



Product Evaluation Report
E.F. BAVIS & ASSOCIATES, INC.

3' Fixed Window

Florida Product Approval # 6587.1 R8

Florida Building Code 2023

Per Rule 61G20-3

Method: 1 -D

Category: Windows

Subcategory: Fixed

Compliance Method: 61G20-3.005(1)(d)

HVHZ

Product Manufacturer:

E.F. Bavis & Associates, Inc.

201 Grandin Road

Maineville, Ohio 45039

Engineer Evaluator:

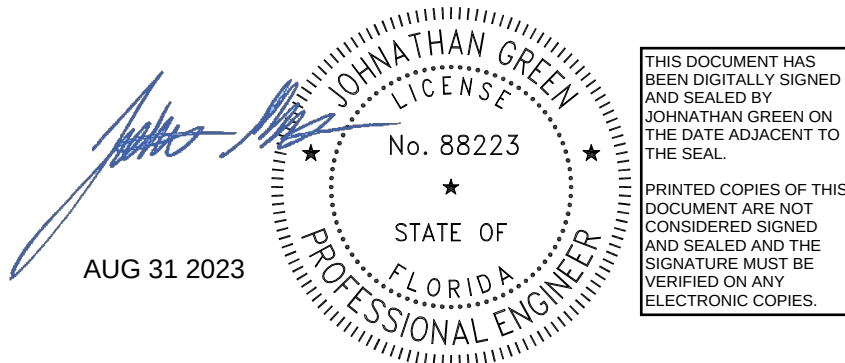
Johnathan Green, P.E. #88223

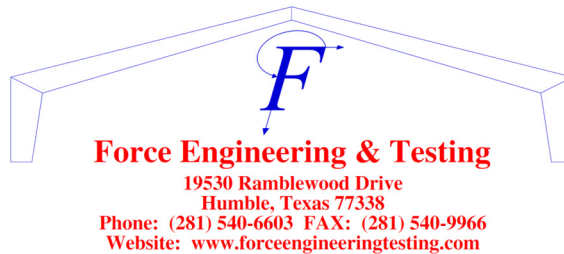
Florida Evaluation ANE ID: 12901

Contents:

Evaluation Report: Page 1 - 3

Installation Detail: Page 4 - 19





Compliance Statement:	The product as described in this report has demonstrated compliance with the Florida Building Code 2023 including High Velocity Hurricane Zone.
Product Description:	3' Fixed Window Model #12103986.
Window Frame Size:	2'-8" wide x 2'-8 ¾" high x 6 ¾" deep
Window Frame:	Material: 14 Ga. ASTM A653 Grade 50, Galvannealed A60 Frame Coating: Nominal 3 mils Powder Coat
Glazing:	1 ¼" (nominal) thick bullet resistant glass. The glass consists of 3/32" annealed on interior face, 3/8" annealed, ½" annealed and ¼" annealed on the exterior side. A layer of 0.030" Kuraray Trosifol PVB is placed between each layer of glass.
Glazing Interlayer:	Kuraray America, Inc. 0.030" Kuraray Trosifol PVB Interlayer Miami Dade NOA NO: 23-0717.28
Window Frame Anchorage:	Header: Three fasteners equally spaced, 7 ¼" from each end then 8 ¾" O.C. Sill: Six fasteners located in pairs of two at 2" apart, 8 ¼" from each end and at center. Jamb: Three fasteners located 6", 17 ¼" and 28 ½" from bottom of frame for each jamb. All fasteners shall be corrosion resistance per Florida Building Code 2023.
Substrate:	Minimum 14 Ga. Stud framed opening or Minimum Grout filled C90 Concrete Block Nominal 8" or Minimum No 2 S.P.F. Wood frame Substrate must be designed in accordance w/ Florida Building Code 2023.
Anchor Edge Distance:	Minimum ¾" edge distance for 14 Ga. steel framing Minimum 3" edge distance for Grout filled C90 Concrete Block Nominal 8" Minimum 1 ¼" edge distance for No 2 S.P.F. Wood frame
Design Wind Pressures:	+ / - 75.0 psf



Performance Standards:

The product described herein has demonstrated compliance with:

- TAS 201-94: Large Missile Impact Test.
- TAS 202-94: Criteria for Testing Impact and Non-Impact Resistance Building Envelope Components Using Static Air Pressure.
- TAS 203-94: Criteria for Testing Products Subject to Cyclic Wind Pressure Loading.
- ASTM F588: Type D Hand & Tool Manipulation Test

Reference Data:

1. Test Reports T195-08
Farabaugh Engineering & Testing, Inc.
2. Anchor Calculations
Terrence E. Wolfe, P.E. # 44923
3. Certificate of Independence
By Johnathan Green, P.E. (No. 88223) @ Force Engineering & Testing
(FBC Organization # ANE ID: 12901)

Quality Assurance Entity:

The manufacturer has established compliance of roof panel products in accordance with the Florida Building Code and Rule 61G20-3.005(3) for manufacturing under a quality assurance program audited by an approved quality assurance entity.

Installation:

Install per manufacturer's recommended details.

Design Procedure:

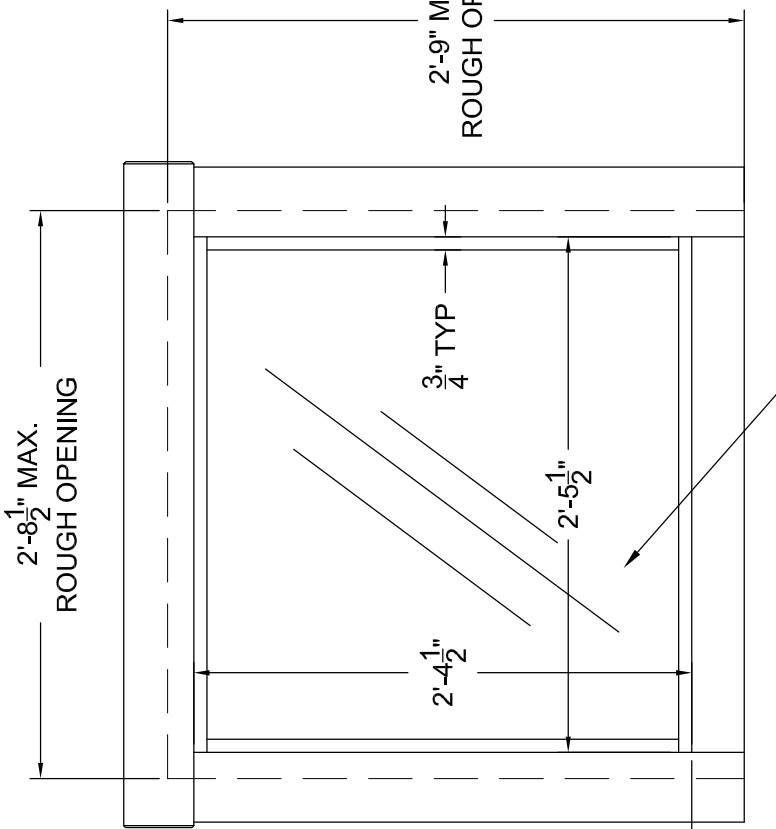
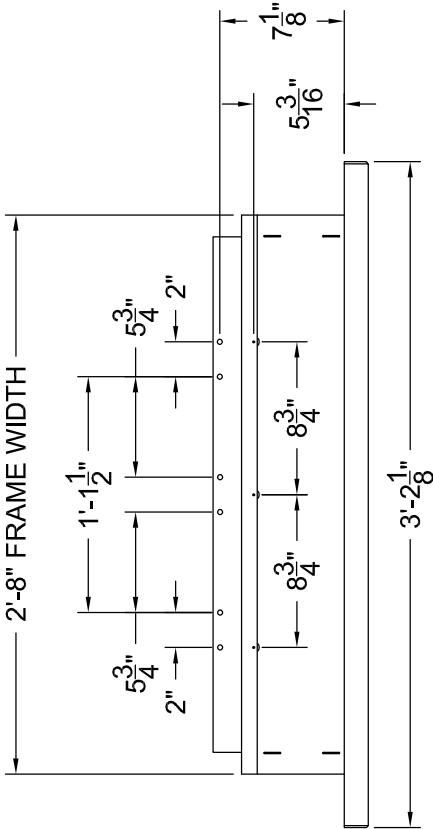
Based on the dimensions of the structure, appropriate wind loads are determined using Chapter 16 of the Florida Building Code 2023 for wall cladding wind loads. These component wind loads for wall cladding are compared to the allowable pressure listed above. The design professional shall select the appropriate erection details to reference in his drawings for proper fastener attachment to the structure. Support framing must be in compliance with Florida Building Code 2023.

