



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

CONTRACTOR LICENSING SECTION
(305) 375-2527 FAX (305) 375-2558

CONTRACTOR ENFORCEMENT DIVISION
(305) 375-2966 FAX (305) 375-2908

PRODUCT CONTROL DIVISION
(305) 375-2902 FAX (305) 372-6339

PRODUCT CONTROL NOTICE OF ACCEPTANCE

Greenheck Fan Corporation
525 Western Road
Schofield, WI 54476-0410

Your application for Notice of Acceptance (NOA) of:

ESD-603D Louver

under Chapter 8 of the Code of Miami-Dade County governing the use of Alternate Materials and Types of Construction, and completely described herein, has been recommended for acceptance by the Miami-Dade County Building Code Compliance Office (BCCO) under the conditions specified herein.

This NOA shall not be valid after the expiration date stated below. BCCO reserves the right to secure this product or material at any time from a jobsite or manufacturer's plant for quality control testing. If this product or material fails to perform in the approved manner, BCCO may revoke, modify, or suspend the use of such product or material immediately. BCCO reserves the right to revoke this approval, if it is determined by BCCO that this product or material fails to meet the requirements of the South Florida Building Code.

The expense of such testing will be incurred by the manufacturer.

ACCEPTANCE NO.: 00-0929.13

EXPIRES: 09/06/2006

Raul Rodriguez
Chief Product Control Division

**THIS IS THE COVERSHEET, SEE ADDITIONAL PAGES FOR SPECIFIC AND GENERAL
CONDITIONS
BUILDING CODE & PRODUCT REVIEW COMMITTEE**

This application for Product Approval has been reviewed by the BCCO and approved by the Building Code and Product Review Committee to be used in Miami-Dade County, Florida under the conditions set forth above.

Francisco J. Quintana, R.A.
Director
Miami-Dade County
Building Code Compliance Office

APPROVED: 09/06/2001

Greenheck Fan Corporation.

ACCEPTANCE No: 00-0929.13

APPROVED: SEP 06 2001

EXPIRES: SEP 06 2006

NOTICE OF ACCEPTANCE: SPECIFIC CONDITIONS

1. SCOPE

- 1.1 This approves extruded aluminum louvers with damper, as described in Section 2 of this Notice of Acceptance, designed to comply with the South Florida Building Code (SFBC), 1994 Edition for Miami-Dade County. For the locations where the pressure requirements, as determined by SFBC Chapter 23, do not exceed the Design Pressure Rating values indicated in the approved drawings.

2. PRODUCT DESCRIPTION

- 2.1 The ESD-603D Louver and its components shall be constructed in strict compliance with the following documents: Drawing No. MD-8, titled "ESD-603D Louver," sheets 1 through 5 of 5, prepared by Greenheck Fan Corporation, dated 06/05/2001 with last revision on 07/27/2001. They bear the Miami-Dade County Product Control Approval stamp with the Notice of Acceptance number and approval date by the Miami-Dade County Product Control Division. These documents shall hereinafter be referred to as the approved drawings.

3. LIMITATIONS

- 3.1 All permanent set components, included but not limited to embedded anchor bolts, metal shields, headers and sills, must be protected against corrosion, contamination and damage at all time.
- 3.2 This approval applies to applications as shown on the approved drawings
- 3.3 Units with dimensions equal to or smaller than those shown in the approved drawings shall qualify under this approval, as long as all the components are exactly as described in this approval.

4. INSTALLATION

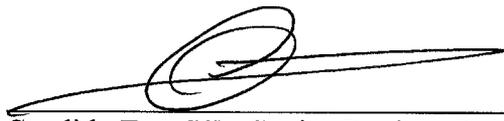
- 4.1 The louvers shall be installed in strict compliance with the approved drawings.
- 4.2 The installation of this product **will not** require a hurricane protection system.
- 4.3 This louver shall only be installed in a location where the room behind the louver is designed to drain water penetrating into the room, and the room will house water-resistant equipment, components, and supplies.

5. LABELING

- 5.1 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".

6. BUILDING PERMIT REQUIREMENTS

- 6.1 Application for building permit shall be accompanied by copies of the following:
- 6.1.1 This Notice of Acceptance.
- 6.1.2 Duplicate copies of the approved drawings, as identified in Section 2 of this Notice of Acceptance, clearly marked to show the components selected for the proposed installation.
- 6.1.3 Any other documents required by the Building Official or the South Florida Building Code (SFBC) in order to properly evaluate the installation of this system.


Candido Font PE., Senior Product Control Examiner
Product Control Division

Greenheck Fan Corporation.

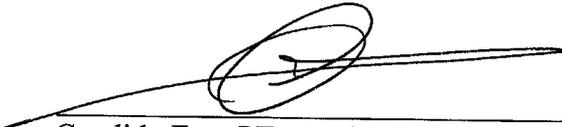
ACCEPTANCE No: 00-0929.13

APPROVED: SEP 06 2001

EXPIRES: SEP 06 2006

NOTICE OF ACCEPTANCE: STANDARD CONDITIONS

1. Renewal of this Acceptance (approval) shall be considered after a renewal application has been filed and the original submitted documents, including test-supporting data, engineering documents, are no older than eight (8) years.
2. Any and all approved products shall be permanently labeled with the manufacturer's name, city, state, and the following statement: "Miami-Dade County Product Control Approval", or as specifically stated in the specific conditions of this Acceptance.
3. Renewals of Acceptance will not be considered if:
 - a. There has been a change in the South Florida Building Code affecting the evaluation of this product and the product is not in compliance with the code changes.
 - b. The product is no longer the same product (identical) as the one originally approved.
 - c. If the Acceptance holder has not complied with all the requirements of this acceptance, including the correct installation of the product.
 - d. The engineer who originally prepared, signed and sealed the required documentation initially submitted, is no longer practicing the engineering profession.
4. Any revision or change in the materials, use, and/or manufacture of the product or process shall automatically be cause for termination of this Acceptance, unless prior written approval has been requested (through the filing of a revision application with appropriate fee) and granted by this office.
5. Any of the following shall also be grounds for removal of this Acceptance:
 - a. Unsatisfactory performance of this product or process.
 - b. Misuse of this Acceptance as an endorsement of any product, for sales, advertising or any other purposes.
6. The Notice of Acceptance 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 Notice of Acceptance is displayed, then it shall be done in its entirety.
7. A copy of this Acceptance as well as approved drawings and other documents, where it applies, shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at all time. The engineer need not reseal the copies.
8. Failure to comply with any section of this Acceptance shall be cause for termination and removal of Acceptance.
9. This Notice of Acceptance consists of pages 1, 2 and this last page 3.


Candido Font PE., Senior Product Control Examiner
Product Control Division

Greenheck Fan Corporation.

ACCEPTANCE No: 00-0929.13

APPROVED: SEP 06 2001

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NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS.

1. Drawing prepared by Greenheck Fan Corporation, titled "ESD-603D Louver," Drawing No. MD-8, Sheets 1 through 5 of 5 dated 06/05/2001 with last revision on 07/27/2001, signed and sealed by L. D. Rice, PE.

B. TESTS.

1. Test report on Large Missile Impact Test per PA 201, Cyclic Wind Pressure Test per PA 203, Uniform Static Air Pressure Test per PA 202 and Wind Driven Rain Test Per PA 100(A) of "Specimens 1, 2, 3 & 4: ESD-603D Louver and Specimens 5A & 5B: ESD-603D / HCD-240 Louver/Damper Assembly", prepared by Architectural Testing, Inc., report No. 01-37834.01, dated 01/15/01, signed and sealed by A. N. Reeves, PE

C. CALCULATIONS.

1. Louver Calculations prepared by Greenheck Louver, pages 1 & 2, signed and sealed by L.D. Rice, PE.
2. Justification of Product Variation from Tested Units, prepared by Greenheck Fan Corporation, on 05/08/2001, revised on 07/27/2001, pages 1 to 11 of 11, signed and sealed by L. D. Rice, PE.

