



DEPARTMENT OF PERMITTING, ENVIRONMENT, AND REGULATORY
AFFAIRS (PERA)

BOARD AND CODE ADMINISTRATION DIVISION

NOTICE OF ACCEPTANCE (NOA)

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION

11805 SW 26 Street, Room 208

Miami, Florida 33175-2474

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www.miamidade.gov/pera

Hartman Windows and Doors, LLC

531 Southern Blvd.

West Palm Beach, FL 33405

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County PERA - Product Control Section 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 Section (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. PERA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section 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 "European Mahogany" Inswing Wood Casement Window - L.M.I.

APPROVAL DOCUMENT: Drawing No. **06-HWD-0004**, titled "European Series Mahogany Inswing Casement Windows-Large Missile Impact Resistant", sheets 1, 2, 2A, 3, 3A, 4, 4A, 5, & 6 thru 13, 13A, 14 & 15 thru 26 of 26, dated 01/27/07, with revision dated 01/25/12, prepared by Engineering Express, signed and sealed by Frank L. Bennardo, 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 Section.

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, model/series, 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 and renews** NOA# **08-1119.04** and 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 **Manuel Perez, P.E.**



MP
7/7/2/12

NOA No. 12-0319.03

Expiration Date: April 12, 2017

Approval Date: July 12, 2012

Page 1

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS

1. Manufacturer's die drawings and sections.
2. Drawing No **06-HWD-0004**, Sheets 1, 2, 2A, 3, 3A, 4, 4A, 5, & 6 thru 13, 13A, 14 & 15 thru 26 of 26, titled "European Series Mahogany Inswing Casement Windows—Large Missile Impact Resistant", dated 01/27/07 with revision dated 01/25/12, prepared by Engineering Express, signed and sealed by Frank Bennardo, 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, TAS 202-94

along with marked-up drawings and installation diagram of wood inswing/outswing casement windows, prepared by Fenestration Testing Laboratory, Inc., Test Report No. **FTL-5292**, dated 08/16/07, signed and sealed by Carlos S. Rionda, P.E.

(Submitted under previous NOA#08-1119.04)

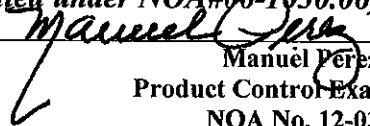
2. Test reports on: 1) Air Infiltration Test, per FBC, TAS 202-94
2) Uniform Static Air Pressure Test, Loading per FBC TAS 202-94
3) Water Resistance Test, per FBC, TAS 202-94
4) Large Missile Impact Test per FBC, TAS 201-94
5) Cyclic Wind Pressure Loading per FBC, TAS 203-94
6) Forced Entry Test, per FBC 2411 3.2.1, TAS 202-94

along with marked-up drawings and installation diagram of wood inswing/outswing casement windows, prepared by Fenestration Testing Laboratory, Inc., Test Report No. **FTL-5291**, dated 09/24/07, signed and sealed by Carlos S. Rionda, P.E.

(Submitted under previous NOA#08-1119.04)

3. 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, TAS 202-94

along with marked-up drawings and installation diagram of: specimen #1 (arch top inswing tilt/turn); #2 (arch top outswing); #3 (inswing); #4 (European French outswing mulled); specimen #5 (arch top mulled direct set); #6 (French inswing tilt/turn w/transom), and #7 (arch top direct glazed) wood casement window, prepared by Hurricane Test Laboratory, Test Report No. **HTL 0137-0714-05**, dated from 07/27/05 to 06/08/06, signed and sealed by Vinu J. Abraham, P.E. *(Submitted under NOA#06-1030.06)*


Manuel Pérez, P.E.
Product Control Examiner
NOA No. 12-0319.03
Expiration Date: April 12, 2017
Approval Date: July 12, 2012

Hartman Windows and Doors, LLC

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C. CALCULATIONS

1. Anchor verification calculations and structural analysis, complying with FBC-2004 and FBC-2007, prepared by Express Engineering, dated 10/14/08, signed and sealed by Frank L. Bennardo, P.E.
(Submitted under previous NOA# 08-1119.04)
2. Glazing complies with ASTM E1300-04

D. QUALITY ASSURANCE

1. Miami-Dade Department of Permitting, Environment, and Regulatory Affairs (PERA)

E. MATERIAL CERTIFICATIONS

1. Notice of Acceptance No. **11-0624.02** issued to **E.I. DuPont DeNemours & Co., Inc.** for their "**DuPont SentryGlas® Interlayer**" dated 08/25/11, expiring on 01/14/17.
2. Notice of Acceptance No. **11-0325.05** issued to Solutia, Inc. for their "**Saflex and Vanceva clear and color interlayers**" dated 05/05/11, expiring on 05/21/16
3. Notice of Acceptance No. **08-1224.04** issued to Solutia, Inc. for their "**Saflex Composites Glass Interlayer with PET Core**" dated 02/25/09, expiring on 12/11/13.

F. STATEMENTS

1. Statement letter of conformance, complying with FBC 2010, dated March 15, 2012, signed and sealed by Frank L. Bennardo, P.E.
2. Statement letter of no financial interest, dated March 15, 2012, signed and sealed by Frank L. Bennardo, P.E.
3. Laboratory compliance letter for Test Report No. **FTL-5292**, issued by Fenestration Testing Laboratory, Inc., dated 12/27/07, signed and sealed by Carlos S. Rionda, P.E.
(Submitted under previous NOA# 08-1119.04)
4. Laboratory compliance letter for Test Report No. **FTL-5291**, issued by Fenestration Testing Laboratory, Inc., dated 01/04/08, signed and sealed by Carlos S. Rionda, P.E.
(Submitted under previous NOA# 08-1119.04)

G. OTHERS

1. Notice of Acceptance No. **08-1119.04**, issued to Hartman Windows and Doors, LLC for their Series "European Mahogany" Inswing Wood Casement Window – L.M.I., approved on 07/22/09 and expiring on 04/12/12.


Manuel Perez, P.E.
Product Control Examiner
NOA No. 12-0319.03
Expiration Date: April 12, 2017
Approval Date: July 12, 2012

EUROPEAN SERIES

MAHOGANY INSWING CASEMENT WINDOWS

LARGE MISSILE IMPACT RESISTANT

GENERAL NOTES

1. THE SYSTEM DESCRIBED HEREIN HAS BEEN DESIGNED AND TESTED IN ACCORDANCE WITH THE 2010 FLORIDA BUILDING CODE, FOR USE WITHIN AND OUTSIDE THE HIGH VELOCITY HURRICANE ZONE, PER TAS 201 / 202 / 203 & ASTM E1300 STANDARDS.
2. NO 33-1/3% INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THIS SYSTEM. WIND LOAD DURATION FACTOR $C_d=1.6$ HAS BEEN USED FOR WOOD ANCHOR DESIGN.
3. POSITIVE AND NEGATIVE DESIGN PRESSURES CALCULATED FOR USE WITH THIS SYSTEM SHALL BE DETERMINED PER SEPARATE ENGINEERING IN ACCORDANCE WITH THE GOVERNING CODE. PRESSURE REQUIREMENTS AS DETERMINED IN ACCORDANCE WITH ASCE 7-10 AND CHAPTER 1609 OF THE 2010 FLORIDA BUILDING CODE SHALL BE LESS THAN OR EQUAL TO THE POSITIVE OR NEGATIVE DESIGN PRESSURE CAPACITY VALUES LISTED HEREIN FOR ANY ASSEMBLY AS SHOWN.
4. DESIGN PRESSURES NOTED HEREIN ARE BASED ON MAXIMUM TESTED PRESSURES DIVIDED BY A 1.5 SAFETY FACTOR.
5. MULTIPLE UNITS MUST BE INSTALLED USING MIAMI-DADE COUNTY PERMITTING, ENVIRONMENT AND REGULATORY AFFAIRS (PERA) APPROVED STRUCTURAL MULLIONS.
6. THE SYSTEM DETAILED HEREIN IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SPECIFIC SITE. FOR SITE CONDITIONS DIFFERENT FROM THE CONDITIONS DETAILED HEREIN, A LICENSED ENGINEER OR REGISTERED ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS AND SUBMIT FOR A ONE-TIME NOTICE OF ACCEPTANCE FOR USE IN CONJUNCTION WITH THIS DOCUMENT.
7. PERMIT HOLDER SHALL VERIFY THE ADEQUACY OF THE EXISTING STRUCTURE TO WITHSTAND SUPERIMPOSED LOADS. WOOD BUCKS (BY OTHERS) SHALL BE ANCHORED PROPERLY TO TRANSFER LOADS TO THE EXISTING STRUCTURE.
8. UNITS GLAZED WITH 7/16" or 9/16" LAMINATED GLASS ARE LARGE MISSILE IMPACT RESISTANT AND DO NOT REQUIRE IMPACT RESISTANT SHUTTERS. LAMINATED GLAZING INTERLAYERS SHALL BE AS SPECIFIED IN THEIR RESPECTIVE CURRENT NOTICE OF ACCEPTANCE.
9. UNITS INSTALLED WITH SOLID WOOD PANELS OR PLYWOOD INFILLS ARE ALSO LARGE MISSILE IMPACT RESISTANT. SEE GLAZING SCHEDULE FOR GLAZING/INFILL SPECIFICATIONS.
10. EXTERIOR SEAM OF FRAME CORNERS SHALL BE SEALED WITH SILICONE.
11. ALL STEEL IN CONTACT WITH ALUMINUM SHALL BE PAINTED OR PLATED.

GLAZING/INFILL SCHEDULE:

REFER TO GLAZING DETAILS BELOW FOR DEPICTION OF EACH GLAZING/INFILL TYPE

A	7/16" SAFLEX: 3/16" ANN - 0.090" SOLUTIA SAFLEX IIIG PVB - 3/16" ANN
A2	7/16" DUPONT: 3/16" HS - 0.090" DUPONT SGP - 3/16" HS
B	9/16" VANCEVA: 1/4" ANN - 0.075" SOLUTIA VANCEVA - 1/4" ANN
C	1 1/4" VANCEVA INSULATED: 3/16" ANN - 0.075" SOLUTIA VANCEVA - 3/16" ANN + 1/2" AIR GAP + 3/16" TEMP
D	1 3/4" MAHOGANY PANEL: RAISED MAHOGANY WOOD PANEL
E	3/4" MAHOGANY PLYWOOD: MARINE-GRADE MAHOGANY PLYWOOD

NOTE: ALLOWABLE PRESSURES MAY VARY BASED ON GLAZING/INFILL TYPE FOR EACH CONFIGURATION SHOWN HEREIN. SEE APPROPRIATE CONFIGURATION ELEVATION FOR ALLOWABLE PRESSURE SCHEDULE.

ANCHOR SCHEDULE:

TO HOLLOW BLOCK OR CONCRETE:

- 1/4" ITW TAPCONS THRU 1x WOOD BUCKS OR DIRECTLY INTO CONC (MIN 3.0 KSI) OR MASONRY (MIN 1.5 KSI) WITH 1-3/4" MIN EMBED.

TO WOOD BUCK OR HOST STRUCTURE:

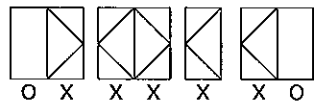
- #12 WOOD SCREWS WITH 1-1/2" MIN THREAD PENETRATION.
- (2) #10 WOOD SCREWS WITH 1-1/2" MIN THREAD PENETRATION.

ANCHOR NOTES:

1. SEE ANCHORAGE DIAGRAMS FOR ANCHOR LOCATIONS AND/OR SPACING.
2. ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' MOST CURRENT RECOMMENDATIONS.
3. TAPCONS SHALL BE MANUFACTURED BY ITW.
4. ENSURE MINIMUM 2-1/2" EDGE DISTANCE FOR ALL ANCHORS TO CONCRETE.
5. FOR ANCHORS TO WOOD FRAMING, 7/8" MIN EDGE DISTANCE SHALL BE MAINTAINED.
6. MINIMUM EMBEDMENT SHALL BE AS NOTED IN ANCHOR SCHEDULE. MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDES STUCCO, FOAM, BRICK, AND OTHER WALL FINISHES.
7. WHERE EXISTING STRUCTURE IS WOOD FRAMING, EXISTING CONDITIONS MAY VARY. FIELD VERIFY THAT FASTENERS ARE INTO ADEQUATE WOOD FRAMING MEMBERS, NOT INTO PLYWOOD.
8. WOOD BUCKS (BY OTHERS) SHALL BE ANCHORED PROPERLY TO TRANSFER LOADS TO THE EXISTING STRUCTURE.

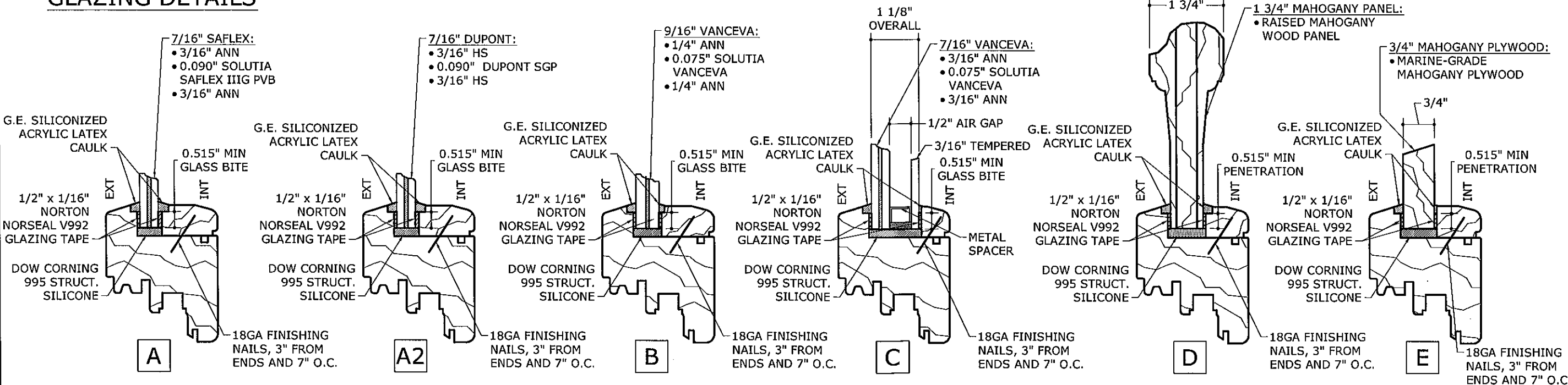
CONFIGURATION NOTES:

ALL WINDOWS SHOWN HEREIN SHALL BE INSTALLED VERTICALLY, AND MAY BE INSTALLED IN THE FOLLOWING CONFIGURATIONS:



PRODUCT REVISED
as complying with the Florida
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By Mmanuel Perez
Miami Dade Product Control

GLAZING DETAILS

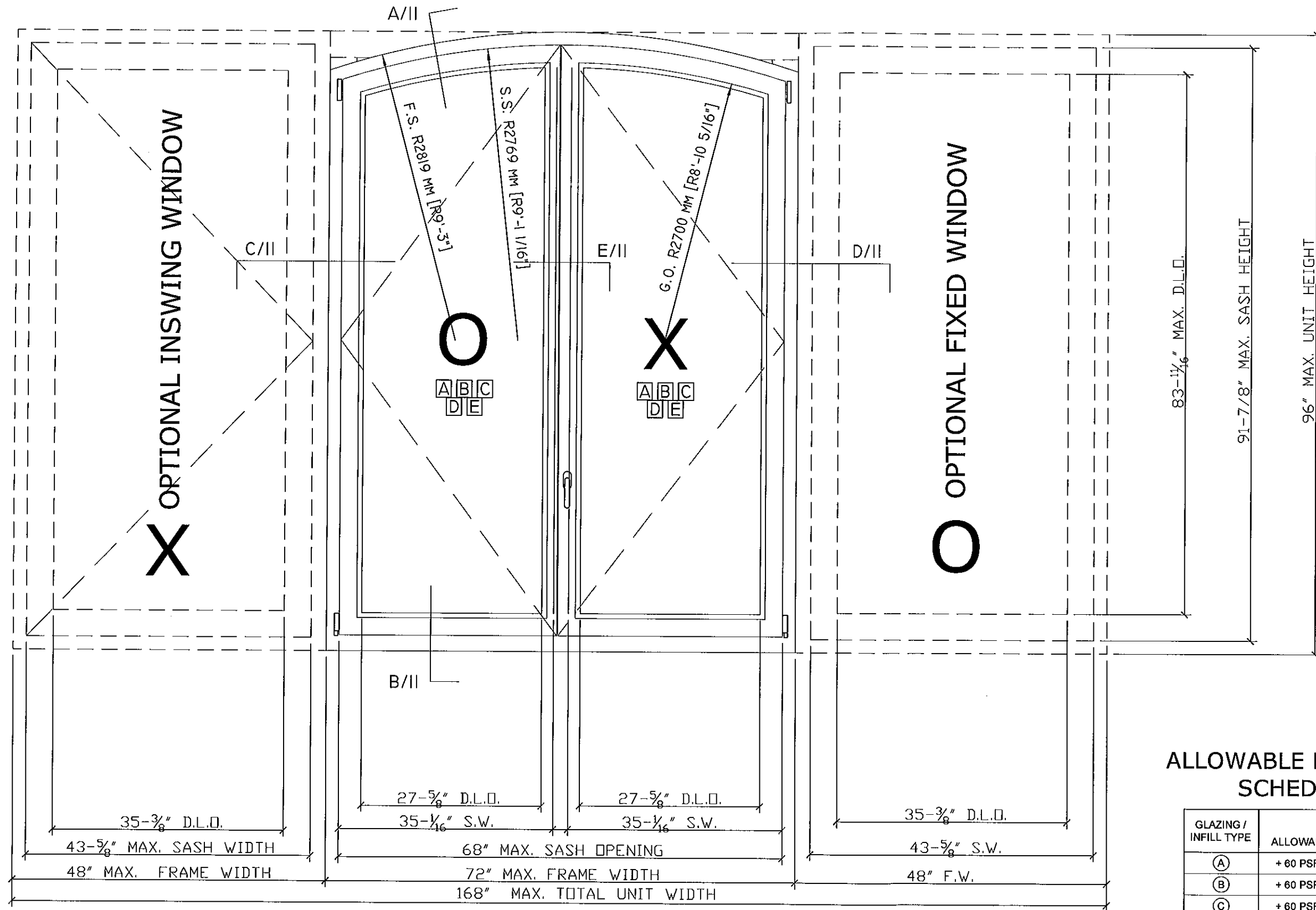


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HARTMAN WINDOWS
& DOORS, LLC
531 SOUTHERN BOULEVARD
WEST PALM BEACH, FL 33405
'EUROPEAN SERIES' MAHOGANY
INSWING CASEMENT WINDOWS
LARGE MISSILE IMPACT RESISTANT

REMARKS	DATE	CHKD	DATE
1000 COMMENTS	1/27/07	CL	FLB
1000 COMMENTS	3/14/07	CL	FLB
ADDTL GLAZING OPTION	10/13/08	KL	CL
1000 COMMENTS	06/04/09	KL	FLB
2010 FBC	01/25/12	KL	FLB

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SCALE: 1/8" = 1'-0"
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INSWING WINDOW
MAHOGANY ARCH TOP WINDOW

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as complying with the Florida
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By *Manuel Perez*
Miami/Dade Product Control

ALLOWABLE PRESSURE
SCHEDULE

GLAZING / INFILL TYPE	ALLOWABLE PRESSURES	
	+ 60 PSF	- 70 PSF
(A)	+ 60 PSF	- 70 PSF
(B)	+ 60 PSF	- 70 PSF
(C)	+ 60 PSF	- 70 PSF
(D)	+ 60 PSF	- 70 PSF
(E)	+ 60 PSF	- 70 PSF

FRANK L. BENNARDI, P.E.
A P.E. 04019

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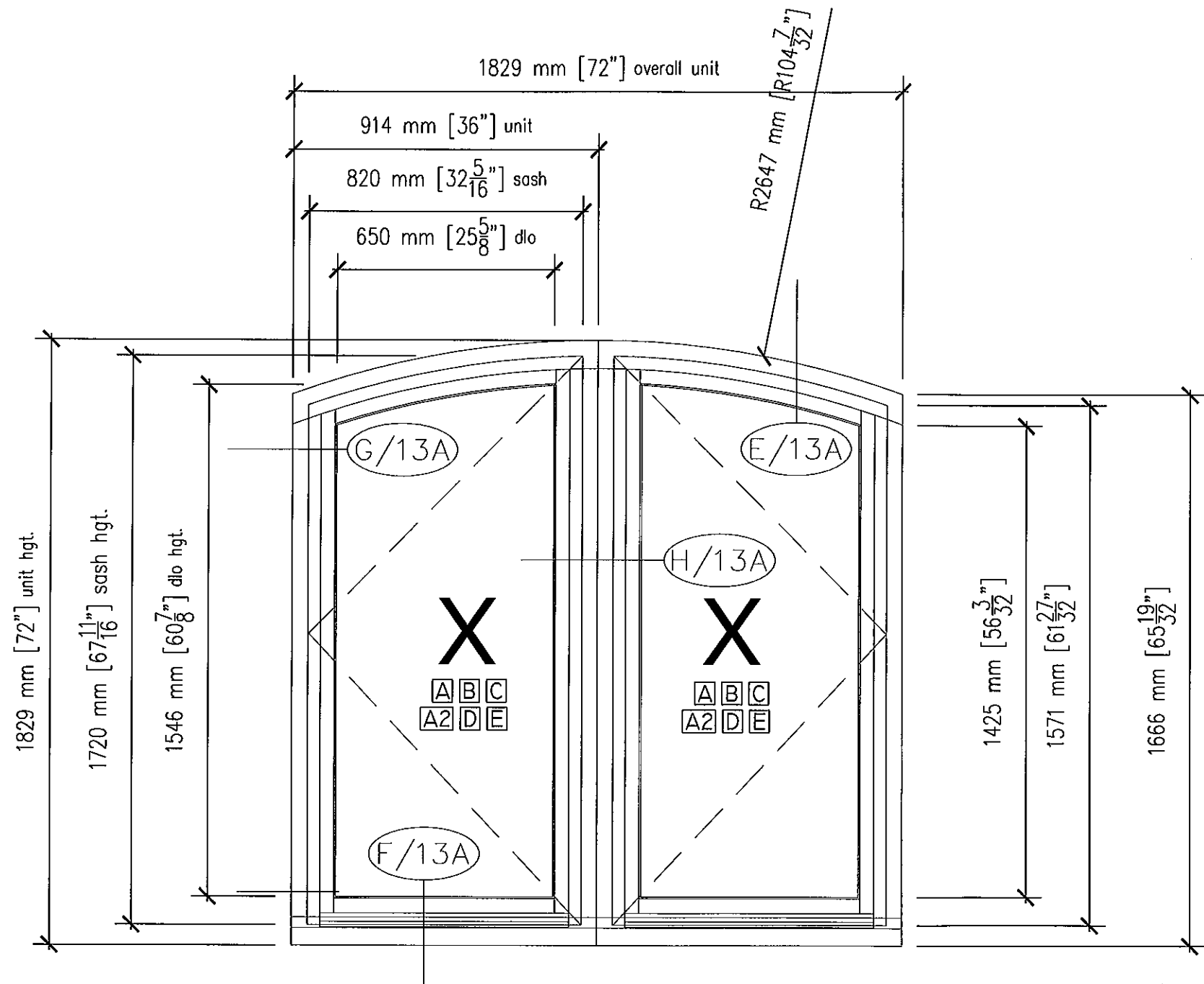
'EUROPEAN SERIES' MAHOGANY
INSWING CASEMENT WINDOWS
LARGE MISSILE IMPACT RESISTANT

REMARKS	DRWN	CHKD	DATE
BCO COMMENTS	CL	FLB	1/27/07
BCO COMMENTS	CL	FLB	3/14/07
ADDTL GLAZING OPTION	KL	CL	10/13/08
BCO COMMENTS	RKB	FLB	06/04/09
2010 FBC	KL	FLB	01/25/12

06-HWD-0004
SCALE: 1" = 1'-0"
PAGE DESCRIPTION:

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2



INSWING WINDOW
MAHOGANY ARCH TOP DOUBLE WINDOW +

ALLOWABLE PRESSURE SCHEDULE

GLAZING / INFILL TYPE	ALLOWABLE PRESSURES	
	+ 60 PSF	- 70 PSF
(A)	+ 60 PSF	- 70 PSF
(A2)	+ 80 PSF	- 80 PSF
(B)	+ 60 PSF	- 70 PSF
(C)	+ 60 PSF	- 70 PSF
(D)	+ 60 PSF	- 70 PSF
(E)	+ 60 PSF	- 70 PSF

PRODUCT REVISED
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Building Code
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By *Manuel Perez*
Miami Dade Product Control

REMARKS	DRWN	CHND	DATE
BCCO COMMENTS	CL	FLB	1/27/07
BCCO COMMENTS	CL	FLB	3/14/07
ADD'L GLAZING OPTION	KL	CL	10/13/08
BCCO COMMENTS	RKB	FLB	06/04/09
2010 FBC	KL	FLB	01/25/12

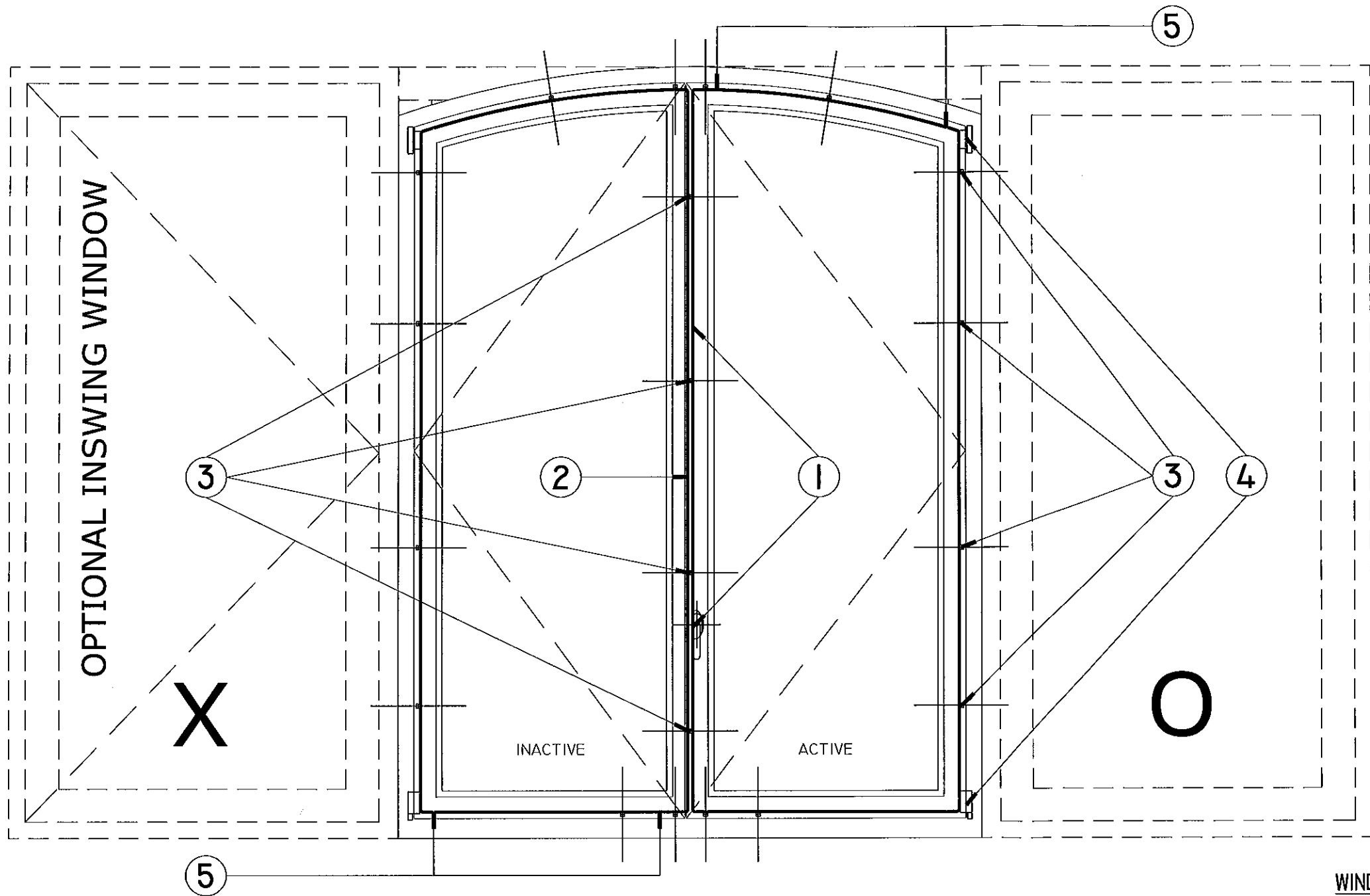
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SCALE: 1/8" = 1'-0"
PAGE DESCRIPTION: 03

2A

FRANK L. BENNARD, P.E.
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03/15/2012
STATE OF FLORIDA
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HARTMAN WINDOWS
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531 SOUTHERN BOULEVARD
WEST PALM BEACH, FL 33405
'EUROPEAN SERIES' MAHOGANY
INSWING CASEMENT WINDOWS
LARGE MISSILE IMPACT RESISTANT

03/15/2012 - 11:12am keithl F:\01 Project Files\Hartman Windows & Doors (HWD)\2006 Jobs\06-HWD-0004 European Casement Window, Inswing, LMI (NOA)\06-HWD-0004_03a European Tilt-Turn Casement, Inswing, LMI (NOA).dwg



WINDOW TYPE I HARDWARE SCHEMATIC
MAHOGANY ARCH TOP WINDOW

WINDOW CORNER CONSTRUCTION:

FRAME/FRAME: MULTI-FORK MORTISE AND TENON JOINERY SECURED WITH NATIONAL CASEINE OR TITE BOND WATERPROOF GLUE.

