



DEPARTMENT OF PERMITTING, ENVIRONMENT, AND REGULATORY
AFFAIRS (PERA)
BOARD AND CODE ADMINISTRATION DIVISION
NOTICE OF ACCEPTANCE (NOA)

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/pera/

Arrow United Industries
450 Riverside Drive
Wyalusing, PA 18853

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 PERA -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. PERA 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 EAV-66, 6" Aluminum Louver System

APPROVAL DOCUMENT: Drawing No. 1504, titled "EAV-66 Vertical Louver System", sheets 1 through 9 of 9, dated 10/18/2006, with last revision B dated 11/08/2011, prepared by W. W. Schaefer Engineering and consulting, P.A., signed and sealed, by Warren W. Schaefer, P.E., bearing the Miami-Dade County Product Control renewal 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.

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 NOA # 08-0904.01 and consists of this page 1 and evidence pages E-1 and E-2, as well as approval document mentioned above.

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



[Signature]
01/26/2012

NOA No. 11-1115.02
Expiration Date: March 15, 2017
Approval Date: February 2, 2012
Page 1

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS

1. Drawing No. **1504**, titled "EAV-66 Vertical Louver System", sheets 1 through 9 of 9, dated 10/18/2006, with last revision B dated 11/08/2011, prepared by W. W. Schaefer Engineering and consulting, P.A., signed and sealed, by Warren W. Schaefer, P.E.

B. TESTS "Submitted under NOA # 08-0904.01"

1. Test report on Large Missile Test (Level E) and on Cyclic Load Test per ASTM 1886/1996 of an **EAV-66 Aluminum Louver System**, prepared by Hurricane Test Laboratories LLC., Report # **0198-0109-07**, dated 03/08/2007, signed and sealed by Vinu J. Abraham, P.E.
2. Test report on Wind Driven Rain Test per TAS 100(A) of an EAV-66 Aluminum Louver with AFD-20 Damper, prepared by PRI Construction Materials Technologies, LLC, Test Report No. **AWV-006-02-01**, dated 02/07/2008, Duc T. Nguyen, P.E.
3. Test report on Wind Driven Rain Test per TAS 100(A) of an EAV-66 Aluminum Louver with AC-525, prepared by PRI Construction Materials Technologies, LLC, Test Report No. **AWV/AUI-006-02-01**, dated 02/14/2008, Duc T. Nguyen, P.E.

"Submitted under NOA # 06-1211.03"

4. Test report on Large Missile Impact Test per FBC, TAS 201, Cyclic Wind Pressure Test per FBC, TAS 203 and Uniform Static Air Pressure Test per FBC, TAS 202 of an EAV-66 Aluminum Louver System, prepared by Hurricane Test Laboratories, LLC, Report No. **0198-0712-06**, dated 11/07/2006, signed and sealed by Vinu J. Abraham, P.E.

C. CALCULATIONS

1. Anchor calculations prepared by W.W. Schaefer Engineering and Consulting P.A., dated 11/07/2011, signed and sealed by Warren W. Schaefer, P.E.

"Submitted under NOA # 08-0904.01"

2. Anchorage, stress and deflection calculations of the Louver System with AFD-20 Dampers, sheets 1 through 4 of 4 and with AC-525/526 Dampers, sheets 1 and 2 of 2, both dated 07/22/2008, prepared by W.W. Schaefer Engineering and Consulting P.A., signed and sealed by Warren W. Schaefer, P.E.

"Submitted under NOA # 06-1211.03"

3. Anchorage calculations, 13 pages for Arrow United Industries, **Model EAV-66** Vertical Louver, prepared by W.W. Schaefer Engineering and Consulting P.A., signed and sealed on 11/07/2006 by Warren W. Schaefer, P.E.



01/26/2012
Carlos M. Utrera, P.E.
Product Control Examiner
NOA No. 11-1115.02
Expiration Date: March 15, 2017
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NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

D. QUALITY ASSURANCE

1. Miami-Dade Department of Permitting, Environment, and Regulatory Affairs (PERA)

E. MATERIAL CERTIFICATIONS

1. None.

F. STATEMENTS

1. Statement letter of code conformance to 2007 and 2010 FBC issued by W.W. Schaefer Engineering and Consulting P.A., dated 11/08/2011, signed and sealed by Warren W. Schaefer, P.E.
2. No financial interest letter from W.W. Schaefer Engineering and Consulting P.A., dated 11/08/2011, signed and sealed by Warren W. Schaefer, P.E.



01/26/2012

Carlos M. Utrera, P.E.
Product Control Examiner
NOA No. 11-1115.02
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GENERAL NOTES:

- IT SHALL BE THE RESPONSIBILITY OF THE PERMIT HOLDER TO VERIFY THE STRUCTURAL INTEGRITY OF THE EXISTING STRUCTURE TO SUPPORT THE LOADS SUPERIMPOSED BY THE LOUVERS.
- THESE LOUVER SYSTEMS HAVE BEEN DESIGNED & TESTED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE (FBC) AND PROTOCOLS TAS-100, 201, 202 & 203 INCLUDING HIGH VELOCITY HURRICANE ZONES (HVHZ).
- EACH LOUVER ASSEMBLY SHALL BE PERMANENTLY LABELED AS FOLLOWS: ARROW UNITED INDUSTRIES
WYALUSING, PA
MIAMI-DADE COUNTY PRODUCT CONTROL APPROVED
- ALL CONCRETE SUBSTRATE SHALL BE MIN. 3000 PSI.
- ALL WOOD SUBSTRATE SHALL BE MIN. G = 0.55 DENSITY.
- ALL METAL STUD SUBSTRATE SHALL BE MIN. 16 GA. Fy = 33 ksi.
- ALL STRUCTURAL STEEL SUBSTRATE SHALL BE MIN. 12 GA. Fy = 36 ksi.
- INDIVIDUAL PANEL WIDTHS ARE UNLIMITED IN DIMENSION. PANEL HEIGHTS ARE LIMITED BY THE DIMENSIONS SHOWN IN THE ELEVATIONS.
- INDIVIDUAL PANELS MAY BE STACKED HORIZONTALLY IN AN UNLIMITED QUANTITY. IT IS THE RESPONSIBILITY OF THE SUPPORTING STRUCTURES DESIGN ENGINEER/ARCHITECT TO INSURE THE SUPPORTING STRUCTURE WILL SUPPORT ALL DESIGN LOADS TRANSFERRED BY THE LOUVERS.
- MATERIALS, INCLUDING BUT NOT LIMITED TO STEEL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF FLORIDA BUILDING CODE CHAPTER 20.
- THESE LOUVERS HAVE PASSED TESTING IN ACCORDANCE WITH ASTM E1886 & E1996 FOR ESSENTIAL FACILITIES LEVEL "E" 80 FT/S LARGE MISSILE IMPACT SPEED. THEREFORE, THESE LOUVER SYSTEMS ARE APPROVED FOR USE WITH ESSENTIAL FACILITIES.
- THIS SYSTEM HAS BEEN TESTED FOR WATER INFILTRATION RESISTANCE AND IS A WATER RESISTANT SYSTEM WHEN AN AFD-20 OR AC525/526 DAMPER IS INSTALLED WITH THE LOUVER PANEL.
- UNLESS THE AFD-20 OR AC525/526 DAMPER IS ATTACHED TO THE LOUVER, THE LOUVER 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/WATER PROOF EQUIPMENT, COMPONENTS OR SUPPLIES.

