MIAMI-DADE COUNTY
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/

Ruskin Company
3900 Dr. Greaves Road
Grandview, MO 64030

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 EME545D Aluminum Louver

APPROVAL DOCUMENT: Drawing No. **60-022221-00D**, titled "EME545D Louver", sheets 1 through 18 of 18, prepared by Ruskin Company, dated 12/07/2010, with last revision E dated 01/10/2012, signed and sealed by Daniel J. Rau, P.E., bearing the Miami-Dade County Product Control approval stamp with the Notice of Acceptance number and approval 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 consists of this page 1 and evidence page E-1, as well as approval document mentioned above.
The submitted documentation was reviewed by **Carlos M. Utrera, P.E.**

MIAMI-DADE COUNTY APPROVED

03/22/2012

NOA No. 11-1102.06
Expiration Date: March 29, 2017
Approval Date: March 29, 2012

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS

1. Manufacturer's die drawings and sections.
2. Drawing No. **60-022221-00D**, titled "EME545D Louver", sheets 1 through 18 of 18, prepared by Ruskin Company, dated 12/07/2010, with last revision E dated 01/10/2012, signed and sealed by Daniel J. Rau, P.E.

B. TESTS

1. Test reports on: 1) Uniform Static Air Pressure Test, Loading per FBC TAS 202-94
   2) Large Missile Impact Test per FBC, TAS 201-94
   3) Cyclic Wind Pressure Loading per FBC, TAS 203-94
   along with marked-up drawings and installation diagram of Model EME545D Fixed Louvers, prepared by National Certified Testing Laboratories, Report No. **210-3736-1**, dated 03/04/2011, revised on 01/18/2012, signed and sealed by Gerald J. Ferrara, P.E.
2. Test reports on: 1) Uniform Static Air Pressure Test, Loading per FBC TAS 202-94
   2) Large Missile Impact Test per FBC, TAS 201-94
   3) Cyclic Wind Pressure Loading per FBC, TAS 203-94
   along with marked-up drawings and installation diagram of Model EME545D Fixed Louvers, prepared by National Certified Testing Laboratories, Report No. **210-3736-2**, dated 03/04/2011, revised on 01/18/2012, signed and sealed by Gerald J. Ferrara, P.E.

C. CALCULATIONS

1. EME6625D wind load review (Revision A), prepared by Ruskin Company, dated 01/17/2012, signed and sealed by Daniel J. Rau, P.E.

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 Ruskin Company, dated 02/14/2012, signed and sealed by Daniel J. Rau, P.E.
2. Statement letter of no financial interest issued by Ruskin Company, dated 02/14/2012, signed and sealed by Daniel J. Rau, P.E.

03/22/2012

Carlos M. Utrera, P.E.
Product Control Examiner
NOA No. 11-1102.06
Expiration Date: March 29, 2017
Approval Date: March 29, 2012

NOTES: Ⓐ

1) THE EME545D HAS BEEN TESTED IN ACCORDANCE WITH MIAMI-DADE COUNTY PROTOCOLS TAS-201, 202 & 203 FOR LARGE MISSLE IMPACT, UNIFORM PRESSURE AND CYCLIC WIND PRESSURE.

2) THIS LOUVER SYSTEM IS APPROVED FOR APPLICATIONS WITH DESIGN PRESSURES OF +/- 130 PSF OR LESS.

Ⓑ 3) TAS -100 (A) WIND DRIVEN RAIN TEST WAS NOT PERFORMED.

4) MAXIMUM SINGLE SECTION SIZE TESTED 120" WIDE X 144" HIGH

5) MAXIMUM ASSEMBLED LOUVER SIZE: UNLIMITED WIDTH X 144" HIGH
MULLION SPACING 24" O.C. MAXIMUM.

6) 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.

7) IT SHALL BE THE RESPONSIBILITY OF THE PERMIT HOLDER/ENGINEER OF RECORD TO VERIFY THE STRUCTURAL INTEGRITY OF THE EXISTING STRUCTURE TO SUPPORT THE LOADS IMPOSED BY THE EME545D LOUVERS.

8) ALL DISSIMILAR MATERIALS INCLUDING STEEL THAT IS IN CONTACT WITH ALUMINUM SHALL BE PROTECTED IN COMPLIANCE WITH FLORIDA BUILDING CODE 2003.8.4.2.

DRAWING INDEX:

60-022221-00D SHT 1 0F 18 EME545D LOUVER - SPEC & NOTES
60-022221-00D SHT 2 0F 18 EME545D TEST LOUVER - ASSY 'A'
60-022221-00D SHT 3 0F 18 EME545D TEST LOUVER - ASSY 'B'
60-022221-00D SHT 4 0F 18 EME545D TEST LOUVER - SECTIONS & DETAILS ASSY 'A'
60-022221-00D SHT 5 0F 18 EME545D TEST LOUVER - SECTIONS & DETAILS ASSY 'A'
60-022221-00D SHT 6 0F 18 EME545D TEST LOUVER - SECTIONS & DETAILS ASSY 'A'
60-022221-00D SHT 7 0F 18 EME545D TEST LOUVER - SECTIONS & DETAILS ASSY 'A'
60-022221-00D SHT 8 0F 18 EME545D TEST LOUVER - SECTIONS & DETAILS ASSY 'B'
60-022221-00D SHT 9 0F 18 EME545D TEST LOUVER - SECTIONS & DETAILS ASSY 'B'
60-022221-00D SHT 10 0F 18 EME545D TEST LOUVER - SECTIONS & DETAILS ASSY 'B'
60-022221-00D SHT 11 0F 18 EME545D TEST LOUVER - SECTIONS & DETAILS ASSY'B'
60-022221-00D SHT 12 0F 18 EME545D TEST LOUVER - PART DETAILS
60-022221-00D SHT 13 0F 18 EME545D TEST LOUVER - PART DETAILS
60-022221-00D SHT 14 0F 18 EME545D TEST LOUVER - PART DETAILS
60-022221-00D SHT 15 0F 18 EME545D TEST LOUVER - PART DETAILS
60-022221-00D SHT 16 0F 18 EME545D TEST LOUVER - PART DETAILS
60-022221-00D SHT 17 0F 18 EME545D TEST LOUVER - PART DETAILS
60-022221-00D SHT 18 0F 18 EME545D TABLE #1 DRAWING CROSS REFERENCE

DANIEL J. RAU
LICENSE
NO. 63636
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
01/17/2012

FOR OFFICE USE ONLY

Approved as complying with the
Florida Building Code
Date 03/29/2012
NOA# 11-1102.06
Miami Dade Product Control
By

ENGINEER OF RECORD
DANIEL J. RAU
ENGINEERING DISCIPLINE
CIVIL ENGINEER
STATE OF FLORIDA #63636

REV.	DESCRIPTION	DATE	REV'D BY	CHK'D BY	APP'D BY
E	REVISED DWGS. PER MIAMI-DADE MARKUPS	1/10/12	DRP		
D	CONVERTED TEST DWG. TO MANUFACTURING DWGS.	10/27/11	DRP	DWS	DJR
B	REMOVED SHEET 6 FROM DRAWING SET ADDED NOTES 4 AND 5	3/15/11	JDL		
A	DELETED SOME IRRELEVANT NOTES.	1/21/10	DWS		

TOLERANCES
UNLESS SPECIFIED OTHERWISE
3 PLACE .XXX ±.010
2 PLACE .XX ± .020
ANGLE DIMENSIONS ± 2°
USE VIO-007 & 008

NOTE:
1) ALL DIMENSIONS ARE GIVEN IN INCHES.
2) ALL EXPOSED SURFACES MUST BE FREE OF DIE LINES.
3) ALUMINUM ASSOCIATION TOLERANCES APPLY UNLESS OTHERWISE SPECIFIED.
4) ** EXTRUDER SPECIFIC ID MARK: .008R x .008DP

CTR	CENTER	OC	ON CENTER
CL	CENTER LINE	OD	OUTSIDE DIAMETER
C-C	CENTER TO CENTER	OR	OUTSIDE RADIUS
CHAM	CHAMFER	PI	POINT OF INTERSECTION
DAT	DATUM	R	FULL RADIUS
DET	DETAIL	REF	REFERENCE
E-E	END TO END	SYM	SYMMETRICAL
EXP	EXPOSED	TAN	TANGENT
ID	INSIDE DIAMETER	TYP	TYPICAL
IR	INSIDE RADIUS		

RUSKIN
SWARTWOUT
3900 DR. GREAVES RD
GRANDVIEW, MO 64030
PH: (816) 761-7476 FAX: (816) 763-6102

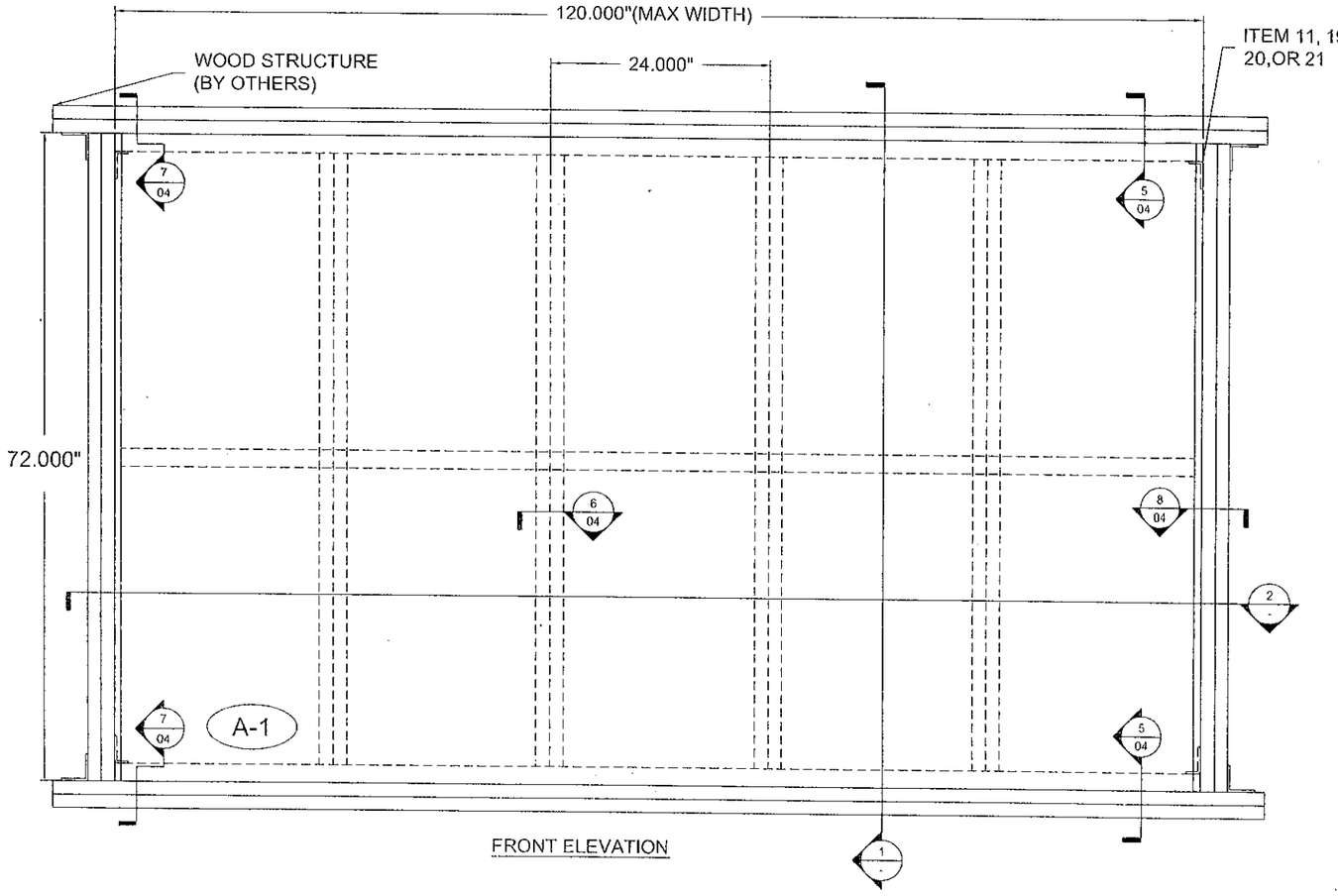
AREA	EST. PER.	EST. WT./FT.
-	-	-
ALLOY & TEMPER	UNSPEC. RADII	UNSPEC. WALL
-	-	-

DWN:	DCD	CHK:	VMA	APPV:	
DATE:	12/01/10	DATE:	12/07/10	DATE:	

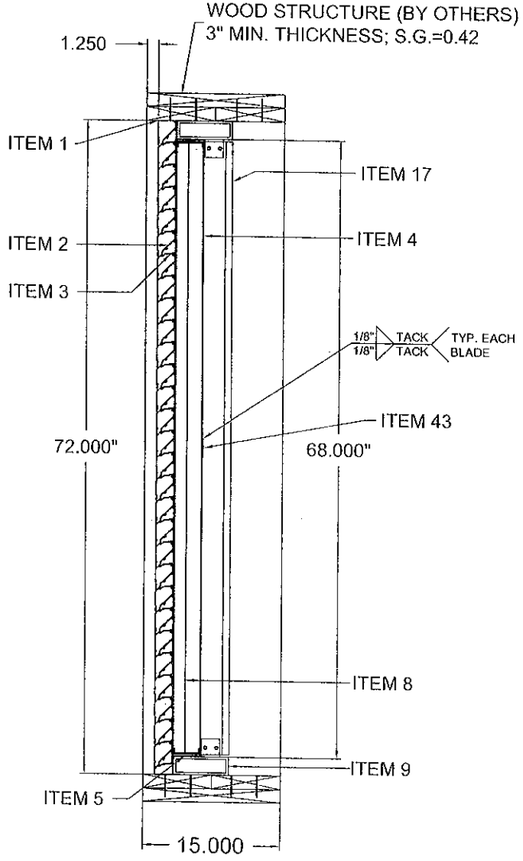
PART DESC.
EME545D LOUVER
SPEC AND NOTES
SHEET 1 0F 18

SCALE: NTS | ECN: - | DATE:

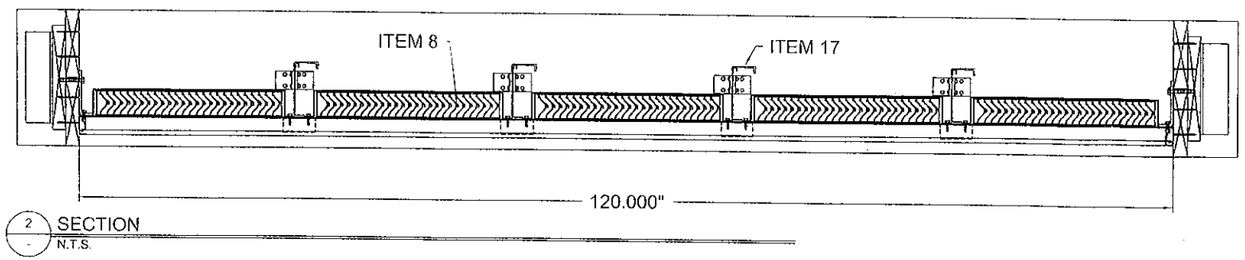
DWG No.
60 - 022221 -00D



FRONT ELEVATION



1 SECTION
N.T.S.



2 SECTION
N.T.S.

ASSEMBLY 'A' - UNITS EQUAL TO OR SHORTER THAN 72" W/ ONLY JAMB ATTACHMENT
N.T.S.