SASH/SASH: MULTI-FORK MORTISE AND TENON JOINERY SECURED WITH NATIONAL CASEINE OR TITE BOND WATERPROOF GLUE.

THE HARDWARE SPECIFIED FOR THESE WINDOWS IS BY G.U. AND MEETS DADE COUNTY SPECS; HARDWARE IS SUPPLIED AS FOLLOW:

- [1] LEVER HANDLE & TILT TURN SS GEAR HDW W/MUSHROOM HD LOCK CAMS
- [2] TURN SS GEAR HDW W/HIDDEN OPERATOR HANDLE & EXTENTIONS
- [3] SS KEEPERS & MUSHROOM HEAD LOCKING CAMS
- [4] HEAVY DUTY TILT TURN & TURN HINGES WITH CAPS
- [5] SS CORNER DRIVE WITH MUSHROOM HD LOCKING CAMS

PRODUCT REVISED
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Building Code
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By *Maurice J. Jara*
Miami Made Product Control

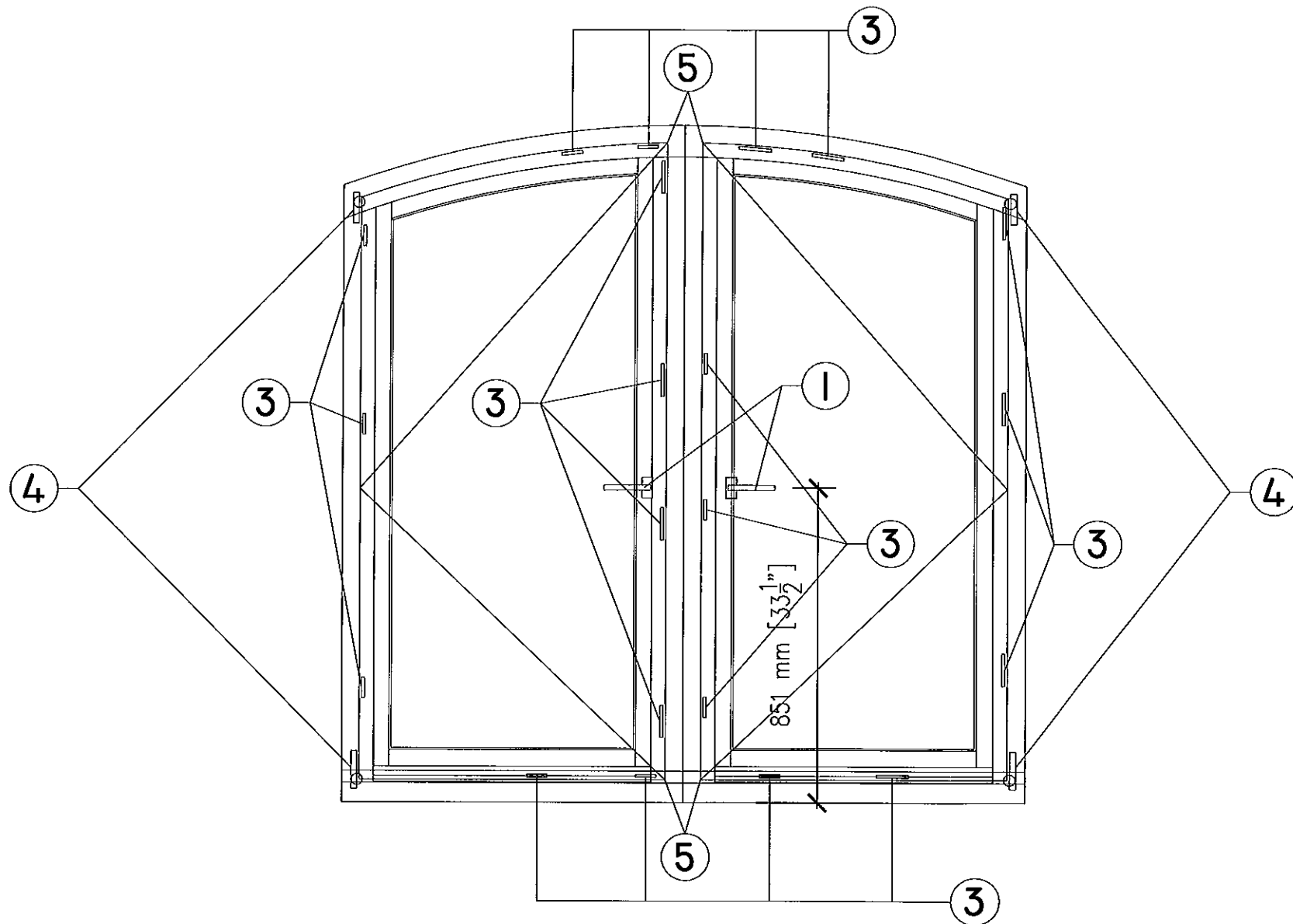
FRANK L. BENNARD, P.E.
LICENSED PROFESSIONAL ENGINEER
063165402012

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A FRANK L. BENNARD, P.E., INC. INNOVATION

HARTMAN WINDOWS
& DOORS, LLC
531 SOUTHERN BOULEVARD
WEST PALM BEACH, FL 33405
"EUROPEAN SERIES" MAHOGANY
INSWING CASEMENT WINDOWS
LARGE MISSILE IMPACT RESISTANT

REMARKS	DRWN	CHKD	DATE
BCCO COMMENTS	CL	FLB	1/27/07
BCCO COMMENTS	CL	FLB	3/14/07
ADD'L GLAZING OPTION	KL	CL	10/13/08
BCCO COMMENTS	RLB	FLB	06/04/09
2010 PEC	KL	FLB	01/25/12

06-HWD-0004
SCALE: 1/8" = 1'-0"
PAGE DESCRIPTION:
326



WINDOW TYPE I HARDWARE SCHEMATIC
MAHOGANY ARCH TOP DOUBLE WINDOW

WINDOW CORNER CONSTRUCTION:

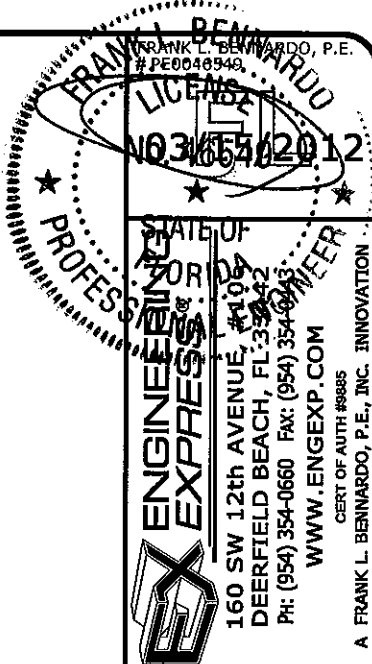
FRAME/FRAME: MULTI-FORK MORTISE AND TENON JOINERY SECURED WITH NATIONAL CASEINE OR TITE BOND WATERPROOF GLUE.

SASH/SASH: MULTI-FORK MORTISE AND TENON JOINERY SECURED WITH NATIONAL CASEINE OR TITE BOND WATERPROOF GLUE.

THE HARDWARE SPECIFIED FOR THESE WINDOWS IS BY G.U. AND MEETS DADE COUNTY SPECS; HARDWARE IS SUPPLIED AS FOLLOW:

- [1] LEVER HANDLE & TILT TURN SS GEAR HDW W/MUSHROOM HD LOCK CAMS
- [3] SS KEEPERS & MUSHROOM HEAD LOCKING CAMS
- [4] HEAVY DUTY TILT TURN & TURN HINGES WITH CAPS
- [5] SS CORNER DRIVE WITH MUSHROOM HD LOCKING CAMS

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Building Code
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Expiration Date April 12, 2017
By *Maurice Ruiz*
Miami Dade Product Control



HARTMAN WINDOWS
& DOORS, LLC
531 SOUTHERN BOULEVARD
WEST PALM BEACH, FL 33405
'EUROPEAN SERIES' MAHOGANY
INSWING CASEMENT WINDOWS
LARGE MISSILE IMPACT RESISTANT

REMARKS	DRWN/CHKD	DATE
BCCO COMMENTS	CL	FLB 1/27/07
BCCO COMMENTS	CL	FLB 3/14/07
ADD'L GLAZING OPTION	CL	FLB 10/13/08
BCCO COMMENTS	IRKB	FLB 06/04/09
2010 FBC	KL	FLB 01/25/12

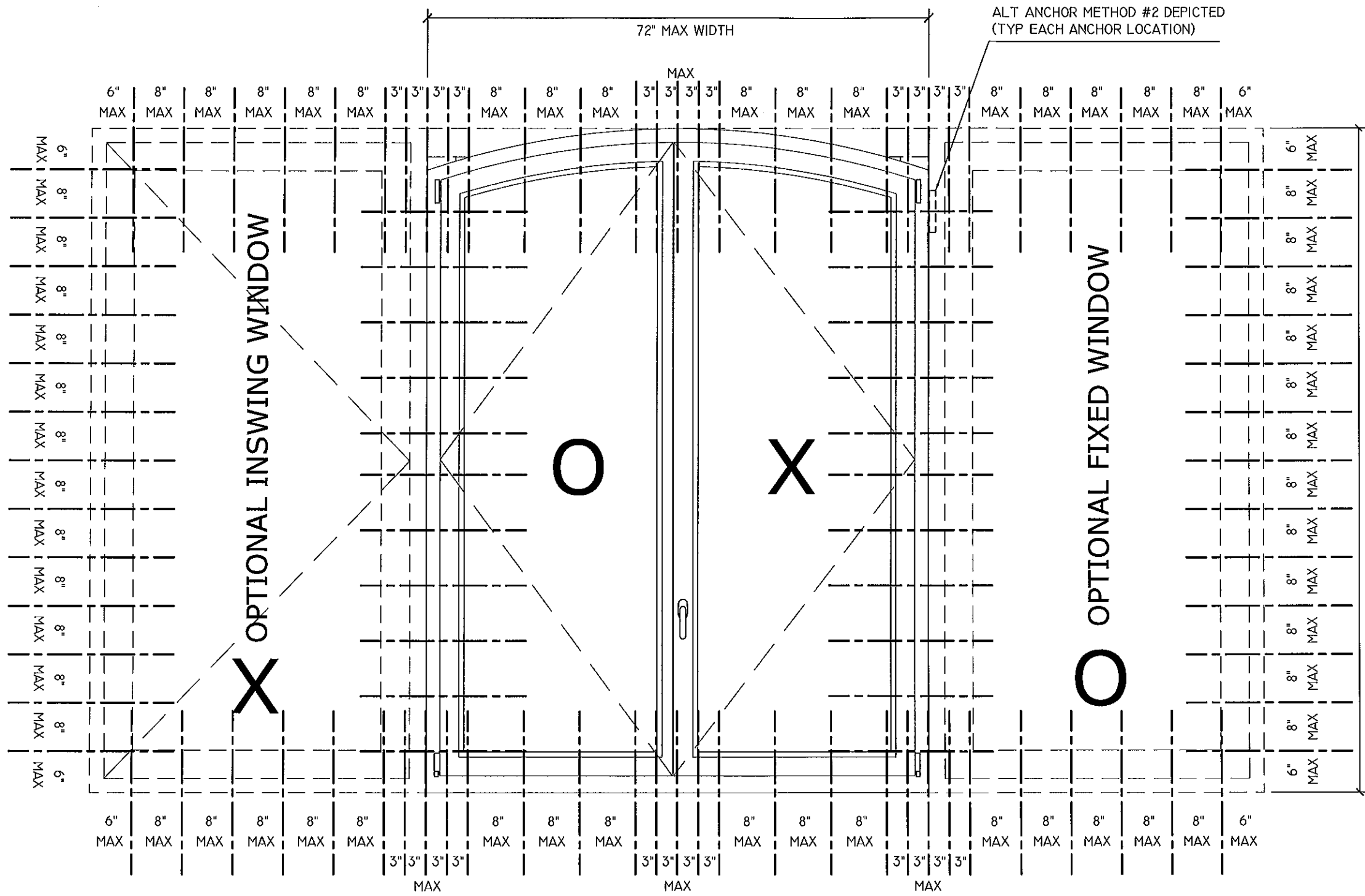
06-HWD-0004

SCALE: 03

PAGE DESCRIPTION:

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INSTALLATION DIAGRAM
MAHOGANY ARCH TOP WINDOW
(SHOWN W/ OPTIONAL SIDELITES)

96" MAX. UNIT HEIGHT

ALT ANCHOR METHOD #2 DEPICTED
(TYP EACH ANCHOR LOCATION)

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as complying with the Florida
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Expiration Date April 12, 2017
By *Mmanuel Diaz*
Miami Dade Product Control

ALTERNATE INSTALLATION
METHODS:

1. PROVIDE (2) #10 X 1-3/4" S.S. PAN HEAD SCREWS PER LOCATION INDICATED FOR WOOD SUBSTRATE. SCREW THROUGH STEEL CLIP INTO WOOD BUCK WITH MIN. PENETRATION 1 1/2", SPACED AS INDICATED. SEE SECTION DETAILS FOR DETAILS.
2. PROVIDE (2) #10 X 2" S.S. PAN HEAD SCREWS PER LOCATION INDICATED FOR WOOD SUBSTRATE. SCREW THROUGH 1 1/2" X 1 1/2" X 1/8" ALUMINUM ANGLE INTO WOOD BUCK WITH MIN. 1 3/4" PENETRATION, SPACED AS INDICATED. SEE SECTION DETAILS FOR DETAILS.
3. PROVIDE (1) #12 X 3 1/2" S.S. SCREW PER LOCATION INDICATED. SCREW THROUGH HOLES IN JAMB INTO WOOD BUCK SPACED AS INDICATED. SEE SECTION DETAILS FOR DETAILS.

NOTE: IF LESS THAN 2 X 6 BUCK IS USED AROUND OPENING, 3/4" TAPCONS SHALL BE USED, RUNNING THROUGH THE JAMB, SHIM, BUCK, & INTO THE BLOCK / CONCRETE WITH MIN. EMBEDMENT 1 1/4".

FRANK L. BENNARDO
P.E.
03/15/2012
PROFESSIONAL ENGINEER
STATE OF FLORIDA

ENGINEERING EXPRESS

160 SW 12th Avenue, Suite 1100
Deerfield Beach, FL 33442
Ph: (954) 354-0660 Fax: (954) 354-0661
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HARTMAN WINDOWS
& DOORS, LLC
531 SOUTHERN BOULEVARD
WEST PALM BEACH, FL 33405

'EUROPEAN SERIES' MAHOGANY
INSWING CASEMENT WINDOWS
LARGE MISSILE IMPACT RESISTANT

REMARKS	DRWN	CHKD	DATE
BCCO COMMENTS	CL	FLB	1/27/07
BCCO COMMENTS	CL	FLB	3/14/07
AUDL GLAZING OPTION	CL	CL	10/13/08
BCCO COMMENTS	RGB	FLB	06/04/09
2010 FEC	KL	FLB	01/25/12

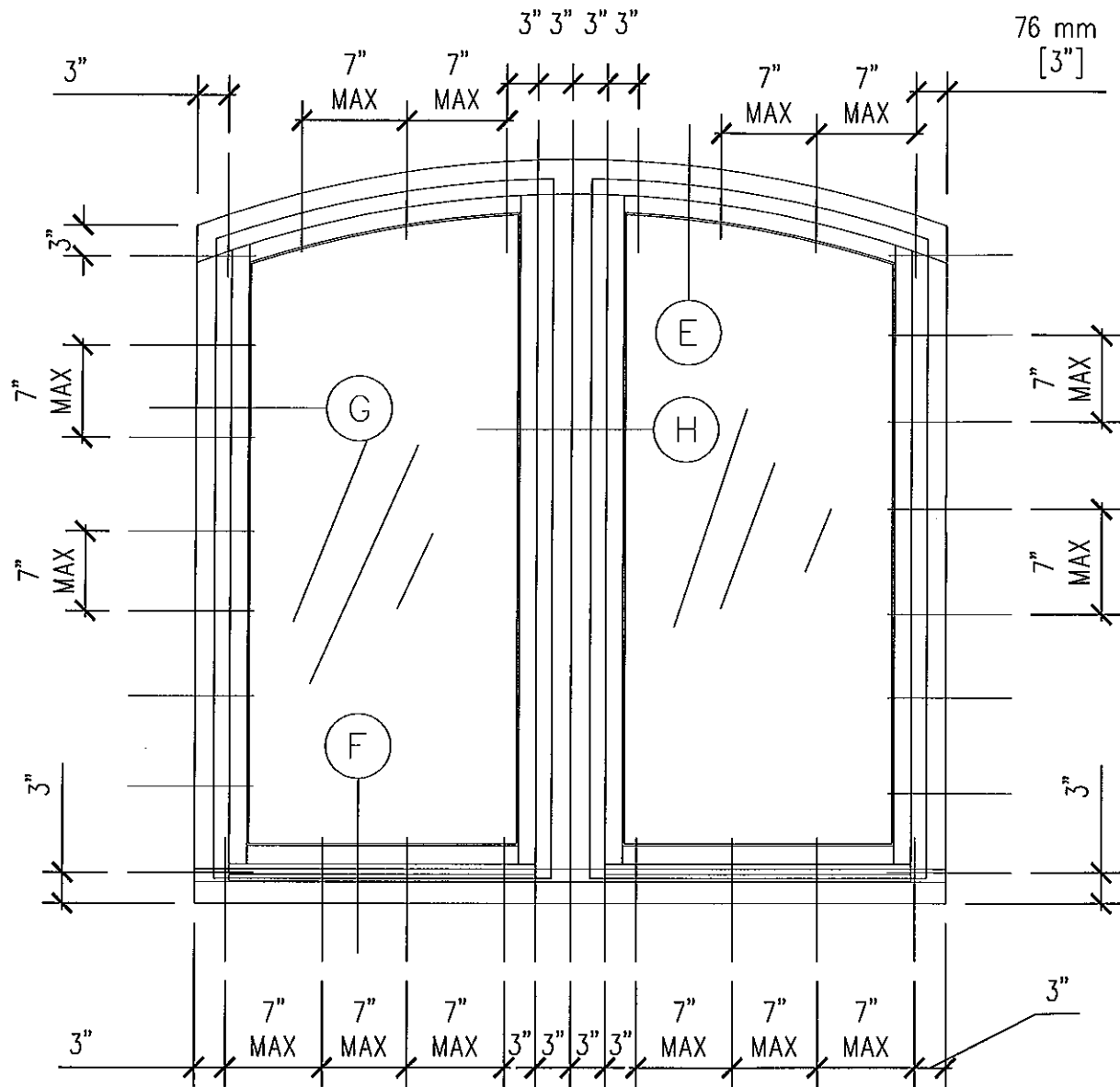
06-HWD-0004

SCALE: 1" = 1'-0"

PAGE DESCRIPTION:

426

F:\01 Project Files\Hartman Windows & Doors (HWD)\2006 Jobs\06-HWD-0004 European Casement Window - Inswing, LMI (NOA)\06-HWD-0004_03a European Tilt-Turn Casement, Inswing, LMI (NOA).dwg 03/15/2012 - 11:12am Keith



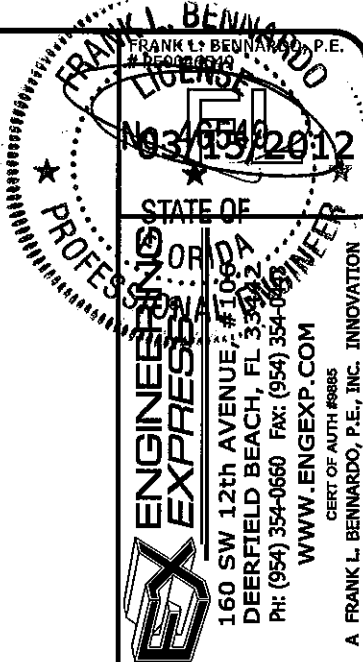
INSTALLATION DIAGRAM
MAHOGANY ARCH TOP DOUBLE WINDOW

ALTERNATE INSTALLATION METHODS:

1. PROVIDE (2) #10 X 1- $\frac{3}{4}$ " S.S. PAN HEAD SCREWS PER LOCATION INDICATED FOR WOOD SUBSTRATE. SCREW THROUGH STEEL CLIP INTO WOOD BUCK WITH MIN. PENETRATION 1 $\frac{1}{2}$ ", SPACED AS INDICATED. SEE SECTION DETAILS FOR DETAILS.
2. PROVIDE (2) #10 X 2" S.S. PAN HEAD SCREWS PER LOCATION INDICATED FOR WOOD SUBSTRATE. SCREW THROUGH 1 $\frac{1}{2}$ " X 1 $\frac{1}{2}$ " X $\frac{1}{8}$ " ALUMINUM ANGLE INTO WOOD BUCK WITH MIN. 1 $\frac{3}{4}$ " PENETRATION, SPACED AS INDICATED. SEE SECTION DETAILS FOR DETAILS.
3. PROVIDE (1) #12 X 3 $\frac{1}{2}$ " S.S. SCREW PER LOCATION INDICATED. SCREW THROUGH HOLES IN JAMB INTO WOOD BUCK SPACED AS INDICATED. SEE SECTION DETAILS FOR DETAILS.

NOTE: IF LESS THAN 2 X 6 BUCK IS USED AROUND OPENING,
 $\frac{1}{4}$ " TAPCONS SHALL BE USED, RUNNING THROUGH THE JAMB, SHIM, BUCK, & INTO THE BLOCK / CONCRETE WITH MIN. EMBEDMENT 1 $\frac{1}{4}$ ".

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 12-0319.03
Expiration Date April 14, 2017
By *Manner*
Miami Dade Product Control



HARTMAN WINDOWS
& DOORS, LLC
531 SOUTHERN BOULEVARD
WEST PALM BEACH, FL 33405
'EUROPEAN SERIES' MAHOGANY
INSWING CASEMENT WINDOWS
LARGE MISSILE IMPACT RESISTANT

REMARKS	DRWN	CHKD	DATE
BCCO COMMENTS	CL	FLB	1/27/07
BCCO COMMENTS	CL	FLB	3/14/07
ADDTL GLAZING OPTION	KL	CL	10/13/08
BCCO COMMENTS	RKB	FLB	06/04/09
2010 FBC	KL	FLB	01/25/12

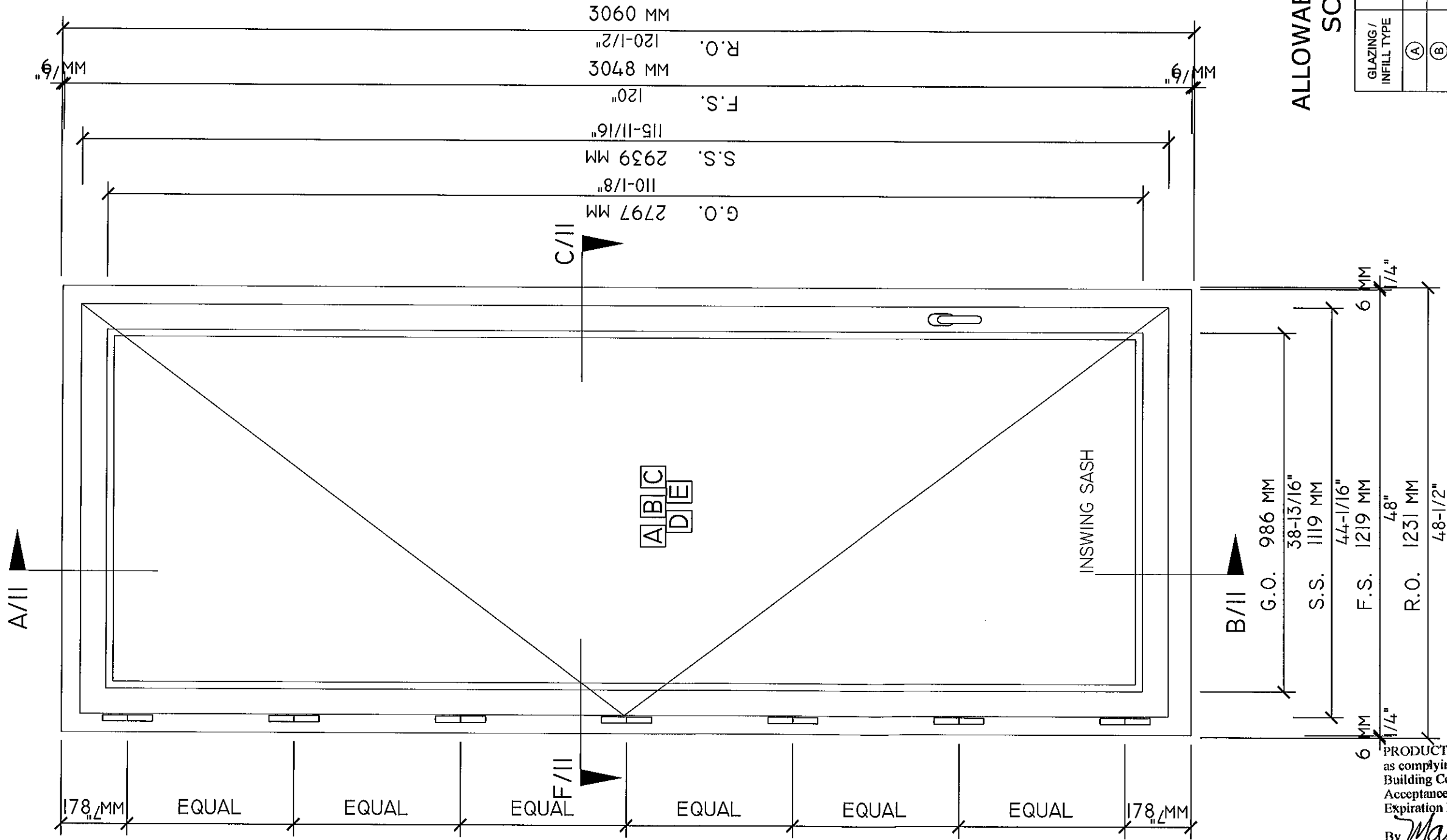
06-HWD-0004

SCALE: 1" = 1'-0"

PAGE DESCRIPTION: 03

4A

26



ALLOWABLE PRESSURE
SCHEDULE

GLAZING / INFILL TYPE	ALLOWABLE PRESSURES	
(A)	+ 42.8 PSF	- 42.8 PSF
(B)	+ 60 PSF	- 70 PSF
(C)	+ 45.8 PSF	- 45.8 PSF
(D)	+ 60 PSF	- 70 PSF
(E)	+ 60 PSF	- 70 PSF

