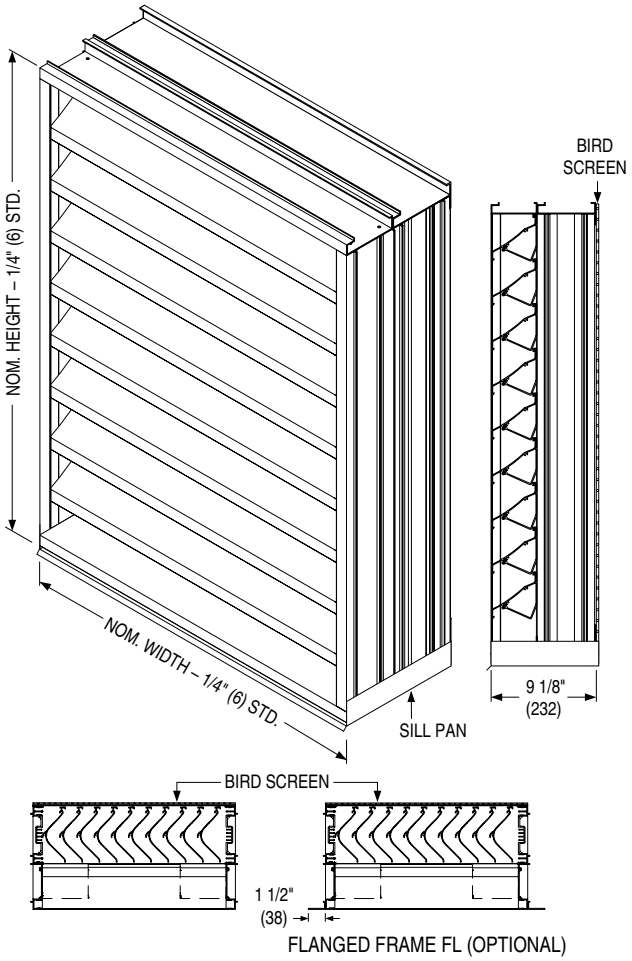
Nailor® Industries Inc.

EXTRUDED ALUMINUM STATIONARY HYBRID LOUVER
MIAMI-DADE QUALIFIED • FLORIDA PRODUCT APPROVED
HIGH VELOCITY WIND-DRIVEN RAIN AND IMPACT RESISTANT
9" (229) DEEP • HORIZONTAL AND VERTICAL BLADE
MODEL: 1609HM

QUALIFICATIONS:

- **Miami-Dade County 23-0823.05**
- **Florida Product Approval 41947.1**
- **Tested in accordance with: TAS-100A (Wind-Driven Rain Test), TAS-201 (Large Missile Impact Test), TAS-202 (Uniform Static Air Pressure Test), TAS-203 (Cyclic Wind Pressure Loading Test).**
- **AMCA 500-L (Wind-Driven Rain, Water Penetration, Air Performance).**
- **AMCA 540 (Wind-Borne Debris Impact Test [Enhanced "Level E" Protection]).**
- **AMCA 550 (High Velocity Wind-Driven Rain Resistance Test).**
- **Wind load rating +/– 160 PSF.**



STANDARD CONSTRUCTION:

FRAME:	**Front:** 4" (102) deep, Type 6063-T6 extruded aluminum, .080" (2.03) nominal wall thickness. Integral caulking slot provided. **Rear:** 5" (127) deep, Type 6063-T6 extruded aluminum, .080" (2.03) nominal wall thickness. Integral downspouts provided.
BLADES:	**Front:** Horizontal Type 6063-T6 extruded aluminum, .080" (2.03) nominal wall thickness, with reinforcing bosses. J style. Fixed at 37 degrees. **Rear:** Vertical Type 6063-T6 extruded aluminum, .060" (1.52) nominal wall thickness, with reinforcing bosses.
BLADE SPACING:	**Front:** Approx. 4" (102) on centers. **Rear:** Approx. 1 1/2" (38) on centers.
BLADE SUPPORT:	**Front:** Concealed type, factory installed on rear of louver on maximum 60" (1524) centers. **Rear:** 2.5" (64) strap every 60" (1524) or less in height.
SCREEN:	3/4" x .050 (19 x 1.3) expanded, flattened aluminum bird screen in removable frame, inside (rear) mount (adds approximately 3/8" [10] to louver depth).
SILL PAN:	Aluminum sill pan with end dams. (louver width undersized an additional 1/4" (6) to accommodate sill pan).
FINISH:	Mill.
MINIMUM SIZE:	12" W x 12" H (305 x 305).
MAXIMUM SINGLE SECTION SIZE:	60" W x 120" H (1524 x 3048). 50 sq. ft. (4.6 m^2). Larger louvers will require field assembly of smaller sections.
MAXIMUM SIZE:	Unlimited Width x 120" H (3048).

OPTIONS:

- ❑ **BSSS** Type 304 S. S. Bird Screen.
- ❑ **BSN** No Bird Screen.
- ❑ **ISSS** Type 304 S. S. Insect Screen.
- ❑ **ISA** Aluminum Insect Screen.
- ❑ **FL15** Flanged Frame, 1 1/2" (38).
- ❑ **FL20** Flanged Frame, 2" (51).
- ❑ Other: _____ .

OPTIONAL FINISHES:

- ❑ **PC3** Powder Coat AAMA 2603. Color: _____ .
- ❑ **PC4** High Performance Powder Coat AAMA 2604 (Equivalent to 50% Kynar®). Color: _____ .
- ❑ **PC5** Fluoropolymer Powder Coat AAMA 2605 (Equivalent to 70% Kynar®). Color: _____ .
- ❑ **PCC** Prime Coat.
- ❑ **AN04** Clear Anodized 204-R1.
- ❑ **AN15** Clear Anodized 215-R1.

SCHEDULE TYPE:	Page 1 of 3 Dimensions are in inches (mm).			
PROJECT:				
ENGINEER:	**DATE**	**B SERIES**	**SUPERSEDES**	**DRAWING NO.**
CONTRACTOR:	**4 - 12 - 24**	**1600M**	**NEW**	**1609HM**

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FREE AREA in Square Feet and Square Meters

Height in Inches and Meters	**Width in Inches and** Meters								
	12 0.30	**18** 0.46	**24** 0.61	**30** 0.76	**36** 0.91	**42** 1.07	**48** 1.22	**54** 1.37	**60** 1.52
12 0.30	**0.21** 0.02	**0.39** 0.04	**0.56** 0.05	**0.73** 0.07	**0.90** 0.08	**1.07** 0.10	**1.24** 0.12	**1.41** 0.13	**1.58** 0.15
18 0.46	**0.42** 0.04	**0.76** 0.07	**1.10** 0.10	**1.44** 0.13	**1.78** 0.17	**2.12** 0.20	**2.46** 0.23	**2.80** 0.26	**3.13** 0.29
24 0.61	**0.63** 0.06	**1.14** 0.11	**1.65** 0.15	**2.15** 0.20	**2.66** 0.25	**3.17** 0.29	**3.67** 0.34	**4.18** 0.39	**4.69** 0.44
30 0.76	**0.84** 0.08	**1.52** 0.14	**2.19** 0.20	**2.87** 0.27	**3.54** 0.33	**4.21** 0.39	**4.89** 0.45	**5.56** 0.52	**6.24** 0.58
36 0.36	**1.05** 0.10	**1.89** 0.18	**2.74** 0.25	**3.58** 0.33	**4.42** 0.41	**5.26** 0.49	**6.10** 0.57	**6.95** 0.65	**7.79** 0.72
42 1.07	**1.26** 0.12	**2.27** 0.21	**3.28** 0.30	**4.29** 0.40	**5.30** 0.49	**6.31** 0.59	**7.32** 0.68	**8.33** 0.77	**9.34** 0.87
48 1.22	**1.47** 0.14	**2.65** 0.25	**3.83** 0.36	**5.00** 0.46	**6.18** 0.57	**7.36** 0.68	**8.53** 0.79	**9.71** 0.90	**10.89** 1.01
54 1.37	**1.68** 0.16	**3.03** 0.28	**4.37** 0.41	**5.72** 0.53	**7.06** 0.66	**8.41** 0.78	**9.75** 0.91	**11.09** 1.03	**12.44** 1.16
60 1.52	**1.89** 0.18	**3.40** 0.32	**4.92** 0.46	**6.43** 0.60	**7.94** 0.74	**9.45** 0.88	**10.97** 1.02	**12.48** 1.16	**13.99** 1.30
66 1.68	**2.10** 0.20	**3.78** 0.35	**5.46** 0.51	**7.14** 0.66	**8.82** 0.82	**10.50** 0.98	**12.18** 1.13	**13.86** 1.29	**15.54** 1.44
72 1.83	**2.31** 0.21	**4.16** 0.39	**6.01** 0.56	**7.85** 0.73	**9.70** 0.90	**11.55** 1.07	**13.40** 1.24	**15.24** 1.42	**17.09** 1.59
78 1.98	**2.52** 0.23	**4.53** 0.42	**6.55** 0.61	**8.57** 0.80	**10.58** 0.98	**12.60** 1.17	**14.61** 1.36	**16.63** 1.54	**18.64** 1.73
84 2.13	**2.73** 0.25	**4.91** 0.46	**7.10** 0.66	**9.28** 0.86	**11.46** 1.06	**13.64** 1.27	**15.83** 1.47	**18.01** 1.67	**20.19** 1.88
90 2.29	**2.94** 0.27	**5.29** 0.49	**7.64** 0.71	**9.99** 0.93	**12.34** 1.15	**14.69** 1.36	**17.04** 1.58	**19.39** 1.80	**21.75** 2.02
96 2.44	**3.15** 0.29	**5.67** 0.53	**8.19** 0.76	**10.70** 0.99	**13.22** 1.23	**15.74** 1.46	**18.26** 1.70	**20.78** 1.93	**23.30** 2.16
102 2.59	**3.36** 0.31	**6.04** 0.56	**8.73** 0.81	**11.42** 1.06	**14.10** 1.31	**16.79** 1.56	**19.47** 1.81	**22.16** 2.06	**24.85** 2.31
108 2.74	**3.57** 0.33	**6.42** 0.60	**9.27** 0.86	**12.13** 1.13	**14.98** 1.39	**17.84** 1.66	**20.69** 1.92	**23.54** 2.19	**26.40** 2.45
114 2.90	**3.78** 0.35	**6.80** 0.63	**9.82** 0.91	**12.84** 1.19	**15.86** 1.47	**18.88** 1.75	**21.91** 2.04	**24.93** 2.32	**27.95** 2.60
120 3.05	**3.99** 0.37	**7.18** 0.67	**10.36** 0.96	**13.55** 1.26	**16.74** 1.56	**19.93** 1.85	**23.12** 2.15	**26.31** 2.44	**29.50** 2.74

