

United Enertech Holdings, LLC 3005 South Hickory Street Chattanooga, TN 37407

**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 FL-D-6 Aluminum Louver System**

**APPROVAL DOCUMENT:** Drawing No. **20-207**, titled "Aluminum Louver System Model FL-D-6, sheets 1 through 16 of 16, dated 07/21/2020, prepared by Tilteco, Inc, signed and sealed by Walter A. Tillit, Jr., P.E., bearing the Miami-Dade County Product Control revision stamp with the Notice of Acceptance number and expiration date by the Miami-Dade County Product Control Section.

### MISSILE IMPACT RATING: Large and Small Missile Impact Resistant

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

**LIMITATION:** This louver has not been evaluated for compliance with the impact testing standard ANSI/AMCA 540.

**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 **renews** and **revises NOA # 20-0115.04** and consists of this page 1 and evidence pages E-1, E-2, E-3 and E-4, as well as approval document mentioned above.

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



Atuns

NOA No. 20-0901.02 Expiration Date: January 17, 2026 Approval Date: November 25, 2020 Page 1

### 1. EVIDENCE SUBMITTED UNDER PREVIOUS NOA's

### A. DRAWINGS "Submitted under NOA # 15-0420.04"

1. Drawing No. 15-025, titled "Aluminum Louver System Model FL-D-6, sheets 1 through 15 of 15, dated 03/16/2015, prepared by Tilteco, Inc, signed and sealed by Walter A. Tillit, Jr., P.E. on 03/31/2015.

### B. TESTS "Submitted under NOA # 11-0104.03"

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 marked-up drawings and installation diagram of a Model FLD-4 Aluminum Louver System, prepared by American Test Lab of South Florida, Test Report No. **1207.01-10**, dated 12/22/2010, signed and sealed by Julio E. Gonzalez, P.E.

### C. CALCULATIONS "Submitted under NOA # 15-0420.04"

1. Revision to aluminum louver system Model FL-D-6 prepared by Tilteco Inc, dated 03/16/2015, signed and sealed by Walter A. Tillit Jr., P.E.

### "Submitted under NOA # 11-0104.03"

2. Revision to aluminum louver system Model FL-D-6 prepared by Tilteco Inc, dated 12/09/2014, signed and sealed by Walter A. Tillit Jr., P.E.

### *"Submitted under NOA # 08-0902.09"*

**3.** Revision to Aluminum Louver System Model FL-D-6, prepared by Tilteco Inc, dated 08/21/2008, sheets 1 through 134 of 134, complying with F.B.C. 2007, signed and sealed by Walter A. Tillit Jr., P.E.

### D. QUALITY ASSURANCE

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

### E. MATERIAL CERTIFICATIONS "Submitted under NOA # 11-0104.03"

1. Test report on Tensile Test per ASTM E8, issued by QC Metallurgical, Inc., dated 12/21/2010, signed and sealed by Frank E. Grate Jr., P.E.

### F. STATEMENTS "Submitted under NOA # 15-0420.04"

1. Statement letter of code conformance to the 5<sup>th</sup> edition (2014) FBC issued by Tilteco, Inc, dated 03/31/2015, signed and sealed by Walter A. Tillit Jr., P.E.

### "Submitted under NOA # 12-0120.06"

2. Statement letter of code conformance to 2010 FBC issued by Tilteco, Inc, dated 01/16/2012, signed and sealed by Walter A. Tillit Jr., P.E.

### "Submitted under NOA # 11-0104.03"

2. Statement letter of no financial interest issued by Tilteco, Inc, dated 12/23/2010, signed and sealed by Walter A. Tillit Jr., P.E.

### 2. EVIDENCE SUBMITTED UNDER NOA #17-0823.07

### A. DRAWINGS

1. Drawing No. 17-127, titled "Aluminum Louver System Model FL-D-6", sheets 1 through 15 of 15, dated 08/02/2017, prepared by Tilteco, Inc., signed and sealed by Walter A. Tillit, Jr., P.E.

### B. TESTS

1. None.

### C. CALCULATIONS

1. Revision to aluminum louver system Model FL-D-6 prepared by Tilteco Inc., dated 08/15/2017, signed and sealed by Walter A. Tillit Jr., 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 6<sup>th</sup> Edition (2017) FBC, issued by Tilteco, Inc., dated 08/02/2017, signed and sealed by Walter A. Tillit Jr., P.E.

### 3. EVIDENCE SUBMITTED UNDER NOA # 20-0115.04

### A. DRAWINGS

1. Drawing No. 17-127, titled "Aluminum Louver System Model FL-D-6, sheets 1 through 15 of 15, dated 08/02/2017, with revision dated 11/08/2019, prepared by Tilteco, Inc, signed and sealed by Walter A. Tillit, Jr., P.E.

### **B. TESTS**

1. None.

### C. CALCULATIONS

1. None.

### **D. QUALITY ASSURANCE**

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

### **E. MATERIAL CERTIFICATIONS**

1. None.

### F. STATEMENTS

- 1. Letter requesting the company name change from "United Enertech Corp." to its parent company, "United Enertech Holdings, LLC", issued by Winstead PC, dated 01/31/2020, signed by Andrew J. Ostapko, Attorney.
- 2. Certificate of merger between "United Enertech Corp." and "Enertech Acquisition Corp.", issued by the State of Delaware, dated 01/04/2017.
- **3.** Amended and restated certificate of incorporation of "United Enertech Corp." (F/K/A "Enertech Acquisition Corp.", issued by the State of Delaware, dated 12/30/2016.
- 4. Certificate of formation of "United Enertech Holdings, LLC", issued by the State of Delaware, dated 12/02/2016.

### 4. **NEW EVIDENCE SUBMITTED**

### A. DRAWINGS

1. Drawing No. 20-207, titled "Aluminum Louver System Model FL-D-6, sheets 1 through 16 of 16, dated 07/21/2020, prepared by Tilteco, Inc., signed and sealed by Walter A. Tillit, Jr., P.E.

### **B. TESTS**

1. None.

### C. CALCULATIONS

1. None.

### **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 7<sup>th</sup> Edition (2020) FBC, issued by Tilteco, Inc., dated 07/27/2020, signed and sealed by Walter A. Tillit Jr., P.E.

### **GENERAL NOTES:**

1. ALUMINUM LOUVER SYSTEM SHOWN ON THIS PRODUCT APPROVAL DOCUMENT (P.A.D.) HAS BEEN VERIFIED FOR CODE COMPLIANCE IN ACCORDANCE WITH THE 2020 (7th EDITION) AND 2017 (6th EDITION) OF THE FLORIDA BUILDING CODE. THIS PRODUCT MAY BR INSTALLED WITHIN HIGH VELOCITY HURRICANE ZONES (H.V.H.Z).

DESIGN WIND LOADS SHALL BE DETERMINED AS PER SECTION 1620 OF THE ABOVE MENTIONED CODE. USING ASCE 7–16 (FBC 2020) AND ASCE 7–10 (FBC 2017) AND SHALL NOT EXCEED THE MAXIMUM (A.S.D.) DESIGN PRESSURE RATINGS INDICATED ON THIS SHEET.

IN ORDER TO VERIFY THE ABOVE CONDITION, ULTIMATE DESIGN WIND LOADS DETERMINED PER ASCE 7-16 & ASCE 7-10 SHALL BE FIRST REDUCED TO A.S.D. DESIGN WIND LOADS BY MULTIPLYING THEM BY 0.6 IN ORDER TO COMPARE THESE W/ MAX. (A.S.D.) DESIGN PRESSURE RATINGS INDICATED ON THIS SHEET.

IN ORDER TO VERIFY THAT COMPONENTS AND ANCHORS ON THIS P.A.D AS TESTED WERE NOT OVER STRESSED, A 33% INCREASE IN ALLOWABLE STRESS FOR WIND LOADS WAS NOT USED IN THEIR ANALYSIS, A DURATION FACTOR CD=1.60 WAS USED FOR VERIFICATION OF FASTENERS SPACINGS IN WOOD.

ALUMINUM LOUVER SYSTEM'S ADEQUACY FOR IMPACT AND FATIGUE RESISTANCE HAS BEEN VERIFIED IN ACCORDANCE WITH SECTION 1626 OF THE ABOVE MENTIONED CODE AS PER AMERICAN TESTING LAB OF SOUTH FLORIDA REPORTS # 0604.01-01 AND 1207.01-10 AS PER TAS-201, TAS-202 & TAS-203 PROTOCOLS, AS WELL AS PER ANSI/AMCA IMPACT STANDARD 540-08, PER INTERTEK/ARCHITECTURAL TESTING REPORT # E 0370.01-550-18.

2. ALL ALUMINUM EXTRUSIONS SHALL BE 6063-T6 ALLOY (UNLESS OTHERWISE NOTED). ALL ALUMINUM EXTRUSIONS IN CONTACT WITH DISSIMILAR MATERIALS SHALL COMPLY WITH SECTION III-6 OF THE 2015 ALUMINUM DESIGN MANUAL.

3. ALL SCREWS TO BE STAINLESS STEEL 304 OR 316 SERIES W/ 50 ksi YIELD STRENGTH AND 90 ksi TENSILE STRENGTH OR CORROSION RESISTANT COATED CARBÓN STEEL AS PER DIN 50018. THRU BOLTS AT MULLION TO BE ASTM A-307 GALVANIZED STEEL OR AISI 304 SERIES STAINLESS STEEL SCREWS AND BOLTS SHALL COMPLY W/ FLORIDA BUILDING CODE SECTION 2411.3.3.4.

4. ALL ALUMINUM COMPONENTS FRAMING SHALL BE WELDED IN ACCORDANCE WITH AWS D1.2 .PER THE AMERICAN WELDING SOCIETY LATEST EDITION REGULATIONS USE CERTIFIED WELDERS. USE ER-5356 ELECTRODES.

5. JAMB ANCHOR REQUIREMENTS: EMBEDMENT AND EDGE DISTANCE ARE BEYOND ANY FINISH. (A) TO EXISTING POURED CONCRETE: (MIN. f'c = 3192 psi), MIN. EDGE DISTANCE (E.D.) = 2 1/2". - 1/4"Ø TAPCON ANCHORS W/ 1 3/4" MIN. EMBEDMENT, AS MANUFACTURED BY ITW BUILDEX.

(B) TO EXISTING A.S.T.M. C-90 CONCRETE BLOCK WALL. MIN. EDGE DISTANCE (E.D.) = 2 1/2". - 1/4"Ø TAPCON ANCHORS W/ 1 1/4" MIN. EMBEDMENT, AS MANUFACTURED BY ITW BUILDEX.

(C) TO EXISTING 2x P.T. WOOD BUCK. MIN. EDGE DISTANCE (E.D.) = 1 1/2". - 1/4"ø LAG SCREWS W/ 1 1/2" MIN. EMBEDMENT, AS PER N.D.S. 2015

(D) TO EXISTING MIN. 1/8" THICK STEEL MEMBER (ASTM A-500, A-653 OR A-36) MIN. EDGE DISTANCE (E.D.) = 1/2". - 1/4"øx3/4", AS MANUFACTURED BY ITW BUILDEX.

