



**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)

**T. M. Window and Door
601 N. W. 12th Ave
Pompano Beach, Florida, 33609**

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 High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: Series "515" Aluminum Outswing Casement Window -SM Impact

APPROVAL DOCUMENT: Drawing No. C515-SMI, titled "Series 515 Aluminum Outswing Casement window", 1 through 7 of 7, prepared by manufacturer, dated 11-15-01 and last revised on 02-25-03, signed and sealed by Ballard L. Argus, 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: 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.

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 01-1203.01 and consists of this page 1 as well as approval document mentioned above.

The submitted documentation was reviewed by Ishaq I. Chanda, P. E.

[Handwritten mark]



**NOA No 01-1203.01
Expiration Date: May 01, 2008
Approval Date: May 01, 2003**

T. M. Window and Door

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED
(For File ONLY. Not part of NOA)

A. DRAWINGS

1. Manufacturer's die drawings and sections.
2. Drawing No. **C515-SMI**, titled "Series 515 Aluminum Outswing Casement window", 1 through 7 of 7, prepared by manufacturer, dated 11-15-01 and last revised on 02-25-03, signed and sealed by Ballard L. Argus, 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) Large Missile Impact Test per FBC, TAS 201-94
 - 5) Small Missile Impact Test per FBC, TAS 201-94 (**FTL2770**)
 - 6) Cyclic Wind Pressure Loading per FBC, TAS 203-94
 - 7) Forced Entry Test, per FBC 2411 3.2.1 and TAS 202-94

along with marked-up drawings and installation diagram of an aluminum casement windows, prepared by Fenestration Testing Laboratory, Inc., Test Report No. **FTL-2770 (00122) & FTL-2587 (00006)**, dated 6/13/01 and 04-04-00, signed and sealed by Antonio Acevedo, P. E. and Aldo P. Gonzales, P.E. respectively.

Note: Test report FTL-2587 has been revised by addendum letter dated 04-12-2000, issued by Fenestration Testing Laboratory, signed and sealed by Aldo P. Gonzales, P.E.

2. Additional Test reports on
 - 1) Air Infiltration Test, per FBC, TAS 202-94
 - 2) Uniform Static Air Pressure Test, Loading per FBC, TAS 20294
 - 3) Large Missile Impact Test per FBC, TAS 201-94
 - 4) Cyclic Wind Pressure Loading per FBC, TAS 203-94

along with installation diagram of an aluminum casement window, prepared by American Test Lab of South Florida, Test Report No. **ATL 0806.01-02** dated 09-24-02, signed and sealed by William R. Mehner, P.E.

C. CALCULATIONS

1. Structural performance, comparative analysis and anchor verification calculations dated 09-27-02, 10-04-02, 12-04-15-02, and last revised on 02-25-03 prepared, signed and sealed by Ballard L. Argus, P. E.

D. MATERIAL CERTIFICATIONS

1. Notice of Acceptance No. **02-1205.03** issued to Security Impact Glass Holding L. L. C for "Saf-Glas", expiring on 12/16/07.
2. Notice of Acceptance No. **01-0205.02** issued to Solutia Inc. for "Saflex/Keep Safe Maximum", expiring on 05/21/2006.

Ishaq I. Chanda

Ishaq I. Chanda, P. E.
Product Control Examiner
NOA No 01-1203.01
Expiration Date: May 01, 2008
Approval Date: May 01, 2003

T. M. Window and Door

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED
(For File ONLY. Not part of NOA)

E. STATEMENTS

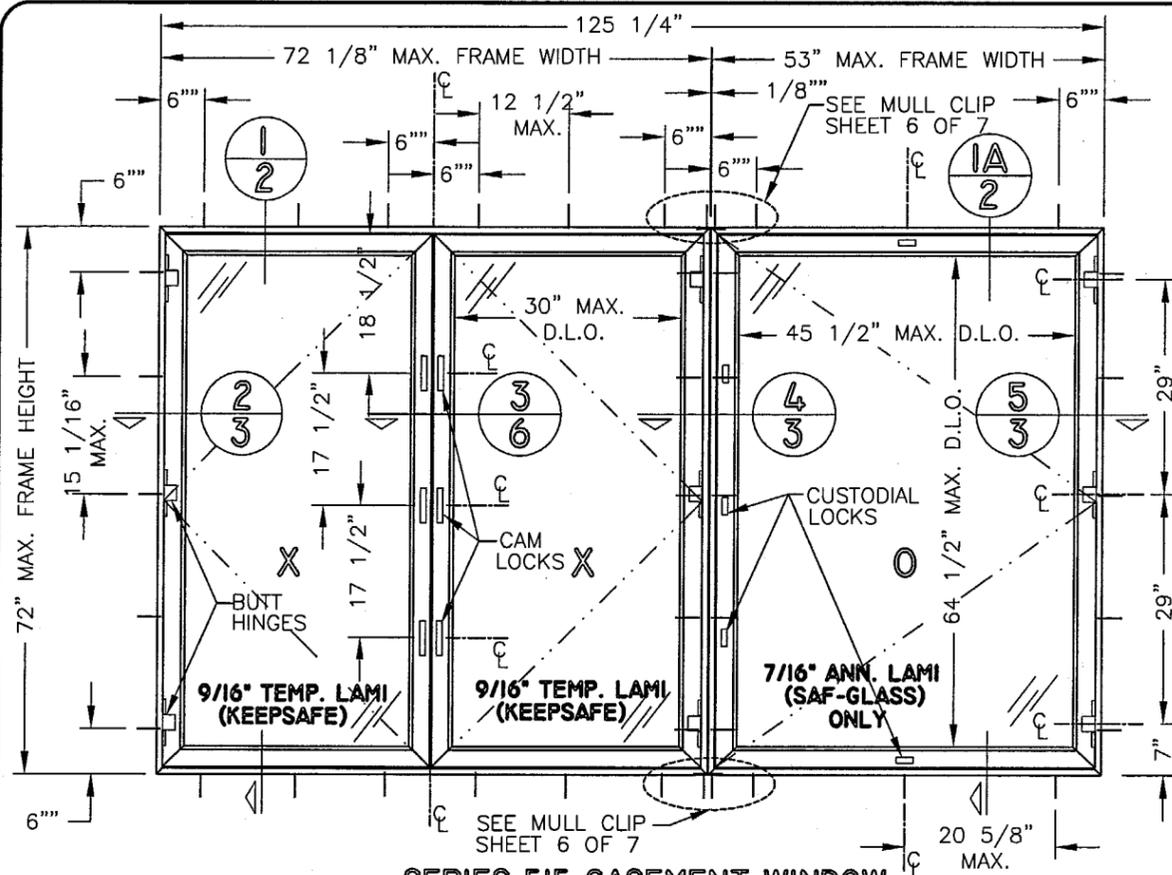
1. Letter of conformance and "No financial interest, dated 12-04-2002 signed & sealed by Ballard L. Argus, P.E.
2. Statement letter of compliance, part of test report, issued by Fenestration Testing laboratory and American Test Lab of South Florida.
3. Letter & marked-up drawing dated March 12, 2003 issued by Fenestration Testing laboratory, signed by Roberto Robleto.

F. OTHER

1. None

Ishaq I. Chanda

Ishaq I. Chanda, P. E.
Product Control Examiner
NOA No 01-1203.01
Expiration Date: May 01, 2008
Approval Date: May 01, 2003



SERIES 515 CASEMENT WINDOW

(TEST UNIT ELEVATION VIEWED FROM EXTERIOR, SCALE: 1/2" = 12")

MAXIMUM DESIGN PRESSURE (PSF)
SEE TABLES #1, #2, AND #3
TEST REPORT No.: FTL-2770
GLAZING: 7/16" SAF-GLAS BY S.I.G. (AT FIXED SASH ONLY)
- 3/16" ANNEALED GLASS
- 0.070" POLYCARBONATE INTERLAYER
- 3/16" ANNEALED GLASS
GLAZING: 9/16" SAFLEX/KEEPSAFE MAX. (AT OPER. SASH ONLY)
- 1/4" TEMPERED GLASS
- 0.060" SAFLEX IIII PVB INTERLAYER
- 1/4" TEMPERED GLASS
WATER RESISTANCE TEST: 12.00 PSF

