



MIAMI-DADE COUNTY, FLORIDA
 METRO-DADE FLAGLER BUILDING
 140 WEST FLAGLER STREET, SUITE 1603
 MIAMI, FLORIDA 33130-1563
 (305) 375-2901 FAX (305) 372-6339
www.miamidade.gov/buildingcode

BUILDING CODE COMPLIANCE OFFICE (BCCO)
 PRODUCT CONTROL DIVISION
NOTICE OF ACCEPTANCE (NOA)

Marvin Windows & Doors
Highway 11 West
P.O. Box 100
Warroad, MN 56763-0100

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 "StormPlus IZ 4 Casemaster" Wood Awning Window – L.M.I.

APPROVAL DOCUMENT: Drawing No. 1552, titled "Wood Casemaster Awning StormPlus IZ 4", sheets 1 through 5 of 5, dated 11/20/07, prepared by W. W. Schaefer Engineering & Consulting, P.A., signed & sealed by Warren W. Schaefer, P.E., bearing the Miami-Dade County Product Control Approval stamp with the Notice of Acceptance number and approval date by the Miami-Dade County Product Control Division.

MISSILE IMPACT RATING: Large and Small Missile Impact Resistant

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.

REVISION 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 consists of this page 1 and evidence page E-1, as well as approval document mentioned above. The submitted documentation was reviewed by **Manuel Perez, P.E.**



NOA No. 08-0310.12
 Expiration Date: June 19, 2013
 Approval Date: June 19, 2008
 Page 1

Marvin Windows & Doors

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS

1. Manufacturer's die drawings and sections.
2. Drawing No. **1552**, titled "Wood Casemaster Awning StormPlus IZ 4", sheets 1 through 5 of 5, dated 11/20/07, prepared by W. W. Schaefer Engineering & Consulting, P.A., signed & 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 202-94
 - 3) Water Resistance Test, per FBC, TAS 202-94
 - 4) Large Missile Impact Test per FBC, TAS 201-94
 - 5) Cyclic Wind Pressure Loading per FBC, TAS 203-94
 - 6) Forced Entry Test, per FBC 2411 3.2.1 (b) and TAS 202-94

Along with marked-up drawings and installation diagram of wood awning windows, prepared by Architectural Testing, Inc., Test Report No. **ATI 77677.01-201-18**, dated 12/18/2007, signed and sealed by Joseph A. Reed, P.E.

C. CALCULATIONS

1. Anchor verification calculations and structural analysis, complying with FBC-2004, prepared by W. W. Schaefer Engineering & Consulting, P.A., dated February 14, 2008, signed & sealed by Warren W. Schaefer, P.E.
Complies with ASTM E1300-02

D. QUALITY ASSURANCE

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

E. MATERIAL CERTIFICATIONS

1. Notice of Acceptance No. **07-1116.04** issued to E.I. DuPont DeNemours & Co., Inc. for their "**DuPont SentryGlas® Plus**" dated 01/03/08, expiring on 01/14/12.

F. STATEMENTS

1. Statement letter of conformance and no financial interest, prepared by W. W. Schaefer Engineering & Consulting, P.A., dated April 02, 2008, signed & sealed by Warren W. Schaefer, P.E.
2. Laboratory compliance letter for Test Report No. **ATI 77677.01-201-18** issued by Architectural Testing, Inc., dated 02/19/2008, signed and sealed by Joseph A. Reed, P.E.

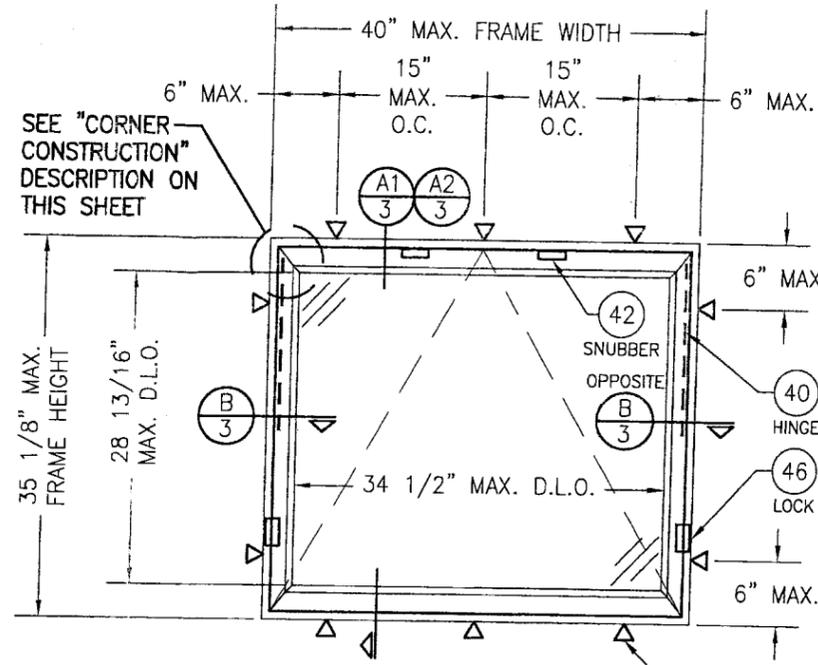
G. OTHERS

1. None


Manuel Perez, P.E.
Product Control Examiner
NOA No. 08-0310.12
Expiration Date: June 19, 2013
Approval Date: June 19, 2008

GENERAL NOTES:

1. THESE WINDOW SYSTEMS HAVE BEEN TESTED, ANALYZED & APPROVED FOR DESIGN PRESSURES NOT TO EXCEED THOSE SHOWN IN THE "ALLOWABLE DESIGN PRESSURE TABLE(S)".
2. OPENINGS, BUCKING & BUCKING FASTENERS MUST BE PROPERLY DESIGNED & INSTALLED TO TRANSFER WIND LOADS TO THE STRUCTURE.
3. ALL HARDWARE & FASTENERS SHALL BE IN ACCORDANCE WITH THESE DRAWINGS & SHALL NOT VARY UNLESS SPECIFICALLY MENTIONED ON THE DRAWINGS. SPECIFIED ANCHOR EMBED TO BASE MATERIAL SHALL BE BEYOND WALL FINISH OR STUCCO.
4. THE DETAILS & SPECIFICATIONS SHOWN HEREIN REPRESENT THE PRODUCTS TESTED & PROPOSED FOR WATER, AIR, IMPACT, CYCLIC & UNIFORM STATIC AIR PRESSURE TESTING IN CONFORMANCE WITH THE FLORIDA BUILDING CODE PROTOCOLS TAS-201, 202 & 203 FOR LARGE MISSILE IMPACT WINDOWS.
5. THESE WINDOW SYSTEMS HAVE BEEN DESIGNED IN ACCORDANCE WITH AND MEET THE REQUIREMENTS OF THE FLORIDA BUILDING CODE (FBC) INCLUDING HIGH VELOCITY HURRICANE ZONES (HVHZ).
6. IMPACT SHUTTERS ARE NOT REQUIRED WITH THESE WINDOWS.
7. ALL ANCHORS SECURING WINDOW FRAME TO PRESSURE TREATED BUCKS OR WOOD FRAMING SHALL BE CAPABLE OF RESISTING CORROSION CAUSED BY THE PRESSURE TREATING CHEMICALS IN THE WOOD.
8. DETERMINE THE POSITIVE & NEGATIVE DESIGN LOADS TO USE WHEN REFERENCING THESE DOCUMENTS IN ACCORDANCE WITH THE GOVERNING CODE AND GOVERNING WIND VELOCITY. FOR WIND LOAD CALCULATIONS IN ACCORDANCE WITH THE FLORIDA BUILDING CODE, A DIRECTIONALITY FACTOR OF $K_d = 0.85$ MAY BE APPLIED WHEN USED IN CONJUNCTION WITH LOAD COMBINATIONS SPECIFIED IN SECTION 2.0 OF THE ASCE 7 STANDARD.
9. NO INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE CERTIFICATION OF THIS PRODUCT. WIND LOAD DURATION FACTOR $C_d = 1.6$ WAS USED FOR WOOD SCREW ANALYSIS ONLY.
10. 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.



**EXTERIOR ELEVATION
SINGLE AWNING WINDOW**
SCALE: 3/4" = 1'-0"

FRAME SHEAR SCREW OR INSTALLATION CLIP WHERE SHOWN. SEE "FRAME ANCHOR REQUIREMENTS TABLE" ON THIS SHEET FOR SCREW REQUIREMENTS.

SNUBBER REQUIREMENTS TABLE

MAX. FRAME WIDTH	MIN. NO. OF SNUBBERS
40"	2
20"	1

**ALLOWABLE DESIGN PRESSURE
(SINGLE & MULLED WINDOWS)**

+70/-85 PSF

CORNER CONSTRUCTION

FRAME CORNERS: THE SIDE WOOD MEMBERS ARE BUTTED TO THE HEAD & SILL MEMBERS, SECURED WITH THREE(3) GS16 1/2" X 1 1/2" STAPLES THROUGH THE HEAD & SILL INTO THE JAMB & ONE(1) 14 GA. 1/2" X 2" STAPLE THROUGH THE JAMB INTO THE HEAD & SILL & SEALED WITH SEALANT.
SASH CORNERS: SASH MEMBERS ARE MORTISED & TENONED AND SECURED WITH TWO(2) 16 GA. X 1 3/8" BRAD NAILS.

FRAME ANCHOR REQUIREMENTS TABLE

OPENING TYPE (SUBSTRATE)	FRAME/CLIP TO OPENING FASTENER TYPE	MINIMUM EMBED	MINIMUM EDGE DIST.
FRAME SHEAR 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 SELF TAP/DRILLING SCREW	FULL	1/2"
MIN. 1/8" THK A36 STEEL	NO. 10 SELF TAP/DRILLING SCREW	FULL	1/2"
MIN. 1/8" THK 6063-T5 ALUM.	NO. 10 SELF TAP/DRILLING SCREW	FULL	1/2"
C-90 CMU/2500 PSI CONCRETE	(1) 1/4" CONCRETE SCREW	1 1/4"	2"
INSTALLATION CLIP SCREWS			
MIN. 2X4 WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55)	NO. 8 X 1 1/2" SMS	1 3/8"	1/2"
MIN. 1/8" THK A36 STEEL	NO. 8 SELF TAP/DRILLING SCREW	FULL	1/2"
MIN. 1/8" THK 6063-T5 ALUM.	NO. 8 SELF TAP/DRILLING SCREW	FULL	1/2"