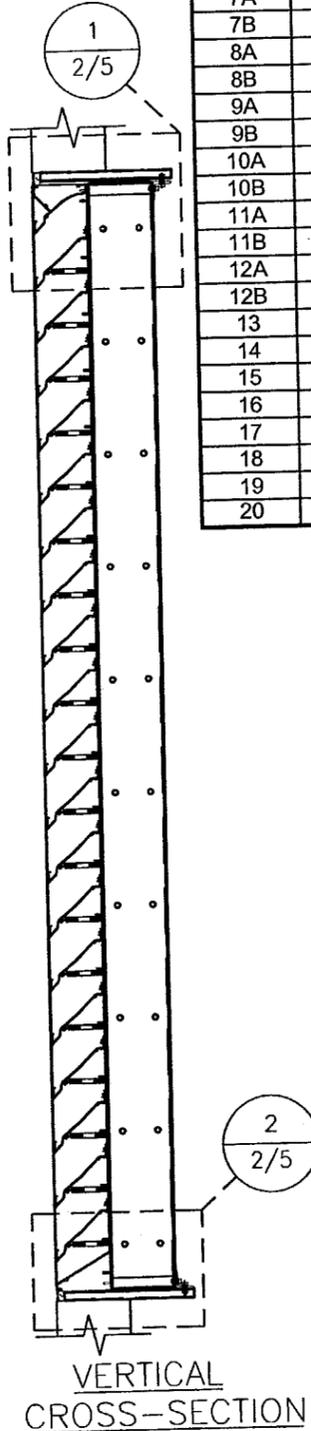
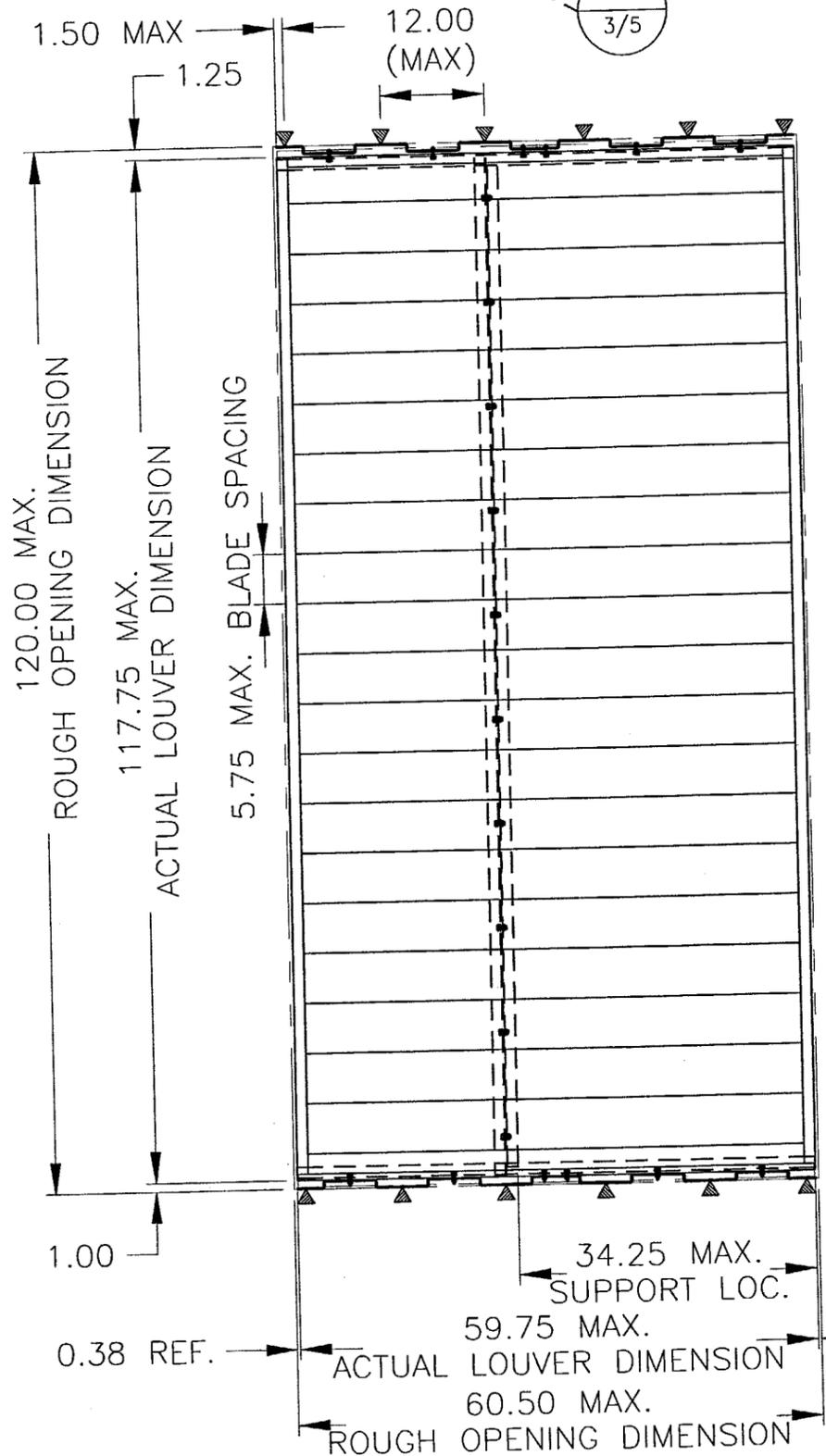
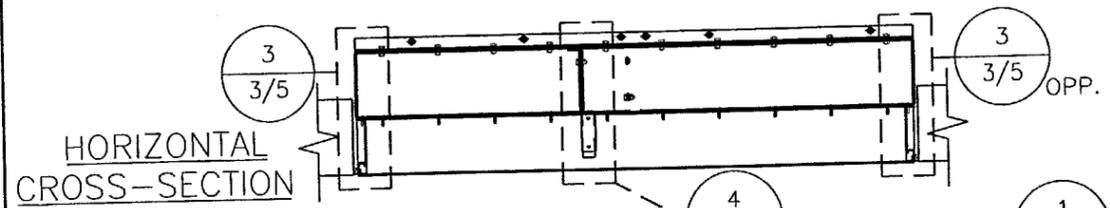
D. MATERIAL CERTIFICATIONS.

N/A

E. STATEMENTS

1. Test compliance letter issued by Architectural Testing, Inc., on 01/17/2001, signed and sealed by A. N. Reeves, PE.
2. Code compliance letter issued by Rice Engineering on 05/17, 2001, signed and sealed by L. D. Rice, PE.