REV.	DESCRIPTION	DATE	REV'D BY	CHK'D BY	APP'D BY
E	REVISED DWGS. PER MIAMI-DADE MARKUPS	1/10/12	DRP		
D	CONVERTED TEST DWG. TO MANUFACTURING DWGS.	10/27/11	DRP	DWS	DJR

TOLERANCES
UNLESS SPECIFIED OTHERWISE
3 PLACE .XXX ±.010
2 PLACE .XX ±.020
ANGLE DIMENSIONS ± 2°
USE WC-007 & 008

NOTE:
1) ALL DIMENSIONS ARE GIVEN IN INCHES.
2) ALL EXPOSED SURFACES MUST BE FREE OF DIE LINES.
3) ALUMINUM ASSOCIATION TOLERANCES APPLY UNLESS OTHERWISE SPECIFIED.
4) " EXTRUDER SPECIFIC ID MARK: .008R x .008DP

CTR	CENTER	OC	ON CENTER
CL	CENTER LINE	OD	OUTSIDE DIAMETER
C-C	CENTER TO CENTER	OR	OUTSIDE RADIUS
CHAM	CHAMFER	PI	POINT OF INTERSECTION
DAT	DATUM	R	FULL RADIUS
DET	DETAIL	REF	REFERENCE
E-E	END TO END	SYM	SYMMETRICAL
EXP	EXPOSED	TAN	TANGENT
ID	INSIDE DIAMETER	TYP	TYPICAL
IR	INSIDE RADIUS		

RUSKIN
SWARTWOUT
3900 DR. GREAVES RD
GRANDVIEW, MO 64030
PH: (816) 761-7476 FAX: (816) 763-8102

AREA	EST. PER.	EST. WT/FT.
-	-	-
ALLOY & TEMPER	UNSPEC. RADII	UNSPEC. WALL
-	-	-

DWN:	DCD	CHK:	VMA	APPV.	
DATE:	12/01/10	DATE:	12/07/10	DATE:	

PART DESC.
EME545D LOUVER
ASSEMBLY 'A'
SHEET 2 OF 18

SCALE: NTS	ECN: -	DATE

DWG No.
60 - 022221 -00D

FOR OFFICE USE ONLY

Approved as complying with the
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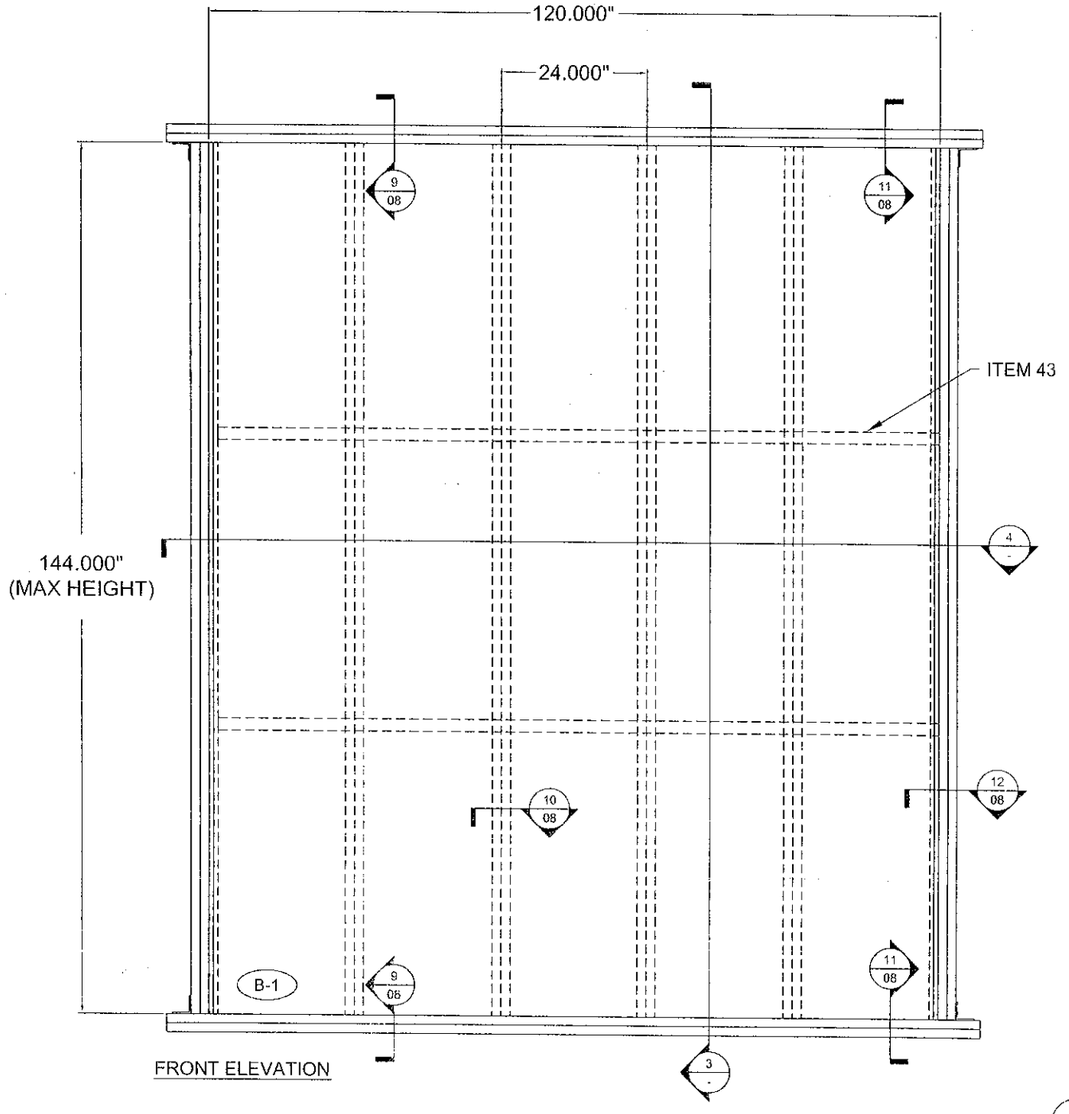
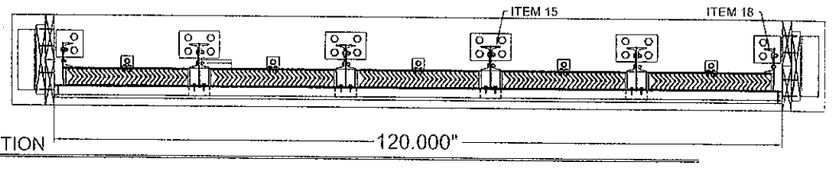
Date 03/29/2012
NOA# 11-1102.06
Miami Dade Product Control
By

DANIEL J. RAU
LICENSE
NO. 63636
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
01/17/2012

ENGINEER OF RECORD
DANIEL J. RAU
ENGINEERING DISCIPLINE
CIVIL ENGINEER
STATE OF FLORIDA #63636



FRONT ELEVATION

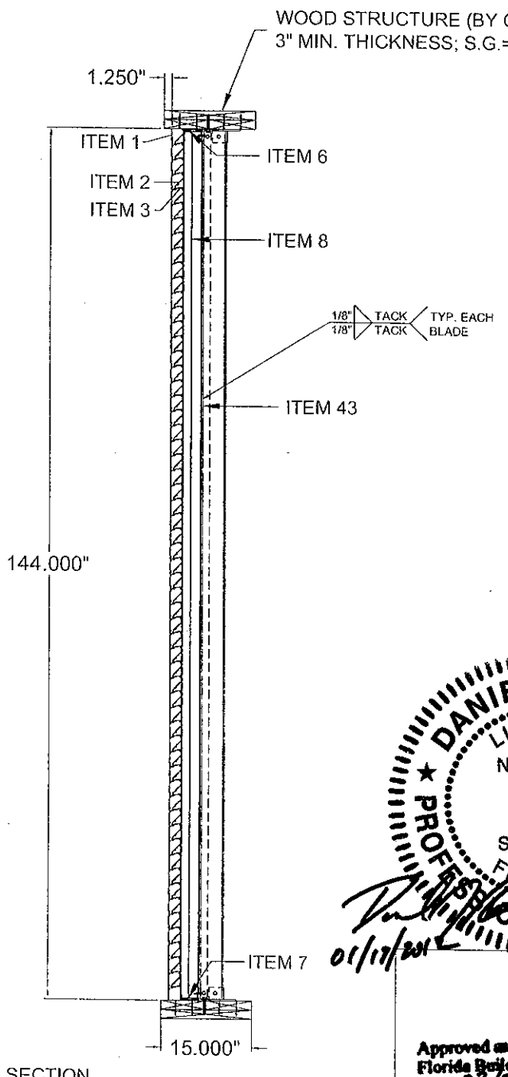


4 SECTION N.T.S.

ASSEMBLY 'B' - UNITS TALLER THAN 72" UP TO 144" TALL W/ ONLY HEAD/SILL ATTACHMENT

N.T.S.

1-ASSEMBLY REQUIRED WITH 1-SHIP SECTION



3 SECTION N.T.S.

REV.	DESCRIPTION	DATE	REV'D BY	CHK'D BY	APP'D BY
E	REVISED DWGS. PER MIAMI-DADE MARKUPS	1/10/12	DRP		
D	CONVERTED TEST DWGS. TO MANUFACTURING DWGS.	10/27/11	DRP	DWS	DJR

NOTE:
1) ALL DIMENSIONS ARE GIVEN IN INCHES.
2) ALL EXPOSED SURFACES MUST BE FREE OF DIE LINES.
3) ALUMINUM ASSOCIATION TOLERANCES APPLY UNLESS OTHERWISE SPECIFIED
4) ** EXTRUDER SPECIFIC ID MARK: .008R x .008DP

TOLERANCES UNLESS SPECIFIED OTHERWISE
3 PLACE .XXX ± .010
2 PLACE .XX ± .020
ANGLE DIMENSIONS ± 2°
USE W/O .007 & .008

DANIEL J. RAU LICENSE NO. 63636 STATE OF FLORIDA PROFESSIONAL ENGINEER

01/17/2012

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Date 03/21/2012
NOA# 11-1102.06
Miami Dade Product Control
By

FOR OFFICE USE ONLY

CTR	CENTER
CL	CENTER LINE
C-C	CENTER TO CENTER
CHAM	CHAMFER
DAT	DATUM
DET	DETAIL
E-E	END TO END
EXP	EXPOSED
ID	INSIDE DIAMETER
IR	INSIDE RADIUS
OC	ON CENTER
OD	OUTSIDE DIAMETER
OR	OUTSIDE RADIUS
PI	POINT OF INTERSECTION
R	FULL RADIUS
REF	REFERENCE
SYM	SYMMETRICAL
TAN	TANGENT
TYP	TYPICAL

RUSKIN

SWARTWOUT

3900 DR. GREAVES RD.
GRANDVIEW, MO 64030
PH: (816) 761-7476 FAX: (816) 763-8102

AREA	EST. PER	EST. WT/FT.
-	-	-
ALLOY & TEMPER	UNSPEC. RADII	UNSPEC. WALL
-	-	-

DWN:	DCD	CHK:	VMA	APPV:	
DATE:	12/01/10	DATE:	12/07/10	DATE:	

PART DESC.

EME545D LOUVER
ASSEMBLY 'B'
SHEET 3 OF 18

SCALE: NTS	ECN: -	DATE:

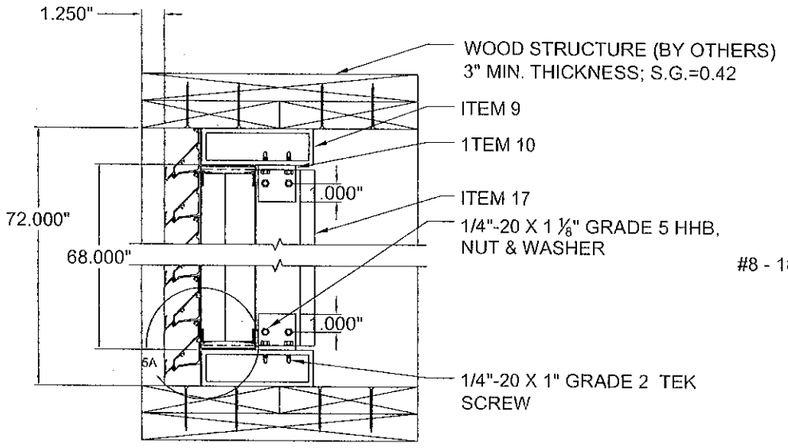
DWG No

60 - 022221 -00D

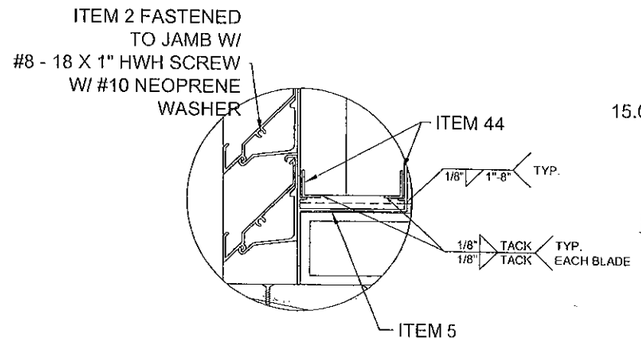
ENGINEER OF RECORD
DANIEL J. RAU

ENGINEERING DISCIPLINE
CIVIL ENGINEER

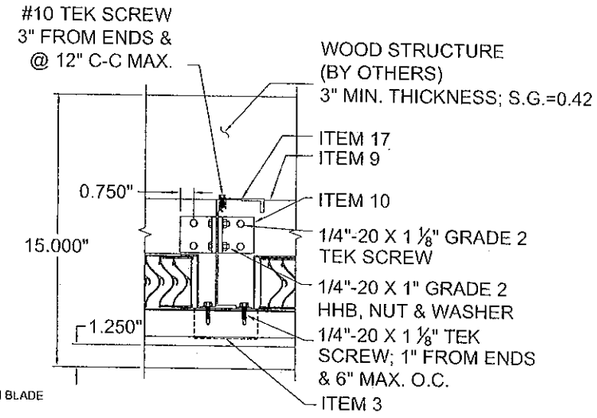
STATE OF FLORIDA #63636



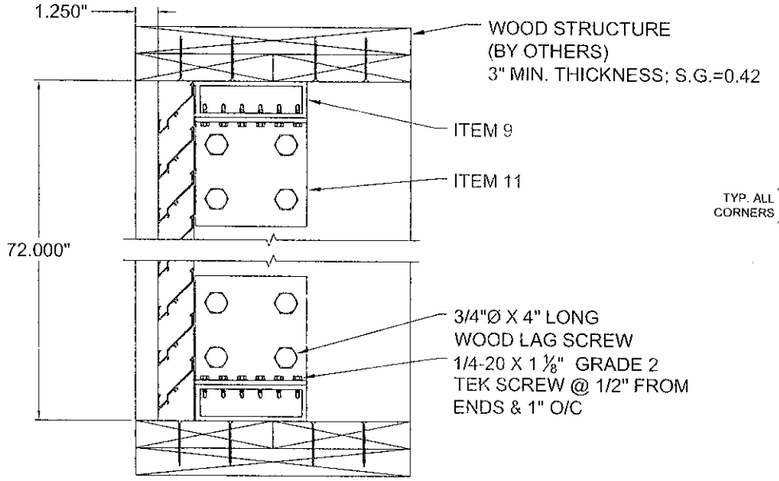
5 / 02 LOUVER HVBS DETAIL @ HEAD & SILL - ASSY 'A'
N.T.S.



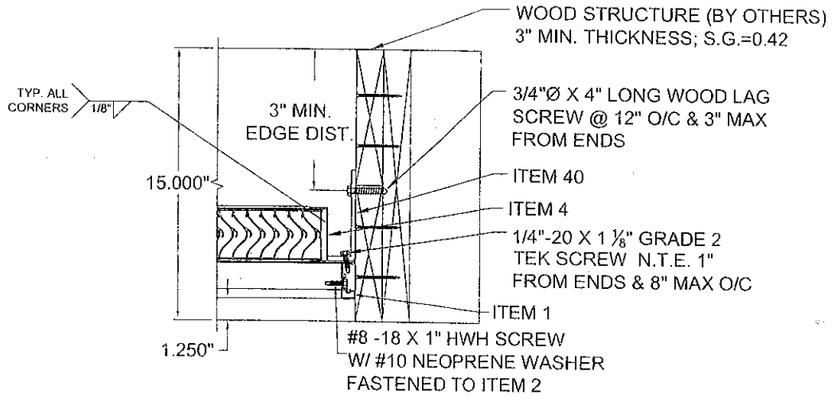
5A / · LOUVER BLADE CONNECTION DETAIL
N.T.S.



6 / 02 HVBS DETAIL - ASSY 'A'
N.T.S.



7 / 02 LOUVER DETAIL @ HEAD & SILL - ASSY 'A'
N.T.S.



8 / 02 LOUVER DETAIL @ END JAMB - ASSY 'A'
N.T.S.