CORNER & BLADE END CONSTRUCTION

BLADE TO HEAD & SILL:
BLADE END IS SQUARE CUT, BUTTED AND JOINED TO HEAD AND SILL WITH TWO NO. 8 X 1" S.S. SMS SCREWS PER BLADE END.
HEAD & SILL TO JAMB:
SIDE JAMB IS SQUARE CUT, BUTTED AND JOINED TO HEAD AND SILL WITH TWO 1/4" X 1" SELF TAPPING SCREWS.

FASTENER SCHEDULE

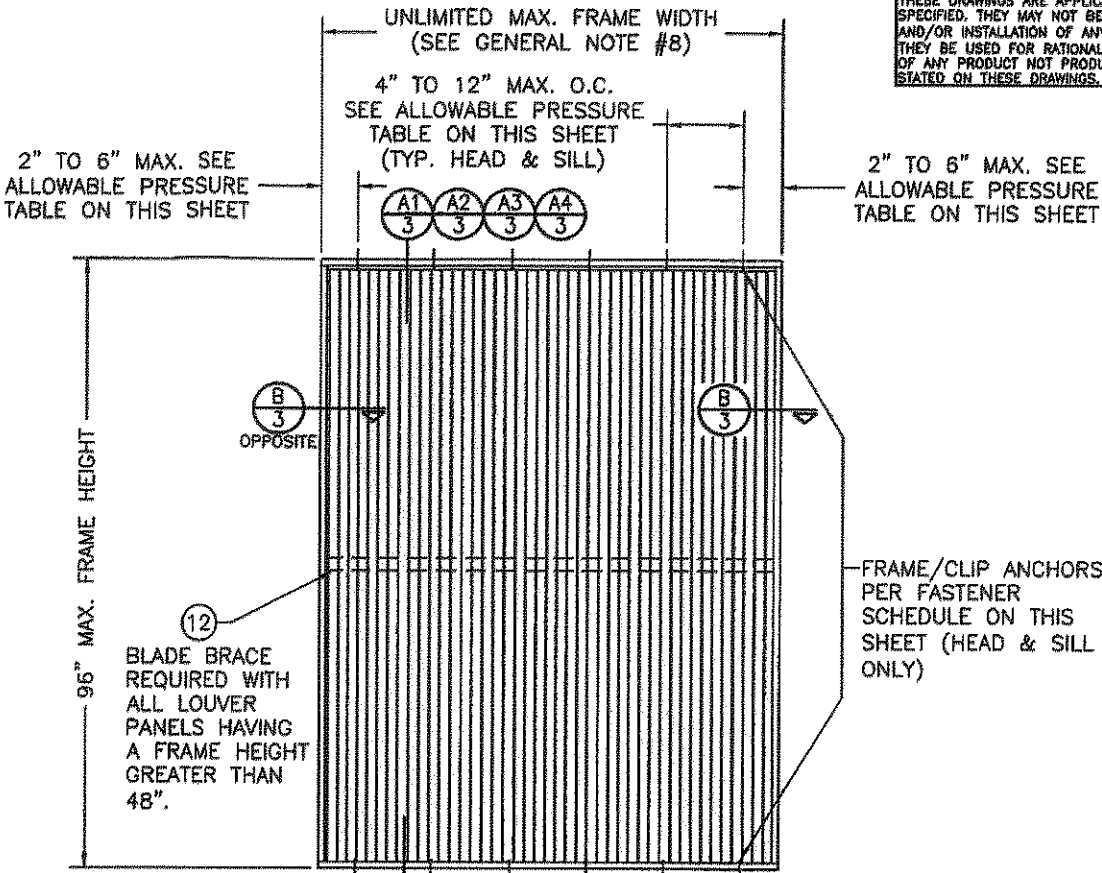
ANCHOR TYPE	(4) SUBSTRATE	MINIMUM EMBEDMENT	MINIMUM EDGE DIST.
(3) NO. 10 S.S. SCREW	WOOD	1 1/4"	3/4"
(5) NO. 10-16 SELF TAPPING/DRILLING SCREW	METAL STUD	FULL	3/4"
(1) 1/4" CONCRETE SCREW	CONCRETE	1 1/2"	2"
(2) 1/4" BOLT	STEEL OR METAL STUD	FULL	3/4"
(5) 1/4-20 OR 1/4-14 SELF TAPPING/DRILLING SCREW	STEEL	FULL	3/4"

- CONCRETE SCREWS SHALL BE ELCO ULTRACONS, ELCO CRETE-FLEX, ITW RAMSET/RED HEAD TAPCONS OR HILTI KWIK-CON II (HARDENED STEEL OR S.S.).
- BOLT SHALL BE MIN. A307 GALVANIZED OR 304 S.S. (Fv = 10,000 PSI MIN.)
- SMS WOOD SCREWS SHALL HAVE MIN. YIELD STRENGTH OF Fyb = 80,000 PSI
- SEE GENERAL NOTES FOR SUBSTRATE REQUIREMENTS.
- SELF TAPPING SCREWS SHALL BE CORROSION RESISTANT MIN. SAE GRADE 2 STEEL OR MIN. ALLOY GROUP 1, 2 & 3 CONDITION "A" STAINLESS STEEL.