REVISION RECORD				DR	CK
DATE	ECN	UPDATE FILE NUMBER AND CODE VERSION		MC	MB
12/29/15	16996			MC	MB
01/09/18	18726	UPDATE CODE VERSION		MC	MB
10/01/20	21500	UPDATE CODE VERSION		MC	MB
01/24/23	23573	UPDATE GLASS MANUFACTURER'S UL FILE NUMBER		MC	DM

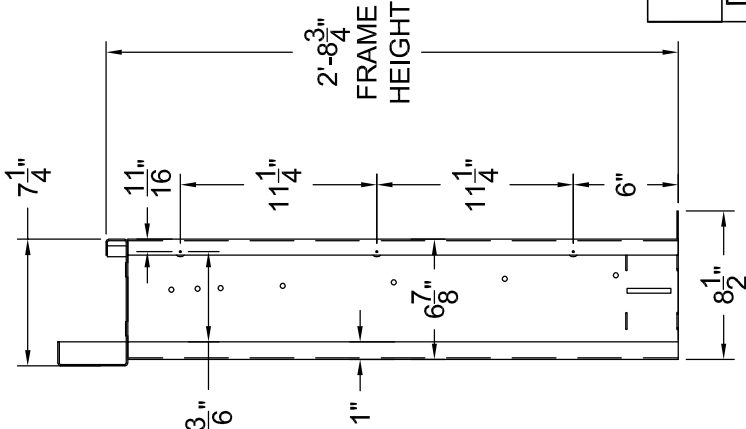
FOR INSTALLATION AND MOUNTING REQUIREMENTS,
GO TO THE FLORIDA BUILDING CODE WEBSITE AT:
http://www.floridabuilding.org/pr/pr_app_srch.aspx

SEARCH:
CODE VERSION: 2023
FL#: 6587

CATEGORY: WINDOWS
SUBCATEGORY: FIXED
APPLICATION STATUS: APPROVED



2'-4" x 2'-3" U.L. LISTED LEVEL1
BULLET RESISTANT GLASS



WINDOW MODEL #
12103986

E.F.BAVIS & ASSOCIATES INC.
 201 GRANDIN RD.
 MAINEVILLE, OH 45039
 T: 513-677-0500 F: 513-677-0552 E: info@bavis.com www.bavis.com

PROPRIETARY

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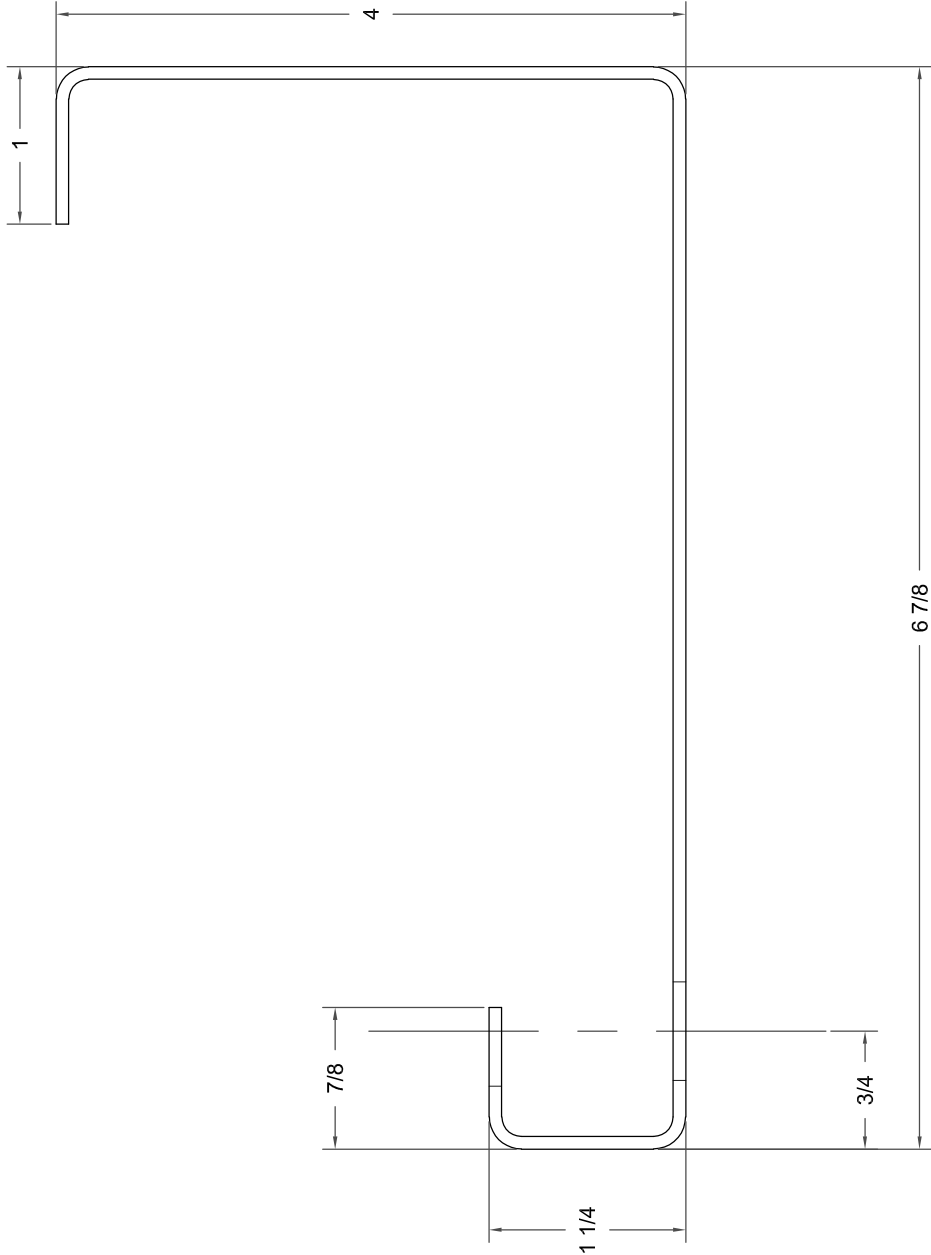
DIMENSIONS ARE IN
FT & INCHES
 UNLESS OTHERWISE
 SPECIFIED

