MIAMI-DADE COUNTY
DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
11805 SW 26 Street, Room 208
Miami, Florida 33175-2474
T (786) 315-2590 F (786) 315-2599
www.miamidade.gov/economy

NOTICE OF ACCEPTANCE (NOA)

CGI Windows & Doors, Inc.
3780 W. 103rd Street
Hialeah, FL 33018

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 RER -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. RER 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 "450" Aluminum Inswing Opaque Doors w/wo Sidelites - Impact

APPROVAL DOCUMENT: Drawing No. **450FD4-NOA** Rev **B**, titled "Series 450 Alum French Opaque & IS (LM)", sheets 1 thru 14 of 14, prepared by manufacturer, dated June 12, 2020 and last revised on 08/10/2022, signed and sealed by Lynn Miller, 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

Limitations:

1. See Design Pressure ratings in sheets **2, 9, 10, 11, 12 &13** for unit sizes Vs lock options, mullion type, door/ side lite, sill types and anchors. Lower Design Pressure shall control.
2. Sills (threshold) types S-1, SS-1 & SS-2 are not rated for water infiltration. See thresholds (sills) sheets **9, 11, 12 & 13**.
3. See the **7/16**" & **1**" Composite panels details in sheet **3**. Narrow stile sidelites are limited to **18**" or less.
4. The alternate frame size must not exceed 125 ft^2, nor panel tested area and nor max. panel height.

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and series and following statement: "Miami-Dade County Product Control Approved", 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 & renews** #**20-0619.05** consists of this page 1 and evidence pages E-1, E-2, E-3, E-4 & E-5, as well as approval document mentioned above.
The submitted documentation was reviewed by **Ishaq I. Chanda, P.E.**

MIAMI-DADE COUNTY APPROVED

Ishaq I. Chanda

CGI Windows & Doors, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. EVIDENCE SUBMITTED UNDER PREVIOUS NOA'S

A. DRAWINGS

1. Manufacturer's die drawings and sections (Submitted under files below).
2. Drawing No.**W12-23 Rev B**, titled "Series 450 Inswing Doors & Sidelites", sheets 1, 1.1, 1.2, 2, 2.1, 2.2, 3, 3.1, 4, 5, 6, 7 7.1 and 7.2 of 7, prepared by Al-Farooq Corporation, dated 10-27-06 and last revised on AUG 27, 2015, signed and sealed by Javad Ahmad, P.E.

B. TESTS (Submitted under files #**12-0706.01**)

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(+50.0 PSF, sill S-I only)
   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 manufacturer's parts and section drawing marked-up drawings of aluminum In swing / Outswing door w/wo sidelites, by Hurricane Testing Laboratory, Inc., Test Report No. **HTL-0080-0304-11** dated 11/28/2011 and **HTL-0080-0902-11**, signed and sealed by Vinu J. Abraham, P.E.
   Note: This test report has been revised by addendum letters, issued by Architectural Testing (Former Hurricane Testing Lab), dated 01/20/12 and 04/03/12, both signed and sealed by Vinu J. Abraham, P.E.
   Along with manufacturer's parts and section drawing marked-up drawings of double aluminum outswing doors, issued by Architectural Testing, Test Report No(s) **B-5234.02-450-18** dated 12/19/2011, signed and sealed by Vinu J. Abraham, 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 manufacturer's parts and section drawing marked-up drawings of aluminum In/out swing door w/sidelites, by Hurricane Testing Laboratory, Inc., Test Report No. **HTL-97055 (0080-912-97)** dated 09/23/97 thru 02/27/98 for specimen #1, 2, 3, 4 tested per PA202-94, specimen #4, 5A, 5B, 5C tested per PA201-94 & PA203-94, signed and sealed by Timothy S. Marshall, P.E.

Ishaq I. Chanda

Ishaq I. Chanda, P.E.
Product Control Unit Supervisor
NOA No 22-0822.02
Expiration Date: October 25, 2027
Approval Date: September 29, 2022

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

B. TESTS (continued**):**

Along with manufacturer's parts and section drawing marked-up drawings of aluminum out swing door w/sidelites, by Hurricane Testing Laboratory, Inc., Test Report No. **HTL-01071 (0080-0402-02)** dated 04/01/2002 tested per PA201-94 & PA203-94, signed and sealed by Vinu J. Abraham, P.E. **(**submitted in file # **09-0723.04**). Original tests conducted per SFBC, PA 201, 202 &203-94 now known as FBC, TAS 201, 202 & 203-94.

3. Reference Certified Testing Laboratories test report # CTLA **3056WA**, issued to CGI Windows & Doors Inc. pert TAS 201, 202 and 203-94 for specimen #1 thru #30 for laminated PVB glass, insulated PVB laminated glass with Duraseal and super spacers, signed and sealed by Ramesh C. Patel, P.E.

C. CALCULATIONS

1. Anchor verification calculations and structural analysis, complying with FBC-2014(**5th Edition**), prepared by Al Farooq Corporation, dated 10/27/14 and last revised on AUG 27, 2015, signed and sealed by Javad Ahmad, P.E.
2. Additional intermediate horizontal mull calculations, prepared by Al Farooq Corporation, dated JUN 29, 2012, signed and sealed by Javad Ahmad, P.E. (Submitted under file # **11-1025.03**)

D. QUALITY ASSURANCE

1. Miami Dade Department of Regulatory and Economic Resources (RER).

E. MATERIAL CERTIFICATIONS

1. None

F. STATEMENTS

1. Statement letter of conformance to FBC 2014(**5th Edition**) and letter of no financial interest, prepared by Al Farooq Corporation, dated 10/03/14, signed and sealed by Javad Ahmad, P.E.
2. Lab compliance and addendum letters, as part of the above referenced test reports.

G. OTHER

1. This NOA **revises # 12-0706.01**, expiring on 10/25/17.
2. Hardware cut sheets verified and marked-up by the Architectural Testing (former Hurricane Testing lab).
3. Test proposals dated 12/16/14 approved by RER & Test proposal # **10-0940**, dated 11/17/10 approved by BNC.

Ishaq I. Chanda

Ishaq I. Chanda, P.E.
Product Control Unit Supervisor
NOA No 22-0822.02
Expiration Date: October 25, 2027
Approval Date: September 29, 2022

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

2. EVIDENCE SUBMITTED under previous NOA

A. DRAWINGS

1. Drawing No. **W12-23**, titled "Series 450 Inswing Doors & Sidelites", sheets 1, 1.1, 1.2, 2, 2.1, 2.2, 3, 3.1, 4, 5, 6, 7 7.1 and 7.2 of 7, prepared by Al-Farooq Corporation, dated 05/22/12, with revision **C** dated 09/21/17, signed and sealed by Javad Ahmad, P.E.

B. TESTS

1. None.

C. CALCULATIONS

1. Anchor verification calculations and structural analysis, complying with **FBC 5th Edition (2014)** and with **FBC 6th Edition (2017)**, prepared by Al Farooq Corporation, dated 09/29/17, signed and sealed by Javad Ahmad, P.E.

D. QUALITY ASSURANCE

1. Miami Dade Department of Regulatory and Economic Resources (RER).

E. MATERIAL CERTIFICATIONS

1. None

F. STATEMENTS

1. Statement letter of conformance to **FBC 5th Edition (2014)** and **FBC 6th Edition (2017)** and letter of no financial interest, prepared by Al Farooq Corporation, dated 08/30/17, signed and sealed by Javad Ahmad, P.E.

G. OTHER

1. This NOA **revises** and **renews# 14-1103.06**, expiring on 10/25/17.

3. Evidence submitted under previous approval

A. DRAWINGS

1. Drawing No. **450FD4-NOA** Rev **A** (former No. **W12-23)**, titled "Series 450 Alum French Opaque & IS (LM) ", sheets 1 thru 14 of 14, prepared by manufacturer, dated June 12, 2020, signed and sealed by Lynn Miller, 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.

Ishaq I. Chanda

Ishaq I. Chanda, P.E.
Product Control Unit Supervisor
NOA No 22-0822.02
Expiration Date: October 25, 2027
Approval Date: September 29, 2022

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

B. TESTS (continue):

along with marked-up drawings and installation diagram of all CGI Windows and Doors, Inc. and PGT Industries, Inc., representative units listed below and tested to qualify **Dowsil 791** and **Dowsil 983** silicones, per Proposal #**19-1155TP**, prepared by Fenestration Testing Laboratory, Inc., Test Reports No.:

CGI Windows and Doors Inc. test specimens:

FTL-20-2108.1, CGI SH360 Aluminum Single Hung Window (unit 1 in proposal) **FTL-20-2108.2,** CGI CA238 Alum. Outswing Casement Window (unit 2 in proposal) **FTL-20-2108.3,** CGI SGD560 Aluminum Sliding Glass Door (unit 3 in proposal) FTL**-20-2108.4**, CGI PW410 Aluminum Fixed Window (unit 4 in proposal) and **FTL-20-2108.5**, CGI SH360 Aluminum Single Hung Window (unit 5 in proposal) all dated 08/24/20 and signed and sealed by Idalmis Ortega, P.E.

PGT Industries, Inc. test specimens:

FTL-7897, PGT PW5520 PVC Fixed Window (unit 6 in proposal), dated 09/03/14
FTL-20-2107.1, PGT SGD780 Aluminum Sliding Glass Door (unit 7 in proposal) **FTL-20-2107.2,** PGT CA740 Alum. Outswing Casement Window (unit 8 in proposal) **FTL-20-2107.3,** PGT PW7620A Aluminum Fixed Window (unit 9 in proposal) and **FTL-20-2107.4**, PGT PW7620A Aluminum Fixed Window (unit 10 in proposal) all dated 07/13/20 and signed and sealed by Idalmis Ortega, P.E.

C. CALCULATIONS

1. Anchor verification calculations and structural analysis, complying with **FBC 2020, 7th Edition**, prepared by manufacturer, dated 04/20/20, signed and sealed by A. Lynn Miller, P. E.
2. Glazing complies with ASTM E1300–04, -09, -12 and-16.

D. QUALITY ASSURANCE

1. Miami Dade Department of Regulatory and Economic Resources (RER).

E. MATERIAL CERTIFICATIONS

1. None.

F. STATEMENTS

1. Statement letter of conformance to FBC 2020 (**7th** Edition), issued by manufacturer, dated 6/12/20, signed and sealed by Lynn Miller, P. E.
2. Notification of Successor Engineer per the Florida Administrative Code Section 61G15-27.001, notifying original engineer that the successor engineer is assuming full professional and legal responsibility for all engineering documents pertaining to this NOA, dated 06/12/20, signed and sealed by A. Lynn Miller, P.E.

G. OTHER

1. This NOA **revises # 17-1011.13** and updates to FBC 2020, expiring **10/25/22.**

Ishaq I. Chanda

Ishaq I. Chanda, P.E.
Product Control Unit Supervisor
NOA No 22-0822.02
Expiration Date: October 25, 2027
Approval Date: September 29, 2022

2. RER Test proposals #**19-1155** dated 01/10/20 approved by Ishaq I. Chanda, P.E.

CGI Windows & Doors, Inc.

Ishaq I. Chanda

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

4. NEW EVIDENCE SUBMITTED

A. DRAWINGS

1. Drawing No. **450FD4-NOA** Rev **B**, titled "Series 450 Alum French Opaque & IS (LM)", sheets 1 thru 14 of 14, prepared by manufacturer, dated June 12, 2020 and last revised on 08/10/2022, signed and sealed by Lynn Miller, P.E.

B. TESTS

1. None.

C. CALCULATIONS (submitted under previous approval**)**

1. Anchor verification calculations and structural analysis, complying with **FBC 2020, 7th Edition**, prepared by manufacturer, dated 04/20/20, signed and sealed by A. Lynn Miller, P. E.
2. Glazing complies with ASTM E1300–04, -09, -12 and-16.

D. QUALITY ASSURANCE

1. Miami Dade Department of Regulatory and Economic Resources (RER).

E. MATERIAL CERTIFICATIONS

1. None

F. STATEMENTS

1. Statement letter of conformance to FBC 2020 (**7th** Edition), issued by manufacturer, dated 8/15/22, signed and sealed by Lynn Miller, P. E
2. Statement letter of conformance to FBC 2020 (**7th** Edition), issued by manufacturer, dated 6/12/20, signed and sealed by Lynn Miller, P. E.

G. OTHER

1. This NOA **revises** and **renews#20-0619.05**, expiring on **10/25/27**.

Ishaq I. Chanda

Ishaq I. Chanda, P.E.
Product Control Unit Supervisor
NOA No 22-0822.02
Expiration Date: October 25, 2027
Approval Date: September 29, 2022

SERIES 450 ALUM. INSWING OPAQUE DOORS WITH OR WITHOUT SIDELITES, LARGE & SMALL MISSILE

1) THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE REQUIREMENTS OF THE 2020 (7th EDITION) FLORIDA BUILDING CODE (FBC) INCLUDING THE HIGH VELOCITY HURRICANE ZONE (HVHZ). THIS DOOR IS NOT RATED FOR WATER INFILTRATION RESISTANCE AND MUST ONLY BE INSTALLED WHERE WATER INFILTRATION RESISTANCE IS NOT REQUIRED OR AN OVERHANG IS PROVIDED PER FIG. 2, THIS SHEET.

2) 1BY OR 2BY WOOD BUCKS & BUCK FASTENERS BY OTHERS, MUST BE DESIGNED AND INSTALLED ADEQUATELY TO TRANSFER APPLIED PRODUCT LOADS TO THE BUILDING STRUCTURE.

3) ANCHORS SHALL BE CORROSION RESISTANT, SPACED AS SHOWN ON DETAILS AND INSTALLED PER MANUF'S INSTRUCTIONS. SPECIFIED EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO.

4) A LOAD DURATION INCREASE IS USED IN DESIGN OF ANCHORS INTO WOOD ONLY.

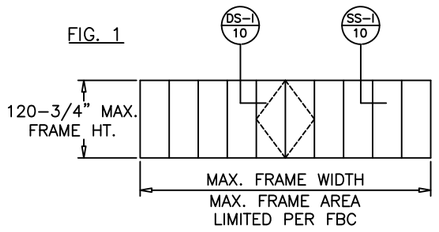
5) ALL SHIMS TO BE HIGH IMPACT, NON–METALLIC AND NON–COMPRESSIBLE.

6) MATERIALS INCLUDING BUT NOT LIMITED TO STEEL/METAL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF THE FBC & ADOPTED STANDARDS.

7) THIS PRODUCT APPROVAL IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT, I.E. LIFE SAFETY OF THIS PRODUCT, ADEQUACY OF STRUCTURE RECEIVING THIS PRODUCT AND SEALING AROUND OPENING FOR WATER INFILTRATION RESISTANCE ETC. CONDITIONS NOT SHOWN IN THIS DRAWING ARE TO BE ANALYZED SEPARATELY, AND TO BE REVIEWED BY BUILDING OFFICIAL.

8) EGRESS REQUIREMENTS TO BE REVIEWED BY BUILDING OFFICIAL.