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9" (229) DEEP • HORIZONTAL AND VERTICAL BLADE
PERFORMANCE DATA
MODEL: 1609HM

AIRFLOW/WATER PENETRATION DATA
for 48" x 48" (1219 x 1219) Louver Size

Free Area %		53%
Free Area sq. ft. (sq. m.)		8.53 (0.79)
INTAKE	Free Area Velocity at Point of Beginning Water Penetration at .01 oz./sq. ft. (3 ml/sq. m) (15 min. test duration)	1011 fpm (308 m/min.)
	Air Volume at 1011 fpm Free Area Velocity	8,624 cfm (4070 l/s)
	Pressure Drop @ 1011 fpm	.34 in. w.g. (85 Pa)

NOTE: To minimize water penetration when sizing intake louvers, select a Free Area Velocity that is **below** the beginning point of water penetration.

WIND DRIVEN RAIN PERFORMANCE

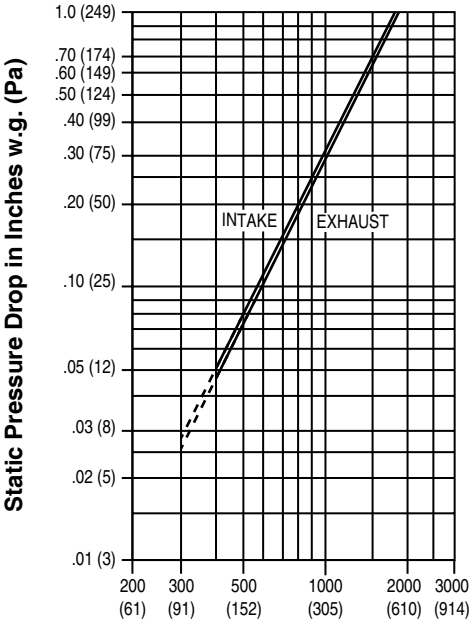
Core Ventilation	0	99	198	297	393	494	590	690	789	889	985
Rate in fpm (m/s)	(0.00)	(0.50)	(1.01)	(1.51)	(2.00)	(2.51)	(3.00)	(3.51)	(4.01)	(4.52)	(5.00)
Free Area Ventilation	0	174	348	522	690	868	1036	1212	1386	1561	1730
Rate in fpm (m/s)	(0.00)	(0.88)	(1.77)	(2.65)	(3.51)	(4.41)	(5.26)	(6.16)	(7.04)	(7.93)	(8.79)
Effectiveness Ratio (%)	100	100	100	100	100	100	100	100	100	100	99.9
Penetration Class	A	A	A	A	A	A	A	A	A	A	A

Test was based on a 39.375" x 39.375" (1.0 m x 1.0 m) core area louver tested at a rainfall rate of 3" per hour (76 mm/hour) with a wind velocity of **29 mph (13 m/s).**
DISCHARGE LOSS COEFFICIENT CLASS (INTAKE): 3. (Discharge Loss Coefficient Classification is as follows: 1=0.4 and above, 2=0.3 to 0.399, 3 = 0.2 to 0.299, 4 = 0.199 and below.)

Core Ventilation	0	96	197	288	396	482	593	691	793	894	988
Rate in fpm (m/s)	(0.00)	(0.49)	(1.00)	(1.46)	(2.01)	(2.45)	(3.01)	(3.51)	(4.03)	(4.54)	(5.02)
Free Area Ventilation	0	169	346	506	696	847	1042	1214	1393	1570	1735
Rate in fpm (m/s)	(0.00)	(0.86)	(1.76)	(2.57)	(3.54)	(4.30)	(5.29)	(6.17)	(7.08)	(7.98)	(8.81)
Effectiveness Ratio (%)	100	100	100	100	100	100	99.8	99.6	99.1	98.5	97.9
Penetration Class	A	A	A	A	A	A	A	A	A	B	B

Test was based on a 39.375" x 39.375" (1.0 m x 1.0 m) core area louver tested at a rainfall rate of 8" per hour (203 mm/hour) with a wind velocity of **50 mph (22 m/s).**
DISCHARGE LOSS COEFFICIENT CLASS (INTAKE): 3. (Discharge Loss Coefficient Classification is as follows: 1=0.4 and above, 2=0.3 to 0.399, 3 = 0.2 to 0.299, 4 = 0.199 and below.)

PRESSURE DROP



Air Velocity in Feet (Meters) Per Minute Through Free Area

Louver test size: 48" x 48" (1219 x 1219 mm).
Standard air density @ 0.075 lbs/ft³.
Tested to AMCA Fig. 5.5 – 6.5.

amca WORLDWIDE CERTIFIED RATINGS — WATER PENETRATION, AIR PERFORMANCE, WIND DRIVEN RAIN — AIR MOVEMENT AND CONTROL ASSOCIATION INTERNATIONAL, INC. — www.amca.org

Nailor Industries Inc. certifies that the Model 1609HM shown herein is licensed to bear the AMCA Certified Ratings Program seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Program seal applies to air performance, water penetration and wind driven rain performance ratings.

Louvers were tested in accordance with AMCA Standard 500-L.

amca INTERNATIONAL LISTED

HIGH VELOCITY RAIN RESISTANT WITH BLADES FULLY OPEN AND IMPACT RESISTANT LOUVER
Enhanced Protection Level E
See www.AMCA.org for all certified or listed products

This label does not signify AMCA airflow performance certification.

Nailor Industries Inc. certifies that the 1609HM shown herein is approved to bear the AMCA International Listing Label. The ratings shown are based on tests and procedures performed in accordance with AMCA publications and comply with the requirements of the AMCA International Listing Label program. The AMCA International Listing Label applies to pressure cycle tested wind borne debris impact resistant louvers rated for 'Enhanced Protection' and +/- 160PSF with a minimum blade span of 12 in. (305mm) and a maximum unsupported blade span of 59 in. (1499 mm) and to High Velocity Wind-Driven Rain Resistant Louvers tested in the fully open position that permits airflow through a louver.

Dimensions are in inches (mm).

