



BUILDING CODE COMPLIANCE OFFICE (BCCO)  
PRODUCT CONTROL DIVISION

MIAMI-DADE COUNTY, FLORIDA  
METRO-DADE FLAGLER BUILDING  
140 WEST FLAGLER STREET, SUITE 1603  
MIAMI, FLORIDA 33130-1563  
(305) 375-2901 FAX (305) 375-2908

**NOTICE OF ACCEPTANCE (NOA)**

[www.buildingcodeonline.com](http://www.buildingcodeonline.com)

**Marvin Windows & Doors**  
**Highway 11, P.O. Box 100**  
**Warroad, MN 56763**

**SCOPE:**

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed by Miami-Dade County Product Control Division and accepted by the Board of Rules and Appeals (BORA) to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Division (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. BORA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Division that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code, including the High Velocity Hurricane Zone.

**DESCRIPTION: Series "CUDH HP Clad Ultimate" Wood Double Hung Window-N.I.**

**APPROVAL DOCUMENT:** Drawing No. **00013061**, titled "Clad Ultimate Double Hung CUDH HP", Sheets 1 through 11 of 11, prepared by W. W. Schaefer Engineering & Consulting, P.A., dated 06/08/99, with last revision "A1" on 08/03/05, signed and sealed by Warren W, Schaefer, P.E., bearing the Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and expiration date by the Miami-Dade County Product Control Division.

**MISSILE IMPACT RATING: None**

**LABELING:** Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

**RENEWAL** of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

**TERMINATION** of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

**ADVERTISEMENT:** The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

**INSPECTION:** A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA revises NOA # **03-0311.04** and consists of this page 1 and evidence page E-1, and E-2, as well as approval document mentioned above.

The submitted documentation was reviewed by **Jaime D. Gascon, P.E.**

**NOA No 05-0815.09**  
**Expiration Date: March 10, 2008**  
**Approval Date: April 06, 2006**  
**Page 1**



*J. Gascon*  
*3/10/06*

Marvin Windows & Doors

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

**A. DRAWINGS**

1. Manufacturer's die drawings and sections.
2. Drawing No. **00013061**, titled "Clad Ultimate Double Hung CUDH HP", Sheets 1 through 11 of 11, dated 06/08/99 with last revision "A1" on 08/03/05, prepared by W. W. Schaefer Engineering & Consulting, P.A., signed and sealed by Warren W. Schaefer, P.E.

**B. TESTS**

1. Test reports on 1) Air Infiltration Test, per FBC, TAS 202-94  
2) Uniform Static Air Pressure Test, Loading per FBC, TAS 20294  
3) Water Resistance Test, per FBC, TAS 202-94  
4) Forced Entry Test, per FBC 2411 3.2.1 and TAS 202-94  
along with marked-up drawings and installation diagram of 3 specimens of Series CUDH HP double hung wood window (X/X, 37-3/8" x 76-3/8" w/1.448" sill) anchored with steel brackets or nailing fin, prepared by Fenestration Testing Laboratory, Inc., Test Report No. **FTL-2289**, dated July 23, 1999, signed and sealed by Jose D. Mitrani, P.E.  
**"Submitted under NOA#03-0311.04"**
2. Test reports on 1) Air Infiltration Test, per FBC, TAS 202-94  
2) Uniform Static Air Pressure Test, Loading per FBC, TAS 20294  
3) Water Resistance Test, per FBC, TAS 202-94  
4) Forced Entry Test, per FBC 2411 3.2.1 and TAS 202-94  
along with marked-up drawings and installation diagram of 1 specimen of Series CUDH HP double hung wood window (X/X, 37-3/8" x 76-3/8" w/3-1/2" sill) anchored with steel brackets, prepared by Fenestration Testing Laboratory, Inc., Test Report No. **FTL-2364**, dated July 23, 1999, signed and sealed by Jose D. Mitrani, P.E.  
**"Submitted under NOA#03-0311.04"**

**C. CALCULATIONS**

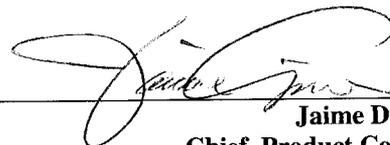
1. Anchor Calculations and structural analysis, complying with FBC-2004, prepared by W.W. Schaefer Engineering & Consulting, P.A., dated 06/25/99, signed and sealed by Warren W. Schaefer, P.E.  
**Complies with ASTM E1300-98**

**D. QUALITY ASSURANCE**

1. Miami Dade /Building Code Compliance Office (BCCO).

**E. MATERIAL CERTIFICATIONS**

1. None



Jaime D. Gascon, P.E.  
Chief, Product Control Division  
NOA No 05-0815.09  
Expiration Date: March 10, 2008  
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Marvin Windows & Doors

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**F. STATEMENTS**

1. Statement letter of no change and stating that the engineer who performed the review of the product is still in the engineering business, issued by Marvin Windows & Doors, signed by Don Lagerstrom, dated 2/15/03.  
*“Submitted under NOA#03-0311.04”*

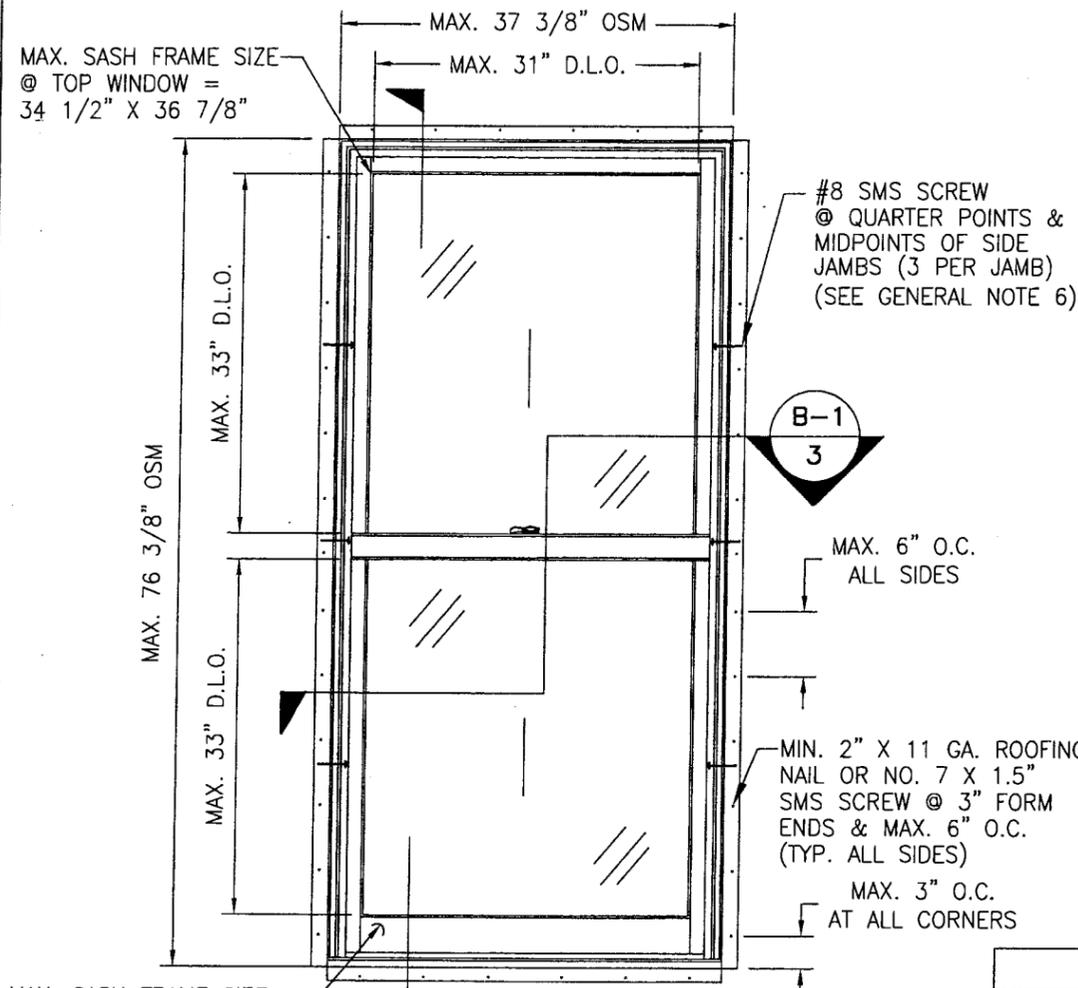
**G. OTHER**

Notice of Acceptance No. **03-0311.04** Marvin Windows & Doors, for their **Series** “CUDH HP Clad Ultimate” Wood Double Hung Window, approved on 04/17/03 and expiring on 3/10/08.



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**Jaime D. Gascon, P.E.**  
**Chief, Product Control Division**  
**NOA No 05-0815.09**  
**Expiration Date: March 10, 2008**  
**Approval Date: April 06, 2006**



MAX. SASH FRAME SIZE @ BOTTOM WINDOW = 34 1/2" X 38 1/2"

**EXTERIOR ELEVATION  
FIN MOUNT**

SCALE: 3/4"=1'-0"

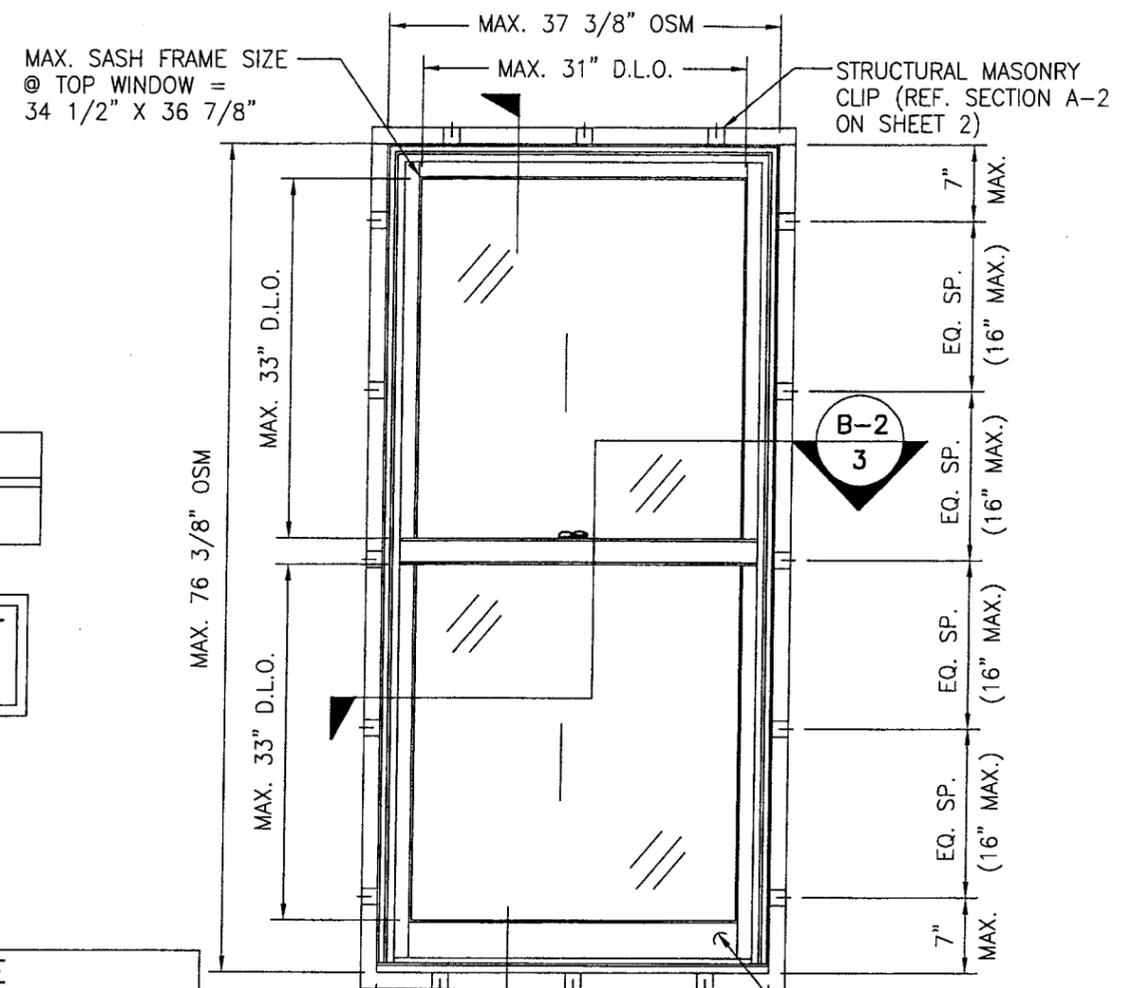
**ALLOWABLE DESIGN LOADS**  
SEE LOAD TABLE ON SHEET 10

