



BUILDING CODE COMPLIANCE OFFICE (BCCO)

PRODUCT CONTROL DIVISION

**NOTICE OF ACCEPTANCE (NOA)**

140 WEST FLAGLER STREET, SUITE 1107  
MIAMI, FLORIDA 33130-1563  
(305) 375-2902 FAX (305) 372-6339

[www.miamidade.gov/buildingcode](http://www.miamidade.gov/buildingcode)

**HMF Express, LLC**  
**2501 Northcase Parkway, S. E.**  
**Wilmington, NC 28405**

**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 (FBC), including the High Velocity Hurricane Zone (HVHZ).

**DESCRIPTION: Series "16 & 18 ga. Flush" 7'2" Outswing Opaque Steel Commercial Door – L.M.I.**

**APPROVAL DOCUMENT:** Drawing No. **HMF001**, titled "Series OS Flush Steel Door", sheets 1 through 13 of 13, dated 06/09/09 with revision "B" dated 01/14/10, prepared by CertWorks, LLC, signed and sealed by Kristina Daugherty, P. E., bearing the Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and expiration 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", 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 **revises and renews** NOA No. **03-0916.01** and consists of this page 1 and evidence page E-1, as well as approval document mentioned above.



*J. Casan*  
*2/18/10*

NOA No. 09-0615.02  
Expiration Date: August 26, 2014  
Approval Date: March 10, 2010  
Page 1

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

**A. DRAWINGS**

1. Manufacturer's die drawings and sections.
2. Drawing No **HMF001**, titled "Series OS Flush Steel Door", sheets 1 through 13 of 13, dated 06/09/09 with revision "**B**" dated 01/14/10, prepared by CertWorks, LLC, signed and sealed by Kristina Daugherty, P. E.

**B. TESTS**

1. Test reports on:
  - 1) Air Infiltration Test, per FBC, TAS 202-94
  - 2) Uniform Static Air Pressure Test, Loading per FBC TAS 202-94
  - 3) Water Resistance Test, per FBC, TAS 202-94
  - 4) Large Missile Impact Test per FBC, TAS 201-94
  - 5) Cyclic Wind Pressure Loading per FBC, TAS 203-94
  - 6) Forced Entry Test, per FBC 2411 3.2.1, TAS 202-94
  - 7) Tensile Test, per ASTM E8, A 370, B 557

along with marked-up drawings and installation diagram of outswing steel door, prepared by Certified Testing Laboratories Architectural Division, Test Report No. **CTLA-1089W** dated 04/21/03, signed and sealed by Ramesh Patel, P. E.  
*(Submitted under previous NOA No. 03-0916.01)*

**C. CALCULATIONS**

1. Anchor verification calculations and structural analysis, complying with FBC-2007, dated 06/09/09, 10/02/10 and 01/29/10, prepared by CertWorks, LLC, dated 02/12/10, signed and sealed by Kristina Daugherty, P. E.  
**Complies with ASTM E1300-98/ 04**

**D. QUALITY ASSURANCE**

1. Miami-Dade Building Code Compliance Office (BCCO).

**E. MATERIAL CERTIFICATIONS**

1. None.

**F. STATEMENTS**

1. Statement letters of conformance and no financial interest, dated June 01, 2009, signed and sealed by Kristina Daugherty, P. E.
2. Laboratory compliance letter for Test Report no. **CTLA-1089W**, issued by Certified Testing Laboratories Architectural Division, dated April 21, 2003, signed and sealed by Ramesh Patel, P. E.  
*(Submitted under previous NOA No. 03-0916.01)*

**G. OTHERS**

1. Notice of Acceptance No. **03-0916.01**, issued to Benchmark HMF, LLC for their Series "**16 & 18 ga. Opaque Flush Outswing Steel Commercial Door**", approved on 08/26/04 and expiring on 08/29/09.



Jaime D. Gascon, P. E.  
Chief, Product Control Division  
NOA No. 09-0615.02  
Expiration Date: August 26, 2014  
Approval Date: March 10, 2010

**INSTALLATION NOTES:**

- ONE (1) INSTALLATION ANCHOR IS REQUIRED AT EACH ANCHOR LOCATION SHOWN.
- THE NUMBER OF INSTALLATION ANCHORS DEPICTED IS THE MINIMUM NUMBER OF ANCHORS TO BE USED FOR PRODUCT INSTALLATION.
- INSTALL INDIVIDUAL INSTALLATION ANCHORS WITHIN A TOLERANCE OF ±1/2 INCH OF THE DEPICTED LOCATION IN THE ANCHOR LAYOUT DETAIL (I.E., WITHOUT CONSIDERATION OF TOLERANCES). TOLERANCES ARE NOT CUMULATIVE FROM ONE INSTALLATION ANCHOR TO THE NEXT.
- SHIM AS REQUIRED AT EACH INSTALLATION ANCHOR WITH LOAD BEARING SHIM(S). MAXIMUM ALLOWABLE SHIM STACK TO BE 1/4 INCH. SHIM WHERE SPACE OF 1/16 INCH OR GREATER OCCURS. SHIM(S) SHALL BE CONSTRUCTED OF HIGH DENSITY PLASTIC OR BETTER.
- REFER TO SHEET 3 FOR ANCHOR TYPE AND SPACING DETAILS.
- MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDE WALL FINISHES, INCLUDING BUT NOT LIMITED TO STUCCO, FOAM, BRICK VENEER, AND SIDING.
- INSTALLATION ANCHORS AND ASSOCIATED HARDWARE MUST BE MADE OF CORROSION RESISTANT MATERIAL OR HAVE A CORROSION RESISTANT COATING.
- FOR HOLLOW BLOCK AND GROUT FILLED BLOCK, DO NOT INSTALL INSTALLATION ANCHORS INTO MORTAR JOINTS. EDGE DISTANCE IS MEASURED FROM FREE EDGE OF BLOCK OR EDGE OF MORTAR JOINT INTO FACE SHELL OF BLOCK.
- INSTALLATION ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH ANCHOR MANUFACTURER'S INSTALLATION INSTRUCTIONS, AND ANCHORS SHALL NOT BE USED IN SUBSTRATES WITH STRENGTHS LESS THAN THE MINIMUM STRENGTH SPECIFIED BY THE ANCHOR MANUFACTURER.
- INSTALLATION ANCHOR CAPACITIES FOR PRODUCTS HEREIN ARE BASED ON SUBSTRATE MATERIALS WITH THE FOLLOWING PROPERTIES:
  - WOOD - MINIMUM SPECIFIC GRAVITY OF 0.55.
  - CONCRETE - MINIMUM COMPRESSIVE STRENGTH OF 2700 PSI.
  - MASONRY - STRENGTH CONFORMANCE TO ASTM C-90, GRADE N, TYPE 1 (OR GREATER), MIN. 1.5 KSI.
  - STEEL - MINIMUM TENSILE YIELD STRENGTH OF 33 KSI.

# HMF EXPRESS

## OUTSWING FLUSH STEEL COMMERCIAL DOOR

**GENERAL NOTES:**

- THE PRODUCT SHOWN HEREIN IS DESIGNED AND MANUFACTURED TO COMPLY WITH THE 2007 FLORIDA BUILDING CODE (FBC), INCLUDING HVHZ AND HAS BEEN EVALUATED ACCORDING TO THE FOLLOWING:
  - TAS 201-94
  - TAS 202-94
  - TAS 203-94
- ADEQUACY OF THE EXISTING STRUCTURAL CONCRETE/MASONRY AND 2X FRAMING AS A MAIN WIND FORCE RESISTING SYSTEM CAPABLE OF WITHSTANDING AND TRANSFERRING APPLIED PRODUCT LOADS TO THE FOUNDATION IS THE RESPONSIBILITY OF THE ENGINEER OR ARCHITECT OF RECORD FOR THE PROJECT OF INSTALLATION.
- 1X AND 2X BUCKS (WHEN USED) SHALL BE DESIGNED AND ANCHORED TO PROPERLY TRANSFER ALL LOADS TO THE STRUCTURE. BUCK DESIGN AND ANCHOR LAYOUT IS THE RESPONSIBILITY OF THE ENGINEER OR ARCHITECT OF RECORD FOR THE PROJECT OF INSTALLATION.
- THE INSTALLATION DETAILS DESCRIBED HEREIN ARE GENERIC AND MAY NOT REFLECT ACTUAL CONDITIONS FOR A SPECIFIC SITE. IF SITE CONDITIONS CAUSE INSTALLATION TO DEVIATE FROM THE REQUIREMENTS DETAILED HEREIN, A LICENSED ENGINEER OR ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE WITH THIS DOCUMENT.
- THIS PRODUCT IS LARGE AND SMALL MISSILE IMPACT RESISTANT APPROVED IMPACT PROTECTIVE SYSTEM **IS NOT REQUIRED** ON THIS PRODUCT IN AREAS REQUIRING IMPACT RESISTANCE.
- DOOR FRAME MATERIAL: - 16 GA. STEEL (.053" MIN.)  
- 18 GA. STEEL (.043" MIN.)
- DESIGNATIONS "X" AND "O" STAND FOR THE FOLLOWING:  
X: OPERABLE PANEL  
O: FIXED PANEL

TABLE OF CONTENTS		
SHEET	REVISION	SHEET DESCRIPTION
1	B	INSTALLATION & GENERAL NOTES
2	C	ELEVATIONS
3	C	ANCHOR LAYOUTS & NOTES
4	A	18 GA. & 16 GA. DOOR PANEL CONSTRUCTION
5	C	FRAME NOTES & MULLION DETAILS
6	C	VERTICAL SECTIONS
7	B	HORIZONTAL SECTIONS
8	C	HORIZONTAL SECTIONS
9	B	HORIZONTAL SECTIONS
10	-	COMPONENTS
11	A	COMPONENTS
12	B	STIFFENER DETAILS
13	C	COMPONENTS, DETAILS & BILL OF MATERIALS

MIAMI DADE/FLORIDA BUILDING CODE DESIGN PRESSURES			
	*WHERE WATER INFILTRATION IS NOT REQUIRED OR IS PROTECTED BY OVERHANG	WHERE WATER INFILTRATION REQUIREMENT IS NEEDED OR IS NOT PROTECTED BY OVERHANG	MISSILE IMPACT RATING
Z E CORBIN/RUSSWIN 26D HEAVY DUTY LOCKSET CORBIN/RUSSWIN DL3000 SERIES CYLINDRICAL DEAD LOCK	+/- 80 PSF	NOT APPROVED	SMALL AND LARGE MISSILE IMPACT RATED
CORBIN/RUSSWIN CL2000 SERIES MORTISE LOCK W/ LEVER	+/- 80 PSF	NOT APPROVED	
DORMA 9300 SERIES RIM DEVICE W/ PUSH BAR	+/- 80 PSF	NOT APPROVED	
DORMA 9400 SERIES VERTICAL RODS W/ PUSH BAR	+/- 80 PSF	NOT APPROVED	

\*NOTE: UNIT SHALL BE INSTALLED AT LOCATION PROTECTED BY OVERHANG SUCH THAT OVERHANG RATIO (OH) = OH LENGTH / OH HEIGHT GREATER THAN 1.

**HMF EXPRESS**

2501 NORTHCHASE PKWY SE  
WILMINGTON, NC 28405  
PH: (866) 452-1845 FX: (910) 452-1848

TITLE: OS FLUSH STEEL DOOR INSTALLATION & GENERAL NOTES  
PREPARED BY: CERTWORKS, LLC  
127 W. FAIRBANKS AVE., STE. 438  
WINTER PARK, FL 32789  
PH: (407) 644-6957 FX: (407) 644-2366

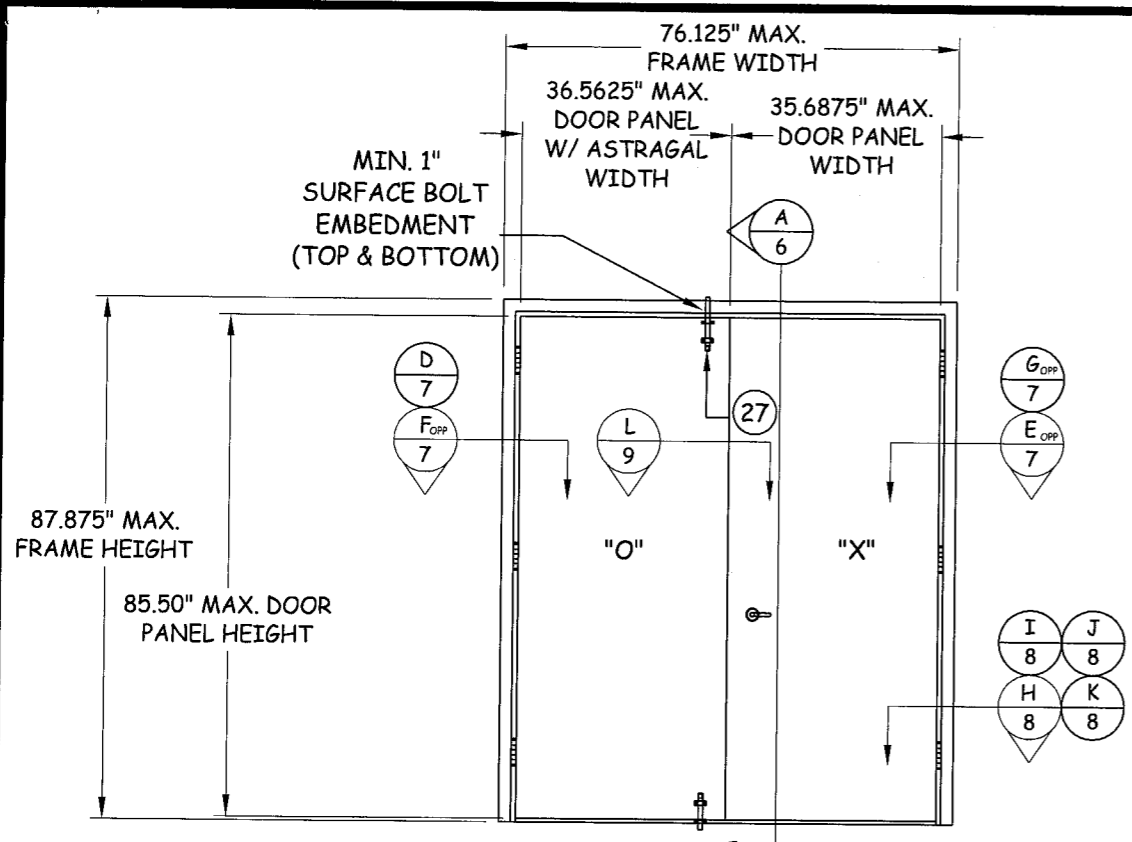
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A	UPDATED TABLE OF CONTENTS	JLR	10.02.09
B	UPDATED PER MD COMMENT	JLA	01.14.10

*[Signature]*  
2-12-10  
KRISTINA S. DAUGHERTY  
FLORIDA P.E. NO. 09485  
127 WINTER PARK BLVD STE 438  
WINTER PARK, FL 32789  
FBPE CERT. OF AUTHORIZATION NO. 28680

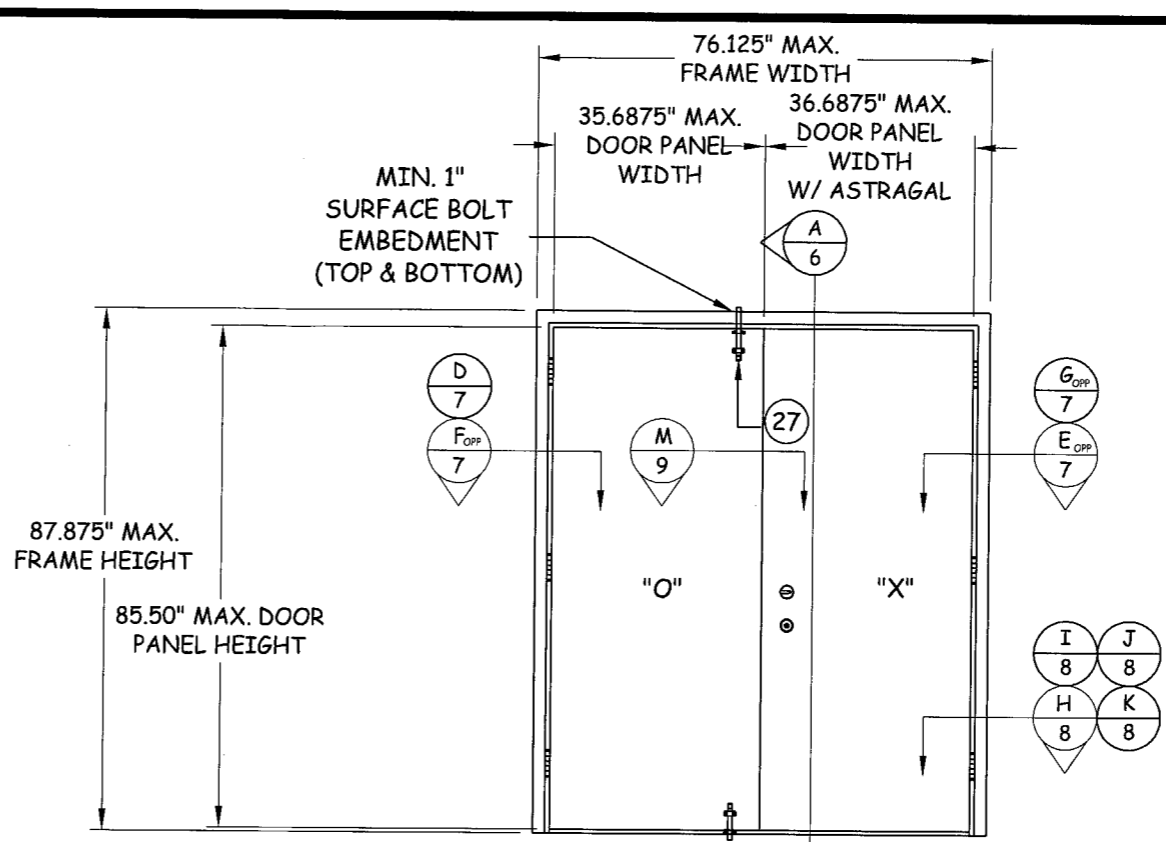
PRODUCT REVISED as complying with the Florida Building Code  
Acceptance No. 09-0615-05  
Expiration Date: 08/26/2014  
By: *[Signature]*  
Miami Dade Product Control Division

