



**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)**

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**Louvers and Dampers  
7301 International Drive  
Holland , OH 43528**

**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" LOUVERED PENTHOUSE IP69**

**APPROVAL DOCUMENT:** Drawing No.1489, titled "IP69 Louvered Penthouse" dated 08/08/06 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 a private label of NOA # 05-1104.04** consist of this page, evidence page as well as approval document mentioned above.

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

  
10/12/06



**NOA No: 06-0822.07  
Expiration Date: July 13, 2011  
Approval Date: October 12, 2006  
Page 1**

## Louvers and Dampers

### NOTICE OF ACCEPTANCE: EVIDENCE PAGE

#### A. DRAWINGS.

1. Drawing prepared by W.W. Schaefer Engineering & consulting P.A., titled "IP69 Louvered Penthouse" Drawing No. 1489, dated 08/08/06, with no revisions signed and sealed by W. W. Schaefer, PE.

#### B. TESTS.

1. Test report on Large Missile Impact Test per TAS 201, Cyclic wind Pressure Test per TAS 203 and Uniform Static Air Pressure Test per TAS 202 of " Louvered Enclosure" prepared by Hurricane Test Laboratory, LLC, Report # 0198-1210-04, dated 12/22/04, signed and sealed by V. J. Abraham PE.

#### C. CALCULATIONS.

1. Penthouse Anchor calculations, dated 10/07/05 pages 1 & 2 prepared by W.W. Schaefer Engineering and Consulting PA, signed and sealed by W.W. Schaefer, PE.

#### D. QUALITY ASSURANCE.

1. Miami-Dade Product Control Division

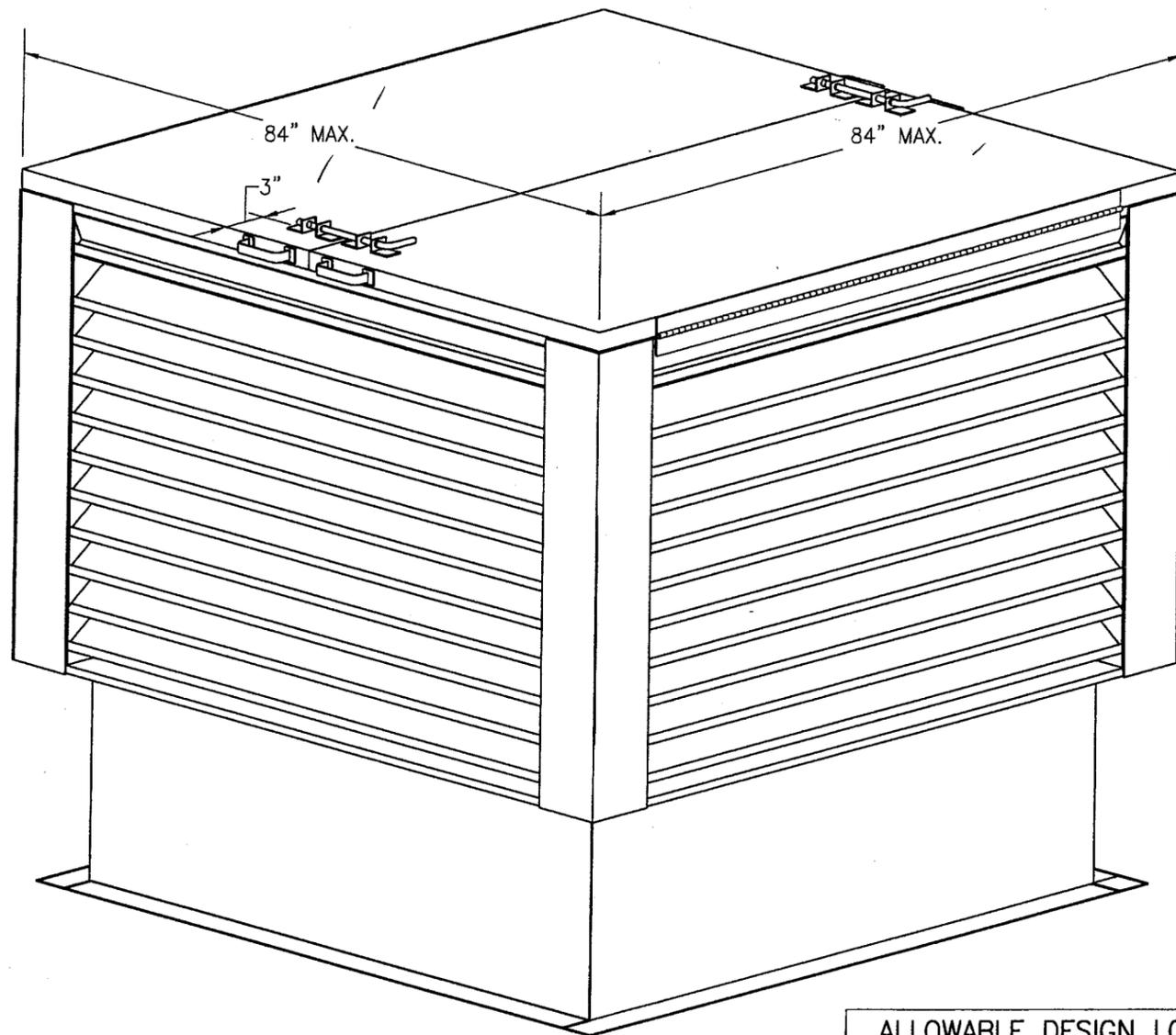
#### E. STATEMENTS

1. No financial interest letter issued by W.W. Schaefer Engineering & Consulting PA on 10/07/05 signed and sealed by W. W. Schaefer, PE.
2. Code compliance letter issued by W.W. Schaefer Engineering & Consulting PA on 10/07/05 signed and sealed by W. W. Scheafer PE.
3. Private Labeling Agreement between American Warming & Ventilating represented by R. Lichtenwald and Louvers and Dampers represented by R. Lichtenwald.