Candido Font PE., Senior Product Control Examiner
Product Control Division



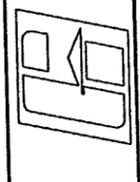
ITEM #	QUANTITY	DESCRIPTION	MATERIAL	DIMENSIONS
1	1	HEAD	6063-T5 EXTR. ALUM.	.125 WALLx5.73Dx5.34H
2	5.75 MAX.SPACING	BLADE	6063-T5 EXTR. ALUM.	.125 WALLx5.73Dx6.53H
3	1	SILL	6063-T5 EXTR. ALUM.	.125 WALLx6.08Dx6.54H
4	1/BLADE	BLADE BRACKET (OVER 36" WIDE)	6063-T5 EXTR. ALUM.	.081 WALLx1.5Wx4.69Dx4.80H
5	1/BLADE	BLADE BRACKET REINFORCEMENT	6063-T5 EXTR. ALUM.	.063 WALLx.5x1.5x4
6	2	JAMB	6063-T5 EXTR. ALUM.	.125 WALLx5.94Dx1.25W
7A	2 MIN.	TOP/BOT ANCHOR PLATE W/7" FRAME	A569 STL. or A240 SS	12GAx.94Hx14.13D
7B	2 MIN.	TOP/BOT ANCHOR PLATE W/3" FRAME	A569 STL. or A240 SS	12GAx.94Hx 9.63D
8A	2	TOP/BOT STRUCT. SUP. W/7" FRAME	A569 STL. or A240 SS	10GAx1.25x2x7D
8B	2	TOP/BOT STRUCT. SUP. W/3" FRAME	A569 STL. or A240 SS	10GAx1.25x2x3D
9A	2	SIDE STRUCT. SUP. W/7" FRAME	A569 STL. or A240 SS	10GAx1.25x2x7D
9B	2	SIDE STRUCT. SUP. W/3" FRAME	A569 STL. or A240 SS	10GAx1.25x2x3D
10A	1	CENTER STRUCT. ANGLE W/7" FRAME	A569 STL. or A240 SS	10GAx2Wx6.5D
10B	1	CENTER STRUCT. ANGLE W/3" FRAME	A569 STL. or A240 SS	10GAx2Wx2.5D
11A	1	BLADE SUPPORT ANGLE W/7" FRAME	A569 STL. or A240 SS	10GAx1.25Wx6.5D
11B	1	BLADE SUPPORT ANGLE W/3" FRAME	A569 STL. or A240 SS	10GAx1.25Wx2.5D
12A	2	2" ANCHORING ANGLE for ROH >48"	ASTM A36 HR STL.	.25x1.5x1.5
12B	2	1-1/2" ANCHORING ANGLE for ROH <=48"	ASTM A36 HR STL.	.25x1.5x1.5
13	2/BLD. BRKT	SMS TPH	18-8 SS	#8-18x1" TYPE AB
14	6" O.C.	SMS TPH	18-8 SS	#10-16x1" TYPE AB
15	2/BLD. BRKT	SELF-PIERCING RIVET	ZP	3/16x7/32
16	12" O.C.	ZP HH SFF	SAE J429, GR. 5 or ASTM F593	3/8-16x.75 Min.
17	AS REQD.	HEX NUT	SAE J995 or ASTM F594	3/8-16
18	MAX 12" SPACING	INSTALLATION FASTENERS (BY OTHERS)	304SS	3/8-16x3 HILTI KBII 38-3
19	MAX 12" SPACING	INSTALLATION FASTENERS (BY OTHERS)	ASTM A307	3/8-16x1
20	AS REQD.	SEALANT (BY OTHERS)	TREMCO SPECTREM 1	

GENERAL NOTES:

1. Maximum allowable single panel size is 59.75" x 117.75" for a maximum 60.5" x 120" rough opening.
2. Maximum wall opening is of unlimited width with an opening height not to exceed 120". The opening can be covered with multiple louver panels of 59.75" width or less.
3. Center blade support is used on all louvers having a rough opening width over 36". Louver blade span cannot exceed 34.25" in any configuration.
4. ESD-603D is approved for installation into masonry, minimum 2000 psi concrete and steel frame openings. Louver construction and fastener locations are the same for all substrates. Opening frame must be designed to withstand the loads transferred from louver.
5. Louver is qualified for a maximum design load of ±138 pounds per square foot (psf).
6. All anchoring fasteners must be as specified and must be installed as shown in these drawings.
7. The ESD-603D louver has been tested in accordance with Miami-Dade County Protocols PA201-94 (impact), PA202-94 (structural integrity), and PA203-94 (cyclic fatigue). Louver is intended for use where the space behind is designed for water penetrating into the room, and the room will house water-resistant equipment, components or supplies.
8. Louver design, testing, and installation conforms to the South Florida Building Code.
9. Louver is to be anchored at head and sill only. No anchorage is required at the jambs.
10. Louver frame jambs are mitered at the bottom and square cut at the top. Jambs are stitchwelded, two places, and fastened with (2) #10 x 1" Torx pan head screws at head and sill.

DRAWN BY: TESKE
 DATE: 6/5/2001
 REVISION DATE: 7/27/2001
 SCALE: 1/20
 SHEET NO.: 1 of 5
 CAD DRAWING NO.: MD-8
 REV: 1

GREENHECK
 P.O. BOX 410 SCHOFIELD,
 WISCONSIN 54476-0410



ESD-603D LOUVER

APPROVED AS COMPLYING WITH THE
 SOUTH FLORIDA BUILDING CODE
 DATE: SEP 06 2001
 BY: [Signature]
 PRODUCT CONTROL DIVISION
 BUILDING CODE COMPLIANCE OFFICE
 ACCEPTANCE NO. 00-0929.13

[Signature]
 L. Davis Rice
 AUG 17 2001

▲ REQUIRED ANCHOR POINTS

HILTI KBII 38-3, 3/8-16 x 3
on 12"(305mm) Max. Centers, 1.5"(38mm) Max. From Corners at Head and Sill (By Others) ⑮

