



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

www.buildingcodeonline.com

NOTICE OF ACCEPTANCE (NOA)

EFCO Corporation
1000 County Road
Monett, MD 65708

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 S-660 Aluminum Single Hung Window- S.M.I.

APPROVAL DOCUMENT: Drawing No. 1505, titled "S-660 Small Missile Impact Single Hung Window", sheets 1 through 5 of 5, dated 11/27/06 prepared by W.W. Schaefer Engineering & Consulting, P.A, signed and sealed by Warren W. Schaefer, P.E., bearing the Miami-Dade County Product Control Renewal stamp with the Notice of Acceptance number and expiration date by the Miami-Dade County Product Control Division.

MISSILE IMPACT RATING: Small Missile Impact

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 **renews and revises** NOA# 00-0207.14 consists of this page 1 and evidence pages E-1 and E-2, as well as approval document mentioned above.

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



J. Gascon
3/20/07

NOA No 07-0118.07
Expiration Date: September 27, 2011
Approval Date: April 12, 2007
Page 1

EFCO Corporation

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS

1. Manufacturers die drawings and sections.
2. Drawing No. 1505, titled "S-660 Small Missile Impact Single Hung Window", sheets 1 through 5 of 5, dated 11/27/06 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, TAS202-94.
 - 2) Uniform Static Air Pressure Test, Loading perFBC, TAS202-94
 - 3) Water Resistance Test, per FBC, TAS 202-94.
 - 4) Forced Entry Test, per FBC 2411 3.2.1, TAS 202-94.
 - 5) Small Missile Impact Test, per FBC, TAS 201-94.
 - 6) Cyclic Wind Pressure Loading Test, per FBC, TAS 203-94along with marked-up drawings and installation diagram of an EFCO S6600/S660 aluminum windows in a mulled configuration, prepared by Hurricane Test Laboratory, Inc., Test Report No. **HTL-0046-0610-99** dated from 09/20/99 to 04/12/99, signed and sealed by Vinu J Abraham, P.E.

C. CALCULATIONS

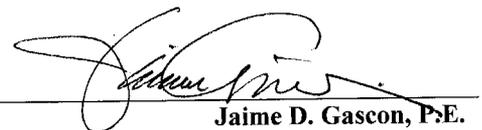
1. Revised Anchor Calculations, dated 08/09/06, prepared by W.W. Schaefer Engineering & Consulting, P.A., signed and sealed by Warren W. Schaefer, P.E.

D. QUALITY ASSURANCE

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

E. MATERIAL CERTIFICATIONS

1. Notice of Acceptance No. **06-0216.06**, issued to Solutia, Inc. for their "Saflex / IIIIG PVB Interlayer", approved on 05/04/06 and expiring on 05/21/11.



Jaime D. Gascon, P.E.
Chief, Product Control Division
NOA No 07-0118.07
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F. STATEMENTS

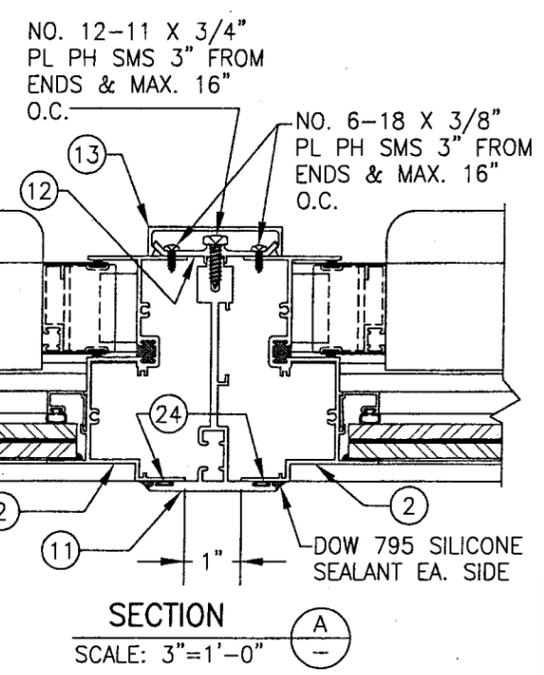
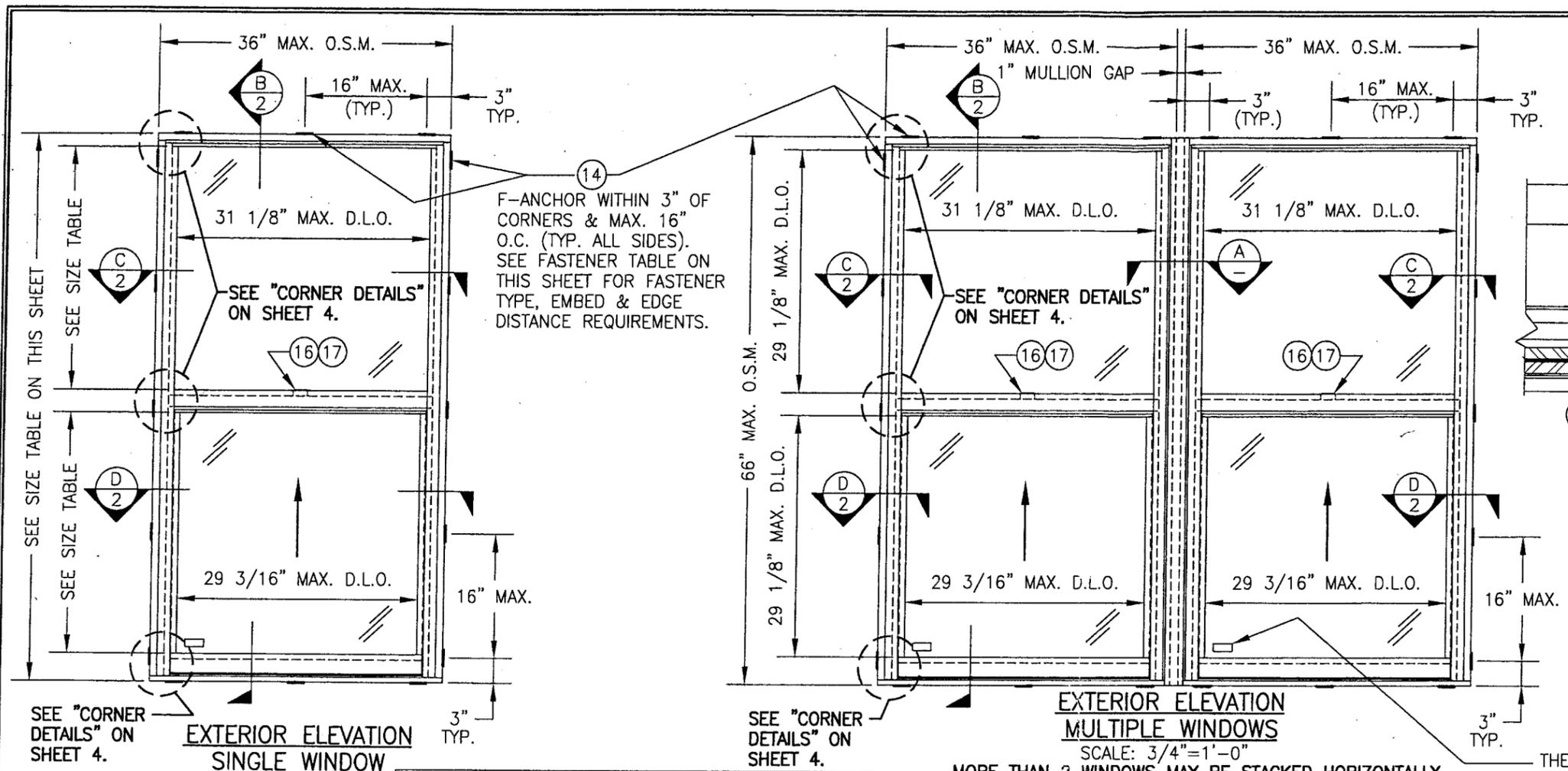
1. Letter of no financial interest, issued by W.W. Schaefer Engineering & Consulting, P.A. on November 07, 2000, signed and sealed by Warren Schaefer, P.E.
“Submitted under NOA#00-0207.14”
2. Letter of Code Compliance, issued by W.W. Schaefer Engineering & Consulting, P.A. on July 25, 2005, signed and sealed by Warren Schaefer, P.E.