DANIEL J. RAU LICENSE NO. 63636 STATE OF FLORIDA PROFESSIONAL ENGINEER
01/17/2012

Approved as complying with the Florida Building Code
Date 03/29/2012
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Miami Dade Product Control
By

FOR OFFICE USE ONLY

ENGINEER OF RECORD	DANIEL J. RAU		
ENGINEERING DISCIPLINE	CIVIL ENGINEER		
STATE OF FLORIDA #63636			

REV.	DESCRIPTION	DATE	REVD BY	CHK'D BY	APP'D BY
E	REVISED DWGS. PER MIAMI-DADE MARKUPS	1/10/12	DRP		
D	CONVERTED TEST DWG. TO MANUFACTURING DWGS.	10/27/11	DRP	DWS	DJR

TOLERANCES UNLESS SPECIFIED OTHERWISE: 3 PLACE .XXX ±.010; 2 PLACE .XX ±.020; ANGLE DIMENSIONS ± 2°; USE WIQ 007 & 008

NOTE:
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2) ALL EXPOSED SURFACES MUST BE FREE OF DIE LINES.
3) ALUMINUM ASSOCIATION TOLERANCES APPLY UNLESS OTHERWISE SPECIFIED.
4) " EXTRUDER SPECIFIC ID MARK: .008R x .008DP

CTR	CENTER	OC	ON CENTER
CL	CENTER LINE	OD	OUTSIDE DIAMETER
C-C	CENTER TO CENTER	OR	OUTSIDE RADIUS
CHAM	CHAMFER	PI	POINT OF INTERSECTION
DAT	DATUM	R	FULL RADIUS
DET	DETAIL	REF	REFERENCE
E-E	END TO END	SYM	SYMMETRICAL
EXP	EXPOSED	TAN	TANGENT
ID	INSIDE DIAMETER	TYP	TYPICAL
IR	INSIDE RADIUS		

RUSKIN
SWARTWOUT
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GRANDVIEW, MO 64030
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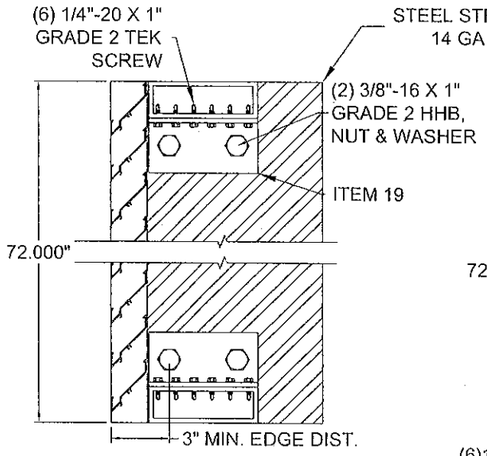
AREA	EST. PER	EST. WT/FT.
-	-	-
ALLOY & TEMPER	UNSPEC. RADII	UNSPEC. WALL
-	-	-
DWN: DCD	CHK. VMA	APPV.
DATE: 12/01/10	DATE: 12/07/10	DATE:

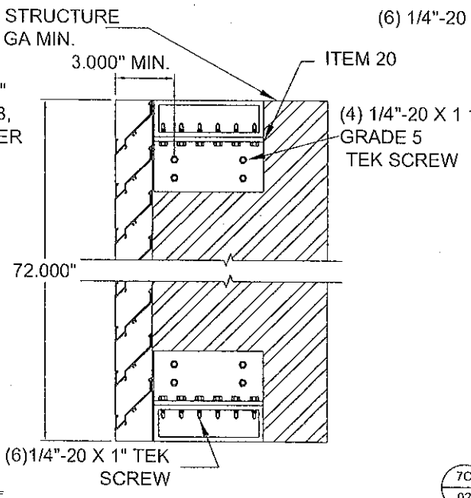
PART DESC.
EME545D LOUVER
SECTIONS AND DETAILS
SHEET 4 OF 18

SCALE: NTS | ECN: - | DATE:

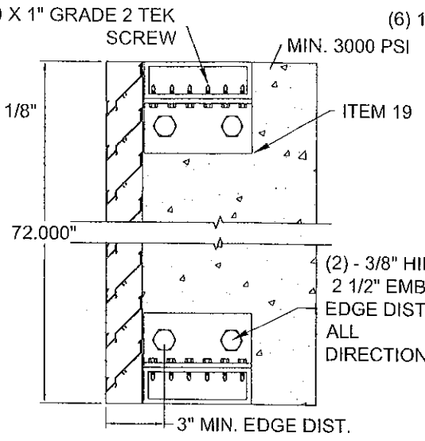
DWG No.
60 - 022221 -00D



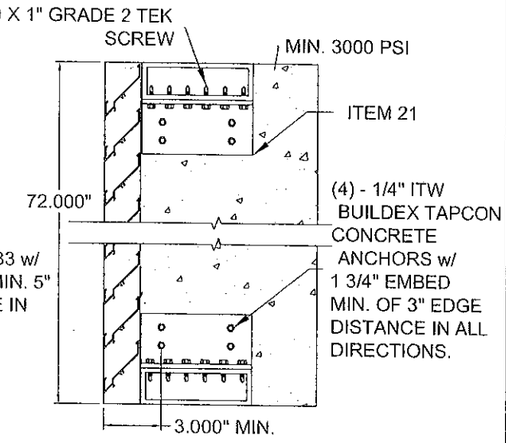
7A / 02 LOUVER DETAIL @ HEAD & SILL - ASSY 'A'
N.T.S.
STEEL CONNCECTION (BOLT OPTION)
REAR LOUVER NOT SHOWN FOR CLARITY



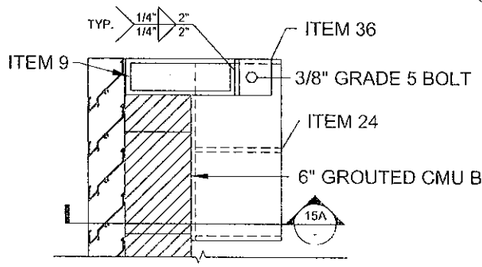
7B / 02 LOUVER DETAIL @ HEAD & SILL - ASSY 'A'
N.T.S.
STEEL CONNECTION (SREW OPTION)
REAR LOUVER NOT SHOWN FOR CLARITY



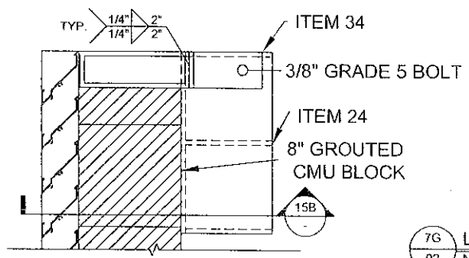
7C / 02 LOUVER DETAIL @ HEAD & SILL - ASSY 'A'
N.T.S.
CONCRETE CONNECTION (ANCHOR BOLT OPTION)
REAR LOUVER NOT SHOWN FOR CLARITY



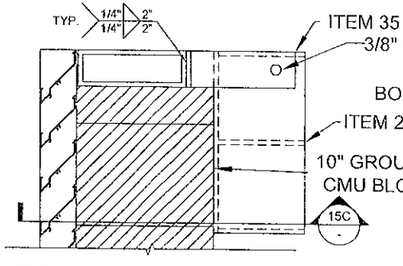
02 / 01D LOUVER DETAIL @ JAMB - ASSY 'A'
N.T.S.
CONCRETE CONNECTION (CONCRETE SCREW OPTION)
REAR LOUVER NOT SHOWN FOR CLARITY



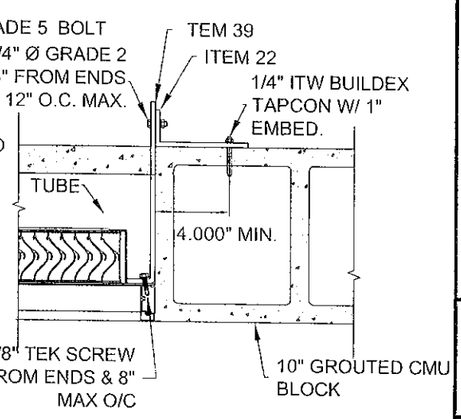
7E / 02 LOUVER DETAIL @ HEAD & SILL - ASSY 'A'
N.T.S.
6" GROUTED CMU BLOCK CONNECTION
REAR LOUVER NOT SHOWN FOR CLARITY



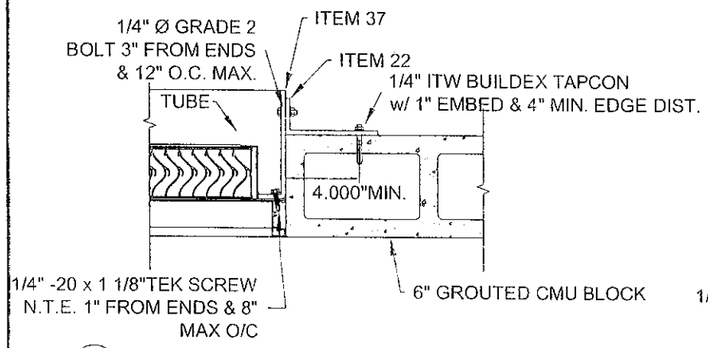
7F / 02 LOUVER DETAIL @ HEAD & SILL - ASSY 'A'
N.T.S.
8" GROUTED CMU BLOCK CONNECTION
REAR LOUVER NOT SHOWN FOR CLARITY



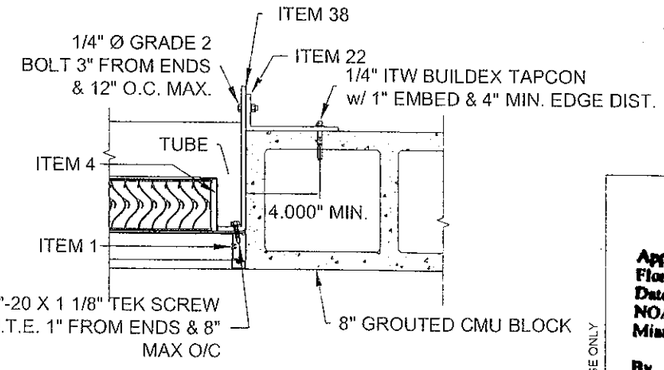
7G / 02 LOUVER DETAIL @ HEAD & SILL - ASSY 'A'
N.T.S.
10" GROUTED CMU BLOCK CONNECTION
REAR LOUVER NOT SHOWN FOR CLARITY



8F / 02 LOUVER DETAIL @ JAMB
N.T.S.
10" GROUTED CMU BLOCK CONNECTION
ASSEMBLY 'A'



8D / 02 LOUVER DETAIL @ JAMB
N.T.S.
6" GROUTED CMU BLOCK CONNECTION
ASSEMBLY 'A'



8E / 02 LOUVER DETAIL @ JAMB
N.T.S.
8" GROUTED CMU BLOCK CONNECTION
ASSEMBLY 'A'

FOR OFFICE USE ONLY

Approved as complying with the Florida Building Code
Date 03/29/2012
NOA# 11-1102.06
Miami Dade Product Control
By

9/17/2012
DANIEL J. RAU LICENSE NO. 63636 STATE OF FLORIDA PROFESSIONAL ENGINEER

ENGINEER OF RECORD
DANIEL J. RAU
ENGINEERING DISCIPLINE
CIVIL ENGINEER
STATE OF FLORIDA #63636

REV.	DESCRIPTION	DATE	REV'D BY	CHK'D BY	APP'D BY
E	REVISED DWGS. PER MIAMI-DADE MARKUPS	1/10/12	DRP		
D	CONVERTED TEST DWG. TO MANUFACTURING DWGS.	10/27/11	DRP	DWS	DJR

TOLERANCES UNLESS SPECIFIED OTHERWISE
3 PLACE .XXX ±.010
2 PLACE .XX ±.020
ANGLE DIMENSIONS ± 2°
USE WIC.007 & 008

NOTE:
1) ALL DIMENSIONS ARE GIVEN IN INCHES.
2) ALL EXPOSED SURFACES MUST BE FREE OF DIE LINES.
3) ALUMINUM ASSOCIATION TOLERANCES APPLY UNLESS OTHERWISE SPECIFIED
4) ** EXTRUDER SPECIFIC ID MARK: .008R x .008DP

CTR	CENTER	OC	ON CENTER
CL	CENTER LINE	OD	OUTSIDE DIAMETER
C-C	CENTER TO CENTER	OR	OUTSIDE RADIUS
CHAM	CHAMFER	PI	POINT OF INTERSECTION
DAT	DATUM	R	FULL RADIUS
DET	DETAIL	REF	REFERENCE
E-E	END TO END	SYM	SYMMETRICAL
EXP	EXPOSED	TAN	TANGENT
ID	INSIDE DIAMETER	TYP	TYPICAL
IR	INSIDE RADIUS		

RUSKIN
SWARTWOUT
3900 DR. GREAVES RD
GRANDVIEW, MO 64030
PH: (816) 761-7476 FAX: (816) 763-8102

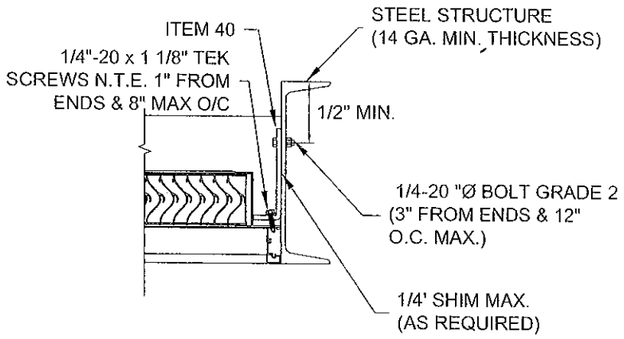
AREA	EST. PER.	EST. WT/FT.
ALLOY & TEMPER	UNSPEC. RADII	UNSPEC. WALL

DWN:	DCD	CHK:	VMA	APPV:	
DATE:	12/01/10	DATE:	12/07/10	DATE:	

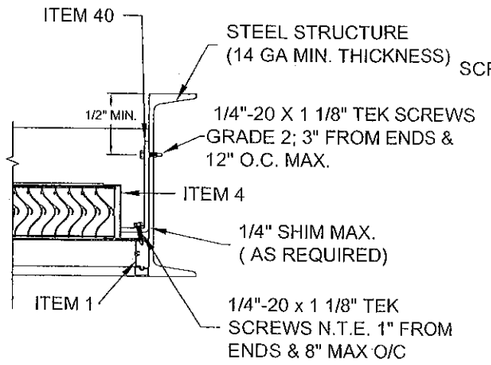
PART DESC.
EME545D LOUVER ASSEMBLY 'A'
ALT. CONNECTIONS SECTIONS AND DETAILS
SHEET 5 OF 18

SCALE: NTS | ECN: - | DATE

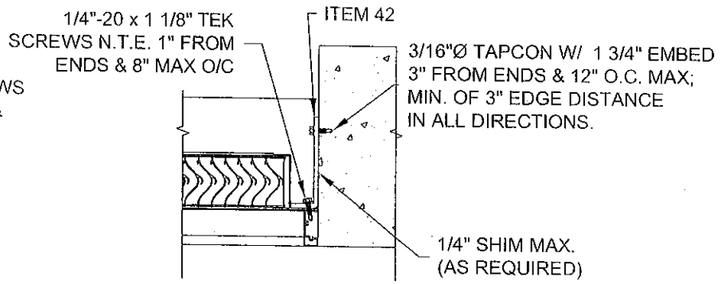
DWG No.
60 - 022221 -00D



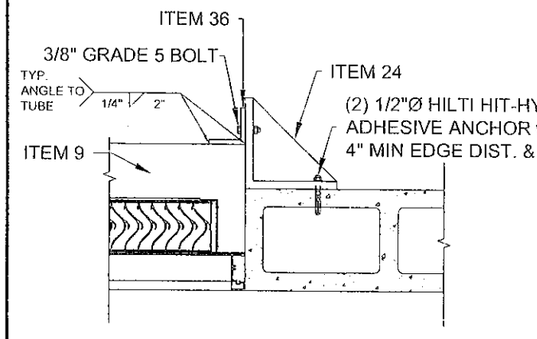
8A / 01D LOUVER DETAIL @ END JAMB
N.T.S.
STEEL CONNECTION -(BOLT OPTION)
ASSEMBLY 'A'



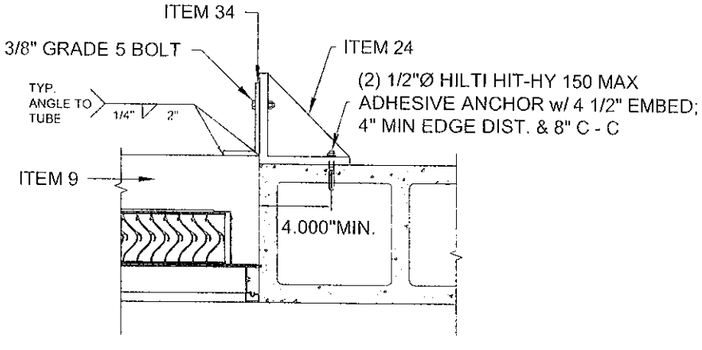
8B / 01D LOUVER DETAIL @ END JAMB
N.T.S.
STEEL CONNECTION -(SCREW OPTION)
ASSEMBLY 'A'



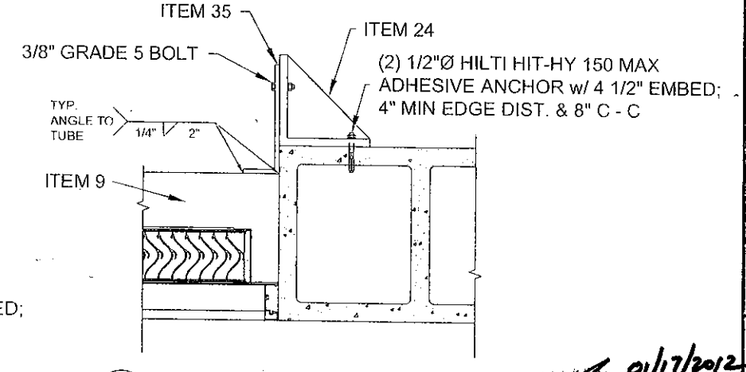
8C / 01D LOUVER DETAIL @ END JAMB
N.T.S.
CONCRETE CONNECTION (CONCRETE SCREW OPTION)
ASSEMBLY 'A'



