



**BUILDING CODE COMPLIANCE OFFICE (BCCO)  
PRODUCT CONTROL DIVISION**

**MIAMI-DADE COUNTY, FLORIDA  
METRO-DADE FLAGLER BUILDING  
140 WEST FLAGLER STREET, SUITE 1603  
MIAMI, FLORIDA 33130-1563  
(305) 375-2901 FAX (305) 375-2908**

**NOTICE OF ACCEPTANCE (NOA)**

**Arrow United Industries  
314 Riverside Drive  
P. O. Box 69  
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 by Miami-Dade County Product Control Division and accepted by the Board of Rules and Appeals (BORA) 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 Division (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. BORA reserves the right to revoke this acceptance, if it is determined by Miami-Dade county Product Control Division 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: 6" Louver System Model EA 64.**

**APPROVAL DOCUMENT:** Drawing No. 1464, titled "EA-64 Louver System" dated 12/02/05 with no revisions, prepared by W.W. Schaefer Engineering & consulting, PA., signed and sealed by W. W. Schaefer, P.E., bearing the Miami-Dade County Product Control Approval stamp with the NOA number and approval date by the Miami-Dade County Product Control Division.

**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 and following statement: "Miami-Dade County Product Control Approved or MDCPCA", 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 is a Private Label of NOA # 05-0328.01** consisting of this page, evidence page as well as approval document mentioned above.

The submitted documentation was reviewed by **Candido F. Font PE.**

  
05/26/06



**NOA No: 05-1206.04  
Expiration Date: April 22, 2009  
Approval Date: May 26, 2006  
Page 1**

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

**A. DRAWINGS.**

1. Drawing prepared by W.W. Schaefer Engineering & consulting P.A., titled "EA-64 Louver System" Drawing No. 1464, dated 12/02/05, with no revisions signed and sealed by W. W. Schaefer, PE.

**B. TESTS.**

	Test Report	Test Standard	Test Date	Test Witness
1.	HTL 0198-0508-03	TAS 201,202 & 203	05/15-10/03	V.J.Abraham PE.
2.	HTL.0198-0618-03	TAS 201, 202 & 203	06/06-25/03	V.J.Abraham PE.
3.	HTL 0198-0804-03	TAS 201, 202 & 203	08/06-08/03	V.J.Abraham PE
4.	HTL 0198-0508-03	TAS 201, 202 & 203	05/08-13/03	V.J.Abraham PE
5.	HTL 0198-0804-03	TAS 201, 202 & 203	08/08-11/03	V.J.Abraham PE
6.	HTL 0198-0324-03	TAS 201, 202 & 203	03/24-26/03	V.J.Abraham PE
7.	HTL 0198-0324-03	TAS 201, 202 & 203	03/24-04/16	V.J.Abraham PE
8.	HTL 0198-0324-03	TAS 201, 202 & 203	03/24-24/03	V.J.Abraham PE
9.	HTL 0198-0324-03	TAS 201, 202 & 203	03/25-04/21	V.J.Abraham PE
10.	HTL 0198-0128-03	TAS 201, 202 & 203	02/10-04/21	V.J.Abraham PE
11.	HTL 0198-0508-03	TAS 202	05/13-13/03	V.J.Abraham PE
12.	HTL 0198-0324-03	TAS 202	03/27-27/03	V.J.Abraham PE
13.	HTL 0198-0324-03	TAS 201 & 203	03/24-04/21	V.J.Abraham PE.
14.	AT 01-45720.01	TAS100(A)-95	06/16/03	J.A. Reed PE.

**C. CALCULATIONS.**

1. Allowable Load Calculations, dated 09/04/03 pages 1 through 11 of 11 prepared by W.W. Schaefer Engineering and Consulting PA, signed and sealed by W.W. Schaefer, PE.
2. Allowable Load Calculations, dated 03/04/04, pages 1 through 6 prepared by W.W. Schaefer Engineering & Consulting PA, signed and sealed by W.W. Schaefer PE.
3. Revised Allowable Load Calculations dated 09/04/03 and revised on 08/22/05, page 1 through 11 prepared by W.W. Schaefer Engineering & Consulting PA, signed and sealed by W.W. Schaefer PE.

**D. QUALITY ASSURANCE.**

1. Miami-Dade Product Control Division

**E. STATEMENTS**

1. No financial interest letter issued by W.W. Schaefer Engineering & Consulting PA on 09/22/03 signed and sealed by W. W. Schaefer, PE.
2. Code compliance letter issued by W.W. Schaefer Engineering & Consulting PA on 09/22/03 signed and sealed by W. W. Scheafer PE.
3. Test compliance letter issued by Hurricane Test Laboratory on 09/09/03, signed and sealed by V.J. Abraham, PE.
4. Private Labeling Agreement between American Warming and Ventilating and Arrow United Industries, signed by R. Lichtenwald and V. Kreglewicz, both signatures were notarized.

  
05/26/06  
Candido F. Font PE.  
Sr. Product Control Examiner  
NOA No 05-1206.04  
Expiration Date: April 22, 2009  
Approval: Date: May 26, 2006

**FASTENER SCHEDULE**

ANCHOR TYPE	(5) SUBSTRATE	MINIMUM EMBEDMENT	MINIMUM EDGE DIST.
(3) NO. 10 S.S. SCREW	WOOD	1 3/8"	3/4"
(6) NO. 10 SELF TAP SCREW	METAL STUD OR STEEL	FULL	3/4"
(1) 1/4" CONCRETE SCREW	C90 CONCR. BLOCK	1 1/4"	2 1/2"
(1) 1/4" CONCRETE SCREW	CONCRETE	1 1/4"	2"
(2) 1/4" BOLT	STEEL OR METAL STUD	FULL	3/4"
(4) 3/8" SLEEVE ANCHOR	CONCRETE	2 1/2"	2"
(2) 3/8" BOLT	STEEL	FULL	3/4"

- (1) CONCRETE SCREWS SHALL BE ELCO TAPCONS OR HILTI KWIK-CON II. (HARDENED STEEL OR S.S. PER AISI 1021 & 410)
- (2) BOLT SHALL BE MIN. A307 GALVANIZED OR 304 S.S. (Fv = 10,000 PSI MIN.)
- (3) WOOD SCREWS SHALL HAVE MIN. YIELD STRENGTH OF Fyb = 80,000 PSI
- (4) SLEEVE ANCHORS MAY BE GALVANIZED OR S.S. RAMSET RED HEAD DYNABOLTS OR POWERS RAWL POWER BOLT.
- (5) SEE GENERAL NOTES FOR SUBSTRATE REQUIREMENTS.
- (6) SELF TAPPING SCREWS SHALL BE CORROSION RESISTANT MIN. SAE GRADE 2 STEEL OR MIN. ALLOY GROUP 1, 2 & 3 CONDITION "A" STAINLESS STEEL.

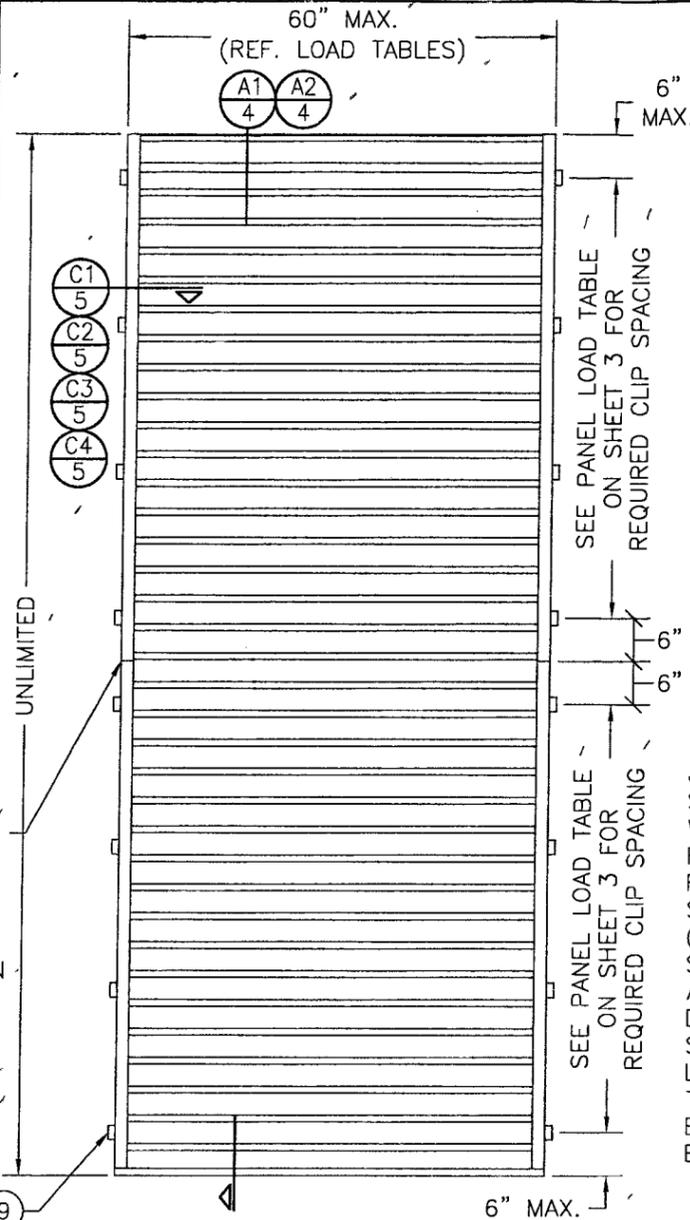
**CORNER & BLADE END CONSTRUCTION**

**BLADE TO JAMB:**  
**WELDED CONDITION:** BLADE END BUTTS TO JAMB, IS WELDED WITH ONE 1/8" X 5" WELD AND SCREWED TO JAMB WITH WITH 2 NO. 8 X 3/4" S.S. SMS SCREWS THROUGH JAMB AND INTO BLADE SCREW SPLINES.  
**SCREWED CONDITION:** BLADE END BUTTS TO JAMB & IS SCREWED TO JAMB WITH TWO (2) 1/4"-20 X 1 1/2" TYPE "F" SCREWS THROUGH JAMB AND INTO BLADE SCREW SPLINES.  
**HEAD TO JAMB:** HEAD FRAME IS SQUARE CUT, BUTTED AND JOINED TO JAMB WITH ONE 1/8" X 5" WELD AND 2 NO. 8 X 3/4" S.S. SMS SCREWS THROUGH JAMB AND INTO HEADER SCREW SPLINES.  
**SILL TO JAMB:** SIDE JAMB BUTTS TO SILL AND IS JOINED TO SILL WITH THREE(3) 1/8" X 1" WELDS AND 2 NO. 8 X 3/4" S.S. SMS SCREWS THROUGH SILL AND INTO JAMB SCREW SPLINES.

**GENERAL NOTES:**

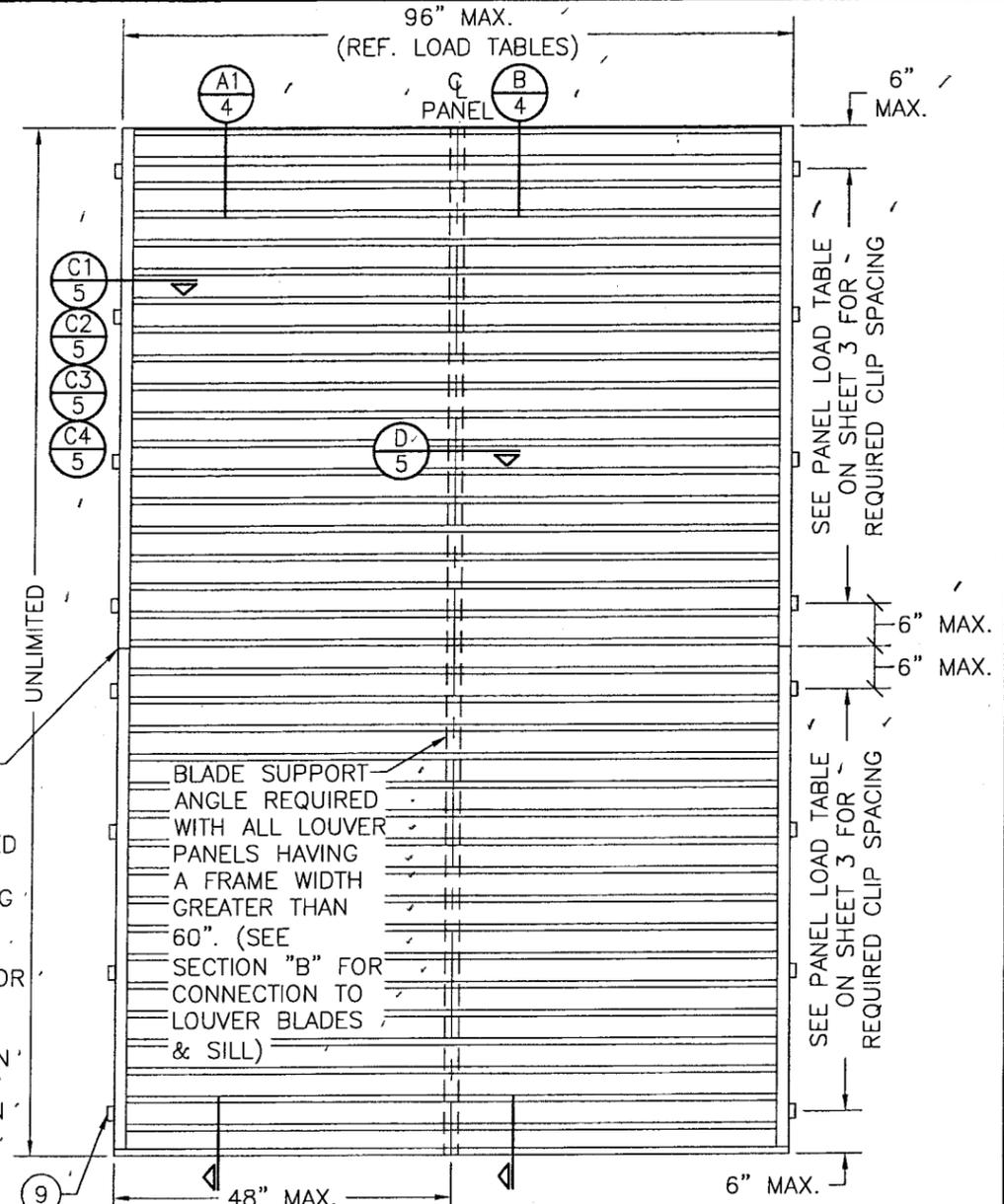
1. IT SHALL BE THE RESPONSIBILITY OF THE PERMIT HOLDER TO VERIFY THE STRUCTURAL INTEGRITY OF THE EXISTING STRUCTURE TO SUPPORT THE LOADS SUPERIMPOSED BY THE LOUVERS.
2. THESE LOUVER SYSTEMS HAVE BEEN DESIGNED & TESTED IN ACCORDANCE WITH THE 2004 FLORIDA BUILDING CODE (FBC) AND PROTOCOLS TAS-100, 201, 202 & 203 INCLUDING HIGH VELOCITY HURRICANE ZONES (HVHZ).
3. EACH LOUVER ASSEMBLY SHALL BE PERMANENTLY LABELED AS FOLLOWS: ARROW UNITED INDUSTRIES, MIAMI-DADE COUNTY PRODUCT CONTROL APPROVED
4. ALL CONCRETE SUBSTRATE SHALL BE MIN. 3000 PSI.
5. ALL WOOD SUBSTRATE SHALL BE MIN. G = 0.55 DENSITY.
6. ALL METAL STUD SUBSTRATE SHALL BE MIN. 16 GA. Fy = 33 ksi.
7. ALL STRUCTURAL STEEL SUBSTRATE SHALL BE MIN. 12 GA. Fy = 36 ksi.
8. PANEL WIDTHS & HEIGHTS ARE LIMITED AS SHOWN IN ELEVATIONS.
9. MULLED PANELS MAY BE HORIZONTALLY INSTALLED TO AN UNLIMITED NUMBER. VERTICAL STACKING OF MULLED PANELS MAY OCCUR PROVIDING A STRUCTURAL SUPPORT IS DESIGNED & INSTALLED BY OTHERS TO SUPPORT ALL LOADS TRANSFERRED FROM THE LOUVER ASSEMBLY (SINGLE PANELS MAY RUN TO UNLIMITED HEIGHT PER ELEVATION IF NO MULLION EXISTS).
10. SEPARATION OF DISSIMILAR MATERIALS MUST BE MAINTAINED PER ALL APPLICABLE CODES & SECTION 2003.8.4 OF FBC 2004.
11. THIS SYSTEM HAS BEEN TESTED FOR WATER INFILTRATION RESISTANCE AND IS A WATER RESISTANT SYSTEM WHEN THE LOUVER BLADE ENDS ARE SCREWED & WELDED AND THE DAMPER BLADE IS ATTACHED TO THE LOUVER BLADES AS SHOWN IN SECTION "A2/4". (NOT RATED FOR WATER RESISTANCE WHEN LOUVER BLADE ENDS ARE SCREW CONNECTED ONLY)
12. UNLESS THE DAMPER BLADE IS ATTACHED TO THE LOUVER BLADES, 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.
13. ALL DETAILS OF SHEETS 8 THRU 11 MUST COMPLY WITH THE LOUVER DETAILS SHOWN ON SHEETS 1 THRU 7. ANY DISCREPANCY IS CONTROLLED BY THE DETAILS ON SHEETS 1 THRU 7.