SCHEDULE TYPE:				
PROJECT:				
ENGINEER:	DATE	B SERIES	SUPERSEDES	DRAWING NO.
CONTRACTOR:	4 - 12 - 24	1600M	NEW	1609HM

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/building

DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

NOTICE OF ACCEPTANCE (NOA)

Nailor Industries Inc.
4714 Winfield Road
Houston, TX 77039

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: Model 1609HM Aluminum Louver System

APPROVAL DOCUMENT: Drawing No. **1609HM-NOA**, titled "BOM, Notes, Anchors, Elevation, Mull Details, Assembly Details, Head/Sill, Jamb, Profiles", sheets 1 through 7 of 7, prepared by manufacturer, dated 05/27/2021, signed and sealed by Lucas A. Turner, P.E. on 03/07/2024, bearing the Miami-Dade County Product Control Approval stamp with the Notice of Acceptance number and expiration date by the Miami-Dade County Product Control Section.

MISSILE IMPACT RATING: Large and Small Missile Impact Resistant

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

LIMITATION: This system is to be installed in a location where the room behind the louver is designed to drain water penetrating into the room, and the room will house water resistant/waterproof equipment, components, or supplies.

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 consists of this page 1 and evidence page E-1, as well as approval document mentioned above.

The submitted documentation was reviewed by **Carlos M. Utrera, P.E.**

MIAMI-DADE COUNTY APPROVED

05/09/24

NOA No. 23-0823.05
Expiration Date: April 4, 2029
Approval Date: April 4, 2024

Nailor Industries Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS

1. Drawing No. **1609HM-NOA**, titled "BOM, Notes, Anchors, Elevation, Mull Details, Assembly Details, Head/Sill, Jamb, Profiles", sheets 1 through 7 of 7, prepared by manufacturer, dated 05/27/2021, signed and sealed by Lucas A. Turner, P.E. on 03/07/2024.

B. TESTS

1. Test reports on: 1) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94
2) Large Missile Impact Test per FBC, TAS 201-94
3) Cyclic Wind Pressure Loading per FBC, TAS 203-94
along with installation diagram of Model 1609HM Louver Systems, prepared by Intertek, Test Report No. **K4977.01-801-18-r1**, dated 02/04/2022, revised on 05/23/2022, signed and sealed by Tyler Westerling, P.E.

2. Test Report on Test Method for Louvers Impacted by Wind Borne Debris per ANSI/AMCA 540-13 on a Model 1609HM Aluminum Louver Systems, prepared by Intertek, Test Report No. **K4975.01-801-18-R2,** dated 06/28/2021, revised on 01/04/2022, signed and sealed by Tyler Westerling, P.E.

3. Test Report on High Velocity Wind Driven Rain Resistance per ANSI/AMCA 550-15 on a Model 1609HM Aluminum Louver System, prepared by Intertek, Test Report No. **K4976.01-801-44-R2,** dated 05/06/2021, revised on 01/21/2022, signed and sealed by Tyler Westerling, P.E.

C. CALCULATIONS

1. Louver structural calculations, dated 08/09/2023, prepared by Turner Engineering Consulting, Inc., signed and sealed by Lucas A. Turner, 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 code conformance to the **FBC, 7th Edition (2020)** and **FBC, 8th Edition (2023),** issued by Turner Engineering Consulting, Inc., dated 08/09/2023, signed and sealed by Lucas A. Turner, P.E.

2. Statement letter of no financial interest issued by Turner Engineering Consulting, Inc., dated 08/09/2023, signed and sealed by Lucas A. Turner, P.E.

Carlos M. Utrera, P.E.
Product Control Examiner
NOA No. 23-0823.05
Expiration Date: April 4, 2029
Approval Date: April 4, 2024

GENERAL NOTES

1. THE 1609HM LOUVER SYSTEM SHOWN IN THE CONFIGURATIONS HEREIN IS DESIGNED AND MANUFACTURED TO COMPLY WITH THE REQUIREMENTS OF THE 8TH EDITION (2023) FLORIDA BUILDING CODE INCLUDING THE HIGH VELOCITY HURRICANE ZONE PROVISIONS, FOR APPLICATIONS WITH DESIGN PRESSURE (ASD) REQUIREMENTS OF 160 PSF OR LESS.
2. THIS PRODUCT HAS BEEN TESTED IN ACCORDANCE WITH TAS 100A, TAS 201, TAS 202, TAS 203, AMCA 540 AND AMCA 550. FOR FULL PRODUCT TESTING DETAILS SEE INTERTEK TEST REPORTS K4975.01-801-18-R2, K4976.01-801-44-R2, AND K4977.01-801-18-R1.
3. THIS PRODUCT AS SHOWN IN THIS DRAWING IS MISSILE LEVEL E (9 LB 2X4, 80 FPS) LARGE MISSILE IMPACT RESISTANT, AND DOES NOT REQUIRE THE USE OF IMPACT PROTECTIVE DEVICES (SHUTTERS) IN WINDBORNE DEBRIS REGIONS.
4. THIS LOUVER SYSTEM HAS BEEN TESTED IN ACCORDANCE WITH TAS 100A TO PREVENT WIND-DRIVEN RAIN FROM PENETRATING THE SPACE BEHIND THE LOUVER FOR WIND SPEEDS UP TO 110 MPH AND INSTALLATION IN HEIGHTS UP TO 33 FT.
5. THIS LOUVER SYSTEM IS NON-BEARING AND IS NOT DESIGNED TO WITHSTAND BUILDING DEAD LOADS.
6. THE 4/3 ALLOWABLE STRESS INCREASE FACTOR (SHORT-TERM INCREASE FACTOR) HAS NOT BEEN USED IN THE ANCHOR ANALYSIS FOR THIS SYSTEM. THE 1.6 Cd FACTOR WAS USED IN THE ANALYSIS OF ANCHORAGE INTO WOOD SUBSTRATE.
7. THE OPENING SUBSTRATE MATERIALS (FRAMING, MASONRY, BUCKS) AND ATTACHMENT OF BUCKS TO THE SUBSTRATE ARE BY OTHERS AND SHALL BE VERIFIED BY THE ARCHITECT OR ENGINEER OF RECORD OR AS APPROVED BY THE AUTHORITY HAVING JURISDICTION (AHJ). BUCKING, OPENINGS, & BUCKING FASTENERS MUST BE PROPERLY DESIGNED & INSTALLED BY OTHERS IN ACCORDANCE WITH THE FBC TO TRANSFER SUPERIMPOSED LOADS TO THE STRUCTURE.
8. DISSIMILAR MATERIALS THAT COME INTO CONTACT SHALL BE COATED OR OTHERWISE PROTECTED TO PREVENT GALVANIC REACTIONS. WOOD BUCKS, IF USED, SHALL BE PRESSURE TREATED, WITH EITHER A TREATMENT OR COATING COMPATIBLE WITH THIS PRODUCT.
9. ANCHORAGE NOTES: INSTALL PRODUCTS WITH MAXIMUM SHIM GAP, MINIMUM EDGE DISTANCE AND EMBEDMENT, AND WITH FASTENER TYPE AS SHOWN IN THE DETAILS AND AS INDICATED IN TABLE 1 FOR THE APPROPRIATE SUBSTRATE, OR AS APPROVED, SIGNED, AND SEALED BY A FLORIDA-REGISTERED PROFESSIONAL ENGINEER ON A SITE-SPECIFIC BASIS. ALL ANCHORS USED SHALL BE OF A MATERIAL OR HAVE A COATING COMPATIBLE WITH THE OPENING SUBSTRATE AND ALL OTHER LOUVER MATERIALS. INSTALL ONE ANCHOR AT EACH LOCATION SHOWN IN THE ELEVATION. INSTALL SHIMS AT EACH ANCHOR LOCATION WHERE A GAP OF 1/16" OR GREATER EXISTS BETWEEN PRODUCT FRAME AND SUBSTRATE. SHIMS SHALL BE LOAD-BEARING (PLASTIC OR METALLIC) AND CAPABLE OF TRANSFERRING LOADS TO SUBSTRATE. SPECIFIED ANCHOR EMBEDMENT TO SUBSTRATE SHALL BE BEYOND WALL FINISH OR STUCCO.