DRAWN **M. CRAVEN**
 10/27/14
 12103986
 DIM
 1
 OF 1

TITLE
HVHZ 3' TRIMMED WINDOW

	E.F.BAVIS & ASSOC. INC.		UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES DECIMALS: .XX ± .01; .XXX ± .005 FRACTIONS: + - 1/32" ANGLES: ± .30° REMOVE ALL BURRS AND SHARP EDGES TO R .02 OR .02 X .02 CHAMFER MAX.		3' FIXED WINDOW		MODEL 12103986		PAGE 2 OF 15	
	201 GRANDIN RD. P.O.BOX 337 MAINEVILLE, OH. 45039 0337 PH 513-677-0500 FAX 513-677-0552		THIS DOCUMENTATION AND INFORMATION CONTAINED ARE THE SOLE PROPERTY OF E.F.BAVIS & ASSOC. INC. IT SHALL BE RETURNED UPON REQUEST AND SHALL NOT BE REPRODUCED IN WHOLE OR IN PART, OR DISCLOSED TO ANYONE ELSE, OR USED, WITHOUT WRITTEN CONSENT OF E.F.BAVIS & ASSOC. INC.		DWG. 3' WT-HUR		DATE: 10/27/14		DATE: 10/27/14	
					REV. DATE:		MJC		COPYRIGHT 1986,2002 E.F.Bavis & Assoc. Inc.	

VERTICAL FRAME CROSS SECTION, FOR PLANT QUALITY CONTROL

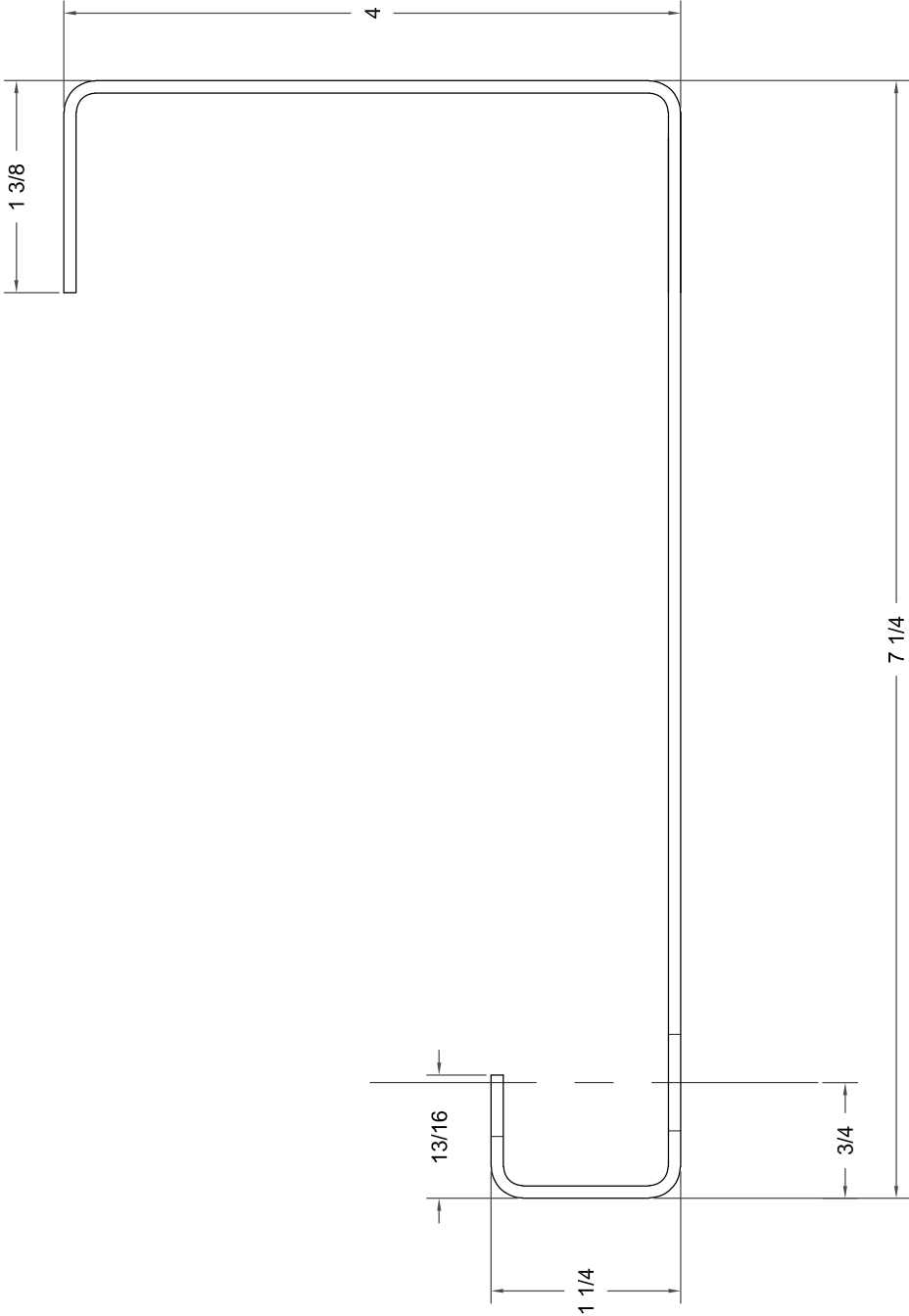


ITEM 1

MATERIAL: ASTM A653 .0785 (14 GAUGE) GALVANNEALED A60

	E.F.BAVIS & ASSOC. INC.		UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES DECIMALS: XX +-.01; .XXX +-.005 FRACTIONS: + - 1/32; ANGLES: + - 30' REMOVE ALL BURRS AND SHARP EDGES TO R .02 OR .02 X .02 CHAMFER MAX.		MODEL		12103986		PAGE	
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					REV.				COPYRIGHT 1986,2002 E.F.Bavis & Assoc. Inc.	

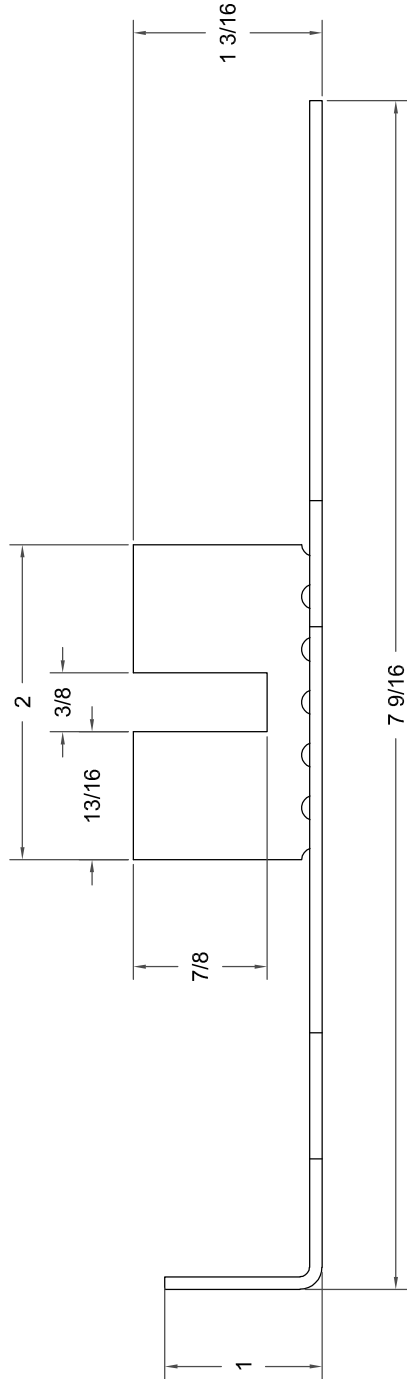
TOP FRAME CROSS SECTION, FOR PLANT QUALITY CONTROL