DATE: 06.09.09  
DWN BY: GRN  
CHK BY: HN  
SCALE: NTS  
DWG #: HMF001  
SHEET: 1 OF 13

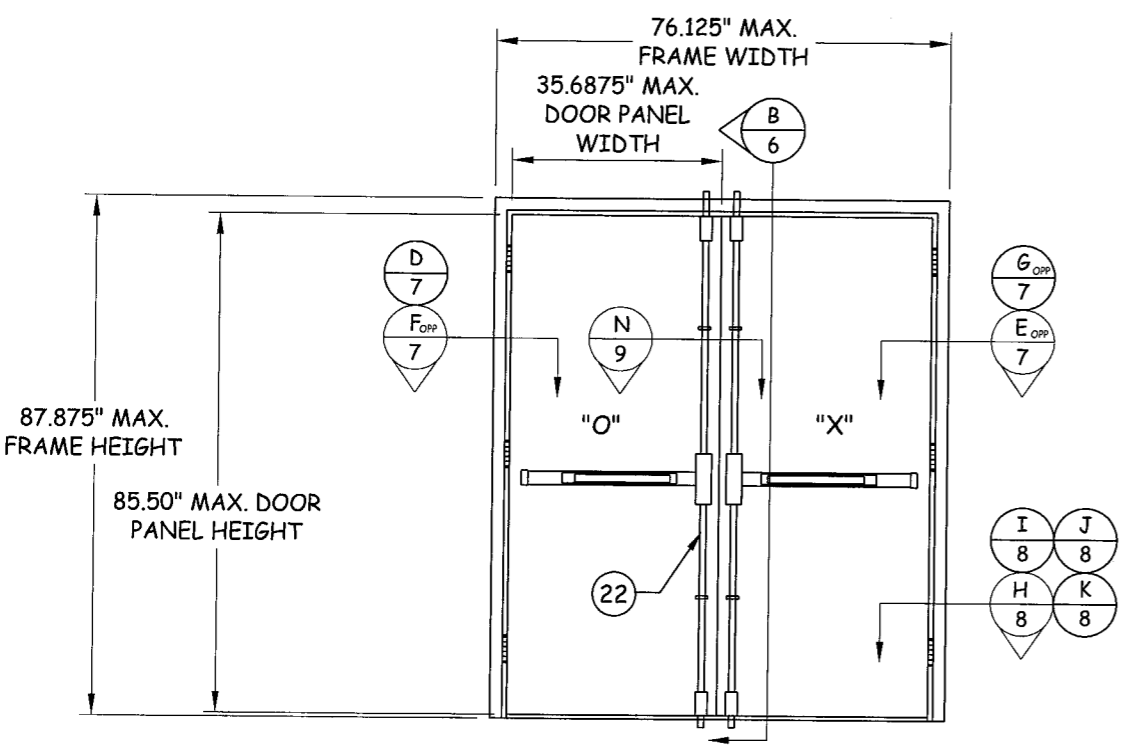
TITLE: OS FLUSH STEEL DOOR ELEVATIONS  
PREPARED BY: CERTWORKS, LLC  
127 W. FAIRBANKS AVE., STE. 438  
WINTER PARK, FL 32789  
PH: (407) 644-6957 FX: (407) 644-2366



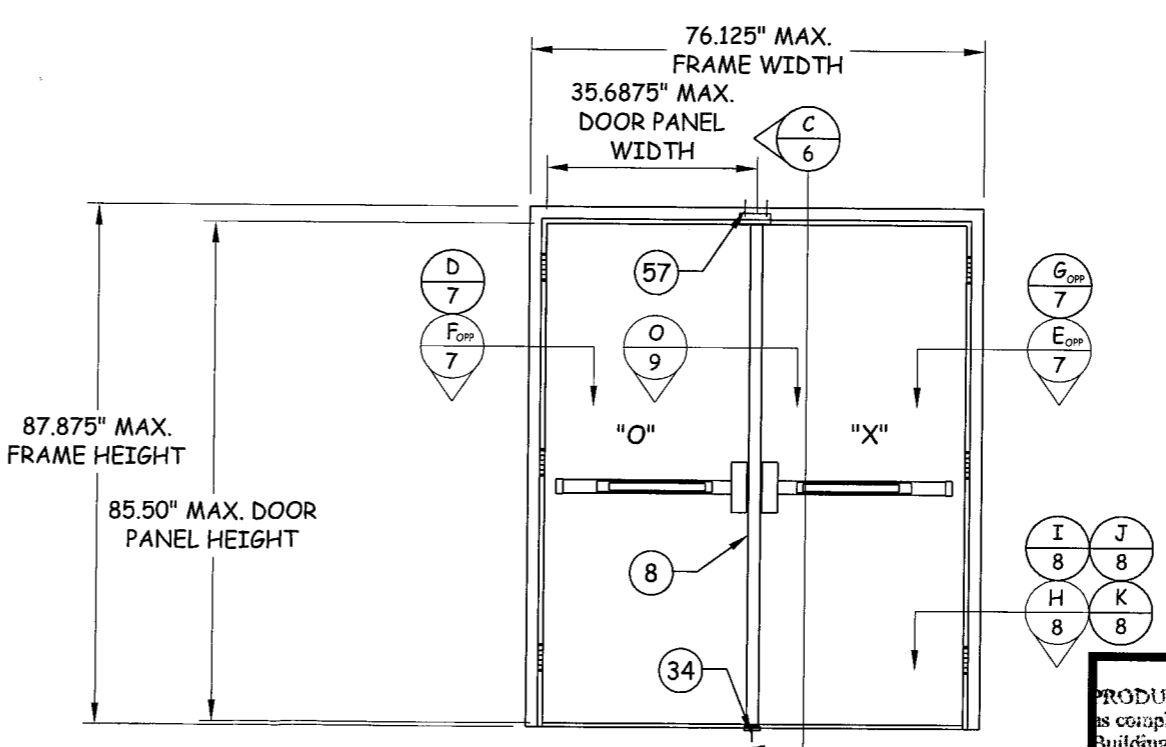
**ELEVATION**  
CORBIN/RUSSWIN ML2000 SERIES MORTISE LOCK



**ELEVATION**  
CORBIN/RUSSWIN CORB 26D HEAVY DUTY CYLINDRICAL  
LOCKSET DL3000 26DSS CYLINDRICAL DEAD LOCK



**ELEVATION**  
DORMA 9400 VERTICAL RODS W/ PUSH BAR



**ELEVATION**  
DORMA 9300 RIM DEVICE W/ PUSH BAR &  
REMOVABLE MULLION

REVISIONS	
NO.	DESCRIPTION
B	UPDATED PER MD COMMENT
C	UPDATED PER MD COMMENT

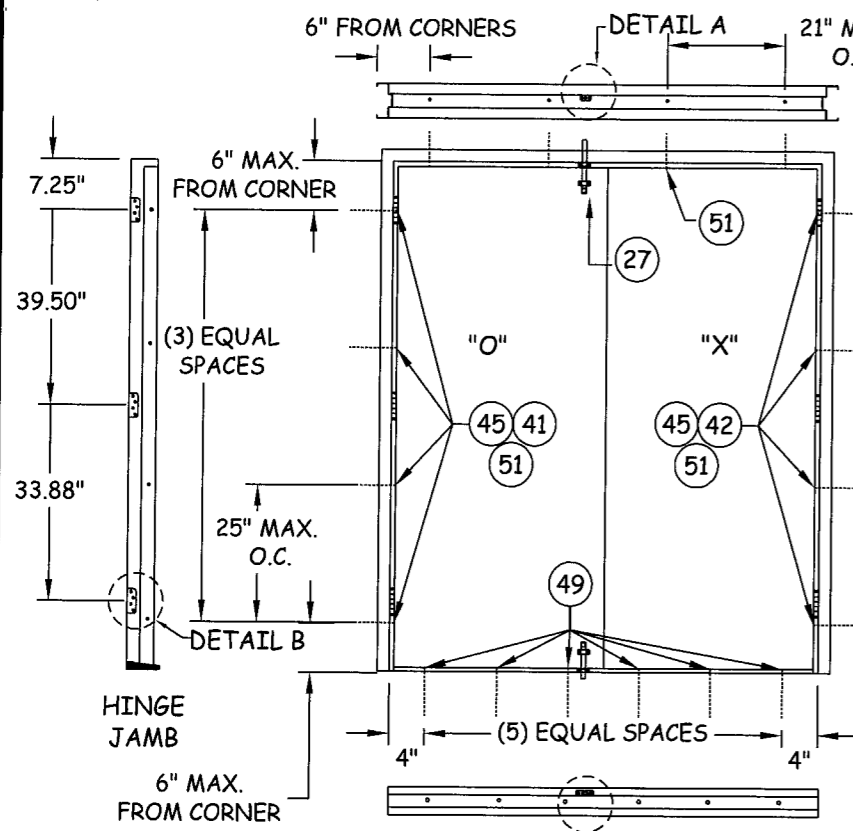
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2-12-10  
KRESTINA S. DAUGHERTY  
127 W. FAIRBANKS AVE., STE. 438  
WINTER PARK, FL 32789  
FBPC CERT. OF AUTHORIZATION NO. 28520

PRODUCT REVISED  
is complying with the Florida  
Building Code  
Acceptance No. 09-0615-2  
Expiration Date 08/26/2014  
By *[Signature]*  
Miami Dade Product Control  
Division

DATE: 06.09.09	DWN BY: GRN	CHK BY: HN	SCALE: NTS
DWG #: <b>HMF001</b>			
SHEET: 2 OF 13			

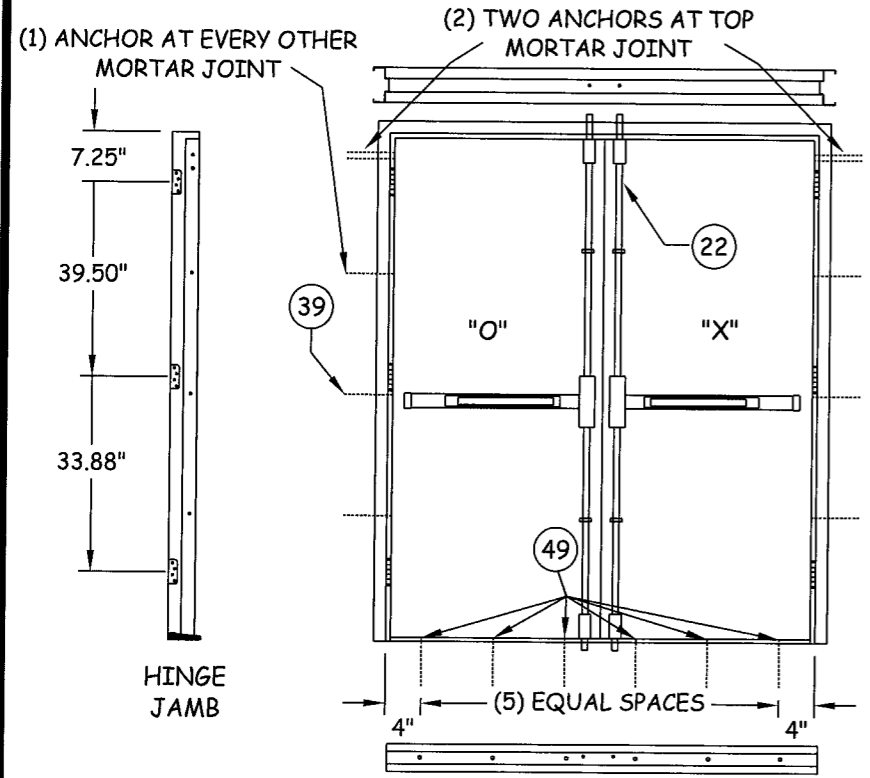
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**ANCHOR LAYOUT**

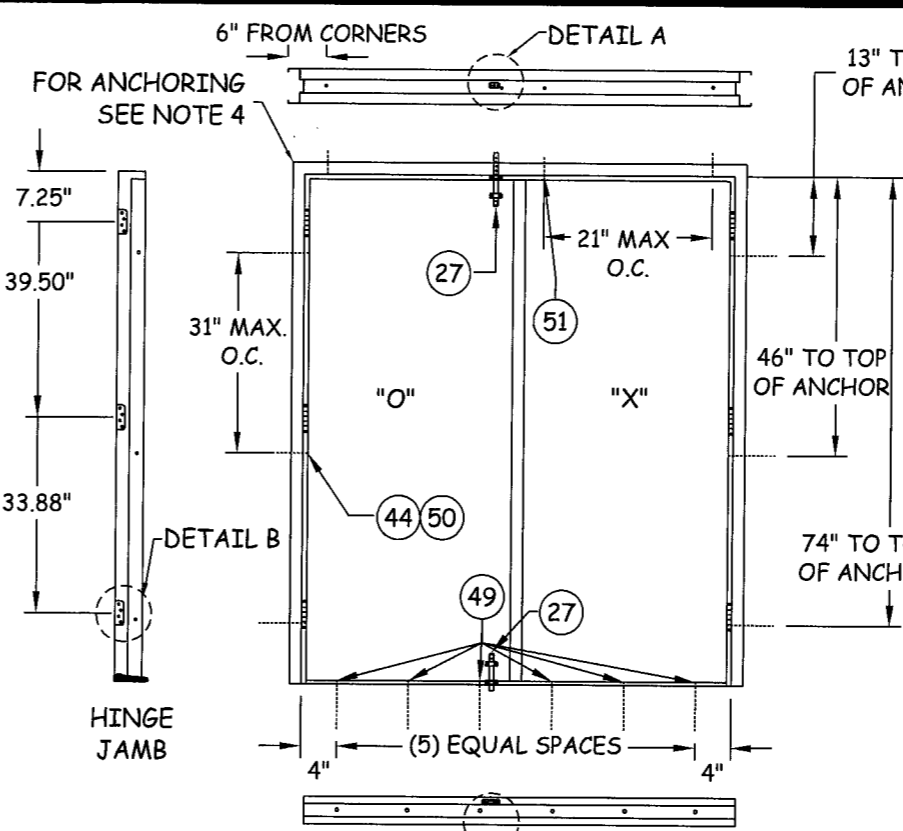
LEFT SIDE WELDED EMA ANCHORS SEE NOTE 7 & 14  
 RIGHT SIDE BUTTERFLY ANCHORS SEE NOTE 6 & 7  
 HEAD 3/8" LAG SCREWS SEE NOTE 15



**ANCHOR LAYOUT**

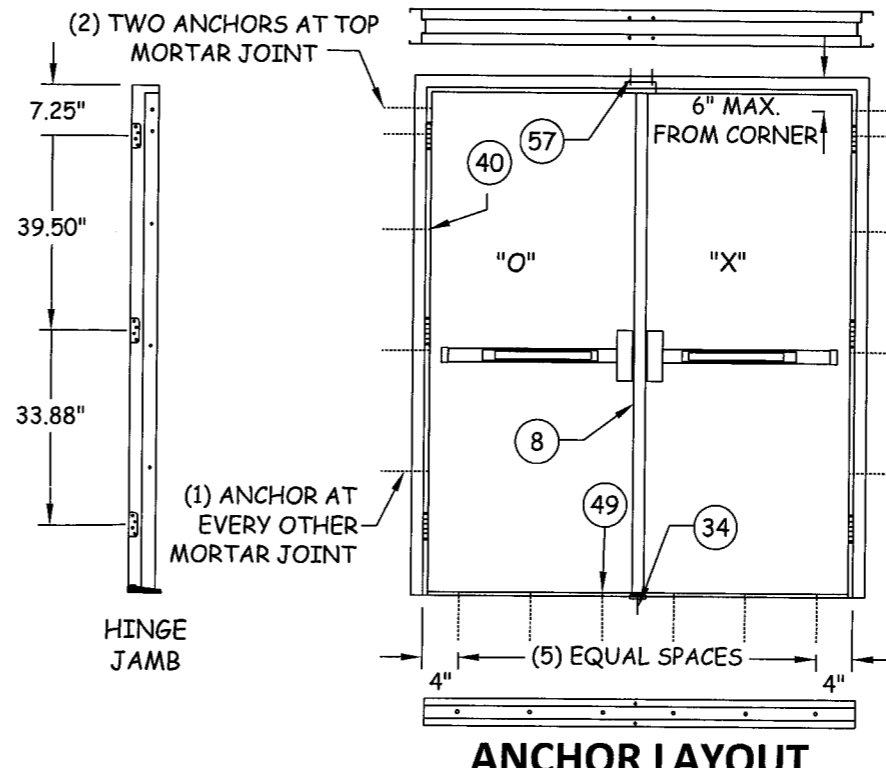
LEFT SIDE TEE ANCHORS SEE NOTE 9  
 RIGHT SIDE ADJUSTABLE STRAPS SEE NOTE 12 & 13