JAMB SPLICE WHEN REQUIRED FOR STACKING (SEE SECTION A1/4 FOR DETAIL). SPLICE LOCATION TO BE BETWEEN BLADES.



**EXTERIOR ELEVATION SINGLE LOUVER PANEL WITHOUT BLADE SUPPORT ANGLE**

NOTE: LOUVER PANELS MAY BE STACKED/SPLICED VERTICALLY OR THE LOUVER PANEL MAY RUN VERTICALLY TO INFINITE HEIGHT PROVIDING OPENING IS PROPERLY DESIGNED BY OTHERS TO SUPPORT THE LOUVER PANELS.



**EXTERIOR ELEVATION SINGLE LOUVER PANEL WITH BLADE SUPPORT ANGLE**

NOTE: LOUVER PANELS MAY BE STACKED/SPLICED VERTICALLY OR THE LOUVER PANEL MAY RUN VERTICALLY TO INFINITE HEIGHT PROVIDING OPENING IS PROPERLY DESIGNED BY OTHERS TO SUPPORT THE LOUVER PANELS. BLADE SUPPORT ANGLE IS CONTINUOUS FROM HEAD TO SILL AND SPLICING OF THIS ANGLE IS NOT PART OF THIS APPROVAL.

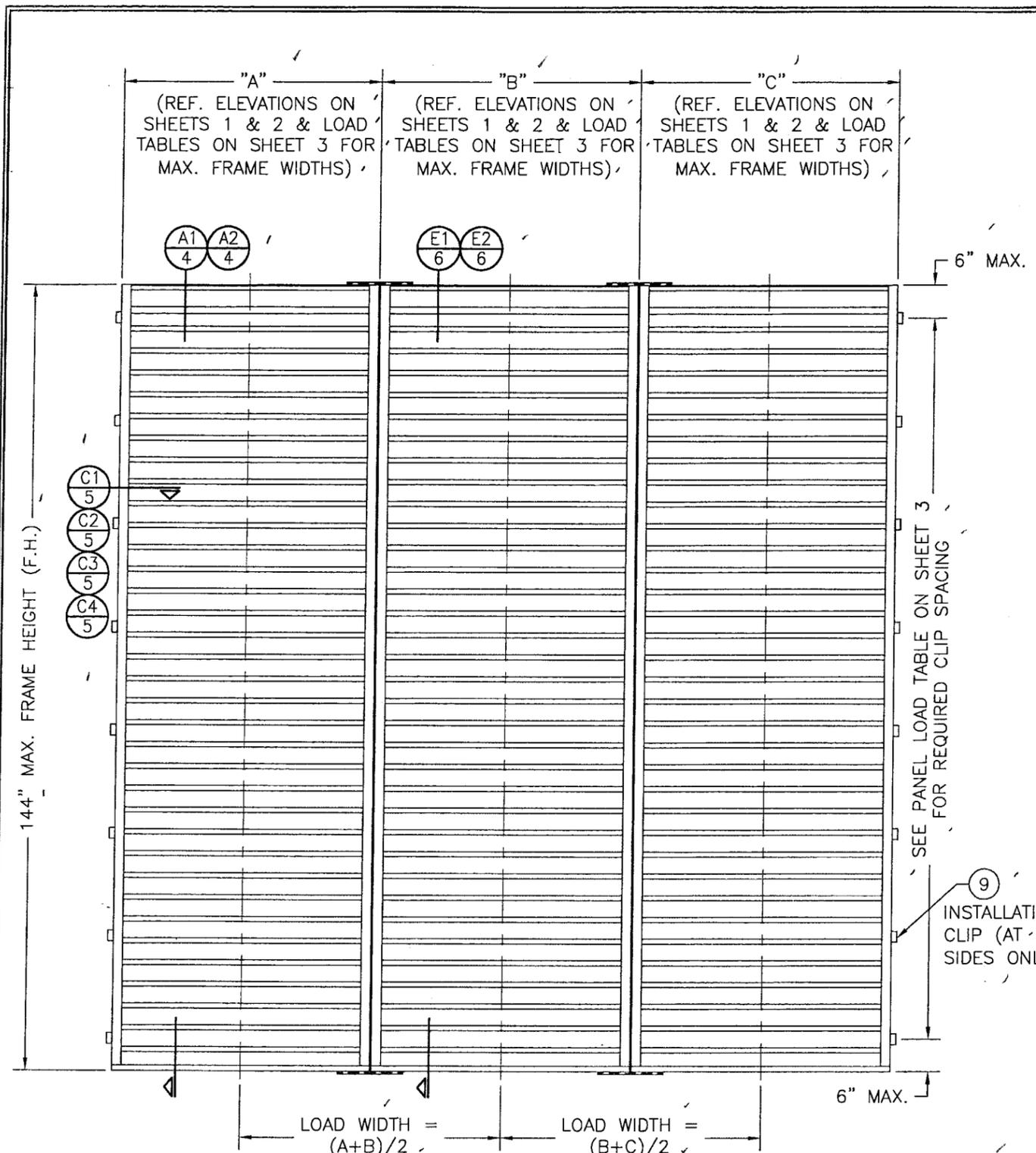
**ALLOWABLE PRESSURES**

PRESSURES VARY WITH PANEL SIZE, CLIP SPACING & MULLION CONDITIONS & SHALL BE CONTROLLED BY THE LESSER OF THE ALLOWABLE PRESSURE FOR EACH OF THOSE APPLICABLE CONDITIONS. SEE LOAD TABLES ON SHEET 3 FOR ALLOWABLE PRESSURES.

Approved as complying with the Florida Building Code  
 NO. 05-1206-04  
 Miami-Dade Product Control  
 Warren W. Schaeffer, P.E.

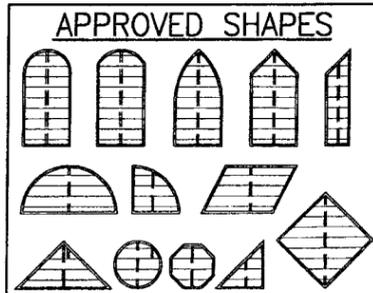
DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1=24	DATE: 12/02/05
DATE	BY
REVISION DESCRIPTION	
NO.	
<b>EA-64 LOUVER SYSTEM</b> MANUFACTURER <b>ARROW UNITED INDUSTRIES</b> 314 RIVERSIDE DRIVE WYALUSING, PA 18853 570-746-1888	
CONSULTANTS <b>W. W. SCHAEFFER ENGINEERING &amp; CONSULTING, P.A.</b> 8885 N. MILITARY TRAIL, SUITE C-204 PALM BEACH GARDENS, FL 33410 PHONE: 561-775-4902 FAX: 561-775-4903	
CERTIFICATION	DEC 02 2005 WARREN W. SCHAEFFER, P.E. P.E. NO. 44135
DRAWING NO.	REV.
1464	
SHEET NO.	1 OF 12

DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1=24	DATE: 12/02/05
NO.	REVISION DESCRIPTION



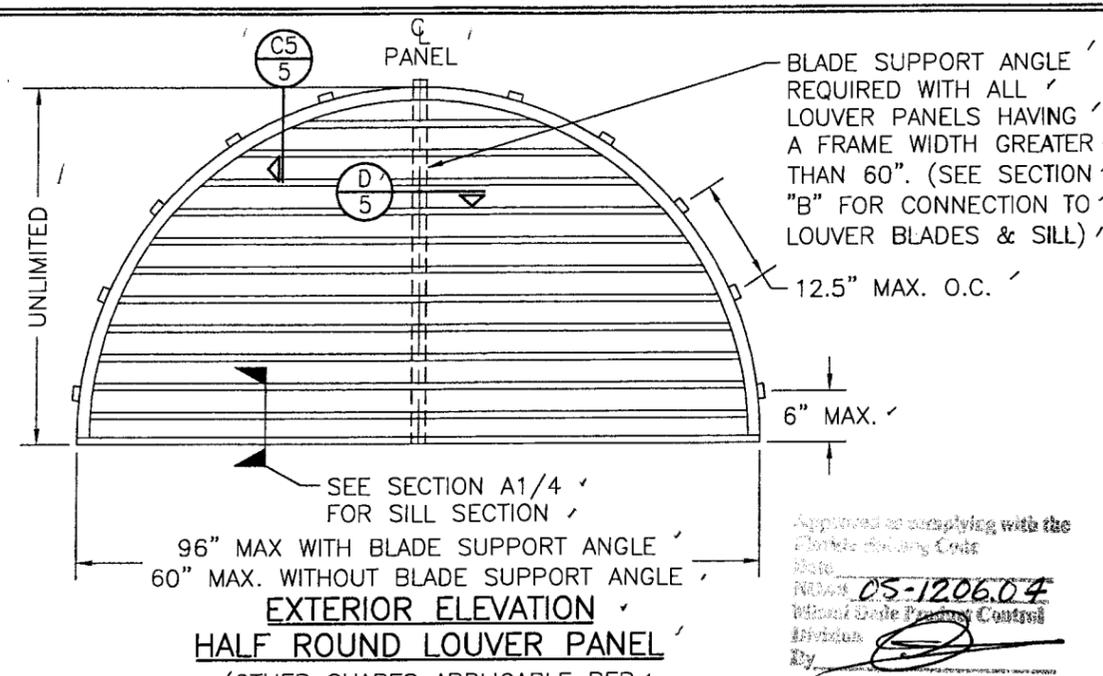
RECTANGULAR PANELS SHOWN; SHAPED PANELS MAY ALSO BE MULLED PROVIDING THE MULLION END CONNECTIONS ARE AS DETAILED WITH THE ABOVE RECTANGULAR ELEVATION.

**EXTERIOR ELEVATION  
MULLED UNITS**  
(3 PANEL UNIT SHOWN; MORE THAN 3 PANELS MAY BE MULLED/STACKED HORIZONTALLY)

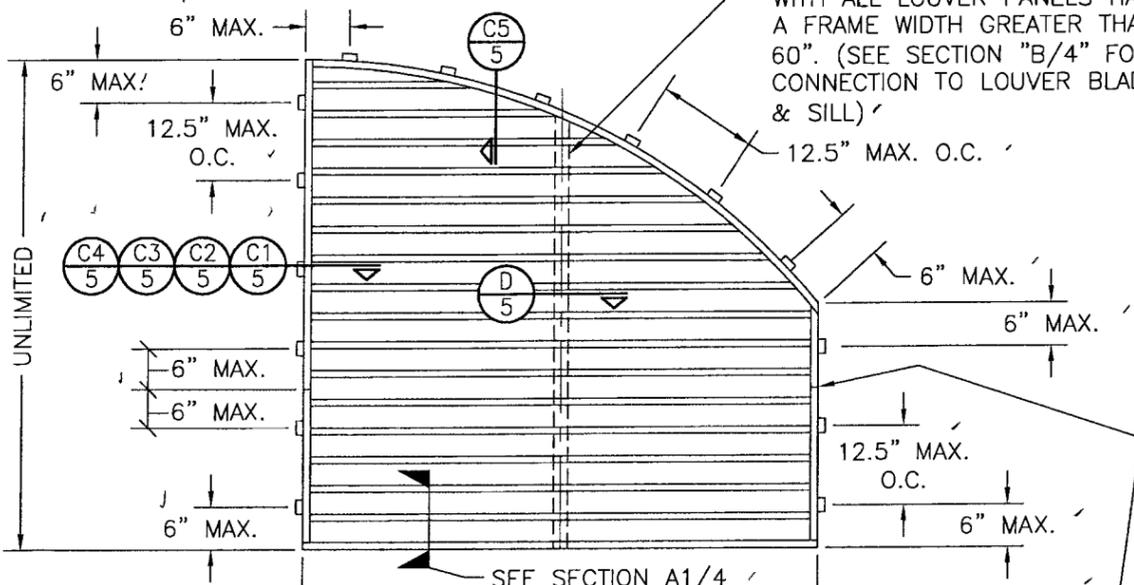


**NOTES:**

1. OTHER SHAPES MAY APPLY PROVIDING THEY ARE SIMILAR TO THOSE SHOWN & HAVE CORNER CONSTRUCTION AS DESCRIBED ON ALL SHEETS.
2. ALL SHAPED LOUVER PANELS ARE RESTRICTED TO THE SAME PANEL WIDTHS & PRESSURE AS THE RECTANGULAR LOUVER PANELS & MAY BE STACKED VERTICALLY & HORIZONTALLY THE SAME AS THE RECTANGULAR PANELS.
3. CLIP SPACING IS RESTRICTED TO 6" FROM ENDS & 12.5" MAX. O.C. FOR ALL SHAPED LOUVER PANELS.
4. WHEN BLADES EXCEED 60" IN LENGTH (UP TO 96"), BLADE SUPPORT ANGLE AND BRACKETS ARE REQUIRED AT A MAXIMUM OF 48" FROM BLADE ENDS.
5. ALL OTHER SHAPES, EXCEPT SQUARE & RECTANGULAR, MUST HAVE BLADE SUPPORT ANGLE AND BRACKETS AT CENTER OF SPAN REGARDLESS OF BLADE LENGTH.
6. SPLICES MAYNOT EXIST ON BENT OR SLOPED JAMBS. ONLY STRAIGHT VERTICAL JAMBS MAY BE SPLICED.



**EXTERIOR ELEVATION  
HALF ROUND LOUVER PANEL**  
(OTHER SHAPES APPLICABLE PER APPROVED SHAPE TABLE)



**EXTERIOR ELEVATION  
PARTIAL ARCH TOP PANEL**  
(OTHER SHAPES APPLICABLE PER APPROVED SHAPE TABLE)

JAMB SPLICE WHEN REQUIRED FOR STACKING (SEE SECTION A1/4 FOR DETAIL). SPLICE LOCATION TO BE BETWEEN BLADES (SEE NOTE 6 BELOW).

