BY A FLORIDA STATE APPROVED CERTIFICATION/QA ENTITY & SHALL BE LABELED IN ACCORDANCE WITH THE FBC AND THE FLORIDA DEPARTMENT OF BUSINESS & PROFESSIONAL REGULATION REGULATIONS. PRODUCT ASSEMBLY IS NOT PART OF THIS DRAWING AND SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S QUALITY ASSURANCE SPECIFICATIONS & TESTING REPORTS.
7. CERTIFICATION OF THESE PRODUCT INSTALLATIONS SHALL BE CONSIDERED VOID IF ANY OF THE FOLLOWING APPLY: 1) PRODUCT IS INSTALLED WITHOUT A BUILDING PERMIT FROM THE APPLICABLE LOCAL BUILDING DEPARTMENT. 2) PRODUCT IS INSTALLED BY ANYONE OTHER THAN A LICENSED CONTRACTOR EXPERIENCED WITH INSTALLATIONS OF THIS TYPE OF PRODUCT. 3) IF CHANGES HAVE OCCURRED TO THE PRODUCT'S CERTIFICATION ENTITY'S CERTIFICATE THAT CAUSE THESE INSTALLATIONS TO BE INCORRECT OR INCONSISTENT WITH WHAT HAS BEEN TESTED.
8. PRODUCT SHALL BE INSTALLED IN ACCORDANCE WITH THE DRAWING OR II. THE PRODUCT'S CERTIFICATION SHALL CONTROL FOR THE INSTALLED PRODUCT.
9. THESE DRAWINGS CERTIFY THE PRODUCT INSTALLATION ONLY. WATER PROOFING OF THE INSTALLED PRODUCT IS NOT PART OF THIS INSTALLATION CERTIFICATION. THAT RESPONSIBILITY SHALL BE THAT OF THE MANUFACTURER &/OR INSTALLER.

INSTALLATION EVALUATION IS BASED ON APPLICABLE ANCHOR STANDARDS AND/OR INFORMATION & RESULTS FROM APPLICABLE TEST REPORTS. THE FLORIDA BUILDING CODE VERSION CONSIDERED WITH THE EVALUATION WAS THAT IN FORCE AT THE TIME OF THE EVALUATION. IN THE EVENT OF CODE VERSION CHANGES, THE MANUFACTURER SHALL BE RESPONSIBLE FOR DETERMINING THE APPLICABLE STANDARDS. THE MANUFACTURER SHALL BE RESPONSIBLE FOR OBTAINING THE APPLICABLE STANDARDS. THE MANUFACTURER SHALL CONFIRM WITH THE INSTALLATION EVALUATION ENGINEER OF RECORD THAT THE INSTALLATIONS SPECIFIED HERE-IN ARE CURRENT WITH THE THEN CURRENT TESTING, CODE AND APPLICABLE STANDARDS.

**FRAME ANCHOR REQUIREMENTS TABLE**

OPENING TYPE (SUBSTRATE)	FRAME CLIP/NAIL FIN TO OPENING FASTENER TYPE	MINIMUM EMBED	MINIMUM EDGE DIST.
(1) FRAME SCREWS			
MIN. 2X4 WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55)	NO. 10 SMS OR WOOD SCREW	1 1/4"	3/4"
MIN. 18 GA. 33 KSI METAL STUD	NO. 10 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 1/8" THK A36 STEEL	NO. 10 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 1/8" THK 6063-T5 ALUM.	NO. 10 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. C-90 CMU OR 2500 PSI CONCRETE	(2) 1/4" CONCRETE SCREW	1 1/4"	2"
(1) INSTALLATION CLIP SCREWS			
MIN. 2X4 WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55)	NO. 10 SMS SCREW	1 1/4"	1/2"
MIN. 18 GA. 33 KSI METAL STUD	NO. 10 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 1/8" THK A36 STEEL	NO. 10 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 1/8" THK 6063-T5 ALUM.	NO. 10 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
2500 PSI CONCRETE	(2) 3/16" CONCRETE SCREW	1 1/4"	2"
(3) NAILING FIN FASTENERS			
MIN. 2X4 WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55)	NO. 8 SMS SCREW	1 3/8"	1/2"
MIN. 2X4 WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55)	11 GA. ROOFING NAIL	1 3/8"	1/2"
MIN. 1/8" THK A36 STEEL	NO. 8 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 1/8" THK 6063-T5 ALUM.	NO. 8 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"

- (1) FRAME AND INSTALLATION CLIP SCREWS SHALL BE A PAN OR HEX HEAD SCREW.
- (2) CONCRETE SCREWS SHALL BE ELCO ULTRACONS (C.S.), ELCO CRETE-LEX (S.S.), ITW RAMSEY/RED HEAD TAPCONS (C.S. OR S.S.) OR HILTI KIM-CON II (C.S. OR S.S.).
- (3) WHEN SCREWS ARE USED WITH THE NAIL FIN, THEY MUST BE A WAFFLE HEAD SCREW OR HAVE A FLAT WASHER AT THE SCREW HEAD.



**ALLOWABLE SINGLE WINDOW SIZE/PRESSURE TABLE**

MAXIMUM FRAME LONG DIMENSION (IN.)	MAXIMUM FRAME SHORT DIMENSION (IN.)	ALLOWABLE PRESSURE (+/- PSF)
108	60	30
72	72	30
60	60	50

1. LONG DIMENSION MAY BE HORIZONTAL OR VERTICAL.  
 PRESSURES & CONDITIONS SHOWN IN THIS DRAWING ARE GOVERNED BY INSTALLATION REQUIREMENTS ONLY. THE GOVERNING CONDITIONS ON ANY SPECIFIC PRODUCT SHALL BE THE LESSER OF THOSE SPECIFIED IN THE PRODUCTS STATE APPROVAL OR THAT SHOWN IN THESE DRAWINGS.

**EXTERIOR ELEVATION: SINGLE WINDOW SCALE: 3/4" = 1'-0" (NAIL FIN MOUNT CONDITION)**

**ANCHOR/SUBSTRATE EVALUATION NOTE:**  
 THE ANCHOR/SUBSTRATE EVALUATION TESTS HAVE BEEN ANALYZED IN ACCORDANCE WITH THEIR APPLICABLE STANDARDS AND ARE FOUND TO BE CAPABLE OF SUPPORTING ALL LOADS IMPOSED ON THEM UNDER THE GUIDELINES OF THIS DOCUMENT. ANY SUBSTRATES OR CONDITIONS OUTSIDE OF WHAT IS SHOWN HERE-IN SHALL BE SUBJECT TO JOB SPECIFIC ENGINEER'S REVIEW & CERTIFICATION.

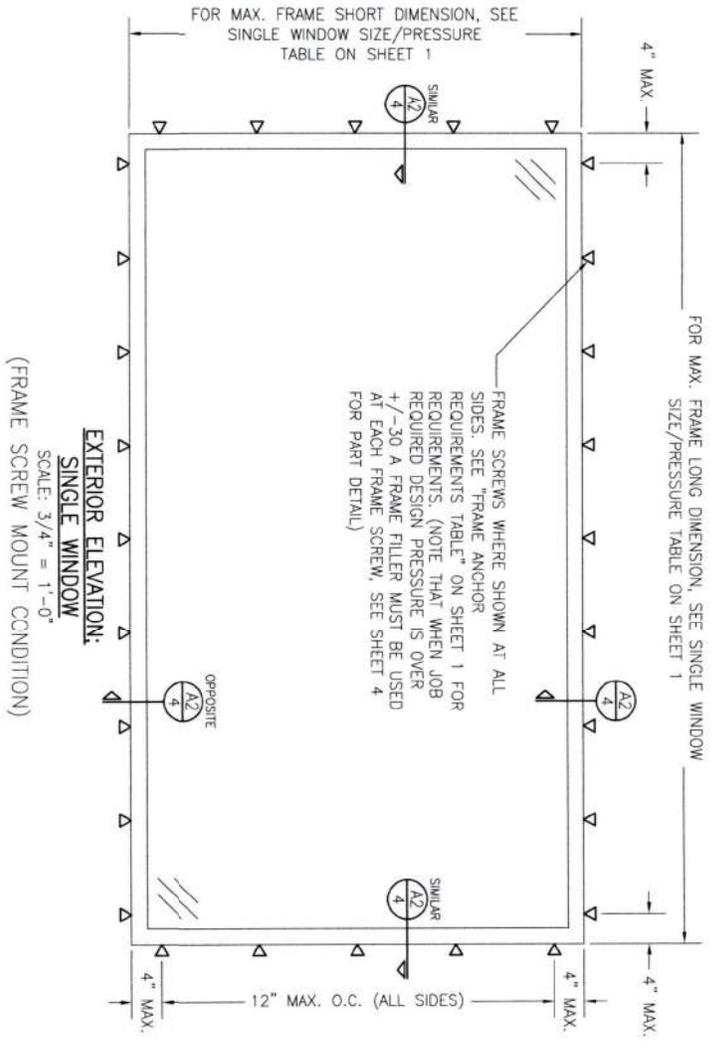
**INSTALLATION NOTE:**  
 WHEN NECESSARY, INSTALLATION METHODS MAY BE MIXED WITH ANY ONE WINDOW SUCH THAT INDIVIDUAL SIDES OF THE WINDOW MAY USE ONE OR THE OTHER ANCHOR METHOD (EXAMPLE: HEAD AND OPER SCREWS METHOD WHILE OTHER SIDES USE FIN).

THESE DRAWINGS ARE APPLICABLE ONLY TO THE PRODUCT SPECIFIED. THEY MAY NOT BE USED FOR THE ASSEMBLY AND/OR INSTALLATION OF ANY OTHER PRODUCT FOR MAY BE USED FOR RATIONAL AND/OR LOCAL APPROVAL EXCEPT AS SPECIFICALLY NOTED BY THE MANUFACTURER.



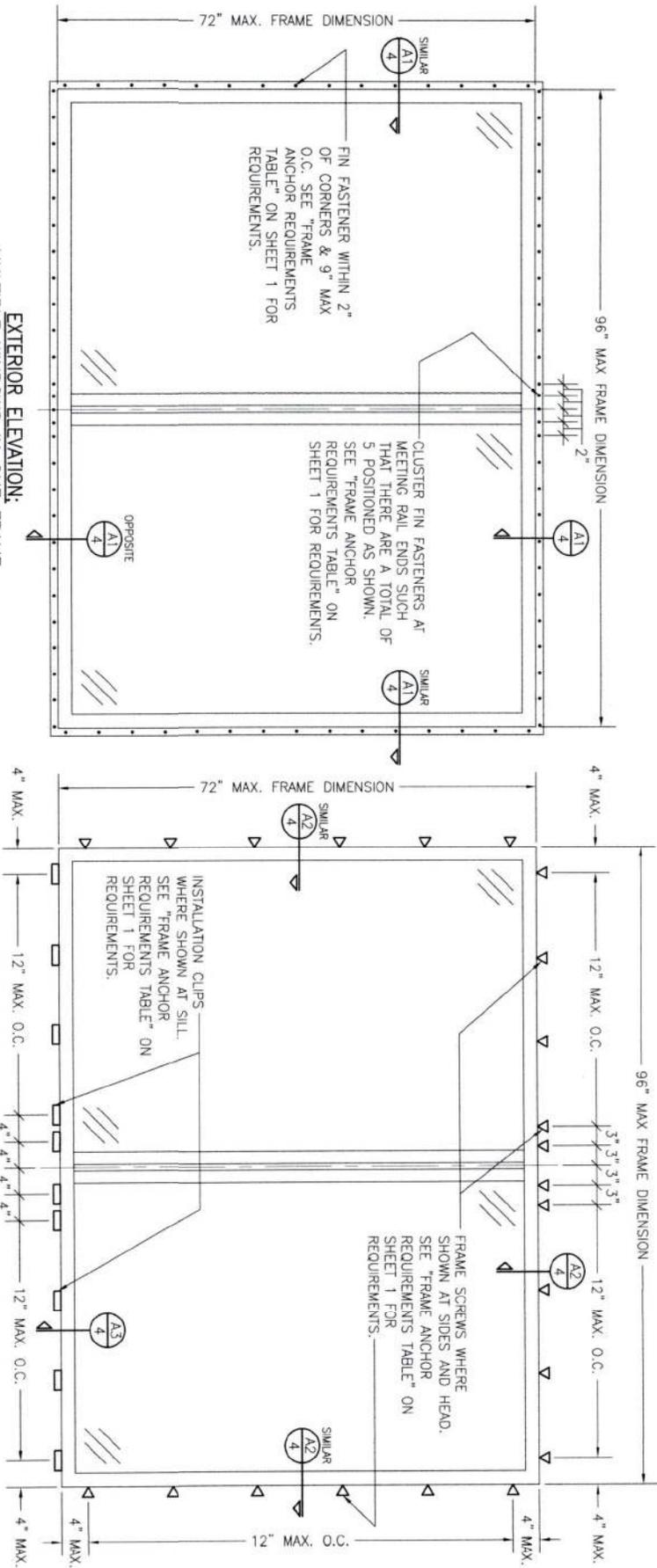
Digitally signed  
 by Warren W  
 Schaefer  
 Date: 2023.03.09  
 09:31:27 -05'00'

DRAWING NO. 1866	REV. A	SHEET NO. 1 OF 4	DATE 02/29/14	BY W.S.	DATE 03/08/23	NO.	REVISION DESCRIPTION	BY	DATE
						A1	UPDATE TO CURRENT STANDARDS	W.S.	03/08/23
DRAWING TITLE 250 SERIES VINYL FIXED DIRECT GLAZED NON-IMPACT WINDOW			CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. 26376 NADIR ROAD, UNIT 309 PUNTA GORDA, FL 33963 PHONE: 561-744-3424			MANUFACTURER PELLA CORPORATION 102 MAIN STREET PELLA, IA 50219 641-621-1000			
CERTIFICATION WARREN W. SCHAEFER, P.E. P.E. NO. 44135									



EXTERIOR ELEVATION:  
 SINGLE WINDOW  
 SCALE: 3/4" = 1'-0"  
 (FRAME SCREW MOUNT CONDITION)

DRAWING NO. <b>1866</b>	REV. <b>A</b>	DATE <b>02/20/24</b>	BY <b>W.W.S.</b>	CHECKED BY <b>W.W.S.</b>	NO.	REVISION	DESCRIPTION	BY	DATE
DRAWING TITLE <b>250 SERIES VINYL FIXED DIRECT GLAZED NON-IMPACT WINDOW</b>		CONSULTANTS <b>W. W. SCHAEFER ENGINEERING &amp; CONSULTING, P.A.</b> 26376 NADIR ROAD, UNIT 309 PUNTA GORDA, FL 33983 PHONE: 561-744-3424			MANUFACTURER  <b>PELLA CORPORATION</b> 102 MAIN STREET PELLA, IA 50219 641-621-1000				
CERTIFICATION  WARREN W. SCHAEFER, P.E. P.E. NO. 44135		PLOT: 1-16			DRAWN BY: _____				
SHEET NO. <b>2</b> OF <b>4</b>		DATE: 02/20/24			CHECKED BY: _____				



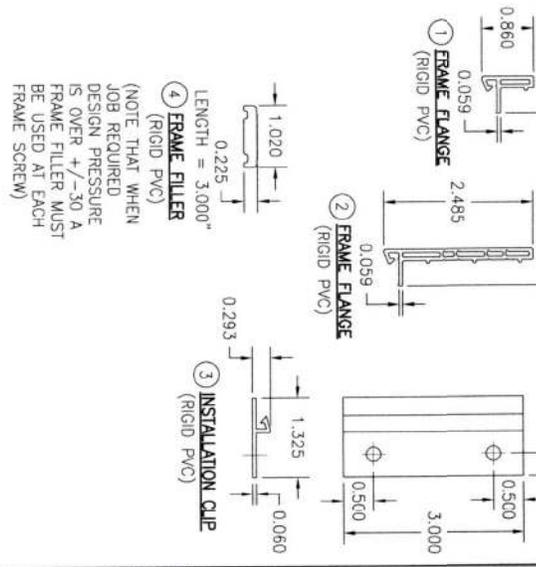
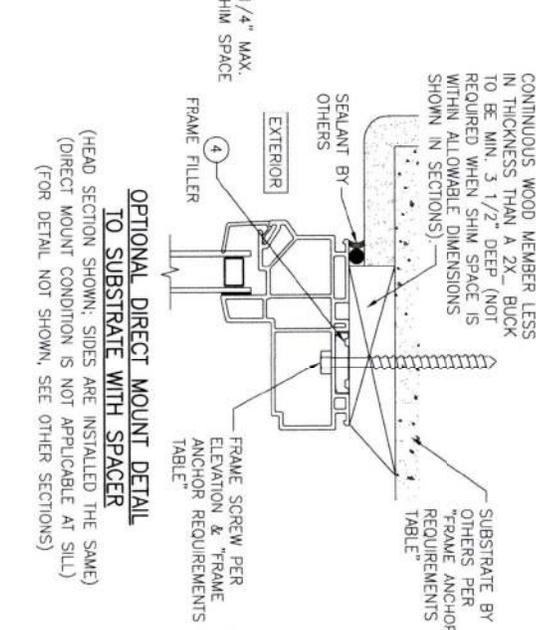
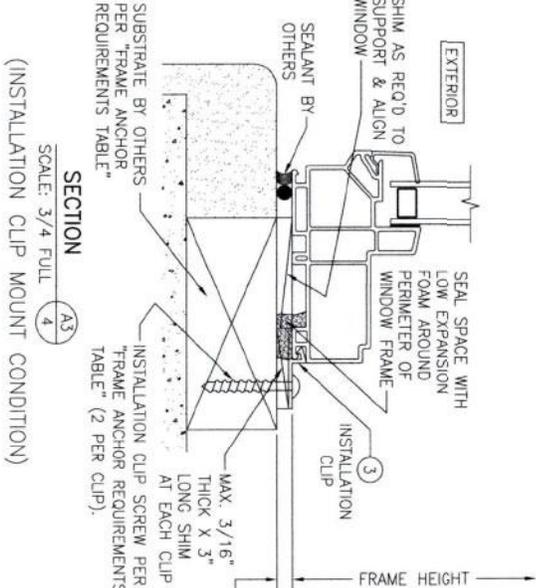
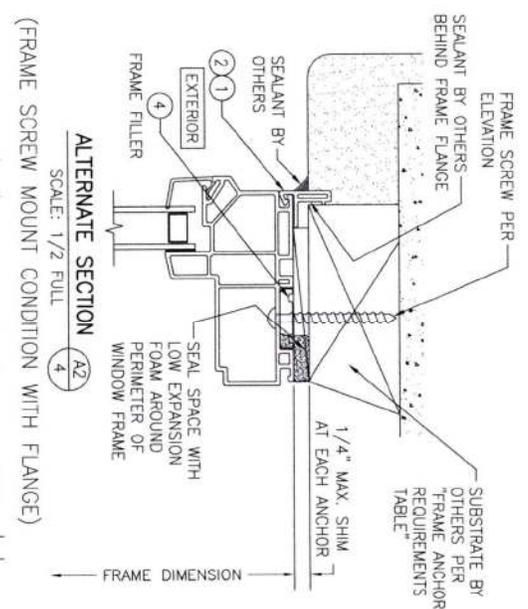
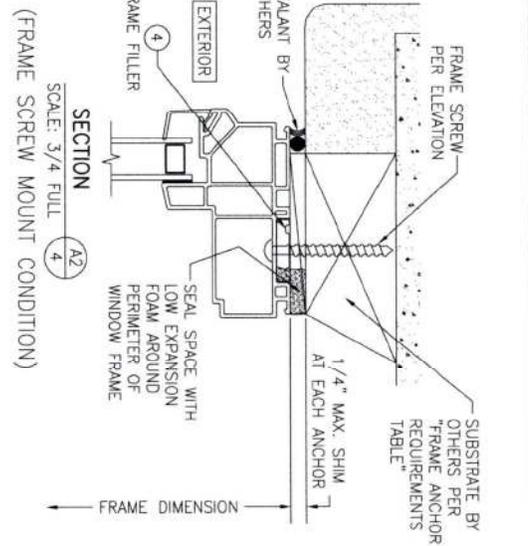
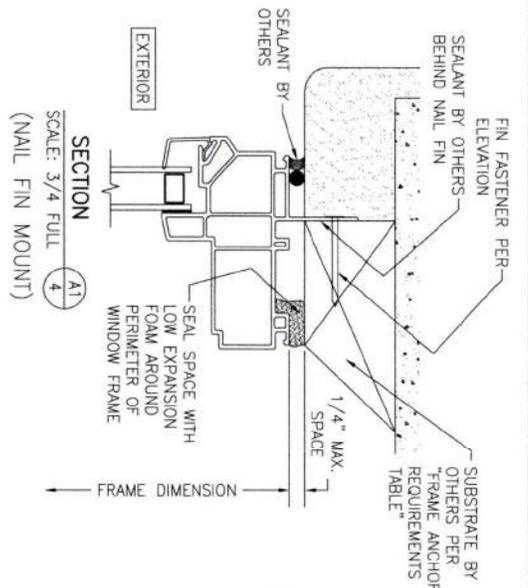
**EXTERIOR ELEVATION:  
MULTIPLE WINDOWS IN ONE FRAME**  
(NAIL FIN MOUNT CONDITION)  
SCALE: 3/4" = 1'-0"

**ALLOWABLE DESIGN PRESSURE**  
(MULTIPLE WINDOWS IN ONE FRAME)  
+/-30 PSF

**EXTERIOR ELEVATION:  
MULTIPLE WINDOWS IN ONE FRAME**  
(FRAME SCREW AND CLIP MOUNT CONDITION)  
SCALE: 3/4" = 1'-0"

- MULTIPLE UNIT NOTES:**
- MULLION MAY BE HORIZONTAL OR VERTICAL PROVIDING UNIT SIZES ARE RESTRICTED AS SHOWN IN THIS ELEVATION.
  - IF VERTICALLY STACKED, THE MANUFACTURER &/OR INSTALLER SHALL INSURE THAT THE DEAD LOAD WEIGHT OF THE ABOVE WINDOWS CAN NOT CAUSE UNDO FAILURE TO THE BELOW WINDOWS.
  - THERE IS NO LIMIT ON THE NUMBER OF WINDOWS THAT MAY BE COMBINED IN ONE DIRECTION INTO ONE OPENING PROVIDING THE OPENING IS DESIGNED TO SUPPORT ALL LOADS TRANSFERRED FROM THE WINDOWS & THEIR MULLIONS.

DRAWING NO. <b>1866</b>	SHEET NO. <b>A</b>	WARREN W. SCHAEFER, P.E. P.E. NO. 44135	CONSULTANTS <b>W. W. SCHAEFER ENGINEERING &amp; CONSULTING, P.A.</b> 26376 NADR ROAD, UNIT 309 PUNTA GORDA, FL 33983 PHONE: 561-744-3424	MANUFACTURER  <b>PELLA CORPORATION</b> 102 MAIN STREET PELLA, IA 50219 641-621-1000	NO.	REVISION	DESCRIPTION	BY	DATE
					3	OF	4		



NO.	REVISION	DESCRIPTION	BY	DATE
1				
2				

DRAWING NO. 1866	DATE 05/20/14
SHEET NO. 4 OF 4	CHECKED BY

DRAWING TITLE <b>250 SERIES VINYL FIXED DIRECT GLAZED NON-IMPACT WINDOW</b>	
CONSULTANTS <b>W. W. SCHAEFER ENGINEERING &amp; CONSULTING, P.A.</b> 26376 MADR ROAD, UNIT 309 PUNTA GORDA, FL 33983 PHONE: 561-744-3424	MANUFACTURER <b>PELLA CORPORATION</b> 102 MAIN STREET PELLA, IA 50219 641-621-1000

CERTIFICATION	
WARREN W. SCHAEFER, P.E. P.E. NO. 44135	



**Product Approval**  
USER: Public User

[Product Approval Menu](#) > [Product or Application Search](#) > **Application List**

OFFICE OF THE  
SECRETARY

**Search Criteria**

[Refine Search](#)

Code Version	2023	FL#	16812.1
Application Type	ALL	Product Manufacturer	ALL
Category	ALL	Subcategory	ALL
Application Status	ALL	Compliance Method	ALL
Quality Assurance Entity	ALL	Quality Assurance Entity Contract Expired	ALL
Product Model, Number or Name	ALL	Product Description	ALL
Approved for use in HVHZ	ALL	Approved for use outside HVHZ	ALL
Impact Resistant	ALL	Design Pressure	ALL
Other	ALL		

**Search Results - Applications**

<a href="#">FL#</a>	<a href="#">Type</a>	<a href="#">Manufacturer</a>	<a href="#">Validated By</a>	<a href="#">Status</a>
<a href="#">FL16812-R9</a> <a href="#">History</a>	Revision	Pella Corporation <b>FL#:</b> FL16812.1 <b>Model:</b> 250 Series Single Hung Window <b>Description:</b> 36" x 63" vinyl non-impact single window <b>Category:</b> Windows <b>Subcategory:</b> Single Hung	T.E. Lunn, PE, LLC (561) 625-6455	Approved *

\*Approved by DBPR. Approvals by DBPR shall be reviewed and ratified by the POC and/or the Commission if necessary.

[Contact Us](#) :: 2601 Blair Stone Road, Tallahassee FL 32399 Phone: 850-487-1824

The State of Florida is an AA/EEO employer. [Copyright 2007-2013 State of Florida](#). :: [Privacy Statement](#) :: [Accessibility Statement](#) :: [Refund Statement](#)

Under Florida law, email addresses are public records. If you do not want your e-mail address released in response to a public-records request, do not send electronic mail to this entity. Instead, contact the office by phone or by traditional mail. If you have any questions, please contact 850.487.1395. \*Pursuant to Section 455.275(1), Florida Statutes, effective October 1, 2012, licensees licensed under Chapter 455, F.S. must provide the Department with an email address if they have one. The emails provided may be used for official communication with the licensee. However email addresses are public record. If you do not wish to supply a personal address, please provide the Department with an email address which can be made available to the public. To determine if you are a licensee under Chapter 455, F.S., please click [here](#).

**Product Approval Accepts:**



**GENERAL NOTES:**

1. ALL FASTENERS SHALL BE IN ACCORDANCE WITH THESE DRAWINGS. SPECIFIED ANCHOR EMBED TO BASE MATERIAL SHALL BE BEYOND WALL FINISH OR STUCCO.
2. OPENINGS, BUCKING & BUCKING FASTENERS MUST BE PROPERLY DESIGNED & INSTALLED TO TRANSFER WIND LOADS TO THE STRUCTURE.
3. THESE NON-IMPACT RATED PRODUCT INSTALLATIONS ARE IN ACCORDANCE WITH AND MEET THE REQUIREMENTS OF THE FLORIDA BUILDING CODE (FBC).
4. ALL ANCHORS SECURING PRODUCT FRAMES TO PRESSURE TREATED BUCKS OR WOOD FRAMING SHALL BE CAPABLE OF RESISTING CORROSION CAUSED BY THE PRESSURE TREATING CHEMICALS IN THE WOOD.
5. MATERIALS, INCLUDING BUT NOT LIMITED TO STEEL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF FLORIDA BUILDING CODE CHAPTER 20.
6. TO THE BEST OF OUR KNOWLEDGE, THE PRODUCT SHOWN HEREIN IS CERTIFIED & QUALITY ASSURED BY A FLORIDA STATE APPROVED CERTIFICATION/OA ENTITY & SHALL BE LABELED IN ACCORDANCE WITH THE FBC AND THE FLORIDA DEPARTMENT OF BUSINESS & PROFESSIONAL REGULATION SPECIFICATIONS. PRODUCT ASSEMBLY IS NOT PART OF THIS DRAWING AND SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S QUALITY ASSURANCE SPECIFICATIONS & TESTING REPORTS.
7. CERTIFICATION OF THESE PRODUCT INSTALLATIONS SHALL BE CONSIDERED VOID IF ANY OF THE FOLLOWING APPLY: 1) PRODUCT IS INSTALLED WITHOUT A BUILDING PERMIT FROM THE APPLICABLE LOCAL BUILDING DEPARTMENT. 2) PRODUCT IS INSTALLED BY ANYONE OTHER THAN A LICENSED CONTRACTOR EXPERIENCED WITH INSTALLATIONS OF THIS TYPE OF PRODUCT. 3) IF CHANGES HAVE OCCURRED TO THE PRODUCT'S CERTIFICATION ENTITY'S CERTIFICATE THAT CAUSE THESE INSTALLATIONS TO BE INCORRECT OR INCONSISTENT WITH WHAT HAS BEEN TESTED.
8. THE LEAST DESIGN PRESSURE SPECIFIED EITHER IN THIS DRAWING OR IN THE PRODUCT'S CERTIFICATION SHALL CONTROL FOR THE INSTALLED PRODUCT.
9. THESE DRAWINGS CERTIFY THE PRODUCT INSTALLATION ONLY. WATER PROOFING OF THE INSTALLED PRODUCT IS NOT PART OF THIS INSTALLATION CERTIFICATION. THAT RESPONSIBILITY SHALL BE THAT OF THE MANUFACTURER &/OR INSTALLER.