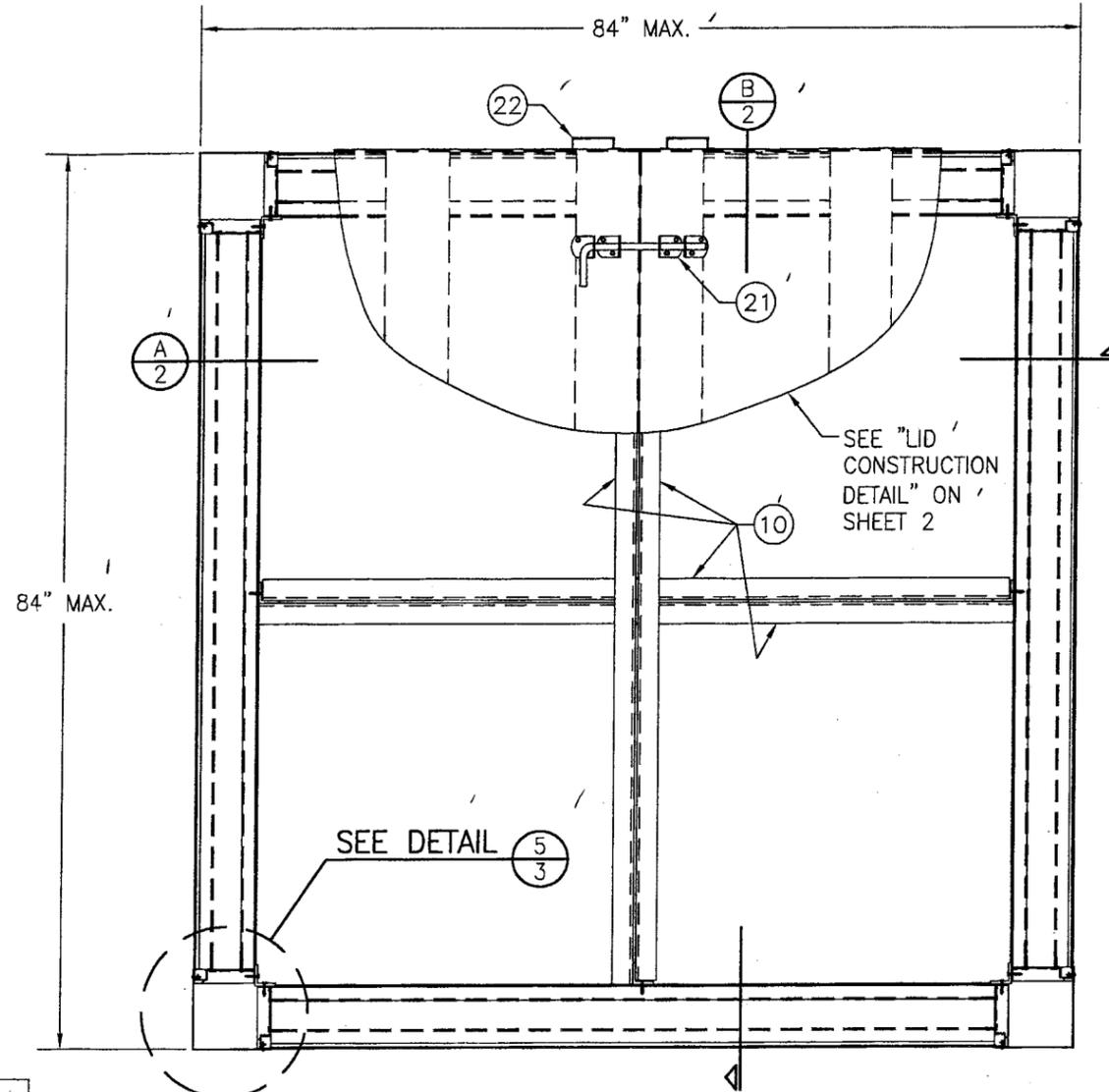


10/12/06

Candido F/Font PE.  
Sr. Product Control Examiner  
NOA No: 06-0822.07  
Expiration Date: July 13, 2011  
Approval: Date: October 12, 2006



**ISOMETRIC VIEW**  
SCALE: N.T.S.



**PLAN VIEW SECTION**  
(LIDS NOT FULLY SHOWN FOR CLARITY)  
SCALE: 3/4"=1'-0"

ALLOWABLE DESIGN LOAD	
POSITIVE	NEGATIVE
70 PSF	70 PSF
LARGE MISSILE IMPACT RATED	

ANCHOR SCHEDULE			
ANCHOR TYPE	(4) SUBSTRATE	MINIMUM EMBEDMENT	MINIMUM EDGE DIST.
(1) 1/4" BOLT W/NUT & WASHER	STEEL	FULL	1/2"
(2) 3/8" SLEEVE ANCHOR	CONCRETE	2 1/2"	2"
(3) 1/4-14 OR 1/4-20 SELF TAPPING SCREW	STEEL	FULL	0.5"