Applied in compliance with the Florida Building Code  
Date: 05-12-06  
Project: 05-1206.04  
Division: [Signature]

**MANUFACTURER**  
**ARROW UNITED INDUSTRIES**  
314 RIVERSIDE DRIVE  
WYALUSING, PA 18853  
570-746-1888

**CONSULTANTS**  
**W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.**  
8895 N. MILITARY TRAIL, SUITE C-204  
PALM BEACH GARDENS, FL 33410  
PHONE: 561-775-4802 FAX: 561-775-4903

**CERTIFICATION**  
DEC 02 2005  
WARREN W. SCHAEFER, P.E.  
P.E. NO. 44135

**DRAWING TITLE**  
EA-64 LOUVER SYSTEM

**DRAWING NO.**  
1464

**REV.**  
2 OF 12

MULLION LOAD TABLE (SEE INSTRUCTIONS BELOW)

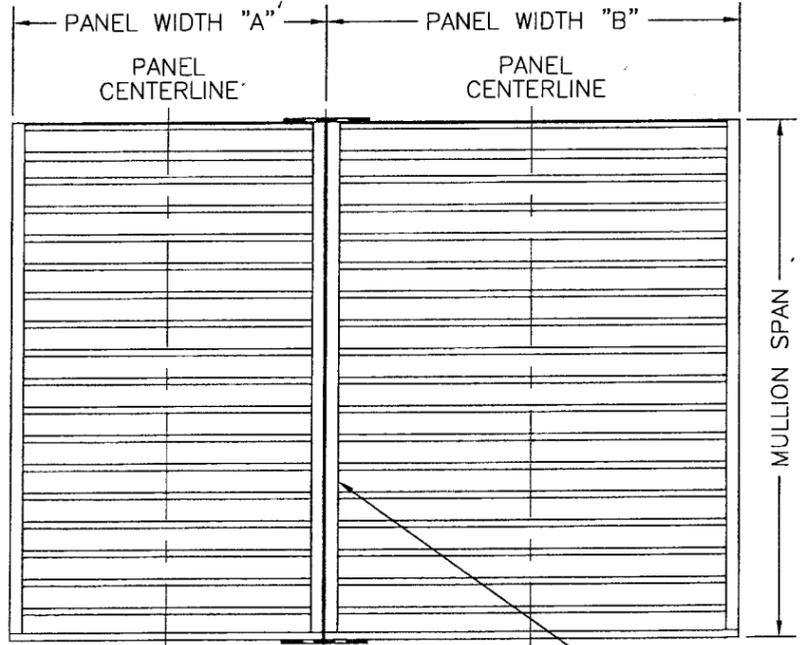
MULLION SPAN (IN.)	LOAD WIDTH (IN.)	(1) ALLOWABLE (2) PRESSURE (PSF)	MULLION SPAN (IN.)	LOAD WIDTH (IN.)	(1) ALLOWABLE (2) PRESSURE (PSF)	MULLION SPAN (IN.)	LOAD WIDTH (IN.)	(1) ALLOWABLE (2) PRESSURE (PSF)	MULLION SPAN (IN.)	LOAD WIDTH (IN.)	(1) ALLOWABLE (2) PRESSURE (PSF)	
18"	96"	180.0	60"	96"	65.7	84"	96"	47.0	120"	96"	32.9	
	24"	96"		164.3	90"		70.1	90"		50.1	90"	35.1
24"		90"		175.3	84"		75.1	84"		53.7	84"	37.6
	30"	84"		180.0	78"		80.9	78"		57.8	78"	40.4
96"		131.5		72"	87.6		72"	62.6		72"	43.8	
		90"		140.2	66"		95.6	66"		68.3	66"	47.8
84"		150.2		60"	105.2		60"	75.1		60"	52.6	
78"		161.8		54"	116.9		54"	83.5		54"	58.4	
72"		175.3		48"	131.5		48"	93.9		48"	65.7	
36"	66"	180.0		42"	150.2		42"	107.3		42"	75.1	
	96"	109.6		36"	175.3		36"	125.2		36"	87.6	
	90"	116.9		30"	180.0		30"	150.2		30"	105.2	
	84"	125.2	66"	96"	59.8	96"	24"	180.0	24"	131.5		
	78"	134.8		90"	63.7		96"	41.1	18"	175.3		
	72"	146.1		84"	68.3		90"	43.8	96"	27.2		
66"	159.3	78"		73.5	84"		47.0	90"	29.0			
60"	175.3	72"		79.7	78"		50.6	84"	31.1			
54"	180.0	66"		86.9	72"		54.8	78"	33.5			
42"	96"	93.9	60"	95.6	60"	59.8	72"	36.3	132"	66"	39.6	
	90"	100.2	54"	106.2	54"	65.7	60"	43.6		60"	43.6	
	84"	107.3	48"	119.5	48"	73.0	54"	48.4		54"	48.4	
	78"	115.6	42"	136.6	42"	82.2	48"	54.4		48"	54.4	
	72"	125.2	36"	159.3	36"	93.9	42"	62.2		42"	62.2	
	66"	136.6	30"	180.0	30"	109.6	36"	72.6		36"	72.6	
	60"	150.2	72"	96"	54.8	30"	131.5	30"		87.1	30"	87.1
	54"	166.9		90"	58.4	24"	164.3	24"		108.9	24"	108.9
48"	180.0	84"		62.6	18"	180.0	18"	145.2	144"	18"	145.2	
48"	96"	82.2		78"	67.4	96"	36.5	72"		28.0	72"	28.0
	90"	87.6		72"	73.0	90"	39.0	84"		30.5	66"	30.5
84"	93.9	66"		79.7	84"	41.7	84"	33.5		60"	33.5	
78"	101.1	60"		87.6	78"	44.9	72"	37.3		54"	37.3	
72"	109.6	54"		97.4	72"	48.7	66"	41.9		48"	41.9	
66"	119.5	48"	109.6	66"	53.1	60"	47.9	42"		47.9		
60"	131.5	42"	125.2	42"	58.4	48"	55.9	36"		55.9		
54"	146.1	36"	146.1	48"	73.0	42"	67.1	30"	67.1			
48"	164.3	30"	175.3	36"	97.4	30"	83.5	24"	83.9			
42"	180.0	24"	180.0	24"	146.1	24"	116.9	18"	111.8			
				18"	180.0							

PANEL LOAD TABLE

PANEL WIDTH (IN.)	(3) CLIP SPACING (IN.)	(1) ALLOWABLE (2) PRESSURE (PSF)	PANEL WIDTH (IN.)	(3) CLIP SPACING (IN.)	(1) ALLOWABLE (2) PRESSURE (PSF)
36"	12.5"	180.0	72"	12.5"	100.0
	20"	127.3		20"	63.6
42"	12.5"	154.3	78"	12.5"	92.3
	20"	109.1		20"	58.7
48"	12.5"	120.0	84"	12.5"	85.0
	20"	95.5		20"	54.5
54"	12.5"	106.7	90"	12.5"	80.0
	20"	84.8		20"	50.9
60"	12.5"	90.0	96"	12.5"	75.0
	20"	76.4		20"	47.7
66"	12.5"	109.1			
	20"	69.4			

NOTE: ALL SHAPED LOUVER PANELS ARE RESTRICTED TO A FRAME CLIP SPACING OF 12.5" O.C. 20" CLIP SPACING IS ONLY ALLOWED ON RECTANGULAR & SQUARE SHAPE LOUVERS.

LOAD TABLE NOTES (APPLICABLE TO MULLION & PANEL LOAD TABLES):  
 1) ALLOWABLE PRESSURE IS BOTH POSITIVE & NEGATIVE.  
 2) THE LESSER LOAD FROM THE MULLION LOAD TABLE & THE PANEL LOAD TABLE SHALL CONTROL AS THE ALLOWABLE FOR THE ENTIRE MULLED UNIT.



MULLION "LOAD WIDTH" = (A + B)/2

LOUVER ASSEMBLY

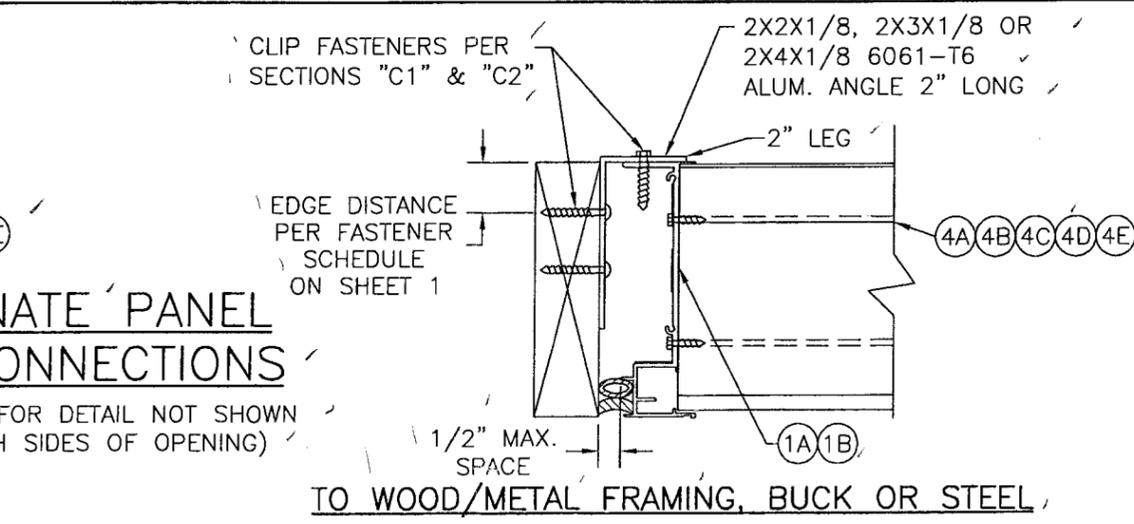
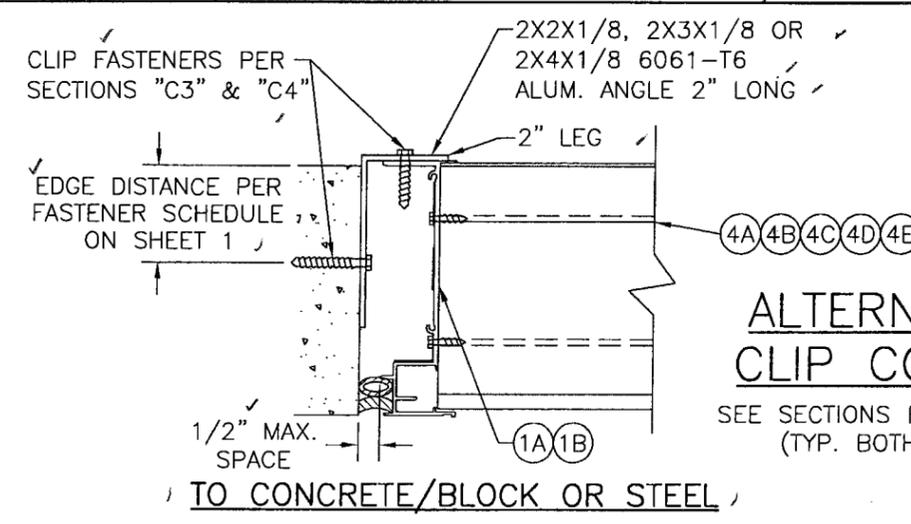
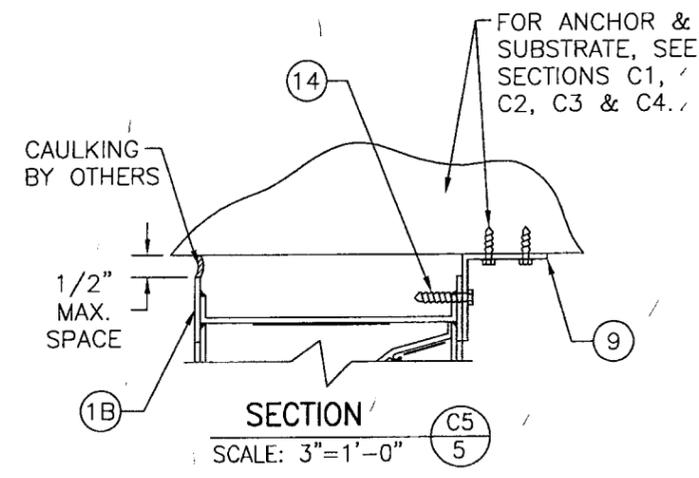
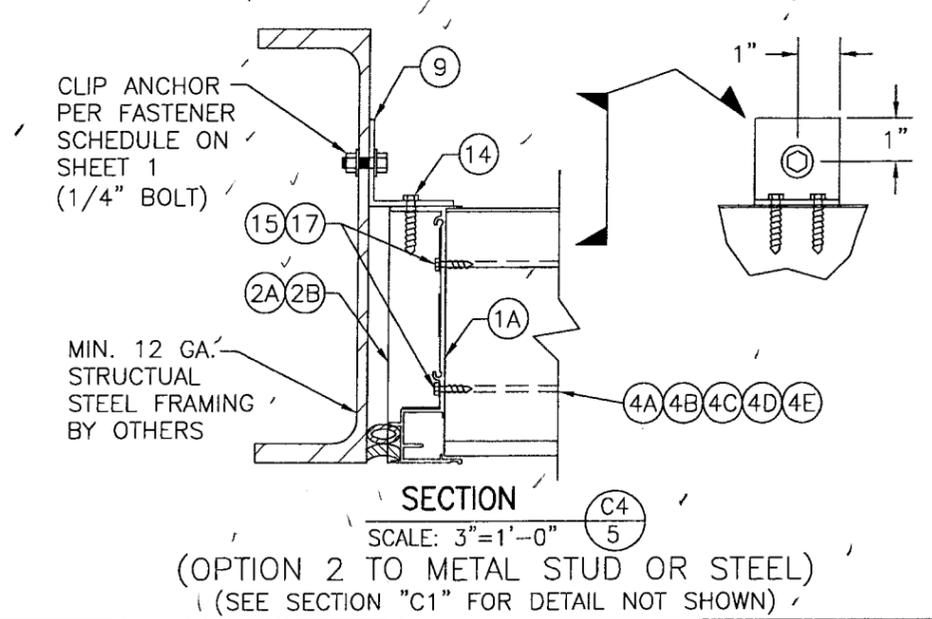
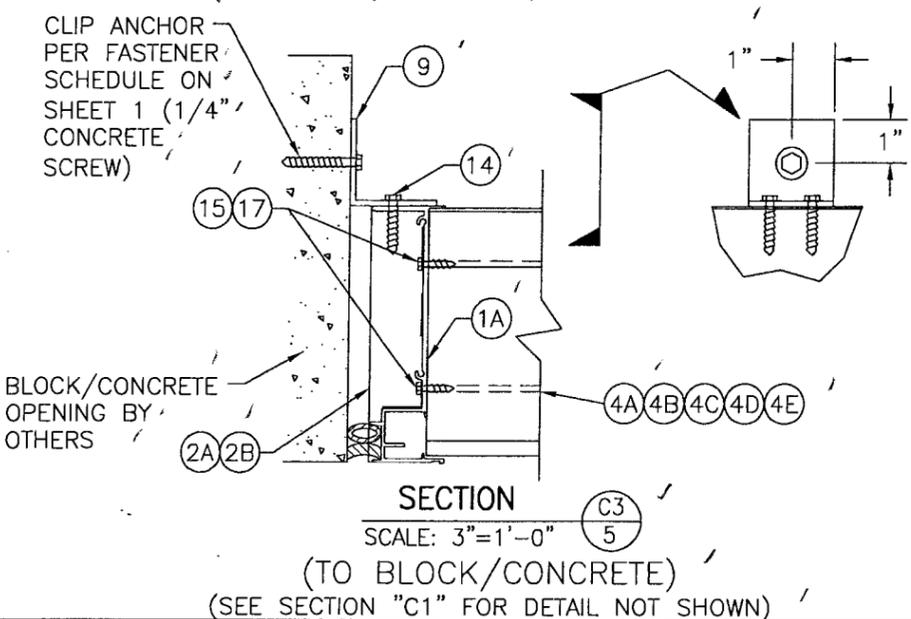
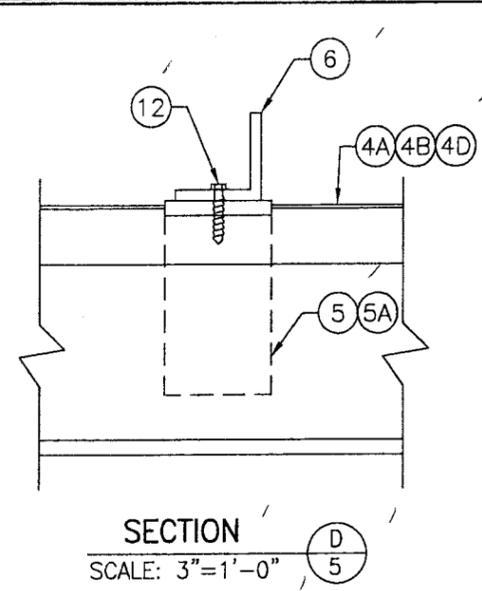
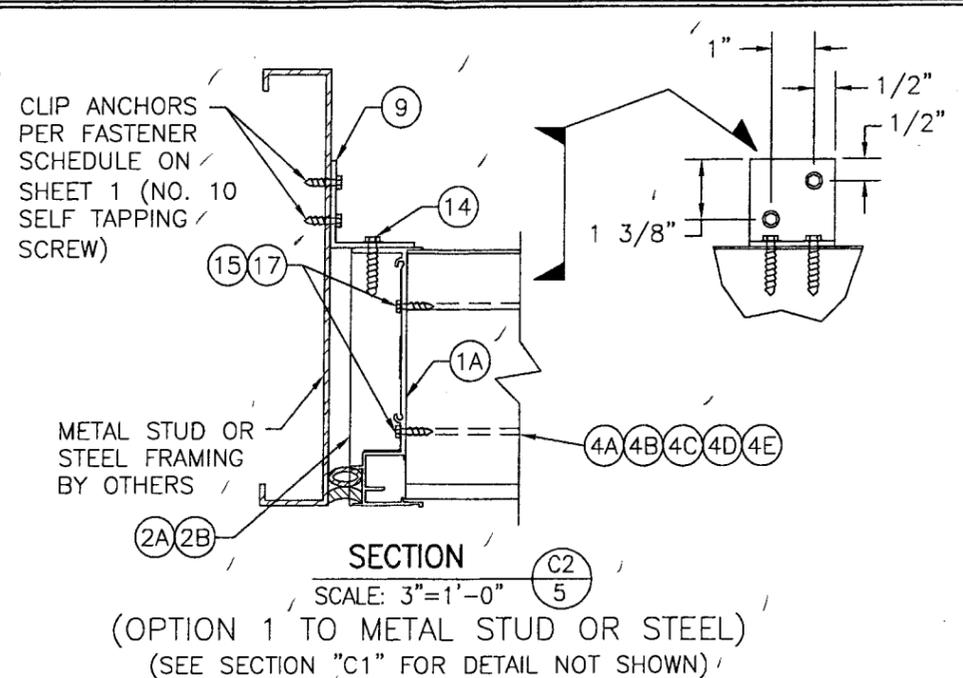
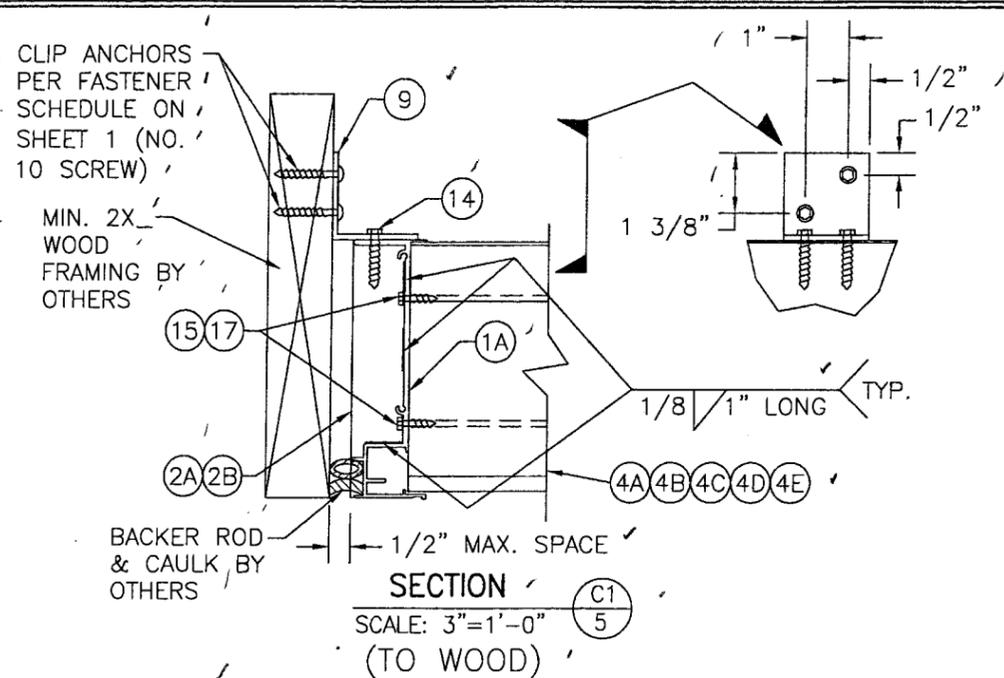
05/26/06  
 05-1206.64