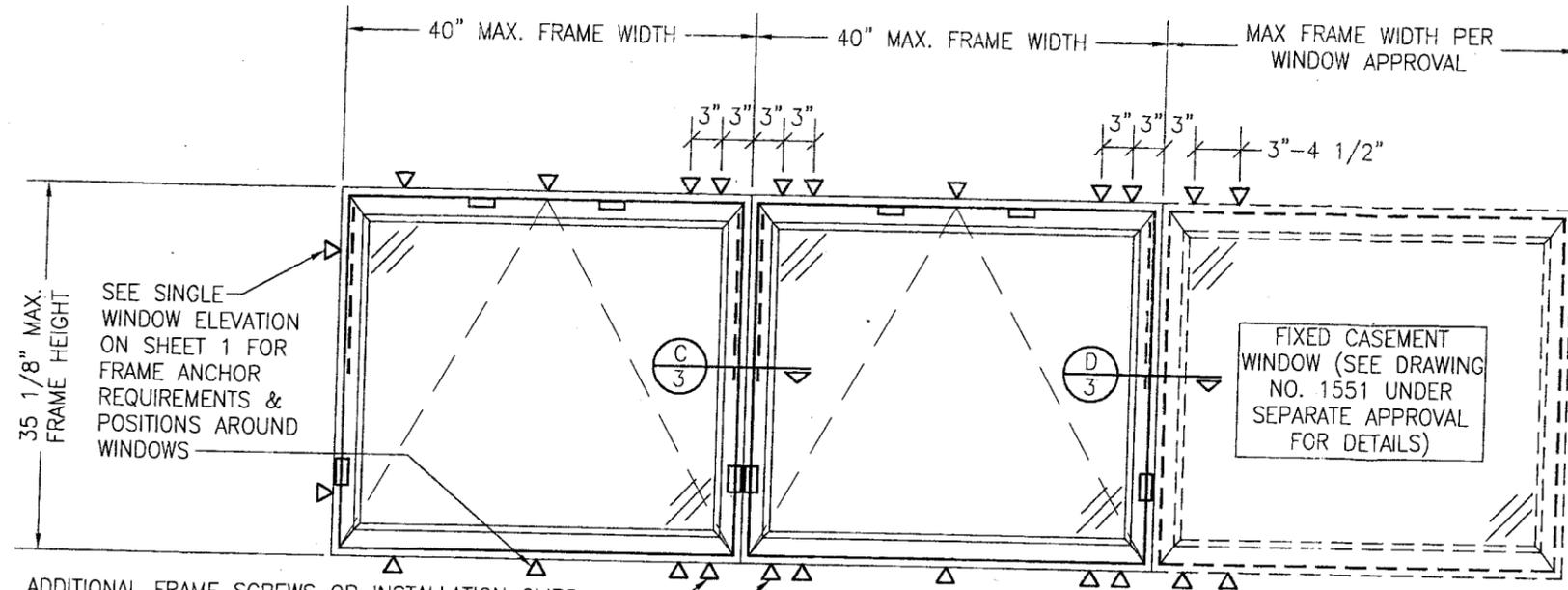
(1) CONCRETE SCREWS SHALL BE ELCO OR ITW RAMSET/RED HEAD TAPCONS, HILTI KWIK-CON II OR POWERS RAWL TAPPER (HARDENED STEEL OR S.S.).

Approved as complying with the
Florida Building Code
Date: **JUNE 19, 2008**
NOA# **08-0310.12**
Miami Dade Product Control
Division
By: *Manuel Pina*

DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1=16	DATE: 04/02/08
DATE	
BY	
REVISION DESCRIPTION	
NO.	

DRAWING TITLE WOOD CASEMASTER AWNING STORMPLUS IZ4	MANUFACTURER MARVIN WINDOWS & DOORS HIGHWAY 11; P.O. BOX 100 WARROAD, MN 56763 800-346-5044
	CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. 8895 N. MILITARY TRAIL, SUITE C-204 PALM BEACH GARDENS, FL 33410 PHONE: 561-775-4902 FAX: 561-775-4903

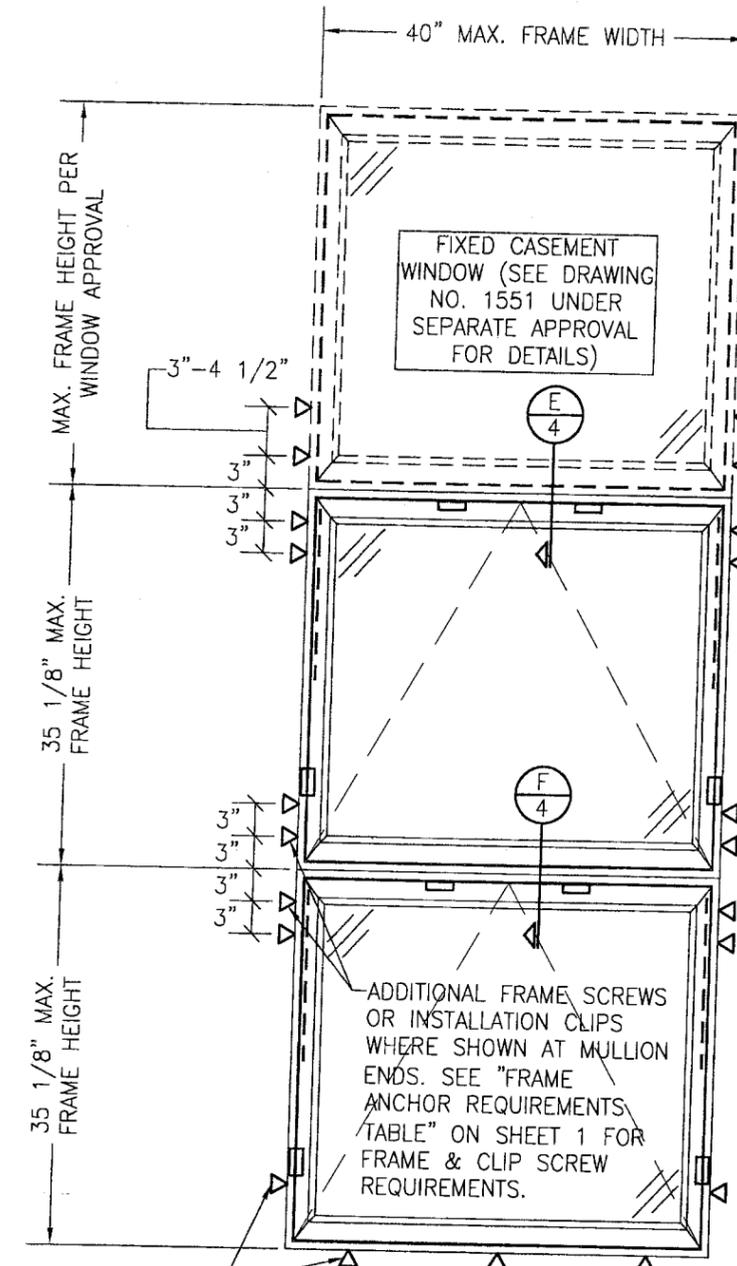
CERTIFICATION APR 2 2008	DRAWING NO. 1552	REV.
	SHEET NO. 1	OF 5
	WARREN W. SCHAEFER, P.E. P.E. NO. 44135	



SEE SINGLE WINDOW ELEVATION ON SHEET 1 FOR FRAME ANCHOR REQUIREMENTS & POSITIONS AROUND WINDOWS

ADDITIONAL FRAME SCREWS OR INSTALLATION CLIPS WHERE SHOWN AT MULLION ENDS. SEE "FRAME ANCHOR REQUIREMENTS TABLE" ON SHEET 1 FOR FRAME & CLIP SCREW REQUIREMENTS.