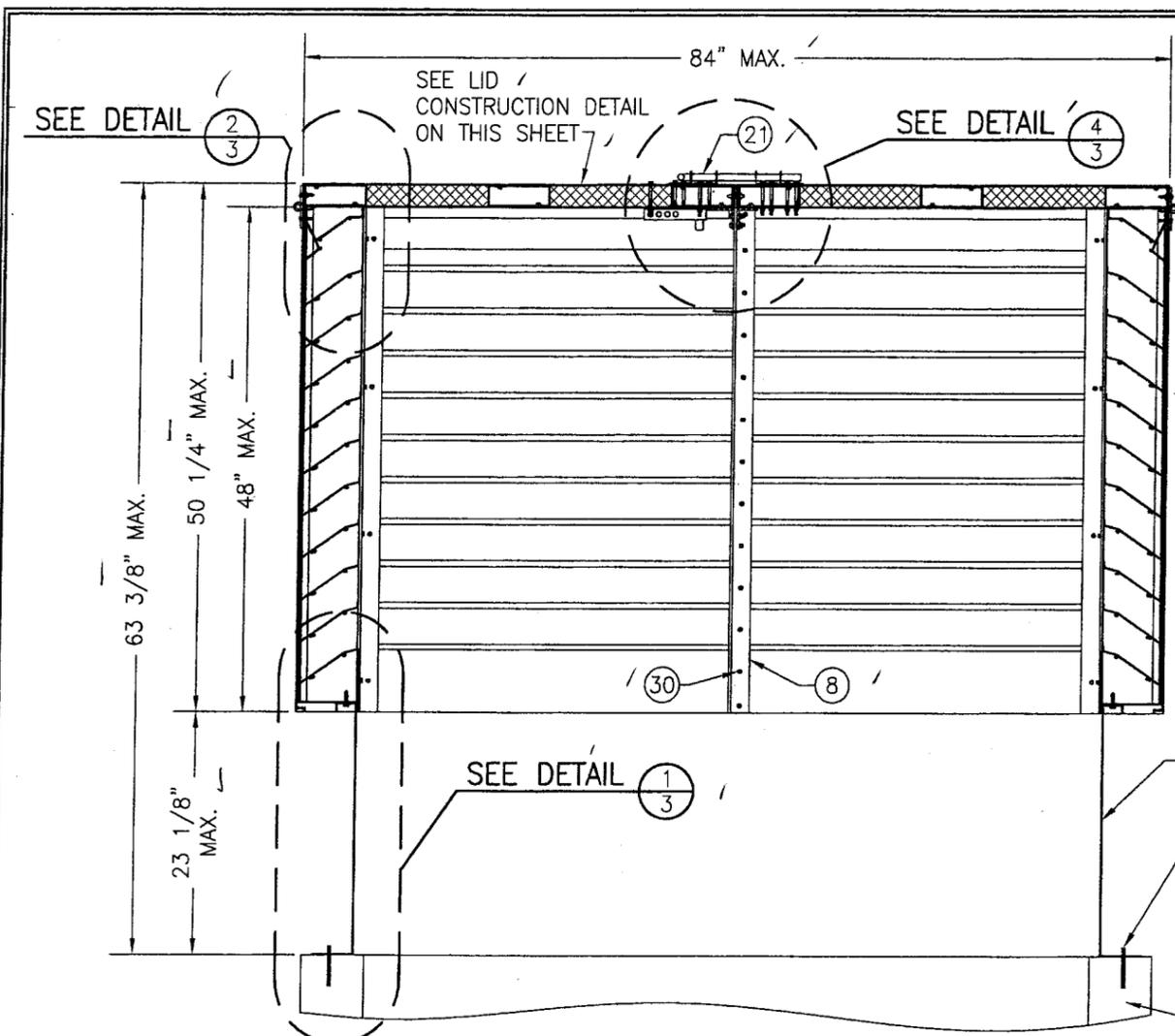
(1) BOLT SHALL BE MIN. A307 GALVANIZED OR 304 S.S. (Fv = 10,000 PSI MIN.)  
 (2) SLEEVE ANCHORS MAY BE GALVANIZED OR S.S. RAMSET RED HEAD DYNABOLTS OR POWERS RAWL POWER BOLT.  
 (3) SELF TAPPING SCREWS SHALL BE COATED TO RESIST CORROSION AND REACTIONS WITH DISSIMILAR MATERIALS.  
 (4) SEE GENERAL NOTES FOR SUBSTRATE REQUIREMENTS.

**GENERAL NOTES:**

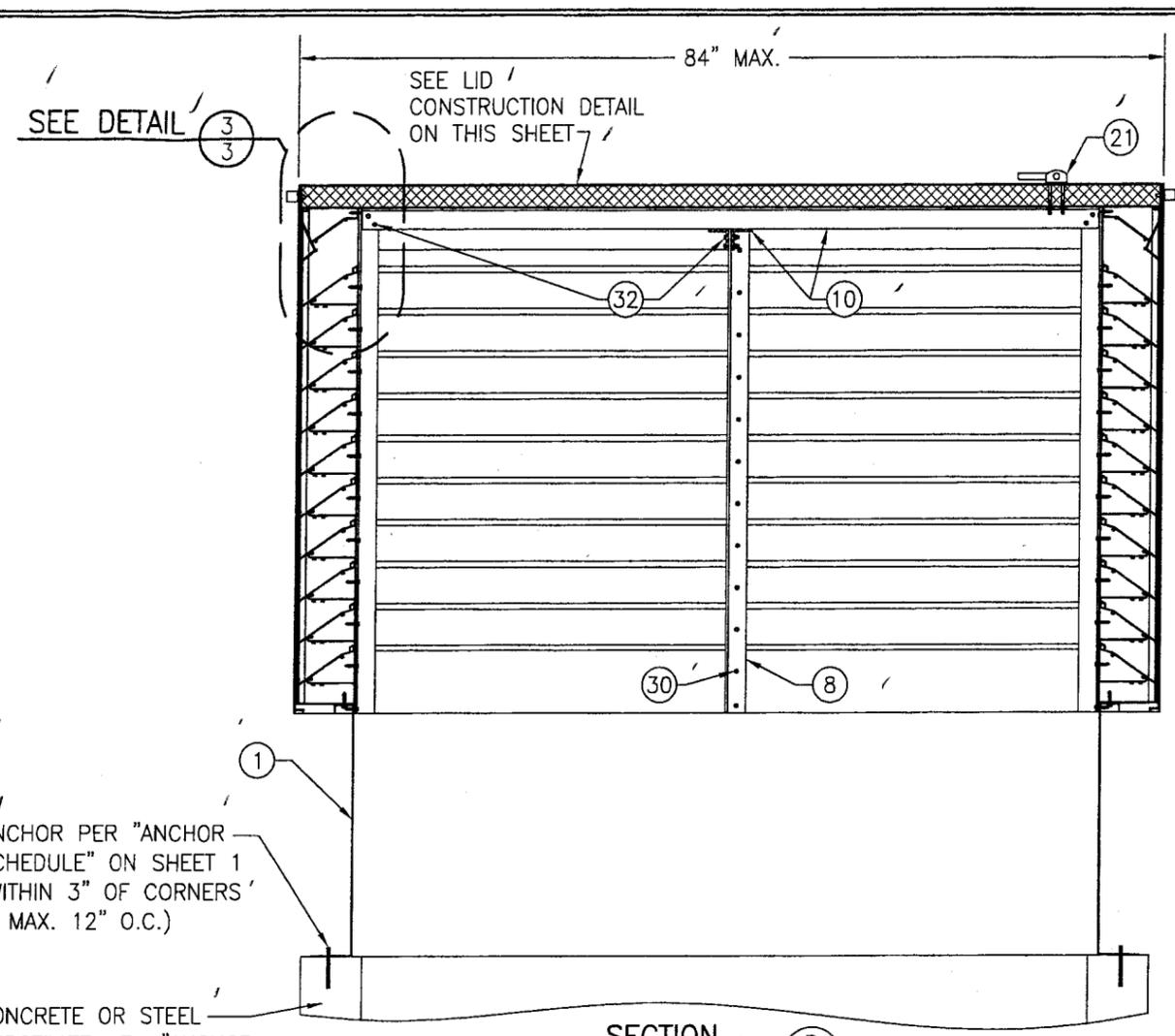
- IT SHALL BE THE RESPONSIBILITY OF THE PERMIT HOLDER TO VERIFY THE STRUCTURAL INTEGRITY OF THE EXISTING STRUCTURE TO SUPPORT THE LOADS SUPERIMPOSED BY THE PENTHOUSE.
- THIS PENTHOUSE SYSTEM HAS BEEN DESIGNED & TESTED IN ACCORDANCE WITH THE 2004 FLORIDA BUILDING CODE (FBC) AND PROTOCOLS TAS-201, 202 & 203 INCLUDING HIGH VELOCITY HURRICANE ZONES (HVHZ).
- EACH PENTHOUSE ASSEMBLY SHALL BE PERMANENTLY LABELED AS FOLLOWS:  
LOUVERS & DAMPERS  
FLORENCE, KY  
MIAMI-DADE COUNTY PRODUCT CONTROL APPROVED
- ALL CONCRETE SUBSTRATE SHALL BE MIN. 3000 PSI.
- ALL STRUCTURAL STEEL SUBSTRATE SHALL BE MIN. 1/4" THICK WITH Fy = 36 ksi. MIN.
- PENTHOUSE WIDTHS & HEIGHTS ARE LIMITED AS SHOWN IN THE SECTION VIEWS.
- SEPARATION OF DISSIMILAR MATERIALS MUST BE MAINTAINED PER ALL APPLICABLE CODES & SECTION 2003.8.4 OF FBC 2004.
- THIS SYSTEM HAS NOT BEEN TESTED FOR WATER INFILTRATION RESISTANCE AND THEREFORE IS NOT RATED FOR WATER RESISTANCE.
- THE PENTHOUSE IS TO BE INSTALLED IN A LOCATION WHERE THE AREA WITHIN THE PENTHOUSE IS DESIGNED TO DRAIN WATER PENETRATING INTO THE AREA AND THE PENTHOUSE WILL HOUSE WATER RESISTANT/WATER PROOF EQUIPMENT, COMPONENTS OR SUPPLIES.
- MATERIALS, INCLUDING BUT NOT LIMITED TO STEEL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF 2004 FLORIDA BUILDING CODE SECTION 2003.8.4.
- NO WIND LOAD DURATION FACTORS WERE USED IN THE ANALYSIS OF THIS PENTHOUSE SYSTEM.
- INSULATION USED IN THE ROOF HOOD IS 2" OF POLYISOCYANURATE MANUFACTURED BY RMAX, INC. UNDER NOA 02-0719.09 OR DYPLAST PRODUCTS LLC UNDER NOA 03-1209.09.