INSTALLATION EVALUATION IS BASED ON APPLICABLE ANCHOR STANDARDS AND/OR INFORMATION & RESULTS FROM APPLICABLE TEST REPORTS. THE FLORIDA BUILDING CODE VERSION CONSIDERED WITH THE EVALUATION WAS THAT IN FORCE AT THE TIME OF THE EVALUATION. IN THE EVENT OF CODE VERSION CHANGES/UPDATES OR IN THE EVENT THAT NEW OR ADDITIONAL TESTING IS COMPLETED ON THE REFERENCED PRODUCT, PRIOR TO STATING CODE COMPLIANCE WITH THE STATE, THE MANUFACTURER SHALL CONFIRM WITH THE INSTALLATION EVALUATION ENGINEER OF RECORD THAT THE INSTALLATIONS SPECIFIED HERE-IN ARE CURRENT WITH THE THEN CURRENT TESTING, CODE AND APPLICABLE STANDARDS.

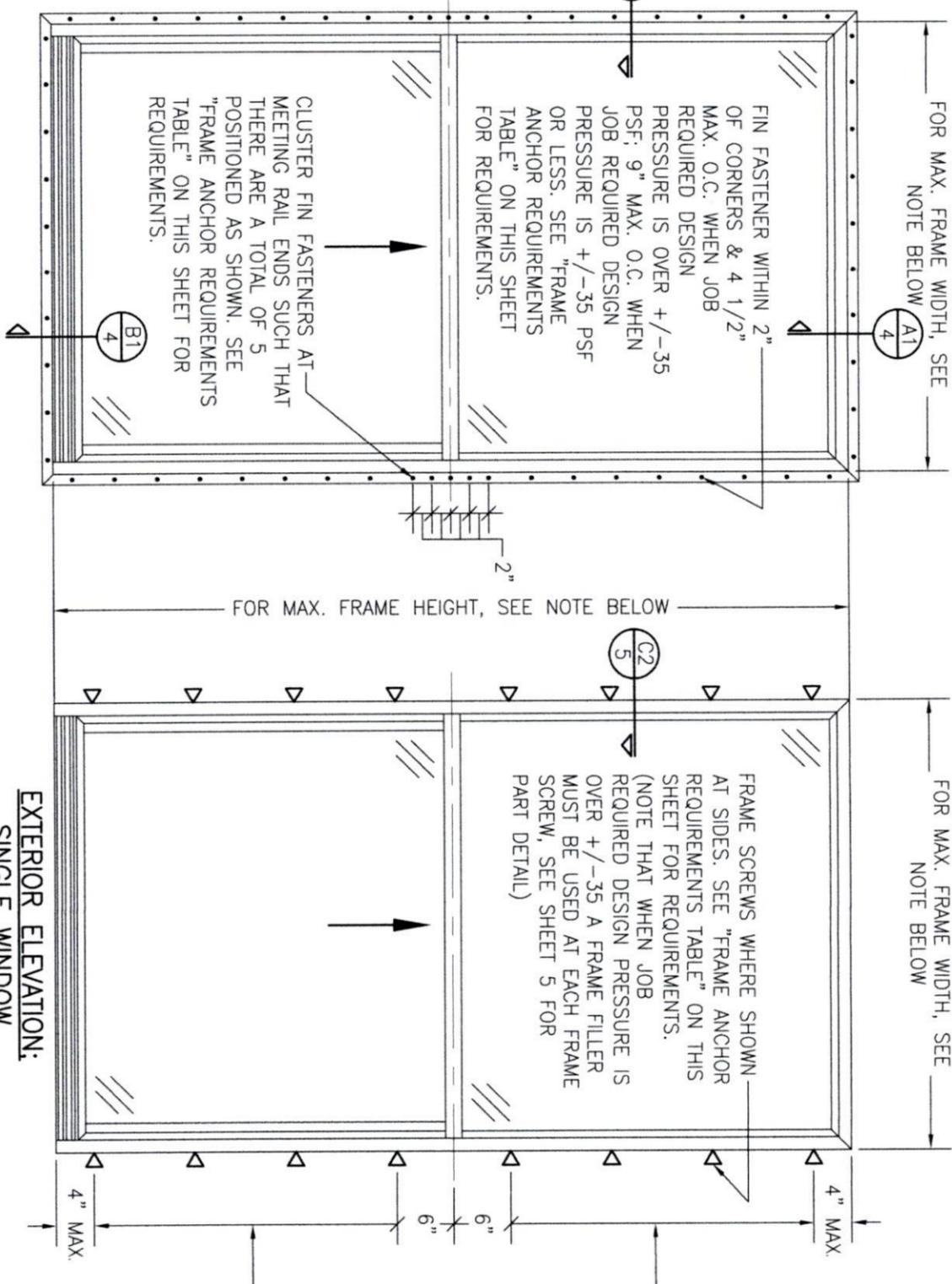
PRESSURES & CONDITIONS SHOWN IN THIS DRAWING ARE GOVERNED BY INSTALLATION REQUIREMENTS ONLY. THE GOVERNING CONDITIONS ON ANY SPECIFIC PRODUCT SHALL BE THE LESSER OF THOSE SPECIFIED IN THE PRODUCTS STATE APPROVAL OR THAT SHOWN IN THESE DRAWINGS.

**INSTALLATION NOTE:**  
WHEN NECESSARY, INSTALLATION METHODS MAY BE MIXED WITH ANY ONE WINDOW SUCH THAT INDIVIDUAL SIDES OF THE WINDOW MAY USE ONE OR THE OTHER ANCHOR METHOD (EXAMPLE: HEAD MAY USE FRAME SCREWS METHOD WHILE OTHER SIDES USE FIN)

**FRAME ANCHOR REQUIREMENTS TABLE**

OPENING TYPE (SUBSTRATE)	FRAME/CLIP/NAIL FIN TO OPENING FASTENER TYPE	MINIMUM EMBED	MINIMUM EDGE DIST.
(1) FRAME SCREWS			
MIN. 2X4 WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55)	NO. 10 SMS OR WOOD SCREW	1 1/4"	3/4"
MIN. 18 GA. 33 KSI METAL STUD	NO. 10 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 1/8" THK A36 STEEL	NO. 10 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 1/8" THK 6063-T5 ALUM.	NO. 10 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. C-90 CMU OR 2500 PSI CONCRETE	(2) 1/4" CONCRETE SCREW	1 1/4"	2"
(1) INSTALLATION CLIP SCREWS			
MIN. 2X4 WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55)	NO. 10 SMS SCREW	1 1/4"	1/2"
MIN. 18 GA. 33 KSI METAL STUD	NO. 10 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 1/8" THK A36 STEEL	NO. 10 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 1/8" THK 6063-T5 ALUM.	NO. 10 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
2500 PSI CONCRETE	(2) 3/16" CONCRETE SCREW	1 1/4"	2"
(3) NAILING FIN FASTENERS			
MIN. 2X4 WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55)	NO. 8 SMS SCREW	1 3/8"	1/2"
MIN. 2X4 WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55)	11 GA. ROOFING NAIL	1 3/8"	1/2"
MIN. 1/8" THK A36 STEEL	NO. 8 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 1/8" THK 6063-T5 ALUM.	NO. 8 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"

- (1) FRAME AND INSTALLATION CLIP SCREWS SHALL BE A PAN OR HEX HEAD SCREW.
- (2) CONCRETE SCREWS SHALL BE ELCO ULTRACONS (C.S.), ELCO CRETE-FLEX (S.S.), ITW RAMSET/RED HEAD TAPCONS (C.S. OR S.S.) OR HILTI KWIK-CON II (C.S. OR S.S.).
- (3) WHEN SCREWS ARE USED WITH THE NAIL FIN, THEY MUST BE A PAN HEAD OR WAFFLE HEAD SCREW OR HAVE A FLAT WASHER AT THE SCREW HEAD.



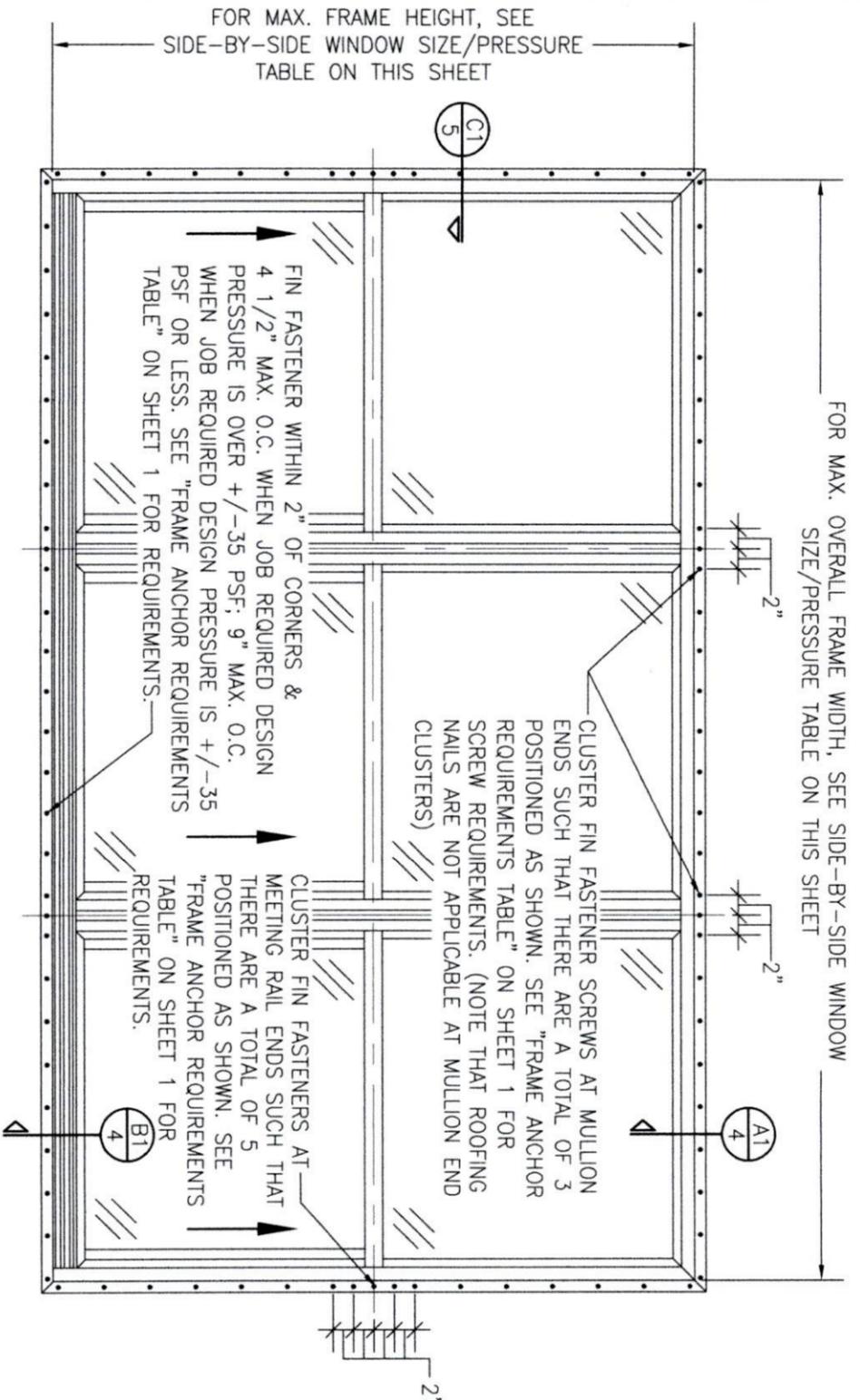
**NOTE: FOR MAX. SINGLE WINDOW FRAME DIMENSIONS AND ALLOWABLE DESIGN PRESSURE, SEE APPLICABLE FLORIDA APPROVAL**

**ANCHOR/SUBSTRATE EVALUATION NOTE:**  
ALL ANCHORS IN THEIR SPECIFIED SUBSTRATES HAVE BEEN ANALYZED IN ACCORDANCE WITH THEIR APPLICABLE STANDARD(S) AND ARE FOUND TO BE CAPABLE OF SUPPORTING ALL LOADS IMPOSED ON THEM UNDER THE GUIDELINES OF THIS DOCUMENT. ANY SUBSTRATES OR CONDITIONS OUTSIDE OF WHAT IS SHOWN HERE-IN SHALL BE SUBJECT TO JOB SPECIFIC ENGINEER'S REVIEW & CERTIFICATION.

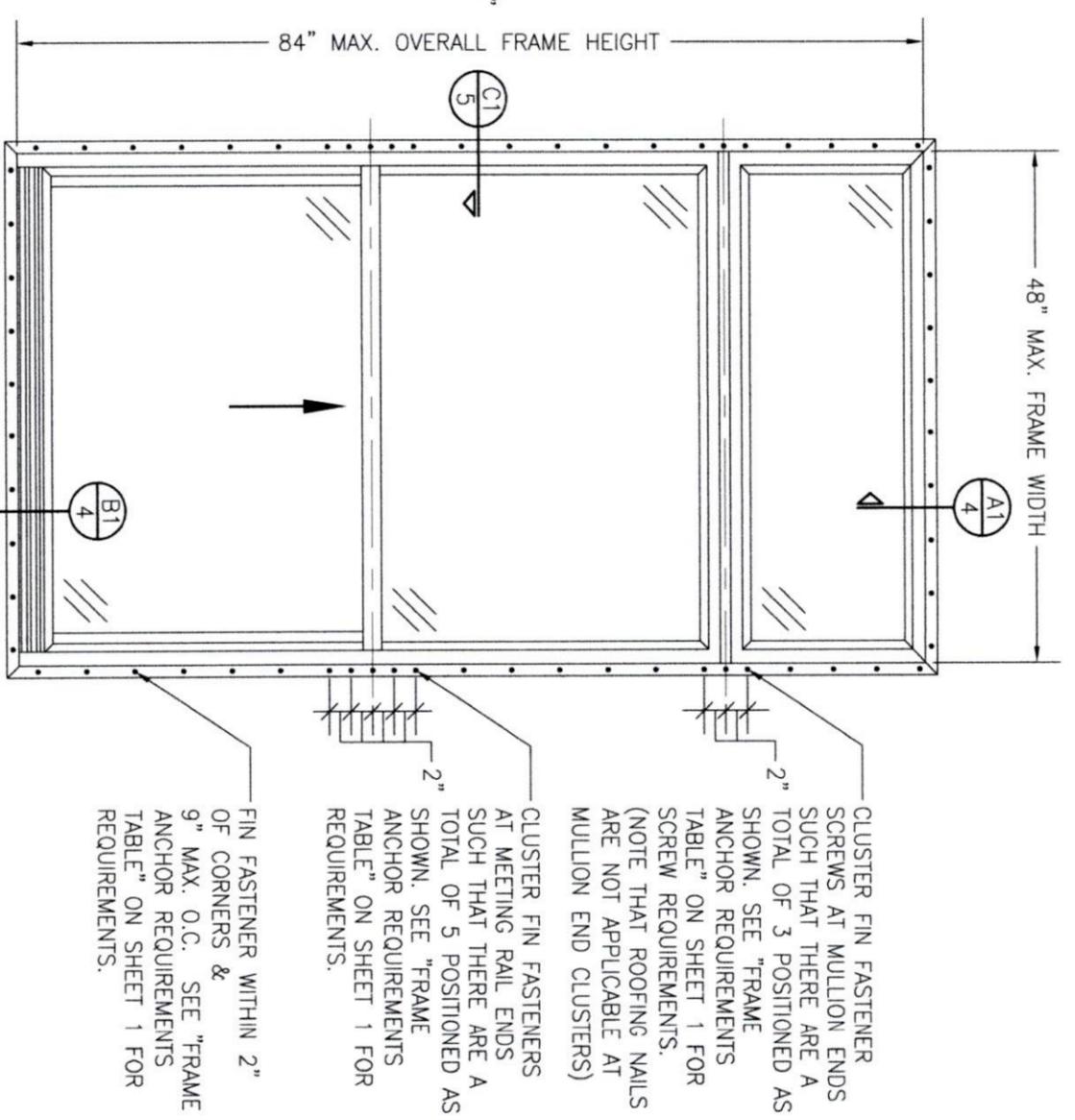
SIDE JAMB ANCHOR SPACING TABLE	MAXIMUM FRAME WIDTH (IN.)	MAXIMUM O.C. SPACING (IN.)
	54	12
	48	13
	36	17

THESE DRAWINGS ARE APPLICABLE ONLY TO THE PRODUCT SPECIFIED. THEY MAY NOT BE USED FOR THE ASSEMBLY AND/OR INSTALLATION OF ANY OTHER PRODUCT NOR MAY THEY BE USED FOR NATIONAL AND/OR LOCAL APPROVAL OF ANY PRODUCT NOT PRODUCED BY THE MANUFACTURER STATED ON THESE DRAWINGS.

DRAWING TITLE <b>250 SERIES VINYL SINGLE HUNG NON-IMPACT WINDOW</b>		DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
CONSULTANTS <b>W. W. SCHAEFER ENGINEERING &amp; CONSULTING, P.A.</b> 26376 NADIR ROAD; UNIT 309 PUNTA GORDA, FL 33983 PHONE: 561-744-3424		MANUFACTURER <b>PELLA CORPORATION</b> 102 MAIN STREET PELLA, IA 50219 641-621-1000		DATE: 02/05/14	
CERTIFICATION WARREN W. SCHAEFER, P.E. P.E. NO. 44135		REVISION DESCRIPTION		NO. BY DATE	
DRAWING NO. <b>1867</b>		A1 UPDATE FOR NEW TESTING		W.W.S. 03/08/16	
SHEET NO. 1 OF 5		B1 ADDED 109 X 72 WINDOW		W.W.S. 11/02/20	
		C1 UPDATE TO CURRENT STANDARDS		W.W.S. 03/09/23	



**EXTERIOR ELEVATION:  
SIDE-BY-SIDE WINDOW**  
SCALE: 3/4" = 1'-0"  
(NAIL FIN MOUNT CONDITION)



**EXTERIOR ELEVATION:  
SINGLE WINDOW WITH TRANSOM**  
SCALE: 3/4" = 1'-0"  
(NAIL FIN MOUNT CONDITION)

ALLOWABLE SIDE-BY-SIDE WINDOW SIZE/PRESSURE TABLE		
MAXIMUM OVERALL FRAME WIDTH DIMENSION (IN.)	MAXIMUM FRAME HEIGHT DIMENSION (IN.)	ALLOWABLE PRESSURE (+/- PSF)
<b>TRIPLE WINDOW</b>		
109	63	35
109	72	30
<b>DOUBLE WINDOW</b>		
96	72	35
72	65 1/2	50

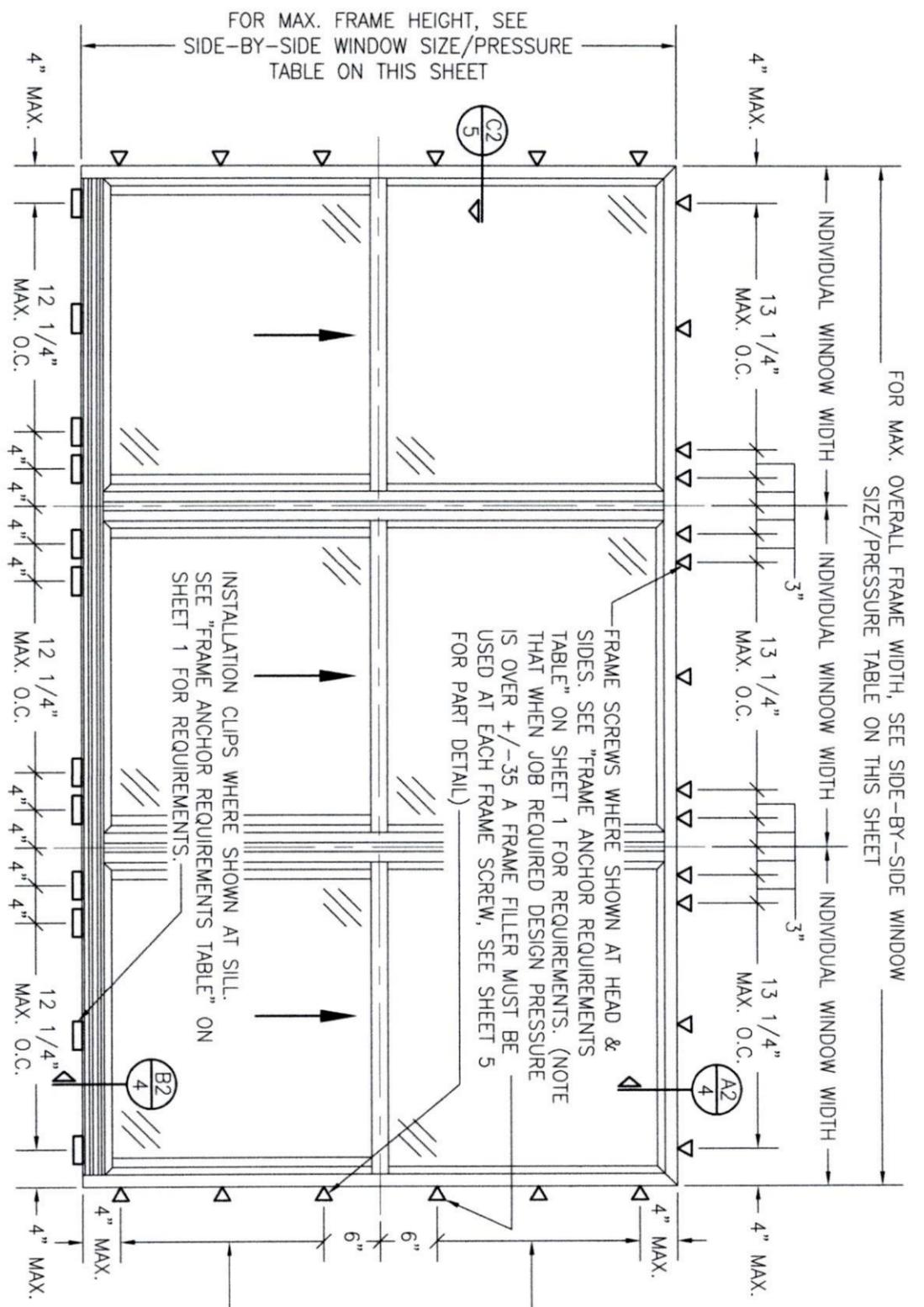
PRESSURES & CONDITIONS SHOWN IN THIS DRAWING ARE GOVERNED BY INSTALLATION REQUIREMENTS ONLY. THE GOVERNING CONDITIONS ON ANY SPECIFIC PRODUCT SHALL BE THE LESSER OF THOSE SPECIFIED IN THE PRODUCTS STATE APPROVAL OR THAT SHOWN IN THESE DRAWINGS.

ALLOWABLE DESIGN PRESSURE (TRANSOM UNITS ONLY)
+/-35 PSF

NO.	REVISION DESCRIPTION	BY	DATE

DRAWING TITLE <b>250 SERIES VINYL SINGLE HUNG NON-IMPACT WINDOW</b>	
CONSULTANTS <b>W. W. SCHAEFER ENGINEERING &amp; CONSULTING, P.A.</b> 26376 NADIR ROAD; UNIT 309 PUNTA GORDA, FL 33983 PHONE: 561-744-3424	MANUFACTURER  <b>PELLA CORPORATION</b> 102 MAIN STREET PELLA, IA 50219 641-621-1000
CERTIFICATION  WARREN W. SCHAEFER, P.E. P.E. NO. 44135	DRAWINGS NO.: <b>1867</b> REV.: <b>C</b>
SHEET NO. <b>2</b> OF <b>5</b>	

DRAWN BY: W.R.M.	CHECKED BY: W.M.S.
DATE: 02/05/14	

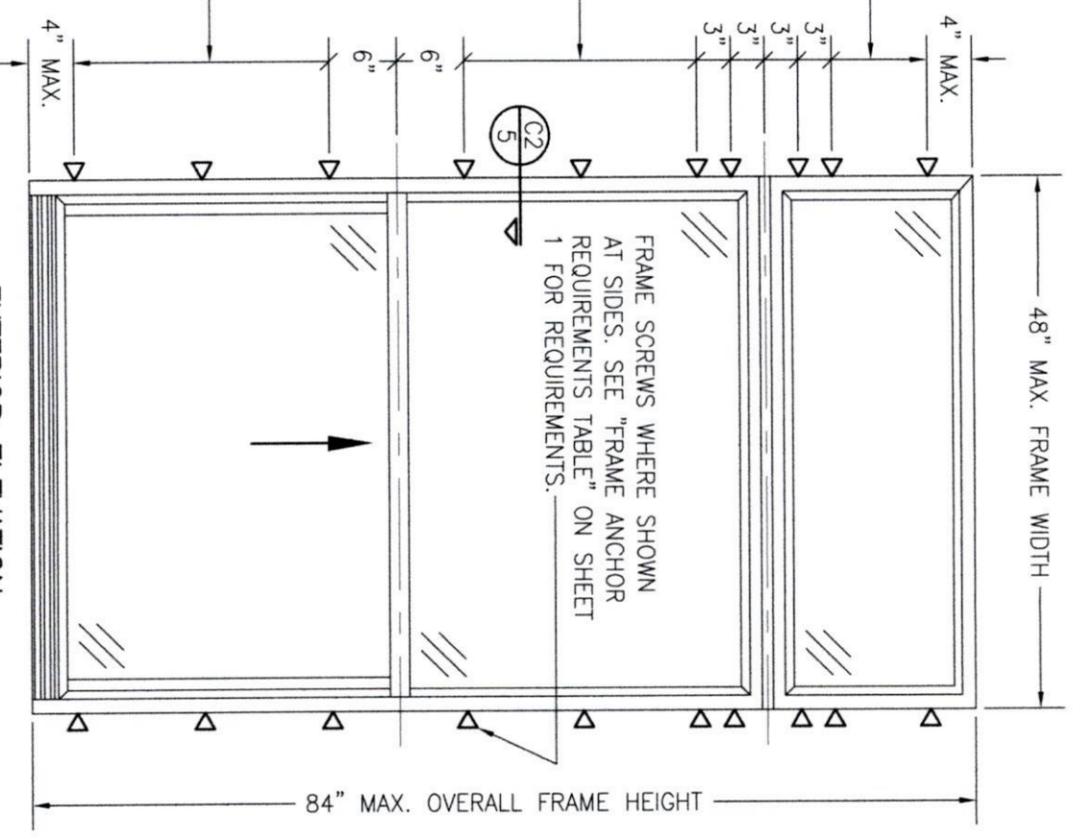


**EXTERIOR ELEVATION:  
SIDE-BY-SIDE WINDOW  
WITH TRANSOM**  
SCALE: 3/4" = 1'-0"  
(FRAME SCREW AND CLIP MOUNT CONDITION)

SIDE JAMB ANCHOR SPACING TABLE	
MAXIMUM INDIVIDUAL WINDOW WIDTH (IN.)	MAXIMUM O.C. SPACING (IN.)
48	13
36	17

ALLOWABLE SIDE-BY-SIDE WINDOW SIZE/PRESSURE TABLE		
MAXIMUM OVERALL FRAME WIDTH DIMENSION (IN.)	MAXIMUM FRAME HEIGHT DIMENSION (IN.)	ALLOWABLE PRESSURE (+/- PSF)
<b>TRIPLE WINDOW</b>		
109	63	35
109	72	30
<b>DOUBLE WINDOW</b>		
96	72	35
72	65 1/2	50

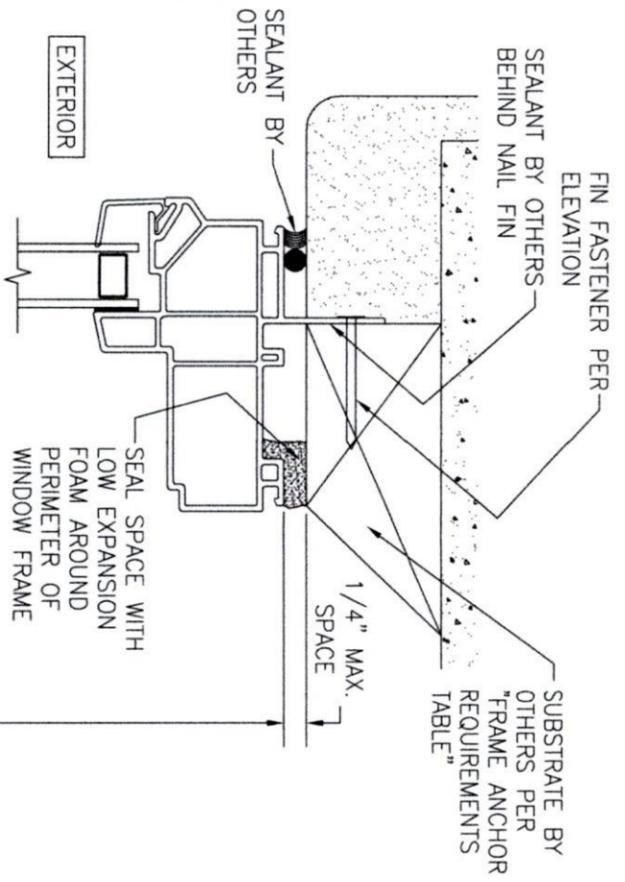
PRESSURES & CONDITIONS SHOWN IN THIS DRAWING ARE GOVERNED BY INSTALLATION REQUIREMENTS ONLY. THE GOVERNING CONDITIONS ON ANY SPECIFIC PRODUCT SHALL BE THE LESSER OF THOSE SPECIFIED IN THE PRODUCTS STATE APPROVAL OR THAT SHOWN IN THESE DRAWINGS.