INSWING CASEMENT WINDOW

MAHOGANY INSWING CASEMENT WINDOW

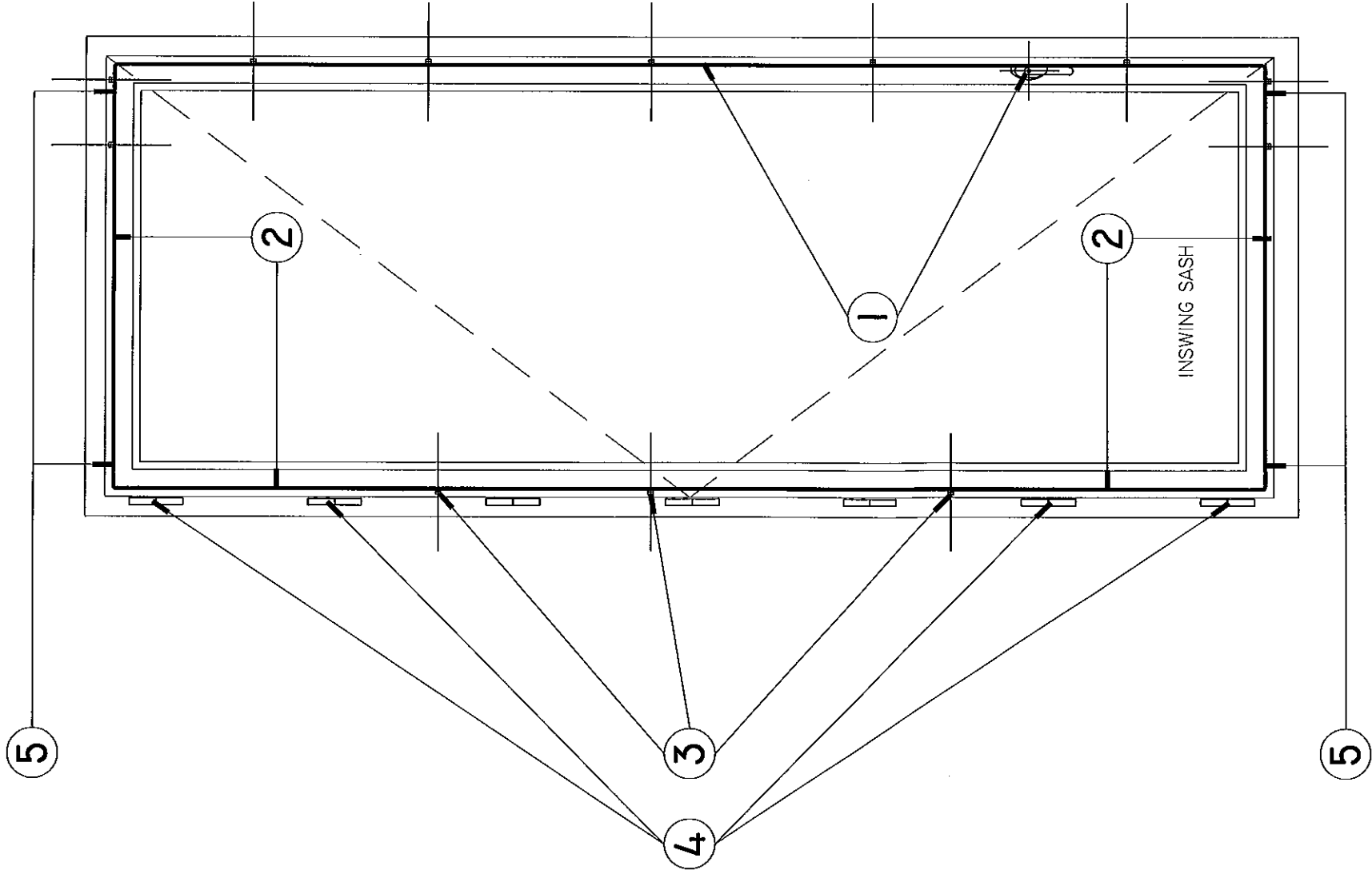
PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 12-0319.03
Expiration Date April 12, 2017
By *Mmanuel Perez*
Miami Dade Product Control

HARTMAN WINDOWS
& DOORS, LLC
531 SOUTHERN BOULEVARD
WEST PALM BEACH, FL 33405
'EUROPEAN SERIES' MAHOGANY
INSWING CASEMENT WINDOWS
LARGE MISSILE IMPACT RESISTANT

REMARKS	DRWN	CHKD	DATE
BCCO COMMENTS	CL	FLB	1/27/07
BCCO COMMENTS	CL	FLB	3/14/07
ADD'L GLAZING OPTION	KL	CL	10/13/08
BCCO COMMENTS	RKB	FLB	06/04/09
2010 FBC	KL	FLB	07/25/12

06-HWD-0004
SCALE: 1"=1'-0"
PAGE DESCRIPTION: 03

Professional Engineer Seal for Frank L. Bennardo, State of Florida, License No. 93713, dated 03/15/2012. The seal includes the text: FRANK L. BENNARDO, PROFESSIONAL ENGINEER, STATE OF FLORIDA, LICENSE NO. 93713, EXPIRATION DATE 03/15/2012. Below the seal is contact information for Hartman Windows & Doors, LLC, including address, phone, fax, and website.



WINDOW CORNER CONSTRUCTION:

FRAME/FRAME: MULTI-FORK MORTISE AND TENON JOINERY SECURED WITH NATIONAL CASEINE OR TITE BOND WATERPROOF GLUE.

SASH/SASH: MULTI-FORK MORTISE AND TENON JOINERY SECURED WITH NATIONAL CASEINE OR TITE BOND WATERPROOF GLUE.

THE HARDWARE SPECIFIED FOR THESE WINDOWS IS BY G.U. AND MEETS DADE COUNTY SPECS; HARDWARE IS SUPPLIED AS FOLLOW:

- [1] LEVER HANDLE & TILT TURN SS GEAR HDW W/MUSHROOM HD LOCK CAMS
- [2] TURN SS GEAR HDW W/HIDDEN OPERATOR HANDLE & EXTENTIONS
- [3] SS KEEPERS & MUSHROOM HEAD LOCKING CAMS
- [4] HEAVY DUTY TILT TURN & TURN HINGES WITH CAPS
- [5] SS CORNER DRIVE WITH MUSHROOM HD LOCKING CAMS

INSWING CASEMENT HARDWARE LAYOUT
MAHOGANY INSWING CASEMENT WINDOW

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 12-0319.03
Expiration Date April 12, 2017
By *Mmanuel Lopez*
Miami Dade Product Control

REMARKS		DRWN	CHKD	DATE
BCCO COMMENTS	CL	FLB	FLB	1/27/07
BCCO COMMENTS	CL	FLB	FLB	3/14/07
ADD'L GLAZING OPTION	KL	FLB	CL	10/13/08
BCCO COMMENTS	RKB	FLB	FLB	06/04/09
2010 FBC	KL	FLB	FLB	01/25/12

| HARTMAN WINDOWS & DOORS, LLC 531 SOUTHERN BOULEVARD WEST PALM BEACH, FL 33405 | | | | |
| 'EUROPEAN SERIES' MAHOGANY INSWING CASEMENT WINDOWS LARGE MISSILE IMPACT RESISTANT | | | | |

06-HWD-0004
SCALE: 03
PAGE DESCRIPTION:

FRANK L. BENWARDO, P.E.
LICENSE NO. 12048
STATE OF FLORIDA
EXPIRATION DATE 12/31/2012

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A FRANK L. BENWARDO, P.E., INC. INNOVATION



1. PROVIDE (2) #10 X 1- $\frac{3}{4}$ " S.S. PAN HEAD SCREWS PER LOCATION INDICATED FOR WOOD SUBSTRATE. SCREW THROUGH STEEL CLIP INTO WOOD BUCK WITH MIN. PENETRATION 1 $\frac{1}{2}$ ", SPACED AS INDICATED. SEE SECTION DETAILS FOR DETAILS.
2. PROVIDE (2) #10 X 2" S.S. PAN HEAD SCREWS PER LOCATION INDICATED FOR WOOD SUBSTRATE. SCREW THROUGH 1 $\frac{1}{2}$ " X 1 $\frac{1}{2}$ " X $\frac{1}{8}$ " ALUMINUM ANGLE INTO WOOD BUCK WITH MIN. 1 $\frac{3}{4}$ " PENETRATION, SPACED AS INDICATED. SEE SECTION DETAILS FOR DETAILS.

2. PROVIDE (2) #10 X 2" S.S. PAN HEAD SCREWS PER LOCATION INDICATED FOR WOOD SUBSTRATE. SCREW THROUGH $1\frac{1}{2}$ " X $1\frac{1}{2}$ " X $\frac{1}{8}$ " ALUMINUM ANGLE INTO WOOD BUCK WITH MIN. $1\frac{3}{4}$ " PENETRATION, SPACED AS INDICATED. SEE SECTION DETAILS FOR DETAILS.

3. PROVIDE (1) #12 X 3½" S.S. SCREW PER LOCATION INDICATED. SCREW THROUGH HOLES IN JAMB INTO WOOD BUCK SPACED AS INDICATED. SEE SECTION DETAILS FOR DETAILS.

NOTE: IF LESS THAN 2 X 6 BUCK IS USED AROUND OPENING, 1/4" TAPCONS SHALL BE USED, RUNNING THROUGH THE JAMB, SHIM, BUCK, & INTO THE BLOCK / CONCRETE WITH MIN. EMBEDMENT 1 1/4".

FRAME SCREW & BRACKETS REQUIREMENTS			
FASTENER	SUBSTRATE	MIN. EMBED	MIN. EDGE DISTANCE
No. 10 x 1-3/4"	WOOD	1 1/2"	6"
No.12 x 3 1/2"	WOOD	1 3/8"	6"
1/4" x 3-1/2" TAPCON	BLOCK/CONCR.	1 1/4"	6"
1"x1"x6" ANGLE BRKT	----	----	6"

INSTALLATION DIAGRAM

MAHOGAN Y INSWING CASEMENT WINDOW

By Manuel Perez
Miami Dade Product Control

SCALE: -

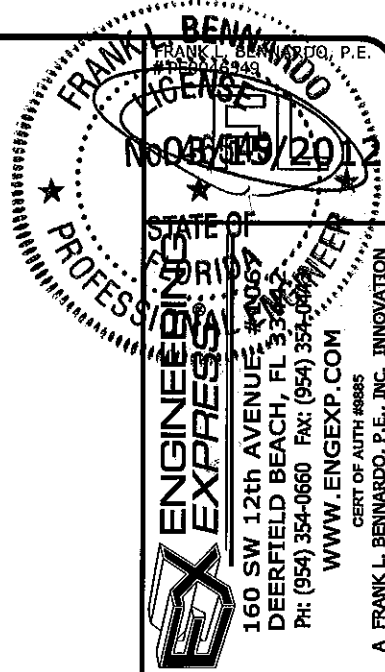
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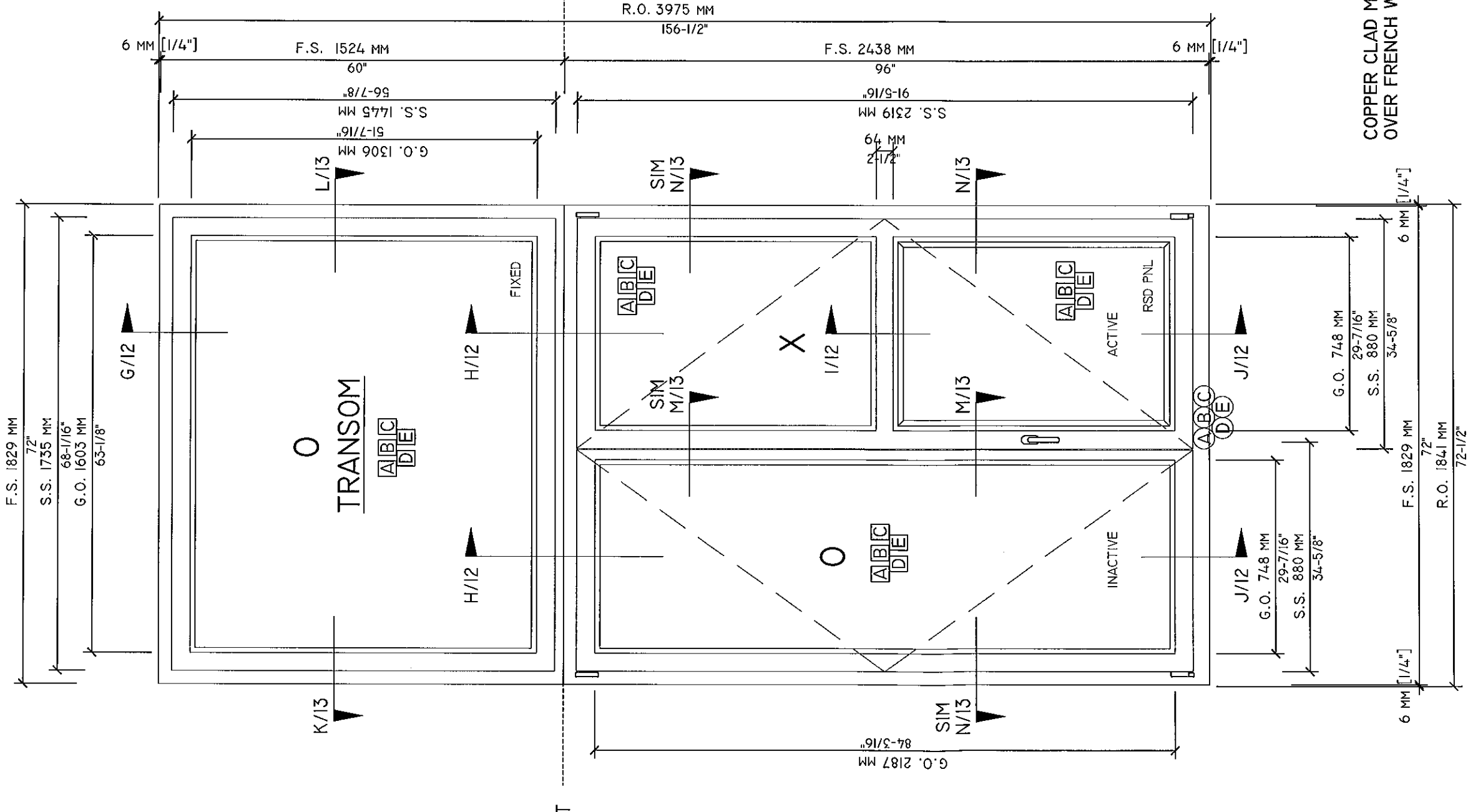
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**HARTMAN WINDOWS
& DOORS, LLC**
531 SOUTHERN BOULEVARD
WEST PALM BEACH, FL 33405

**'EUROPEAN SERIES' MAHOGANY
INSWING CASEMENT WINDOWS
LARGE MISSILE IMPACT RESISTANT**





TRANSOM
ALLOWABLE PRESSURE
SCHEDULE

GLAZING / INFILL TYPE	TRANSOM FRAME SIZE	ALLOWABLE PRESSURES
(A)	72" x 60"	+ 47.1 PSF
	72" x 42"	+ 60 PSF
(B)	72" x 60"	+ 60 PSF
	72" x 42"	+ 60 PSF
(C)	72" x 60"	+ 50.4 PSF
	72" x 42"	+ 60 PSF
(D)	72" x 60"	+ 60 PSF
	72" x 42"	+ 60 PSF
(E)	72" x 60"	+ 60 PSF
	72" x 42"	+ 60 PSF

CASEMENT WINDOW
ALLOWABLE
PRESSURE SCHEDULE

GLAZING / INFILL TYPE	ALLOWABLE PRESSURES
(A)	+ 60 PSF
(B)	+ 60 PSF
(C)	+ 60 PSF
(D)	+ 60 PSF
(E)	+ 60 PSF

INSWING W/ FIXED TRANSOM

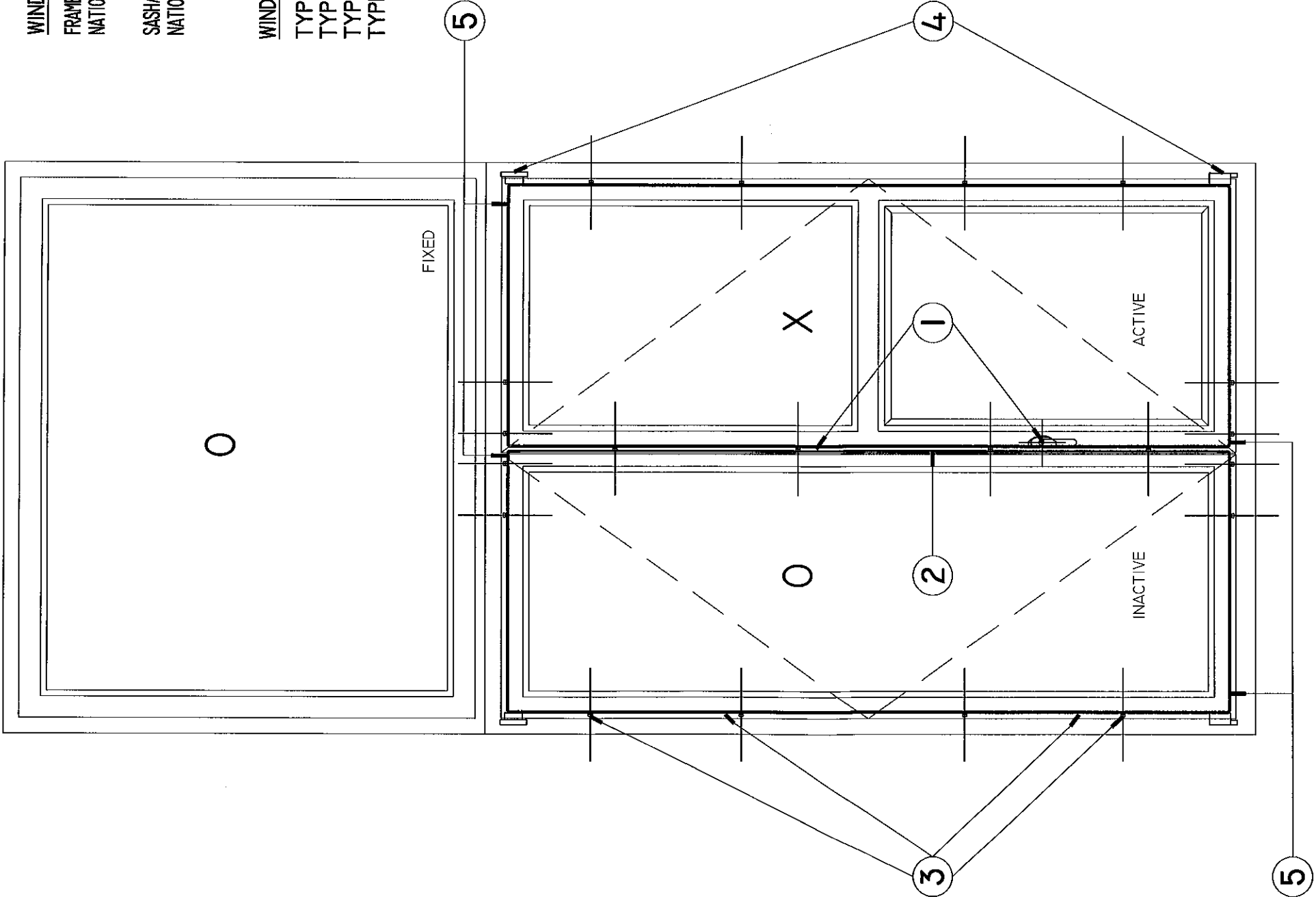
PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 12-0319.03
Expiration Date April 12, 2017
By *Manuel Perez*
Miami Made Product Control

HARTMAN WINDOWS
& DOORS, LLC
531 SOUTHERN BOULEVARD
WEST PALM BEACH, FL 33405
"EUROPEAN SERIES" MAHOGANY
INSWING CASEMENT WINDOWS
LARGE MISSILE IMPACT RESISTANT

REMARKS	DRWN	CHKD	DATE
ECOC COMMENTS	CL	FLB	1/27/07
ECOC COMMENTS	CL	FLB	3/14/07
ADDT GLAZING OPTION	KL	CL	10/13/08
ECOC COMMENTS	RKB	FLB	06/04/08
2010 FBC	KL	FLB	01/25/12

06-HWD-0004
SCALE: 1/4" = 1'-0"
PAGE DESCRIPTION: 03

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LICENSED PROFESSIONAL ENGINEER
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WWW.ENGP.COM
CERT OF AUTH #9885
A FRANK L. BENNARD, P.E., INC. INNOVATION



WINDOW CORNER CONSTRUCTION:
FRAME/FRAME: MULTI-FORK MORTISE AND TENON JOINERY SECURED WITH NATIONAL CASEINE OR TITE BOND WATERPROOF GLUE.
SASH/SASH: MULTI-FORK MORTISE AND TENON JOINERY SECURED WITH NATIONAL CASEINE OR TITE BOND WATERPROOF GLUE.

WINDOW HARDWARE SUPPLIERS:
TYPE 1 - G.U.
TYPE 2 - A.G.B.
TYPE 3 - SEGENIA
TYPE 4 - HOPPE

HARDWARE LAYOUT SPECIFICATIONS
COPPER CLAD MAHOGANY FIXED TRANSOM MULLED
OVER FRENCH WINDOW

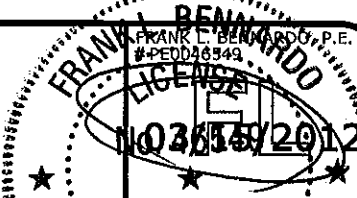
PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 12-0319.03
Expiration Date April 12, 2017
By *Mamuel Perez*
Miami Dade Product Control

REMARKS		DRWN	CHKD	DATE
BCCO COMMENTS	CL	FLB	FLB	1/27/07
BCCO COMMENTS	CL	FLB	FLB	3/14/07
ADD'L GLAZING OPTION	KL	CL	CL	10/13/08
BCCO COMMENTS	RKB	FLB	FLB	06/04/09
2010 FBC	KL	FLB	FLB	01/25/12

HARTMAN WINDOWS & DOORS, LLC 531 SOUTHERN BOULEVARD WEST PALM BEACH, FL 33405	
'EUROPEAN SERIES' MAHOGANY INSWING CASEMENT WINDOWS LARGE MISSILE IMPACT RESISTANT	

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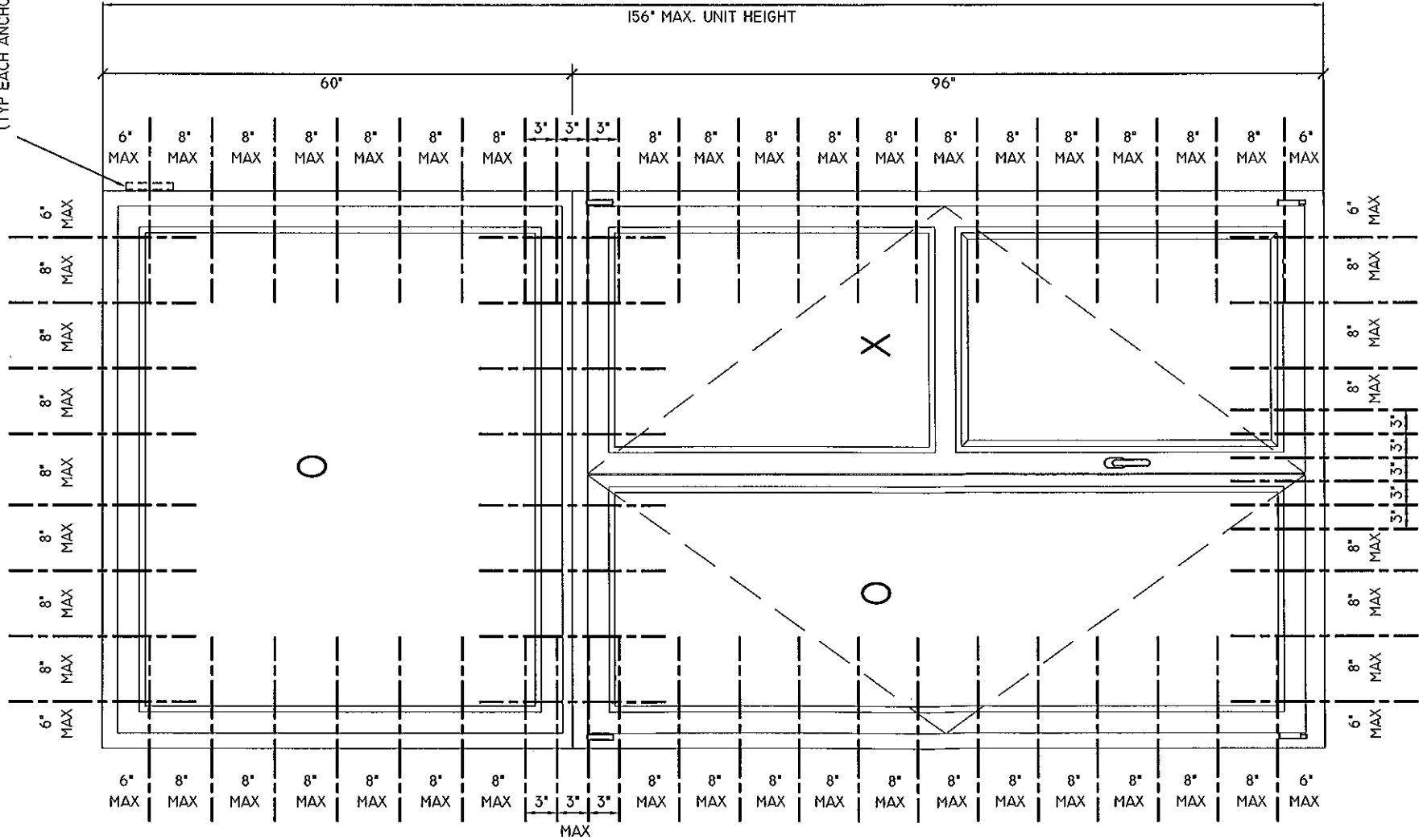


FRANK L. BENNARDO, P.E.
#PED0046549
12/20/12



EX ENGINEERING
EXPRESS
160 SW 12th AVENUE, #1804
DEERFIELD BEACH, FL 33442
Ph: (954) 354-0660 Fax: (954) 354-0668
WWW.ENGEXP.COM
A FRANK L. BENNARDO, P.E., INC. INNOVATION

ALT. ANCHOR METHOD #2 DEPICTED
(TYP EACH ANCHOR LOCATION)



ALTERNATE INSTALLATION METHODS:

1. PROVIDE (2) #10 X 1-3/4" S.S. PAN HEAD SCREWS PER LOCATION INDICATED FOR WOOD SUBSTRATE. SCREW THROUGH STEEL CLIP INTO WOOD BUCK WITH MIN. PENETRATION 1 1/2", SPACED AS INDICATED. SEE SECTION DETAILS FOR DETAILS.
2. PROVIDE (2) #10 X 2" S.S. PAN HEAD SCREWS PER LOCATION INDICATED FOR WOOD SUBSTRATE. SCREW THROUGH 1 1/2" X 1 1/2" X 1/8" ALUMINUM ANGLE INTO WOOD BUCK WITH MIN. 1 3/4" PENETRATION, SPACED AS INDICATED. SEE SECTION DETAILS FOR DETAILS.
3. PROVIDE (1) #12 X 3 1/2" S.S. SCREW PER LOCATION INDICATED. SCREW THROUGH HOLES IN JAMB INTO WOOD BUCK SPACED AS INDICATED. SEE SECTION DETAILS FOR DETAILS.

NOTE: IF LESS THAN 2 X 6 BUCK IS USED AROUND OPENING, 1/4" TAPCONS SHALL BE USED, RUNNING THROUGH THE JAMB, SHIM, BUCK, & INTO THE BLOCK / CONCRETE WITH MIN. EMBEDMENT 1 1/4".