TABLE 1. INSTALLATION ANCHOR REQUIREMENTS (NOTE: THIS TABLE APPLIES TO ANCHORAGE OF BOTH 1.5X2 AND 5X6 ANGLES)

ANCHOR ID	OPENING SUBSTRATE	ANCHOR TO OPENING FASTENER TYPE	MINIMUM EMBEDMENT	MINIMUM EDGE DISTANCE	MAX. O.C. DISTANCE, ATTACHMENT OF 1.5X2X1/8 ANGLE	MAX. O.C. DISTANCE, ATTACHMENT OF 5X6X3/8 ANGLE
A	SOLID UNCRACKED CONCRETE (4000 PSI MIN.)	3/8" DEWALT COATED CARBON STEEL SCREW-BOLT+	2 1/2"	1 1/2"	3 1/4"	9"
B	GROUT- FILLED CMU (ASTM C-90 WITH 1,500 PSI MIN. GROUT)	3/8" DEWALT COATED CARBON STEEL SCREW-BOLT+	3 1/4"	1 1/2"	3 1/4"	9"
C	1/4" THICK MIN. A36 MIN. STEEL	3/8"-16 BOLT, 300 SERIES COND. CW SS (65ksi MIN. YIELD)	1/4"	9/16"	3 1/4"	9"
D	SOUTHERN PINE (SG = 0.55 MIN.)	3/8" LAG SCREW, 300 SERIES COND. CW SS (65ksi MIN. YIELD)	3"	1 1/2"	3 1/4"	5"

TABLE OF CONTENTS

BILL OF MATERIALS, MISCELLANEOUS COMPONENTS

1	C6-189	SCREW, MACHINE, HW, #10-24 X 1 1/2,
2	C6-192	SCREW, MACHINE, HEX, #10 X 1 1/2,
3	C6-193	SCREWM METAL, HEX, #14 X 1 1/2,
4	C6-198	SCREW, MTL, HEX, #8 X 3/4,
5	-	SEALANT & BACKER ROD
6	-	3/8 NYLON INSERT LOCKNUT
7	-	3/8 COMM'L FLAT WASHER
8	-	3/8-16 X 1 HEX CAP SCREW 18-8 SS
9	-	INSTALL ANCHOR, SEE TABLE 1, SHEET 1

BILL OF MATERIALS, 6063-T6 ALUMINUM COMPONENTS

ITEM	INTERNAL ID	DESCRIPTION
10	C6-144	1604 HD HEAD/SILL FRAME
20	C6-146	1604 HD JAMB FRAME
30	C6-215A	1604 J BLADE
40	C6-216A	BLADE BRACE
50	C6-119	1605WD HEAD/SILL
60	C6-199	1605WDF JAMB FRAME
70	C6-203	1605 WD BLADE
80	XX-XXX	BAFFLE
90	XX-XXX	JAMB BLOCK OFF
100	XX-XXX	SILL BLOCKOFF
110	C6-179	MULLION BAR
120	C6-133	4 in CHANNEL FRAME
130	XX-XXX	BLANK OFF (0.125" THICK 5052-H32 ALUM.)
140	C6-173	MULLION COVER
150	C6-161B	3 x 6 x 1/4 ALUM ANGLE (CONT)
160	C6-176	1 1/2 x 2 x 1/8 ANGLE (CONT)
170	XX-XXX	5 x 6 x 3/8 ALUM WALL ANGLE (CONT)

PRODUCT APPROVED
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NOA-No. 23-0823.05
Approval Date 04/04/2024
By
Miami-Dade Product Control

LUCAS A. TURNER LICENSE No. 58201 STATE OF FLORIDA PROFESSIONAL ENGINEER

3/7/2024
LUCAS TURNER
FL PE 58201
TURNER ENGINEERING & CONSULTING, INC.,
2428 OLD NATCHEZ TRACE TRL.
CAMDEN, TN, 38320
PH 941-380-1574

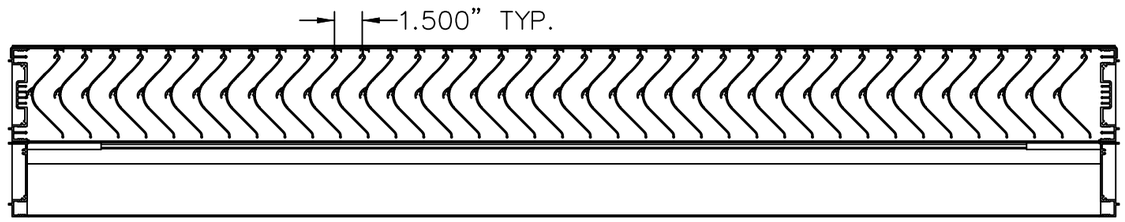
www.nailor.com

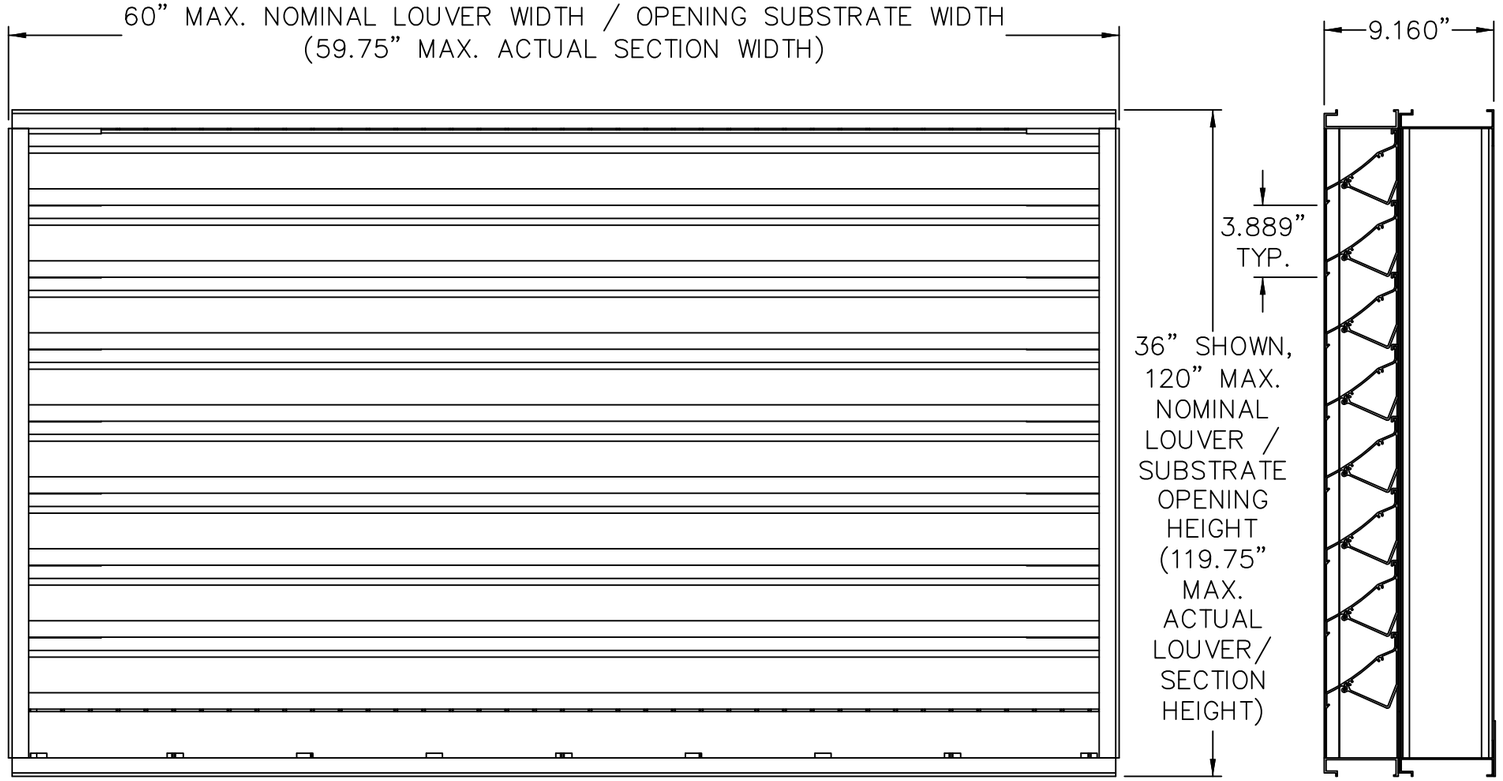
Nailor Industries Inc.
4714 Winfield Road
Houston, TX 77039
TEL: 281-590-1172
FAX: 281-590-3086