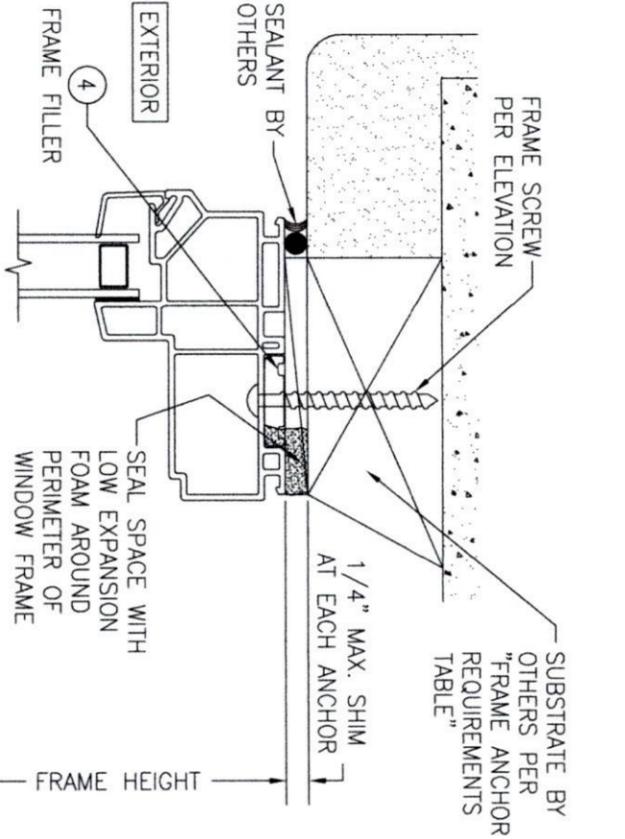
**EXTERIOR ELEVATION:  
SINGLE WINDOW WITH TRANSOM**  
SCALE: 3/4" = 1'-0"  
(FRAME SCREW MOUNT CONDITION)

ALLOWABLE DESIGN PRESSURE (TRANSOM UNITS ONLY)
+/-35 PSF

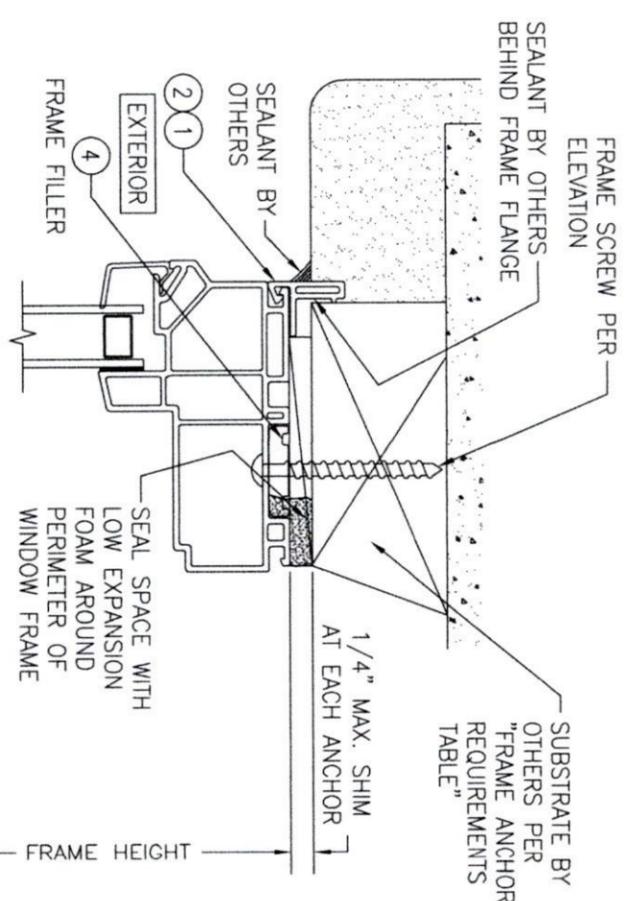
CERTIFICATION  WARREN W. SCHAEFER, P.E. P.E. NO. 44135	DRAWING TITLE <b>250 SERIES VINYL SINGLE HUNG NON-IMPACT WINDOW</b>	NO. REVISION DESCRIPTION BY DATE	DRAWN BY: W.R.M.	CHECKED BY: W.M.S.
	CONSULTANTS <b>W. W. SCHAEFER ENGINEERING &amp; CONSULTING, P.A.</b> 26376 NADIR ROAD; UNIT 309 PUNTA GORDA, FL 33983 PHONE: 561-744-3424		MANUFACTURER  <b>PELLA CORPORATION</b> 102 MAIN STREET PELLA, IA 50219 641-621-1000	PLOT: 1-16
DRAWING NO.: <b>1867</b>	SHEET NO.: <b>3</b> OF <b>5</b>	REV.: <b>C</b>		



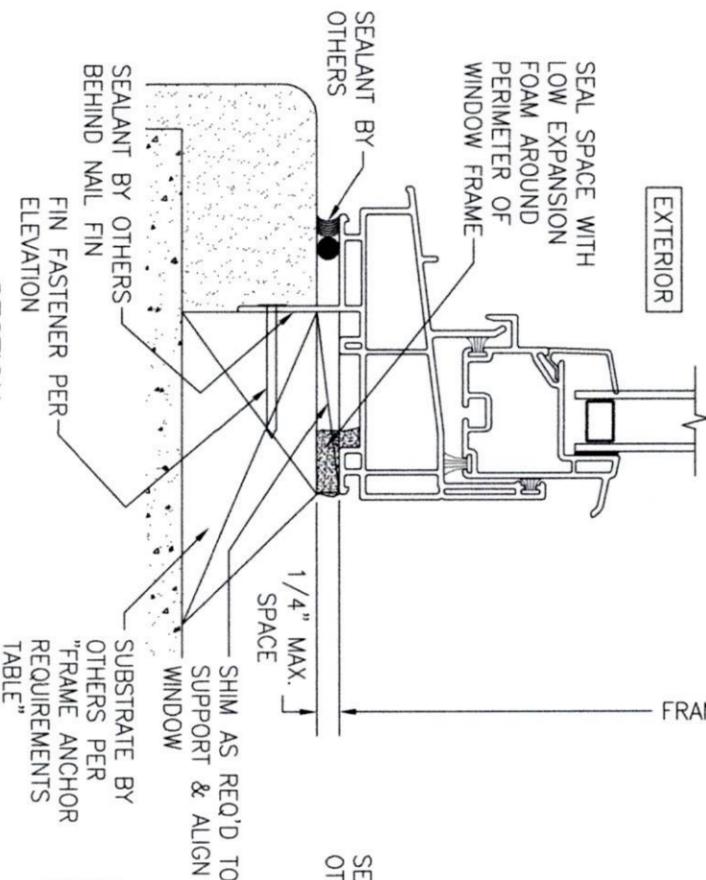
SECTION A1  
SCALE: 3/4 FULL  
(NAIL FIN MOUNT)



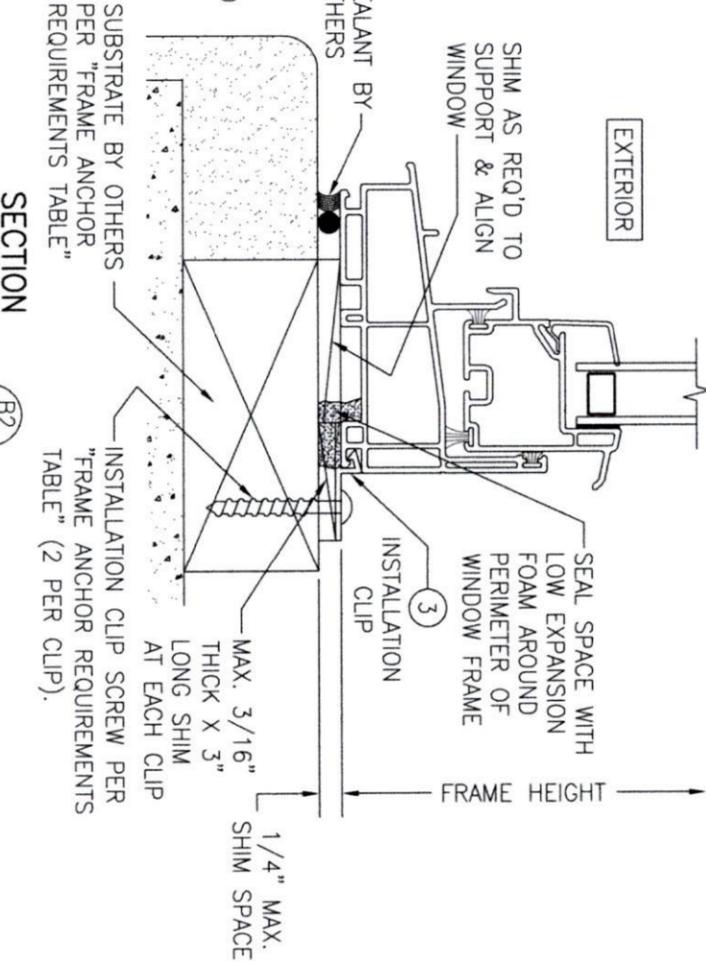
SECTION A2  
SCALE: 3/4 FULL  
(FRAME SCREW MOUNT CONDITION)



ALTERNATE SECTION A2  
SCALE: 1/2 FULL  
(FRAME SCREW MOUNT CONDITION WITH FLANGE)



SECTION B1  
SCALE: 3/4 FULL  
(NAIL FIN MOUNT)



SECTION B2  
SCALE: 3/4 FULL  
(INSTALLATION CLIP MOUNT CONDITION)

NO.	REVISION	DESCRIPTION	BY	DATE

DRAWING TITLE  
**250 SERIES VINYL SINGLE HUNG NON-IMPACT WINDOW**

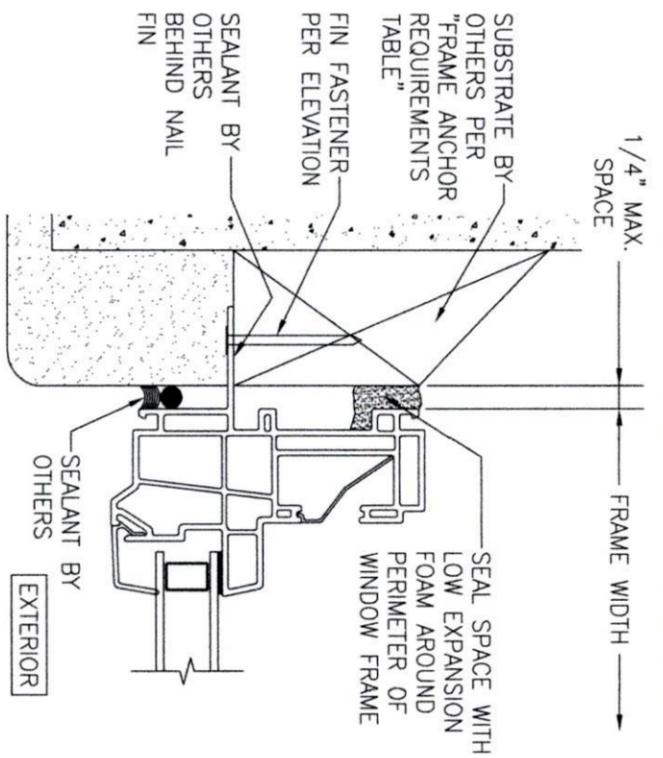
CONSULTANTS  
**W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.**  
26376 NADIR ROAD; UNIT 309  
PUNTA GORDA, FL 33983  
PHONE: 561-744-3424

MANUFACTURER  
**Pella**  
PELLA CORPORATION  
102 MAIN STREET  
PELLA, IA 50219  
641-621-1000

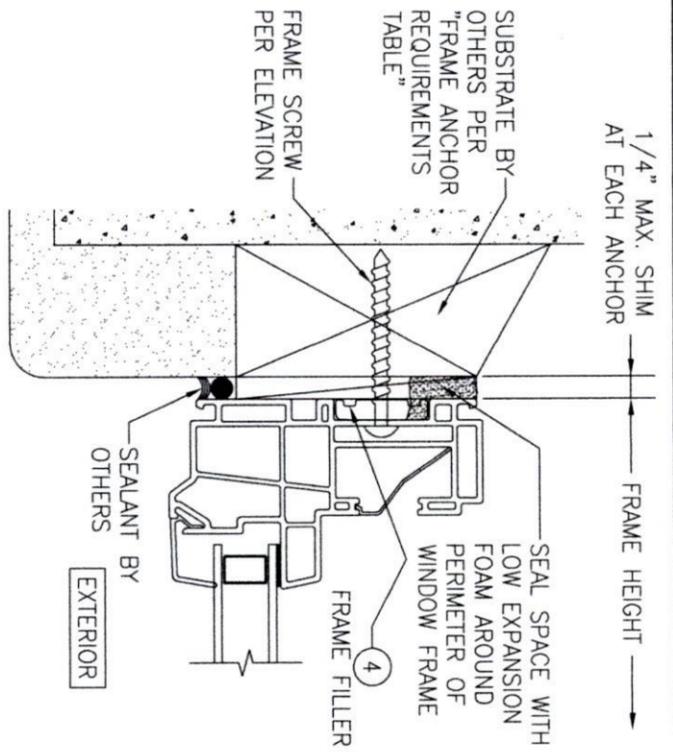
CERTIFICATION  
WARREN W. SCHAEFER, P.E.  
P.E. NO. 44135

DRAWING NO.: **1867**  
REV.: **C**

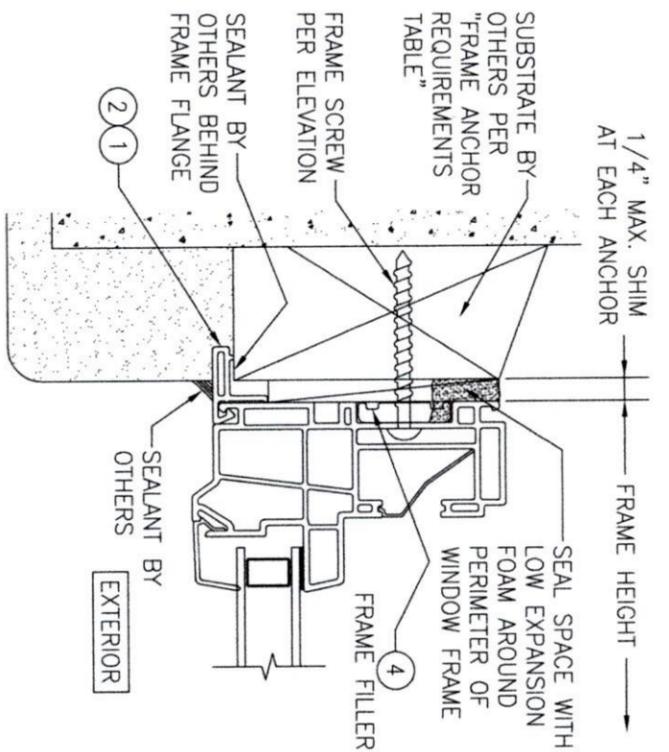
SHEET NO. **4** OF **5**



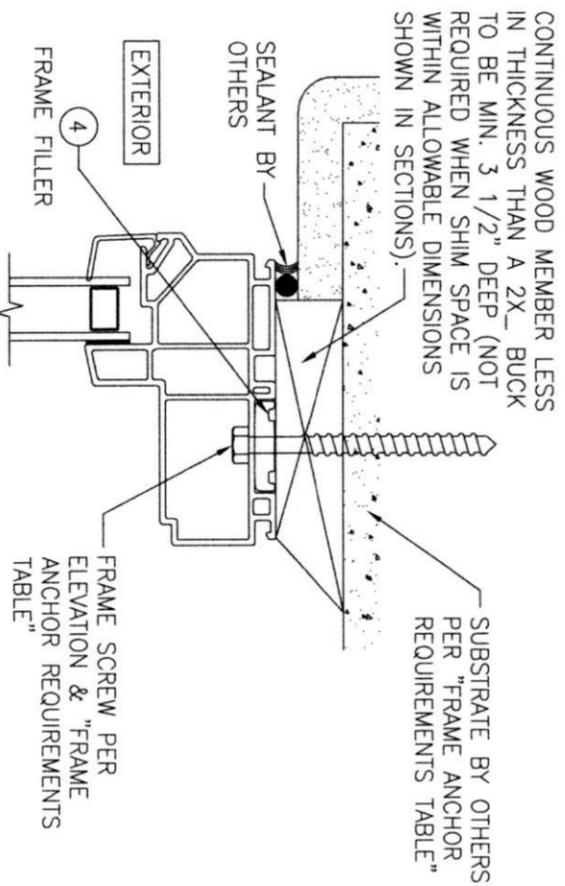
SECTION C1  
SCALE: 3/4 FULL  
(NAIL FIN MOUNT)



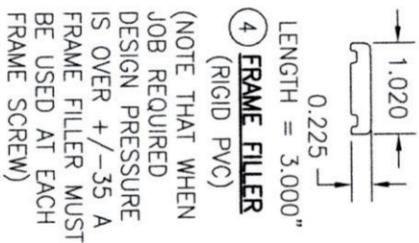
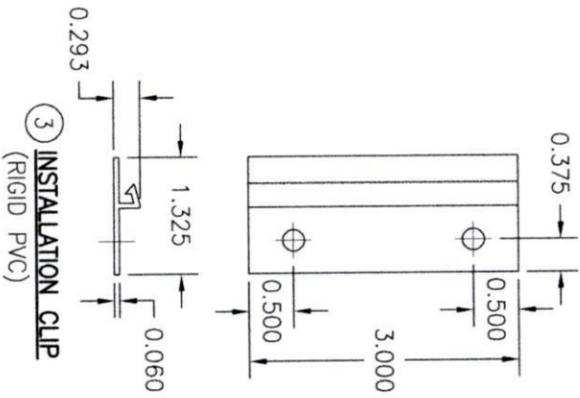
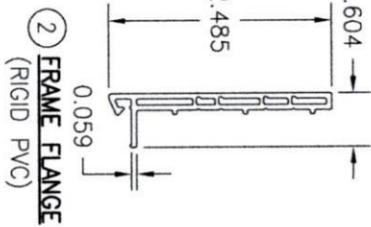
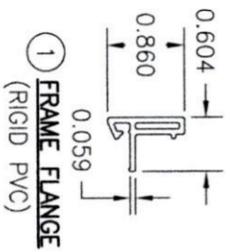
SECTION C2  
SCALE: 3/4 FULL  
(FRAME SCREW MOUNT CONDITION)



ALTERNATE SECTION C2  
SCALE: 1/2 FULL  
(FRAME SCREW MOUNT CONDITION WITH FLANGE)



OPTIONAL DIRECT MOUNT DETAIL  
TO SUBSTRATE WITH SPACER  
(HEAD SECTION SHOWN; SIDES ARE INSTALLED THE SAME)  
(DIRECT MOUNT CONDITION IS NOT APPLICABLE AT SILL)  
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)



4 FRAME FILLER (RIGID PVC)  
(NOTE THAT WHEN JOB REQUIRED DESIGN PRESSURE IS OVER +/-35 A FRAME FILLER MUST BE USED AT EACH FRAME SCREW)

NO.	REVISION DESCRIPTION	BY	DATE
1			
2			

DRAWING TITLE: 250 SERIES VINYL SINGLE HUNG NON-IMPACT WINDOW

CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.  
26376 NADIR ROAD; UNIT 309  
PUNTA GORDA, FL 33983  
PHONE: 561-744-3424

MANUFACTURER: Pella CORPORATION  
102 MAIN STREET  
PELLA, IA 50219  
641-621-1000

CERTIFICATION: WARREN W. SCHAEFER, P.E.  
P.E. NO. 44135

DRAWING NO.: 1867  
REV. C

SHEET NO. 5 OF 5



**Product Approval**  
USER: Public User

[Product Approval Menu](#) > [Product or Application Search](#) > **Application List**

OFFICE OF THE  
SECRETARY

**Search Criteria**

[Refine Search](#)

Code Version	2023	FL#	16812.2
Application Type	ALL	Product Manufacturer	ALL
Category	ALL	Subcategory	ALL
Application Status	ALL	Compliance Method	ALL
Quality Assurance Entity	ALL	Quality Assurance Entity Contract Expired	ALL
Product Model, Number or Name	ALL	Product Description	ALL
Approved for use in HVHZ	ALL	Approved for use outside HVHZ	ALL
Impact Resistant	ALL	Design Pressure	ALL
Other	ALL		

**Search Results - Applications**

<a href="#">FL#</a>	<a href="#">Type</a>	<a href="#">Manufacturer</a>	<a href="#">Validated By</a>	<a href="#">Status</a>
<a href="#">FL16812-R9</a> <a href="#">History</a>	Revision	Pella Corporation <b>FL#:</b> FL16812.2 <b>Model:</b> 250 Series Single Hung Window <b>Description:</b> 48" x 84" vinyl non-impact single window with fully reinforced stiles & rails <b>Category:</b> Windows <b>Subcategory:</b> Single Hung	T.E. Lunn, PE, LLC (561) 625-6455	Approved *

\*Approved by DBPR. Approvals by DBPR shall be reviewed and ratified by the POC and/or the Commission if necessary.

[Contact Us](#) :: 2601 Blair Stone Road, Tallahassee FL 32399 Phone: 850-487-1824

The State of Florida is an AA/EEO employer. [Copyright 2007-2013 State of Florida.](#) :: [Privacy Statement](#) :: [Accessibility Statement](#) :: [Refund Statement](#)

Under Florida law, email addresses are public records. If you do not want your e-mail address released in response to a public-records request, do not send electronic mail to this entity. Instead, contact the office by phone or by traditional mail. If you have any questions, please contact 850.487.1395. \*Pursuant to Section 455.275(1), Florida Statutes, effective October 1, 2012, licensees licensed under Chapter 455, F.S. must provide the Department with an email address if they have one. The emails provided may be used for official communication with the licensee. However email addresses are public record. If you do not wish to supply a personal address, please provide the Department with an email address which can be made available to the public. To determine if you are a licensee under Chapter 455, F.S., please click [here](#).

**Product Approval Accepts:**



**GENERAL NOTES:**

1. ALL FASTENERS SHALL BE IN ACCORDANCE WITH THESE DRAWINGS. SPECIFIED ANCHOR EMBED TO BASE MATERIAL SHALL BE BEYOND WALL FINISH OR STUCCO.
2. OPENINGS, BLOCKING & BLOCKING FASTENERS MUST BE PROPERLY DESIGNED & INSTALLED TO TRANSFER LOADS TO THE FOUNDATION.
3. THESE ON-IMPACT-RATED PRODUCT INSTALLATIONS ARE IN ACCORDANCE WITH AND MEET THE REQUIREMENTS OF THE FLORIDA BUILDING CODE (FBC).
4. ALL ANCHORS SECURING PRODUCT FRAMES TO PRESSURE TREATED BLOCKS OR WOOD FRAMING SHALL BE CAPABLE OF RESISTING CORROSION CAUSED BY THE PRESSURE TREATING CHEMICALS IN THE WOOD.
5. MATERIALS, INCLUDING BUT NOT LIMITED TO STEEL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF FLORIDA BUILDING CODE CHAPTER 20.
6. TO THE BEST OF OUR KNOWLEDGE, THE PRODUCT SHOWN HEREIN IS CERTIFIED & QUALITY ASSURED BY A FLORIDA STATE APPROVED CERTIFICATION/QA ENTITY & SHALL BE LABELED IN ACCORDANCE WITH THE FBC AND THE FLORIDA DEPARTMENT OF BUSINESS & PROFESSIONAL REGULATION SPECIFICATIONS.
7. CERTIFICATION OF THESE PRODUCT INSTALLATIONS & TESTING METHODS WILL BE CONSIDERED VOID IF ANY OF THE FOLLOWING APPLIES: (1) PRODUCT IS INSTALLED WITHOUT FOLLOWING THE APPLICABLE LOCAL BUILDING DEPARTMENT (2) PRODUCT IS NOT TESTED BY AN INDEPENDENT, LICENSED CONTRACTOR (3) PRODUCT IS NOT INSTALLED IN ACCORDANCE WITH THE OTHER DESIGN APPROVED CONTRACTOR SPECIFICATIONS (4) CHANGES WERE MADE TO THE ORIGINAL DESIGN (5) CHANGES WERE MADE TO THE ORIGINAL DESIGN THAT CAUSED THESE INSTALLATIONS TO BE INCONSISTENT WITH WHAT HAS BEEN TESTED.
8. THE LEAST DESIGN PRESSURE SPECIFIED EITHER IN THIS DRAWING OR IN THE PRODUCT'S CERTIFICATION SHALL CONTROL FOR THE INSTALLED PRODUCT.
9. THESE DRAWINGS CERTIFY THE PRODUCT INSTALLATION ONLY. WATER PROOFING OF THE INSTALLED PRODUCT IS NOT PART OF THIS INSTALLATION CERTIFICATION. THAT RESPONSIBILITY SHALL BE THAT OF THE MANUFACTURER &/OR INSTALLER.

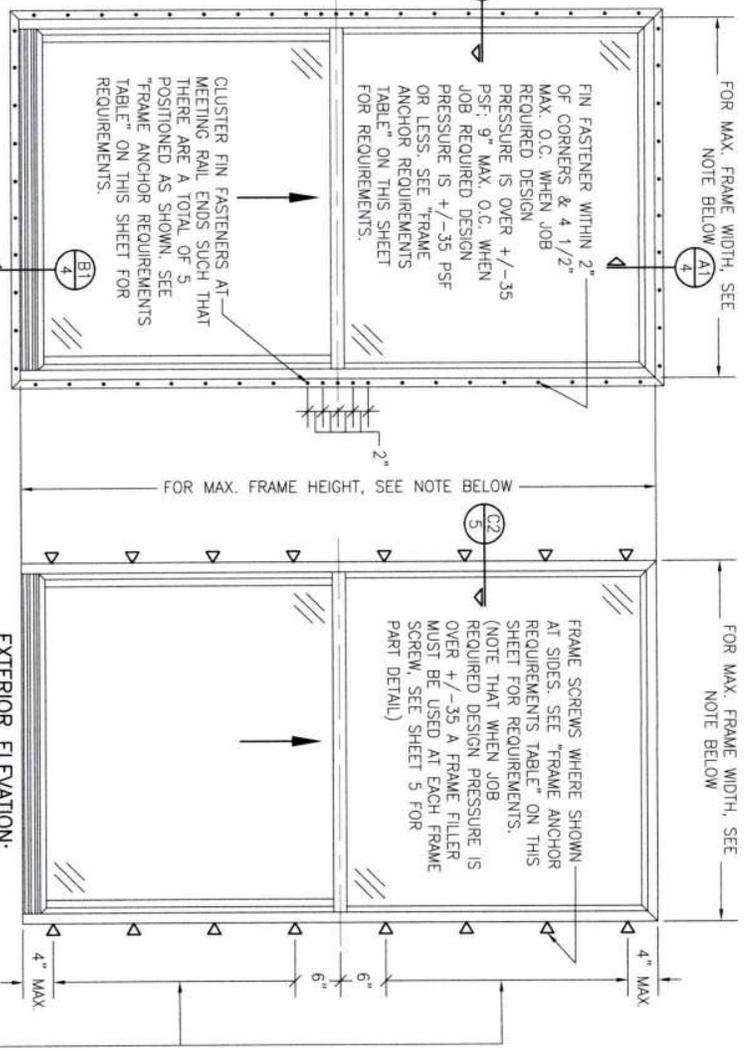
INSTALLATION EVALUATION IS BASED ON APPLICABLE ANCHOR STRAINERS AND/OR INFORMATION & RESULTS FROM LABORATORY TESTING REPORTS. THE FLORIDA BUILDING CODE VERSION CONSIDERED WITH THE EVALUATION WAS THAT IN FORCE AT THE TIME OF THE EVALUATION. IN THE EVENT OF CODE VERSION CHANGES/UPDATES OR IN THE EVENT THAT NEW OR ADDITIONAL TESTING IS COMPLETED ON THE REFERENCED PRODUCT, PRIOR TO SAVING CODE COMPLIANCE WITH THE STATE, THE MANUFACTURER SHALL CONTACT WITH THE INSTALLATION EVALUATION ENGINEER OF RECORD THAT THE INSTALLATIONS SPECIFIED HEREIN ARE CORRECT WITH THE THEN CURRENT TESTING, CODE AND APPLICABLE STANDARDS.

**INSTALLATION NOTE:**  
WHEN NECESSARY, INSTALLATION METHODS MAY BE MODIFIED WITH ANY ONE WINDOW SUCH THAT INDIVIDUAL SIDES OF THE WINDOW MAY USE ONE OR THE OTHER ANCHOR METHOD (EXAMPLE: HEAD MAY USE FRAME SCREWS METHOD WHILE OTHER SIDES USE FIN).