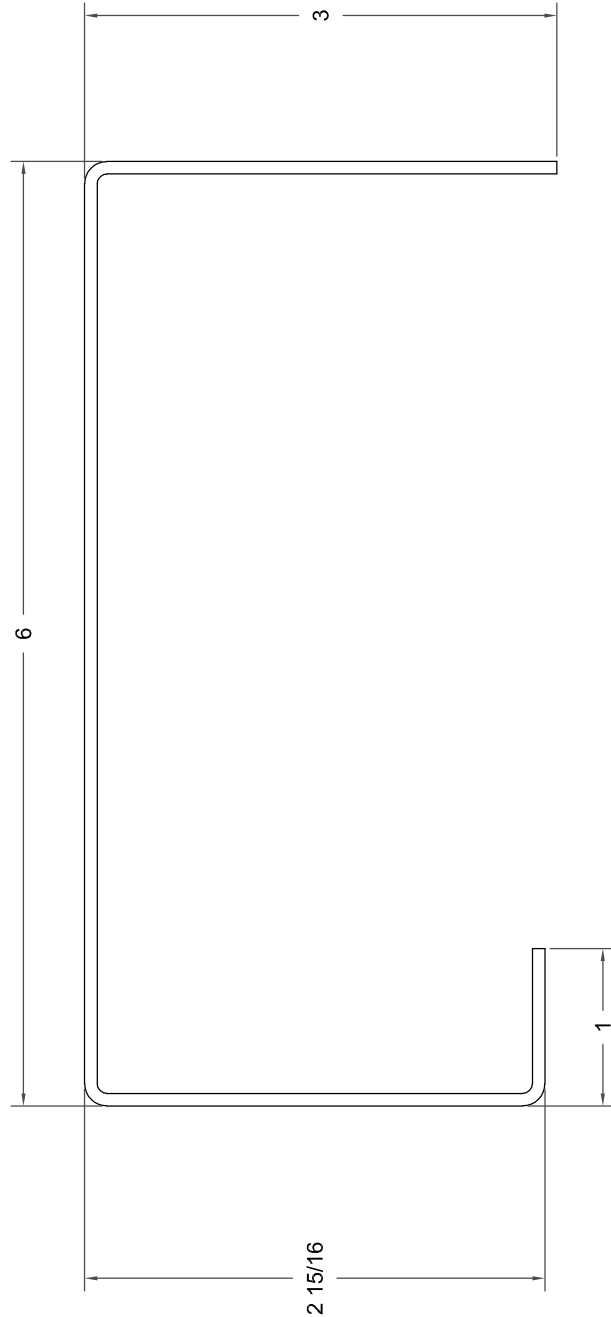
ITEM 2

MATERIAL: ASTM A653 .0785 (14 GAUGE) GALVANNEALED A60

	E.F.BAVIS & ASSOC. INC.		UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES DECIMALS: .XX ± .01 ; .XXX ± .005 FRACTIONS: + - 1/32" ANGLES: ± .30° REMOVE ALL BURRS AND SHARP EDGES TO R .02 OR .02 X .02 CHAMFER MAX.		MODEL 12103986		PAGE 4 OF 15
	201 GRANDIN RD. P.O. BOX 337 MAINEVILLE, OH. 45039 0337 PH 513-677-0500 FAX 513-677-0552		THIS DOCUMENTATION AND INFORMATION CONTAINED ARE THE SOLE PROPERTY OF E.F.BAVIS & ASSOC. INC. IT SHALL BE RETURNED UPON REQUEST AND SHALL NOT BE REPRODUCED IN WHOLE OR IN PART, OR DISCLOSED TO ANYONE ELSE, OR USED, WITHOUT WRITTEN CONSENT OF E.F.BAVIS & ASSOC. INC.		DWG. 3' WT-HUR		DATE CREATED: 10/27/14 MJC
					REV. DATE:		COPYRIGHT 1986,2002 E.F.Bavis & Assoc. Inc.
3' FIXED WINDOW							
LOWER SILL CROSS SECTION, FOR PLANT QUALITY CONTROL							



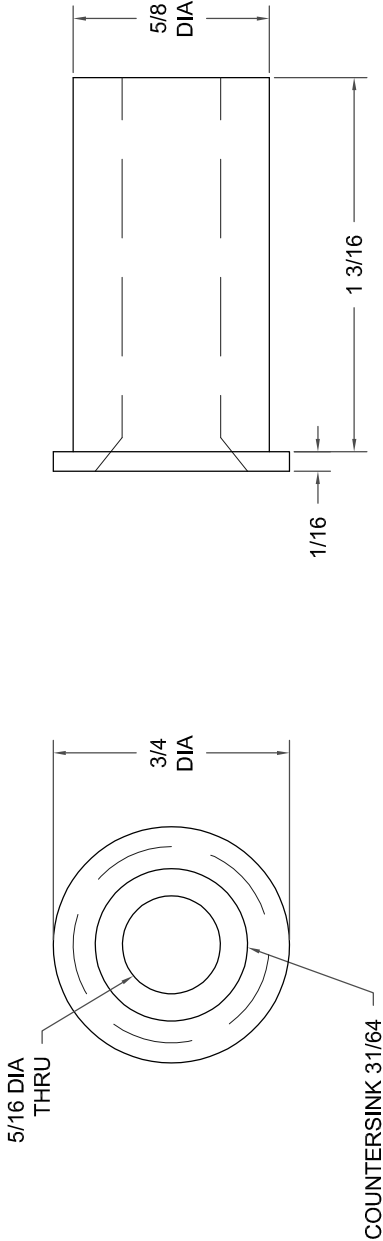
UPPER SILL CROSS SECTION, FOR PLANT QUALITY CONTROL



	E.F.BAVIS & ASSOC. INC.		UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES DECIMALS: .XX ± .01 ; .XXX ± .005 FRACTIONS: + - 1/32" ANGLES: + - 30' REMOVE ALL BURRS AND SHARP EDGES TO R .02 OR .02 X .02 CHAMFER MAX.		12103986		PAGE
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	PH 513-677-0500 FAX 513-677-0552				REV.		COPYRIGHT 1996,2002 E.F.Bavis & Assoc. Inc.