**EXTERIOR ELEVATION
MULTIPLE AWNING/FIXED WINDOW**
SCALE: 3/4" = 1'-0"



SEE SINGLE WINDOW ELEVATION ON SHEET 1 FOR FRAME ANCHOR REQUIREMENTS & POSITIONS AROUND WINDOWS

**EXTERIOR ELEVATION
MULTIPLE AWNING WITH TRANSOM**
SCALE: 3/4" = 1'-0"

MULTIPLE UNIT NOTES:

1. FOR ALL DETAIL NOT SHOWN, SEE SINGLE WINDOW ELEVATION.
2. 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.

Approved as complying with the Florida Building Code
Date JUNE 19, 2008
NOAH 08-0310.12
Miami Dade Product Control Division
By *Warren W. Schaefer*

DRAWN BY: W.R.N. CHECKED BY: W.W.S.
PLOT: 1=16 DATE: 04/02/08

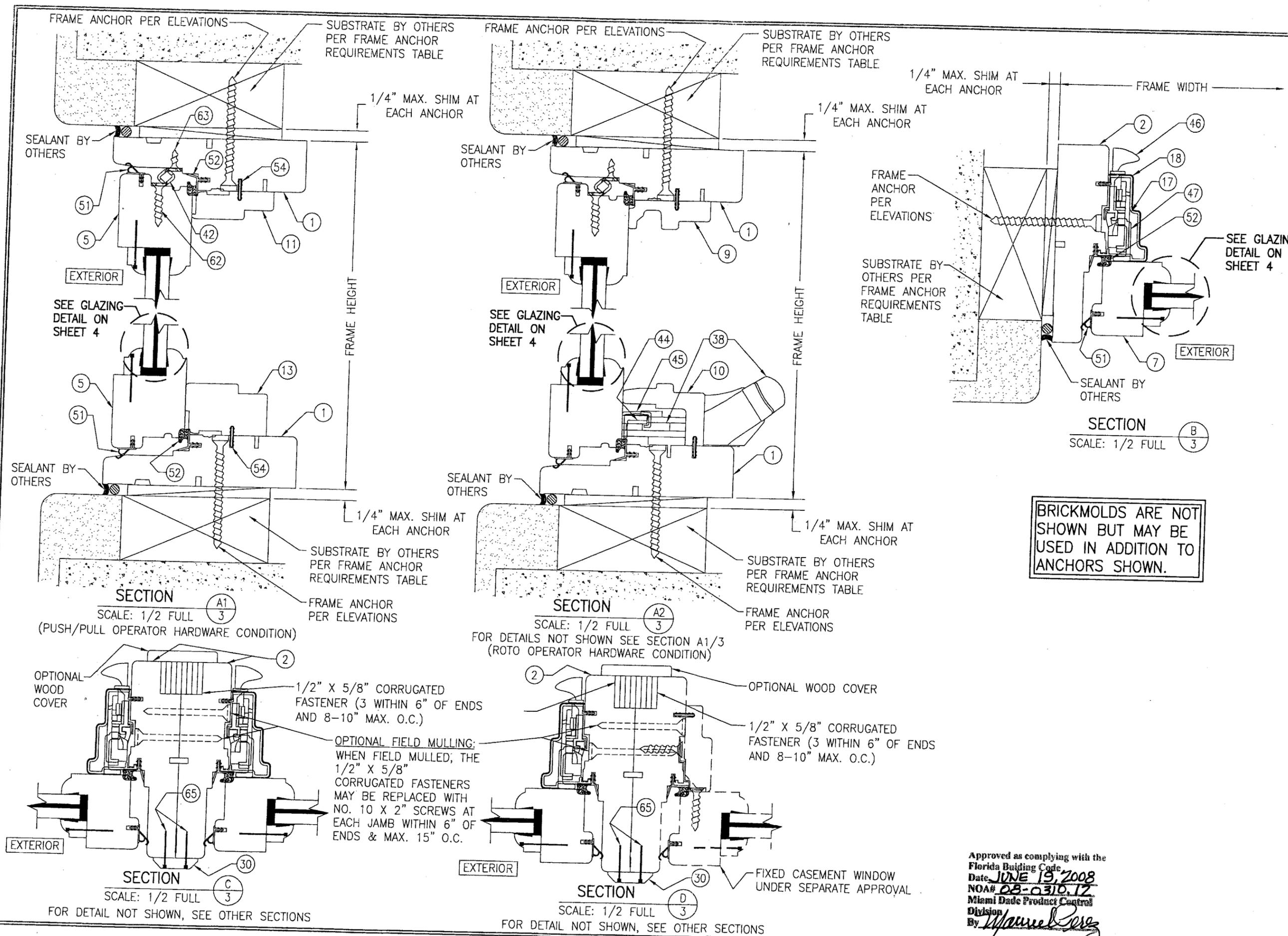
NO.	REVISION DESCRIPTION	BY	DATE

DRAWING TITLE: **WOOD CASEMASTER AWNING STORMPLUS IZ4**

CONSULTANTS: **W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.**
8895 N. MILITARY TRAIL, SUITE C-204
PALM BEACH GARDENS, FL 33410
PHONE: 561-775-4902 FAX: 561-775-4903