**FRAME ANCHOR REQUIREMENTS TABLE**

OPENING TYPE (SUBSTRATE)	FRAME/CLIP/NAIL FIN TO OPENING FASTENER TYPE	MINIMUM EMBED	MINIMUM EDGE DIST.
<b>(1) FRAME SCREWS</b>			
MIN. 2X4 WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55)	NO. 10 SMS OR WOOD SCREW	1 1/4"	3/4"
MIN. 18 GA. 33 KSI METAL STUD	NO. 10 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 1/8" THK AS6 STEEL	NO. 10 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 1/8" THK 6063-15 ALUM.	NO. 10 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. C-90 CMU OR 2500 PSI CONCRETE	(2) 1/4" SELF CONCRETE SCREW	1 1/4"	2"
<b>(1) INSTALLATION CLIP SCREWS</b>			
MIN. 2X4 WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55)	NO. 10 SMS SCREW	1 1/4"	1/2"
MIN. 18 GA. 33 KSI METAL STUD	NO. 10 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 1/8" THK AS6 STEEL	NO. 10 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 1/8" THK 6063-15 ALUM.	NO. 10 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
2500 PSI CONCRETE	(2) 3/16" CONCRETE SCREW	1 1/4"	2"
<b>(3) NAILING FIN FASTENERS</b>			
MIN. 2X4 WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55)	NO. 8 SMS SCREW	1 3/8"	1/2"
MIN. 2X4 WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55)	11 GA. ROOFING NAIL	1 3/8"	1/2"
MIN. 1/8" THK AS6 STEEL	NO. 8 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 1/8" THK 6063-15 ALUM.	NO. 8 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"

- (1) FRAME AND INSTALLATION CLIP SCREWS SHALL BE A PAN OR HEX HEAD SCREW.
- (2) CONCRETE SCREWS SHALL BE ELCO ULTRACONS (C.S.), ELCO CRETE-FLEX (S.S.), ITW RAMST/REID HEAD TAPCONS (C.S. OR S.S.) OR HILTI KIMK-CON II (C.S. OR S.S.).
- (3) WHEN SCREWS ARE USED WITH THE NAIL FIN, THEY MUST BE A PAN HEAD OR WAFLE HEAD SCREW OR HAVE A FLAT WASHER AT THE SCREW HEAD.



**EXTERIOR ELEVATION: SINGLE WINDOW**  
SCALE: 3/4" = 1'-0"  
(NAIL FIN MOUNT CONDITION)

**EXTERIOR ELEVATION: SINGLE WINDOW**  
SCALE: 3/4" = 1'-0"  
(FRAME SCREW MOUNT CONDITION)

**NOTE: FOR MAX. SINGLE WINDOW FRAME DIMENSIONS AND ALLOWABLE DESIGN PRESSURE, SEE APPLICABLE FLORIDA APPROVAL**

**ANCHOR/SUBSTRATE EVALUATION NOTE:**  
THESE DRAWINGS AND THEIR SPECIFIED SUBSTRATES HAVE BEEN ANALYZED IN ACCORDANCE WITH THEIR APPLICABLE STANDARDS AND ARE FOUND TO BE CAPABLE OF SUPPORTING ALL LOADS IMPOSED ON THEM UNDER THE GUIDELINES OF THIS DOCUMENT. ANY SUBSTRATES OR CONDITIONS OUTSIDE OF WHAT IS SHOWN HEREIN SHALL BE SUBJECT TO JOB SPECIFIC ENGINEER'S REVIEW & CERTIFICATION.



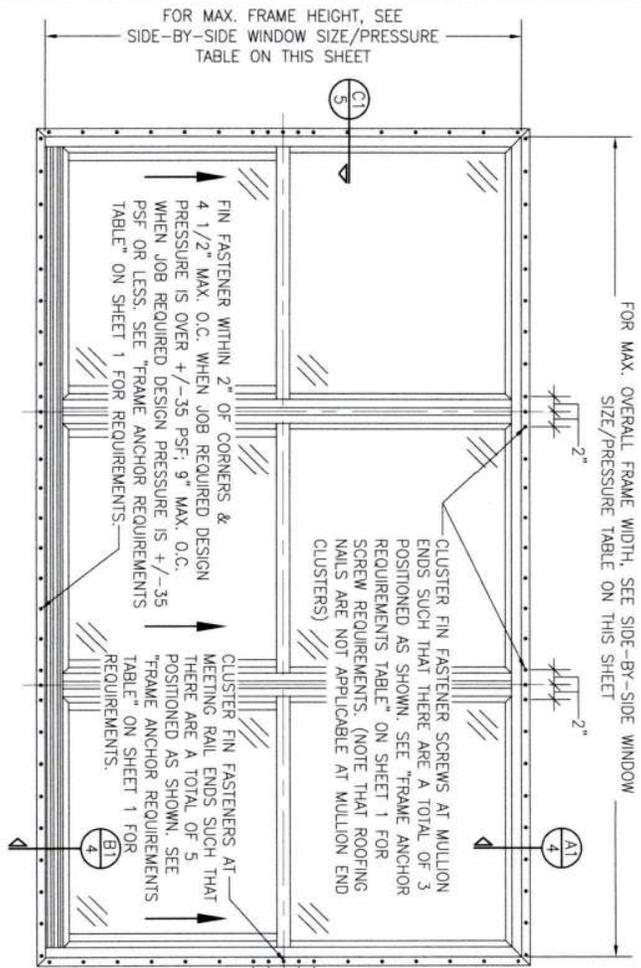
Digitally signed  
by Warren W  
Schaefer  
Date: 2023.03.09  
09:33:17 -05'00'

SIDE JAMB ANCHOR SPACING TABLE		MAXIMUM ANCHOR SPACING	
MAXIMUM FRAME WIDTH (IN.)	O.C.	MAXIMUM SPACING (IN.)	
54		12	
48		13	
36		17	

THESE DRAWINGS ARE APPLICABLE ONLY TO THE PRODUCT AND/OR INSTALLATION OF ANY OTHER PRODUCT NOR MAY ANY PRODUCT NOT PRODUCED BY THE MANUFACTURER STATED ON THESE DRAWINGS.

DRAWING NO. 1867 SHEET NO. 1 OF 5	DRAWING TITLE 250 SERIES VINYL SINGLE HUNG NON-IMPACT WINDOW	CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. 26376 MADIR ROAD, UNIT 309 PUNTA GORDA, FL 33983 PHONE: 561-744-3424	MANUFACTURER PELLA CORPORATION 102 MAIN STREET PELLA, IA 50219 641-621-1000	NO.	REVISION DESCRIPTION	BY	DATE
				A1	UPDATE FOR NEW TESTING	W.W.S.	03/08/16
				B1	ADDED 109 X 72 WINDOW	W.W.S.	11/02/20
				C1	UPDATE TO CURRENT STANDARDS	W.W.S.	03/09/23

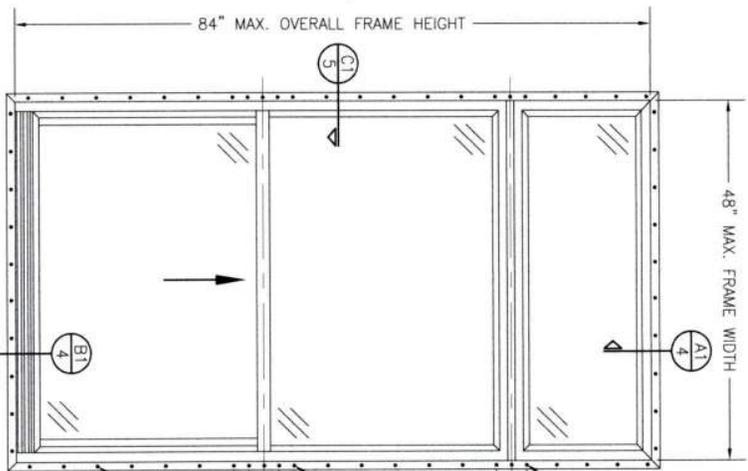
CERTIFICATION  
WARREN W. SCHAEFER, P.E.  
P.E. NO. 44135



**EXTERIOR ELEVATION:  
SIDE-BY-SIDE WINDOW**  
SCALE: 3/4" = 1'-0"  
(NAIL FIN MOUNT CONDITION)

ALLOWABLE SIDE-BY-SIDE WINDOW SIZE/PRESSURE TABLE		
MAXIMUM OVERALL FRAME WIDTH DIMENSION (IN.)	MAXIMUM FRAME HEIGHT DIMENSION (IN.)	ALLOWABLE PRESSURE (+/- PSF)
<b>TRIPLE WINDOW</b>		
109	63	35
109	72	30
<b>DOUBLE WINDOW</b>		
96	72	35
72	65 1/2	50

PRESSURES & CONDITIONS SHOWN IN THIS DRAWING ARE GOVERNED BY INSTALLATION REQUIREMENTS ONLY. THE GOVERNING CONDITIONS ON ANY SPECIFIC PRODUCT SHALL BE THE LESSER OF THOSE SPECIFIED IN THE PRODUCTS STATE APPROVAL OR THAT SHOWN IN THESE DRAWINGS.



**EXTERIOR ELEVATION:  
SINGLE WINDOW WITH TRANSOM**  
SCALE: 3/4" = 1'-0"  
(NAIL FIN MOUNT CONDITION)

ALLOWABLE DESIGN PRESSURE (TRANSOM UNITS ONLY)
+/-35 PSF

NO.	REVISION	DESCRIPTION	BY	DATE

**PELLA CORPORATION**  
102 MAIN STREET  
PELLA, IA 50219  
641-621-1000



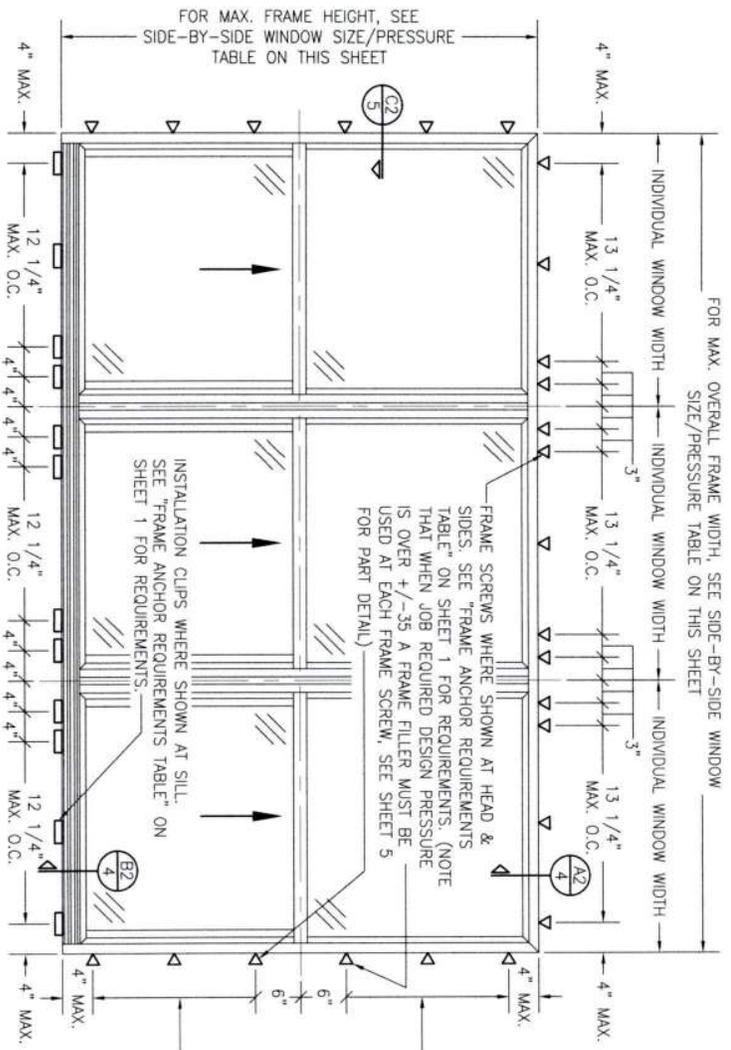
**CONSULTANTS**  
**W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.**  
26376 NADIR ROAD, UNIT 309  
PUNTA GORDA, FL 33983  
PHONE: 561-744-3424

**CERTIFICATION**  
DRAWING NO. 1867  
REV. C  
WARREN W. SCHAEFER, P.E.  
P.E. NO. 44135

DRAWING NO. 1867  
REV. C  
SHEET NO. 2 OF 5

DRAWN BY: W.B.M.  
CHECKED BY: W.M.S.  
DATE: 02/09/14

DRAWING TITLE: 250 SERIES VINYL SINGLE HUNG NON-IMPACT WINDOW

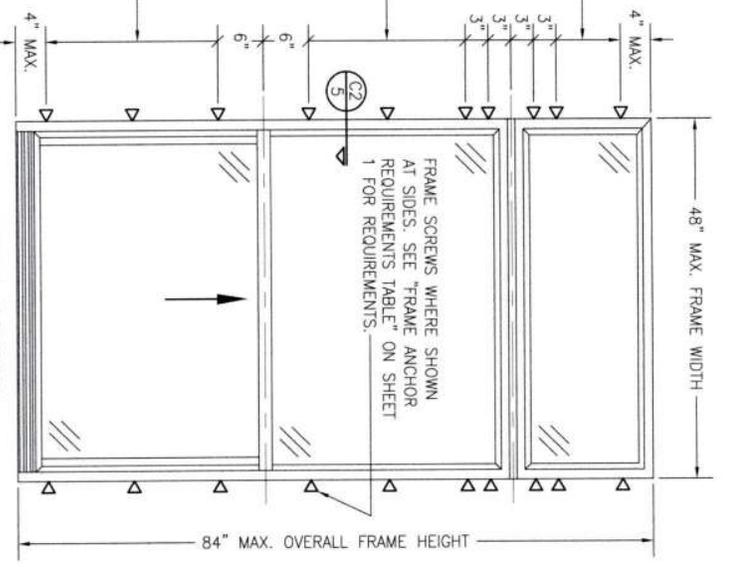


**EXTERIOR ELEVATION:  
SIDE-BY-SIDE WINDOW**  
SCALE: 3/4" = 1'-0"  
(FRAME SCREW AND CLIP MOUNT CONDITION)

ALLOWABLE SIDE-BY-SIDE WINDOW SIZE/PRESSURE TABLE		
MAXIMUM OVERALL FRAME WIDTH DIMENSION (IN.)	MAXIMUM FRAME HEIGHT (+/- PSF)	ALLOWABLE PRESSURE
109	6.3	35
109	72	30
DOUBLE WINDOW		
96	72	35
72	65 1/2	50

SIDE JAMB ANCHOR SPACING TABLE		
MAXIMUM INDIVIDUAL WINDOW WIDTH (IN.)	MAXIMUM O.C. SPACING (IN.)	
48	13	
36	17	

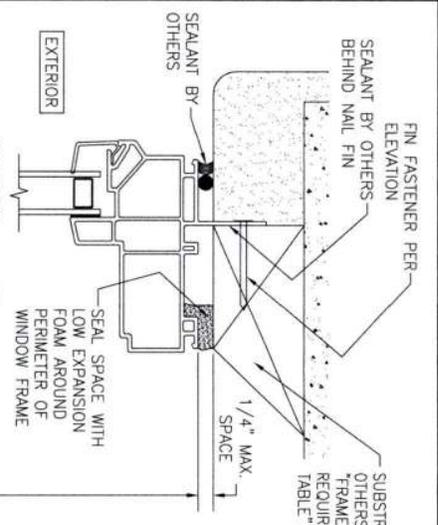
PRESSURES & CONDITIONS SHOWN IN THIS DRAWING ARE GOVERNED BY INSTALLATION REQUIREMENTS ONLY. THE GOVERNING CONDITIONS ON ANY SPECIFIC PRODUCT SHALL BE THE LESSER OF THOSE SPECIFIED IN THE PRODUCTS STATE APPROVAL OR THAT SHOWN IN THESE DRAWINGS.



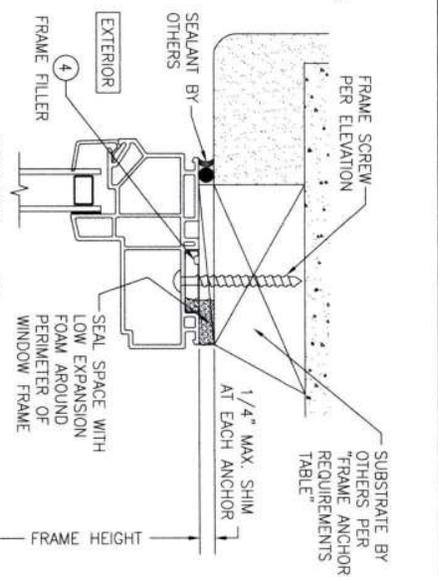
**EXTERIOR ELEVATION:  
SINGLE WINDOW WITH TRANSOM**  
SCALE: 3/4" = 1'-0"  
(FRAME SCREW MOUNT CONDITION)

ALLOWABLE DESIGN PRESSURE (TRANSOM UNITS ONLY)	
	+/-35 PSF

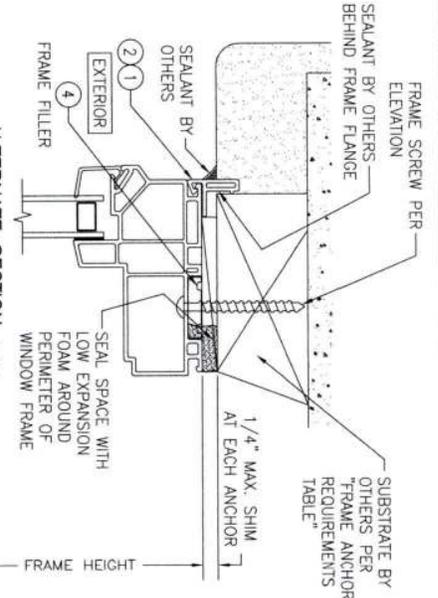
DRAWING NO. 1867 SHEET NO. 3 OF 5	CERTIFICATION WARREN W. SCHAEFER, P.E. P.E. NO. 44135	DRAWING TITLE <b>250 SERIES VINYL SINGLE HUNG NON-IMPACT WINDOW</b>	MANUFACTURER  <b>PELLA CORPORATION</b> 102 MAIN STREET PELLA, IA 50219 641-621-1000	NO.    REVISION    DESCRIPTION    BY    DATE
		CONSULTANTS <b>W. W. SCHAEFER ENGINEERING &amp; CONSULTING, P.A.</b> 26376 NADIR ROAD, UNIT 309 PUNTA GORDA, FL 33983 PHONE: 561-744-3424		DESIGNER DATE CHECKED BY DATE



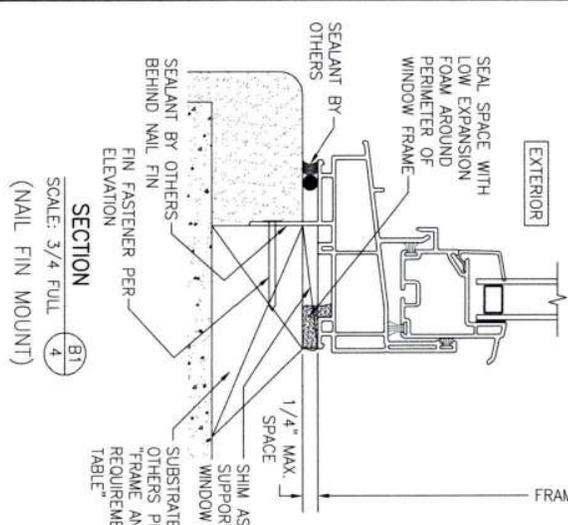
SECTION A1  
SCALE: 3/4 FULL  
(NAIL FIN MOUNT)



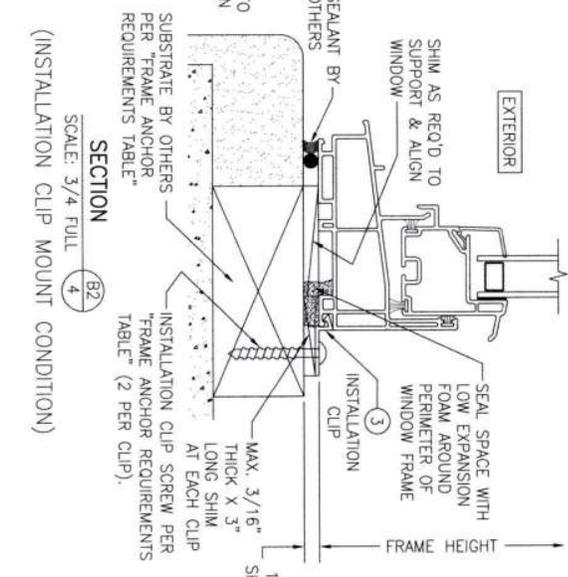
SECTION A2  
SCALE: 3/4 FULL  
(FRAME SCREW MOUNT CONDITION)



ALTERNATE SECTION A2  
SCALE: 1/2 FULL  
(FRAME SCREW MOUNT CONDITION WITH FLANGE)



SECTION B1  
SCALE: 3/4 FULL  
(NAIL FIN MOUNT)



SECTION B2  
SCALE: 3/4 FULL  
(INSTALLATION CLIP MOUNT CONDITION)

NO.	REVISION	DESCRIPTION	BY	DATE

**CONSULTANTS**  
**W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.**  
 26376 NADIR ROAD; UNIT 309  
 PUNTA GORDA, FL 33983  
 PHONE: 561-744-3424

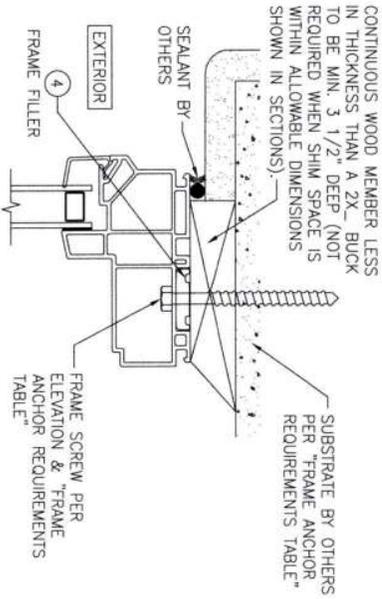
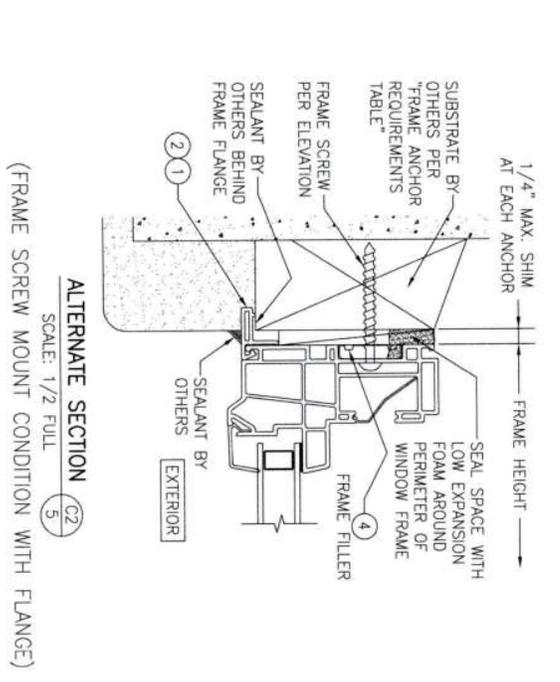
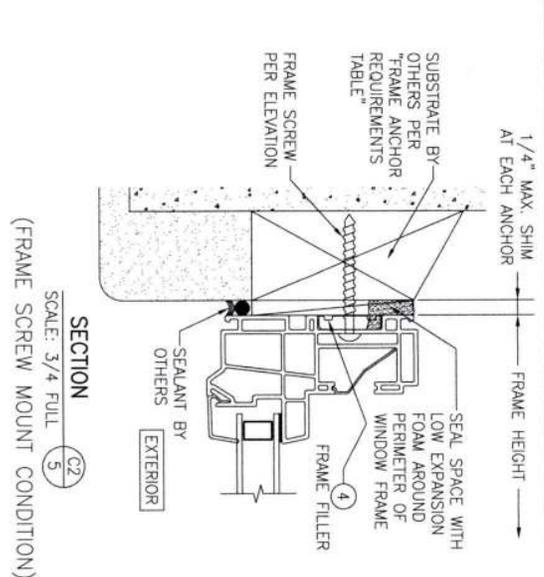
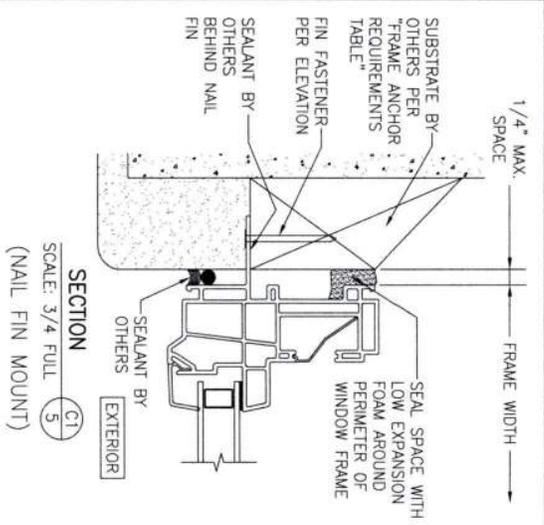
**MANUFACTURER**  
  
**PELLA CORPORATION**  
 102 MAIN STREET  
 PELLA, IA 50219  
 641-621-1000

**CERTIFICATION**

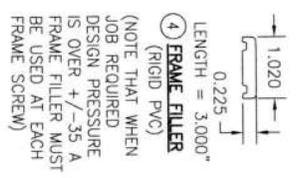
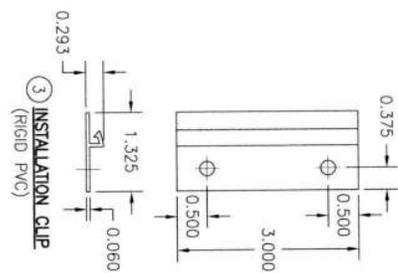
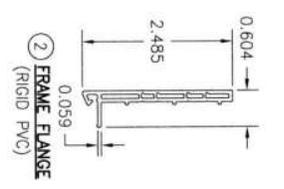
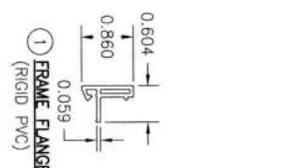
DRAWING TITLE  
**250 SERIES VINYL SINGLE HUNG NON-IMPACT WINDOW**

DRAWING NO. 1867  
 REV. C  
 SHEET NO. 4 OF 5

WARREN W. SCHAEFER, P.E.  
 P.E. NO. 44135



OPTIONAL DIRECT MOUNT DETAIL  
TO SUBSTRATE WITH SPACER  
(HEAD SECTION SHOWN; SIDES ARE INSTALLED THE SAME)  
(DIRECT MOUNT CONDITION IS NOT APPLICABLE AT SILL)  
(FOR DETAIL, NOT SHOWN, SEE OTHER SECTIONS)



4 FRAME FILLER (RIGID PVC)  
(NOTE THAT WHEN JOB REQUIRED DESIGN PRESSURE IS OVER +/- .35 A FRAME FILLER MUST BE USED AT EACH FRAME SCREW)

NO.	REVISION DESCRIPTION	BY	DATE

DRAWING NO. 1867	CHECKED BY: DATE: 05/09/14
SHEET NO. 5 OF 5	WARREN W. SCHAEFER, P.E. P.E. NO. 44135

DRAWING TITLE <b>250 SERIES VINYL SINGLE HUNG NON-IMPACT WINDOW</b>	MANUFACTURER <b>Pella</b>
CONSULTANTS <b>W. W. SCHAEFER ENGINEERING &amp; CONSULTING, P.A.</b> 26376 NAHIR ROAD; UNIT 309 PUNTA GORDA, FL 33983 PHONE: 561-744-3424	PELLA CORPORATION 102 MAIN STREET PELLA, IA 50219 641-621-1000



[DBPR HOME](#) | [ABOUT DBPR](#) | [DBPR DIVISIONS](#) | [CONTACT DBPR](#)

[BCIS Home](#) | [Log In](#) | [User Registration](#) | [Hot Topics](#) | [Submit Surcharge](#) | [Stats & Facts](#) | [Publications](#) | [Contact Us](#) | [BCIS Site Map](#) | [Links](#) | [Search](#)



**Product Approval**  
USER: Public User

[Product Approval Menu](#) > [Product or Application Search](#) > **Application List**

OFFICE OF THE SECRETARY

**Search Criteria**

[Refine Search](#)

Code Version	2023	FL#	16812.5
Application Type	ALL	Product Manufacturer	ALL
Category	ALL	Subcategory	ALL
Application Status	ALL	Compliance Method	ALL
Quality Assurance Entity	ALL	Quality Assurance Entity Contract Expired	ALL
Product Model, Number or Name	ALL	Product Description	ALL
Approved for use in HVHZ	ALL	Approved for use outside HVHZ	ALL
Impact Resistant	ALL	Design Pressure	ALL
Other	ALL		

**Search Results - Applications**

<a href="#">FL#</a>	<a href="#">Type</a>	<a href="#">Manufacturer</a>	<a href="#">Validated By</a>	<a href="#">Status</a>
<a href="#">FL16812-R9</a> <a href="#">History</a>	Revision	Pella Corporation <b>FL#:</b> FL16812.5 <b>Model:</b> 250 Series Single Hung Window <b>Description:</b> 72 1/2" x 63" vinyl non-impact double window <b>Category:</b> Windows <b>Subcategory:</b> Single Hung	T.E. Lunn, PE, LLC (561) 625-6455	Approved *

\*Approved by DBPR. Approvals by DBPR shall be reviewed and ratified by the POC and/or the Commission if necessary.