- NOTES:**
- SPACING FOR ITEM #33 THE #10 x 3/4" SMS. ATTACHING THE DOOR BOTTOM SWEEPS TO THE DOOR IS AS FOLLOWS: 2.125" FROM BOTH ENDS AND A MAXIMUM OF 8.0" O.C.
  - SPACING FOR ITEM #33 THE #10 x 3/4" SMS. ATTACHING THE FRAME WEATHERSTRIP TO THE FRAME IS AS FOLLOWS: 3.0" FROM BOTH ENDS AND A MAXIMUM OF 8.0" O.C.
  - SPACING FOR ITEM #32 THE #8 x 1/2" SMS. ATTACHING THE DOOR FACE SEAL TO THE DOOR PANELS IS AS FOLLOWS: 3.6" FROM BOTH ENDS AND A MAXIMUM OF 8.0" O.C.
  - SPACING FOR ITEM #33 THE #10 x 3/4" SMS. ATTACHING THE WEATHERSTRIP TO THE MULLION IS AS FOLLOWS: 2.125" FROM BOTH ENDS AND A MAXIMUM OF 8.0" O.C.
  - SPACING FOR ITEM #33 THE #10 x 3/4" SMS. ATTACHING THE FLAT ASTRAGAL, ITEM #31 TO THE INACTIVE PANEL IS AS FOLLOWS: 2.0" FROM THE TOP DOWN WITH (7) MORE EQUALLY SPACED ALONG THE ASTRAGAL.
  - ALL ANCHORS ARE TO BE THE HMF EXPRESS BUTTERFLY ANCHOR, ITEM #42.
  - ALL ANCHORS ARE SECURED THROUGH THE FRAME AND INTO THE BLOCK WITH 3/8" DYNA BOLT BY ITW RED HEAD (USED W/ EMA WELDED AND EMA BUTTERFLY ANCHORS), ITEM #45.
  - ALL ANCHORS IN THE SIDE JAMBS ARE TO BE THE HMF EXPRESS WOOD/METAL STUD ANCHOR, ITEM #44. EACH ANCHOR IS ATTACHED TO THE WOOD BUCK WITH (4) 8d COMMON RING SHANK NAILS, ITEM #50.
  - ALL ANCHORS ARE TO BE THE HMF EXPRESS TEE ANCHOR, ITEM #39 SUPPLIED BY HMF EXPRESS.
  - ALL BLOCK AND H.M.F. JAMBS AND HEADER ARE TO BE BACK FILLED WITH CONCRETE AS THE OPENING IS BUILT.
  - ALL ANCHORS ARE TO BE THE HMF EXPRESS WIRE ANCHORS, ITEM #40 SUPPLIED BY HMF EXPRESS.
  - THE STRAP ANCHOR BASE IS WELDED INTO THE FRAME AT THE LOCATIONS ABOVE. ADJUST THE STRAP TO FALL INTO A MORTAR JOINT AT INSTALLATION.
  - ALL ANCHORS ARE TO BE THE HMF EXPRESS ADJUSTABLE STRAP ANCHOR, ITEM #43 SUPPLIED BY HMF EXPRESS.
  - ALL ANCHORS ARE TO BE THE HMF EXPRESS WELDED EMA ANCHORS, ITEM #41 SUPPLIED BY HMF EXPRESS.
  - ALL ANCHORS FOR WOOD SUBSTRATE ARE TO BE 3/8" SLOTTED FLAT HEAD LAG SCREWS USED WITH EMA WELDED ANCHOR, ITEM #51.



**ANCHOR LAYOUT**

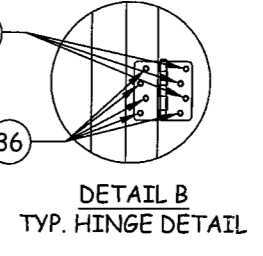
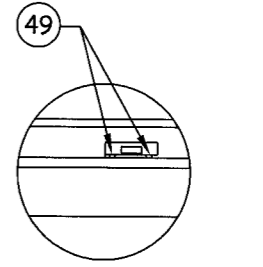
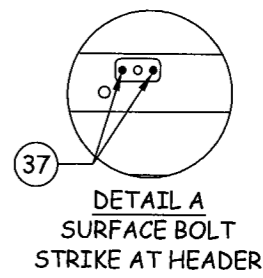
JAMBS WOOD & METAL STUD ANCHORS  
 SEE NOTE 8  
 HEAD 3/8" LAG SCREW SEE NOTE 15



**ANCHOR LAYOUT**

LEFT SIDE WIRE ANCHORS SEE NOTE 11/  
 RIGHT SIDE SEE NOTE 12 & 13  
 WELDED EMA ANCHOR SEE NOTE 7 & 14

PRODUCT REVISED as complying with the Florida Building Code Acceptance No. 09-061502 Expiration Date 08/26/2014  
 By: [Signature] Miami Dade Product Control Division



NOTE: THE SURFACE BOLTS MUST BE USED WITH CORBIN/RUSSWIN ML2000 SERIES MORTISE LOCK & CORBIN/RUSSWIN CORB 26D HEAVY DUTY CYLINDRICAL LOCK LOCKSET & DL3000 HEAVY DUTY CYLINDRICAL DEAD LOCK

**HMF EXPRESS**

2501 NORTHCHASE PKWY SE  
 WILMINGTON, NC 28405  
 PH: (866) 452-1845 FX: (910) 452-1848

TITLE: OS FLUSH STEEL DOOR ANCHOR LAYOUTS & NOTES  
 PREPARED BY: CERTWORKS, LLC  
 127 W. FAIRBANKS AVE., STE. 438  
 WINTER PARK, FL 32789  
 PH: (407) 644-6957 FX: (407) 644-2366

NO.	DESCRIPTION	BY	DATE
A	UPDATED NOTES 7. PER M-D COMMENT	JLR	10.02.09
B	UPDATED PER MD COMMENT	MS	01.13.10
C	UPDATED PER MD COMMENT	KSD	02.11.10

[Signature]  
 2-12-10  
 KRISTINA S. DALCHERTY  
 PROJECT MANAGER  
 127 W. FAIRBANKS AVE., STE. 438  
 WINTER PARK, FL 32789  
 FBPE CERT. OF AUTHORIZATION NO. 286520

DATE:	06.09.09	DWN BY:	GRN	CHK BY:	HN	SCALE:	NTS
DWG #:	<b>HMF001</b>						
SHEET:	<b>3 OF 13</b>						

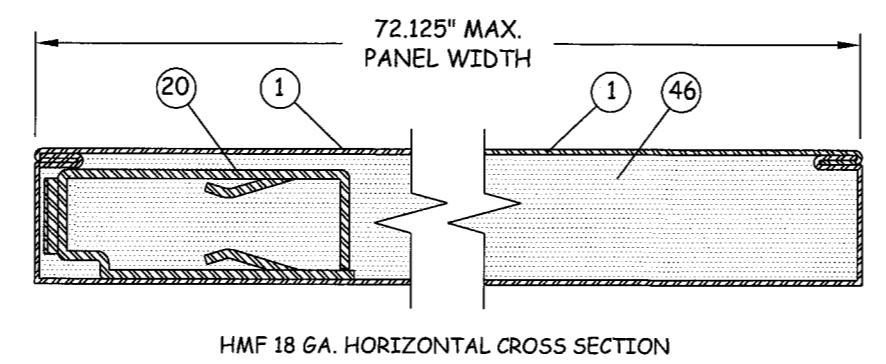
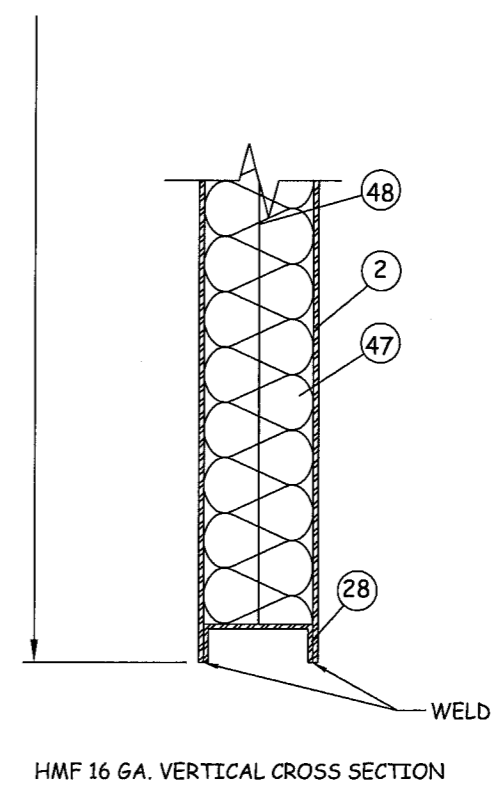
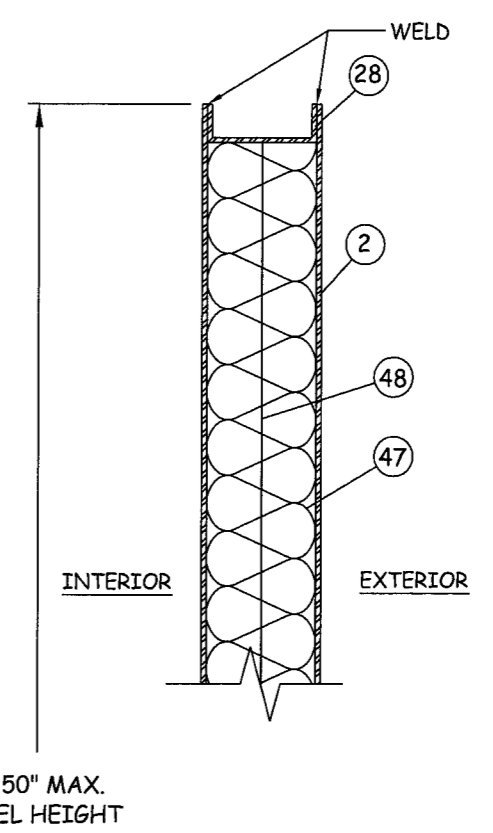
TITLE: OS FLUSH STEEL DOOR  
18 GA. & 16 GA. DOOR PANEL  
CONSTRUCTION

PREPARED BY: CERTWORKS, LLC  
127 W. FAIRBANKS AVE., STE. 438  
WINTER PARK, FL 32789  
PH: (407) 644-6957 FX: (407) 644-2366

NO.	DESCRIPTION	BY	DATE
A	UPDATED 18 GA. NOTES	JLR	10.02.09

*[Signature]*  
2-12-10  
KRISTINA S. DAUGHERTY  
FLORIDA P. E. NO. 68485  
127 W. FAIRBANKS AVE., STE. 438  
WINTER PARK, FL 32789  
FIBRE CERT. OF AUTHORIZATION NO. 288520

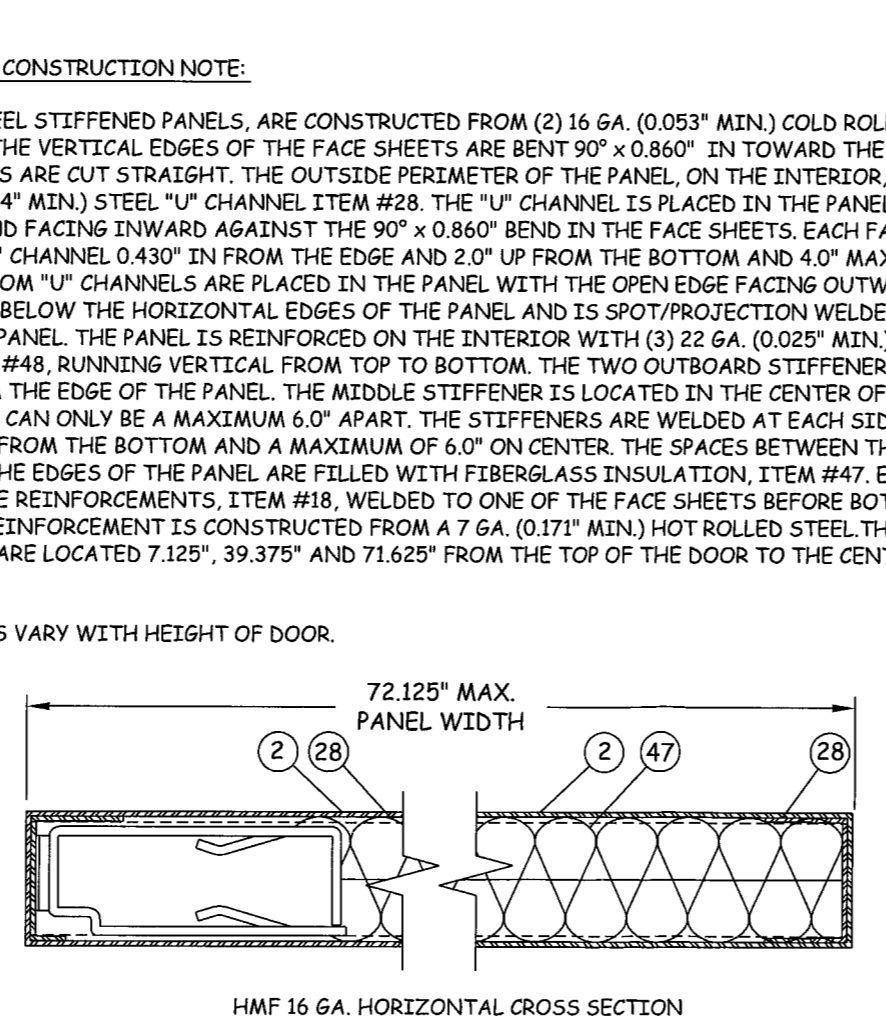
DATE:	06.09.09	DWN BY:	GRN	CHK BY:	HN	SCALE:	NTS
PRODUCT REVISED	complying with the Florida Building Code						
Acceptance No	09-0615.02						
Expiration Date	08/26/2014						
DWG #:	HMF001						
SHEET:	4 OF 13						



**18 GA. DOOR PANEL CONSTRUCTION NOTE:**

THE HMF 18 GA. PANELS ARE CONSTRUCTED FROM (2) 18 GA. (0.048" MIN.) COLD ROLLED OR A60 GALVANNEALED STEEL FACE SHEETS, ITEM #2. THE VERTICAL EDGES OF THE FACE SHEETS HAVE ROLL FORMED EDGES AND ARE PLACED TOGETHER AT PANEL CONSTRUCTION TO FORM A MECHANICAL INTERLOCK. THE HORIZONTAL EDGES ARE CUT STRAIGHT AND ARE CLOSED WITH A 14 GA.(0.074") STEEL TOP & BOTTOM "U" CHANNEL CLOSER, ITEM #28. THE TOP AND BOTTOM "U" CHANNELS ARE PLACED IN THE PANEL WITH OPEN EDGE FACING OUTWARD. THE "U" CHANNEL IS 0.125" BELOW THE HORIZONTAL EDGES OF THE PANEL AND IS SPOT/PROJECTION WELDED IN (5) PLACES ON EACH SIDE OF THE PANEL. THE INTERIOR CAVITY OF EACH PANEL IS FILLED WITH EXPANDED POLYSTYRENE (EPS) 1.0lbs. DENSITY, ITEM #46. THERE ARE THREE HINGE REINFORCEMENTS, ITEM #18, WELDED TO THE FACE SHEETS BEFORE BOTH FACE SHEETS ARE ASSEMBLED. THE REINFORCEMENT IS CONSTRUCTED FROM 7 GA. (0.179") HOT ROLLED STEEL MEASURING 1.25" X 8.5". THE REINFORCEMENTS ARE LOCATED AT 7.125", 39.375" AND 71.625" FROM TOP OF THE DOOR TO THE CENTER OF THE REINFORCEMENTS.