DRAWN BY: W.W.S.	CHECKED BY: W.W.S.
PLOT: 1=16	DATE: 08/08/06
NO.	REVISION DESCRIPTION
DATE	BY
DRAWING TITLE <b>IP69 LOUVERED PENTHOUSE</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: 561-775-4803	MANUFACTURER <b>LOUVERS &amp; DAMPERS</b> 7435 INDUSTRIAL ROAD FLORENCE, KY 41042 859-647-2299
CERTIFICATION <b>AUG 14 2006</b>	WARREN W. SCHAEFER, P.E. P.E. NO. 44135
DRAWING NO. <b>1489</b>	REV.
SHEET NO. <b>1</b>	OF <b>4</b>

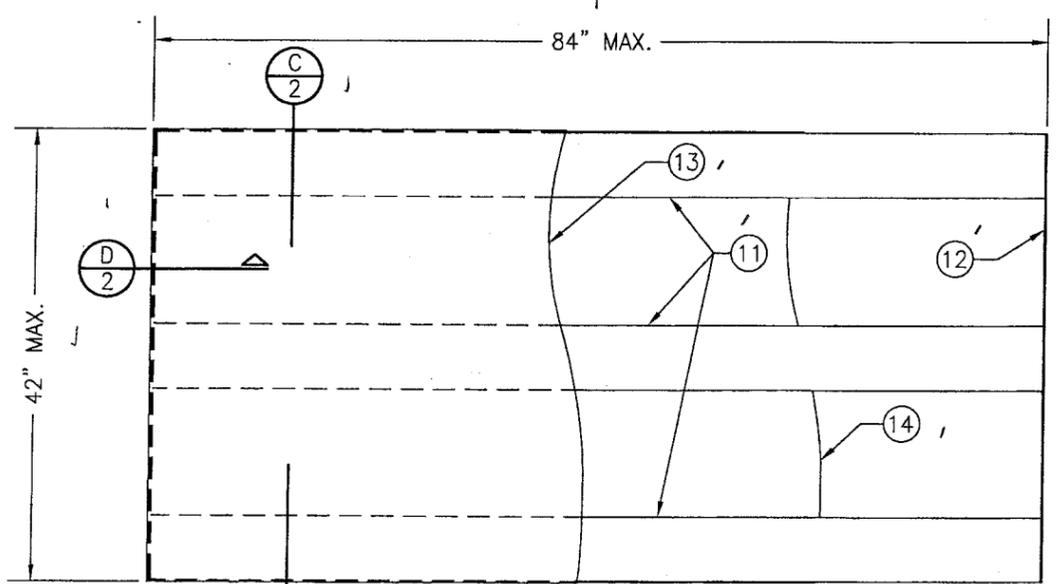
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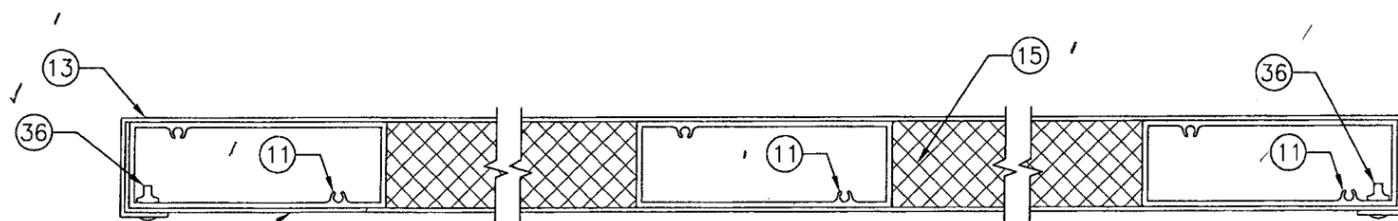
SECTION A/2  
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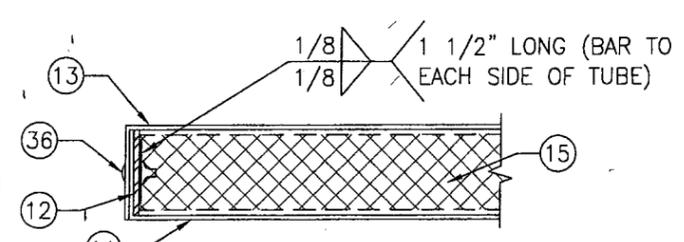
SECTION B/2  
SCALE: 3/4"=1'-0"  
(SEE SECTION A/2 FOR DETAIL NOT SHOWN)