MANUFACTURER: **MARVIN WINDOWS & DOORS**
HIGHWAY 11, P.O. BOX 100
WARROAD, MN 56763
800-346-5044

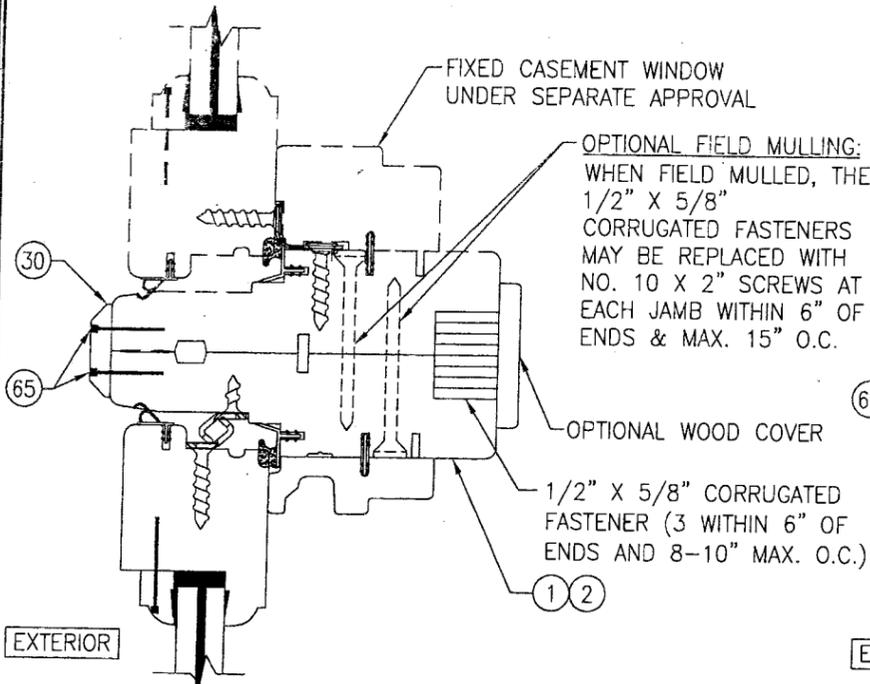
CERTIFICATION	APR 22 2008	WARREN W. SCHAEFER, P.E. P.E. NO. 44135
DRAWING NO.	1552	REV.
SHEET NO.	2	OF 5



BRICKMOLDS ARE NOT SHOWN BUT MAY BE USED IN ADDITION TO ANCHORS SHOWN.

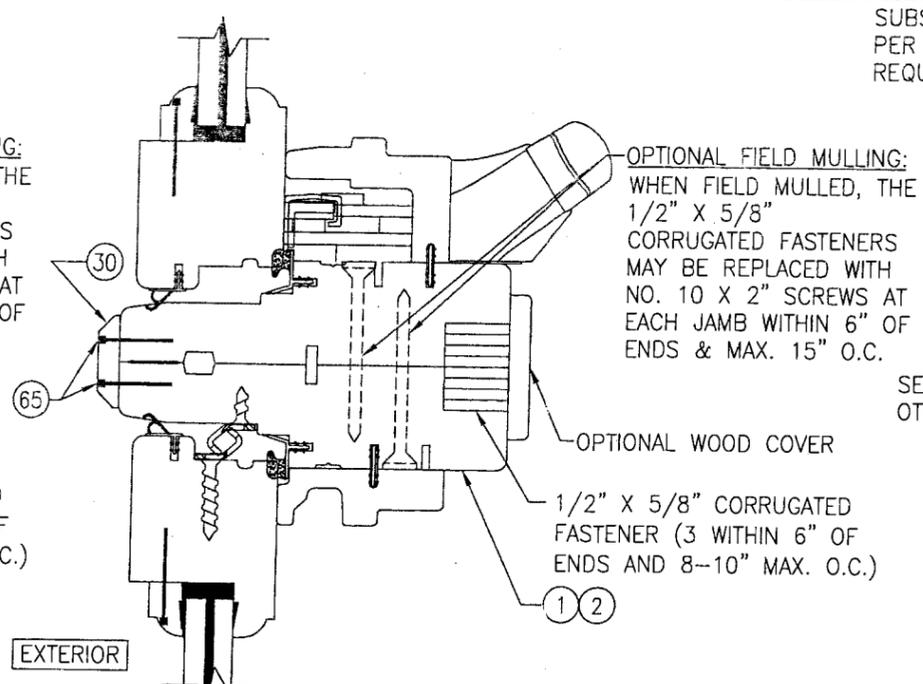
Approved as complying with the Florida Building Code
 Date: JUNE 19, 2008
 NOA# 08-0310.12
 Miami Dade Product Control
 Division
 By: *Manuel Perez*

DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=2		DATE: 04/02/08	
NO.	REVISION DESCRIPTION	DATE	BY
DRAWING TITLE: WOOD CASEMASTER AWNING STORMPLUS IZ4			
MANUFACTURER: MARVIN WINDOWS & DOORS HIGHWAY 11; P.O. BOX 100 WARROAD, MN 56763 800-346-5044			
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. 8895 N. MILITARY TRAIL, SUITE C-204 PALM BEACH GARDENS, FL 33410 PHONE: 561-775-4902 FAX: 561-775-4903			
CERTIFICATION: APR 02 2008			
DRAWING NO. 1552			
SHEET NO. 3 OF 5			