(E) ANCHORS SHALL BE INSTALLED FOLLOWING ALL OF THE RECOMMENDATIONS AND SPECIFICATIONS OF THE ANCHOR'S MANUFACTURER.

6. ANCHORS REQUIRED FOR MULLION CONNECTIONS SHALL BE AS SPECIFIED ON APPLICABLE SECTIONS SHOWN ON SHEETS 13, 14 & 15.

ANCHORS SHALL BE INSTALLED FOLLOWING ALL OF THE RECOMMENDATIONS AND SPECIFICATIONS OF THE ANCHOR'S MANUFACTURER.

7. THIS LOUVER SHALL BE ONLY 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 RESISTENT/WATER PROOF EQUIPMENT, COMPONENTS OR SUPPLIES.

8. IT SHALL BE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE SOUNDNESS OF THE STRUCTURE WHERE LOUVER SYSTEM IS TO BE ATTACHED TO INSURE PROPER ANCHORAGE.

9. WOOD BUCKS BY OTHERS, MUST BE ANCHORED PROPERLY TO TRANSFER LOADS TO THE BUILDING STRUCTURE. WOOD BUCKS MUST BE SOUTHERN PINE, G = 0.55.

10. (A) THIS PRODUCT APPROVAL DOCUMENT (P.A.D.) PREPARED BY THIS ENGINEER IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT; i.e. WHERE THE SITE CONDITIONS DEVIATE FROM THE P.A.D.

(B) CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION INCLUDING LIFE SAFETY, PURCHASE AND INSTALLATION OF THIS PRODUCT BASED ON THIS PRODUCT APPROVAL PROVIDED HE/SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED ON THIS DOCUMENT. CONSTRUCTION SAFETY AT SITE IS THE CONTRACTOR'S RESPONSIBILITY.

(C) THIS PRODUCT APPROVAL DOCUMENT WILL BE CONSIDERED INVALID IF MODIFIED.

(D) SITE SPECIFIC PROJECTS SHALL BE PREPARED BY A FLORIDA REGISTERED ENGINEER OR ARCHITECT WHICH WILL BECOME THE PROFESSIONAL OF RECORD (P.O.R) FOR THE PROJECT AND WHO WILL BE RESPONSIBLE FOR THE PROPER USE OF THE P.A.D.

(E) ORIGINAL P.A.D SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER OR RECORD THAT PREPARED IT.

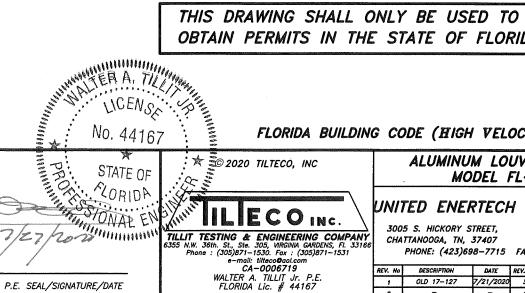
11. PRODUCT MANUFACTURER'S LABEL SHALL BE LOCATED ON A READILY VISIBLE LOCATION AT PRODUCT IN ACCORDANCE WITH SECTION 1709.9.3 OF FLORIDA BUILDING CODE. ONE LABEL SHALL BE PLACED FOR EVERY OPENING. LABELING TO COMPLY WITH SECTION 1709.9.2 OF THE FLORIDA BUILDING CODE.

### **PRODUCT REVISED**

as complying with the Florida Building Code 20-0901.02 NOA-No.

Expiration Date 01/17/2026 Atros

Βv Miami-Dade Product Control

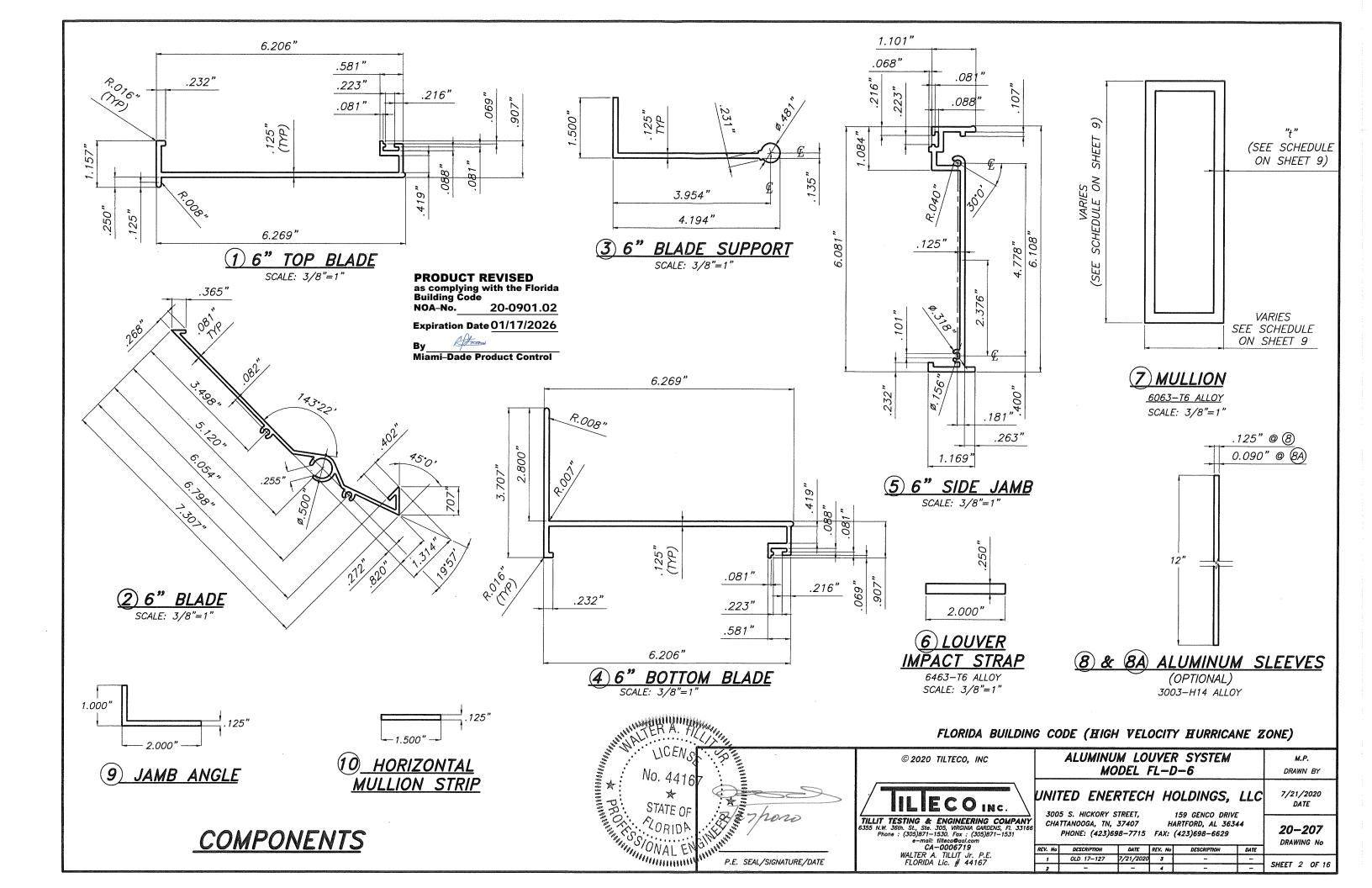


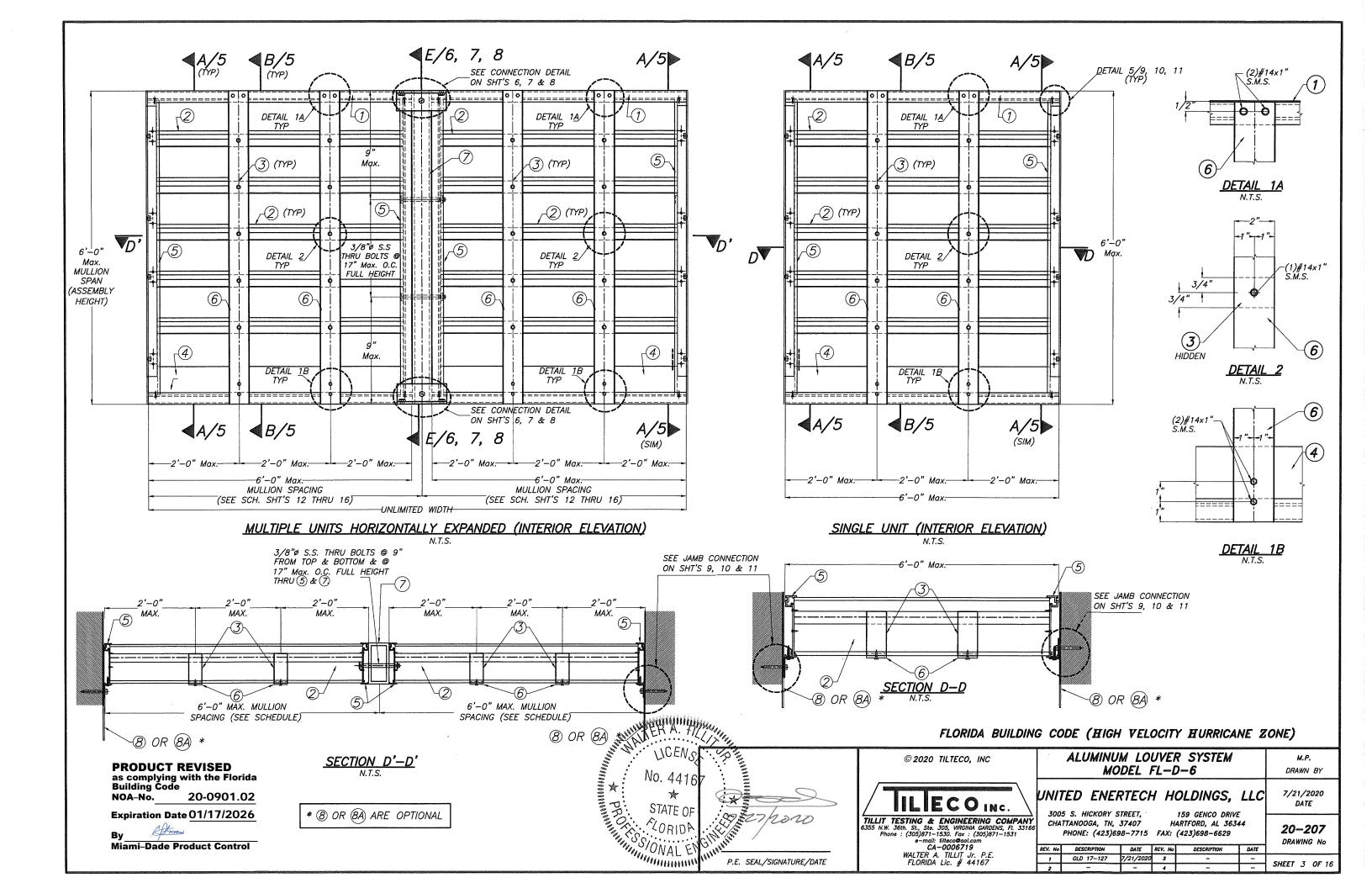
MAXIMUM A.S.D. DESIGN PRESSURE RATING +150.0, -150.0 psf. LARGE MISSILE IMPACT RESISTANCE.