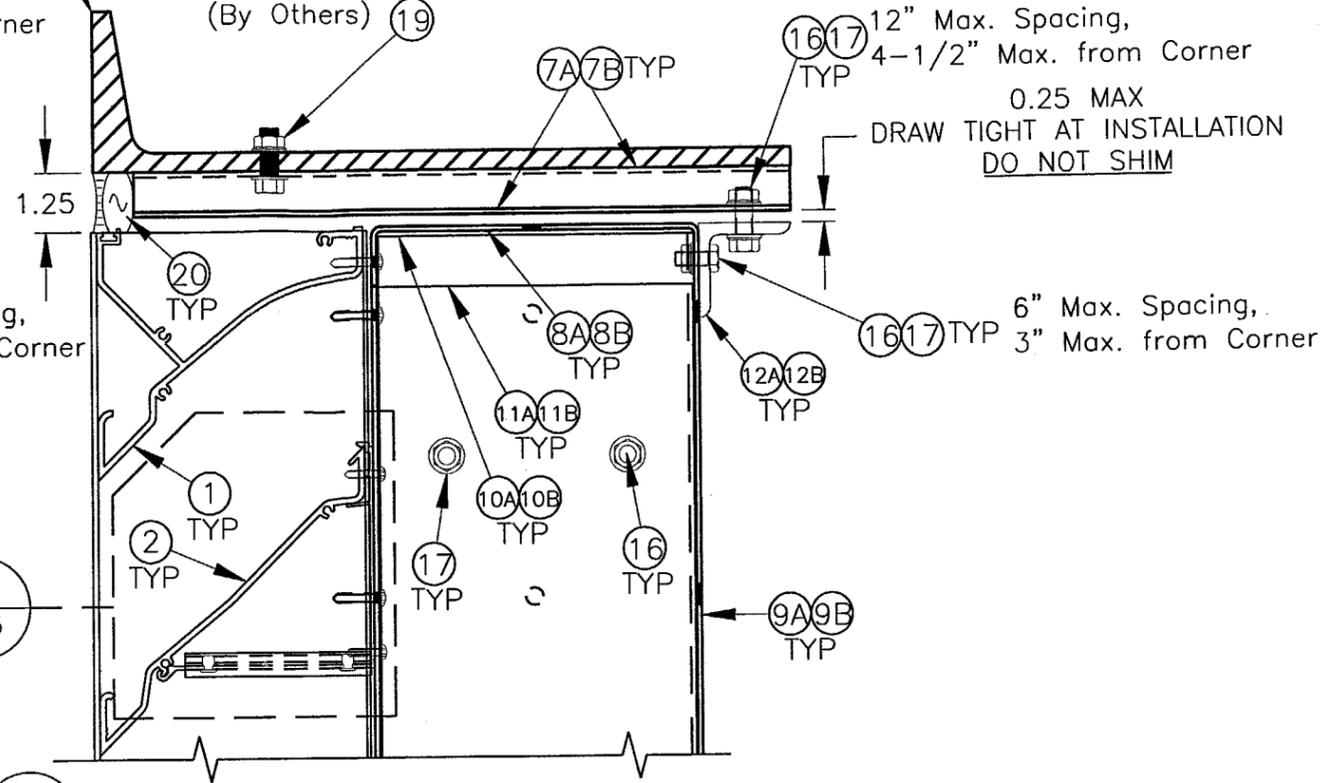
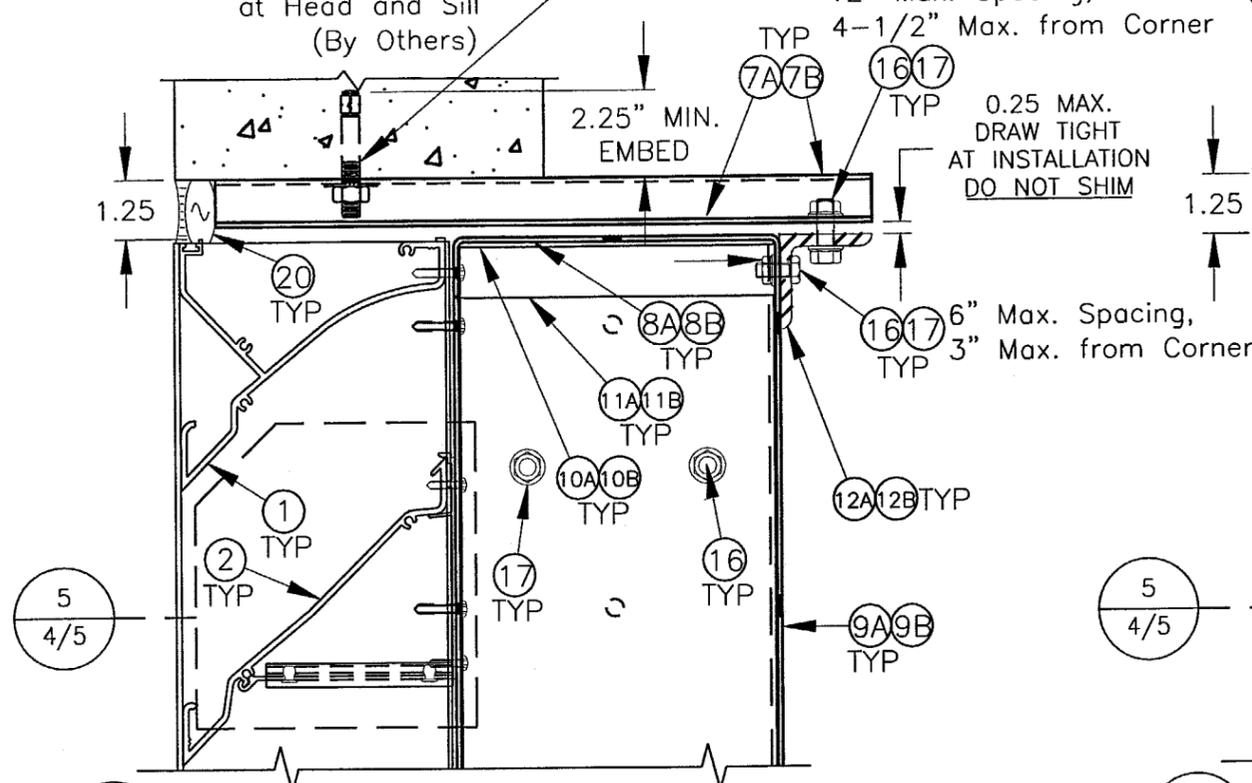
1/4" Thick Minimum Steel

3/8-16 UNC, ASTM A307 BOLT, 12"(305mm) Max. Centers, 1.5"(38mm) Max From Corner At Head & Sill (By Others) ⑲

12" Max. Spacing, 4-1/2" Max. from Corner

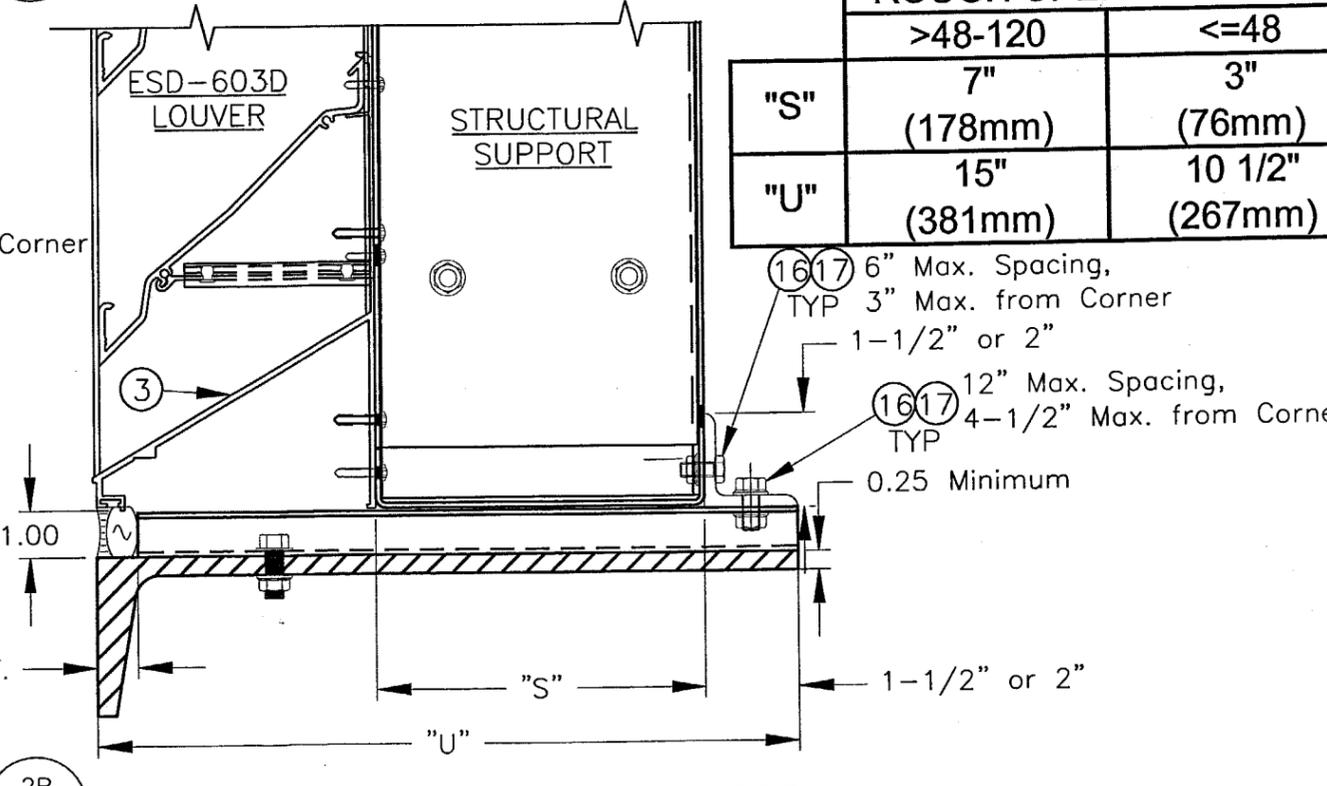
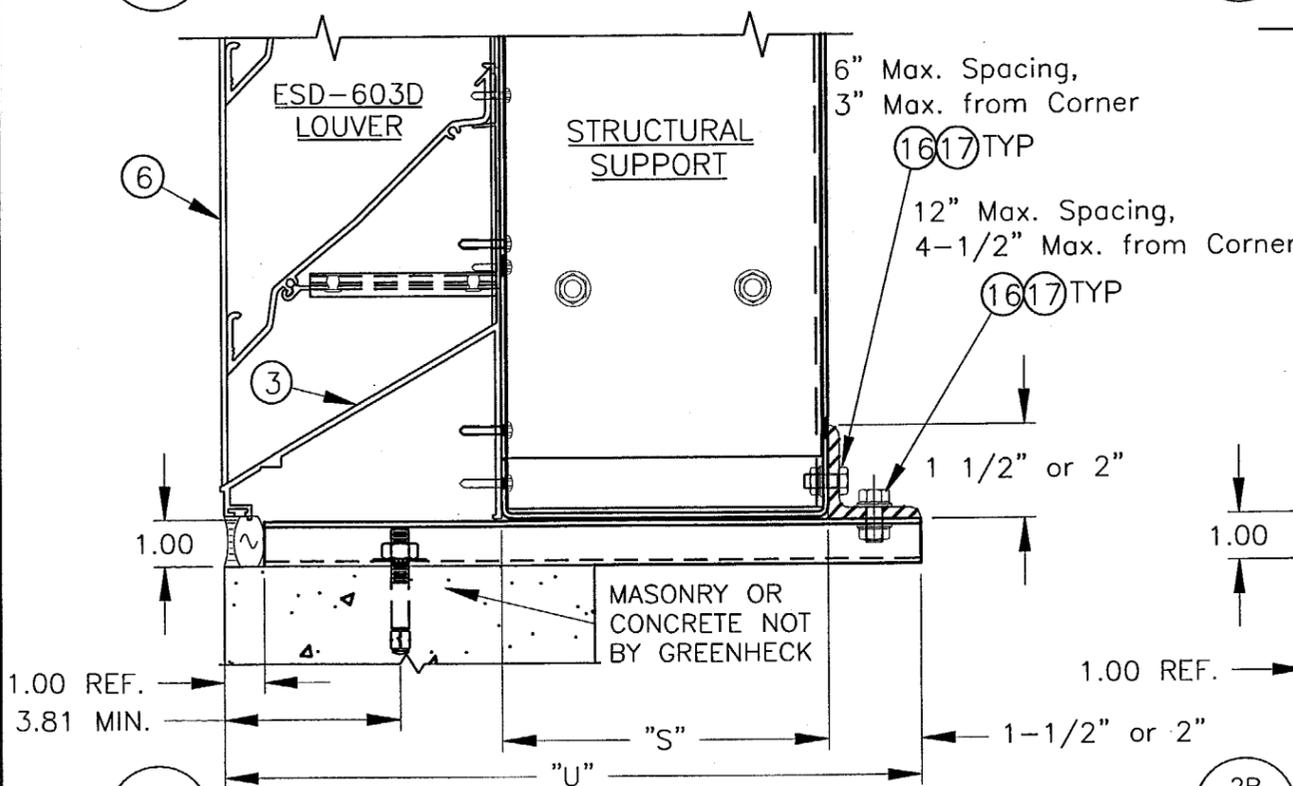
0.25 MAX DRAW TIGHT AT INSTALLATION DO NOT SHIM