MULLION LOAD TABLE INSTRUCTIONS:

1. DETERMINE REQUIRED DESIGN PRESSURE OF THE LOUVER ASSEMBLY.
2. DETERMINE THE REQUIRED MULLION SPAN OF THE LOUVER ASSEMBLY.
3. DETERMINE THE PANEL WIDTH "A" & "B" AND THE MULLION LOAD WIDTH.
4. GO TO THE MULLION LOAD TABLE AND CHECK THE ALLOWABLE PRESSURE FOR THE RESPECTIVE MULLION SPAN/LOAD WIDTH.
5. GO TO THE PANEL LOAD TABLE AND CHECK THE ALLOWABLE PRESSURE FOR EACH PANEL WIDTH.
6. IF ALL THE ALLOWABLE PRESSURES OF INSTRUCTIONS 4 & 5 ARE GREATER THAN THE REQUIRED DESIGN PRESSURE, THE ASSEMBLY IS ACCEPTABLE.
7. IF ANY ALLOWABLE PRESSURE OF INSTRUCTIONS 4 & 5 ARE LESS THAN THE REQUIRED DESIGN PRESSURE, THE ASSEMBLY IS NOT ACCEPTABLE UNLESS THE ASSEMBLY SIZE OR PRESSURE IS REDUCED AND INSTRUCTIONS FROM 1 TO 7 ARE FOLLOWED AGAIN.

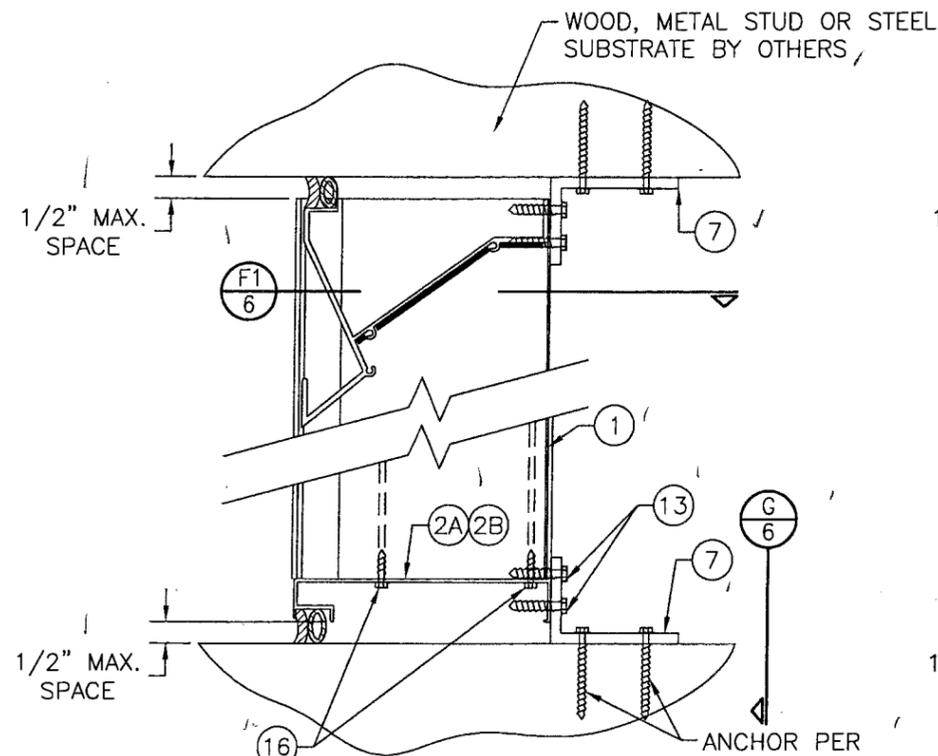
DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1=24	DATE: 12/02/05
DATE	BY
REVISION DESCRIPTION	
NO.	
MANUFACTURER <b>ARROW UNITED INDUSTRIES</b> 314 RIVERSIDE DRIVE WYALUSING, PA 18853 570-746-1888	
DRAWING TITLE <b>EA-64 LOUVER SYSTEM</b>	
CONSULTANTS <b>W. W. SCHAEFER ENGINEERING &amp; CONSULTING, P.A.</b> 8895 N. MILITARY TRAIL, SUITE C-204 PALM BEACH GARDENS, FL 33410 PHONE: 561-775-4902 FAX: 561-775-4903	
CERTIFICATION DEC 12 2005 WARREN W. SCHAEFER, P.E. P.E. NO. 44135	
DRAWING NO. 1464	REV.
SHEET NO. 3 OF 12	





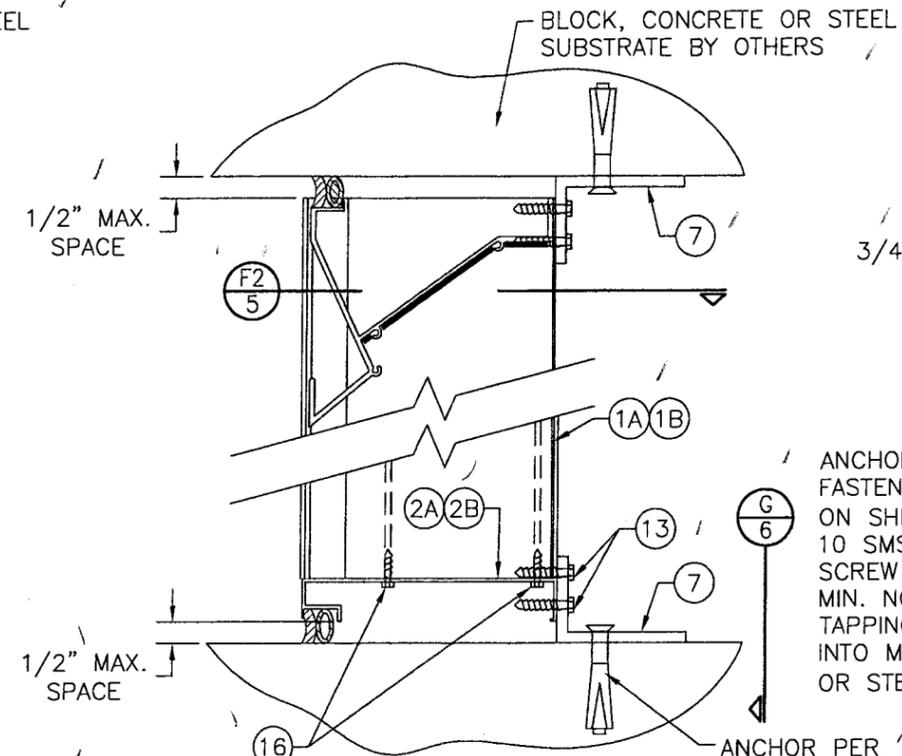
Approved for use with the Florida Building Code  
 Date: 05/26/06  
 NO. 05-120604  
 Minimum Code Requirements  
 Division 5

DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=4		DATE: 12/02/05	
NO.	REVISION DESCRIPTION	BY	DATE
DRAWING TITLE: EA-64 LOUVER SYSTEM			
MANUFACTURER: ARROW UNITED INDUSTRIES			
314 RIVERSIDE DRIVE			
WYALUSING, PA 18853			
570-746-1888			
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.			
8895 N. MILITARY TRAIL, SUITE C-204			
PALM BEACH GARDENS, FL 33410			
PHONE: 561-775-4902 FAX: 561-775-4903			
CERTIFICATION: DEC 02 2005			
WARREN W. SCHAEFER, P.E.			
P.E. NO. 44135			
DRAWING NO. 1464		REV.	
SHEET NO. 5 OF 12			



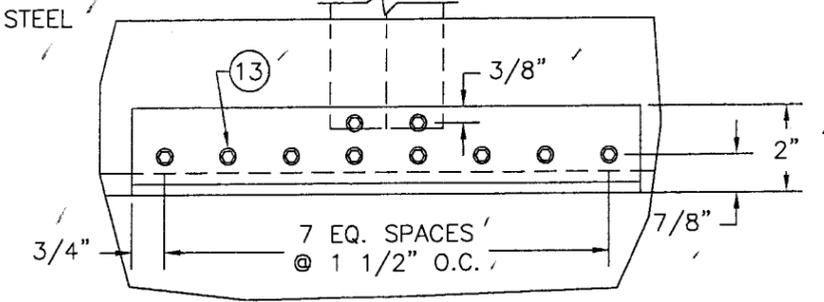
**SECTION E1**  
SCALE: 3"=1'-0"  
(INTO WOOD, METAL STUD OR STEEL OPENING)

ANCHOR PER FASTENER SCHEDULE ON SHEET 1 (NO. 10 SMS OR WOOD SCREW INTO WOOD; MIN. NO. 10 SELF TAPPING SCREW INTO METAL STUD OR STEEL)



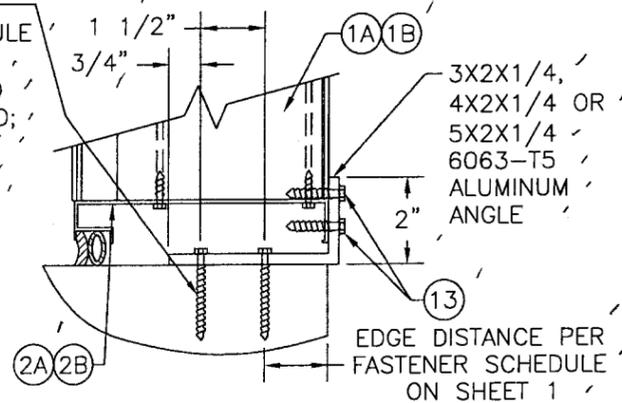
**SECTION E2**  
SCALE: 3"=1'-0"  
(INTO CONCRETE OR STRUCTURAL STEEL OPENING)

ANCHOR PER FASTENER SCHEDULE ON SHEET 1 (3/8" SLEEVE/WEDGE ANCHOR INTO CONCRETE; 3/8" BOLT INTO STEEL)



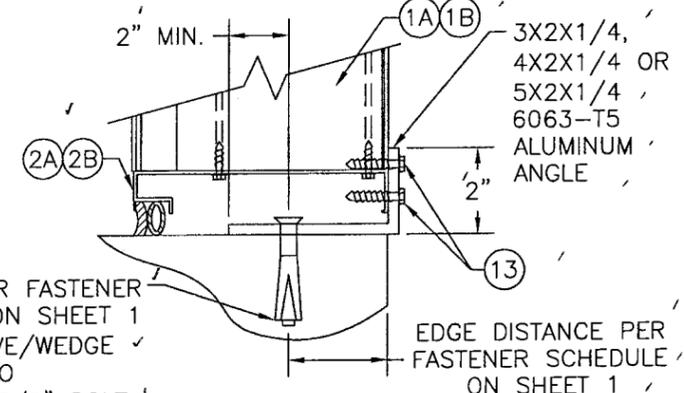
**VIEW G**  
SCALE: 3"=1'-0"  
(SEE SECTIONS "E1" & "E2" FOR ANCHORS TO OPENING)

ANCHOR PER FASTENER SCHEDULE ON SHEET 1 (NO. 10 SMS OR WOOD SCREW INTO WOOD; MIN. NO. 10 SELF TAPPING SCREW INTO METAL STUD OR STEEL)



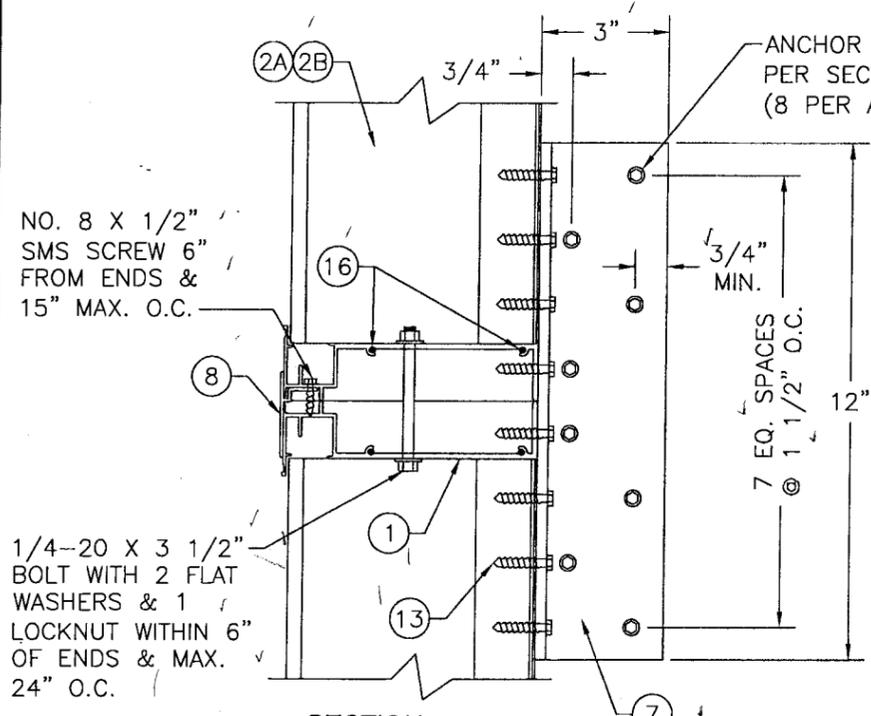
**OPTIONAL SECTION E1**  
SCALE: 3"=1'-0"  
SILL SHOWN; HEAD SIMILAR

EDGE DISTANCE PER FASTENER SCHEDULE ON SHEET 1



**OPTIONAL SECTION E2**  
SCALE: 3"=1'-0"  
SILL SHOWN; HEAD SIMILAR

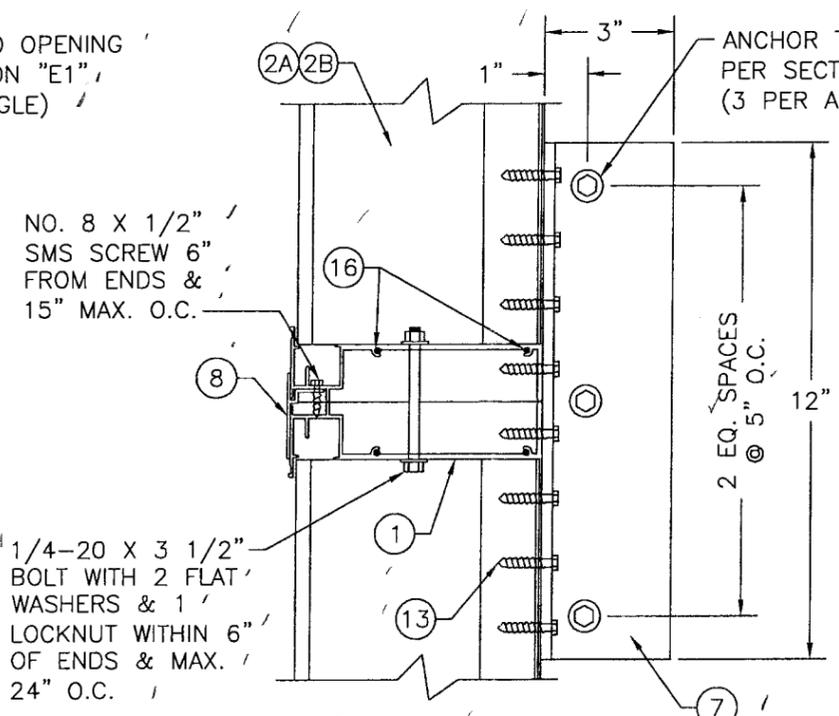
EDGE DISTANCE PER FASTENER SCHEDULE ON SHEET 1



**SECTION F1**  
SCALE: 3"=1'-0"

NO. 8 X 1/2" SMS SCREW 6" FROM ENDS & 15" MAX. O.C.  
1/4-20 X 3 1/2" BOLT WITH 2 FLAT WASHERS & 1 LOCKNUT WITHIN 6" OF ENDS & MAX. 24" O.C.