**NOTE: THIS WINDOW IS A NON-IMPACT PRODUCT & MUST BE SHUTTERED**

FRAME ANCHOR REQUIREMENTS TABLE			
SIDE JAMB SHEAR SCREWS			
OPENING TYPE (SUBSTRATE)	JAMB TO OPENING FASTENER TYPE	MINIMUM EMBEDMENT	MINIMUM EDGE DIST.
2X_ WOOD FRAME OR BUCK	NO. 8 SMS SCREW	1 1/4"	3/4"
NAIL FIN NAILS			
2X_ WOOD FRAME OR BUCK	11 GA. ROOFING NAILS	1 3/4"	1/2"
MASONRY CLIPS			
2X_ WOOD FRAME OR BUCK	NO. 8 SMS SCREW	1 3/8"	1/4"

**GENERAL NOTES**

1. THESE WINDOW SYSTEMS HAVE BEEN TESTED, ANALYZED AND APPROVED FOR DESIGN PRESSURES NOT TO EXCEED THOSE SHOWN IN THE LOAD TABLES ON SHEET 10.
2. BUCKING, OPENINGS & BUCKING FASTENERS MUST BE DESIGNED & INSTALLED TO WITHSTAND WIND LOADS AS DETERMINED FOR EACH APPLICATION.
3. ALL HARDWARE & FASTENERS SHALL BE IN ACCORDANCE WITH THESE DRAWINGS & MAY NOT VARY UNLESS SPECIFICALLY MENTIONED ON THE DRAWINGS.
4. THE DETAILS & SPECIFICATIONS SHOWN HEREIN REPRESENT THE PRODUCTS PROPOSED FOR WATER, AIR, IMPACT, CYCLIC & UNIFORM STATIC AIR PRESSURE TESTING IN CONFORMANCE WITH 2004 FLORIDA BUILDING CODE PROTOCOLS TAS-201, 202 & 203.
5. FOR ANCHOR EMBED & EDGE DISTANCE REQUIREMENTS, SEE "ANCHOR REQUIREMENTS TABLE" ON THIS SHEET.
6. THESE WINDOW SYSTEMS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE 2004 FLORIDA BUILDING CODE (FBC) INCLUDING THE HIGH VELOCITY HURRICANE ZONE (HVHZ).
7. THIS PRODUCT HAS BEEN TESTED IN ACCORDANCE WITH 2004 FLORIDA BUILDING CODE PROTOCOLS TAS-201, TAS-202 & TAS-203 FOR LARGE MISSILE IMPACT, STRUCTURAL & CYCLIC TESTING.
8. MATERIALS, INCLUDING BUT NOT LIMITED TO STEEL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF 2004 FLORIDA BUILDING CODE SECTION 2003.8.4.



MAX. SASH FRAME SIZE @ BOTTOM WINDOW = 34 1/2" X 38 1/2"

**EXTERIOR ELEVATION  
STRUCTURAL CLIP MOUNT**

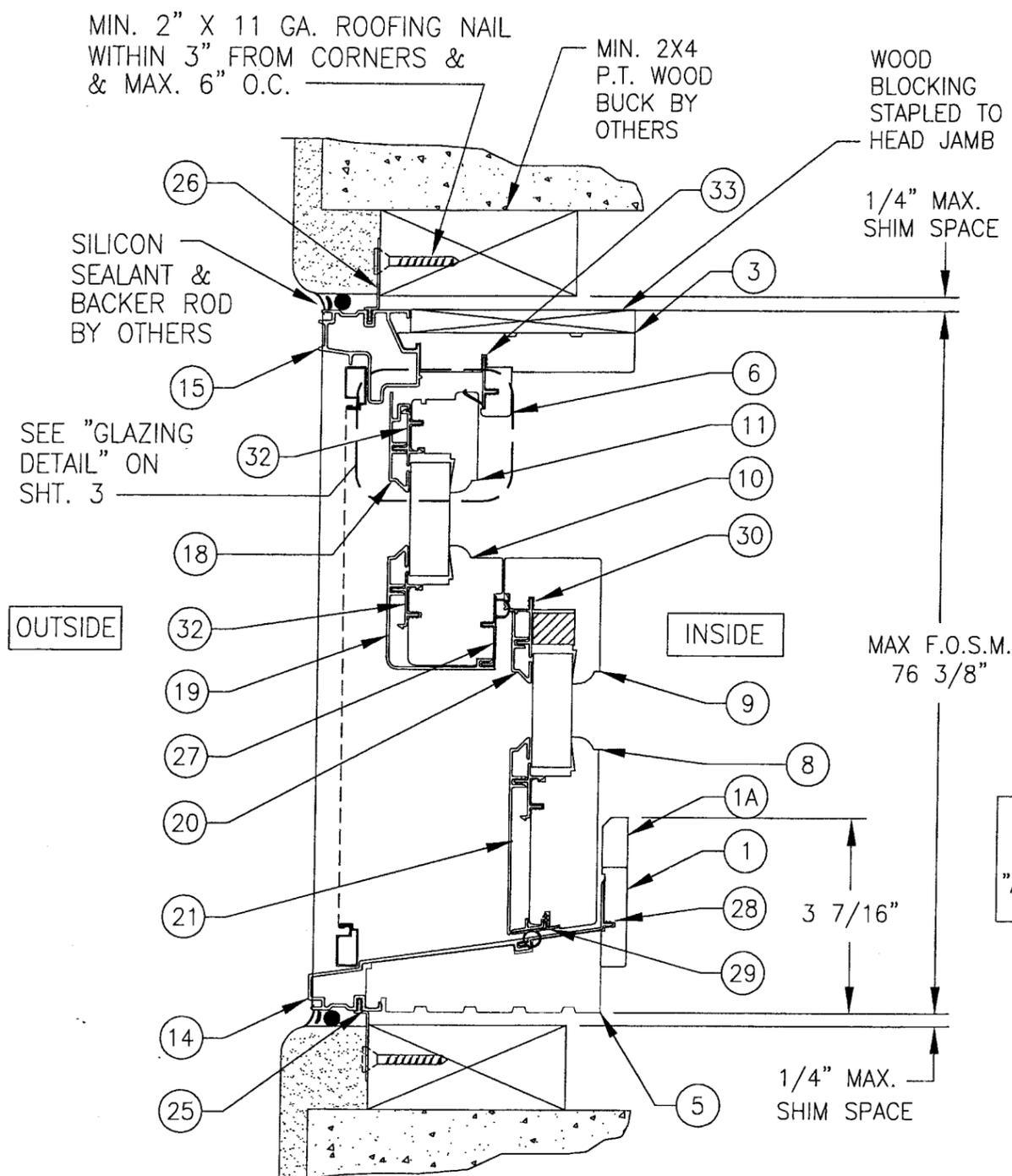
SCALE: 3/4"=1'-0"

**PRODUCT REVISED**  
in compliance with the Florida Building Code  
Acceptance No 05-0815-09  
Expiration Date 03/10/08  
By: [Signature]  
Miami Dade Product Control Division

JAN 22 2006  
WARREN W. SCHAEFER, P.E.  
STRUCTURAL ENGINEER  
P.E. No. 44135  
**W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.**  
STRUCTURAL CONSULTING ENGINEERS  
8895 N. MILITARY TRAIL, SUITE C204  
PALM BEACH GARDENS, FL 33410  
PHONE: 561-775-4902

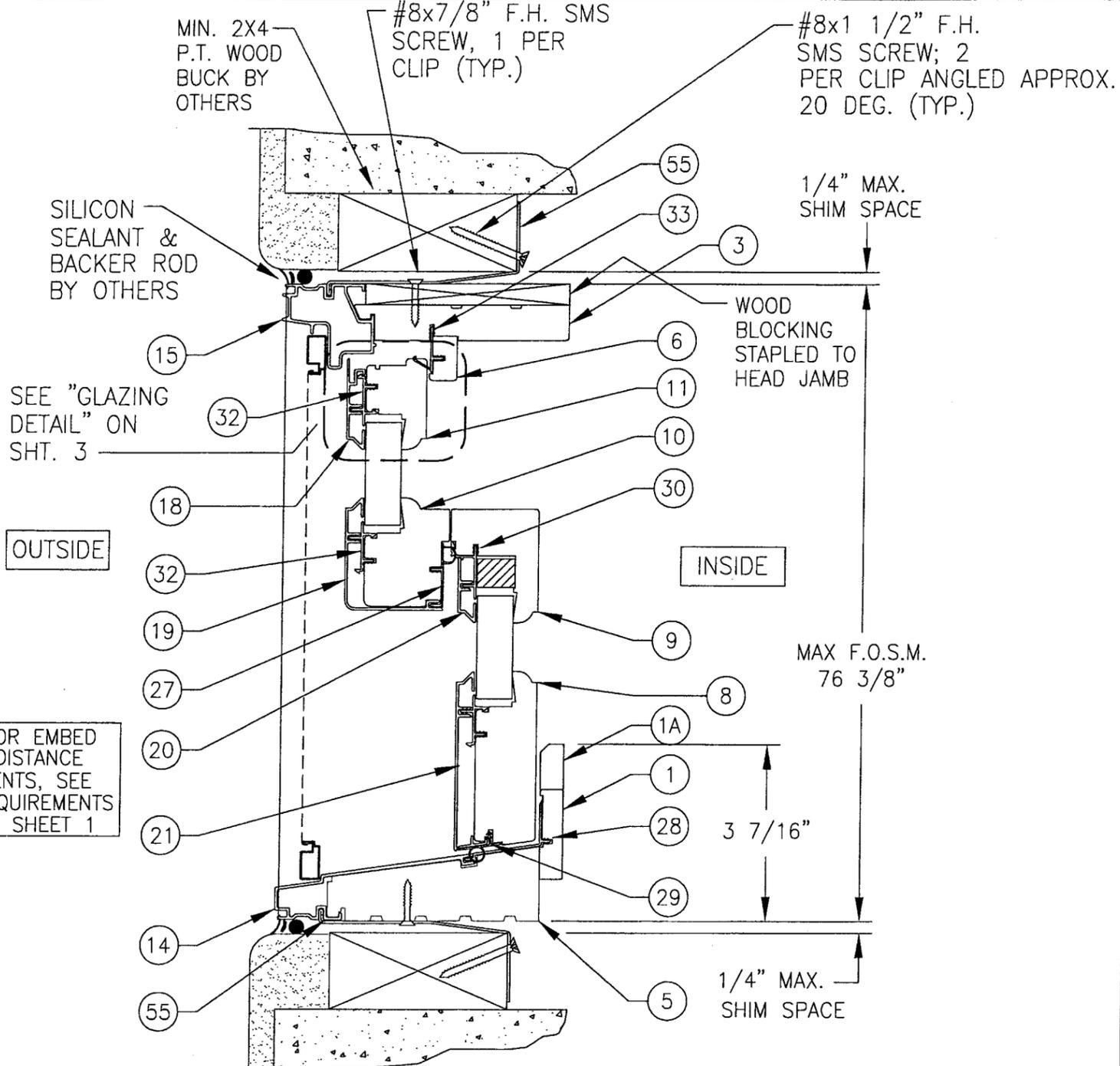
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<input type="checkbox"/> DIP	<input type="checkbox"/> AT MLDR.	BOX 100, WARROAD, MN 56763	
<input type="checkbox"/> NO DIP	<input type="checkbox"/> IN PROD.	WINDOWS&DOORS. (218) 386-1430 FAX 386-1913	
PRODUCT LINE: CLAD ULTIMATE DOUBLE HUNG			
PRODUCT: CUDH HP			
ASSEMBLY			
EXTERIOR ELEVATIONS			
MATERIAL: N/A	SIZE: B	DRAWING NO: 00013061	
SCALE: NOTED	DATE: 6/8/99	DRAWN BY: BRAD BOE	SHEET: 1 OF 11