15A / 04D TUBE TO SUB ANGLE - SINGLE SECTION
N.T.S.
6" GROUTED CMU BLOCK
ASSEMBLY 'A'



15B / 01D TUBE TO SUB ANGLE - SINGLE SECTION
N.T.S.
8" GROUTED CMU BLOCK
ASSEMBLY 'A'



15C / 01D TUBE TO SUB ANGLE - SINGLE SECTION
N.T.S.
10" GROUTED CMU BLOCK
ASSEMBLY 'A'

REV.	DESCRIPTION	DATE	REV'D BY	CHK'D BY	APP'D BY
E	REVISED DWGS. PER MIAMI-DADE MARKUPS	1/10/12	DRP		
D	CONVERTED TEST DWG. TO MANUFACTURING DWGS.	10/27/11	DRP	DWS	DJR

NOTE:
1) ALL DIMENSIONS ARE GIVEN IN INCHES.
2) ALL EXPOSED SURFACES MUST BE FREE OF DIE LINES.
3) ALUMINUM ASSOCIATION TOLERANCES APPLY UNLESS OTHERWISE SPECIFIED.
4) ** EXTRUDER SPECIFIC ID MARK: .008R x .008DP

TOLERANCES UNLESS SPECIFIED OTHERWISE
3 PLACE XXX ±.010
2 PLACE XX ±.020
ANGLE DIMENSIONS ± 2°
USE WI/Q-007 & 008

CTR	CENTER	OC	ON CENTER
CL	CENTER LINE	OD	OUTSIDE DIAMETER
C-C	CENTER TO CENTER	OR	OUTSIDE RADIUS
CHAM	CHAMFER	PI	POINT OF INTERSECTION
DAT	DATUM	R	FULL RADIUS
DET	DETAIL	REF	REFERENCE
E-E	END TO END	SYM	SYMMETRICAL
EXP	EXPOSED	TAN	TANGENT
ID	INSIDE DIAMETER	TYP	TYPICAL
IR	INSIDE RADIUS		

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GRANDVIEW, MO.64030
PH: (816) 761-7476 FAX: (816) 763-8102

AREA	EST. PER.	EST. WT/FT.
ALLOY & TEMPER	UNSPEC. RADII	UNSPEC. WALL

DWN:	DCD	CHK:	VMA	APPV:	
DATE:	12/01/10	DATE:	12/07/10	DATE:	

PART DESC.
EME545D LOUVER ASSEMBLY 'A'
ALT. CONNECTIONS SECTIONS AND DETAILS
SHEET 6 OF 18

SCALE: NTS	ECN: -	DATE:

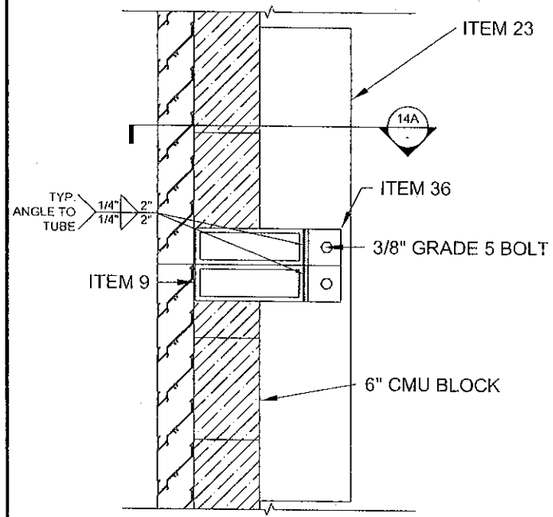
DWG No
60 - 022221 -00D

FOR OFFICE USE ONLY

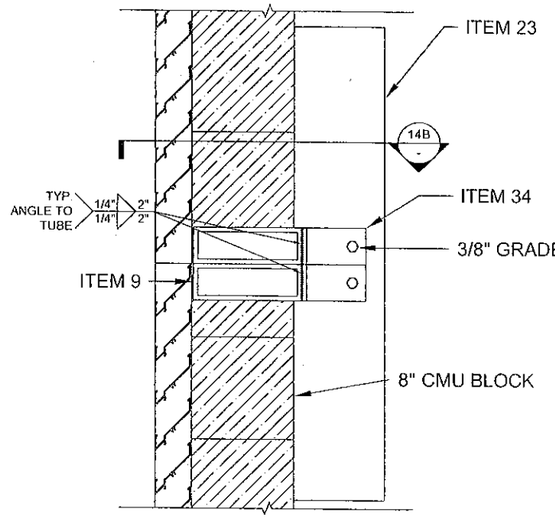
Approved as complying with the
Florida Building Code
Date 03/29/2012
NOA# 11-1102.06
Miami Dade Product Control
By

01/17/2012
DANIEL J. RAU
LICENSE
NO. 63636
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

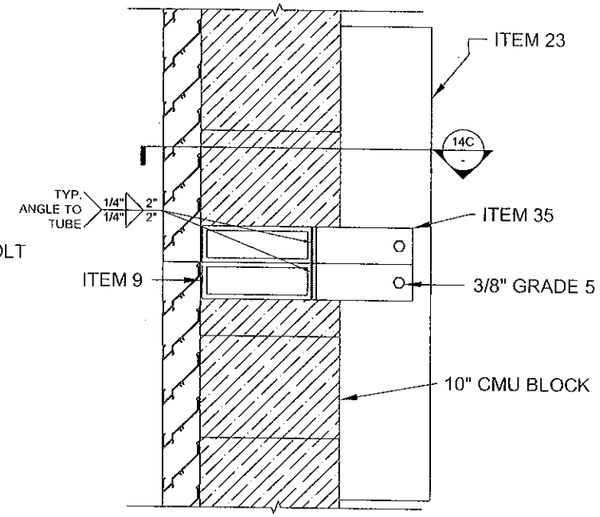
ENGINEER OF RECORD
DANIEL J. RAU
ENGINEERING DISCIPLINE
CIVIL ENGINEER
STATE OF FLORIDA #63636



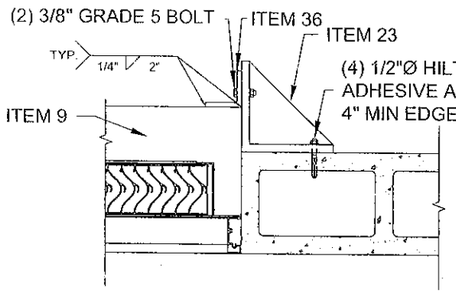
7H / 02 MULTI-SECTION DETAIL @ HEAD & SILL
N.T.S.
6" GROUTED CMU BLOCK CONNECTION ASSEMBLY 'A'



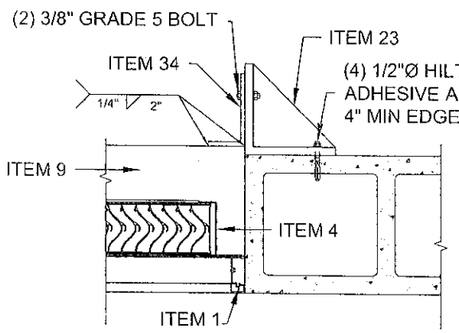
7I / 02 MULTI-SECTION DETAIL @ HEAD & SILL
N.T.S.
8" GROUTED CMU BLOCK CONNECTION ASSEMBLY 'A'



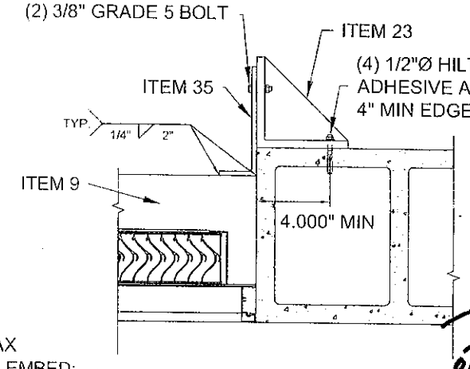
7J / 02 MULTI-SECTION DETAIL @ HEAD & SILL
N.T.S.
10" GROUTED CMU BLOCK CONNECTION ASSEMBLY 'A'



14A - MULTI-SECTION CONNECTION DETAIL
N.T.S.
6" GROUTED CMU BLOCK ASSEMBLY 'A'



14B - MULTI-SECTION CONNECTION DETAIL
N.T.S.
8" GROUTED CMU BLOCK ASSEMBLY 'A'



14C - MULTI-SECTION CONNECTION DETAIL
N.T.S.
10" GROUTED CMU BLOCK ASSEMBLY 'A'

DANIEL J. RAU LICENSE NO. 63636 STATE OF FLORIDA PROFESSIONAL ENGINEER
01/17/2012

Approved as complying with the Florida Building Code
Date 03/29/2012
NOA# 11-1102.06
Miami Dade Product Control
By

FOR OFFICE USE ONLY

E	REVISED DWGS. PER MIAMI-DADE MARKUPS	1/10/12	DRP
D	CONVERTED TEST DWG. TO MANUFACTURING DWGS.	10/27/11	DRP
REV.	DESCRIPTION	DATE	REV'D BY

	DWS	DJR
	CHK'D BY	APP'D BY

TOLERANCES UNLESS SPECIFIED OTHERWISE
3 PLACE .XXX ±.010
2 PLACE .XX ±.020
ANGLE DIMENSIONS ± 2°
USE W/O-007 & 008

NOTE:
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4) ** EXTRUDER SPECIFIC ID MARK: .008R x .008DP

CTR	CENTER	OC	ON CENTER
CL	CENTER LINE	OD	OUTSIDE DIAMETER
C-C	CENTER TO CENTER	OR	OUTSIDE RADIUS
CHAM	CHAMFER	PI	POINT OF INTERSECTION
DAT	DATUM	R	FULL RADIUS
DET	DETAIL	REF	REFERENCE
E-E	END TO END	SYM	SYMMETRICAL
EXP	EXPOSED	TAN	TANGENT
ID	INSIDE DIAMETER	TYP	TYPICAL
IR	INSIDE RADIUS		

ENGINEER OF RECORD
DANIEL J. RAU
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STATE OF FLORIDA #63636

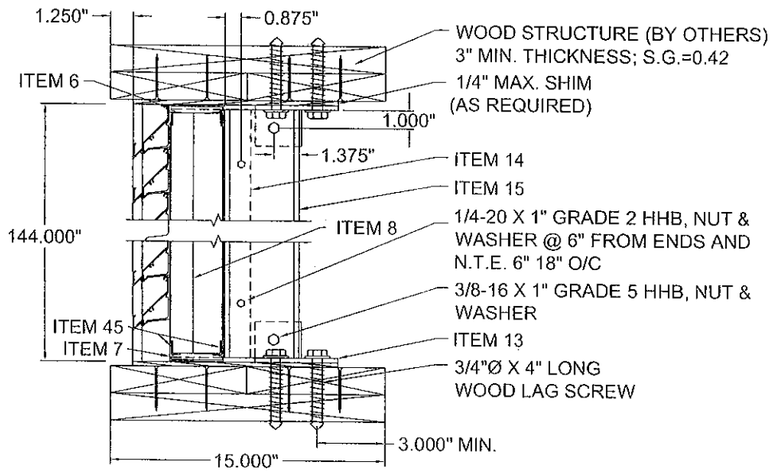
RUSKIN
SWARTWOUT
3900 DR. GREAVES RD
GRANDVIEW, MO 64030
PH: (816) 761-7476 FAX: (816) 763-8102

AREA	EST. PER.	EST. WT/FT.
ALLOY & TEMPER	UNSPEC. RADII	UNSPEC. WALL
DWN: DCD	CHK: VMA	APPV:
DATE: 12/01/10	DATE: 12/07/10	DATE:

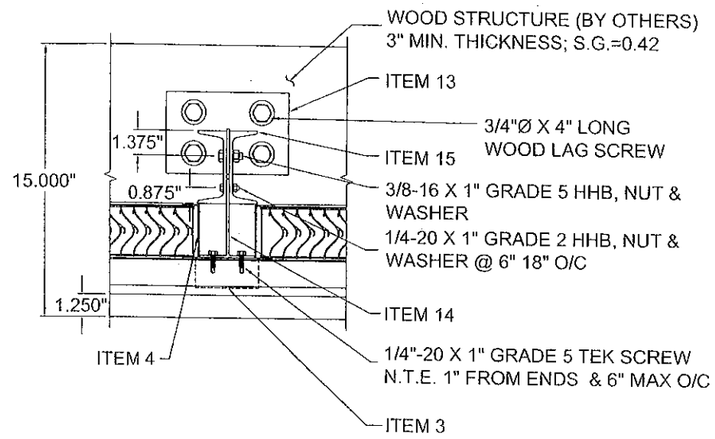
PART DESC.
EME545D LOUVER ASSEMBLY 'A'
ALT. CONNECTIONS SECTIONS AND DETAILS
SHEET 7 OF 18

SCALE: NTS | ECN: - | DATE:

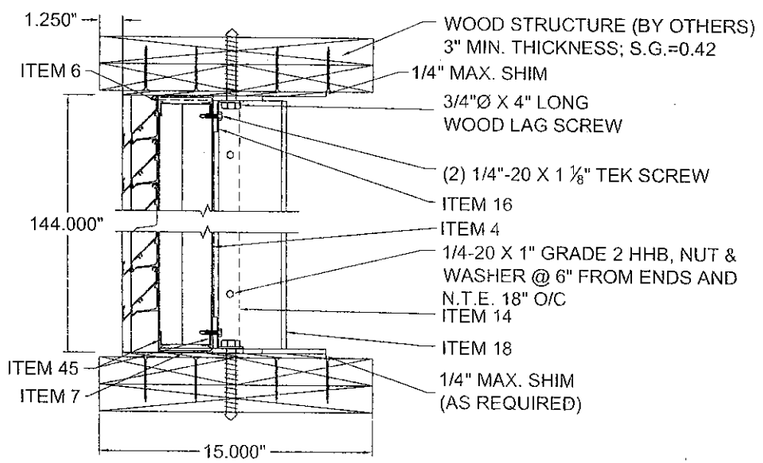
DWG No.
60 - 022221 -00D



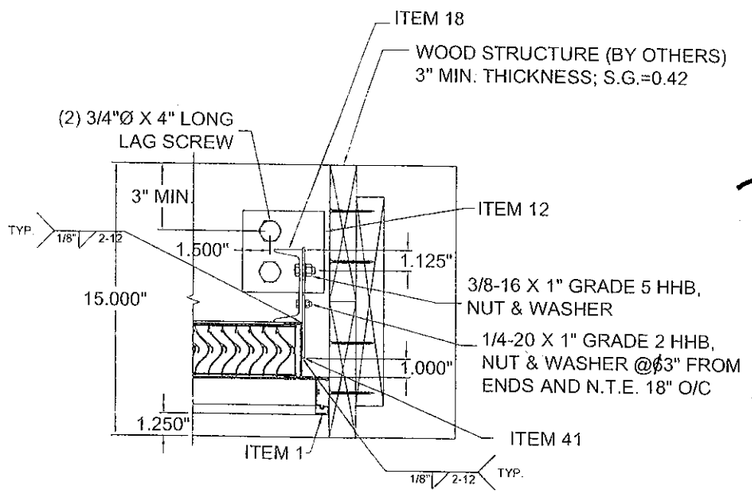
9/03 LOUVER DETAIL @ HEAD & SILL- ASSY 'B'
N.T.S.



10/03 HVBS DETAIL - ASSY 'B'
N.T.S.



11/03 LOUVER END JAMB DETAIL @ HEAD & SILL - ASSY 'B'
N.T.S.



13/03 ATTACHMENT DETAIL @ END SUPPORT - ASSY 'B'
N.T.S.