3' FIXED WINDOW

WINDOW FILLER PLUG, FOR PLANT QUALITY CONTROL



ITEM - 5

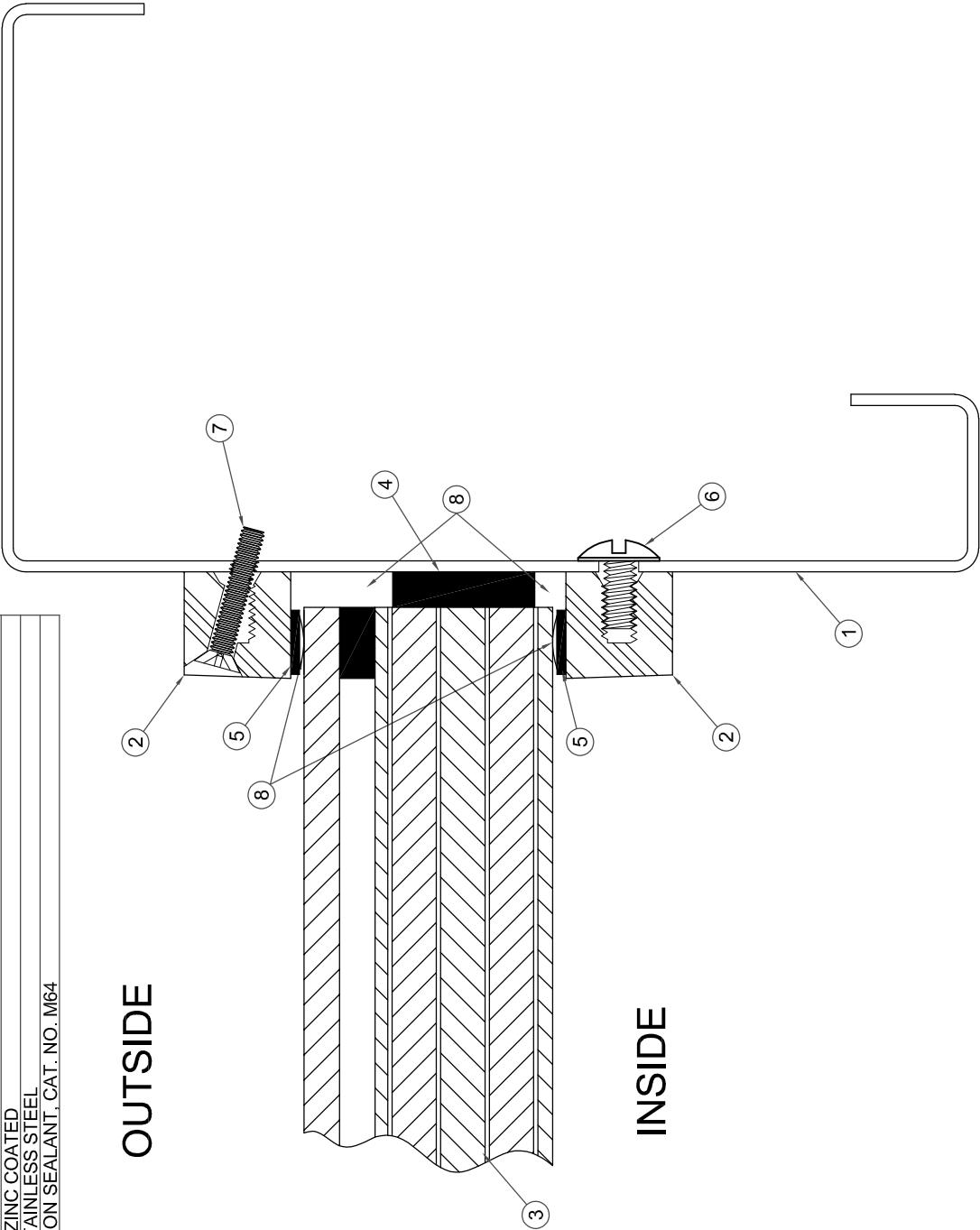
MATERIAL: 12L14 STEEL

3' FIXED WINDOW

INSULATED GLASS WINDOW GLAZING DETAIL, FOR PLANT QUALITY CONTROL

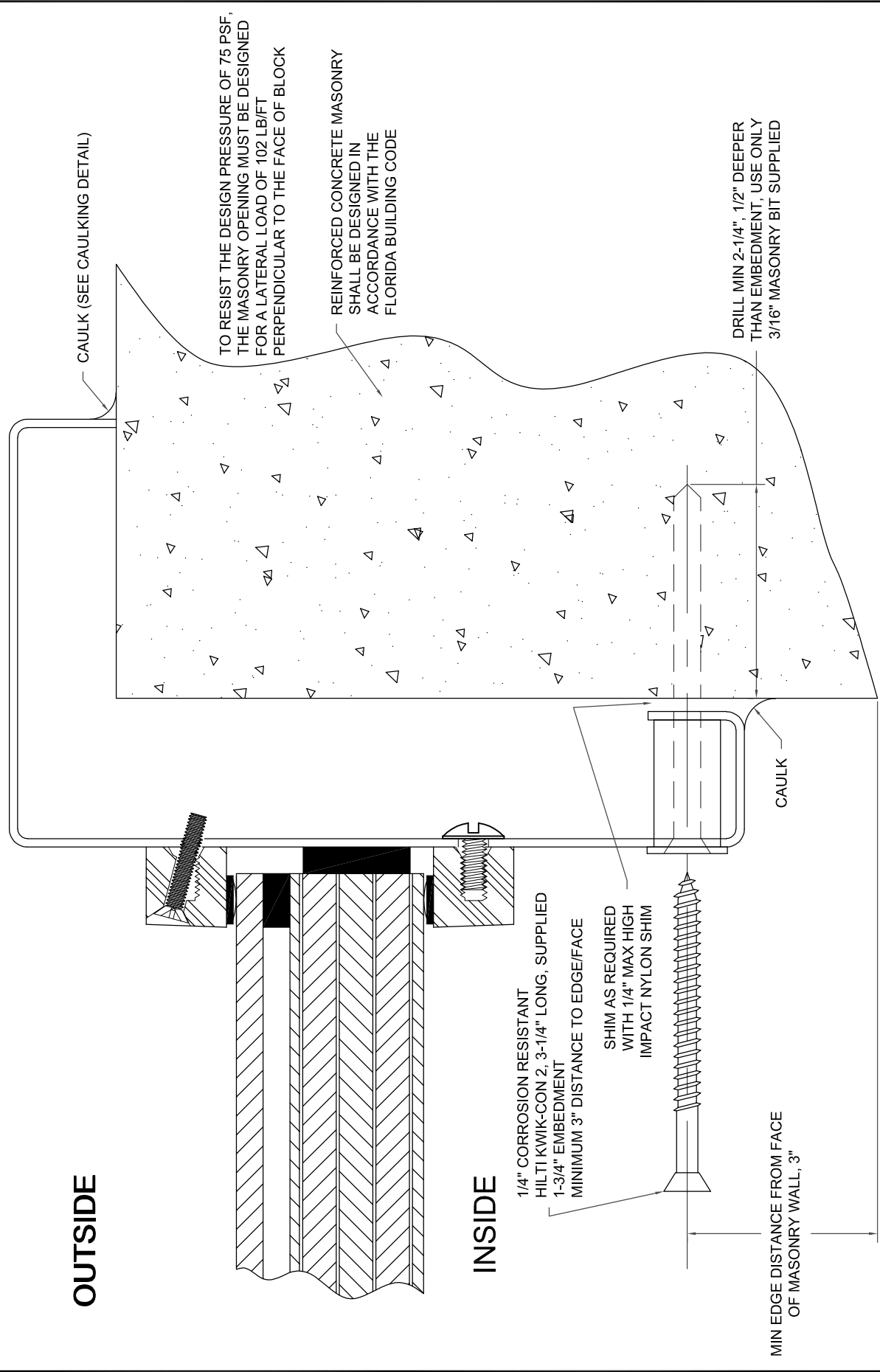
ITEM	DESCRIPTION
1	VERTICAL FRAME
2	3/4" X 3/4" ALUMINUM EXTRUSION
3	UL LISTED 78CL, LEVEL 1 BULLET RESISTANT GLASS
	STANDARD MAKE-UP: 1/4" ANNEALED, 1/2" ANNEALED, 3/8" ANNEALED & 3/32" ANNEALED GLASS
	WITH 0.030" KURARAY TROSIFOL PVB (POLYVINYL BUTYRAL) INTERLAYERS
	INSULATED MAKE-UP: 1/4" ANNEALED, 1/4" AIR SPACE, 1/4" ANNEALED, 1/2" ANNEALED, 3/8" ANNEALED
	& 3/32" ANNEALED GLASS WITH 0.030" KURARAY TROSIFOL PVB (POLYVINYL BUTYRAL) INTERLAYERS
4	1" X 4" X 3/16" THICK, RUBBER SETTING BLOCK
5	1/16" BUTYL TAPE, TREMCO 7242YA1760
6	1/4-20 X 1/2" PHILIPS TRUSS HEAD, ZINC COATED
7	#8-32 X 1" SPANNER FLAT HEAD, STAINLESS STEEL
8	CRL POLYURETHANE CONSTRUCTION SEALANT, CAT. NO. M64