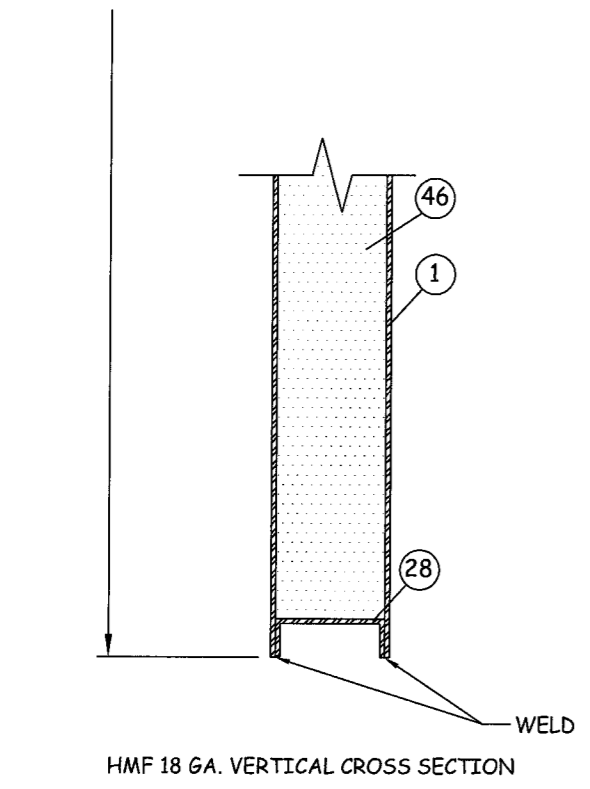
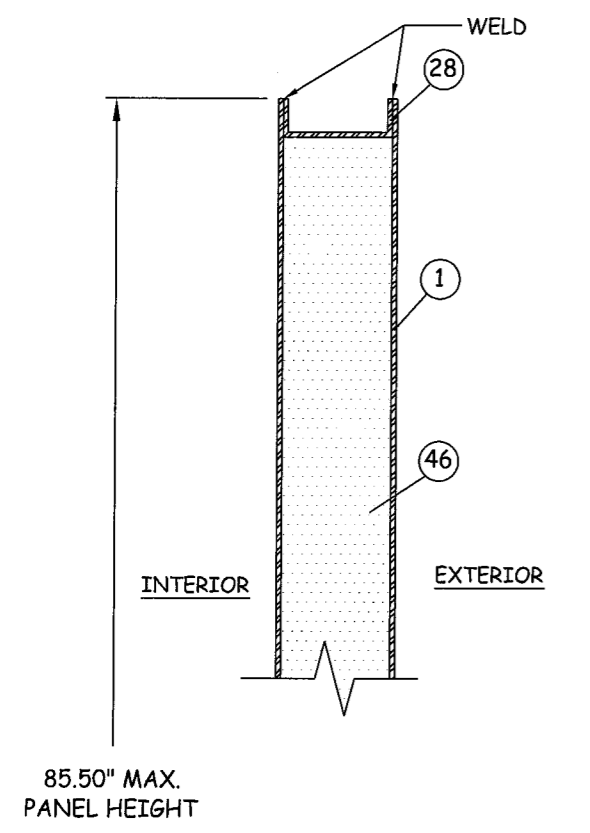
\*NOTE: HINGE LOCATIONS VARY WITH HEIGHT OF DOOR



**16 GA. DOOR PANEL CONSTRUCTION NOTE:**

THE HMF 16 GA. STEEL STIFFENED PANELS, ARE CONSTRUCTED FROM (2) 16 GA. (0.053" MIN.) COLD ROLLED STEEL FACE SHEETS ITEM #2. THE VERTICAL EDGES OF THE FACE SHEETS ARE BENT 90° x 0.860" IN TOWARD THE CENTER. THE HORIZONTAL EDGES ARE CUT STRAIGHT. THE OUTSIDE PERIMETER OF THE PANEL, ON THE INTERIOR, IS REINFORCED WITH A 14 GA. (0.074" MIN.) STEEL "U" CHANNEL ITEM #28. THE "U" CHANNEL IS PLACED IN THE PANEL ON THE SIDES WITH THE OPEN END FACING INWARD AGAINST THE 90° x 0.860" BEND IN THE FACE SHEETS. EACH FACE SHEET IS SPOT WELDED TO THE "U" CHANNEL 0.430" IN FROM THE EDGE AND 2.0" UP FROM THE BOTTOM AND 4.0" MAXIMUM OF CENTER. THE TOP AND BOTTOM "U" CHANNELS ARE PLACED IN THE PANEL WITH THE OPEN EDGE FACING OUTWARD. THE "U" CHANNEL IS 0.125" BELOW THE HORIZONTAL EDGES OF THE PANEL AND IS SPOT/PROJECTION WELDED IN (5) PLACES ON EACH SIDE OF THE PANEL. THE PANEL IS REINFORCED ON THE INTERIOR WITH (3) 22 GA. (0.025" MIN.) STEEL STIFFENERS, ITEM #48, RUNNING VERTICAL FROM TOP TO BOTTOM. THE TWO OUTBOARD STIFFENERS ARE LOCATED 6.5" MAXIMUM IN FROM THE EDGE OF THE PANEL. THE MIDDLE STIFFENER IS LOCATED IN THE CENTER OF THE PANEL. THE THREE STIFFENERS CAN ONLY BE A MAXIMUM 6.0" APART. THE STIFFENERS ARE WELDED AT EACH SIDE OF THE STIFFENER UP 3.0" FROM THE BOTTOM AND A MAXIMUM OF 6.0" ON CENTER. THE SPACES BETWEEN THE THREE STIFFENERS AND THE EDGES OF THE PANEL ARE FILLED WITH FIBERGLASS INSULATION, ITEM #47. EACH PANEL HAS THREE STEEL HINGE REINFORCEMENTS, ITEM #18, WELDED TO ONE OF THE FACE SHEETS BEFORE BOTH FACE SHEETS ARE ASSEMBLED. THE REINFORCEMENT IS CONSTRUCTED FROM A 7 GA. (0.171" MIN.) HOT ROLLED STEEL. THE REINFORCEMENTS ARE LOCATED 7.125", 39.375" AND 71.625" FROM THE TOP OF THE DOOR TO THE CENTER OF THE REINFORCEMENTS.

\*HINGE LOCATIONS VARY WITH HEIGHT OF DOOR.

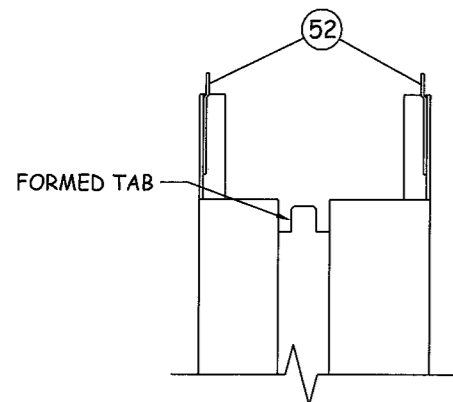


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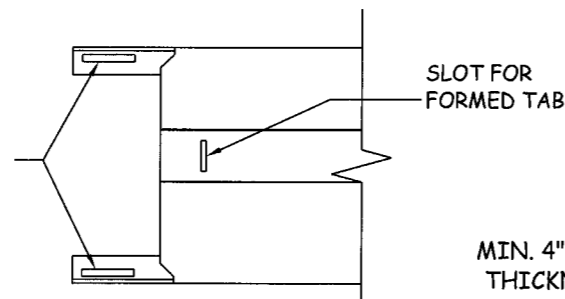
**FRAME CONSTRUCTION NOTE:**

- K.D. AND WELDED FRAME - THE HEADER, ITEM #3 AND THE SIDE JAMBS, ITEM #4 ARE A ONE-PIECE BRAKE PRESS FORMED STEEL FRAME FROM 16 GA. (0.053" MIN.) COLD ROLLED STEEL. THE CORNERS OF BOTH THE HEADER AND SIDE JAMBS ARE MITERED AND BUTTED. THE HEADER HAS SLOTS PUNCHED IN BOTH RETURN LEGS (SEE DETAIL B, SHEET 5) FOR THE 18 GA. (0.048" MIN.) FRAME TABS, ITEM #52 THAT ARE WELDED TO SIDE JAMBS. THE TABS ARE BENT 90° OVER THE HEADER AFTER BEING SLIPPED THROUGH THE SLOTS TO CREATE A MECHANICAL JOINT. THE HEADER ALSO HAS A PUNCHED SLOT IN THE HAT SECTION, SEE DETAIL B SHEET 5. THE SIDE JAMBS HAVE ONE FORMED TAB IN THE HAT SECTION, SEE DETAIL A SHEET 5. THE FORMED TABS ON THE SIDE JAMBS ARE SLID INTO THE PUNCHED SLOTS IN THE HEADER AND BENT OVER 90° TO CREATE A MECHANICAL LOCK. WELDED FRAME ONLY AT THE HEADER AND SIDE JAMBS ARE ASSEMBLED. THEY ARE SEAM WELDED ON THE FRAME FACE AND CONTINUOUS WELDED ON THE INTERIOR FACES.

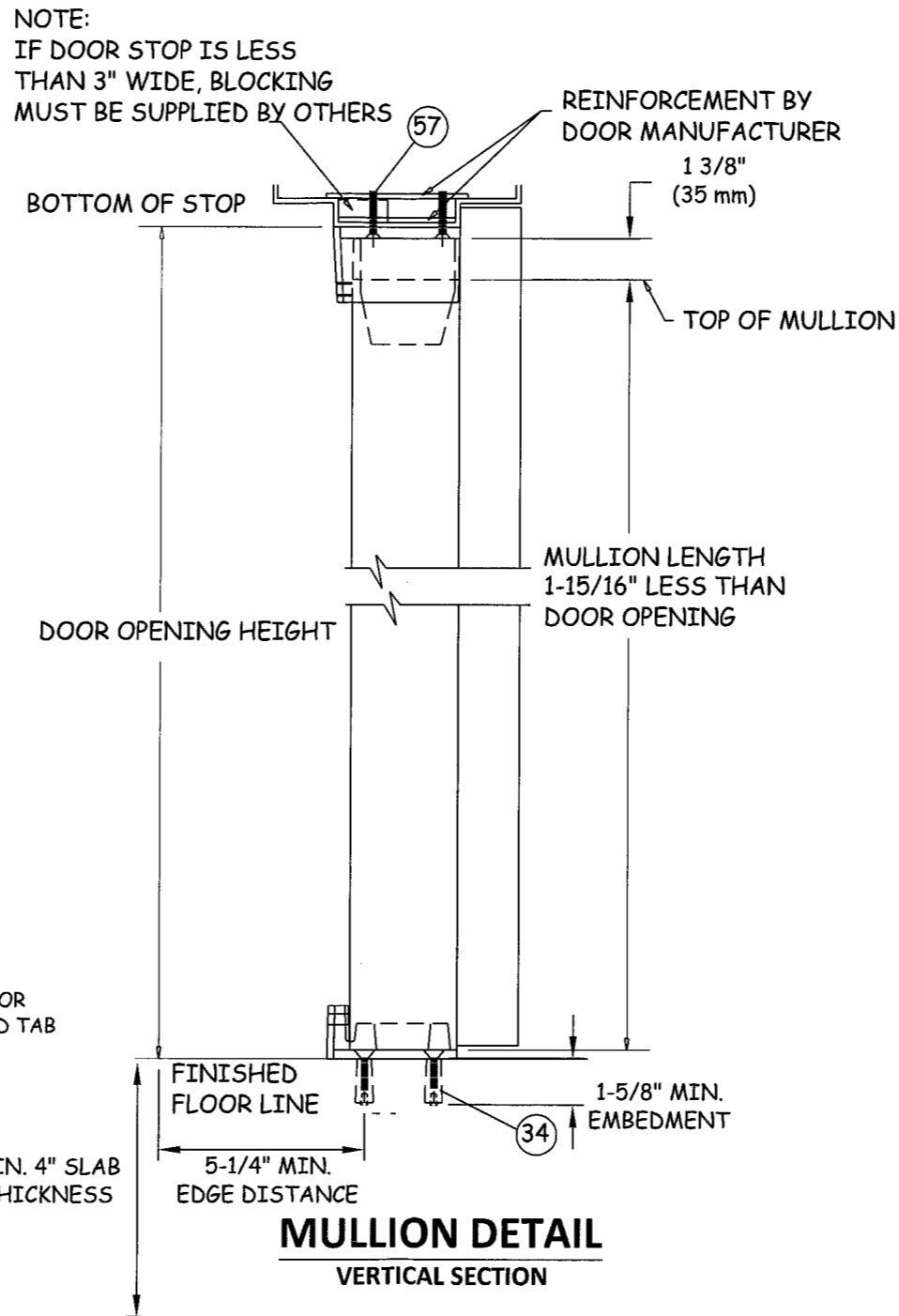
- EACH HINGE LOCATION ON BOTH THE WELDED FRAME AND THE K.D. FRAME HAVE A 7 GA. (0.179") HOT ROLLED STEEL HINGE REINFORCEMENT, ITEM #19, WELDED TO THE FRAME. EACH SIDE JAMB HAS A 16 GA. (0.053") STEEL L-SHAPED FLOOR ANCHOR PLATE WELDED TO THE INSIDE BOTTOM OF THE FRAME. THE SYSTEM CAN BE FITTED WITH AN EXTRUDED ALUMINUM OUT-SWING ADA BUMP FACE THRESHOLD MANUFACTURED BY NATIONAL GUARD PRODUCTS #896N, ITEM #5, OR AN EXTRUDED ALUMINUM ADA PASS OVER THRESHOLD #415S BY HAGAR, ITEM #7. THE FRAME SYSTEM CAN UTILIZE A SOLID STEEL REMOVABLE MULLION BY DORMA #F1300, ITEM #8, COLD ROLLED STEEL. THE MULLION IS HELD INTO THE FRAME WITH A SOLID STEEL TOP AND BOTTOM MULLION FITTING. THE FITTING AT THE TOP IS SECURED TO THE FRAME HEADER WITH (4) 5/16" X 1/2" FHPMS, ITEM #57. THE FITTING AT THE BOTTOM IS SECURED TO THE CONCRETE FLOOR WITH (2) 3/8" X 1-3/8" DROP-IN ANCHORS INTO CONCRETE SILL, ITEM # 34.



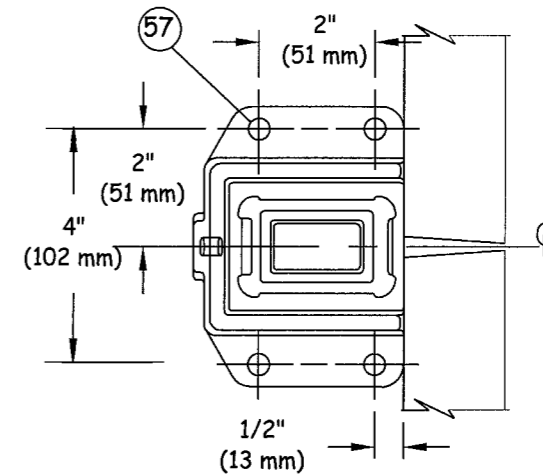
**DETAIL A**  
JAMB DETAIL W/ FORMED  
& WELDED TABS



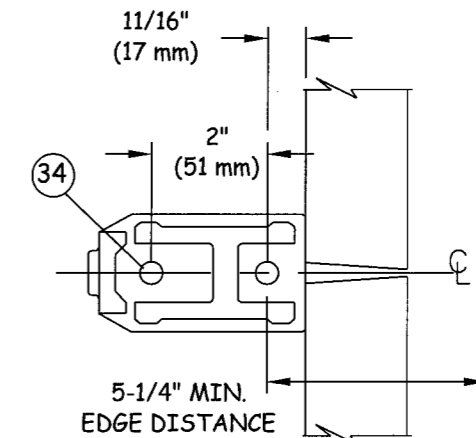
**DETAIL B**  
HEADER DETAIL W/ PUNCHED  
SLOTS FOR JAMB TABS



**MULLION DETAIL**  
VERTICAL SECTION



**MULLION DETAIL**  
TOP FITTING



**MULLION DETAIL**  
BOTTOM FITTING

**HMF EXPRESS**

2501 NORTHCHASE PKWY SE  
WILMINGTON, NC 28405  
PH: (866) 452-1845 FX: (910) 452-1848

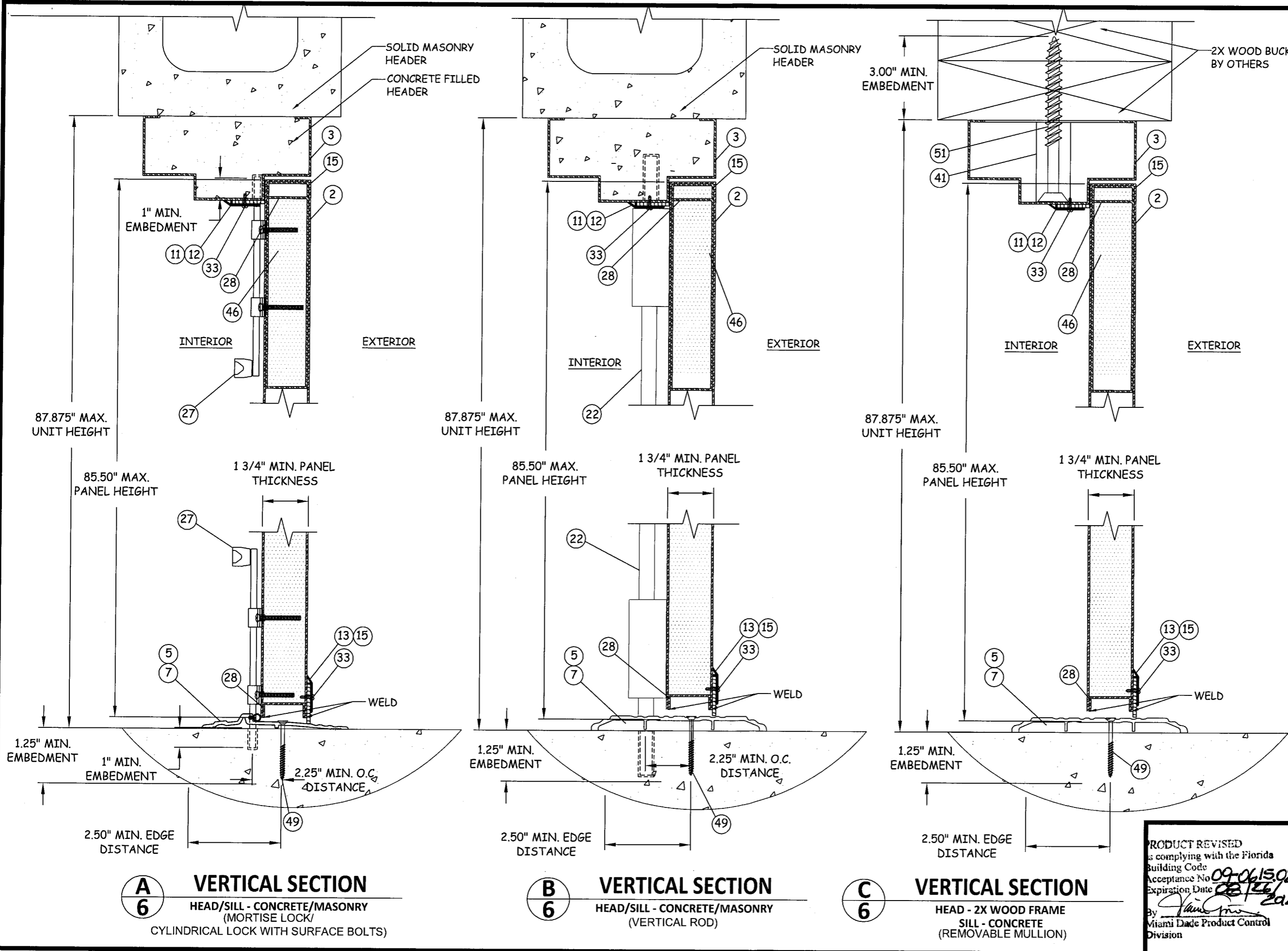
TITLE: OS FLUSH STEEL DOOR  
FRAME NOTES AND MULLION  
DETAILS  
PREPARED BY: CERTWORKS, LLC  
127 W. FAIRBANKS AVE., STE. 438  
WINTER PARK, FL 32789  
PH: (407) 644-6957 FX: (407) 644-2366