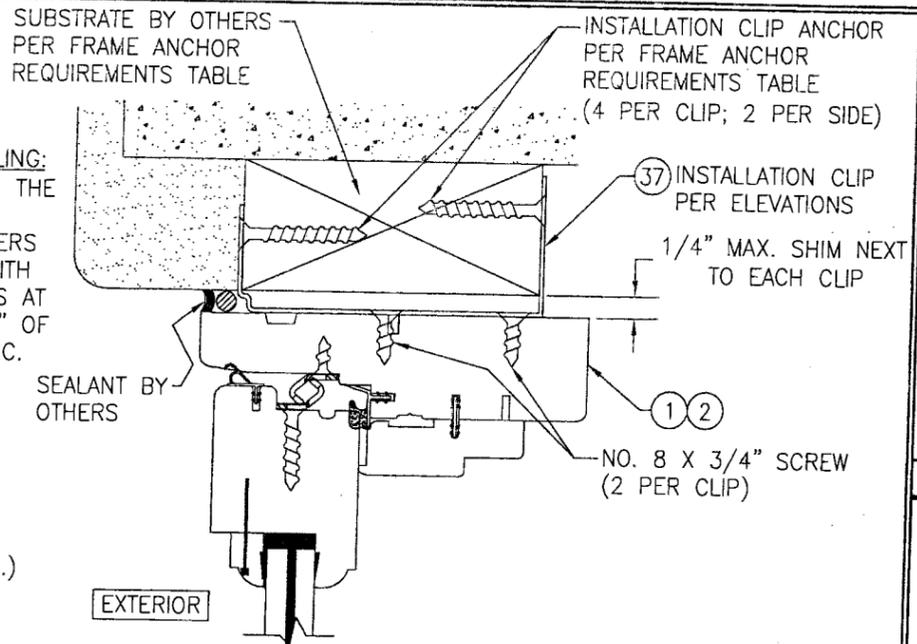
SECTION E
SCALE: 1/2 FULL

FOR DETAILS NOT SHOWN SEE OTHER SECTIONS
(ROTO OPERATOR HARDWARE CONDITION SHOWN, PUSH/PULL OPERATOR CONDITION ALSO APPLIES)

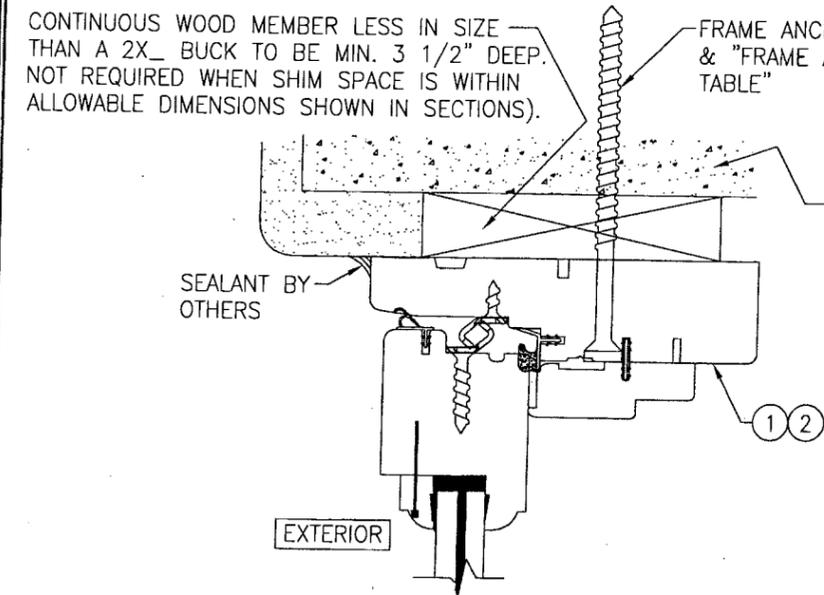


SECTION F
SCALE: 1/2 FULL

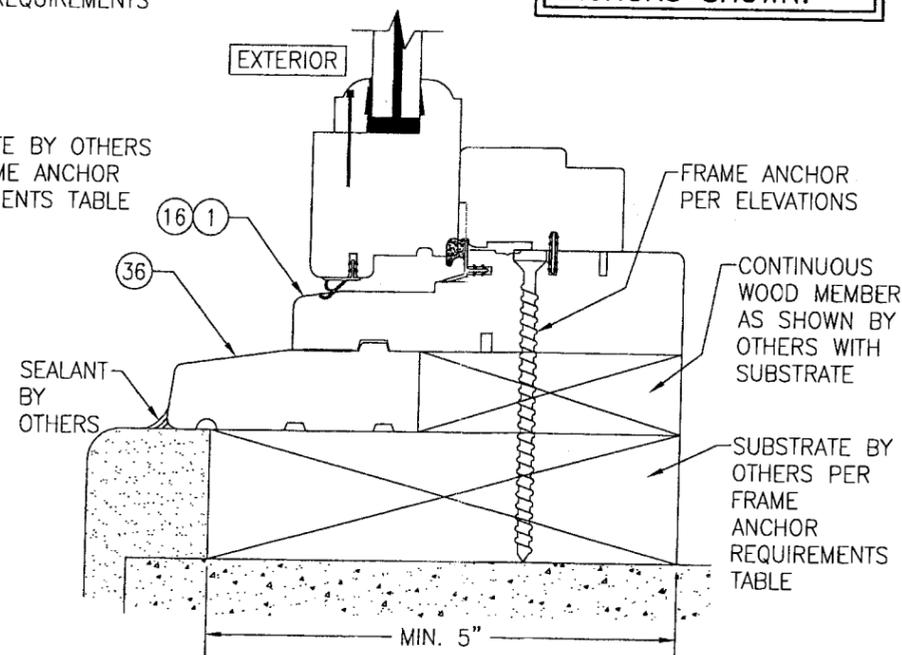
FOR DETAILS NOT SHOWN SEE OTHER SECTIONS
(ROTO OPERATOR HARDWARE CONDITION SHOWN, PUSH/PULL OPERATOR CONDITION ALSO APPLIES)



OPTIONAL INSTALLATION CLIP DETAIL
(HEAD SECTION SHOWN, SILL & SIDES ARE INSTALLED THE SAME)
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)
(PUSH/PULL OPERATOR HARDWARE CONDITION SHOWN, ROTO OPERATOR ALSO APPLIES)

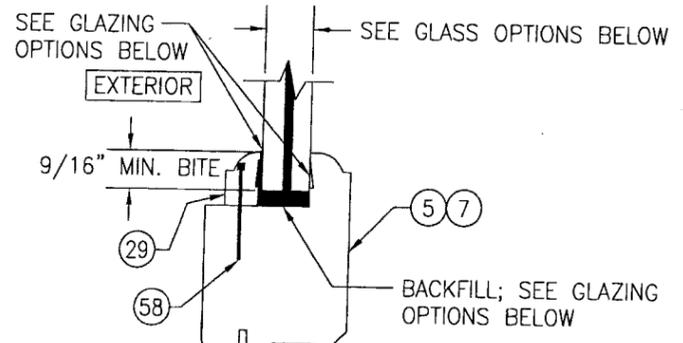


OPTIONAL DIRECT MOUNT DETAIL TO SUBSTRATE WITH SPACER
(HEAD SECTION SHOWN, SILL & SIDES ARE INSTALLED THE SAME)
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)
(PUSH/PULL OPERATOR HARDWARE CONDITION SHOWN, ROTO OPERATOR CONDITION ALSO APPLIES)



OPTIONAL DIRECT MOUNT DETAIL WITH SUB-SILL
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)

BRICKMOLDS ARE NOT SHOWN BUT MAY BE USED IN ADDITION TO ANCHORS SHOWN.