LID CONSTRUCTION DETAIL  
SCALE: 3/4"=1'-0"



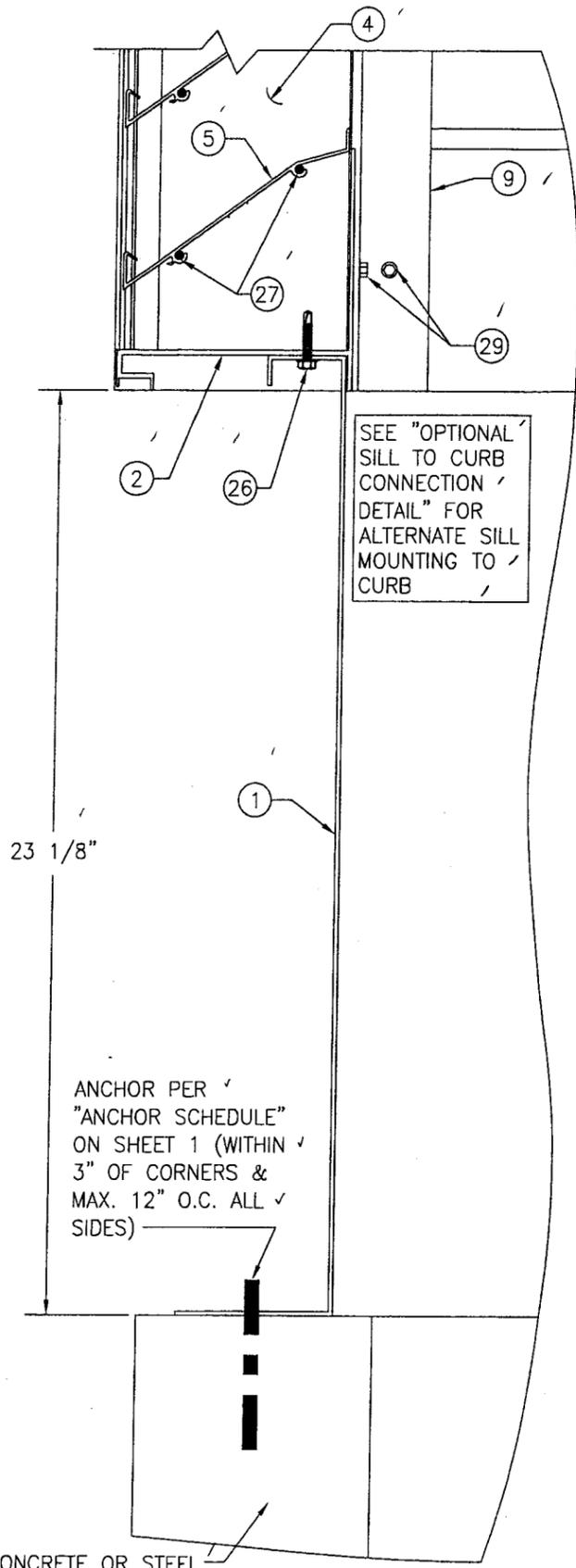
SECTION C/2  
SCALE: N.T.S.



SECTION D/2  
SCALE: N.T.S.

10/12/06  
06-0822.07

DRAWN BY: W.W.S.		CHECKED BY: W.W.S.	
PLOT: 1=16		DATE: 08/08/06	
NO.	REVISION DESCRIPTION	BY	DATE
DRAWING TITLE IP69 LOUVERED PENTHOUSE			
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. 8885 N. MILITARY TRAIL, SUITE C-204 PALM BEACH GARDENS, FL 33410 PHONE: 561-775-4902 FAX: 561-775-4903		MANUFACTURER LOUVERS & DAMPERS 7435 INDUSTRIAL ROAD FLORENCE, KY 41042 859-647-2299	
CERTIFICATION ATT: 147006			
DRAWING NO. 1489			
SHEET NO. 2 OF 4			