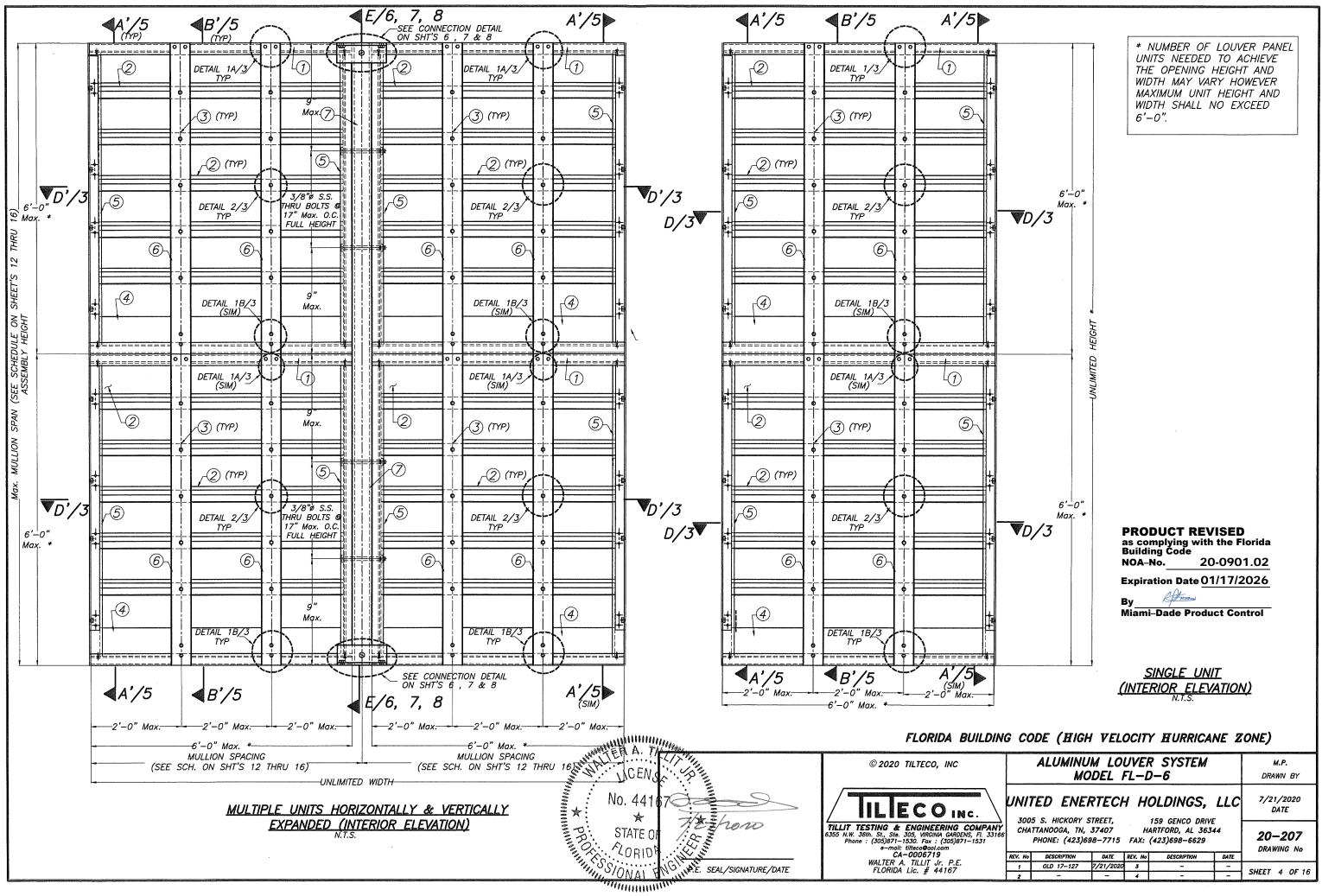
OBTAIN PERMITS IN THE STATE OF FLORIDA

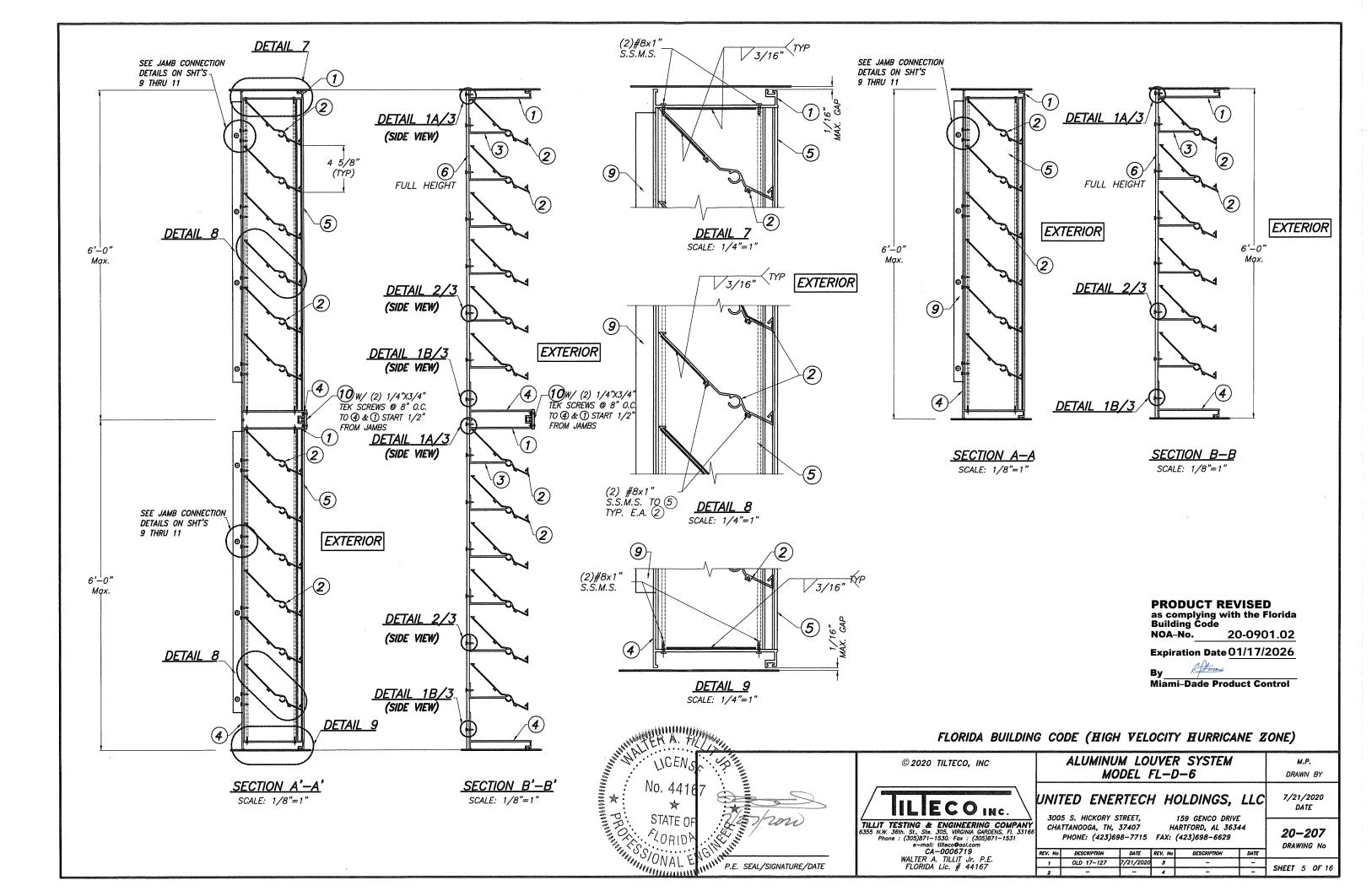
FLORIDA BUILDING CODE (HIGH VELOCITY HURRICANE ZONE)

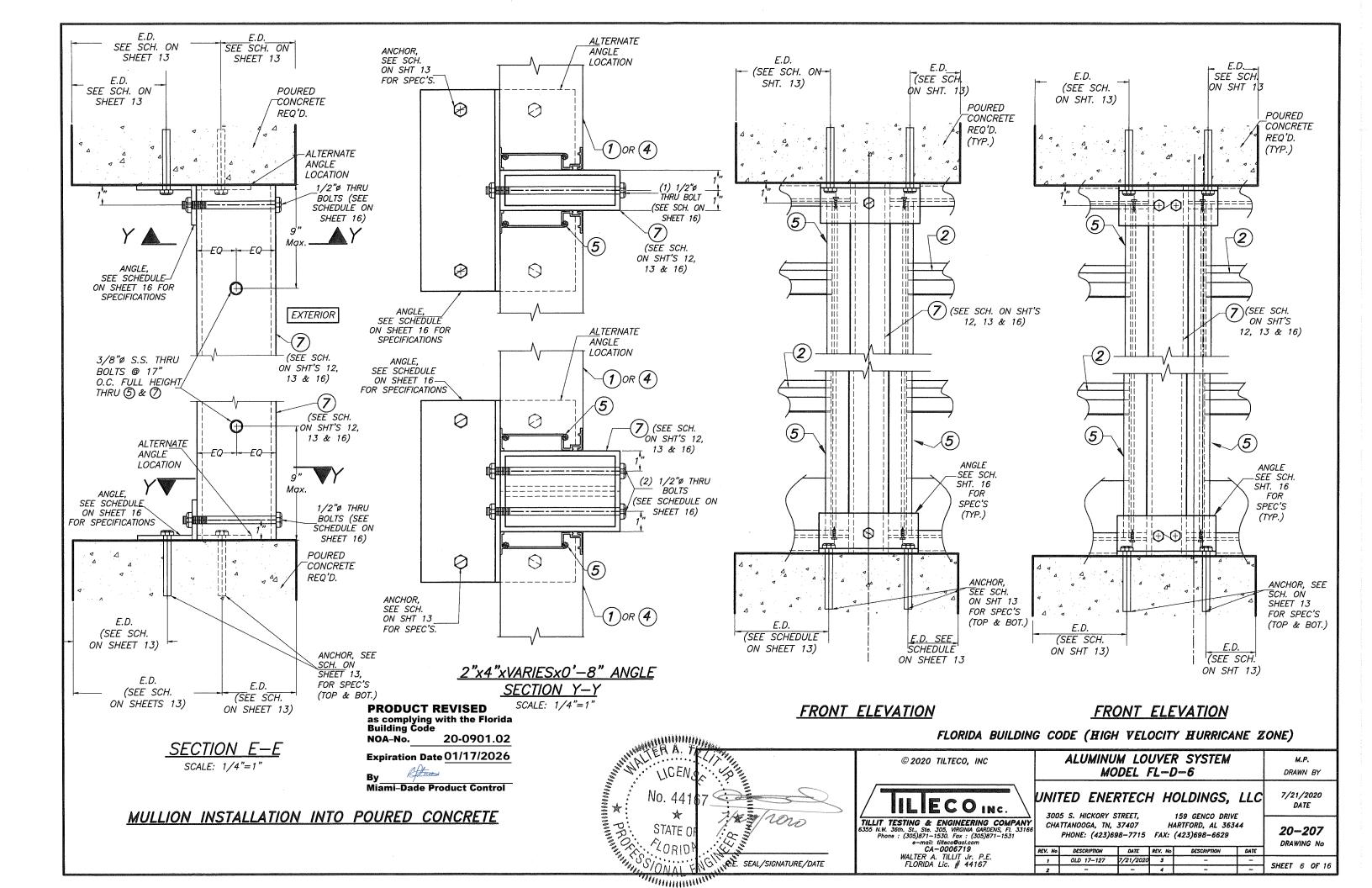
		ALUMINU MO		M.P. DRAWN BY						
					OLDINGS,		7/21/2020 DATE			
MPANY Fl. 33166 531	СНА	3005 S. HICKORY STREET, 159 GENCO DRIVE CHATTANOOGA, TN, 37407 HARTFORD, AL 36344 PHONE: (423)698-7715 FAX: (423)698-6629 DRAWING No								
-	REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE				
	1	OLD 17-127	7/21/2020	3	-	-				
	2	-	-	4			SHEET 1 OF 16			