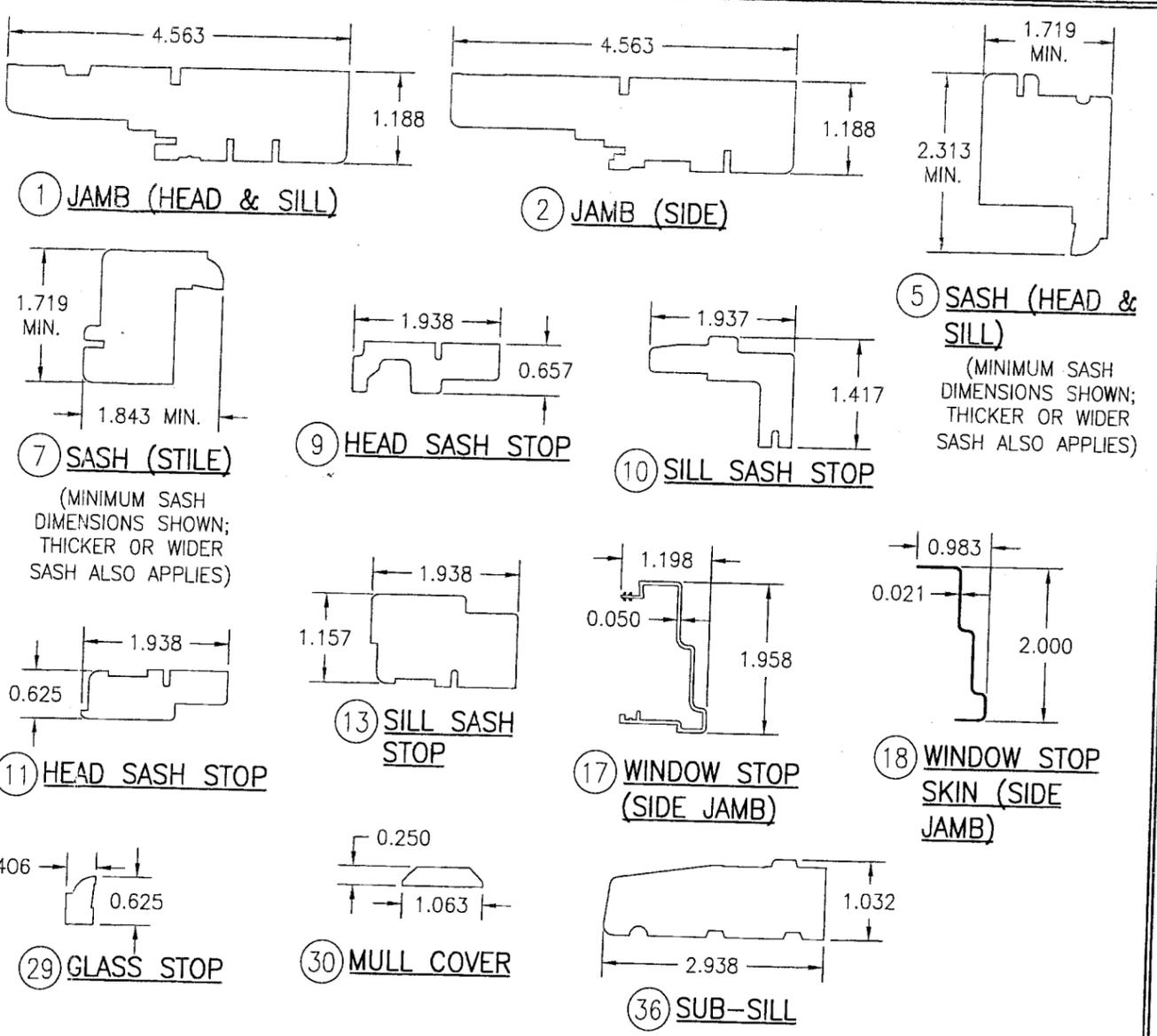
GLASS OPTIONS
GLASS OPTION A: 9/16" THICK LAMINATED GLASS (1/4" AN./0.09" DUPONT SGP/1/4" AN.)
GLASS OPTION B: 9/16" THICK LAMINATED GLASS (1/4" HT.ST./0.09" DUPONT SGP/1/4" HT.ST.)
GLASS OPTION C: 3/8" THICK LAMINATED GLASS (5/32" AN./0.090" DUPONT SGP/5/32" AN.)