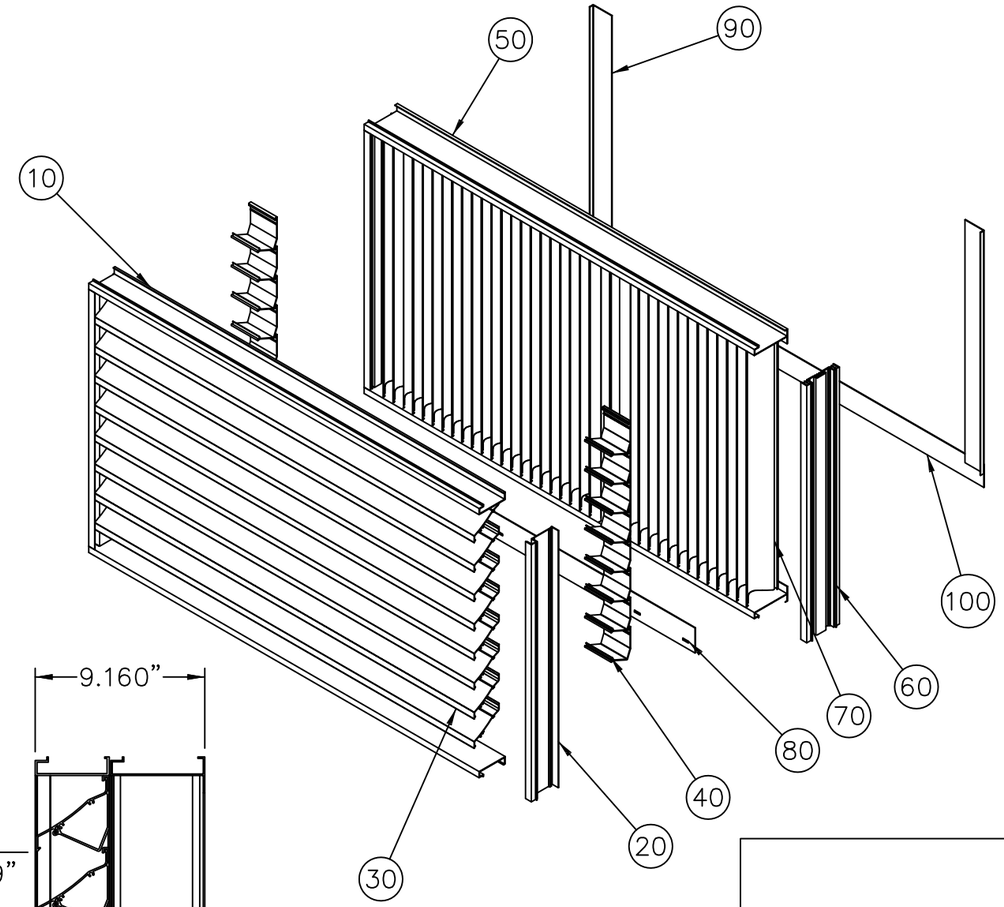
REV	BY	DESCRIPTION	DATE

DWN BY: fcortinas | SCALE: NTS
DATE: 5/27/2021 | SHEET: 1 OF 7
SHEET DESCRIPTION: BOM, NOTES, ANCHORS | REV 0
DWG: 1609HM-NOA

TYPICAL ASSEMBLY, SINGLE LOUVER SECTION







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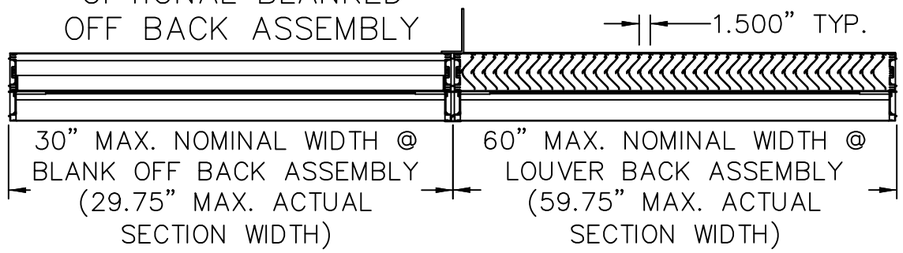
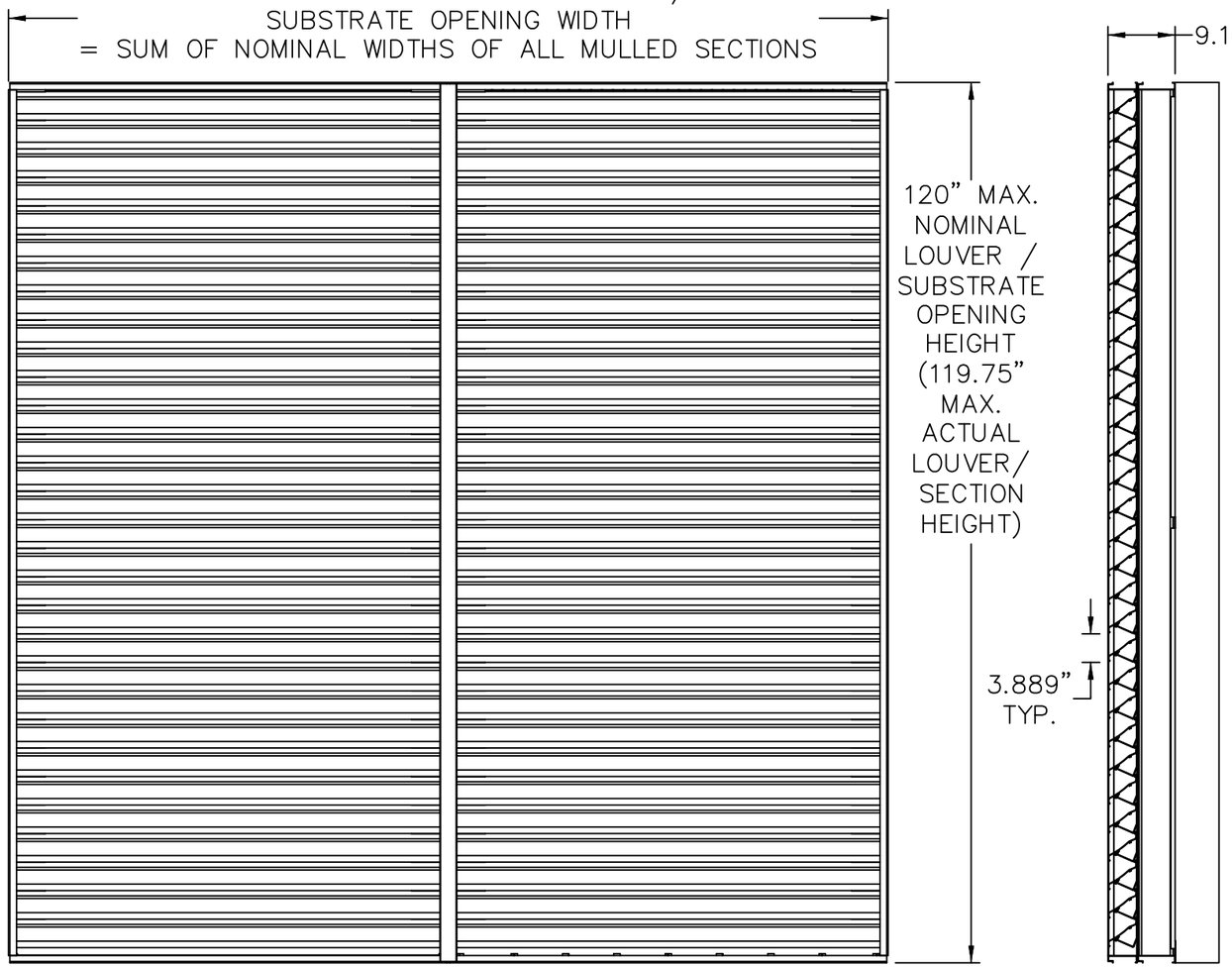
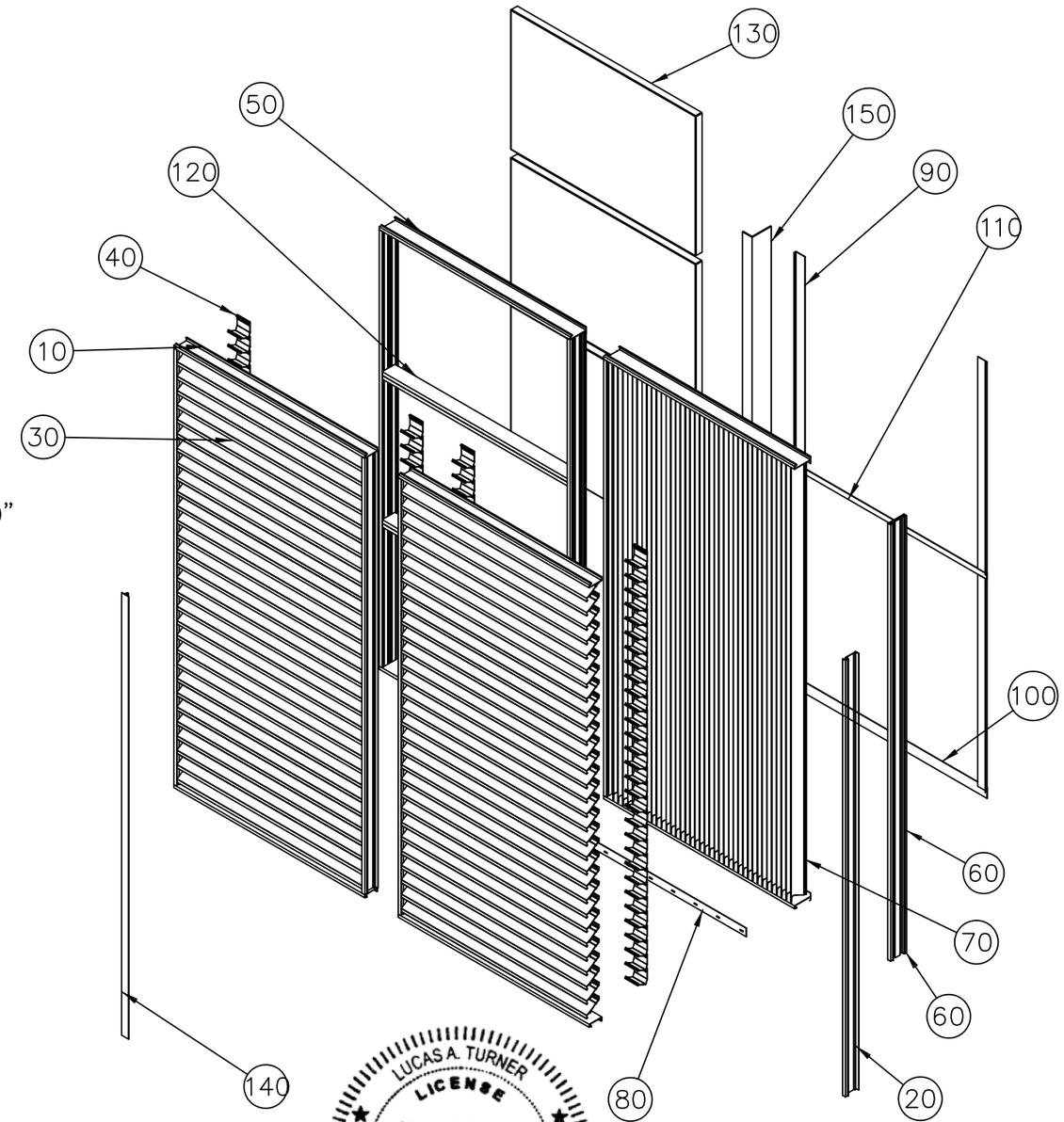
REV	BY	DESCRIPTION	DATE