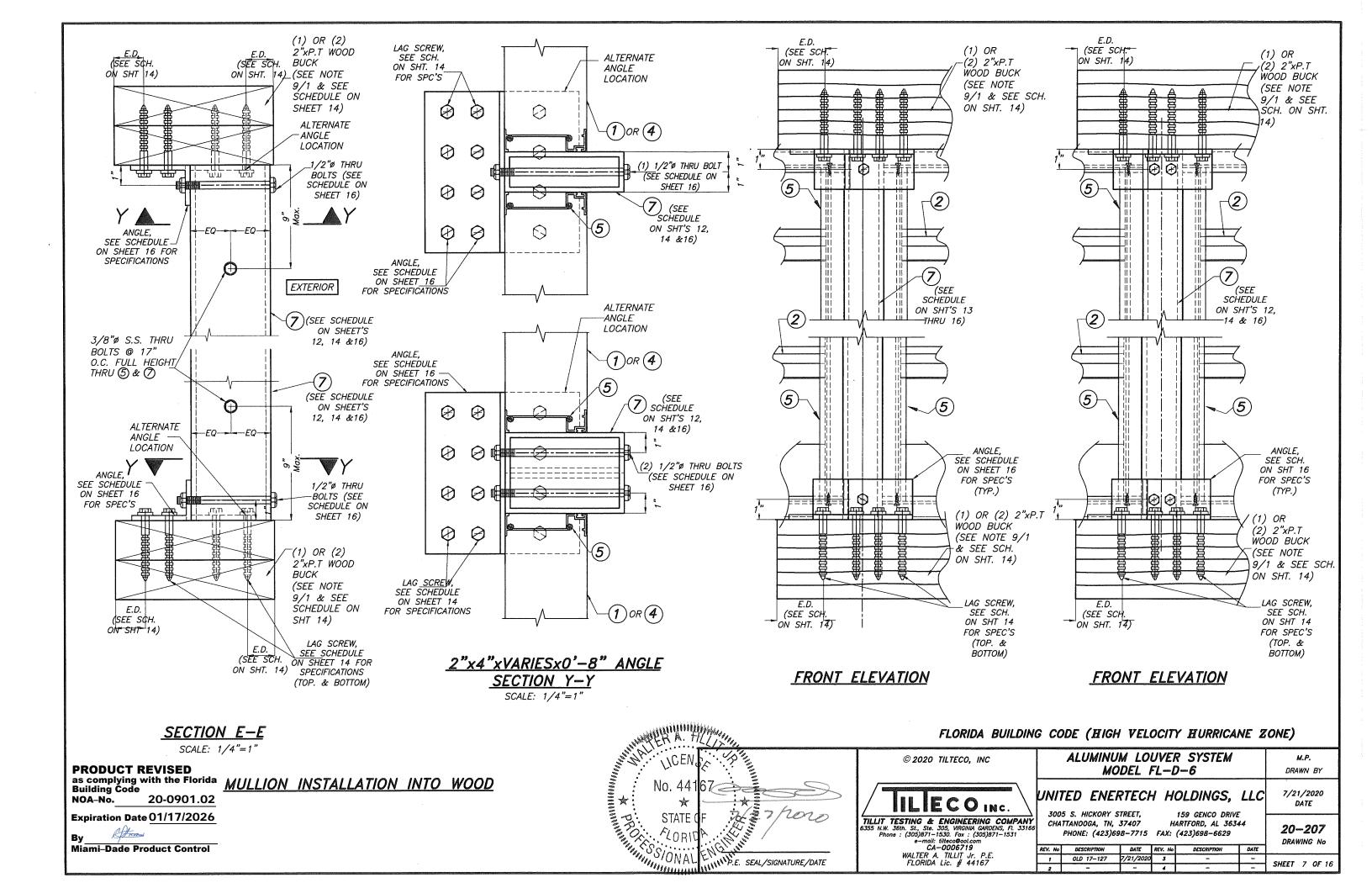


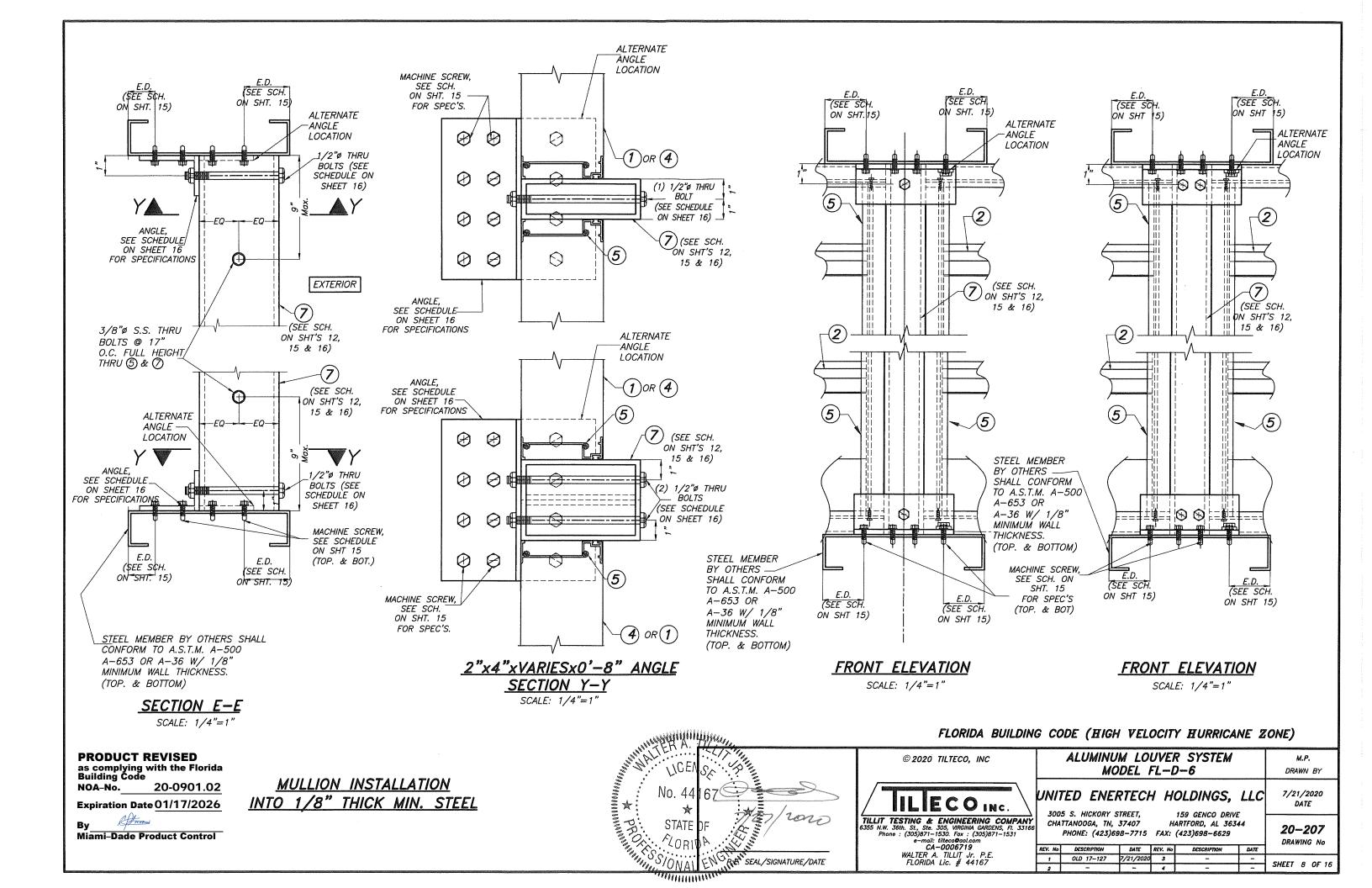


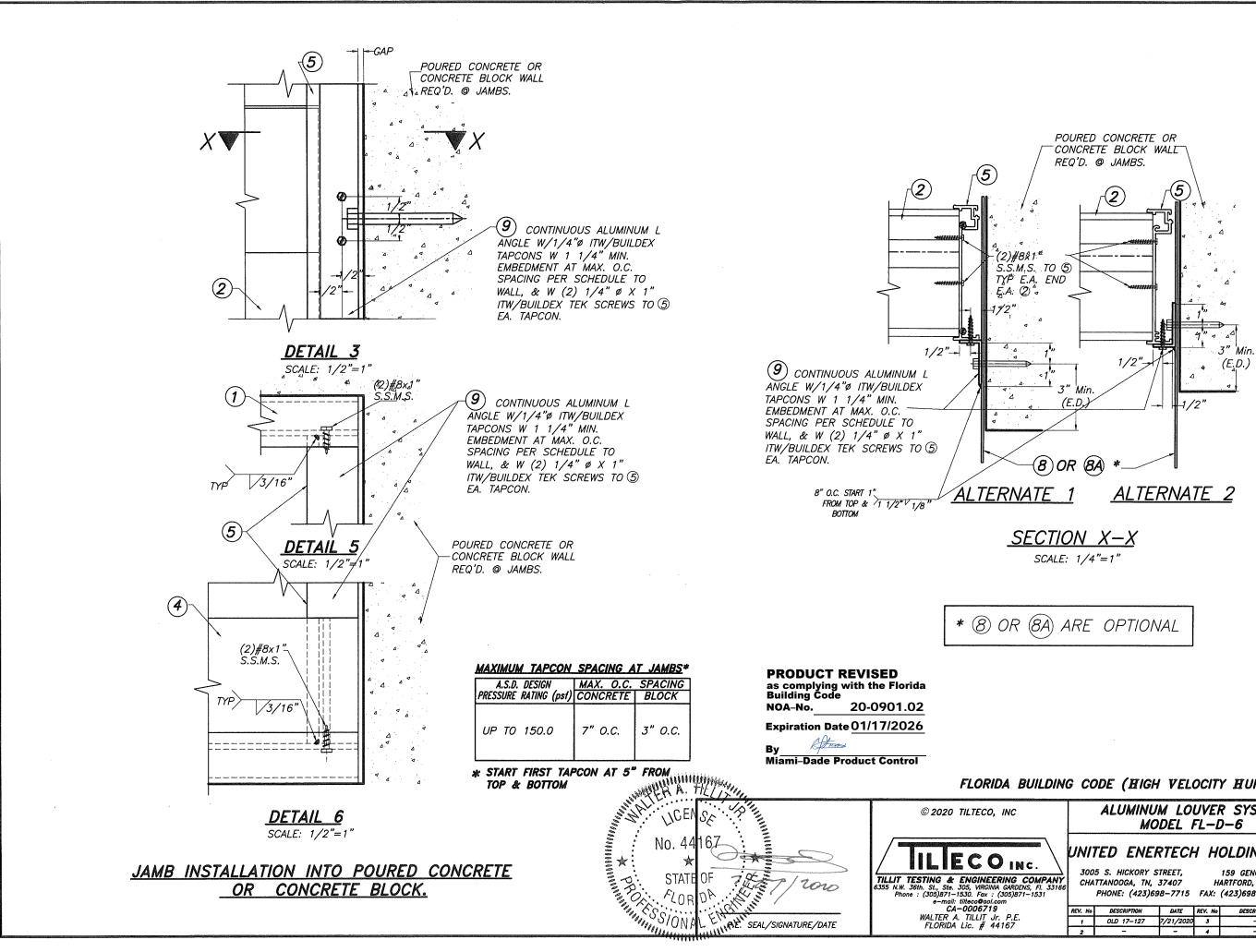






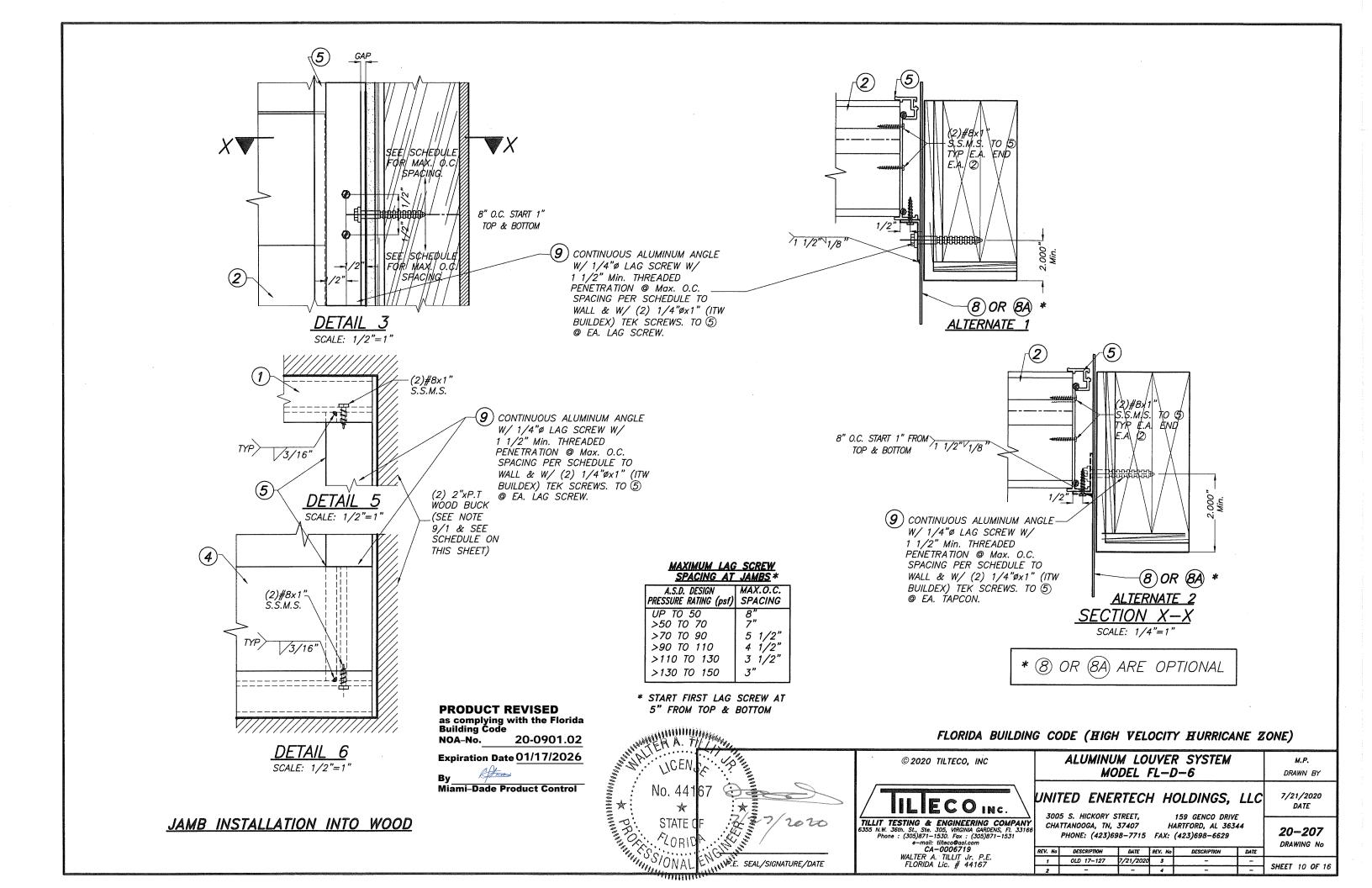


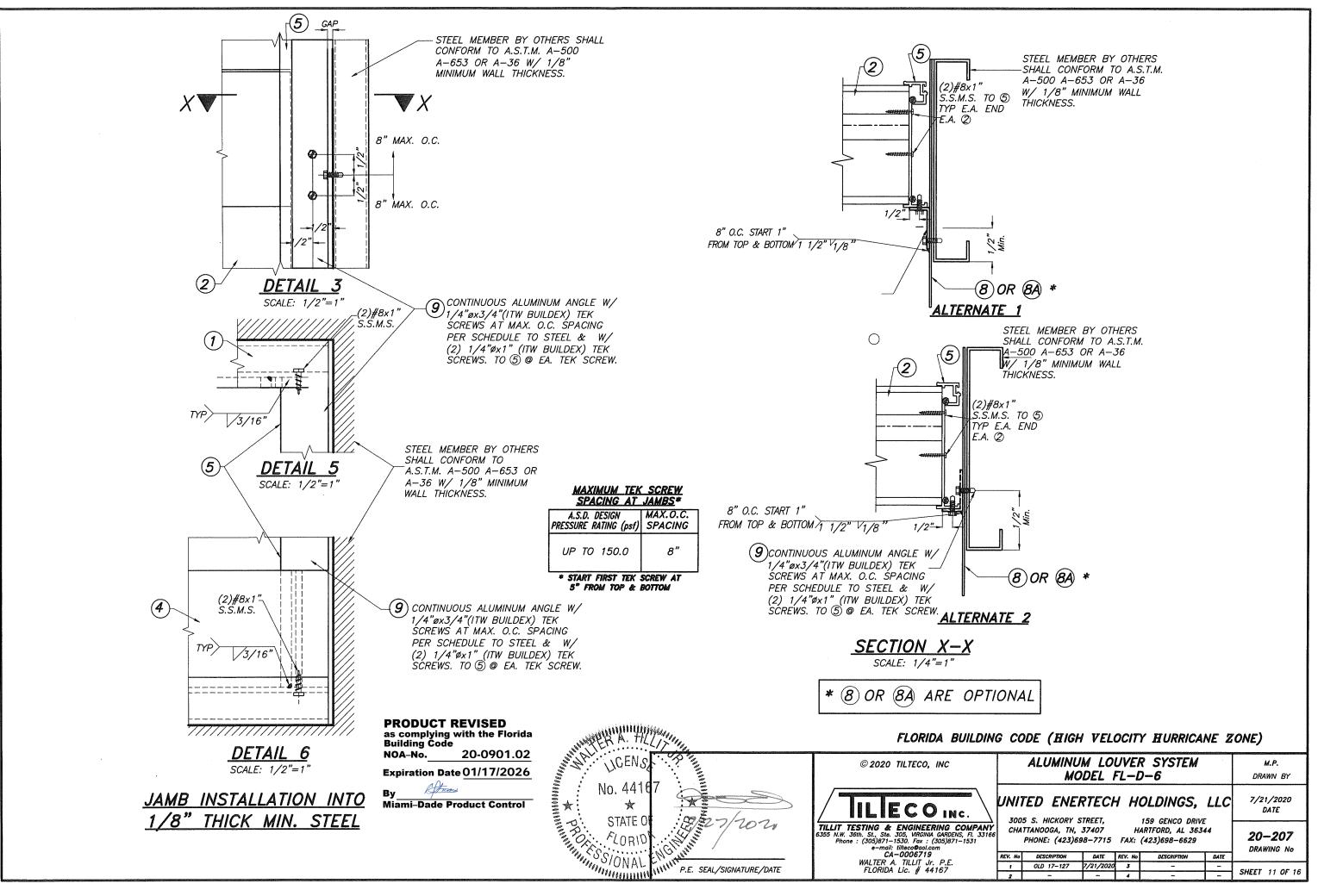




FLORIDA BUILDING CODE (HIGH VELOCITY HURRICANE ZONE)

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		ALUMINU MO	M.P. DRAWN BY				
		S S. HICKORY S		7/21/2020 DATE			
DMPANY Fl. 33166 1531		5 S. HICKURT S TTANOOGA, TN, PHONE: (423)69	<b>20—207</b> DRAWING No				
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		OLD 17-127	7/21/2020	3	-		SHEET 9 OF 16
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1		7/21/2020	3	_	-	000557	
2	-	_		-	_	SHEET 11	0