FIG. 1



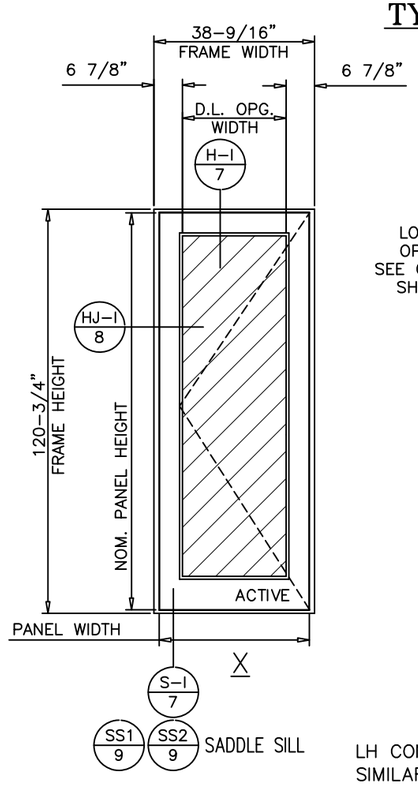
MULTIPLE SIDELITES W/ DOORS WITHIN TESTED FRAME AREA ARE AVAILABLE (SEE SHEET 11) 125 SQ. FT. TESTED FRAME AREA

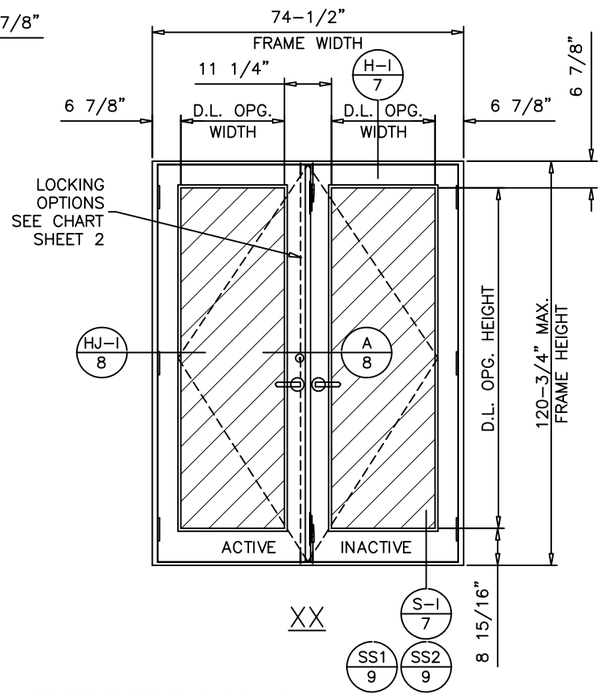
LEGEND

H–I / 7 = DOOR DETAIL / SHEET #

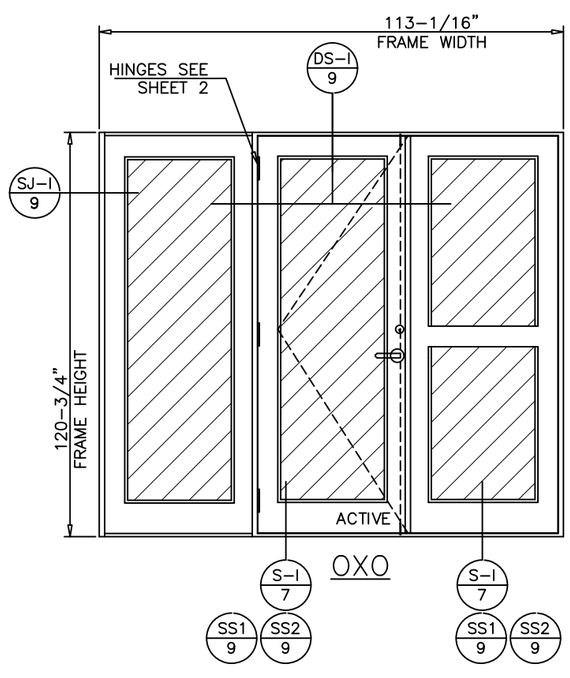
□ = ITEM PART NUMBER

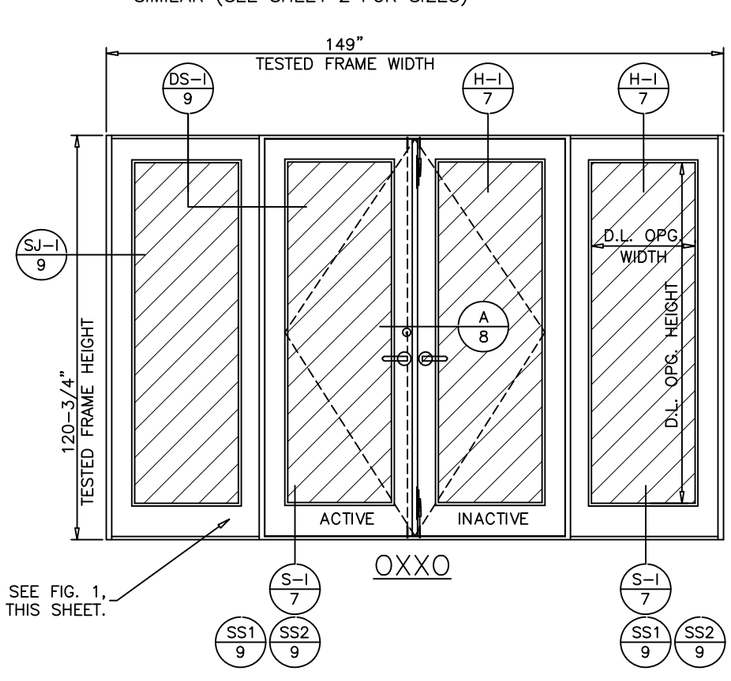
TYPICAL ELEVATIONS





LH CONFIGURATIONS SHOWN, RH SIMILAR (SEE SHEET 2 FOR SIZES)





STEPS TO USE CHARTS:

1) DETERMINE WIND LOAD BASED ON PROVISIONS OF THE FBC.

2) CONFIRM THAT FIG. 2, THIS SHEET, APPLIES OR THAT WATER INFILTRATION RESISTANCE IS NOT REQUIRED.

3) SELECT A DOOR SYSTEM I.E. INSWING AND TYPE OF THRESHOLD FROM SHEET 11 AND LOCK OPTIONS FROM SHEET 2.

4) CHECK THE ALLOWABLE EXTERIOR AND INTERIOR LOADS FROM APPROPRIATE CHARTS ON SHEETS 2, 10 & 11. THE ALLOWABLE LOADS MUST MEET OR EXCEED THE DESIGN LOADS REQUIREMENTS.

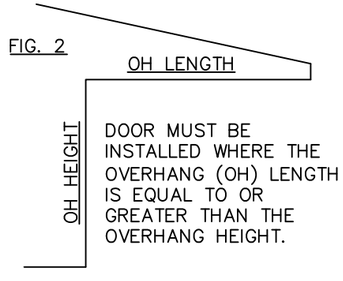
5) SELECT AND CHECK ANCHORS TO MEET LOAD. (SEE SHEETS 12 & 13)

6) FOR MULLED SIDELITE REFER TO MULLION CAPACITY ON SHEET 10.

7) LOWER DESIGN PRESSURE FROM LOCKS CHART, PANEL PERFORMANCE CHART, MULLION PERFORMANCE CHART AND ANCHOR CAPACITY CHARTS AT MULLION AND MTG. STILE ENDS SHALL CONTROL THE ENTIRE SYSTEM.

8) MATERIALS INCLUDING BUT NOT LIMITED TO STEEL/METAL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF THE FBC.

FIG. 2



DOOR MUST BE INSTALLED WHERE THE OVERHANG (OH) LENGTH IS EQUAL TO OR GREATER THAN THE OVERHANG HEIGHT.

PRODUCT REVISED
as complying with the Florida Building Code
NOA–No. 22-0822.02
Expiration Date 10/25/2027
By Ishaq I. Chanda
Miami–Dade Product Control

Revision: CLARIFIED WATER INFILTRATION RESISTANCE REQUIREMENTS - JR - 8/10/22

PREPARED BY A. LYNN MILLER
1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275
(941) 480-1600
REGISTRATION #29296

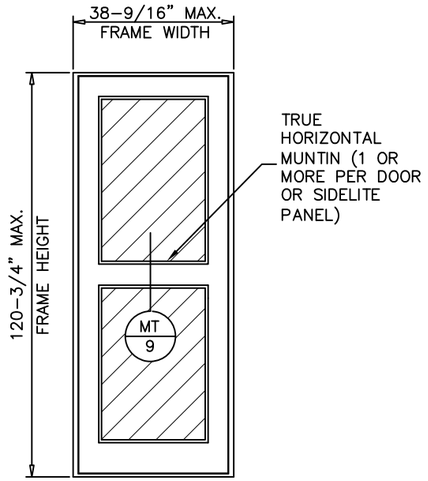
Impact Resistant Windows & Doors
WE'RE STRONGER™
CGI WINDOWS AND DOORS, INC.
3780 W 104TH STREET
HIALEAH, FL 33018
(305) 593-6590

Title	Date	Drawn By	Rev.
450 ALUM. FRENCH DOOR - OPAQUE & IS (LM)	06/12/2020	J ROSOWSKI	B
Desc. GEN. NOTES AND ELEVATIONS			DWG No. 450FD4-NOA
Series FD450 INSWING	**Scale** NTS	**Sheet** 1 OF 14	

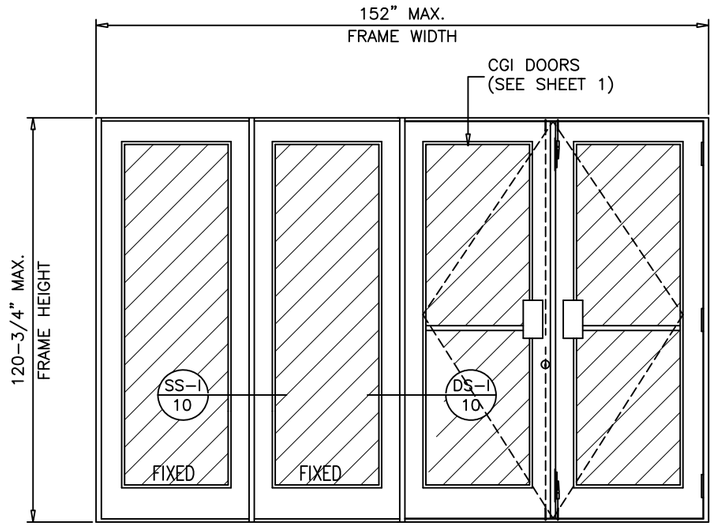
ANTHONY LYNN MILLER
LICENSE
No. 58705
A. Lynn Miller
08/10/22
STATE OF FLORIDA
PROFESSIONAL ENGINEER

A. LYNN MILLER, P.E.
P.E.# 58705

HARDWARE DESCRIPTION, TYPICAL ELEVATIONS



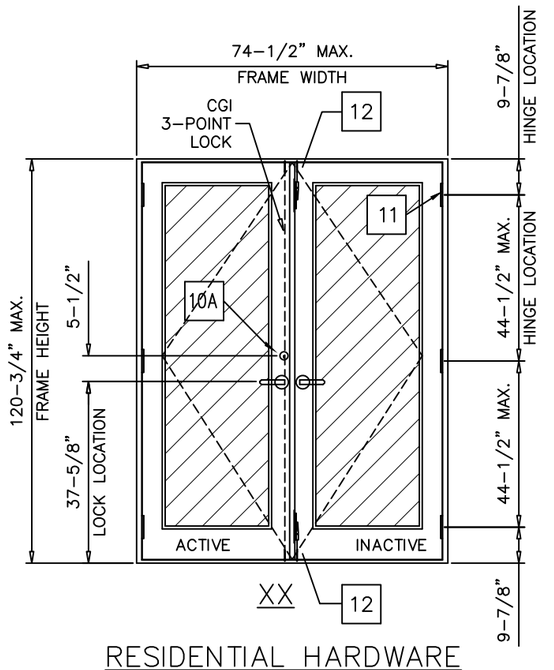
X OR O



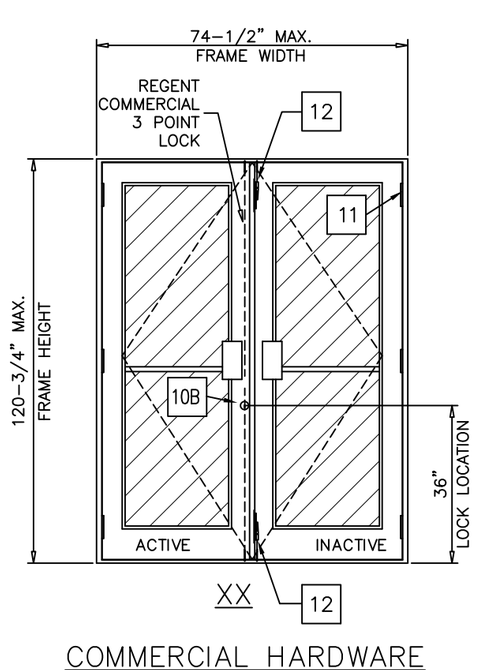
OOXX

HINGE LOCATIONS		
MAX. FRAME HEIGHT	NO. REQD.	MAX. SPACING
UP TO 90–3/4"	3	35 1/2"
ABOVE 90–3/4" UPTO 120–3/4"	4	44 1/2"

DOORS WITH 3 HINGES LIMITED TO 100 PSF



RESIDENTIAL HARDWARE



COMMERCIAL HARDWARE

LOCK OPTIONS AND CAPACITY

	10A		10AA		10B		10C & 10CC		10 F	
FRAME HEIGHT	EXT.(+)	INT.(–)	EXT.(+)	INT.(–)	EXT.(+)	INT.(–)	EXT.(+)	INT.(–)	EXT.(+)	INT.(–)
84–3/4"	90.0	90.0	100.0	110.0	100.0	110.0	65.0	65.0	100.0	110.0
96–3/4"	90.0	90.0	100.0	110.0	100.0	110.0	65.0	65.0	90.0	90.0
108–3/4"	–	–	100.0	110.0	100.0	110.0	–	–	90.0	90.0
120–3/4"	–	–	70.0	70.0	70.0	70.0	–	–	70.0	70.0

10A : COPPER CREEK W/ CGI 3 POINT
10AA : BALDWIN W/ CGI 3 POINT
10B : REGENT COMMERCIAL 3 POINT
10C : BALDWIN SINGLE POINT LOCK
10CC : COPPER CREEK SINGLE POINT LOCK
10F : SURFACE MOUNTED LOCK

FRAME WIDTH (X)	FRAME WIDTH (XX)	DOOR/SIDELITE PANEL WIDTH	D.L. OPG. WIDTH
26–9/16"	50–1/2"	23–3/4"	12–3/4"
32–9/16"	62–1/2"	29–3/4"	18–3/4"
38–9/16"	74–1/2"	35–3/4"	24–3/4"
44–9/16"	86–1/2"	41–3/4"	30–3/4"

LEGEND

(H–I / 7) = DOOR DETAIL / SHEET #

□ = ITEM PART NUMBER

FRAME HEIGHT	DOOR/SIDELITE PANEL * HEIGHT	D.L. OPG. HEIGHT
82–3/4"	80–7/8"	67–3/8"
84–3/4"	82–7/8"	69–3/8"
90–3/4"	88–7/8"	75–3/8"
96–3/4"	94–7/8"	81–3/8"
102–3/4"	100–7/8"	87–3/8"
108–3/4"	106–7/8"	93–3/8"
114–3/4"	112–7/8"	99–3/8"
120–3/4"	118–7/8"	105–3/8"

* HEIGHTS FOR STD. THRESHOLD

LH CONFIGURATIONS SHOWN, RH SIMILAR (SEE SHEET 2 FOR SIZES)

FRAME HEIGHT = PANEL HEIGHT + 1–7/8" (STD. THRESHOLD)
FRAME HEIGHT = PANEL HEIGHT + 1–5/8" (ADA THRESHOLD)
FRAME WIDTH = PANEL WIDTH + 2–13/16"

PRODUCT REVISED
as complying with the Florida Building Code
NOA–No. 22-0822.02
Expiration Date 10/25/2027
By Ishaq I. Chanda
Miami–Dade Product Control

Revision:

PREPARED BY A. LYNN MILLER
1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275
(941) 480-1600
REGISTRATION #29296