6" Max. Spacing, 3" Max. from Corner



1A 2/5 INSTALLATION INTO CONCRETE/MASONRY

1B 2/5 INSTALLATION INTO STEEL FRAMED OPENING



2A 2/5 INSTALLATION INTO CONCRETE/MASONRY

2B 2/5 INSTALLATION INTO STEEL FRAMED OPENING

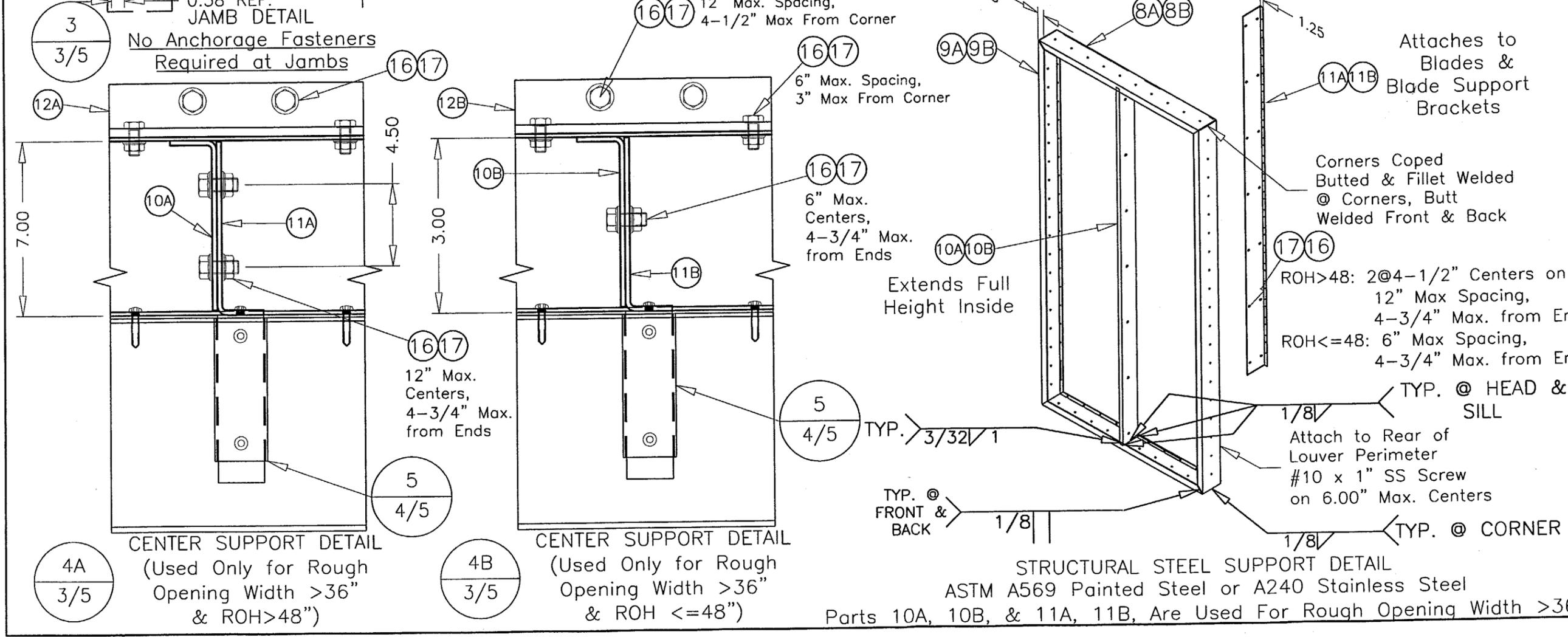
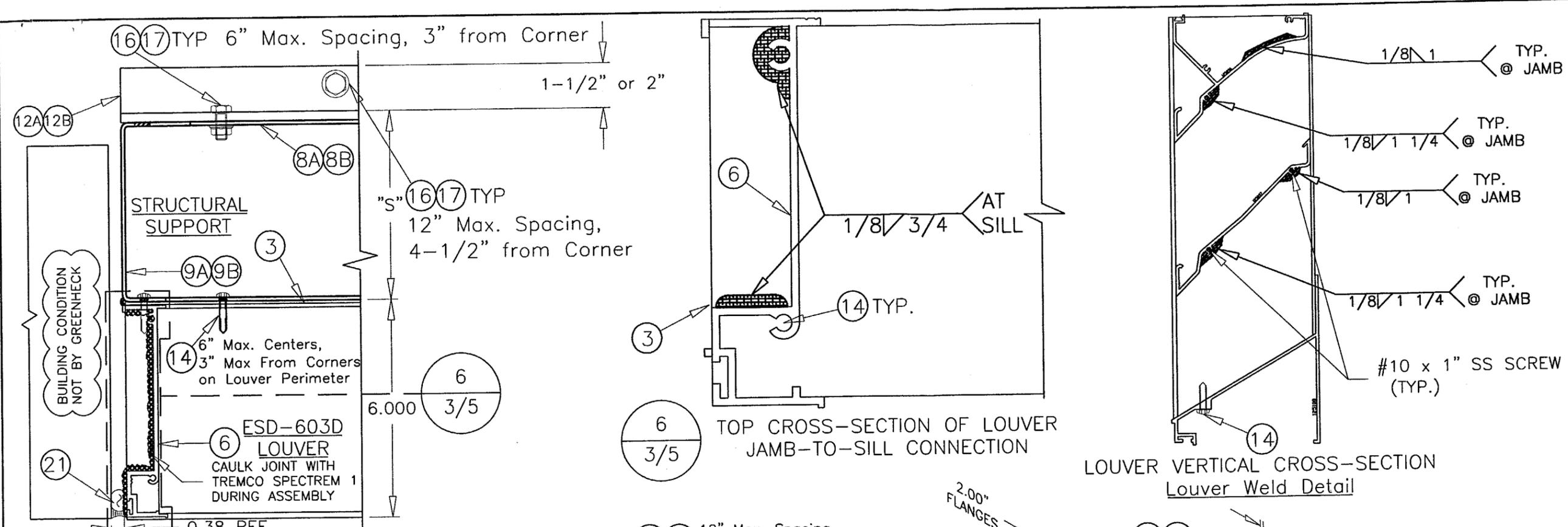
	ROUGH OPENING HEIGHT	
	>48-120	<=48
"S"	7" (178mm)	3" (76mm)
"U"	15" (381mm)	10 1/2" (267mm)