NOTE:
THE FIXED PANEL (O) IS EQUIPPED WITH BUTT HINGES AND CUSTODIAL LOCKS FOR CLEANING PURPOSES ONLY

ANCHOR NOTES

- TYPICAL ANCHOR TYPE FOR X, XX AND XOX CONFIGURATIONS SHALL BE:
 - 1/4"Ø ELCO TEXTRON (CARBON STEEL) HEX FLANGE OR FLAT HEAD TAPCON ANCHORS, WITH THE FOLLOWING MECHANICAL PROPERTIES:
MINIMUM YIELD STRESS= 146,887 PSI
AVERAGE YIELD STRESS= 158,767 PSI
 - 5/16"Ø ELCO TEXTRON (CARBON STEEL) HEX FLANGE OR FLAT HEAD TAPCON ANCHORS, WITH THE FOLLOWING MECHANICAL PROPERTIES:
MINIMUM YIELD STRESS= 150,142 PSI
AVERAGE YIELD STRESS= 155,862 PSI
 - MINIMUM TYP. EMBEDMENTS ARE AS FOLLOW:
 - FOR X AND XX CONFIGURATIONS:
 - 1 1/2" FOR 2500/3000 PSI STRUCTURAL CONCRETE
 - 1 1/4" FOR HOLLOW CONCRETE BLOCK
 - FOR XOX, XXO, AND OXX CONFIGURATIONS:
 - 1 3/4" FOR 3200 PSI STRUCTURAL CONCRETE
 - 1 1/4" FOR HOLLOW CONCRETE BLOCK AT JAMBS ONLY
 - MINIMUM TAPCON EDGE DISTANCE FROM EDGE OF CONCRETE OR BLOCK IS 2 1/2"
 - MINIMUM TAPCON SPACING BETWEEN ADJACENT ANCHORS AT THE TOP AND BOTTOM OF THE XX CONFIGURATION VERTICAL MEETING RAIL IS 3" FOR 1/4"Ø ELCO TAPCON, AND 3 3/4" FOR 5/16"Ø ELCO TAPCON.
 - MAXIMUM SHIM SPACE BETWEEN WINDOW FRAME AND FACE OF SUBSTRATE, IS 1/4".
 - MINIMUM ANCHOR QUANTITIES ARE DEPICTED AS SOLID LINES LOCATED AROUND THE PERIMETER OF WINDOW ELEVATION, DRAWN PERPENDICULAR TO THE FRAME.
- MAXIMUM ANCHOR SPACING REQUIREMENTS:**
- HEAD AND SILL OF OPERATING VENTS FOR X, XX AND XOX CONFIGURATIONS, LOCATE ANCHORS AT 6" FROM ENDS AND 12 1/2" O.C. MAXIMUM
 - TOP AND BOTTOM OF MEETING RAILS FOR XX CONFIGURATION, LOCATE ANCHORS IN CLUSTER WITHIN 6" MAXIMUM OF EACH SIDE OF MEETING RAIL CENTERLINE.
 - HEAD AND SILL OF FIXED VENTS FOR XOX CONFIGURATIONS, LOCATE ANCHORS 6" FROM ENDS AND 20 5/8" O.C. MAXIMUM
 - JAMBS OF OPERATING AND FIXED VENTS FOR X, XX AND XOX CONFIGURATIONS, LOCATE ANCHORS 6" FROM ENDS AND 15 1/16" O.C. MAXIMUM.
6. ABOVE ANCHOR SPACING ARE MAXIMUMS; REDUCE ANCHOR SPACING FROM FRAME ENDS, IF REQUIRED, TO MAINTAIN 3" MINIMUM SPACING BETWEEN ADJACENT ANCHORS.

GENERAL NOTES

- SERIES 515 ALUMINUM CASEMENT WINDOW (SMALL MISSILE IMPACT), AS DESIGNED AND MANUFACTURED BY TM WINDOW AND DOOR, LLC.
- PRODUCT APPROVAL DRAWINGS ARE BASED ON TEST REPORTS No.: FTL-2770 (SEE ELEVATION)
- DRAWINGS PROVIDE ANCHOR INFORMATION FOR STRUCTURAL CONCRETE AND HOLLOW CONCRETE BLOCK CONSTRUCTION ONLY.
- WINDOW MINIMUM HARDWARE REQUIREMENTS:
 - EACH OPERABLE VENT TO HAVE:
 - ALUMINUM THREE PIECE BUTT HINGES 6 1/4" LONG, LOCATED 7" FROM TOP AND BOTTOM AND AT MID-SPAN WHERE THREE HINGE UNITS ARE INDICATED (SEE TABLES FOR REQUIREMENTS)
 - SURFACE MOUNTED LEVER TYPE CAM LOCKS, WITH DOUBLED MOUNTED KEEPERS, LOCATED 18 1/2" FROM TOP AND BOTTOM AND AT MID-SPAN, WHERE THREE LOCKS ARE INDICATED, AT LEFT OR RIGHT JAMBS (SEE TABLES FOR REQUIREMENTS EACH VENT SIZE)
 - ONE (1) ROTO OPERATOR AT SILL, LOCATED 4 1/2" FROM EITHER LEFT OR RIGHT JAMB.
 - EACH FIXED VENT TO HAVE:
 - ALUMINUM THREE PIECE BUTT HINGES 6 1/4" LONG, LOCATED 7" FROM TOP AND BOTTOM AND AT MID-SPAN, WHERE THREE HINGE UNITS ARE INDICATED (SEE TABLES FOR REQUIREMENTS)
 - SURFACE MOUNTED KEY OPERATED CUSTODIAL LOCKS, WITH SURFACE MOUNTED KEEPERS, LOCATED 18" FROM TOP AND BOTTOM AND AT MID-SPAN, WHERE THREE LOCKS ARE INDICATED, AT LEFT OR RIGHT JAMBS (SEE TABLES FOR REQUIREMENTS EACH VENT SIZE)
 - SURFACE MOUNTED KEY OPERATED CUSTODIAL LOCK, LOCATED AT MID-SPAN OF HEAD AND SILL WHERE CUSTODIAL LOCKS ARE INDICATED (SEE TABLES FOR REQUIREMENTS EACH VENT SIZE)
- WINDOW WEATHERSTRIPPING REQUIREMENTS:
 - SINGLE ROW, WOOL PILE WITH INTEGRAL PLASTIC FIN. -LOCATE AT PERIMETER OF FRAME AND AT FIXED MEETING RAIL, AT EACH WEATHERSTRIPPING GROOVE.
- GLAZING METHOD: EXTERIOR GLAZED WITH 0.450" (VENTS) AND 0.450" (FIXED LITES) GLASS BITE, USING SILICONE AND AN ALUMINUM TUBE GLAZING BEAD WITH SILICONE BETWEEN THE BEAD AND GLASS. GLAZING BEAD FASTENER SCREWS ARE NOT REQUIRED FOR THIS OPTION.
- ALL STRUCTURAL MEMBERS SHALL BE ALUMINUM ALLOY 6063-T6.

SHUTTER REQUIREMENTS:

DADE COUNTY APPROVED HURRICANE PROTECTION SYSTEM (SHUTTERS) ARE REQUIRED FOR ALL INSTALLATIONS UP TO 30 FEET ABOVE GRADE. SHUTTERS ARE NOT REQUIRED FOR ALL INSTALLATIONS MORE THAN 30 FEET ABOVE GRADE.

DRAWING INDEX

- SHEET 1. -GENERAL NOTES/ANCHOR NOTES/ELEVATION
- SHEET 2. -VERTICAL CROSS SECTIONS AND BILL OF MATERIALS
- SHEET 3. -HORIZONTAL CROSS SECTIONS
- SHEET 4. -LOAD/ANCHOR/HARDWARE TABLES (X & XX CONFIGURATIONS)
- SHEET 5. -LOAD/ANCHOR/CLIPS/HARDWARE TABLE (XOX CONFIGURATION)
- SHEET 6. -MULL ANCHOR CLIPS TYPES AND DETAILS
- SHEET 7. -PARTS LIST

Approved as complying with the Florida Building Code
 Date May 01, 2003
 NOAH 01-1203-01
 Miami Dade Product Council
 Division
 By Ishaq J. Chanda

BALLARD L. ARGUS, P.E.
 844 N.W. 91 TERRACE
 PLANTATION, FL 33324

[Signature]

