



**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) 372-6339

NOTICE OF ACCEPTANCE (NOA)

www.miamidade.gov/buildingcode

**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 by Miami-Dade County Product Control Division and accepted by the Board of Rules and Appeals (BORA) to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

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

DESCRIPTION: Series "European Mahogany" Outswing Wood Casement Window – L.M.I.

APPROVAL DOCUMENT: Drawing No. **06-HWD-0008**, titled "European Series Mahogany Outswing Casement Windows – Large Missile Impact Resistant", sheets 1, 2, 3, 4, 5, 5A, 6, 6A, 7, 7A and 8 through 20 of 20, dated 10/18/06 with revision dated 06/04/09, 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 Division.

MISSILE IMPACT RATING: Large and Small Missile Impact Resistant

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

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

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

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

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official. This NOA **revises NOA # 06-1030.05** 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.**



**NOA No. 08-1119.03
Expiration Date: April 12, 2012
Approval Date: July 22, 2009
Page 1**

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS

1. Manufacturer's die drawings and sections.
2. Drawing No **06-HWD-0008**, Sheets 1, 2, 3, 4, 5, 5A, 6, 6A, 7, 7A and 8 through 20 of 20, titled "European Series Mahogany Outswing Casement Windows – Large Missile Impact Resistant", dated 10/18/06 with revision dated 06/04/09, 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.

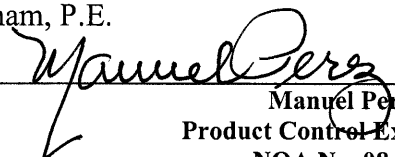
2. Test reports on: 1) Air Infiltration Test, per FBC, TAS 202-94
2) Uniform Static Air Pressure Test, Loading per FBC TAS 202-94
3) Water Resistance Test, per FBC, TAS 202-94
4) Large Missile Impact Test per FBC, TAS 201-94
5) Cyclic Wind Pressure Loading per FBC, TAS 203-94
6) Forced Entry Test, per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

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 wood inswing tilt/turn window; #2 arch top outswing wood casement window; #3 inswing wood casement window; #4 European French outswing mulled quad wood window; specimen #5 arch top mulled direct set wood window; #6 French inswing tilt/turn wood window w/transom, and #7 arch top direct glazed wood 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 previous NOA#06-1030.05)


Manuel Perez, P.E.
Product Control Examiner
NOA No. 08-1119.03

Expiration Date: April 12, 2012
Approval Date: July 22, 2009

Hartman Windows and Doors, LLC

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

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.
Complies with ASTM E1300-98/02

D. QUALITY ASSURANCE

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

E. MATERIAL CERTIFICATIONS

1. Notice of Acceptance No. **07-1116.04** issued to E.I. DuPont DeNemours & Co., Inc. for their "**DuPont Sentry Glass ® Plus**" dated 01/03/08, expiring on 01/14/12.
2. Notice of Acceptance No. **06-0216.06** issued to Solutia Inc. for their "**Saflex III G Clear or colored Interlayer**" dated 05/04/06, expiring on 05/21/11.
3. Notice of Acceptance No. **08-0520.08** issued to Solutia Inc. for their "**Vanceva Composites Glass Interlayer**" dated 7/17/2008, expiring on 12/11/13.

F. STATEMENTS

1. Statement letter of conformance, dated November 6, 2008, signed and sealed by Frank L. Bennardo, P.E.
2. Statement letter of no financial interest, dated November 6, 2008, 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 December 27, 2007, signed and sealed by Carlos S. Rionda, P.E.
4. Laboratory compliance letter for Test Report No. **FTL-5291**, issued by Fenestration Testing Laboratory, Inc., dated January 4, 2008, signed and sealed by Carlos S. Rionda, P.E.

G. OTHERS

1. Notice of Acceptance No. **06-1030.05**, issued to Hartman Windows and Doors, LLC for their Series "European Tilt & Turn" Outswing Mahogany Casement Window – L.M.I., approved on 04/12/07 and expiring on 04/12/12.


Manuel Perez, P.E.
Product Control Examiner

NOA No. 08-1119.03

Expiration Date: April 12, 2012

Approval Date: July 22, 2009

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rhartlett

EUROPEAN SERIES MAHOGANY OUTSWING CASEMENT WINDOWS

LARGE MISSILE IMPACT RESISTANT

FRANK L. BENNARDO, P.E.
PE0046549

06/05/2009

ENGINEERING
EXPRESS®

160 SW 12th AVENUE, #106
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CERT OF AUTH #9885
A FRANK L. BENNARDO, P.E., INC. INNOVATION

GENERAL NOTES

1. THE SYSTEM DESCRIBED HEREIN HAS BEEN DESIGNED AND TESTED IN ACCORDANCE WITH THE 2007 FLORIDA BUILDING CODE, FOR USE WITHIN AND OUTSIDE THE HIGH VELOCITY HURRICANE ZONE, PER TAS 201 / 202 / 203 & ASTM E1300-98 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 BY OTHERS ON A JOB-SPECIFIC BASIS IN ACCORDANCE WITH THE GOVERNING CODE.
4. MULTIPLE UNITS MUST BE INSTALLED USING MIAMI-DADE COUNTY BCCO-APPROVED STRUCTURAL MULLIONS.
5. 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.
6. 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.
7. 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.
8. UNITS INSTALLED WITH SOLID WOOD PANELS OR PLYWOOD INFILLS ARE ALSO LARGE MISSILE IMPACT RESISTANT. SEE GLAZING SCHEDULE FOR GLAZING/INFILL SPECIFICATIONS.
9. EXTERIOR SEAM OF FRAME CORNERS SHALL BE SEALED WITH SILICONE.
10. 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" TAPCONS (ELCO OR ITW) 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:

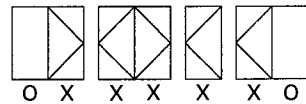
- #12 WOOD SCREWS WITH 1-1/2" MIN THREAD PENETRATION.
- (2) #10 WOOD SCREWS WITH 1-1/2" MIN THREAD PENETRATION.

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 MAY BE MANUFACTURED BY ELCO OR 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. WOOD HOST STRUCTURE SHALL BE "SOUTHERN PINE" $G=0.55$ OR GREATER DENSITY.
7. MINIMUM EMBEDMENT SHALL BE AS NOTED IN ANCHOR SCHEDULE. MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDES STUCCO, FOAM, BRICK, AND OTHER WALL FINISHES.
8. WHERE EXISTING STRUCTURE IS WOOD FRAMING, EXISTING CONDITIONS MAY VARY. FIELD VERIFY THAT FASTENERS ARE INTO ADEQUATE WOOD FRAMING MEMBERS, NOT INTO PLYWOOD.
9. WOOD BUCKS (BY OTHERS) SHALL BE ANCHORED PROPERLY TO TRANSFER LOADS TO THE EXISTING STRUCTURE.

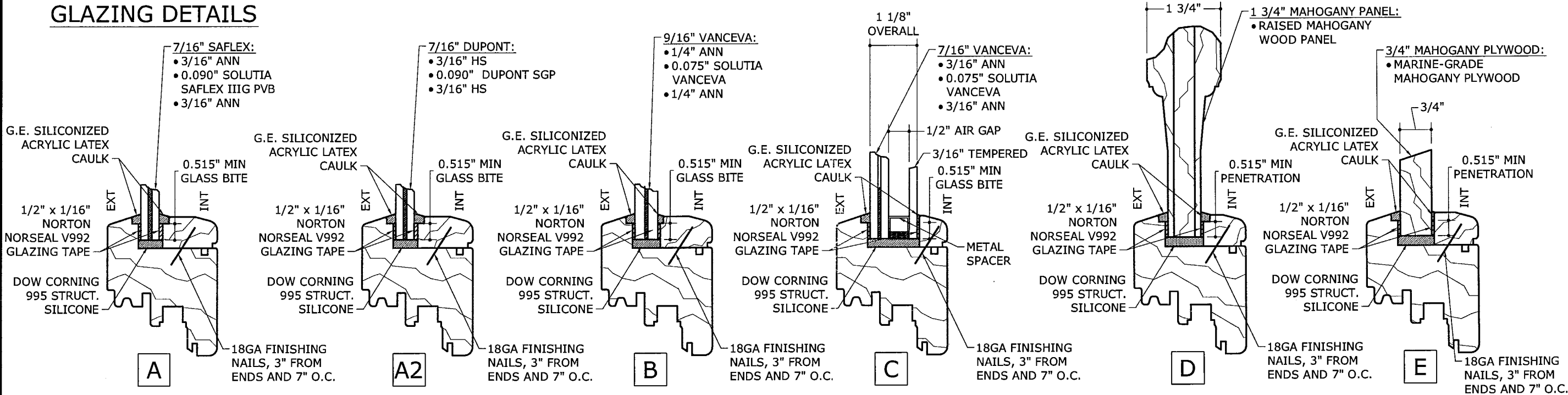
CONFIGURATION NOTES:

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



PRODUCT REVIEWED
on compliance with the Florida
Building Code
As noted on 08-1119.03
APRIL 12, 2012
By: *Manuel S. Sosa*
Miami, Florida
Division

GLAZING DETAILS

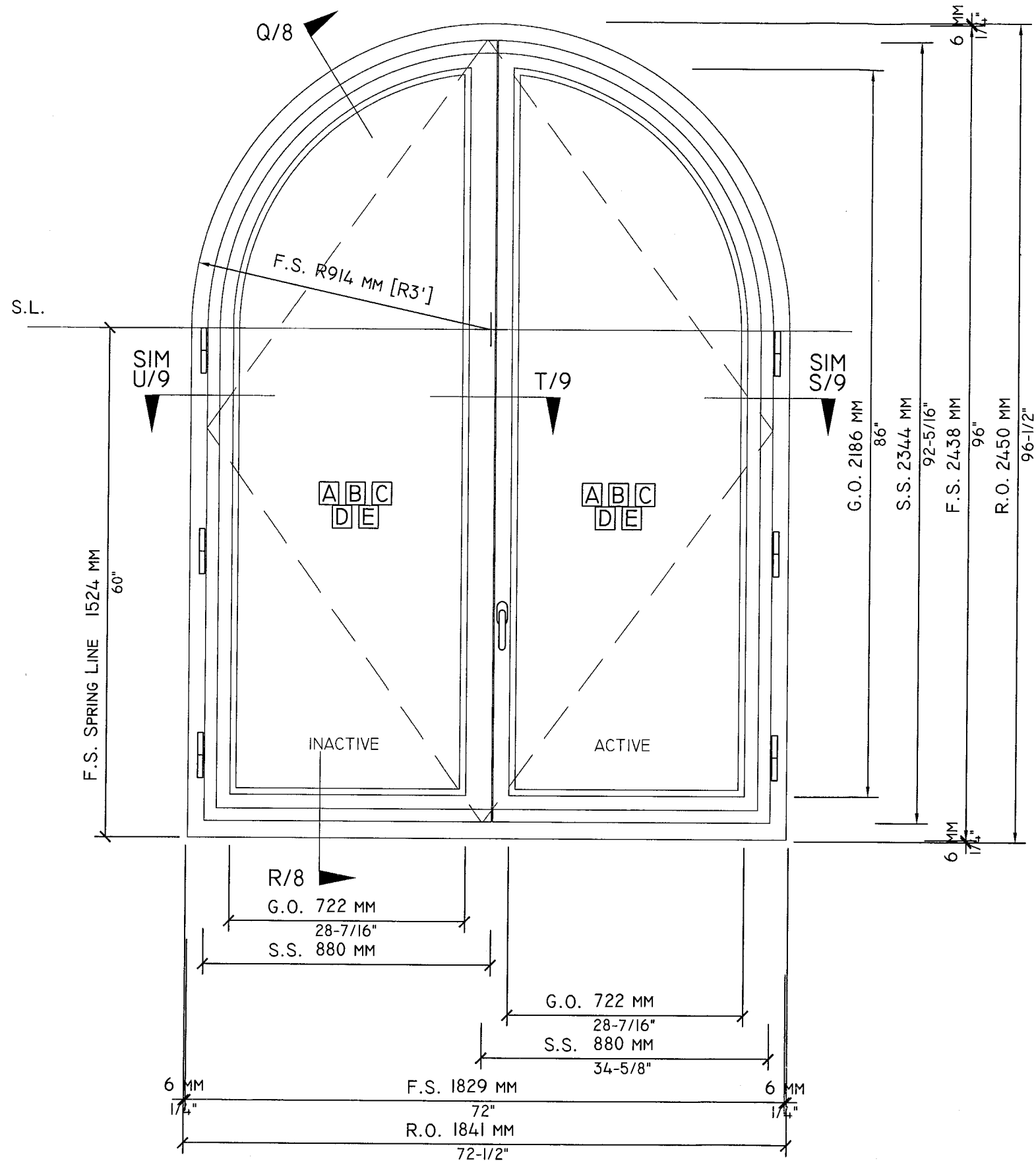


REMARKS	DRWN	CHKD	DATE
INITIAL ISSUE	CL	FLB	10/18/06
BCCO COMMENTS	CL	FLB	1/27/07
BCCO COMMENTS	CL	FLB	3/14/07
AUDIT GLAZING TYPE	KL	CL	10/13/08
BCCO COMMENTS	RKB	FLB	06/04/09

06-HWD-0008

SCALE: 02

PAGE DESCRIPTION:



EUROPEAN OUTSWING CASEMENT
MAHOGANY OUTSWING FRENCH CASEMENT WINDOW

ALLOWABLE PRESSURE SCHEDULE

GLAZING / INFILL TYPE	ALLOWABLE PRESSURES	
(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

PRODUCT REVISION
as compliant with the Florida
Building Code
08-1119-03
APRIL 12, 2012
By: *Manuel Perez*
Checked: *Manuel Perez*
Reviewed: *Manuel Perez*

FRANK L. BENNARDO, P.E.
PE0046549

06/05/2009

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

**HARTMAN WINDOWS
& DOORS, LLC**

531 SOUTHERN BOULEVARD
WEST PALM BEACH, FL 33405

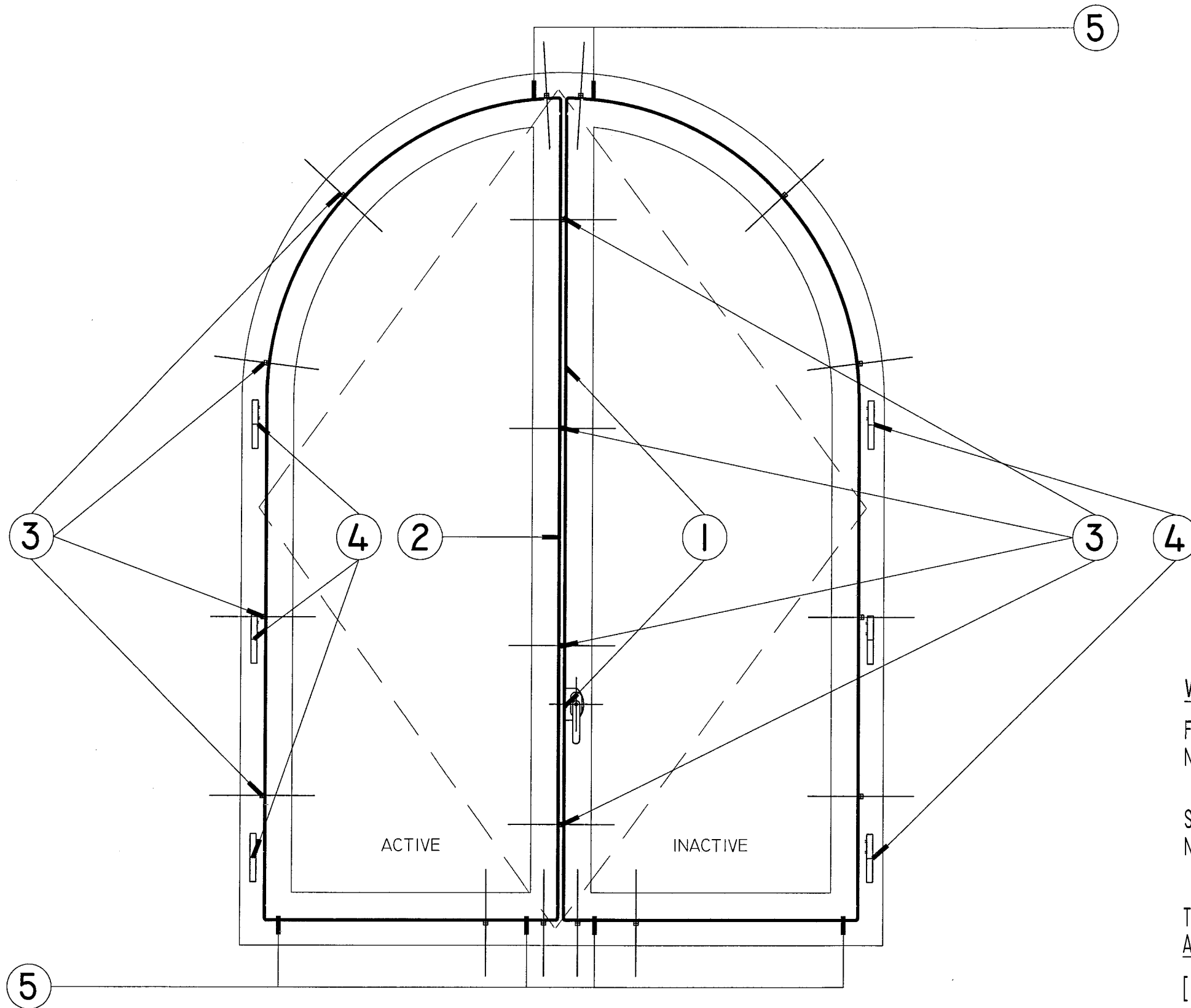
'EUROPEAN SERIES' MAHOGANY
OUTSWING CASEMENT WINDOWS
LARGE MISSILE IMPACT RESISTANT

REMARKS	DRWN	CHKD	DATE
INITIAL ISSUE	CL	FLB	10/18/06
BCCO COMMENTS	CL	FLB	1/27/07
BCCO COMMENTS	CL	FLB	3/14/07
ADD'L GLAZING TYPE	KL	CL	10/13/08
BCCO COMMENTS	RKB	FLB	08/04/09

06-HWD-0008

SCALE: 1/2"

PAGE DESCRIPTION:



EUROPEAN OUTSWING CASEMENT HARDWARE LAYOUT
MAHOGANY OUTSWING FRENCH CASEMENT 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., A.G.B & SEGENIA AND MEETS DADE COUNTY SPECS; HARDWARE IS SUPPLIED AS FOLLOW:

- [1] LEVER HANDLE & 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] PROPRTARY SS 4 WAY ADJUSTABLE BARREL HINGES W/CAPS
- [5] SS CORNER DRIVE WITH MUSHROOM HD LOCKING CAMS

PRODUCT REVIEWED
DATE: 08-11-19-03
APRIL 12, 2012
By: Manuel Perez

06/05/2009

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HARTMAN WINDOWS & DOORS, LLC

531 SOUTHERN BOULEVARD
WEST PALM BEACH, FL 33405

'EUROPEAN SERIES' MAHOGANY
OUTSWING CASEMENT WINDOWS
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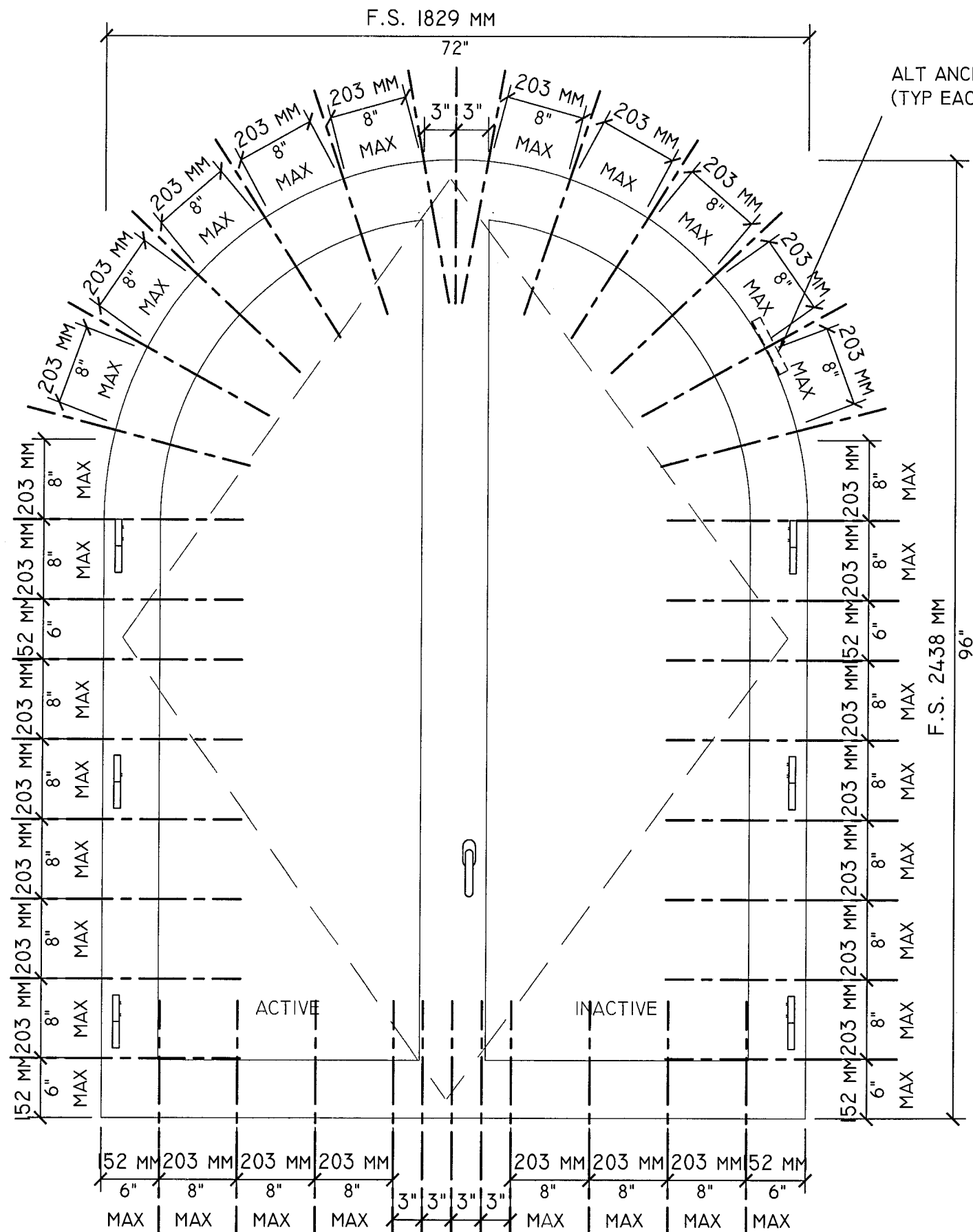


06-HWD-0008

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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".

PRODUCT DESIGNED
in compliance with the Florida
Building Code
08-1119-03
APRIL 12, 2012
By: *Mamuel Perez*
Product Engineer

FRAME SCREW 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"

FRANK L. BENNARDO, P.E.
PE0046549

06/05/2009

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WEST PALM BEACH, FL 33405

'EUROPEAN SERIES' MAHOGANY
OUTSWING CASEMENT WINDOWS
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06-HWD-0008

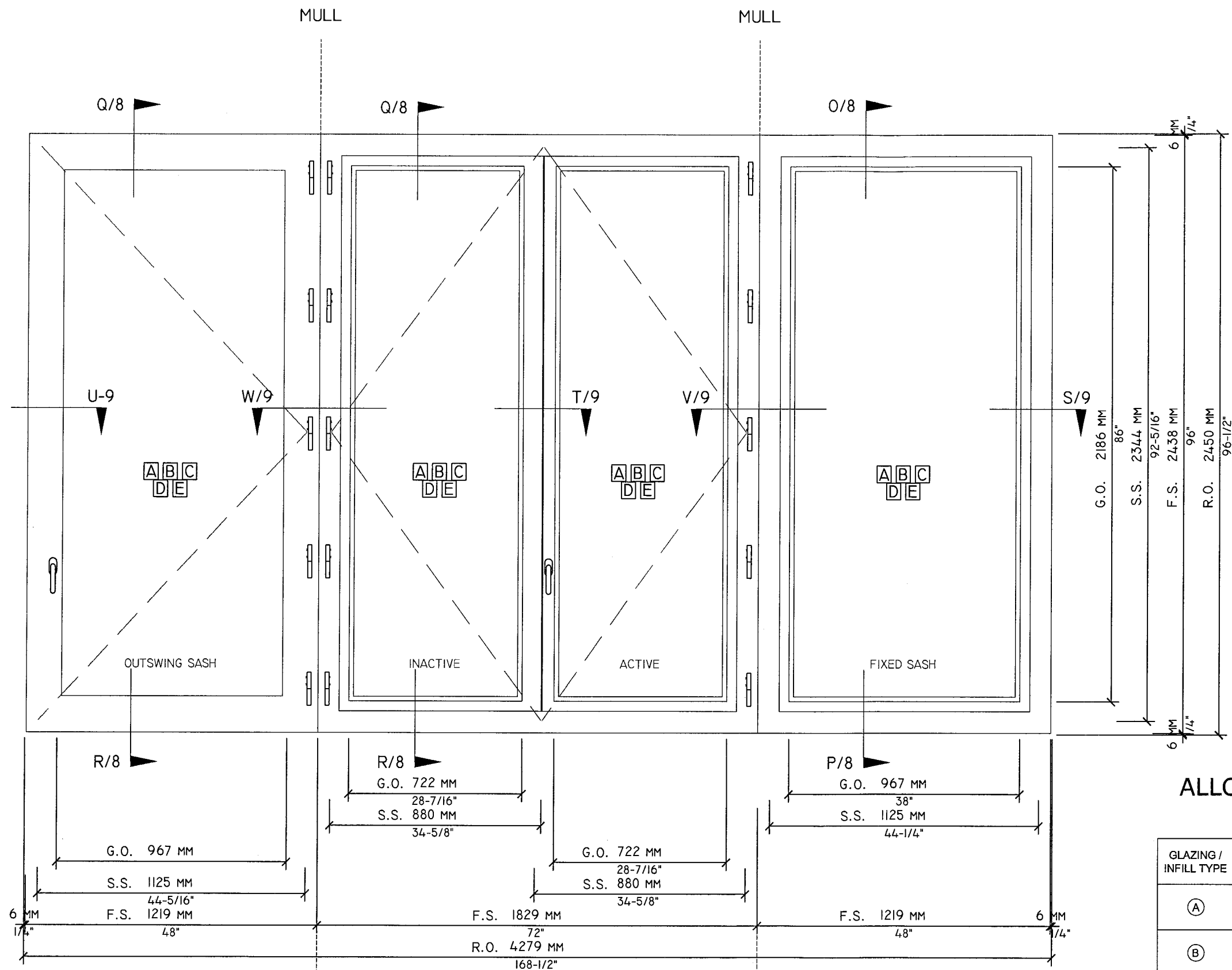
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ALLOWABLE PRESSURE SCHEDULE

GLAZING / INFILL TYPE	WIND SASH / PANEL WIDTH	ALLOWABLE PRESSURES	
		CL	FLB
(A)	44-1/4"	+ 51.1 PSF	- 51.1 PSF
	34-5/8"	+ 60 PSF	- 70 PSF
(B)	44-1/4"	+ 60 PSF	- 70 PSF
	34-5/8"	+ 60 PSF	- 70 PSF
(C)	44-1/4"	+ 54.7 PSF	- 54.7 PSF
	34-5/8"	+ 60 PSF	- 70 PSF
(D)	44-1/4"	+ 60 PSF	- 70 PSF
	34-5/8"	+ 60 PSF	- 70 PSF
(E)	44-1/4"	+ 60 PSF	- 70 PSF
	34-5/8"	+ 60 PSF	- 70 PSF

FRANK L. BENNARDO, P.E.
PE0046549

06/05/2009

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

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BCCO COMMENTS	06/04/09				

06-HWD-0008

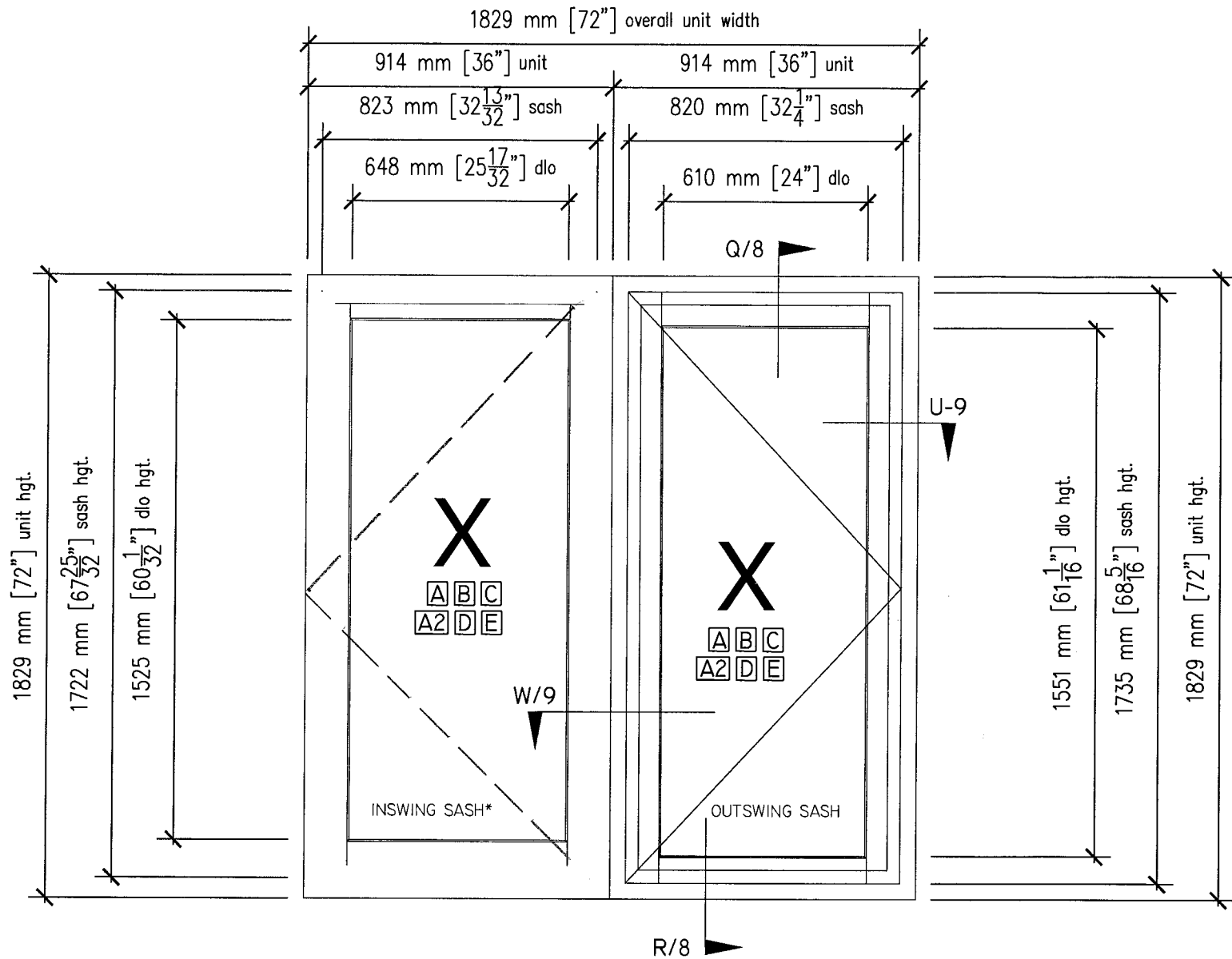
SCALE: 02

PAGE DESCRIPTION:

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06/05/2009 - 2:05pm rbarlett F:\01 Project Files\Hartman Windows & Doors (HWD)\2008 Jobs\06-HWD-0008 European Casement Window, Outswing, LMI (NOA)\06-HWD-0008_02a European Casement, Outswing, LMI (NOA).dwg



OUTSWING CASEMENT
MAHOGANY OUTSWING CASEMENT WINDOW
WITH INSWING CASEMENT

*NOTE: INSWING OPTION UNDER SEPARATE APPROVAL

ALLOWABLE PRESSURE SCHEDULE

GLAZING / INFILL TYPE	DOOR SASH / PANEL WIDTH	ALLOWABLE PRESSURES	
		+	-
A	44-1/4"	+ 51.1 PSF	- 51.1 PSF
	34-5/8"	+ 60 PSF	- 70 PSF
A2	44-1/4"	+ 60 PSF	- 70 PSF
	32-1/4"	+ 80 PSF	- 80 PSF
B	44-1/4"	+ 60 PSF	- 70 PSF
	34-5/8"	+ 60 PSF	- 70 PSF
C	44-1/4"	+ 54.7 PSF	- 54.7 PSF
	34-5/8"	+ 60 PSF	- 70 PSF
D	44-1/4"	+ 60 PSF	- 70 PSF
	34-5/8"	+ 60 PSF	- 70 PSF
E	44-1/4"	+ 60 PSF	- 70 PSF
	34-5/8"	+ 60 PSF	- 70 PSF

FRANK L. BENNARDO, P.E.
PE0046549

06/05/2009

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160 SW 12th AVENUE, # 106
DEERFIELD BEACH, FL 33442
Ph: (954) 354-0660 Fax: (954) 354-0443
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CERT OF AUTH #9885
A FRANK L. BENNARDO, P.E., INC. INNOVATION

HARTMAN WINDOWS
& DOORS, LLC

531 SOUTHERN BOULEVARD
WEST PALM BEACH, FL 33405

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

REMARKS	DRWN	CHKD	DATE
INITIAL ISSUE	CL	FLB	10/18/06
BCCO COMMENTS	CL	FLB	1/27/07
BCCO COMMENTS	CL	FLB	3/14/07
ADDL GLAZING TYPE	KL	CL	10/13/08
BCCO COMMENTS	RKB	FLB	06/04/09

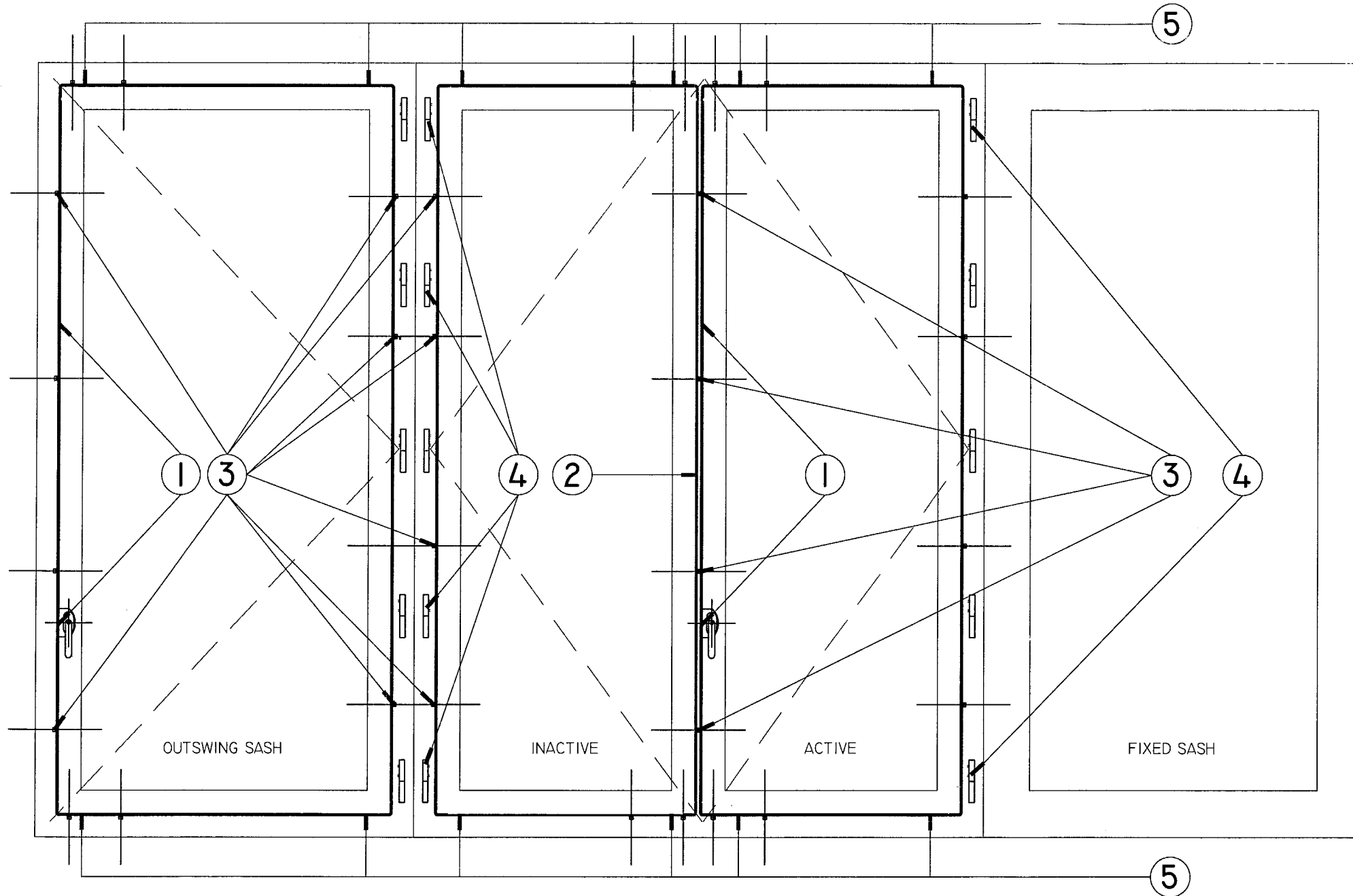
06-HWD-0008

SCALE: 02

PAGE DESCRIPTION:

5A

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OUTSWING CASEMENT HARDWARE LAYOUT
MAHOGANY OUTSWING FRENCH CASEMENT WINDOW
WITH FIXED & OUTSWING CASEMENT SIDELITES

WINDOW CORNER CONSTRUCTION:

FRAME/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., A.G.B & SEGENIA AND MEETS DADE COUNTY SPECS; HARDWARE IS SUPPLIED AS FOLLOW:

- [1] LEVER HANDLE & 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] PROPERTY SS 4 WAY ADJUSTABLE BARREL HINGES W/CAPS
- [5] SS CORNER DRIVE WITH MUSHROOM HD LOCKING CAMS

PRODUCT SERVICES
as supplied with the window
08-1119.03
APRIL 12, 2012
Mauro J. Perez

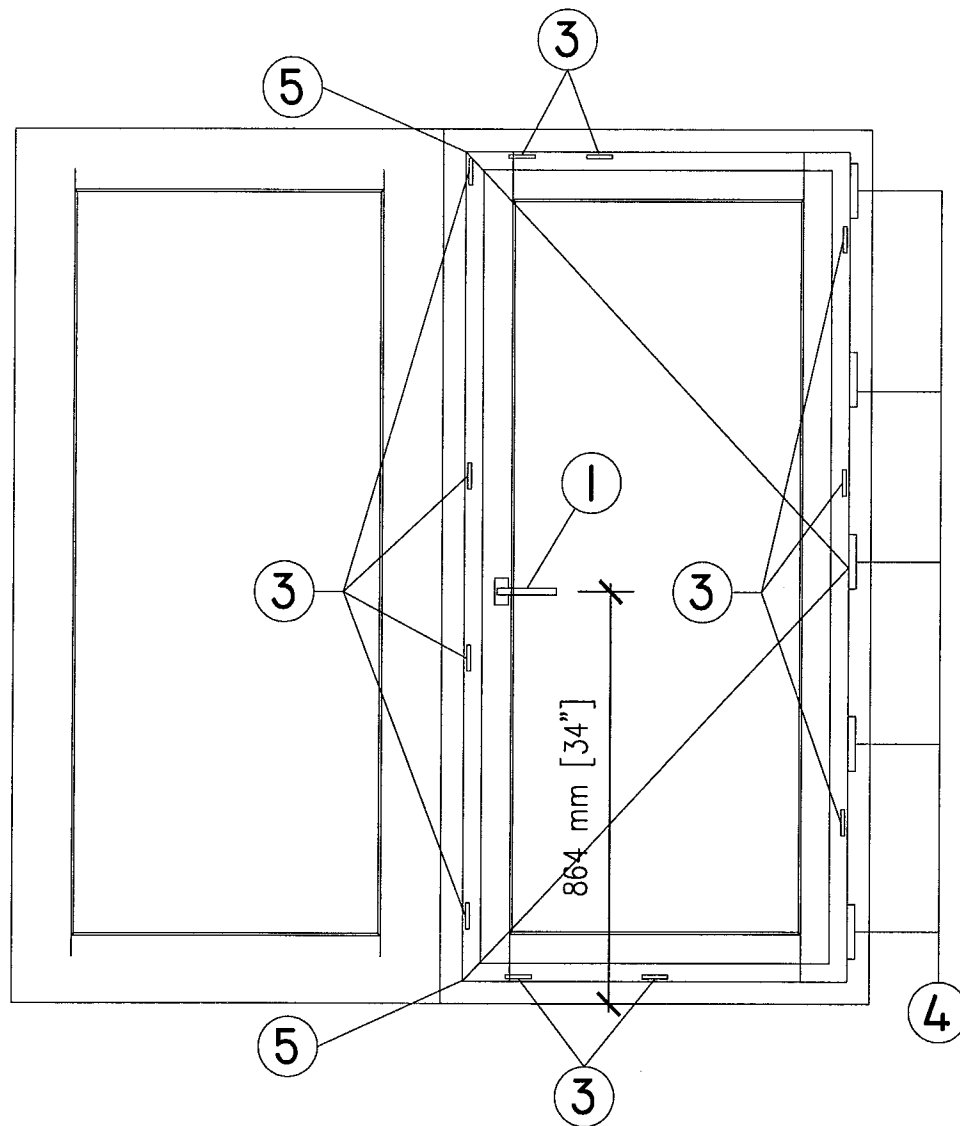
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ADD'L GLAZING TYPE	KL	CL	10/13/08
BCCO COMMENTS	RKB	FLB	06/04/09

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OUTSWING CASEMENT HARDWARE LAYOUT
MAHOGANY OUTSWING CASEMENT WINDOW
WITH INSWING CASEMENT

*NOTE: INSWING OPTION UNDER SEPARATE APPROVAL

WINDOW CORNER CONSTRUCTION:

FRAME/SASH : MULTI-FORK MORTISE AND TENON JOINERY SECURED WITH
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- [4] PROPERTYARY SS 4 WAY ADJUSTABLE BARREL HINGES W/CAPS
- [5] SS CORNER DRIVE WITH MUSHROOM HD LOCKING CAMS

PRODUCT REVIEWED
in compliance with the Florida
Building Code
Date: 08-11-09
By: Manuel Perez
Product Control
Division

06/05/2009



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BCCO COMMENTS	IRKB	FLB	06/04/09



06-HWD-0008

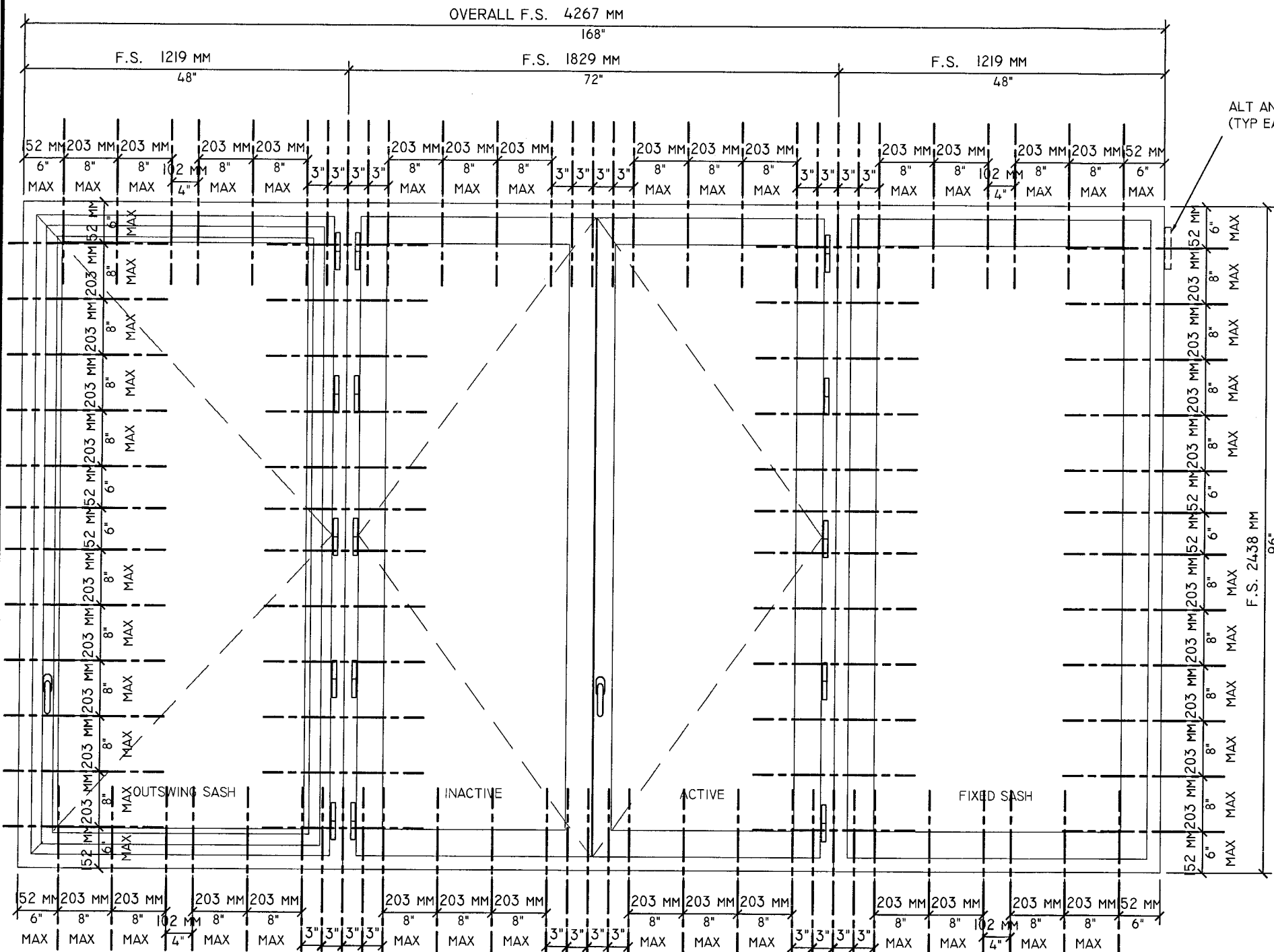
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6A

06/05/2009 - 2:05pm rbarlett F:\01 Project Files\Hartman Windows & Doors (HWD)\2006 Jobs\06-HWD-0008 European Casement Window, Outswing, LMI (NOA).dwg



INSTALLATION DIAGRAM
MAHOGANY OUTSWING FRENCH CASEMENT WINDOW
WITH FIXED & OUTSWING CASEMENT SIDELITES

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

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 $\frac{1}{4}$ ".

FRAME SCREW & STRAP REQUIREMENTS			
FASTENER	SUBSTRATE	MIN. EMBED	MIN. EDGE DISTANCE
No. 10 x 1- $\frac{3}{4}$ "	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"
16 GA 6" X 1-1/2" SS OR GALVANIZED STEEL STRAP	----	----	6"

PRODUCT REVISION
REVISION 1
DATE 08-11-03
APRIL 12, 2012
MANUEL PEREZ

FRANK L. BENNARDO, P.E.
PE0046549

06/05/2009

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& DOORS, LLC

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WEST PALM BEACH, FL 33405

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

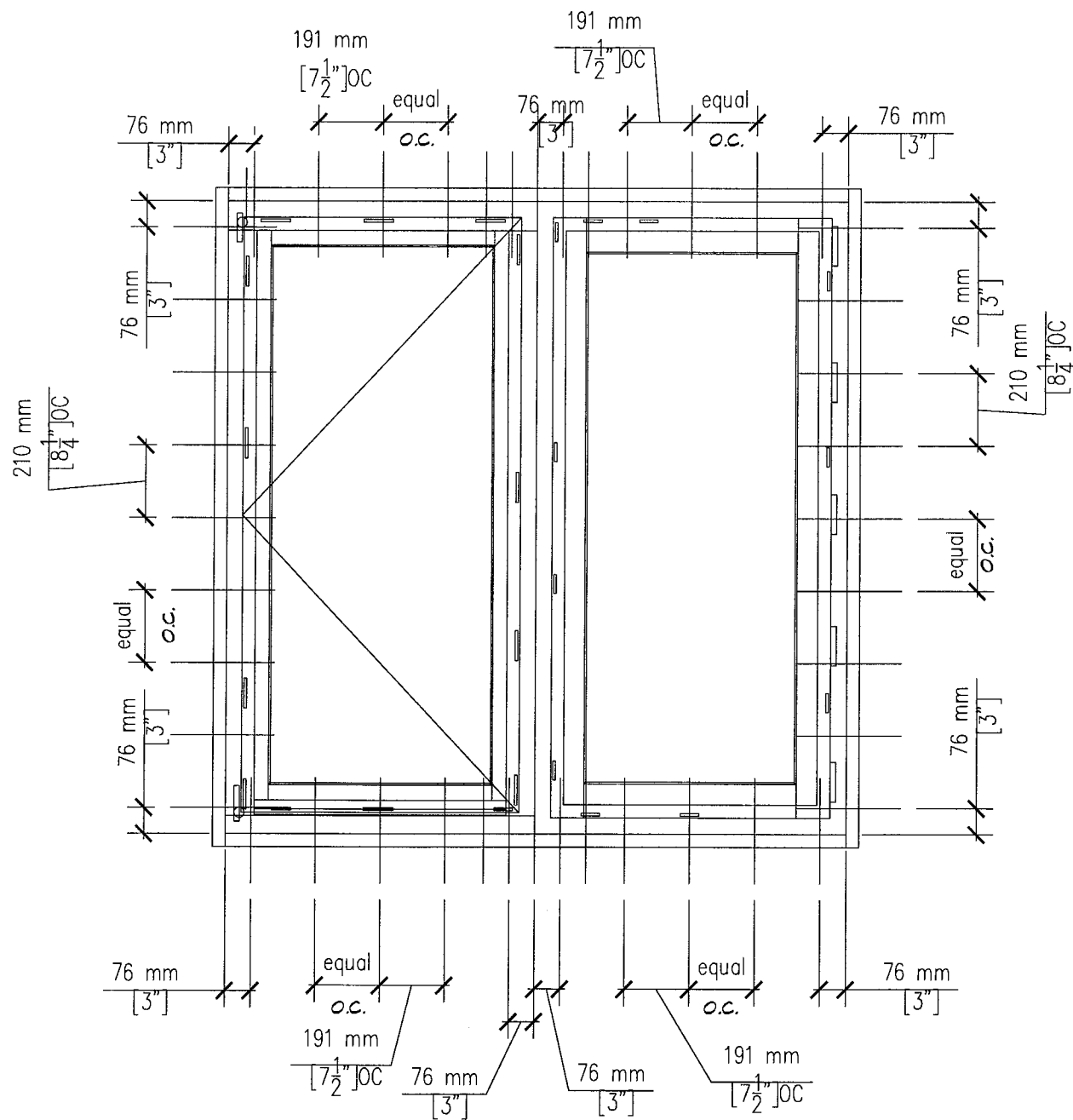
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BCCO COMMENTS	CL	FLB	3/14/07
ADDITIONAL GLAZING TYPE	KL	CL	10/13/08
BCCO COMMENTS	RKB	FLB	06/04/09

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PAGE DESCRIPTION:

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INSTALLATION DIAGRAM
MAHOGANY OUTSWING CASEMENT WINDOW
WITH INSWING CASEMENT

*NOTE: INSWING OPTION UNDER SEPARATE APPROVAL

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.
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FRAME SCREW & STRAP 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"
16 GA 6" x 1-1/2" SS OR GALVANIZED STEEL STRAP	----	----	6"

PRODUCT REVISED
in compliance with the Florida
Building Code
As of Date 08-11-03
Revised Date APRIL 12, 2012
By Manuel Perez
Product Engineer

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WEST PALM BEACH, FL 33405
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OUTSWING CASEMENT WINDOWS
LARGE MISSILE IMPACT RESISTANT

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BCCO COMMENTS	CL	FLB	3/14/07
ADD'L GLAZING TYPE	KL	CL	10/13/08
BCCO COMMENTS	RKB	FLB	06/04/09