ANCHOR TO OPENING PER SECTION "E1" (8 PER ANGLE)



**SECTION F2**  
SCALE: 3"=1'-0"

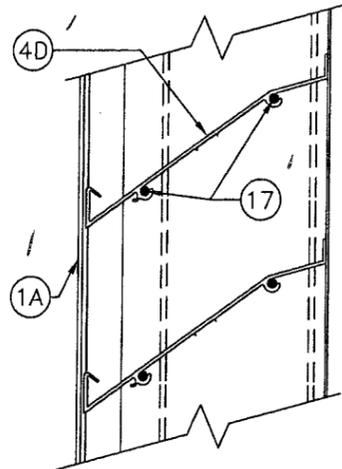
NO. 8 X 1/2" SMS SCREW 6" FROM ENDS & 15" MAX. O.C.  
1/4-20 X 3 1/2" BOLT WITH 2 FLAT WASHERS & 1 LOCKNUT WITHIN 6" OF ENDS & MAX. 24" O.C.

ANCHOR TO OPENING PER SECTION "E2" (3 PER ANGLE)

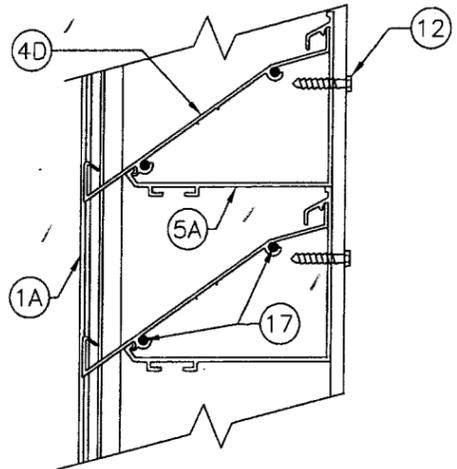
ANCHOR PER FASTENER SCHEDULE ON SHEET 1 (3/8" SLEEVE/WEDGE ANCHOR INTO CONCRETE; 3/8" BOLT INTO STEEL)

Approved as consulting with the Florida Board of Professional Engineers  
Date: 05/26/06  
NO. 05-1206.04  
Division: [Signature]  
By: [Signature]

DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=4		DATE: 12/02/05	
DATE	BY	REVISION DESCRIPTION	NO.
<b>EA-64 LOUVER SYSTEM</b> MANUFACTURER: <b>ARROW UNITED INDUSTRIES</b> 314 RIVERSIDE DRIVE WYALUSING, PA 18853 570-746-1888			
CONSULTANTS: <b>W. W. SCHAEFER ENGINEERING &amp; CONSULTING, P.A.</b> 8895 N. MILITARY TRAIL, SUITE C-204 PALM BEACH GARDENS, FL 33410 PHONE: 561-775-4902 FAX: 561-775-4903			
CERTIFICATION		P.E.	
DEC 02 2005		WARREN W. SCHAEFER, P.E. NO. 44135	
DRAWING NO.	REV.	SHEET NO.	
1464		6 OF 12	

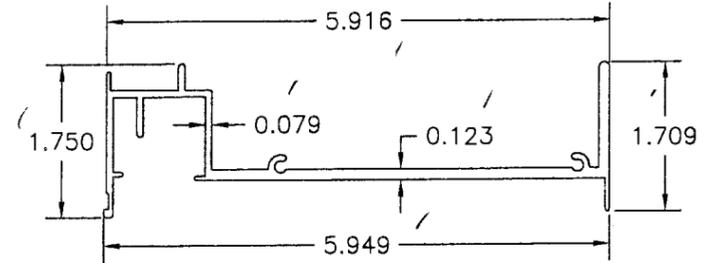


OPTIONAL BLADE DETAIL  
WITH SCREWED END CONSTRUCTION  
(STANDARD LOUVER)

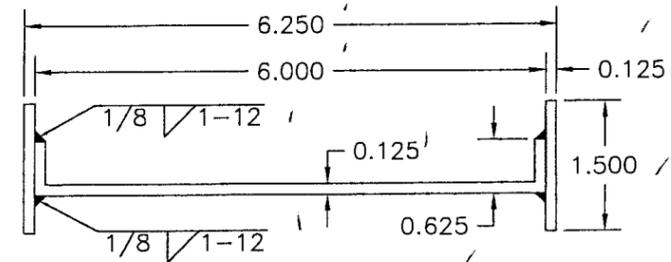


OPTIONAL BLADE SUPPORT BRACKET  
DETAIL WITH SCREWED END CONSTRUCTION

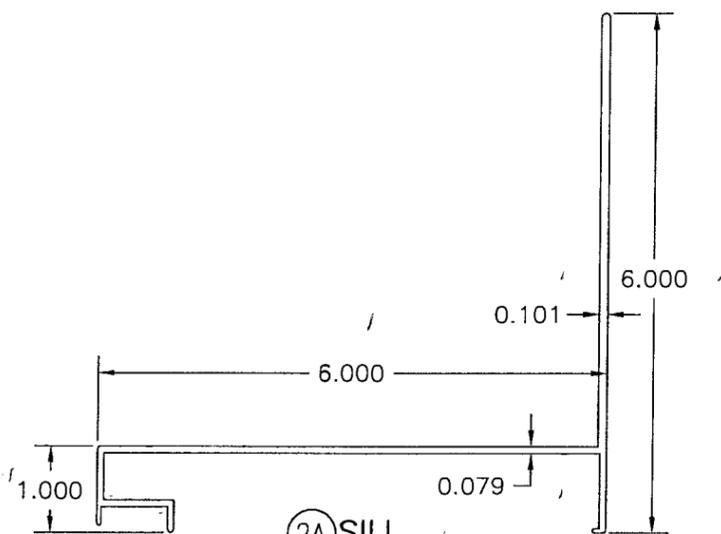
DETAILS SHOWN ON THIS SHEET  
ARE NOT WATER RESISTANT  
UNLESS ALL BLADE END  
CONNECTIONS ARE SCREWED &  
WELDED AS SHOWN ON SHEET  
4 OF 12.



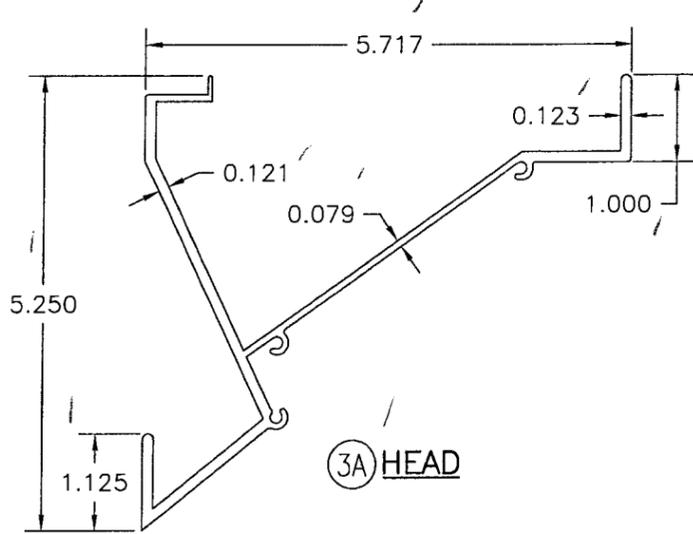
1A STANDARD  
STRAIGHT JAMB



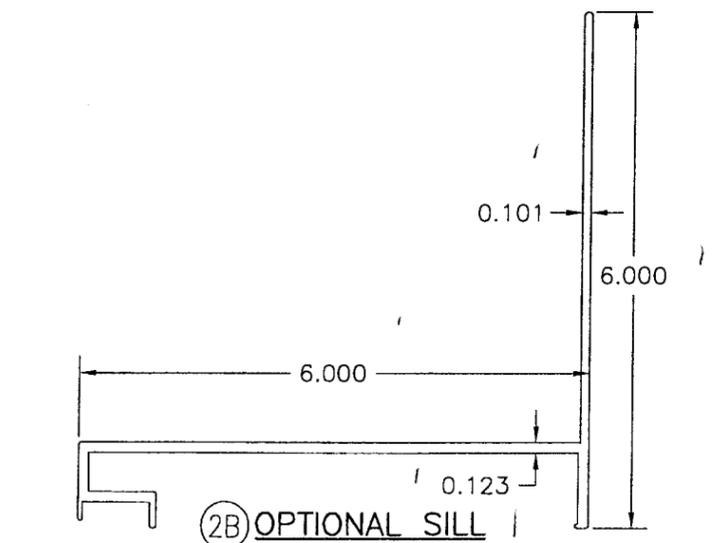
1B RADIUS JAMB



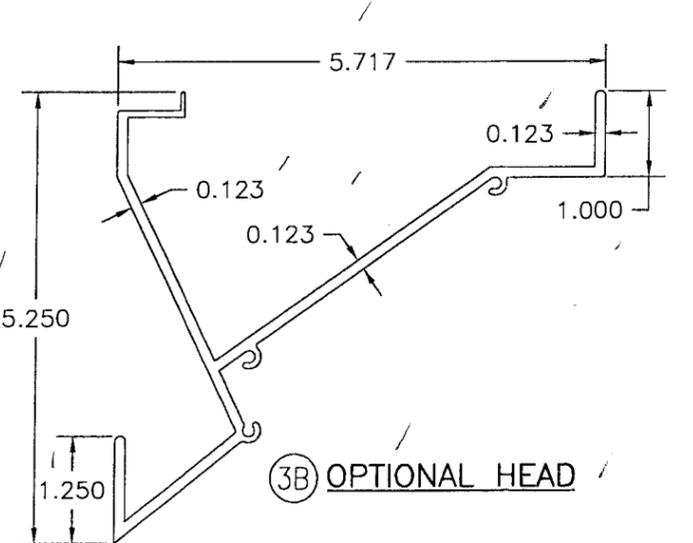
2A SILL



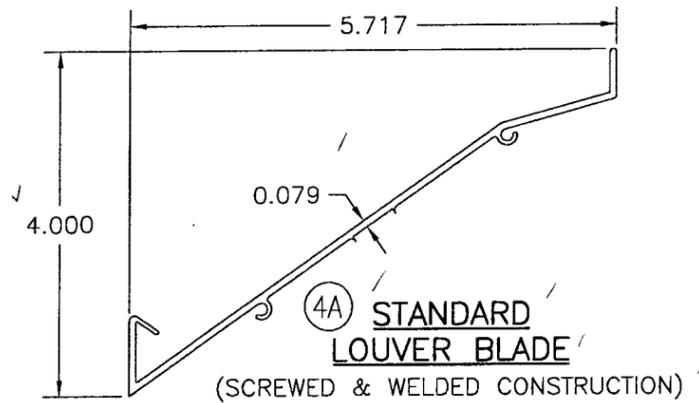
3A HEAD



2B OPTIONAL SILL



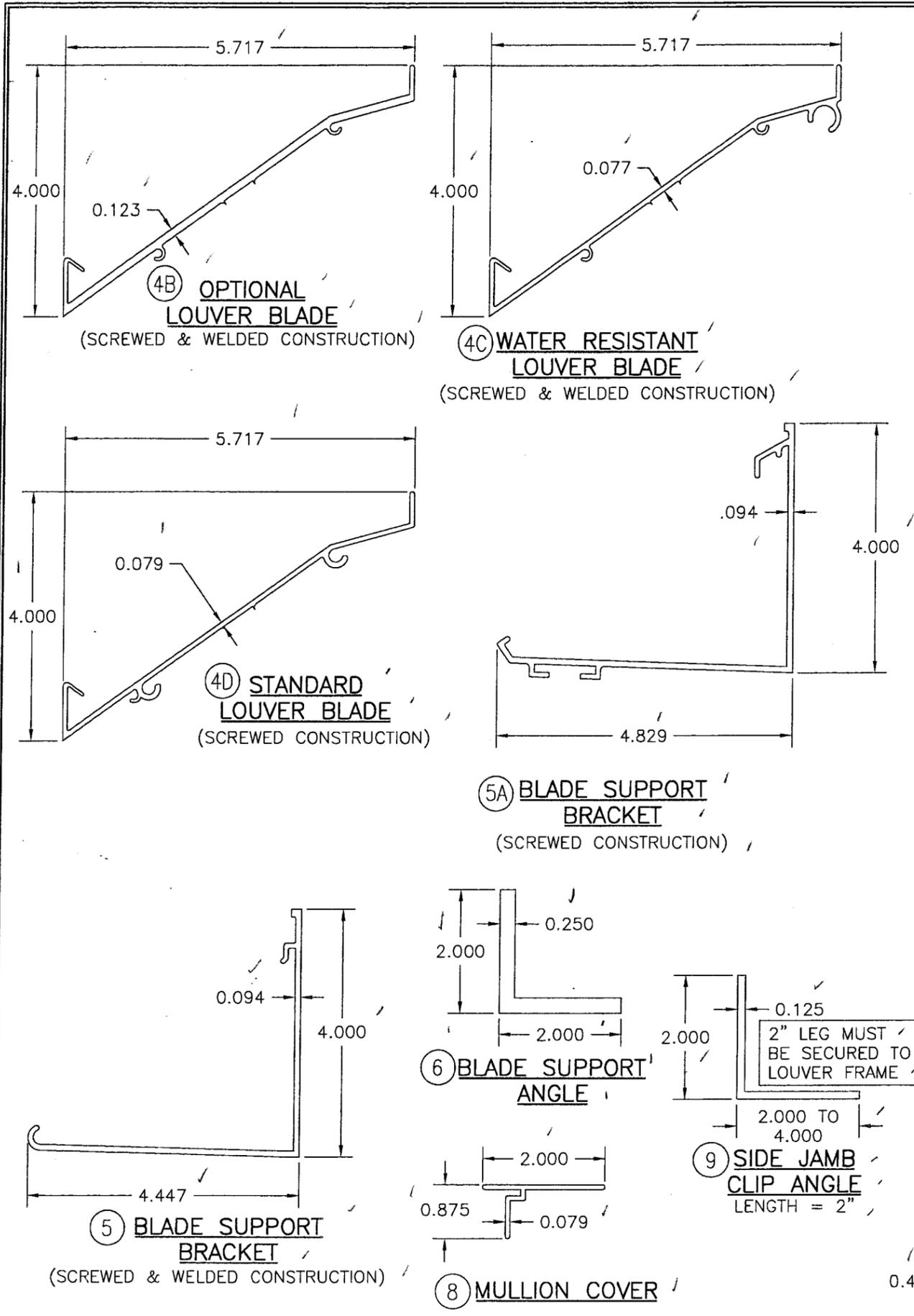
3B OPTIONAL HEAD



4A STANDARD  
LOUVER BLADE  
(SCREWED & WELDED CONSTRUCTION)