G. OTHER

1. Notice of Acceptance No. **00-0207.14**, issued to “Series S-660 Aluminum Single Hung Window- Impact Resistant”, dated 09/27/01, and expiring on 09/27/06.



Jaime D. Gascon, P.E.
Chief, Product Control Division
NOA No 07-0118.07
Expiration Date: September 27, 2011
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SECTION A-A
SCALE: 3"=1'-0"

FOR SINGLE HUNG WINDOW MULLED TO A PICTURE WINDOW, SEE DRAWING NO. 1025.

GENERAL NOTES

1. THESE WINDOW SYSTEMS HAVE BEEN TESTED, ANALYZED AND APPROVED FOR DESIGN PRESSURES NOT TO EXCEED THOSE SHOWN IN THE "ALLOWABLE DESIGN LOADS" TABLE.
2. BUCKING, OPENINGS & BUCKING FASTENERS MUST BE DESIGNED & INSTALLED TO WITHSTAND WIND LOADS AS DETERMINED FOR EA. 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 TESTED & PROPOSED FOR WATER, AIR, IMPACT, CYCLIC & UNIFORM STATIC AIR PRESSURE TESTING IN CONFORMANCE WITH FLORIDA BUILDING CODE PROTOCOLS TAS 201, 202 & 203 FOR SMALL MISSILE IMPACT WINDOWS.
5. THESE WINDOW SYSTEMS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE 2004 FLORIDA BUILDING CODE INCLUDING HIGH VELOCITY HURRICANE ZONES (HVHZ).
6. ALL FRAME ANCHORS SECURING WINDOW/DOOR FRAME TO PRESSURE TREATED BUCKS OR WOOD FRAMING SHALL BE CAPABLE OF RESISTING CORROSION CAUSED BY THE PRESSURE TREATING CHEMICALS IN THE WOOD.
7. 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.
8. DUE TO SMALL MISSILE IMPACT REQUIREMENTS, THESE WINDOWS MAY NOT BE INSTALLED AT SILL ELEVATIONS LESS THAN 30 FT. ABOVE GRADE WITHOUT A SHUTTER.

SCALE: 3/4"=1'-0" O.S.M. = OUTSIDE FRAME MEASUREMENT

WINDOW MAXIMUM SIZE TABLE (SINGLE WINDOWS ONLY)

FRAME WIDTH	FRAME HEIGHT	TOP WINDOW D.L.O.		BOTTOM WINDOW D.L.O.	
		HORIZONTAL	VERTICAL	HORIZONTAL	VERTICAL
24"	99"	19 1/8"	45 5/8"	17 3/16"	45 5/8"
27"	88"	22 1/8"	40 1/8"	20 3/16"	40 1/8"
30"	79"	25 1/8"	35 5/8"	23 3/16"	35 5/8"
33"	72"	28 1/8"	32 1/8"	26 3/16"	32 1/8"
36"	66"	31 1/8"	29 1/8"	29 3/16"	29 1/8"

NOTES: 1) ALL MULLED UNITS ARE LIMITED TO 66" TALL AS TESTED.
2) ALL WINDOWS ARE LIMITED TO 36" MAXIMUM WIDTH.

ALLOWABLE DESIGN LOADS & IMPACT RATING (FOR SINGLE & MULLED UNITS)

GLAZING DESCRIPTION	IMPACT RATING	ALLOWABLE PRESSURE	
		POSITIVE	NEGATIVE
1/4" HT. STR./0.06" SAFLEX PVB/1/4" HT. STR.	SMALL MISSILE	73.3 PSF	120 PSF

LOAD TABLE NOTE:
1. ALL MULLED UNITS ARE LIMITED TO MAXIMUM HEIGHT OF 66".
2. SMALL MISSILE IMPACT WINDOWS MAY NOT BE INSTALLED AT A SILL ELEVATION LESS THAN 30 FT. ABOVE GRADE.

CLIP FASTENER REQUIREMENTS TABLE

OPENING TYPE (SUBSTRATE)	(2) CLIP TO OPENING FASTENER TYPE	NO. FASTENERS PER CLIP INTO SUBSTRATE	MINIMUM EMBEDMENT	MINIMUM EDGE DIST.
WOOD	NO. 12 SMS SCREW	3	1 1/8"	1"
MIN. 18 GA. STUD	NO. 12 TEK SCREW	3	FULL	1/2"
STRUCT. STEEL	NO. 12 TEK SCREW	3	FULL	1/2"
CMU/CONCRETE	(1) 1/4" CONCRETE SCREW	2	1 1/4"	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.).
(2) SEE F-ANCHOR #14 DETAIL ON SHEET 5 FOR CLIP SCREW POSITIONS WITHIN THE F-ANCHOR