							1			-		÷.	
A.S.D.DESIGN		MULLIONS											
PRESSURE		2"x6	"x1/4"		4"x	6"x1/4" OF	R (2) 2"x6">	(1/4"		4"x8	"x1/4"		
RATING		MULLION	SPACINO	)		MULLION	SPACING	6		MULLION	I SPACINO	G	
(psf)	3'	4'	5'	6'	3'	4'	5'	6'	3'	4'	5'	6'	
30	10' - 0"	10' - 0"	10' - 0"	10' - 0"	12' - 0"	12' - 0"	12' - 0"	12' - 0"	12' - 0"	12'-0"	12' - 0"	12' - 0"	
50	10' - 0"	10' - 0"	10' - 0"	10' - 0"	12' - 0"	12' - 0"	12' - 0"	12' - 0"	12'-0"	12' - 0"	12' - 0"	12' - 0"	S I
70	10' - 0"	10' - 0"	10' - 0"	10' - 0"	12' - 0"	12' - 0"	12' - 0"	11' - 10"	12' - 0"	12' - 0"	12' - 0"	12' - 0"	SE
90	10' - 0"	10' - 0"	10' - 0"	9' - 5"	12' - 0"	12' - 0"	11' - 7"	10' - 11"	12' - 0"	12' - 0"	12' - 0"	12' - 0"	MB
100	10' - 0"	10' - 0"	9' - 8"	9' - 0"	12' - 0"	12' - 0"	11' - 2"	10' - 6"	12' - 0"	12' - 0"	12' - 0"	12' - 0"	<b></b>
110	10' - 0"	10' - 0"	9' - 4"	8' - 7"	12' - 0"	11' - 8"	10' - 10"	10' - 2"	12'-0"	12' - 0"	12' - 0"	12' - 0"	$\prec$
120	10' - 0"	9' - 9"	9' - 0"	8' - 2"	12' - 0"	11'-4"	10' - 6"	9' - 11"	12' - 0"	12' - 0"	12' - 0"	12' - 0"	
130	10' - 0"	9' - 6"	8' - 7"	7' - 10"	12' - 0"	11' - 0"	10' - 3"	9' - 8"	12' - 0"	12' - 0"	12' - 0"	12' - 0"	G
140	10' - 0"	9' - 3"	8' - 4"	7' - 7"	11' - 10"	10' - 9"	10' - 0"	9' - 5"	12' - 0"	12' - 0"	12' - 0"	11' - 11"	I
150	10' - 0"	9' - 0"	8' - 0"	7' - 4"	11' - 7"	10' - 6"	9' - 9"	9' - 2"	12' - 0"	12' - 0"	12' - 0"	11'-6"	<b></b> ]

MAX. MULLION SPAN SCHEDULE FOR A GIVEN A.S.D. DESIGN PRESSURE RATING & MULLION SPACING \*

\* SEE ADDITIONAL LIMITATIONS FOR MAXIMUM MULLION SPAN (ASSEMBLY HEIGHT) ON SHEETS 13 THRU 16 FOR A MULLION CONNECTION TYPE. MAXIMUM FINAL MULLION SPAN (ASSEMBLY HEIGHT) SHALL BE THE MINIMUM VALUE BETWEEN THIS SCHEDULE AND ANY OTHER SCHEDULE GIVEN ON ABOVE MENTIONED SHEETS.

PRODUCT REVISED as complying with the Florida Building Code © 2020 TILTECO, INC NOA-No. 20-0901.02 000000000000 ILLECOINC. Expiration Date 01/17/2026 
Image: Constraint of the second se Atum Βv STAT Miami-Dade Product Control AL/SIGNATURE/DATE UNAL ENGIN

FLORIDA BUILDING CODE (HIGH VELOCITY HURRICANE ZONE)

		ALUMINU MC	M.P. DRAWN BY				
		TED ENEI		7/21/2020 DATE			
PANY 33166	СНА	5 S. HICKORY S TTANOOGA, TN, PHONE: (423)6	14	<b>20–207</b> DRAWING No			
	REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE	
	1	OLD 17-127	7/21/2020	J	-	-	
	2			4	-		SHEET 12 OF 16

### MAX. MULLION SPAN (L ft) FOR A GIVEN A.S.D. DESIGN PRESSUR **RATING & MULLION SPACING FOR TYPE 1 CONNECTION\***

NATINO &	MOLLION	DELIGN STAGING FOR THE FOOMALOHON.						
A.S.D.		MULLION SPACING						
D.P.R.	3	4	5	6	·			
(psf)								
30	12'- 0"	12'- 0"	12'- 0"	12 '- 0 "				
50	12'- 0"	12'- 0"	12 ' - 0 "	12'- 0"	A			
70	12'- 0"	12'- 0"	12 ' - 0 "	11 - 3 "	ASSEMBLY			
90	12'- 0"	12'- 0"	10'- 6"	8'- 9"	Ä			
100	12'- 0"	12'- 0"	9'- 5"	7'- 10"	Υ <sup>μ</sup>			
110	12'- 0"		8'- 7"	7'-2"				
120	12 '- 0 "	12'- 0"	7'- 10"	6'- 7"	HEIGHT			
130	12'- 0"	12 '- 0 "	7'- 3"	6'- 1"	£			
140	12'- 0"	8'- 5"	6'- 9"	5'- 7"				
150	10'- 6"	7'- 10"	6'- 3"	5'- 3"				

### **TYPE 1 CONNECTION TO POURED CONCRETE:**

2 -1/2"ø KWIK BOLT TZ (HILTI, INC.) W/ 4" Min, EMBEDMENT &

8" MIN, MEMBER THICKNESS, W/ 3" MIN. E.D & 6" MIN. SPACING

### MAX. MULLION SPAN (L ft) FOR A GIVEN A.S.D. DESIGN PRESSURE **RATING & MULLION SPACING FOR TYPE 3 CONNECTION \***

		MULLION SPACING						
A.S.D.		MULLION	SPACING	-				
D.P.R.	3	4	5	6				
(psf)								
30	12'- 0"	12'- 0"	12'- 0"	12'- 0"				
50	12'- 0"	12 ' - 0'"	12'- 0"	12'- 0"	AS			
70	12" - 0"	12 - 0 "	12'- 0"	11'- 11"	N N			
90	12'- 0"	12 - 0 "	11'- 1."	9'- 3"	ASSEMBLY			
100	12'- 0"	12'- 0"	10'- 0"	8'- 4"	Ę			
110	12'- 0"	11'- 4"	9'- 1"	7'- 7"	-			
120	12'- 0"	10'- 5"	8'- 4"	6' - 11 "	Ē			
130	12'- 0;"	9'- 7"	7'- 8"	6'- 5"	HEIGHT			
140	11'- 11"	8'- 11"	7'-2"	5'- 11"				
150	11'- 1"	8'- 4"	6'- 8"	5'- 7"				

### **TYPE 3 CONNECTION TO POURED CONCRETE:**

2 -1/2"ø KWIK BOLT TZ (HILTI, INC.) W/ 4" Min. EMBEDMENT & 8" MIN, MEMBER THICKNESS W/4" MIN, E.D. & 6" MIN, SPACING

### MAX. MULLION SPAN (L ft) FOR A GIVEN A.S.D. DESIGN PRESSURE **RATING & MULLION SPACING FOR TYPE 2 CONNECTION\***

INTINO &	morenois							
A.S.D.		MULLION SPACING						
D.P.R.	3	4	5	6				
(psf)								
30	12'- 0"	12 - 0 "	12'- 0"	12'- 0"				
50	12 ' - 0 "	12 - 0 "	12'- 0"	12'- 0"				
70	12'- 0"	12'- 0"	12'- 0"	12'- 0"				
90	12'- 0"	12'- 0"	12'- 0"	10'- 0"				
100	12'- 0"	12'- 0"	10'- 10"	9'- 0"				
110	12'- 0"	12'- 0"	9'- 10"	8'- 2"	•			
120	12'- 0"	11'- 3"	9'- 0"	7 '- 6 "	i			
130	12'- 0"	10'- 5"	8'- 4"	6'- 11"				
140	12'- 0"	9'- 8"	7'- 9"	6'- 5"	-			
150	12 '- 0 "	9'- 0"	7'- 2"	6'- 0"				

### **TYPE 2 CONNECTION TO POURED CONCRETE:**

2 -5/8"ø KWIK BOLT TZ (HILTI, INC.) W/ 5" Min. EMBEDMENT &

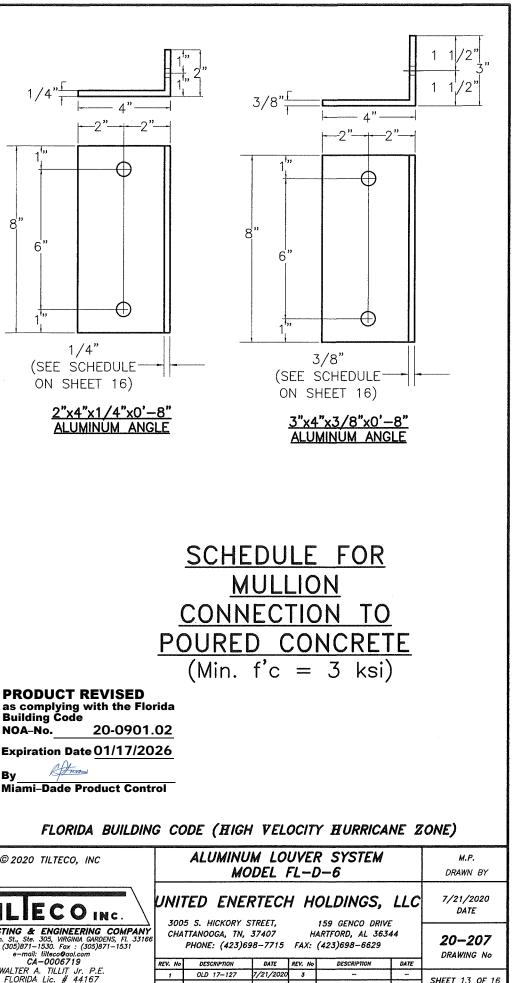
### MAX. MULLION SPAN (L ft) FOR A GIVEN A.S.D. DESIGN PRESSURE **RATING & MULLION SPACING FOR TYPE 4 CONNECTION \***