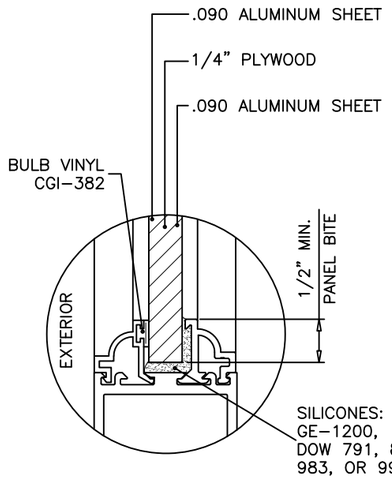
Impact Resistant Windows & Doors
WE'RE STRONGER™
CGI WINDOWS AND DOORS, INC.
3780 W 104TH STREET
HIALEAH, FL 33018
(305) 593-6590

Title: 450 ALUM. FRENCH DOOR - OPAQUE & IS (LM)
Desc.: DESIGN PRESSURES AND ELEVATIONS
Series: FD450 INSWING
Scale: NTS
Sheet: 2 OF 14
DWG No.: 450FD4-NOA
Rev.: B
Drawn By: J ROSOWSKI
Date: 06/12/2020

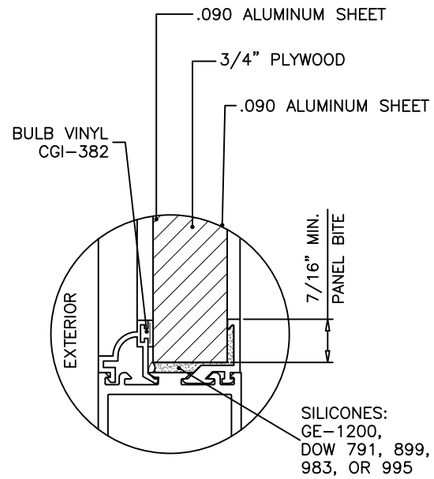
ANTHONY LYNN MILLER
LICENSE
No. 58705
STATE OF FLORIDA
PROFESSIONAL ENGINEER
08/10/22

A. LYNN MILLER, P.E.
P.E.# 58705

GLAZING OPTIONS

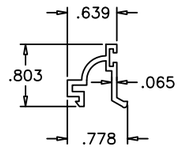


7/16" OVERALL
COMPOSITE PANEL

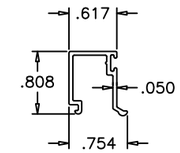


1" OVERALL
COMPOSITE PANEL

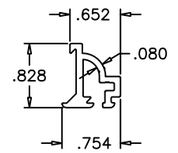
GLAZING STOP OPTIONS



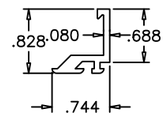
CGI-375



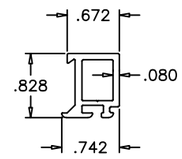
CGI-396



CGI-504



CGI-515



CGI-519

DOORS AND SIDELITES CAN BE GLAZED USING SQUARE OR OGEE GLAZING BEADS/ADAPTERS

PRODUCT REVISED
as complying with the Florida Building Code
NOA-No. 22-0822.02
Expiration Date 10/25/2027
By Ishaq I. Chanda
Miami-Dade Product Control

Revision:

PREPARED BY A. LYNN MILLER
1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275
(941) 480-1600

REGISTRATION #29296

Impact Resistant Windows & Doors
WE'RE STRONGER™
CGI WINDOWS AND DOORS, INC.
3780 W 104TH STREET
HIALEAH, FL 33018
(305) 593-6590

Title:	450 ALUM. FRENCH DOOR - OPAQUE & IS (LM)
Desc:	GLAZING DETAILS
Series	FD450 INSWING
Scale	NTS
Sheet	3 OF 14
DWG No.	450FD4-NOA
Rev.	B
Drawn By	J ROSOWSKI
Date	06/12/2020

ANTHONY LYNN MILLER
LICENSE
No. 58705
A. Lynn Miller
08/10/22
STATE OF FLORIDA
PROFESSIONAL ENGINEER

A. LYNN MILLER, P.E.
P.E.# 58705

BILL OF MATERIALS

ITEM	DESCRIPTION
1	#12 X 1 1/4" HEX HEAD S/S SMS (3 PER CORNER CONNECTION)
2A	3/8–16 FULLY THREADED CONTINUOUS ROD
2B	3/8–16 HEX NUT
2C	1 1/2" X 1 1/2" X 3/16"THK. ALUMINUM PLATE
3	SHEAR CLIP (EXT. NO. 506)
4	DOUBLE 9/32" DIA. JAMB INSTLL. HOLES AT 6" FROM ENDS & 24" O.C. MAX.
5	9/32" DIA. HEAD & SILL INSTLL. HOLES AT 6" FROM ENDS, 3 @ CENTER OF PAIRS SPACED 6" O.C. & 24" O.C. MAX.
6	#10 X 1" PH–PH–SS TEKS SCREW, @ 3" & 7" FROM ENDS & 19–3/8" O.C. MAX.
7	#14 X 3/4" HEX HEAD S/S TEKS SCREW AT 6" FROM ENDS & 24 3/16" O.C. MAX.
8	.320 HIGH WOOL PILE WITH CENTER FIN (ULTRAFAB # 3032)
9	.350 HIGH FOAM–TITE WEATHERSEAL (AMESBURY # 32011)
10	ACTIVE PANEL LOCK OPTIONS (SEE SHEET 1.1 FOR LIMITS)
10A	CGI CUSTOM 3 POINT LOCK 4503PL, CONSISTING OF (2) CGI CUSTOM END BOLTS (TOP & BOTTOM), ATTACHED WITH #10 X 3/4" PH SMS, (1) CGI CUSTOM INTERIOR LINKAGE MECHANISM, (1) DEADBOLT BY COPPER CREEEK SERIES E MODEL D82410.
10AA	CGI CUSTOM 3 POINT LOCK 4503PL, CONSISTING OF (2) CGI CUSTOM END BOLTS (TOP & BOTTOM), ATTACHED WITH #10 X 3/4" PH SMS, (1) CGI CUSTOM INTERIOR LINKAGE MECHANISM, (1) DEADBOLT BY BALDWIN SERIES 8200, KWIKSET 780.
10B	REGENT COMMERCIAL 2222 THREE POINT LOCK MECHANISM WITH MORTISE LOCK.
10C	SINGLE POINT LOCK (1) DEADBOLT BY BALDWIN SERIES 8200.
10CC	SINGLE POINT LOCK (1) DEADBOLT BY COPPER CREEK SERIES D82410.
10F	CGI CUSTOM SURFACE MOUNTED SLIDE BOLTS WITH CGI END BOLTS AT ACTIVE LEAF (AT TOP & BOTTOM) WITH BALDWIN SERIES 8200 DEAD BOLT.
11	HAGER 4 1/2" X 4" HINGE IN SOLID BRASS OR STAINLESS STEEL CGI 4–1/2" X 4" HINGE IN ALUMINUM SECURED WITH (8) #12–24 X 1/2" F.H. M.S. (3 PER PANEL UP TO 7'–6 3/4" HIGH) (4 PER PANEL OVER 7'–6 3/4")
12	CGI FLUSHBOLT AT TOP & BOTTOM OF INACTIVE LEAF, HOUSING ATTACHED TO PANEL STILE WITH #10 X 3/4" PH SMS, ACTIVATOR ATTACHED WITH #8 X 1/2" PH SMS.
13	SEE SHEET 3 FOR GLAZING OPTIONS
14	SILICONES: GE–1200, DOW 791, 899, 983, OR 995
17	1/2" X 1/2" CONTINUOUS CLOSED CELL FOAM TAPE WITH ONE SIDE ADHESIVE
18	PLASTIC WEEP BAFFLE
19	7/8" X 5" X 1/8" THK. CONTINUOUS ALUMINUM SILL ANGLE ADAPTER

EXTRUSION LIST: 500A, 501, 502, 503, 504, 507, 509, 510, 514, 515, 519, 539, & 540 ALL EXTRUSIONS ARE 6063–T6. 375, 396, 505, 508, 511 EXTRUSIONS ARE 6063–T5.

Material	Min. F_y	Min. F_u
#14 Steel Screw, Gr 5	81 ksi	105 ksi
1/4" Elco UltraCon	155 ksi	177 ksi
1/4" DeWalt UltraCon+	148 ksi	164 ksi
5/16" Elco UltraCon	155 ksi	177 ksi
5/16" DeWalt UltraCon+	155 ksi	177 ksi
6063-T5 Aluminum	16 ksi	22 ksi
A36 Steel	36 ksi	58 ksi
Gr. 33 Steel Stud	33 ksi	45 ksi

PRODUCT REVISED
as complying with the Florida Building Code
NOA–No. 22-0822.02
Expiration Date 10/25/2027
By Ishaq I. Chanda
Miami–Dade Product Control

Revision:

PREPARED BY A. LYNN MILLER
1070 TECHNOLOGY DRIVE
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Impact Resistant Windows & Doors
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3780 W 104TH STREET
HIALEAH, FL 33018
(305) 593-6590

Title	Desc.	Series
450 ALUM. FRENCH DOOR - OPAQUE & IS (LM)	BILL OF MATERIALS	FD450 INSWING

Date	Drawn By	DWG No.	Rev.
06/12/2020	J ROSOWSKI	450FD4-NOA	B

Scale	Sheet
NTS	4 OF 14

ANTHONY LYNN MILLER
LICENSE
No. 58705
A. Lynn Miller
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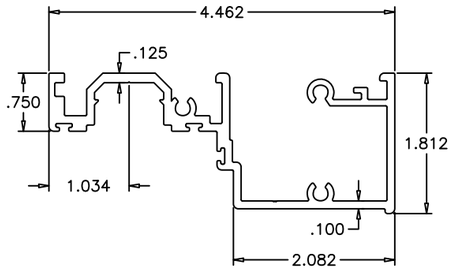
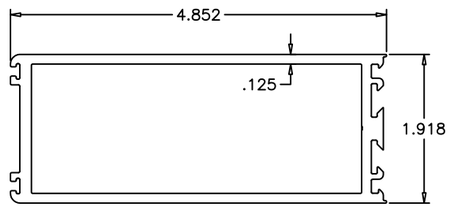
PROFESSIONAL ENGINEER

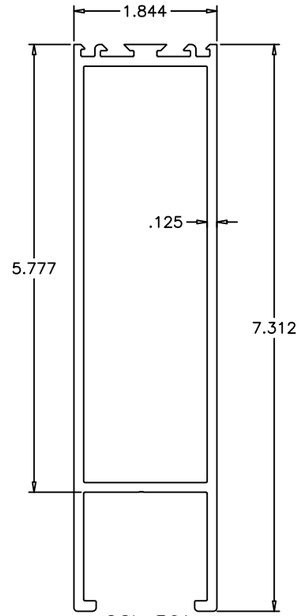
A. LYNN MILLER, P.E.
P.E.# 58705



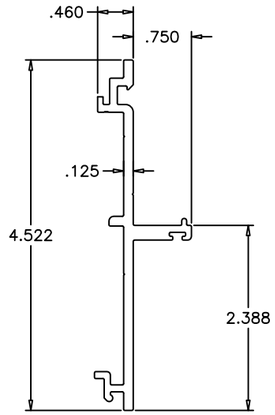
CGI–507
DOOR FRAME HEAD/SILL



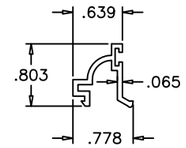
CGI–502
JAMB/LOCK/SIDELITE STILE



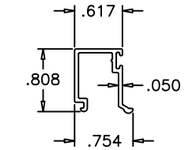
CGI–501
BOTTOM RAIL



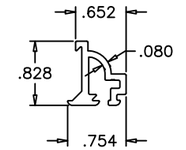
CGI–510
SIDELITE MULLION



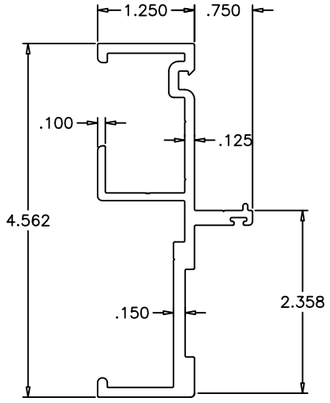
CGI–375



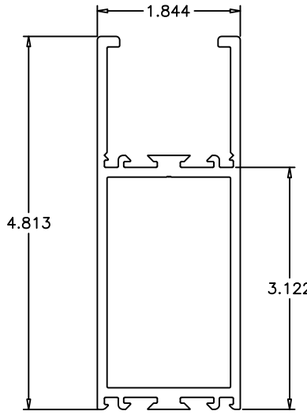
CGI–396



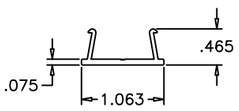
CGI–504



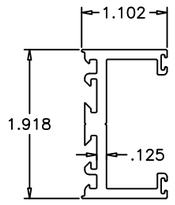
CGI–509
FRAME JAMB/MULLION



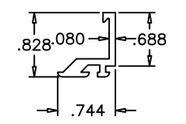
CGI–500A
TOP RAIL



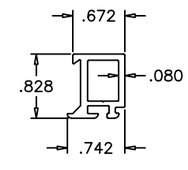
CGI–508
FRAME COVER



CGI–503
NARROW SIDELITE STILE

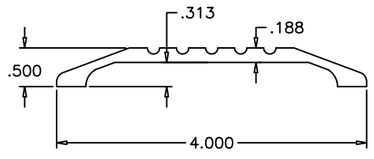


CGI–515

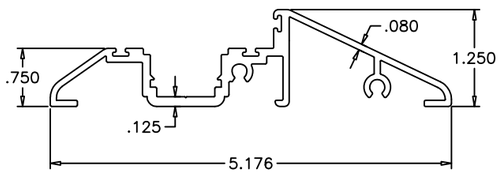


CGI–519

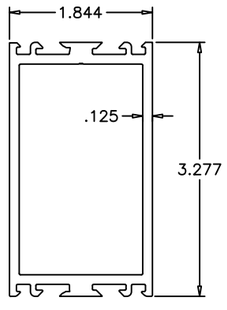
GLAZING STOP OPTIONS



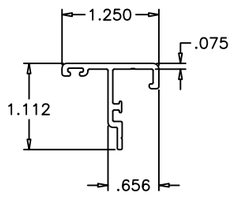
CGI–540
COM. SADDLE/ADA THRESHOLD



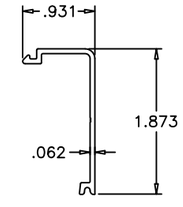
CGI–539
RES. SADDLE THRESHOLDS



CGI–514
HORIZONTAL MUNTIN



CGI–505
ASTRAGAL



CGI–511
JAMB COVER

PRODUCT REVISED
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NOA–No. 22-0822.02
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By Ishaq I. Chanda
Miami–Dade Product Control

Revision:

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Impact Resistant Windows & Doors
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HIALEAH, FL 33018
(305) 593-6590

Series	Desc.	Title	Date	Drawn By	Rev.
FD450 INSWING	EXTRUSIONS	450 ALUM. FRENCH DOOR - OPAQUE & IS (LM)	06/12/2020	J ROSOWSKI	B