DWN BY: fcortinas	SCALE: NTS
DATE: 5/27/2021	SHEET: 2 OF 7
SHEET DESCRIPTION: 1609HM 60.00 X 36.00	REV 0
DWG: 1609HM-NOA	

TYPICAL ASSEMBLY, MULLED LOUVERS (TWO LOUVER SECTIONS SHOWN, BUT UNLIMITED SECTIONS MAY BE MULLED)







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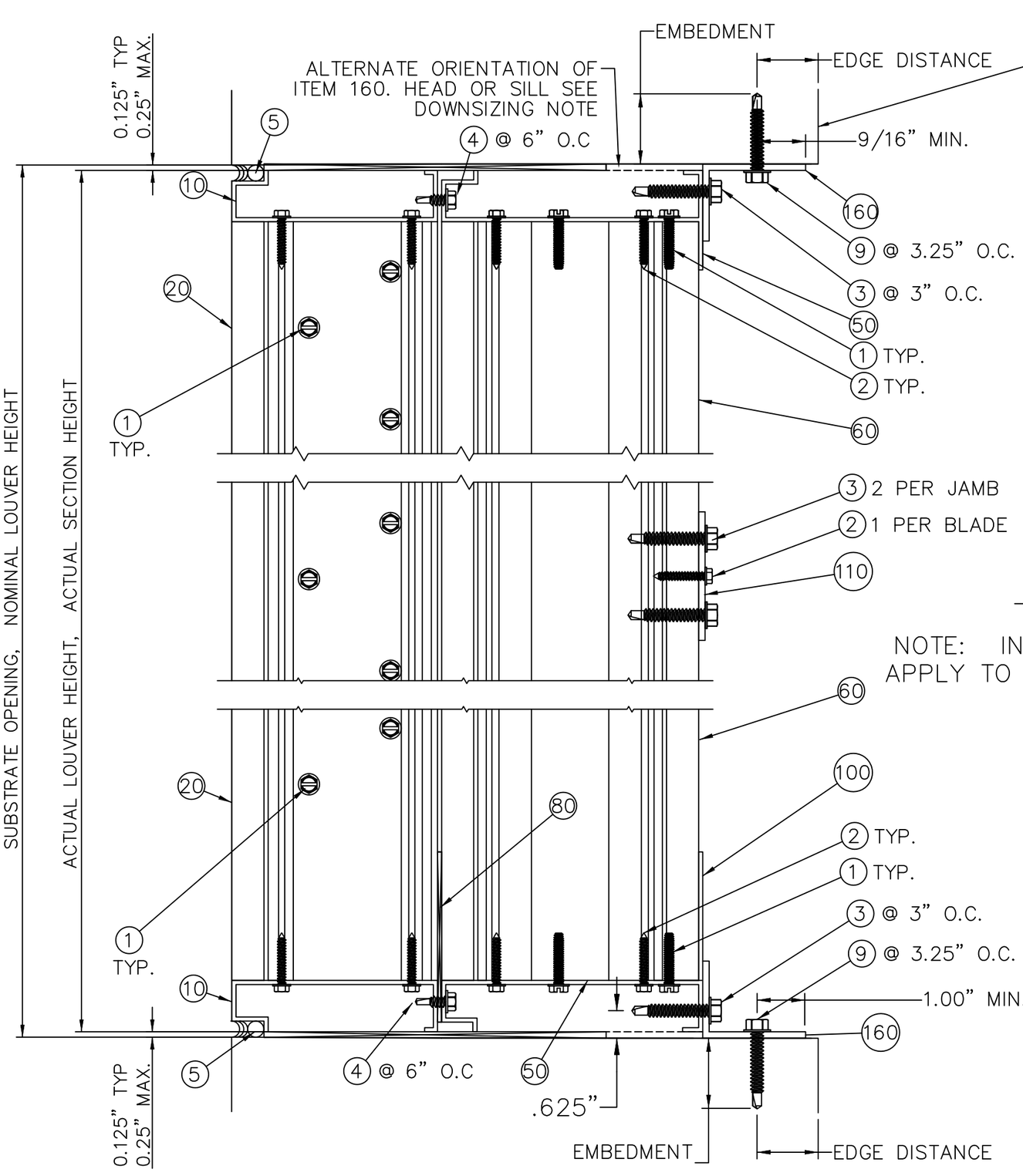
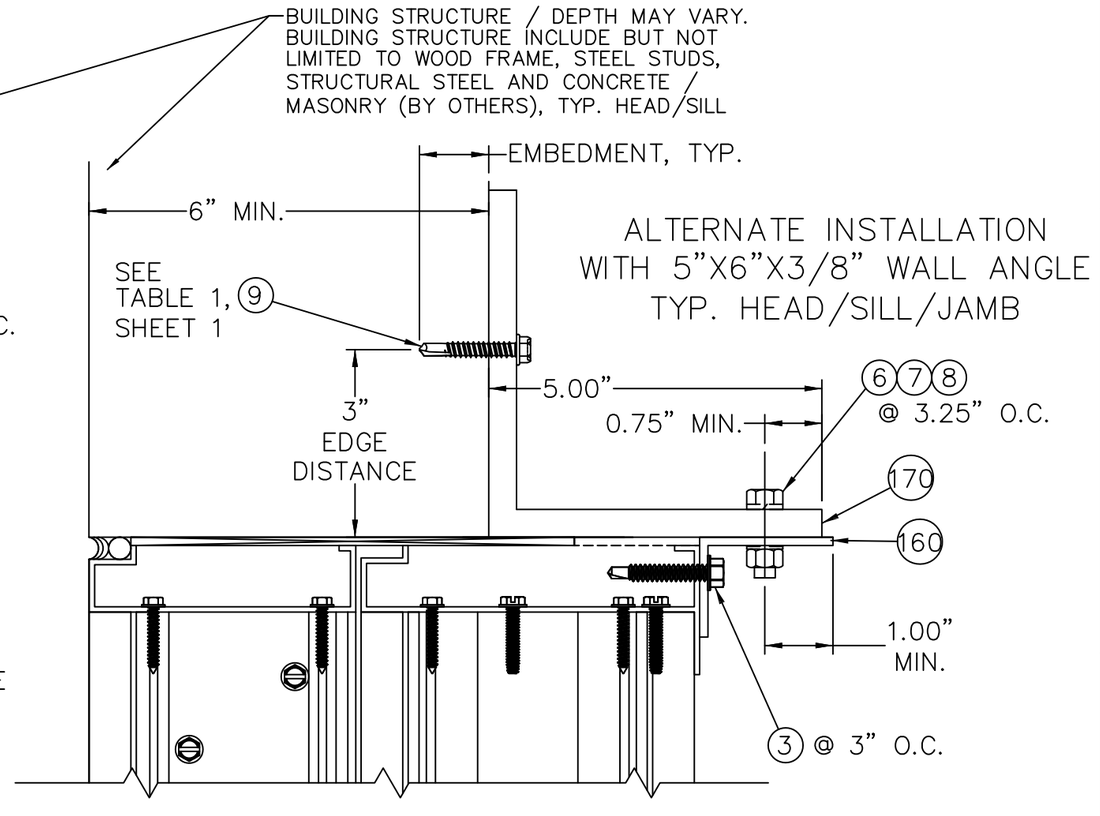
REV	BY	DESCRIPTION	DATE