REVISIONS		NO.	DESCRIPTION	BY	DATE
B	UPDATED PER MD COMMENT	JLA	01.14.10		
C	UPDATED PER MD COMMENT	KSD	02.11.10		

*[Handwritten Signature]*  
2-12-10  
KRISTINA S. DAUGHERTY  
FLORIDA P.E. NO. 68465  
127 W. FAIRBANKS AVE., STE. 438  
WINTER PARK, FL 32789  
FBCE CERT. OF AUTHORIZATION NO. 88562

PRODUCT REVISED  
is complying with the Florida  
Building Code  
Acceptance No. 09-0615-02  
Expiration Date 08/26/2014  
By *[Signature]*  
Miami Dade Product Control  
Division

DATE: 06.09.09  
DWN BY: GRN  
CHK BY: HN  
SCALE: NTS  
DWG #: HMF001  
SHEET: 5 OF 13



**HMF EXPRESS**

2501 NORTHCHASE PKWY SE  
 WILMINGTON, NC 28405  
 PH: (866) 452-1845 FX: (910) 452-1848

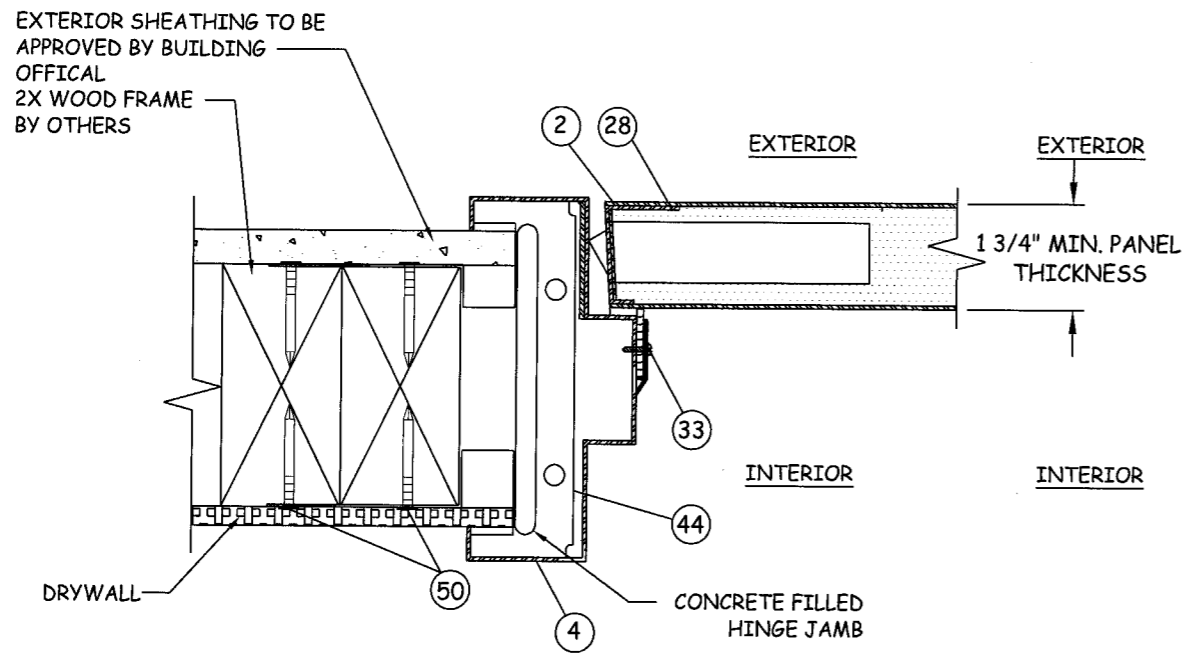
TITLE: OS FLUSH STEEL DOOR  
 VERTICAL SECTIONS  
 PREPARED BY:  
 CERTWORKS, LLC  
 127 W. FAIRBANKS AVE., STE. 438  
 WINTER PARK, FL 32789  
 PH: (407) 644-6957 FX: (407) 644-2366

NO.	DESCRIPTION	BY	DATE
A	UPDATED PER MIAMI-DADE COMMENT	JLR	10.02.09
B	UPDATED PER MD COMMENT	MS	01.13.10
C	UPDATED PER MD COMMENT	KSD	02.11.10

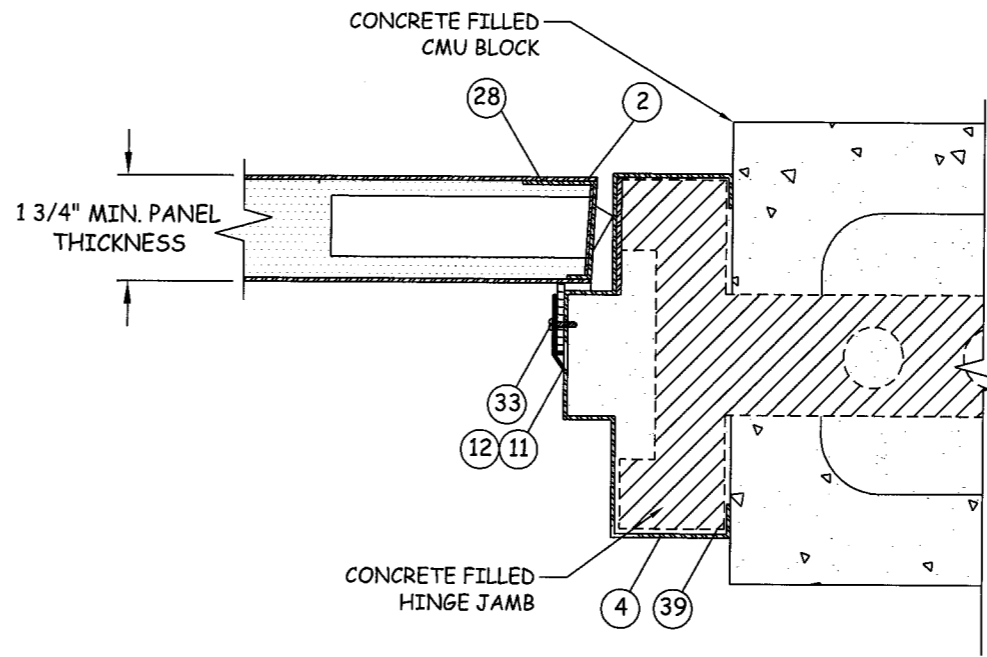
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 2-12-10  
 KRISTINA S. DALGHERTY  
 FLORIDA P.E. NO. 88455  
 127 W. FAIRBANKS AVE., STE. 438  
 WINTER PARK, FL 32789  
 FBPE CERT. OF AUTHORIZATION NO. 28920

PRODUCT REVISED  
 is complying with the Florida  
 Building Code  
 Acceptance No. 09-061502  
 Expiration Date 08/26/2014  
 By *[Signature]*  
 Miami Dade Product Control  
 Division

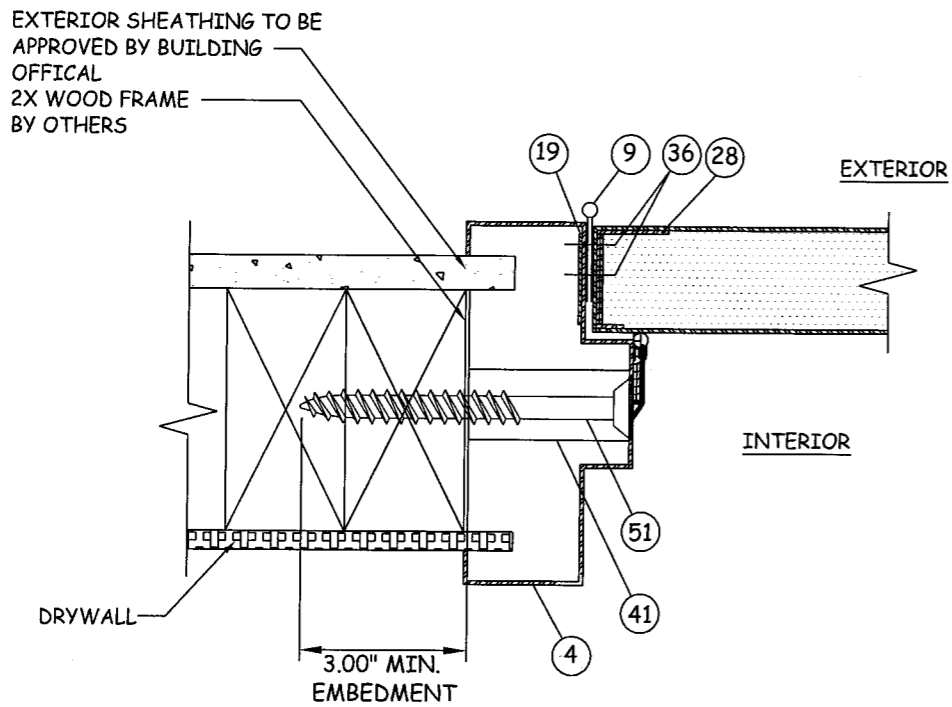
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 DWN BY: GRN  
 CHK BY: HN  
 SCALE: NTS  
 DWG #: HMF001  
 SHEET: 6 OF 13



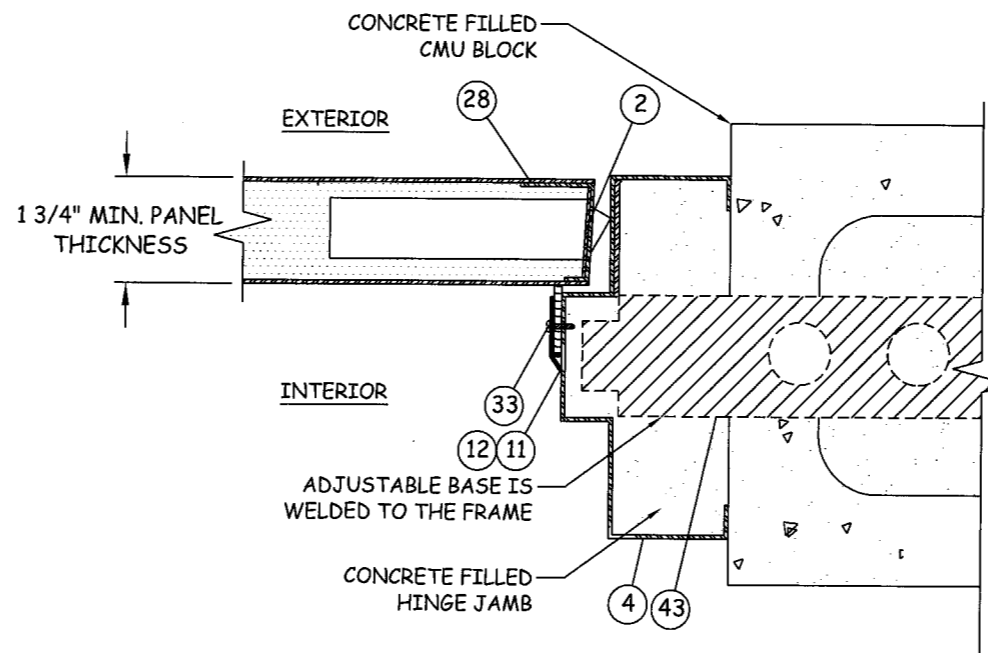
**F**  
**7** **HORIZONTAL SECTION**  
JAMB - WOOD FRAME  
WOOD/METAL STUD ANCHOR



**G**  
**7** **HORIZONTAL SECTION**  
JAMB - CONCRETE/MASONRY  
TEE ANCHOR



**D**  
**7** **HORIZONTAL SECTION**  
JAMB - WOOD FRAME  
LAG SCREW/EMA WELDED ANCHOR



**E**  
**7** **HORIZONTAL SECTION**  
JAMB - CONCRETE/MASONRY  
ADJUSTABLE STRAP

**HMF EXPRESS**

2501 NORTHCHASE PKWY SE  
WILMINGTON, NC 28405  
PH: (866) 452-1845 FX: (910) 452-1848

TITLE: OS FLUSH STEEL DOOR  
HORIZONTAL SECTIONS  
PREPARED BY: CERTWORKS, LLC  
127 W. FAIRBANKS AVE., STE. 438  
WINTER PARK, FL 32789  
PH: (407) 644-6957 FX: (407) 644-2366

**REVISIONS**

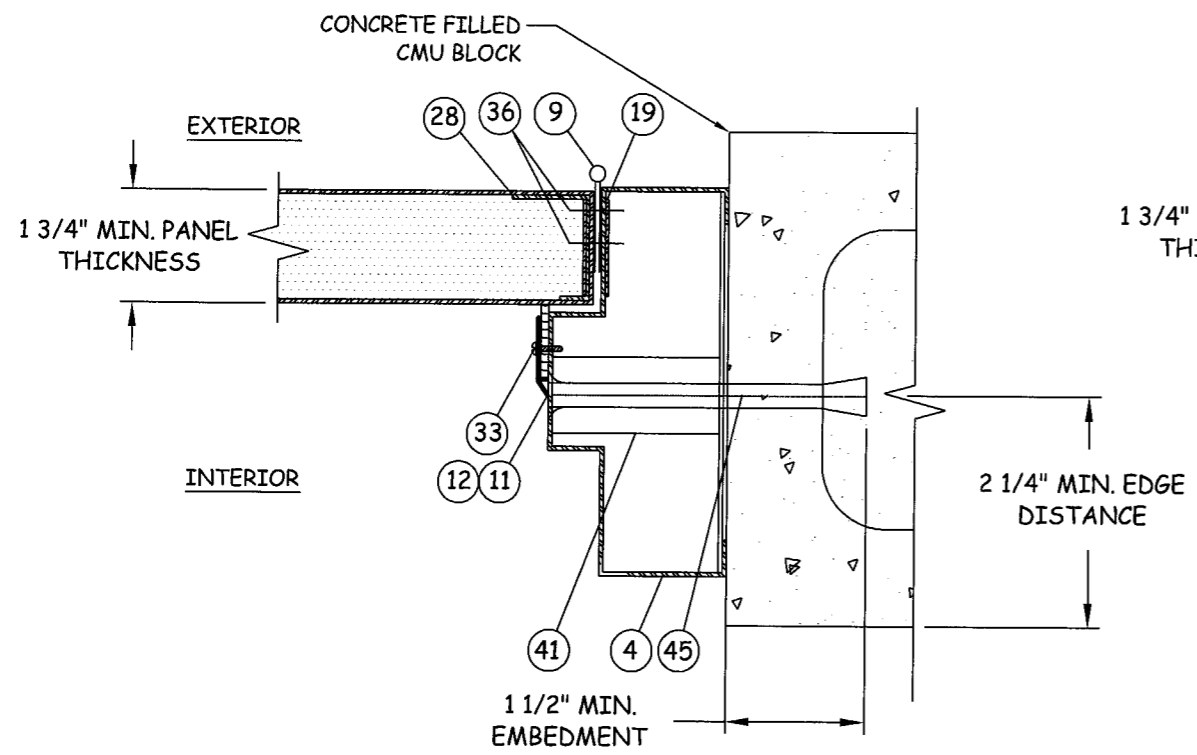
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B	UPDATED PER MD COMMENT	MS	01.13.10

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2-12-10  
KRISTINA S. DAUGHERTY  
FLORIDA P. E. NO. 68465  
127 W. FAIRBANKS AVE., STE. 438  
WINTER PARK, FL 32789  
FBPE CERT. OF AUTHORIZATION NO. 28280