(2) ALLOWABLE DESIGN PRESSURE & ANCHOR SPACING REQUIREMENTS (LOUVER PANELS)

(1) MAX. ANCHOR SPACING	(1) MAX. ANCHOR END DISTANCE	ALLOWABLE PRESSURE
4"	2"	+/-150 PSF
8"	4"	+/-75 PSF
12"	6"	+/-50 PSF

- WHEN LOUVERS ARE USED TO PROTECT ESSENTIAL FACILITIES, MAX. ANCHOR SPACING SHALL NOT EXCEED 4" & MAX. ANCHOR END DISTANCE SHALL NOT EXCEED 2" REGARDLESS OF PRESSURE REQUIRED.
- FOR ALLOWABLE PRESSURE ON DAMPERS, SEE SHEET 5 OR 7.



EXTERIOR ELEVATION
SINGLE LOUVER PANEL
(ARCHITECTURAL & NON-ARCHITECTURAL)

SCALE: 1/2" = 1'-0"

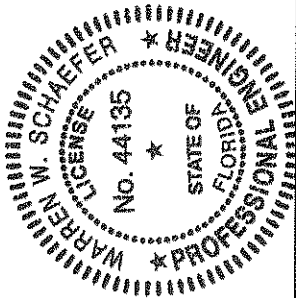
THESE DRAWINGS ARE APPLICABLE ONLY TO THE PRODUCT SPECIFIED. THEY MAY NOT BE USED FOR THE ASSEMBLY AND/OR INSTALLATION OF ANY OTHER PRODUCT NOR MAY THEY BE USED FOR RATIONAL AND/OR LOCAL APPROVAL OF ANY PRODUCT NOT PRODUCED BY THE MANUFACTURER STATED ON THESE DRAWINGS.

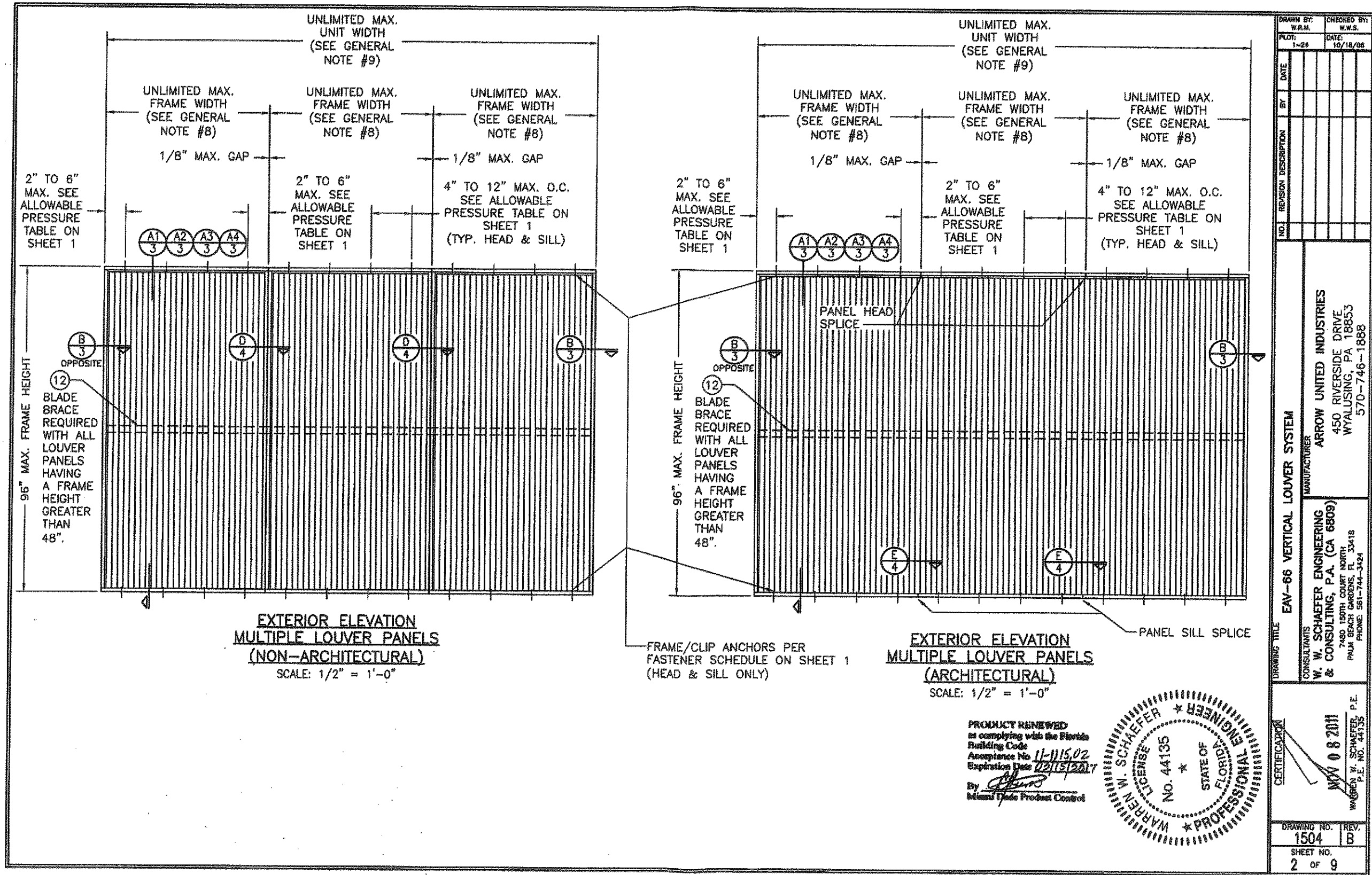
NO.	REVISION DESCRIPTION	DATE	BY	W.S.	W.S.	W.S.	W.S.	W.S.	W.S.
1	UPDATE TO PRESENT STANDARDS	07/14/08	W.S.	W.S.	W.S.	W.S.	W.S.	W.S.	W.S.
2	ADDED DAMPER CONDITIONS	07/14/08	W.S.	W.S.	W.S.	W.S.	W.S.	W.S.	W.S.
3	ADDED ESSENTIAL FACILITIES USE	07/14/08	W.S.	W.S.	W.S.	W.S.	W.S.	W.S.	W.S.
4	UPDATE TO CURRENT STANDARDS	11/08/11	W.S.	W.S.	W.S.	W.S.	W.S.	W.S.	W.S.