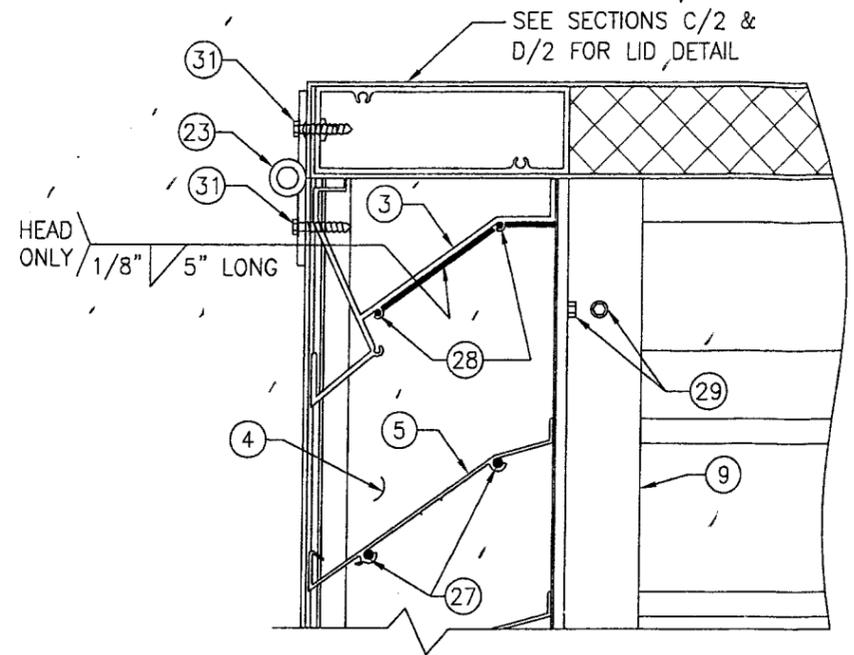


SEE "OPTIONAL SILL TO CURB CONNECTION DETAIL" FOR ALTERNATE SILL MOUNTING TO CURB

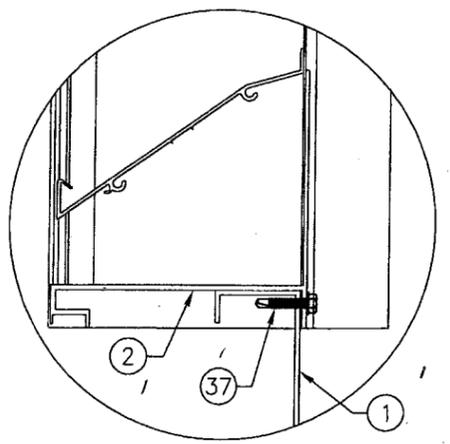
ANCHOR PER "ANCHOR SCHEDULE" ON SHEET 1 (WITHIN 3" OF CORNERS & MAX. 12" O.C. ALL SIDES)

CONCRETE OR STEEL SUBSTRATE PER "ANCHOR SCHEDULE" ON SHEET 1

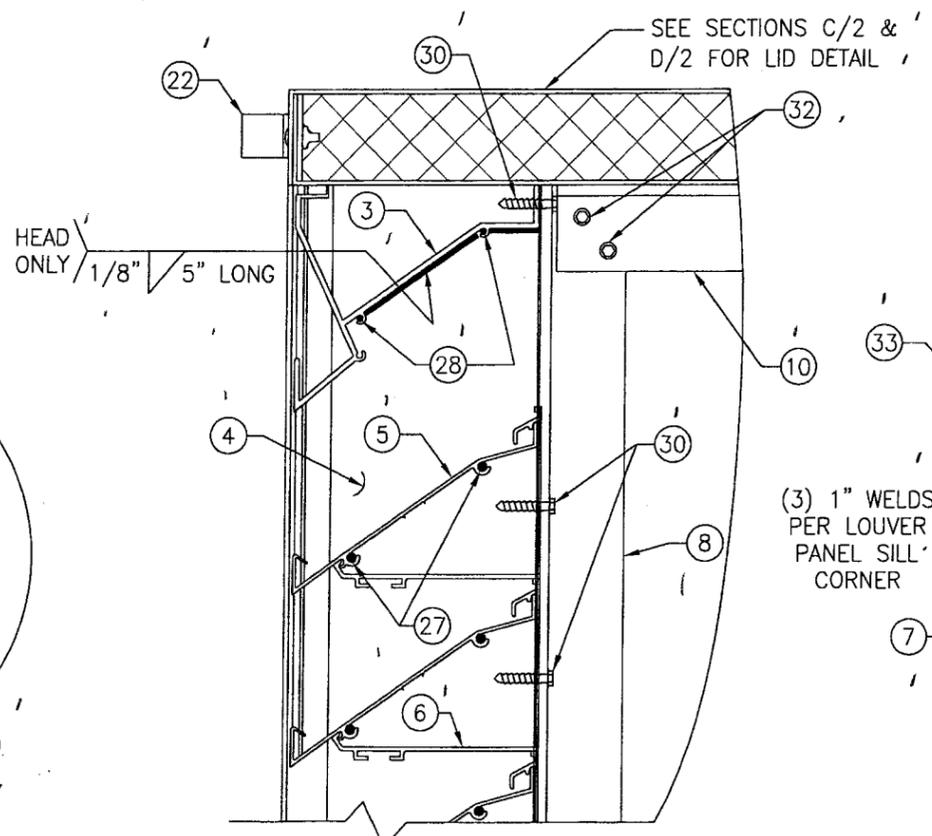
DETAIL 1  
1/4 FULL



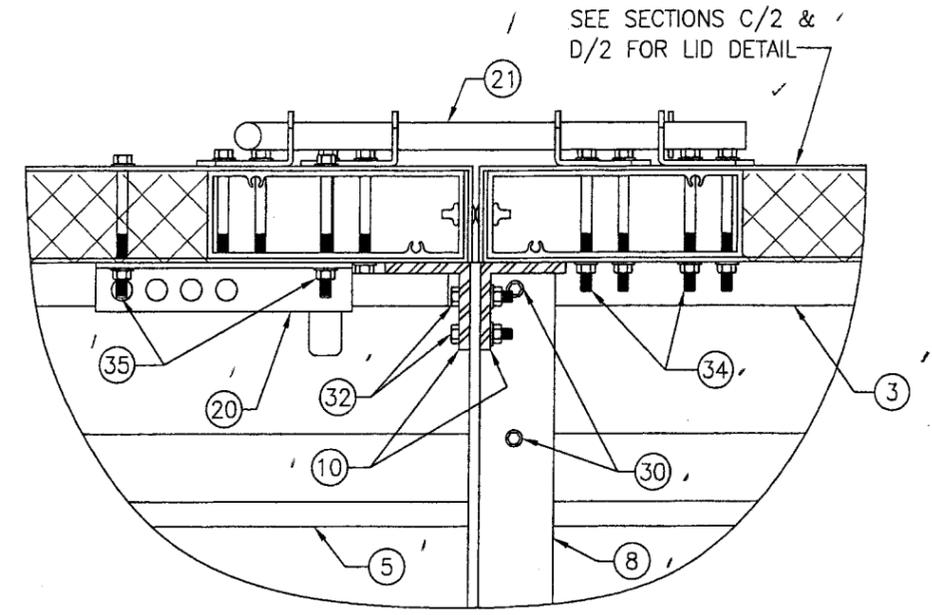
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1/4 FULL