DANIEL J. RAU
LICENSE
NO. 63636
STATE OF FLORIDA
PROFESSIONAL ENGINEER

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NOA# 11-1102.06
Miami Dade Product Control
By

FOR OFFICE USE ONLY

ENGINEER OF RECORD
DANIEL J. RAU
ENGINEERING DISCIPLINE
CIVIL ENGINEER
STATE OF FLORIDA #63636

REV.	DESCRIPTION	DATE	REV'D BY	CHK'D BY	APP'D BY
E	REVISED DWGS. PER MIAMI-DADE MARKUPS	1/10/12	DRP		
D	CONVERTED TEST DWG. TO MANUFACTURING DWGS.	10/27/11	DRP	DWS	DJR

TOLERANCES
UNLESS SPECIFIED OTHERWISE
3 PLACE .XXX ±.010
2 PLACE .XX ±.020
ANGLE DIMENSIONS ± 2°
USE WID-007 & 008

NOTE:
1) ALL DIMENSIONS ARE GIVEN IN INCHES.
2) ALL EXPOSED SURFACES MUST BE FREE OF DIE LINES.
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4) " " EXTRUDER SPECIFIC ID MARK: .008R x .008DP

CTR	CENTER	OC	ON CENTER
CL	CENTER LINE	OD	OUTSIDE DIAMETER
C-C	CENTER TO CENTER	OR	OUTSIDE RADIUS
CHAM	CHAMFER	PI	POINT OF INTERSECTION
DAT	DATUM	R	FULL RADIUS
DET	DETAIL	REF	REFERENCE
E-E	END TO END	SYM	SYMMETRICAL
EXP	EXPOSED	TAN	TANGENT
ID	INSIDE DIAMETER	TYP	TYPICAL
IR	INSIDE RADIUS		

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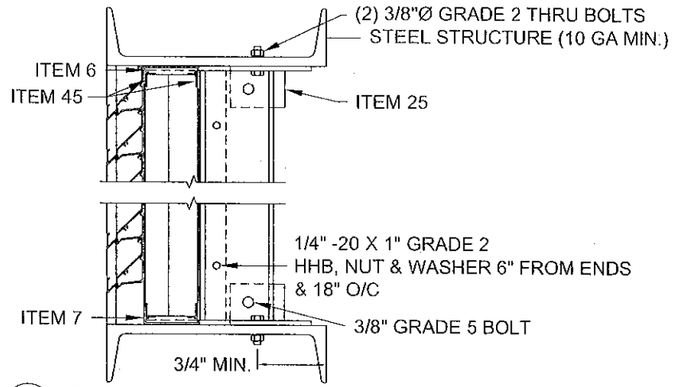
3900 DR. GREAVES RD
GRANDVIEW, MO 64030
PH: (816) 761-7476 FAX: (816) 763-8102

AREA	EST. PER.	EST. WT/FT.
	-	-
ALLOY & TEMPER	UNSPEC. RADII	UNSPEC. WALL
-	-	
DWN: DCD	CHK: VMA	APPV:
DATE: 12/01/10	DATE: 12/07/10	DATE:

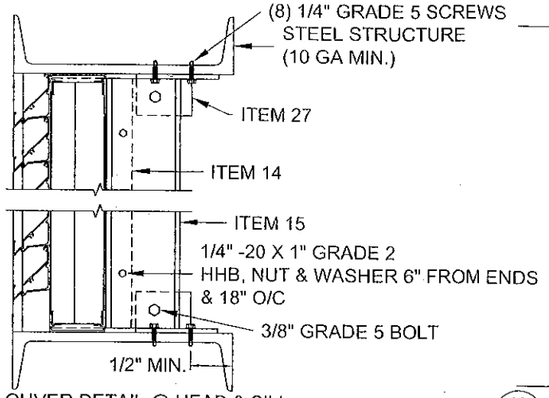
PART DESC.
EME545D LOUVER ASSEMBLY 'B'
SECTIONS AND DETAILS
SHEET 8 OF 18

SCALE: NTS | ECN: - | DATE:

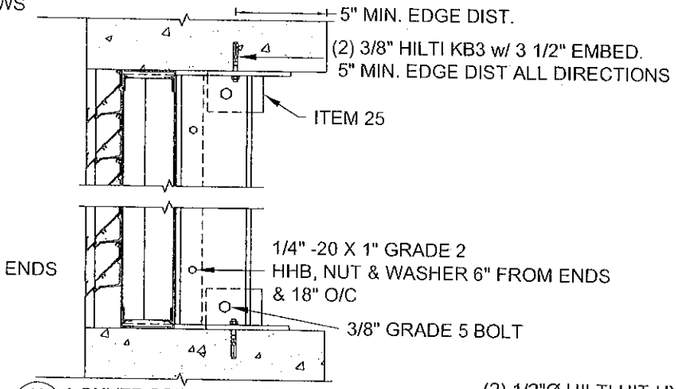
DWG No
60 - 022221 -00D



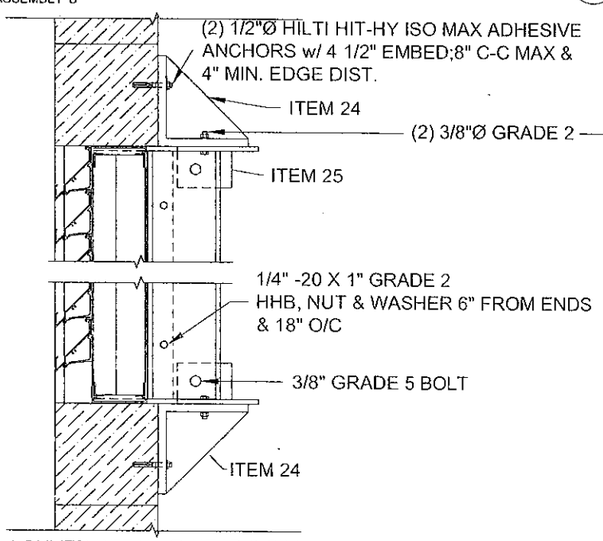
9A / 03 LOUVER DETAIL @ HEAD & SILL
N.T.S.
STEEL CONNECTION - BOLTS
ASSEMBLY 'B'



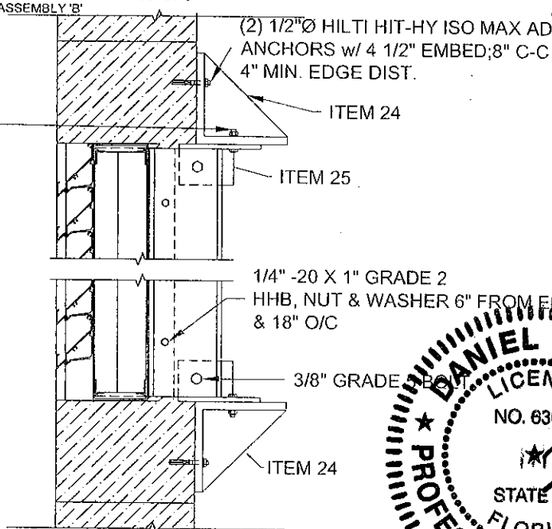
9B / 03 LOUVER DETAIL @ HEAD & SILL
N.T.S.
STEEL CONNECTION - SCREWS
ASSEMBLY 'B'



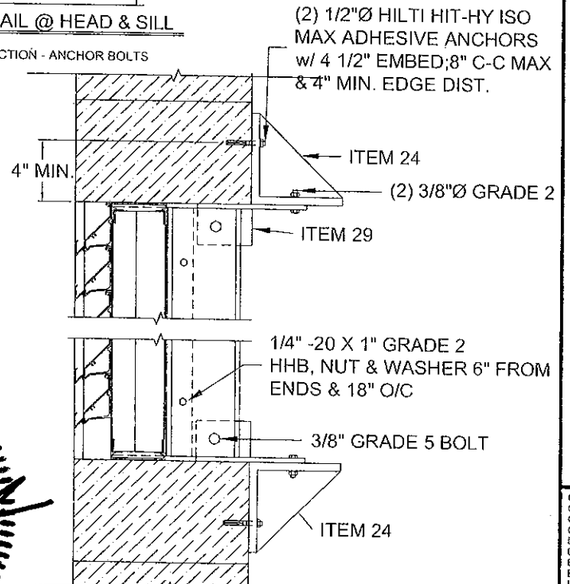
9C / 03 LOUVER DETAIL @ HEAD & SILL
N.T.S.
CONCRETE CONNECTION - ANCHOR BOLTS
ASSEMBLY 'B'



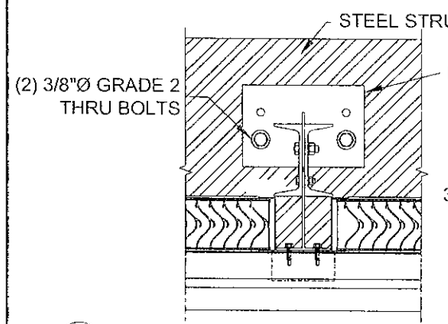
9D / 03 LOUVER DETAIL @ HEAD & SILL
N.T.S.
6" GROUTED CMU BLOCK CONNECTION
ASSEMBLY 'B'



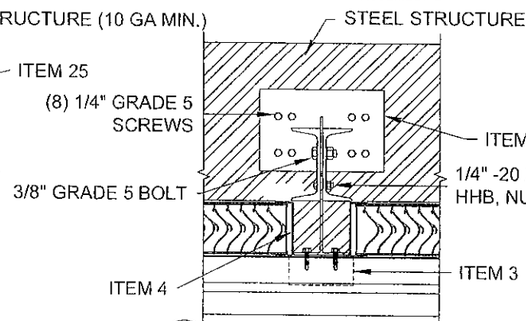
9E / 03 LOUVER DETAIL @ HEAD & SILL
N.T.S.
8" GROUTED CMU BLOCK CONNECTION
ASSEMBLY 'B'



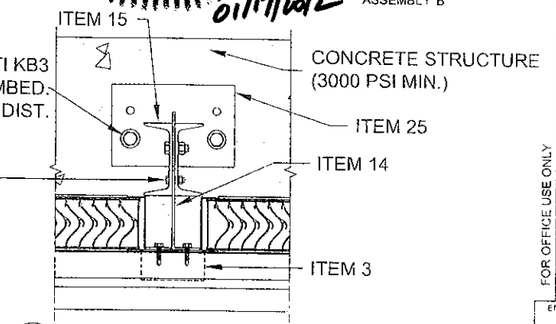
9F / 03 LOUVER DETAIL @ HEAD & SILL
N.T.S.
10" GROUTED CMU BLOCK CONNECTION
ASSEMBLY 'B'



10A / 03 HVBS DETAIL
N.T.S.
STEEL CONNECTION - BOLTS
ASSEMBLY 'B'



10B / 03 HVBS DETAIL
N.T.S.
STEEL CONNECTION - SCREWS
ASSEMBLY 'B'



10C / 03 HVBS DETAIL
N.T.S
CONCRETE CONNECTION - ANCHOR BOLTS
ASSEMBLY 'B'

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By

FOR OFFICE USE ONLY

ENGINEER OF RECORD
DANIEL J. RAU
ENGINEERING DISCIPLINE
CIVIL ENGINEER
STATE OF FLORIDA #63636

REV.	DESCRIPTION	DATE	REV'D BY	CHK'D BY	APP'D BY
E	REVISED DWGS. PER MIAMI-DADE MARKUPS	1/10/12	DRP		
D	CONVERTED TEST DWGS. TO MANUFACTURING DWGS.	10/27/11	DRP	DWS	DJR

NOTE:
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3) ALUMINUM ASSOCIATION TOLERANCES APPLY UNLESS OTHERWISE SPECIFIED
4) ** EXTRUDER SPECIFIC ID MARK: .008R x .008DP

TOLERANCES UNLESS SPECIFIED OTHERWISE
3 PLACE XXX ±.010
2 PLACE XX ±.020
ANGLE DIMENSIONS ± 2°
USE WIG-007 & 008

CTR	CENTER	OC	ON CENTER
CL	CENTER LINE	OD	OUTSIDE DIAMETER
C-C	CENTER TO CENTER	OR	OUTSIDE RADIUS
CHAM	CHAMFER	PI	POINT OF INTERSECTION
DAT	DATUM	R	FULL RADIUS
DET	DETAIL	REF	REFERENCE
E-E	END TO END	SYM	SYMMETRICAL
EXP	EXPOSED	TAN	TANGENT
ID	INSIDE DIAMETER	TYP	TYPICAL
IR	INSIDE RADIUS		

RUSKIN
SWARTWOUT
3900 DR. GREAVES RD
GRANDVIEW, MO 64030
PH: (816) 761-7476 FAX: (816) 763-8102

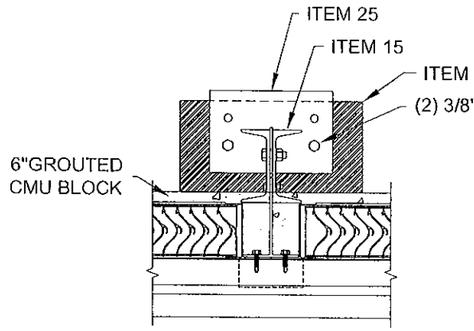
AREA	EST. PER	EST. WT/FT.
ALLOY & TEMPER	UNSPEC. RADII	UNSPEC. WALL

DWN:	DCD	CHK:	VMA	APPV:	
DATE:	12/01/10	DATE:	12/07/10	DATE:	

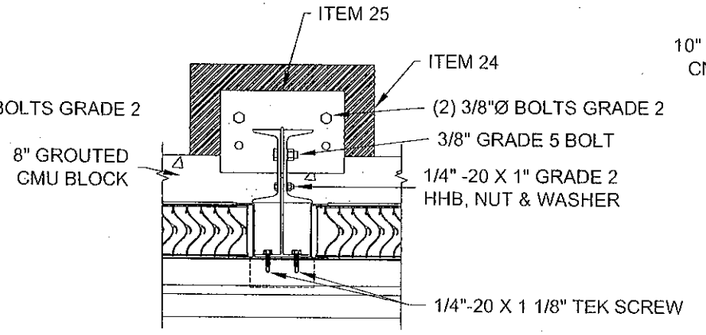
PART DESC.
EME545D LOUVER ASSEMBLY 'B'
SECTIONS AND DETAILS
SHEET 9 OF 18

SCALE: NTS	ECN: -	DATE:

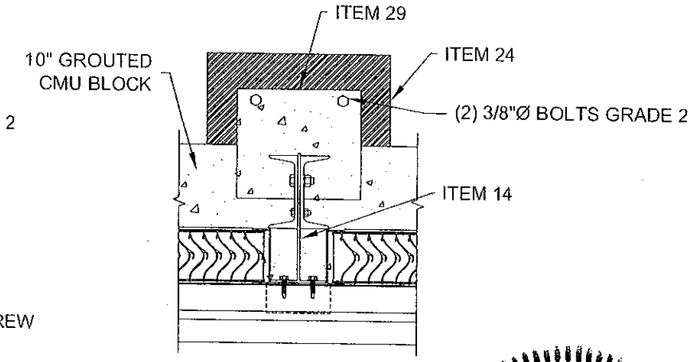
DWG No.
60 - 022221 -00D



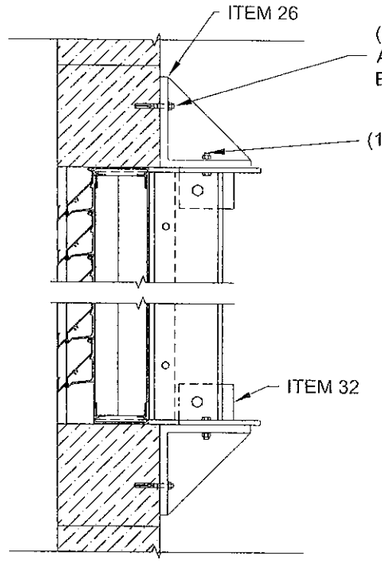
10D / 03 HVBS DETAIL
N.T.S.
6" GROUTED CMU BLOCK CONNECTION
ASSEMBLY 'B'



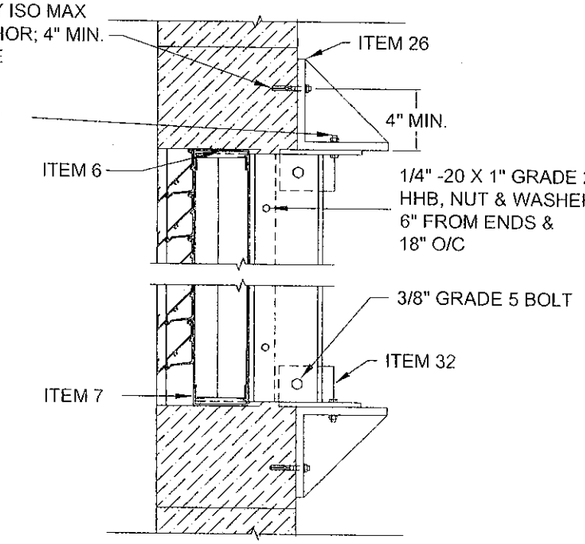
10E / 03 HVBS DETAIL
N.T.S.
8" GROUTED CMU BLOCK CONNECTION
ASSEMBLY 'B'



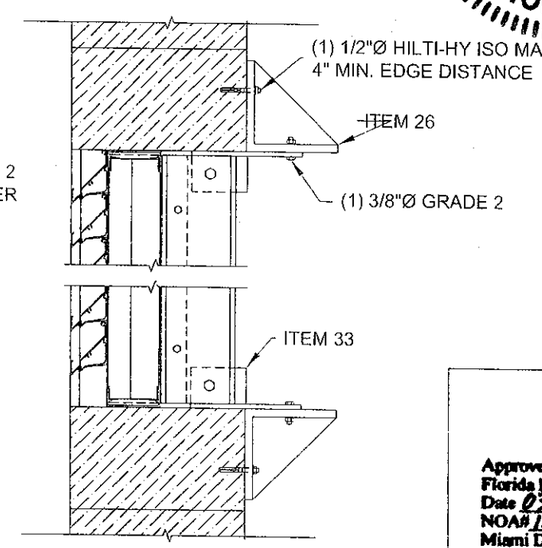
10F / 03 HVBS
N.T.S.
10" GROUTED CMU BLOCK CONNECTION
ASSEMBLY 'B'



11A / 03 END JAMB SUPPORT @ HEAD & SILL
N.T.S.
6" GROUTED CMU BLOCK CONNECTION
ASSEMBLY 'B'