MANUFACTURER	ARROW UNITED INDUSTRIES
CONSULTANTS	W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)
7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3624	

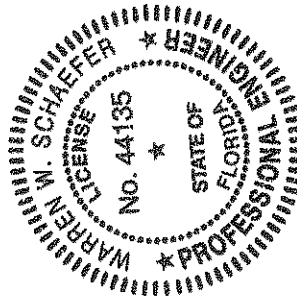
CERTIFICATION	NOV 08 2011
WARREN W. SCHAEFER, P.E.	P.E. NO. 44135
DRAWING NO.	1504
REV.	B
SHEET NO.	1 OF 9

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No 11-1115.02
Expiration Date 03/15/2017
By [Signature]
Miami Trade Products Control

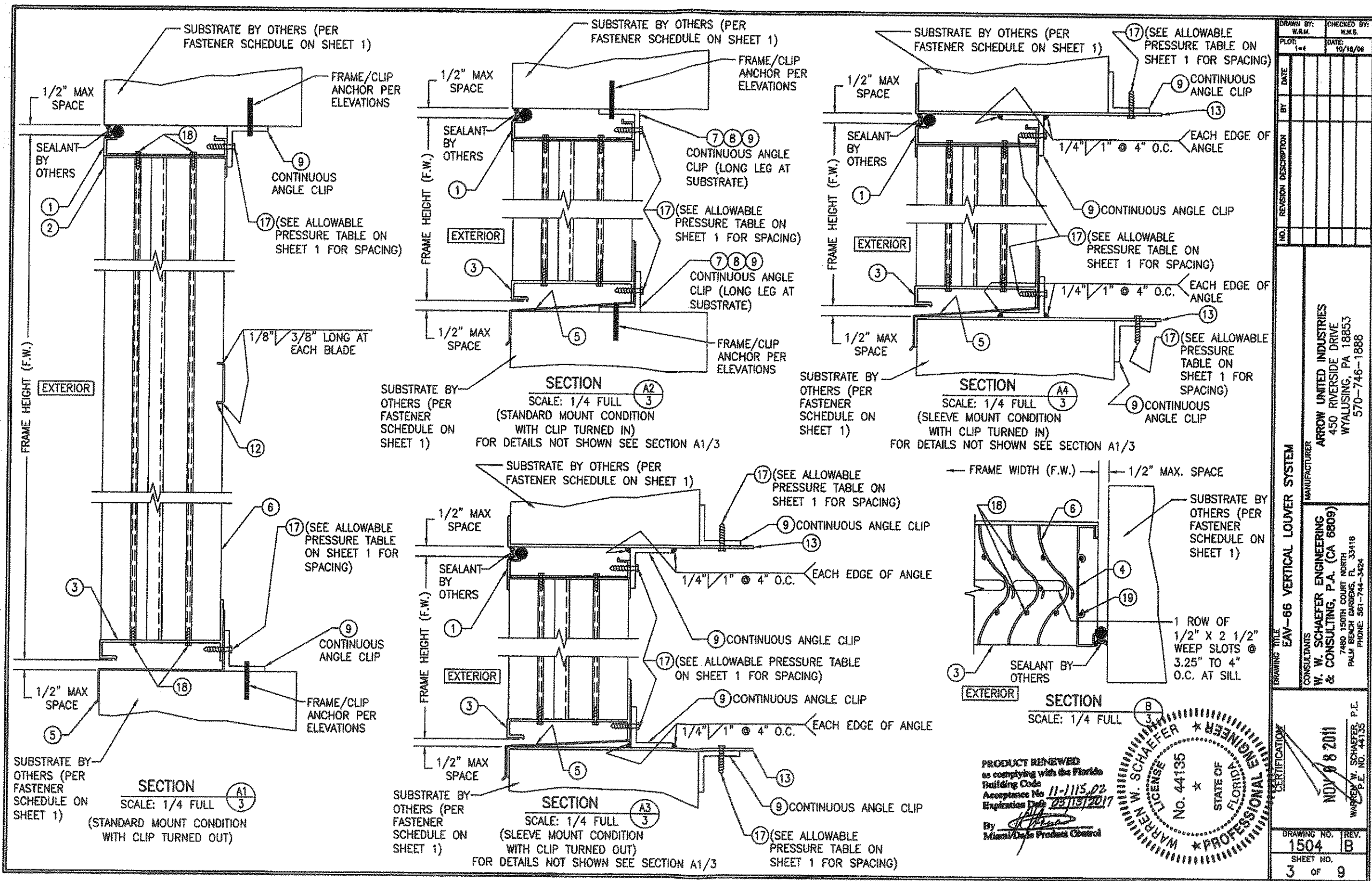


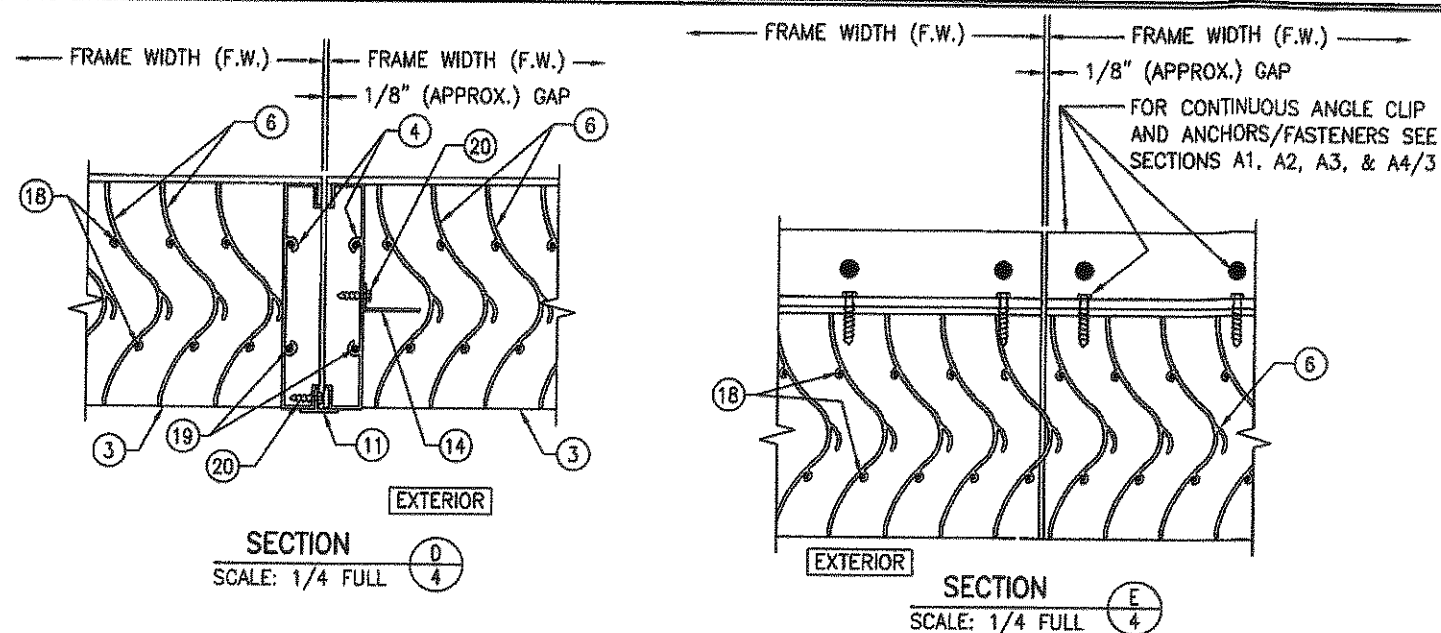


PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 11-1115.02