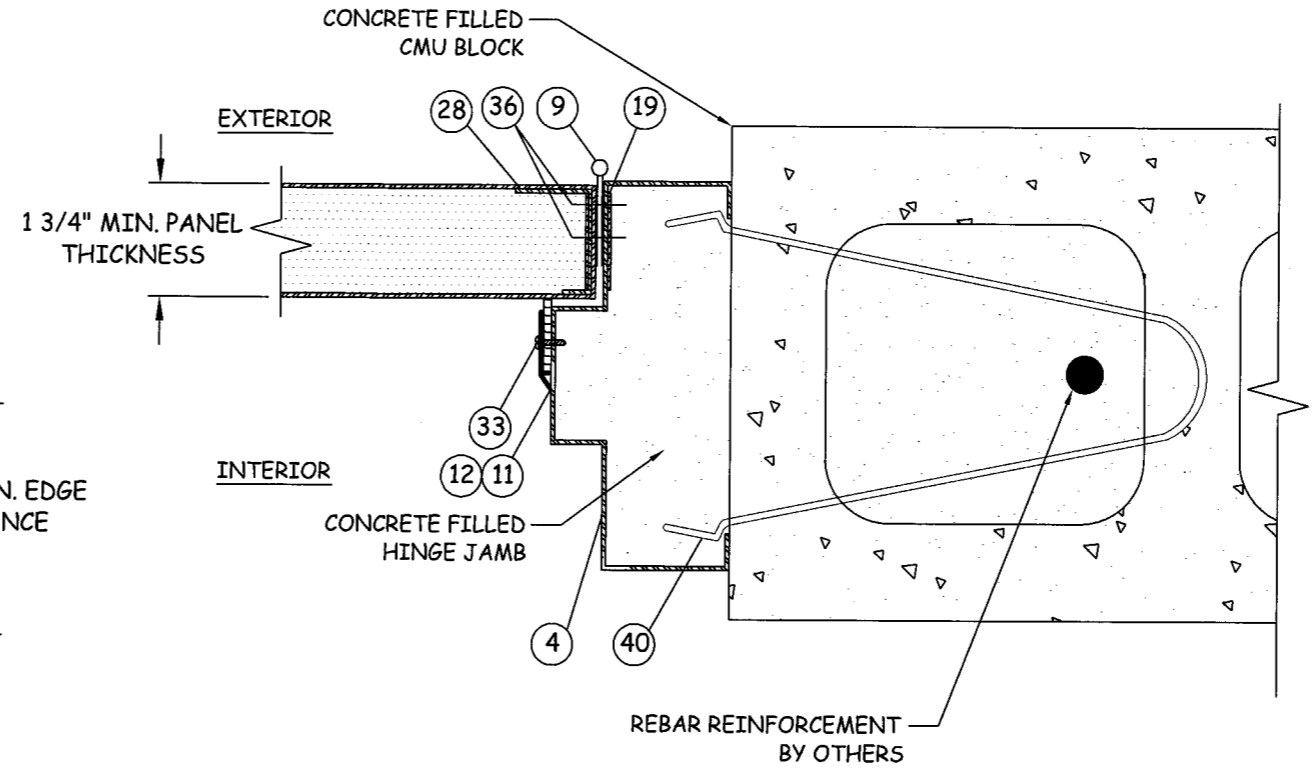
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as complying with the Florida  
Building Code  
Acceptance No. 09-0615-02  
Expiration Date 08/26/2014  
By *[Signature]*  
Miami Dade Product Control  
Division

DATE: 06.09.09  
DWN BY: GRN  
CHK BY: HN  
SCALE:  
DWG #: HMF001  
SHEET: 7 OF 13

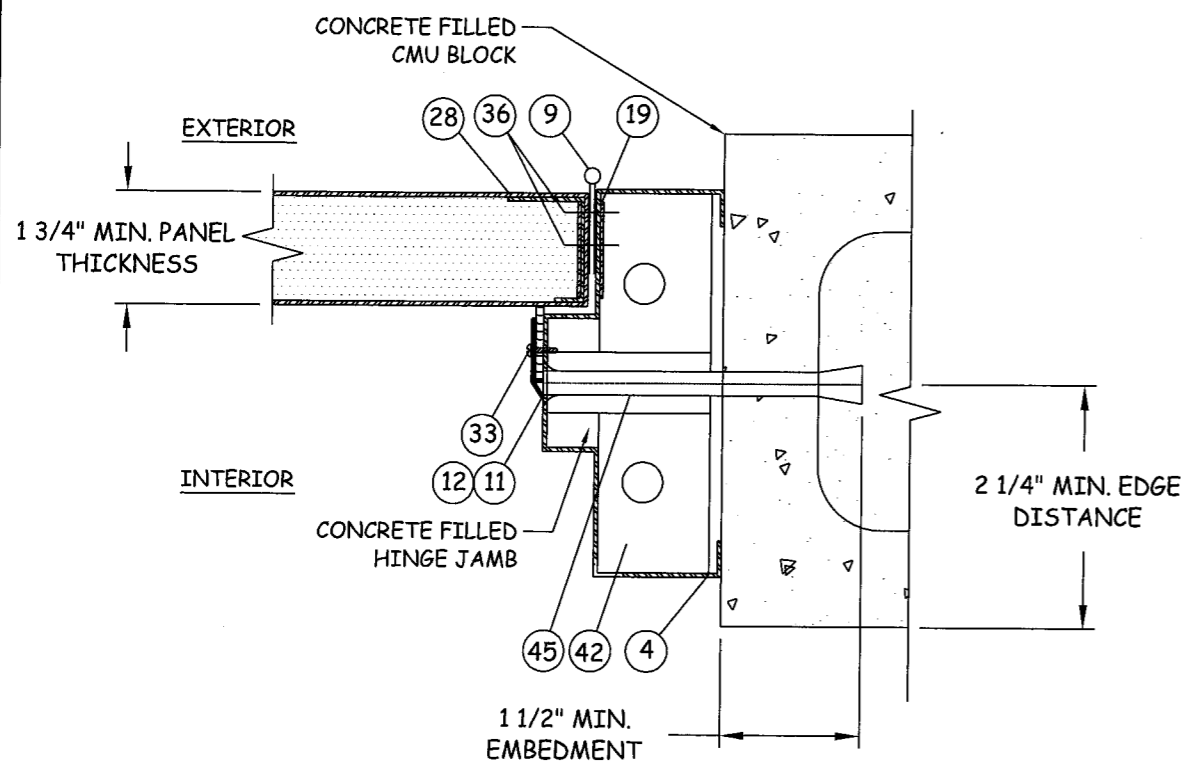
TITLE: OS FLUSH STEEL DOOR  
HORIZONTAL SECTIONS  
PREPARED BY:  
CERTWORKS, LLC  
127 W. FAIRBANKS AVE., STE. 438  
WINTER PARK, FL 32789  
PH: (407) 644-6957 FX: (407) 644-2366



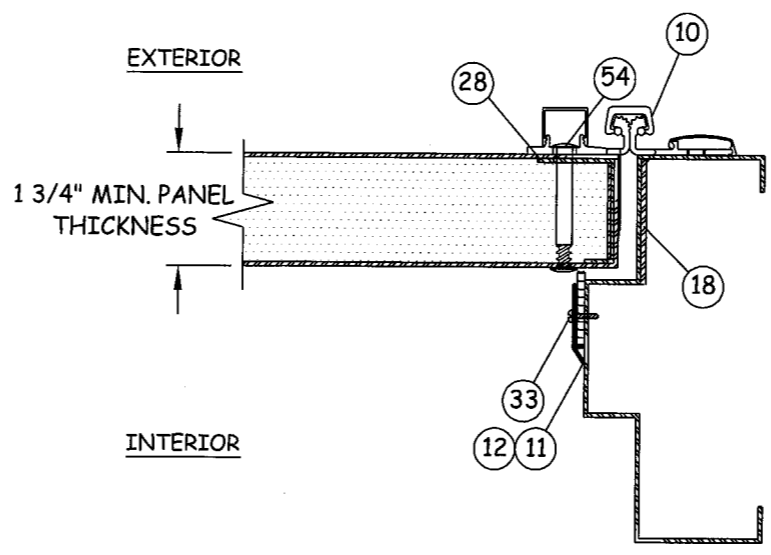
**J**  
**8** HORIZONTAL SECTION  
JAMB - CONCRETE/MASONRY  
LOK-BOLT/ EMA. WELDED ANCHOR



**K**  
**8** HORIZONTAL SECTION  
JAMB - CONCRETE/MASONRY  
WIRE ANCHOR/HMF 18GA PANEL



**H**  
**8** HORIZONTAL SECTION  
JAMB - CONCRETE/MASONRY  
LOK-BOLT/ EMA BUTTERFLY ANCHOR



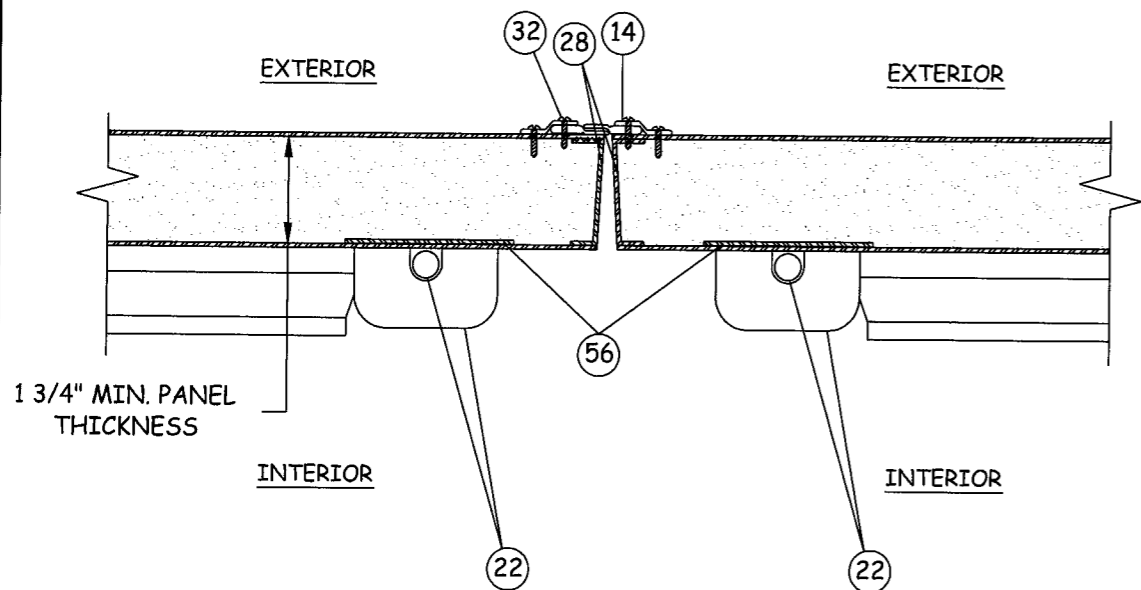
**I**  
**8** HORIZONTAL SECTION  
JAMB - CONTINUOUS HINGE

REVISIONS	
NO.	DESCRIPTION
A	UPDATED K/8 PER M-D COMMENT
B	UPDATED PER MD COMMENT
C	UPDATED PER MD COMMENT

*[Signature]*  
2-12-10  
GRETINA S. DALGHERTY  
FLORIDA P. E. NO. 88455  
127 W. FAIRBANKS AVE., STE. 438  
WINTER PARK, FL 32789  
FIRE CERT. OF AUTHORIZATION NO. 28520

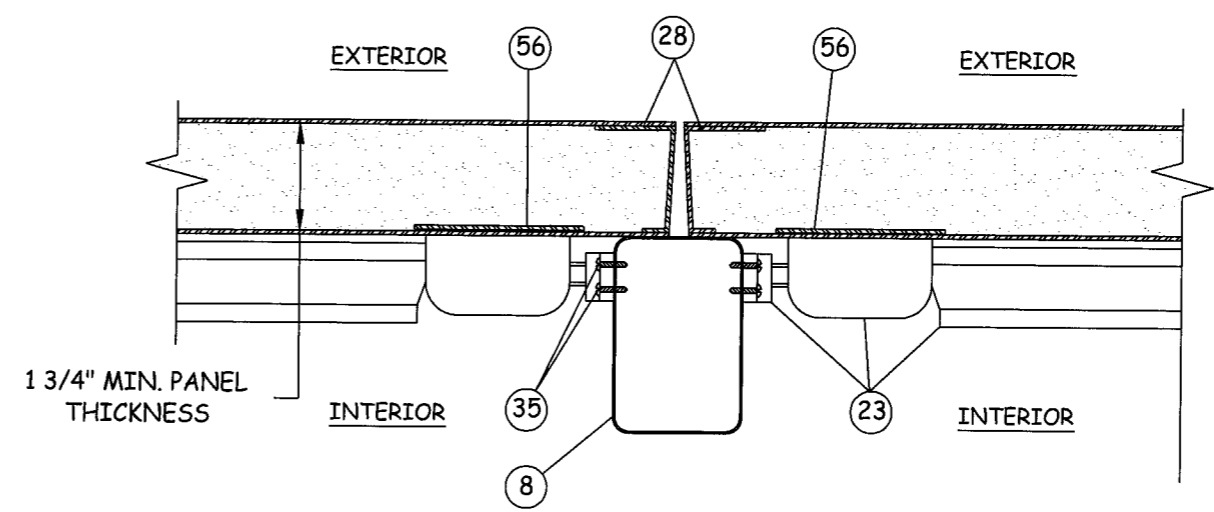
PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No. 09-10615-02  
Expiration Date 09/26/2014  
By *[Signature]*  
Miami Dade Product Control  
Division

DATE:	06.09.09	DWN BY:	GRN	CHK BY:	HN	SCALE:	NTS
DWG #:	HMF001						
SHEET:	8 OF 13						



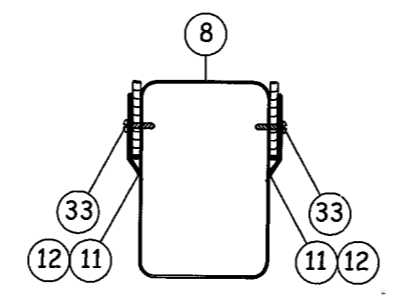
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**9** **HORIZONTAL SECTION**  
DORMA 9400 VERTICAL RODS\*

\* MIAMI-DADE APPROVED  
GRADE 1 EXIT DEVICE

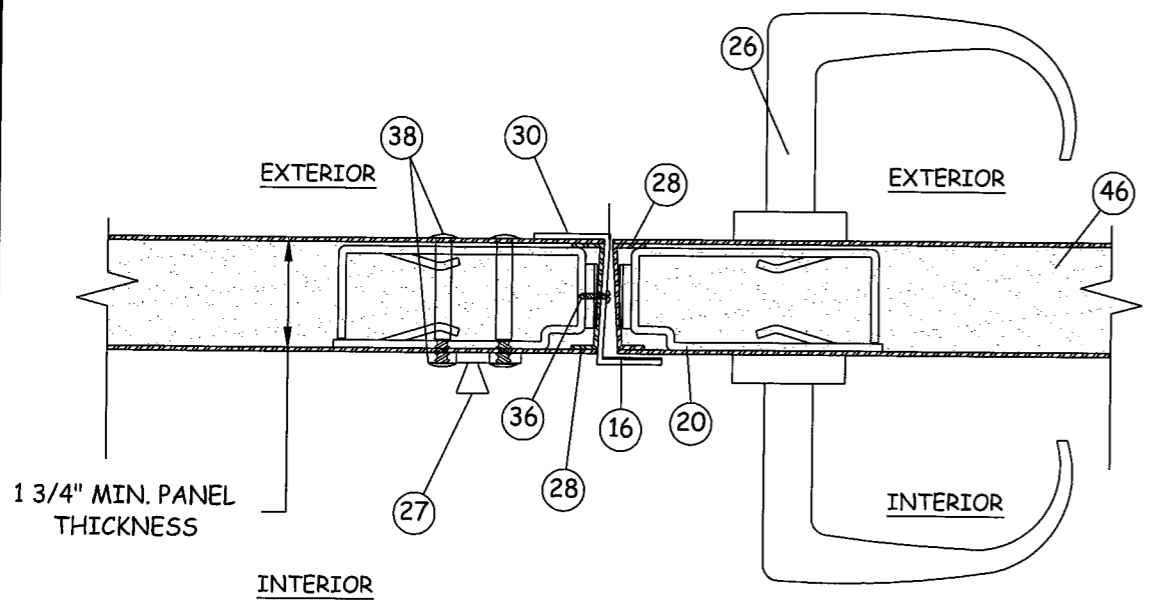


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**9** **HORIZONTAL SECTION**  
DORMA 9300 RIM DEVICE W/ PUSH BAR\*

\* MIAMI-DADE APPROVED  
GRADE 1 RIM EXIT DEVICE

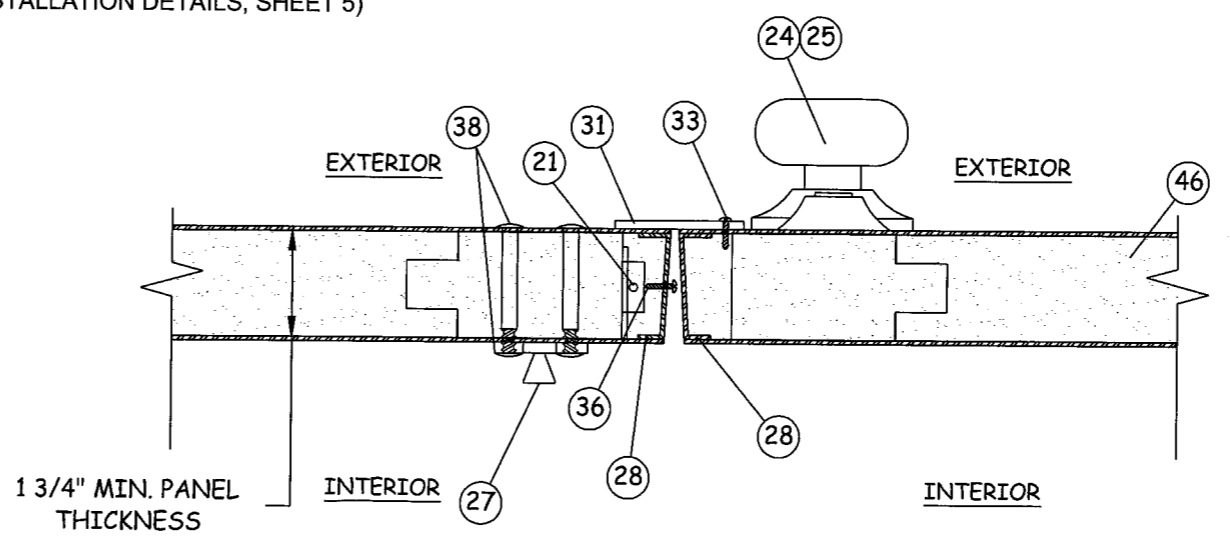


**MULLION DETAIL A**  
(SEE MULLION TOP & BOTTOM  
INSTALLATION DETAILS, SHEET 5)



**L**  
**9** **HORIZONTAL SECTION**  
CORBIN/RUSSWIN ML2000\*  
MORTISE LOCKSET

\* MIAMI-DADE APPROVED  
GRADE 1 MORTISE LOCK



**M**  
**9** **HORIZONTAL SECTION**  
CORBIN/RUSSWIN CORB 26D  
CYLINDRICAL LOCKSET

\* MIAMI-DADE APPROVED  
GRADE 1 CYLINDRICAL LOCK  
GRADE 1 CYLINDRICAL DEADLOCK

**HMF EXPRESS**

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WILMINGTON, NC 28405  
PH: (866) 452-1845 FX: (910) 452-1848