A1	UPDATED GENERAL NOTES TO 2004 FBC		08/03/05	WWS
REV#	DESCRIPTION / REQUESTER	ECN NO	DATE	DRAFTER



SECTION A-1  
SCALE: 3/8 FULL SIZE

NAIL FIN AND SCREW  
INSTALLATION



SECTION A-2  
SCALE: 3/8 FULL SIZE

STRUCTURAL CLIP  
INSTALLATION

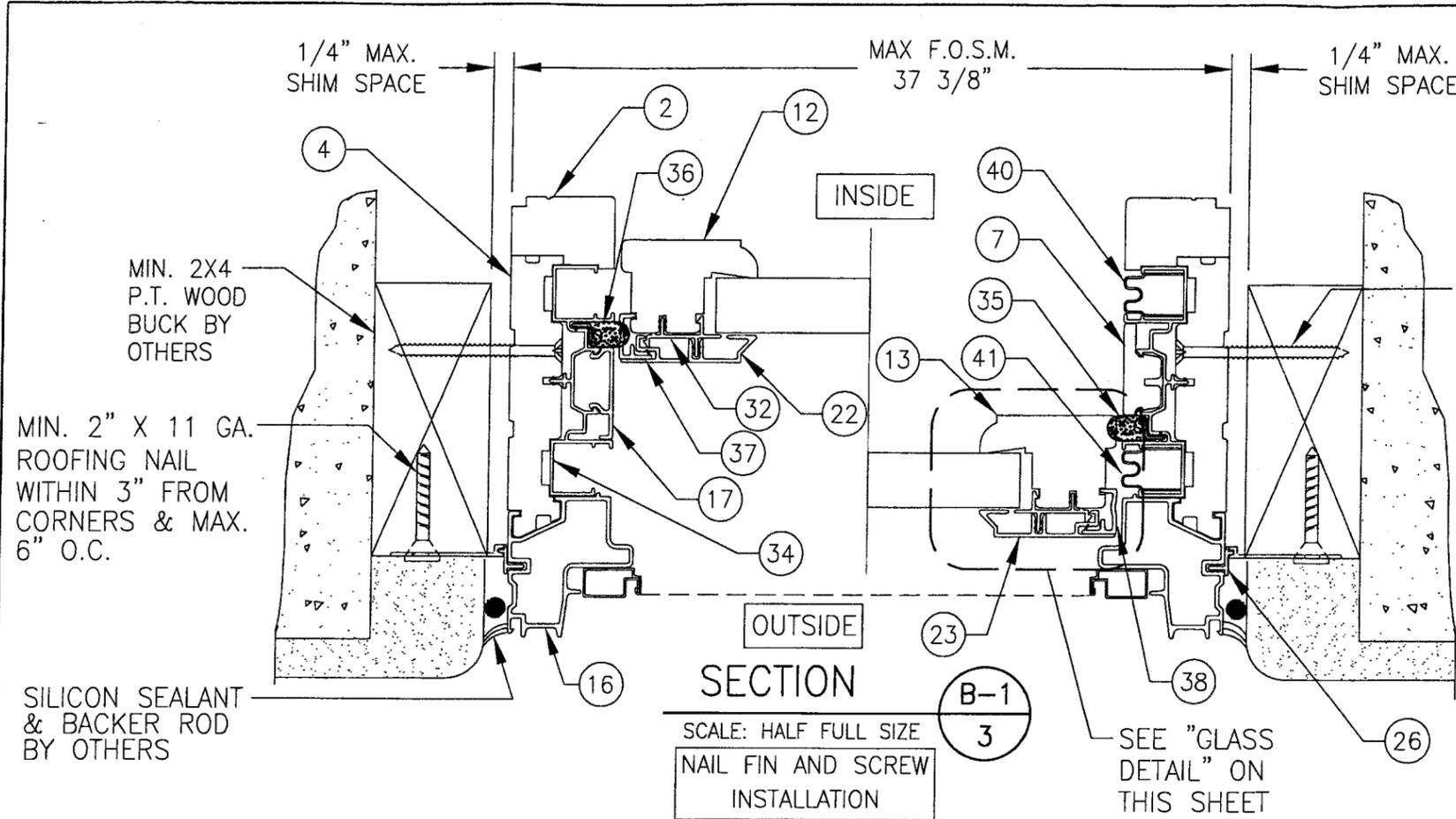
FOR ANCHOR EMBED  
& EDGE DISTANCE  
REQUIREMENTS, SEE  
"ANCHOR REQUIREMENTS  
TABLE" ON SHEET 1

**PRODUCT-REVISED**  
so complying with the Florida  
Building Code  
Acceptance No. 05-0815-09  
Expiration Date 03/10/08  
By: [Signature]  
Miami Code Product Control  
Division

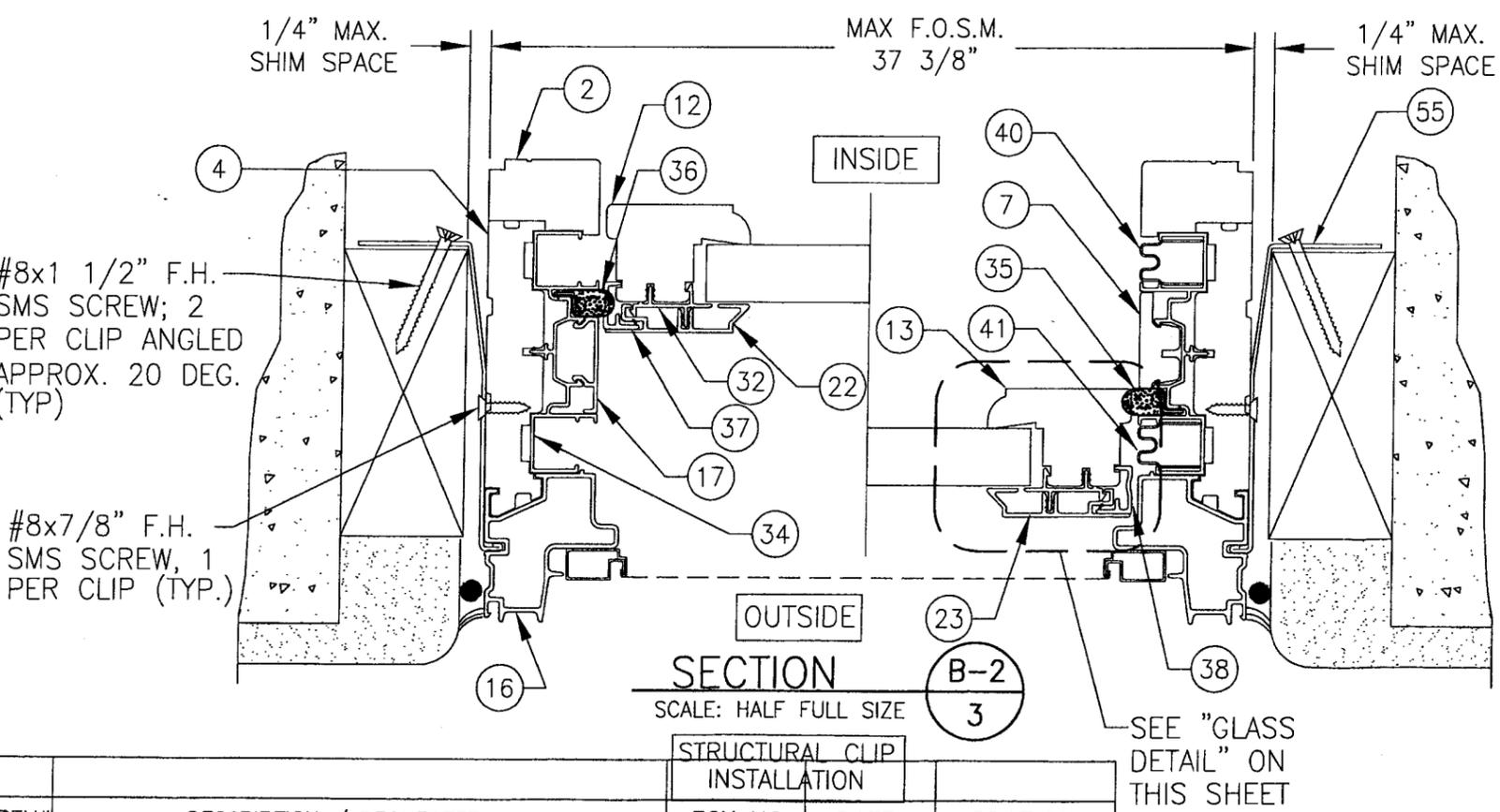
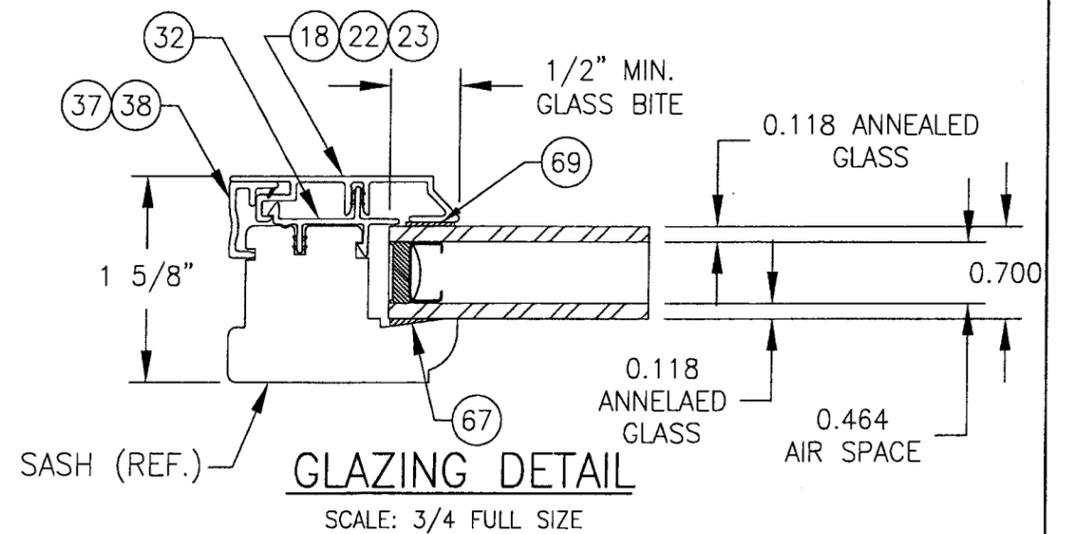
JAN 22 2006  
WARREN W. SCHAEFER, P.E.  
STRUCTURAL ENGINEER  
P.E. No. 44135  
W. W. SCHAEFER ENGINEERING  
& CONSULTING, P.A.  
STRUCTURAL CONSULTING ENGINEERS  
8895 N. MILITARY TRAIL, SUITE C204  
PALM BEACH GARDENS, FL 33410  
PHONE: 561-775-4902

WOOD PART DIP SPEC		MARVIN RESEARCH AND DEVELOPMENT	
<input type="checkbox"/> DIP	<input type="checkbox"/> AT MLDR.	BOX 100, WARROAD, MN 56763	
<input type="checkbox"/> NO DIP	<input type="checkbox"/> IN PROD.	WINDOWS&DOORS. (218) 386-1430 FAX 386-1913	
PRODUCT LINE: CLAD ULTIMATE DOUBLE HUNG			
PRODUCT: CUDH HP			
ASSEMBLY			
VERTICAL CROSS SECTION			
MATERIAL: N/A	SIZE: B	DRAWING NO: 00013061	
SCALE: NOTED	DATE: 6/8/99	DRAWN BY: BRAD BOE	SHEET: 2 OF 11