Approved or complies with the  
Florida Building Code  
Date: 03/26/06  
NOA: 05-1206.04  
Division:

DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=4		DATE: 12/02/05	
NO.	REVISION DESCRIPTION	DATE	BY
DRAWING TITLE EA-64 LOUVER SYSTEM			
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. 8895 N. MILITARY TRAIL, SUITE C-204 PALM BEACH GARDENS, FL 33410 PHONE: 561-775-4902 FAX: 561-775-4903		MANUFACTURER ARROW UNITED INDUSTRIES 3114 RIVERSIDE DRIVE WYALUSING, PA 18853 570-746-1888	
CERTIFICATION DEC 02 2005		WARREN W. SCHAEFER, P.E. P.E. NO. 44135	
DRAWING NO. 1464		REV.	
SHEET NO. 7		OF 12	

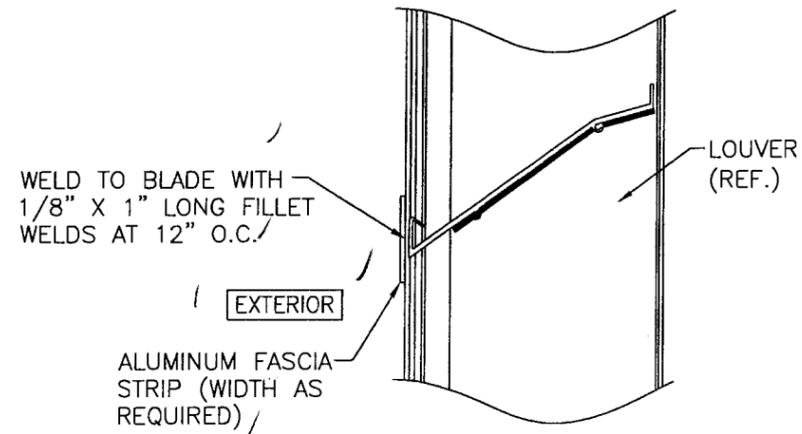
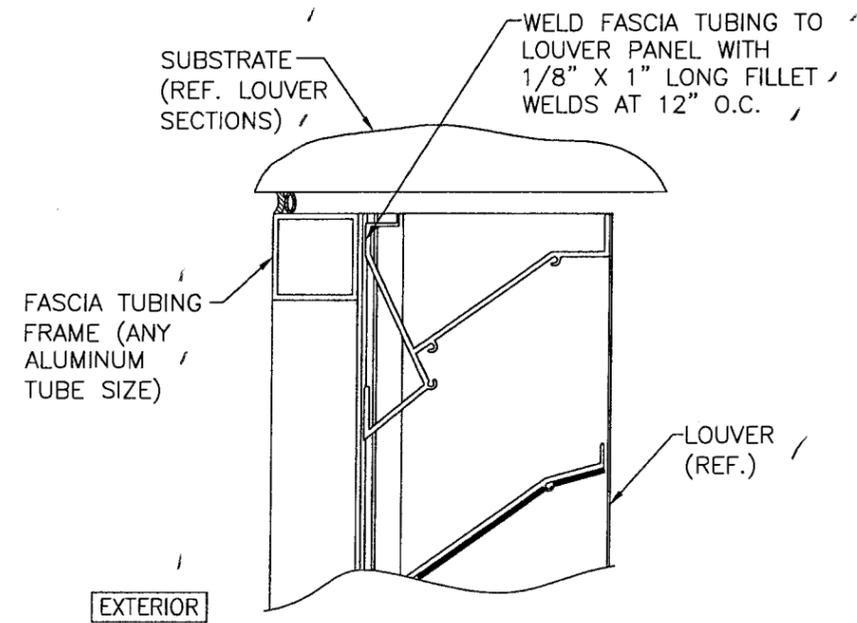


ITEM #	ITEM DESCRIPTION	MANUFACTURER/NOTES
<b>PARTS</b>		
1A	STANDARD STRAIGHT JAMB	6063-T6 ALUMINUM ✓
1B	RADIUS JAMB	5052-H32 ALUMINUM ✓
2A	SILL	6063-T6 ALUMINUM ✓
2B	OPTIONAL SILL	6063-T5 ALUMINUM ✓
3A	HEAD	6063-T5 ALUMINUM ✓
3B	OPTIONAL HEAD	6063-T5 ALUMINUM ✓
4A	STANDARD LOUVER BLADE (SCREWED & WELDED ENDS)	6063-T5 ALUMINUM ✓
4B	OPTIONAL LOUVER BLADE (SCREWED & WELDED ENDS)	6063-T5 ALUMINUM ✓
4C	(1) WATER RESISTANT LOUVER BLADE (SCREWED & WELDED ENDS)	6063-T5 ALUMINUM ✓
4D	SCREWED END LOUVER BLADE	6063-T5 ALUMINUM ✓
5A	BLADE SUPPORT BRACKET	6063-T5 ALUMINUM (USED WITH BLADE 4D) ✓
5	BLADE SUPPORT BRACKET	6063-T5 ALUMINUM (USED WITH BLADES 4A, 4B & 4C) ✓
6	BLADE SUPPORT ANGLE	6063-T5 ALUMINUM ✓
7	MULLION END SUPPORT ANGLE	6061-T6 ALUMINUM ✓
8	MULLION COVER	6063-T6 ALUMINUM ✓
9	SIDE JAMB CLIP ANGLE	6061-T6 ALUMINUM ✓
10	DAMPER BLADE	6063-T5 ALUMINUM (USED WITH PART 4B) ✓
11A	STANDARD SILL PAN	16 GA. 5052-H32 ALUMINUM ✓
11B	OPTIONAL SILL PAN	16 GA. 5052-H32 ALUMINUM ✓
<b>FASTENERS</b>		
12	1/4-14 X 1 1/4" HILTI TEK SCREW OR	1 THROUGH SUPPORT ANGLE AT EACH SUPPORT BRACKET AND AT HEAD & SILL ✓
13	1/4-14 X 1 1/4" HILTI TEK SCREW	10 PER MULLION SUPPORT ANGLE INTO FRAME ✓
14	1/4-14 X 1 1/4" HILTI TEK SCREW	2 PER EACH CLIP ANGLE INTO JAMB ✓
15	NO. 8 X 3/4" S.S. SMS	2 THROUGH JAMB INTO EACH LOUVER BLADE ✓
16	NO. 8 X 3/4" S.S. SMS	2 THROUGH SILL INTO EACH SIDE & MULLION JAMB ✓
17	1/4-20 X 1 1/2" TYPE "F" SCREW	2 THROUGH JAMB INTO EACH BLADE LOUVER ✓
<b>SEALS &amp; SEALANTS</b>		
18	BULB SEAL	MCL 743091 ✓

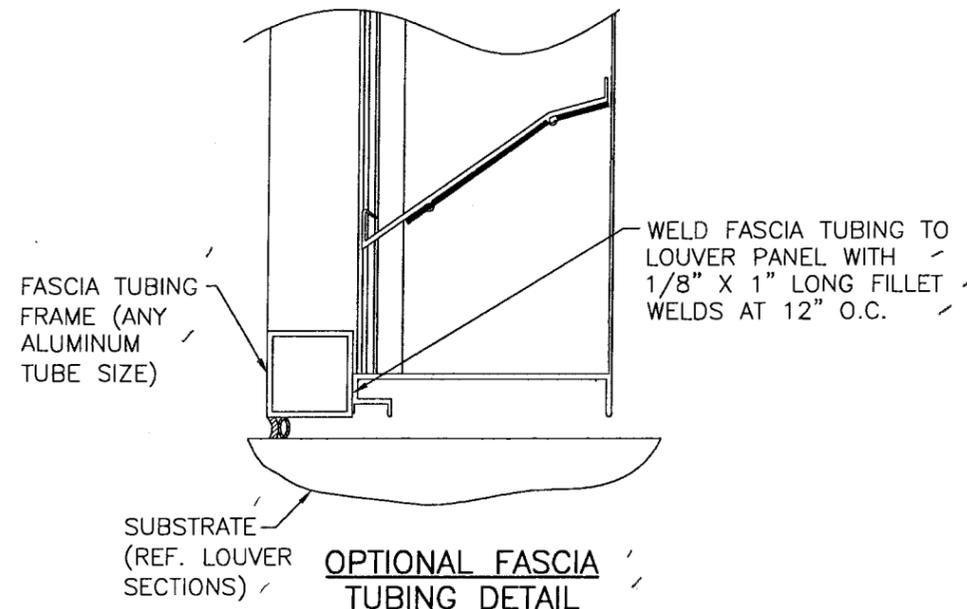
(1) PARTS 4C & 10 SHALL BE USED IN PLACE OF PART 4A OR 4B WHEN LOUVER IS REQUIRED TO RESIST WATER PENETRATION. ✓

Approved for use with the Florida Building Code  
Date: 05/26/05  
NDA# 05-1208.04  
Must Be Used From Control Division  
By: [Signature]

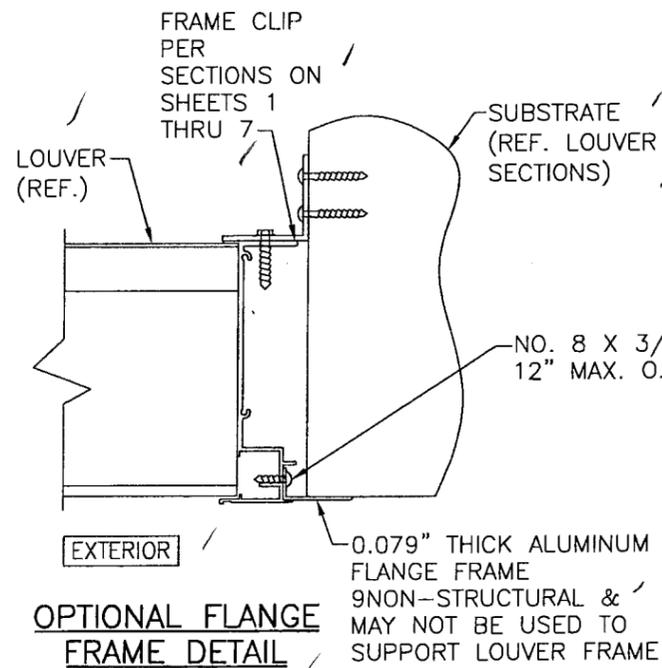
DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1=2	DATE: 12/02/05
DATE	BY
REVISION DESCRIPTION	NO.
DRAWING TITLE <b>EA-64 LOUVER SYSTEM</b>	
MANUFACTURER <b>ARROW UNITED INDUSTRIES</b> 314 RIVERSIDE DRIVE WYALUSING, PA 18853 570-746-1888	
CONSULTANTS <b>W. W. SCHAEFER ENGINEERING &amp; CONSULTING, P.A.</b> 8895 N. MILITARY TRAIL, SUITE C-204 PALM BEACH GARDENS, FL 33410 PHONE: 561-775-4902 FAX: 561-775-4903	
CERTIFICATION <b>DEC 02 2005</b>	WARREN W. SCHAEFER, P.E. P.E. NO. 44135
DRAWING NO. <b>1464</b>	REV.
SHEET NO. <b>8</b>	OF <b>12</b>