DATE 6/5/2001
REVISION DATE 7/27/2001
DRAWN BY TESKE
SCALE 1/2
SHEET NO. 2 of 5
CAD DRAWING NO. MD-8
REV 1

GREENHECK
P.O. BOX 410 SCHOFIELD,
WISCONSIN 54476-0410
TITLE
ESD-603D LOUVER

APPROVED AS COMPLYING WITH THE
SOUTH FLORIDA BUILDING CODE
DATE SEP 06 2001
BY [Signature]
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. 00-0929.13

[Signature]
L. PAUL RICO
AUG 07 2001



DATE	6/5/2001
REVISION DATE	7/27/2001
DRAWN BY	TESKE
SCALE	1/2
SHEET NO.	3 of 5
CAD DRAWING NO.	MD-8
REV	1

GREENHECK
P.O. BOX 410 SCHOFIELD, WISCONSIN 54476-0410

ESD-603D LOUVER

TITLE

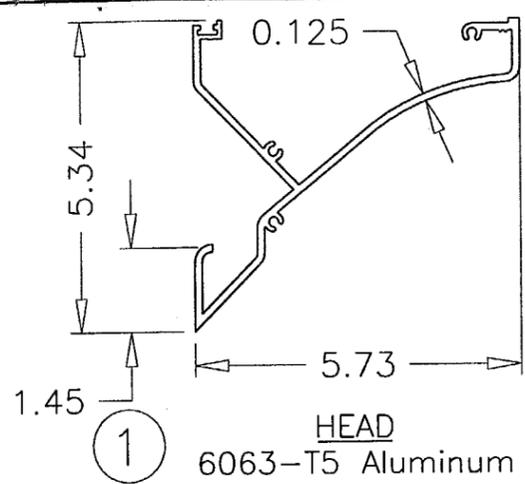
APPROVED AS COMPLYING WITH THE SOUTH FLORIDA BUILDING CODE

DATE SEP 06 2001

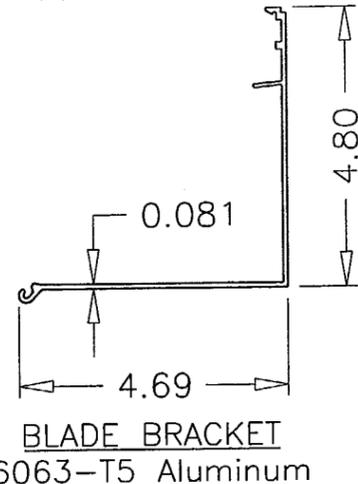
BY [Signature]

PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. 00-0929.13

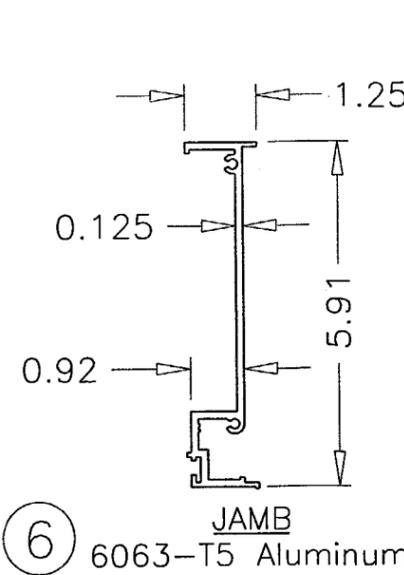
[Signature]
L. PAUL RICE
AUG 07 2001



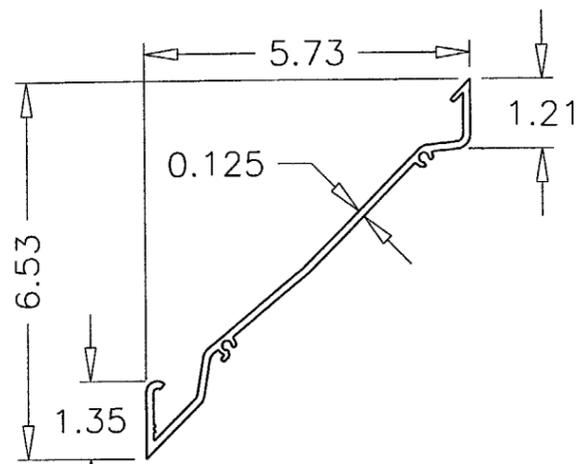
① **HEAD**
6063-T5 Aluminum



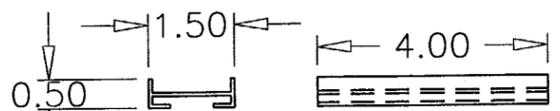
④ **BLADE BRACKET**
6063-T5 Aluminum
(Used only for Rough Opening Width > 36")
See Assembly Detail