REV#	DESCRIPTION / REQUESTER	ECN NO	DATE	DRAFTER



#8 SMS SCREW  
3 PER JAMB EVENLY  
SPACED AT MIDPOINTS  
& QUARTER POINTS OF  
JAMBS (REF. ELEVATION)



FOR ANCHOR EMBED  
& EDGE DISTANCE  
REQUIREMENTS, SEE  
"ANCHOR REQUIREMENTS  
TABLE" ON SHEET 1

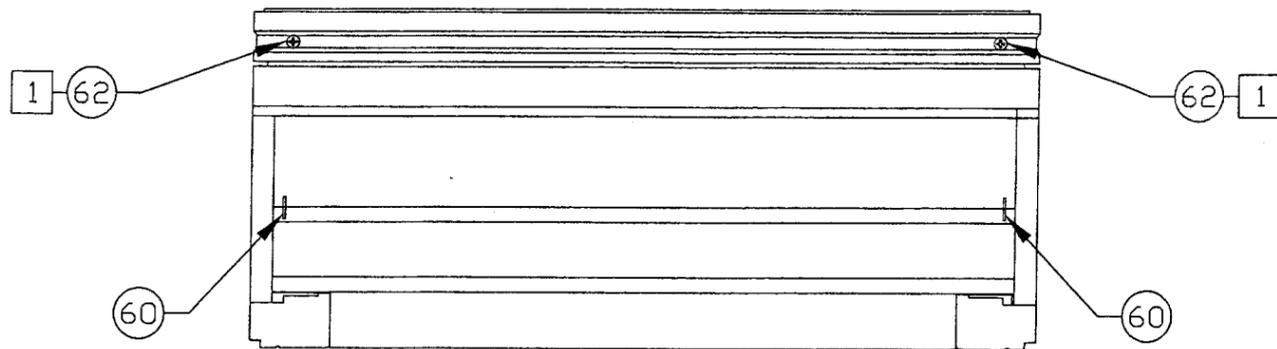
**PRODUCT REVIEWED**  
as complying with the Florida  
Building Code  
Acceptance No. 05-0815.09  
Expiration Date 08/15/08  
By *[Signature]*  
Miami Dade Product Control  
Division

 JAN 22 2006 WARREN W. SCHAEFER, P.E. STRUCTURAL ENGINEER P.E. No. 44185	WOOD PART DIP SPEC <input type="checkbox"/> DIP <input type="checkbox"/> AT MLDR. <input type="checkbox"/> NO DIP <input type="checkbox"/> IN PROD.		<b>MARVIN</b> RESEARCH AND DEVELOPMENT BOX 100, WARROAD, MN 56763 WINDOWS&DOORS. (218) 386-1430 FAX 386-1913	
	PRODUCT LINE: CLAD ULTIMATE DOUBLE-HUNG PRODUCT: CUDH HP			
ASSEMBLY HORIZONTAL CROSS SECTION				
MATERIAL: N/A		SIZE: B		DRAWING NO: 00013061
SCALE: NOTED		DATE: 6/8/99	DRAWN BY: BRAD BOE	SHEET: 3 OF 11

REV#	DESCRIPTION / REQUESTER	ECN NO	DATE	DRAFTER

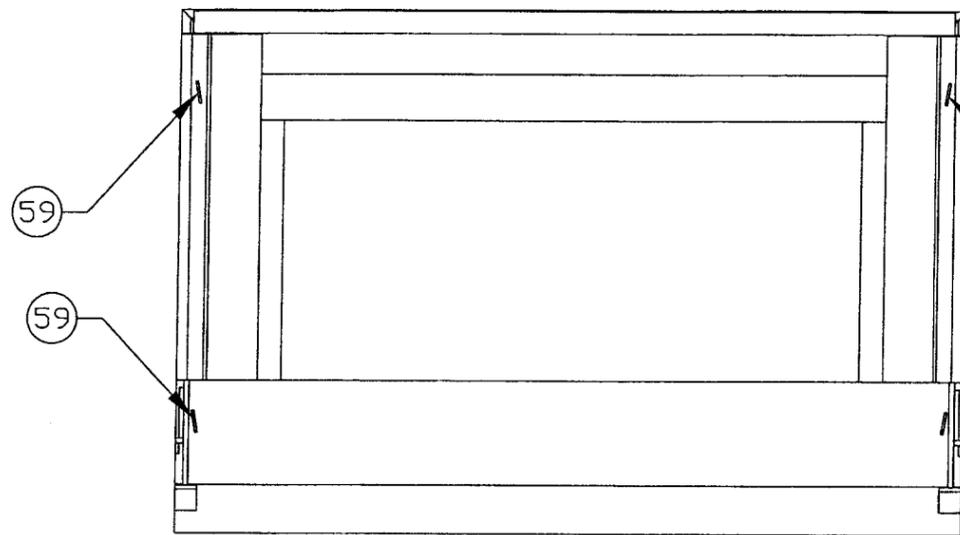
SEALANT INJECTION SCHEDULE

SYMBOL	QUAN. /TYPE SEALANT
1	8.0 GM. ±1 /7100
2	8.0 GM. ±1 /7100
3	8.0 GM. ±1 /7100



TOP VIEW

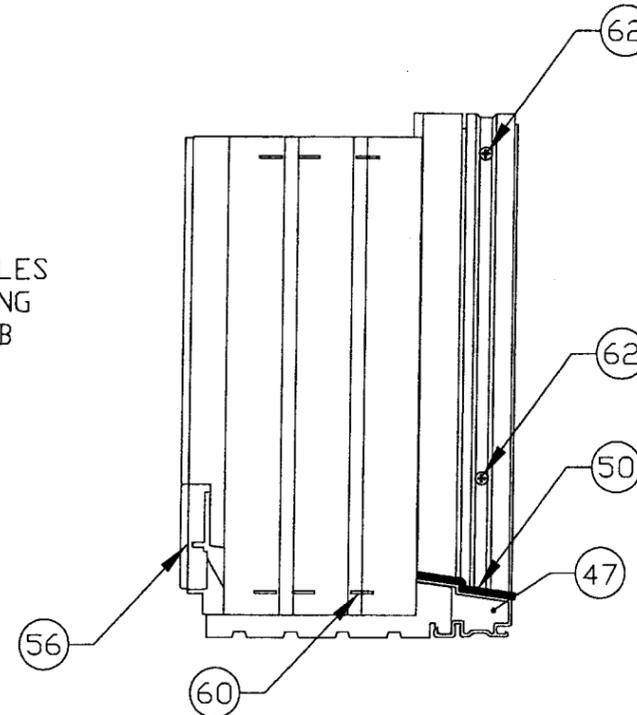
SCALE: 3/8 FULL SIZE



INTERIOR VIEW  
(FRAME ASSEMBLY)

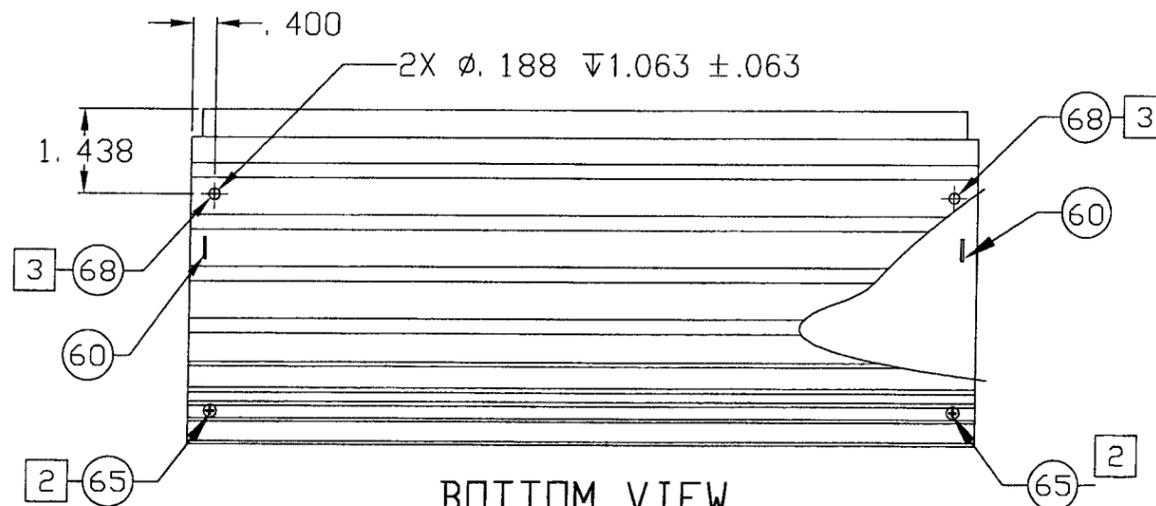
SCALE: 3/8 FULL SIZE

ROTATE STAPLES  
10° FROM LONG  
AXIS OF JAMB



RIGHT SIDE

SCALE: 3/8 FULL SIZE



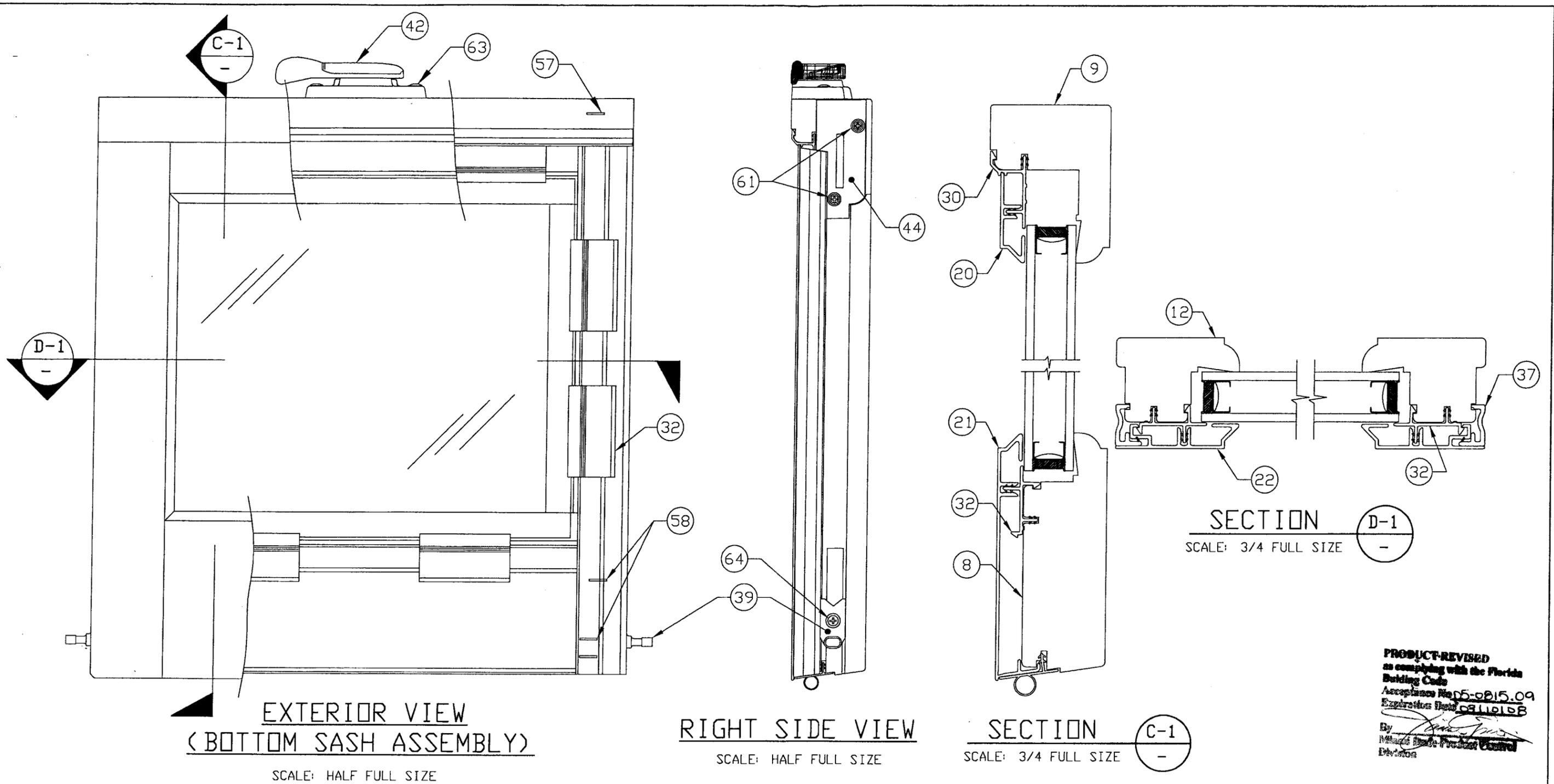
BOTTOM VIEW

SCALE: 3/8 FULL SIZE

**PRODUCT REVISED**  
as complying with the Florida  
Building Code  
Acceptance No 05-0815-09  
Expiration Date 03/18/08  
By: *[Signature]*  
Product Control  
Division