DWN BY: fcortinas	SCALE: NTS	
DATE: 5/27/2021	SHEET: 3 OF 7	
SHEET DESCRIP.: 1609HM 120.00 X 120.00	REV 0	
DWG: 1609HM–NOA		





NOTE: INSTALLATION DETAILS SHOWN THIS SHEET APPLY TO BOTH LOUVER AND BLANK OFF SECTIONS

DOWNSIZING NOTE:
TO ALLOW FOR SUBSTRATE ANCHOR HEAD CLEARANCE, LOUVER HEIGHT DOWNSIZING (UNDERCUT) OF UP TO 0.25 TOTAL PER END (0.50 OVERALL TOTAL) IS ALLOWABLE. DOWNSIZING OF 0.125 PER END (.0.25 OVERALL TOTAL) FROM ACTUAL HEIGHT IS STANDARD. ONLY ENDS WITH ALTERNATE ANCHOR ORIENTATION MAY REQUIRE ADDITIONAL DOWNSIZING, BUT THE 0.125 STANDARD DOWNSIZING SHOULD ALLOW FOR ALTERNATE ANCHOR ORIENTATION SETUP CLEARANCES. THERE IS NO NEED FOR ADDITIONAL DOWNSIZING AT THE JAMBS WHEN USING ALTERNATE ANCHOR ORIENTAION. CONSULT YOUR LOCAL REP OR THE MANUFACTURER IF ASSISTANCE IS NEEDED FOR PROPER DOWNSIZING FOR YOUR APPLICATION.

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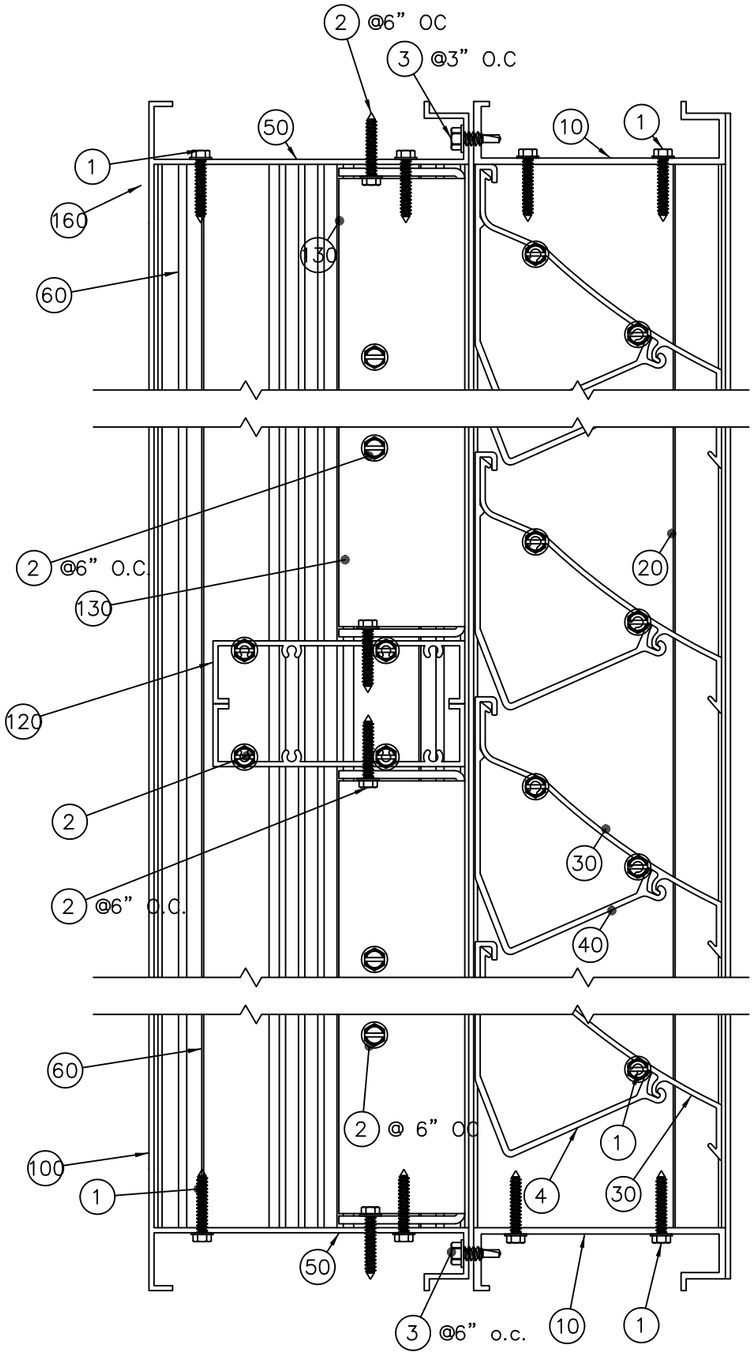
REV	BY	DESCRIPTION	DATE

DWN BY: fcortinas	SCALE: NTS
DATE: 5/27/2021	SHEET: 4 OF 7
SHEET DESCRIP.: HEAD/SILL SECTION VIEWS	REV 0
DWG: 1609HM-NOA	



EXT.

BLANK OFF VERTICAL SECTION
(FOR INSTALLATION DETAILS SEE SHEET 4)