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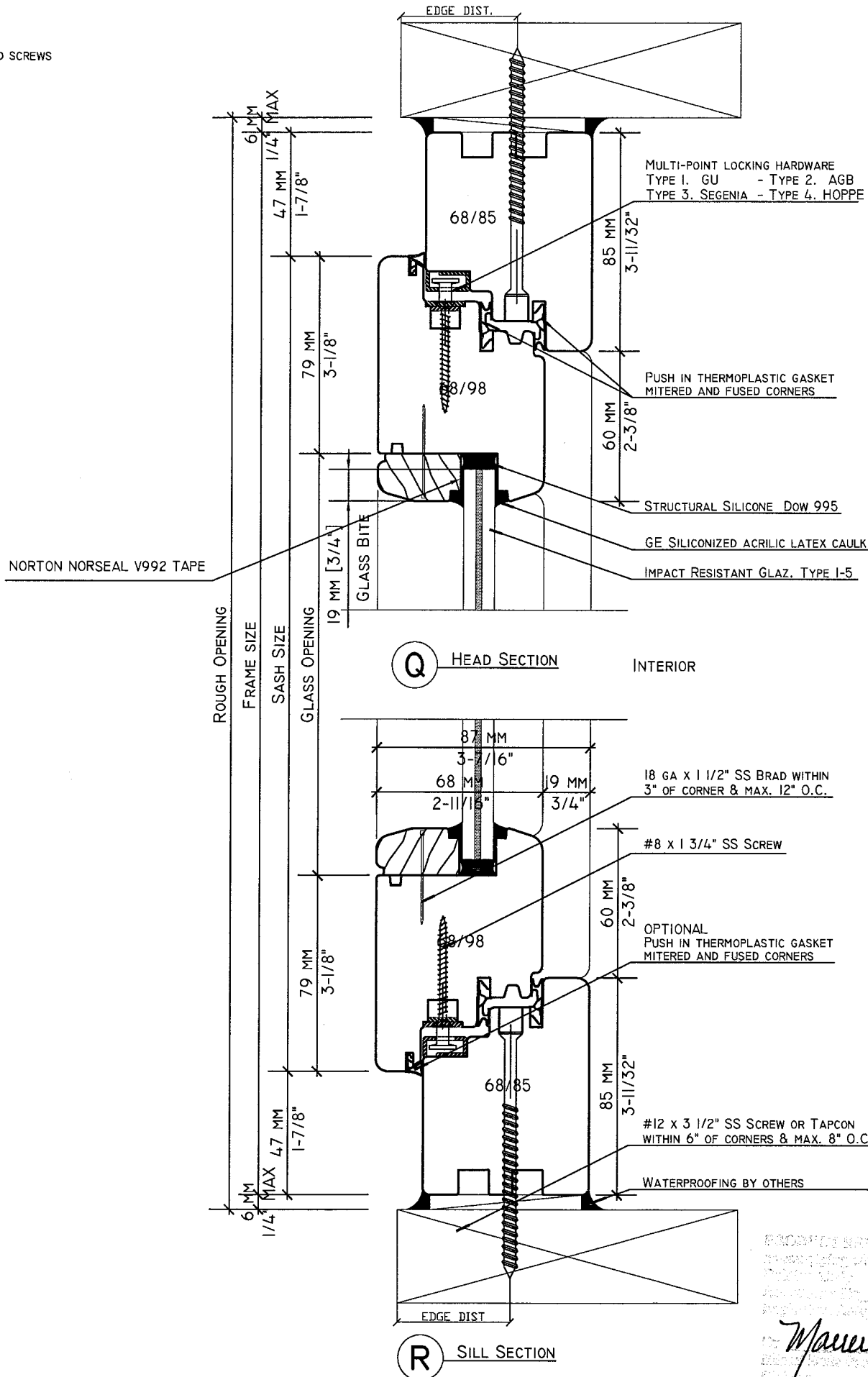
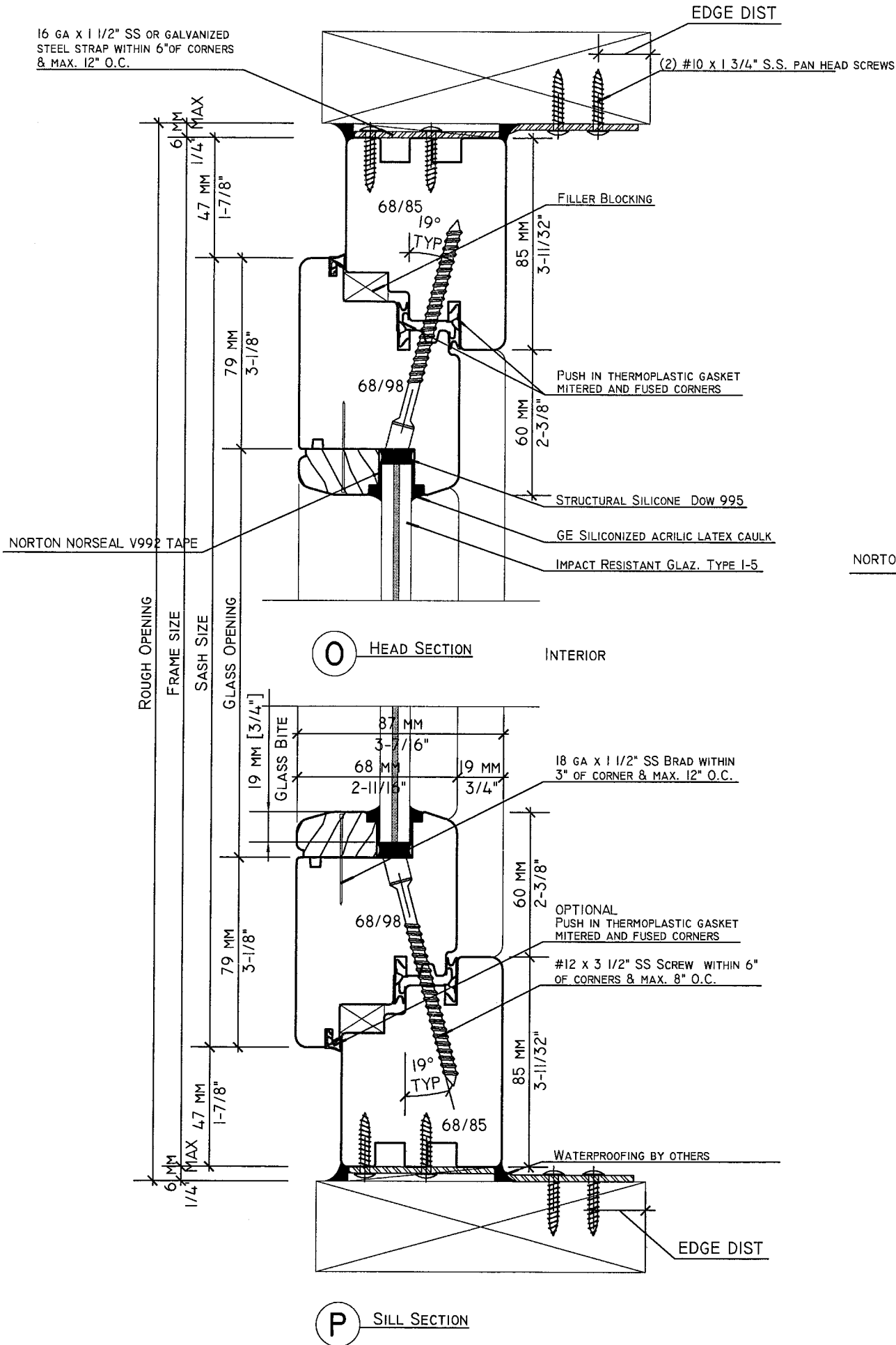
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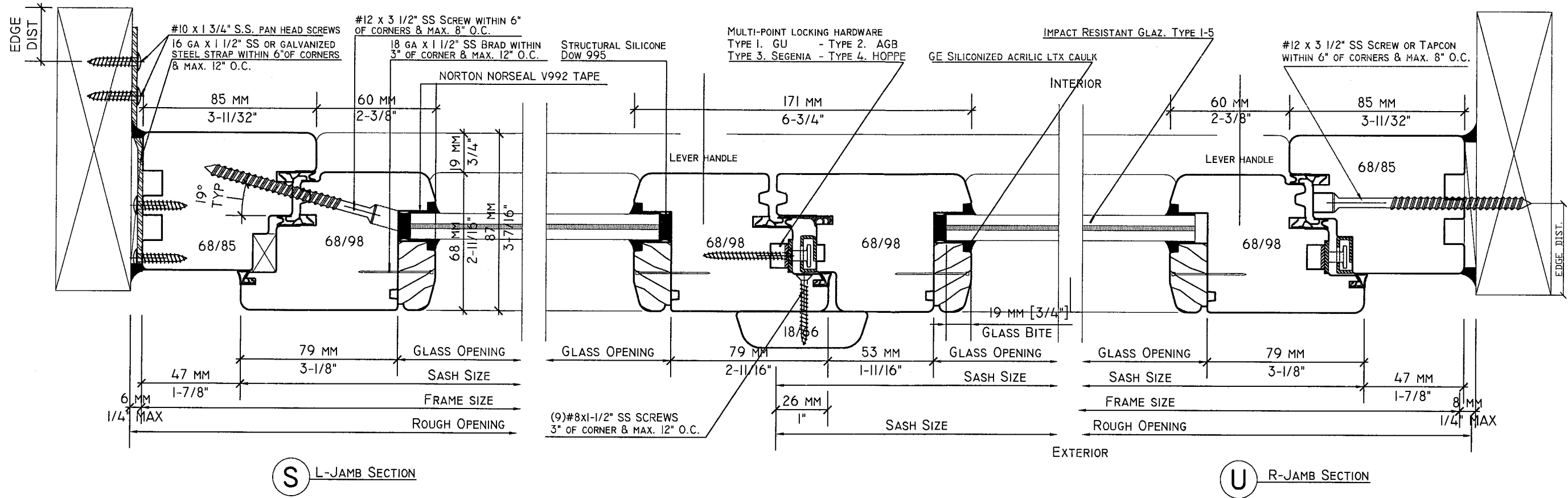
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APRIL 12, 2012
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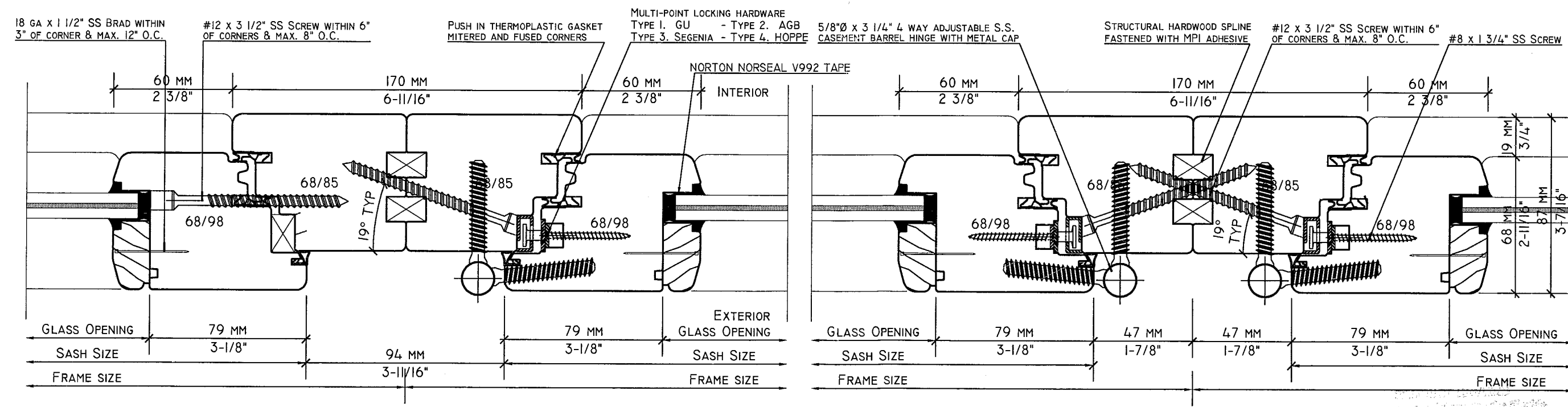
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rbarlett
05/05/2009 - 2:06pm



S L-JAMB SECTION

T MEETING STILES

U R-JAMB SECTION



V MULLION JAMBS SECTION

W MULLION JAMBS SECTION

FRANK L. BENNARDO, P.E.
PE0046549

06/05/2009

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08-1119.03
APRIL 12, 2012
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06/05/2009

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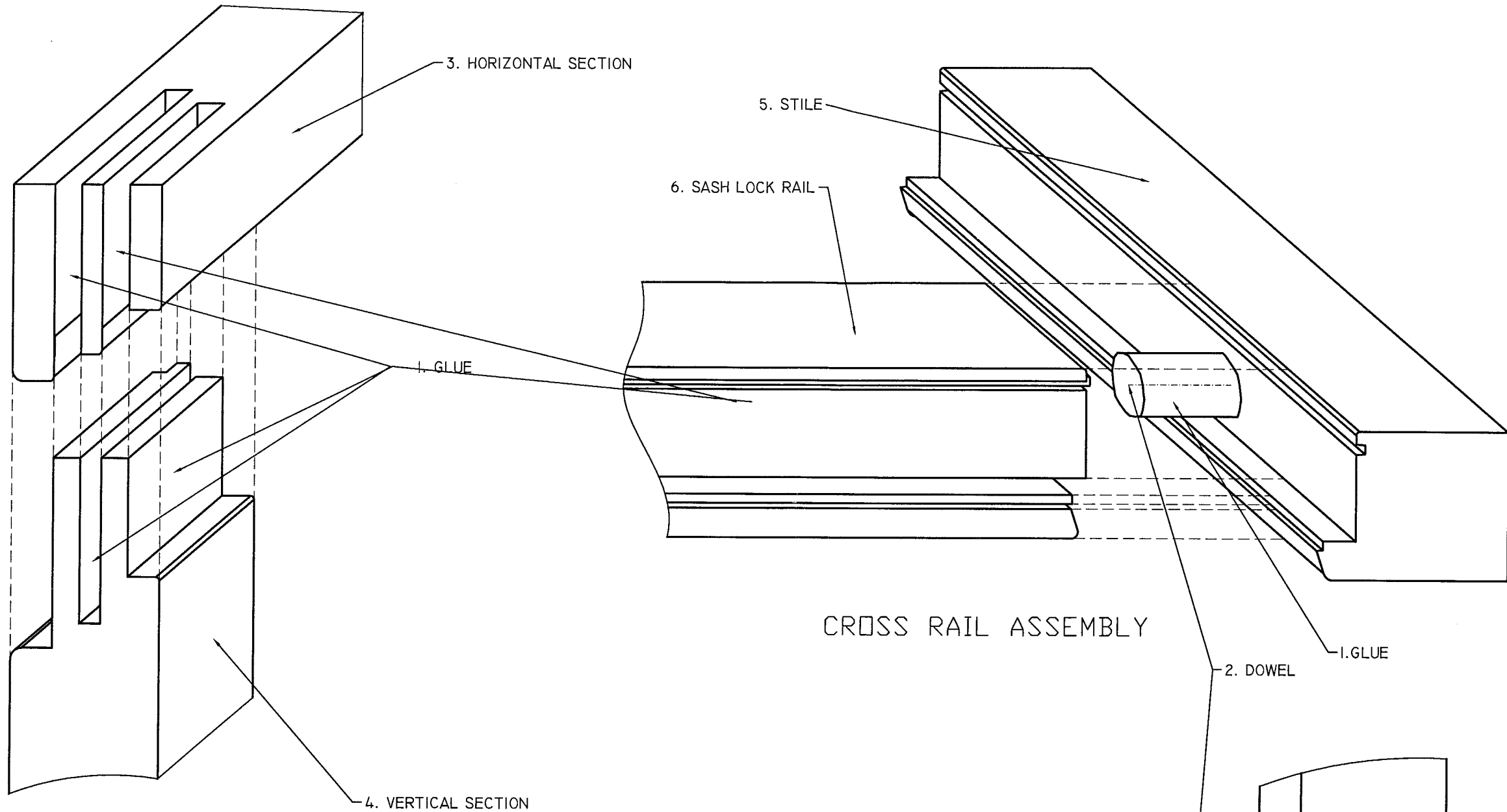
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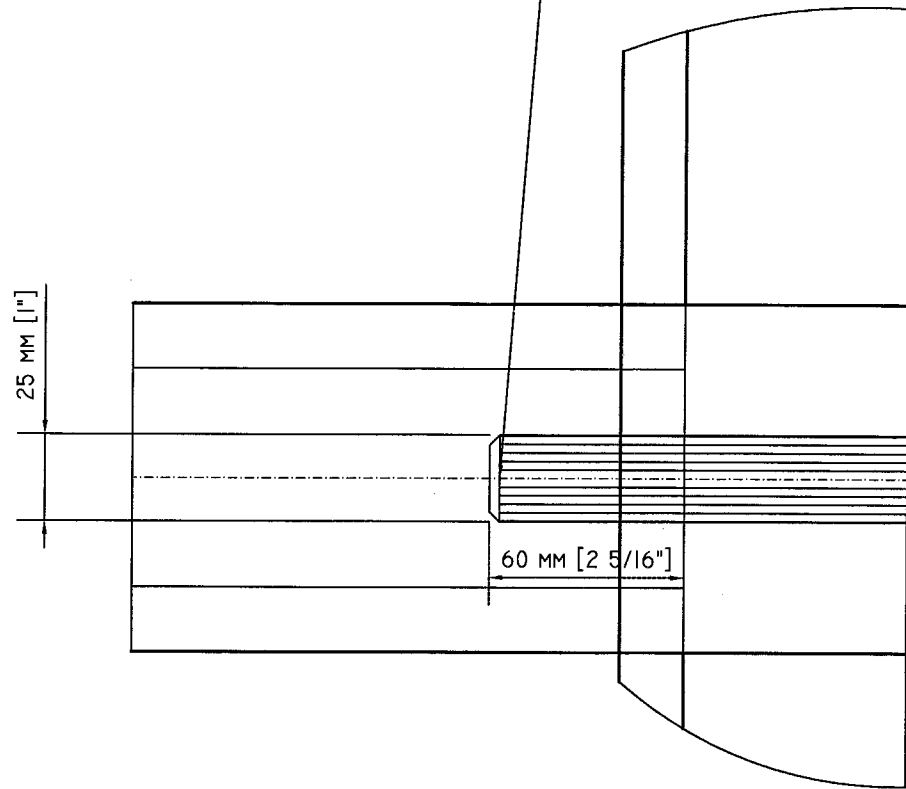
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WEST PALM BEACH, FL 33405

'EUROPEAN SERIES' MAHOGANY
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LARGE MISSILE IMPACT RESISTANT



MULTI-FORK FRAME AND VENT
CORNER ASSEMBLY

MATERIALS LIST		
ITEM	DESCRIPTION	REMARKS/SUPPLIER
1	National Casein or Tite Bond II	Type II Glue
2	Dowel	Mahogany or equal
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		



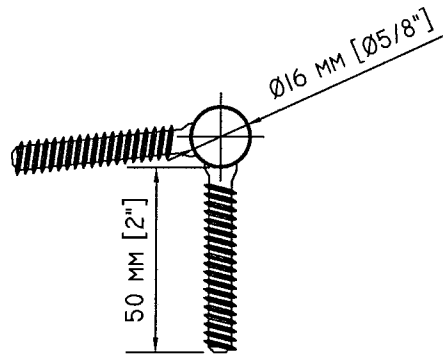
08-1119.03
APR 12, 2012
Manuel Perez

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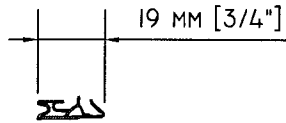


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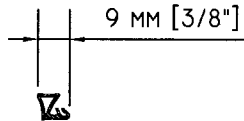
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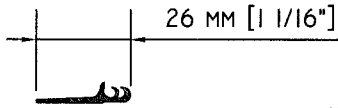
1. Adjustable S.S. Hinge