[Contact Us](#) :: 2601 Blair Stone Road, Tallahassee FL 32399 Phone: 850-487-1824

The State of Florida is an AA/EEO employer. [Copyright 2007-2013 State of Florida](#). :: [Privacy Statement](#) :: [Accessibility Statement](#) :: [Refund Statement](#)

Under Florida law, email addresses are public records. If you do not want your e-mail address released in response to a public-records request, do not send electronic mail to this entity. Instead, contact the office by phone or by traditional mail. If you have any questions, please contact 850.487.1395. \*Pursuant to Section 455.275(1), Florida Statutes, effective October 1, 2012, licensees licensed under Chapter 455, F.S., must provide the Department with an email address if they have one. The emails provided may be used for official communication with the licensee. However email addresses are public record. If you do not wish to supply a personal address, please provide the Department with an email address which can be made available to the public. To determine if you are a licensee under Chapter 455, F.S., please click [here](#).

**Product Approval Accepts:**





[DBPR HOME](#) | [ABOUT DBPR](#) | [DBPR DIVISIONS](#) | [CONTACT DBPR](#)

[BCIS Home](#) | [Log In](#) | [User Registration](#) | [Hot Topics](#) | [Submit Surcharge](#) | [Stats & Facts](#) | [Publications](#) | [Contact Us](#) | [BCIS Site Map](#) | [Links](#) | [Search](#)



**Product Approval**  
**USER:** Public User

[Product Approval Menu](#) > [Product or Application Search](#) > [Application List](#) > **Application Detail**

OFFICE OF THE SECRETARY

FL # FL16812-R9  
 Application Type Revision  
 Code Version 2023  
 Application Status Approved  
 \*Approved by DBPR. Approvals by DBPR shall be reviewed and ratified by the POC and/or the Commission if necessary.

Comments  
 Archived

Product Manufacturer Pella Corporation  
 Address/Phone/Email 102 Main St.  
 Pella, IA 50219  
 (641) 621-6096  
 pellaproductapproval@pella.com

Authorized Signature TROY FARR  
 tbfarr@pella.com

Technical Representative TROY FARR  
 Address/Phone/Email 18600 NE WILKES ROAD  
 PORTLAND, OR 97230  
 (503) 405-9176  
 tbfarr@pella.com

Quality Assurance Representative Pat Bortscheller  
 Address/Phone/Email 102 Main Street  
 Pella, IA 50219  
 (641) 621-1000  
 PJBortscheller@pella.com

Category Windows  
 Subcategory Single Hung

Compliance Method Certification Mark or Listing

Certification Agency Window and Door Manufacturer Association  
 Validated By T.E. Lunn, PE, LLC  
 Validation Checklist - Hardcopy Received

Referenced Standard and Year (of Standard)	Standard	Year
	AAMA/WDMA/CSA 101/I.S.2/A440-08	2008
	AAMA/WDMA/CSA 101/I.S.2/A440-11	2011
	AAMA/WDMA/CSA 101/I.S.2/A440-17	2017

Equivalence of Product Standards  
 Certified By



**Product Approval**  
USER: Public User

[Product Approval Menu](#) > [Product or Application Search](#) > **Application List**

OFFICE OF THE  
SECRETARY

**Search Criteria**

[Refine Search](#)

Code Version	2023	FL#	45981.1
Application Type	ALL	Product Manufacturer	ALL
Category	ALL	Subcategory	ALL
Application Status	ALL	Compliance Method	ALL
Quality Assurance Entity	ALL	Quality Assurance Entity Contract Expired	ALL
Product Model, Number or Name	ALL	Product Description	ALL
Approved for use in HVHZ	ALL	Approved for use outside HVHZ	ALL
Impact Resistant	ALL	Design Pressure	ALL
Other	ALL		

**Search Results - Applications**

<a href="#">FL#</a>	<a href="#">Type</a>	<a href="#">Manufacturer</a>	<a href="#">Validated By</a>	<a href="#">Status</a>
<a href="#">FL45981</a>	New	Custom Window Systems Inc. <b>FL#:</b> FL45981.1 <b>Model:</b> Comfort Shield Vinyl Window Series Un-clipped Aluminum Mullion <b>Description:</b> Non-impact Mullion <b>Category:</b> Windows <b>Subcategory:</b> Mullions	Steven M. Urich, PE (717) 317-8454	Approved

\*Approved by DBPR. Approvals by DBPR shall be reviewed and ratified by the POC and/or the Commission if necessary.

[Contact Us](#) :: [2601 Blair Stone Road, Tallahassee FL 32399](#) Phone: 850-487-1824

The State of Florida is an AA/EEO employer. [Copyright 2007-2013 State of Florida](#). :: [Privacy Statement](#) :: [Accessibility Statement](#) :: [Refund Statement](#)

Under Florida law, email addresses are public records. If you do not want your e-mail address released in response to a public-records request, do not send electronic mail to this entity. Instead, contact the office by phone or by traditional mail. If you have any questions, please contact 850.487.1395. \*Pursuant to Section 455.275(1), Florida Statutes, effective October 1, 2012, licensees licensed under Chapter 455, F.S. must provide the Department with an email address if they have one. The emails provided may be used for official communication with the licensee. However email addresses are public record. If you do not wish to supply a personal address, please provide the Department with an email address which can be made available to the public. To determine if you are a licensee under Chapter 455, F.S., please click [here](#).

**Product Approval Accepts:**



# CUSTOM WINDOW SYSTEMS

## COMFORT SHIELD VINYL WINDOW MULLION SYSTEM

### INSTALLATION ANCHORAGE DETAILS

**GENERAL NOTES:**

1. THIS PRODUCT HAS BEEN EVALUATED AND IS DESIGNED TO COMPLY WITH THE CURRENT EDITION OF THE FLORIDA BUILDING CODE - BUILDING AND RESIDENTIAL VOLUMES. THIS PRODUCT EVALUATION DOCUMENT IS NOT FOR USE IN THE HIGH VELOCITY HURRICANE ZONE (HVHZ). THIS PRODUCT WAS TESTED IN ACCORDANCE WITH THE FOLLOWING:
  - 1.1. AAMA 450-10
  - 1.2. ASTM E283-04
  - 1.3. ASTM E330-02
  - 1.4. ASTM E547-00
2. ADEQUACY OF THE EXISTING STRUCTURAL CONCRETE / MASONRY, 2X FRAMING AND METAL FRAMING SUBSTRATES AS A MAIN WIND FORCE RESISTING SYSTEM CAPABLE OF WITHSTANDING AND TRANSFERRING APPLIED PRODUCT LOADS TO THE FOUNDATION IS THE RESPONSIBILITY OF THE LICENSED PROFESSIONAL ENGINEER OR REGISTERED ARCHITECT ACTING AS THE DESIGN PROFESSIONAL OF RECORD FOR THE PROJECT OF INSTALLATION.
3. 1X AND 2X BUCKS (WHEN USED) SHALL BE DESIGNED AND ANCHORED TO PROPERLY TRANSFER ALL LOADS TO THE STRUCTURE. BUCK DESIGN AND INSTALLATION IS THE RESPONSIBILITY OF THE LICENSED PROFESSIONAL ENGINEER OR REGISTERED ARCHITECT ACTING AS THE DESIGN PROFESSIONAL OF RECORD FOR THE PROJECT OF INSTALLATION.
4. WHEN INSTALLED IN LOCATIONS WHERE WINDBORNE DEBRIS PROTECTION REQUIREMENTS EXIST, THIS PRODUCT SHALL REQUIRE AN IMPACT PROTECTIVE DEVICE.
5. SEPARATE PRODUCT EVALUATION DOCUMENTS (PED) FOR EACH GLAZING PRODUCT USED IN CONJUNCTION WITH THESE MULLIONS MUST BE SUBMITTED ALONG WITH THIS PRODUCT EVALUATION DOCUMENT.
6. THE INSTALLATION DETAILS DESCRIBED IN THIS PRODUCT EVALUATION DOCUMENT ARE GENERIC AND MAY NOT REFLECT ACTUAL CONDITIONS FOR A SPECIFIC SITE. IF SITE CONDITIONS CAUSE INSTALLATION TO DEVIATE FROM THE REQUIREMENTS DETAILED IN THIS PRODUCT EVALUATION DOCUMENT, SITE SPECIFIC DOCUMENTS SHALL BE PREPARED FOR USE WITH THIS DOCUMENT BY A LICENSED PROFESSIONAL ENGINEER OR REGISTERED ARCHITECT
7. FOR MULLION DESIGN PRESSURE RATINGS SEE APPROPRIATE LOAD SPAN RATING TABLES AS LISTED IN THE TABLE OF CONTENTS.
8. THE DESIGN PRESSURE RATING OF THE ASSEMBLY SHALL BE THE LESSER OF THE LOAD CAPACITY OF THE MULLION AS DETERMINED USING THIS PRODUCT EVALUATION DOCUMENT OR THE CERTIFIED DESIGN PRESSURE RATING OF THE INDIVIDUAL GLAZING PRODUCTS USED.
9. MATERIALS, INCLUDING BUT NOT LIMITED TO STEEL SCREWS THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF THE CURRENT EDITION OF THE FLORIDA BUILDING CODE - BUILDING AND RESIDENTIAL VOLUMES.
10. THE COMFORT SHIELD MULLION SHOWN IN THIS PRODUCT APPROVAL DOCUMENT HAS BEEN EVALUATED FOR USE WITH THE FOLLOWING CUSTOM WINDOW SYSTEMS COMFORT SHIELD VINYL WINDOWS IN ACCORDANCE WITH AAMA 450-10, OPTION NO. 1 AND SECTION 6.0.
  - 10.1. COMFORT SHIELD FIXED WINDOW
  - 10.2. COMFORT SHIELD SINGLE HUNG WINDOW
  - 10.3. COMFORT SHIELD DOUBLE HUNG WINDOW
  - 10.4. COMFORT SHIELD CASEMENT WINDOW

**PRODUCT APPROVAL DOCUMENT USAGE :**

1. THIS DOCUMENT PROVIDES THE FOLLOWING.
  - 1.1. LOAD CAPACITY TABLES BASED ON LOAD WIDTH VS. MULLION SPAN FOR 1/2" AND 1" MULLION.
  - 1.2. INSTALLATION REQUIREMENTS FOR THE 1/2" AND 1" MULLION.
2. THE USER SHALL DETERMINE WHICH SIZE MULLION AND IN THE CASE OF THE 1" MULLION IF REINFORCEMENT IS NEEDED FOR THE WINDOW CONFIGURATION (SEE SHEET 2) THEY INTEND ON MULLING.
  - 2.1. THIS WILL BE DETERMINED BASED ON THE SIZE OF THE PRODUCT TO BE MULLED AND THE DESIGN PRESSURE REQUIRED FOR THE MULLED ASSEMBLY.
3. INSTALLATION OF THE MULLION AND MULLED WINDOWS SHALL BE AS FOLLOWS.
  - 3.1. COMFORT SHIELD 1/2" AND 1" MULLIONS ARE INSTALLED AS FOLLOWS.
    - 3.1.1. PER THIS PRODUCT APPROVAL DOCUMENT.
    - 3.1.2. CUSTOM WINDOW SYSTEMS COMFORT SHIELD MULLION ASSEMBLY DRAWING NO. DES-V985287-DFT.
  - 3.1. COMFORT SHIELD VINYL WINDOW ARE INSTALLED IN ACCORDANCE WITH THE INDIVIDUAL PRODUCT APPROVAL DOCUMENTS.

TABLE OF CONTENTS	
SHEET	SHEET DESCRIPTION
1	GENERAL NOTES, INSTALLATION NOTES AND PRODUCT APPROVAL DOCUMENT USAGE
2	APPROVED MULLED WINDOW CONFIGURATIONS AND MULLIONS
3	1/2" MULLION - LOAD TABLE 2
4	1/2" MULLION - WINDOW INSTALLATION
5	1/2" MULLION - WINDOW INSTALLATION & ANCHOR SCHEDULE
6	1/2" MULLION - COMPONENTS
7	1" MULLION - LOAD TABLE 2
8	1" MULLION WITH ONE REINFORCEMENT - LOAD TABLE 3
9	1" MULLION WITH TWO REINFORCEMENTS - LOAD TABLE 4
10	1" ALUMINUM MULLION - NAIL FIN (FIN FRAME) WINDOW INSTALLATION
11	1" ALUMINUM MULLION - BLOCK FRAME WINDOW INSTALLATION
12	1" ALUMINUM MULLION - NAIL FIN & BLOCK FRAME MULL CLIP INSTALLATION
13	1" ALUM. MULLION - INSTALLATION DETAILS AND ANCHOR SCHEDULE
14	1" ALUMINUM MULLION - COMPONENTS

**INSTALLATION NOTES:**

1. PRODUCT ANCHORS SHALL BE AS DESIGNATED AND LOCATED AS SHOWN IN THIS PRODUCT EVALUATION DOCUMENT. ANCHOR EMBEDMENT AND EDGE DISTANCE EXCLUDE WALL FINISHES, INCLUDING BUT NOT LIMITED TO STUCCO, FOAM, BRICK VENEER AND SIDING.
2. SEE INSTALLATION ANCHOR SCHEDULE FOR TYPE AND GRADE OF ANCHOR, AND/OR MANUFACTURER'S ANCHOR SPECIFICATIONS, MINIMUM NOMINAL SIZE, MINIMUM EMBEDMENT INTO SUBSTRATE AND MINIMUM EDGE DISTANCES.
  - 2.1. EDGE DISTANCES SHALL BE MEASURED FROM CENTERLINE OF ANCHOR TO EDGE OF STRUCTURAL SUBSTRATE EITHER TO THE INTERIOR OR EXTERIOR OF THE FENESTRATION PRODUCT.
  - 2.2. SEE SHEET 2 FOR ILLUSTRATION OF ANCHOR EDGE DISTANCE AND SPACING.
  - 2.3. MINIMUM EMBEDMENT SHALL BE BASED ON PENETRATION INTO MAIN WIND FORCE RESISTING SYSTEM SUBSTRATE.
3. 1/2" AND 1" MULLIONS ARE APPROVED WITH THIS DOCUMENT (SEE SHEET 2).
  - 3.1. FOR INSTALLATION OF THE 1/2" MULLION SYSTEM SEE THE FOLLOWING.
    - 3.1.1. SHEETS 4 THROUGH 6 OF THIS PRODUCT APPROVAL DOCUMENT.
    - 3.1.2. CUSTOM WINDOW SYSTEMS COMFORT SHIELD MULLION ASSEMBLY DRAWING NO. DES-V985287-DFT.
  - 3.1. FOR INSTALLATION OF THE 1" MULLION SYSTEM SEE THE FOLLOWING.
    - 3.1.1. SHEETS 7 THROUGH 14 OF THIS PRODUCT APPROVAL DOCUMENT.
    - 3.1.2. CUSTOM WINDOW SYSTEMS COMFORT SHIELD MULLION ASSEMBLY DRAWING NO. DES-V985287-DFT.

PROJECT # 423-1106

**Custom Window Systems Inc.**  
 1900 SW 44th Avenue  
 Ocala, FL 34474

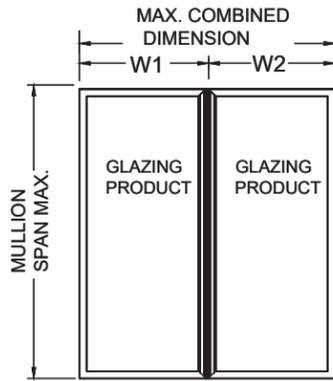
TITLE: COMFORT SHIELD VINYL WINDOW MULLION SYSTEM  
 GENERAL & INSTALLATION NOTES / PED USAGE

DRAWN BY: RJA  
 DATE: 11/25/23  
 SCALE: N.T.S.  
 DRAWING NO: CWS1001  
 SHEET: 1 OF 14  
 REV: ---

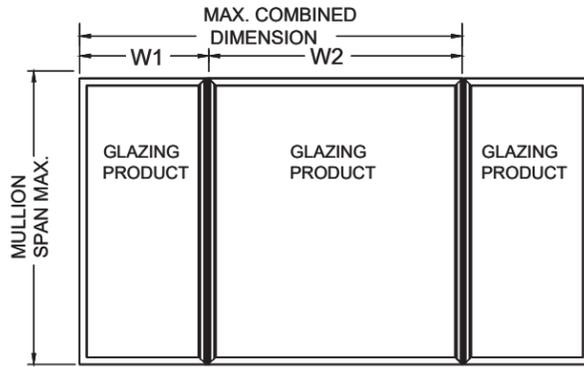


Robert J. Amoruso, P.E.  
Florida P.E. No. 49752

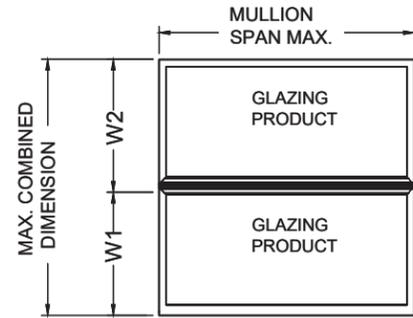
# APPROVED MULLED WINDOW CONFIGURATIONS



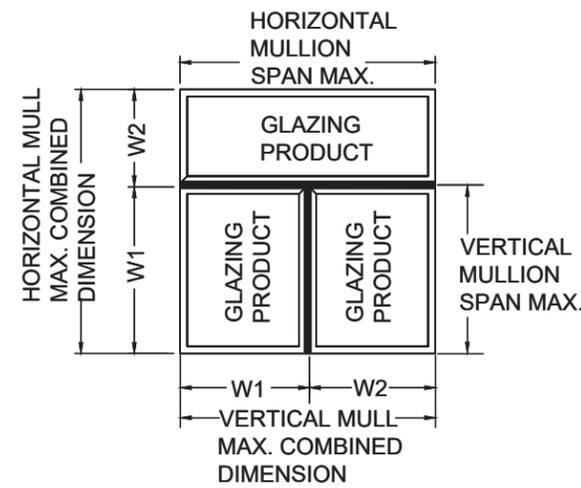
2-WAY VERTICAL MULLION CONFIGURATION



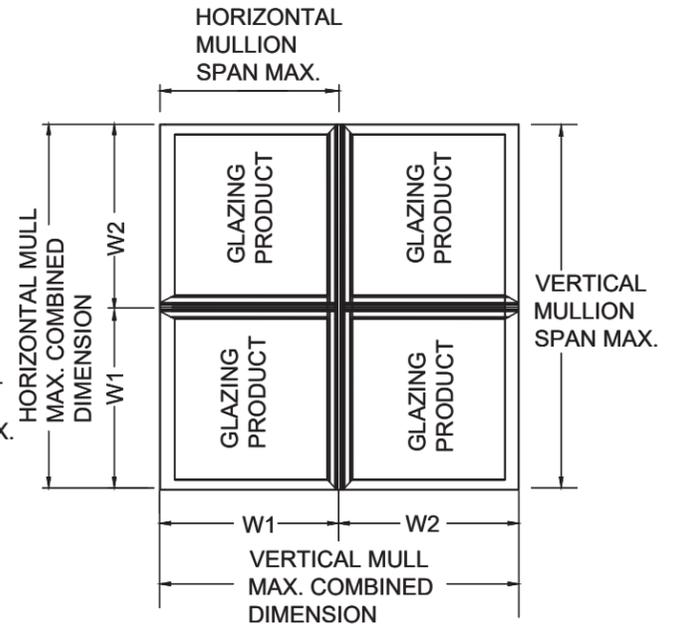
2-WAY VERTICAL MULLION CONFIGURATION



2-WAY HORIZONTAL MULLION CONFIGURATION

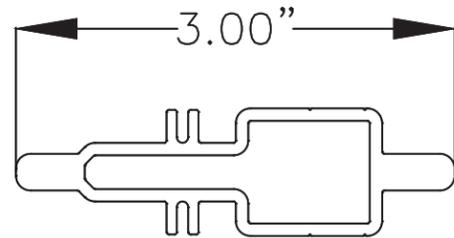


3-WAY MULLION CONFIGURATION (HORIZONTAL MULLION IS CONTINUOUS - VERTICAL MULLION FRAMES INTO HORIZONTAL MULLION WHERE IT IS UNCLIPPED.)

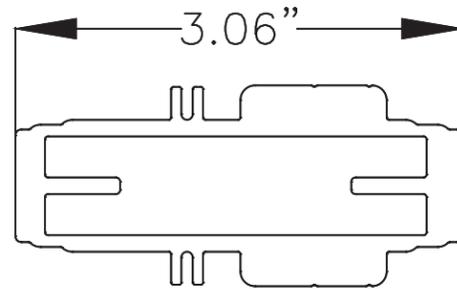


4-WAY MULLION CONFIGURATION (VERTICAL MULLION IS CONTINUOUS. HORIZONTAL MULLIONS ARE DISCONTINUOUS AND FRAME INTO VERTICAL MULLION WHERE THEY ARE UNCLIPPED.)

## APPROVED MULLIONS



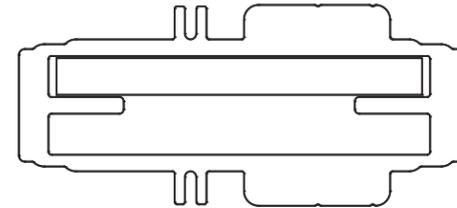
1/2" ALUMINUM MULLION EXTRUSION  
DWG. NO. V985276



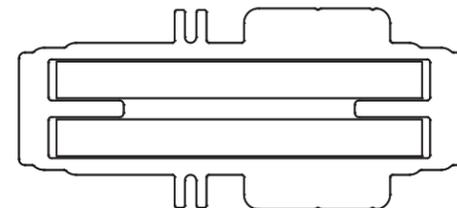
1" ALUMINUM MULLION EXTRUSION  
DWG. NO. DES-000023418



1" ALUMINUM MULLION REINFORCEMENT  
DWG. NO. DES-000023421



1" ALUMINUM MULLION EXTRUSION WITH ONE REINFORCEMENT



1" ALUMINUM MULLION EXTRUSION WITH TWO REINFORCEMENTS

Robert J. Amoroso, P.E.  
Florida P.E. No. 49752

Custom Window Systems Inc.  
1900 SW 44th Avenue  
Ocala, FL 34474

TITLE: COMFORT SHIELD VINYL WINDOW MULLION SYSTEM  
APPROVED MULLED WINDOW CONFIGURATIONS AND MULLIONS

PREPARED BY: RJA  
DRAWN BY: RJA  
SCALE: N.T.S.  
REV: ---  
DATE: 11/25/23  
DRAWING NO: CWS1001  
SHEET: 2 OF 14

PROJECT # 423-1106

REV	DESCRIPTION	DATE	BY

# 1/2" ALUMINUM MULLION - MULL SPAN vs. LOAD WIDTH CAPACITY TABLES

**MULLION TABLE 1**  
(1/2 INCH ALUMINUM MULLION)

MULL SPAN (in)	LOAD WIDTH (in)	DESIGN PRESSURE (psf)	MULL SPAN (in)	LOAD WIDTH (in)	DESIGN PRESSURE (psf)	MULL SPAN (in)	LOAD WIDTH (in)	DESIGN PRESSURE (psf)	MULL SPAN (in)	LOAD WIDTH (in)	DESIGN PRESSURE (psf)	MULL SPAN (in)	LOAD WIDTH (in)	DESIGN PRESSURE (psf)	MULL SPAN (in)	LOAD WIDTH (in)	DESIGN PRESSURE (psf)
30	24	50	48	24	50	60	24	50	72	24	50	80	24	38	108	24	15
30	30	50	48	30	50	60	30	50	72	30	42	80	30	30	108	30	-
30	36	50	48	36	50	60	36	50	72	36	35	80	36	25	108	36	-
30	42	50	48	42	50	60	42	50	72	42	30	80	42	22	108	42	-
30	48	50	48	48	50	60	48	45	72	48	26	80	48	19	108	48	-
30	54	50	48	54	50	60	54	40	72	54	23	80	54	17	108	54	-
30	60	50	48	60	50	60	60	36	72	60	21	80	60	15	108	60	-
30	66	50	48	66	50	60	66	33	72	66	19	80	66	-	108	66	-
30	72	50	48	72	50	60	72	30	72	72	17	80	72	-	108	72	-
30	78	50	48	78	50	60	78	28	72	78	16	80	78	-	108	78	-
30	84	50	48	84	50	60	84	26	72	84	-	80	84	-	108	84	-
30	90	50	48	90	47	60	90	24	72	90	-	80	90	-	108	90	-
30	96	50	48	96	44	60	96	23	72	96	-	80	96	-	108	96	-
30	108	50	48	108	39	60	108	20	72	108	-	80	108	-	108	108	-

36	24	50	53	24	50	66	24	50	78	24	41	96	24	22
36	30	50	53	30	50	66	30	50	78	30	33	96	30	18
36	36	50	53	36	50	66	36	45	78	36	27	96	36	-
36	42	50	53	42	50	66	42	39	78	42	24	96	42	-
36	48	50	53	48	50	66	48	34	78	48	21	96	48	-
36	54	50	53	54	50	66	54	30	78	54	18	96	54	-
36	60	50	53	60	50	66	60	27	78	60	16	96	60	-
36	66	50	53	66	48	66	66	25	78	66	-	96	66	-
36	72	50	53	72	44	66	72	23	78	72	-	96	72	-
36	78	50	53	78	40	66	78	21	78	78	-	96	78	-
36	84	50	53	84	37	66	84	19	78	84	-	96	84	-
36	90	50	53	90	35	66	90	18	78	90	-	96	90	-
36	96	50	53	96	33	66	96	17	78	96	-	96	96	-
36	108	50	53	108	29	66	108	15	78	108	-	96	108	-

**INSTRUCTIONS FOR USE OF THE MULLION LOAD TABLE:**

1. DETERMINE THE WINDLOAD REQUIREMENT (D.P. PSF) FOR THE PARTICULAR OPENING.
2. FOR THE PARTICULAR OPENING (SEE SHEET 2 FOR APPROVED MULLION CONFIGURATIONS), DETERMINE THE TRIBUTARY WIDTH AND MULLION SPAN. REFERENCE THE SKETCHES ON THIS SHEET FOR MULLION SPAN AND TRIBUTARY WIDTH DETERMINATION.
3. IN THE FIRST COLUMN IN THE TABLE, LOCATE MULLION SPAN. IN SECOND COLUMN OF THE TABLE, LOCATE THE TRIBUTARY WIDTH. IN THE THIRD COLUMN CORRESPONDING TO THE DESIRED MULLION SPAN vs. LOAD WIDTH, READ THE MULLION LOAD RATING GIVEN IN PSF. THE MULLION LOAD RATING MUST BE EQUAL TO OR GREATER THAN THE DESIGN LOAD REQUIREMENT DEFINED IN STEP 1 ABOVE.
4. UNITS:
  - 4.1. DESIGN PRESSURE IN PSF.
  - 4.2. MULL SPAN AND LOAD WIDTH IS IN INCHES.

**TABLE NOTES:**

1. FOR INSTALLATION DETAILS, SEE SHEETS 4 & 5 FOR DETAIL.
2. IN ORDER TO SIMPLIFY TABLES, TABLE PRESSURES ARE LIMITED TO 50 PSF. USE OF THESE MULLIONS FOR PRESSURES HIGHER THAN 50 PSF SHALL BE REVIEWED UNDER SEPARATE ENGINEERING EVALUATION.
3. THESE LOAD TABLES ARE CERTIFIED AS CORRECT IN CONTENT. HOWEVER, CHOOSING OF THE CORRECT MULLION & CONNECTION FROM THESE TABLES FOR ITS SPECIFIC USE IS THE RESPONSIBILITY OF THOSE USING THE TABLES AND SHOULD BE VERIFIED BY THE BUILDING OFFICIAL OR A FLORIDA LICENSED ENGINEER.
4. ALL LOADS IN THESE TABLES RESTRICT MULLION DEFLECTION TO L/175 PER THE FLORIDA BUILDING CODE.