FRAME SCREW & STRAP REQUIREMENTS				
FASTENER	SUBSTRATE	MIN. EMBED	MIN. EDGE DISTANCE	
No. 10 x 1-3/4"	WOOD	1 3/4"	AS PER LOCKING HDW	
No.12 x 3 1/2"	WOOD	1 3/8"	6"	
1/4" x 3-1/2" TAPCON	BLOCK/CONCR.	1 1/4"	6"	
16 GA 6" X 1/2" SS OR GALVANIZED STEEL STRAP	---	---	6"	

INSTALLATION DIAGRAM
COPPER CLAD MAHOGANY FIXED TRANSOM MULLED
OVER FRENCH IN-SWING WINDOW

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 12-0319.03
Expiration Date April 12, 2017
By Manuel
Miami/Dade Product Control

HARTMAN WINDOWS
& DOORS, LLC

531 SOUTHERN BOULEVARD
WEST PALM BEACH, FL 33405

'EUROPEAN SERIES' MAHOGANY
INSWING CASEMENT WINDOWS
LARGE MISSILE IMPACT RESISTANT

REMARKS	DRWN	CHKD	DATE
BCCO COMMENTS	CL	FLB	1/27/07
BCCO COMMENTS	CL	FLB	3/14/07
ADDTL GLAZING OPTION	KL	CL	10/13/08
BCCO COMMENTS	RKB	FLB	06/04/09
2010 FBC	KL	FLB	01/25/12

06-HWD-0004

SCALE: 1"=1'-0"

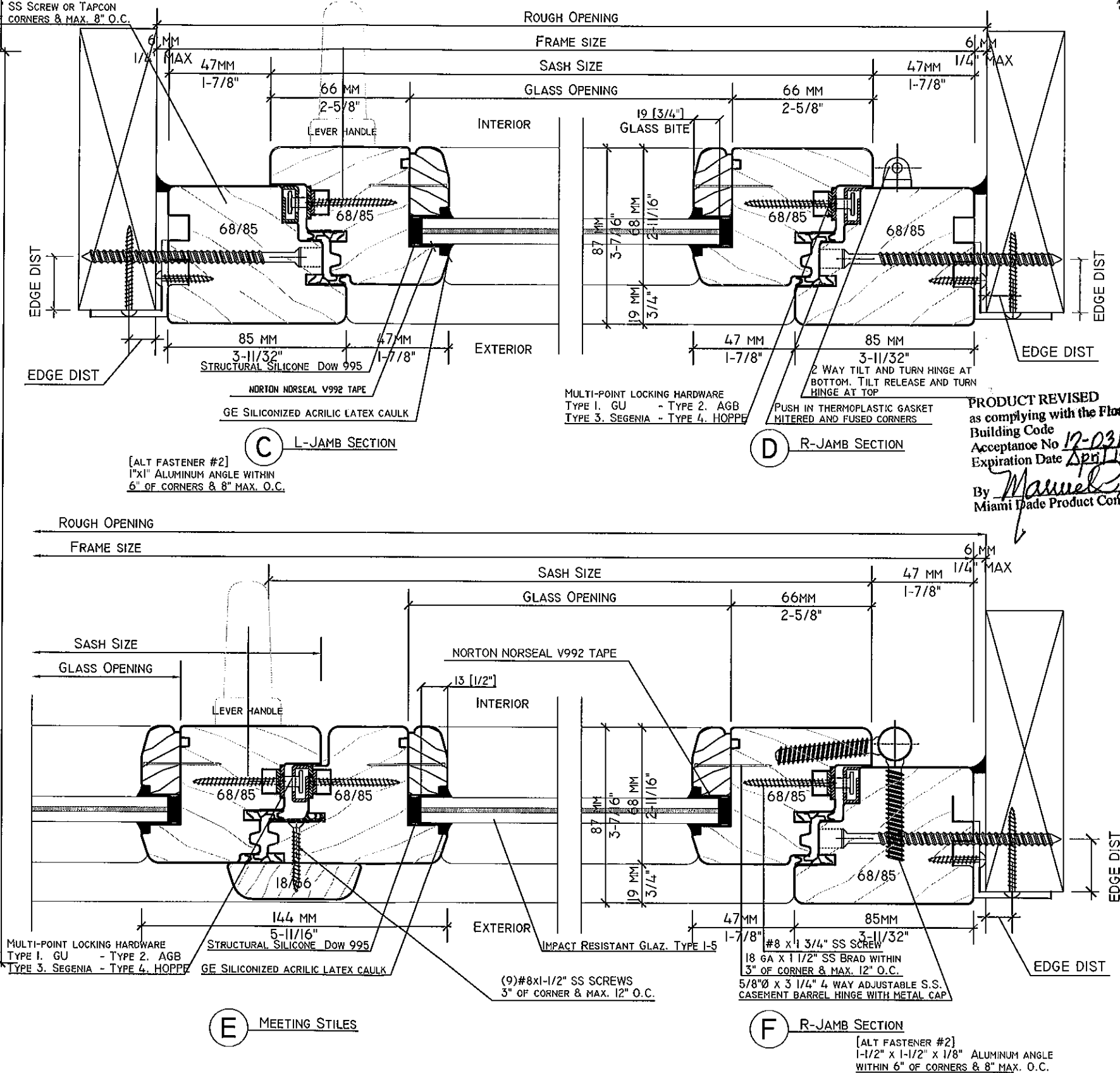
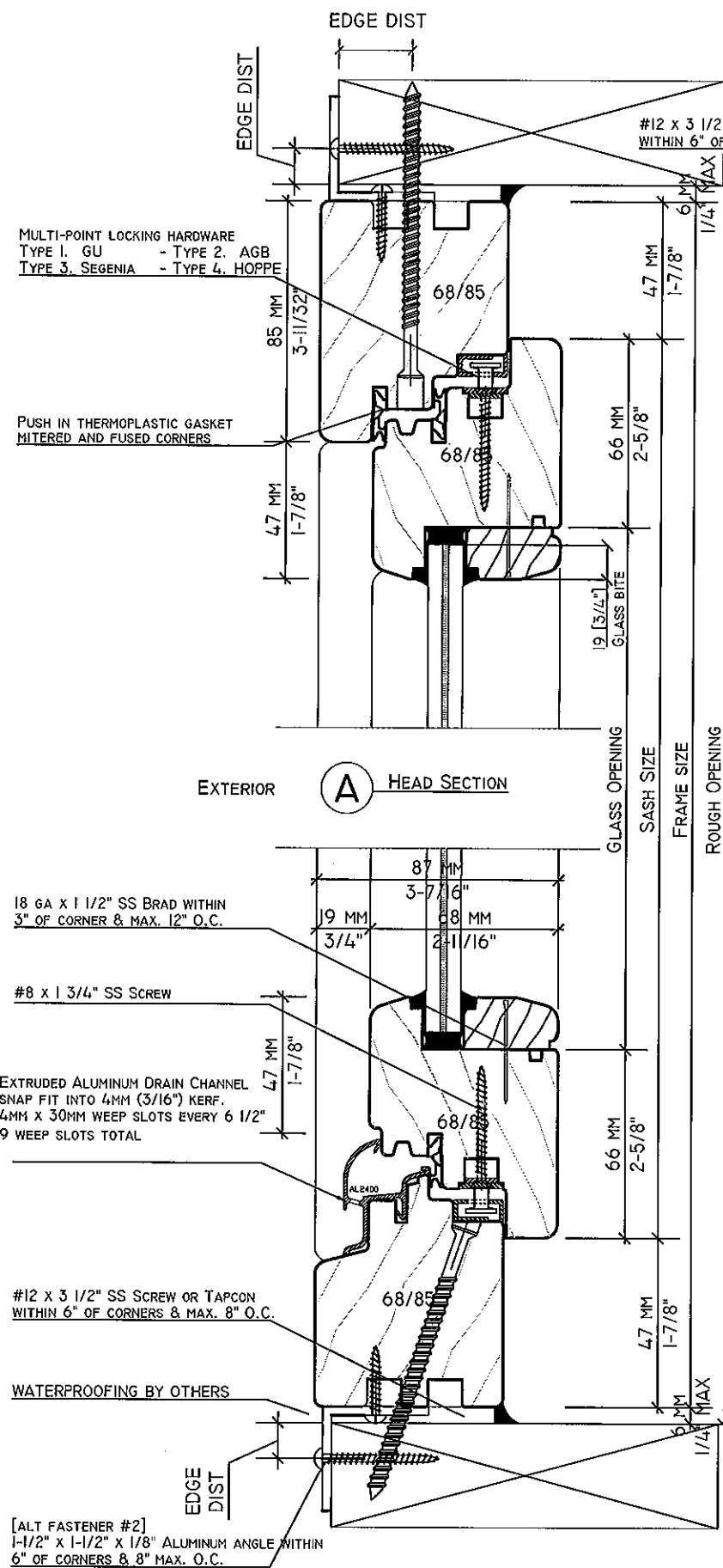
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FRANK L. BENNARDO, P.E.
PROFESSIONAL ENGINEER
No. 34013
2012

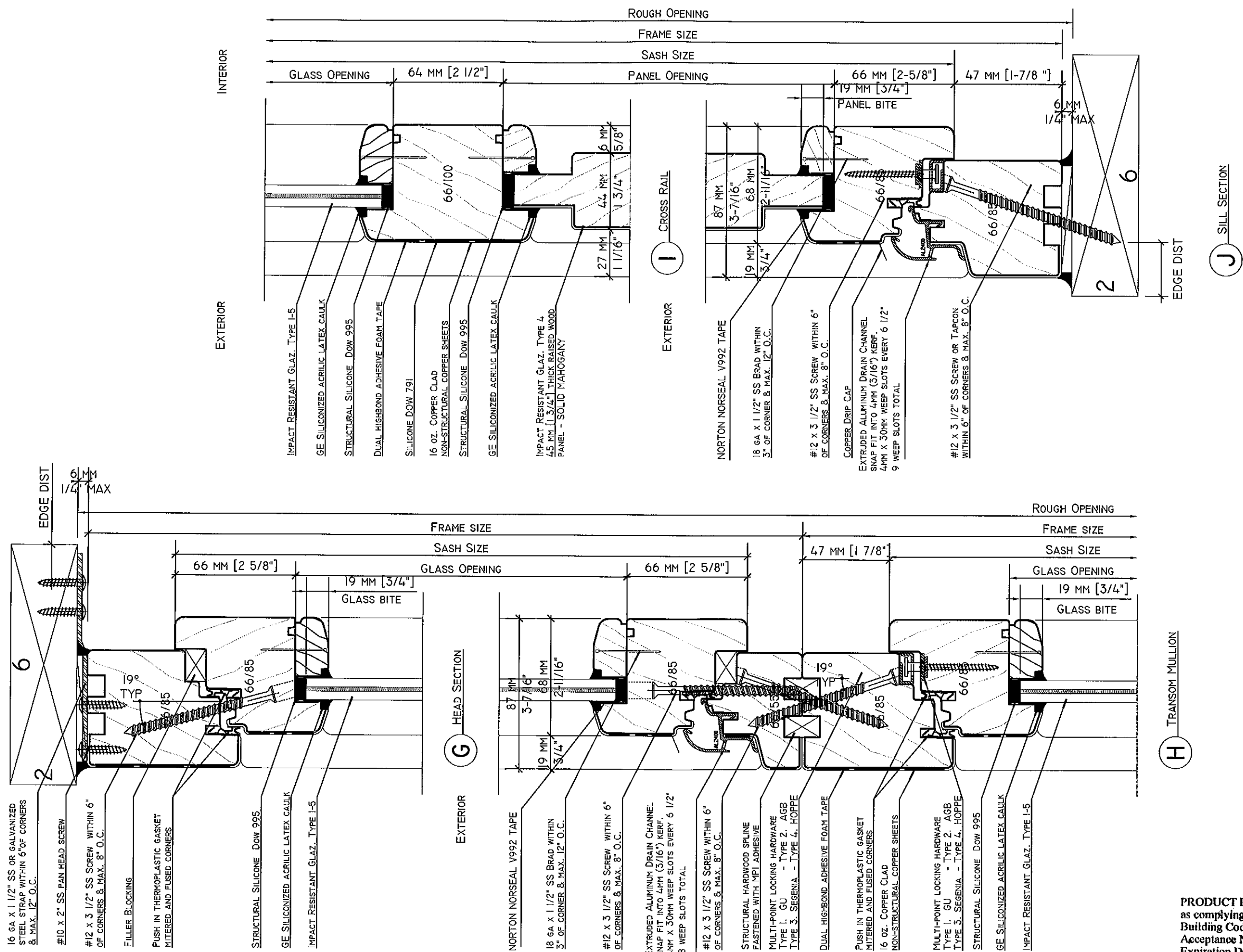
STATE OF
FLORIDA
160 SW 12th AVENUE, #1000
DEERFIELD BEACH, FL 33442
Ph: (954) 354-0660 Fax: (954) 354-0660
WWW.ENGEXP.COM
A FRANK L. BENNARDO, P.E., INC. INNOVATION



PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 12-0319-03
Expiration Date April 12, 2017
By Manuel Perez
Miami Dade Product Control

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BCCO COMMENTS	CL	FLB	1/27/07
BCCO COMMENTS	CL	FLB	3/14/07
ADD'L GLAZING OPTION	KL	CL	10/13/08
BCCO COMMENTS	RKB	FLB	06/04/09
2010 FBC	KL	FLB	01/25/12

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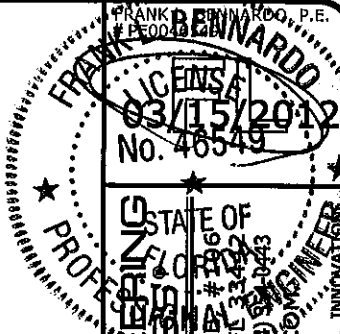
PRODUCT REVISED
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Building Code
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By *Manuel Pro*
Miami Dade Product Control

HARTMAN WINDOWS & DOORS, LLC
531 SOUTHERN BOULEVARD
WEST PALM BEACH, FL 33405
"EUROPEAN SERIES" MAHOGANY
INSWING CASEMENT WINDOWS
LARGE MISSILE IMPACT RESISTANT

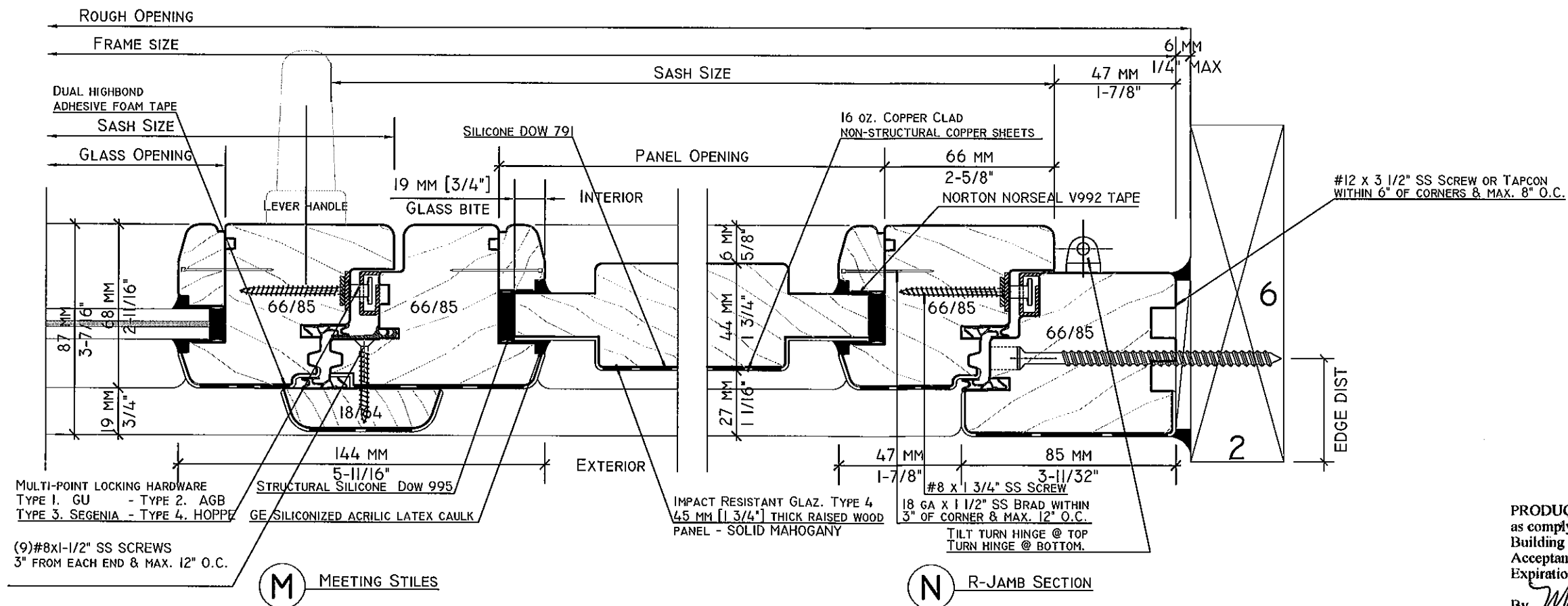
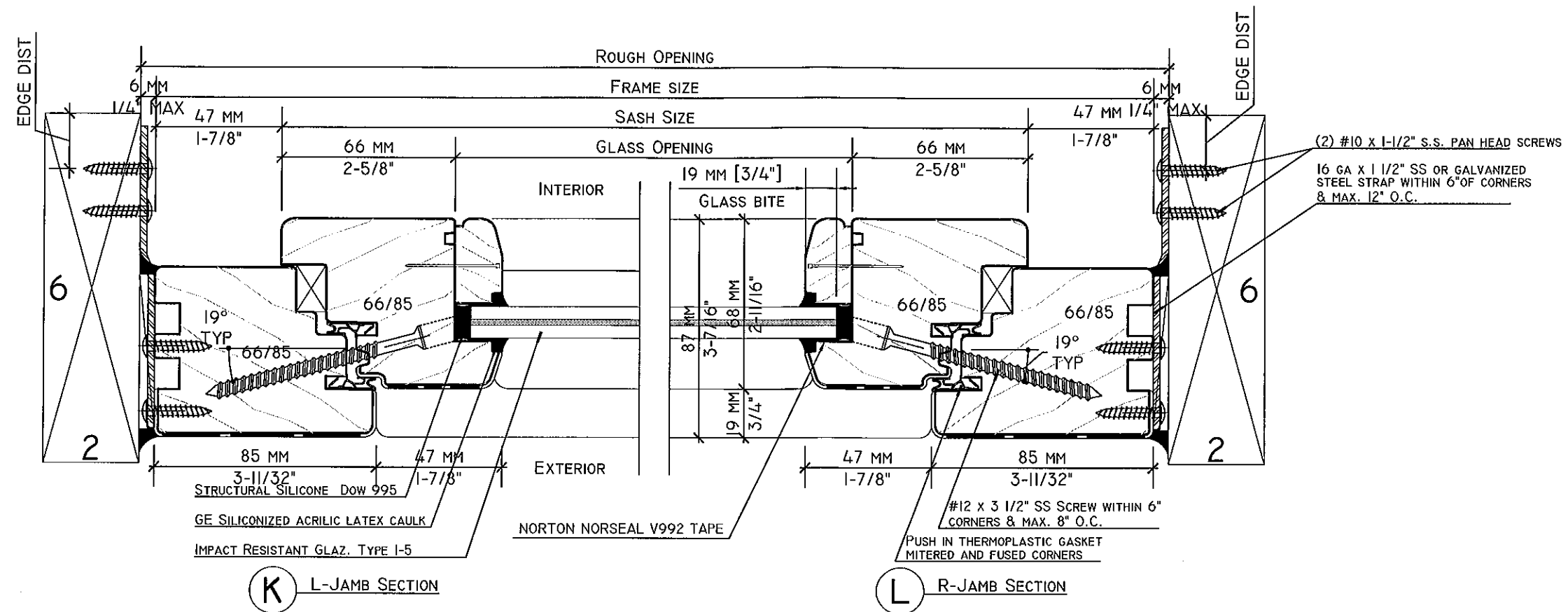
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ADDT. GLAZING OPTION	KL	CL	10/13/08
BCCO COMMENTS	RKB	FLB	06/04/09
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06-HWD-0004
SCALE: 1/8" = 1'-0"
PAGE DESCRIPTION: 03

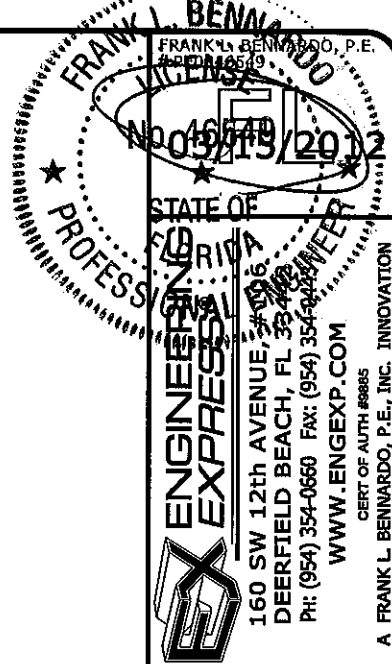
ENGINEERING EXPERTS
STATE OF FLORIDA
160 SW 12th AVENUE, #1300
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CERT OF AUTH #8885
A FRANK L. BENNARDO, P.E., INC. INNOVATION



F:\01 Project Files\Hartman Windows & Doors (HWD)\2006 Jobs\06-HWD-0004 European Casement Window, Inswing, LMI (NOA)\06-HWD-0004_03a European Tilt-Turn Casement, Inswing, LMI (NOA).dwg
03/15/2012 - 11:13am keithl



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Expiration Date April 12, 2017
By *Mamuel Perez*
Miami Dade Product Control



HARTMAN WINDOWS & DOORS, LLC
531 SOUTHERN BOULEVARD
WEST PALM BEACH, FL 33405
"EUROPEAN SERIES" MAHOGANY
INSWING CASEMENT WINDOWS
LARGE MISSILE IMPACT RESISTANT

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BCCO COMMENTS	CL	FLB	3/14/07
ADDTL GLAZING OPTION	KL	CL	10/13/08
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2010 FBC	KL	FLB	01/25/12

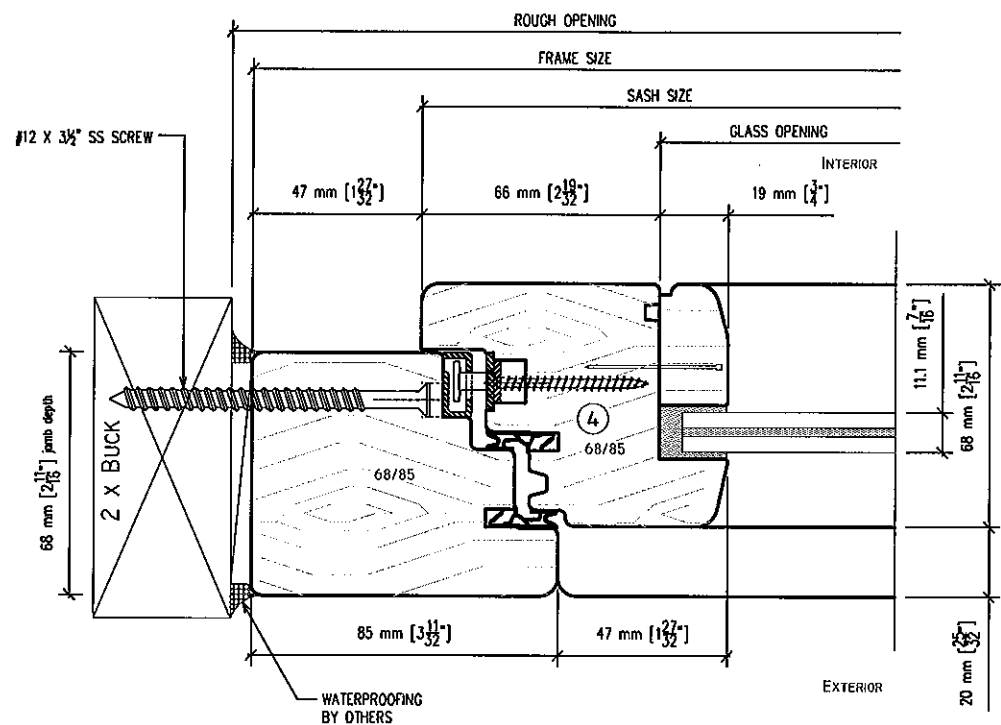
06-HWD-0004

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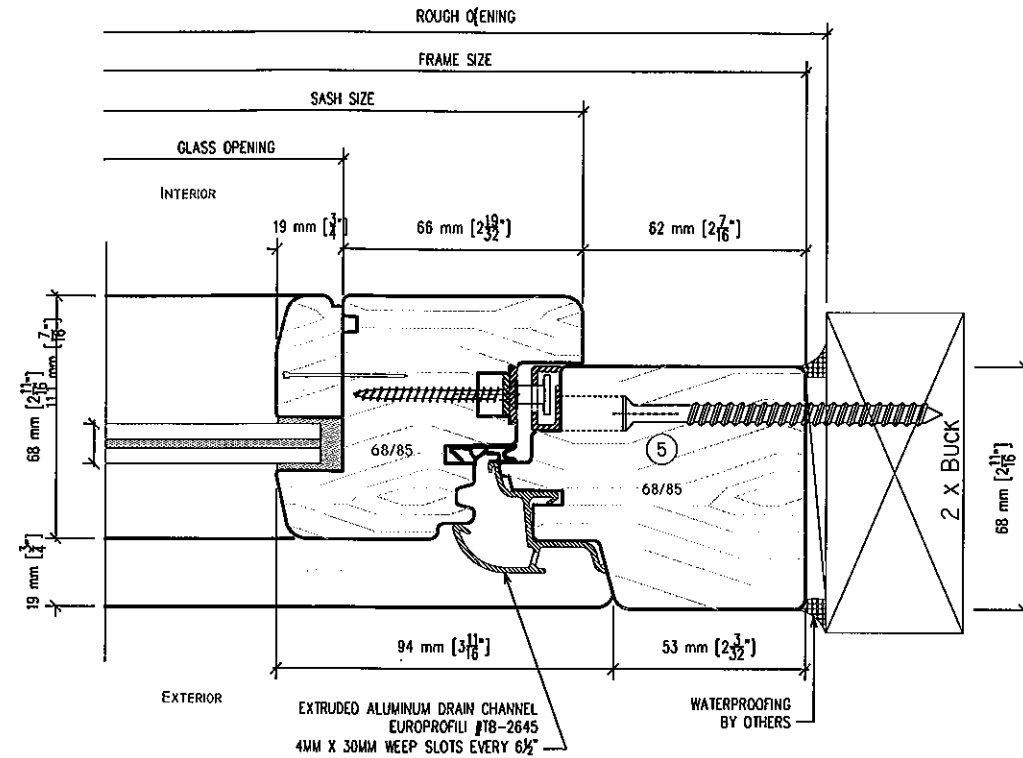
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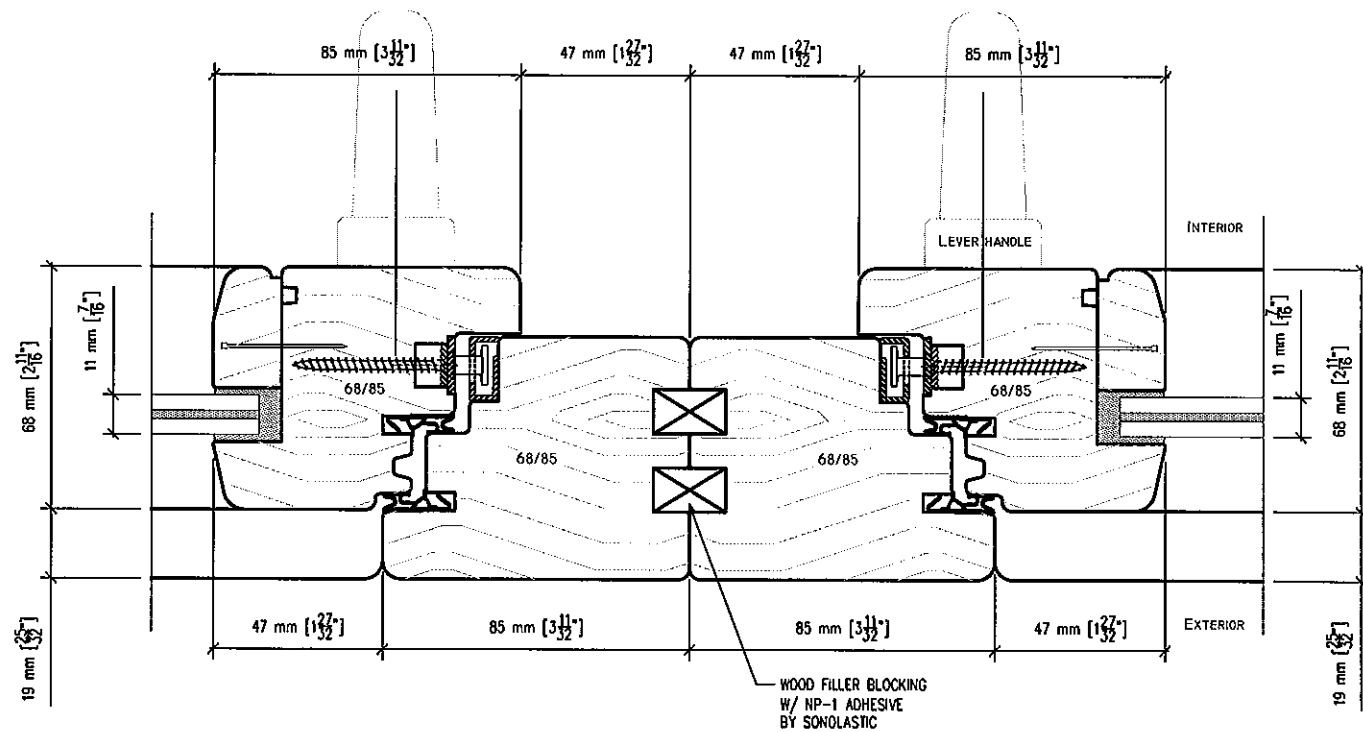
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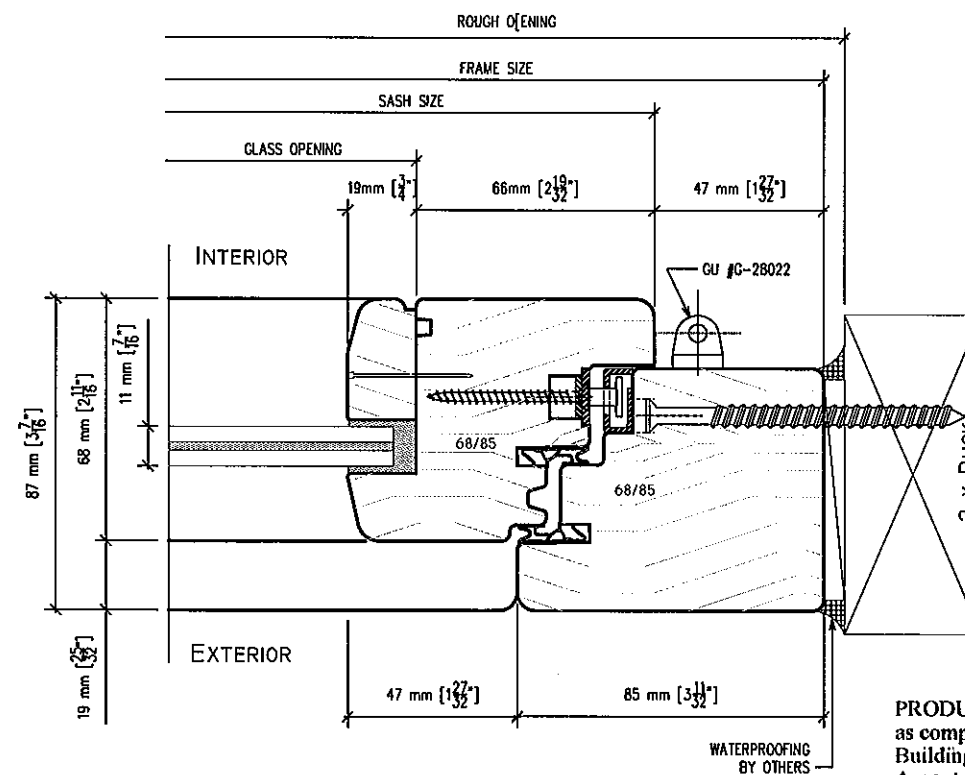
E HEAD SECTION
INSWING CASEMENT WINDOW