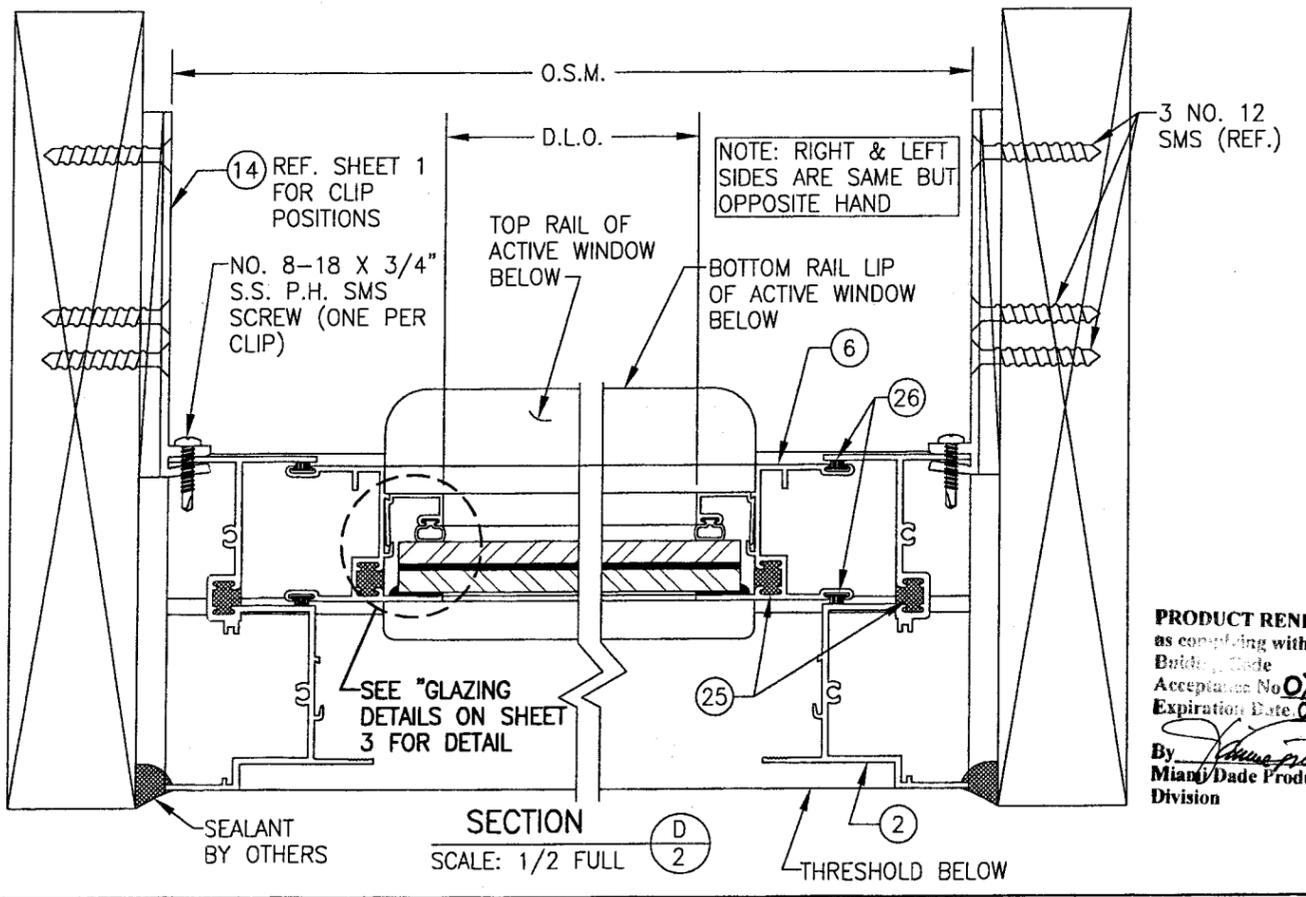
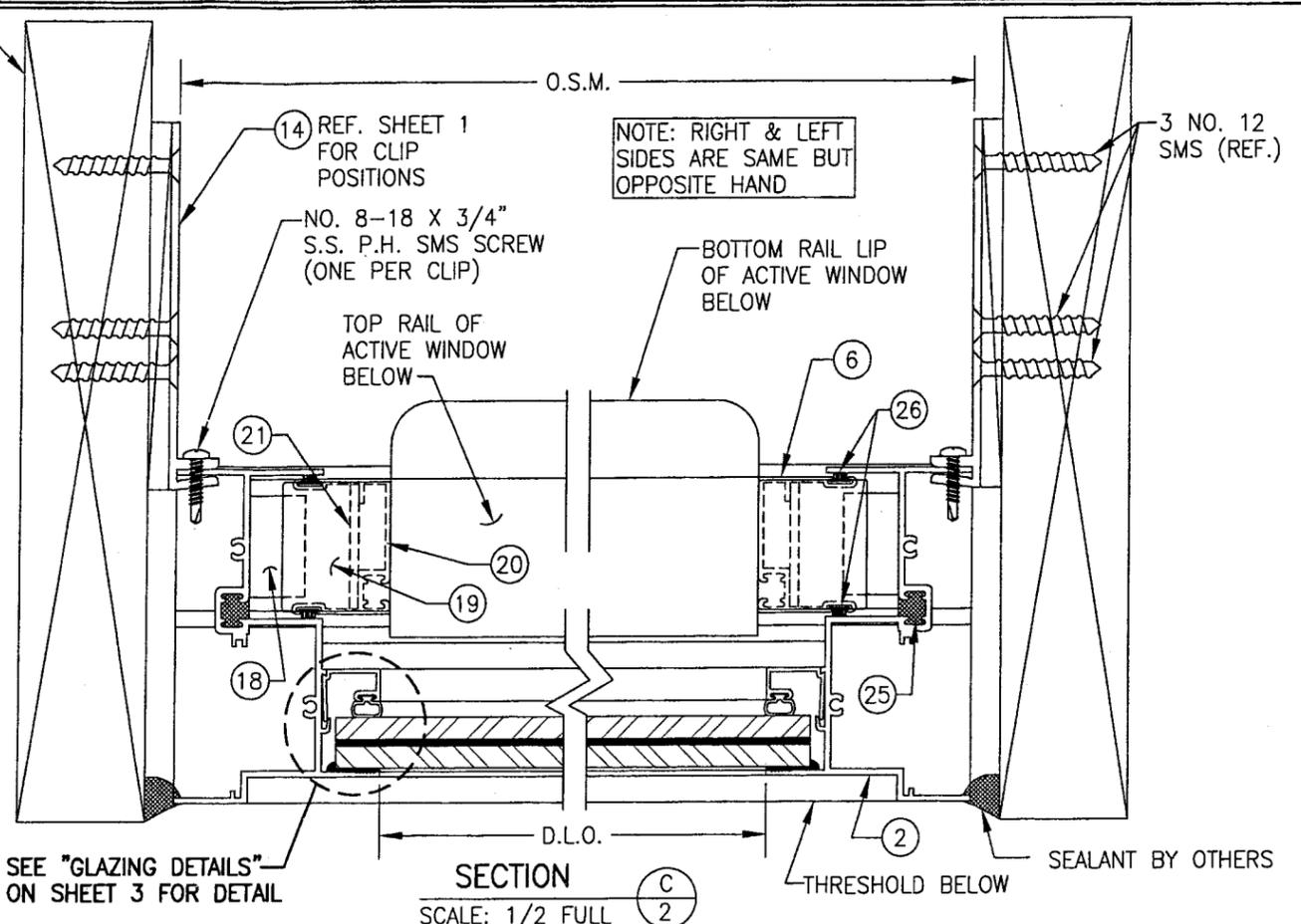
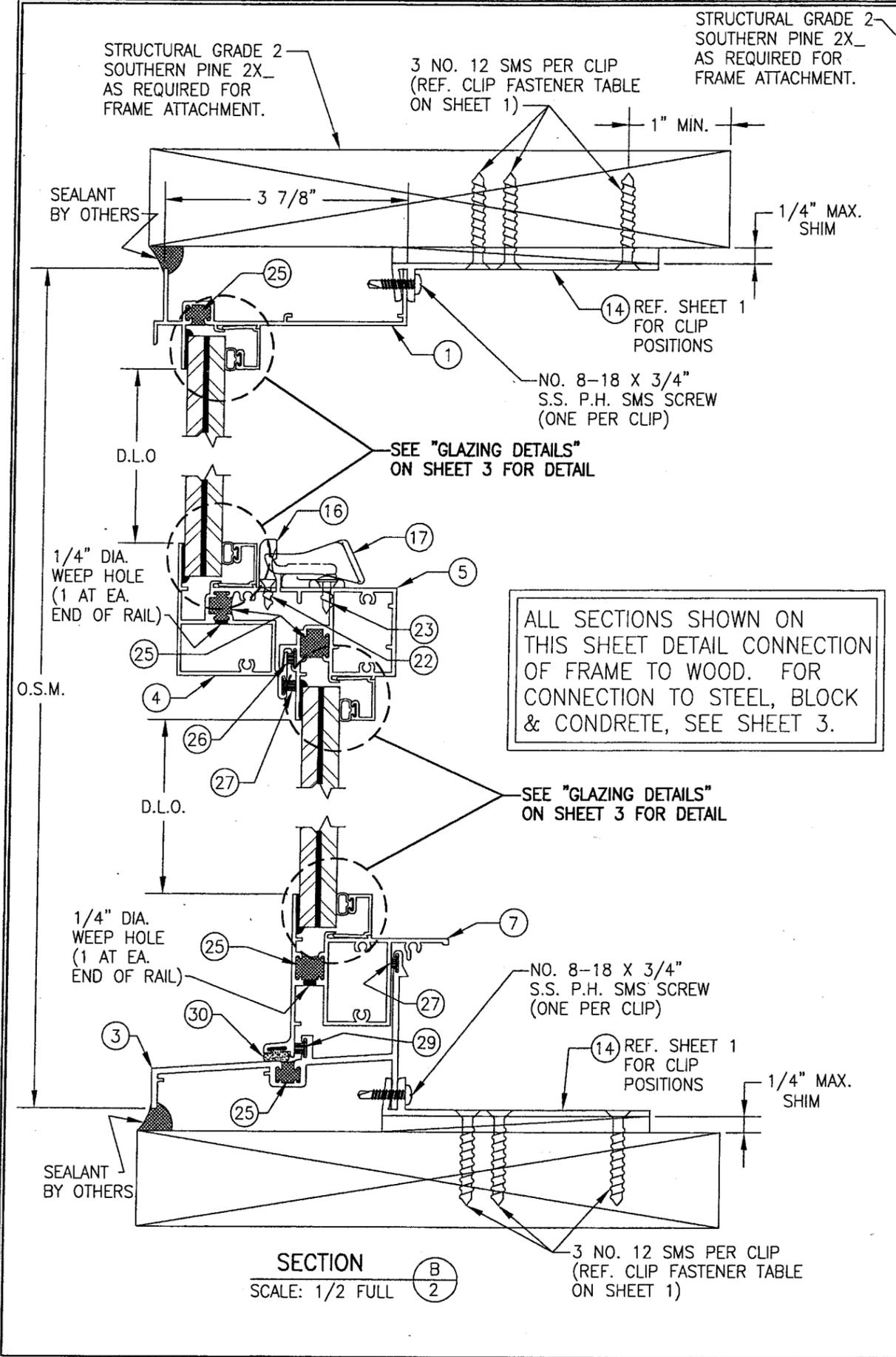
THE FOLLOWING LABEL SHALL BE PLACED AT THE INNER BOTTOM RIGHT CORNER OF THE WINDOW TO DISTINGUISH BETWEEN SMALL & LARGE MISSILE GLASS:

EFCO CORPORATION, MONETT MISSOURI
MIAMI-DADE COUNTY PRODUCT CONTROL APPROVED
SMALL MISSILE IMPACT UNIT

DRAWN BY: W.W.S.	CHECKED BY: W.W.S.
PLOT: 1=16	DATE: 11/27/06
NO.	REVISION DESCRIPTION
BY	DATE
DRAWING TITLE: S-660 SMALL MISSILE IMPACT SINGLE HUNG WINDOW	
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.	MANUFACTURER: EFCO CORPORATION
8895 N. MILITARY TRAIL, SUITE C-204 PALM BEACH GARDENS, FL 33410 PHONE: 561-775-4902 FAX: 561-775-4903	1000 COUNTY ROAD, P.O. BOX 609 MONETT, MO 65708-0609 800-221-4169
CERTIFICATION: NOV 27 2006	DRAWING NO. 1505
WARREN W. SCHAEFER, P.E. P.E. NO. 44135	REV. SHEET NO. 5

PRODUCT RENEWED
as complying with the Florida Building Code
Acceptance No. 07-0118-07
Expiration Date 09/27/2011

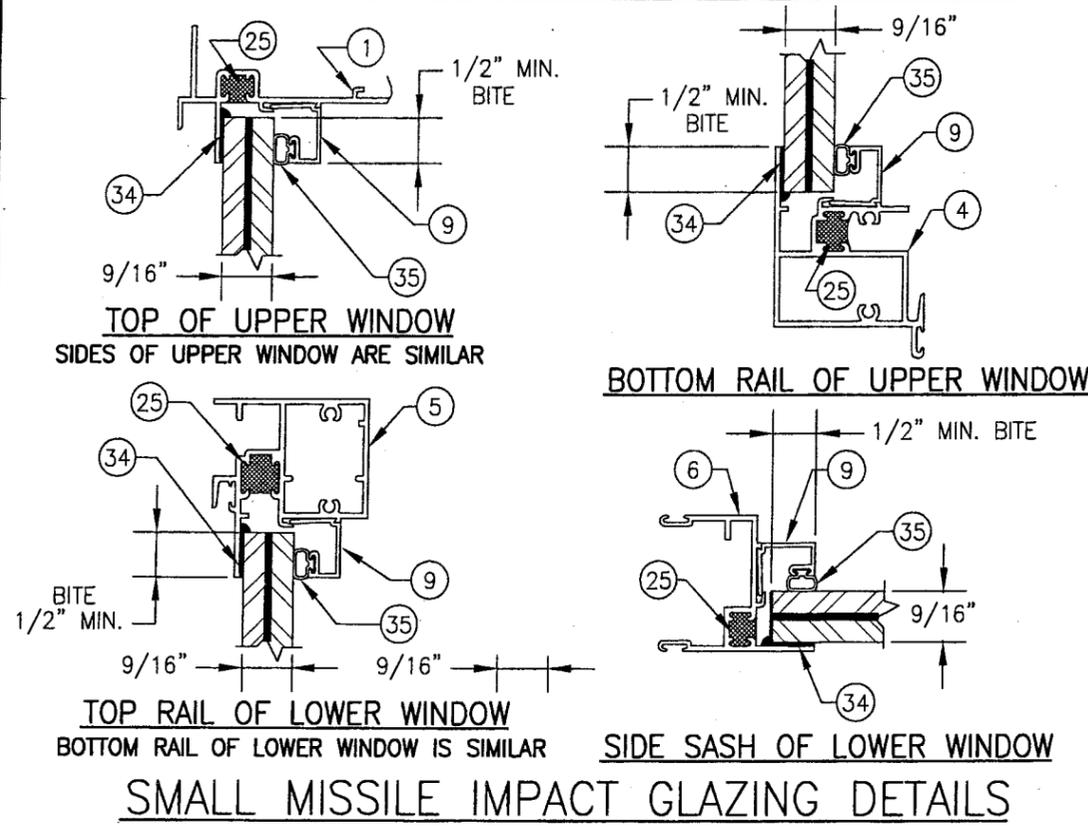
By: *[Signature]*
Miami Dade Product Control Division



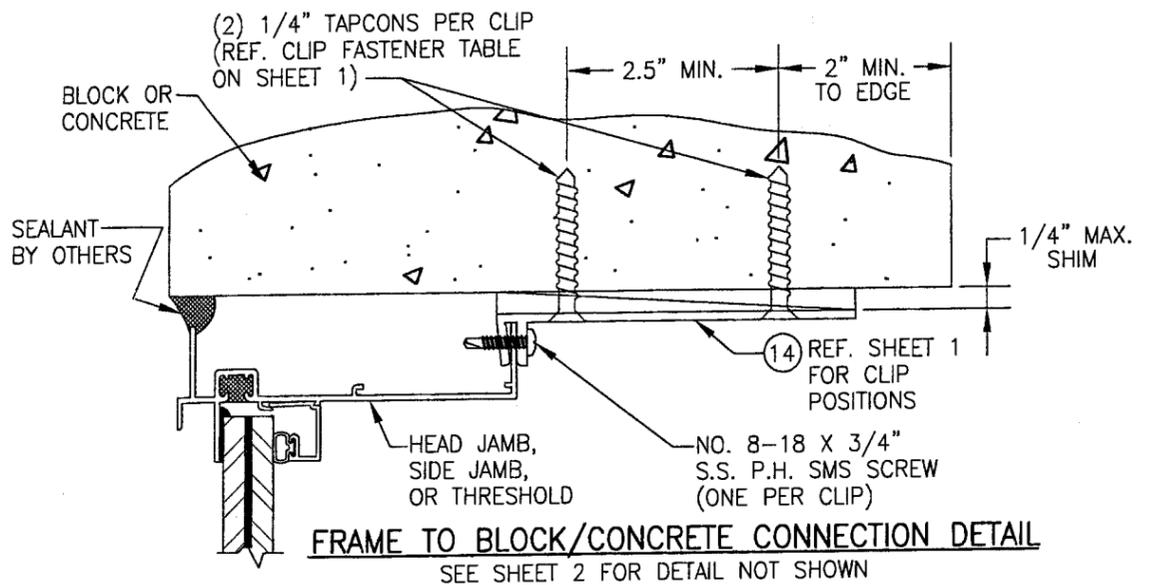
ALL SECTIONS SHOWN ON THIS SHEET DETAIL CONNECTION OF FRAME TO WOOD. FOR CONNECTION TO STEEL, BLOCK & CONCRETE, SEE SHEET 3.

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 By *Warren W. Schaefer*
 Miami/Dade Product Control Division

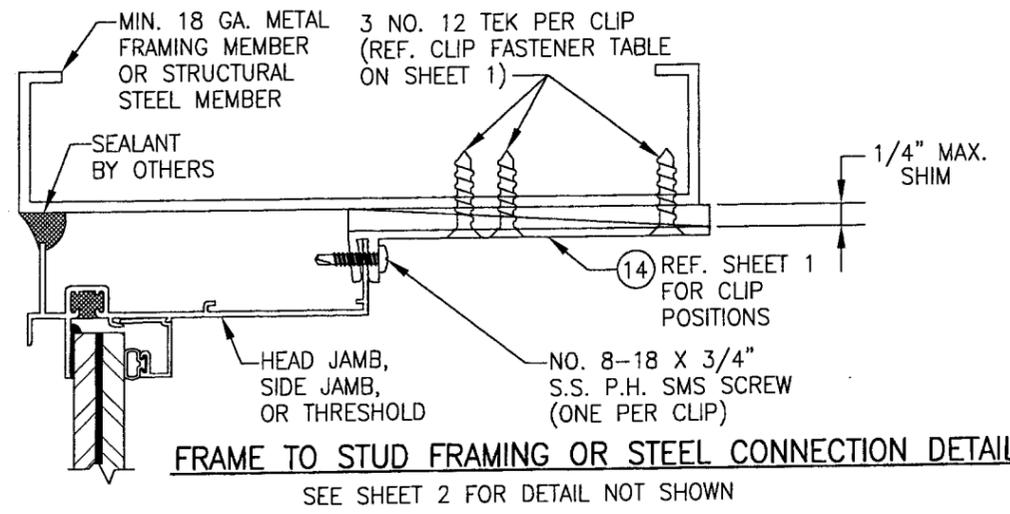
DRAWN BY: W.W.S.	CHECKED BY: W.W.S.
PLOT: 1-2	DATE: 11/27/06
DATE	
BY	
REVISION DESCRIPTION	
NO.	
DRAWING TITLE	
S-660 SMALL MISSILE IMPACT SINGLE HUNG WINDOW	
MANUFACTURER	
EFCO CORPORATION	
1000 COUNTY ROAD, P.O. BOX 609 MONETT, MO 65708-0609 800-221-4169	
CONSULTANTS	
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.	
8895 N. MILITARY TRAIL, SUITE C-204 PALM BEACH GARDENS, FL 33410 PHONE: 561-775-4802 FAX: 561-775-4903	
CERTIFICATION	
NOV 27 2006	
WARREN W. SCHAEFER, P.E. P.E. NO. 44135	
DRAWING NO.	REV.
1505	
SHEET NO.	
2 OF 5	