 JAN 22 2006 WARREN W. SCHAEFER, P.E. STRUCTURAL ENGINEER P.E. No. 44135	WOOD PART DIP SPEC <input type="checkbox"/> DIP <input type="checkbox"/> AT MLDR. <input type="checkbox"/> NO DIP <input type="checkbox"/> IN PROD.		<b>MARVIN</b> RESEARCH AND DEVELOPMENT BOX 100, WARROAD, MN 56763 WINDOWS&DOORS. (218) 386-1430 FAX 386-1913		
	PRODUCT LINE: CLAD ULTIMATE DOUBLE-HUNG PRODUCT: CUDH HP				
ASSEMBLY FRAME ASSEMBLY					
MATERIAL: NA		SIZE: B		DRAWING NO: 00013061	
SCALE: NOTED		DATE: 6/11/99		DRAWN BY: BRAD BOE	
				SHEET: 4 OF 11	

REV#	DESCRIPTION / REQUESTER	ECN NO	DATE	DRAFTER



**EXTERIOR VIEW  
(BOTTOM SASH ASSEMBLY)**

SCALE: HALF FULL SIZE

**RIGHT SIDE VIEW**

SCALE: HALF FULL SIZE

**SECTION C-1**

SCALE: 3/4 FULL SIZE

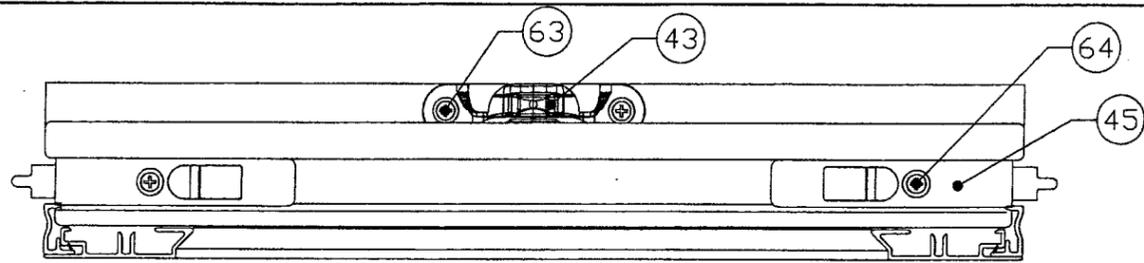
**SECTION D-1**  
SCALE: 3/4 FULL SIZE

**PRODUCT REVISED**  
as complying with the Florida  
Building Code  
Acceptance No. 05-0815.09  
Expiration Date: 09/10/08  
By: *[Signature]*  
Marvin Windows & Doors Product Control  
Division

REV#	DESCRIPTION / REQUESTER	ECN NO	DATE	DRAFTER

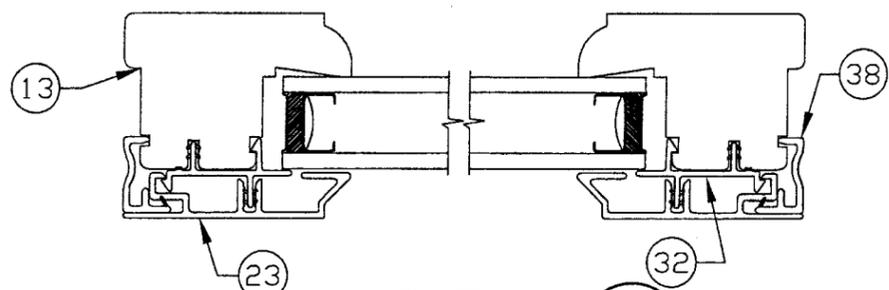
JAN 22 2006  
WARREN W. SCHAEFER, P.E.  
STRUCTURAL ENGINEER  
P.E. No. 44135  
**W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.**  
STRUCTURAL CONSULTING ENGINEERS  
8895 N. MILITARY TRAIL, SUITE C204  
PALM BEACH GARDENS, FL 33410  
PHONE: 561-775-4902

WOOD PART DIP SPEC <input type="checkbox"/> DIP <input type="checkbox"/> NO DIP		<b>MARVIN</b> RESEARCH AND DEVELOPMENT BOX 100, WARROAD, MN 56763 WINDOWS & DOORS (218) 386-1430 FAX 386-1913	
PRODUCT LINE: CLAD ULTIMATE DOUBLE HUNG PRODUCT: CUDH HP		ASSEMBLY BOTTOM SASH ASSEMBLY	
MATERIAL: NA	SIZE: B	DRAWING NO: 00013061	
SCALE: NOTED	DATE: 6/11/99	DRAWN BY: BRAD BOE	SHEET: 5 OF 11



**TOP VIEW**

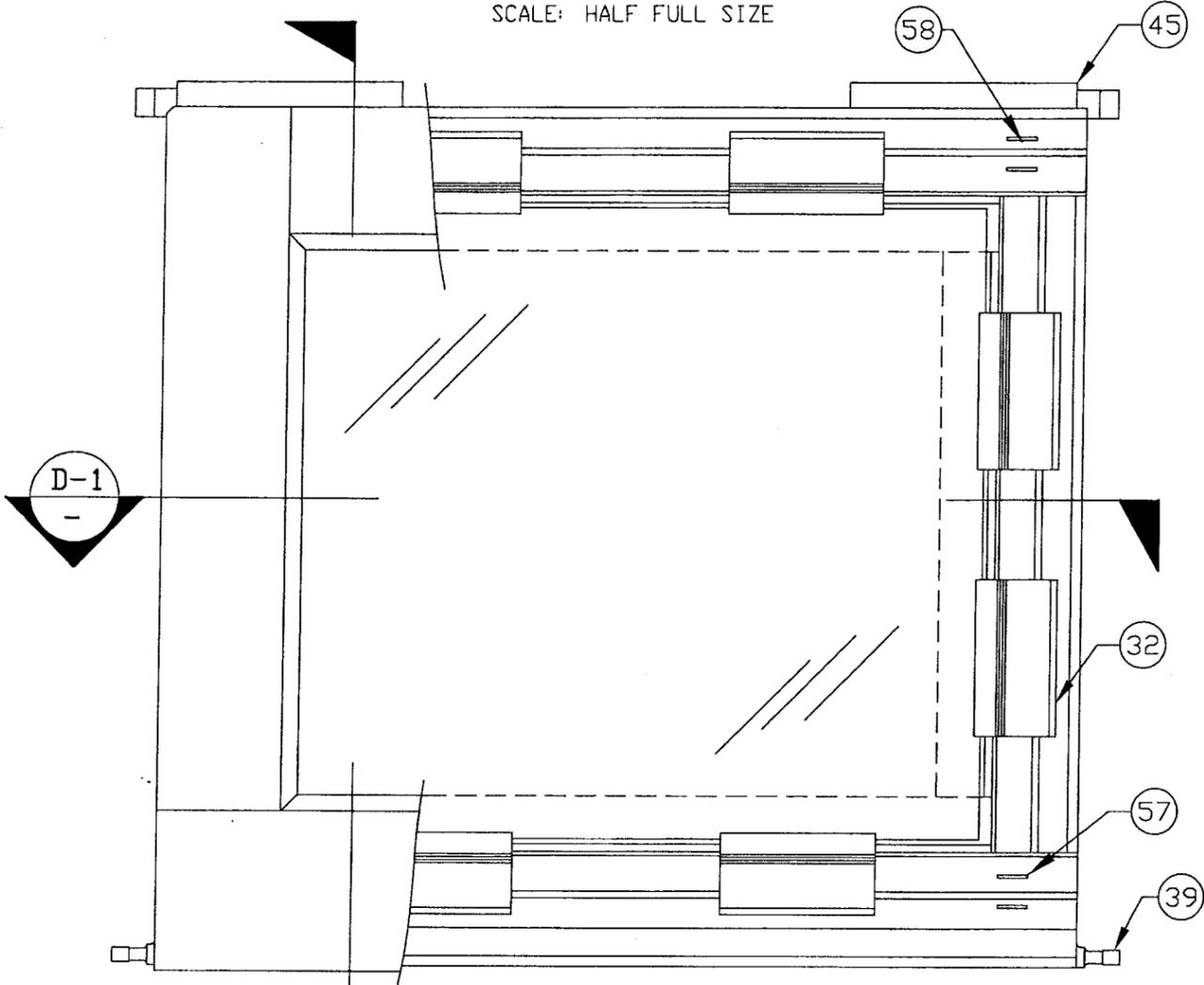
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**SECTION**

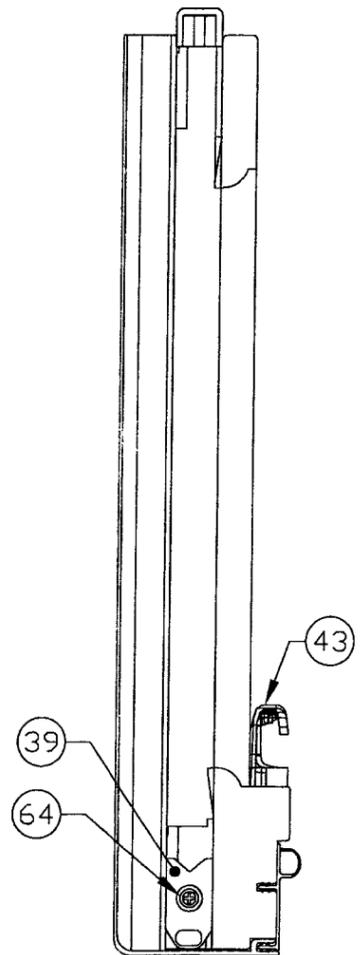
SCALE: 3/4 FULL SIZE

D-1  
-



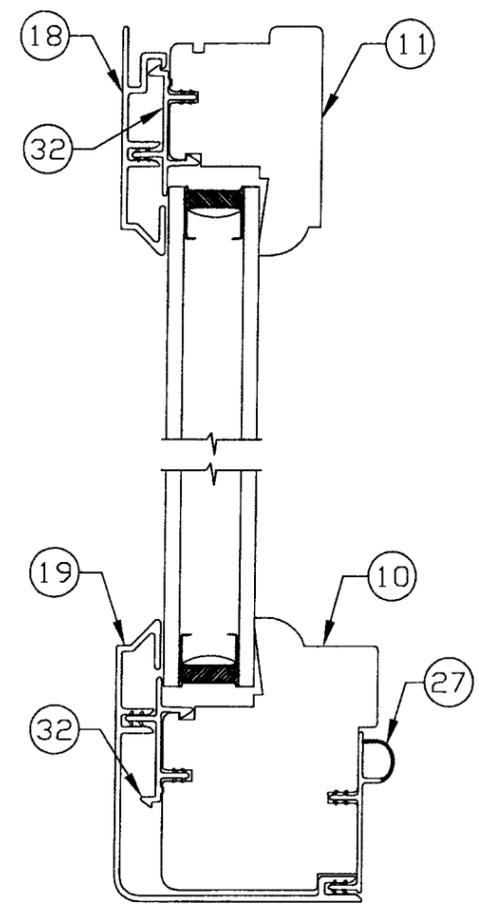
**EXTERIOR VIEW  
TOP SASH ASSEMBLY**

SCALE: HALF FULL SIZE



**RIGHT SIDE VIEW**

SCALE: HALF FULL SIZE



**SECTION**

SCALE: 3/4 FULL SIZE

E-1  
-

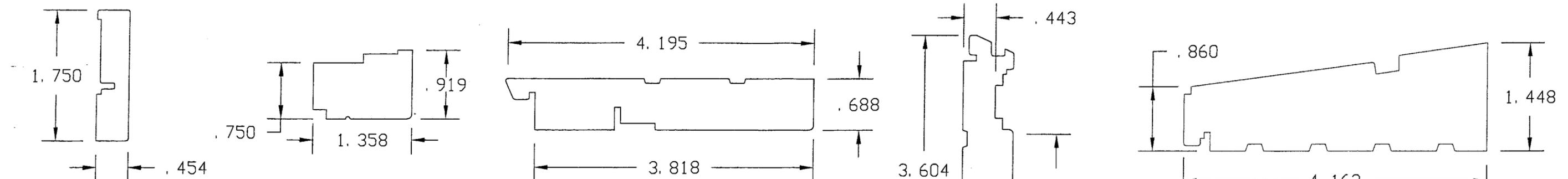
**PRODUCT REVIEWED**  
as complying with the Florida  
Building Code  
Acceptance No 05-0815-09  
Expiration Date 03/19/08  
By *[Signature]*  
Miami Dade Product Control  
Division