F SILL SECTION
INSWING CASEMENT WINDOW

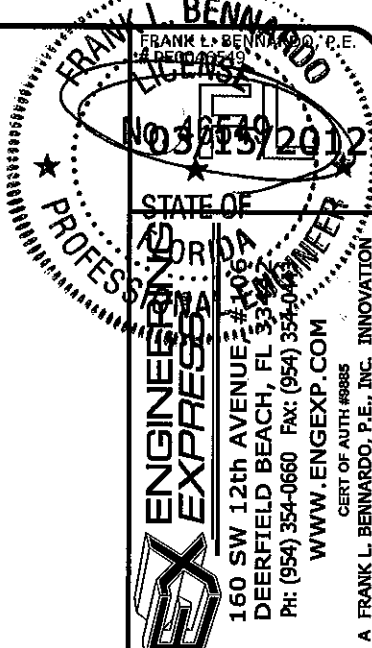


H JAMB SECTION HANDLE SIDE
INSWING CASEMENT WINDOW



G JAMB SECTION HINGE SIDE
INSWING CASEMENT WINDOW

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 12-0319.03
Expiration Date APR 12, 2017
By *Manuel Perez*
Miami/Dade Product Control

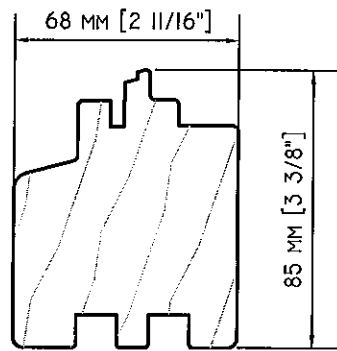


HARTMAN WINDOWS
& DOORS, LLC
531 SOUTHERN BOULEVARD
WEST PALM BEACH, FL 33405
'EUROPEAN SERIES' MAHOGANY
INSWING CASEMENT WINDOWS
LARGE MISSILE IMPACT RESISTANT

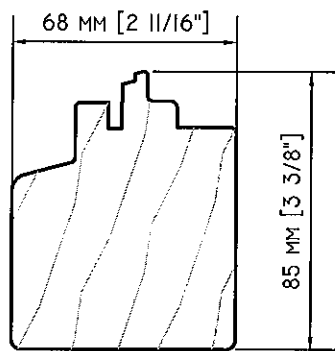
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BCCO COMMENTS	CL	FLB	1/27/07
BCCO COMMENTS	CL	FLB	3/14/07
ADDT. GLAZING OPTION	KL	CL	10/13/08
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2010 FBC	KL	FLB	01/25/12

06-HWD-0004
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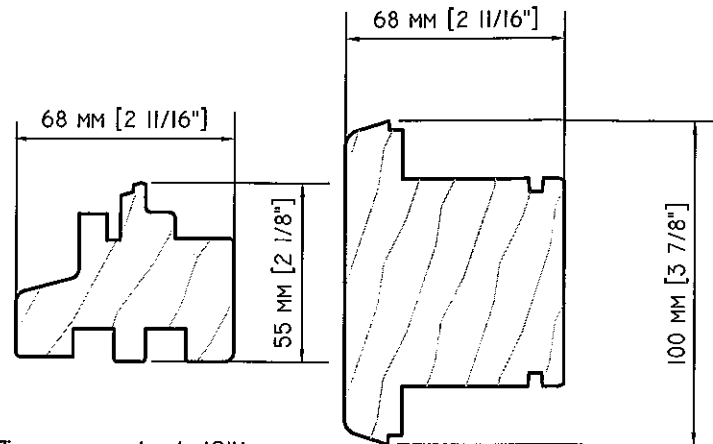
13A 26



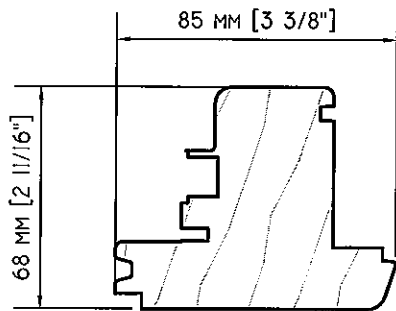
1. Bottom Jamb/Sill with or without notches



2. Transom Jamb/Sill

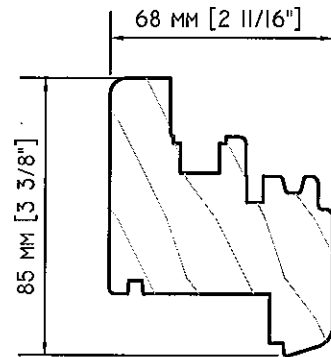


3. Sash Lock Rail

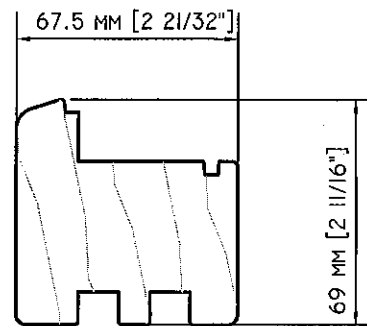


4. Inactive Meeting Rail

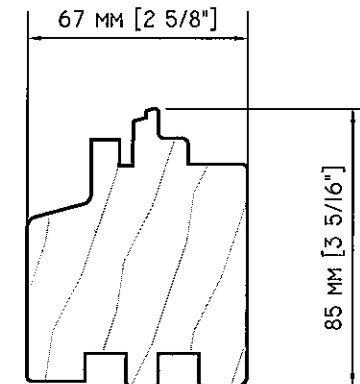
NOTE: All Jamb/Sill Types Available With or Without Notches



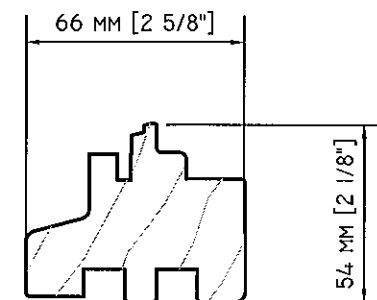
5. Inswing Sash



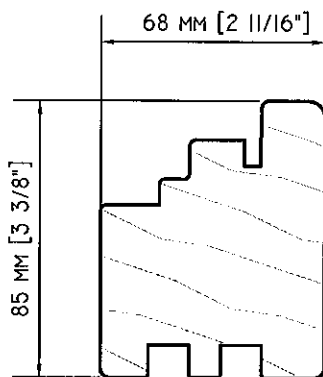
6. Direct Glazed Sash



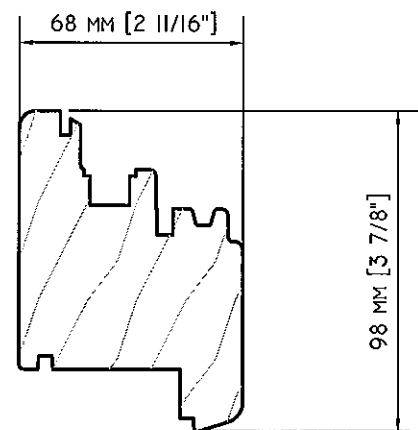
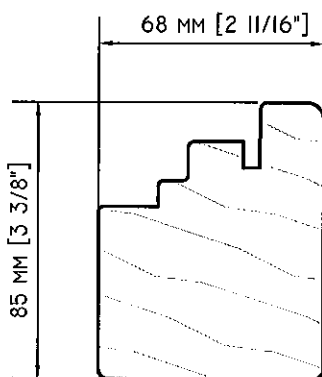
9. Copper Clad Bottom Jamb/Sill



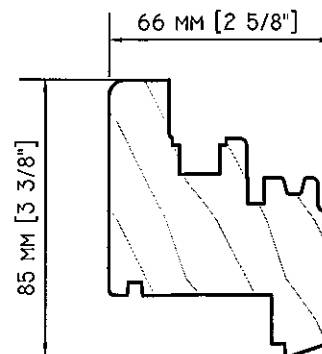
10. Copper Clad Transom Bottom Jamb/Sill



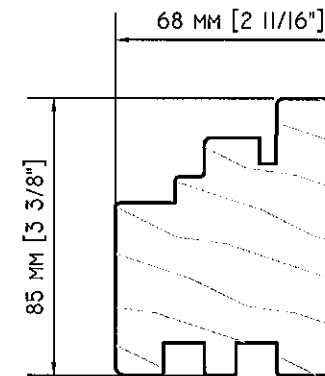
7. Casement Head/Jamb with or without notches



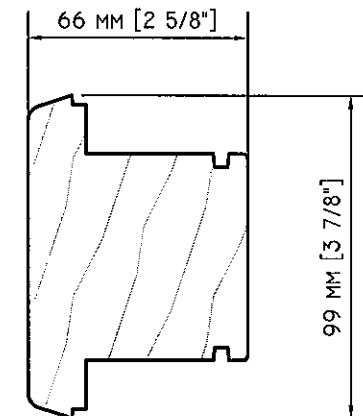
8. Inswing Sash



11. Copper Clad Sash



13. Copper Clad Jamb



12. Copper Clad Lock Rail

MATERIALS LIST		
ITEM	DESCRIPTION	REMARKS/SUPPLIER
1	Bottom Jamb/Sill	Mahogany or equal
2	Transom Jamb/Sill	Mahogany or equal
3	Sash Lock Rail	Mahogany or equal
4	Inactive Meeting Rail	Mahogany or equal
5	Inswing Sash	Mahogany or equal
6	Direct Glazed Sash	Mahogany or equal
7	Casement Head/Jamb	Mahogany or equal
8	Inswing Sash	Mahogany or equal
9	Copper Clad Bottom Jamb/Sill	Mahogany or equal
10	Copper Clad Bottom Jamb/Sill	Mahogany or equal
11	Copper Clad Sash	Mahogany or equal
12	Copper Clad Lock Rail	Mahogany or equal
13	Copper Clad Jamb	Mahogany or equal
14		

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 12-0319.03
Expiration Date APRIL 12, 2019
By Manuel Perez
Miami/Dade Product Control

HARTMAN WINDOWS
& DOORS, LLC
531 SOUTHERN BOULEVARD
WEST PALM BEACH, FL 33405

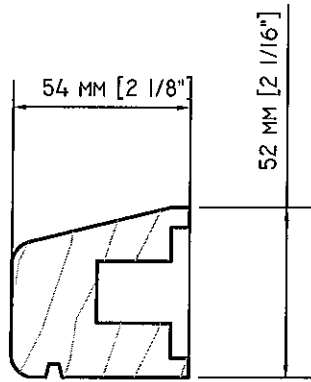
'EUROPEAN SERIES' MAHOGANY
INSWING CASEMENT WINDOWS
LARGE MISSILE IMPACT RESISTANT

REMARKS	DRWN	CHKD	DATE
BC00 COMMENTS	CL	FLB	1/27/07
BC00 COMMENTS	CL	FLB	3/14/07
ADDTL GLAZING OPTION	KL	CL	10/13/08
BC00 COMMENTS	RKB	FLB	06/04/09
2010 FBC	KL	FLB	01/25/12

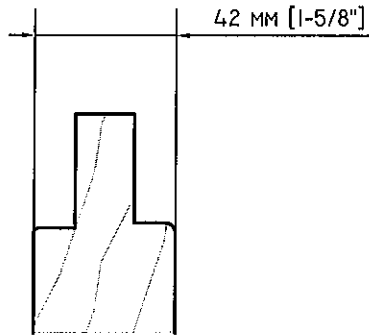
06-HWD-0004

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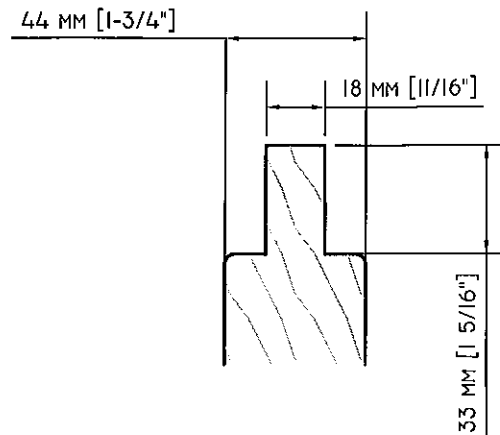
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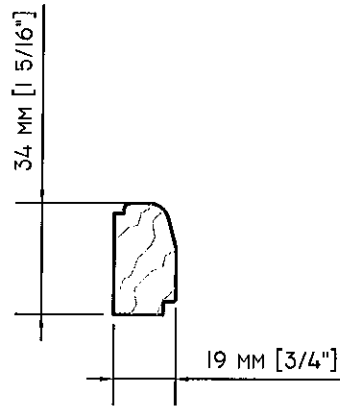
1. Drip Cap/Steel Cover



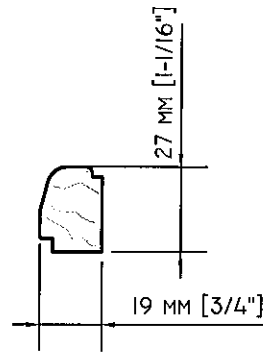
2. Copper Clad Panel



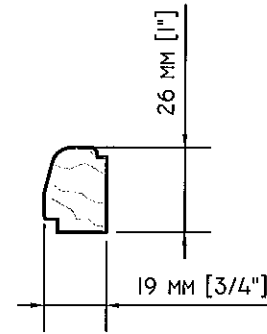
3. Wood Panel



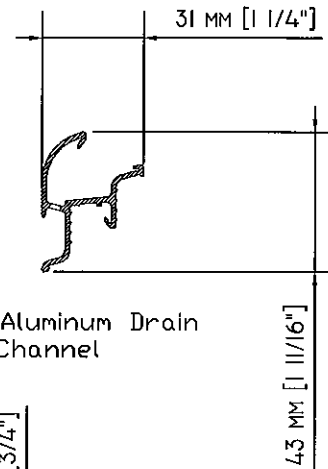
4. Glazing Bead



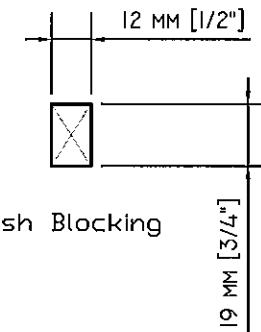
16. Glazing Bead



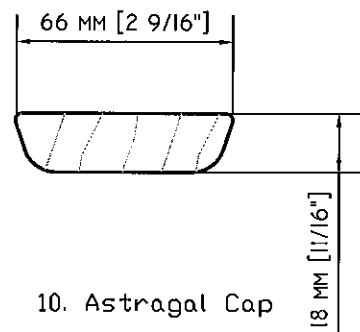
5. I.G. Glazing Bead



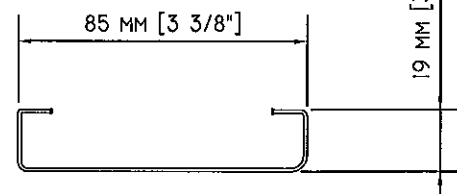
6. Aluminum Drain Channel



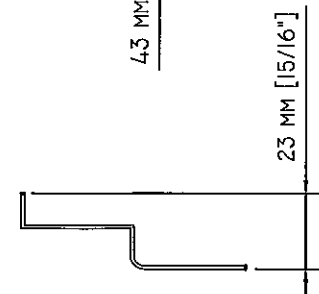
8. Fixed Sash Blocking



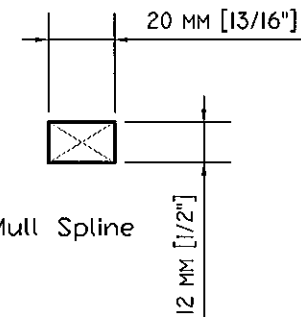
10. Astragal Cap



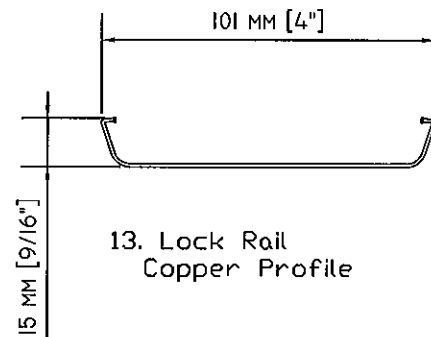
11. Head/Jamb Copper Profile



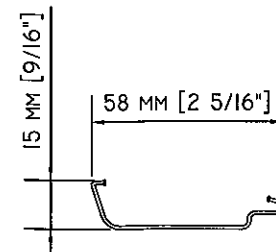
12. Panel Edge Copper Profile



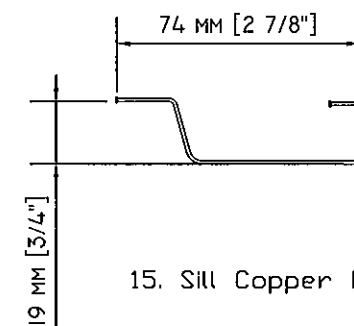
9. Mull Spline



13. Lock Rail Copper Profile



14. Sash Copper Profile



15. Sill Copper Profile

MATERIALS LIST		
ITEM	DESCRIPTION	REMARKS/SUPPLIER
1	Drip Cap/Steel Cover	Mahogany or equal
2	Copper Clad Panel	Mahogany or equal
3	Wood Panel	Mahogany or equal
4	Glazing Bead	Mahogany or equal
5	I.G. Glazing Bead	Mahogany or equal
6	Drain Channel (Aluminum)	Proprietary
-	-	-
8	Fixed Sash Blocking	Mahogany or equal
9	Mull Spline	Mahogany or equal
10	Astragal Cap	Mahogany or equal
11	Head/Jamb Copper Profile	Proprietary
12	Panel Edge Copper Profile	Proprietary
13	Lock Rail Copper Profile	Proprietary
14	Sash Copper Profile	Proprietary
15	Sill Copper Profile	Proprietary
16	Glazing Bead	Mahogany or equal

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 12-0319.03
Expiration Date April 12, 2017
By *Manuel Perez*
Miami/Dade Product Control

HARTMAN WINDOWS
& DOORS, LLC
531 SOUTHERN BOULEVARD
WEST PALM BEACH, FL 33405

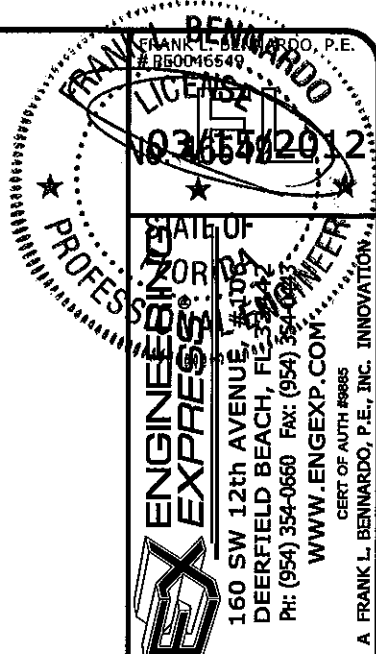
'EUROPEAN SERIES' MAHOGANY
INSWING CASEMENT WINDOWS
LARGE MISSILE IMPACT RESISTANT

REMARKS	DRWN	CHKD	DATE
BC00 COMMENTS	CL	FLB	1/27/07
BC00 COMMENTS	CL	FLB	3/14/07
ADDL GLAZING OPTION	KL	CL	10/13/08
BC00 COMMENTS	RKB	FLB	06/04/09
2010 FBC	KL	FLB	01/25/12

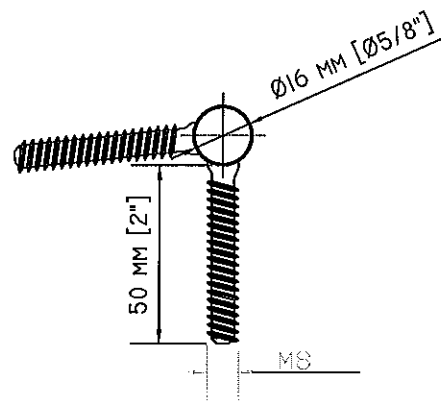
06-HWD-0004

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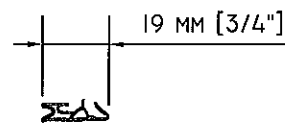
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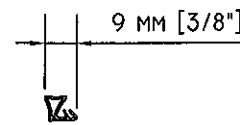
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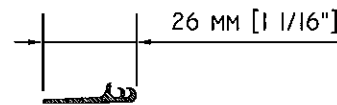
1. Adjustable S.S. Hinge



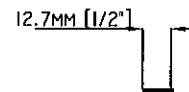
2. Thermoplastic Gasket



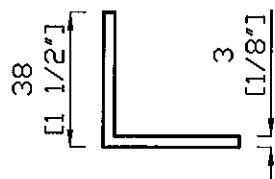
3. Thermoplastic Gasket



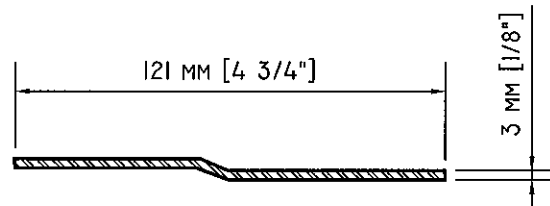
4. Thermoplastic Gasket



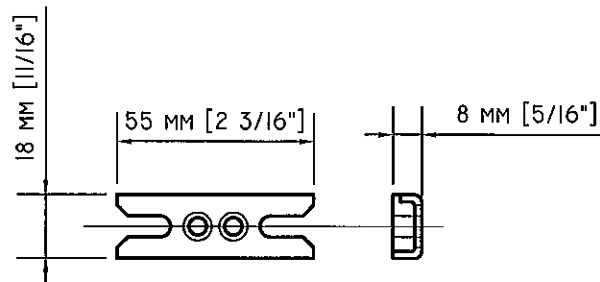
12. NORTON NORSEAL V992 TAPE



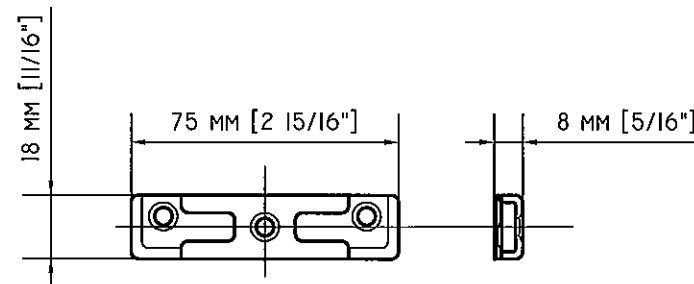
5. Aluminum Angle



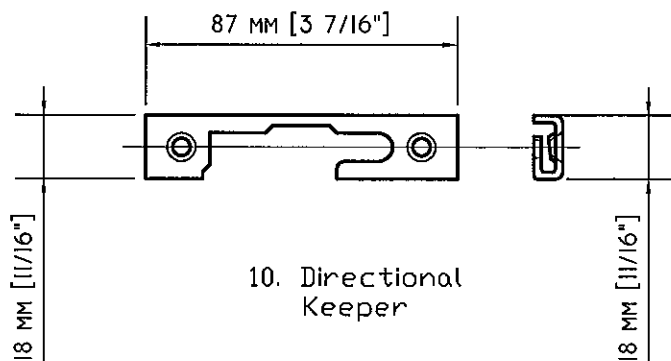
6. Galvanized or S.S. Strap



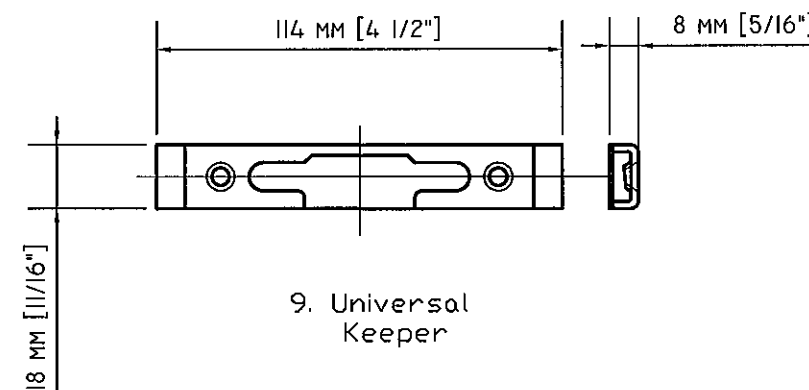
7. Tilt/Turn Keeper



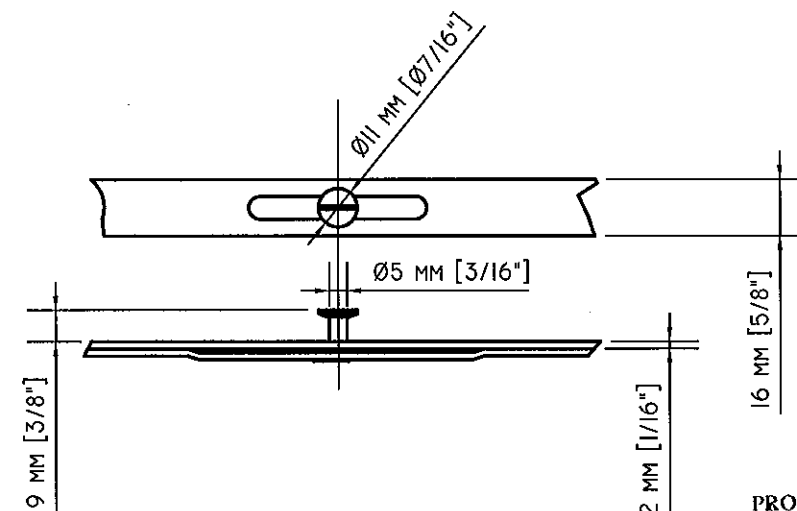
8. Tilt/Turn Keeper



10. Directional Keeper



9. Universal Keeper



11. Adjustable S.S. Cam

MATERIALS LIST			
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1	Adjustable S.S. Hinge		Proprietary
2	Gasket(Thermoplastic)	1500530	Olimpia
3	Gasket(Thermoplastic)	1500450	Olimpia
4	Gasket(Thermoplastic)	1500512	Olimpia
5	1 1/2" x 1 1/2" x 1/8" Angle(Aluminum)		Proprietary
6	Galvanized or S.S. Strap		Proprietary
7	Tilt/Turn Keeper		G.U. A.G.B. S.I. Roto
8	Tilt/Turn Keeper		G.U. A.G.B. S.I. Hoppe
9	Universal Keeper		G.U. A.G.B. S.I. Hoppe
10	Directional Keeper		G.U. A.G.B. S.I. Hoppe
11	Adjustable S.S. Cam		G.U. A.G.B. S.I. Hoppe
12	NORTON NORSEAL V992 TAPE	1500512	Total Plastics
13			
14			