PROJECT # 423-1106

**Custom Window Systems Inc.**  
 1900 SW 44th Avenue  
 Ocala, FL 34474

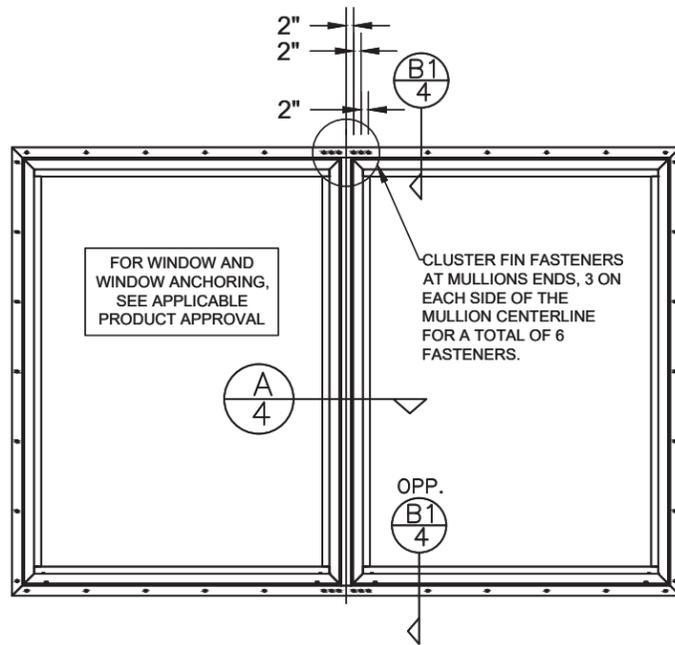
TITLE: COMFORT SHIELD VINYL WINDOW MULLION SYSTEM  
 1/2" MULLION - LOAD TABLE 2

DRAWN BY: RJA  
 DATE: 11/25/23  
 SCALE: N.T.S.  
 DRAWING NO: CWS1001  
 SHEET: 3 OF 14  
 REV: ---

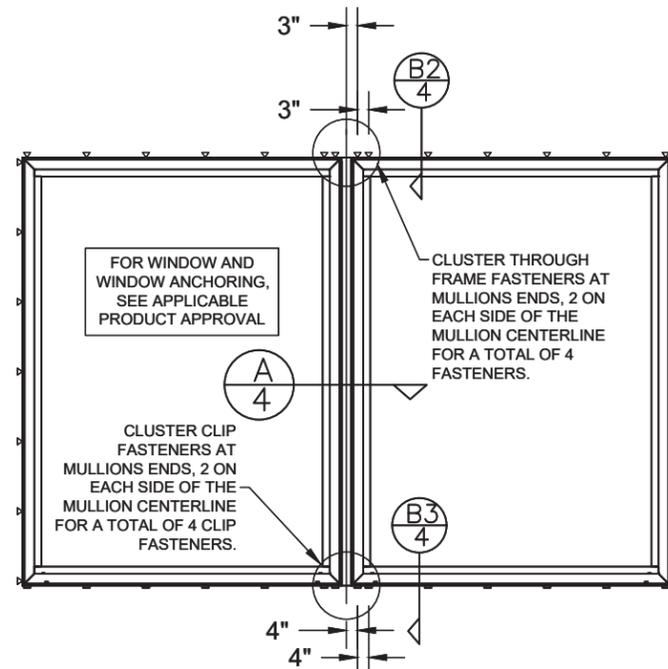


Robert J. Amoruso, P.E.  
Florida P.E. No. 49752

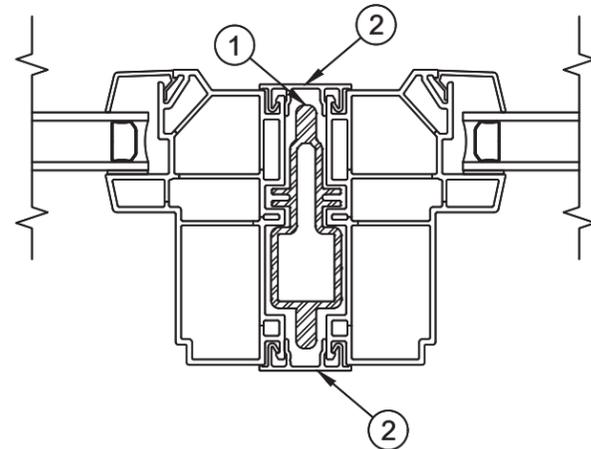
# 1/2" ALUMINUM MULLION - WINDOW INSTALLATION



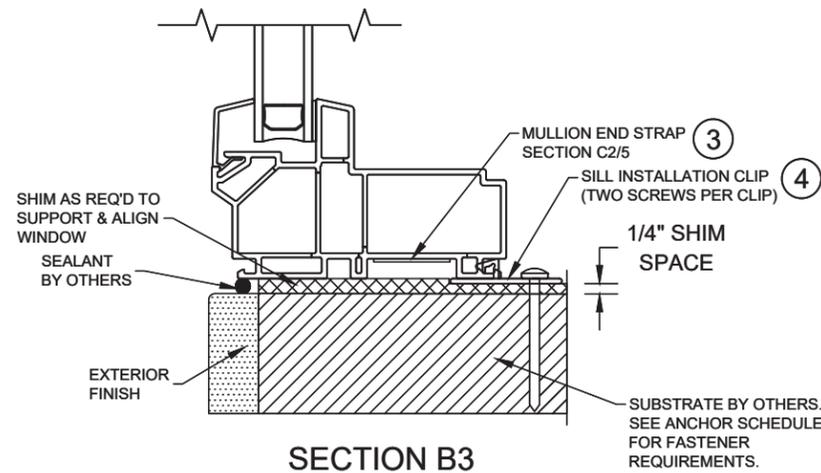
EXTERIOR ELEVATION - TYPICAL MULLED UNIT  
VERTICAL 1/2" MULLION SHOWN  
(APPLICABLE TO HORIZONTAL MULLION)  
NAIL FIN MOUNT CONDITION



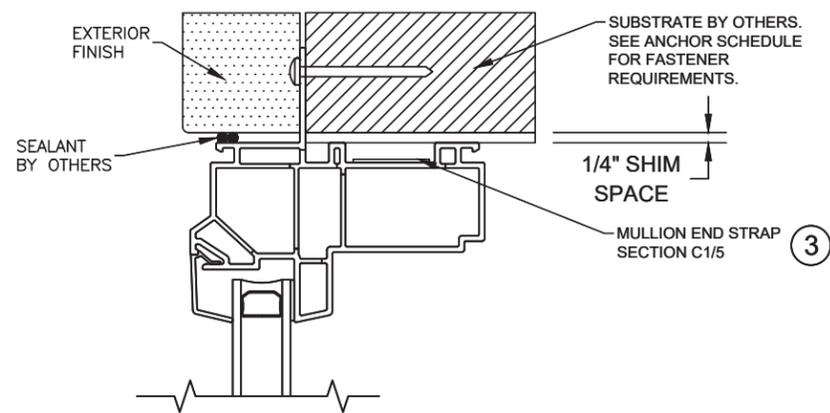
EXTERIOR ELEVATION - TYPICAL MULLED UNIT  
VERTICAL 1/2" MULLION SHOWN  
(APPLICABLE TO HORIZONTAL MULLION)  
THROUGH FRAME AND CLIP MOUNT CONDITION



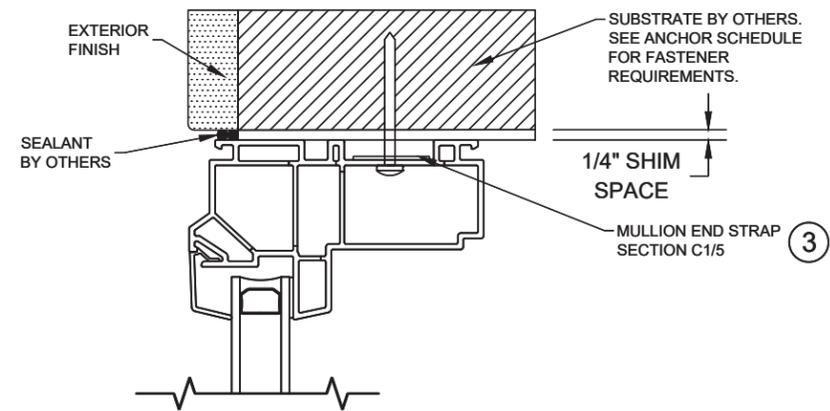
EXTERIOR ELEVATION - SECTION A  
TYPICAL MULLED UNIT  
VERTICAL 1/2" MULLION SHOWN  
(APPLICABLE TO HORIZONTAL MULLION)  
NAIL FIN MOUNT CONDITION



SECTION B3  
THROUGH FRAME MOUNT  
(SILL SHOWN)



SECTION B1  
NAIL FIN MOUNT  
(HEAD SHOWN - APPLICABLE TO  
JAMBS AND SILL)



SECTION B2  
THROUGH FRAME MOUNT  
(HEAD SHOWN - APPLICABLE TO  
JAMBS )

PROJECT # 423-1106

Custom Window Systems Inc.  
1900 SW 44th Avenue  
Ocala, FL 34474

TITLE: COMFORT SHIELD VINYL WINDOW MULLION SYSTEM  
1/2" MULLION - WINDOW INSTALLATION

DATE: 11/25/23  
DRAWING NO: CWS1001  
SHEET: 4 OF 14

PREPARED BY: RJA  
SCALE: N.T.S.  
REV: ---



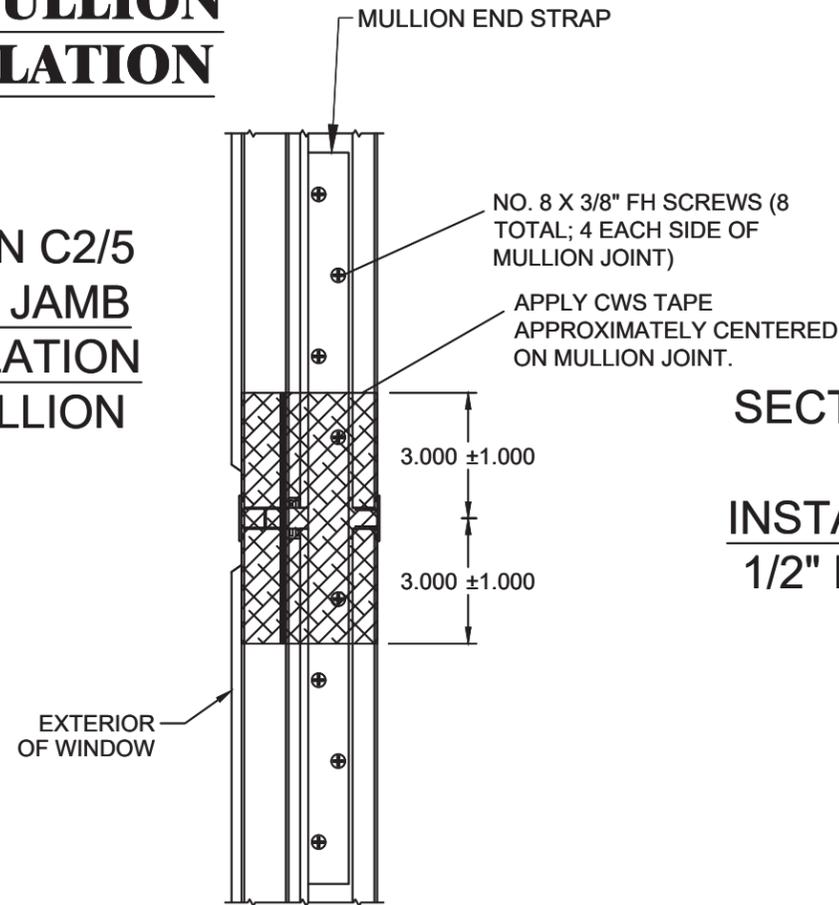
PTC PRODUCT DESIGN GROUP, LLC  
PO BOX 520775  
LONGWOOD, FLORIDA 32752  
PHONE: 321.690.1789  
FAX: 321.690.1789  
EMAIL: info@ptc-corp.com  
FBPE C.A. NO. 23835

Robert J. Amoroso, P.E.  
Florida P.E. No. 49752

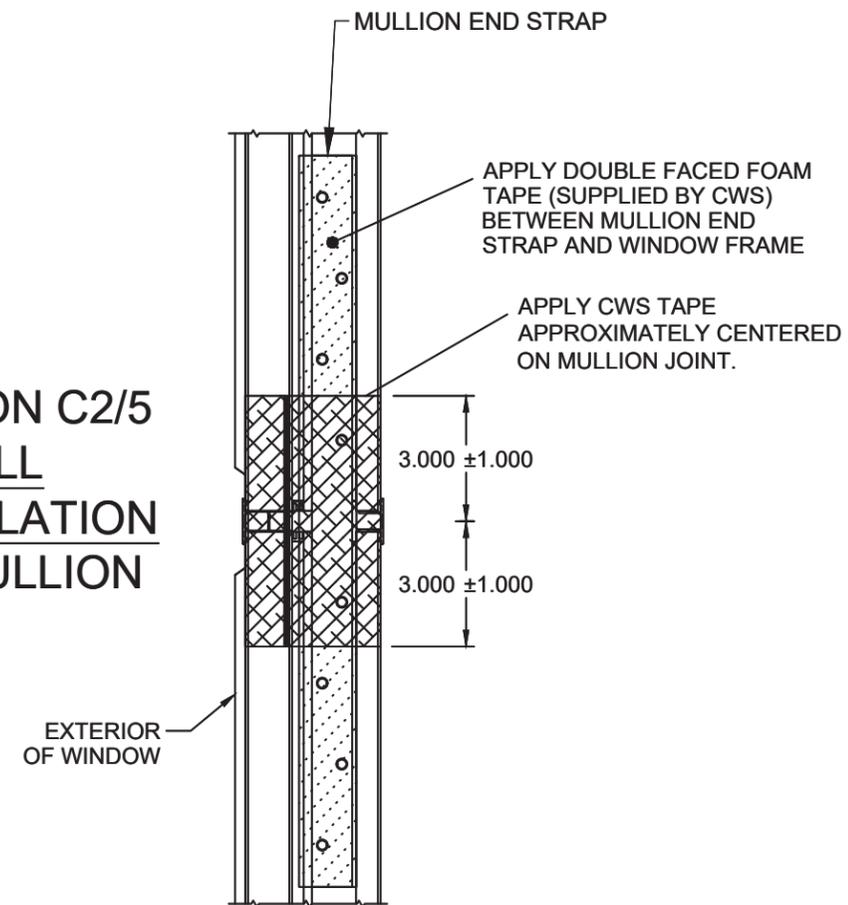
REV	DESCRIPTION	DATE	BY

# 1/2" ALUMINUM MULLION WINDOW INSTALLATION

## SECTION C2/5 HEAD & JAMB INSTALLATION 1/2" MULLION



## SECTION C2/5 SILL INSTALLATION 1/2" MULLION



1/2" MULLION INSTALLATION ANCHOR SCHEDULE

CONNECTION	SUBSTRATE	HEAD TYPE	SIZE	MANUFACTURER AND/OR SPECIFICATION	MIN. EMBEDMENT (IN)	MIN. EDGE DISTANCE (IN)	MIN. SPACING (IN)	SUBSTRATE CAPACITIES BASED ON	
THROUGH FRAME INSTALLATION	CONCRETE	PAN HEAD	3/16"	ITW TAPCONS (2)	1-3/4"	1-1/8"	2"	MIN. 2000 PSI CONCRETE	
				ELCO CRETE-FLEX SS4	2"	1-7/8"	2"	MIN. 2500 PSI CONCRETE	
				HILTI KWIK-CON II	1-1/2"	1-1/8"	2"	MIN. 2500 PSI CONCRETE	
	MASONRY (BLOCK/CMU)	PAN HEAD	3/16"	ITW TAPCONS (2)	1"	2"	3"	STRENGTH CONFORMANCE TO ASTM C-90, MEDIUM WEIGHT, DENSITY > 117 pcf	
				ELCO CRETE-FLEX SS4	1-1/4"	1-7/8"	3"		
				HILTI KWIK-CON II	1"	1-1/8"	3"		
	WOOD (1)	PAN HEAD	NO. 10	ANSI B18.6.1 (WOOD SCREW), GR. 5 ASME B18.6.4 (TAPPING SCREW), GR. 5	1-1/4"	3/4"	3/4"	WOOD WITH A MINIMUM SPECIFIC GRAVITY OF 0.42	
1/8" THK. ALUMINUM				NO. 10	ASME B18.6.4 (TAPPING SCREW), GR. 5	FULLY PENETRATE SUBSTRATE WITH 3 THREADS PROTRUDING INTERNALLY	3/8"	5/8"	ALUMINUM 6063-T5 ALUMINUM OR BETTER
							3/8"	5/8"	ASTM A-36 STEEL, 36 KSI YIELD STRENGTH STEEL OR BETTER
							3/8"	5/8"	ASTM A-653 STEEL, 33 KSI YIELD STRENGTH STEEL OR BETTER
20 GAUGE (0.0346" MIN. THK.) STEEL INCLUDING STEEL STUDS	PAN HEAD	NO. 10	ASME B18.6.4 (TAPPING SCREW), GR. 5	3/8"	5/8"	ASTM A-653 STEEL, 33 KSI YIELD STRENGTH STEEL OR BETTER			
NAILING FIN (FIN FRAME) INSTALLATION	WOOD (1)	PAN HEAD	NO. 10	ANSI B18.6.1 (WOOD SCREW), GR. 5 ASME B18.6.4 (TAPPING SCREW), GR. 5	1-1/2"	3/8"	3/4"	WOOD WITH A MINIMUM SPECIFIC GRAVITY OF 0.42	
	1/8" THK. ALUMINUM	PAN HEAD	NO. 10	ASME B18.6.4 (TAPPING SCREW), GR. 5	FULLY PENETRATE SUBSTRATE WITH 3 THREADS PROTRUDING INTERNALLY	3/8"	5/8"	ALUMINUM 6063-T5 ALUMINUM OR BETTER	
						3/8"	5/8"	ASTM A-36 STEEL, 36 KSI YIELD STRENGTH STEEL OR BETTER	
1/8" THK. STEEL	PAN HEAD	NO. 10	ASME B18.6.4 (TAPPING SCREW), GR. 5	3/8"	5/8"	ASTM A-36 STEEL, 36 KSI YIELD STRENGTH STEEL OR BETTER			

PROJECT # 423-1106

Custom Window Systems Inc.  
1900 SW 44th Avenue  
Ocala, FL 34474

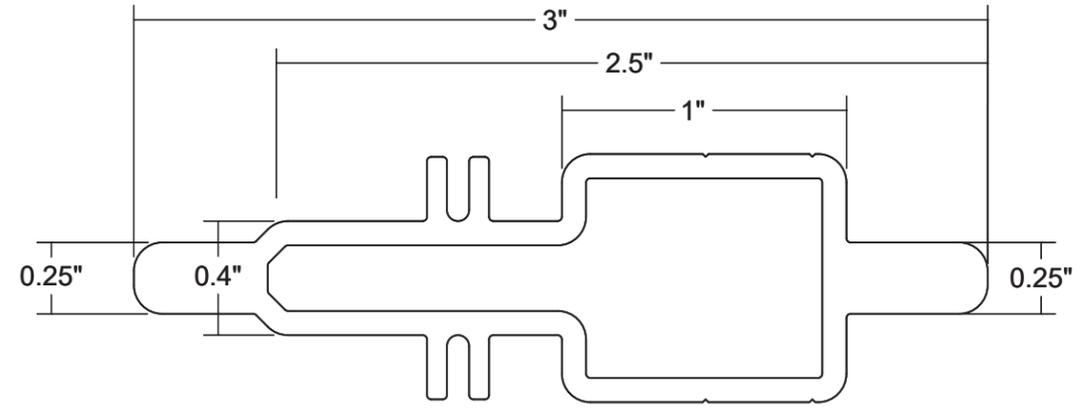
TITLE: COMFORT SHIELD VINYL WINDOW MULLION SYSTEM  
1/2" MULLION - WINDOW INSTALLATION & ANCHOR SCHEDULE

PREPARED BY: RJA  
DATE: 11/25/23  
DRAWING NO: CWS1001  
SCALE: N.T.S.  
SHEET: 5 OF 14  
REV: ---

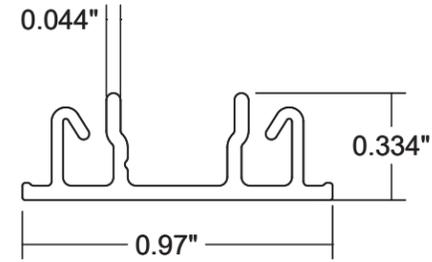


Robert J. Amoroso, P.E.  
Florida P.E. No. 49752

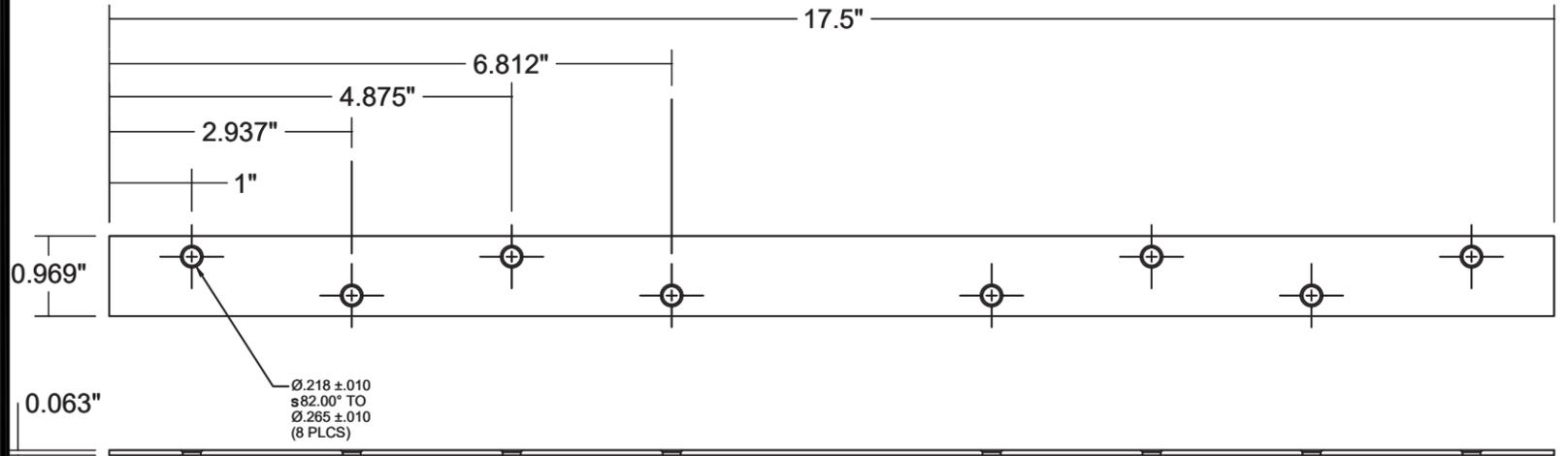
# 1/2" ALUMINUM MULLION - COMPONENTS



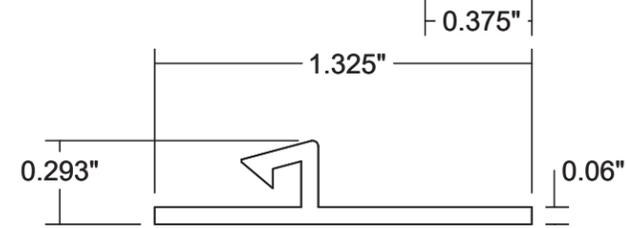
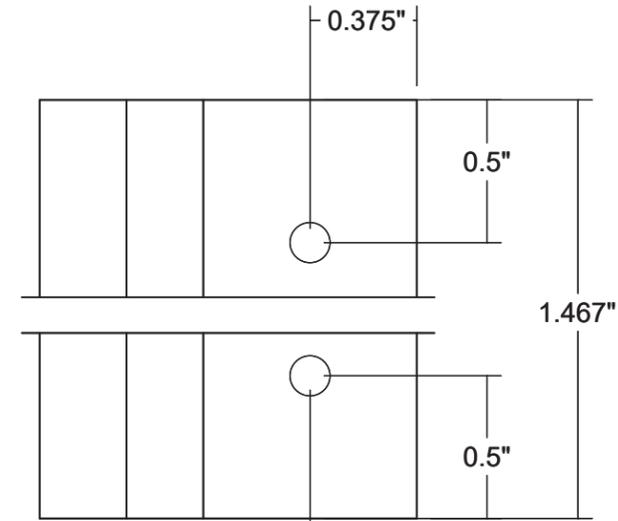
① 1/2" MULLION  
6063-T6 ALUMINUM



② MULL CAP  
RIGID PVC



③ MULLION END STRAP  
GALVANIZED STEEL



④ INSTALLATION CLIP  
RIGID PVC

## 1/2" MULLION COMBINATION BILL OF MATERIALS

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION
1	DES-V985276	V985276	MULLION, 1/2", STIFFENER
2	DES-V982591-DFT	---	1/2" MULLION COVER
3	DES-V985278-DFT	V985278	PLATE, MULLION, TRUSS
4	V421016	V421016	INSTALLATION CLIP

PROJECT # 423-1106

**Custom Window Systems Inc.**  
 1900 SW 44th Avenue  
 Ocala, FL 34474

TITLE: COMFORT SHIELD VINYL WINDOW MULLION SYSTEM  
 1/2" MULLION - COMPONENTS

PREPARED BY: PTC  
 DRAWN BY: RJA  
 DATE: 11/25/23  
 SCALE: N.T.S.  
 DRAWING NO: CWS1001  
 SHEET: 6 OF 14  
 REV: ---

PTC PRODUCT DESIGN GROUP, LLC  
 PO BOX 520775  
 LONGWOOD, FLORIDA 32752  
 FBPE CA. NO. 23535  
 Phone: 321.690.1789  
 Fax: 321.690.1789  
 Email: info@ptc-corp.com

Robert J. Amoruso, P.E.  
Florida P.E. No. 49752

# 1" ALUMINUM MULLION - MULL SPAN vs. LOAD WIDTH CAPACITY TABLES

MULLION TABLE 2																				
(1 INCH ALUMINUM MULLION)																				
MULL SPAN (in)	LOAD WIDTH (in)	DESIGN PRESSURE (psf)	MULL SPAN (in)	LOAD WIDTH (in)	DESIGN PRESSURE (psf)	MULL SPAN (in)	LOAD WIDTH (in)	DESIGN PRESSURE (psf)	MULL SPAN (in)	LOAD WIDTH (in)	DESIGN PRESSURE (psf)	MULL SPAN (in)	LOAD WIDTH (in)	DESIGN PRESSURE (psf)	MULL SPAN (in)	LOAD WIDTH (in)	DESIGN PRESSURE (psf)	MULL SPAN (in)	LOAD WIDTH (in)	DESIGN PRESSURE (psf)
30	24	50	48	24	50	60	24	50	72	24	50	80	24	50	108	24	36			
30	30	50	48	30	50	60	30	50	72	30	50	80	30	50	108	30	29			
30	36	50	48	36	50	60	36	50	72	36	50	80	36	50	108	36	24			
30	42	50	48	42	50	60	42	50	72	42	50	80	42	50	108	42	21			
30	48	50	48	48	50	60	48	50	72	48	50	80	48	44	108	48	18			
30	54	50	48	54	50	60	54	50	72	54	50	80	54	40	108	54	16			
30	60	50	48	60	50	60	60	50	72	60	49	80	60	36	108	60	-			
30	66	50	48	66	50	60	66	50	72	66	44	80	66	32	108	66	-			
30	72	50	48	72	50	60	72	50	72	72	41	80	72	30	108	72	-			
30	78	50	48	78	50	60	78	50	72	78	38	80	78	27	108	78	-			
30	84	50	48	84	50	60	84	50	72	84	35	80	84	25	108	84	-			
30	90	50	48	90	50	60	90	50	72	90	33	80	90	24	108	90	-			
30	96	50	48	96	50	60	96	50	72	96	31	80	96	22	108	96	-			
30	108	50	48	108	50	60	108	47	72	108	27	80	108	20	108	108	-			

36	24	50	53	24	50	66	24	50	78	24	50	96	24	50			
36	30	50	53	30	50	66	30	50	78	30	50	96	30	41			
36	36	50	53	36	50	66	36	50	78	36	50	96	36	34			
36	42	50	53	42	50	66	42	50	78	42	50	96	42	29			
36	48	50	53	48	50	66	48	50	78	48	48	96	48	26			
36	54	50	53	54	50	66	54	50	78	54	43	96	54	23			
36	60	50	53	60	50	66	60	50	78	60	38	96	60	21			
36	66	50	53	66	50	66	66	50	78	66	35	96	66	19			
36	72	50	53	72	50	66	72	50	78	72	32	96	72	17			
36	78	50	53	78	50	66	78	49	78	78	30	96	78	16			
36	84	50	53	84	50	66	84	45	78	84	27	96	84	-			
36	90	50	53	90	50	66	90	42	78	90	26	96	90	-			
36	96	50	53	96	50	66	96	40	78	96	24	96	96	-			
36	108	50	53	108	50	66	108	35	78	108	21	96	108	-			

**INSTRUCTIONS FOR USE OF THE MULLION LOAD TABLE:**

1. DETERMINE THE WINDLOAD REQUIREMENT (D.P. PSF) FOR THE PARTICULAR OPENING.
2. FOR THE PARTICULAR OPENING (SEE SHEET 2 FOR APPROVED MULLION CONFIGURATIONS), DETERMINE THE TRIBUTARY WIDTH AND MULLION SPAN. REFERENCE THE SKETCHES ON THIS SHEET FOR MULLION SPAN AND TRIBUTARY WIDTH DETERMINATION.
3. IN THE FIRST COLUMN IN THE TABLE, LOCATE MULLION SPAN. IN SECOND COLUMN OF THE TABLE, LOCATE THE TRIBUTARY WIDTH. IN THE THIRD COLUMN CORRESPONDING TO THE DESIRED MULLION SPAN vs. LOAD WIDTH, READ THE MULLION LOAD RATING GIVEN IN PSF. THE MULLION LOAD RATING MUST BE EQUAL TO OR GREATER THAN THE DESIGN LOAD REQUIREMENT DEFINED IN STEP 1 ABOVE.
4. UNITS:
  - 4.1. DESIGN PRESSURE IN PSF.
  - 4.2. MULL SPAN AND LOAD WIDTH IS IN INCHES.