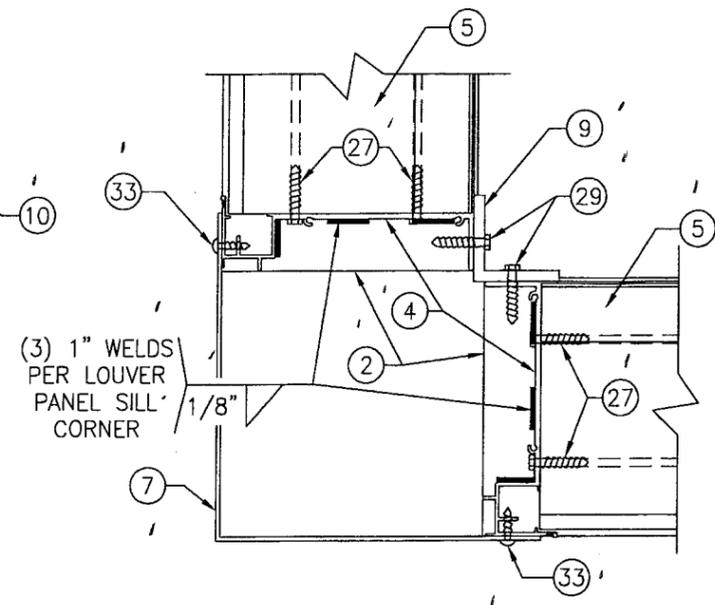
OPTIONAL SILL TO CURB CONNECTION DETAIL



DETAIL 3  
1/4 FULL



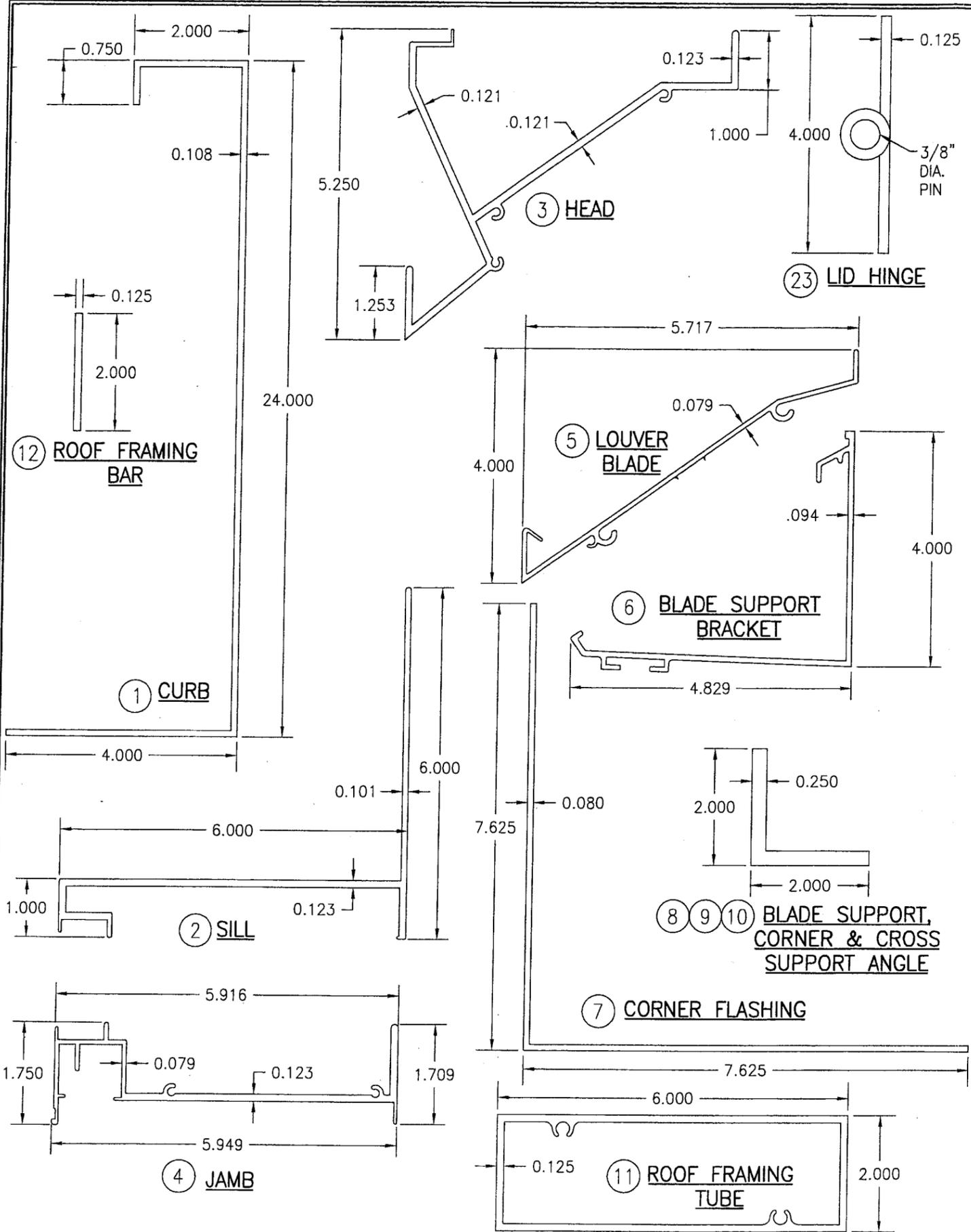
DETAIL 4  
1/4 FULL



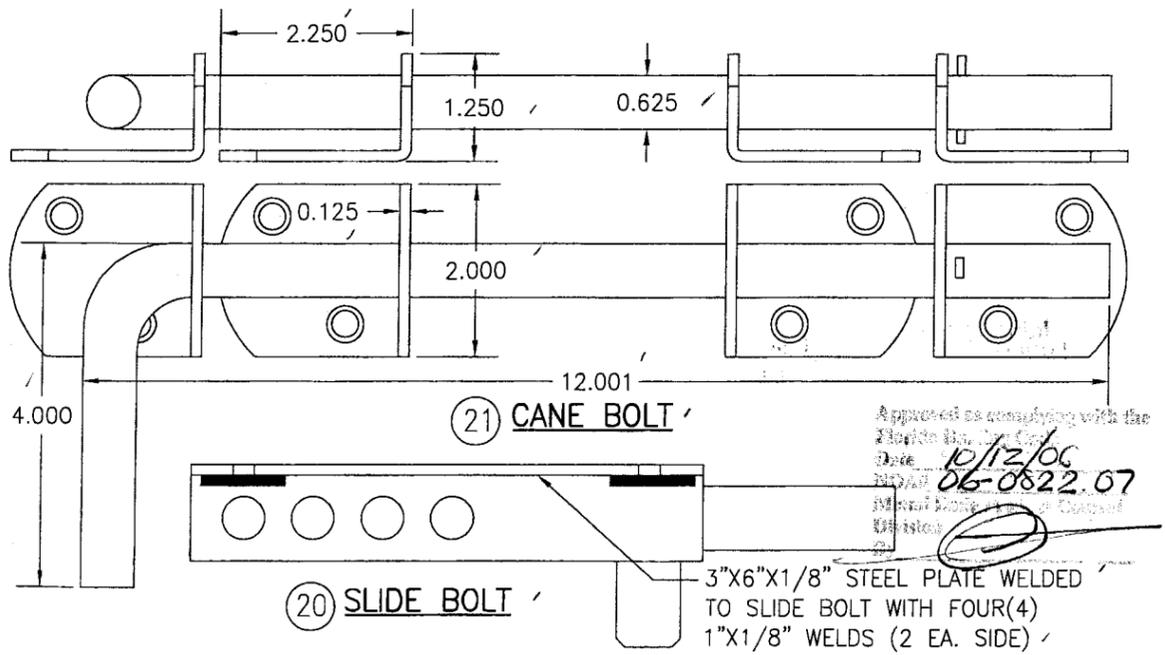
DETAIL 5  
1/4 FULL

10/12/06  
06-0822.07

DRAWING NO. <b>1489</b>	REV.
	SHEET NO. <b>3 OF 4</b>
CERTIFICATION <b>AUG 14 2006</b> WARREN W. SCHAEFER, P.E. P.E. NO. 44135	
DRAWING TITLE <b>IP69 LOUVERED PENTHOUSE</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>LOUVERS &amp; DAMPERS</b> 7435 INDUSTRIAL ROAD FLORENCE, KY 41042 859-647-2299
NO. REVISION DESCRIPTION BY DATE	CHECKED BY: W.W.S. DATE: 08/08/06



ITEM #	ITEM DESCRIPTION	MANUFACTURER/NOTES
PARTS		
1	CURB	12 GA. GALV. 50 KSI STEEL
2	SILL	6063-T5 ALUMINUM
3	HEAD	6063-T5 ALUMINUM
4	JAMB	6063-T6 ALUMINUM
5	LOUVER BLADE	6063-T5 ALUMINUM
6	BLADE SUPPORT BRACKET	6063-T5 ALUMINUM
7	CORNER FLASHING	5052-H32 ALUMINUM
8	BLADE SUPPORT ANGLE	6063-T5 ALUMINUM
9	CORNER ANGLE	6063-T5 ALUMINUM
10	CROSS SUPPORT ANGLE	6063-T5 ALUMINUM
11	ROOF FRAMING TUBE	6063-T5 ALUMINUM
12	ROOF FRAMING BAR	6063-T5 ALUMINUM
13	0.08" THICK ROOF TOP SKIN	5052-H32 ALUMINUM
14	0.08" THICK ROOF BOTTOM SKIN	5052-H32 ALUMINUM
15	2" THICK INSULATION	POLYISOCYANURATE
HARDWARE		
20	SLIDE BOLT	AMERICAN LOCK NO. 895