JAN 22 2006  
WARREN W. SCHAEFER, P.E.  
STRUCTURAL ENGINEER  
P.E. No. 44135

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WOOD PART DIP SPEC <input type="checkbox"/> DIP <input type="checkbox"/> NO DIP		<b>MARVIN</b> RESEARCH AND DEVELOPMENT BOX 100, WARROAD, MN 56763 WINDOWS&DOORS. (218) 386-1430 FAX 386-1913	
PRODUCT LINE: CLAD ULTIMATE DOUBLE HUNG		PRODUCT: CUDH HP	
ASSEMBLY TOP SASH ASSEMBLY			
MATERIAL: NA	SIZE: B	DRAWING NO: 00013061	
SCALE: NOTED	DATE: 6/11/99	DRAWN BY: BRAD BOE	SHEET: 6 OF 11

REV#	DESCRIPTION / REQUESTER	ECN NO	DATE	DRAFTER

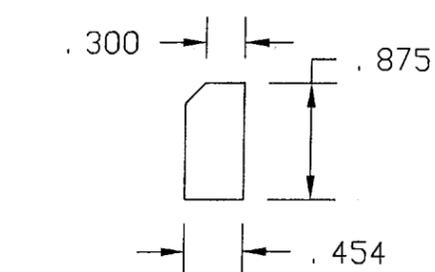


① **SILL LINER**  
SUGAR OR PONDEROSA PINE  
PINE, G=0.4

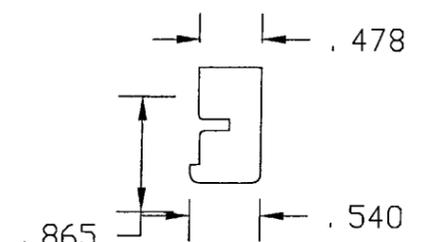
② **JAMB LINER**  
SUGAR OR PONDEROSA PINE  
PINE, G=0.4

③ **HEADJAMB**  
SUGAR OR PONDEROSA PINE  
PINE, G=0.4

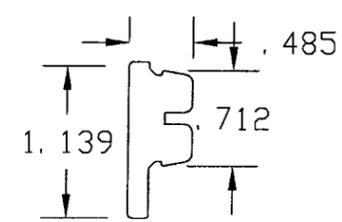
⑤ **SILL**  
SUGAR OR PONDEROSA PINE  
PINE, G=0.4



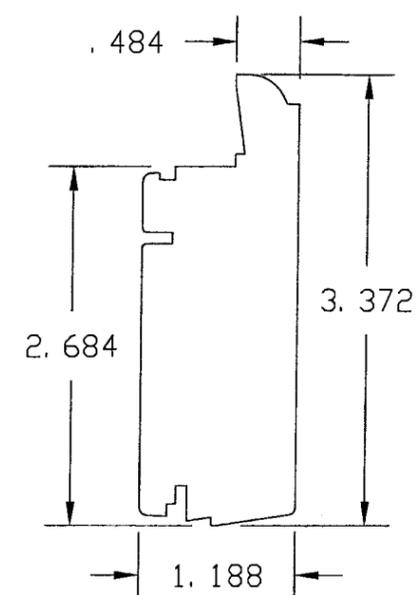
①A **SILL LINER EXTENSION**  
SUGAR OR PONDEROSA PINE  
PINE, G=0.4



⑥ **PARTING STOP**  
SUGAR OR PONDEROSA PINE  
PINE, G=0.4

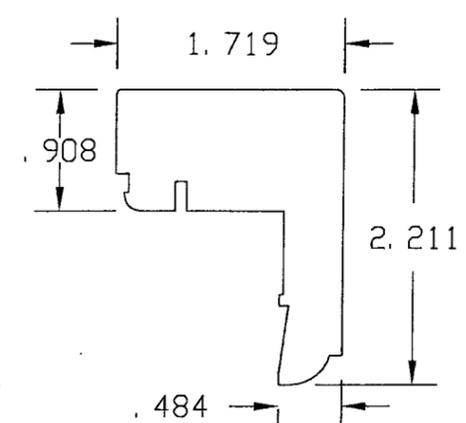


⑦ **JAMB FILLER**  
SUGAR OR PONDEROSA PINE  
PINE, G=0.4

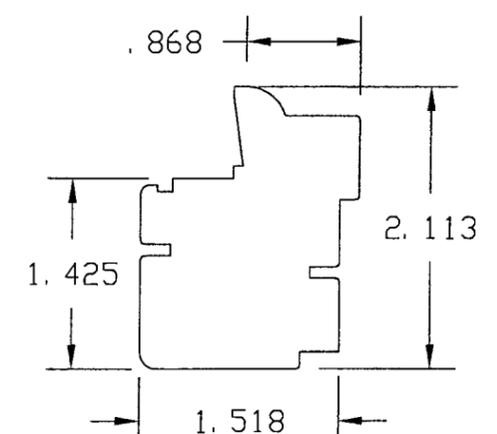


⑧ **BOTTOM RAIL**  
SUGAR OR PONDEROSA PINE  
PINE, G=0.4

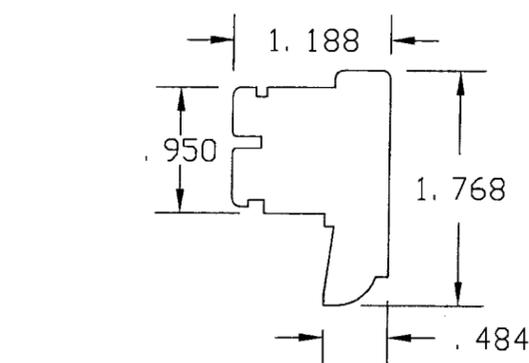
④ **SIDE JAMB**  
SUGAR OR PONDEROSA PINE  
PINE, G=0.4



⑨ **CHECKRAIL SECTION**  
SUGAR OR PONDEROSA PINE  
PINE, G=0.4



⑩ **CHECKRAIL SECTION**  
SUGAR OR PONDEROSA PINE  
PINE, G=0.4

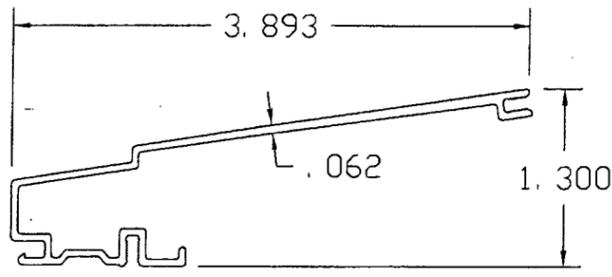


⑪⑫⑬ **TOP RAIL & STILES**  
SUGAR OR PONDEROSA PINE  
PINE, G=0.4

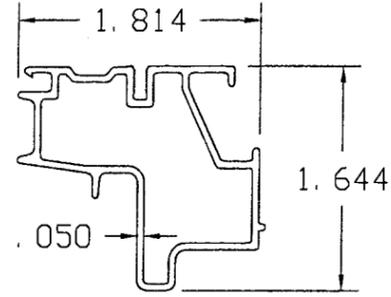
**PRODUCT REVISED**  
as complying with the Florida  
Building Code  
Acceptance No. 05-DB15-09  
Expiration Date 03/15/08  
By *[Signature]*  
Miami-Dade Product Control  
Division

 <b>JAN 22 2006</b> WARREN W. SCHAEFER, P.E. STRUCTURAL ENGINEER F.E. No. 44135	WOOD PART DIP SPEC <input type="checkbox"/> DIP <input type="checkbox"/> AT MLDR. <input type="checkbox"/> NO DIP <input type="checkbox"/> IN PROD.		<b>MARVIN</b> RESEARCH AND DEVELOPMENT BOX 100, WARROAD, MN 56763 WINDOWS&DOORS. (218) 386-1430 FAX 386-1913	
	PRODUCT LINE: CLAD ULTIMATE DOUBLE-HUNG PRODUCT: CUDH HP			
COMPONENT PROFILE WOOD PROFILES				
MATERIAL: N/A		SIZE: B	DRAWING NO: 00013061	
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. STRUCTURAL CONSULTING ENGINEERS 8895 N. MILITARY TRAIL, SUITE C204 PALM BEACH GARDENS, FL 33410 PHONE: 561-775-4902		SCALE: 3/4	DATE: 6/11/99	DRAWN BY: BRAD BOE
			SHEET: 7 OF 11	

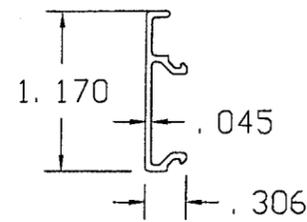
REV#	DESCRIPTION / REQUESTER	ECN NO	DATE	DRAFTER



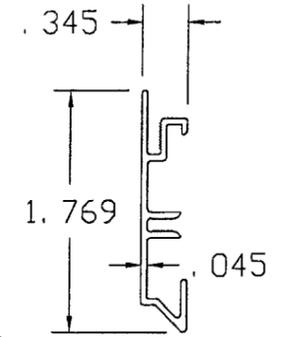
14) SILL CLADDING  
ALUMINUM (6063-T5)



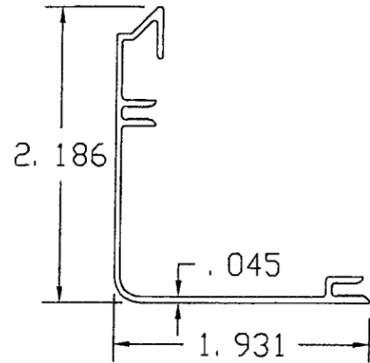
15) 16) HEAD & SIDE JAMB CLADDING  
ALUMINUM (6063-T5)



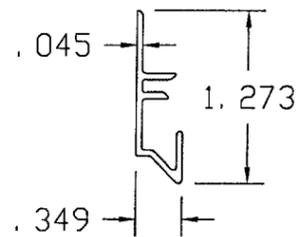
17) CLAD JAMB FILLER  
ALUMINUM (6063-T5)



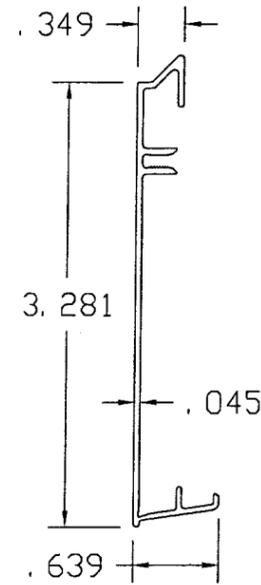
18) 22) 23) TOP RAIL & STILE CLADDING  
ALUMINUM (6063-T5)