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 12-0319.03
Expiration Date April 12, 2017
By *Maurice P. [Signature]*
Miami Dade Product Control

FRANK L. BENNARD, P.E.
03/15/2012
No. 40049
STATE OF FLORIDA
160 SW 12th Avenue, Suite 1100
DEERFIELD BEACH, FL 33442
Ph: (954) 354-0660 Fax: (954) 354-0661
WWW.ENGP.COM
CERT OF AUTH #0005
A FRANK L. BENNARD, P.E., INC. INNOVATION

HARTMAN WINDOWS
& DOORS, LLC
531 SOUTHERN BOULEVARD
WEST PALM BEACH, FL 33405
'EUROPEAN SERIES' MAHOGANY
INSWING CASEMENT WINDOWS
LARGE MISSILE IMPACT RESISTANT

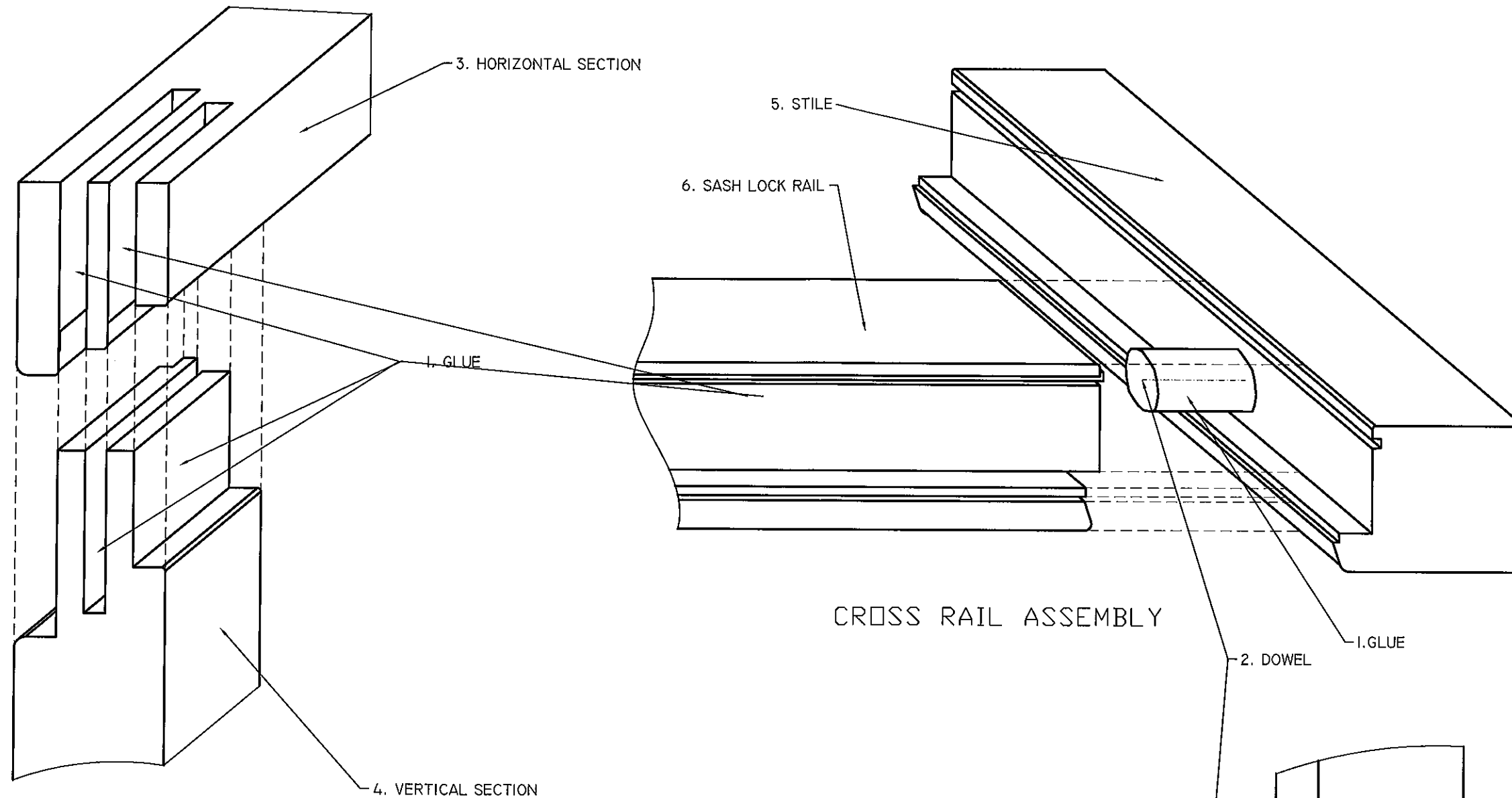
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BCCO COMMENTS	CL	FLB	3/14/07
ADD'L GLAZING OPTION	KL	CL	10/13/08
BCCO COMMENTS	RKB	FLB	06/04/09
2010 FBC	KL	FLB	01/25/12

06-HWD-0004
SCALE: 1/8" = 1'-0"
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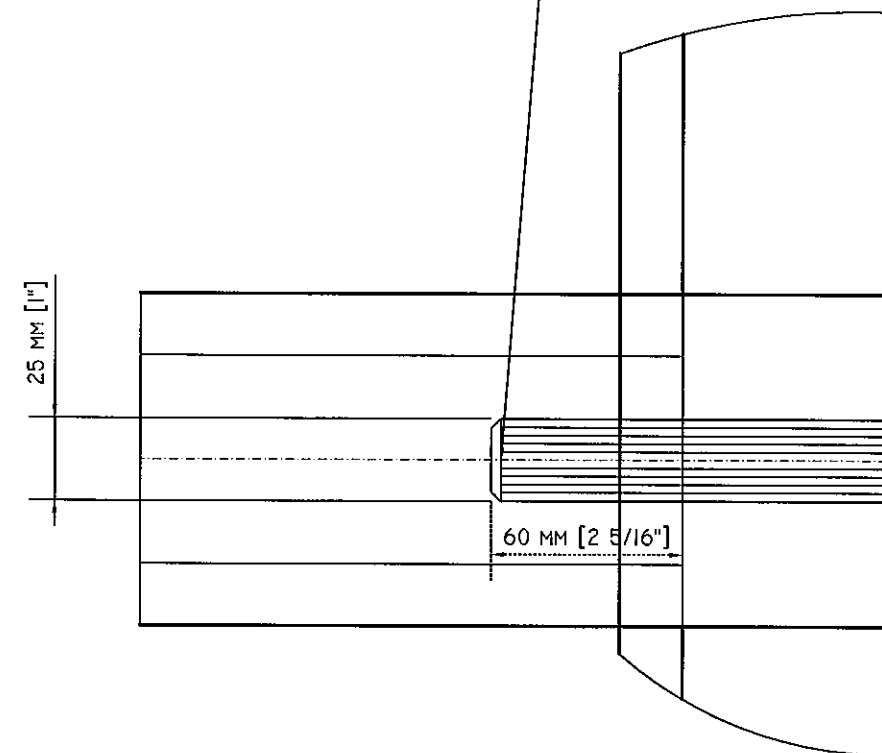
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MULTI-FORK FRAME AND VENT
CORNER ASSEMBLY

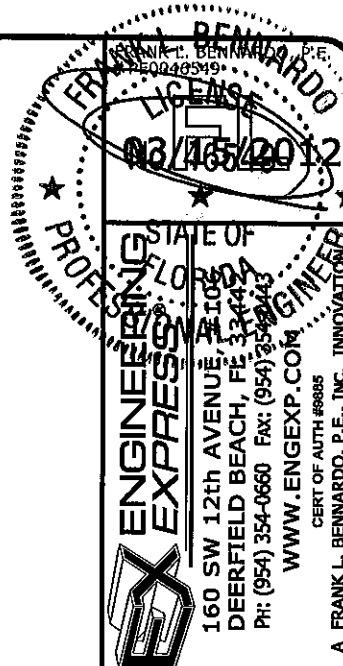
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3	Horizontal Section	Mahogany or equal
4	Vertical Section	Mahogany or equal
5	Stile	Mahogany or equal
6	Sash Lock Rail	Mahogany or equal
7		
8		



CROSS RAIL ASSEMBLY



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By *Manuel Pro*
Miami Dade Product Control



HARTMAN WINDOWS
& DOORS, LLC
531 SOUTHERN BOULEVARD
WEST PALM BEACH, FL 33405
'EUROPEAN SERIES' MAHOGANY
INSWING CASEMENT WINDOWS
LARGE MISSILE IMPACT RESISTANT

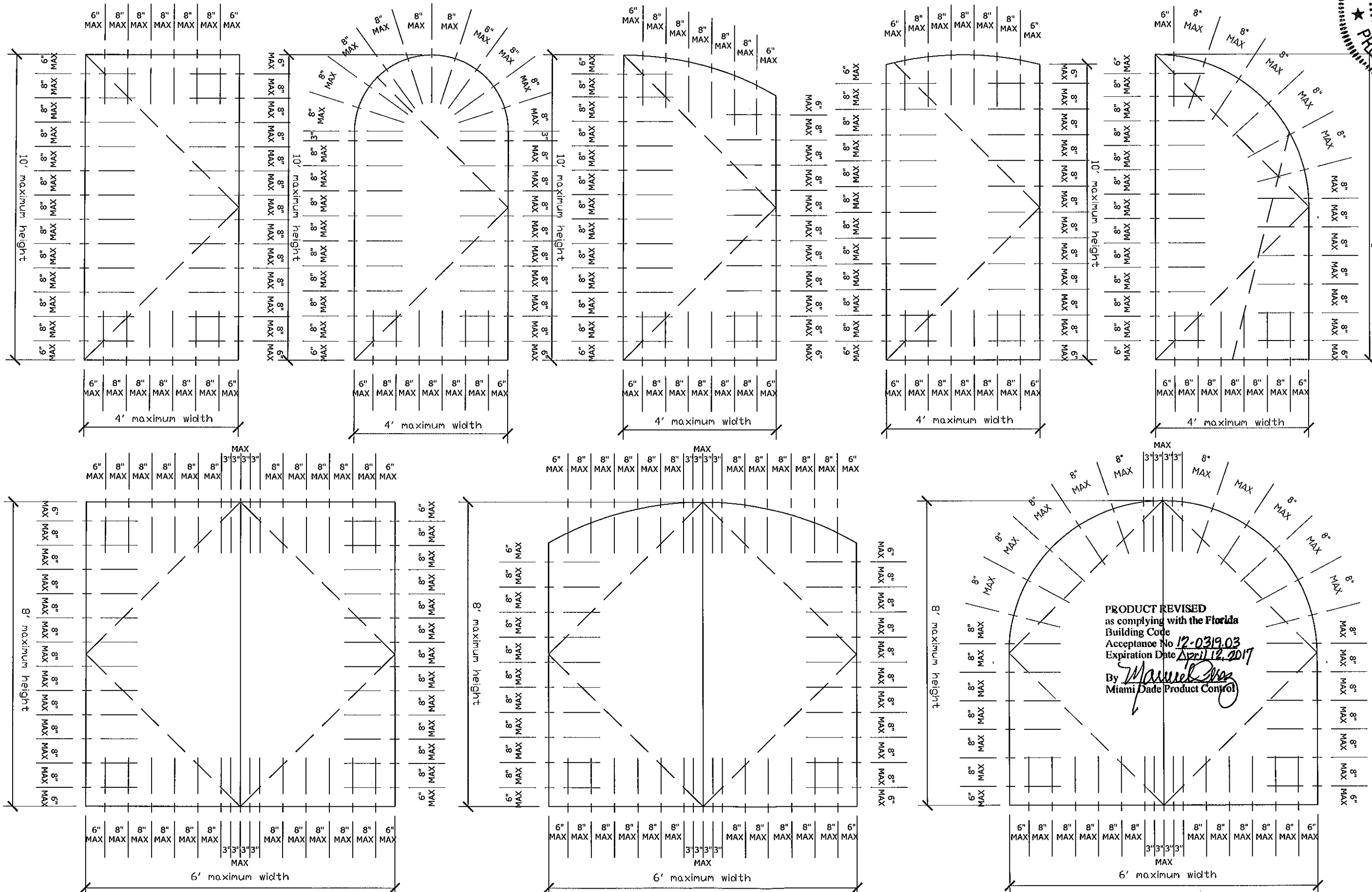
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AUDL GLAZING OPTION	KL	CL	10/13/08
BCCO COMMENTS	RKB	FLB	06/04/09
2010 REC	KL	FLB	01/25/12

06-HWD-0004
SCALE: 1/3
PAGE DESCRIPTION:

INSWING APPROVED SHAPES & CONFIGURATIONS

FOR CONFIGURATIONS & SHAPES NOT SPECIFIED HEREIN, REFER TO THE BELOW MIAMI-DADE NOA FOR APPROVED ANCHOR TYPES AND LOCATIONS:
"EUROPEAN SERIES" MAHOGANY OUTSWING CASEMENT WINDOWS

03/15/2012 - 11:13am keithl F:\01 Project Files\Hartman Windows & Doors (HWD)\2006 Jobs\06-HWD-0004 European Casement Window, Inswing, LMI (NOA).dwg

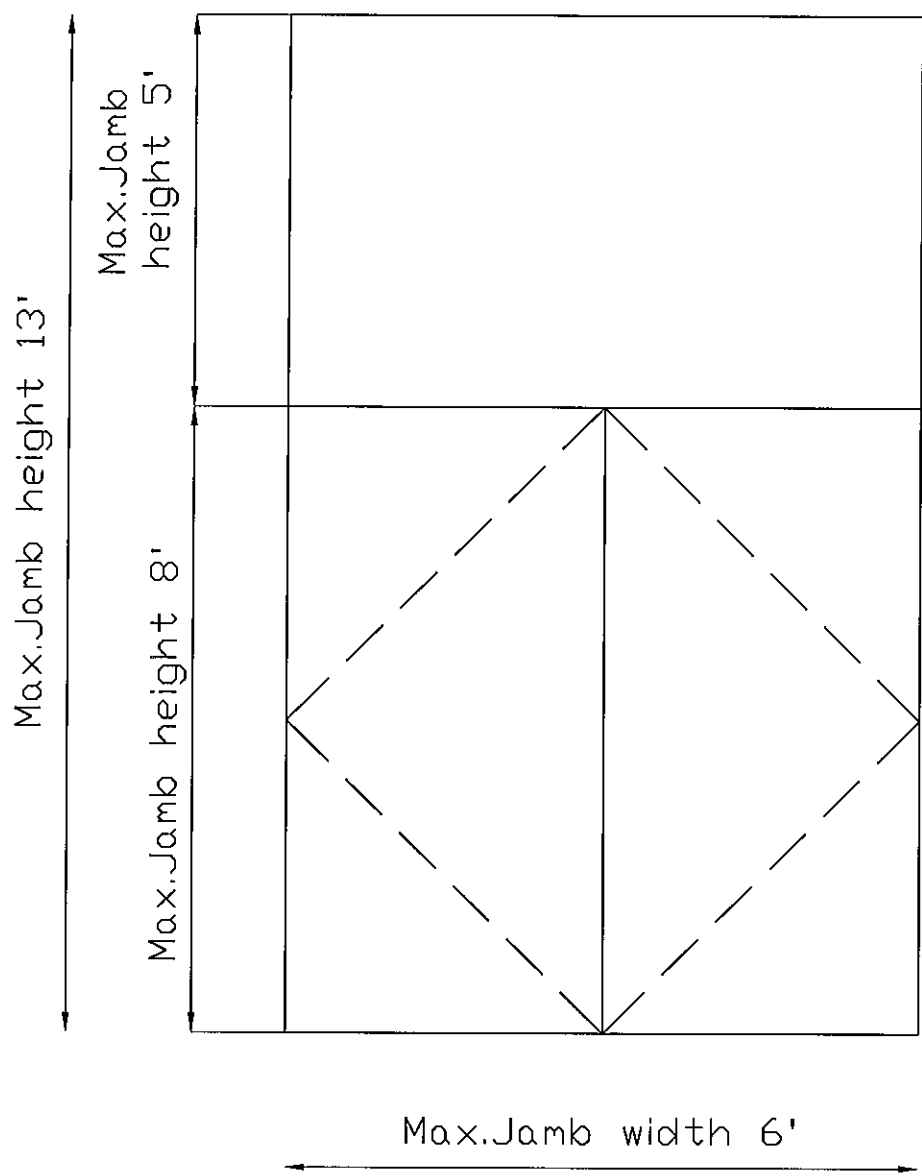


FRANK L. BENNARD, P.E.
ENGINEERING EXPRESS
 160 SW 12th Avenue, #3042
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 CERT OF AUTH #9885
 A FRANK L. BENNARD, P.E., INC. INNOVATION

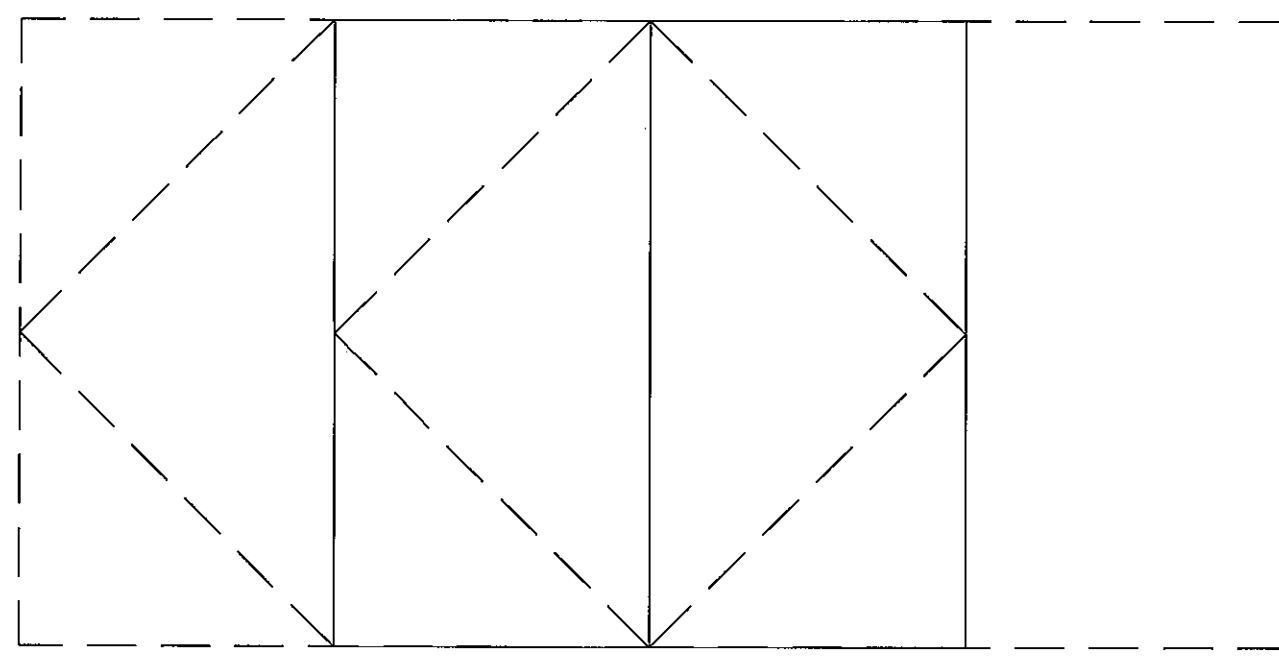
HARTMAN WINDOWS & DOORS, LLC
 531 SOUTHERN BOULEVARD
 WEST PALM BEACH, FL 33405
 "EUROPEAN SERIES" MAHOGANY
 INSWING CASEMENT WINDOWS
 LARGE MISSILE IMPACT RESISTANT

REMARKS	DRWN	CHKD	DATE
BCCO COMMENTS	CL	FLB	1/27/07
BCCO COMMENTS	CL	FLB	3/14/07
ADD'L GLAZING OPTION	KL	FLB	10/13/08
BCCO COMMENTS	RGB	FLB	06/04/09
2010 FBC	KL	FLB	01/25/12

06-HWD-0004
SCALE: 1" = 1'-0"
PAGE DESCRIPTION:



SEE SHEET 10 OF 26 FOR ANCHOR LOCATIONS



SEE SHEET 4 OF 26 FOR ANCHOR LOCATIONS

NOTES:
1.OTHER SHAPES MAY APPLY PROVIDING
THEY ARE SIMILAR TO THOSE SHOWN
2.ALL SHAPED UNITS MUST FIT INSCRIBED
INTO THE ALLOWABLE RECTANGULAR UNITS

PRODUCT REVISED
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Building Code
Acceptance No 12-0319-03
Expiration Date April 12, 2017
By *Mamuel Cruz*
Miami Dade Product Control

REMARKS	DRWN	CHKD	DATE
BCCO COMMENTS	CL	FLB	1/27/07
BCCO COMMENTS	CL	FLB	3/14/07
ADD'L GLAZING OPTION	KL	CL	10/13/08
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2010 FBC	KL	FLB	01/25/12

06-HWD-0004
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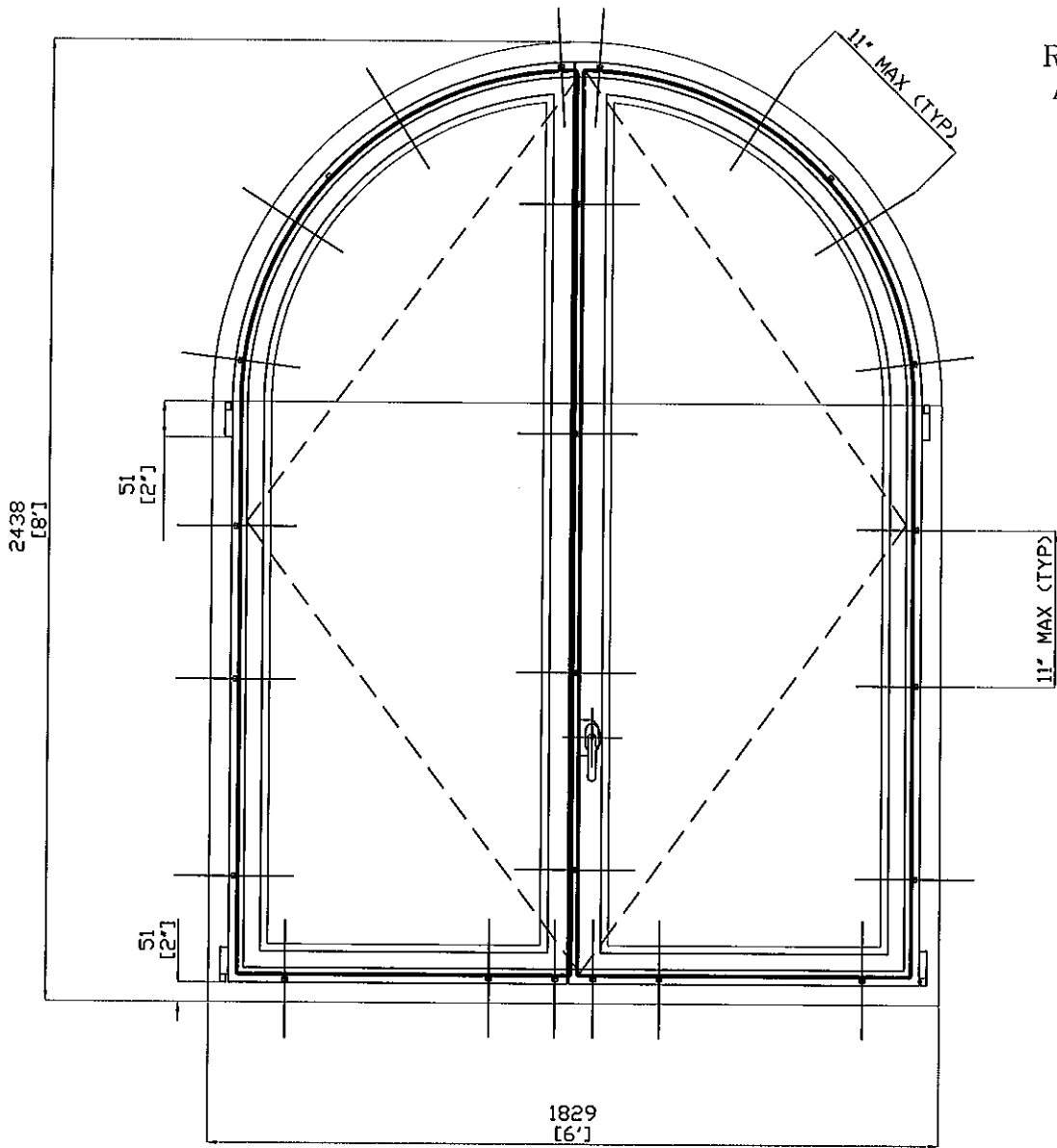
HARTMAN WINDOWS
& DOORS, LLC
531 SOUTHERN BOULEVARD
WEST PALM BEACH, FL 33405
"EUROPEAN SERIES" MAHOGANY
INSWING CASEMENT WINDOWS
LARGE MISSILE IMPACT RESISTANT

FRANK L. BENNARD
PROFESSIONAL ENGINEER
No 03/15/2017
STATE OF FLORIDA
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EXPRESS
160 SW 12th AVENUE, #206
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CERT OF AUTH #9885
A FRANK L. BENNARD, P.E., INC. INNOVATION.