**TABLE NOTES:**

1. FOR INSTALLATION DETAILS, SEE SHEETS 4 & 5 FOR DETAIL.
2. IN ORDER TO SIMPLIFY TABLES, TABLE PRESSURES ARE LIMITED TO 50 PSF. USE OF THESE MULLIONS FOR PRESSURES HIGHER THAN 50 PSF SHALL BE REVIEWED UNDER SEPARATE ENGINEERING EVALUATION.
3. THESE LOAD TABLES ARE CERTIFIED AS CORRECT IN CONTENT. HOWEVER, CHOOSING OF THE CORRECT MULLION & CONNECTION FROM THESE TABLES FOR ITS SPECIFIC USE IS THE RESPONSIBILITY OF THOSE USING THE TABLES AND SHOULD BE VERIFIED BY THE BUILDING OFFICIAL OR A FLORIDA LICENSED ENGINEER.
4. ALL LOADS IN THESE TABLES RESTRICT MULLION DEFLECTION TO L/175 PER THE FLORIDA BUILDING CODE.

PROJECT # 423-1106

**Custom Window Systems Inc.**  
 1900 SW 44th Avenue  
 Ocala, FL 34474

TITLE: COMFORT SHIELD VINYL WINDOW MULLION SYSTEM  
 1" MULLION - LOAD TABLE 2

DRAWN BY: RJA  
 DATE: 11/25/23  
 SCALE: N.T.S.  
 DRAWING NO: CWS1001  
 SHEET: 7 OF 14  
 REV: ---



Robert J. Amoroso, P.E.  
Florida P.E. No. 49752

BY DATE

DESCRIPTION

REV

# 1" ALUMINUM MULLION WITH ONE REINFORCEMENT - MULL SPAN vs. LOAD WIDTH CAPACITY TABLES

MULLION TABLE 3																				
(1 INCH ALUMINUM MULLION WITH ONE REINFORCEMENT INSERT)																				
MULL SPAN (in)	LOAD WIDTH (in)	DESIGN PRESSURE (psf)	MULL SPAN (in)	LOAD WIDTH (in)	DESIGN PRESSURE (psf)	MULL SPAN (in)	LOAD WIDTH (in)	DESIGN PRESSURE (psf)	MULL SPAN (in)	LOAD WIDTH (in)	DESIGN PRESSURE (psf)	MULL SPAN (in)	LOAD WIDTH (in)	DESIGN PRESSURE (psf)	MULL SPAN (in)	LOAD WIDTH (in)	DESIGN PRESSURE (psf)	MULL SPAN (in)	LOAD WIDTH (in)	DESIGN PRESSURE (psf)
30	24	50	48	24	50	60	24	50	72	24	50	80	24	50	108	24	46			
30	30	50	48	30	50	60	30	50	72	30	50	80	30	50	108	30	37			
30	36	50	48	36	50	60	36	50	72	36	50	80	36	50	108	36	30			
30	42	50	48	42	50	60	42	50	72	42	50	80	42	50	108	42	26			
30	48	50	48	48	50	60	48	50	72	48	50	80	48	50	108	48	23			
30	54	50	48	54	50	60	54	50	72	54	50	80	54	50	108	54	20			
30	60	50	48	60	50	60	60	50	72	60	50	80	60	45	108	60	18			
30	66	50	48	66	50	60	66	50	72	66	50	80	66	41	108	66	17			
30	72	50	48	72	50	60	72	50	72	72	50	80	72	37	108	72	15			
30	78	50	48	78	50	60	78	50	72	78	47	80	78	35	108	78	-			
30	84	50	48	84	50	60	84	50	72	84	44	80	84	32	108	84	-			
30	90	50	48	90	50	60	90	50	72	90	41	80	90	30	108	90	-			
30	96	50	48	96	50	60	96	50	72	96	39	80	96	28	108	96	-			
30	108	50	48	108	50	60	108	50	72	108	34	80	108	25	108	108	-			

36	24	50	53	24	50	66	24	50	78	24	50	96	24	50						
36	30	50	53	30	50	66	30	50	78	30	50	96	30	50						
36	36	50	53	36	50	66	36	50	78	36	50	96	36	43						
36	42	50	53	42	50	66	42	50	78	42	50	96	42	37						
36	48	50	53	48	50	66	48	50	78	48	50	96	48	33						
36	54	50	53	54	50	66	54	50	78	54	50	96	54	29						
36	60	50	53	60	50	66	60	50	78	60	49	96	60	26						
36	66	50	53	66	50	66	66	50	78	66	44	96	66	24						
36	72	50	53	72	50	66	72	50	78	72	40	96	72	22						
36	78	50	53	78	50	66	78	50	78	78	37	96	78	20						
36	84	50	53	84	50	66	84	50	78	84	35	96	84	19						
36	90	50	53	90	50	66	90	50	78	90	32	96	90	17						
36	96	50	53	96	50	66	96	50	78	96	30	96	96	16						
36	108	50	53	108	50	66	108	45	78	108	27	96	108	-						

**INSTRUCTIONS FOR USE OF THE MULLION LOAD TABLE:**

1. DETERMINE THE WINDLOAD REQUIREMENT (D.P. PSF) FOR THE PARTICULAR OPENING.
2. FOR THE PARTICULAR OPENING (SEE SHEET 2 FOR APPROVED MULLION CONFIGURATIONS), DETERMINE THE TRIBUTARY WIDTH AND MULLION SPAN. REFERENCE THE SKETCHES ON THIS SHEET FOR MULLION SPAN AND TRIBUTARY WIDTH DETERMINATION.
3. IN THE FIRST COLUMN IN THE TABLE, LOCATE MULLION SPAN. IN SECOND COLUMN OF THE TABLE, LOCATE THE TRIBUTARY WIDTH. IN THE THIRD COLUMN CORRESPONDING TO THE DESIRED MULLION SPAN vs. LOAD WIDTH, READ THE MULLION LOAD RATING GIVEN IN PSF. THE MULLION LOAD RATING MUST BE EQUAL TO OR GREATER THAN THE DESIGN LOAD REQUIREMENT DEFINED IN STEP 1 ABOVE.
4. UNITS:
  - 4.1. DESIGN PRESSURE IN PSF.
  - 4.2. MULL SPAN AND LOAD WIDTH IS IN INCHES.

**TABLE NOTES:**

1. FOR INSTALLATION DETAILS, SEE SHEETS 4 & 5 FOR DETAIL.
2. IN ORDER TO SIMPLIFY TABLES, TABLE PRESSURES ARE LIMITED TO 50 PSF. USE OF THESE MULLIONS FOR PRESSURES HIGHER THAN 50 PSF SHALL BE REVIEWED UNDER SEPARATE ENGINEERING EVALUATION.
3. THESE LOAD TABLES ARE CERTIFIED AS CORRECT IN CONTENT. HOWEVER, CHOOSING OF THE CORRECT MULLION & CONNECTION FROM THESE TABLES FOR ITS SPECIFIC USE IS THE RESPONSIBILITY OF THOSE USING THE TABLES AND SHOULD BE VERIFIED BY THE BUILDING OFFICIAL OR A FLORIDA LICENSED ENGINEER.
4. ALL LOADS IN THESE TABLES RESTRICT MULLION DEFLECTION TO L/175 PER THE FLORIDA BUILDING CODE.

PROJECT # 423-1106

Custom Window Systems Inc.  
 1900 SW 44th Avenue  
 Ocala, FL 34474

TITLE: COMFORT SHIELD VINYL WINDOW MULLION SYSTEM  
 1" MULLION WITH ONE REINFORCEMENT - LOAD TABLE 3

DRAWN BY: RJA  
 DATE: 11/25/23  
 SCALE: N.T.S.  
 DRAWING NO: CWS1001  
 SHEET: 8 OF 14



Robert J. Amoroso, P.E.  
Florida P.E. No. 49752

# 1" ALUMINUM MULLION WITH TWO REINFORCEMENTS - MULL SPAN vs. LOAD WIDTH CAPACITY TABLES

**MULLION TABLE 4**

(1 INCH ALUMINUM MULLION WITH TWO REINFORCEMENT INSERTS)

MULL SPAN (in)	LOAD WIDTH (in)	DESIGN PRESSURE (psf)	MULL SPAN (in)	LOAD WIDTH (in)	DESIGN PRESSURE (psf)	MULL SPAN (in)	LOAD WIDTH (in)	DESIGN PRESSURE (psf)	MULL SPAN (in)	LOAD WIDTH (in)	DESIGN PRESSURE (psf)	MULL SPAN (in)	LOAD WIDTH (in)	DESIGN PRESSURE (psf)	MULL SPAN (in)	LOAD WIDTH (in)	DESIGN PRESSURE (psf)
30	24	50	48	24	50	60	24	50	72	24	50	80	24	50	108	24	50
30	30	50	48	30	50	60	30	50	72	30	50	80	30	50	108	30	44
30	36	50	48	36	50	60	36	50	72	36	50	80	36	50	108	36	37
30	42	50	48	42	50	60	42	50	72	42	50	80	42	50	108	42	31
30	48	50	48	48	50	60	48	50	72	48	50	80	48	50	108	48	28
30	54	50	48	54	50	60	54	50	72	54	50	80	54	50	108	54	24
30	60	50	48	60	50	60	60	50	72	60	50	80	60	50	108	60	22
30	66	50	48	66	50	60	66	50	72	66	50	80	66	49	108	66	20
30	72	50	48	72	50	60	72	50	72	72	50	80	72	45	108	72	18
30	78	50	48	78	50	60	78	50	72	78	50	80	78	42	108	78	17
30	84	50	48	84	50	60	84	50	72	84	50	80	84	39	108	84	16
30	90	50	48	90	50	60	90	50	72	90	50	80	90	36	108	90	-
30	96	50	48	96	50	60	96	50	72	96	46	80	96	34	108	96	-
30	108	50	48	108	50	60	108	50	72	108	41	80	108	30	108	108	-

36	24	50	53	24	50	66	24	50	75	24	50	96	24	50
36	30	50	53	30	50	66	30	50	75	30	50	96	30	50
36	36	50	53	36	50	66	36	50	75	36	50	96	36	50
36	42	50	53	42	50	66	42	50	75	42	50	96	42	45
36	48	50	53	48	50	66	48	50	75	48	50	96	48	39
36	54	50	53	54	50	66	54	50	75	54	50	96	54	35
36	60	50	53	60	50	66	60	50	75	60	50	96	60	31
36	66	50	53	66	50	66	66	50	75	66	50	96	66	29
36	72	50	53	72	50	66	72	50	75	72	50	96	72	26
36	78	50	53	78	50	66	78	50	75	78	50	96	78	24
36	84	50	53	84	50	66	84	50	75	84	47	96	84	22
36	90	50	53	90	50	66	90	50	75	90	44	96	90	21
36	96	50	53	96	50	66	96	50	75	96	41	96	96	20
36	108	50	53	108	50	66	108	50	75	108	37	96	108	17

**INSTRUCTIONS FOR USE OF THE MULLION LOAD TABLE:**

1. DETERMINE THE WINDLOAD REQUIREMENT (D.P. PSF) FOR THE PARTICULAR OPENING.
2. FOR THE PARTICULAR OPENING (SEE SHEET 2 FOR APPROVED MULLION CONFIGURATIONS), DETERMINE THE TRIBUTARY WIDTH AND MULLION SPAN. REFERENCE THE SKETCHES ON THIS SHEET FOR MULLION SPAN AND TRIBUTARY WIDTH DETERMINATION.
3. IN THE FIRST COLUMN IN THE TABLE, LOCATE MULLION SPAN. IN SECOND COLUMN OF THE TABLE, LOCATE THE TRIBUTARY WIDTH. IN THE THIRD COLUMN CORRESPONDING TO THE DESIRED MULLION SPAN vs. LOAD WIDTH, READ THE MULLION LOAD RATING GIVEN IN PSF. THE MULLION LOAD RATING MUST BE EQUAL TO OR GREATER THAN THE DESIGN LOAD REQUIREMENT DEFINED IN STEP 1 ABOVE.
4. UNITS:
  - 4.1. DESIGN PRESSURE IN PSF.
  - 4.2. MULL SPAN AND LOAD WIDTH IS IN INCHES.

**TABLE NOTES:**

1. FOR INSTALLATION DETAILS, SEE SHEETS 4 & 5 FOR DETAIL.
2. IN ORDER TO SIMPLIFY TABLES, TABLE PRESSURES ARE LIMITED TO 50 PSF. USE OF THESE MULLIONS FOR PRESSURES HIGHER THAN 50 PSF SHALL BE REVIEWED UNDER SEPARATE ENGINEERING EVALUATION.
3. THESE LOAD TABLES ARE CERTIFIED AS CORRECT IN CONTENT. HOWEVER, CHOOSING OF THE CORRECT MULLION & CONNECTION FROM THESE TABLES FOR ITS SPECIFIC USE IS THE RESPONSIBILITY OF THOSE USING THE TABLES AND SHOULD BE VERIFIED BY THE BUILDING OFFICIAL OR A FLORIDA LICENSED ENGINEER.
4. ALL LOADS IN THESE TABLES RESTRICT MULLION DEFLECTION TO L/175 PER THE FLORIDA BUILDING CODE.

PROJECT # 423-1106

**Custom Window Systems Inc.**  
 1900 SW 44th Avenue  
 Ocala, FL 34474

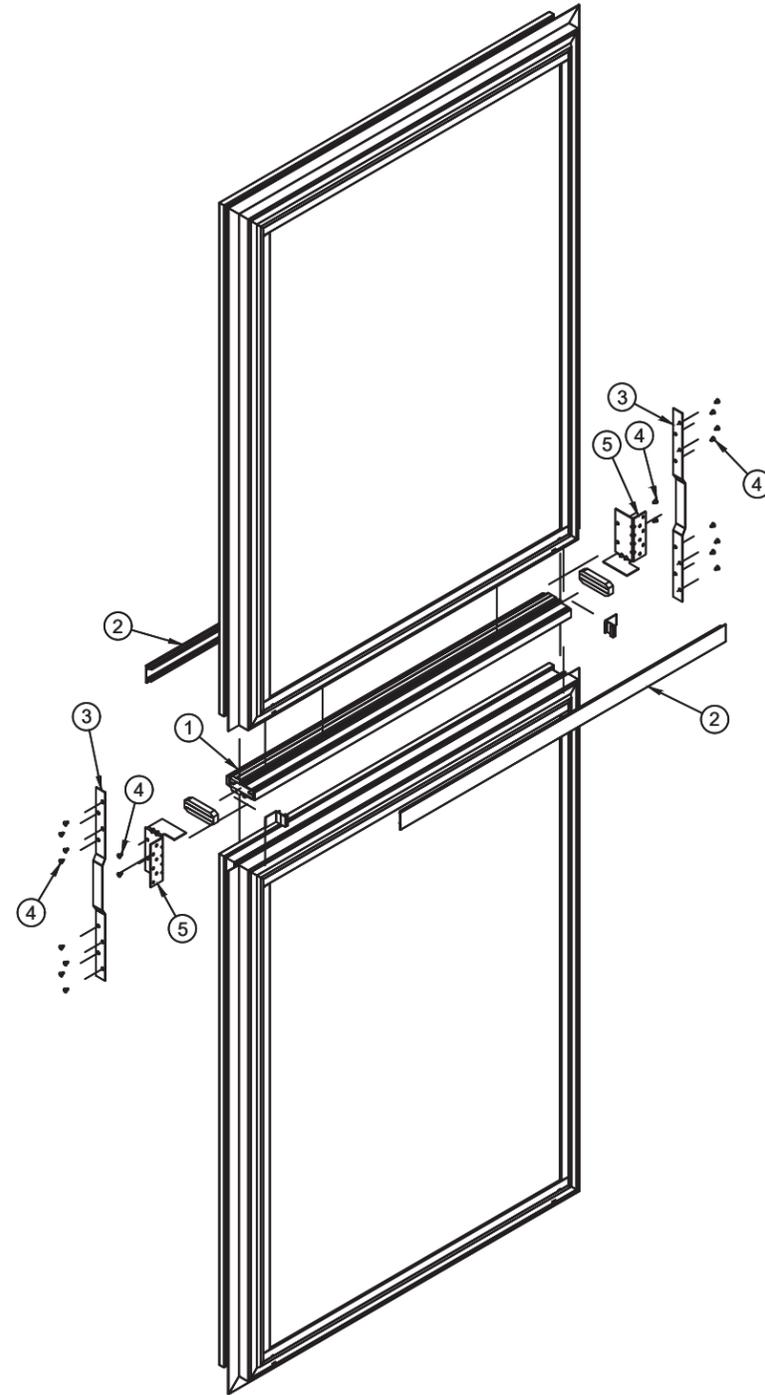
TITLE: COMFORT SHIELD VINYL WINDOW MULLION SYSTEM  
 1" MULLION WITH TWO REINFORCEMENTS - LOAD TABLE 4

PREPARED BY: RJA  
 DRAWN BY: RJA  
 DATE: 11/25/23  
 SCALE: N.T.S.  
 DRAWING NO: CWS1001  
 SHEET: 9 OF 14  
 REV: ---

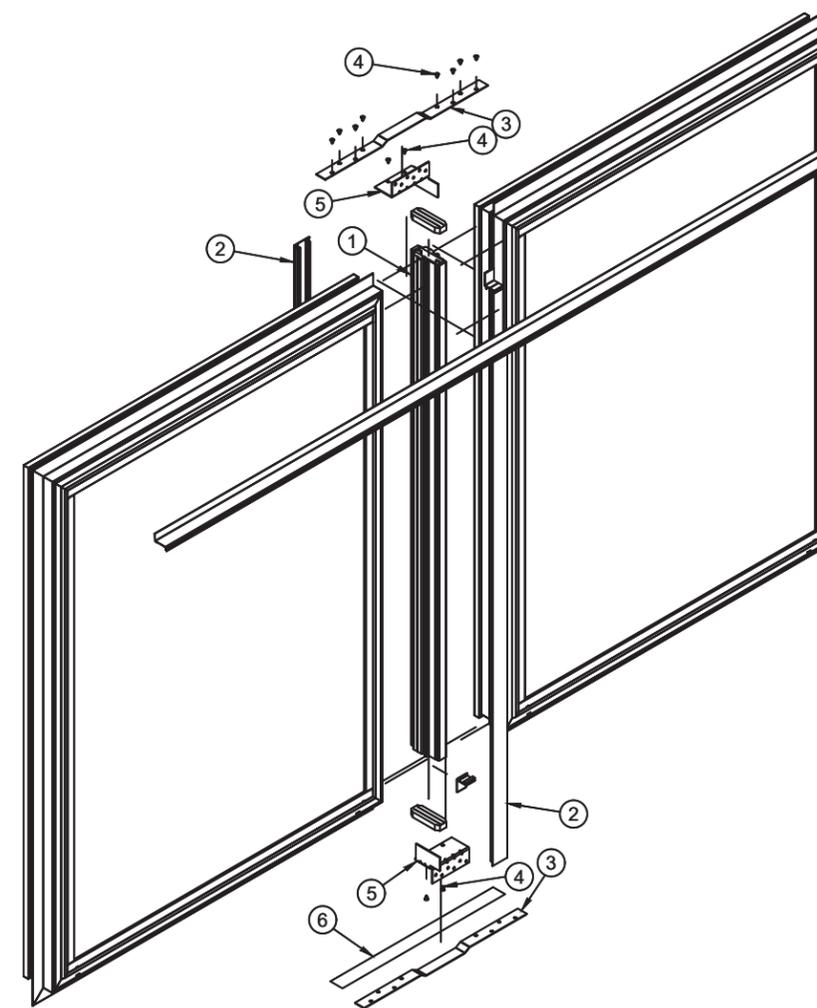


Robert J. Amoruso, P.E.  
Florida P.E. No. 49752

# 1" ALUMINUM MULLION - NAIL FIN (FIN FRAME) WINDOW INSTALLATION



HORIZONTAL 1" MULLION  
(NAIL FIN)



VERTICAL 1" MULLION  
(NAIL FIN)

1" MULLION COMBINATION BILL OF MATERIALS

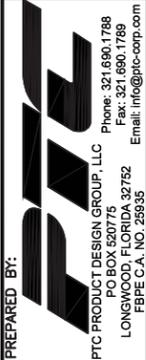
ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION
1	DES-000023418	V986947	MULLION, 1", STIFFENER
2	DES-V982703-DFT	---	1" MULLION COVER
3	DES-000024870	V986957	PLATE, MULLION, TRUSS
4	DES-V782780-DFT	V980367	SCREW, #8 X 0.375, FLAT HEAD
5	DES-000024871	V986948 (LH) AND V986949 (RH)	ANCHOR, END, NAIL FIN
6	DES-MS83G5-DFT	83G50000	DOUBLE FACED FOAM TAPE
7	DES-000024869	V986951	ANCHOR, END, BLOCK FRAME
8	DES-000023421	V986950	REINFORCEMENT, MULLION, 1", STRUCTURAL

PROJECT # 423-1106

Custom Window Systems Inc.  
1900 SW 44th Avenue  
Ocala, FL 34474

TITLE: COMFORT SHIELD VINYL WINDOW MULLION SYSTEM  
1" ALUMINUM MULLION - NAIL FIN WINDOW INSTALLATION

PREPARED BY: RJA  
DATE: 11/25/23  
SCALE: N.T.S.  
DRAWING NO: CWS1001  
SHEET: 10 OF 14



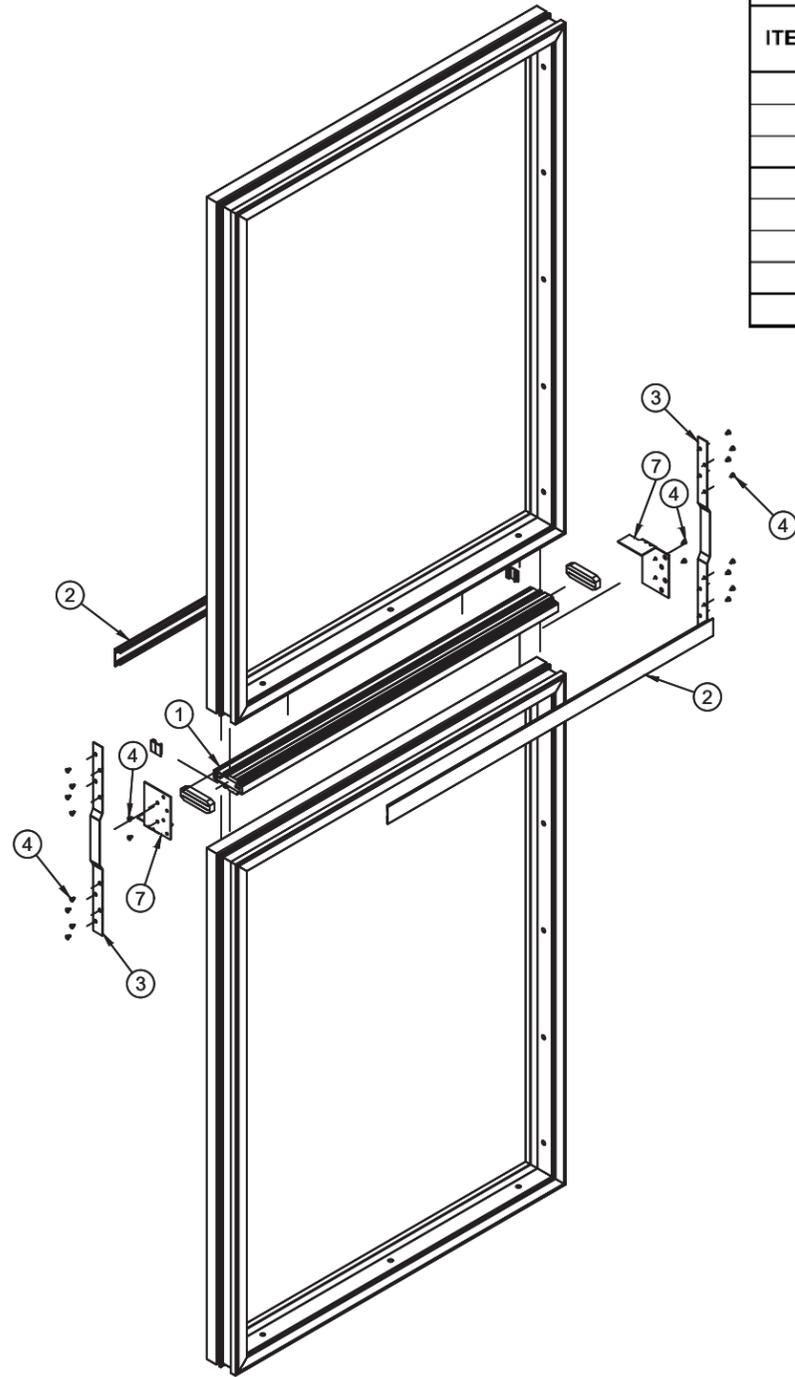
PTC PRODUCT DESIGN GROUP, LLC  
PO BOX 520776  
LONGWOOD, FLORIDA 32752  
PHONE: 321.690.1789  
FAX: 321.690.1789  
EMAIL: info@ptc-corp.com  
FBPE CAL. NO. 23835

Robert J. Amoruso, P.E.  
Florida P.E. No. 49752

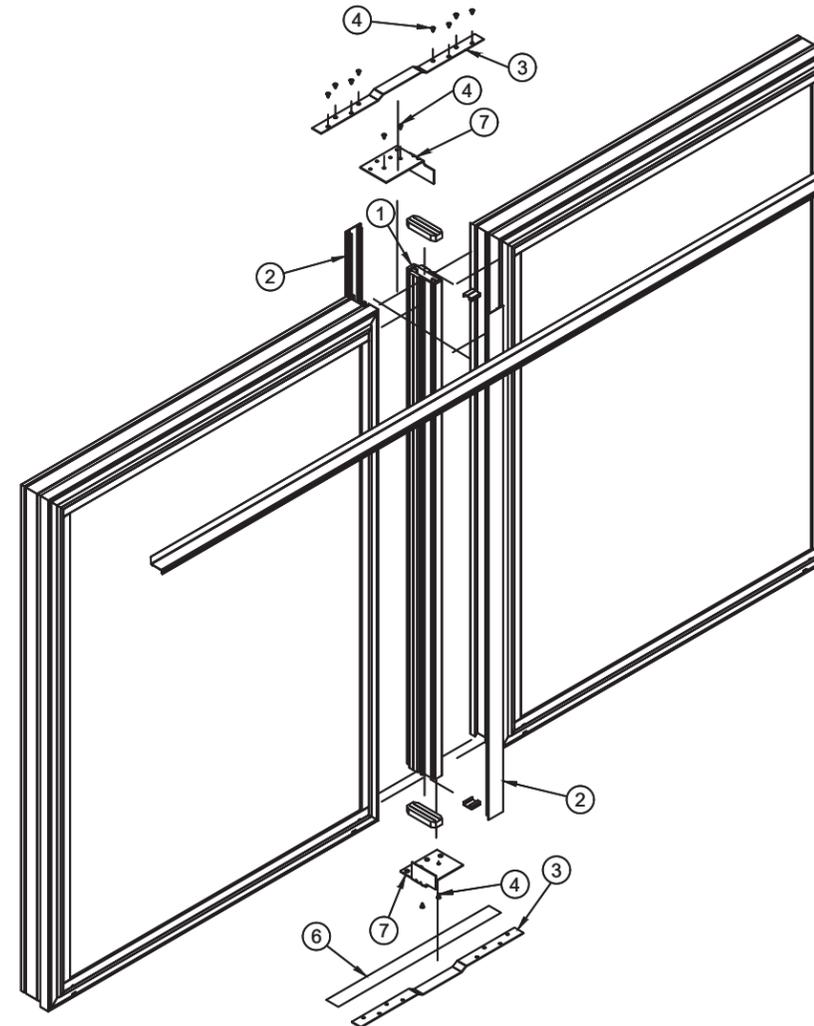
# 1" ALUMINUM MULLION - BLOCK FRAME WINDOW INSTALLATION

1" MULLION COMBINATION BILL OF MATERIALS

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION
1	DES-000023418	V986947	MULLION, 1", STIFFENER
2	DES-V982703-DFT	--	1" MULLION COVER
3	DES-000024870	V986957	PLATE, MULLION, TRUSS
4	DES-V782780-DFT	V980367	SCREW, #8 X 0.375, FLAT HEAD
5	DES-000024871	V986948 (LH) AND V986949 (RH)	ANCHOR, END, NAIL FIN
6	DES-MS83G5-DFT	83G50000	DOUBLE FACED FOAM TAPE
7	DES-000024869	V986951	ANCHOR, END, BLOCK FRAME
8	DES-000023421	V986950	REINFORCEMENT, MULLION, 1", STRUCTURAL



HORIZONTAL 1" MULLION  
(BLOCK FRAME)



VERTICAL 1" MULLION  
(BLOCK FRAME)