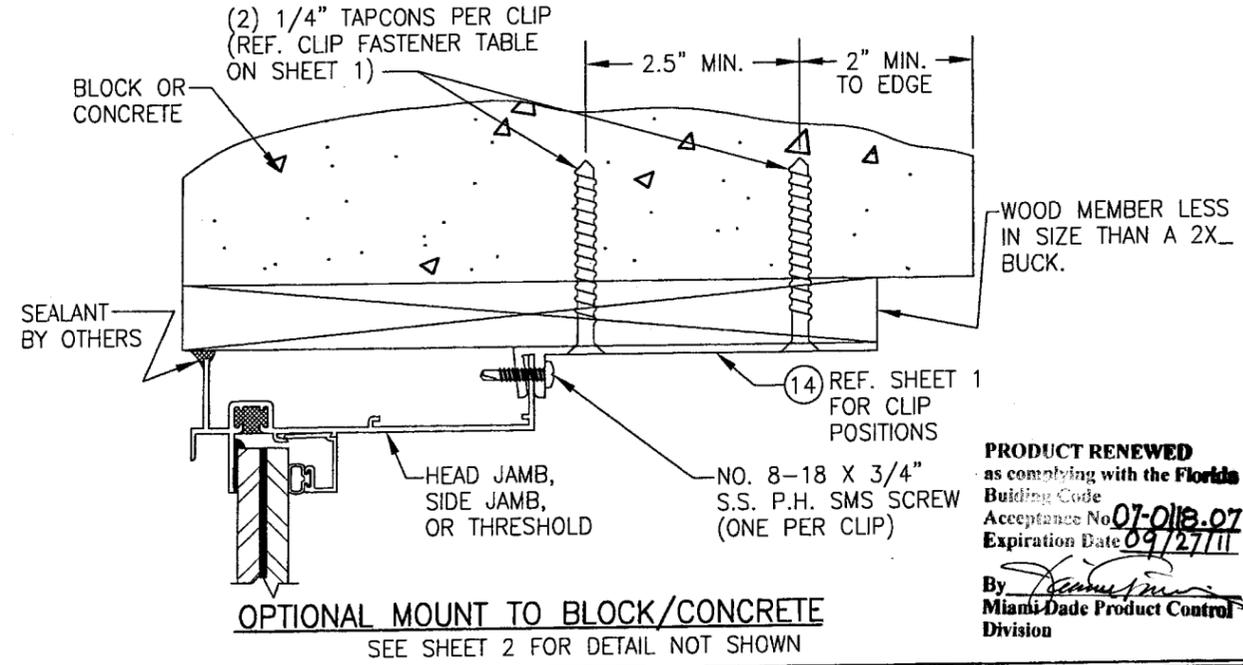
9/16" THK. LAMINATED GLASS BY SAFLEX WITH 1/4" THK. HEAT STRENGTHENED PANES EA. SIDE & 0.06" PVB INNER LAYER



FRAME TO BLOCK/CONCRETE CONNECTION DETAIL
SEE SHEET 2 FOR DETAIL NOT SHOWN



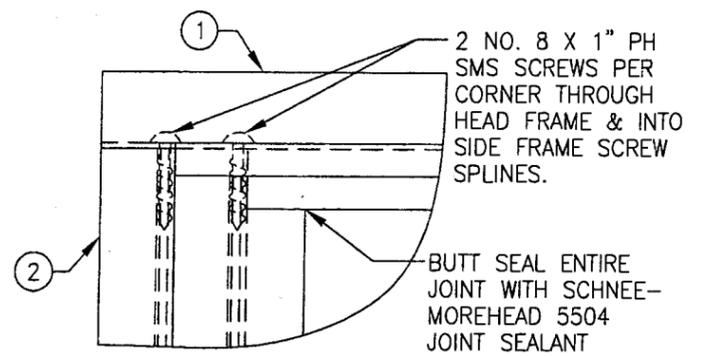
FRAME TO STUD FRAMING OR STEEL CONNECTION DETAIL
SEE SHEET 2 FOR DETAIL NOT SHOWN



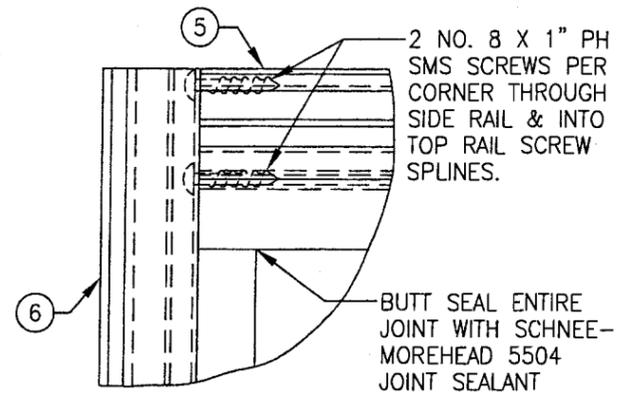
OPTIONAL MOUNT TO BLOCK/CONCRETE
SEE SHEET 2 FOR DETAIL NOT SHOWN

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By *[Signature]*
Miami-Dade Product Control Division