NO.	ECN
1	18556
2	23573

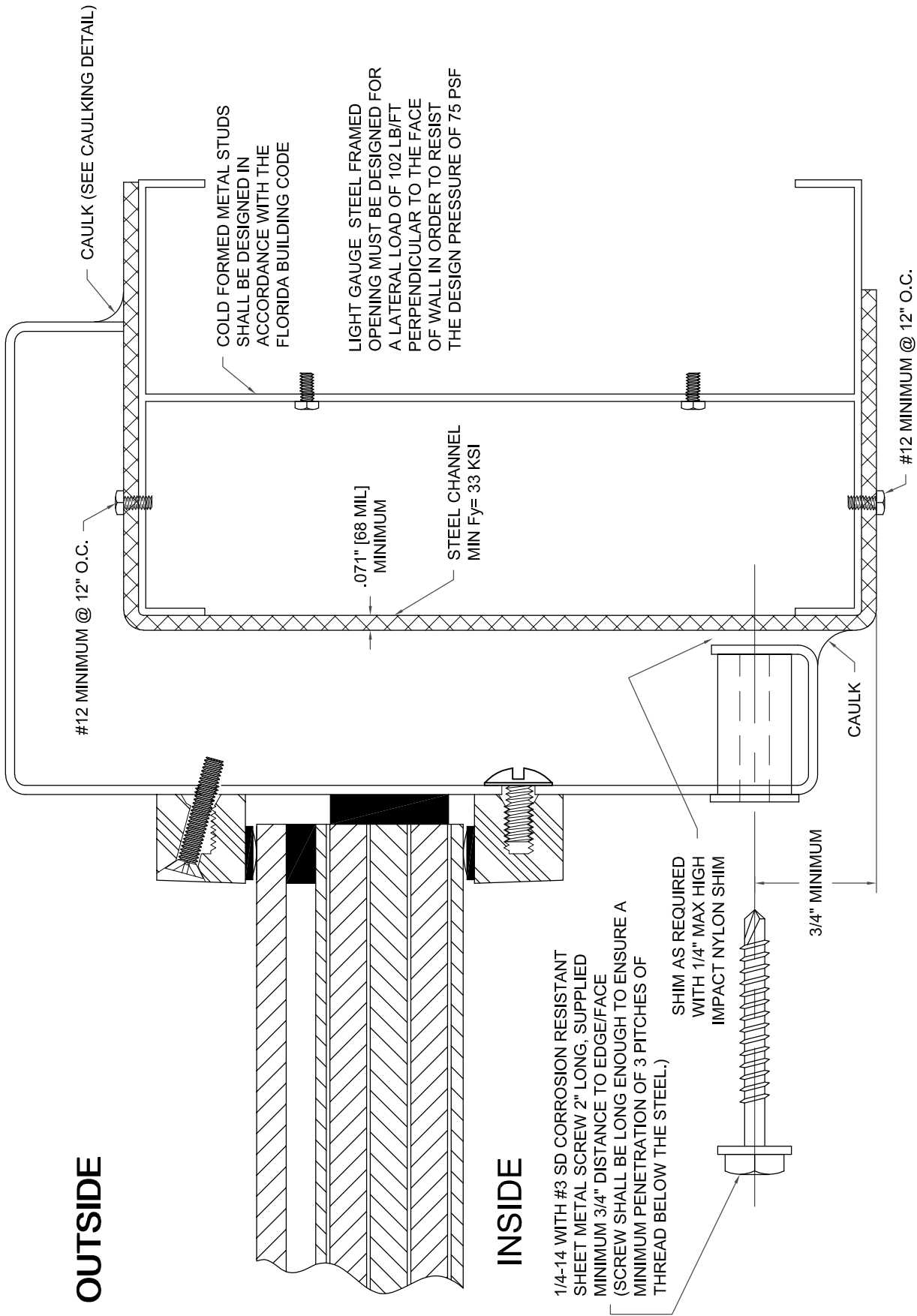


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			DATE:			

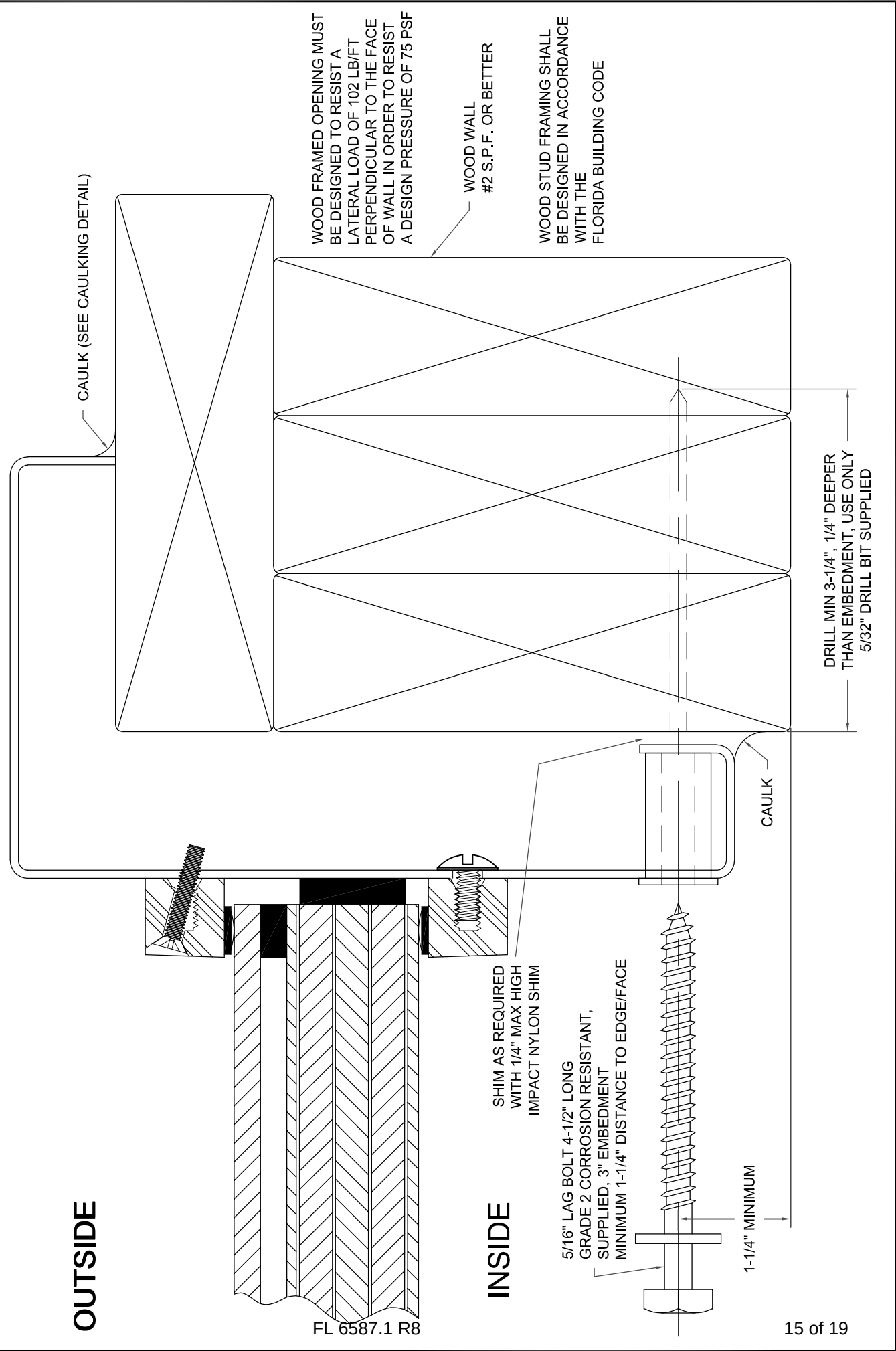
FASTENER INSTALLATION DETAIL: MASONRY, HEAD & JAMB