2/25/03
 FLORIDA No.35686, CIVIL

601 N.W. 12th AVE.,
 POMPANO BEACH, FL 33069
 PHONE: (954) 781-4430
 FAX: (954) 781-3595

WINDOW AND DOOR

DWG. TITLE: GENERAL NOTES / ANCHOR NOTES / ELEVATION

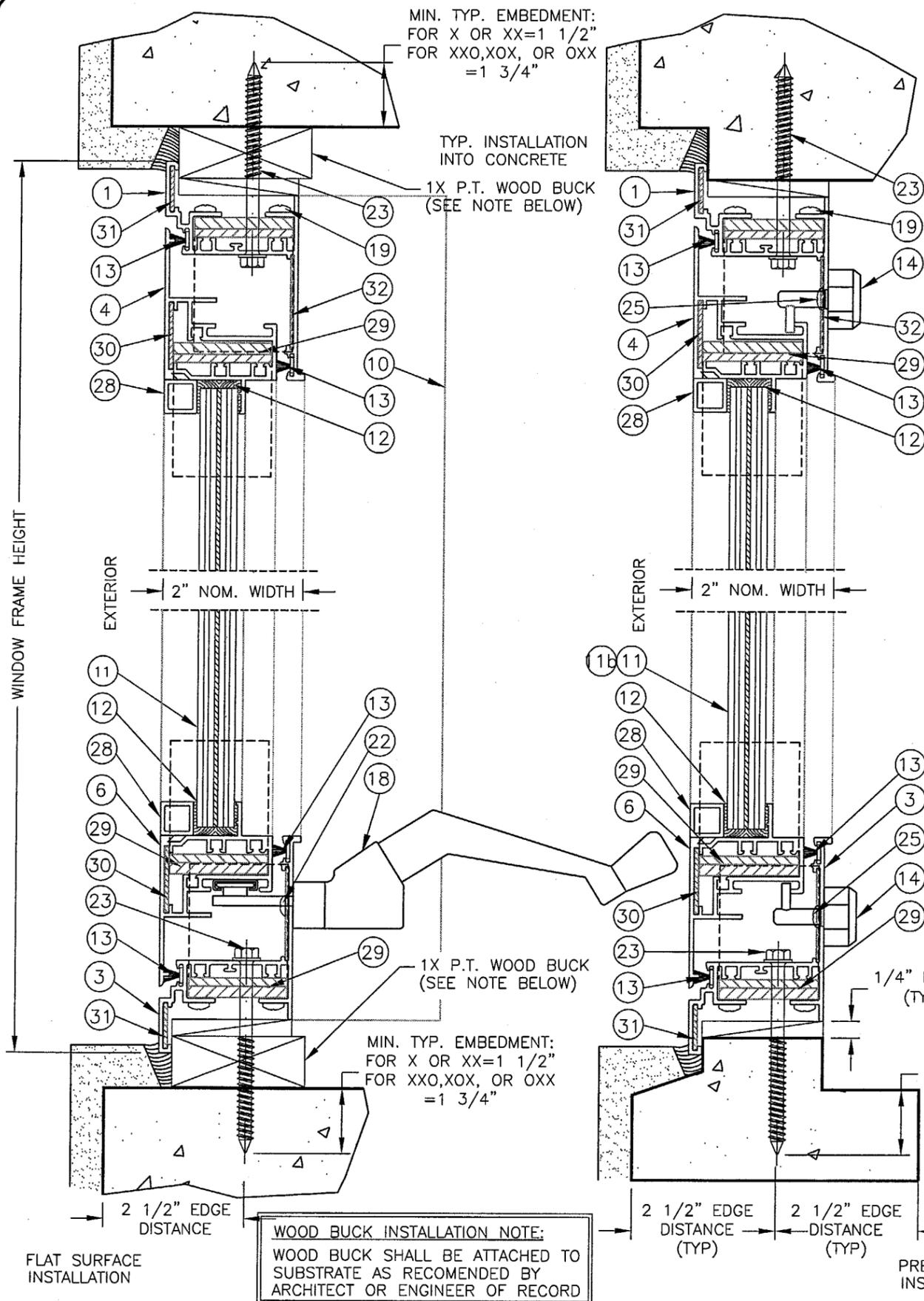
SERIES 515 ALUMINUM OUTSWING CASEMENT WINDOW (SMALL MISSILE IMPACT)

NO.	DATE	BY	DESCRIPTION
1	2/13/03	RP	GENERAL REVISION

DATE: 11/15/01
 SCALE: AS NOTED
 DWG. BY: R.P.
 CHK. BY:

DRAWING No.:
C515-SMI

SHEET 1 OF 7



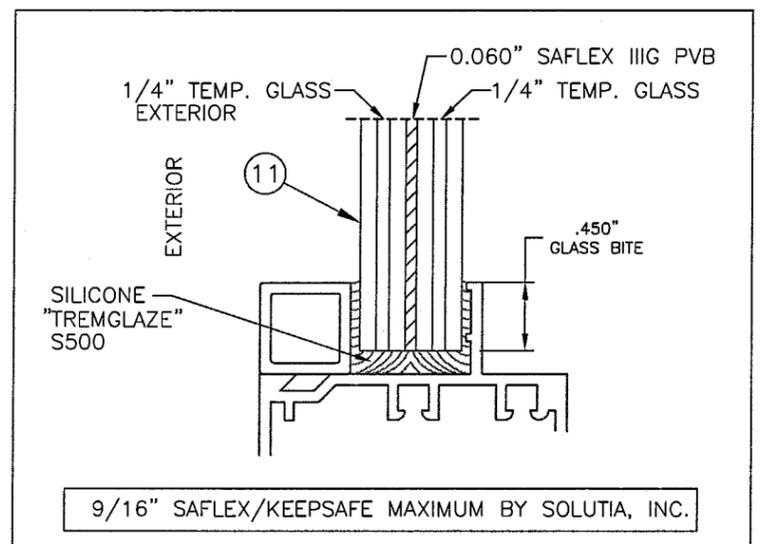
1 VERTICAL SECTION
2 SCALE: HALF SIZE

1A VERTICAL SECTION
2 SCALE: HALF SIZE

BILL OF MATERIALS

ITEM	QTY.	PART No.	MATERIAL	DESCRIPTION	LOCATION
1	2	GW 37528	6063-T6 ALUM.	FRAME HEAD	WINDOW FRAME
2	4	GW 37528	6063-T6 ALUM.	FRAME JAMB	WINDOW FRAME
3	2	GW 37528	6063-T6 ALUM.	FRAME SILL	WINDOW FRAME
4	2	GW 37526	6063-T5 ALUM.	VENT TOP	WINDOW SASH
5	4	GW 37526	6063-T5 ALUM.	VENT STILE	WINDOW SASH
6	2	GW 37526	6063-T5 ALUM.	VENT BOTTOM	WINDOW SASH
7	9	GW 37521	6063-T5 ALUM.	VENT INTERIOR HINGE	FRAME JAMB
8	9	GW 37522	6063-T5 ALUM.	VENT EXTERIOR HINGE	FRAME JAMB
9	1	TM-102	6063-T6 ALUM.	MEETING RAIL	WINDOW FRAME
10	1	TM-82	6063-T6 ALUM.	MULL	ADJACENT JAMBS
11	2	---	GLASS	9/16" "SAFLEX" LAMINATED	OPER. SASH VENTS
11b	1	---	GLASS	7/16" "SAF-GLASS" LAMINATED	FIXED SASH VENTS
12	AS REQ'D	S500	SILICONE	"TREMGLAZE" S500	GLASS PERIMETER
13	AS REQ'D	2230	WOOL	FINSEAL #2230	WINDOW FRAME
14	5	28-23-01-101	CAST ZINC	"TRUTH" KEY OPERATED CUSTODIAL LOCK	FIXED VENT
15	6	24-11-32	CAST ZINC	"TRUTH" LOCK HANDLE	MEETING RAIL/JAMB
17	4	30238	S. STEEL	"TRUTH" KEEPER	MEETING RAIL/JAMB
18	3	23-65-32	CAST ZINC	"TRUTH" SINGLE ARM (FACE-MOUNT) OPERATOR	FRAME SILL
19	3/CORNER	---	S. STEEL	#10 x 1 1/4" P.H. SMS.	FRAME/SASH CORNER
20	AS REQ'D	---	S. STEEL	#10 x 3/8" P.H. SMS.	HINGES/CAM LATCH
21	2/EACH	---	S. STEEL	#10 x 3/8" P.H. "TYPE B" SCREW	KEEPER
22	2/EACH	---	S. STEEL	#10 x 3/8" T.H. "TYPE C" SCREW	ROTO OPERATOR
23	AS REQ'D	---	STEEL	1/4"Ø OR 5/16"Ø TAPCON (SEE TABLES FOR QTY.)	WINDOW FRAME
24	AS REQ'D	---	S. STEEL	#14 x 1 1/2" P.H. SMS.	FRAME MULLION
25	2/EACH	---	S. STEEL	#10-24 "TYPE C" SCREW	CUSTODIAL LOCK
26	8/MULL	---	S. STEEL	#14 x 1/2" F.H. SMS.	MULL TOP & BOTTOM
27	1/HINGE	---	STEEL	3/16"Ø x 5.8" LONG HINGE ROD	HINGE ASSY.
28	AS REQ'D	---	ALUMINUM	1/2 x 1/2 x 1/16" TUBULAR GLASS STOP	WINDOW VENTS
29	20	SW 27713	ALUMINUM	CORNER KEY	VENT CORNERS
30	12	---	ALUMINUM	3 x 1 x 1/16" THK. CHEVRON	VENT CORNERS
31	8	---	ALUMINUM	3 x 11/16 x 1/16" THK. CHEVRON	FRAME CORNER
32	8	---	ALUMINUM	3 x 1 3/8 x .041" THK. CHEVRON	FRAME CORNER
33	2/MULL	TM-096	6063-T6 ALUM.	2 x 3 5/16 x 5 1/2 x 1/8" THK. MULL CLIP "A3"	MULL TOP & BOTTOM
34	4/MULL	---	6063-T5 ALUM.	2 x 1 1/2 x 4 x 1/8" THK. ANGLE CLIP "A1"	MULL TOP & BOTTOM
36	2/HINGE	---	ALUMINUM	CAP RIVET	HINGES