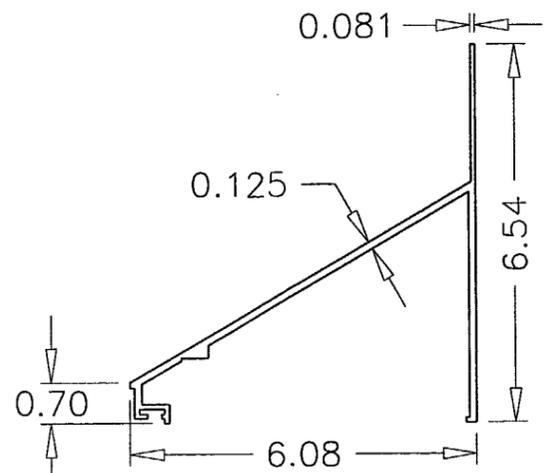
⑥ **JAMB**
6063-T5 Aluminum



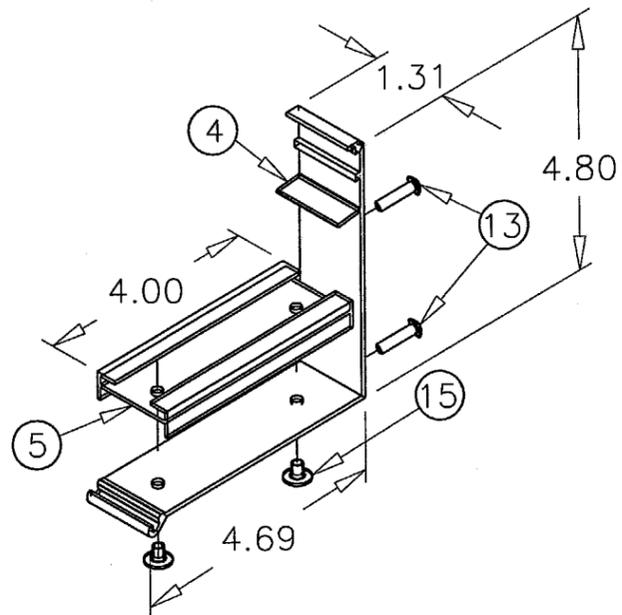
② **BLADE**
6063-T5 Aluminum



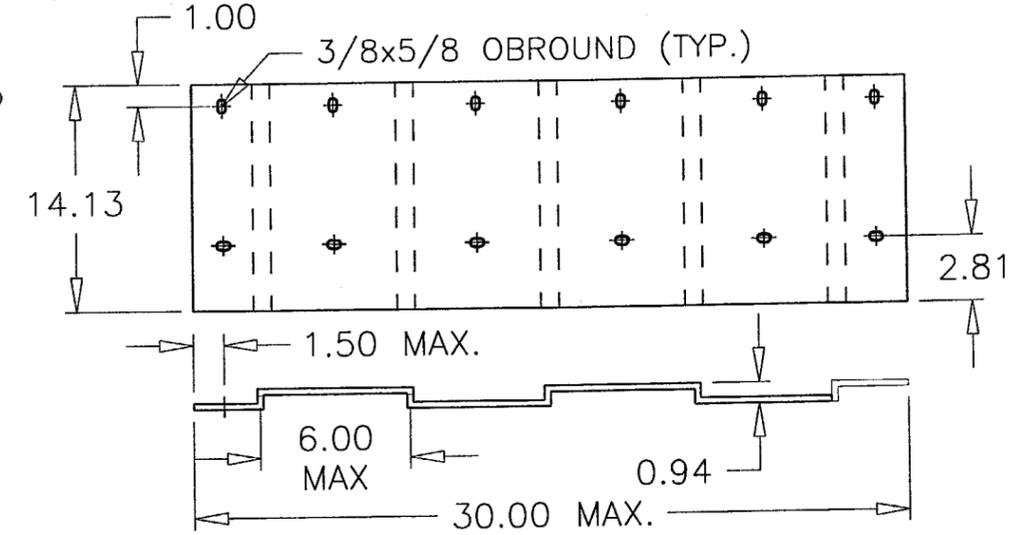
⑤ **BLADE BRACKET REINFORCEMENT**
6063-T5 Aluminum
(Used only for Rough Opening Width > 36")
See Assembly Detail



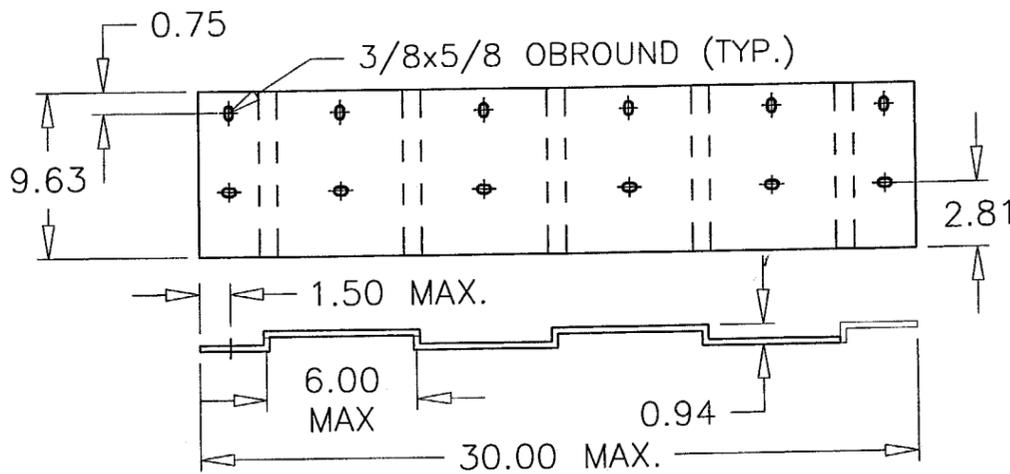
③ **SILL**
6063-T5 Aluminum



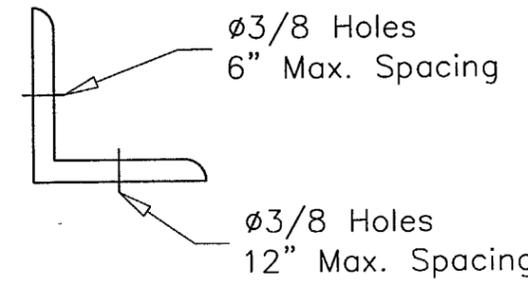
⑤ **BLADE SUPPORT BRACKET ASSEMBLY**
4/5 (Used Only for Rough Opening Width > 36")



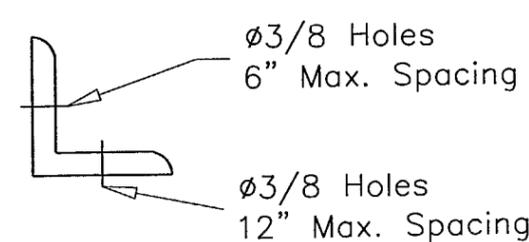
⑦A **TOP/BOTTOM ANCHOR PLATE**
12 ga. (.105) ASTM A569 Painted Steel or
ASTM A240 Stainless Steel
(Used for rough opening height > 48", <= 120)



⑦B **TOP/BOTTOM ANCHOR PLATE**
12 ga. (.105) ASTM A569 Painted Steel or
ASTM A240 Stainless Steel
(Used for rough opening height <= 48")



⑫A **2x2x1/4 Anchoring Angle**
ASTM A36 Painted Steel
Used for R.O.H. > 48"



⑫B **1.5x1.5x1/4 Anchoring Angle**
ASTM A36 Painted Steel
Used Only when R.O.H. <= 48"

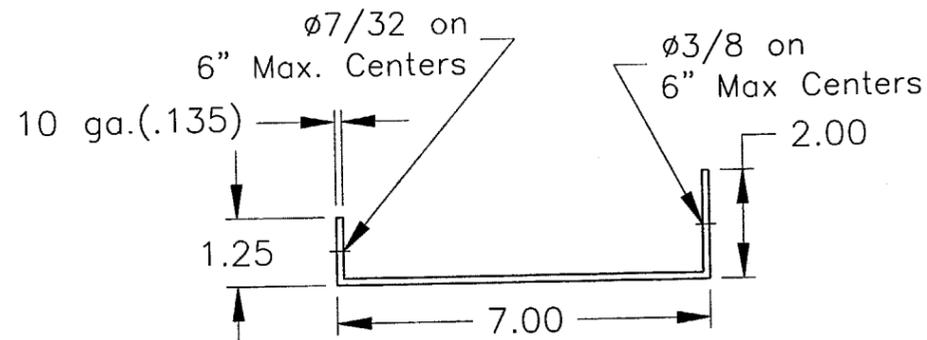
DATE	6/5/2001
REVISION DATE	7/27/2001
DRAWN BY	TESKE
SCALE	1/2
SHEET NO.	4 of 5
CAD DRAWING NO.	MD-8
REV	1