Scale	Sheet	DWG No.	
NTS	5 OF 14	450FD4-NOA	

ANTHONY LYNN MILLER
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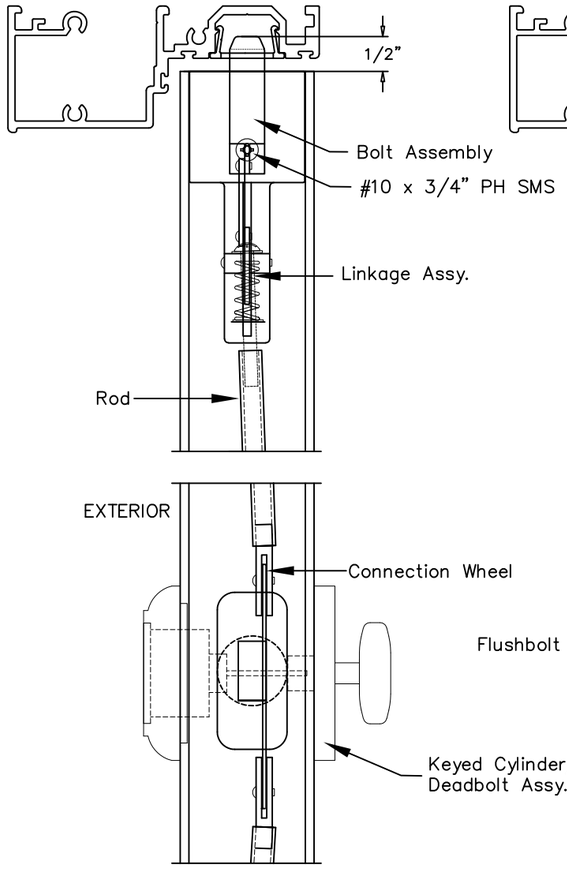
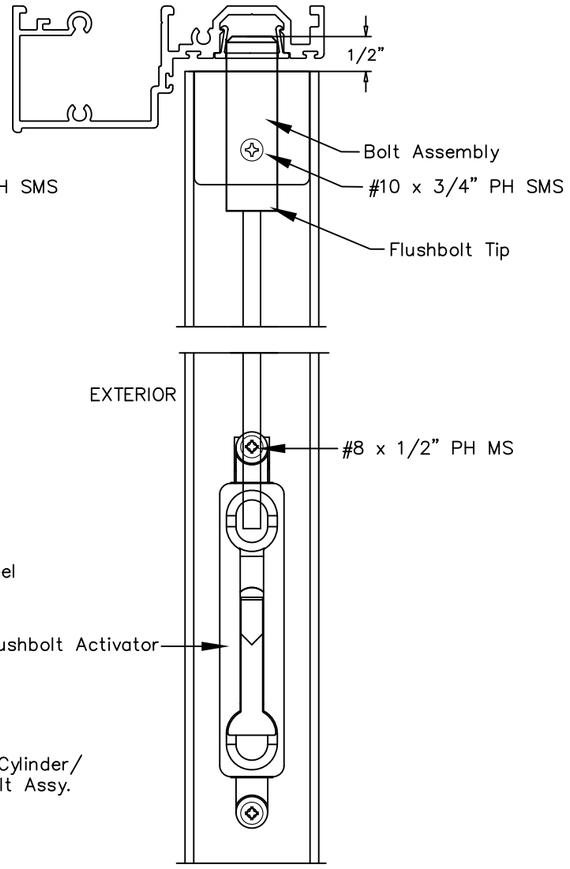


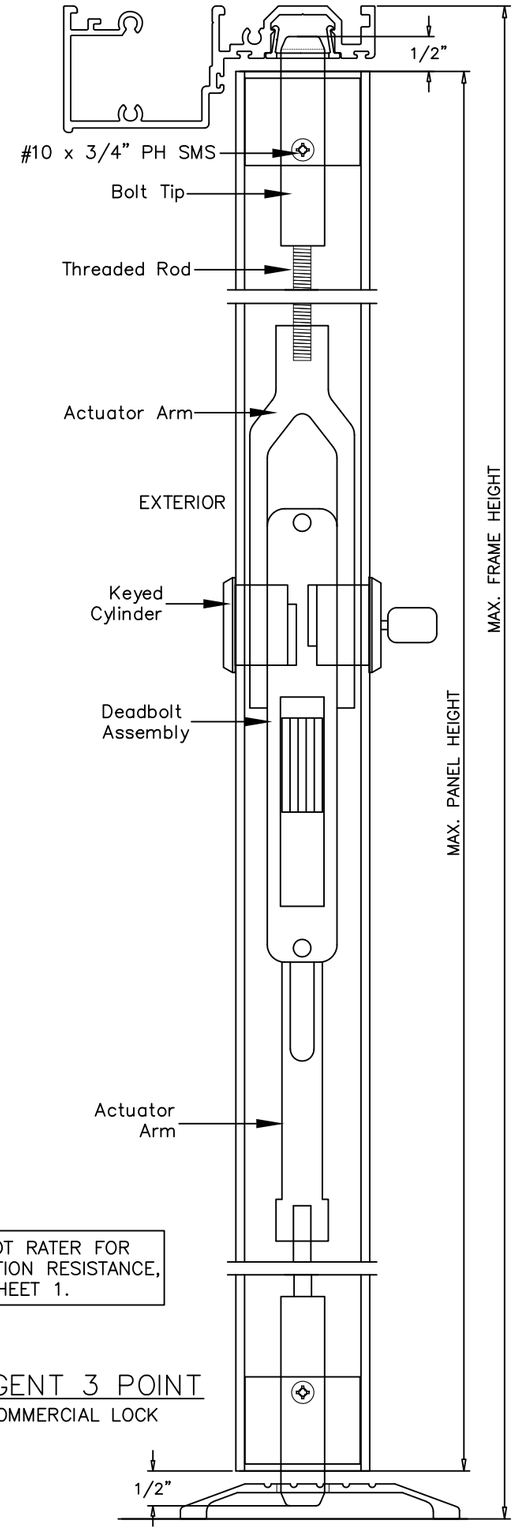
CGI CUSTOM
3–POINT LOCK

TOP SECTION SHOWN
(BOTTOM SIMILAR)



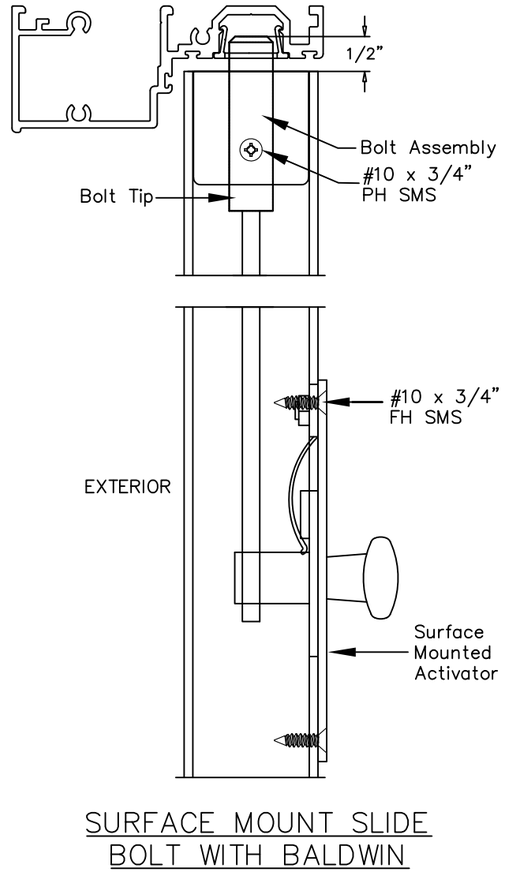
12 FLUSHBOLTS
(INACTIVE PANEL)

TOP SECTION SHOWN
(BOTTOM SIMILAR)



THIS SILL IS NOT RATER FOR WATER INFILTRATION RESISTANCE, SEE NOTE 2, SHEET 1.

REGENT 3 POINT
COMMERCIAL LOCK



SURFACE MOUNT SLIDE
BOLT WITH BALDWIN
DEAD BOLT

TOP SECTION SHOWN
(BOTTOM SIMILAR)

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(305) 593-6590

Title	Desc:	Series
450 ALUM. FRENCH DOOR - OPAQUE & IS (LM)	HARDWARE DETAILS 1	FD450 INSWING

Date	Drawn By	DWG No.	Rev.
06/12/2020	J ROSOWSKI	450FD4-NOA	B

Scale	Sheet
NTS	6 OF 14

ANTHONY LYNN MILLER
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08/10/22

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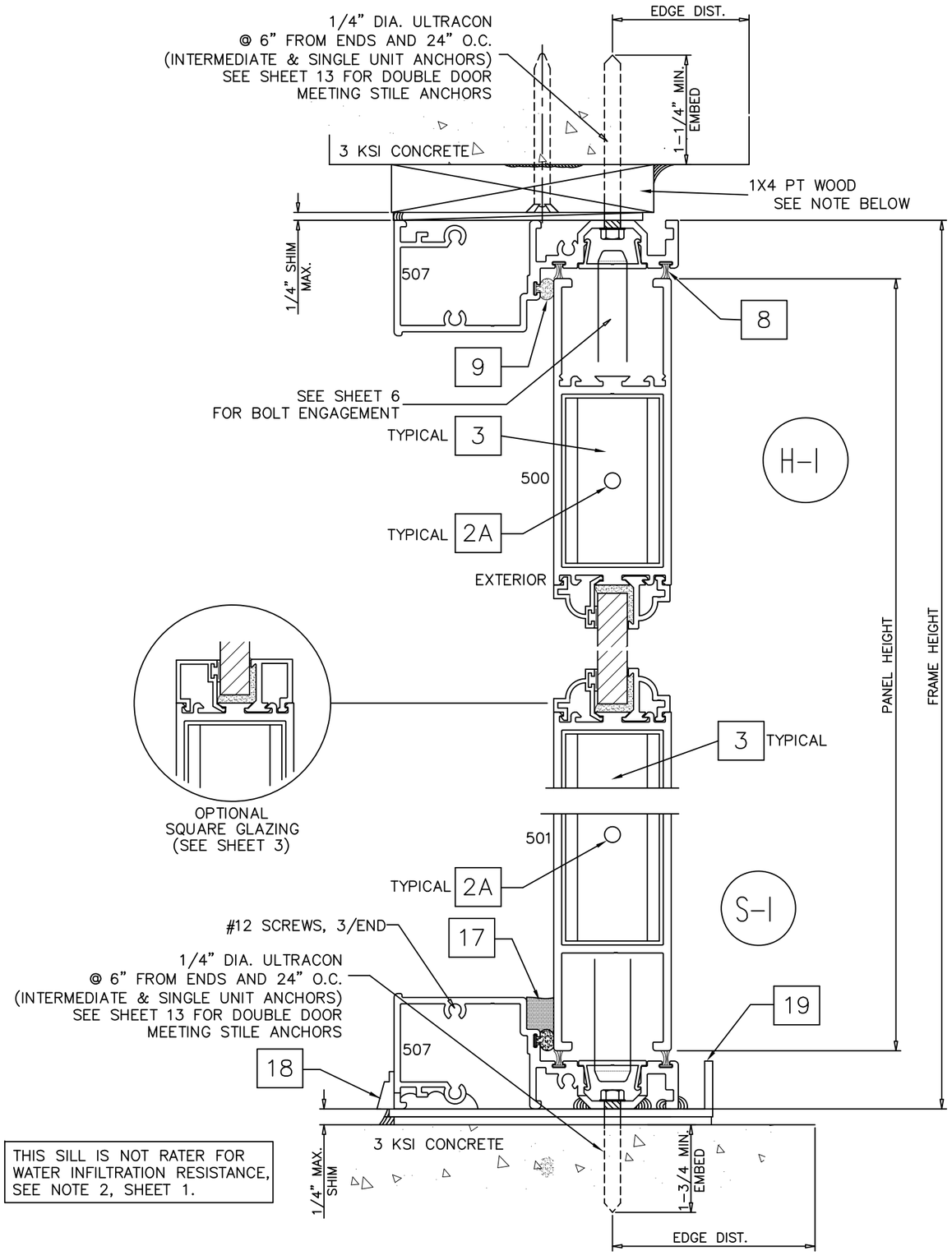
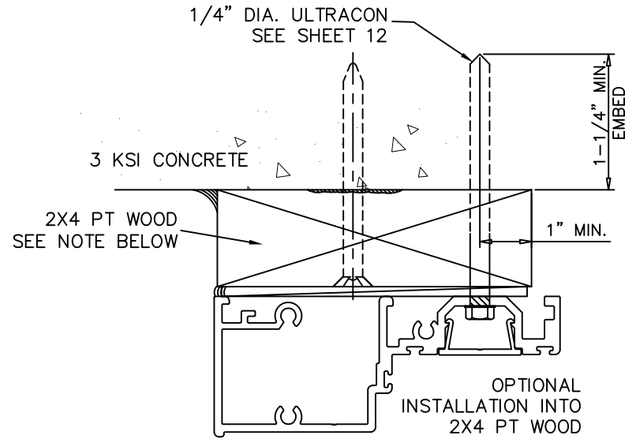
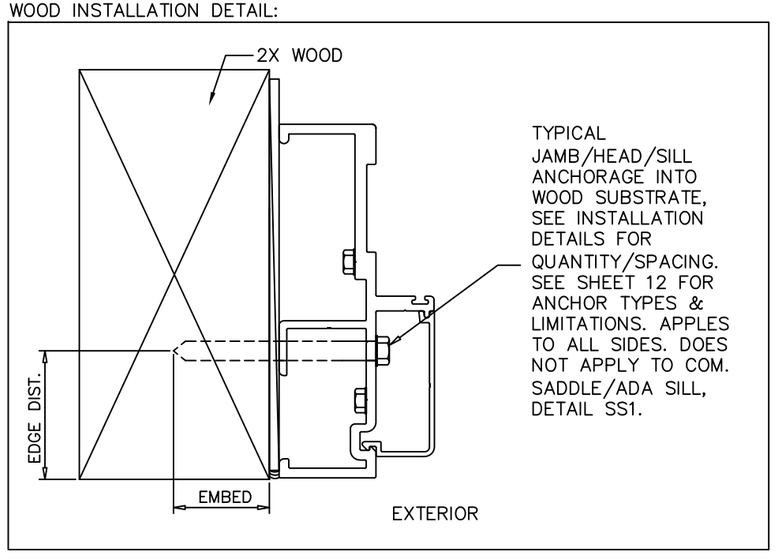
P.E.# 58705



THIS SILL IS NOT RATER FOR WATER INFILTRATION RESISTANCE, SEE NOTE 2, SHEET 1.



WOOD INSTALLATION DETAIL:



OPTIONAL INSTALLATION
DIRECTLY INTO 2X WOOD

NOTES:

1) ALL JAMB ANCHOR CONDITIONS SHOWN ON SHEETS 7, 9 AND 10 MAY BE DIRECTLY TO MASONRY WITH 1/4" MAX. SHIM SPACE WITHOUT VARIATION IN CAPACITY.

2) 1X OR 2X WOOD BUCKS NOT BY CGI MUST BE PROPERLY SECURED AND MUST SUSTAIN LOADS IMPOSED BY GLAZING SYSTEM.