Expiration Date 02/15/2017
By *[Signature]*
Miami Trade Product Control

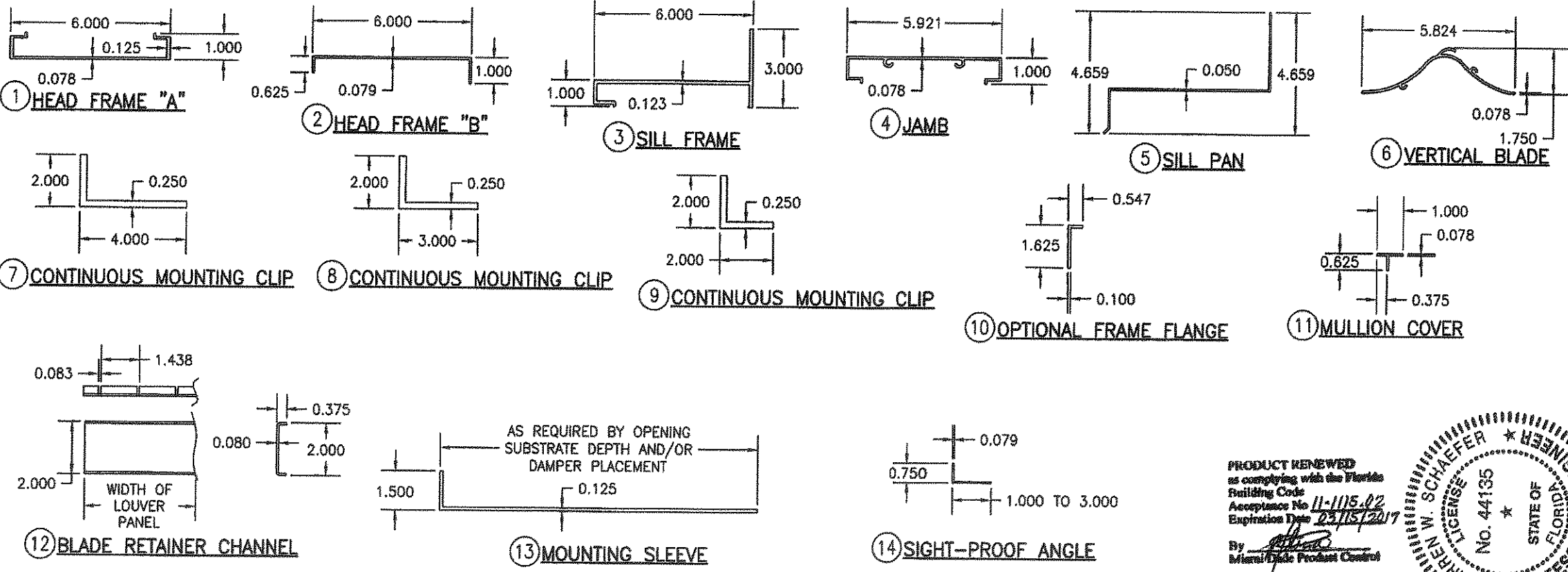


DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=24"		DATE: 10/18/06	
NO.	REVISION	DESCRIPTION	DATE
DRAWING TITLE: EAV-66 VERTICAL LOUVER SYSTEM			
MANUFACTURER: ARROW UNITED INDUSTRIES		450 RIVERSIDE DRIVE WYALUSING, PA 18853 570-746-1888	
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6808)		7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE 561-744-3424	
CERTIFICATION: WWS 08 2011		W. W. SCHAEFER, P.E. P.E. NO. 44135	
DRAWING NO. 1504		REV. B	
SHEET NO. 2		OF 9	