GREENHECK
P.O. BOX 410 SCHOFIELD, WISCONSIN 54476-0410

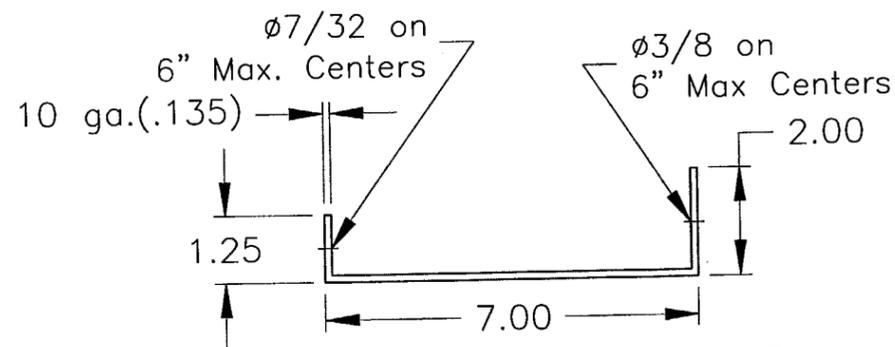
ESD-603D LOUVER

APPROVED AS COMPLYING WITH THE SOUTH FLORIDA BUILDING CODE
DATE **SEP 06 2001**
BY *[Signature]*
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. 00-0929.13

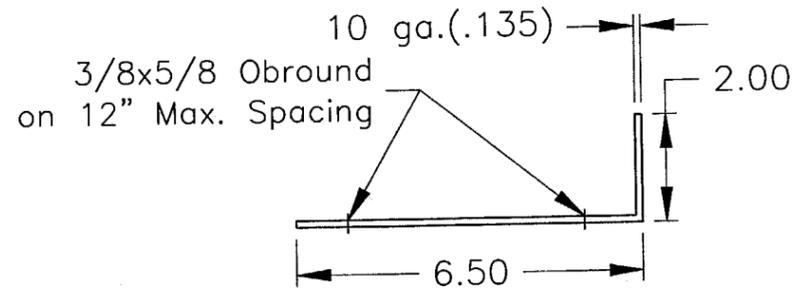
[Signature]
L. DAVID RICE
AUG 07 2001



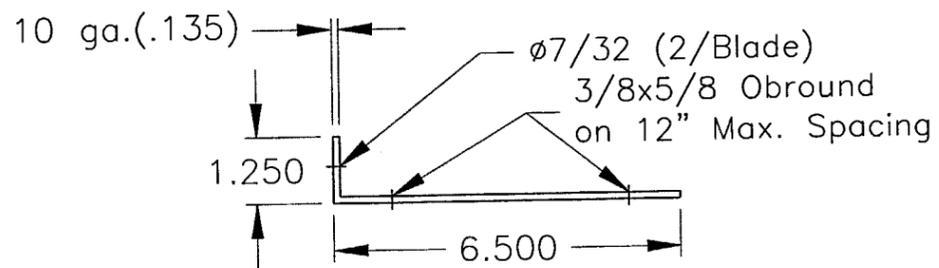
8A TOP/BOTTOM STRUCTURAL SUPPORT
ASTM A569 Painted Steel or A240 Stainless Steel
(Used for Rough Opening Height >48", <=120")



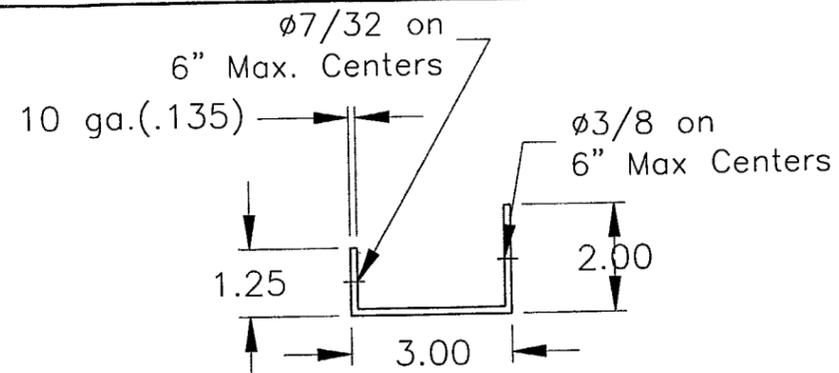
9A SIDE STRUCTURAL SUPPORT
ASTM A569 Painted Steel or A240 Stainless Steel
(Used for Rough Opening Height >48", <=120")



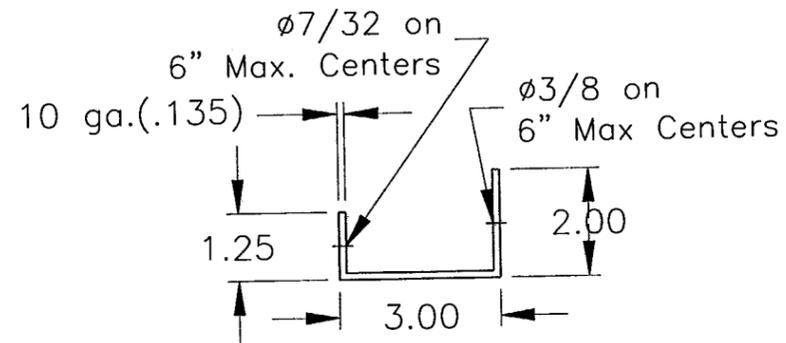
10A CENTER STRUCTURAL SUPPORT ANGLE
ASTM A569 Painted Steel or A240 Stainless Steel
(Used for Rough Opening Height >48", <=120")



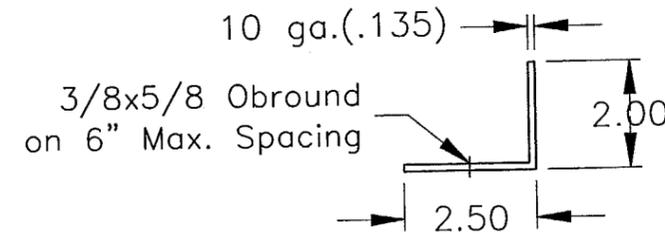
11A BLADE SUPPORT ANGLE
ASTM A569 Painted Steel or A240 Stainless Steel
(Used for Rough Opening Height >48", <=120")



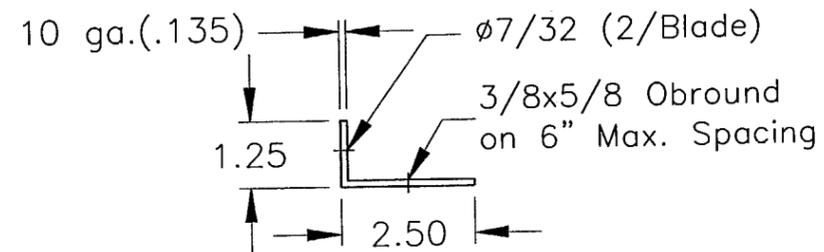
8B TOP/BOTTOM STRUCTURAL SUPPORT
ASTM A569 Painted Steel or A240 Stainless Steel
(Used for Rough Opening Height <=48")



9B SIDE STRUCTURAL SUPPORT
ASTM A569 Painted Steel or A240 Stainless Steel
(Used for Rough Opening Height <=48")



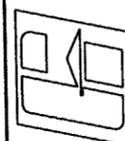
10B CENTER STRUCTURAL SUPPORT ANGLE
ASTM A569 Painted Steel or A240 Stainless Steel
(Used for Rough Opening Height <=48")



11B BLADE SUPPORT ANGLE
ASTM A569 Painted Steel or A240 Stainless Steel
(Used for Rough Opening Height <=48")

DRAWN BY	TESKE	DATE	6/5/2001
SCALE	1/2	REVISION DATE	7/27/2001
SHEET NO.	5 of 5		
CAD DRAWING NO.	MD-8		
REV	1		

GREENHECK
P.O. BOX 410 SCHOFIELD,
WISCONSIN 54476-0410



TITLE

ESD-603D LOUVER

APPROVED AS COMPLYING WITH THE
SOUTH FLORIDA BUILDING CODE
DATE SEP-06-2001
BY 
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. 00-0929.13


L. David Pico
AUG 07 2001