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HIALEAH, FL 33018
(305) 593-6590

Title	Desc.	Series
450 ALUM. FRENCH DOOR - OPAQUE & IS (LM)	INSTALLATION DETAILS 1	FD450 INSWING

Date	Drawn By	Rev.
06/12/2020	J ROSOWSKI	B

Scale	Sheet	DWG No.	Rev.
NTS	7 OF 14	450FD4-NOA	

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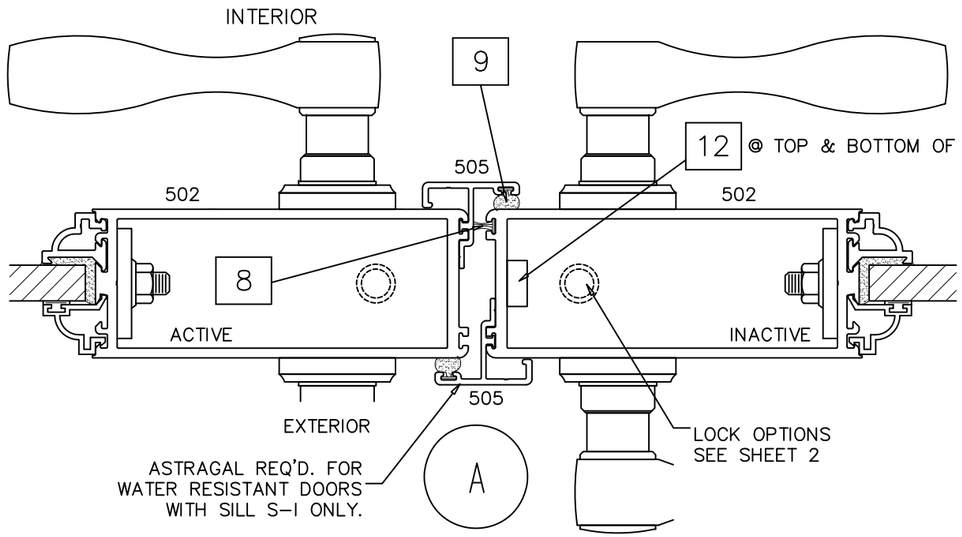
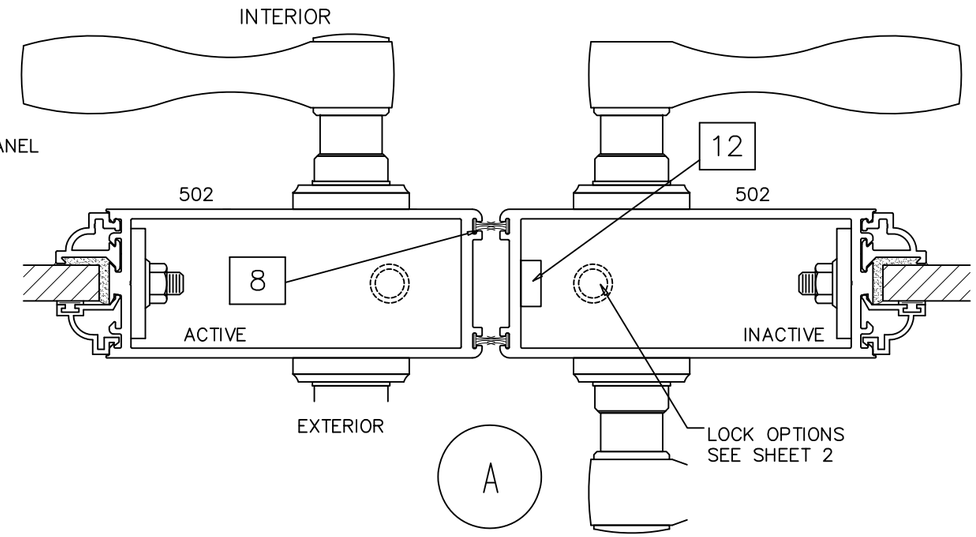
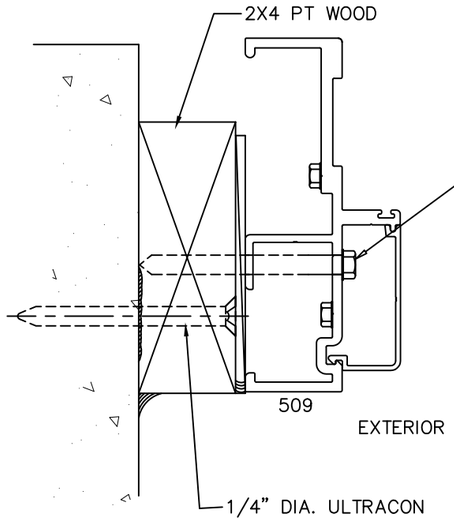
A. LYNN MILLER, P.E.
P.E.# 58705



LOCK STILES WITH WATER RESISTANCE

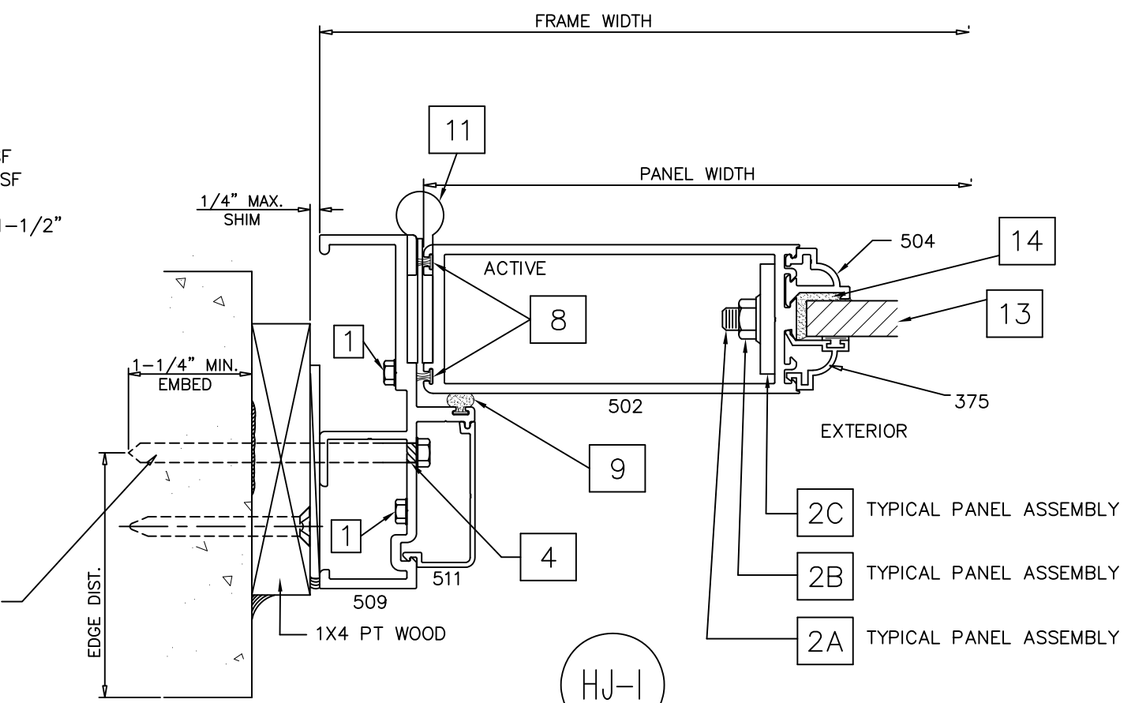


LOCK STILES WITHOUT WATER RESISTANCE



TYPICAL JAMB ANCHORS
1/4" DIA. ULTRACON
@ 6" FROM ENDS AND
19-3/8" O.C. FOR LOADS UPTO 70 PSF
14-1/2" O.C. FOR LOADS ABOVE 70 PSF
2-1/2" EDGE DIST.
EMBEDMENT INTO 2BY WOOD BUCK = 1-1/2"

OPTIONAL INSTALLATION
INTO 2X4 PT WOOD
SEE NOTE BELOW



TYPICAL JAMB ANCHORS
1/4" DIA. ULTRACON
@ 6" FROM ENDS AND
19-3/8" O.C. FOR LOADS UPTO 70 PSF
14-1/2" O.C. FOR LOADS UPTO 110 PSF
12" O.C. FOR LOADS ABOVE 110 PSF
(SEE SHEET 12)
2-1/2" MIN. EDGE DIST.

NOTE:
1X OR 2X WOOD BUCKS NOT BY CGI MUST BE PROPERLY SECURED AND MUST SUSTAIN LOADS IMPOSED BY GLAZING SYSTEM.

PRODUCT REVISED
as complying with the Florida Building Code
NOA-No. 22-0822.02
Expiration Date 10/25/2027
By Ishaq I. Chanda
Miami-Dade Product Control

Revision:

PREPARED BY A. LYNN MILLER
1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275
(941) 480-1600
REGISTRATION #29296

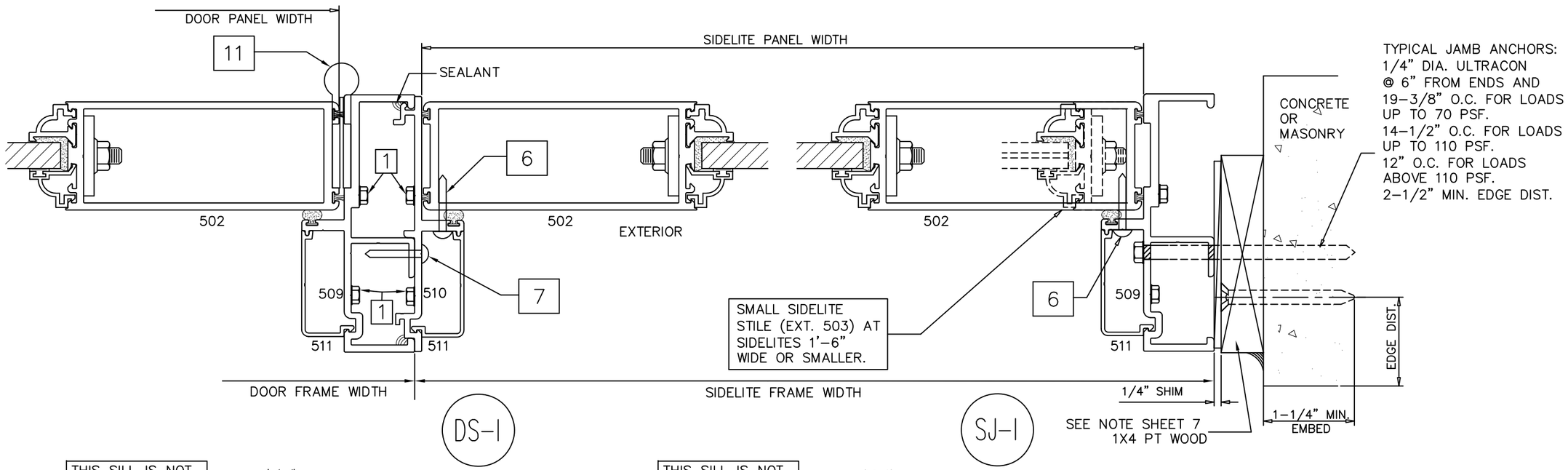
Impact Resistant Windows & Doors
WE'RE STRONGER™
CGI WINDOWS AND DOORS, INC.
3780 W 104TH STREET
HIALEAH, FL 33018
(305) 593-6590

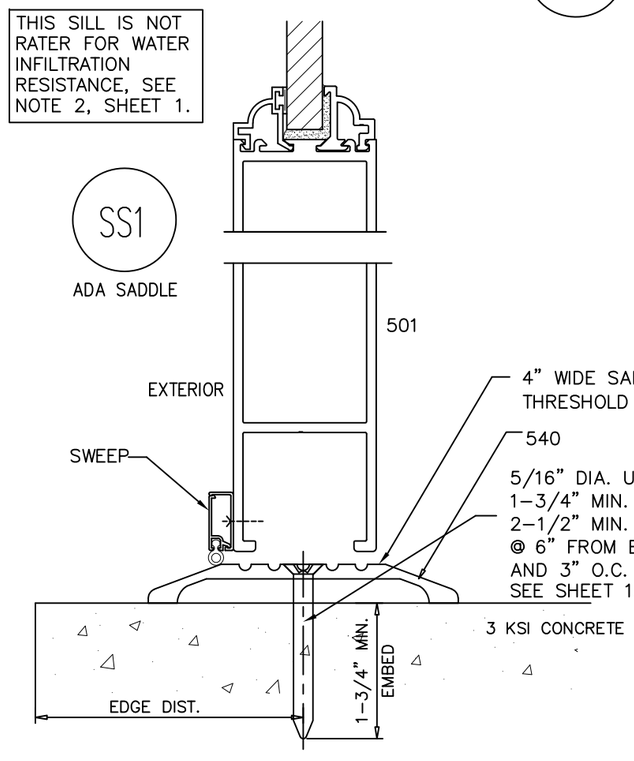
Title	Date	Drawn By	Rev.
450 ALUM. FRENCH DOOR - OPAQUE & IS (LM)	06/12/2020	J ROSOWSKI	B
Desc.			DWG No.
INSTALLATION DETAILS 2			450FD4-NOA
Series			Sheet
FD450 INSWING			8 OF 14
			Scale
			NTS

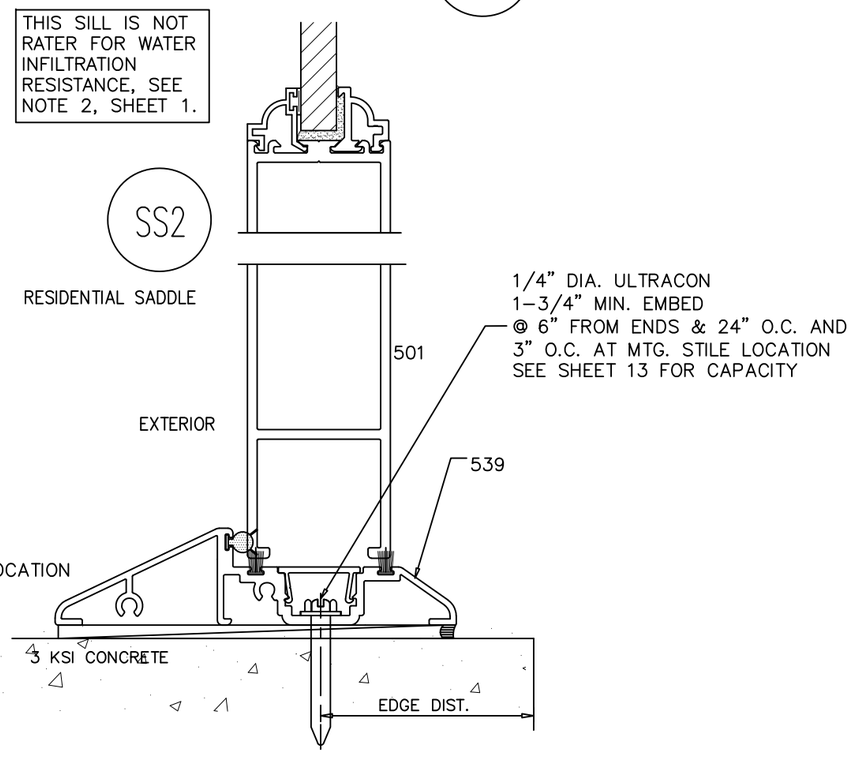
ANTHONY LYNN MILLER
LICENSE
No. 58705
STATE OF FLORIDA
PROFESSIONAL ENGINEER
08/10/22

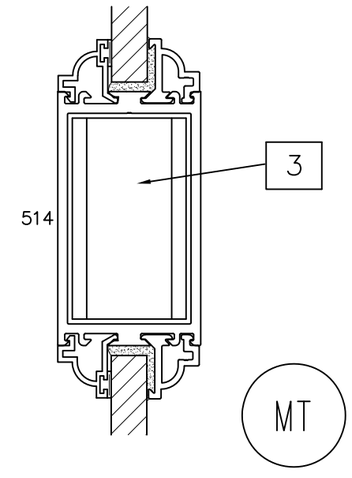
A. LYNN MILLER, P.E.
P.E.# 58705

MULLION #1









REFER TO SHEET 4 OF 14 FOR TYPICAL BILL OF MATERIALS

PRODUCT REVISED
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By Ishaq I. Chanda
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Revision:

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HIALEAH, FL 33018
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Series	Desc.	Title
FD450 INSWING	INSTALLATION DETAILS 3	450 ALUM. FRENCH DOOR - OPAQUE & IS (LM)