FASTENER INSTALLATION DETAIL: METAL, HEAD AND JAMB, FIELD VERIFIED



FASTENER INSTALLATION DETAIL: WOOD, HEAD AND JAMB, FIELD VERIFIED

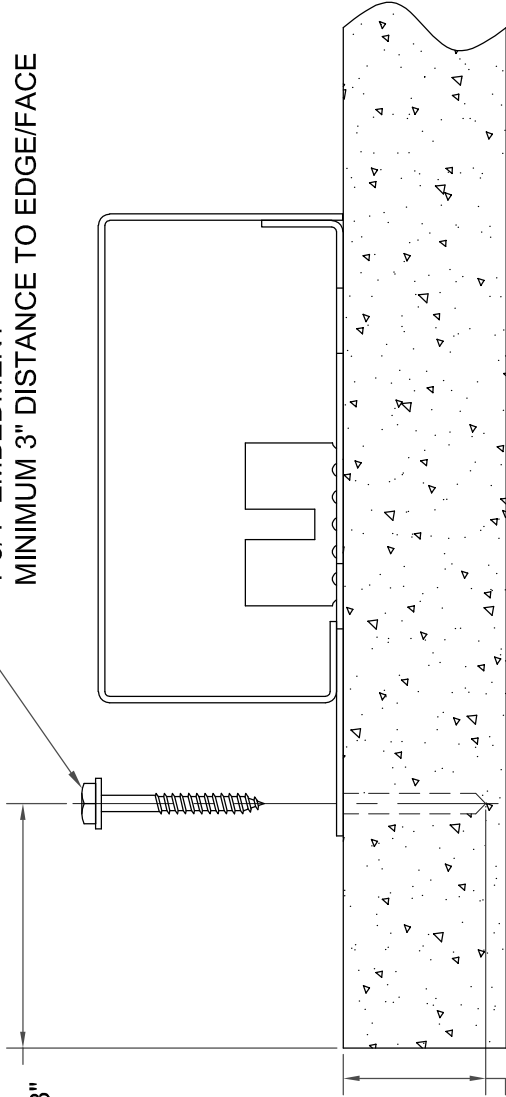


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	3' FIXED WINDOW		THIS DOCUMENTATION AND INFORMATION CONTAINED ARE THE SOLE PROPERTY OF E.F.BAVIS & ASSOC. INC. IT SHALL BE RETURNED UPON REQUEST AND SHALL NOT BE REPRODUCED IN WHOLE OR IN PART, OR DISCLOSED TO ANYONE ELSE, OR USED, WITHOUT WRITTEN CONSENT OF E.F.BAVIS & ASSOC. INC.		DWG. 3' WT-HUR		DATE CREATED: 10/27/14 MJC
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FASTENER INSTALLATION DETAIL: SILL, MASONRY WALL, FIELD VERIFIED							

TO RESIST THE DESIGN PRESSURE OF 75 PSF,
THE MASONRY OPENING MUST BE DESIGNED
FOR A LATERAL LOAD OF 102 LB/FT
PERPENDICULAR TO THE FACE OF BLOCK

1/4" CORROSION RESISTANT
HILTI KWIK-CON 2, X 1-3/4" LONG, SUPPLIED
1-3/4" EMBEDMENT
MINIMUM 3" DISTANCE TO EDGE/FACE

MIN DISTANCE FROM
FACE OF MASONRY WALL 3"



DRILL MIN 2-1/4" , 1/2" DEEPER
THAN EMBEDMENT USE ONLY
3/16" MASONRY BIT SUPPLIED

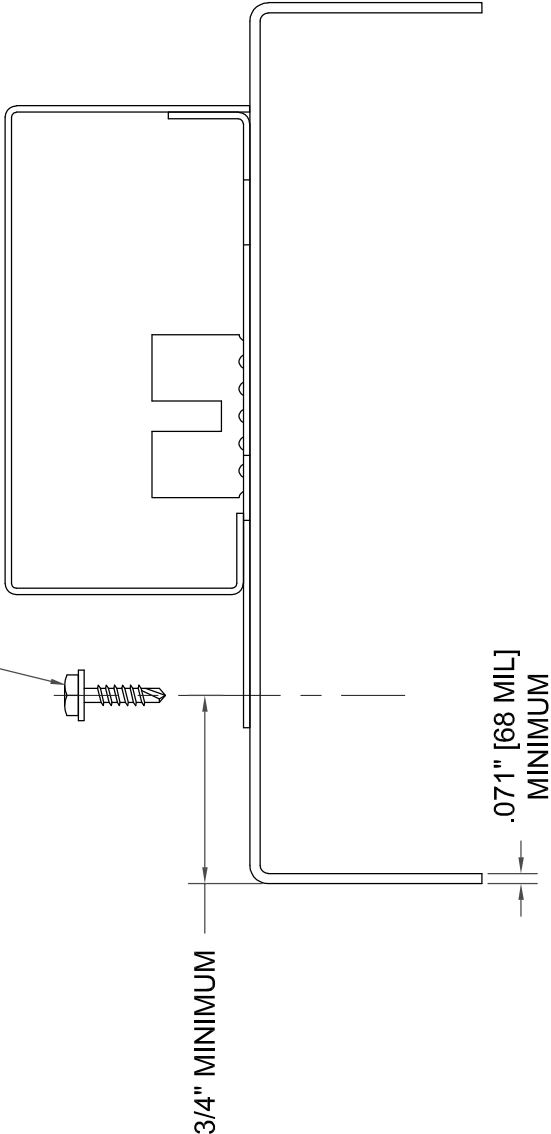
REINFORCED CONCRETE MASONRY
SHALL BE DESIGNED IN
ACCORDANCE WITH THE
FLORIDA BUILDING CODE