FOR INSTALLATIONS UP TO 30 FEET ABOVE GRADE,
SHUTTERS ARE REQUIRED. FOR INSTALLATIONS ABOVE
30 FEET ABOVE GRADE, SHUTTERS ARE NOT REQUIRED.



OPERABLE SASH GLASS DETAIL
SCALE: FULL SIZE
(NOTE: SEE PAGE 7 OF 7 FOR FIXED SASH GLASS DETAIL)

Approved as complying with the
Florida Building Code
Date March 2003
NOA# 01-1203-01
Miami-Dade/Fallon County
By Ishag J. Chaudhry

BALLARD L. ARGUS, P.E.
844 N.W. 91 TERRACE
PLANTATION, FL 33324

2/25/03
FLORIDA No.35686, CIVIL

601 N.W. 12th AVE.
POMPANO BEACH, FL 33069
PHONE: (954) 781-4430
FAX: (954) 781-3595

WINDOW AND DOOR

TM

DWG. TITLE: VERTICAL CROSS SECTIONS AND BILL OF MATERIALS

SERIES 515 ALUMINUM OUTSWING
CASEMENT WINDOW
(SMALL MISSILE IMPACT)

REVISIONS	NO.	DATE	BY	DESCRIPTION
	1	2/13/03	RP	GENERAL REVISION

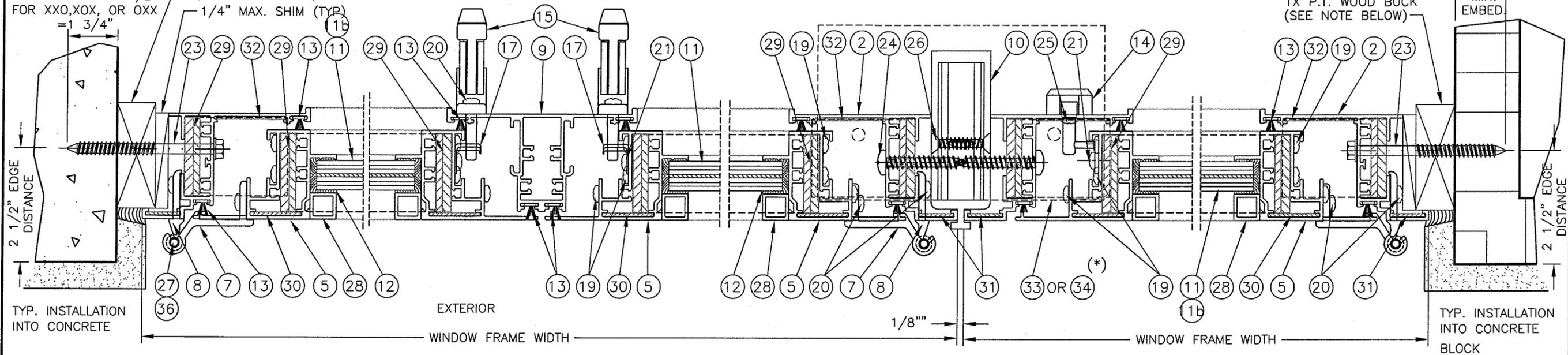
DATE: 11/15/01
SCALE: AS NOTED
DWG. BY: R.P.
CHK. BY:

DRAWING No.:
C515-SM1
SHEET 2 OF 7

MIN. TYP. EMBEDMENT:
FOR X OR XX=1 1/2"
FOR XXO,XXX, OR OXX
=1 3/4"

1X P.T. WOOD BUCK
(SEE NOTE BELOW)
1/4" MAX. SHIM (TYP)

1X P.T. WOOD BUCK
(SEE NOTE BELOW)
1 1/4" MIN. EMBED.

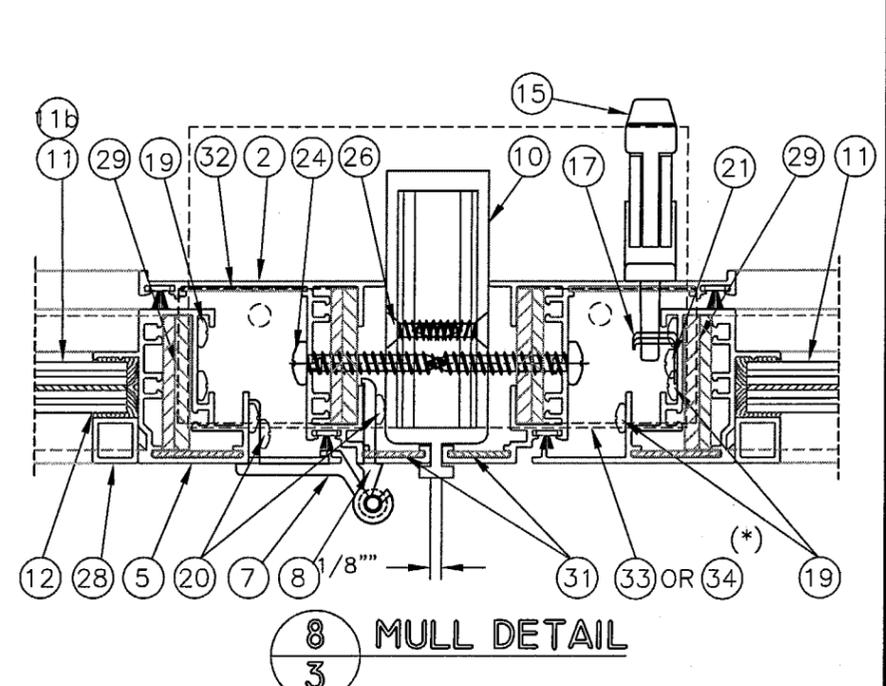
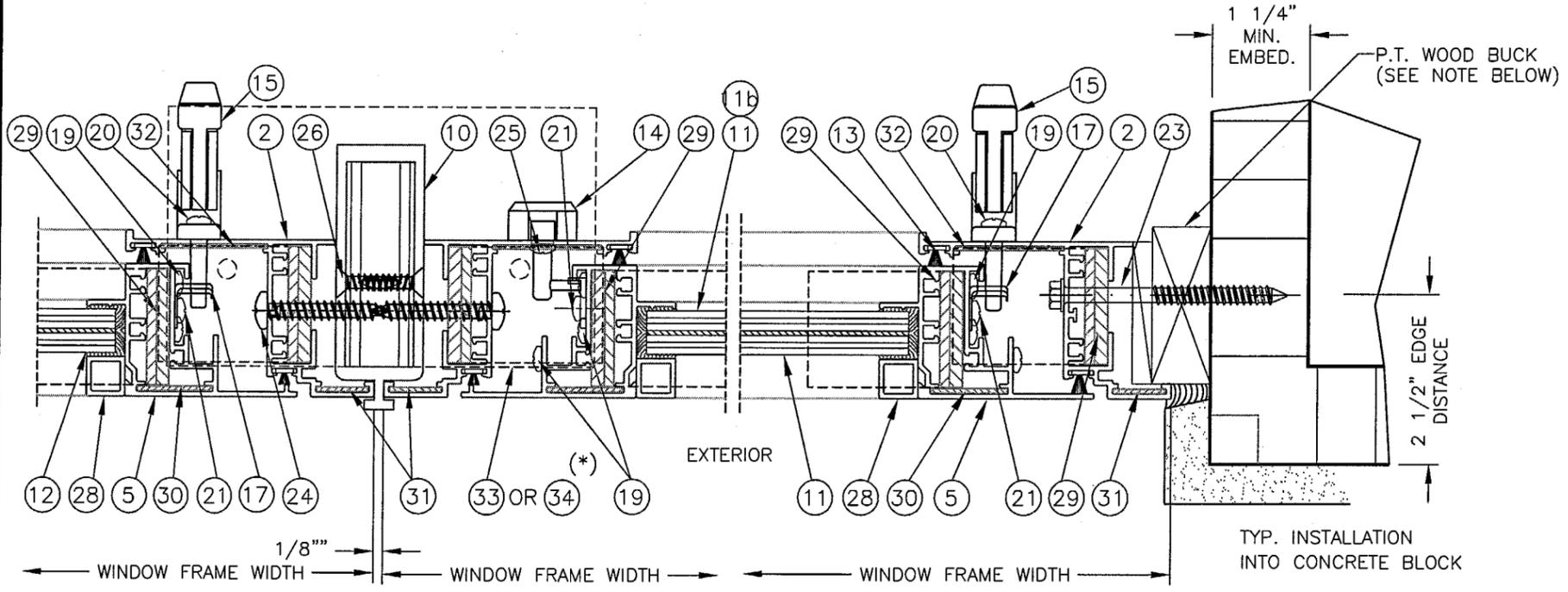