GLAZING OPTIONS
GLAZING OPTION A: DOW 1199 EXTERIOR & INTERIOR WITH DOW 995 BACKFILL (USED WITH SPECIMEN 14)
GLAZING OPTION B: GE RAPID STRENGTH EXTERIOR, INTERIOR & BACKFILL (USED WITH SPECIMEN 15)

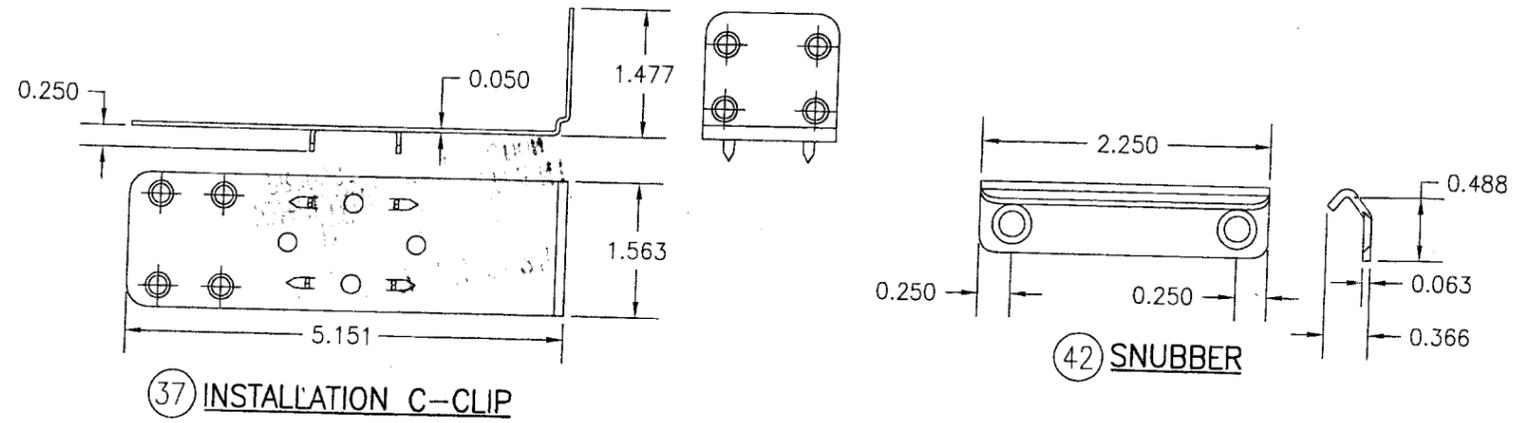
Approved as complying with the Florida Building Code
Date **JUNE 19, 2008**
NOA# **08-0310.17**
Miami Dade Product Control Division
By *Manuel Perez*

DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=2		DATE: 04/02/08	
NO.	REVISION DESCRIPTION	BY	DATE
DRAWING TITLE: WOOD CASEMASTER AWNING STORMPLUS IZ4			
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.		MANUFACTURER: MARVIN WINDOWS & DOORS	
8895 N. MILITARY TRAIL, SUITE C-204 PALM BEACH GARDENS, FL 33410 PHONE: 561-775-4902 FAX: 561-775-4903		HIGHWAY 11, P.O. BOX 100 WARROAD, MN 56763 800-346-5044	
CERTIFICATION	APR 07 2008	DRAWING NO.	REV.
		1552	
SHEET NO.		4 OF 5	

ITEM #	ITEM DESCRIPTION	MANUFACTURER/NOTES
PARTS		
1	JAMB (HEAD & SILL)	* WOOD
2	JAMB (SIDE)	* WOOD
5	SASH (HEAD & SILL)	* WOOD
7	SASH (STILE)	* WOOD
9	HEAD SASH STOP	* WOOD
10	SILL SASH STOP	* WOOD
11	HEAD SASH STOP	* WOOD
13	SILL SASH STOP	* WOOD
17	WINDOW STOP (SIDE JAMB)	* WOOD
18	WINDOW STOP SKIN (SIDE JAMB)	* WOOD
29	GLASS STOP	* WOOD
30	MULLION COVER	* WOOD
36	SUB-SILL	* WOOD
37	INSTALLATION C-CLIP	50 KSI GALV. STEEL
HARDWARE		
38	OPERATOR WITH HANDLE	TRUTH-SERIES 15 DUAL ARM OPERATOR
40	SCISSOR HINGE	10" LONG. S.S. THRUTH 13-16-00-119 (LEFT) THRUTH 13-16-00-120 (RIGHT)
42	SNUBBER	50 KSI STEEL
44	ROLLER TRACK	TRUTH SERIES 30706
45	SASH LIMITER	MARVIN #15808598
46	CAMLOCK	TRUTH #16-18
47	SASH LOCK KEEPER	TRUTH #31359
SEALS & SEALANTS		
51	SASH WEATHERSTRIP	RIGID GLASS FILLED POLYPROPYLENE BY INTEK
52	VINYL FRAME WEATHERSTRIP	BY AMSBURY
54	CONNECTING BARB	PVC & GEON C70a0
MISC. FASTENERS		
58	F-18 x 1.125" BRAD NAIL	3" FROM CORNERS & MAX. 8" O.C.
62	NO. 8 X 1" SMS	2 PER SNUBBER
63	NO. 7 X 1/2" SMS	2 PER SNUBBER
65	18 GA. X 3/4" BRAD NAIL	2" FROM ENDS & 5" TO 8" MAX. O.C.



* ALL WOOD USED WITH TESTED UNITS IS MIN. GRADE 2 WESTERN PINE. ALTERNATE WOOD SPECIES TO PINE ARE MIN. GRADE 2 MAHOGANY, OAK, CHERRY, CYPRUS, & DOUGLAS FIR
NOTE: ALL WOOD IS RECEIVED BY MARVIN WINDOWS & DOORS AS GRADE 2, BUT IS MACHINED BY MARVIN TO A SELECT GRADE USE.



Approved as complying with the Florida Building Code
Date JUNE 19, 2008
NOA# 08-0310.12
Miami Date Product Control
By Manuel Perez

DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1=2	DATE: 04/02/08
DATE	BY
REVISION DESCRIPTION	NO.
DRAWING TITLE WOOD CASEMASTER AWNING STORMPLUS IZ4	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.	
MANUFACTURER MARVIN WINDOWS & DOORS HIGHWAY 11, P.O. BOX 100 WARROAD, MN 56763 800-346-5044	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. 8895 N. MILITARY TRAIL, SUITE C-204 PALM BEACH GARDENS, FL 33410 PHONE: 561-775-4902 FAX: 561-775-4903	
CERTIFICATION APR 02 2008	WARREN W. SCHAEFER, P.E. P.E. NO. 44135
DRAWING NO. 1552	REV.
SHEET NO. 5	OF 5