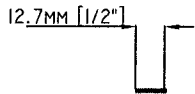
2. Thermoplastic Gasket



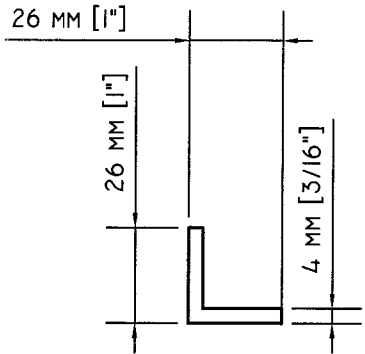
3. Thermoplastic Gasket



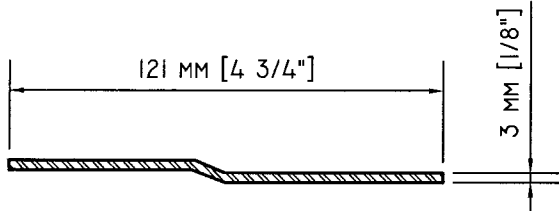
4. Thermoplastic Gasket



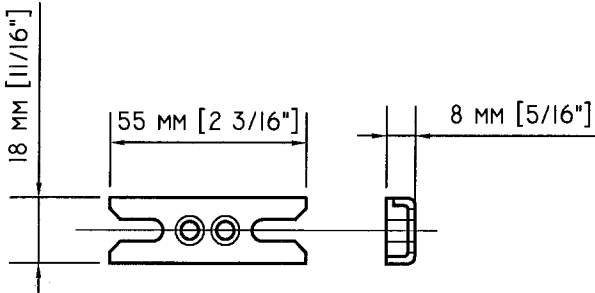
12. NORTON NORSEAL V992 TAPE



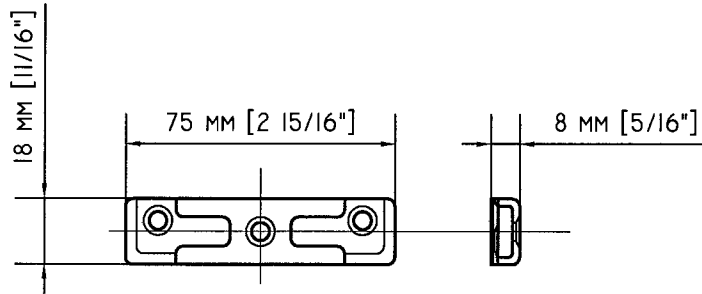
5. Aluminum Angle



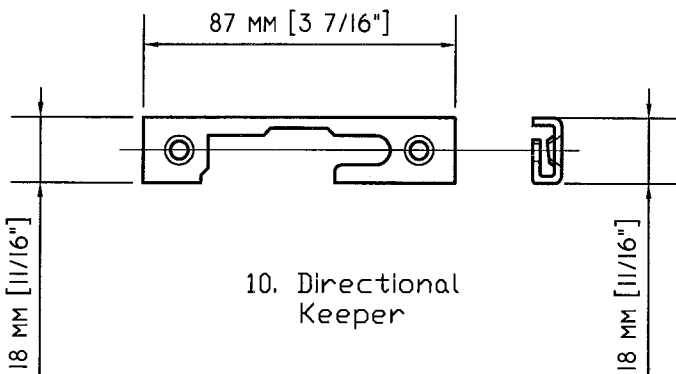
6. Galvanized or S.S. Strap



7. Tilt/Turn Keeper

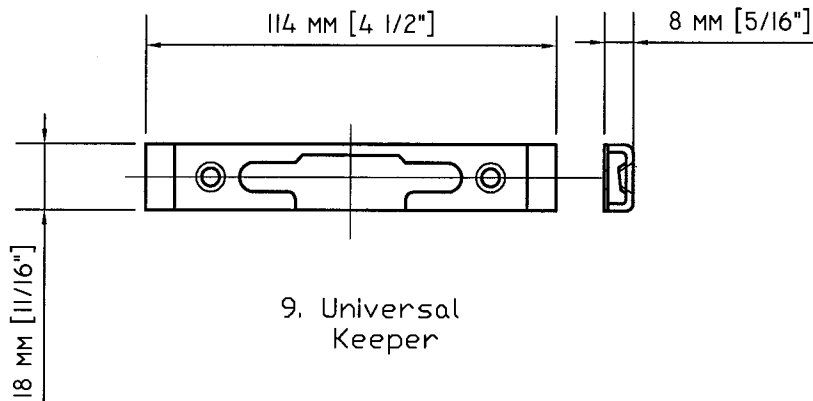


8. Tilt/Turn Keeper

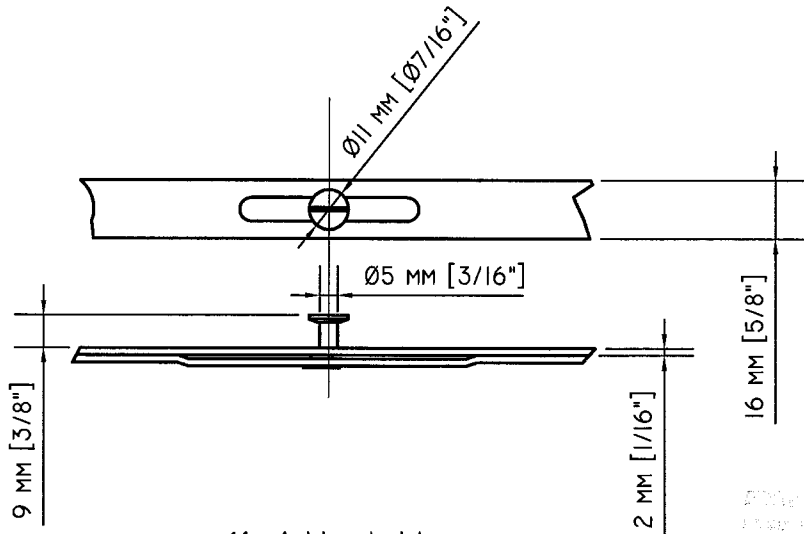


10. Directional Keeper

MATERIALS LIST			
ITEM	DESCRIPTION	Part No.	SUPPLIER
1	Adjustable S.S. Hinge		Proprietary
2	Gasket(Thermoplastic)	1500530	Olimpia
3	Gasket(Thermoplastic)	1500450	Olimpia
4	Gasket(Thermoplastic)	1500512	Olimpia
5	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			



9. Universal Keeper



11. Adjustable S.S. Cam

06/05/2009

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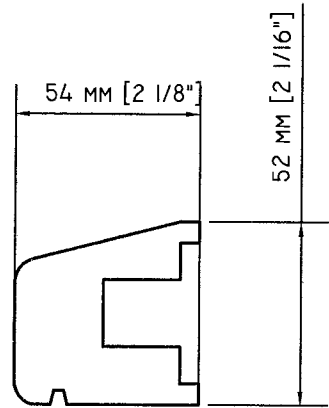
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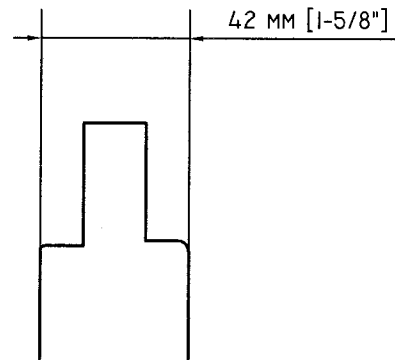
08-1119.03
APRIL 12, 2012

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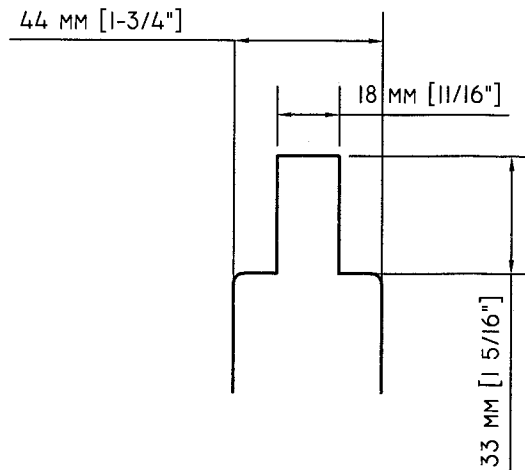
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1. Drip Cap/Steel Cover

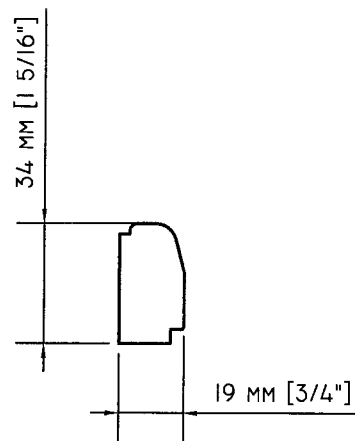


2. Copper Clad Panel

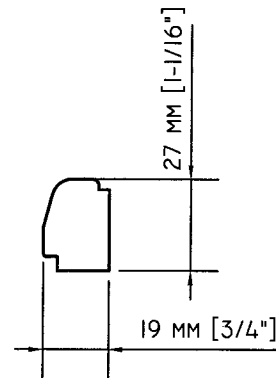


3. Wood Panel

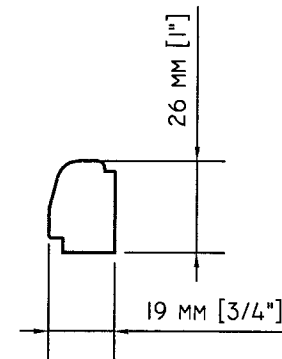
MATERIALS LIST		
ITEM	DESCRIPTION	REMARKS/SUPPLIER
1	Drip Cap/Steel Cover	Mahogany or equal
2	Copper Clad Panel	Mahogany or equal
3	Wood Panel	Mahogany or equal
4	Glazing Bead	Mahogany or equal
5	I.G. Glazing Bead	Mahogany or equal
-	-	-
-	-	-
8	Fixed Sash Blocking	Mahogany or equal
9	Mull Spline	Mahogany 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



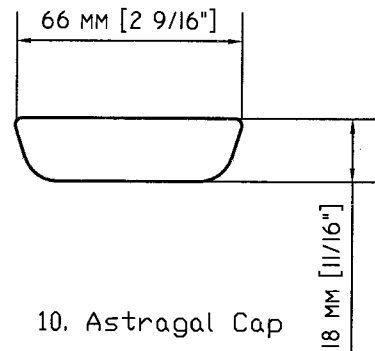
4. Glazing Bead



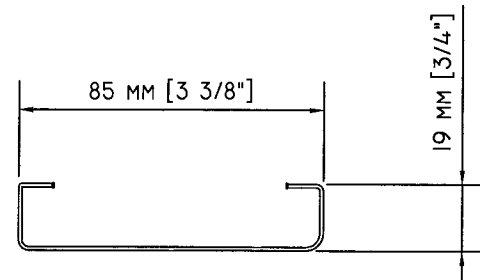
16. Glazing Bead



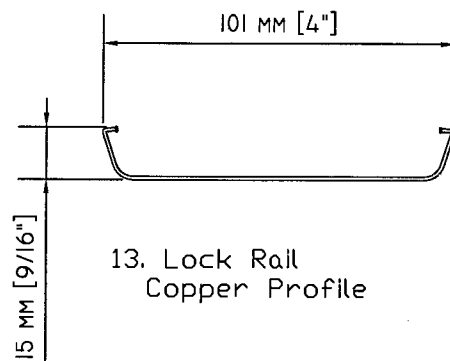
5. I.G. Glazing Bead



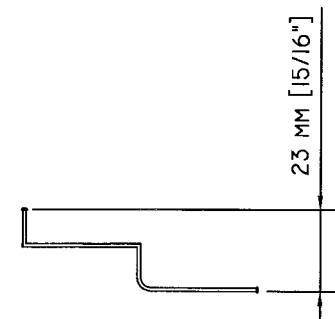
10. Astragal Cap



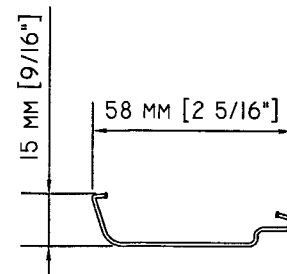
11. Head/Jamb Copper Profile



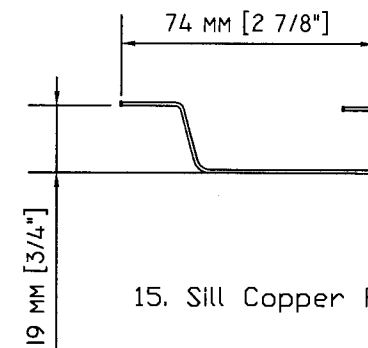
13. Lock Rail Copper Profile



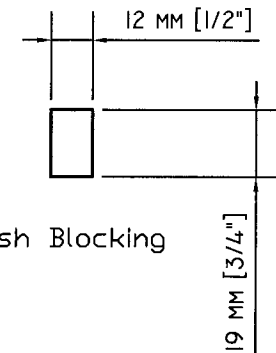
12. Panel Edge Copper Profile



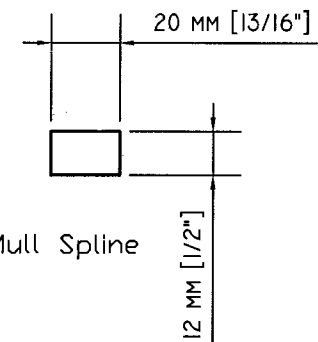
14. Sash Copper Profile



15. Sill Copper Profile



8. Fixed Sash Blocking



9. Mull Spline

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WEST PALM BEACH, FL 33405

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

REMARKS	DRWN	CHKD	DATE
INITIAL ISSUE	CL	FLB	10/18/06
BCCO COMMENTS	CL	FLB	1/27/07
BCCO COMMENTS	CL	FLB	3/14/07
ADD'L GLAZING TYPE	KL	CL	10/13/08
BCCO COMMENTS	RKB	FLB	06/04/09

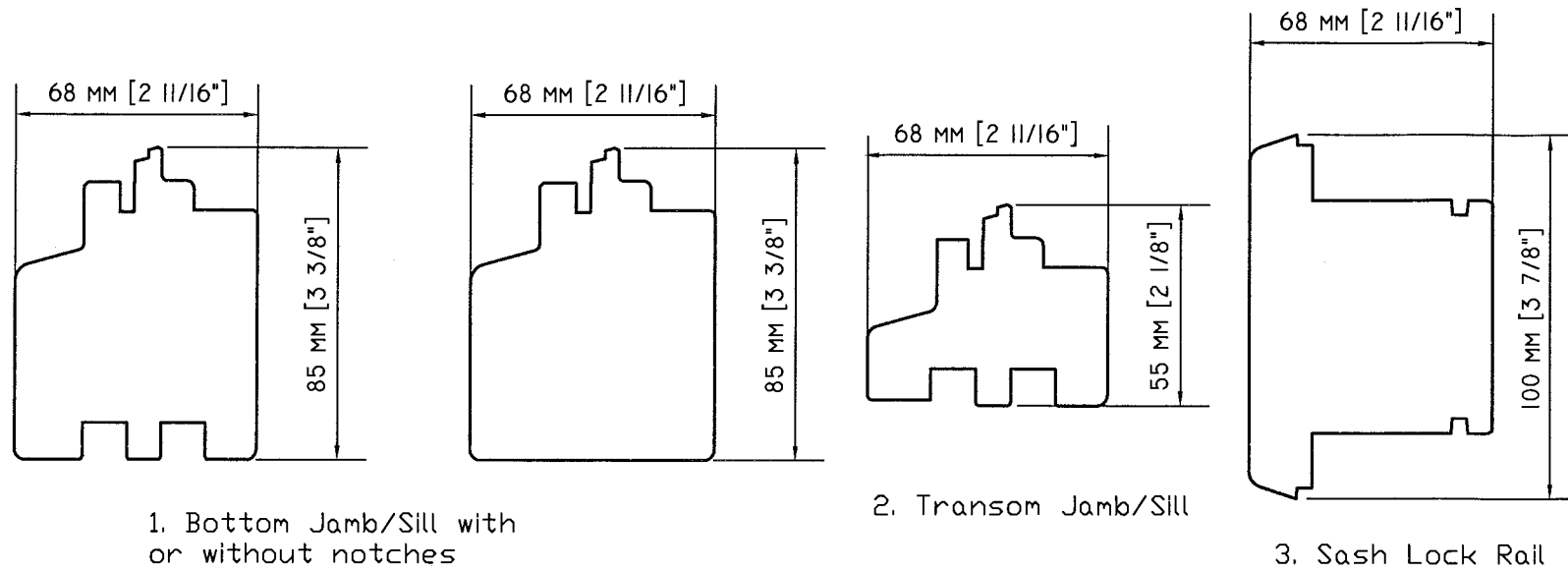
06-HWD-0008

SCALE: 02

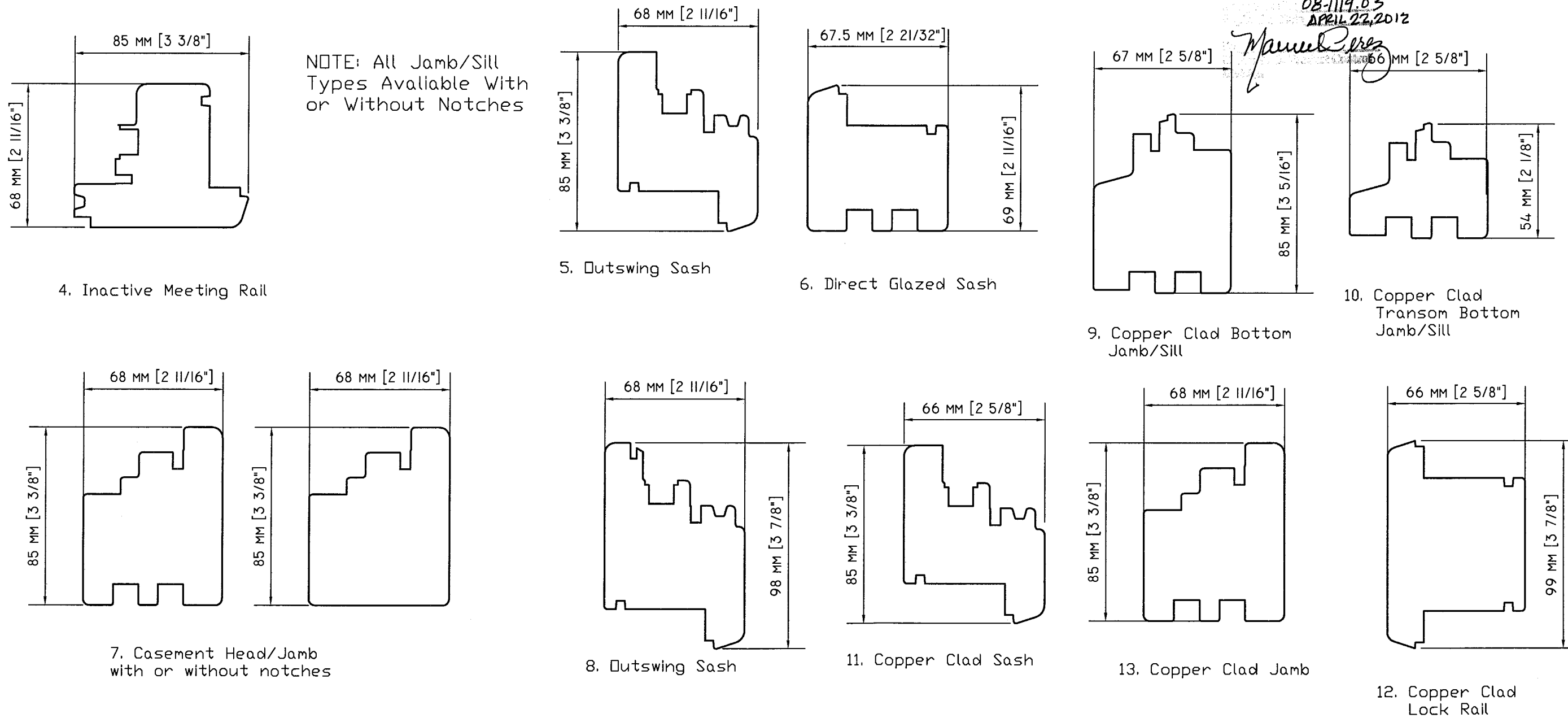
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APRIL 12, 2012
Manuel Perez