Scale	Sheet	DWG No.	Drawn By	Date	Rev.
NTS	9 OF 14	450FD4-NOA	J ROSOWSKI	06/12/2020	B

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A. LYNN MILLER, P.E.
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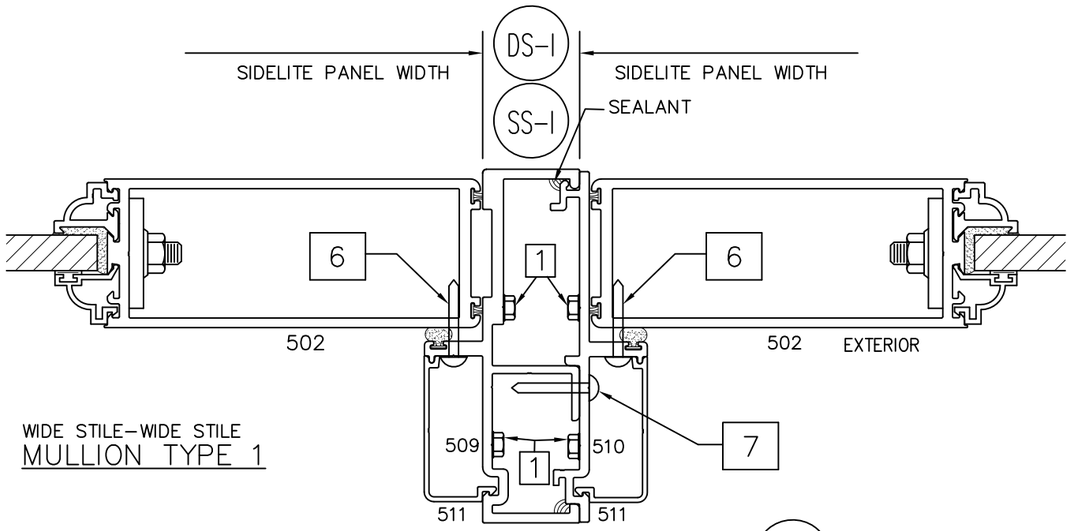
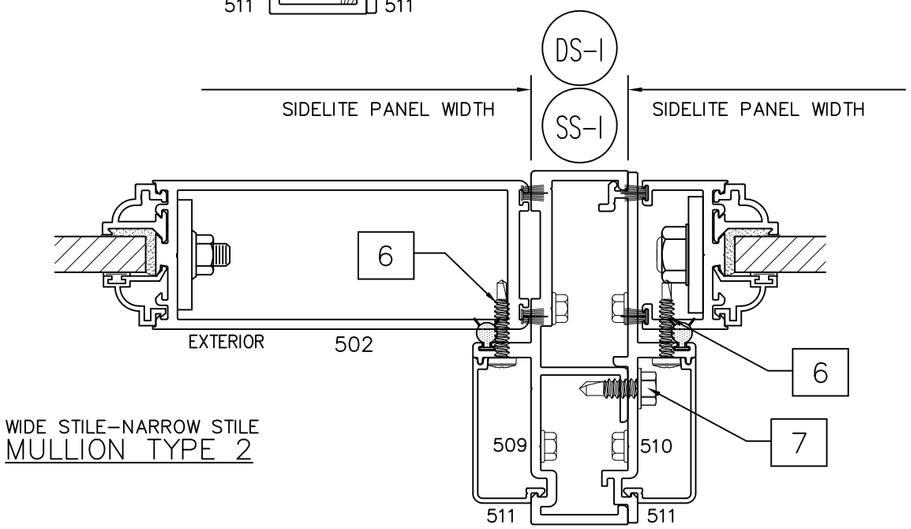
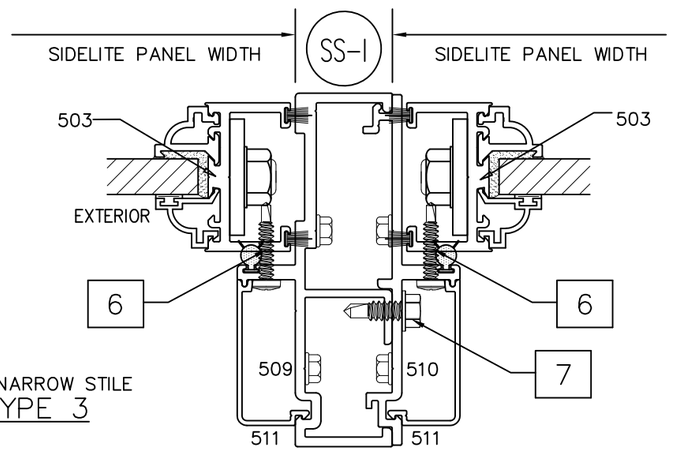


WIDE STILE–WIDE STILE
MULLION TYPE 1



WIDE STILE–NARROW STILE
MULLION TYPE 2



NARROW STILE–NARROW STILE
MULLION TYPE 3

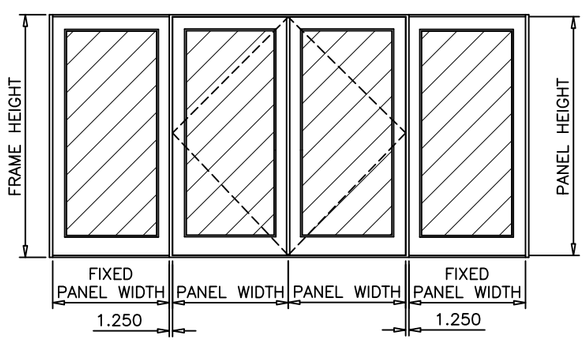
NOTES:
1) LOWER DESIGN LOAD FROM PANEL PERFORMANCE CHART ON SHEET 11 OR MULLION PERFORMANCE CHART ABOVE SHALL CONTROL.

2) REFER TO SHEET 4 OF 14 FOR TYPICAL BILL OF MATERIALS.

MULLION PERFORMANCE CHART
DESIGN LOAD CAPACITY – PSF

NOMINAL DIMS.		MULL TYPE 1		MULL TYPE 2		MULL TYPE 3	
WIDTH (W)	FRAME HEIGHT	EXT.(+)	INT.(–)	EXT.(+)	INT.(–)	EXT.(+)	INT.(–)
1/6	82–3/4"	100.0	110.0	100.0	110.0	100.0	110.0
2/0		100.0	110.0	100.0	110.0	100.0	110.0
2/6		100.0	110.0	100.0	110.0	–	–
3/0		100.0	110.0	100.0	110.0	–	–
3/6		94.2	94.2	70.0	70.0	–	–
1/6	84–3/4"	100.0	110.0	100.0	110.0	100.0	110.0
2/0		100.0	110.0	100.0	110.0	100.0	110.0
2/6		100.0	110.0	100.0	110.0	–	–
3/0		100.0	110.0	100.0	110.0	–	–
3/6		94.2	94.2	–	–	–	–
1/6	90–3/4"	100.0	110.0	100.0	110.0	100.0	110.0
2/0		100.0	110.0	100.0	110.0	70.0	70.0
2/6		100.0	110.0	100.0	110.0	–	–
3/0		100.0	110.0	70.0	70.0	–	–
3/6		94.2	94.2	–	–	–	–
1/6	96–3/4"	100.0	110.0	100.0	110.0	100.0	110.0
2/0		100.0	110.0	100.0	110.0	70.0	70.0
2/6		100.0	110.0	100.0	110.0	–	–
3/0		100.0	110.0	–	–	–	–
3/6		59.9	59.9	–	–	–	–
1/6	102–3/4"	100.0	110.0	100.0	110.0	100.0	110.0
2/0		100.0	110.0	100.0	110.0	–	–
2/6		100.0	110.0	100.0	100.4	–	–
3/0		98.9	98.9	–	–	–	–
3/6		59.9	59.9	–	–	–	–
1/6	108–3/4"	100.0	110.0	100.0	110.0	100.0	110.0
2/0		100.0	110.0	100.0	104.1	–	–
2/6		98.1	98.1	70.0	70.0	–	–
3/0		82.9	82.9	–	–	–	–
1/6	114–3/4"	70.0	70.0	70.0	70.0	100.0	110.0
2/0		70.0	70.0	70.0	70.0	–	–
2/6		70.0	70.0	–	–	–	–
3/0		70.0	70.0	–	–	–	–
1/6	120–3/4"	70.0	70.0	70.0	70.0	70.0	70.0
2/0		70.0	70.0	70.0	70.0	–	–
2/6		70.0	70.0	–	–	–	–
3/0		59.9	59.9	–	–	–	–

$$\text{WIDTH (W)} = \frac{\text{DOOR PANEL + FIXED PANEL}}{2} + 1.250$$



PRODUCT REVISED
as complying with the Florida Building Code
NOA–No. 22-0822.02
Expiration Date 10/25/2027
By Ishaq I. Chanda
Miami–Dade Product Control

Revision:

PREPARED BY A. LYNN MILLER
1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275
(941) 480-1600
REGISTRATION #29296

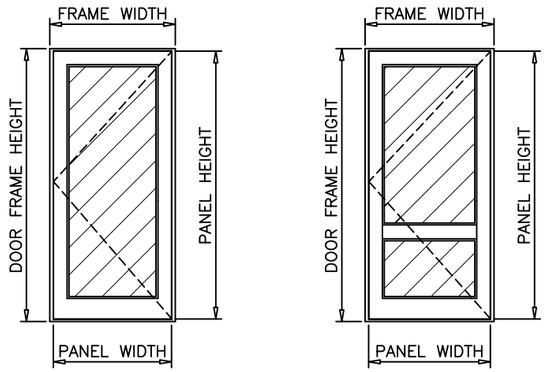
Impact Resistant Windows & Doors
WE'RE STRONGER™
CGI WINDOWS AND DOORS, INC.
3780 W 104TH STREET
HIALEAH, FL 33018
(305) 593-6590

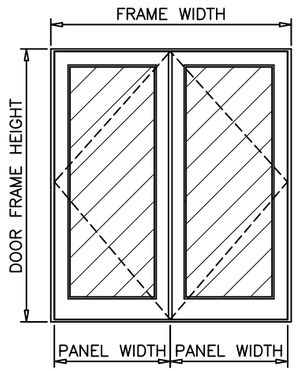
Series	Desc.	Title	Scale	Sheet	DWG No.	Rev.
FD450 INSWING	MULLION X-SECTION AND DPS	450 ALUM. FRENCH DOOR - OPAQUE & IS (LM)	NTS	10 OF 14	450FD4-NOA	B

Drawn By	Date
J ROSOWSKI	06/12/2020

ANTHONY LYNN MILLER
LICENSE
No. 58705
STATE OF FLORIDA
PROFESSIONAL ENGINEER
08/10/22

A. LYNN MILLER, P.E.
P.E.# 58705





PANEL PERFORMANCE CHART FOR SINGLE & DOUBLE DOORS & SINGLE SIDELITES
(NARROW STILE SIDELITES LIMITED TO 18" OR LESS)
DESIGN LOAD CAPACITY – PSF

NOMINAL DIMS.			7/16" COMPOSITE PANELS 1" COMPOSITE PANELS	
FRAME WIDTH (X)	FRAME WIDTH (XX)	FRAME HEIGHT	EXT. (+)	INT. (-)
26-9/16"	50-1/2"	82-3/4"	100.0	110.0
32-9/16"	62-1/2"		100.0	110.0
38-9/16"	74-1/2"		100.0	110.0
44-9/16"	86-1/2"		94.2	94.2
26-9/16"	50-1/2"	84-3/4"	100.0	110.0
32-9/16"	62-1/2"		100.0	110.0
38-9/16"	74-1/2"		100.0	110.0
44-9/16"	86-1/2"		94.2	94.2
26-9/16"	50-1/2"	90-3/4"	100.0	110.0
32-9/16"	62-1/2"		100.0	110.0
38-9/16"	74-1/2"		100.0	110.0
44-9/16"	86-1/2"		94.2	94.2
26-9/16"	50-1/2"	96-3/4"	100.0	110.0
32-9/16"	62-1/2"		100.0	110.0
38-9/16"	74-1/2"		100.0	110.0
44-9/16"	86-1/2"		59.9	59.9
26-9/16"	50-1/2"	102-3/4"	100.0	110.0
32-9/16"	62-1/2"		100.0	110.0
38-9/16"	74-1/2"		100.0	110.0
44-9/16"	86-1/2"		59.9	59.9
26-9/16"	50-1/2"	108-3/4"	100.0	110.0
32-9/16"	62-1/2"		100.0	110.0
38-9/16"	74-1/2"		100.0	110.0
26-9/16"	50-1/2"	114-3/4"	70.0	70.0
32-9/16"	62-1/2"		70.0	70.0
38-9/16"	74-1/2"		70.0	70.0
26-9/16"	50-1/2"	120-3/4"	70.0	70.0
32-9/16"	62-1/2"		70.0	70.0
38-9/16"	74-1/2"		70.0	70.0

NOTES:
1) FOR SINGLE OR DOUBLE LEAF DOORS AND SINGLE SIDELITES CAPACITY SEE CHART ON THIS SHEET.

2) SEE BELOW FOR THRESHOLD TYPES.

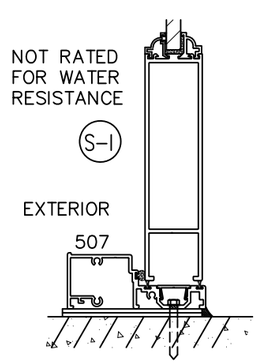
3) SEE SHEET 2 FOR LOCK CAPACITIES FOR SINGLE AND DOUBLE DOORS.

4) SEE SHEET 10 FOR MULLION TYPES AND DESIGN LOAD CAPACITY.

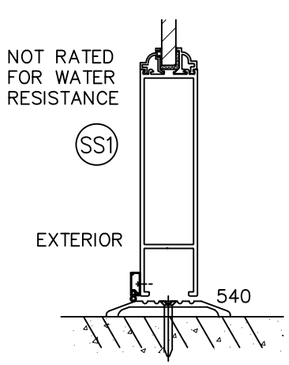
5) SEE CHART ON SHEET 12 FOR MULLION ANCHORS CAPACITY.

6) SEE CHART ON SHEET 13 FOR MTG. STILE ANCHORS AT DOUBLE DOOR.

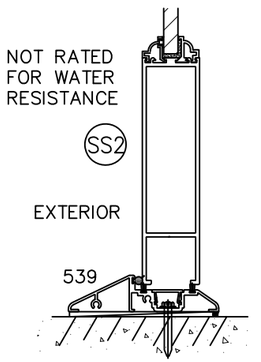
7) LOWEST VALUE FROM THESE CHARTS WILL APPLY TO ENTIRE ASSEMBLY.