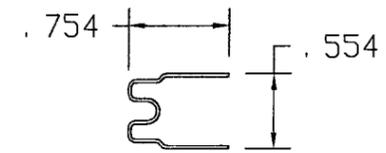
19) CHECK RAIL CLADDING  
ALUMINUM (6063-T5)



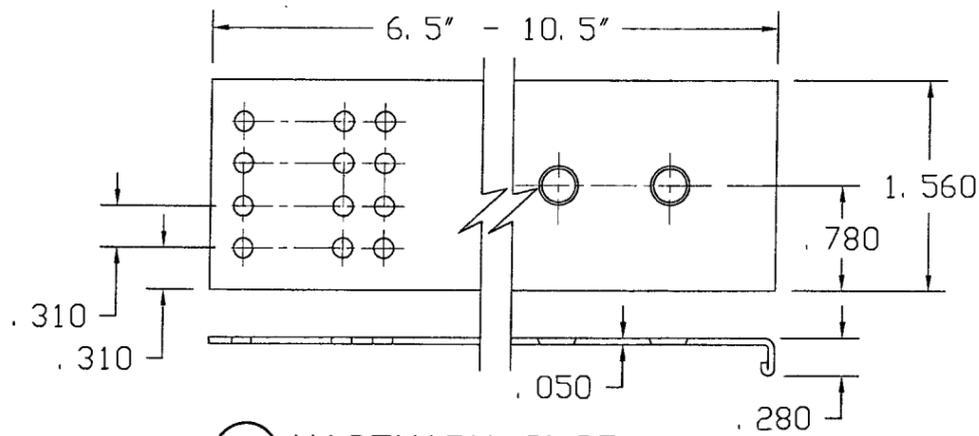
20) CHECK RAIL CLADDING  
ALUMINUM (6063-T5)



21) BOTTOM RAIL CLADDING  
ALUMINUM (6063-T5)



40) 41) BALANCE TUBE  
GALV STEEL OR ALUM (6063-T5)



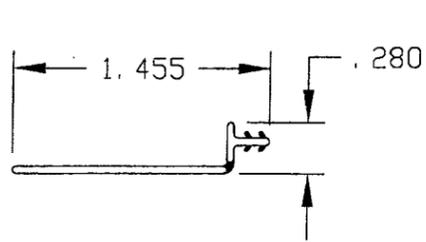
55) MASONRY CLIP  
GALVANIZED CARBON STEEL

**PRODUCT REVISED**  
as complying with the Florida  
Building Code  
Acceptance No. 05-0815-09  
Expiration Date 03/10/18  
By *[Signature]*  
Miami Dade Product Control  
Division

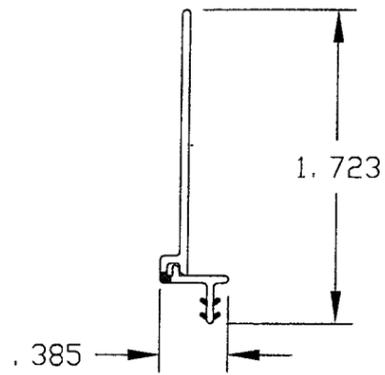
*[Signature]* JAN 22 2006  
WARREN W. SCHAEFER, P.E.  
STRUCTURAL ENGINEER  
P.E. No. 44135  
W. W. SCHAEFER ENGINEERING  
& CONSULTING, P.A.  
STRUCTURAL CONSULTING ENGINEERS  
8895 N. MILITARY TRAIL, SUITE C204  
PALM BEACH GARDENS, FL 33410  
PHONE: 561-775-4902

WOOD PART DIP SPEC <input type="checkbox"/> DIP <input type="checkbox"/> NO DIP		<b>MARVIN</b> RESEARCH AND DEVELOPMENT BOX 100, WARROAD, MN 56763 WINDOWS & DOORS. (218) 386-1430 FAX 386-1913	
PRODUCT LINE: CLAD ULTIMATE DOUBLE HUNG PRODUCT: CUDH HP			
COMPONENT PROFILE ALUMINUM & STEEL PROFILES			
MATERIAL: NOTED	SIZE: B	DRAWING NO: 00013061	
SCALE: 3/4	DATE: 6/15/99	DRAWN BY: BRAD BOE	SHEET: 8 OF 11

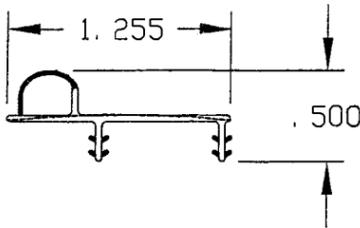
REV#	DESCRIPTION / REQUESTER	ECN NO	DATE	DRAFTER



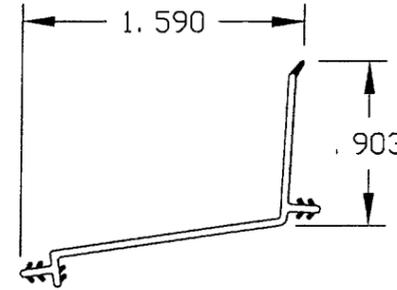
25 SILL NAILING FIN  
VINYL (PVC)



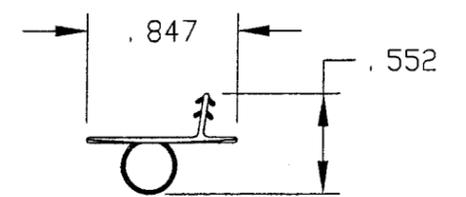
26 HINGED JAMB NAILING FIN  
VINYL (PVC)



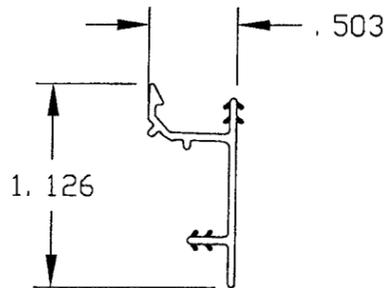
27 CHECK RAIL W. S.  
VINYL (PVC)



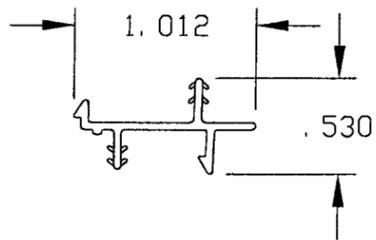
28 SILL COVER  
VINYL (PVC)



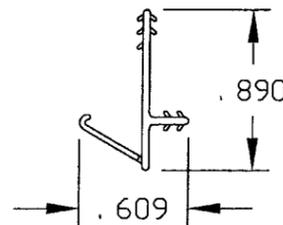
29 BOTTOM RAIL W. S.  
VINYL (PVC)



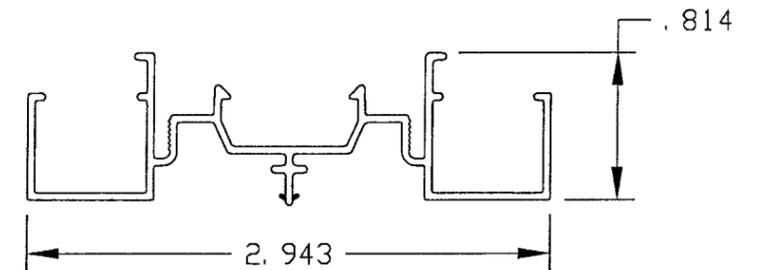
30 RAIL CLAD CONNECTOR  
VINYL (PVC)



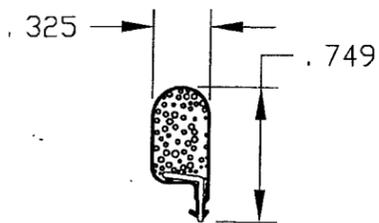
32 SASH CLADDING CLIP  
VINYL (PVC)



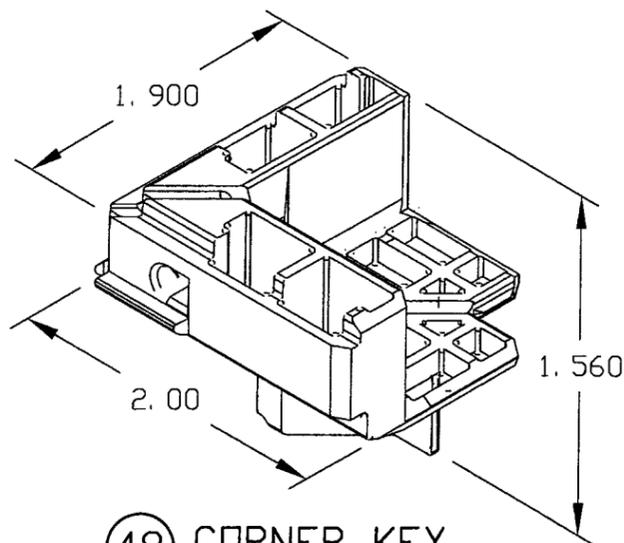
33 HEAD JAMB PARTING STOP W. S.  
VINYL (PVC)



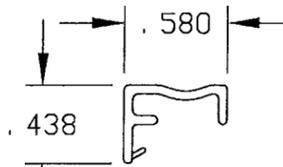
34 JAMB LINER  
VINYL (PVC)



35 36 FRAME W. S.  
VINYL (POLYPROPYLENE & URETHANE)



48 CORNER KEY  
33% GLASS FILL NYLON



37 38 SASH W. S. CONTACT STRIP  
VINYL (PVC)

W. S. = WEATHER STRIP

PRODUCT REVISION  
as complying with the Florida  
Building Code  
Acceptance No. 05-0815.09  
Expiration Date 03/15/08  
By: *[Signature]*  
Marvin Date Product Control  
Division

 WARREN W. SCHAEFER, P.E. STRUCTURAL ENGINEER P.E. No. 44135	WOOD PART DIP SPEC <input type="checkbox"/> DIP <input type="checkbox"/> NO DIP	<b>MARVIN</b> RESEARCH AND DEVELOPMENT BOX 100, WARROD, MN 56763 WINDOWS&DOORS. (218) 386-1430 FAX 386-1913
	PRODUCT LINE: CLAD ULTIMATE DOUBLE HUNG PRODUCT: CUDH HP	
COMPONENT PROFILE MISCELLANEOUS PROFILES		
MATERIAL:	SIZE: B DRAWING NO: 00013061	
SCALE: 1:1	DATE: 6/15/99	DRAWN BY: BRAD BOE SHEET: 9 OF 11

REV#	DESCRIPTION / REQUESTER	ECN NO	DATE	DRAFTER

DESIGN LOAD CAPACITY-PSF					
WINDOW DIMENSIONS		INSULATED GLASS PER DRAWINGS			
HEIGHT	WIDTH	POSITIVE "A"	POSITIVE "B"	NEGATIVE	
32.38"	21.38"	66.7	102	102	
36.38"		66.7	92	92	
40.38"		66.7	83	83	
44.38"		66.7	79	79	
48.38"		66.7	79	79	
52.38"		66.7	79	79	
56.38"		66.7	79	79	
60.38"		66.7	79	79	
64.38"		66.7	79	79	
68.38"		66.7	79	79	
72.38"		66.7	73	73	
76.38"		63.0	63	63	
32.38"		25.38"	66.7	102	102
36.38"			66.7	92	92
40.38"	66.7		83	83	
44.38"	66.7		76	76	
48.38"	66.7		70	70	
52.38"	66.0		66	66	
56.38"	66.0		66	66	
60.38"	66.0		66	66	
64.38"	66.0		66	66	
68.38"	66.0		66	66	
72.38"	63.0		63	63	
76.38"	54.0		54	54	
32.38"	29.38"		66.7	94	94
36.38"			66.7	88	88
40.38"		66.7	83	83	
44.38"		66.7	76	76	
48.38"		66.7	70	70	
52.38"		64.0	64	64	
56.38"		60.0	60	60	
60.38"		57.0	57	57	
64.38"		57.0	57	57	
68.38"		57.0	57	57	
72.38"		57.0	57	57	
76.38"		49.0	49	49	
32.38"		31.38"	66.7	86	86
36.38"			66.7	79	79
40.38"	66.7		74	74	
44.38"	66.7		71	71	
48.38"	66.7		69	69	
52.38"	66.7		64	64	
56.38"	66.0		60	60	
60.38"	66.0		56	56	
64.38"	64.0		54	54	
68.38"	60.0		54	54	
72.38"	57.0		54	54	
76.38"	54.0		48	48	