TITLE: OS FLUSH STEEL DOOR  
HORIZONTAL SECTIONS  
PREPARED BY: CERTWORKS, LLC  
127 W. FAIRBANKS AVE., STE. 438  
WINTER PARK, FL 32789  
PH: (407) 644-6957 FX: (407) 644-2366

NO.	DESCRIPTION	BY	DATE
		M.S.	1/27/10

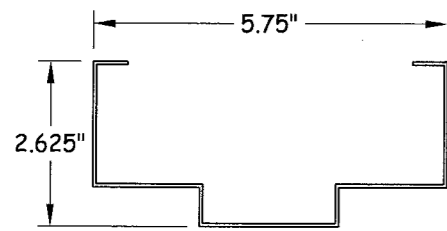
NO.	DESCRIPTION
A	MULLION DETAIL & LOCKSET

*[Signature]*  
2-22-10  
KRISTINA S. CALIBERTY  
FLORIDA P. E. NO. 68465  
127 W. FAIRBANKS AVE. STE. 438  
WINTER PARK, FL 32789  
FBPE CERT. OF AUTHORIZATION NO. 26820

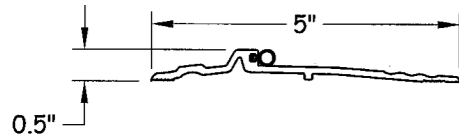
PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No. 09-0615.02  
Expiration Date 08/26/2014  
By: *[Signature]*  
Miami Dade Product Control  
Division

DATE: 06.09.09  
DWN BY: GRN  
CHK BY: HN  
SCALE: NTS  
DWG #: HMF001  
SHEET: 9 OF 13

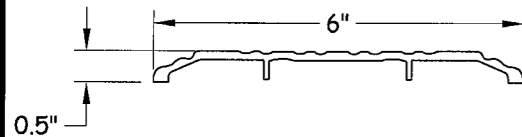
**3&4** H.M.F. HEADER/HINGE JAMB C.R.S.  
16 GA. STEEL MIN.  
TYPICAL WALL THICKNESS: .053"



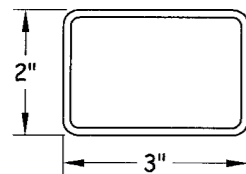
**5** PANIC THRESHOLD NATIONAL GUARD #896N  
ALUMINIUM  
TYPICAL WALL THICKNESS: .125"



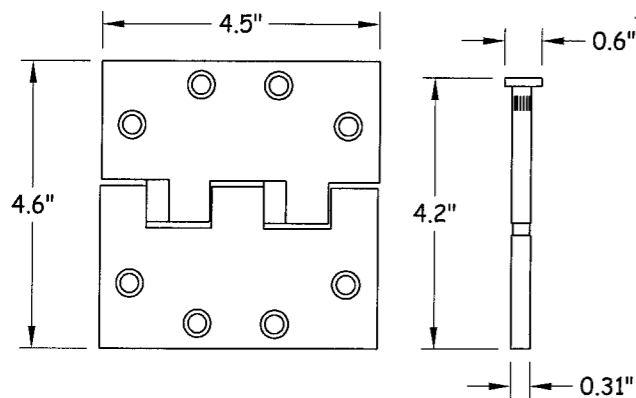
**7** ADA PASS OVER THRESHOLD BY HAGER #415S  
ALUMINIUM  
TYPICAL WALL THICKNESS: .140"



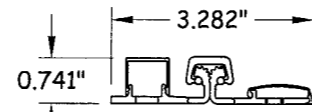
**8** DORMA F1300 FIRE MULLION  
STEEL  
TYPICAL WALL THICKNESS: .116"



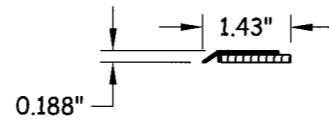
**9** 4 1/2" TEMPLATE HINGE BY HAGER  
STEEL  
TYPICAL WALL THICKNESS: .130"



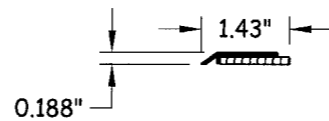
**10** CONTINUOUS STEEL HINGE HAGER



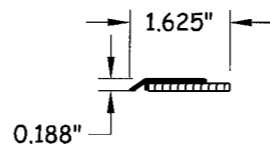
**11** SURFACE MOUNTED FRAME WEATHERSTRIP  
NATIONAL GUARD PRODUCTS #130NA



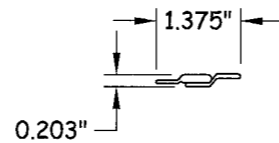
**12** SURFACE MOUNTED FRAME WEATHERSTRIP  
NATIONAL GUARD PRODUCTS #130NA



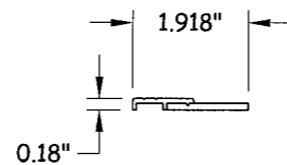
**13** SURFACE MOUNTED DOOR BOTTOM SWEEP  
NATIONAL GUARD PRODUCTS #200NA



**14** SURFACE MOUNTED DOOR MEETING STILE SEAL  
NATIONAL GUARD PRODUCTS #125NA

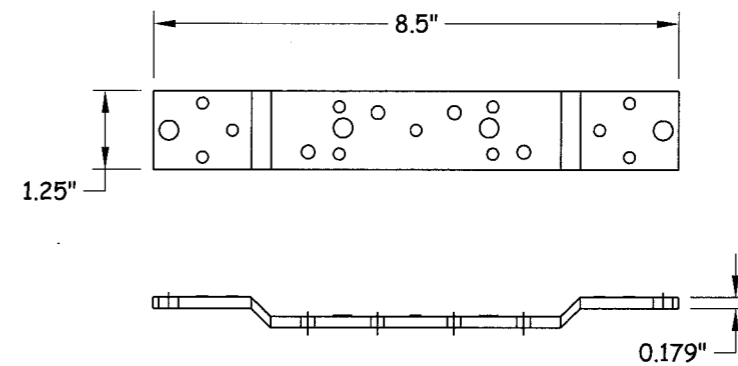


**15** SURFACE MOUNTED DOOR BOTTOM SWEEP  
PEMCO #321CN49

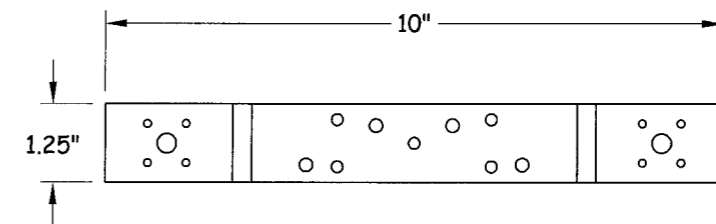


\* ALL HARDWARE & WEATHERSTRIPPING TO BE MIAMI-DADE APPROVED

**18** STEEL DOOR HINGE REINFORCEMENT  
7 GA. STEEL  
TYPICAL WALL THICKNESS: .179"



**19** H.R.S. FRAME HINGE REINFORCEMENT  
7 GA. STEEL  
TYPICAL WALL THICKNESS: .179"



**HMF EXPRESS**

2501 NORTHCHASE PKWY SE  
WILMINGTON, NC 28405  
PH: (866) 452-1845 FX: (910) 452-1848

TITLE: OS FLUSH STEEL DOOR  
COMPONENTS  
PREPARED BY:  
CERTWORKS, LLC  
127 W. FAIRBANKS AVE., STE. 438  
WINTER PARK, FL 32789  
PH: (407) 644-6957 FX: (407) 644-2366

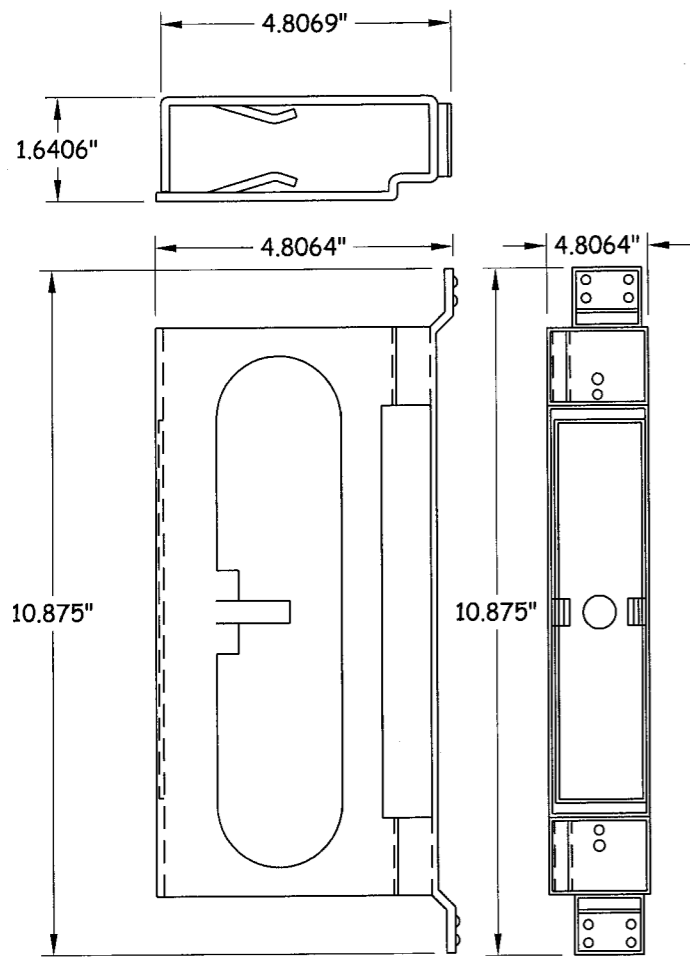
NO.	DESCRIPTION	BY	DATE

*[Signature]*  
2-12-10  
KRISTINA S. DALGHERTY  
FLORIDA P.E. NO. 08455  
127 W. FAIRBANKS AVE., STE. 438  
WINTER PARK, FL 32789  
FEBE CERT. OF AUTHORIZATION NO. 08920

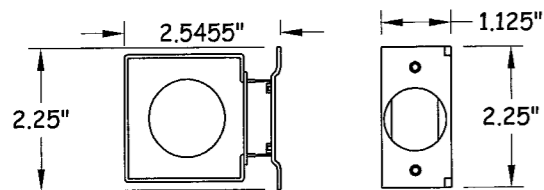
PRODUCT REVISED  
as complying with the Florida  
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Expiration Date 06/26/2014  
By *[Signature]*  
Miami Dade Product Control  
Division

DATE: 06.09.09  
DWN BY: GRN  
CHK BY: HN  
SCALE: NTS  
DWG #: HMF001  
SHEET: 10 OF 13

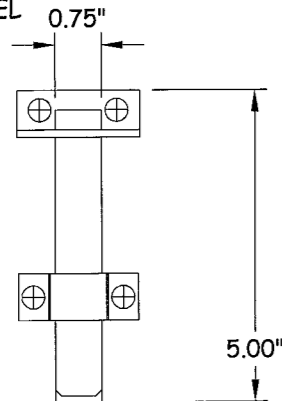
**20** DAYTON MORTISE LOCK BOX  
14 GA. STEEL  
TYPICAL WALL THICKNESS: .075"



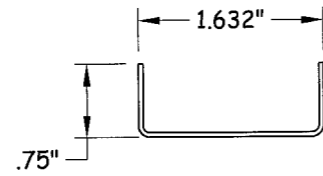
**21** 2 PART 161 LOCK REINFORCEMENT  
16 GA. STEEL  
TYPICAL WALL THICKNESS: .0598"



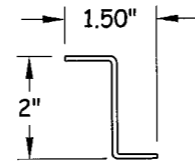
**27** SURFACE BOLT  
STEEL



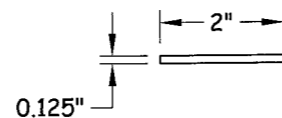
**28** TOP, SIDE, & BOTTOM CHANNEL  
14 GA. STEEL  
TYPICAL WALL THICKNESS: .0747"



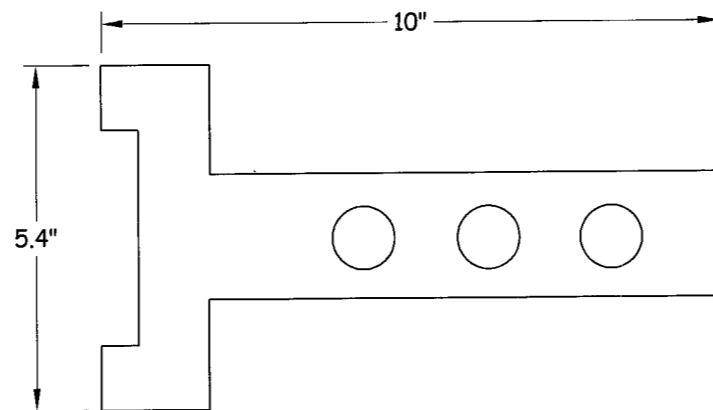
**30** COMMERCIAL Z-ASTRAGAL  
16 GA. STEEL  
TYPICAL WALL THICKNESS: .062" MIN.



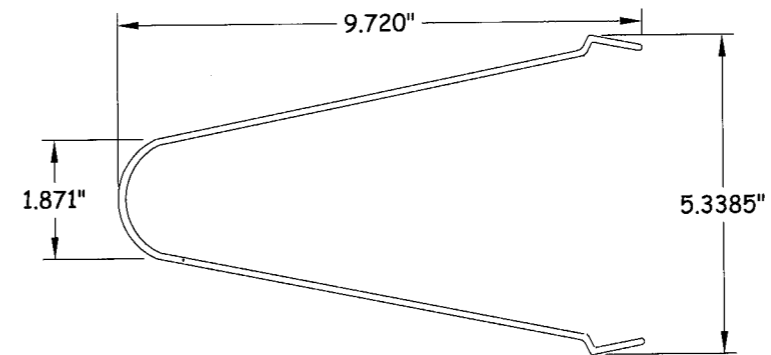
**31** COMMERCIAL FLAT ASTRAGAL  
12 GA. STEEL  
TYPICAL WALL THICKNESS: .0125"



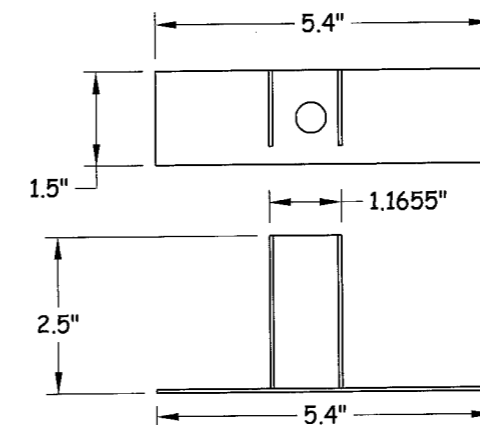
**39** MASONRY "TEE" ANCHOR  
16 GA. STEEL  
TYPICAL WALL THICKNESS: .0058" MIN.



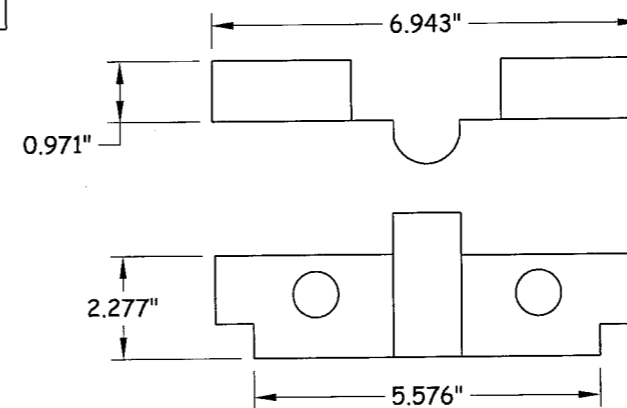
**40** MASONRY WIRE ANCHOR  
7 GA. STEEL (ASTM A653)  
TYPICAL WALL THICKNESS: .0185" DIA.