PROJECT # 423-1106

Custom Window Systems Inc.  
1900 SW 44th Avenue  
Ocala, FL 34474

TITLE: COMFORT SHIELD VINYL WINDOW MULLION SYSTEM  
1" ALUMINUM MULLION - BLOCK FRAME WINDOW INSTALLATION

PREPARED BY: RJA  
DATE: 11/25/23  
DRAWN BY: N.T.S.  
SCALE: CWS1001  
SHEET: 11 OF 14  
REV: ---

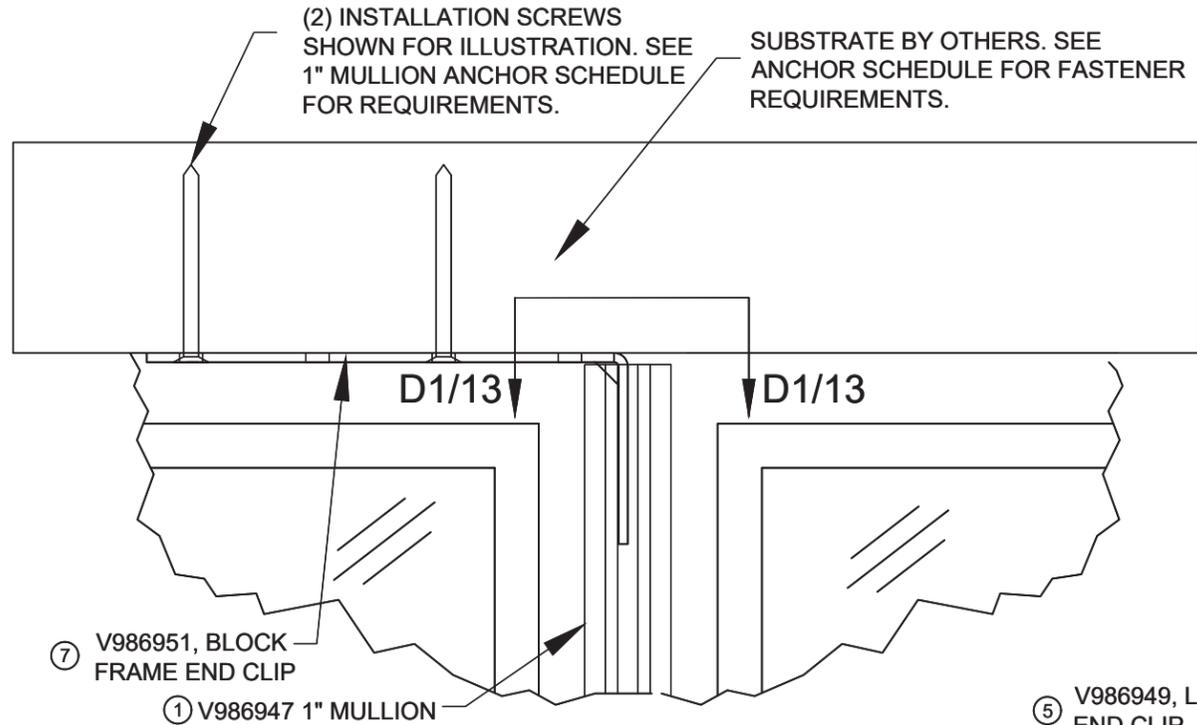


PTC PRODUCT DESIGN GROUP, LLC  
PO BOX 520775  
LONGWOOD, FLORIDA 32752  
PHONE: 321.680.1788  
FAX: 321.680.1789  
EMAIL: info@ptc-corp.com  
FBPE C.A. NO. 23835

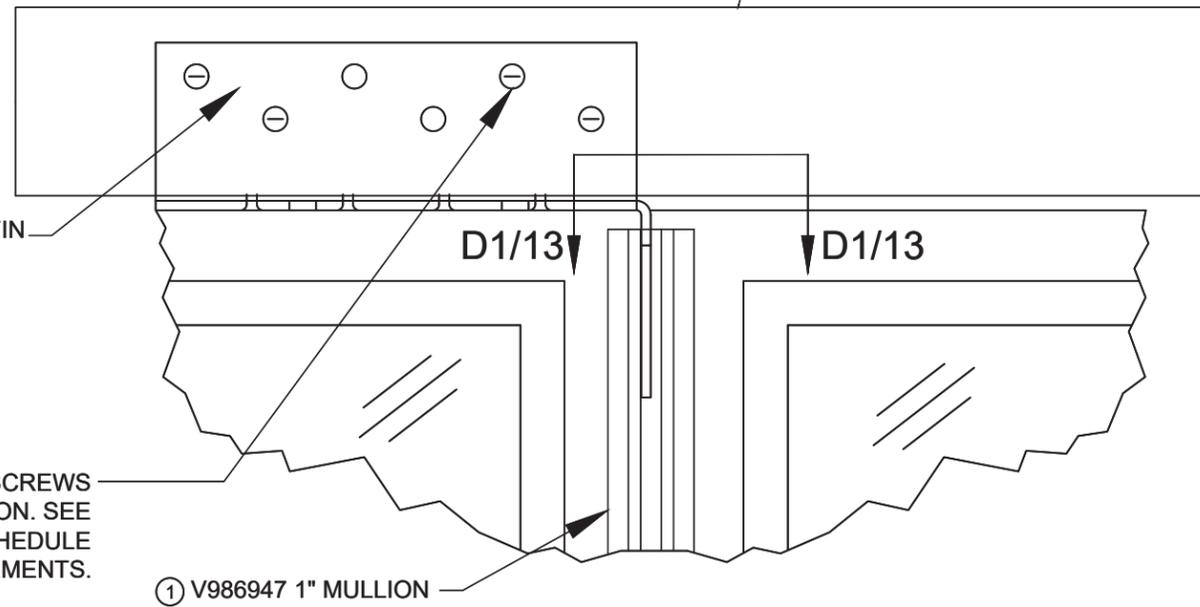
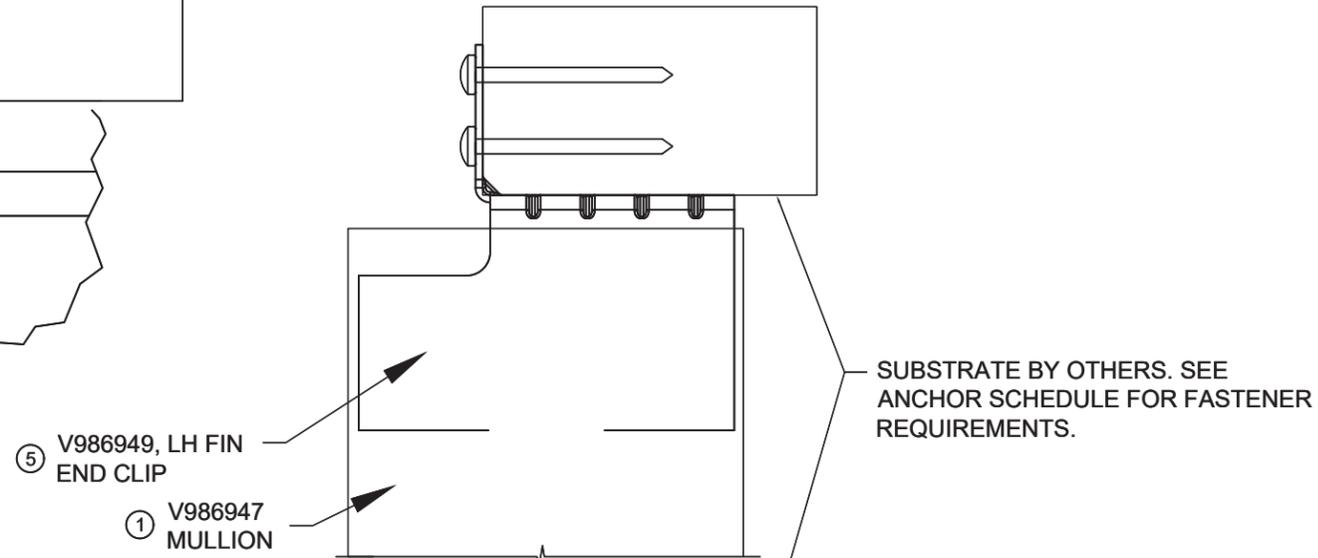
Robert J. Amoruso, P.E.  
Florida P.E. No. 49752

REV DESCRIPTION DATE BY

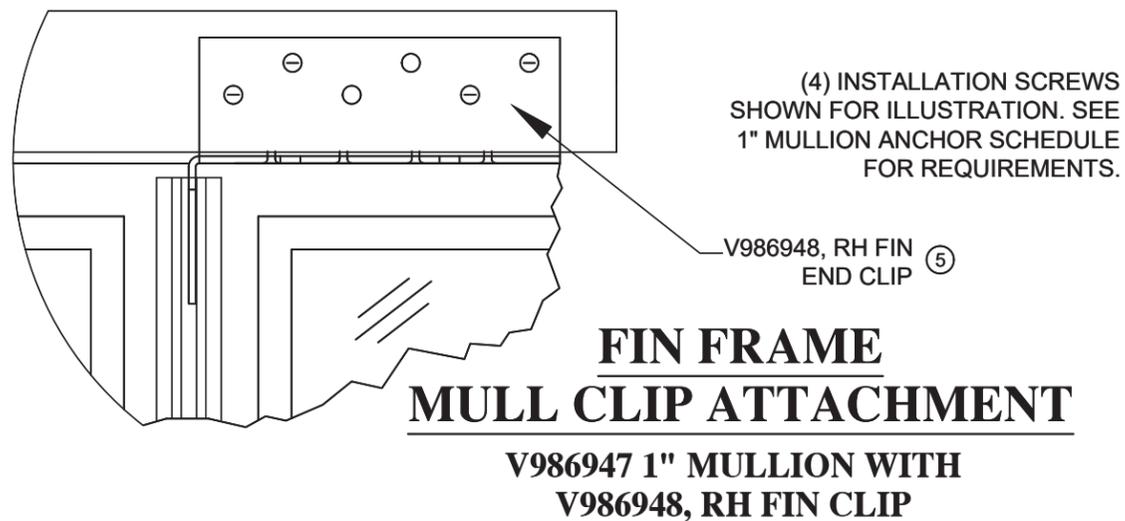
# 1" ALUMINUM MULLION - NAIL FIN (FIN FRAME) AND BLOCK FRAME MULL CLIP INSTALLATION



**BLOCK FRAME MULL CLIP ATTACHMENT**  
**V986947 1" MULLION**  
**VARIOUS SUBSTRATES**  
**FRONT ELEVATION**



**FIN FRAME MULL CLIP ATTACHMENT**  
**V986947 1" MULLION WITH**  
**V986949, LH FIN CLIP**  
**VARIOUS SUBSTRATES**  
**FRONT ELEVATION**



**FIN FRAME MULL CLIP ATTACHMENT**  
**V986947 1" MULLION WITH**  
**V986948, RH FIN CLIP**

PROJECT # 423-1106

Custom Window Systems Inc.  
 1900 SW 44th Avenue  
 Ocala, FL 34474

TITLE: COMFORT SHIELD VINYL WINDOW MULLION SYSTEM  
 1" ALUM. MULLION - NAIL FIN & BLOCK FRAME MULL CLIP INSTALL.

PREPARED BY:	DATE:	11/25/23
DRAWN BY: RJA	SCALE:	N.T.S.
DRIVING NO:	DRAWING NO:	CWS1001
REV:	SHEET:	12 OF 14

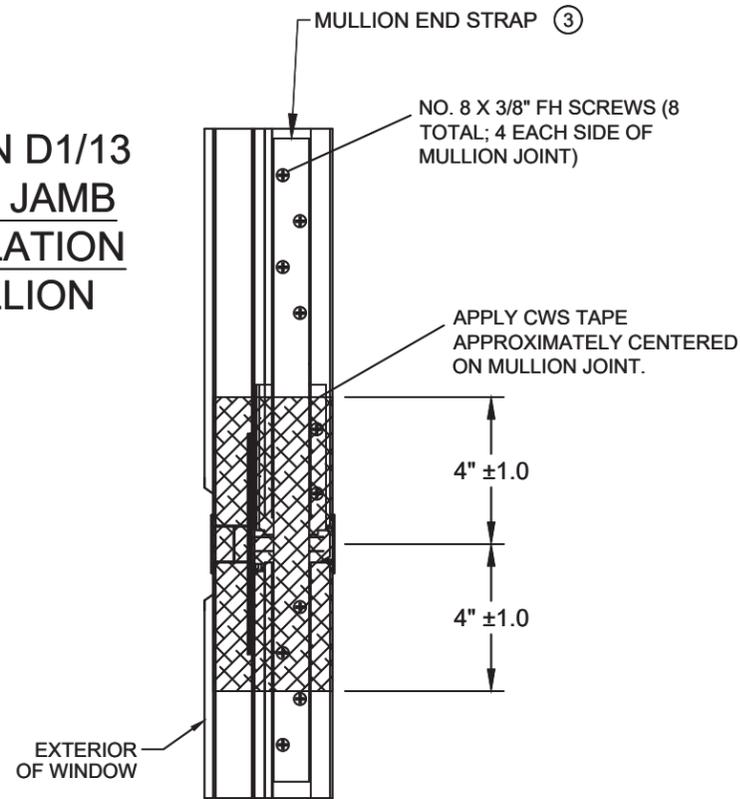
PTC PRODUCT DESIGN GROUP, LLC  
 PO BOX 520776  
 LONGWOOD, FLORIDA 32752  
 FBPE CA. NO. 23835  
 Phone: 321.680.1788  
 Fax: 321.680.1789  
 Email: info@ptc-corp.com

Robert J. Amoruso, P.E.  
 Florida P.E. No. 49752

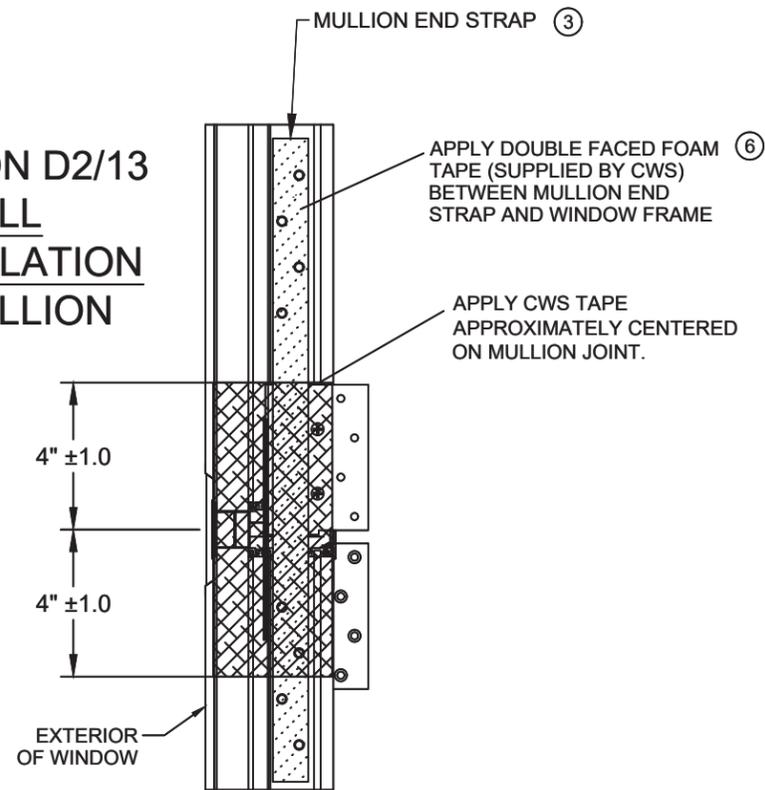
REV	DESCRIPTION	DATE	BY

# 1" ALUMINUM MULLION - INSTALLATION

## SECTION D1/13 HEAD & JAMB INSTALLATION 1" MULLION



## SECTION D2/13 SILL INSTALLATION 1" MULLION



**1" MULLION INSTALLATION ANCHOR SCHEDULE**

CONNECTION															
TYPE	PART NO.	CLIP QUANTITY	ANCHOR QUANTITY	SUBSTRATE	HEAD TYPE	SIZE	MANUFACTURER AND/OR SPECIFICATION	MIN. EMBEDMENT (IN)	MIN. EDGE DISTANCE (IN)	MIN. SPACING (IN)	SUBSTRATE CAPACITIES BASED ON				
THROUGH FRAME CLIP INSTALLATION	V986951	ONE (1) PER MULLION END	2 ANCHORS PER CLIP	CONCRETE	FLAT HEAD	3/16"	ITW TAPCONS (2)	1-3/4"	1-1/8"	2"	MIN. 2000 PSI CONCRETE				
							ELCO CRETE-FLEX SS4	2"	1-7/8"	2"	MIN. 2500 PSI CONCRETE				
							HILTI KWIK-CON II	1-1/2"	1-1/8"	2"	MIN. 2500 PSI CONCRETE				
				MASONRY (BLOCK/CMU)	FLAT HEAD	3/16"	2 ANCHORS PER CLIP	WOOD (1)	FLAT HEAD	NO. 10	ITW TAPCONS (2)	1"	2"	3"	STRENGTH CONFORMANCE TO ASTM C-90, MEDIUM WEIGHT, DENSITY > 117 pcf
											ELCO CRETE-FLEX SS4	1-1/4"	1-7/8"	3"	
											HILTI KWIK-CON II	1"	1-1/8"	3"	
											ASME B18.6.1 (WOOD SCREW), GR. 5 ASME B18.6.4 (TAPPING SCREW), GR. 5	1-1/4"	3/4"	3/4"	
1/8" THK. ALUMINUM	FLAT HEAD	NO. 10	4 ANCHORS PER CLIP	1/8" THK. STEEL	FLAT HEAD	NO. 10	ASME B18.6.4 (TAPPING SCREW), GR. 5	FULLY PENETRATE SUBSTRATE WITH 3 THREADS PROTRUDING INTERNALLY	3/8"	5/8"	ALUMINUM 6063-T5 ALUMINUM OR BETTER				
							ASME B18.6.4 (TAPPING SCREW), GR. 5	3/8"	5/8"	ASTM A-36 STEEL, 36 KSI YIELD STRENGTH STEEL OR BETTER					
NAILING FIN (FIN FRAME) CLIP INSTALLATION	V986948 (LH) OR V986949 (RH)	ONE (1) PER MULLION END, EITHER LH OR RH	4 ANCHORS PER CLIP	WOOD (1)	FLAT OR PAN HEAD	NO. 10	ANSI B18.6.1 (WOOD SCREW), GR. 5 ASME B18.6.4 (TAPPING SCREW), GR. 5	1-1/2"	3/8"	3/4"	WOOD WITH A MINIMUM SPECIFIC GRAVITY OF 0.42				
				1/8" THK. ALUMINUM	FLAT OR PAN HEAD	NO. 10	ASME B18.6.4 (TAPPING SCREW), GR. 5	FULLY PENETRATE SUBSTRATE WITH 3 THREADS PROTRUDING INTERNALLY	3/8"	5/8"	ALUMINUM 6063-T5 ALUMINUM OR BETTER				
				1/8" THK. STEEL	FLAT OR PAN HEAD	NO. 10	ASME B18.6.4 (TAPPING SCREW), GR. 5	3/8"	5/8"	ASTM A-36 STEEL, 36 KSI YIELD STRENGTH STEEL OR BETTER					

**NOTES:**  
 1) FOR WOOD AND TAPPING SCREWS IF SPLITTING IS A CONCERN, DRILL 7/64" HOLE FOR NO. 10 WOOD SCREW AND NO. 10 TAPPING SCREW.  
 2) WHEN ITW TAPCONS ARE USED FOR CONCRETE/MASONRY INSTALLATION, THEY SHALL BE THE ADVANCED THREADFORM TECHNOLOGY TYPE.

PROJECT # 423-1106

**Custom Window Systems Inc.**  
 1900 SW 44th Avenue  
 Ocala, FL 34474

TITLE: COMFORT SHIELD VINYL WINDOW MULLION SYSTEM  
 1" ALUM. MULLION - INSTALLATION DETAILS AND ANCHOR SCHEDULE

PREPARED BY: RJA  
 DATE: 11/25/23  
 SCALE: N.T.S.  
 DRAWING NO: CWS1001  
 SHEET: 13 OF 14

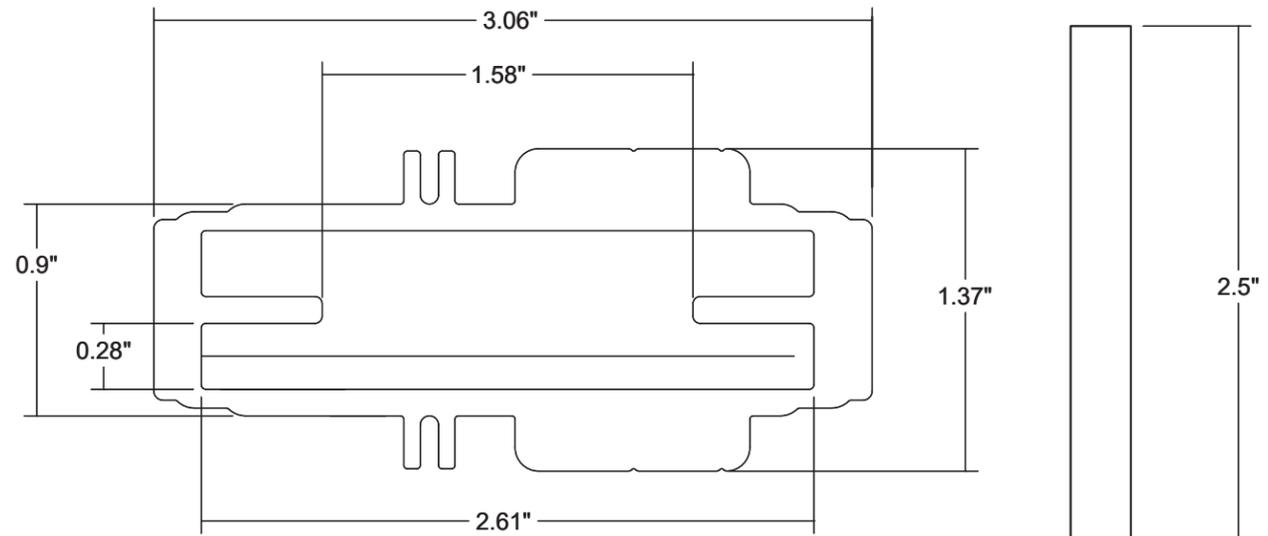


Robert J. Amoroso, P.E.  
 Florida P.E. No. 49752

# 1" ALUMINUM MULLION - COMPONENTS

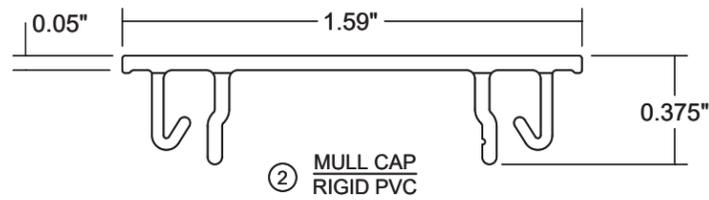
1" MULLION COMBINATION BILL OF MATERIALS

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION
1	DES-000023418	V986947	MULLION, 1", STIFFENER
2	DES-V982703-DFT	--	1" MULLION COVER
3	DES-000024870	V986957	PLATE, MULLION, TRUSS
4	DES-V782780-DFT	V980367	SCREW, #8 X 0.375, FLAT HEAD
5	DES-000024871	V986948 (LH) AND V986949 (RH)	ANCHOR, END, NAIL FIN
6	DES-MS83G5-DFT	83G50000	DOUBLE FACED FOAM TAPE
7	DES-000024869	V986951	ANCHOR, END, BLOCK FRAME
8	DES-000023421	V986950	REINFORCEMENT, MULLION, 1", STRUCTURAL

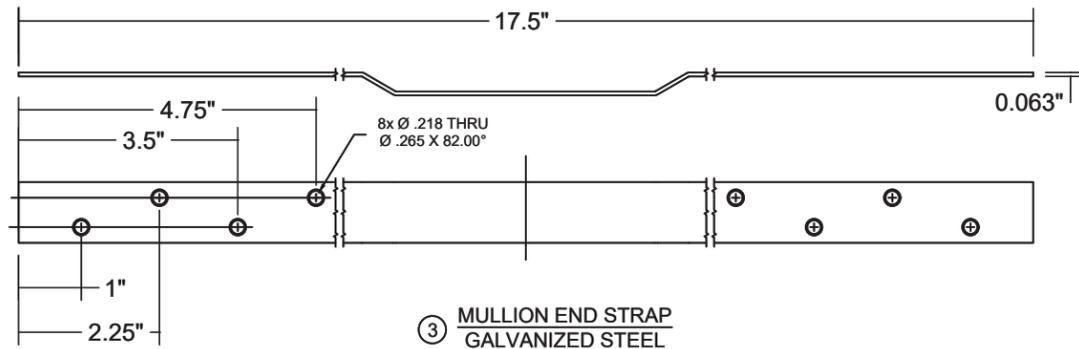


① 1" MULLION  
6063-T6

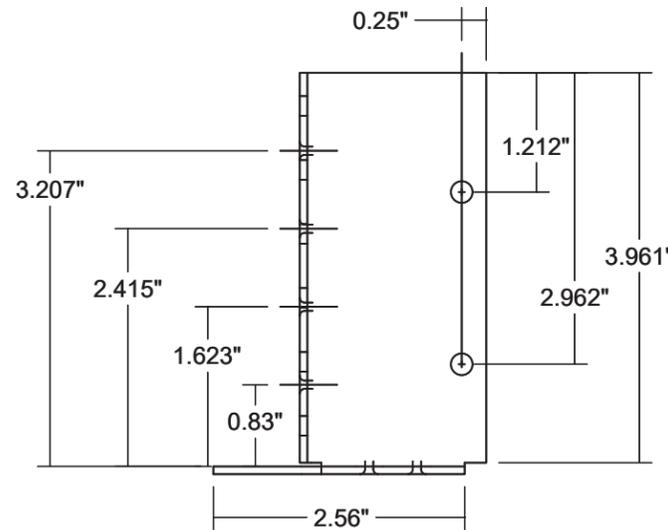
⑧ 1" MULLION REINFORCEMENT  
6061-T6



② MULL CAP  
RIGID PVC

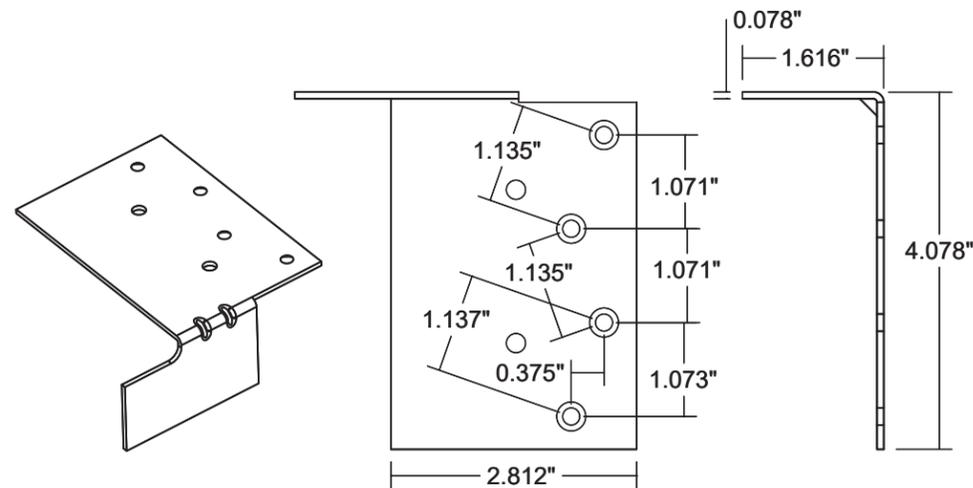


③ MULLION END STRAP  
GALVANIZED STEEL

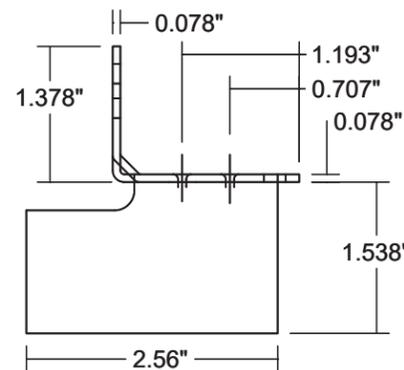


LH

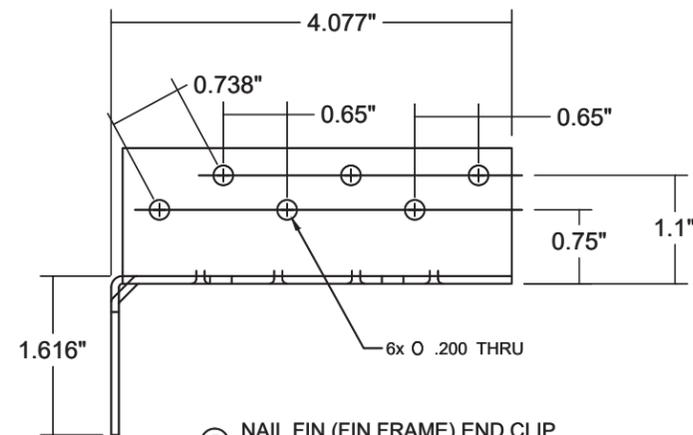
RH



⑦ BLOCK FRAME END CLIP  
GALVANIZED STEEL



⑤ NAIL FIN (FIN FRAME) END CLIP  
GALVANIZED STEEL



Robert J. Amoruso, P.E.  
Florida P.E. No. 49752

PROJECT # 423-1106

Custom Window Systems Inc.  
1900 SW 44th Avenue  
Ocala, FL 34474

TITLE: COMFORT SHIELD VINYL WINDOW MULLION SYSTEM  
1" ALUMINUM MULLION - COMPONENTS

PREPARED BY: RJA  
SCALE: N.T.S.  
DATE: 11/25/23  
DRAWING NO: CWS1001  
SHEET: 14 OF 14

PTC PRODUCT DESIGN GROUP, LLC  
PO BOX 520776  
LONGWOOD, FLORIDA 32752  
PHONE: 321.680.1788  
FAX: 321.680.1789  
EMAIL: info@ptc-corp.com  
FBPE CAL. NO. 23855

REV DESCRIPTION DATE BY