11B / 03 END JAMB SUPPORT @ HEAD & SILL
N.T.S.
8" GROUTED CMU BLOCK CONNECTION
ASSEMBLY 'B'



11C / 03 END JAMB SUPPORT @ HEAD & SILL
N.T.S.
10" GROUTED CMU BLOCK CONNECTION
ASSEMBLY 'B'

DANIEL J. RAU
LICENSE
NO. 63636
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
01/17/2012

Approved as complying with the
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ANGLE DIMENSIONS ± 2°
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ASSEMBLY 'B'	-	-
ALLOY & TEMPER	UNSPEC. RADII	UNSPEC. WALL
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PART DESC.
EME545D LOUVER ASSEMBLY 'B'
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SHEET 10 OF 18

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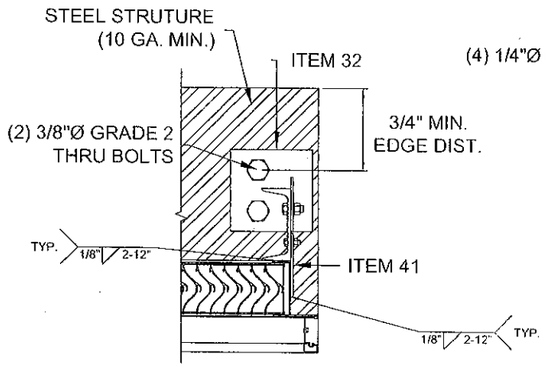
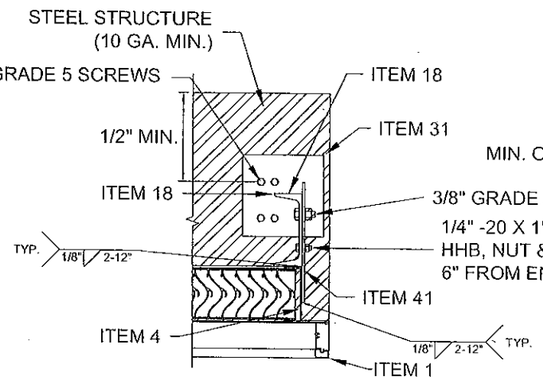
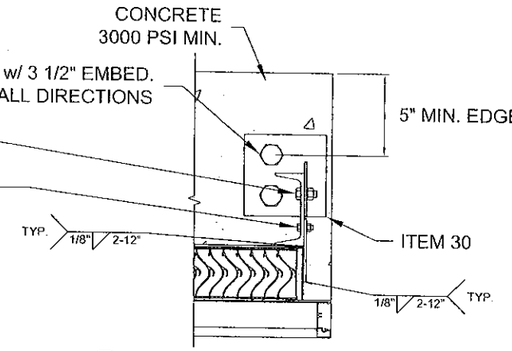


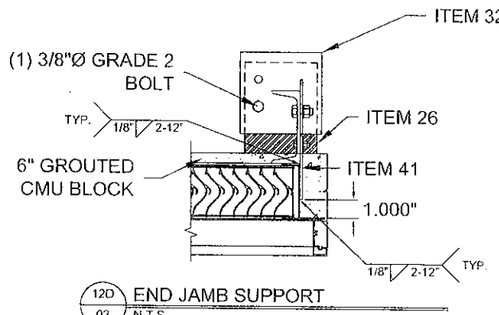
12A / 03 END JAMB SUPPORT
N.T.S.
STEEL CONNECTION (BOLT OPTION)
ASSEMBLY 'B'



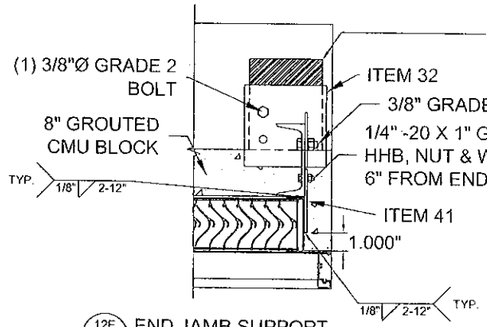
12B / 03 END JAMB SUPPORT
N.T.S.
STEEL CONNECTION (SCREW OPTION)
ASSEMBLY 'B'



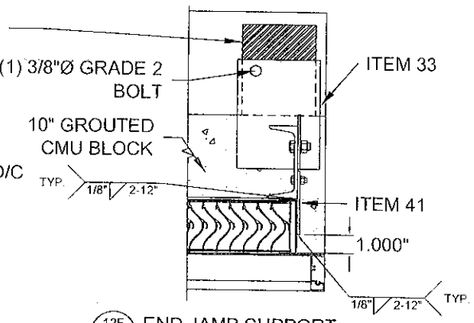
12C / 03 END JAMB SUPPORT
N.T.S.
CONCRETE CONNECTION (ANCHOR BOLT OPTION)
ASSEMBLY 'B'



12D / 03 END JAMB SUPPORT
N.T.S.
6" GROUTED CMU BLOCK
ASSEMBLY 'B'



12E / 03 END JAMB SUPPORT
N.T.S.
8" GROUTED CMU BLOCK
ASSEMBLY 'B'



12F / 03 END JAMB SUPPORT
N.T.S.
10" GROUTED CMU BLOCK
ASSEMBLY 'B'

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ANGLE DIMENSIONS ± 2°
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P*	POINT OF INTERSECTION
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TAN	TANGENT
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	-	-
ALLOY & TEMPER	UNSPEC. RADII	UNSPEC. WALL
-	-	
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DATE: 12/01/10	DATE: 12/07/10	DATE:

PART DESC.
EME545D LOUVER ASSEMBLY 'B'
SECTIONS AND DETAILS
SHEET 11 OF 18

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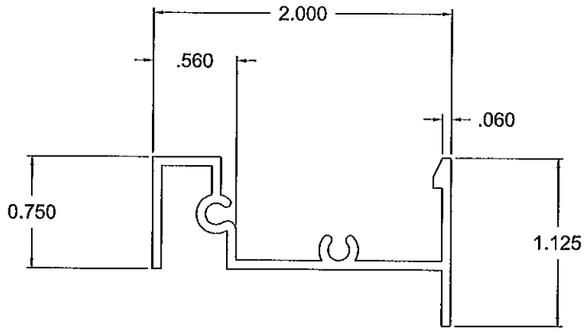
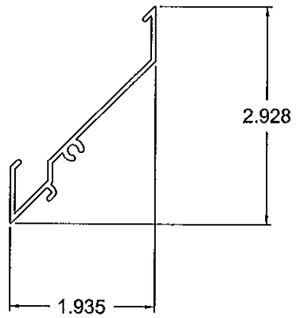


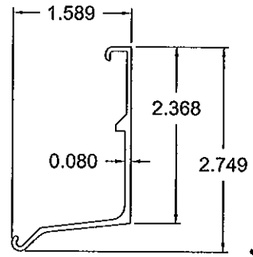
ITEM 1 -(FRONT) JAMB FRAME

RUSKIN# 70-020999-00B
NOM. WALL THICKNESS .060"



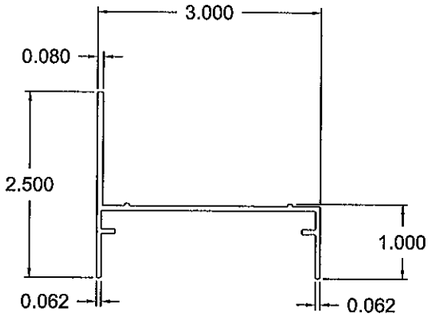
ITEM 2 - HORIZONTAL BLADE

RUSKIN# 70-021014-00B
NOM. WALL THICKNESS .060"



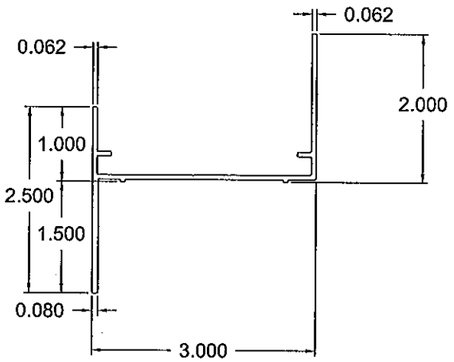
ITEM 3 - BLADE BRACE

RUSKIN# 70-020668-00B
NOM. WALL THICKNESS .080"



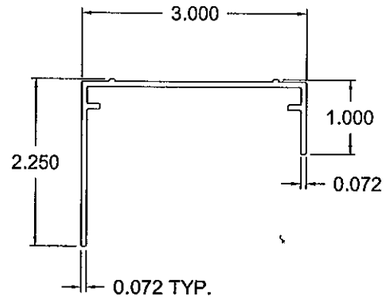
ITEM 4 - (REAR) HEAD & JAMB FRAME

RUSKIN# 70-021256-00B
NOM. WALL THICKNESS .062"
ASSY A



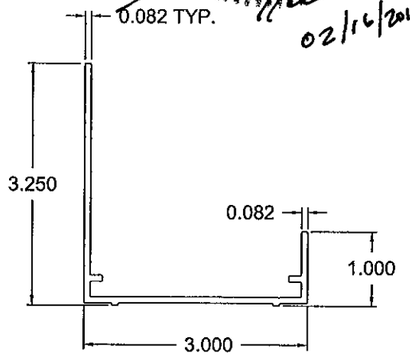
ITEM 5 - SILL FRAME (REAR)

RUSKIN# 70-021257-00B
NOM. WALL THICKNESS .062"
ASSY A



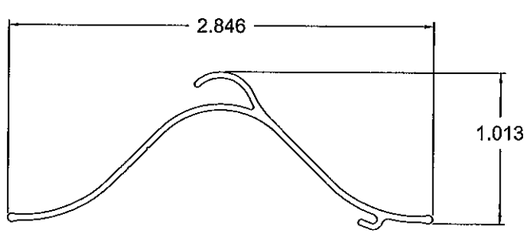
ITEM 6 - HEAD FRAME

RUSKIN#70-021820-00B
NOM. WALL THICKNESS .073"
ASSY B



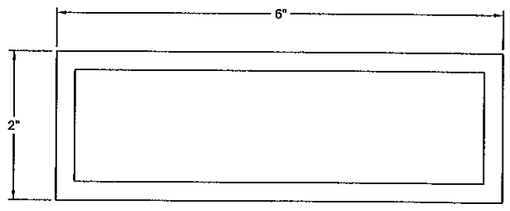
ITEM 7 - SILL FRAME

RUSKIN#70-021821-00B
NOM. WALL THICKNESS .082"
ASSY B



ITEM 8 - VERTICAL BLADE

RUSKIN# RSM7046
NOM. WALL THICKNESS .040"



ITEM 9 - TUBE

6" X 2" X 1/4" 6063-T6
EXTRUDED ALUMINUM

DANIEL J. RAU
LICENSE
NO. 63636
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PROFESSIONAL ENGINEER
02/16/2012

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EME545D LOUVER
PART DETAILS
SHEET 12 OF 18

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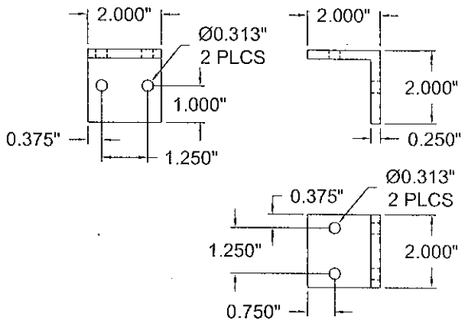
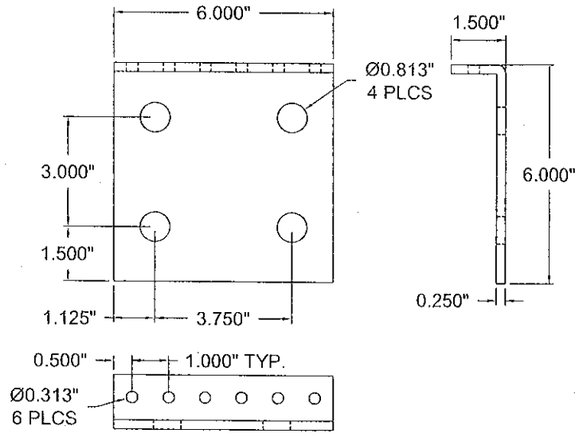
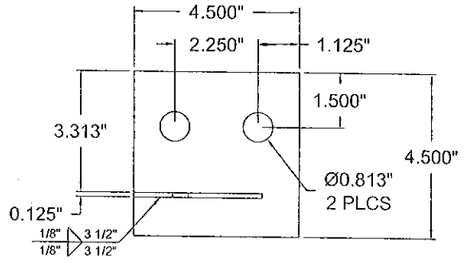
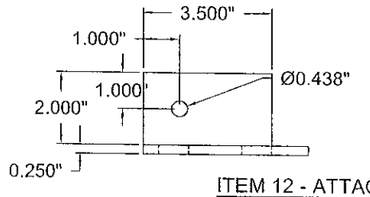


ITEM 10 - CLIP ANGLE

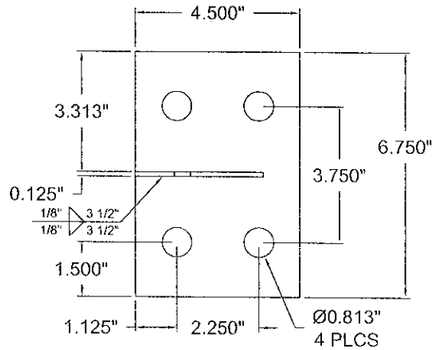


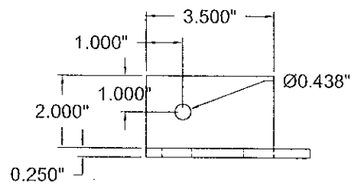
ITEM 11 - CLIP ANGLE



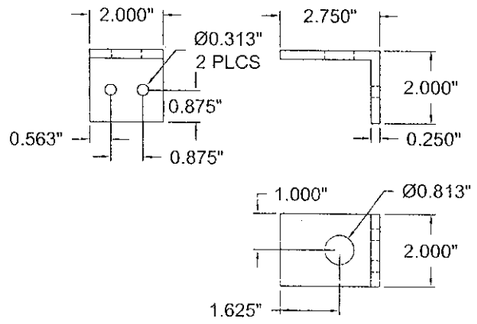


ITEM 12 - ATTACHMENT PLATE

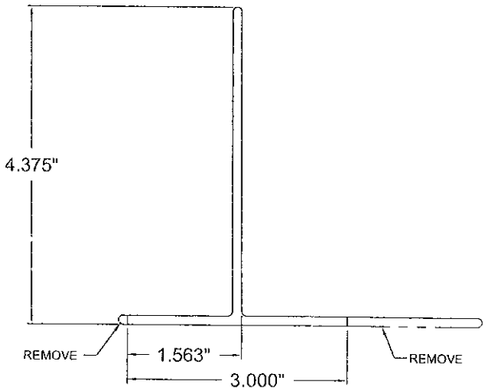




ITEM 13 - CONNECTION PLATE

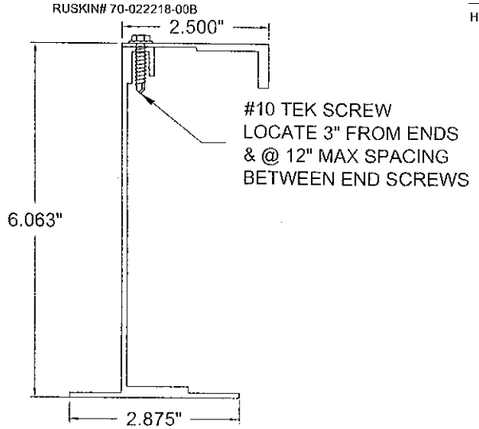


ITEM 16 - CLIP ANGLE



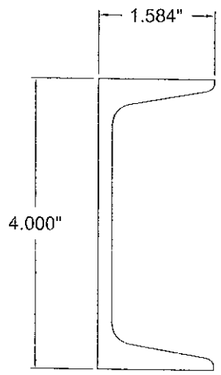
ITEM 14 - HVBS TEE

RUSKIN# 70-022218-00B



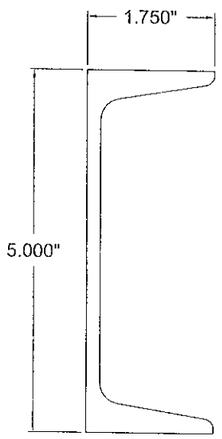
ITEM 17 - HVBS

RUSKIN# 70-021465-00B



ITEM 15 - C4 X 5.4 CHANNEL

HOT DIPPED GALVANIZED ASTM A123



ITEM 18 - C5 X 6.7 CHANNEL

HOT DIPPED GALVANIZED ASTM A123

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D	CONVERTED TEST DWG. TO MANUFACTURING DWGS.	10/27/11	DRP	DWS	DJR
E	REVISED DWGS. PER MIAMI-DADE MARKUPS	1/10/12	DRP		