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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	Outswing Sash	Mahogany or equal
6	Direct Glazed Sash	Mahogany or equal
7	Casement Head/Jamb	Mahogany or equal
8	Outswing 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		



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

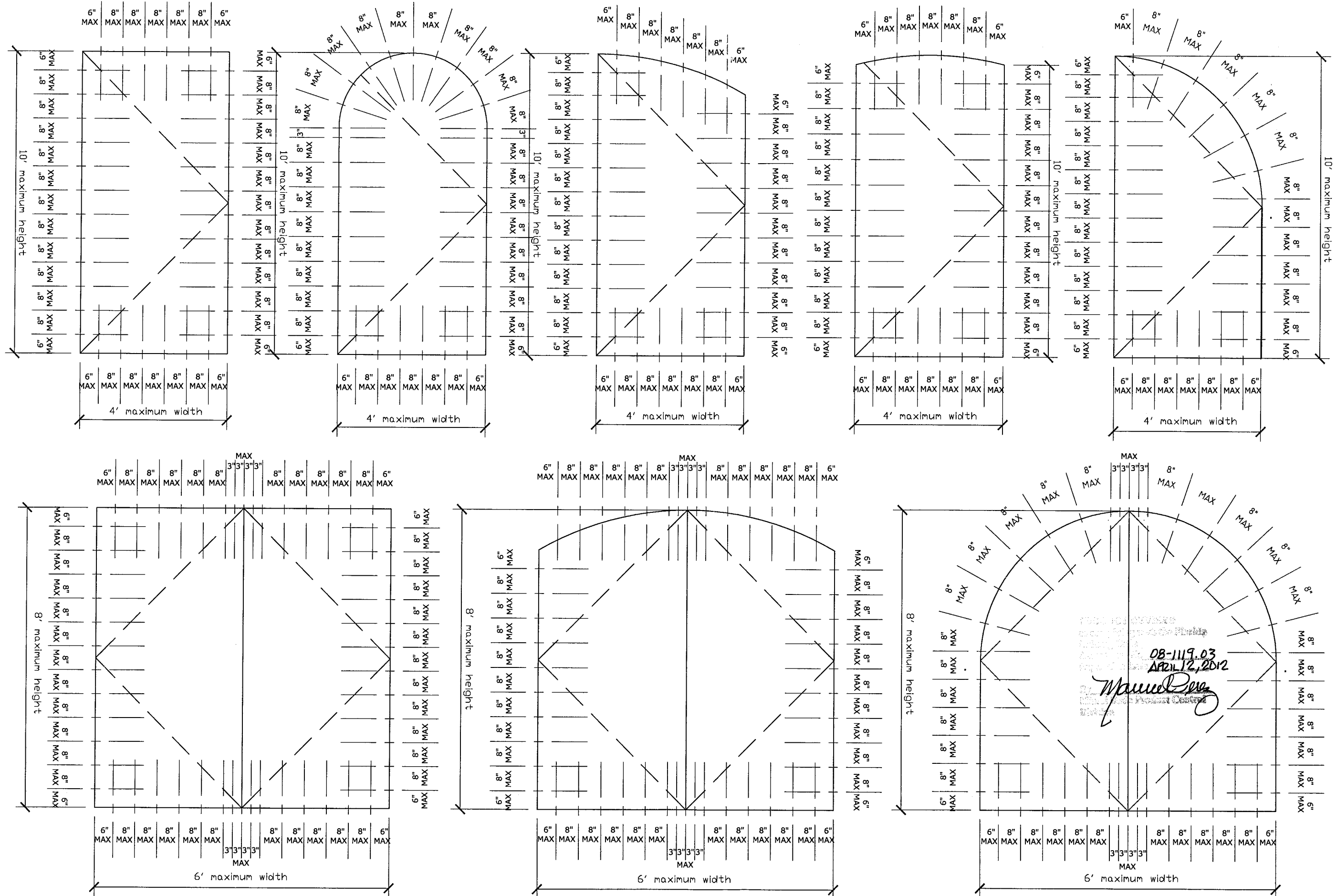
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INITIAL ISSUE	CL	FLB	10/18/06
BCCO COMMENTS	CL	FLB	1/27/07
BCCO COMMENTS	CL	FLB	3/14/07
ADDP GLAZING TYPE	KL	CL	10/13/08
BCCO COMMENTS	RKB	FLB	06/04/09

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PAGE DESCRIPTION:

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OUTSWING 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 INSWING CASEMENT WINDOWS



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"EUROPEAN SERIES" MAHOGANY
OUTSWING CASEMENT WINDOWS
LARGE MISSILE IMPACT RESISTANT

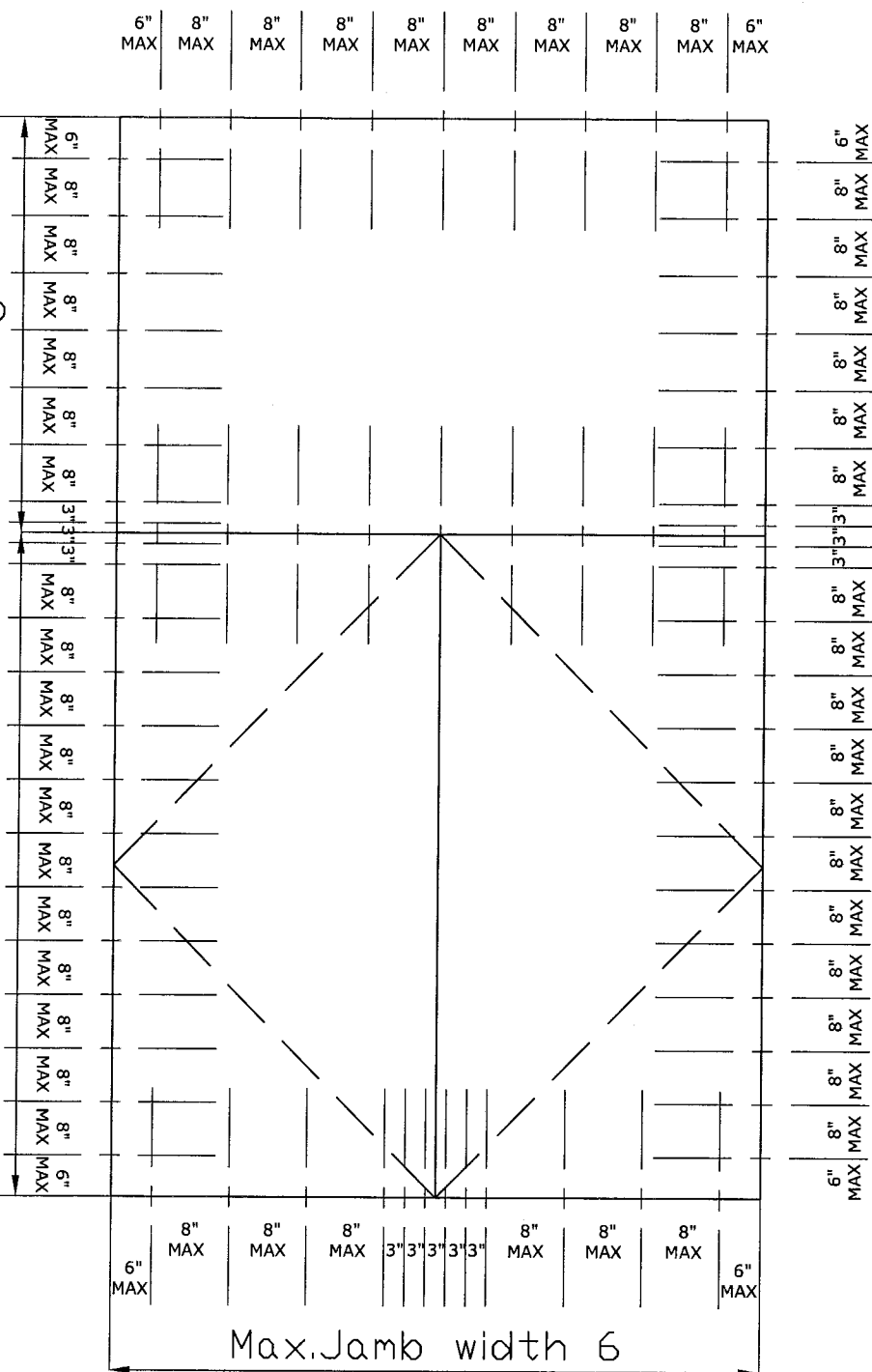
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BCCO COMMENTS	CL	FLB	1/27/07
BCCO COMMENTS	CL	FLB	3/14/07
ADDL GLAZING TYPE	KL	CL	10/13/08
BCCO COMMENTS	RKB	FLB	06/04/09

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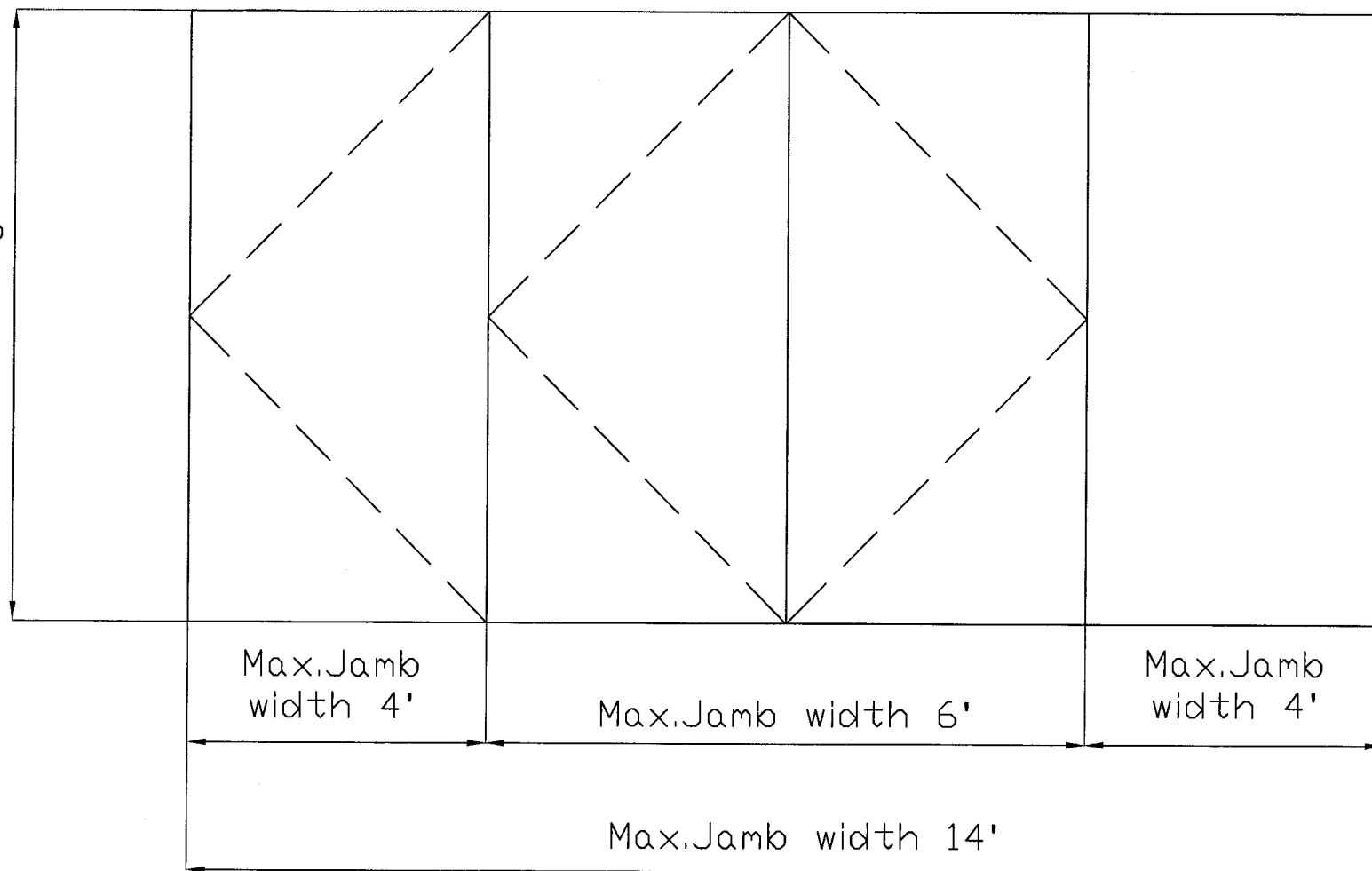
Max. Combined Jamb height 13'

Max. Jamb
height 5'

Max.Jamb height 8'



Max. Jamb height 8'



SEE SHEET 7 OF 20 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

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APRIL 12, 2012
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BCCO COMMENTS	CL	FLB	3/14/07
ADDL GLAZING TYPE	KL	CL	10/13/08
BCCO COMMENTS	CL	FLB	10/14/08

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

REMARKS	DRWN	CHKD	DATE
INITIAL ISSUE	CL	FLB	10/18/06
BCCO COMMENTS	CL	FLB	1/27/07
BCCO COMMENTS	CL	FLB	3/14/07
ADDT. GLAZING TYPE	KL	CL	10/13/08
BCCO COMMENTS	RKB	FLB	06/04/09