21	CANE BOLT	A36 GALV. STEEL
22	ROOF LID HANDLE	GALV. STEEL OR ALUMINUM
23	LID HINGE	6063-T5 ALUMINUM
FASTENERS		
26	1/4-20 X 1 1/4" SELF TAPPING SCREW	WITHIN 3" OF ENDS & MAX. 6" O.C.
27	1/4-20 X 1 1/2" TYPE-F SCREW	2 PER LOUVER BLADE END
28	NO. 8 X 3/4" S.S. SMS	2 PER HEAD END
29	1/4-20 X 1 1/4" SELF TAPPING SCREW	WITHIN 2" OF ENDS & MAX. 14" O.C.
30	1/4-20 X 1 1/4" SELF TAPPING SCREW	AT HEAD, SILL AND EACH BLADE SUPPORT BRACKET
31	1/4-20 X 1 1/4" SELF TAPPING SCREW	1" FROM ENDS & MAX. 11" O.C.
32	1/4-20 X 1 1/4" HEX HEAD BOLT	2 PER CROSS SUPPORT DOUBLE ANGLE END
33	NO. 8 X 3/4" S.S. SMS	1" FROM ENDS & MAX. 15" O.C.
34	1/4-20 X 3" HEX HEAD BOLT	8 PER CANE BOLT (2 PER CLIP)
35	1/4-20 X 3" HEX HEAD BOLT	4 PER SLIDE BOLT
36	3/16" ALUMINUM POP RIVET	WITHIN 6" OF CORNERS & MAX. 14" O.C.
37	1/4-20 X 1 1/4" SELF TAPPING SCREW	WITHIN 3" OF ENDS & MAX. 12" O.C.



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MANUFACTURER <b>LOUVERS &amp; DAMPERS</b>	
7435 INDUSTRIAL ROAD FLORENCE, KY 41042 859-647-2299	
8895 N. MILITARY TRAIL, SUITE C-204 PALM BEACH GARDENS, FL 33410 PHONE: 561-775-4902 FAX: 561-775-4903	
CERTIFICATION AUG 14 2006	W. W. SCHAEFER, P.E. P.E. NO. 44135
DRAWING NO. <b>1489</b>	REV.
SHEET NO. <b>4</b>	OF <b>4</b>