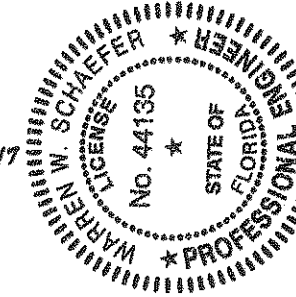




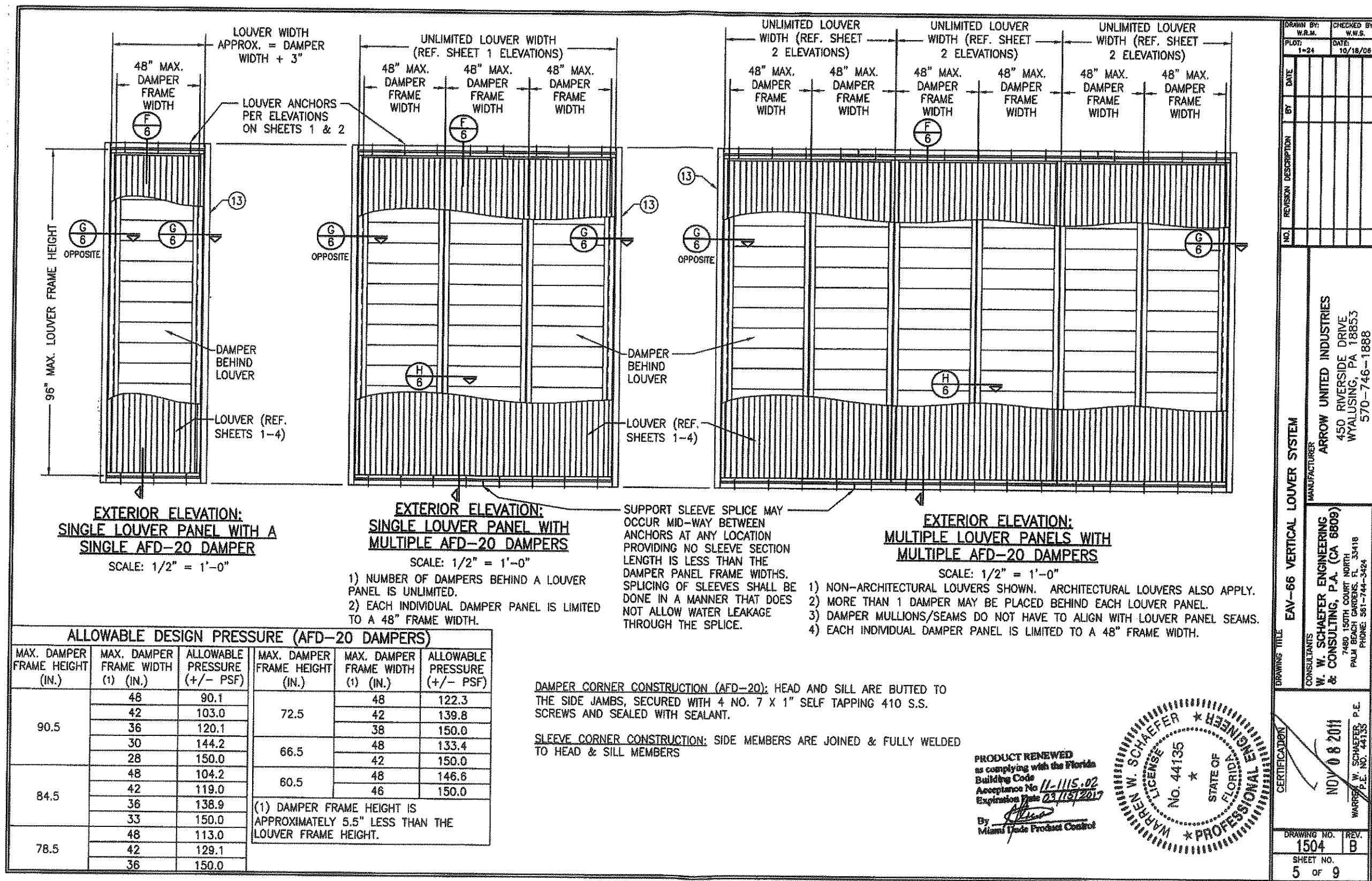
ITEM #	ITEM DESCRIPTION	MANUFACTURER/NOTES
PARTS		
1	HEAD FRAME "A"	6063-T6 ALUMINUM
2	HEAD FRAME "B"	6063-T5 ALUMINUM
3	SILL FRAME	6063-T6 ALUMINUM
4	JAMB	6063-T6 ALUMINUM
5	SILL PAN	5052-H32 ALUMINUM
6	VERTICAL BLADE	6063-T6 ALUMINUM
7	CONTINUOUS MOUNTING CLIP	6063-T5 ALUMINUM
8	CONTINUOUS MOUNTING CLIP	6063-T5 ALUMINUM
9	CONTINUOUS MOUNTING CLIP	6063-T5 ALUMINUM
10	OPTIONAL FRAME FLANGE	6063-T52/T6 ALUMINUM
11	MULLION COVER	6063-T52/T6 ALUMINUM
12	BLADE RETAINER CHANNEL	5052-H32 ALUMINUM
13	MOUNTING SLEEVE	5052-H32 ALUMINUM
14	SIGHT-PROOF ANGLE	6063-T5 ALUMINUM
MISC. FASTENERS		
17	NO. 14 X 1 1/4" 410 SS TEK SCREW	FOR SPACING REQUIREMENTS SEE ALLOWABLE PRESSURE TABLE ON SHEET 1
18	NO. 8 X 1" 18-8 SS SMS SCREW	2 PER BLADE END
19	1/4" X 1" 410 S.S. SELF TAPPING SCREW	2 PER FRAME CORNER
20	NO. 8 X 3/4" 18-8 SS SMS SCREW	2" FROM ENDS & 15" O.C.