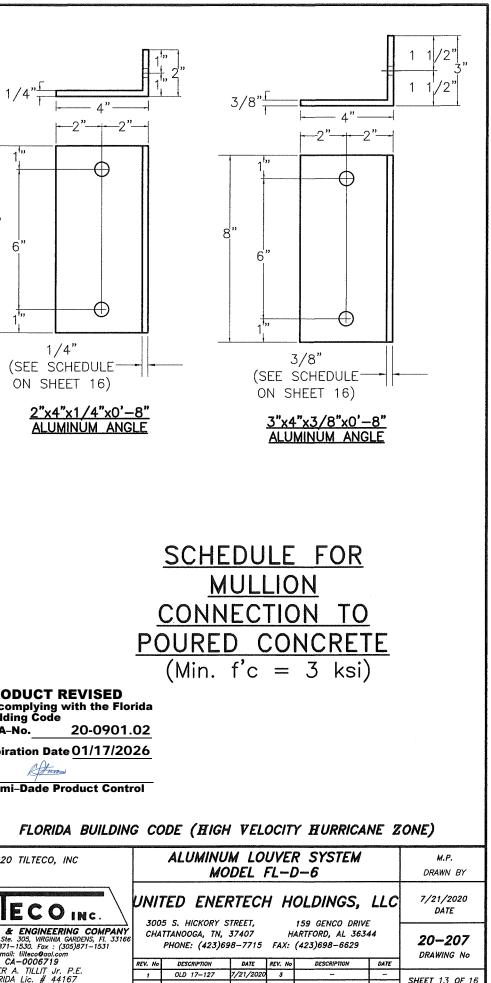
A.S.D.		MULLION SPACING							
D.P.R.	3		4		5	5	6		
(psf)									
30	12 '-	0."	12 '-	0 "	12 '-	0:"	12 '-	0 "	
50	12 '-	0 "	12 '-	0 "	12 '-	0 "	12 ' -	0 "	A
70	12 '-	0."	12 '-	0 "	12 '-	0 "	12 '-	0 "	SS
90	12 '-	0 "	12 '-	0`"	12 '-	0 "	10 ' -	0 "	Z
100	12 '-	0 "	12 '-	0 "	10 : ' -	10 "	9'-	0:"	ASSEMBLY
110	12 '-	0 "	12 '-	0 "	9 ' -	10 "	8'-	2 "	
120	12 '-	0 "	11 '-	3 "	9 : <b>'</b> -	0 "	7 '-	6 "	HEIGHT
130	12 '-	0 ""	10 '-	5 "	8 '-	4 "	6'-	11:"	GH.
140	12 '-	0."	9.'-	8 "	7 '-	9 "	6'-	5 "	
150	12 '-	0 "	9'-	0 "	7 '-	2 "	6'-	0 "	

### **TYPE 4 CONNECTION TO POURED CONCRETE:**

2 -1/2"ø KWIK BOLT TZ (HILTI, INC.) W/ 4" Min. EMBEDMENT &

8" MIN, MEMBER THICKNESS W/6" MIN, E.D. & 6" MIN, SPACING





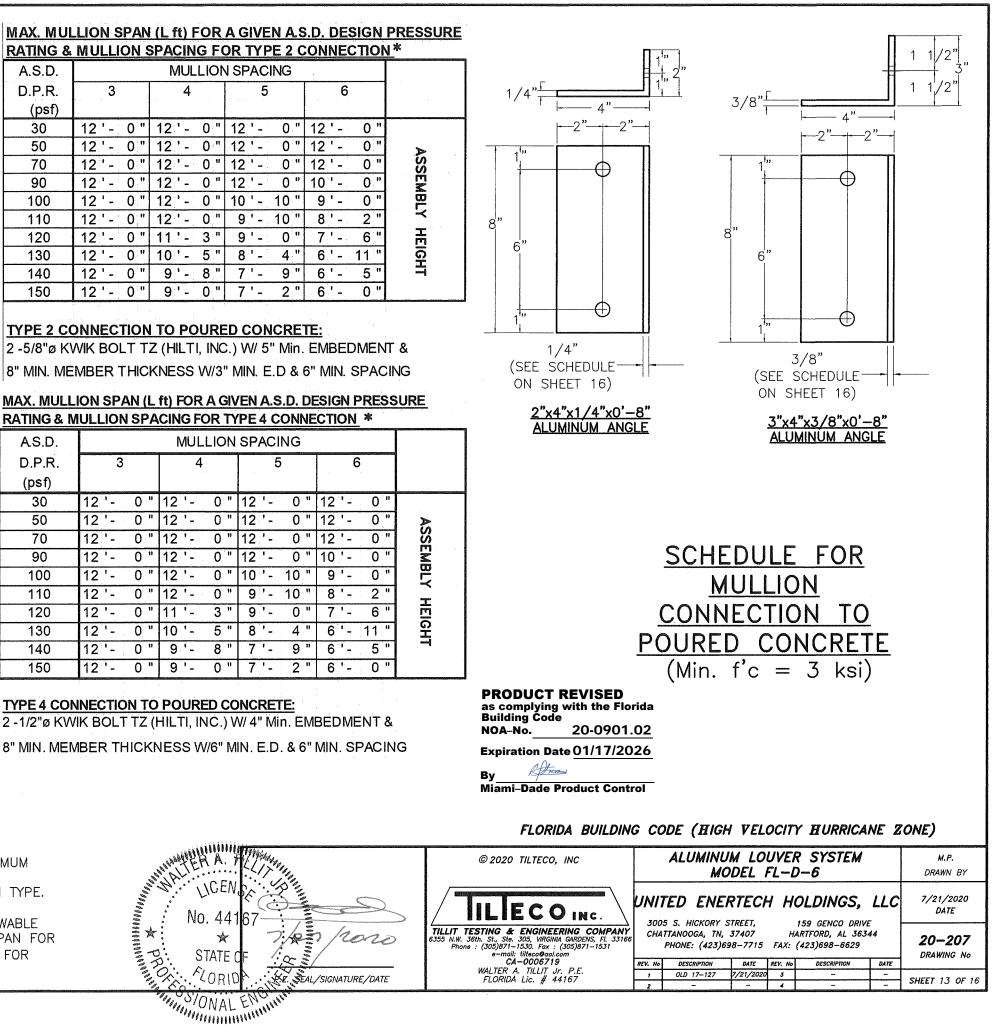
NOA-No.

Bv

### \* NOTES:

(1) SEE SHEET 12 & 16 FOR ADDITIONAL MAXIMUM MULLION SPAN LIMITATIONS FOR A GIVEN A.S.D. DESIGN PRESSURE RATING AND MAXIMUM SPACING. MAXIMUM MULLION SPAN SHALL BE THE MINIMUM BETWEEN SCHEDULES ON SHEETS 12, 16 AND THIS SHEET FOR A CONNECTION TYPE.

(2) SEE SHEET 16 FOR ANGLE SCHEDULE INDICATING MAXIMUM ALLOWABLE À.Ś.D. DESIGN PRESSURE RATING, MULLION SPACING AND MULLION SPAN FOR 1/4" THICK & 3/8" THICK ALUMINUM ANGLES USED TOP & BOTTOM FOR MULLION CONNECTION TO SUBSTRATE.



### MAX. MULLION SPAN (L ft) FOR A GIVEN A.S.D. DESIGN PRESSURE RATING & MULLION SPACING FOR TYPE 5 CONNECTION \*

	I W TELL		a moleion of Aomo Port THE COOMILO HOM							
	A.S.D.		MULLION	SPACING						
	D.P.R.	3	4	5	6					
	(psf)									
	50	12'- 0"	12'- 0"	12'- 0"	12'- 0"					
	60	12'- 0"	12'- 0"	12'- 0"	10'- 6"	SS H				
1	70	12'- 0"	12'- 0"	10'- 10"	9'- 0"	SEMB				
	90	12'- 0"	10'- 6"	8'- 5"	7'- 0"	HP				
	100	12 - 0 "	9'- 5"	7'- 7"	6'- 4"	~				

TYPE 5 CONNECTION W/ 1/4" THICK ALUMINUM ANGLE TO WOOD 8 -3/8"ø LAG SCREWS W/ 3" Min. THREADED PENETRATION W/ 1.25" E.D & 2" SPACING

### MAXIMUM MULLION SPAN (L ft) FOR A GIVEN DESIGN LOAD

<u>&amp; M</u>	& MULLION SPACING FOR TYPE 7 CONNECTION *								
W		MULLION	SPACING						
(psf)	3	4	5	6					
50	12'- 0"		12 '- 0 "	12'- 0"	<u> </u>				
60	12'- 0"	12 '- 0 "	12'- 0"	12'- 0"	AS				
70	12'- 0"	12'- 0"	12'- 0"	10'- 5"					
90	12'- 0"	12'- 0"	9'- 9"	8'- 2"	IGHT				
120	12'- 0"	9'- 2"	7'- 4"	6'- 1"	<b>∠</b>				

### TYPE 7 CONNECTION W/ 3/8" THICK ALUMINUM ANGLE TO WOOD 8 -3/8"ø LAG SCREWS W/ 3" Min. THREADED PENETRATION

W/ 1.25" E.D & 2" SPACING

<b>PRODUCT REVISED</b> as complying with the Florida Building Code					
NOA-No.	20-0901.02				
Expiration Da	ate <u>01/17/2026</u>				
By Him Miami-Dade Product Control					
Miami–Dade I	Product Control				

### \* <u>NOTES</u>:

(1) SEE SHEET 12 THRU 16 FOR ADDITIONAL MAXIMUM MULLION SPAN LIMITATIONS FOR A GIVEN A.S.D. DESIGN PRESSURE RATING AND MAXIMUM SPACING. MAXIMUM MULLION SPAN (ASSEMBLY HEIGHT) SHALL BE THE MINIMUM BETWEEN SCHEDULES ON SHEET 12 AND THIS SHEET FOR A CONNECTION TYPE.

(2) SEE SHEET 16 FOR ANGLE SCHEDULE INDICATING MAXIMUM ALLOWABLE A.S.D. DESIGN PRESSURE RATING, MULLION SPACING AND MULLION SPAN FOR 1/4" THICK & 3/8" THICK ALUMINUM ANGLES USED TOP & BOTTOM FOR MULLION CONNECTION TO SUBSTRATE.

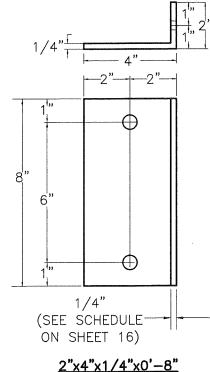
### MAXIMUM MULLION SPAN (L ft) FOR A GIVEN DESIGN LOAD

### & MULLION SPACING FOR TYPE 6 CONNECTION \*

W	MULLION SPACING					
 (psf)	3	4	5	6		
50	12'- 0"	9'- 9"	7'- 9"	6'- 6"		
60	10'- 0"	8'- 1"	6'- 6"	5'- 5"		
70	9'- 0"	6'-11"	5'- 7"	4'- 8"		
90	7'- 0"	5'- 5"	4'- 4"	3'- 7"		

### TYPE 6 CONNECTION W/ 3/8" THICK ALUMINUM ANGLE TO WOOD

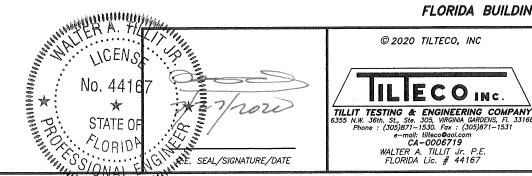
8 -3/8"ø LAG SCREWS W/ 1.5" Min. THREADED PENETRATION W/ 1.25" E.D & 2" SPACING