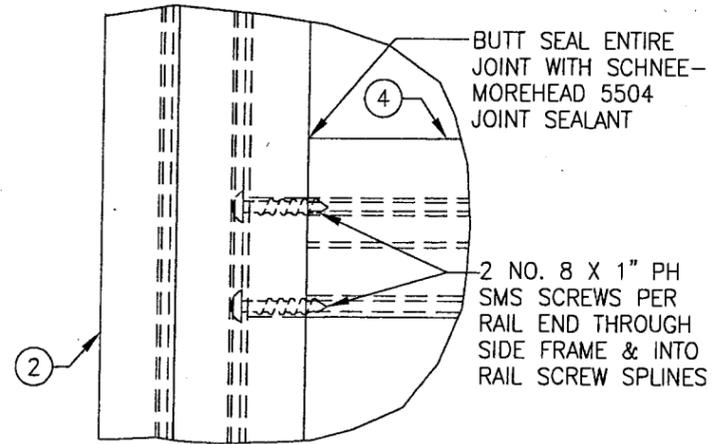
DRAWN BY: W.W.S.		CHECKED BY: W.W.S.	
PLOT: 1=2		DATE: 11/27/06	
DATE	BY	REVISION DESCRIPTION	NO.
DRAWING TITLE: S-660 SMALL MISSILE IMPACT SINGLE HUNG WINDOW			
CONSULTANTS:		MANUFACTURER:	
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. 8895 N. MILITARY TRAIL, SUITE C-204 PALM BEACH GARDENS, FL 33410 PHONE: 561-775-4902 FAX: 561-775-4903		EFCO CORPORATION 1000 COUNTY ROAD, P.O. BOX 609 MONETT, MO 65708-0609 800-221-4169	
CERTIFICATION:			
NOV 27 2006 WARREN W. SCHAEFER, P.E. P.E. NO. 44135			
DRAWING NO.	REV.	SHEET NO.	
1505		3 OF 5	



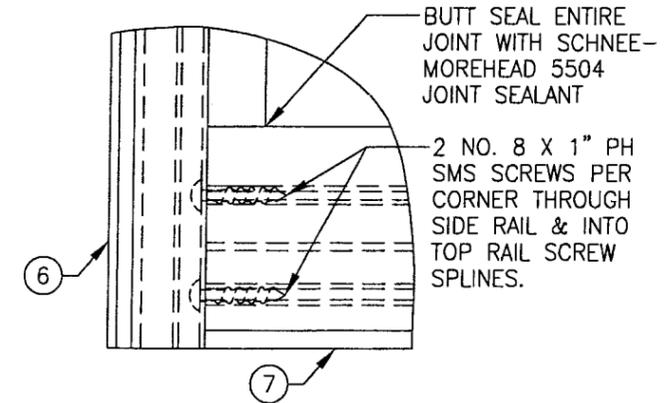
FRAME TOP CORNER DETAIL
OUTSIDE VIEW



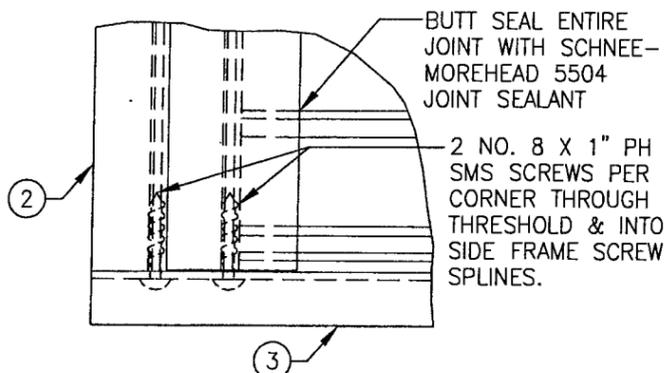
SIDE TO TOP RAIL CORNER DETAIL
BOTTOM ACTIVE WINDOW
OUTSIDE VIEW



BOTTOM RAIL OF TOP WINDOW TO SIDE FRAME DETAIL
OUTSIDE VIEW



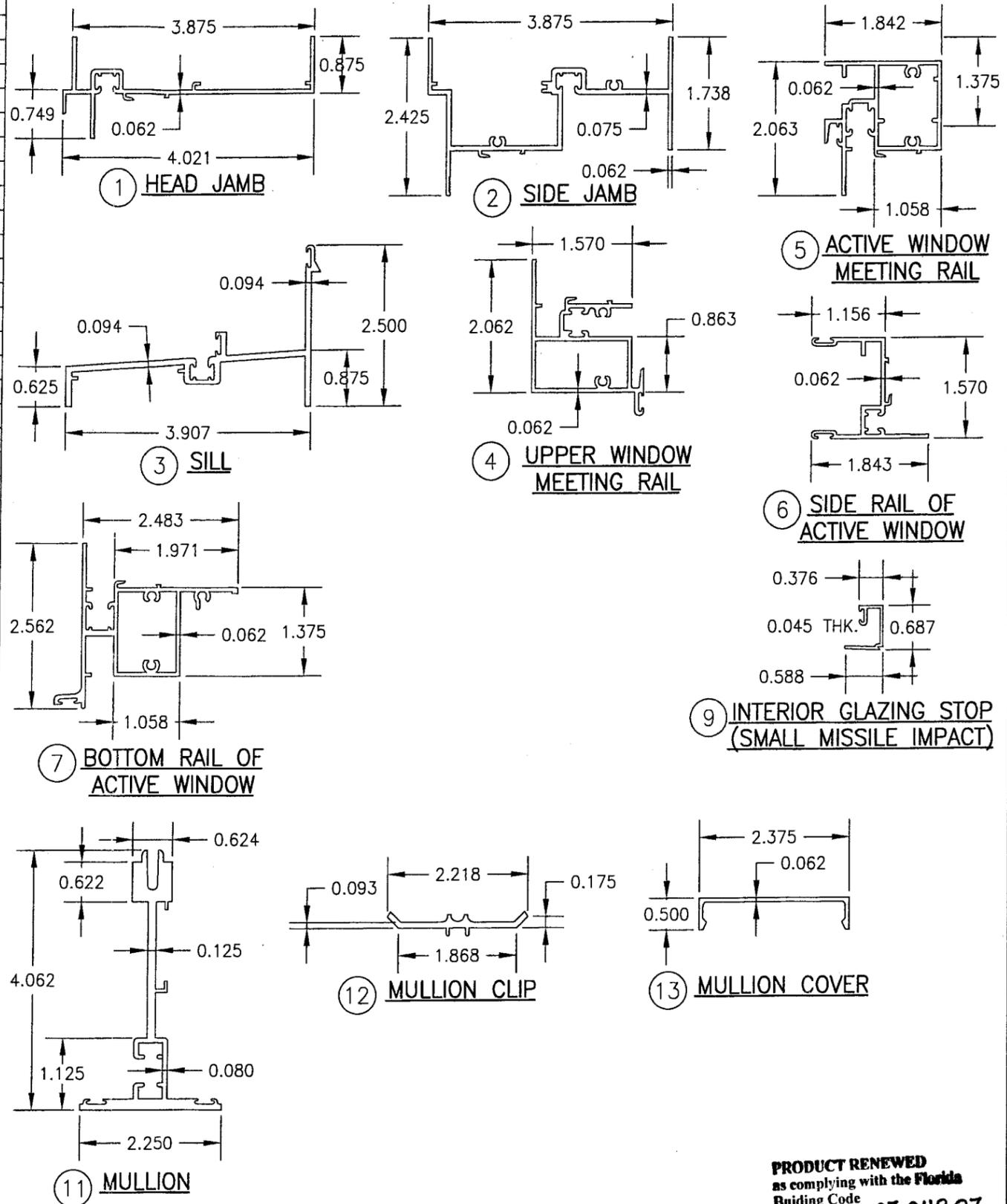
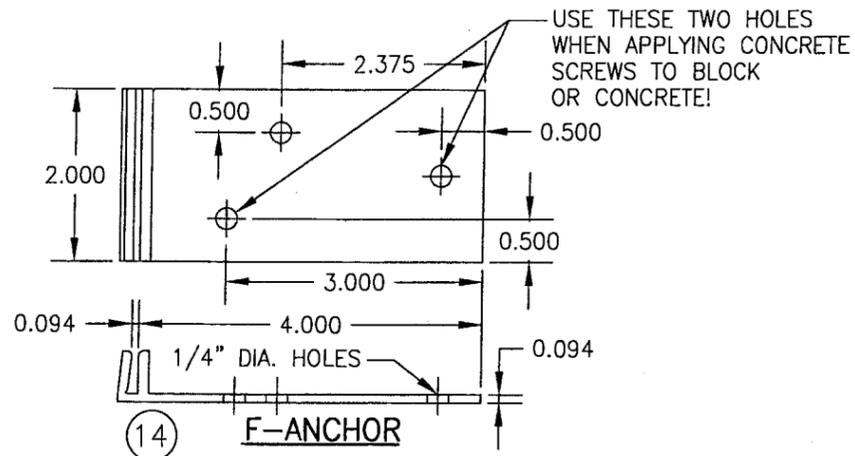
SIDE TO TOP RAIL CORNER DETAIL
BOTTOM ACTIVE WINDOW
OUTSIDE VIEW