	E.F.BAVIS & ASSOC. INC. 201 GRANDIN RD. P.O.BOX 337 MAINEVILLE, OH. 45039 0337 PH 513-677-0500 FAX 513-677-0552	UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES DECIMALS: .XX +-.01; .XXX +-.005 FRACTIONS: + - 1/32; ANGLES: + - 30' REMOVE ALL BURRS AND SHARP EDGES TO R.02 OR .02 X .02 CHAMFER MAX.		12103986		PAGE	
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				3' WT-HUR		DWG.	DATE CREATED: 10/27/14 MJC
				REV.		COPYRIGHT 1996,2002 E.F.Bavis & Assoc. Inc.	
				DATE:			
FASTENER INSTALLATION DETAIL: SILL, METAL WALL, FIELD VERIFIED							

COLD FORMED METAL STUDS
SHALL BE DESIGNED IN
ACCORDANCE WITH CHAPTER 22
OF FBC

LIGHT GAUGE STEEL FRAMED
OPENING MUST BE DESIGNED FOR
A LATERAL LOAD OF 102 LB/FT
PERPENDICULAR TO THE FACE
OF WALL IN ORDER TO RESIST
THE DESIGN PRESSURE OF 75 PSF

1/4-14 WITH #3 SD SHEET METAL SCREW 1" LONG, SUPPLIED
MINIMUM 3/4" DISTANCE TO EDGE/FACE
(SCREW SHALL BE LONG ENOUGH TO ENSURE A MINIMUM
PENETRATION OF 3 PITCHES OF THREAD BELOW THE STEEL.)

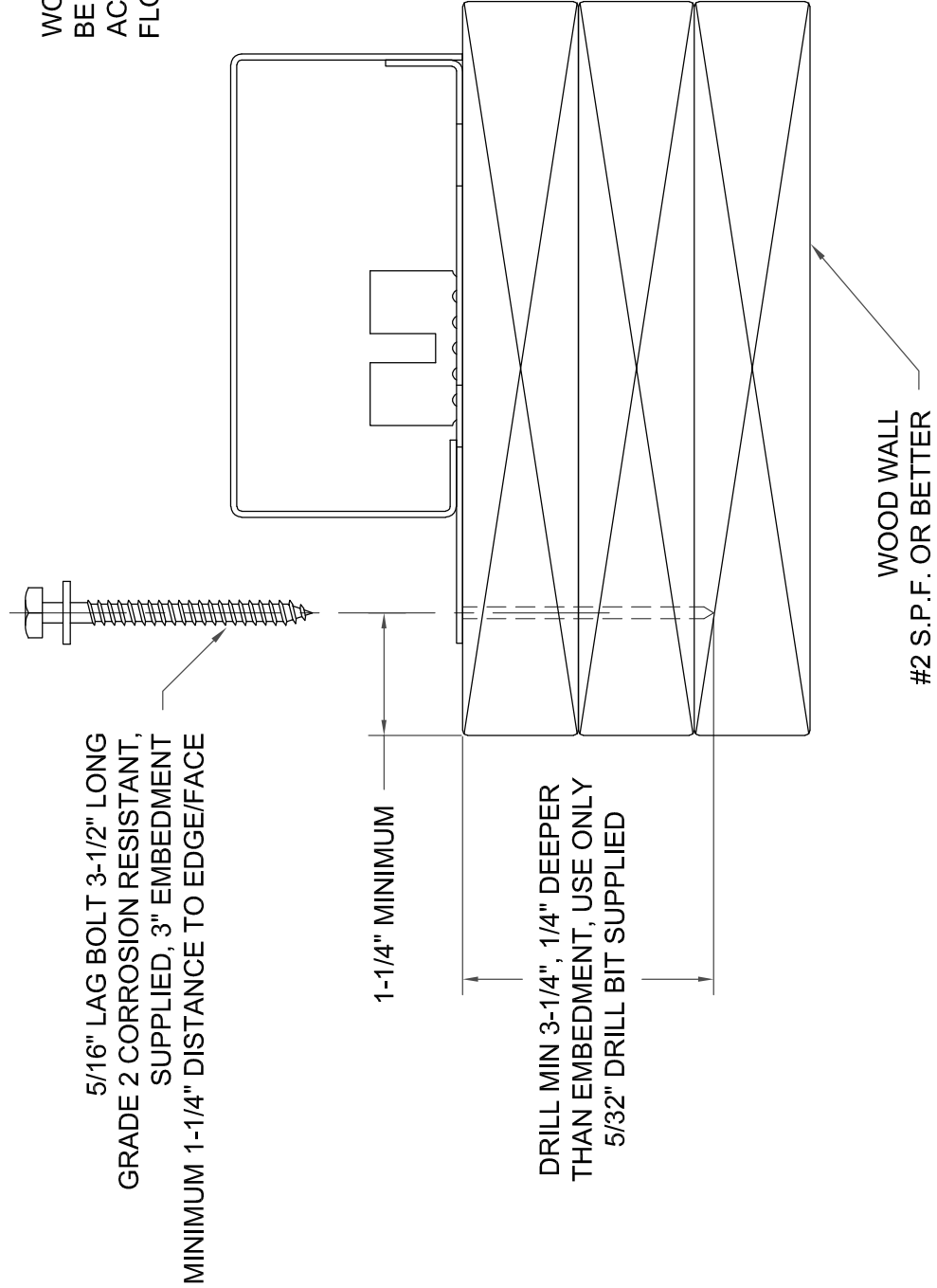


	E.F.BAVIS & ASSOC. INC. 201 GRANDIN RD. P.O.BOX 337 MAINEVILLE, OH. 45039 0337 PH 513-677-0500 FAX 513-677-0552		UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES DECIMALS: .XX +-.01; .XXX +-.005 FRACTIONS: + - 1/32; ANGLES: + - 30' REMOVE ALL BURRS AND SHARP EDGES TO R .02 OR .02 X .02 CHAMFER MAX.		3' FIXED WINDOW		MODEL 12103986		PAGE 14 OF 15	
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	E.F.BAVIS & ASSOC. INC.		REV. DATE:		COPYRIGHT 1986,2002 E.F.Bavis & Assoc. Inc.					

FASTENER INSTALLATION DETAIL: SILL, WOOD WALL, FIELD VERIFIED

WOOD FRAMED OPENING MUST
BE DESIGNED TO RESIST A
LATERAL LOAD OF 102 LB/FT
PERPENDICULAR TO THE FACE
OF WALL IN ORDER TO RESIST
A DESIGN PRESSURE OF 75 PSF

WOOD STUD FRAMING SHALL
BE DESIGNED IN
ACCORDANCE WITH THE
FLORIDA BUILDING CODE



	E.F.BAVIS & ASSOC. INC.		UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES DECIMALS: .XX +-.01; .XXX +-.005 FRACTIONS: + 1/32; ANGLES: +-.30' REMOVE ALL BURRS AND SHARP EDGES TO R.02 OR .02 X .02 CHAMFER MAX.		3' FIXED WINDOW		MODEL 12103986		PAGE 15 OF 15	
	201 GRANDIN RD. P.O.BOX 337 MAINEVILLE, OH. 45039 0337 PH 513-677-0500 FAX 513-677-0552		THIS DOCUMENTATION AND INFORMATION CONTAINED ARE THE SOLE PROPERTY OF E.F.BAVIS & ASSOC. INC. IT SHALL BE RETURNED UPON REQUEST AND SHALL NOT BE REPRODUCED IN WHOLE OR IN PART, OR DISCLOSED TO ANYONE ELSE, OR USED, WITHOUT WRITTEN CONSENT OF E.F.BAVIS & ASSOC. INC.				DWG. 3' WT-HUR		DATE CREATED: 10/27/14 MJC	
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FINISH CAULKING, FIELD VERIFIED