**OPTIONAL FASCIA STRIP DETAIL**



**OPTIONAL FASCIA TUBING DETAIL**

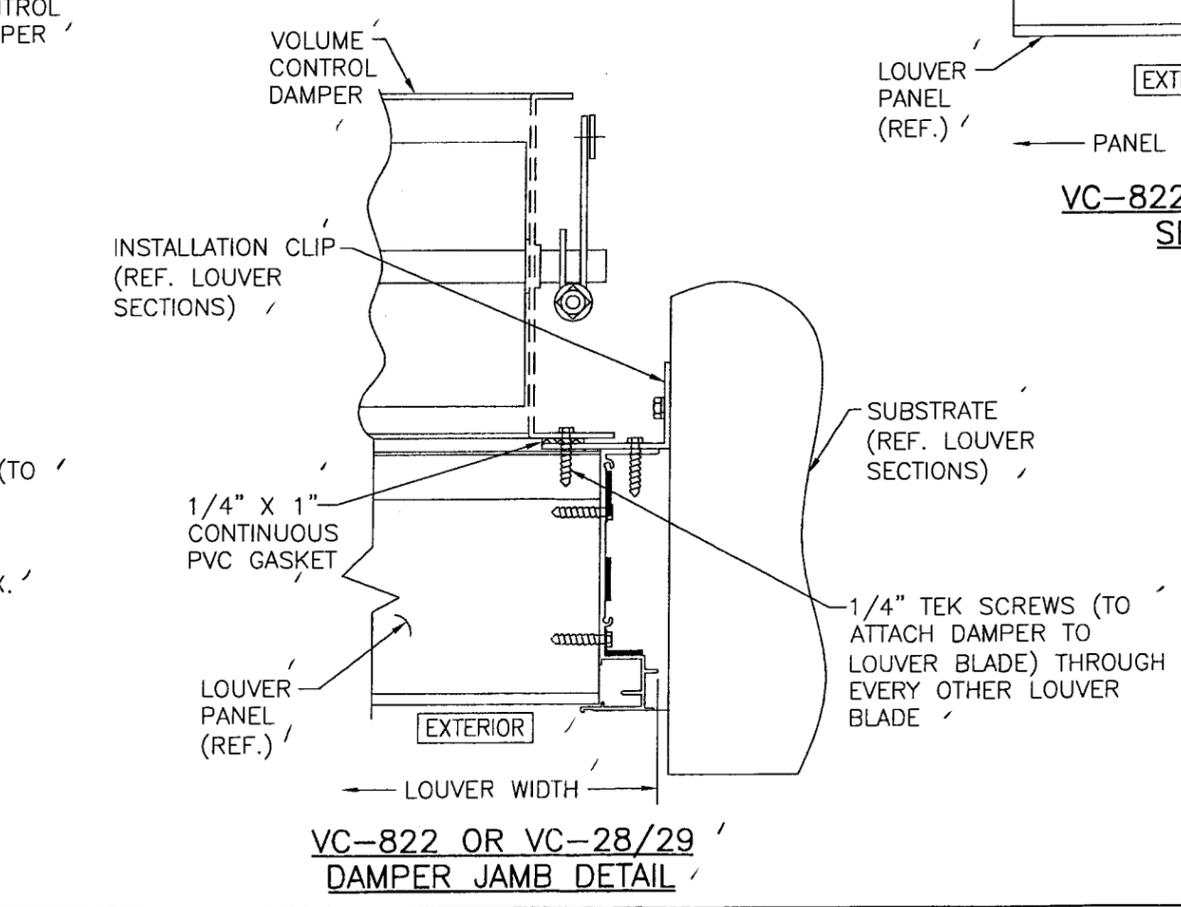
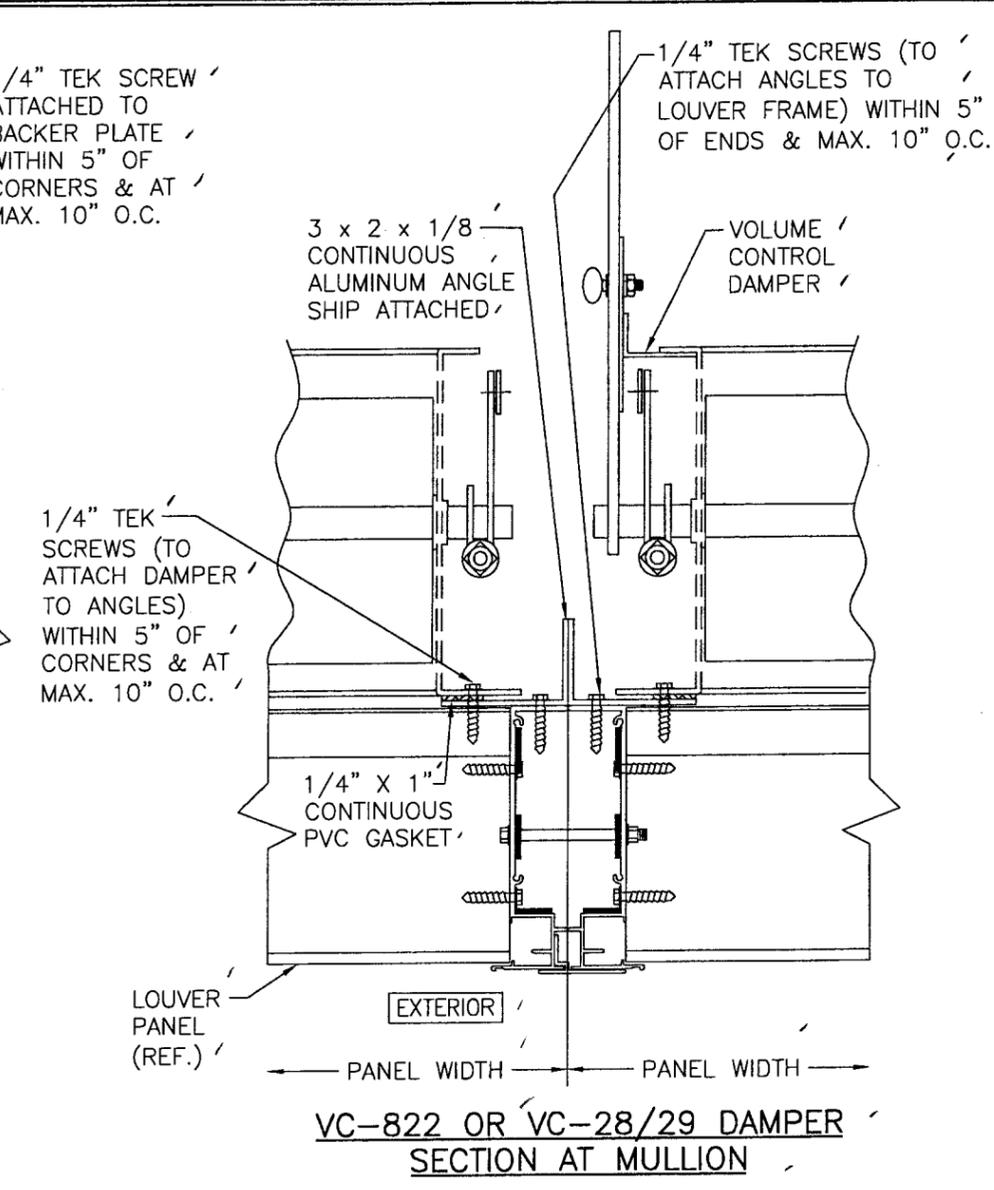
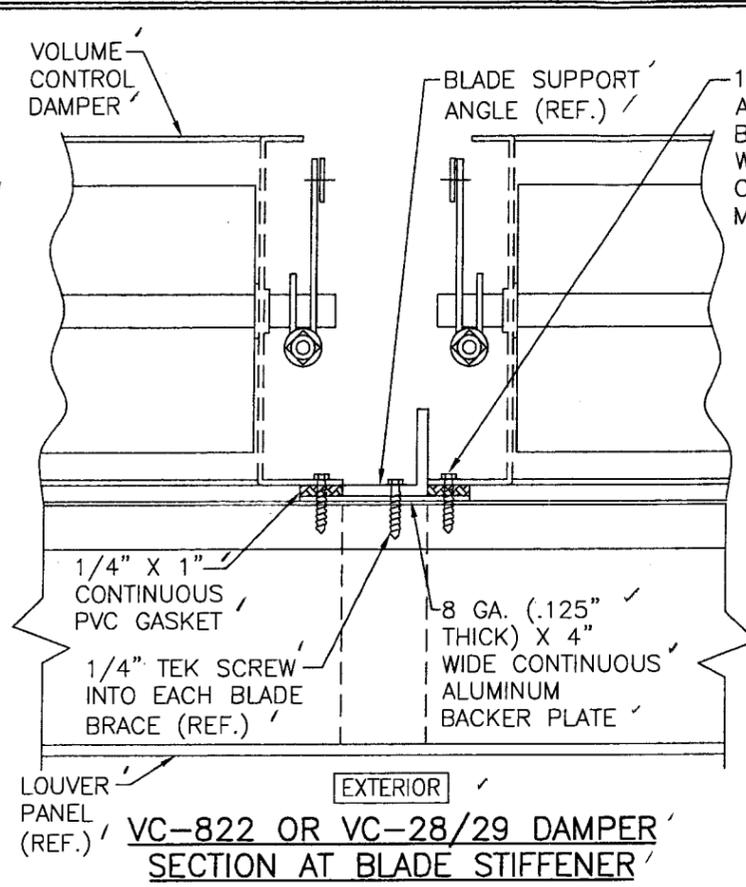
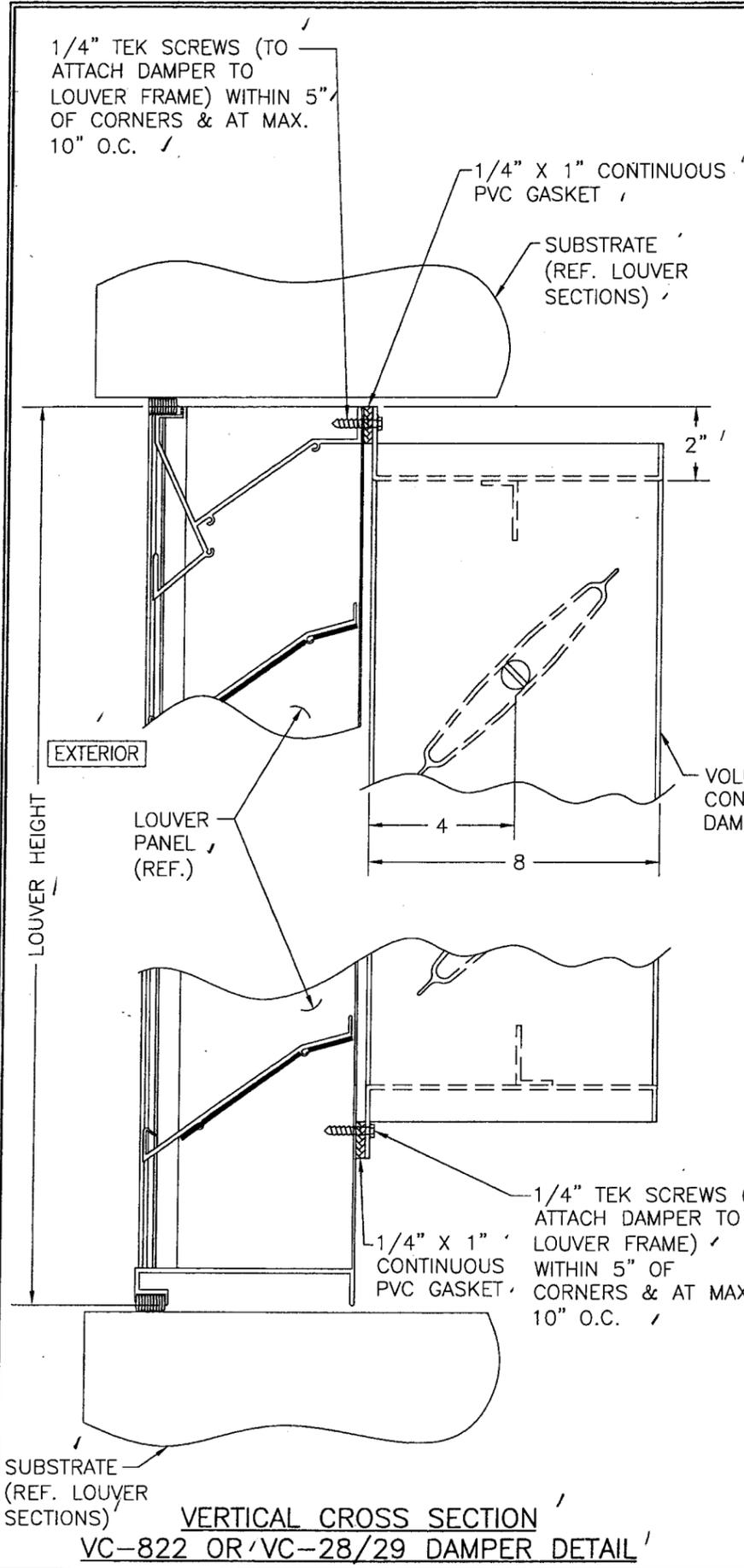


**OPTIONAL FLANGE FRAME DETAIL**

DETAILS ON SHEETS 8 THRU 11 ARE GOVERNED BY DETAILS SHOWN ON SHEET 1 THRU 7.

Approved as complying with the Florida Building Code  
 Date: 05/26/05  
 NOA: 05-1206.04  
 Florida State Program Control  
 Division  
 By: [Signature]

DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=4		DATE: 12/02/05	
NO.	REVISION DESCRIPTION	BY	DATE
DRAWING TITLE <b>EA-64 LOUVER SYSTEM</b>			
CONSULTANTS <b>W. W. SCHAEFER ENGINEERING &amp; CONSULTING, P.A.</b> 8895 N. MILITARY TRAIL, SUITE C-204 PALM BEACH GARDENS, FL 33410 PHONE: 561-775-4902 FAX: 561-775-4903		MANUFACTURER <b>ARROW UNITED INDUSTRIES</b> 314 RIVERSIDE DRIVE WYALUSING, PA 18853 570-746-1888	
CERTIFICATION <b>DEC 02 2005</b>	WARREN W. SCHAEFER, P.E. NO. 44135		
DRAWING NO. <b>1464</b>	REV.		
SHEET NO. <b>9 OF 12</b>			



DETAILS ON SHEETS 8 THRU 11 ARE GOVERNED BY DETAILS SHOWN ON SHEET 1 THRU 7.

02/26/06  
05-1206-04

DRAWN BY:	W.R.M.	CHECKED BY:	W.W.S.
PLOT:	1=4	DATE:	12/02/05
NO.		REVISION DESCRIPTION	
BY			
DATE			

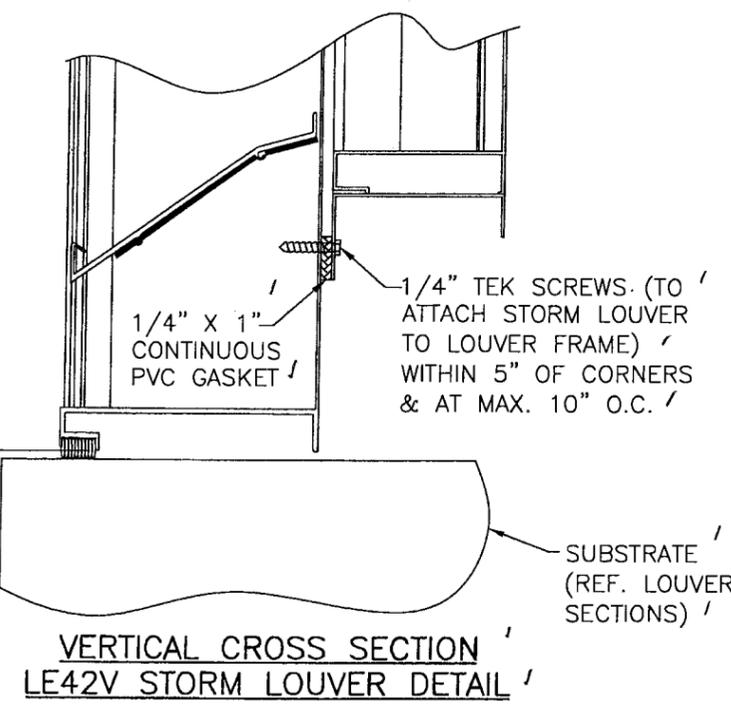
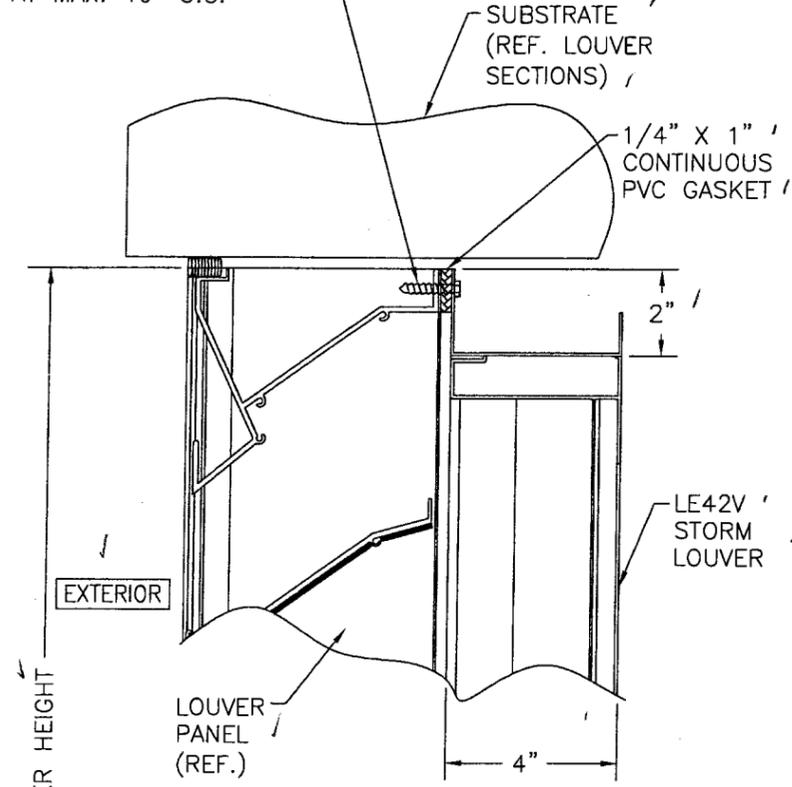
DRAWING TITLE: EA-64 LOUVER SYSTEM

MANUFACTURER: ARROW UNITED INDUSTRIES  
314 RIVERSIDE DRIVE  
WYALUSING, PA 18853  
570-746-1888

CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.  
8895 N. MILITARY TRAIL, SUITE C-204  
PALM BEACH GARDENS, FL 33410  
PHONE: 561-775-4902 FAX: 561-775-4903

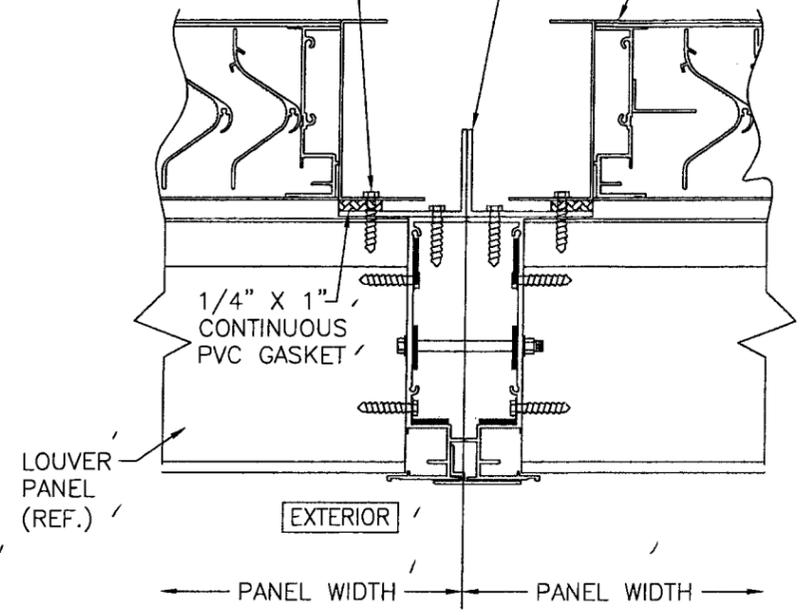
CERTIFICATION	DEC 02 2005
DRAWING NO.	1464
REV.	
SHEET NO.	10 OF 12

1/4" TEK SCREWS (TO ATTACH STORM LOUVER TO LOUVER FRAME) WITHIN 5" OF CORNERS & AT MAX. 10" O.C.



1/4" TEK SCREWS (TO ATTACH STORM LOUVER TO LOUVER FRAME) WITHIN 5" OF CORNERS & AT MAX. 10" O.C.