THRESHOLD CORNER DETAIL
OUTSIDE VIEW

DRAWN BY: W.W.S.		CHECKED BY: W.W.S.	
PLOT: 1-2		DATE: 11/27/06	
NO.	REVISION DESCRIPTION	BY	DATE
DRAWING TITLE S-660 SMALL MISSILE IMPACT SINGLE HUNG WINDOW			
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.		MANUFACTURER EFCO CORPORATION	
8895 N. MILITARY TRAIL, SUITE C-204 PALM BEACH GARDENS, FL 33410 PHONE: 561-775-4902 FAX: 561-775-4903		1000 COUNTY ROAD, P.O. BOX 609 MONETT, MO 65708-0609 800-221-4169	
CERTIFICATION NOV 27 2006			
PRODUCT RENEWED as complying with the Florida Building Code Acceptance No 07-0118.07 Expiration Date 09/27/11			
By: <i>Warren W. Schaefer</i> Warren W. Schaefer, P.E. Miami Made Product Control Division		DRAWING NO. 1505 SHEET NO. 4 OF 5	

ITEM #	PART	ITEM DESCRIPTION	MANUFACTURER/NOTES
PARTS			
1	ES97	HEAD JAMB	EFCO; 6063-T6 ALUMINUM
2	ES98	SIDE JAMB	EFCO; 6063-T6 ALUMINUM
3	6020	SILL	EFCO; 6063-T6 ALUMINUM
4	EN68	UPPER WINDOW MEETING RAIL	EFCO; 6063-T6 ALUMINUM
5	E637	ACTIVE WINDOW MEETING RAIL	EFCO; 6063-T6 ALUMINUM
6	E639	ACTIVE WINDOW SIDE RAIL	EFCO; 6063-T6 ALUMINUM
7	6543	ACTIVE WINDOW BOTTOM RAIL	EFCO; 6063-T6 ALUMINUM
8	E349	INT. GLAZING STOP (LG. MISSILE IMPACT)	EFCO; 6063-T6 ALUMINUM
9	E392	INT. GLAZING STOP (SM. MISSILE IMPACT)	EFCO; 6063-T6 ALUMINUM
10	LB00	GLAZING CAP	FIBER REINFORCED NYLON
11	EG16	MULLION	EFCO; 6063-T6 ALUMINUM
12	ED25	MULLION CLIP	EFCO; 6063-T6 ALUMINUM
13	ED24	MULLION COVER	EFCO; 6063-T6 ALUMINUM
14	KA23/1880	F-ANCHOR	EFCO; 6063-T6 ALUMINUM
15	-	OPEN	-
HARDWARE			
16	HK87	KEEPER	BRONZE CRAFT
17	HL86	LATCH	BRONZE CRAFT
18	-	SASH BALANCE	BALANCE SYSTEMS
19	HGB9	BALANCE RETAINER	EASLY PLASTICS
20	FVG5	BALANCE RETAINER SHIM	CENTRAL PLASTICS
21	HMW7	BALANCE SPACER	EASLY PLASTICS
FASTENERS			
22	-	NO. 6 X 3/8 FH SMS	FASTENS KEEPER TO RAIL (2 PER KEEPER)
23	-	NO. 8 X 3/8 PH SMS	FASTENS LATCH TO RAIL (2 PER LATCH)
SEALS & SEALANTS			
24	WVB4	CONT. VINYL BULB SEAL	CENTRAL PLASTICS
25	-	POLYURETHANE SEALANT	P.R.C.
26	WF01	PB-7515-270 WEATHER STRIPPING	SCHLEGEL
27	WW78	PB-8515-270 WEATHER STRIPPING	SCHLEGEL
28	-	OPEN	-
29	-	PB-7522-270 WEATHER STRIPPING	SCHLEGEL
30	WQ06	Q-LON WEATHER STRIP	SCHLEGEL
31	-	OPEN	-
34	-	DOW 795 SILICONE	DOW CORNING
35	WVB2	CONT. VINYL BULB SEAL	CENTRAL PLASTICS



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By *[Signature]*
Miami Dade Product Control
Division

DRAWN BY: W.W.S.	CHECKED BY: W.W.S.
PLOT: 1=1	DATE: 11/27/06
DATE	
BY	
REVISION DESCRIPTION	
NO.	
DRAWING TITLE S-660 SMALL MISSILE IMPACT SINGLE HUNG WINDOW	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.	
MANUFACTURER EFCO CORPORATION	
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CERTIFICATION NOV 27 2006	WARREN W. SCHAEFER, P.E. P.E. NO. 44135
DRAWING NO. 1505	REV.
SHEET NO. 5	OF 5