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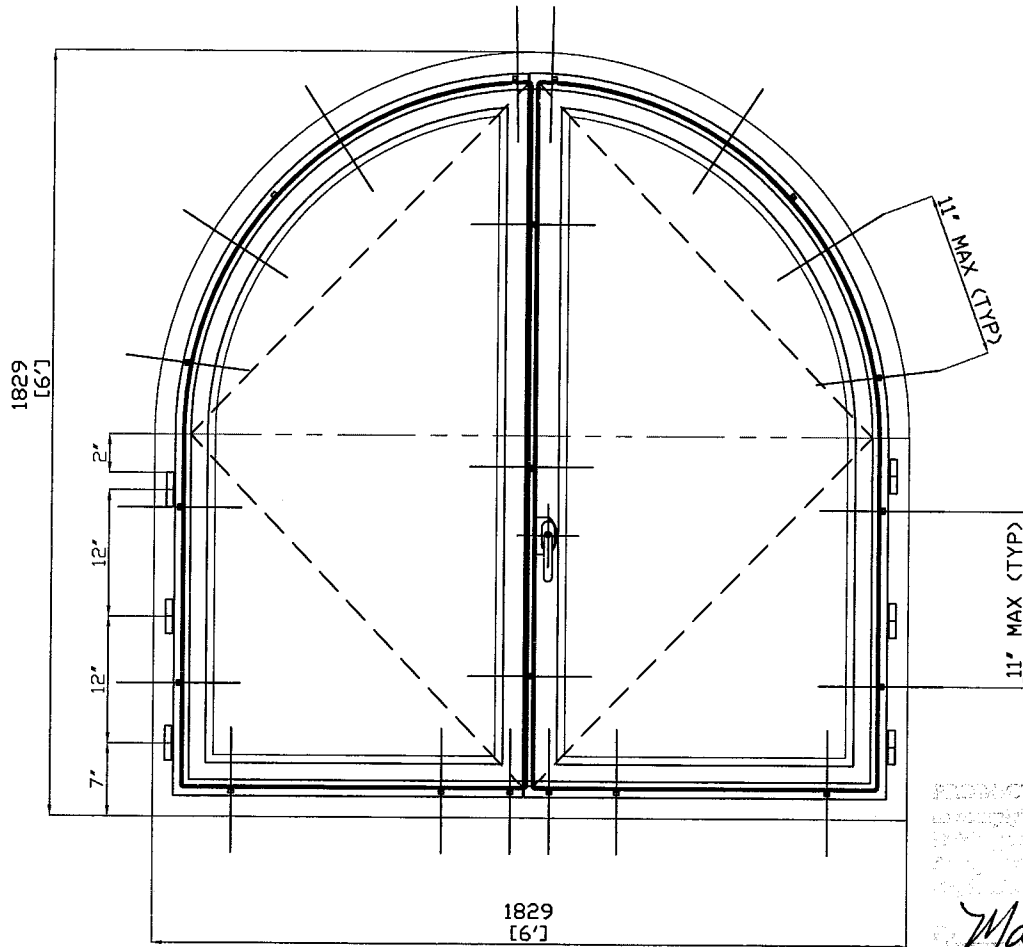
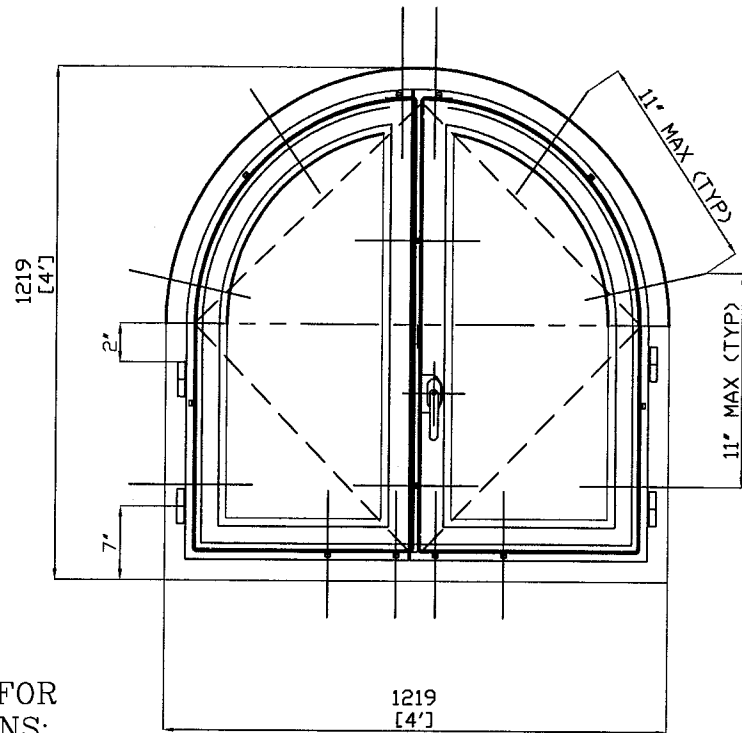
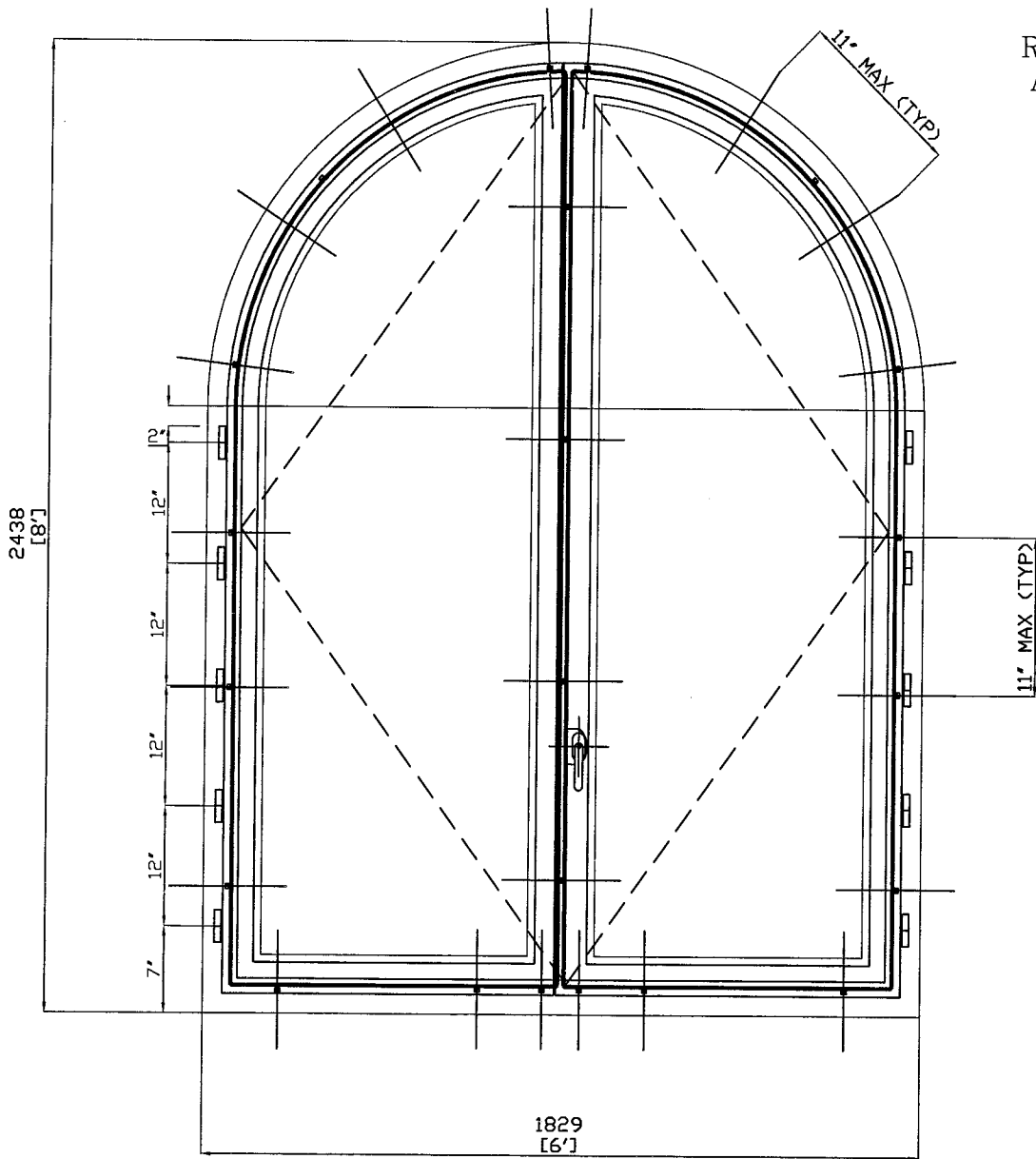
16

HINGES/LOCK POINTS REQUIREMENTS TABLE

OUTSWING ARCH TOP WINDOW

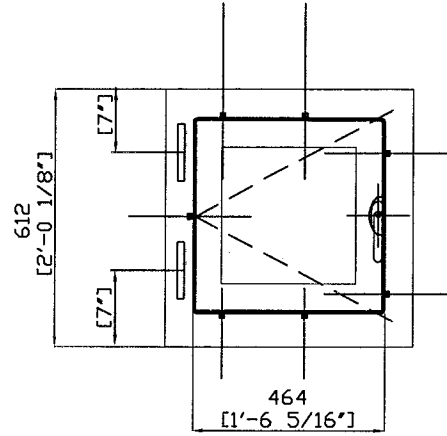
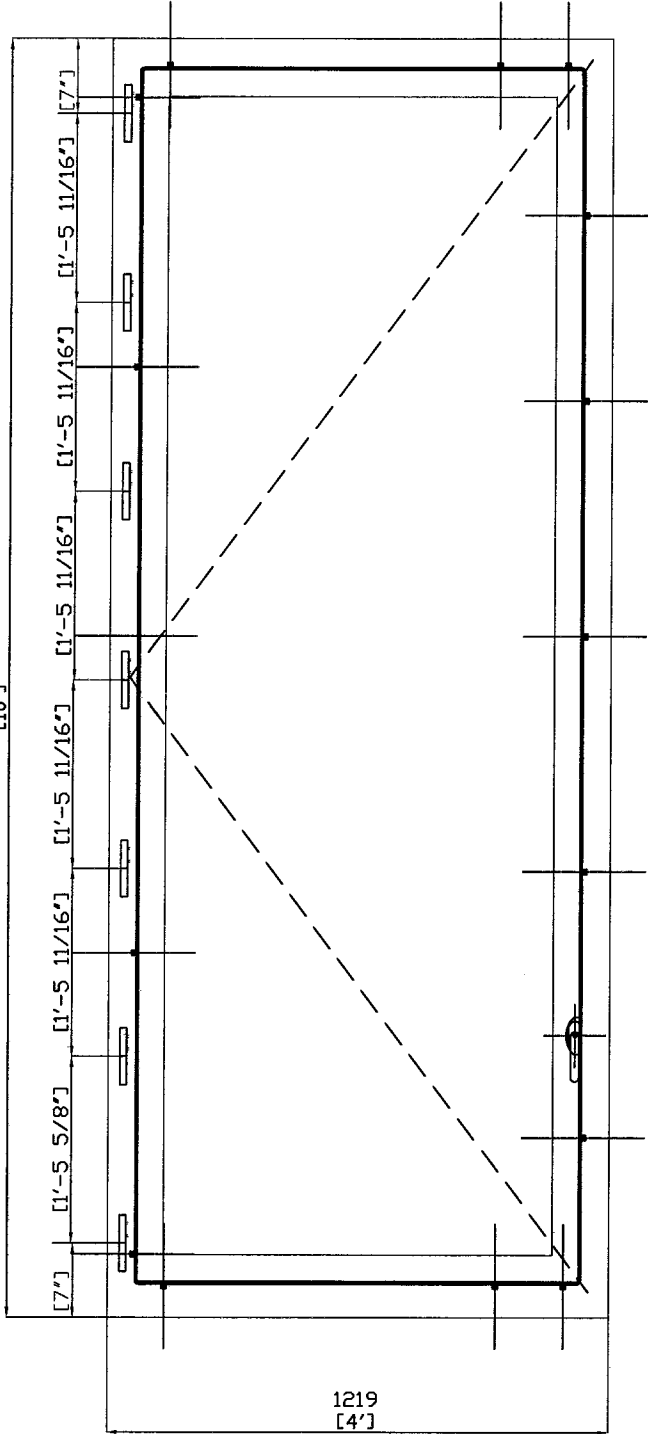
LOCK POINTS QTY REQUIREMENTS						HINGES QTY REQUIREMENTS			
ARCH RAIL/BOTTOM		MEETING RAIL		Left/Right Side		SASH HEIGHT	QTY.	Dist. from bottom corner	Dist. from spring line
SASH WIDTH	QTY.	SASH HEIGHT	QTY.	SASH HEIGHT	QTY.	6'-8'	5	7"	2"
2'-3'	3	6'-8'	4	6'-8'	7	4'-6'	3	7"	2"
Less than 2'	2	4'-6'	3	4'-6'	6	2'-4'	2	7"	2"
		2'-4'	2	2'-4'	4	Less than 2'	2	7"	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
INSWING CASEMENT WINDOWS**

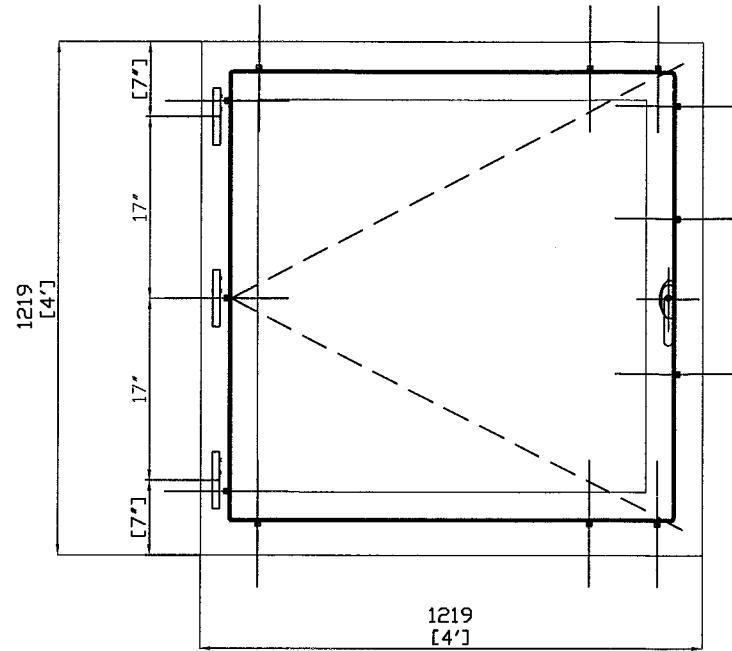
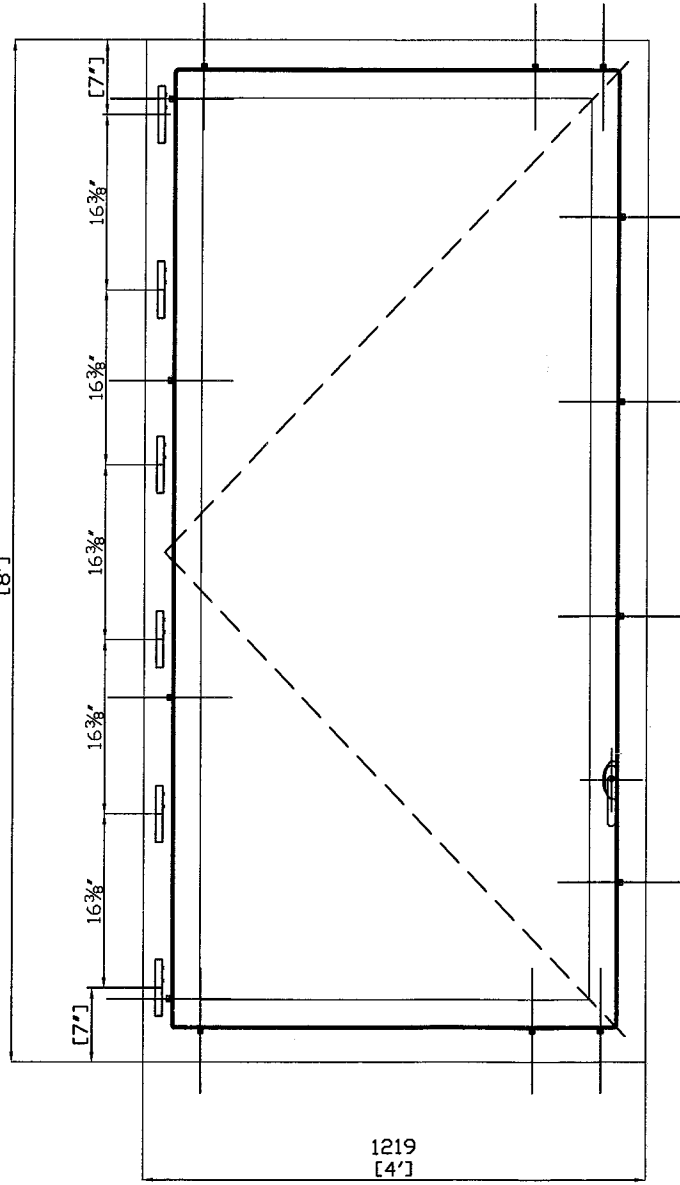


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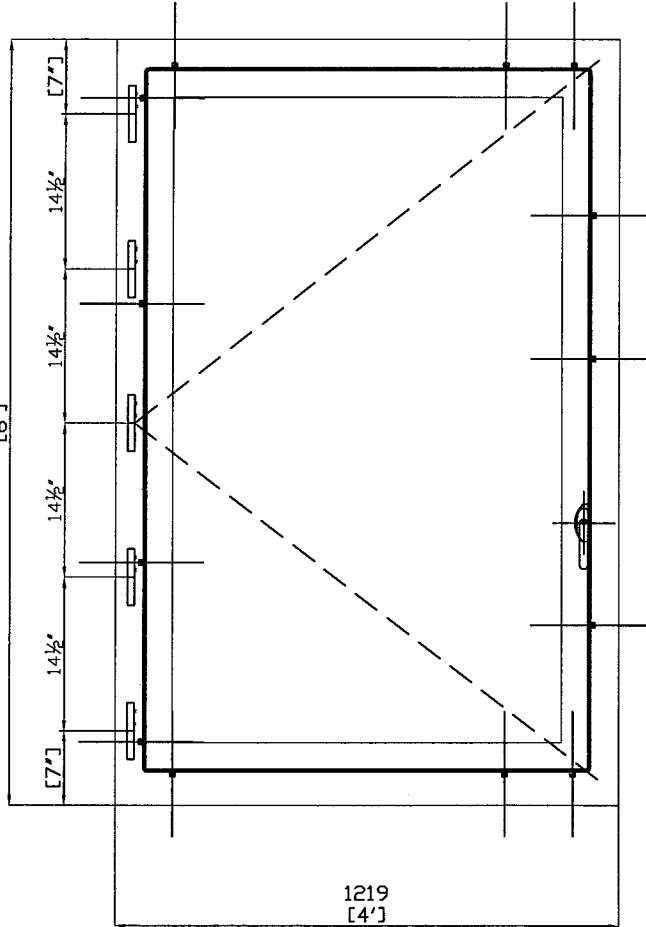
3048
[10']



2438
[8']



1829
[6']



HINGE/LOCK POINT REQUIREMENTS

OUTSWING 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'	7	7"
2'	2	6'-8	4	6'-8'	6	7"
Less 2'	2	2'-8	3	4'-6'	5	7"
		Less 2'	2	2'-4'	3	7"
				Less 2'	2	7"

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

REMARKS	DRWN	CHKD	DATE
INITIAL ISSUE	CL	FLB	10/18/06
BCCO COMMENTS	CL	FLB	1/27/07
BCCO COMMENTS	CL	FLB	3/14/07
ADD'L GLAZING TYPE	KL	CL	10/13/08
BCCO COMMENTS	RKB	FLB	06/04/09



06-HWD-0008

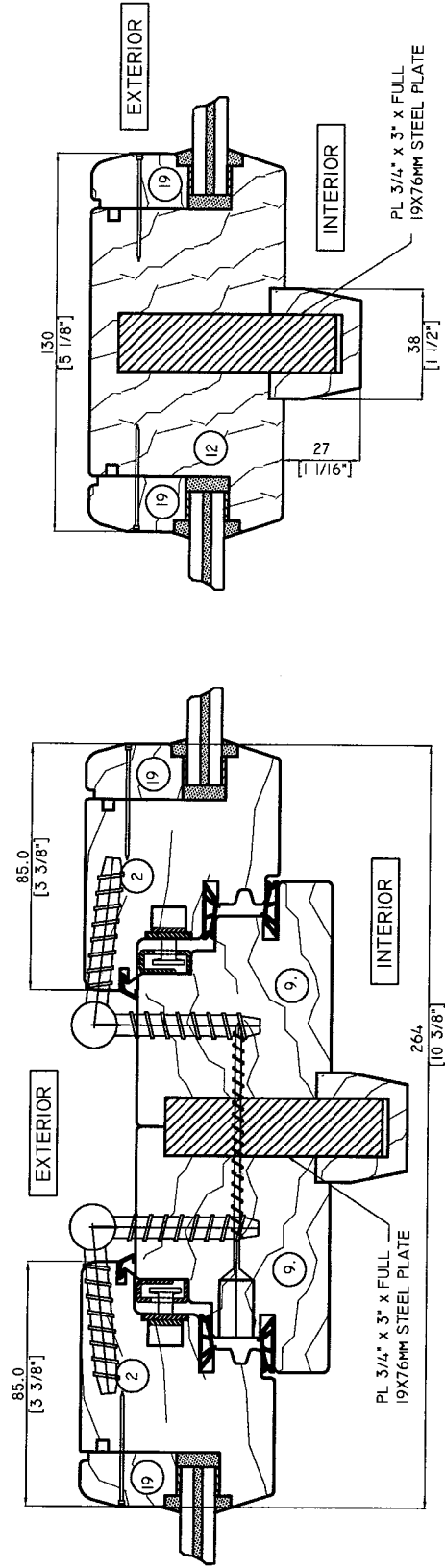
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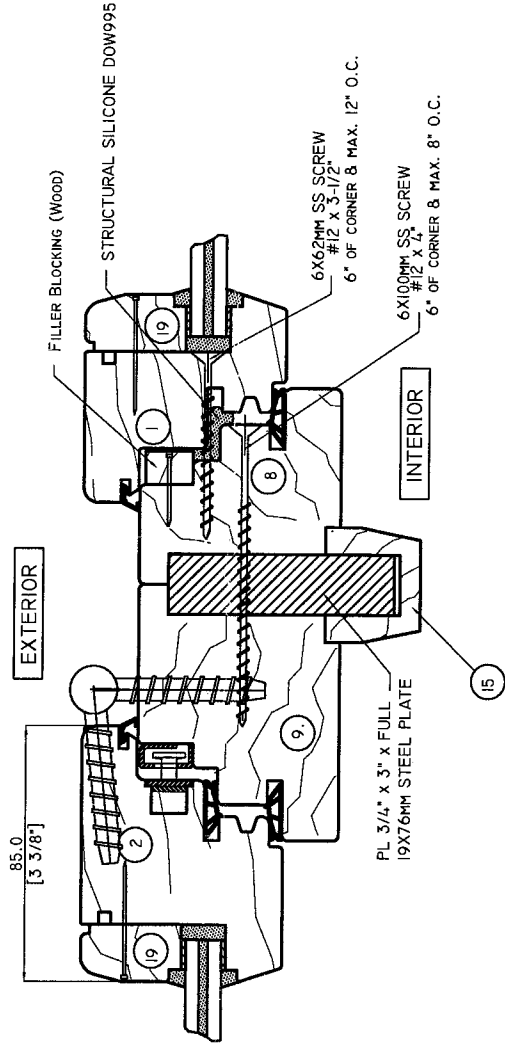
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OUTSWING 8' TO 10' STEEL REINFORCED MULLIONS