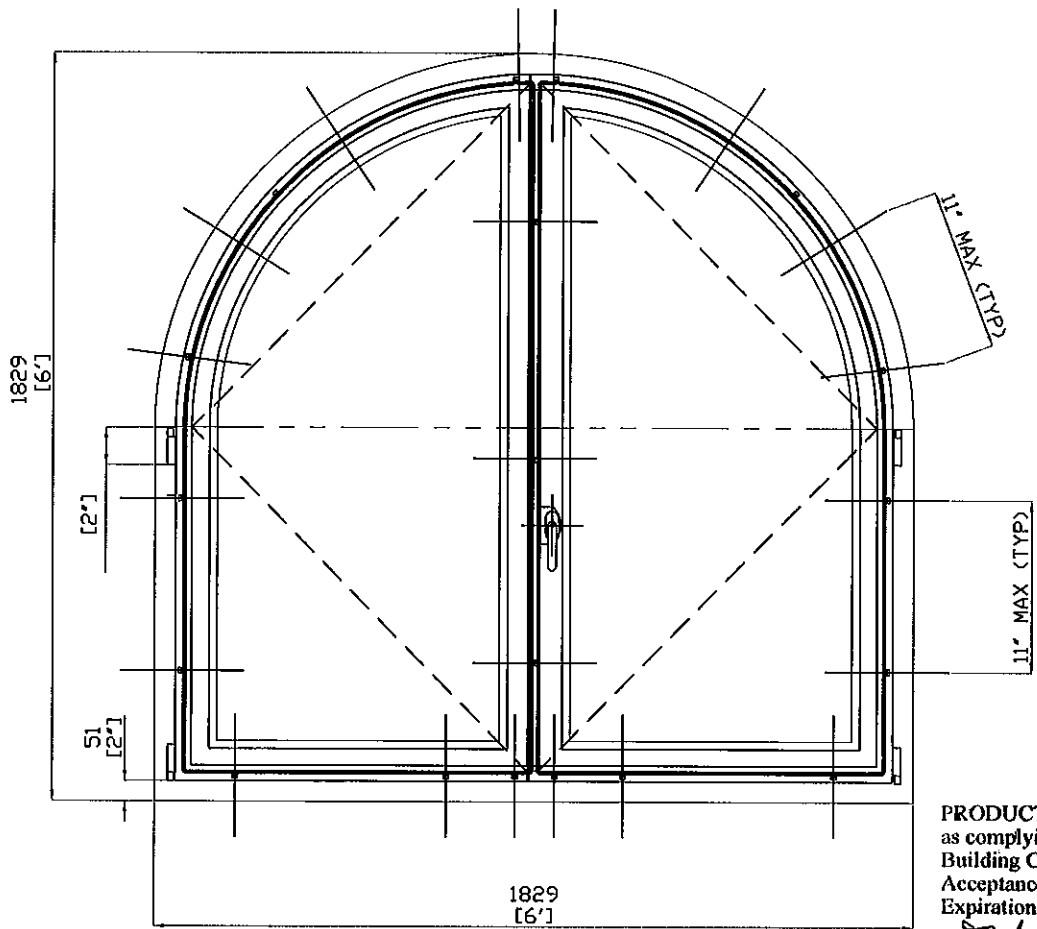
FRANK L. BENNARD
PROFESSIONAL ENGINEER
No 03/15/2017
STATE OF FLORIDA
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EXPRESS
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03/15/2012 - 11:13am keithi F:\01 Project Files\Hartman Windows & Doors (HWD)\2006 Jobs\06-HWD-0004 European Casement Window, Inswing, LMI (NOA)\06-HWD-0004 European Tilt-Turn Casement, Inswing, LMI (NOA).dwg

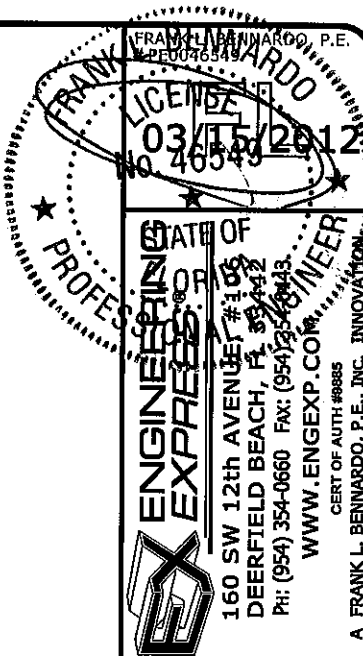
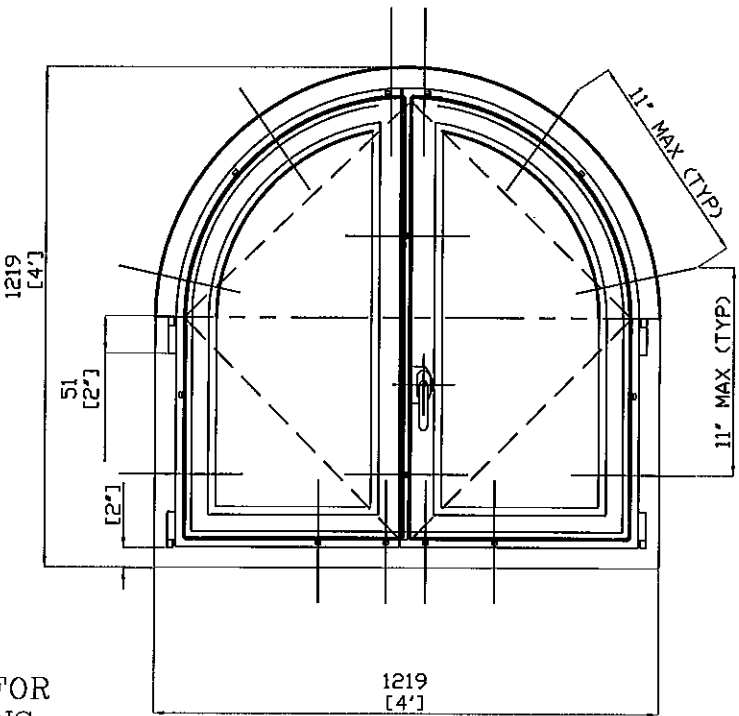
HINGES/LOCK POINTS REQUIREMENTS TABLE									
INSWING ARCH TOP WINDOW									
LOCK POINTS QTY REQUIREMENTS						HINGES QTY REQUIREMENTS			
ARCH RAIL/BOTTOM		MEETING RAIL		Left/Right Side		SASH HEIGHT	QTY.	Dist. from bottom corner	Dist. from spring line
SASH WIDTH	QTY.	SASH HEIGHT	QTY.	SASH HEIGHT	QTY.	6'-8'	2	2"	2"
2'-3'	3	6'-8'	4	6'-8'	7	4'-6'	2	2"	2"
Less than 2'	2	4'-6'	3	4'-6'	6	2'-4'	2	2"	2"
		2'-4'	2	2'-4'	4	Less than 2'	2	2"	2"
		Less than 2'	2	Less than 2'	2				



REFER TO THE BELOW MIAMI-DADE NOA FOR
APPROVED ANCHOR TYPES AND LOCATIONS:
**"EUROPEAN SERIES" MAHOGANY
OUTSWING
CASEMENT WINDOWS**



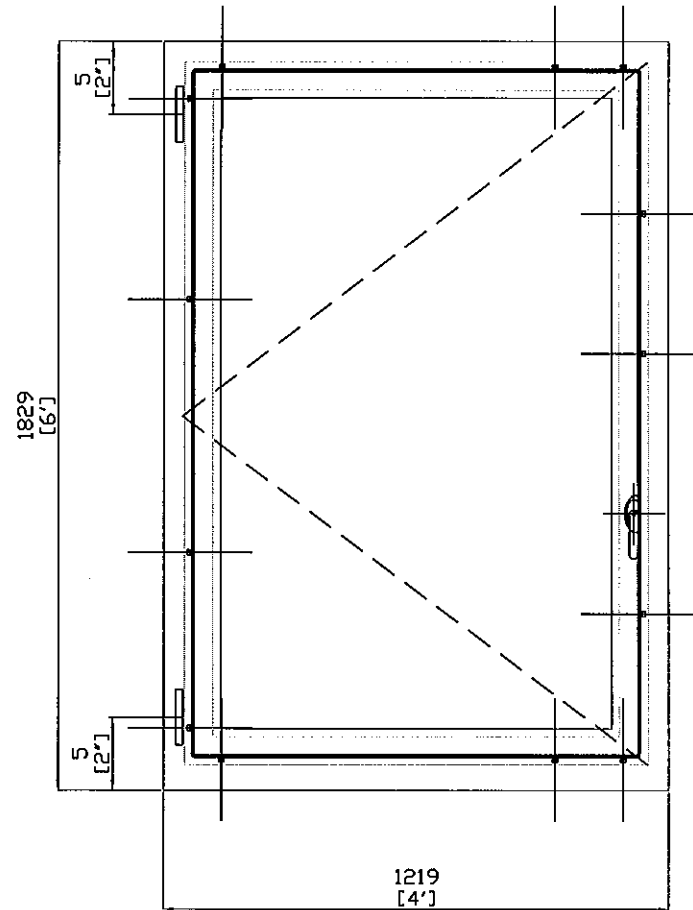
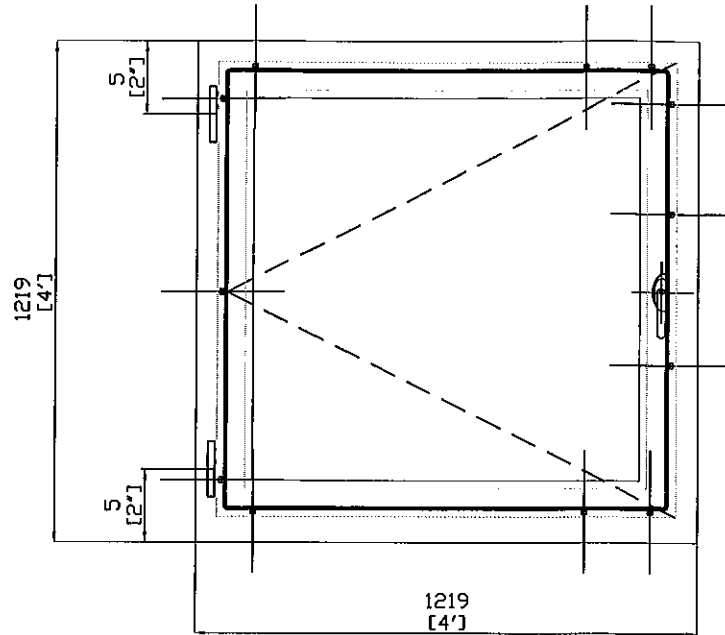
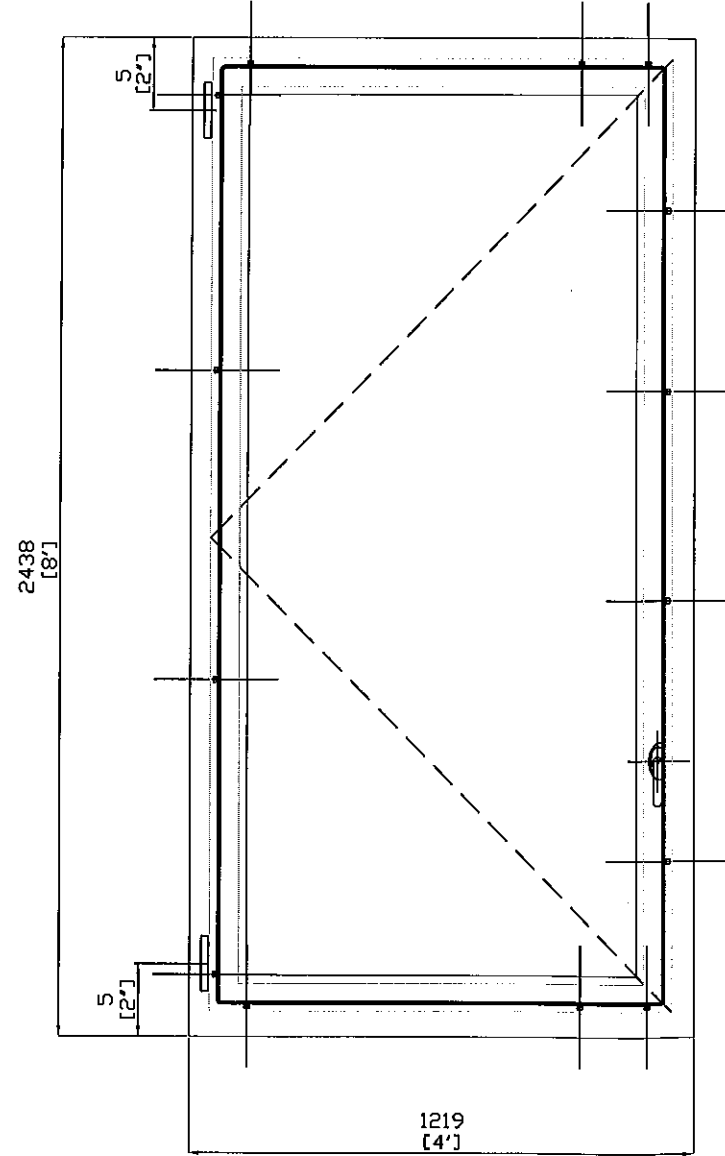
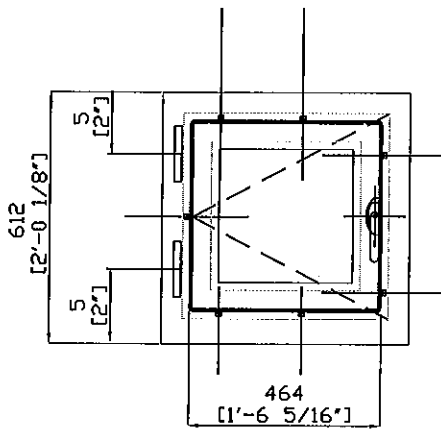
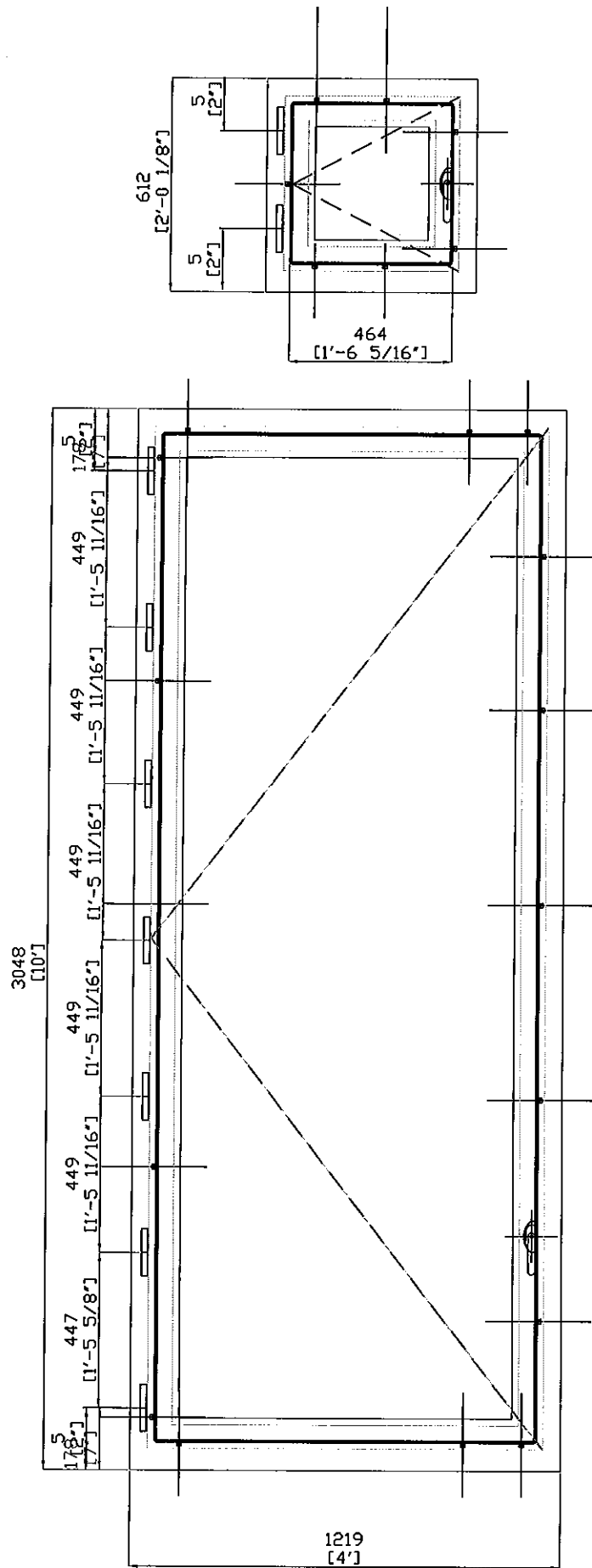
PRODUCT REVISED
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Building Code
Acceptance No 12-0319.03
Expiration Date April 12, 2017
By *Maurice Perez*
Miami Dade Product Control



HARTMAN WINDOWS
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531 SOUTHERN BOULEVARD
WEST PALM BEACH, FL 33405
'EUROPEAN SERIES' MAHOGANY
INSWING CASEMENT WINDOWS
LARGE MISSILE IMPACT RESISTANT

REMARKS	DRWN	CHKD	DATE
BCCO COMMENTS	CL	FLB	1/27/07
BCCO COMMENTS	CL	FLB	3/14/07
ADDTL GLAZING OPTION	KL	CL	10/13/08
BCCO COMMENTS	RKB	FLB	06/04/09
2010 FBC	KL	FLB	01/25/12

06-HWD-0004
SCALE: 1/32"
PAGE DESCRIPTION:



HINGE/LOCK POINT REQUIREMENTS						
INSWING RECTANGLE WINDOWS						
LOCK POINT REQUIREMENTS				HINGE REQUIREMENTS		
TOP/BOTTOM		LEFT/RIGHT SIDE		SASH HIGHT	QTY.	Dist. from corner
SASH WIDTH	QTY.	SASH HEIGHT	QTY.			
2'-4'	3	8'-10'	5	8'-10'	2	2"
2'	2	6'-8'	4	6'-8'	2	2"
Less 2'	2	2'-6'	3	4'-6'	2	2"
		Less 2'	2	2'-4'	2	2"
				Less 2'	2	2"

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Miami Dade Product Control

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& DOORS, LLC

531 SOUTHERN BOULEVARD
WEST PALM BEACH, FL 33405

'EUROPEAN SERIES' MAHOGANY
INSWING CASEMENT WINDOWS
LARGE MISSILE IMPACT RESISTANT

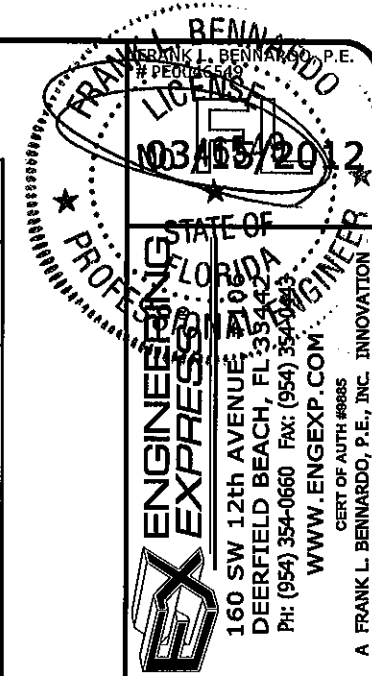
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BCCO COMMENTS	CL	FLB	1/27/07
BCCO COMMENTS	CL	FLB	3/14/07
ADD'L GLAZING OPTION	KL	CL	10/13/08
BCCO COMMENTS	RKB	FLB	06/04/09
2010 FBC	KL	FLB	01/25/12

06-HWD-0004

SCALE: 1/32" = 1'-0"
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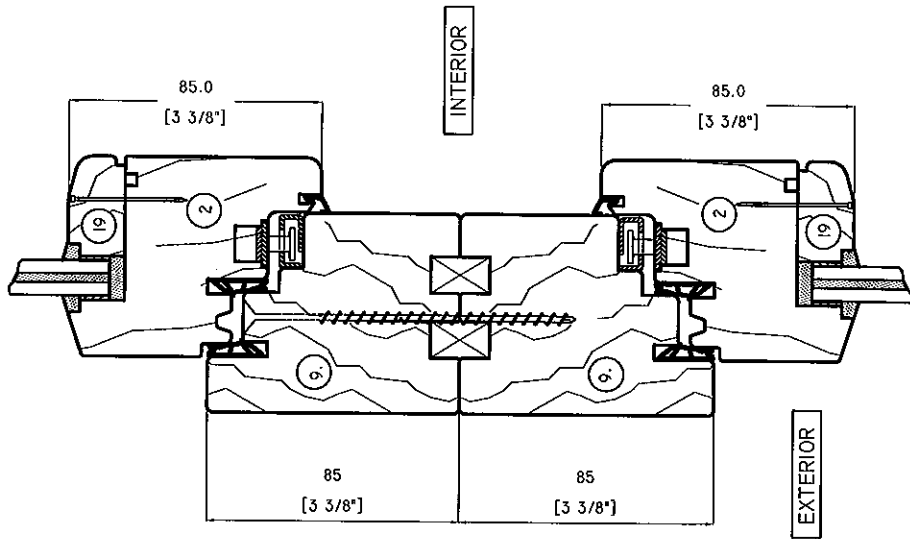
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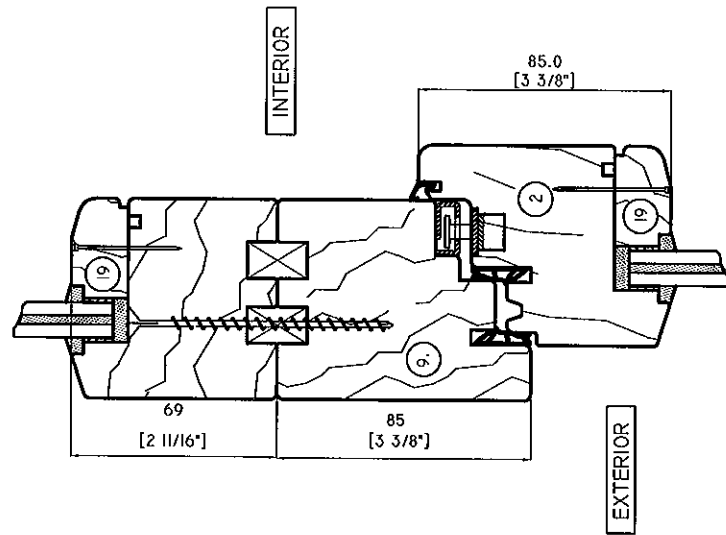
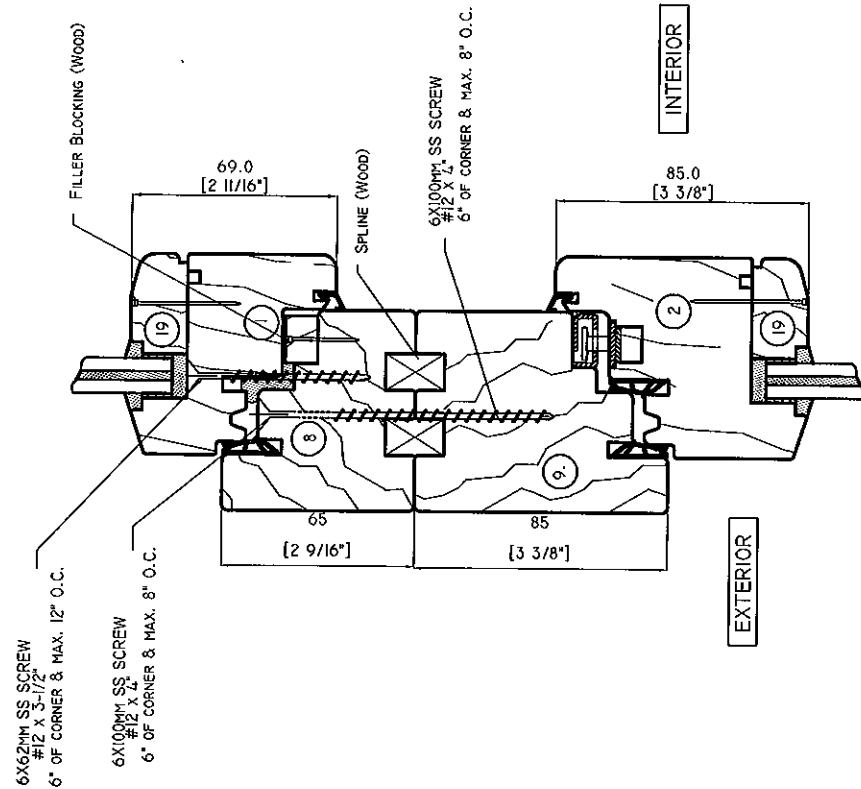
ENGINEERING EXPRESS, LLC
160 SW 12th Avenue, Suite 2100
Deerfield Beach, FL 33442
Ph: (954) 354-0660 Fax: (954) 354-0661
WWW.ENGEXP.COM
CERT OF AUTH #9885
A FRANK L. BENNARDO, P.E., INC. INNOVATION

NON REINFORCED MULLIONS LESS THAN 8'

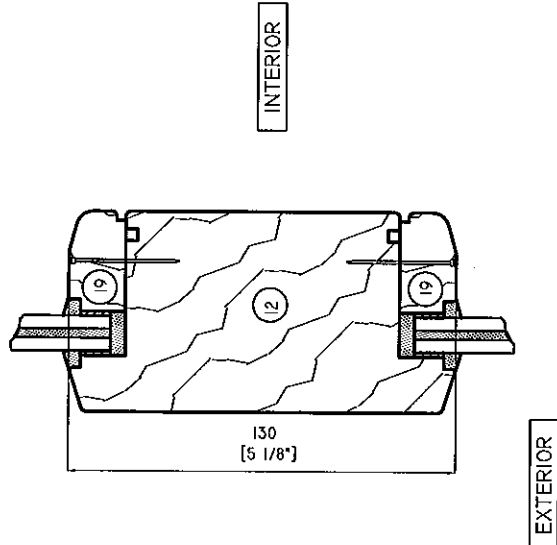
INSWING W/ INSWING TRANSOM



INSWING W/ FIXED INSWING TRANSOM



INSWING W/ SASH ONLY TRANSOM



SASH ONLY / SASH ONLY

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By *Manuel Perez*
Miami/Dade Product Control

REMARKS	DRWN	CHKD	DATE
BCCO COMMENTS	CL	FLB	1/27/07
BCCO COMMENTS	CL	FLB	3/14/07
ADDITIONAL GLAZING OPTION	KL	CL	10/13/08
BCCO COMMENTS	RKB	FLB	06/04/09
2010 FBC	KL	FLB	01/25/12

06-HWD-0004

SCALE: 03

PAGE DESCRIPTION:

22

26

HARTMAN WINDOWS
& DOORS, LLC

531 SOUTHERN BOULEVARD
WEST PALM BEACH, FL 33405

'EUROPEAN SERIES' MAHOGANY
INSWING CASEMENT WINDOWS
LARGE MISSILE IMPACT RESISTANT



160 SW 12th AVENUE, #2060
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ENGINEERING
EXPRESS

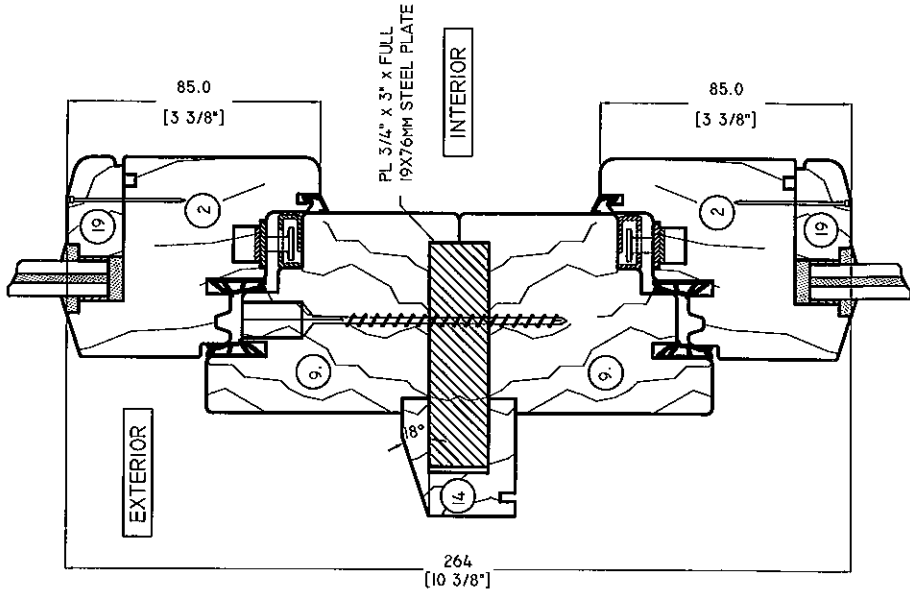
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FLORIDA
REGISTERED PROFESSIONAL ENGINEER

09/15/2012

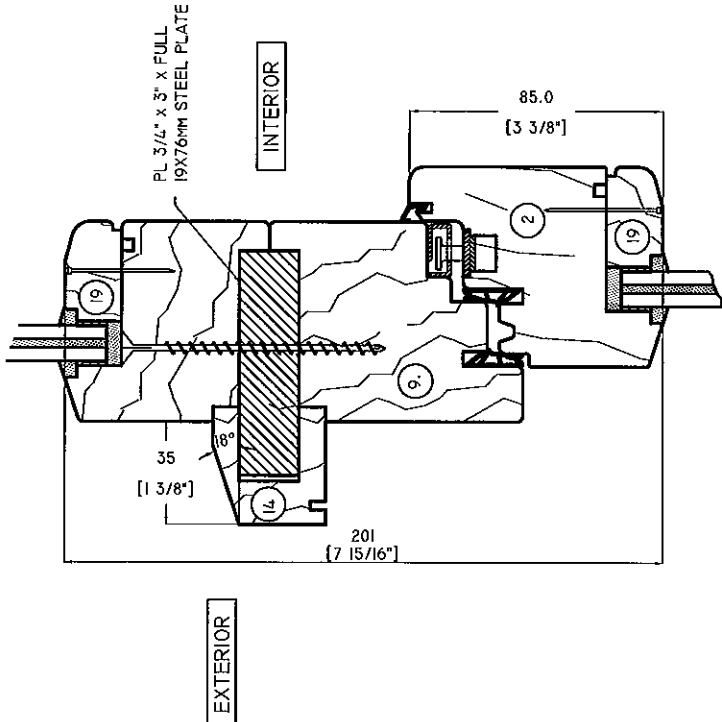
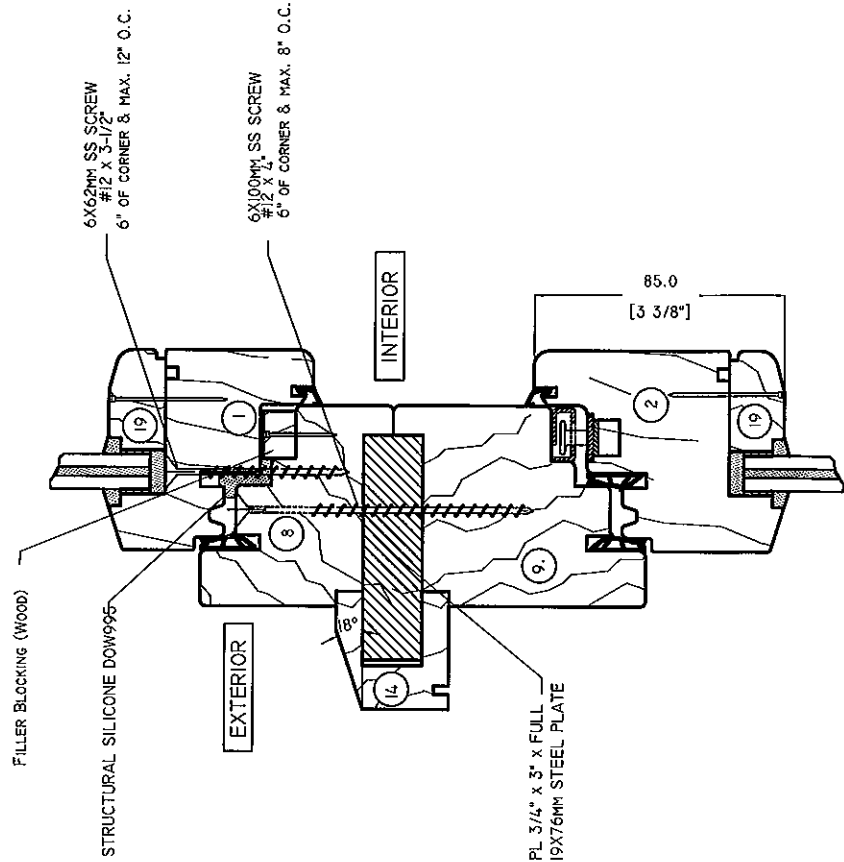
FRANK L. BENNARD, P.E.