DESIGN LOAD CAPACITY-PSF					
WINDOW DIMENSIONS		INSULATED GLASS PER DRAWINGS			
HEIGHT	WIDTH	POSITIVE "A"	POSITIVE "B"	NEGATIVE	
32.38"	33.38"	66.7	78	78	
36.38"		66.7	72	72	
40.38"		66.7	67	67	
44.38"		64.0	64	64	
48.38"		61.0	61	61	
52.38"		60.0	60	60	
56.38"		58.0	58	58	
60.38"		58.0	56	56	
64.38"		57.0	52	52	
68.38"		56.0	50	50	
72.38"		53.0	50	50	
76.38"		50.0	46	46	
32.38"		35.38"	66.7	72	72
36.38"			66.0	66	66
40.38"	62.0		62	62	
44.38"	58.0		58	58	
48.38"	56.0		56	56	
52.38"	54.0		54	54	
56.38"	5.0		52	52	
60.38"	51.0		51	51	
64.38"	51.0		51	51	
68.38"	51.0		49	49	
72.38"	50.0		48	48	
76.38"	48.0		46	46	
32.38"	37.38"		66.7	67	67
36.38"			61.0	61	61
40.38"		57.0	57	57	
44.38"		53.0	53	53	
48.38"		51.0	51	51	
52.38"		49.0	49	49	
56.38"		47.0	47	47	
60.38"		46.0	46	46	
64.38"		46.0	46	46	
68.38"		45.0	45	45	
72.38"		45.0	45	45	
76.38"		45.0	45	45	

WIDTH = OUTSIDE MEASUREMENT OF FRAME (OSM)  
HEIGHT = OUTSIDE MEASUREMENT OF FRAME (OSM)  
POSITIVE "A" = ALLOWABLE POSITIVE PRESSURE AS CONTROLLED BY WATER INFILTRATION OR WIND PRESSURE  
POSITIVE "B" = ALLOWABLE POSITIVE PRESSURE AS CONTROLLED BY WIND PRESSURE ONLY  
NEGATIVE = ALLOWABLE NEGATIVE PRESSURE.

NOTE: ALL RESULTING PRESSURES ARE AS CONTROLLED BY WORSE CASE CONSIDERING, FRAME STRESS & DEFLECTIONS, GLASS LOAD CAPACITY, CHECK RAIL END REACTION & FASTENER CAPACITIES.

TESTED WINDOW				
SIZE		TESTED DESIGN	TESTED WATER	TEST REPORT
WIDTH	HEIGHT	PRESSURE	PRESSURE	NUMBER
37.38"	76.38"	+/- 45 PSF	+66.7 PSF	2364

← TESTED UNIT

**PRODUCT REVIEW**  
as complying with the Florida Building Code  
Acceptance No. 05-0815.09  
Expiration Date 03/10/08  
By: *[Signature]*  
Miami Dade Product Control Division

  
**JAN 22 2006**  
**WARREN W. SCHAEFER, P.E.**  
 STRUCTURAL ENGINEER  
 P.E. No. 44135  
**W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.**  
 STRUCTURAL CONSULTING ENGINEERS  
 8895 N. MILITARY TRAIL, SUITE C204  
 PALM BEACH GARDENS, FL 33410  
 PHONE: 561-775-4902

WOOD PART DIP SPEC		 RESEARCH AND DEVELOPMENT BOX 100, WARROAD, MN 56763 WINDOWS & DOORS. (218) 386-1430 FAX 386-1913		
<input type="checkbox"/> DIP <input checked="" type="checkbox"/> NO DIP				
PRODUCT LINE: CLAD ULTIMATE DOUBLE HUNG				
PRODUCT: CUDH HP				
COMPONENT PROFILE DESIGN LOAD CAPACITY TABLE				
MATERIAL:		SIZE: B	DRAWING NO: 00013061	
SCALE: N/A	DATE: 6/15/99	DRAWN BY: BRAD BOE		SHEET: 10 OF 11

REV#	DESCRIPTION / REQUESTER	ECN NO	DATE	DRAFTER

## MATERIAL LIST

PART NO.	REFERENCE NO.	DESCRIPTION	NOTES
<b>PARTS &amp; EXTRUSIONS</b>			
1	00011803	WOOD SILL LINER	
1A	00013856	WOOD SILL LINER EXTENSION	
2	00011796	WOOD JAMB LINER	
3	00012269	WOOD HEAD JAMB	
4	00012262	WOOD SIDE JAMB	
5	00011801	WOOD SILL	
6	00011805	WOOD HEAD JAMB PARTING STOP	
7	00012343	WOOD JAMB FILLER	
8	00011754	WOOD BOTTOM RAIL	FOR BOTTOM WINDOW
9	00011752	WOOD CHECK RAIL SECTION	FOR BOTTOM WINDOW
10	00011751	WOOD CHECK RAIL SECTION	FOR TOP WINDOW
11	00011742	WOOD TOP RAIL	FOR TOP WINDOW
12	00011755	WOOD STILE	FOR BOTTOM WINDOW
13	00011758	WOOD STILE	FOR TOP WINDOW
14	00011810	SILL CLADDING	
15	00012378	HEAD JAMB CLADDING	
16	00012349	SIDE JAMB CLADDING	
17	00012530	CLAD JAMB FILLER	
18	00012163	TOP RAIL CLADDING	FOR TOP WINDOW
19	00012167	CHECK RAIL CLADDING	FOR TOP WINDOW
20	00011830	CHECK RAIL CLADDING	FOR BOTTOM WINDOW
21	0002166	BOTTOM RAIL CLADDING	FOR BOTTOM WINDOW
22	00012164	STILE CLADDING	FOR BOTTOM WINDOW
23	00012165	STILE CLADDING	FOR TOP WINDOW
24	00005346	NAILING FIN DRIP CAP	NOT SHOWN ON DRAWINGS
25	00005284	SILL NAILING FIN	
26	00005301	JAMB NAILING FIN	
27	00011849	CHECK RAIL W/S	
28	00011813	SILL COVER	
29	00011848	BOTTOM RAIL W/S	FOR BOTTOM WINDOW
30	00011811	TOP RAIL CLAD CONNECTOR	FOR BOTTOM WINDOW
31	00012323	VINYL SASH STOP	NOT SHOWN ON DRAWINGS
32	00012117	SASH CLADDING CLIP	
33	00012531	HEAD JAMB PARTING STOP W/S	
34	00012310	JAMB LINER	
35	00011879	FRAME W/S	FOR TOP WINDOW
36	00011879	FRAME W/S	FOR BOTTOM WINDOW
37	00011918	SASH W/S CONTACT STRIP	FOR BOTTOM WINDOW
38	00011918	SASH W/S CONTACT STRIP	FOR TOP WINDOW

### ALTERNATE WOOD SPECIES FOR ALL WOOD MEMBERS

1. MAHOGANY
2. OAK
3. CHERRY
4. CYPRESS
5. DOUGLAS FIR

**PRODUCT REVIEW**  
 in compliance with the Florida  
 Building Code  
 Acceptance No. 05-0815-09  
 Expiration Date: 3/1/16  
 By: *[Signature]*  
 Miami-Dade Product Control  
 Division

*JAN 22 2006*  
**WARREN W. SCHAEFER, P.E.**  
 STRUCTURAL ENGINEER  
 P.E. No. 44135

**W. W. SCHAEFER ENGINEERING  
& CONSULTING, P.A.**  
 STRUCTURAL CONSULTING ENGINEERS  
 8895 N. MILITARY TRAIL, SUITE C204  
 PALM BEACH GARDENS, FL 33410  
 PHONE: 561-775-4902

## MATERIAL LIST

PART NO.	REFERENCE NO.	DESCRIPTION	NOTES
<b>PURCHASED PARTS</b>			
39	00011844	CLUTCH PIVOT PIN	ZINC DIECAST BY MIDWEST MOULDING
40	00012309	BALANCE TUBE	ALUMINUM OR STEEL BY AMESBURY
41	00012309	BALANCE TUBE	ALUMINUM OR STEEL BY AMESBURY
42	00012532	LOCK ASSEMBLY	ZINC DIECAST BY TRUTH HARDWARE
43	00012533	KEEPER ASSEMBLY	ZINC DIECAST BY TRUTH HARDWARE
44	00012534	ENDPLATE ASSEMBLY	33% GLASS FILLED NYLON BY MIDWEST MOULDING
45	00012535	TILT LATCH ASSEMBLY	33% GLASS FILLED NYLON BY MIDWEST MOULDING
46	00012421	OPERATION CHORD	POLYESTER BY CORDMASTER
47	00012069	SILL END PLUG	33% GLASS FILLED NYLON BY MIDWEST MOULDING
48	00012434	CORNER KEY	33% GLASS FILLED NYLON BY MIDWEST MOULDING
49	00012433	JAMB END PLUG	33% GLASS FILLED NYLON BY MIDWEST MOULDING
50	00012407	SILL TO JAMB GASKET	PVC FOAM BY CLIMATECH
51	00003521	GLASS SETTING BLOCK	SANTOPRENE BY GENERAL WINDOW PRODUCTS
52	00012513	FOAM HARDWARE GASKET	PVC FOAM BY CLIMATECH
53	-	.375 FOAM BAKER ROD @ HEAD JAMB	CLOSED CELL FOAM BY NAMETECH
54	00012655	SHIPPING CLIP	
55	11860012	MASONRY CLIP	GALVANIZED STEEL BY WABANICA
56	00012834	SILL LINER PLUG	
<b>FASTENERS</b>			
57	11820078	GSN18x7/8" STAPLE	AS SHOWN ON DRAWING
58	11820100	GSN18x1" STAPLE	AS SHOWN ON DRAWING
59	11820086	GSN18x1 1/2" STAPLE	FRAME JAMB & SILL LINER; 3" FROM ENDS & 5" O.C.
60	11820120	GSN18x2" STAPLE	FRAME CORNERS; 3 @ SIDES 1 @ HEAD & SILL
61	11800510	#6-20x5/8" F.H. SMS SCREW	2 PER END PLATE ASSEMBLY @ BOTTOM WINDOW
62	FAST-530	#7-19x5/8" F.H. S.S. SMS SCREW	1 EACH END OF FRAME CLADDING TYP. @ ALL SIDES
63	00003205	#7-19x7/8" F.H. S.T. SMS SCREW	2 PER LOCK & KEEPER ASSEMBLY
64	00013166	#7-19x1 1/4" P.H. SMS SCREW	2 PER CLUTCH PIVOT PIN @ TOP & BOTTOM WINDOWS
65	FAST-0545	#8-15x1 1/2" F.H. S.S. SMS SCREW	1 EA. END OF SILL CLADDING
<b>SEALANTS</b>			
67	-	DOW 345 SILICONE	BY DOW CORNING
68	-	SM 7100 URETHANE	BY SCHNEE MOREHEAD, INC.; INJECTED INTO FRAME CORNERS
69	-	.040 x 3/8 GLAZING TAPE	BY ARLON MFG.

WOOD PART DIP SPEC

DIP     AT MLDR.  
 NO DIP     IN PROD.

**MARVIN** RESEARCH AND DEVELOPMENT  
 BOX 100, WARROAD, MN 56763  
 WINDOWS&DOORS. (218) 386-1430 FAX 386-1913

PRODUCT LINE: CLAD ULTIMATE DOUBLE-HUNG  
 PRODUCT: CUDH HP

CHART  
 BILL OF MATERIALS

MATERIAL:  
N/A

SIZE:  
B

DRAWING NO: 00013061

SCALE: DATE:  
N/A 11/20/98

DRAWN BY:  
J HAPKA

SHEET:  
11 OF 11

REV#	DESCRIPTION / REQUESTER	ECN NO	DATE	DRAFTER
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