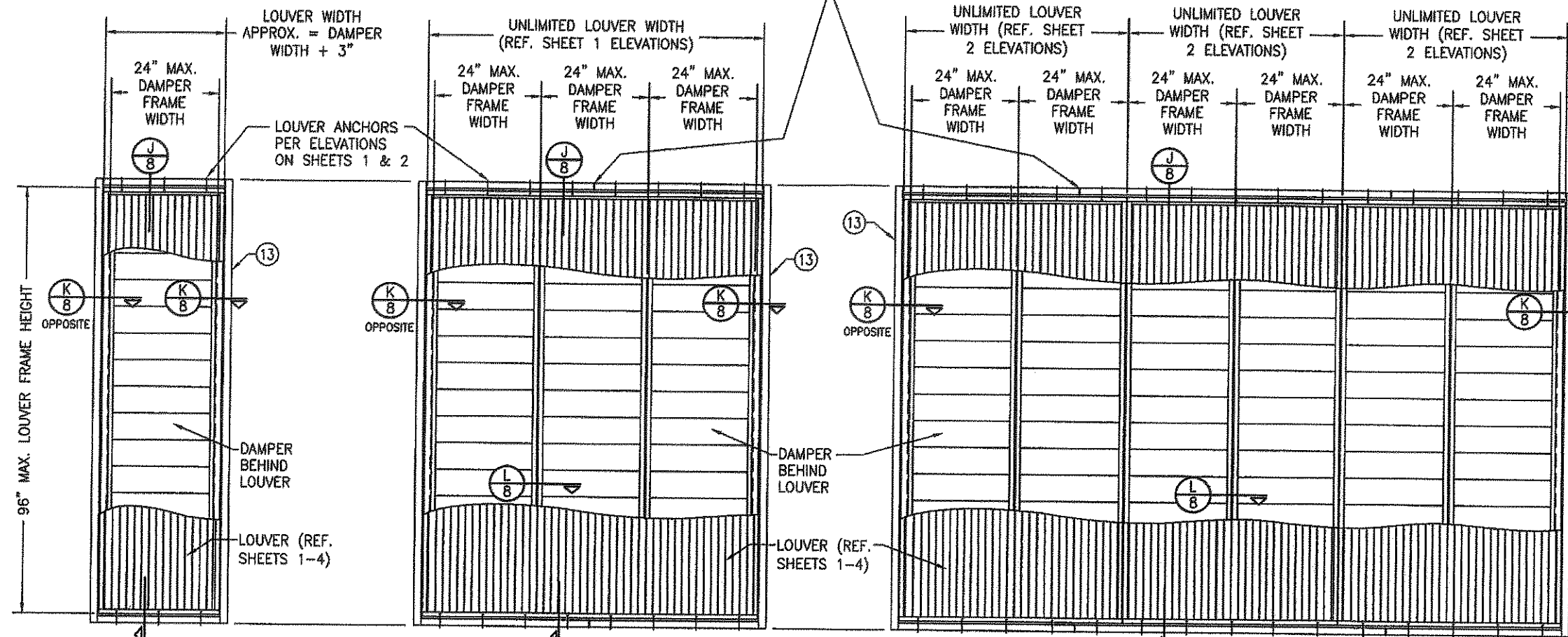
PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 11-1115-02
Expiration Date 02/15/2017
By [Signature]
Miami Blade Product Control



DRAWN BY: W.A.M.		CHECKED BY: W.H.S.	
PLOT: 1=4		DATE: 10/16/06	
DATE	BY	NO.	REVISION DESCRIPTION
<p>DRAWING TITLE: EAV-66 VERTICAL LOUVER SYSTEM</p> <p>MANUFACTURER: ARROW UNITED INDUSTRIES, 450 RIVERSIDE DRIVE, WYALUSING, PA 18853, 570-746-1888</p> <p>CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809), 7400 150TH COURT NORTH, PALM BEACH GARDENS, FL 33418, PHONE: 561-744-3424</p> <p>CERTIFICATION: NOV 08 2011, WARREN W. SCHAEFER, P.E., LICENSE NO. 44135</p> <p>DRAWING NO. 1504, REV. B, SHEET NO. 4 OF 9</p>			



SUPPORT SLEEVE SPLICE MAY OCCUR MID-WAY BETWEEN ANCHORS AT ANY LOCATION PROVIDING NO SLEEVE SECTION LENGTH IS LESS THAN THE DAMPER PANEL FRAME WIDTHS. SPLICING OF SLEEVES SHALL BE DONE IN A MANNER THAT DOES NOT ALLOW WATER LEAKAGE THROUGH THE SPLICE.



EXTERIOR ELEVATION:
SINGLE LOUVER PANEL WITH A
SINGLE AC-525/526 DAMPER
SCALE: 1/2" = 1'-0"

EXTERIOR ELEVATION:
SINGLE LOUVER PANEL WITH
MULTIPLE AC-525/526 DAMPERS
SCALE: 1/2" = 1'-0"
1) NUMBER OF DAMPERS BEHIND A LOUVER
PANEL IS UNLIMITED.
2) EACH INDIVIDUAL DAMPER PANEL IS LIMITED
TO A 24" FRAME WIDTH.

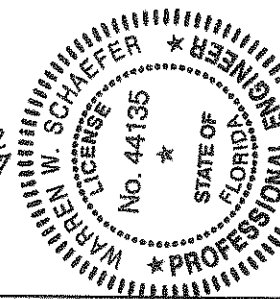
EXTERIOR ELEVATION:
MULTIPLE LOUVER PANELS WITH
MULTIPLE AC-525/526 DAMPERS
SCALE: 1/2" = 1'-0"
1) NON-ARCHITECTURAL LOUVERS SHOWN. ARCHITECTURAL LOUVERS ALSO APPLY.
2) MORE THAN 1 DAMPER MAY BE PLACED BEHIND EACH LOUVER PANEL.
3) DAMPER MULLIONS/SEAMS DO NOT HAVE TO ALIGN WITH LOUVER PANEL SEAMS.
4) EACH INDIVIDUAL DAMPER PANEL IS LIMITED TO A 24" FRAME WIDTH.

DAMPER CORNER CONSTRUCTION (AC-525/526): HEAD AND SILL ARE BUTTED TO THE SIDE JAMBS, SECURED WITH 4 NO. 8 X 3/4" 410 S.S. SHEET METAL SCREWS AND SEALED WITH SEALANT.