NOTE:
1) ALL DIMENSIONS ARE GIVEN IN INCHES.
2) ALL EXPOSED SURFACES MUST BE FREE OF DIE LINES.
3) ALUMINUM ASSOCIATION TOLERANCES APPLY UNLESS OTHERWISE SPECIFIED.
4) ** EXTRUDER SPECIFIC ID MARK: 008R x 008DP

TOLERANCES UNLESS SPECIFIED OTHERWISE
3 PLACE .XXX ±.010
2 PLACE .XX ±.020
ANGLE DIMENSIONS ± 2°
USE WI/Q-007 & 008

CTR	CENTER	OC	ON CENTER
CL	CENTER LINE	OD	OUTSIDE DIAMETER
C-C	CENTER TO CENTER	OR	OUTSIDE RADIUS
CHAM	CHAMFER	PI	POINT OF INTERSECTION
DAT	DATUM	R	FULL RADIUS
DET	DETAIL	REF	REFERENCE
E-E	END TO END	SYM	SYMMETRICAL
EXP	EXPOSED	TAN	TANGENT
ID	INSIDE DIAMETER	TYP	TYPICAL
IR	INSIDE RADIUS		

RUSKIN
SWARTWOUT
3900 DR. GREAVES RD
GRANDVIEW, MO 64030
PH: (816) 761-7476 FAX: (816) 763-8102

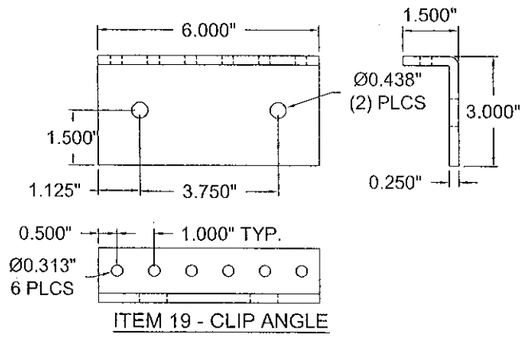
AREA	EST. PER.	EST. WT/FT.
-	-	-
ALLOY & TEMPER	UNSPEC. RADII	UNSPEC. WALL
-	-	-

DWN:	DCD	CHK:	VMA	APPV:	
DATE:	12/01/10	DATE:	12/07/10	DATE:	

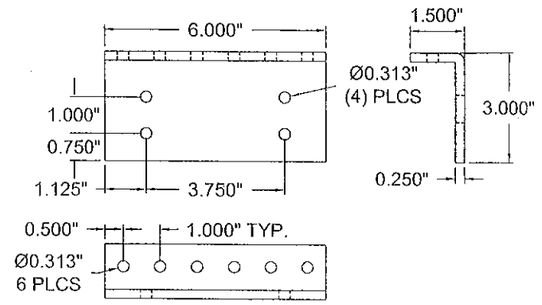
PART DESC.
EME545D LOUVER
PART DETAILS
SHEET 13 OF 18

SCALE: NTS | ECN: - | DATE:

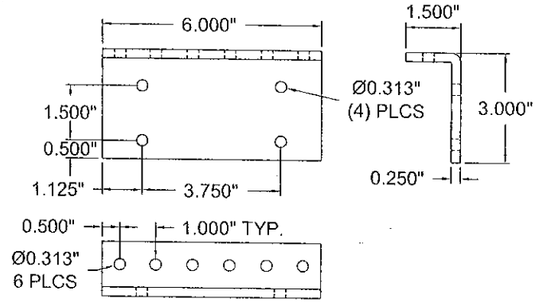
DWG No.
60 - 022221 -00D



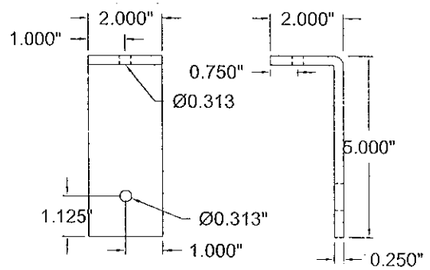
ITEM 19 - CLIP ANGLE



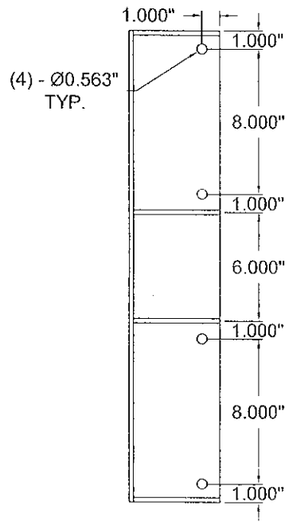
ITEM 20 - CLIP ANGLE



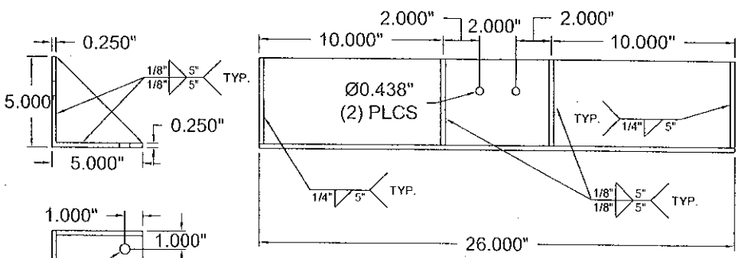
ITEM 21 - ATTACHMENT PLATE

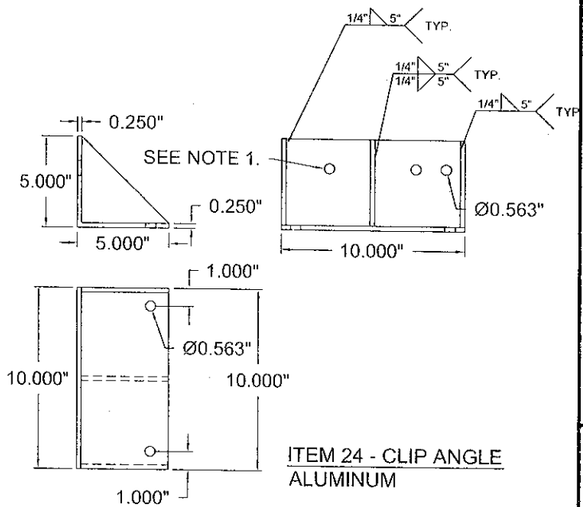


ITEM 22 - CMU END JAMB SUB ANGLE



ITEM 23 - CLIP ANGLE





ITEM 24 - CLIP ANGLE
ALUMINUM

NOTES:

1. FIELD DRILL; LOCATE HOLE ACCORDING TO SUB ANGLE ATTACHING TO.

FOR OFFICE USE ONLY

Approved as complying with the Florida Building Code
Date 03/29/2012
NOA# 11-11.02.06
Miami Dade Product Control
By

DANIEL J. RAU
LICENSE
NO. 63636
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
01/17/2012

ENGINEER OF RECORD
DANIEL J. RAU
ENGINEERING DISCIPLINE
CIVIL ENGINEER
STATE OF FLORIDA #63636

REV.	DESCRIPTION	DATE	REV'D BY	CHK'D BY	APP'D BY
E	REVISED DWGS. PER MIAMI-DADE MARKUPS	1/10/12	DRP		
D	CONVERTED TEST DWG. TO MANUFACTURING DWGS.	10/27/11	DRP	DWS	DJR
A	ADDED ITEM #17 HVBS DRAWING DETAIL	1/21/10	DWS		

TOLERANCES UNLESS SPECIFIED OTHERWISE
3 PLACE .XXX ±.010
2 PLACE .XX ±.020
ANGLE DIMENSIONS ± 2°
USE WIQ.007 & 008

NOTE:
1) ALL DIMENSIONS ARE GIVEN IN INCHES.
2) ALL EXPOSED SURFACES MUST BE FREE OF DIE LINES.
3) ALUMINUM ASSOCIATION TOLERANCES APPLY UNLESS OTHERWISE SPECIFIED.
4) ** EXTRUDER SPECIFIC ID MARK: .008R x .008DP

CTR	CENTER	OC	ON CENTER
CL	CENTER LINE	OD	OUTSIDE DIAMETER
C-C	CENTER TO CENTER	OR	OUTSIDE RADIUS
CHAM	CHAMFER	PI	POINT OF INTERSECTION
DAT	DATUM	R	FULL RADIUS
DET	DETAIL	REF	REFERENCE
E-E	END TO END	SYM	SYMMETRICAL
EXP	EXPOSED	TAN	TANGENT
ID	INSIDE DIAMETER	TYP	TYPICAL
IR	INSIDE RADIUS		

RUSKIN
SWARTWOUT
3900 DR. GREAVES RD
GRANDVIEW, MO 64030
PH: (816) 761-7476 FAX: (816) 763-8102

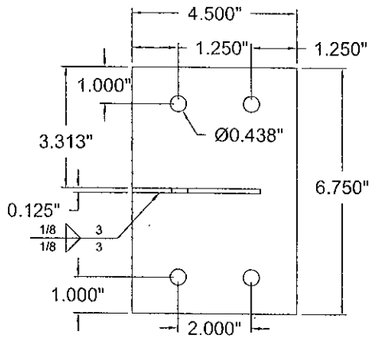
AREA	EST. PER.	EST. WT/FT.
-	-	-
ALLOY & TEMPER	UNSPEC. RADII	UNSPEC. WALL
-	-	-

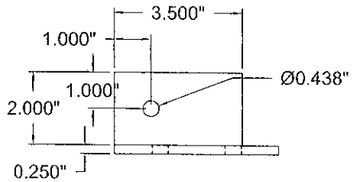
DWN:	DCD	CHK.	VMA	APPV:	
DATE:	12/01/10	DATE:	12/07/10	DATE:	

PART DESC.
EME545D LOUVER
PART DETAILS
SHEET 14 OF 18

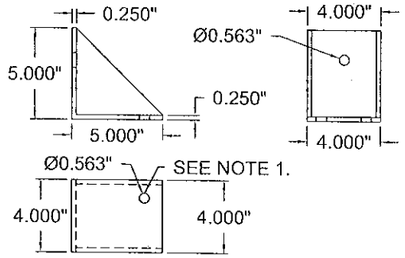
SCALE: NTS | ECN. - | DATE:

DWG No.
60 - 022221 -00D

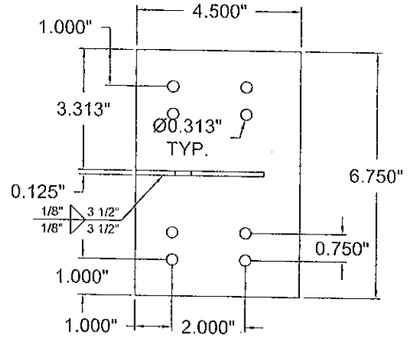


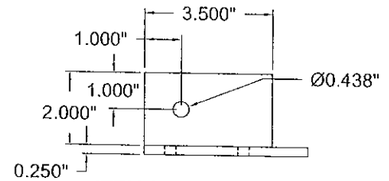


ITEM 25 - CLIP ANGLE

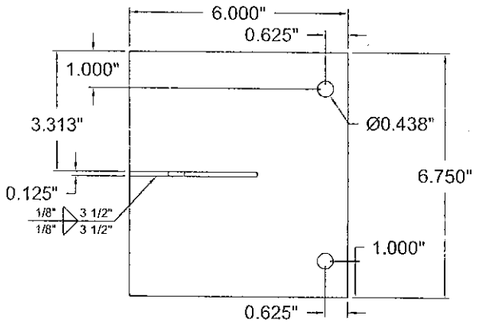


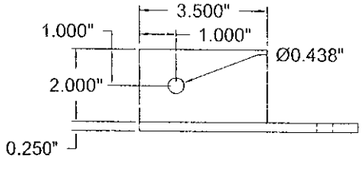
ITEM 26 - CLIP ANGLE



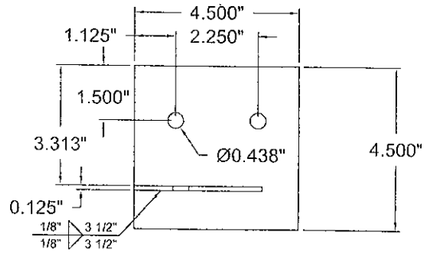


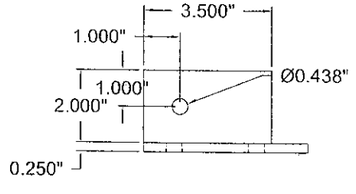
ITEM 27 - CLIP ANGLE





ITEM 29 - CLIP ANGLE





ITEM 30 - CLIP ANGLE

REV.	DESCRIPTION	DATE	REV'D BY	CHK'D BY	APP'D BY
E	REVISED DWGS. PER MIAMI-DADE MARKUPS	1/10/12	DRP		
D	CONVERTED TEST DWG. TO MANUFACTURING DWGS.	10/27/11	DRP	DWS	DJR
A	ADDED ITEM #17 HVSS DRAWING DETAIL	1/21/10	DWS		

NOTE:
1) ALL DIMENSIONS ARE GIVEN IN INCHES.
2) ALL EXPOSED SURFACES MUST BE FREE OF DIE LINES.
3) ALUMINUM ASSOCIATION TOLERANCES APPLY UNLESS OTHERWISE SPECIFIED.
4) ** EXTRUDER SPECIFIC ID MARK: .008R x .008DP

TOLERANCES UNLESS SPECIFIED OTHERWISE
3 PLACE .XXX ± .010
2 PLACE .XX ± .020
ANGLE DIMENSIONS ± 2°
USE WID-007 & 008

CTR	CENTER	OC	ON CENTER
CL	CENTER LINE	OD	OUTSIDE DIAMETER
C-C	CENTER TO CENTER	OR	OUTSIDE RADIUS
CHAM	CHAMFER	PI	POINT OF INTERSECTION
DAT	DATUM	R	FULL RADIUS
DET	DETAIL	REF	REFERENCE
E-E	END TO END	SYM	SYMMETRICAL
EXP	EXPOSED	TAN	TANGENT
ID	INSIDE DIAMETER	TYP	TYPICAL
IR	INSIDE RADIUS		

RUSKIN
SWARTWOUT
3900 DR. GREAVES RD
GRANDVIEW, MO 64030
PH: (816) 761-7476 FAX: (816) 763-8102

AREA	EST. PER.	EST. WT/FT.
-	-	-
ALLOY & TEMPER	UNSPEC. RADII	UNSPEC. WALL
-	-	

DWN:	DCD	CHK:	VMA	APPV:	
DATE:	12/01/10	DATE:	12/07/10	DATE:	

PART DESC.
EME545D LOUVER
PART DETAILS
SHEET 15 OF 18

SCALE: NTS | ECN: - | DATE

DWG No.
60 - 022221 -00D

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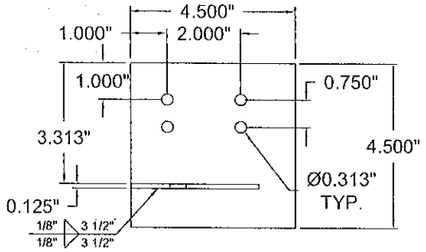
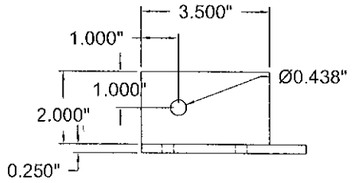
Approved as complying with the Florida Building Code
Date 03/29/2012
NOA# 11-1102.06
Miami Dade Product Control
By

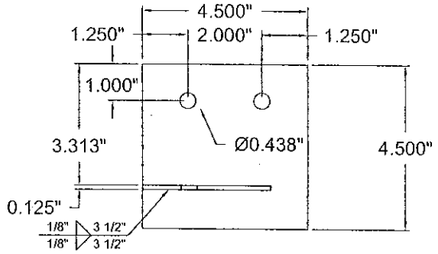
DANIEL J. RAU
LICENSE
NO. 63636
01/17/2012
STATE OF FLORIDA
PROFESSIONAL ENGINEER

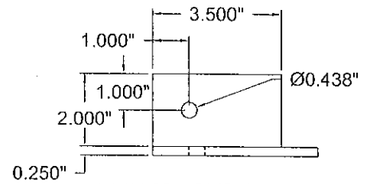
ENGINEER OF RECORD
DANIEL J. RAU
ENGINEERING DISCIPLINE
CIVIL ENGINEER
STATE OF FLORIDA #63636