2 JAMB HINGE DETAIL
3

3 MEETING RAIL DETAIL
3

4 MULL DETAIL
3

5 JAMB HINGE DETAIL
3



6 MULL DETAIL
3

7 JAMB LOCK DETAIL
3

8 MULL DETAIL
3

WOOD BUCK INSTALLATION NOTE:
WOOD BUCK SHALL BE ATTACHED TO SUBSTRATE AS RECOMMENDED BY ARCHITECT OR ENGINEER OF RECORD (TYPICAL)

FOR INSTALLATIONS UP TO 30 FEET ABOVE GRADE, SHUTTERS ARE REQUIRED. FOR INSTALLATIONS ABOVE 30 FEET ABOVE GRADE, SHUTTERS ARE NOT REQUIRED.

Approved as complying with the Florida Building Code
Date May 01, 2003
NOA# 01-1203-01
Miami Dade/Prothon County
Division
By Ishaq J. Chanda

BALLARD L. ARGUS, P.E.
844 N.W. 91 TERRACE
PLANTATION, FL 33324

[Signature]

2/25/03
FLORIDA No.35686, CIVIL

(*) SEE PAGE 6 OF 7 FOR MULL ANCHOR CLIP TYPE APPLICATION.

601 N.W. 12th AVE.
POMPAHO BEACH, FL 33069
PHONE: (954) 781-4430
FAX: (954) 781-3595

WINDOW AND DOOR

7M

DWG. TITLE: HORIZONTAL CROSS SECTIONS

SERIES 515 ALUMINUM OUTSWING CASEMENT WINDOW (SMALL MISSILE IMPACT)

REVISIONS	NO.	DATE	BY	DESCRIPTION
	1	2/13/03	RF	GENERAL REVISION

DATE: 11/15/01
SCALE: HALF SIZE
DWG. BY: R.P.
CHK. BY:

DRAWING No.:
C515-SMI
SHEET 3 OF 7

TABLE # 1:

INSTALLATION FASTENER CHART/HARDWARE (X CONFIGURATION)

GLAZING: 9/16" TEMP. LAM. (SAFLEX/KEEPSAFE MAXIMUM), BASED ON TEST REPORT No.: FTL 2770

2.728" SILL HEIGHT, WATER RESISTANCE TEST: 12.00 PSF
(ELCO 1/4" Ø OR 5/16" Ø TAPCONS IN 2500/3000 PSI CONCRETE SUBSTRATE)

CONFIGURATION X	2500 PSI CONCRETE/ HOLLOW CBS		REQUIRED HARDWARE		REQUIRED ANCHORS (1/4"Ø)		REQUIRED ANCHORS (5/16"Ø)				
	PRODUCT CODE	FR. WIDTH (in)	FR. HEIGHT (in)	POSITIVE (+)	NEGATIVE (-)	BUTT HINGES (QTY.)	LOCKS (QTY.)	HEAD/SILL (QTY.)	EACH JAMB (QTY.)	HEAD/SILL (QTY.)	EACH JAMB (QTY.)
12	19 1/8	26	80.0	-80.0	2	1	2	2	2	2	2
13	19 1/8	38 3/8	80.0	-80.0	2	2	2	3	2	3	3
14	19 1/8	50 5/8	80.0	-80.0	3	2	2	4	2	4	4
15	19 1/8	63	80.0	-80.0	3	3	2	5	2	5	5
16	19 1/8	72	80.0	-80.0	3	3	2	5	2	5	5
1/2 32	26 1/2	26	80.0	-80.0	2	1	3	2	3	2	2
1/2 33	26 1/2	38 3/8	80.0	-80.0	2	2	3	3	3	3	3
1/2 34	26 1/2	50 5/8	80.0	-80.0	3	2	3	4	3	4	4
1/2 35	26 1/2	63	80.0	-80.0	3	3	3	5	3	5	5
1/2 36	26 1/2	72	80.0	-80.0	3	3	3	5	3	5	5
---	32	26	80.0	-80.0	2	1	3	2	3	2	2
---	32	38 3/8	80.0	-80.0	2	2	3	3	3	3	3
---	32	50 5/8	80.0	-80.0	3	2	3	4	3	4	4
---	32	63	80.0	-80.0	3	3	3	5	3	5	5
---	32	72	80.0	-80.0	3	3	3	5	3	5	5
22	37	26	80.0	-80.0	2	1	3	2	3	2	2
23	37	38 3/8	80.0	-80.0	2	2	3	3	3	3	3
33	37	50 5/8	80.0	-80.0	3	2	3	4	3	4	4
25	37	63	80.0	-80.0	3	3	3	5	3	5	5
26	37	72	80.0	-80.0	3	3	3	5	3	5	5

TABLE # 2:

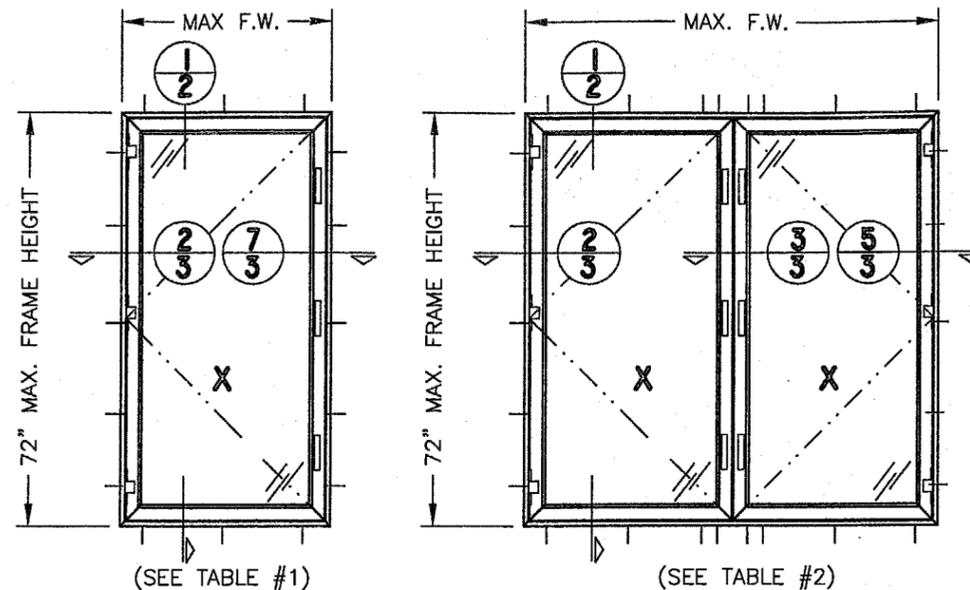
INSTALLATION FASTENER CHART/HARDWARE (XX CONFIGURATION)

GLAZING: 9/16" TEMP. LAM. (SAFLEX/KEEPSAFE MAXIMUM), BASED ON TEST REPORT No.: FTL 2770

2.728" SILL HEIGHT, WATER RESISTANCE TEST: 12.00 PSF
(ELCO 1/4" Ø OR 5/16" Ø TAPCONS IN 2500/3000 PSI CONCRETE SUBSTRATE)