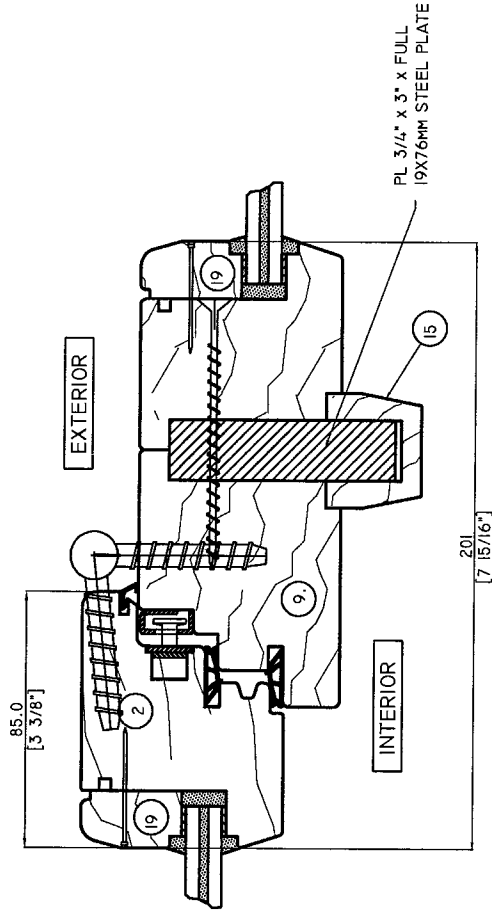


OUTSWING TO OUTSWING W/
MULLED JAMBS

SASH ONLY TO SASH ONLY W/
SINGLE MULL BAR



OUTSWING W/ FIXED OUTSWING
SIDELITE



OUTSWING TO SASH ONLY SIDELITE

PRODUCT REVIEWED
in compliance with the Florida
Building Code
08-1119.03
APRIL 12, 2012
Manuel Perez

REMARKS	DRWN	CHKD	DATE
INITIAL ISSUE	CL	FLB	10/18/06
BCCO COMMENTS	CL	FLB	1/27/07
BCCO COMMENTS	CL	FLB	3/14/07
ADD'L GLAZING TYPE	KL	CL	10/13/08
BCCO COMMENTS	RKB	FLB	06/04/09

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OUTSWING CASEMENT WINDOWS
LARGE MISSILE IMPACT RESISTANT

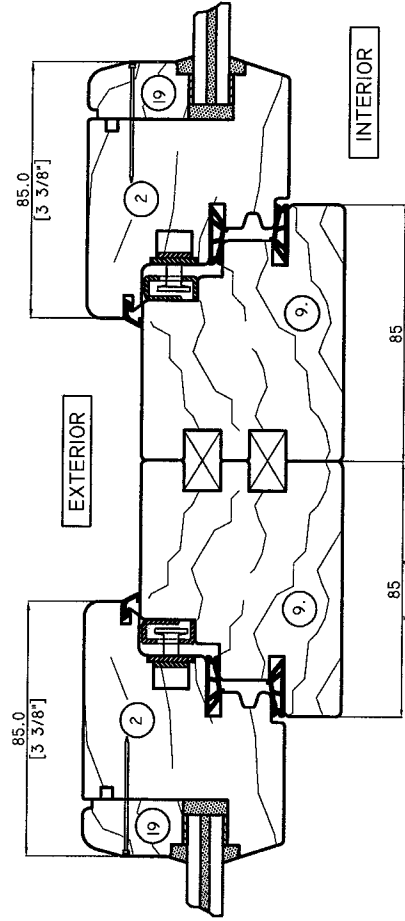
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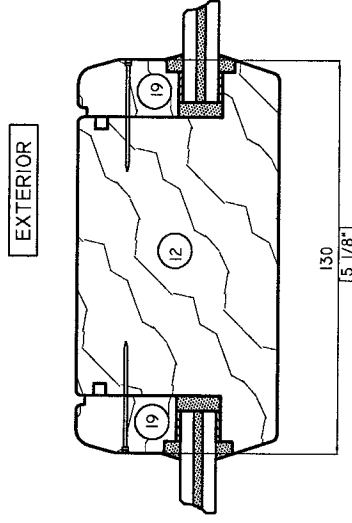
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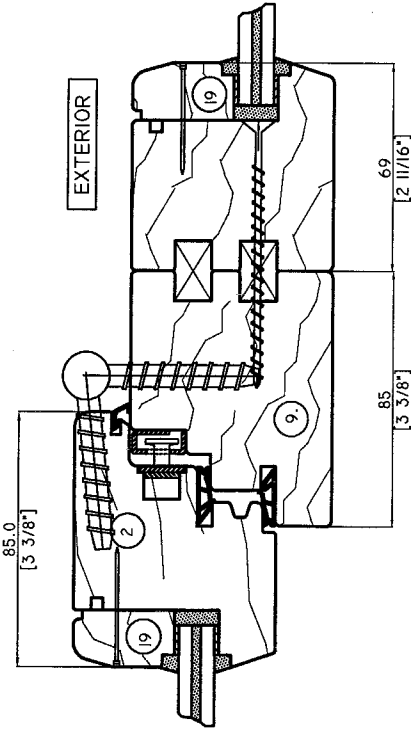
OUTSWING W/ SIDELITES LESS THAN 8'



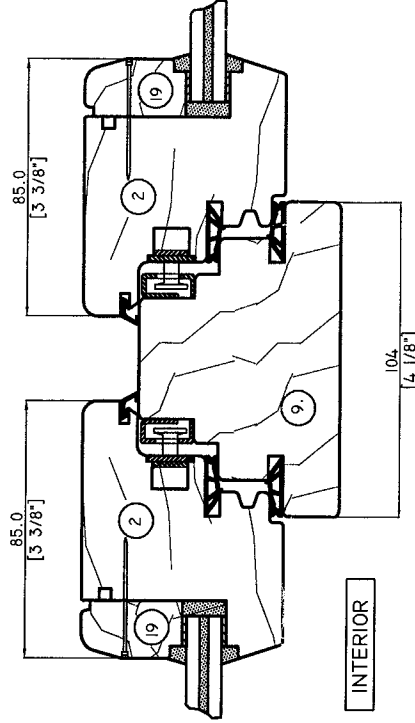
OUTSWING TO OUTSWING W/
MULLED JAMBS



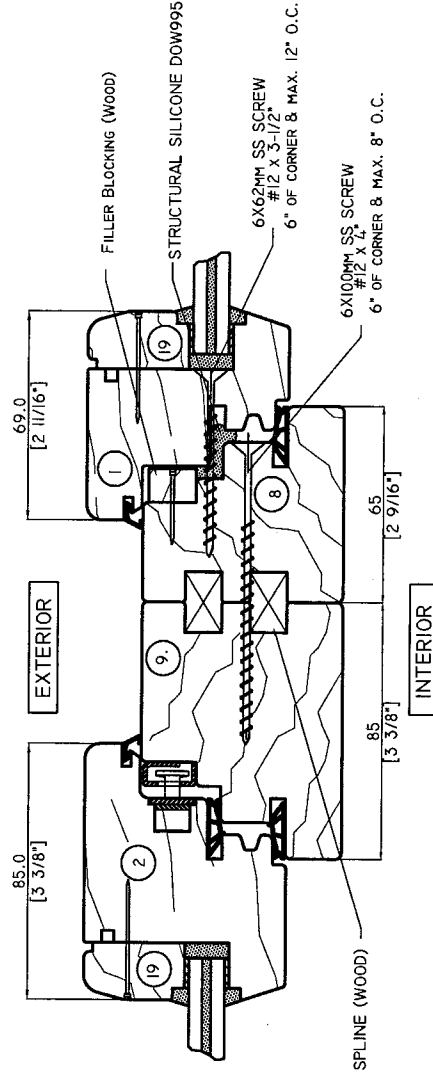
SASH ONLY TO SASH ONLY W/
SINGLE MULL BAR



OUTSWING TO SASH ONLY SIDELITE



OUTSWING TO OUTSWING W/
SINGLE MULL BAR



OUTSWING W/ FIXED OUTSWING
SIDELITE

08-1119.03
APRIL 12, 2012
By *Manuel Perez*
REVIEWED: Project Engineer
Division

REMARKS	DRWN/CHKD	DATE
INITIAL ISSUE	CL FLB	10/18/06
BCCO COMMENTS	CL FLB	1/27/07
BCCO COMMENTS	CL FLB	3/14/07
ADDL GLAZING TYPE	KL CL	10/13/08
BCCO COMMENTS	RKB FLB	06/04/09

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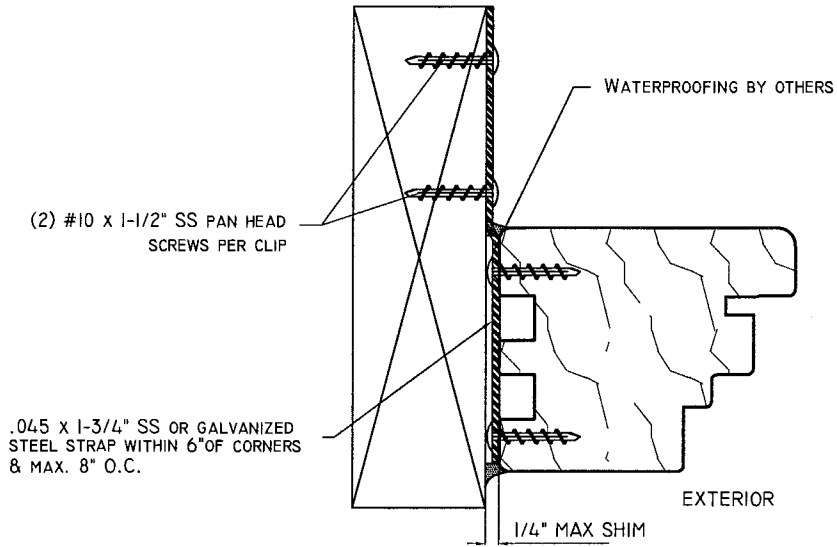
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& DOORS, LLC
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OUTSWING CASEMENT WINDOWS
LARGE MISSILE IMPACT RESISTANT

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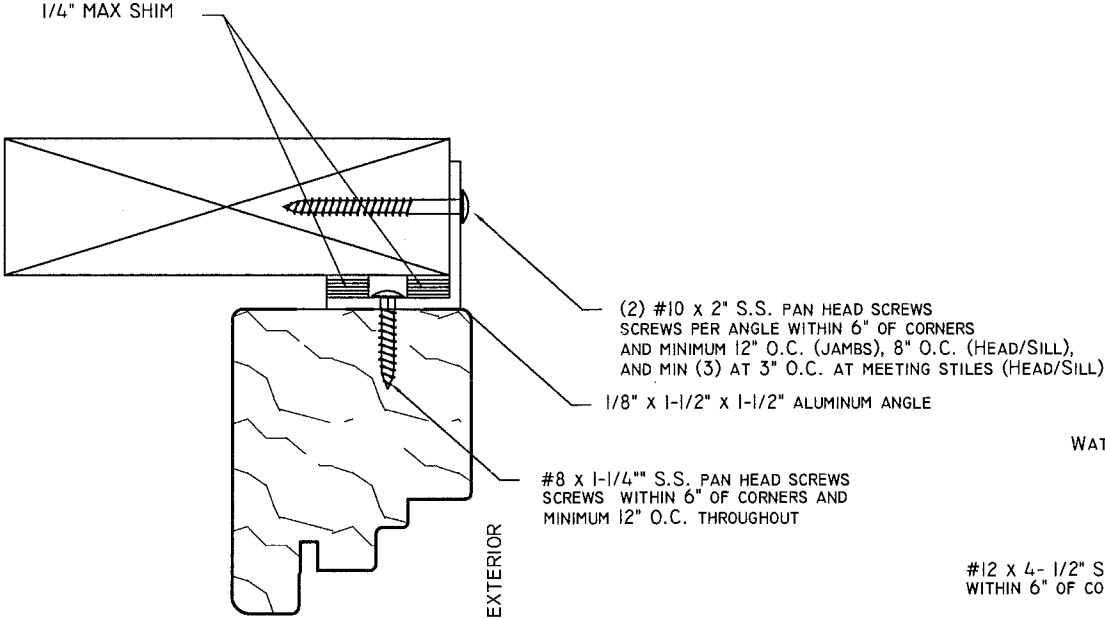
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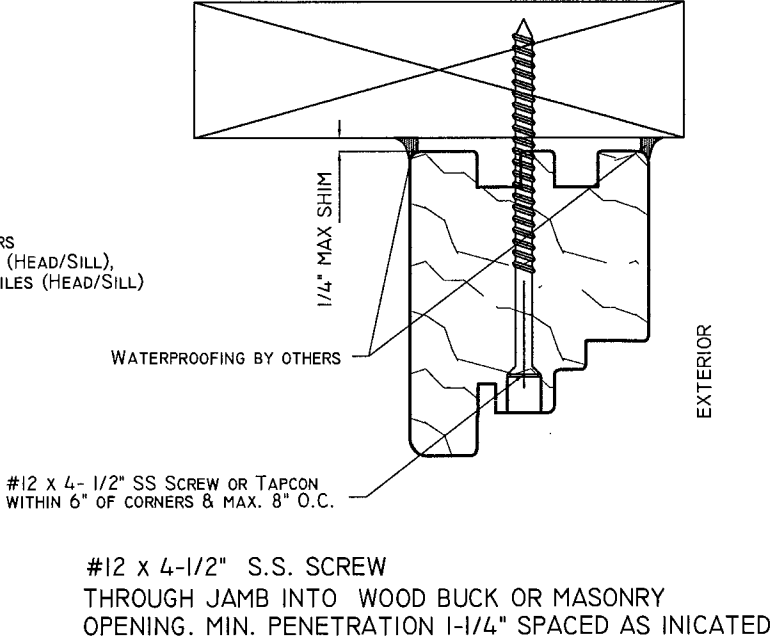
0.045 X 1-3/4" X 5" GALVANIZED STEEL CLIPS
PROVIDE #8 X 1-1/2" STAINLESS STEEL FASTENERS FOR WOOD SUBSTRATE
SCREW THROUGH STEEL CLIP INTO WOOD BUCK OR MASONRY
OPENING. MIN. PENETRATION 1-1/4" SPACED AS INDICATED

TYP CLIP DETAIL
ALT ANCHOR METHOD #1



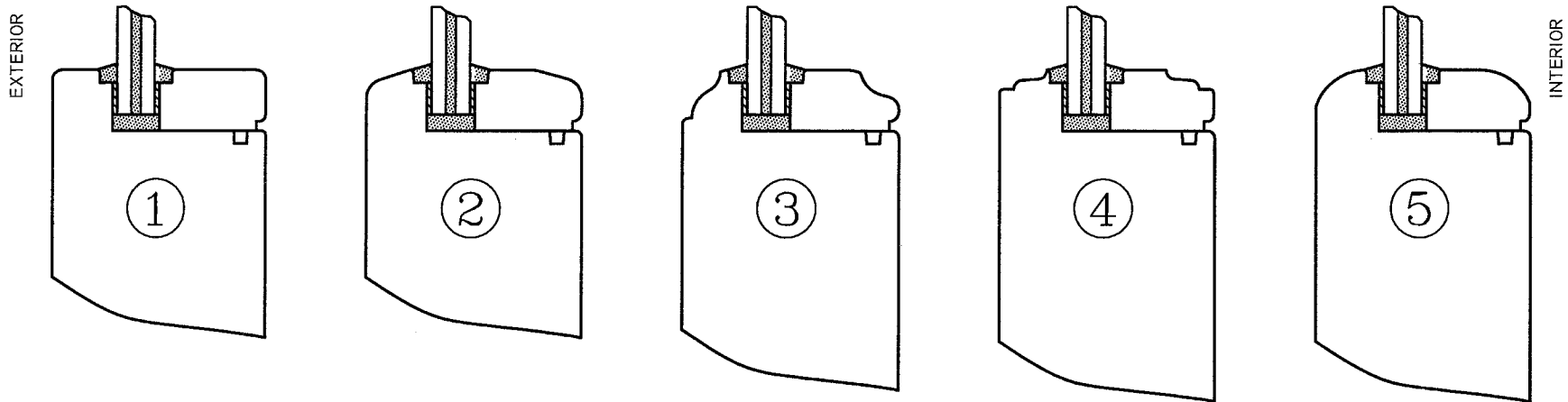
1-1/2" X 1-1/2" X 1/8" ALUMINUM ANGLE
PROVIDE #10 X 2" STAINLESS STEEL FASTENERS FOR WOOD SUBSTRATE
SCREW THROUGH ALUMINUM NAIL FIN INTO WOOD BUCK
MIN. 1-3/4" PENETRATION SPACED AS INDICATED

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

PRODUCT DEVELOP
reworking with the window
product team
08-1119.03
APRIL 12, 2012
Maurice Perez
Hartman Windows & Doors Product Control
Manager

FRANK L. BENNARDO, P.E.
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LARGE MISSILE IMPACT RESISTANT

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ADDL GLAZING TYPE	KL	CL	10/13/08
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