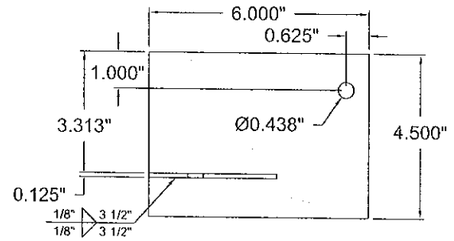


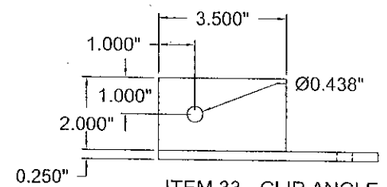
ITEM 31 - CLIP ANGLE



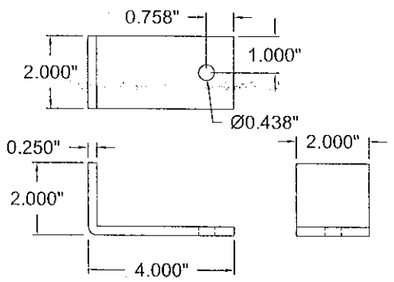


ITEM 32 - CLIP ANGLE

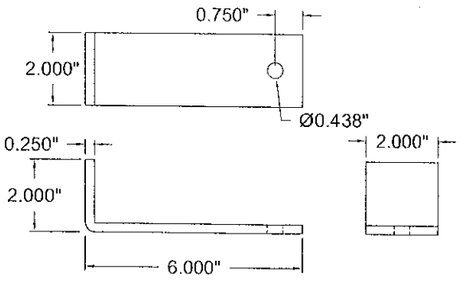




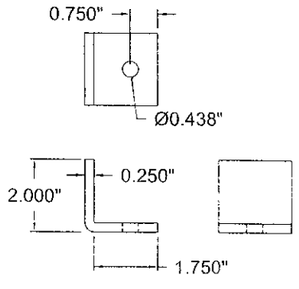
ITEM 33 - CLIP ANGLE



ITEM 34 - CLIP ANGLE



ITEM 35 - CLIP ANGLE



ITEM 36 - CLIP ANGLE

FOR OFFICE USE ONLY

Approved as complying with the Florida Building Code
Date 03/29/2012
NOA# 11-1102.06
Miami Dade Product Control
By

DANIEL J. RAU LICENSE NO. 63636 STATE OF FLORIDA PROFESSIONAL ENGINEER 01/17/2012

ENGINEER OF RECORD
DANIEL J. RAU
ENGINEERING DISCIPLINE
CIVIL ENGINEER
STATE OF FLORIDA #63636

REV	DESCRIPTION	DATE	REV'D BY	CHK'D BY	APP'D BY
E	REVISED DWGS. PER MIAMI-DADE MARKUPS	1/10/12	DRP		
D	CONVERTED TEST DWG. TO MANUFACTURING DWGS.	10/27/11	DRP	DWS	DJR
A	ADDED ITEM #17 HVBS DRAWING DETAIL	1/21/10	DWS		

TOLERANCES
UNLESS SPECIFIED OTHERWISE
3 PLACE .XXX ±.010
2 PLACE .XX ±.020
ANGLE DIMENSIONS ± 2°
USE WIQ-007 & 008

NOTE:
1) ALL DIMENSIONS ARE GIVEN IN INCHES.
2) ALL EXPOSED SURFACES MUST BE FREE OF DIE LINES.
3) ALUMINUM ASSOCIATION TOLERANCES APPLY UNLESS OTHERWISE SPECIFIED.
4) ** EXTRUDER SPECIFIC ID MARK: .008R x .008DP

CTR	CENTER	CC	ON CENTER
CL	CENTER LINE	OD	OUTSIDE DIAMETER
C-C	CENTER TO CENTER	OR	OUTSIDE RADIUS
CHAM	CHAMFER	PI	POINT OF INTERSECTION
DAT	DATUM	R	FULL RADIUS
DET	DETAIL	REF	REFERENCE
E-E	END TO END	SYM	SYMMETRICAL
EXP	EXPOSED	TAN	TANGENT
ID	INSIDE DIAMETER	TYP	TYPICAL
IR	INSIDE RADIUS		

RUSKIN
SWARTWOUT
3900 DR. GREAVES RD
GRANDVIEW, MO 64030
PH: (816) 761-7476 FAX: (816) 763-8102

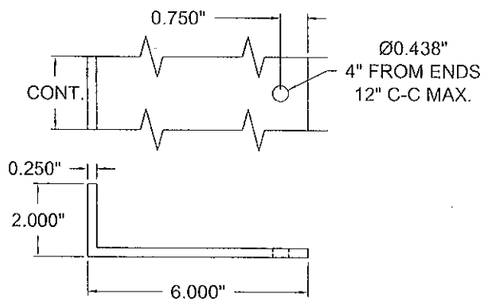
AREA	EST. PER.	EST. WT/FT.
-	-	-
ALLOY & TEMPER	UNSPEC. RADII	UNSPEC. WALL
-	-	

DWN:	DCD	CHK:	VMA	APPV	
DATE:	12/01/10	DATE:	12/07/10	DATE:	

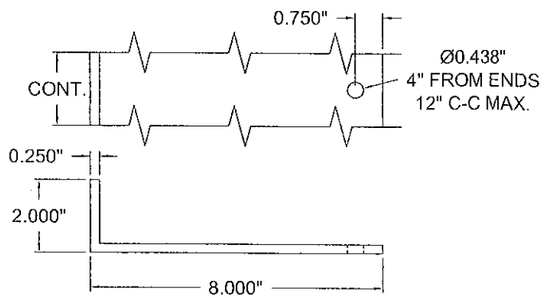
PART DESC.
EME545D LOUVER
PART DETAILS
SHEET 16 OF 18

SCALE: NTS | ECN: - | DATE:

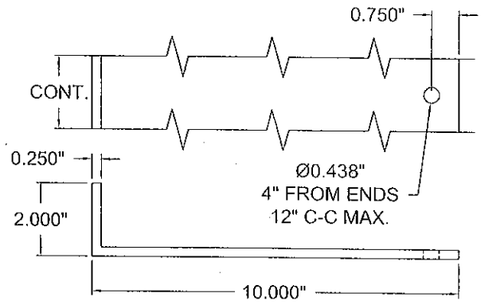
DWG No.
60 - 022221 -00D



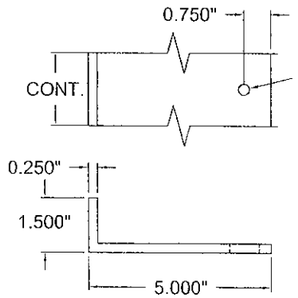
ITEM 37 - CONT. CLIP ANGLE



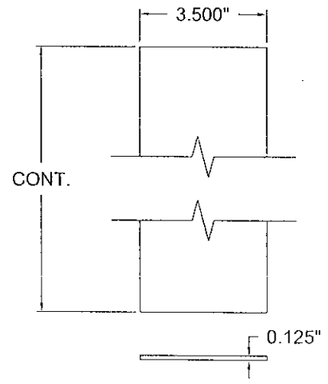
ITEM 38 - CONT. CLIP ANGLE



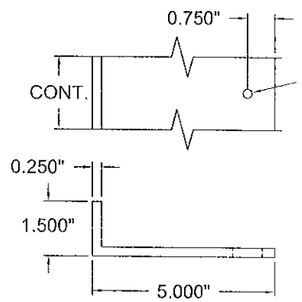
ITEM 39 -CONT. CLIP ANGLE



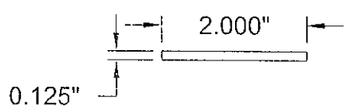
ITEM 40 - CONT. CLIP ANGLE



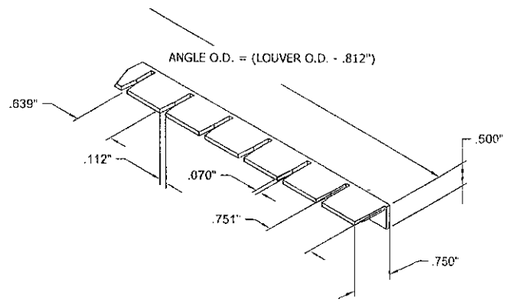
ITEM 41 - CONT. ATTACHMENT PLATE



ITEM 42 - CONT. CLIP ANGLE



ITEM 43 - HHBS



ITEM 44 - CORE ANGLE

Approved as complying with the Florida Building Code
Date 03/29/2012
NOA# 11-1102.06
Miami Dade Product Control
By

FOR OFFICE USE ONLY

DANIEL J. RAU
LICENSE
NO. 63636
STATE OF FLORIDA
PROFESSIONAL ENGINEER
01/12/2012

ENGINEER OF RECORD
DANIEL J. RAU
ENGINEERING DISCIPLINE:
CIVIL ENGINEER
STATE OF FLORIDA #63636

D	CONVERTED TEST DWG. TO MANUFACTURING DWGS.	10/27/11	DRP	DWS	DJR
A	ADDED ITEM #17 HVBS DRAWING DETAIL	1/21/10	DWS		
REV.	DESCRIPTION	DATE	REV'D BY	CHK'D BY	APP'D BY

TOLERANCES UNLESS SPECIFIED OTHERWISE
3 PLACE .XXX ±.010
2 PLACE .XX ±.020
ANGLE DIMENSIONS ± 2°
USE WO-007 & 008

NOTE:
1) ALL DIMENSIONS ARE GIVEN IN INCHES.
2) ALL EXPOSED SURFACES MUST BE FREE OF DIE LINES.
3) ALUMINUM ASSOCIATION TOLERANCES APPLY UNLESS OTHERWISE SPECIFIED.
4) ** EXTRUDER SPECIFIC ID MARK: .008R x .008DP

CTR	CENTER	OC	ON CENTER
CL	CENTER LINE	OD	OUTSIDE DIAMETER
C-C	CENTER TO CENTER	OR	OUTSIDE RADIUS
CHAM	CHAMFER	PI	POINT OF INTERSECTION
DAT	DATUM	R	FULL RADIUS
DET	DETAIL	REF	REFERENCE
E-E	END TO END	SYM	SYMMETRICAL
EXP	EXPOSED	TAN	TANGENT
ID	INSIDE DIAMETER	TYP	TYPICAL
IR	INSIDE RADIUS		

RUSKIN
SWARTWOUT
3900 DR. GREAVES RD
GRANDVIEW, MO 64030
PH: (816) 761-7476 FAX: (816) 763-8102

AREA	EST. PER.	EST. WT/FT.
-	-	-
ALLOY & TEMPER	UNSPEC. RADII	UNSPEC. WALL
-	-	
DWN: DCD	CHK: VMA	APPV:
DATE: 12/01/10	DATE: 12/07/10	DATE:

PART DESC.
EME545D LOUVER
PART DETAILS
SHEET 17 OF 18

SCALE: NTS | ECN: - | DATE:

DWG No.
60 - 022221 -00D

TABLE #1: DRAWING CROSS REFERENCE

ITEM	DRAWING	SHEET #	MATERIAL	DESCRIPTION	RUSKIN #
1	60-022221-00D	12	6063-T5 AL	JAMB FRAME	70-020999-00B
2	60-022221-00D	12	6063-T5 AL	HORIZONTAL BLADE	70-021014-00B
3	60-022221-00D	12	6063-T5 AL	BLADE BRACE	70-020668-00B
4	60-022221-00D	12	6063-T5 AL	HEAD & JAMB FRAME	70-021256-00B
5	60-022221-00D	12	6063-T5 AL	SILL FRAME	70-021257-00B
6	60-022221-00D	12	6063-T6 AL	HEAD FRAME	70-021820-00B
7	60-022221-00D	12	6063-T6 AL	SILL FRAME	70-021821-00B
8	60-022221-00D	12	6063-T5 AL	VERTICAL BLADE	RSM7046
9	60-022221-00D	12	6063-T6 AL	TUBE 6" X 2" X 1/4"	
10	60-022221-00D	13	6063-T6 AL	EXTRUDED CLIP ANGLE	85-021662-00B
11	60-022221-00D	13	3003-H14 AL	FORMED CLIP ANGLE	-
12	60-022221-00D	13	3003-H14 AL	ATTACHMENT PLATE	-
13	60-022221-00D	13	3003-H14 AL	CONNECTION PLATE	-
14	60-022221-00D	13	6063-T6 AL	HVBS TEE	70-022218-00B
15	60-022221-00D	13	A36 STEEL	C4 X 5.4 CHANNEL	-
16	60-022221-00D	13	6063-T6 AL	EXTRUDED CLIP ANGLE	85-021662-00B
17	60-022221-00D	13	6063-T6 AL	HVBS	70-021465-00B
18	60-022221-00D	13	A36 STEEL	C5 X 6.7 CHANNEL	-
19	60-022221-00D	14	3003-H14 AL	FORMED CLIP ANGLE	-
20	60-022221-00D	14	3003-H14 AL	FORMED CLIP ANGLE	-
21	60-022221-00D	14	3003-H14 AL	FORMED CLIP ANGLE	-
22	60-022221-00D	14	3003-H14 AL	FORMED CLIP ANGLE	-
23	60-022221-00D	14	3003-H14 AL	GUSSETED CLIP ANGLE	-
24	60-022221-00D	14	3003-H14 AL	GUSSETED CLIP ANGLE	-
25	60-022221-00D	15	3003-H14 AL	CLIP ANGLE	-
26	60-022221-00D	15	3003-H14 AL	CLIP ANGLE	-
27	60-022221-00D	15	3003-H14 AL	CLIP ANGLE	-
28	60-022221-00D	15	3003-H14 AL	ATTACHMENT PLATE	-
29	60-022221-00D	15	3003-H14 AL	ATTACHMENT PLATE	-
30	60-022221-00D	15	3003-H14 AL	ATTACHMENT PLATE	-
31	60-022221-00D	16	3003-H14 AL	ATTACHMENT PLATE	-
32	60-022221-00D	16	3003-H14 AL	ATTACHMENT PLATE	-
33	60-022221-00D	16	3003-H14 AL	ATTACHMENT PLATE	-
34	60-022221-00D	16	3003-H14 AL	FORMED CLIP ANGLE	-
35	60-022221-00D	16	3003-H14 AL	FORMED CLIP ANGLE	-
36	60-022221-00D	16	3003-H14 AL	FORMED CLIP ANGLE	-
37	60-022221-00D	17	3003-H14 AL	CONT. CLIP ANGLE	-
38	60-022221-00D	17	3003-H14 AL	CONT. CLIP ANGLE	-
39	60-022221-00D	17	3003-H14 AL	CONT. CLIP ANGLE	-
40	60-022221-00D	17	3003-H14 AL	CONT. CLIP ANGLE	-
41	60-022221-00D	17	3003-H14 AL	CONT. ATTACHMENT PLATE	-
42	60-022221-00D	17	3003-H14 AL	CONT. ATTACHMENT PLATE	-
43	60-022221-00D	17	6063 -T6 AL	HHBS	85-021658-00B
44	60-022221-00D	17	6063-T6 AL	CORE ANGLE	RSM7002

REV.	DESCRIPTION	DATE	REV'D BY	CHK'D BY	APP'D BY
E	REVISED DWGS. PER MIAMI-DADE MARKUPS	1/10/12	DRP		
D	CONVERTED TEST DWG. TO MANUFACTURING DWGS.	10/27/11	DRP	DWS	DJR
A	ADDED ITEM #17 HVBS DRAWING DETAIL	1/21/10	DWS		

TOLERANCES UNLESS SPECIFIED OTHERWISE
3 PLACE .XXX ±.010
2 PLACE .XX ±.020
ANGLE DIMENSIONS ± 2°
USE WIQ.007 & 008

NOTE:
1) ALL DIMENSIONS ARE GIVEN IN INCHES.
2) ALL EXPOSED SURFACES MUST BE FREE OF DIE LINES.
3) ALUMINUM ASSOCIATION TOLERANCES APPLY UNLESS OTHERWISE SPECIFIED.
4) ** EXTRUDER SPECIFIC ID MARK: .008R x .008DP

CTR	CENTER	OC	ON CENTER
CL	CENTER LINE	OD	OUTSIDE DIAMETER
C-C	CENTER TO CENTER	OR	OUTSIDE RADIUS
CHAM	CHAMFER	PI	POINT OF INTERSECTION
DAT	DATUM	R	FULL RADIUS
DET	DETAIL	REF	REFERENCE
E-E	END TO END	SYM	SYMMETRICAL
EXP	EXPOSED	TAN	TANGENT
ID	INSIDE DIAMETER	TYP	TYPICAL
IR	INSIDE RADIUS		

FOR OFFICE USE ONLY

Approved as complying with the Florida Building Code
Date 03/29/2012
NOA# 11-1102.06
Miami Dade Product Control
By

DANIEL J. RAU
LICENSE
NO 63636
STATE OF FLORIDA
PROFESSIONAL ENGINEER

01/17/2012

ENGINEER OF RECORD
DANIEL J. RAU
ENGINEERING DISCIPLINE
CIVIL ENGINEER
STATE OF FLORIDA #63636

RUSKIN
SWARTWOUT
3900 DR. GREAVES RD
GRANDVIEW, MO 64030
PH: (816) 761-7476 FAX: (816) 763-8102

AREA	EST. PER.	EST. WT/FT.
-	-	-
ALLOY & TEMPER	UNSPEC. RADII	UNSPEC. WALL
-	-	

DWN:	DCD	CHK:	VMA	APPV:	
DATE:	12/01/10	DATE:	12/07/10	DATE:	

PART DESC.
EME545D LOUVER
PART DETAILS
SHEET 18 OF 18

SCALE: NTS | ECN: - | DATE:

DWG No.
60 - 022221 -00D