INSWING



INSWING
(COM. SADDLE)



INSWING
(RES. SADDLE)

PRODUCT REVISED
as complying with the Florida Building Code
NOA-No. 22-0822.02
Expiration Date 10/25/2027
By Ishaq I. Chanda
Miami-Dade Product Control

Revision:

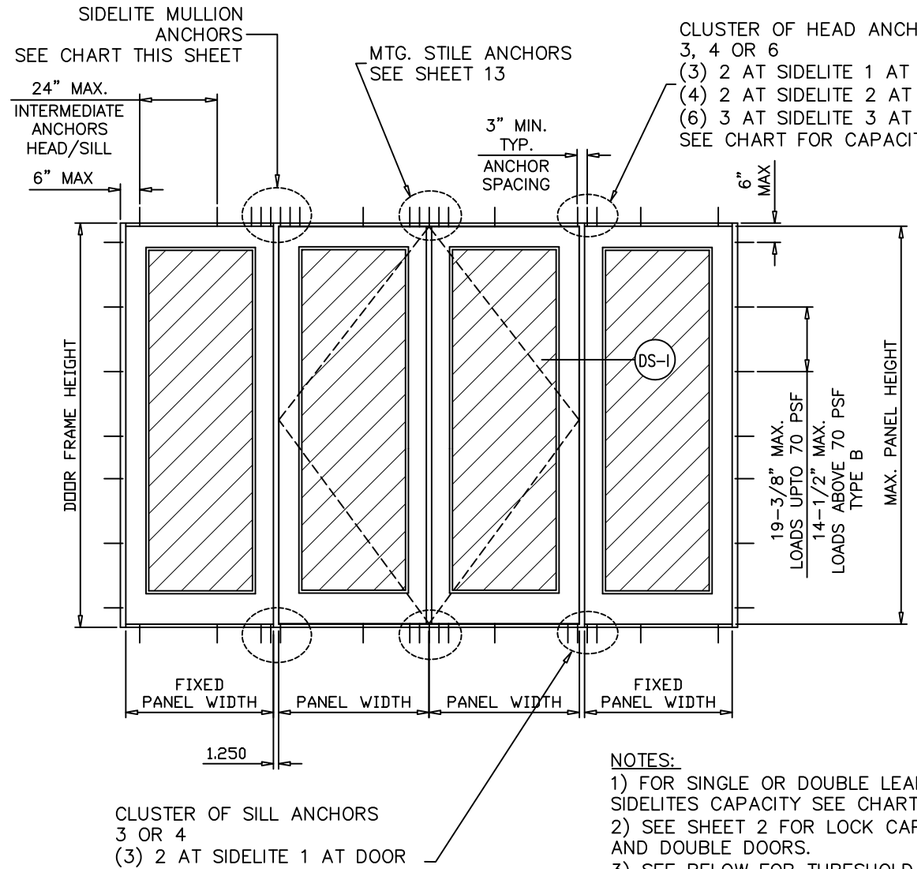
PREPARED BY A. LYNN MILLER
1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275
(941) 480-1600
REGISTRATION #29296

Date 06/12/2020
Drawn By J ROSOWSKI
Rev. B
DWG No. 450FD4-NOA
Sheet 11 OF 14
Scale NTS

Impact Resistant Windows & Doors
WE'RE STRONGER™
CGI WINDOWS AND DOORS, INC.
3780 W 104TH STREET
HIALEAH, FL 33018
(305) 593-6590

Title 450 ALUM. FRENCH DOOR - OPAQUE & IS (LM)
Desc. PANEL DP
Series FD450 INSWING

ANTHONY LYNN MILLER
LICENSE
No. 58705
STATE OF FLORIDA
PROFESSIONAL ENGINEER
08/10/22
A. LYNN MILLER, P.E.
P.E.# 58705



SIDELITE MULLION ANCHORS AS SHOWN IN DETAILS AND CHARTS. INTERMEDIATE ANCHORS TO BE AT 6" FROM CORNERS AND 24" O.C. AT HEAD/SILL.

NOTES:

1) FOR SINGLE OR DOUBLE LEAF DOORS AND SINGLE SIDELITES CAPACITY SEE CHART ON SHEET 11.
2) SEE SHEET 2 FOR LOCK CAPACITIES FOR SINGLE AND DOUBLE DOORS.
3) SEE BELOW FOR THRESHOLD TYPES.
4) SEE SHEET 10 FOR MULLION TYPES AND DESIGN LOAD CAPACITY.
5) SEE CHART ON THIS SHEET FOR MULLION ANCHORS CAPACITY.
6) SEE CHART ON SHEET 13 FOR MTG. STILE ANCHORS AT DOUBLE DOOR.
7) LOWEST VALUE FROM THESE CHARTS WILL APPLY TO ENTIRE ASSEMBLY.

MULLION ANCHORS AT SIDELITES

NOMINAL DIMS.		DESIGN LOAD CAPACTY–PSF						
		TYPE 'B' OR 'B+' AT HEAD			TYPE 'C' AT HEAD TYPE 'C' AT S–I & SS2 SILL		TYPE 'C' AT HEAD TYPE 'D1' AT SS1 SILL OR TYPE 'D2' AT S–I & SS2 SILL	
WIDTH (W)	FRAME HEIGHT	CLUSTER OF 3 ANCHORS	CLUSTER OF 4 ANCHORS	CLUSTER OF 6 ANCHORS	CLUSTER OF 3 ANCHORS	CLUSTER OF 4 ANCHORS	CLUSTER OF 3 ANCHORS	CLUSTER OF 4 ANCHORS
2/0	82-3/4"	106.7	110.0	110.0	110.0	110.0	110.0	110.0
2/6		86.2	110.0	110.0	110.0	110.0	110.0	110.0
3/0		72.3	96.4	110.0	109.3	110.0	101.0	110.0
3/6		62.3	83.0	110.0	94.2	110.0	87.0	110.0
2/0	84-3/4"	104.2	110.0	110.0	110.0	110.0	110.0	110.0
2/6		84.2	110.0	110.0	110.0	110.0	110.0	110.0
3/0		70.6	94.1	110.0	106.7	110.0	98.7	110.0
3/6		60.8	81.1	110.0	91.9	110.0	85.0	108.7
2/0	90-3/4"	97.3	110.0	110.0	110.0	110.0	110.0	110.0
2/6		78.6	104.8	110.0	110.0	110.0	109.8	110.0
3/0		65.9	87.9	110.0	99.7	110.0	92.1	110.0
3/6		56.8	75.7	110.0	85.9	110.0	79.4	101.5
2/0	96-3/4"	91.2	110.0	110.0	110.0	110.0	110.0	110.0
2/6		73.7	98.3	110.0	110.0	110.0	103.0	110.0
3/0		61.9	82.5	110.0	93.5	110.0	86.4	110.0
3/6		53.3	71.0	106.5	80.5	107.4	74.4	95.2
2/0	102-3/4"	85.9	110.0	110.0	110.0	110.0	110.0	110.0
2/6		69.4	92.6	110.0	104.9	110.0	97.0	110.0
3/0		58.2	77.7	110.0	88.0	110.0	81.4	104.1
3/6		50.2	66.9	100.3	75.8	101.1	70.1	89.6
2/0	108-3/4"	81.2	108.2	110.0	110.0	110.0	110.0	110.0
2/6		65.6	87.5	110.0	99.2	110.0	91.7	110.0
3/0		55.0	73.4	110.0	83.2	110.0	76.9	98.3
2/0	114-3/4"	76.9	102.6	110.0	110.0	110.0	107.5	110.0
2/6		62.2	82.9	110.0	94.0	110.0	86.9	110.0
3/0		52.2	69.5	104.3	78.8	105.1	72.9	93.2
2/0	120-3/4"	73.1	97.5	110.0	110.0	110.0	102.2	110.0
2/6		59.1	78.8	110.0	89.3	110.0	82.5	105.6
3/0		49.6	66.1	99.1	74.9	99.9	69.2	88.6

$$\text{WIDTH (W)} = \frac{\text{DOOR PANEL + FIXED PANEL}}{2} + 1.250$$

ANCHORS:

TYPE 'B'– 1/4" DIA. ULTRACON BY 'ELCO' (Fu=177 KSI, Fy=155 KSI)
INTO 2BY WOOD BUCKS OR WOOD STRUCTURES
1–1/2" MIN. PENETRATION INTO WOOD
THRU 1BY WOOD BUCKS INTO CONC./HOLLOW BLOCK
1–1/4" MIN. EMBED INTO CONC./HOLLOW BLOCK
DIRECTLY INTO CONCRETE
1–1/4" MIN. EMBED INTO CONCRETE
EDGE DISTANCES
INTO CONCRETE/HOLLOW BLOCK = 2–1/2" MIN.
INTO WOOD STRUCTURE = 1" MIN.

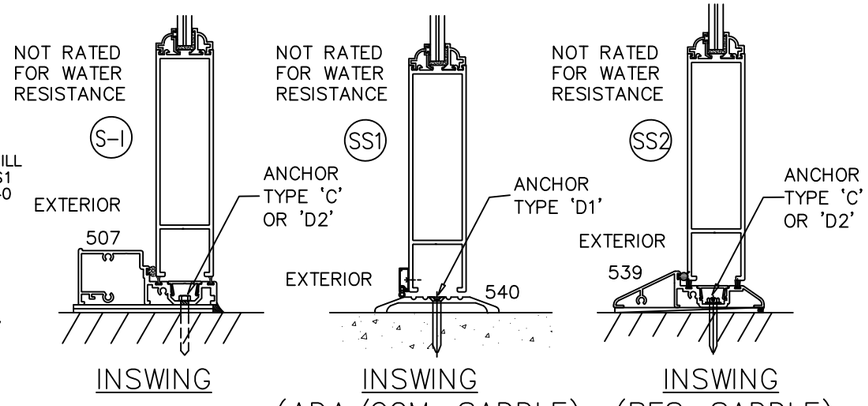
TYPE 'B+'– 1/4" DIA. ULTRACON+ BY 'DEWALT' (Fu=164 KSI, Fy=148 KSI)
INTO 2BY WOOD BUCKS OR WOOD STRUCTURES
1–1/2" MIN. PENETRATION INTO WOOD
THRU 1BY WOOD BUCKS INTO CONC./HOLLOW BLOCK
1–1/4" MIN. EMBED INTO HOLLOW BLOCK
1–3/4" MIN. EMBED INTO CONCRETE
DIRECTLY INTO CONCRETE
1–3/4" MIN. EMBED INTO CONCRETE
EDGE DISTANCES
INTO CONCRETE/HOLLOW BLOCK = 2–1/2" MIN.
INTO WOOD STRUCTURE = 1" MIN.

WOOD AT HEAD OR JAMBS SG = 0.55 MIN.
CONCRETE AT HEAD, SILL OR JAMBS f'c = 3000 PSI MIN.
C–90 HOLLOW/FILLED BLOCK AT JAMBS f'm = 2000 PSI MIN.

TYPE 'C'– 1/4" DIA. ULTRACON BY 'ELCO' (Fu=177 KSI, Fy=155 KSI)
1/4" DIA. ULTRACON+ BY 'DEWALT' (Fu=164 KSI, Fy=148 KSI)
DIRECTLY INTO CONCRETE
1–3/4" MIN. EMBED INTO CONC.
EDGE DISTANCES
INTO CONCRETE = 2–1/2" MIN.
AT HEAD OR JAMBS — AT HEAD OR SILL

TYPE 'D1'– 5/16" DIA. ULTRACON BY 'ELCO' (Fu=177 KSI, Fy=155 KSI)
5/16" DIA. ULTRACON BY 'DEWALT' (Fu=177 KSI, Fy=155 KSI)
DIRECTLY INTO CONCRETE
1–3/4" MIN. EMBED INTO CONC.
EDGE DISTANCES
INTO CONCRETE = 3–1/8" MIN.
AT HEAD OR JAMBS — AT ADA SILL DETAIL SS1 PART #540

TYPE 'D2'– #14 SMS (GRADE 5 CRS)
INTO WOOD STRUCTURES
WITH 1–3/8" MIN. PENETRATION INTO WOOD
EDGE DISTANCES
INTO WOOD = 1" MIN.
AT SILL DETAIL S–1, PART #507 OR DETAIL SS2, PART #539



PRODUCT REVISED
as complying with the Florida Building Code
NOA–No. 22-0822.02
Expiration Date 10/25/2027
By Ishaq I. Chanda
Miami–Dade Product Control

Revision:

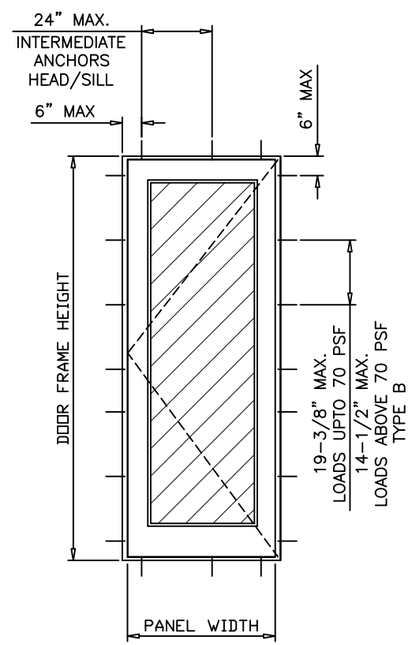
PREPARED BY A. LYNN MILLER
1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275
(941) 480-1600
REGISTRATION #29296

Impact Resistant Windows & Doors
WE'RE STRONGER™
CGI WINDOWS AND DOORS, INC.
3780 W 104TH STREET
HIALEAH, FL 33018
(305) 593-6590

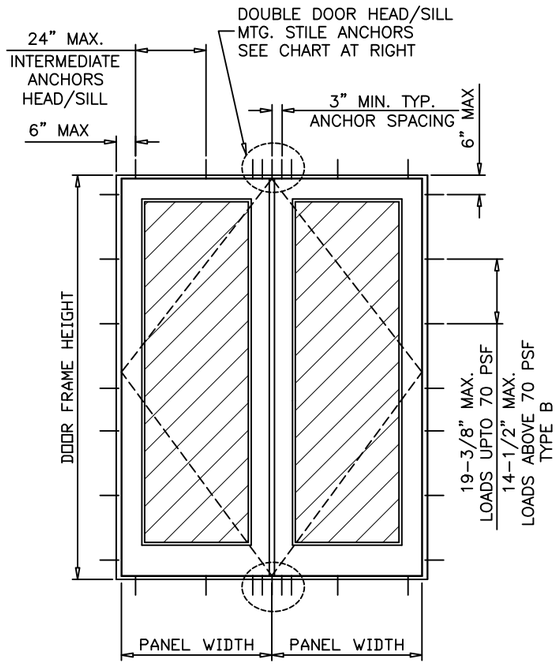
Series	Title	Date	Drawn By	Rev.
FD450 INSWING	450 ALUM. FRENCH DOOR - OPAQUE & IS (LM)	06/12/2020	J ROSOWSKI	B
Desc.				DWG No.
ANCHOR DP				450FD4-NOA
Scale				Sheet
NTS				12 OF 14