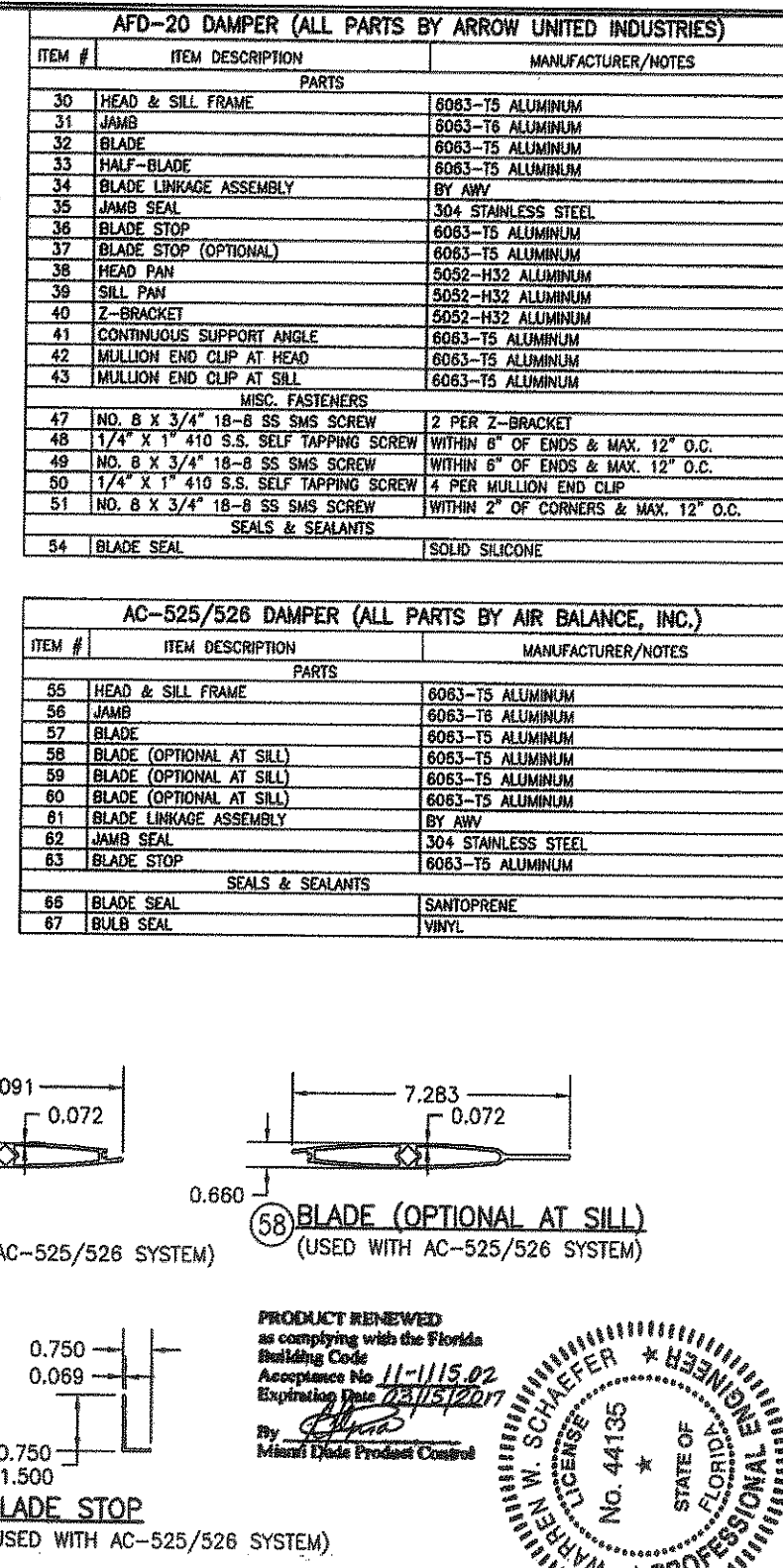
SLEEVE CORNER CONSTRUCTION: SIDE MEMBERS ARE JOINED & FULLY WELDED TO HEAD & SILL MEMBERS

ALLOWABLE DESIGN PRESSURE
(AC-525/526 DAMPERS)
+150/-150 PSF


PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 11-1115.02
Expiration Date 03/15/2017
By [Signature]
Miami Dade Product Control



DRAWN BY: W.A.M.		CHECKED BY: W.W.S.	
PLOT: 1-24		DATE: 10/18/06	
DATE	BY	REVISION	DESCRIPTION
DRAWING TITLE: EAV-66 VERTICAL LOUVER SYSTEM			
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424		MANUFACTURER: ARROW UNITED INDUSTRIES 450 RIVERSIDE DRIVE WYALUSING, PA 18853 570-746-1888	
CERTIFICATION: NOV 08 2011 WARREN W. SCHAEFER, P.E. P.E. NO. 44135		DRAWING NO. 1504 SHEET NO. 7 OF 9	



AC-525/526 DAMPER (ALL PARTS BY AIR BALANCE, INC.)		
ITEM #	ITEM DESCRIPTION	MANUFACTURER/NOTES
PARTS		
55	HEAD & SILL FRAME	6063-T5 ALUMINUM
56	JAMB	6063-T6 ALUMINUM
57	BLADE	6063-T5 ALUMINUM
58	BLADE (OPTIONAL AT SILL)	6063-T5 ALUMINUM
59	BLADE (OPTIONAL AT SILL)	6063-T5 ALUMINUM
60	BLADE (OPTIONAL AT SILL)	6063-T5 ALUMINUM
61	BLADE LINKAGE ASSEMBLY	BY AWW
62	JAMB SEAL	304 STAINLESS STEEL
63	BLADE STOP	6063-T5 ALUMINUM
SEALS & SEALANTS		
66	BLADE SEAL	SANTOPRENE
67	BULB SEAL	VINYL

DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1-4		DATE: 10/18/88	
NO.	REVISION DESCRIPTION	BY	DATE
<div style="display: flex; justify-content: space-between;"> <div> <p>DRAWING TITLE EAV-66 VERTICAL LOUVER SYSTEM</p> </div> <div> <p>MANUFACTURER ARROW UNITED INDUSTRIES 450 RIVERSIDE DRIVE WYALUSING, PA 18853 570-746-1888</p> </div> </div>			
<div style="display: flex; justify-content: space-between;"> <div> <p>CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424</p> </div> <div> <p>CERTIFICATION  NOV 08 2011 WARREN N. SCHAEFER, P.E. C.P.C.E. NO. 44135</p> </div> </div>			
DRAWING NO. 1504		REV. B	
SHEET NO. 9 OF 9			