CONFIGURATION XX	2500 PSI CONCRETE/ HOLLOW CBS		REQUIRED HARDWARE PER OPERABLE VENT		(USING 1/4"Ø TAPCON)					(USING 5/16"Ø TAPCON)				
	PRODUCT CODE	FR. WIDTH (in)	FR. HEIGHT (in)	BUTT HINGES (QTY.)	LOCKS (QTY.)	POSITIVE (+)	NEGATIVE (-)	MEETING RAIL HEAD/SILL (QTY.)	OTHER HEAD/SILL (QTY.)	EACH JAMB (QTY.)	POSITIVE (+)	NEGATIVE (-)	MEETING RAIL HEAD/SILL (QTY.)	OTHER HEAD/SILL (QTY.)
22	37	26	2	1	80.0	-80.0	2	2	2	80.0	-80.0	2	2	2
23	37	38 3/8	2	2	80.0	-80.0	2	2	3	80.0	-80.0	2	2	3
24	37	50 5/8	3	2	80.0	-80.0	4	2	4	80.0	-80.0	2	2	4
25	37	63	3	3	80.0	-80.0	4	2	5	80.0	-80.0	2	2	5
26	37	72	3	3	80.0	-80.0	4	2	5	80.0	-80.0	2	2	5
---	48	26	2	1	80.0	-80.0	2	2	2	80.0	-80.0	2	2	2
---	48	38 3/8	2	2	80.0	-80.0	4	2	3	80.0	-80.0	2	2	3
---	48	50 5/8	3	2	80.0	-80.0	4	2	4	80.0	-80.0	2	2	4
---	48	63	3	3	80.0	-80.0	4	2	5	80.0	-80.0	2	2	5
---	48	72	3	3	80.0	-80.0	4	2	5	80.0	-80.0	2	2	5
32	53 1/8	26	2	1	80.0	-80.0	2	4	2	80.0	-80.0	2	4	2
33	53 1/8	38 3/8	2	2	80.0	-80.0	4	4	3	80.0	-80.0	2	4	3
34	53 1/8	50 5/8	3	2	80.0	-80.0	4	4	4	80.0	-80.0	2	4	4
35	53 1/8	63	3	3	80.0	-80.0	4	4	5	80.0	-80.0	4	4	5
36	53 1/8	72	3	3	80.0	-73.5	4	4	5	80.0	-80.0	4	4	5
---	60	26	2	1	80.0	-80.0	2	4	2	80.0	-80.0	2	4	2
---	60	38 3/8	2	2	80.0	-80.0	4	4	3	80.0	-80.0	2	4	3
---	60	50 5/8	3	2	80.0	-80.0	4	4	4	80.0	-80.0	2	4	4
---	60	63	3	3	80.0	-74.4	4	4	5	80.0	-80.0	4	4	5
---	60	72	3	3	80.0	-65.1	4	4	5	80.0	-80.0	4	4	5
---	74	26	2	1	80.0	-73.0	2	4	2	80.0	-78.0	2	4	2
---	74	38 3/8	2	2	80.0	-72.2	4	4	3	80.0	-72.2	2	4	3
---	74	50 5/8	3	2	80.0	-72.2	4	4	4	80.0	-72.2	4	4	4
---	74	63	3	3	80.0	-60.3	4	4	5	80.0	-72.2	4	4	5
---	72 3/16	72	3	3	72.3	-54.1	4	4	5	80.0	-80.0	4	4	5

OTHER CONFIGURATIONS



FOR INSTALLATIONS UP TO 30 FEET ABOVE GRADE, SHUTTERS ARE REQUIRED. FOR INSTALLATIONS ABOVE 30 FEET ABOVE GRADE, SHUTTERS ARE NOT REQUIRED.

NOTES:
-SEE ANCHOR NOTES ON SHEET 1 OF 7
-SEE MULL ANCHOR DETAILS ON SHEET 6 OF 7

Approved as complying with the Florida Building Code
Date MAY 01, 2003
NOA# 01-1203-01
Miami Dade Product Control
By Shaq. I. Chande

BALLARD I. ARGUS, P.E.
844 N.W. 91 TERRACE
PLANTATION, FL 33324
2/25/03
FLORIDA No.35686, CIVIL

601 N.W. 12th AVE.,
POMFANO BEACH, FL 33069
PHONE: (954) 781-4430
FAX: (954) 781-3595

WINDOW AND DOOR

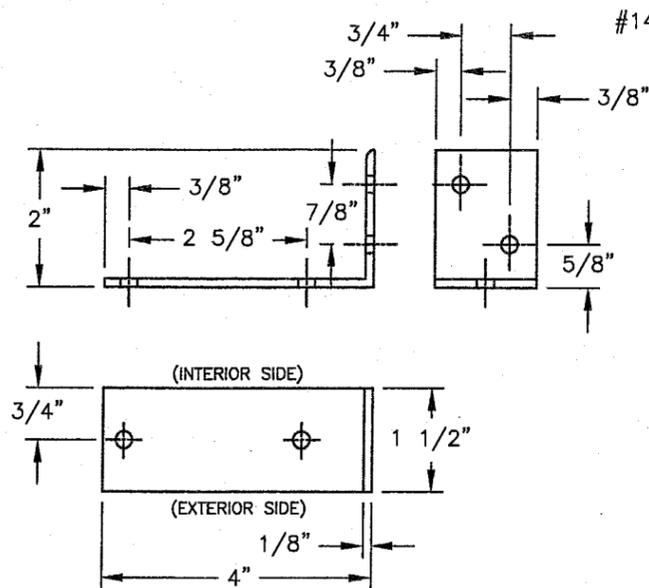
SERIES 515 ALUMINUM OUTSWING CASEMENT WINDOW (SMALL MISSILE IMPACT)

REVISIONS

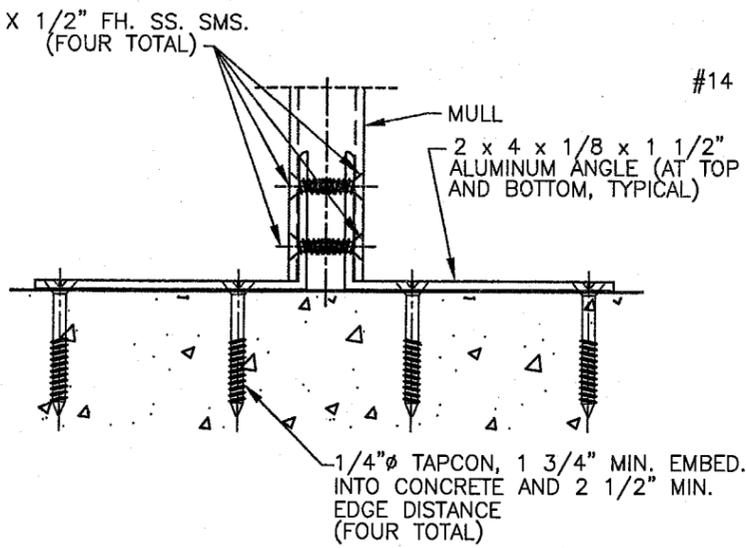
NO.	DATE	BY	DESCRIPTION
1	2/13/03	RP	GENERAL REVISION

DATE: 11/15/01
SCALE:
DWG. BY: R.P.
CHK. BY:

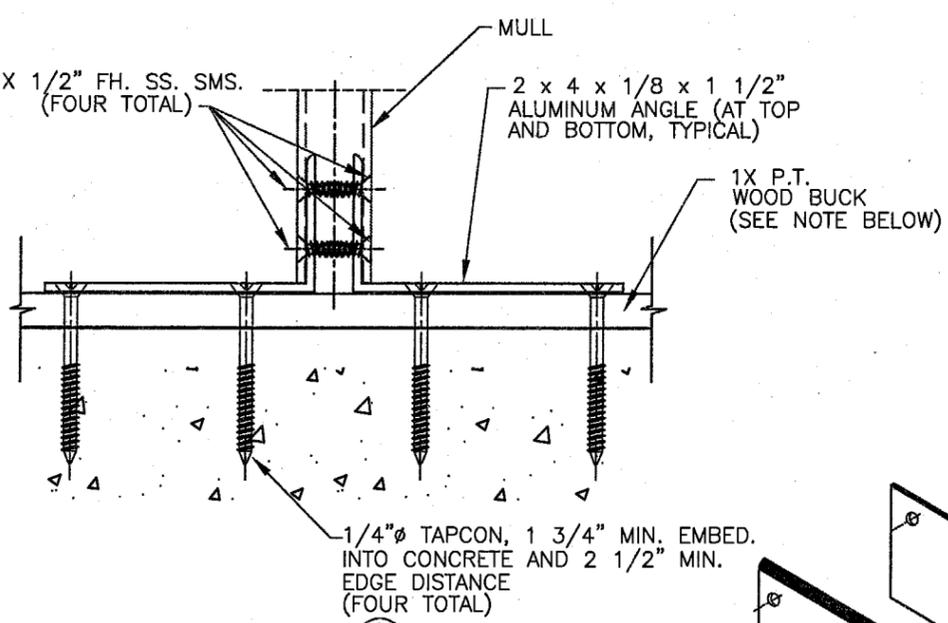
DRAWING No.: C515-SMI
SHEET 4 OF 7



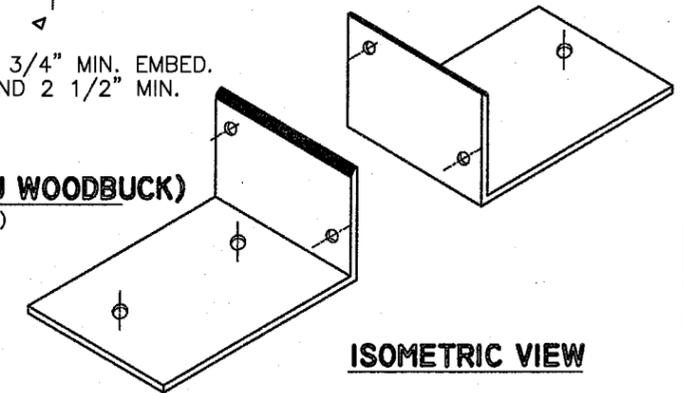
MULLION ANCHOR CLIP "TYPE A1"
(INTENDED TO BE USED FOR PRECAST SILL INSTALLATIONS)



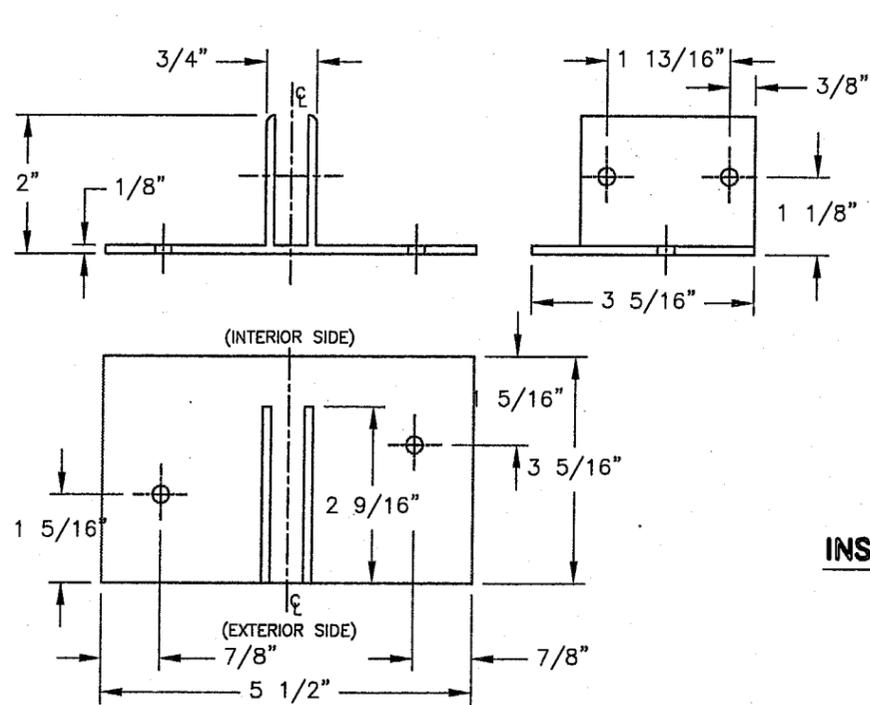
INSTALLATION DETAIL IA 2 (INTO CONC.)
(BOTTOM LOCATION SHOWN, AT TOP SIMILAR)



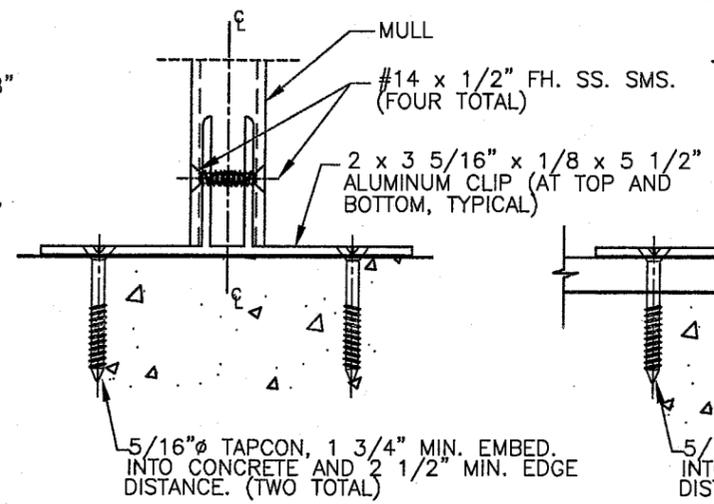
INSTALLATION DETAIL 1 2 (IX THRU WOODBUCK)
(BOTTOM LOCATION SHOWN, AT TOP SIMILAR)



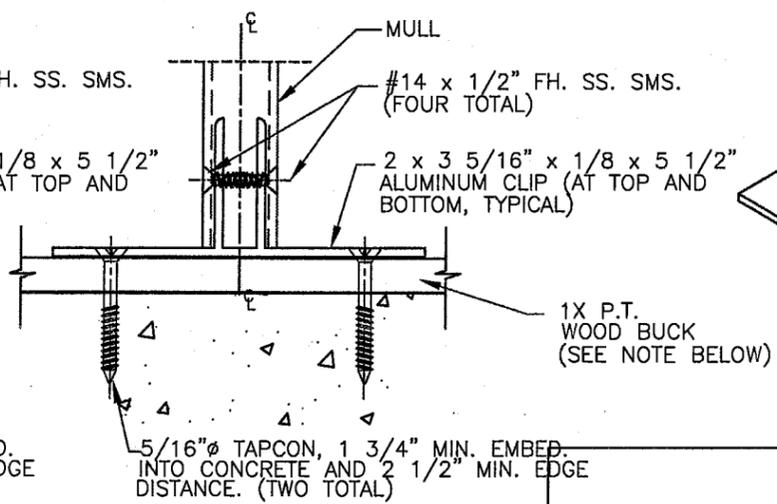
WOOD BUCK INSTALLATION NOTE:
WOOD BUCK SHALL BE ATTACHED TO SUBSTRATE AS RECOMMENDED BY ARCHITECT OR ENGINEER OF RECORD (TYPICAL)



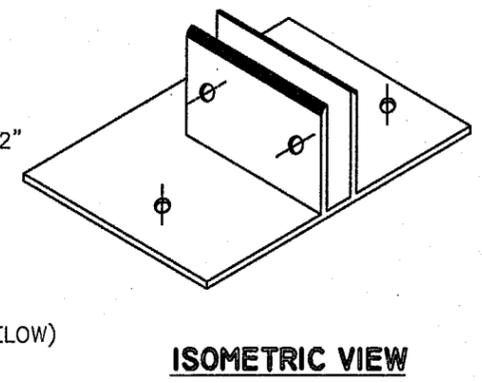
MULLION ANCHOR CLIP "TYPE A3"
(INTENDED TO BE USED FOR FLAT SURFACE INSTALLATIONS)



INSTALLATION DETAIL IA 2 (INTO CONC.)
(BOTTOM LOCATION SHOWN, AT TOP SIMILAR)



INSTALLATION DETAIL 1 2 (THRU WOODBUCK)
(BOTTOM LOCATION SHOWN, AT TOP SIMILAR)



WOOD BUCK INSTALLATION NOTE:
WOOD BUCK SHALL BE ATTACHED TO SUBSTRATE AS RECOMMENDED BY ARCHITECT OR ENGINEER OF RECORD (TYPICAL)

Approved as complying with the Florida Building Code
Date May 01, 2003
NOA# 01-1202.0
Miami Dade Product Control
Division
By Shaq L. Chandra

BALLARD L. ARGUS, P.E.
844 N.W. 91 TERRACE
PLANTATION, FL 33324

[Signature]

2/25/03

FLORIDA No.35686, CIVIL

601 N.W. 12th AVE.
POMPANO BEACH, FL 33069
PHONE: (954) 781-4430
FAX: (954) 781-3595

WINDOW AND DOOR

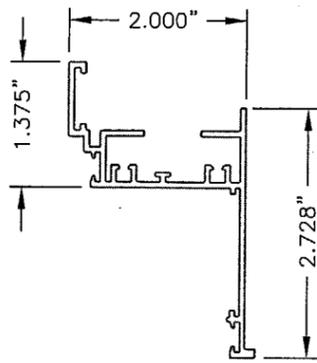
DWG. TITLE: MULL ANCHOR CLIPS DETAILS.