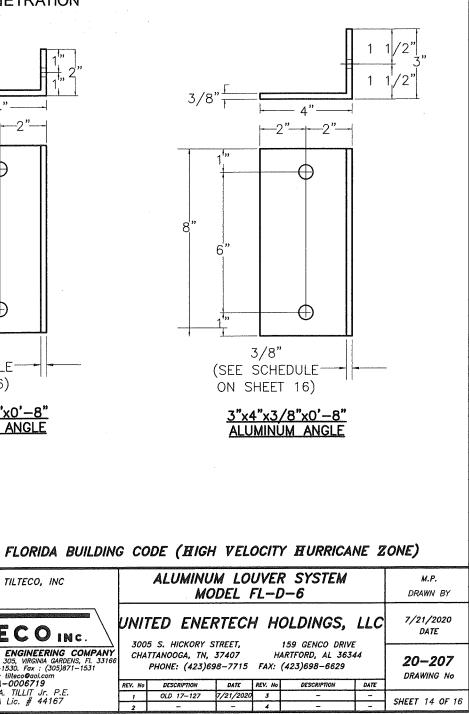
ALUMINUM ANGLE

# SCHEDULE FOR MULLION CONNECTION TO WOOD

(Min. G=0.55)







### MAX. MULLION SPAN (L ft) FOR A GIVEN A.S.D. DESIGN PRESSURE

**RATING & MULLION SPACING FOR TYPE 8 CONNECTION\*** 

A.S.D. MULLION SPACING								
A.S.D.								
D.P.R.	3	4	5	6				
(psf)								
30	12'- 0"	12 '- 0 "	12 '- 0 "	12 ' - 0 "	A			
50	12'- 0"	12 ' - 0 "	12.'- 0 "	12'- 0"	ASS			
70	12'- 0"	12 ' - 0 "	12 - 0 "	12'- 0"	Ĕ			
90	12'- 0"	12'- 0"	12'- 0"	12 - 0 "	EMBLY			
100	12'- 0"	12 ' - 0 "	12 ' - 0 "	12'- 0"	Ч			
110	12'- 0"	12 ' - 0 "	12'- 0"	12 ' - 0 "	Т			
120	12 ' - 0 "	12 ' - 0 "	12 '- 0 "	12'- 0"	m			
130	12'- 0"	12 ' - 0 "	12'- 0"	12 - 0 "	IGHT			
140	12'- 0"	12'- 0"	12'- 0"	12'- 0"				
150	12'- 0"	12'- 0"	12'- 0"	12'- 0"				

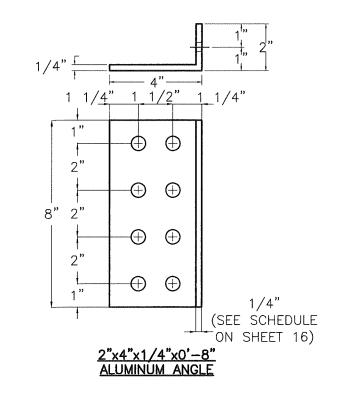
### TYPE 8 CONNECTION W/ 1/4" THICK ALUMINUM ANGLE\* TO STEEL

8 -3/8"ø-16 MACHINE SCREWS W/ 1/8" MIN. MEMBER THICKNESS

### MAXIMUM MULLION SPAN (L ft) FOR A GIVEN DESIGN LOAD

& MULLION SPACING FOR TYPE 9 CONNECTION *									
W		MULLION SPACING							
(psf)	3	4	5	6					
30	12'- 0"	12'- 0"	12,'- 0"	12'- 0"					
50	12'- 0"	12'- 0"	12'- 0"	12'- 0"	AS				
70	12'- 0"	12'- 0"	12'- 0"	12'- 0"	SSEMBLY				
90	12'- 0"	12'- 0"	12'- 0"	12'- 0"	X				
100	12'- 0"	12'- 0"	12'- 0"	12'- 0"	Ĩ,				
110	12'- 0"	12'- 0"	12'- 0"	12'- 0"	•				
120	12'- 0"	12'- 0"	12'- 0"	12'- 0"	TE				
130	12'- 0"	12'- 0"	12'- 0"	12'- 0"	IEIGHT				
140	12'- 0"	12'- 0"	12'- 0"	12'- 0"					
150	12'- 0"	12'- 0"	12'- 0"	12'- 0"					

### TYPE 9 CONNECTION W/ 3/8" THICK ALUMINUM ANGLE\* TO STEEL 8 -3/8"ø-16 MACHINE SCREWS W/ 1/8" MIN. MEMBER THICKNESS



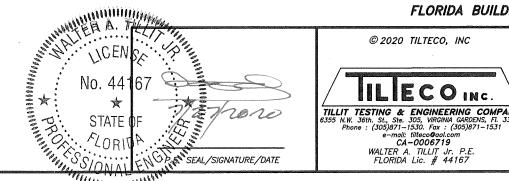
# SCHEDULE FOR MULLION CONNECTION TO STEEL (Min. Fy=33 ksi)

### **PRODUCT REVISED**

as complying with the Florida Building Code 20-0901.02 NOA-No.

Expiration Date 01/17/2026

Atum By **Miami-Dade Product Control** 

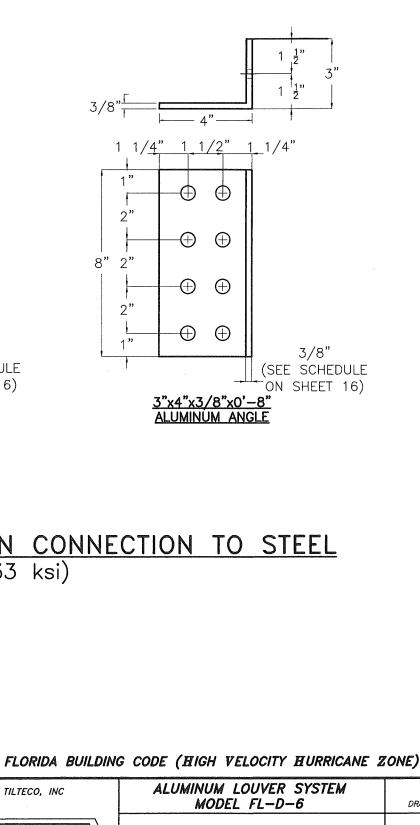


### \* NOTES:

(1) SEE SHEET 9 FOR ADDITIONAL MAXIMUM MULLION SPAN LIMITATIONS FOR À GIVEN A.S.D. DESIGN PRESSURE RATING AND MAXIMUM SPACING. MAXIMUM MULLION SPAN SHALL BE THE MINIMUM BETWEEN SCHEDULES ON SHEET 9 AND THIS SHEET FOR A CONNECTION TYPE.

(2) SEE SHEET 16 FOR ANGLE SCHEDULE INDICATING MAXIMUM ALLOWABLE À.Ś.D. DESIGN PRESSURE RATING, MULLION SPACING AND MULLION SPAN FOR 1/4" THICK & 3/8" THICK ALUMINUM ANGLES USED TOP & BOTTOM FOR MULLION CONNECTION TO SUBSTRATE.

THIIIIIIIIIIIIIIIIIIII



		MO	DRAWN BY				
$\setminus$				7/21/2020 DATE			
NY 3166	6 PHONE: (423)698-7715 FAX: (423)698-6629				<b>20–207</b> DRAWING No		
	REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE	
	1	OLD 17-127	7/21/2020	3	-		SHEET 15 OF 16
	2	***		4		**	SMELI 13 UF 10

MP

# SCHEDULE FOR MAX. MULLION SPAN FOR A GIVEN A.S.D. DESIGN PRESSURE **RATING & MULLION SPACING IN ORDER TO USE 1/4" THICK ALUMINUM**

ANGLE FOR WOLLION CONNECTION TO SUBSTITUTE								
A.S.D.		MULLION SPACING (ft)						
D.P.R.	3 4		5 6					
(psf)								
30	12'- 0"	12'- 0"	12'- 0"	12'0"				
50	12'- 0"	12'- 0"	12'- 0"	12'- 0"	AS			
70	12'- 0"	12'- 0"	12'- 0"	12'- 0"	ASSEMBLY			
90	12'- 0"	12'- 0"	12'- 0"	10'- 0"	<b>≤</b>			
100	12'- 0"	12'- 0"	10'- 10"	9'- 0"	Ϋ́			
110	12'- 0"	12'- 0"	9'- 10"	8'- 2"	<b>. .</b>			
120	12'- 0"	11'- 3"	9'- 0"	7'- 6"	Ē			
130	12'- 0"	10'- 5"	8'- 4"	6'-11"	HEIGHT			
140	12'- 0"	9'- 8"	7'- 9"	6'- 5"				
150	12'- 0"	9'- 0"	7'- 2"	6'- 0"				

# ANGLE FOR MULLION CONNECTION TO SUBSTRATE\*

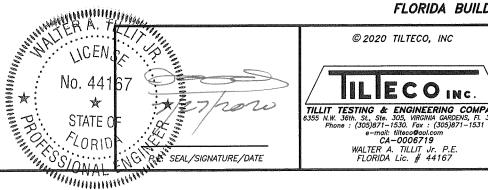
## \* <u>NOTES</u>:

(1) ANY MULLION SPACING OR MULLION SPAN (ASSEMBLY HEIGHT) LARGER THAN THE ONES INCLUDED ON THIS SCHEDULE WILL REQUIRE A 3" x 4" x 3/8" THICK ALUMINUM ANGLE INSTEAD OF 2" x 4" x 1/4" THICK ALUMINUM ANGLE.

(2) SEE SHEET 12 FOR ADDITIONAL MAXIMUM MULLION SPAN (ASSEMBLY HEIGHT) LIMITATIONS FOR A GIVEN A.S.D. DESIGN PRESSURE RATING AND MAXIMUM SPACING. MAXIMUM MULLION SPAN (ASSEMBLY HEIGHT) SHALL BE THE MINIMUM BETWEEN SCHEDULES ON SHEETS 12 THRU 14 AND 15 FOR A CONNECTION TYPE, AND SCHEDULE ON THIS SHEET.

### 1/2"ø THRU BOLT REQUIREMENTS FOR CONNECTION OF ALUMINUM ANGLE TO MULLION FOR MULLION END CONNECTION TO SUBSTRATE.

1/2"ø THRU BOLT REQUIRED
(1) REQUIRED
(2) REQUIRED & (1) EACH TUBE
(2) REQUIRED



PRODUCT REVISED as complying with the Florida Building Code 20-0901.02 NOA-No.

Expiration Date 01/17/2026

Atum Bv Miami-Dade Product Control

### FLORIDA BUILDING CODE (HIGH VELOCITY HURRICANE ZONE)

		ALUMINU MO	M.P. DRAWN BY				
		TED ENEI	7/21/2020 DATE				
<b>PANY</b> 33166	A 3005 S. HICKORY STREET, 159 GENCO DRIVE CHATTANOOGA, TN, 37407 HARTFORD, AL 36344 FHONE: (423)698-7715 FAX: (423)698-6629						<b>20–207</b> DRAWING No
	REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE	
	1	OLD 17-127	7/21/2020	3		-	
	2		-	4		-	SHEET 16 OF 16