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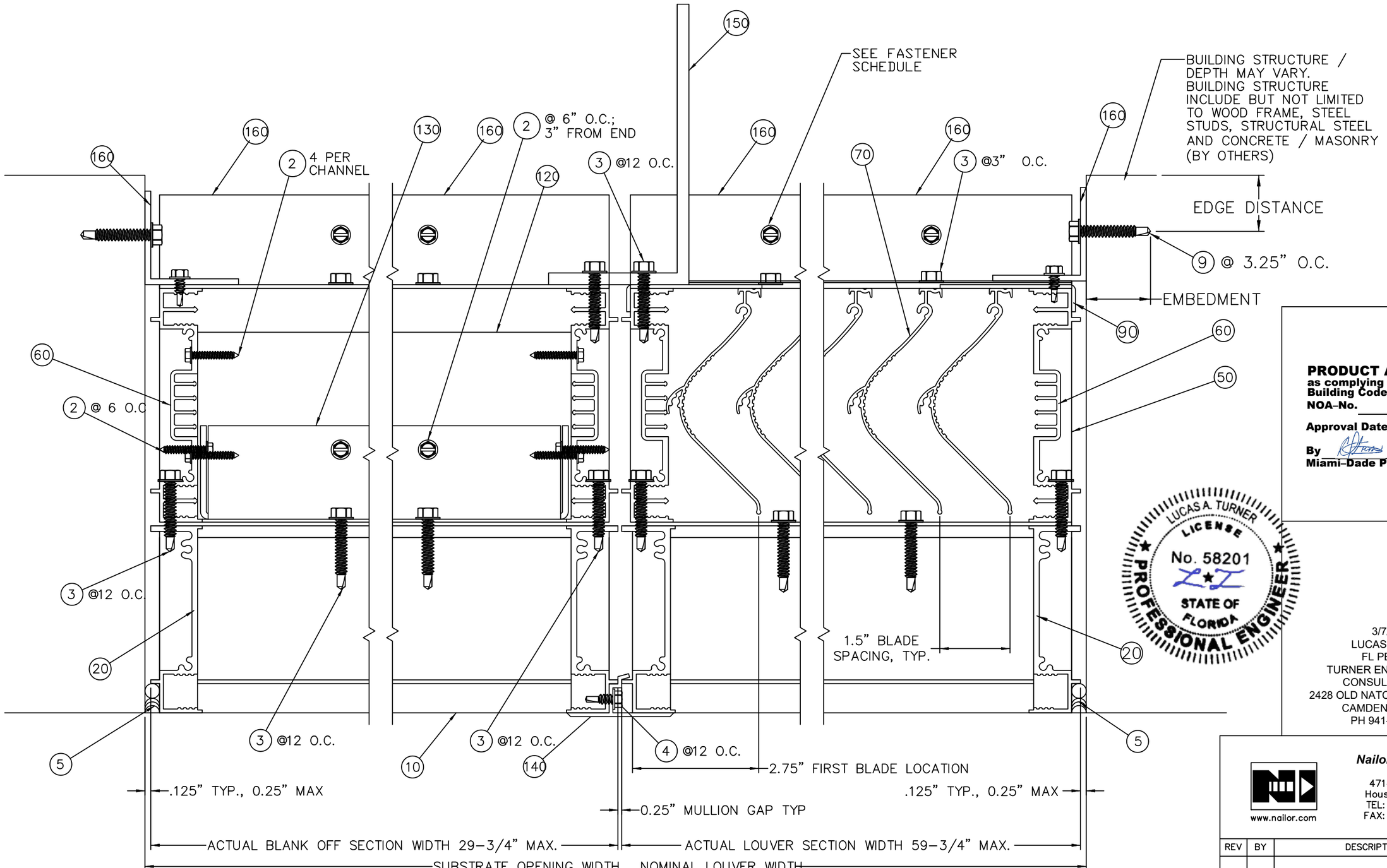
REV	BY	DESCRIPTION	DATE

DWN BY: fcortinas	SCALE: NTS
DATE: 5/27/2021	SHEET: 5 OF 7
SHEET DESCRIP.: HEAD/SILL SECTION VIEWS	REV 0
DWG: 1609HM-NOA	



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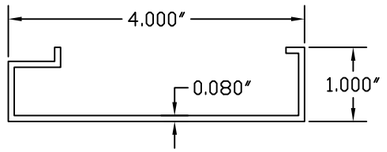
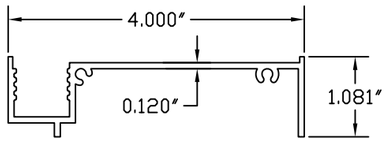
REV	BY	DESCRIPTION	DATE

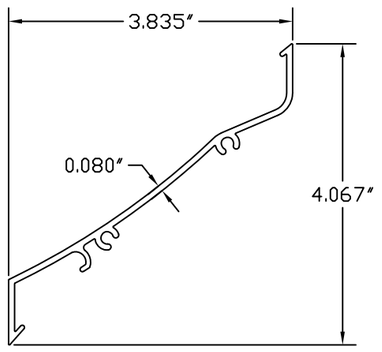
DWN BY: fcortinas	SCALE: NTS
DATE: 5/27/2021	SHEET: 6 OF 7
SHEET DESCRIPTION: TOP SECTION VIEW	REV 0
DWG: 1609HM-NOA	



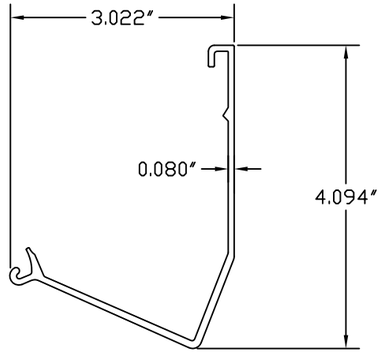
10 1604 HD HEAD/SILL FRAME



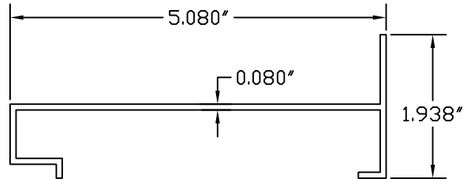
20 1604 HD JAMB FRAME



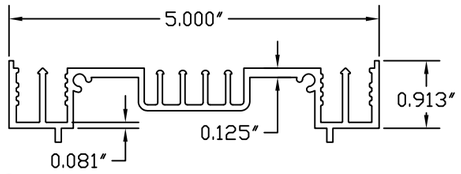
30 1604J BLADE



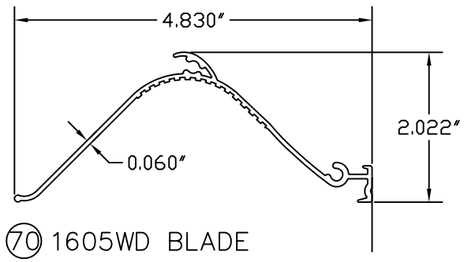
40 BLADE BRACE



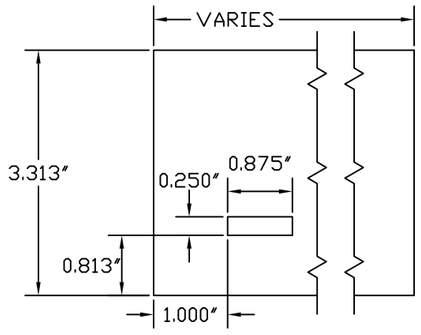
50 1605WD HEAD/SILL



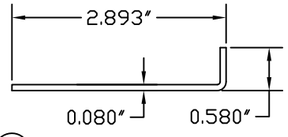
60 1605WDF JAMB FRAME



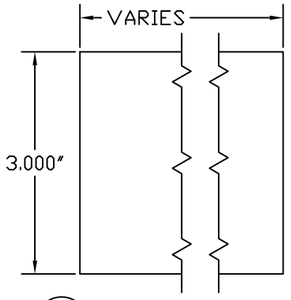
70 1605WD BLADE



80 BAFFLE (0.093" THICK)

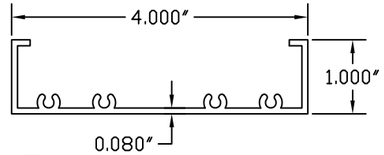


90 JAMB BLOCK OFF

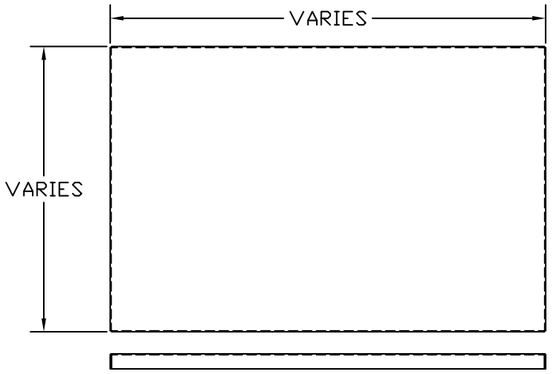


100 SILL BLOCKOFF

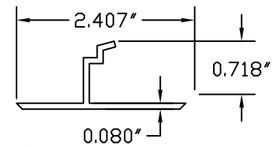
110 MULLION BAR



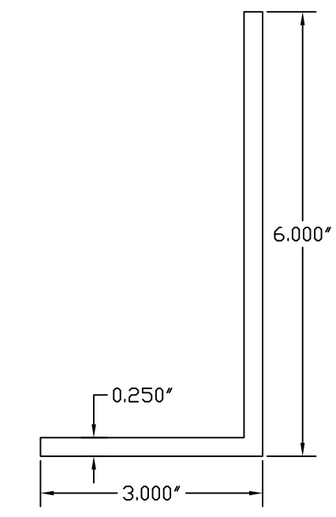
120 4" CHANNEL FRAME



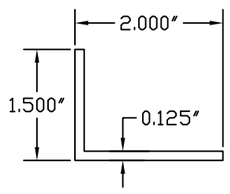
130 BLANKOFF (0.125" THICK)



140 MULLION COVER



150 3X6 ALUM. ANGLE



160 1.5X2X1/8 ANGLE MOUNT

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REV	BY	DESCRIPTION	DATE

DWN BY: fcortinas	SCALE: NTS
DATE: 5/27/2021	SHEET: 7 OF 7
SHEET DESCRIPTION: PROFILES	REV 0
DWG: 1609HM-NOA	