3 x 2 x 1/8 CONTINUOUS ANGLE SHIP ATTACHED

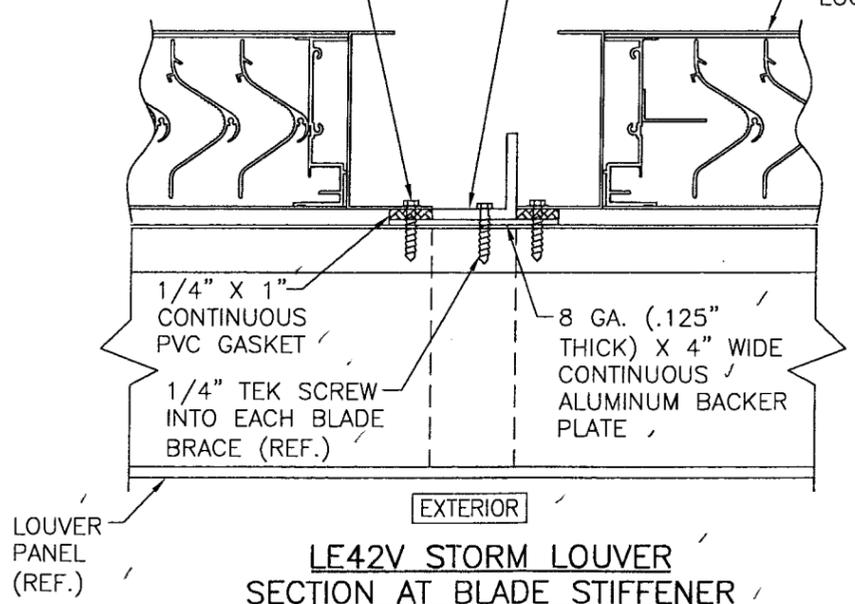


LE42V STORM LOUVER SECTION AT MULLION

1/4" TEK SCREW ATTACHED TO BACKER PLATE WITHIN 5" OF CORNERS & AT MAX. 10" O.C.

2 x 2 x 1/4 MULLION ANGLE

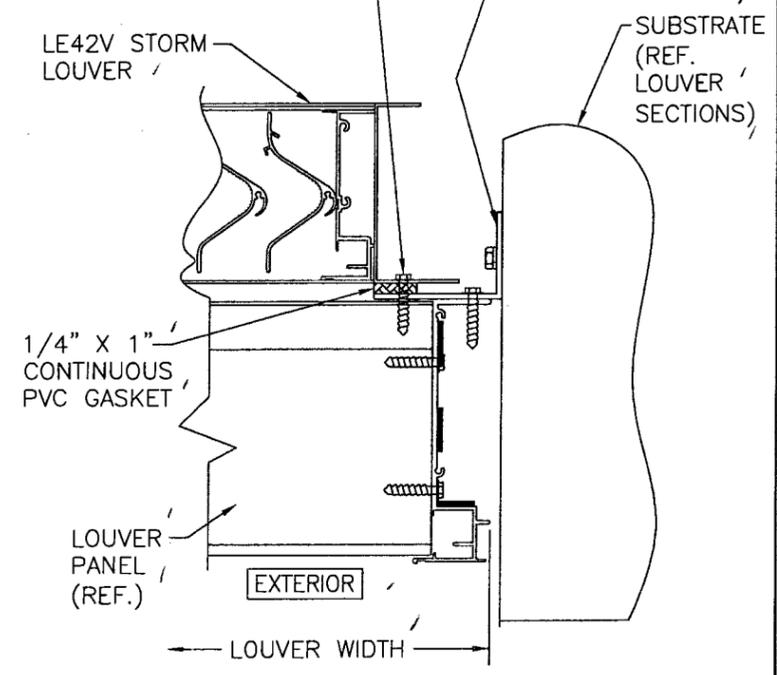
LE42V STORM LOUVER



LE42V STORM LOUVER SECTION AT BLADE STIFFENER

1/4" TEK SCREWS (TO ATTACH STORM LOUVER TO LOUVER BLADE) THROUGH EVERY OTHER LOUVER BLADE

INSTALLATION CLIP (REF. LOUVER SECTIONS)

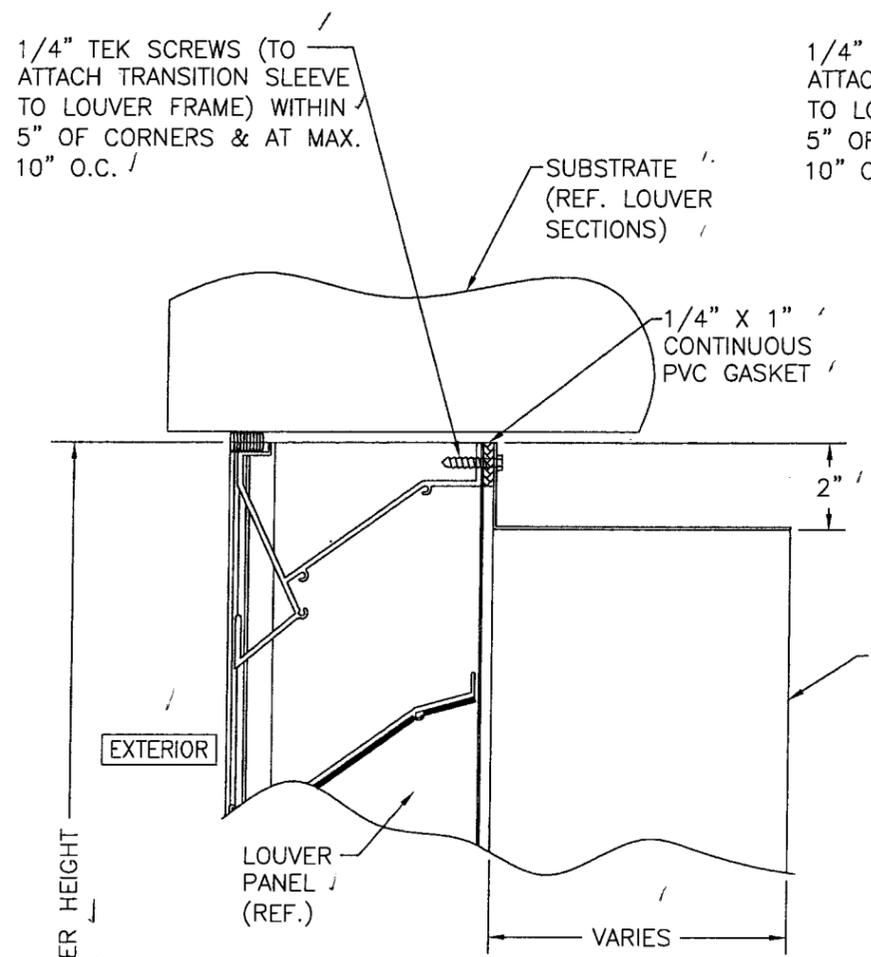


LE42V STORM LOUVER JAMB DETAIL

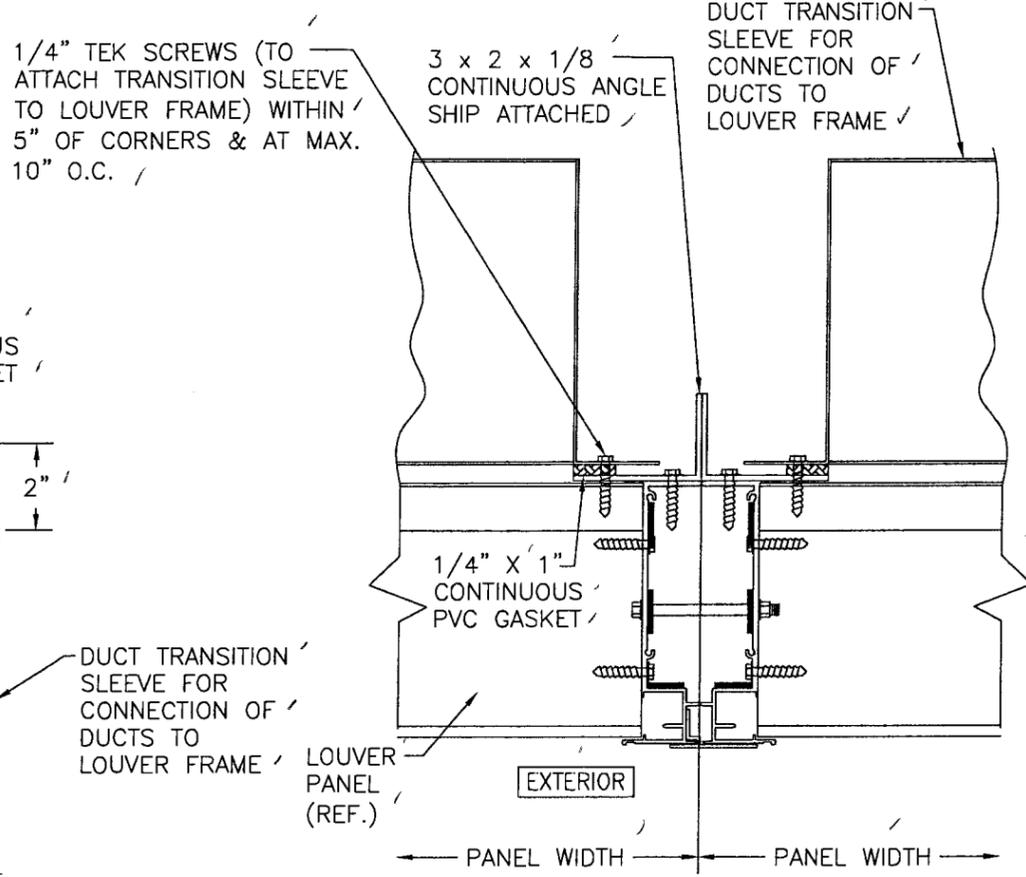
05/26/06  
05-1206.04

DETAILS ON SHEETS 8 THRU 11 ARE GOVERNED BY DETAILS SHOWN ON SHEET 1 THRU 7.

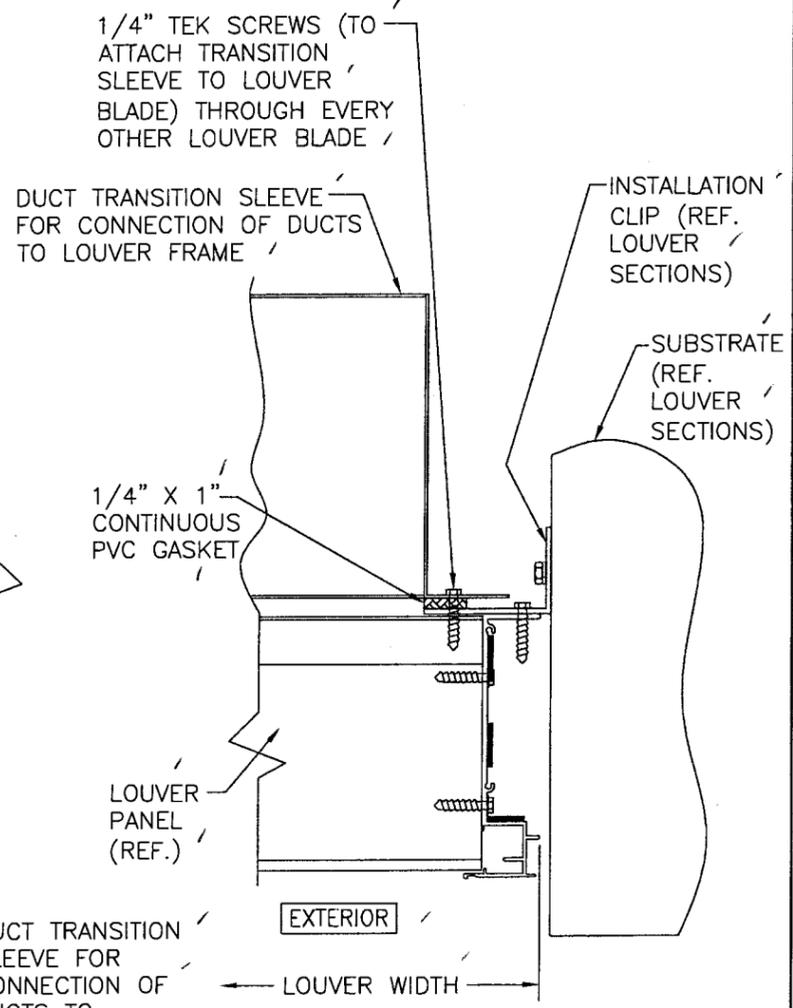
DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=4		DATE: 12/02/05	
NO.	REVISION DESCRIPTION	BY	DATE
DRAWING TITLE: EA-64 LOUVER SYSTEM			
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.			
MANUFACTURER: ARROW UNITED INDUSTRIES			
314 RIVERSIDE DRIVE WYALUSING, PA 18853 570-746-1888			
8895 N. MILITARY TRAIL, SUITE C-204 PALM BEACH GARDENS, FL 33410 PHONE: 561-775-4902 FAX: 561-775-4903			
CERTIFICATION: DEC 02 2005		WARREN W. SCHAEFER, P.E. P.E. NO. 44135	
DRAWING NO. 1464		REV.	
SHEET NO. 11 OF 12			



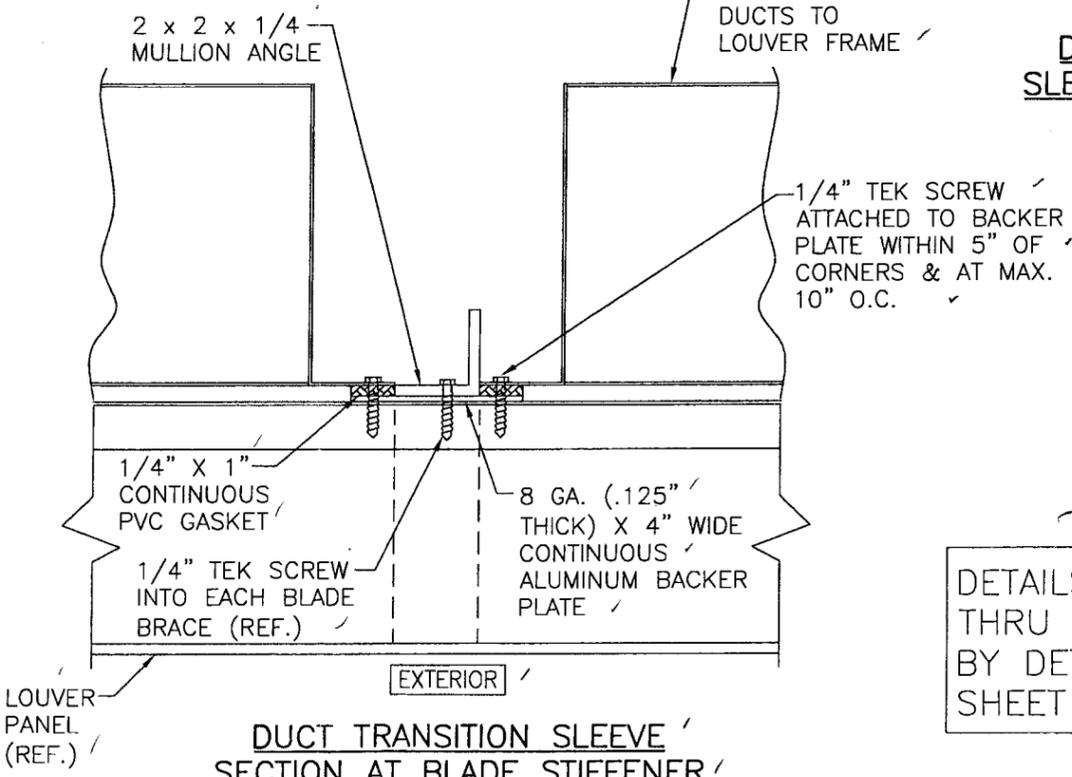
**VERTICAL CROSS SECTION  
DUCT TRANSITION SLEEVE DETAIL**



**DUCT TRANSITION SLEEVE  
SECTION AT MULLION**



**DUCT TRANSITION SLEEVE  
SECTION AT JAMB DETAIL**



**DUCT TRANSITION SLEEVE  
SECTION AT BLADE STIFFENER**

DETAILS ON SHEETS 8  
THRU 11 ARE GOVERNED  
BY DETAILS SHOWN ON  
SHEET 1 THRU 7.

05/26/06  
05-1206.04

DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1=4	DATE: 12/02/05
DATE	
BY	
NO.	REVISION DESCRIPTION
DRAWING TITLE <b>EA-64 LOUVER SYSTEM</b>	
CONSULTANTS <b>W. W. SCHAEFER ENGINEERING &amp; CONSULTING, P.A.</b>	MANUFACTURER <b>ARROW UNITED INDUSTRIES</b>
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DRAWING NO. <b>1464</b>	REV.
SHEET NO. <b>12 OF 12</b>	