ANTHONY LYNN MILLER LICENSE No. 58705 STATE OF FLORIDA PROFESSIONAL ENGINEER
A. Lynn Miller 08/10/22

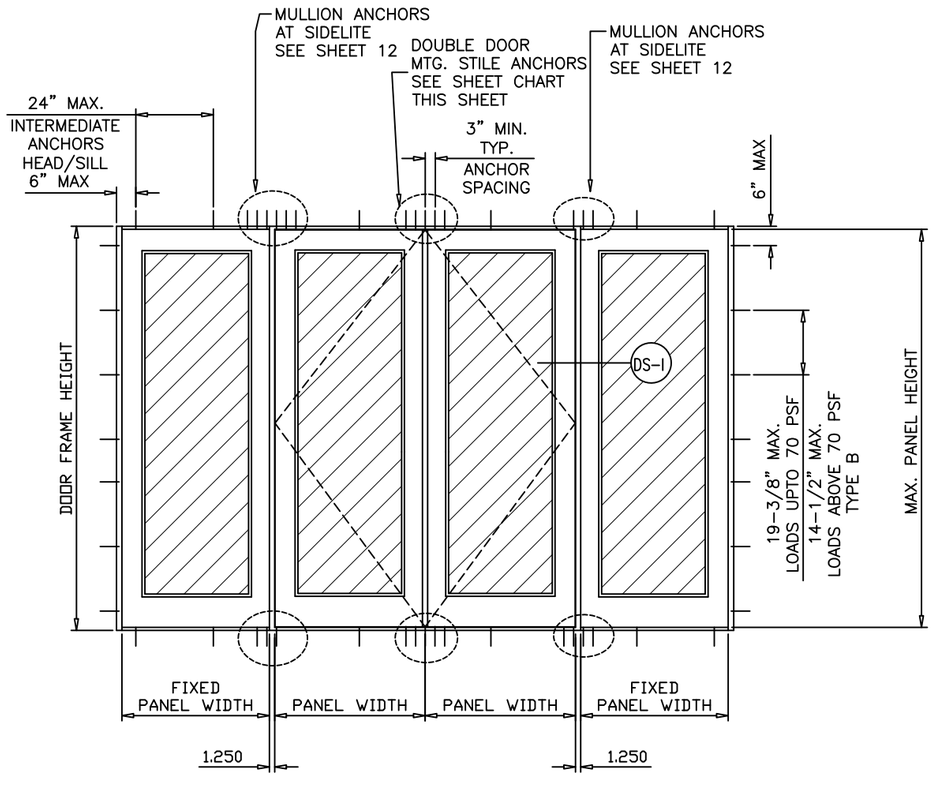
A. LYNN MILLER, P.E.
P.E.# 58705



SINGLE DOOR OR SIDELITE



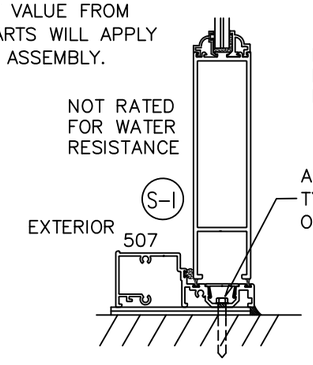
DOUBLE DOOR



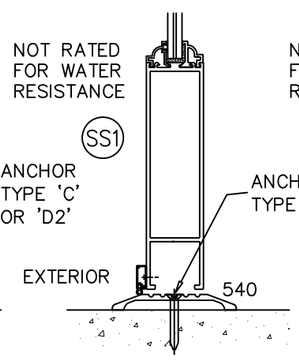
MTG. STILE ANCHORS AT DOUBLE DOORS								
NOMINAL DIMS.		DESIGN LOAD CAPACTY-PSF						
		TYPE 'B' OR 'B+' AT HEAD			TYPE 'C' AT HEAD TYPE 'C' AT S-I & SS2 SILL		TYPE 'C' AT HEAD TYPE 'D1' AT SS1 SILL OR TYPE 'D2' AT S-I & SS2 SILL	
FRAME WIDTH (XX)	FRAME HEIGHT	CLUSTER OF 3 ANCHORS	CLUSTER OF 4 ANCHORS	CLUSTER OF 5 ANCHORS	CLUSTER OF 3 ANCHORS	CLUSTER OF 4 ANCHORS	CLUSTER OF 3 ANCHORS	CLUSTER OF 4 ANCHORS
50-1/2"	82-3/4"	106.7	110.0	110.0	110.0	110.0	110.0	110.0
62-1/2"		86.2	110.0	110.0	110.0	110.0	100.7	110.0
74-1/2"		72.3	96.4	110.0	109.3	110.0	84.5	110.0
86-1/2"		62.3	83.0	103.8	94.2	110.0	72.8	97.0
50-1/2"	84-3/4"	104.2	110.0	110.0	110.0	110.0	110.0	110.0
62-1/2"		84.2	110.0	110.0	110.0	110.0	98.4	110.0
74-1/2"		70.6	94.1	110.0	106.7	110.0	82.5	110.0
86-1/2"		60.8	81.1	101.4	91.9	110.0	71.1	94.8
50-1/2"	90-3/4"	97.3	110.0	110.0	110.0	110.0	110.0	110.0
62-1/2"		78.6	104.8	110.0	110.0	110.0	91.9	110.0
74-1/2"		65.9	87.9	109.9	99.7	110.0	77.1	102.7
86-1/2"		56.8	75.7	94.7	85.9	110.0	66.4	88.5
50-1/2"	96-3/4"	91.2	110.0	110.0	110.0	110.0	106.6	110.0
62-1/2"		73.7	98.3	110.0	110.0	110.0	86.2	110.0
74-1/2"		61.9	82.5	103.1	93.5	110.0	72.3	96.4
86-1/2"		53.3	71.0	88.8	80.5	107.4	62.3	83.0
50-1/2"	102-3/4"	85.9	110.0	110.0	110.0	110.0	100.4	110.0
62-1/2"		69.4	92.6	110.0	104.9	110.0	81.1	108.2
74-1/2"		58.2	77.7	97.1	88.0	110.0	68.1	90.7
86-1/2"		50.2	66.9	83.6	75.8	101.1	58.6	78.2
50-1/2"	108-3/4"	81.2	108.2	110.0	110.0	110.0	94.9	110.0
62-1/2"		65.6	87.5	109.3	99.2	110.0	76.7	102.2
74-1/2"		55.0	73.4	91.7	83.2	110.0	64.3	85.7
50-1/2"	114-3/4"	76.9	102.6	110.0	110.0	110.0	89.9	110.0
62-1/2"		62.2	82.9	103.6	94.0	110.0	72.6	96.9
74-1/2"		52.2	69.5	86.9	78.8	105.1	60.9	81.3
50-1/2"	120-3/4"	73.1	97.5	110.0	110.0	110.0	85.4	110.0
62-1/2"		59.1	78.8	98.5	89.3	110.0	69.0	92.0
74-1/2"		49.6	66.1	82.6	74.9	99.9	57.9	77.2

1) SEE SHEET 12 FOR ANCHORS DESCRIPTION AND SILL ANCHOR OPTIONS.
2) FOR SINGLE OR DOUBLE LEAF DOORS, SINGLE SIDELITES AND THRESHOLD CAPACITY SEE CHART ON SHEET 11.
3) SEE SHEET 2 FOR LOCK CAPACITIES FOR SINGLE AND DOUBLE DOORS.
4) SEE SHEET 10 FOR MULLION TYPES AND DESIGN LOAD CAPACITY.
5) SEE CHART ON SHEET 12 FOR MULLION ANCHORS CAPACITY.
6) SEE CHART ON THIS SHEET FOR MTG. STILE ANCHORS AT DOUBLE DOOR.
7) LOWEST VALUE FROM THESE CHARTS WILL APPLY TO ENTIRE ASSEMBLY.

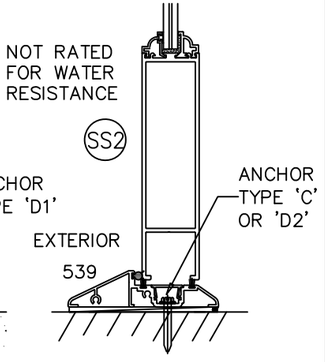
MEETING STILE ANCHORS AS SHOWN IN DETAILS AND CHARTS INTERMEDIATE ANCHORS TO BE AT 6" FROM CORNERS AND 24" O.C. AT HEAD/SILL.



INSWING



INSWING
(ADA/COM. SADDLE)



INSWING
(RES. SADDLE)

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By Ishaq I. Chanda
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Revision:

PREPARED BY A. LYNN MILLER
1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275
(941) 480-1600
REGISTRATION #29296

Impact Resistant Windows & Doors
WE'RE STRONGER™
CGI WINDOWS AND DOORS, INC.
3780 W 104TH STREET
HIALEAH, FL 33018
(305) 593-6590

Title	Desc.	Series
450 ALUM. FRENCH DOOR - OPAQUE & IS (LM)	ANCHOR DP	FD450 INSWING

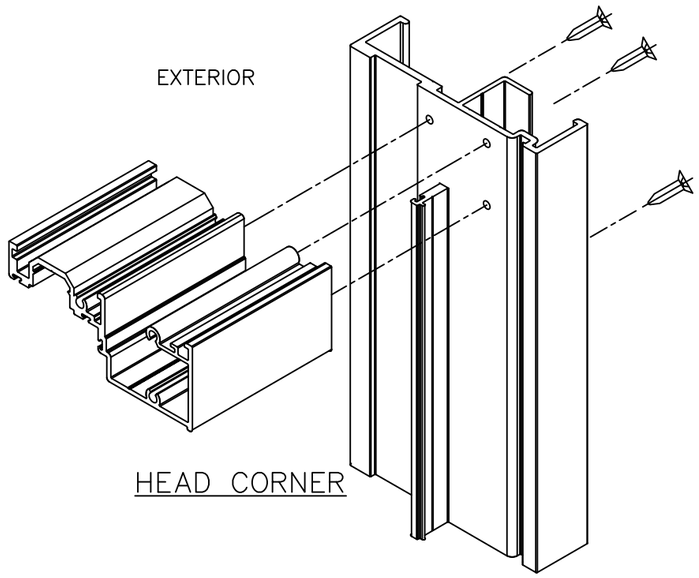
Date	Drawn By	Rev.
06/12/2020	J ROSOWSKI	B

DWG No.	Sheet	Scale
450FD4-NOA	13 OF 14	NTS

ANTHONY LYNN MILLER
LICENSE
No. 58705
STATE OF FLORIDA
PROFESSIONAL ENGINEER
08/10/22

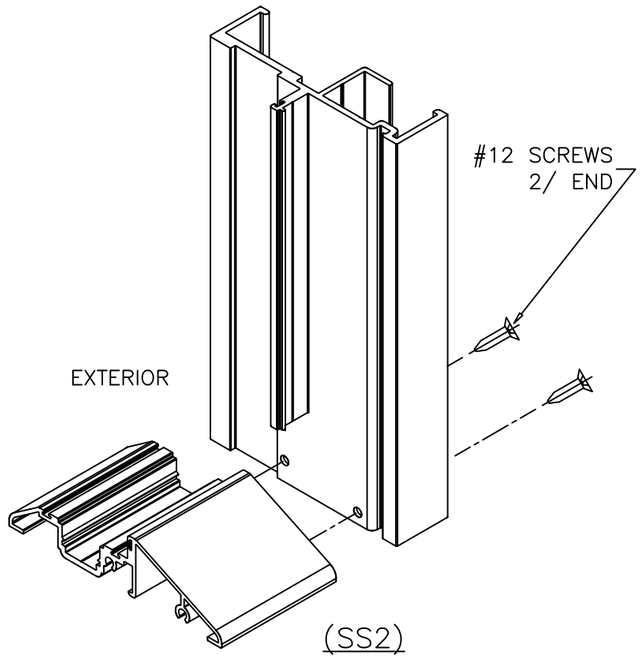
A. LYNN MILLER, P.E.
P.E.# 58705

CORNER DETAILS

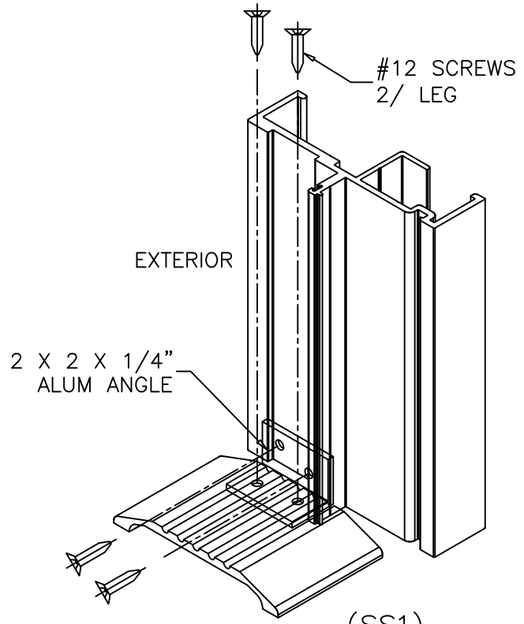


HEAD CORNER

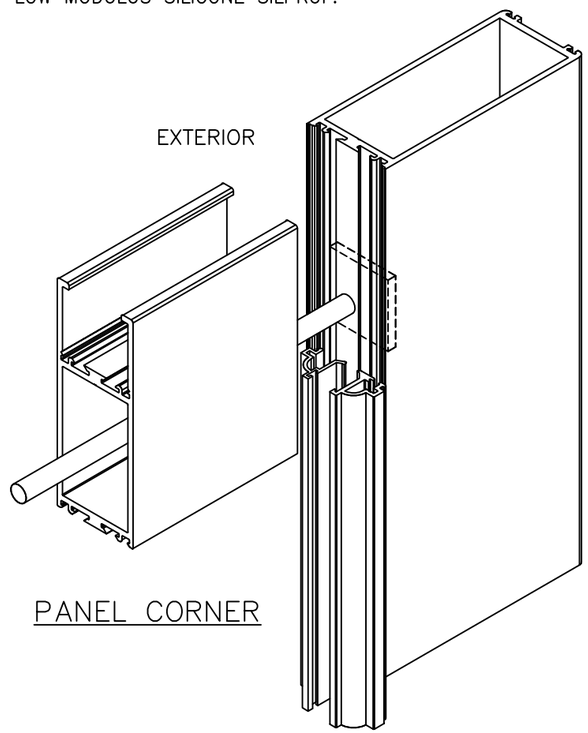
CORNERS TO BE SEALED WITH
LOW MODULUS SILICONE SILPRUF.



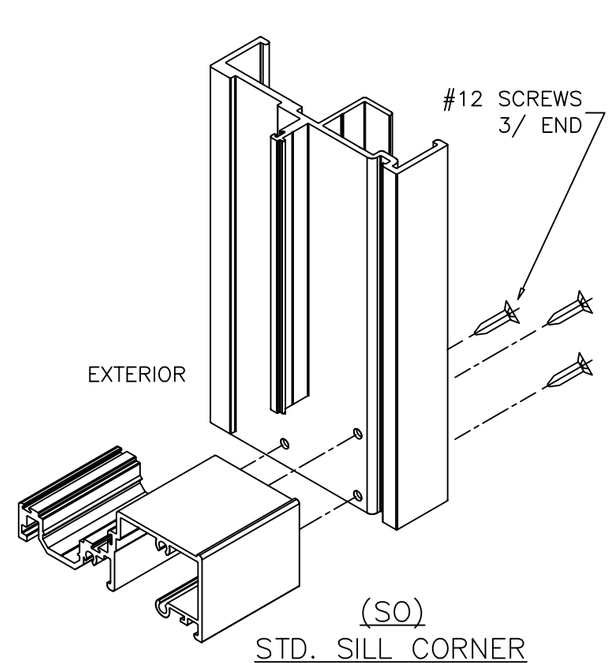
(SS2)
RESIDENTIAL SADDLE SILL



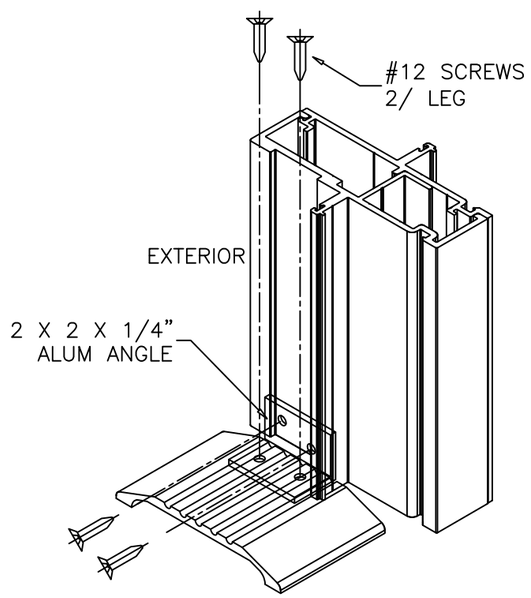
(SS1)
ADA SILL CORNER



PANEL CORNER



(SO)
STD. SILL CORNER



ADA SILL @ MULLION

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Title	450 ALUM. FRENCH DOOR - OPAQUE & IS (LM)	Date	06/12/2020	Rev.	B
Desc.	CORNER DETAILS	Drawn By	J ROSOWSKI	DWG No.	450FD4-NOA
Series	FD450 INSWING	Scale	NTS	Sheet	14 OF 14

ANTHONY LYNN MILLER
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