8' TO 10' STEEL REINFORCED MULLIONS @ TRANSOM

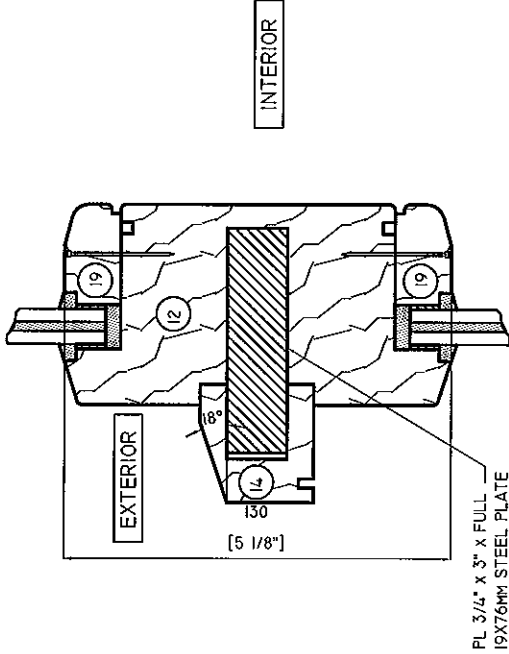
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INSWING W/ FIXED INSWING TRANSOM



INSWING W/ SASH ONLY TRANSOM



SASH ONLY W/ SASH ONLY TRANSOM

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Expiration Date April 12, 2017
By *Manuel Pro*
Miami Dade Product Control

REMARKS	DRWN/CHKD	DATE
BCCO COMMENTS	CL	FLB 1/27/07
BCCO COMMENTS	CL	FLB 3/14/07
ADDT. GLAZING OPTION	KL	CL 10/13/08
BCCO COMMENTS	RKB	FLB 06/04/09
2010 FBC	KL	FLB 01/25/12

06-HWD-0004

SCALE: 1/31

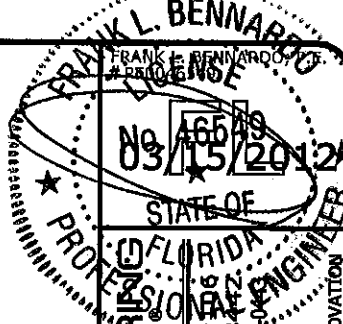
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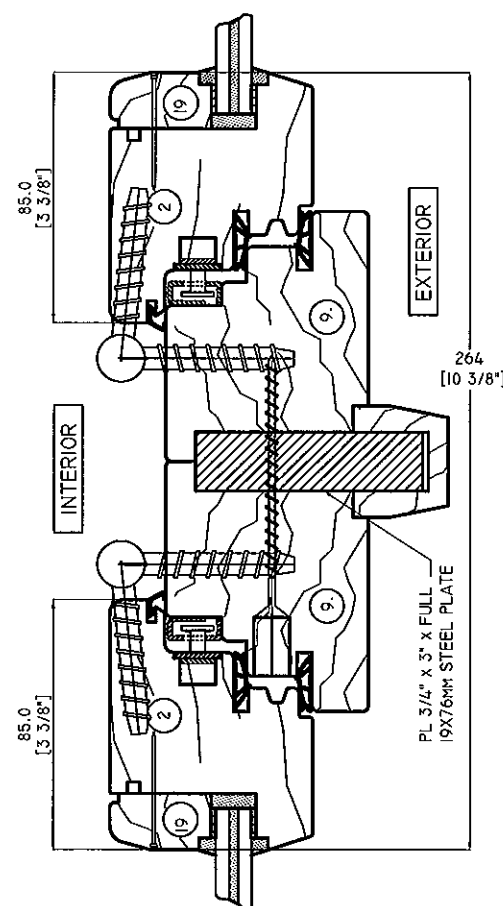
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HARTMAN WINDOWS
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WEST PALM BEACH, FL 33405
'EUROPEAN SERIES' MAHOGANY
INSWING CASEMENT WINDOWS
LARGE MISSILE IMPACT RESISTANT

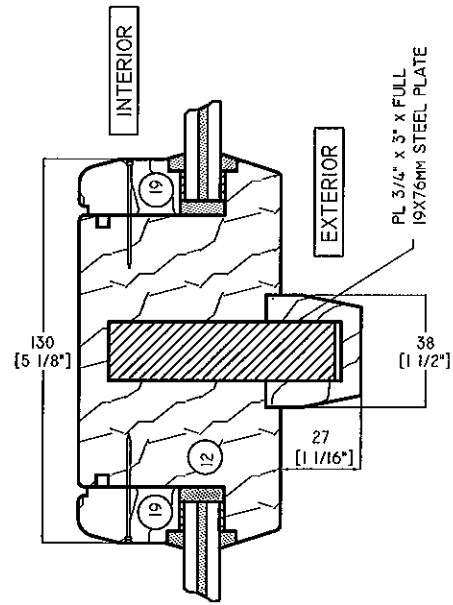
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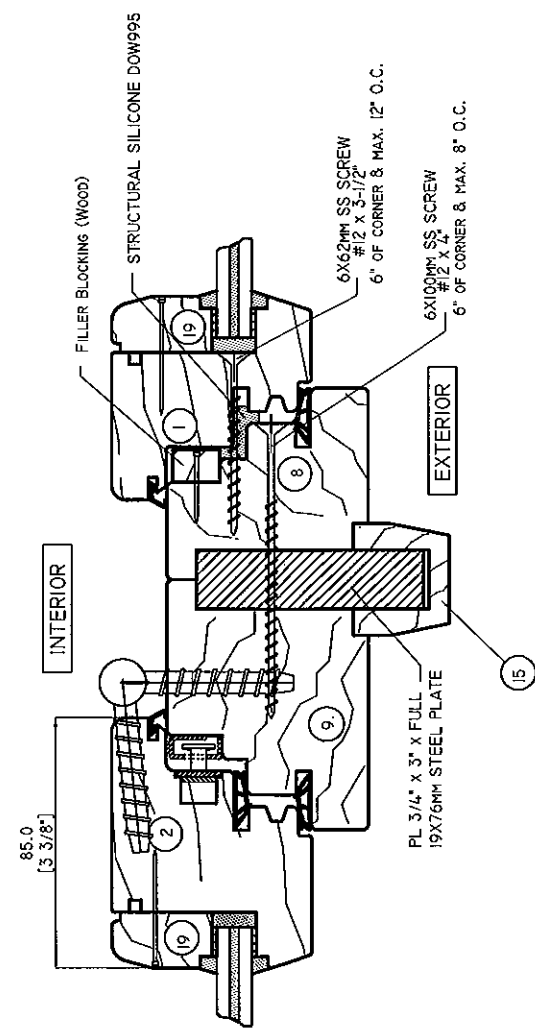
INSWING 8' TO 10' STEEL REINFORCED MULLIONS



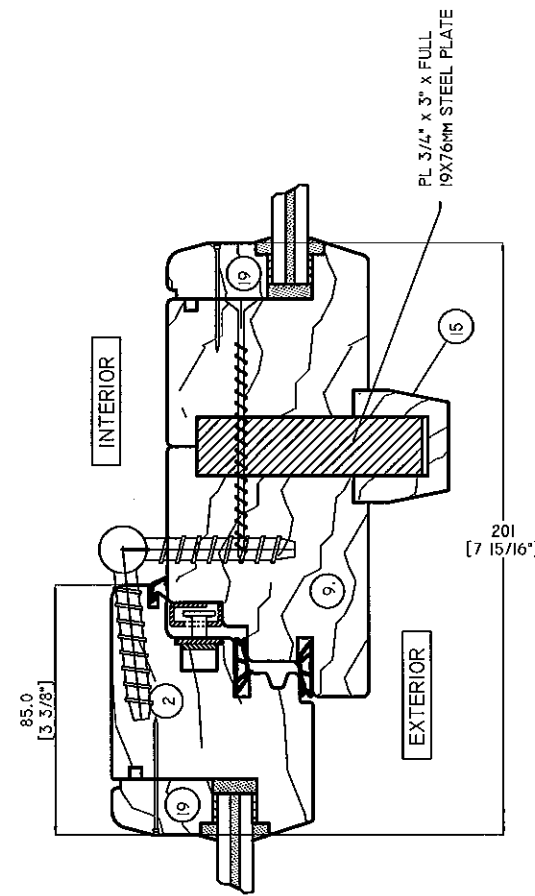
INSWING TO INSWING W/
MULLED JAMBS



SASH ONLY TO SASH ONLY W/
SINGLE MULL BAR



INSWING W/ FIXED INSWING SIDELITE



INSWING TO SASH ONLY SIDELITE

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Expiration Date April 12, 2017
By *Maunel Juez*
Miami Dade Product Control

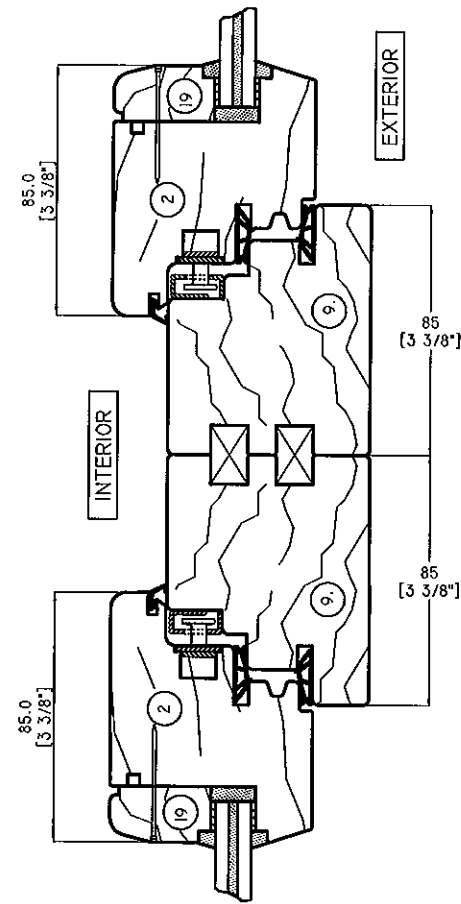
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BCO COMMENTS	CL	FLB	1/27/07
BCO COMMENTS	CL	FLB	3/14/07
ADDITIONAL GLAZING OPTION	KL	CL	10/13/08
BCO COMMENTS	RKB	FLB	06/04/09
2010 FBC	KL	FLB	01/25/12

06-HWD-0004
SCALE: 1/8" = 1'-0"
PAGE DESCRIPTION: 03

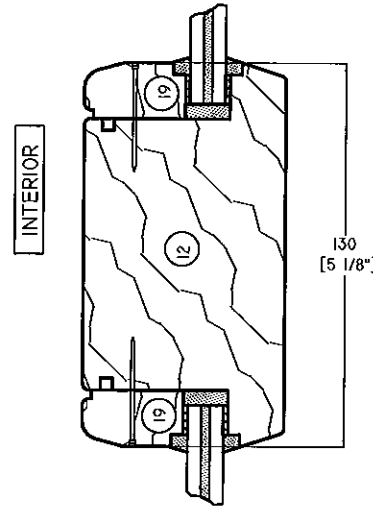
HARTMAN WINDOWS
& DOORS, LLC
531 SOUTHERN BOULEVARD
WEST PALM BEACH, FL 33405
'EUROPEAN SERIES' MAHOGANY
INSWING CASEMENT WINDOWS
LARGE MISSILE IMPACT RESISTANT

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WWW.ENGGEXP.COM
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08/15/2012

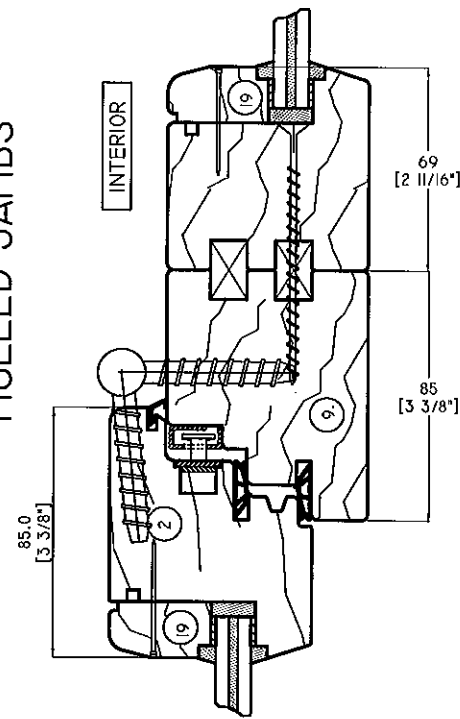
INSWING W/ SIDELITES
LESS THAN 8'



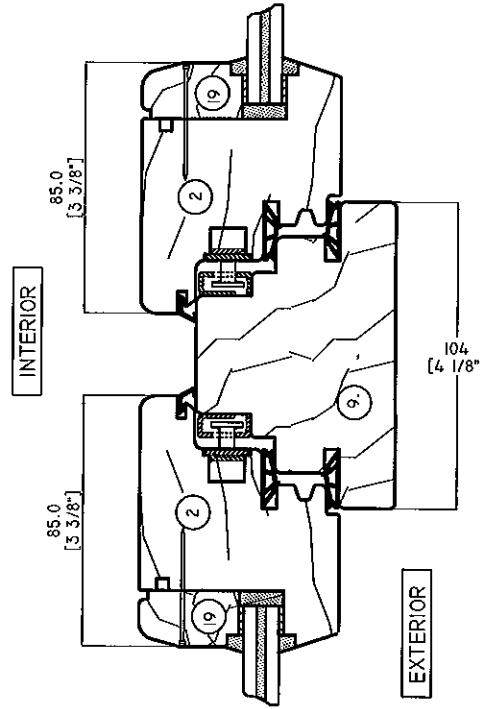
INSWING TO INSWING W/
MULLED JAMBS



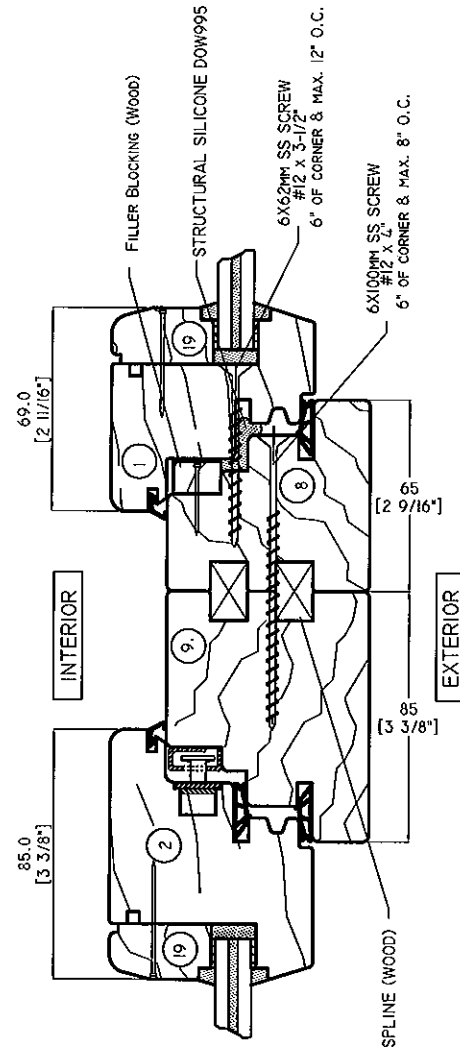
EXTERIOR
**SASH ONLY TO SASH ONLY W/
SINGLE MULL BAR**



IN SWING TO SASH ONLY SIDELITE



INSWING TO INSWING W/
SINGLE MULL BAR



INSWING W/ FIXED INSWING SIDELITE

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By Mmanuel Perez
Miami Dade Product Control

REMARKS	DRWN	CHKD	DATE
BCCO COMMENTS	CL	FLB	1/27/07
BCCO COMMENTS	CL	FLB	3/14/07
ADPL GLAZING OPTION	KL	CL	10/13/08
BCCO COMMENTS	RGB	FLB	06/04/09
2010 FBC	KL	FLB	01/25/12

06-HWD-0004

SCALE: -

PAGE DESCRIPTION:

25

**HARTMAN WINDOWS
& DOORS, LLC**

531 SOUTHERN BOULEVARD
WEST PALM BEACH, FL 33405

**'EUROPEAN SERIES' MAHOGAN Y
INSWING CASEMENT WINDOWS
LARGE MISSILE IMPACT RESISTANT**



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STATE OF



**ENGINEERING
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CERT OF AUTH #9885



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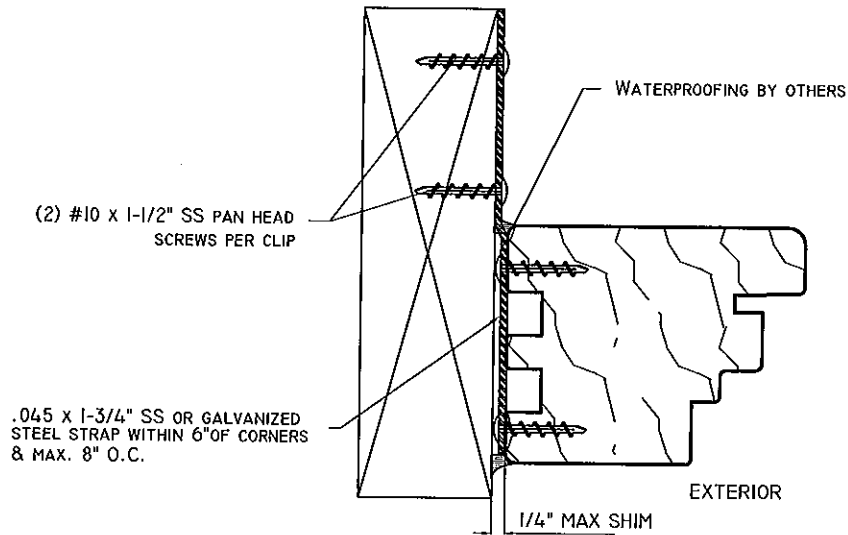
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DEERFIELD BEACH FL 33442

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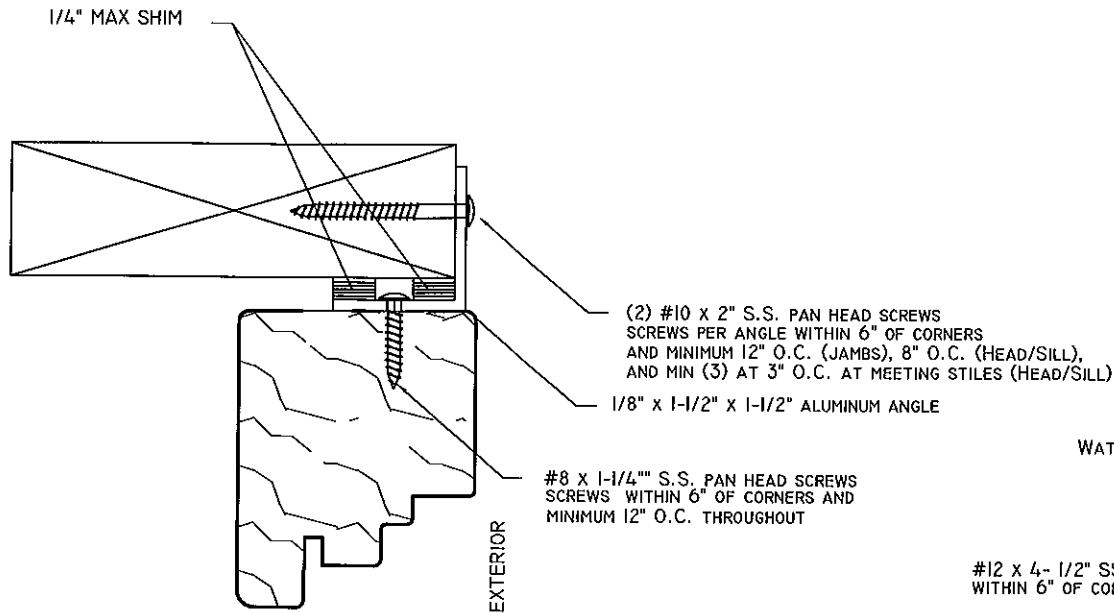
F:\01 Project Files\Hartman Windows & Doors (HWD)\2006 Jobs\06-HWD-0004 European Casement Window, Inswing, LMI (NOA).dwg 03/15/2012 - 11:14am keith



0.045 X 1-3/4" X 5" GALVANIZED STEEL CLIPS
PROVIDE #8 X 1-1/2" STAINLESS STEEL FASTENERS FOR WOOD SUBSTRATE
SCREW THROUGH STEEL CLIP INTO WOOD BUCK OR MASONRY
OPENING. MIN. PENETRATION 1-1/4" SPACED AS INDICATED

TYP CLIP DETAIL

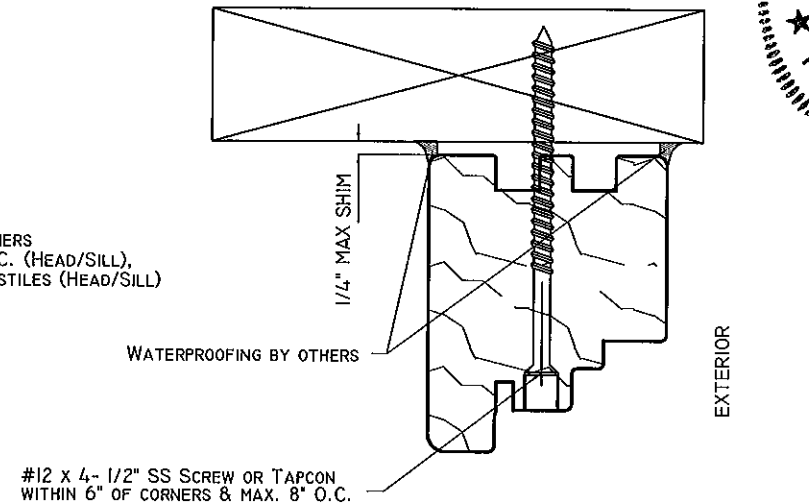
ALT ANCHOR METHOD #1



1-1/2" X 1-1/2" X 1/8" ALUMINUM ANGLE
PROVIDE #10 X 2" STAINLESS STEEL FASTENERS FOR WOOD SUBSTRATE
SCREW THROUGH ALUMINUM NAIL FIN INTO WOOD BUCK
MIN. 1-3/4" PENETRATION SPACED AS INDICATED

TYP NAIL FIN DETAIL

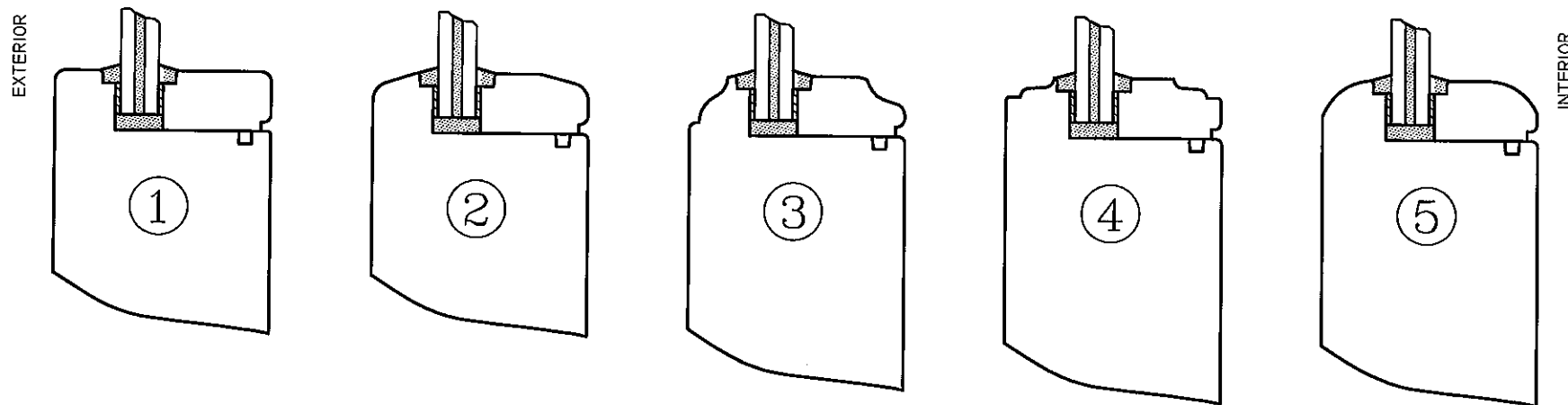
ALT ANCHOR METHOD #2



#12 X 4-1/2" S.S. SCREW
THROUGH JAMB INTO WOOD BUCK OR MASONRY
OPENING. MIN. PENETRATION 1-1/4" SPACED AS INDICATED

TYP DIRECT ANCHOR DETAIL

ALT ANCHOR METHOD #3



ALTERNATE GLAZING PROFILES

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as complying with the Florida
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Expiration Date April 12, 2017
By *Manuel Perez*
Miami Dade Product Control

FRANK L. BENNARD, P.E.
PROFESSIONAL ENGINEER
0360392012
ENGINEERING EXPRESS, LLC
160 SW 12th Avenue, Suite 200
Deerfield Beach, FL 33442
Ph: (954) 354-0660 Fax: (954) 354-0661
WWW.ENGP.COM
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& DOORS, LLC
531 SOUTHERN BOULEVARD
WEST PALM BEACH, FL 33405
'EUROPEAN SERIES' MAHOGANY
INSWING CASEMENT WINDOWS
LARGE MISSILE IMPACT RESISTANT

REMARKS	DRWN	CHKD	DATE
BCCO COMMENTS	CL	FLB	1/27/07
BCCO COMMENTS	CL	FLB	3/14/07
AUDT. GLAZING OPTION	KL	CL	10/13/08
BCCO COMMENTS	RKB	FLB	06/04/09
2010 FBC	KL	FLB	01/25/12

06-HWD-0004
SCALE: 1/32
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