SERIES 515 ALUMINUM OUTSWING CASEMENT WINDOW (SMALL MISSILE IMPACT)

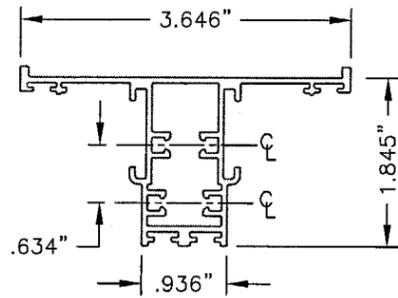
REVISIONS	NO.	DATE	BY	DESCRIPTION
	1	2/13/03	RP	GENERAL REVISION

DATE: 11/15/01
SCALE: HALF SIZE
DWG. BY: R.P.
CHK. BY:

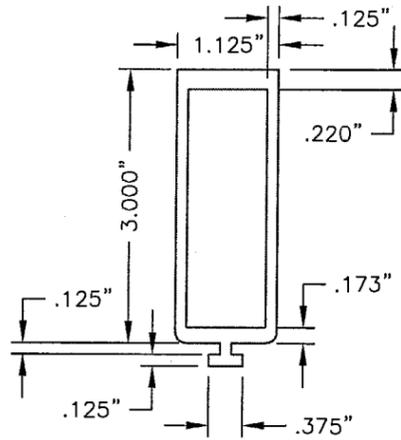
DRAWING No.: C515-SM1
SHEET 6 OF 7



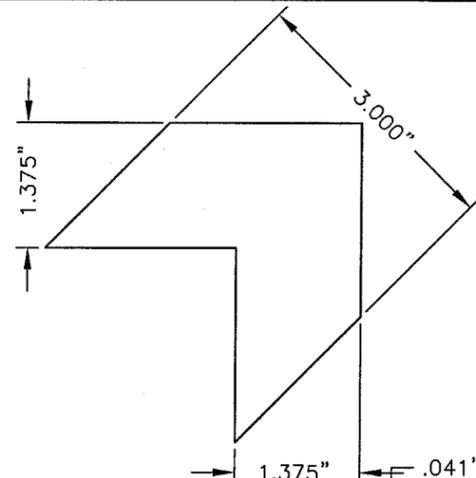
GW 37528 ITEM ① ② ③
FRAME HEAD / SILL / JAMB



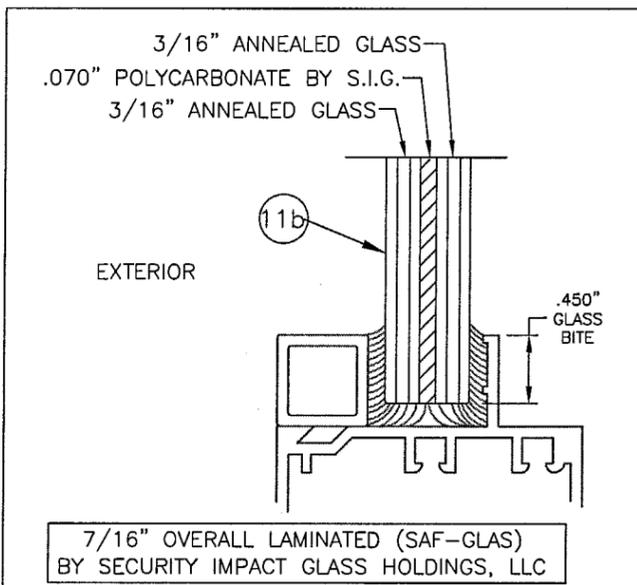
GW 37524 (TM-102) ITEM ⑨
MEETING RAIL



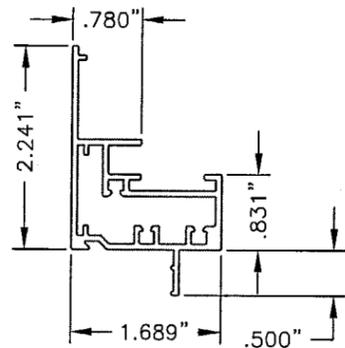
TM-82 ITEM 10
3" STRUCTURAL MULLION



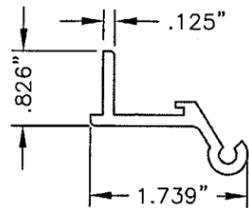
ITEM ③② 3 x 1 3/8" CHEVRON



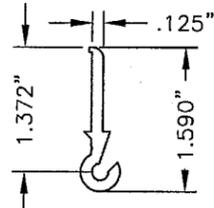
**FIXED SASH
GLASS DETAIL**
SCALE: FULL SIZE



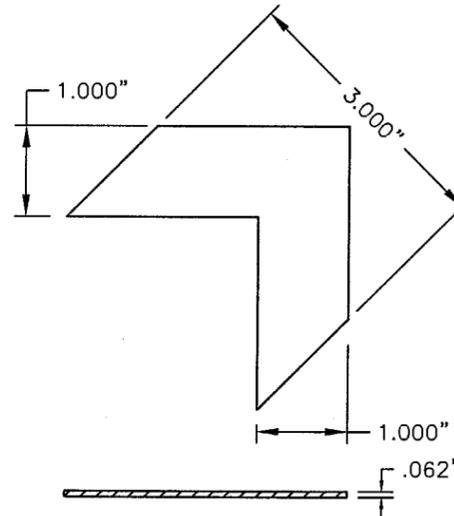
GW 37526 ITEMS ④ ⑤ ⑥
VENT TOP, BOTTOM AND SIDE STILES



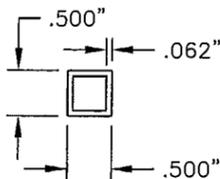
GW 37521
CASEMENT INTERIOR HINGE



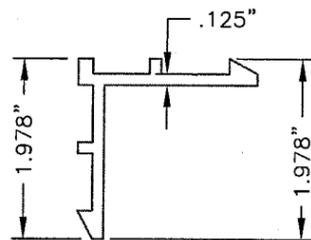
GW 37522
CASEMENT EXTERIOR HINGE



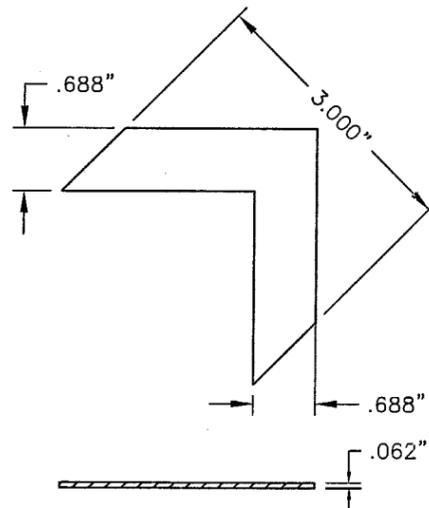
ITEM ③③ 3 x 1" CHEVRON



ITEM ②⑧ 1/2" x 1/2" x .062" THK.
TUBULAR GLAZING STOP



SW 27713
CORNER KEY



ITEM ③① 3 x 11/16" CHEVRON

Approved as complying with the
Florida Building Code
Date: May 01, 2003
NOA# 01-1203-01
Miami Dade Permit Control
Division
By: Shaq L. Chanda

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FAX: (954) 781-3595

**WINDOW
AND DOOR**

DWG. TITLE: PARTS LIST

SERIES 515 ALUMINUM OUTSWING
CASEMENT WINDOW
(SMALL MISSILE IMPACT)

REVISIONS	No.	DATE	BY	DESCRIPTION
	1	2/13/03	RP	GENERAL REVISION

DATE: 11/15/01
SCALE: HALF SIZE
DWG. BY: R.P.
CHK. BY:

DRAWING No.:
C515-SMI

SHEET 7 OF 7