**41** EMA WELDED ANCHOR  
16 GA. STEEL  
TYPICAL WALL THICKNESS: .0058" MIN.



**42** EMA BUTTERFLY ANCHOR  
17 GA. STEEL  
TYPICAL WALL THICKNESS: .054" MIN.



**HMF EXPRESS**

2501 NORTHCHASE PKWY SE  
WILMINGTON, NC 28405  
PH: (866) 452-1845 FX: (910) 452-1848

TITLE: OS FLUSH STEEL DOOR

COMPONENTS

PREPARED BY:  
CERTWORKS, LLC  
127 W. FAIRBANKS AVE., STE. 438  
WINTER PARK, FL 32789  
PH: (407) 644-6957 FX: (407) 644-2366

REVISIONS

NO.	DESCRIPTION	BY	DATE
1	ADDED NOTE TO 40	JLR	10.02.09

*[Signature]*  
2-12-10  
KRISTINA S. DAUGHERTY  
FLORIDA REGISTERED PROFESSIONAL ENGINEER  
127 W. FAIRBANKS AVE., STE. 438  
WINTER PARK, FL 32789  
FBPE CERT. OF AUTHORIZATION NO. 28620

PRODUCT REVISED  
is complying with the Florida  
Building Code  
Acceptance No. 09-061502  
Expiration Date 08/26/2014  
By *[Signature]*  
Miami Dade Product Control  
Division

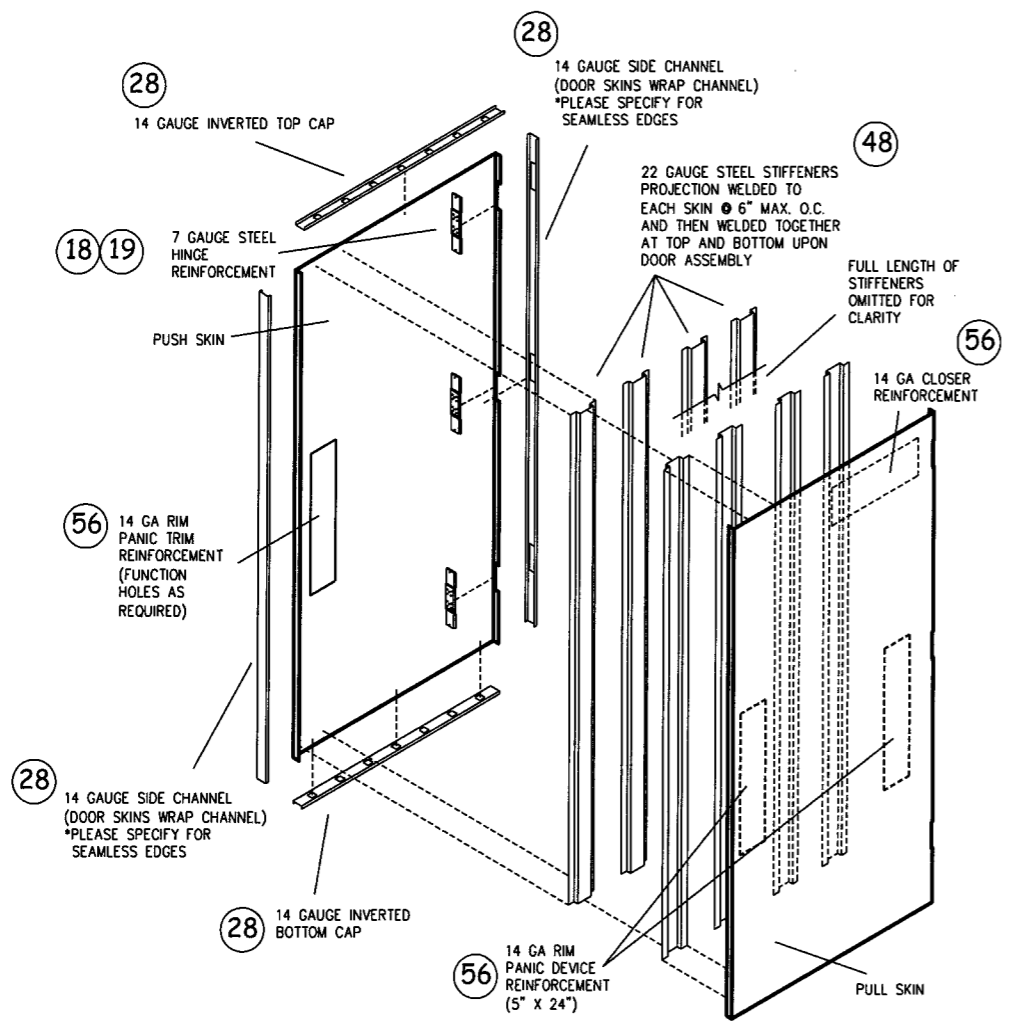
DATE: 06.09.09  
DWN BY: GRN  
CHK BY: HN  
SCALE: NTS  
DWG #: HMF001  
SHEET: 11 OF 13

TITLE: OS FLUSH STEEL DOOR STIFFENER DETAILS  
 PREPARED BY: CERTWORKS, LLC  
 127 W. FAIRBANKS AVE., STE. 438  
 WINTER PARK, FL 32789  
 PH: (407) 644-6957 FX: (407) 644-2366

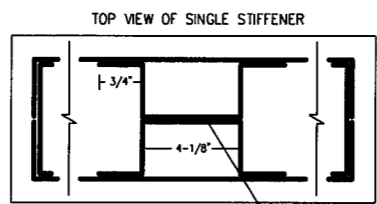
REVISIONS		NO.	DESCRIPTION	BY	DATE
A	ADDED NOTE TO 40	JLR	10.02.09		
B	UPDATED PER MD COMMENT	JLA	01.14.10		

*[Handwritten Signature]*  
 2-12-10  
 KRISTINA S. DALCHERTY  
 FLORIDA P.E. NO. 15845  
 127 W. FAIRBANKS AVE., STE. 438  
 WINTER PARK, FL 32789  
 FIBRE CERT. OF AUTHORIZATION NO. B85620

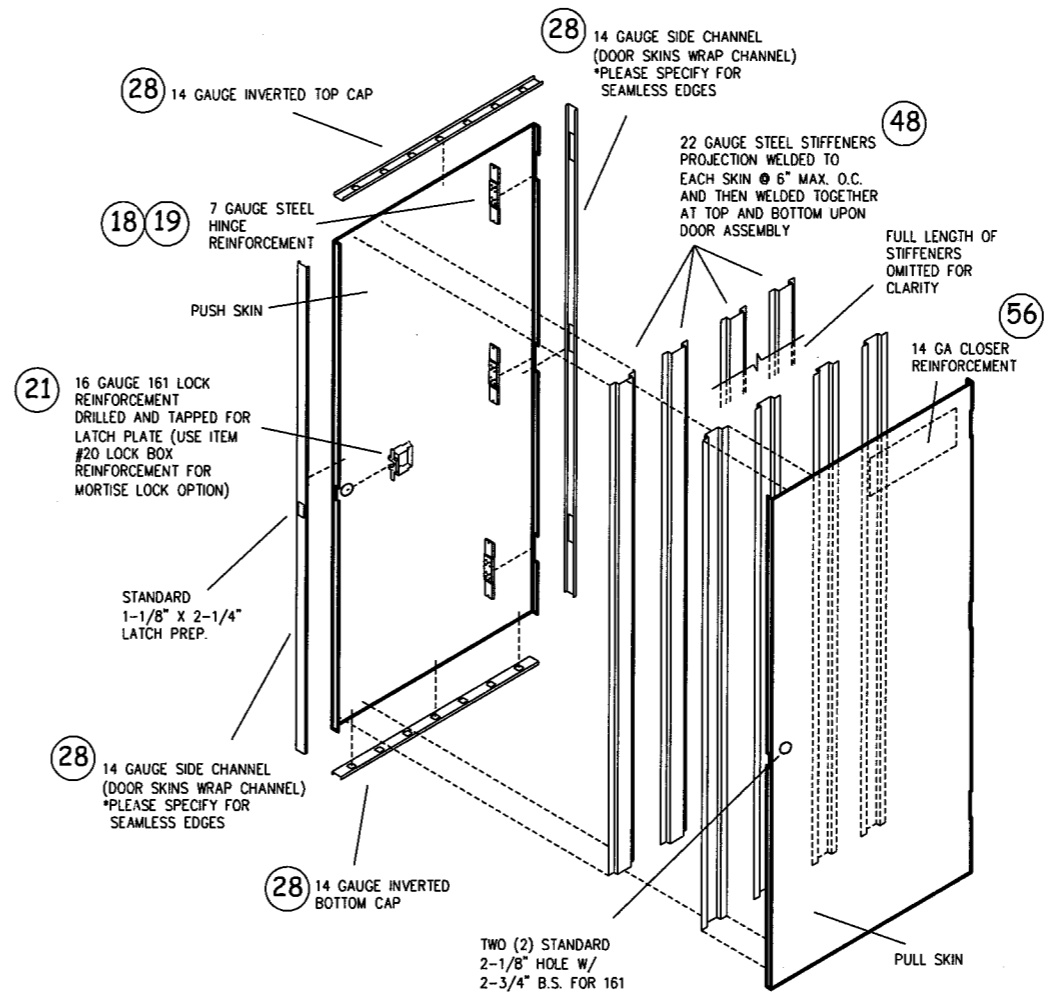
DATE:	06.09.09	DWN BY:	GRN	CHK BY:	HN	SCALE:	NTS
PRODUCT REVISED as complying with the Florida Building Code Acceptance No. 09-0615.02 Expiration Date 08/26/2014							
DWG #: HMF001							
SHEET: 12 OF 13							



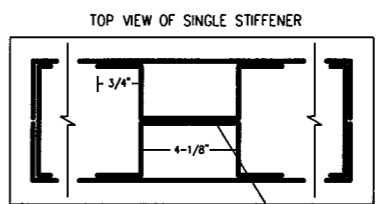
- NOTES:  
 -35.6875 MAX DOOR WIDTH (86.5625 W/ ASTRAGAL)  
 -85.5 MAX DOOR HEIGHT  
 -ESTIMATED PERFORMANCE STC 24, R 1.17, U .855  
 -TESTING STANDARDS - UBC 7.2, NFPA 252, UL 10-C  
 -BUTT EDGE FLUSH DOORS 16 AND 18 GAUGE STEEL (CRS OR A60)  
 -SQUARE EDGE STANDARD/ BEVELED UPON REQUEST  
 -SPACES BETWEEN STIFFENERS FILLED W/ FIBERGLASS INSULATION  
 -MAXIMUM SPACING FOR STIFFENERS @ 6" O.C.



**STIFFENER DETAIL  
PANIC DEVICE**



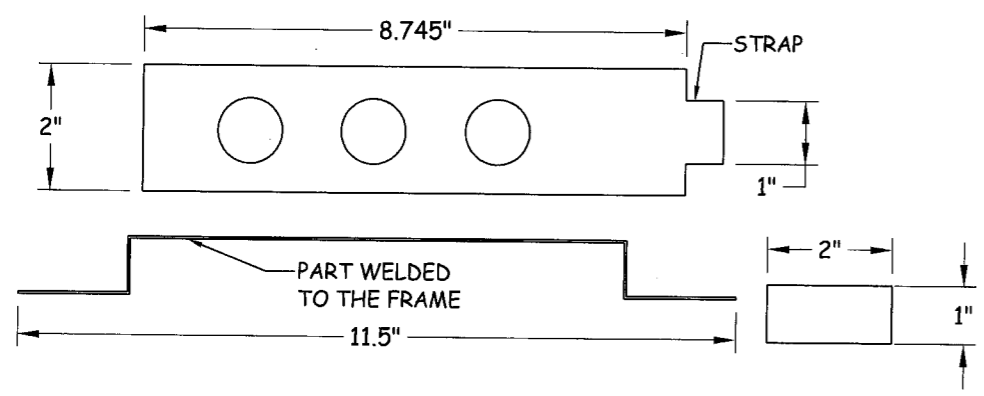
- NOTES:  
 -35.6875 MAX DOOR WIDTH (86.5625 W/ ASTRAGAL)  
 -85.5 MAX DOOR HEIGHT  
 -ESTIMATED PERFORMANCE STC 24, R 1.17, U .855  
 -TESTING STANDARDS - UBC 7.2, NFPA 252, UL 10-C  
 -BUTT EDGE FLUSH DOORS 16 AND 18 GAUGE STEEL (CRS OR A60)  
 -SQUARE EDGE STANDARD/ BEVELED UPON REQUEST  
 -SPACES BETWEEN STIFFENERS FILLED W/ FIBERGLASS INSULATION  
 -MAXIMUM SPACING FOR STIFFENERS @ 6" O.C.



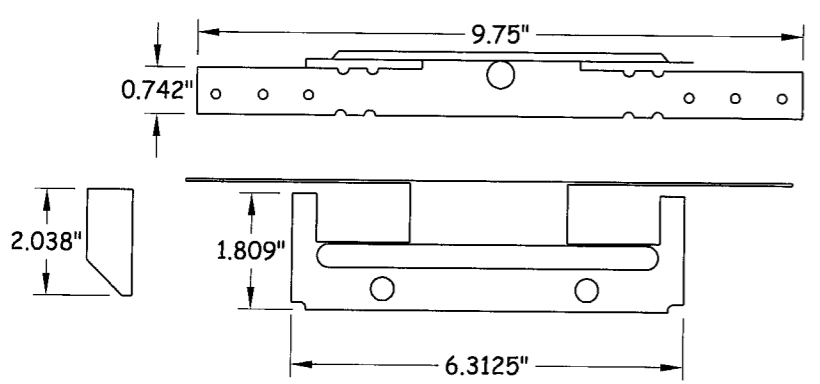
**STIFFENER DETAIL  
MORTISE/  
CYLINDRICAL LOCK**

By *[Signature]*  
 Miami Made Product Control  
 Division

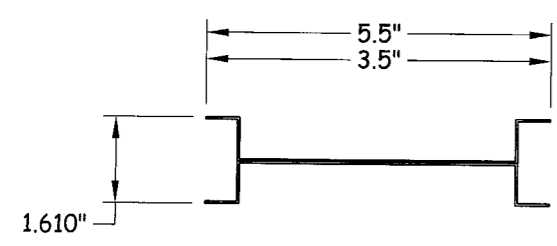
**43 MASONRY ADJUSTABLE STRAP ANCHOR**  
16 GA. STEEL  
TYPICAL WALL THICKNESS: .060"



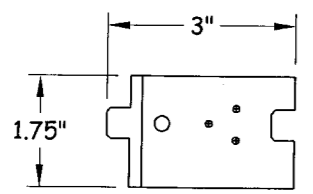
**44 WOOD/METAL STUD ANCHOR**  
18 GA. STEEL  
TYPICAL WALL THICKNESS: .048" MIN.



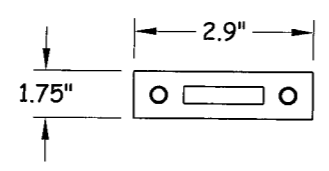
**48 STEEL STIFFENERS**  
22 GA. FORMED STEEL  
TYPICAL WALL THICKNESS: .029"



**52 WELDED FRAME TAB**  
17 GA. STEEL  
TYPICAL WALL THICKNESS: .029"



**55 SURFACE BOLT STRIKE**  
17 GA. STEEL  
TYPICAL WALL THICKNESS: .125"



BILL OF MATERIALS				
ITEM	PART NUMBER	DESCRIPTION	MATERIAL	MANUFACTURER
1		HMF DOOR SLAB - ASTM A1008/A653	18 GA. STEEL	HMF EXPRESS
2		STIFFENED NC DOOR SLAB - ASTM A1008/A653	16 GA. STEEL	HMF EXPRESS
3		H.M.F. HEADER C.R.S. - ASTM A1008/A653	16 GA. STEEL	HMF EXPRESS
4		H.M.F. HINGE JAMB C.R.S. - ASTM A1008/A653	16 GA. STEEL	HMF EXPRESS
5	896N	PANIC THRESHOLD	ALUMINUM	NATIONAL GUARD PRODUCTS
6		THRESHOLD WEATHERSTRIP	VINYL	
7	415S	ADA PASS OVER THRESHOLD	ALUMINUM	HAGER
8		F1300 FIRE MULLION 21' x 3" x .116"	STEEL	DORMA
9		4 1/2" TEMPLATE HINGE	STEEL	HAGER
10		CONTINUOUS STEEL HINGE 3.282" W. ROTON HINGE	STEEL	HAGER
11	137NA	SURFACE MOUNTED FRAME WEATHERSTRIP		NATIONAL GUARD PRODUCTS
12	130NA	SURFACE MOUNTED FRAME WEATHERSTRIP		NATIONAL GUARD PRODUCTS
13	200NA	SURFACE MOUNTED DOOR BOTTOM SWEEP		NATIONAL GUARD PRODUCTS
14	125NA	SURFACE MOUNTED DOOR MEETING STILE SEAL		NATIONAL GUARD PRODUCTS
15	3210119	SURFACE MOUNTED DOOR BOTTOM SWEEP		PEMKO
16	63644	ASTRAGAL FACE WEATHERSTRIP	CELLULAR RUBBER	M-D BUILDING PRODUCTS
17	2873	ASTRAGAL FACE WEATHERSTRIP	FOAM	M-D BUILDING PRODUCTS
18		STEEL DOOR HINGE REINFORCEMENT - ASTM A1008/A653	7 GA. STEEL	HMF EXPRESS
19		H.R.S. FRAME HINGE REINFORCEMENT - ASTM A1008/A653	7 GA. STEEL	HMF EXPRESS
20		"DAYTON" MORTISE LOCK BOX - ASTM A1008/A653	18 GA. STEEL	HMF EXPRESS
21		2 PART 161 LOCK REINFORCEMENT - ASTM A1008/A653	STEEL	HMF EXPRESS
22	9400	VERTICAL RODS W/ PUSH BAR		DORMA HARDWARE
23	9300	RIM DEVICE W/ PUSH BAR		DORMA HARDWARE
24		CORB CK 4251 GRC 260 HEAVY DUTY CYLINDRICAL LOCKSET		CORBIN/RUSSWIN
25		CORB DL3000 260SS HEAVY DUTY CYLINDRICAL LOCKSET		CORBIN/RUSSWIN
26		CORB ML2000 SERIES MORTISE LOCKSET		CORBIN/RUSSWIN
27	454	SURFACE BOLTS 5" LONG	STEEL	IVES
28		TOP, BOTTOM, & SIDE CHANNEL - ASTM A1008/A653	14 GA. STEEL	HMF EXPRESS
29		FOAM STOPPER	FOAM	HMF EXPRESS
30		COMMERCIAL Z-ASTRAGAL 0.062" MIN. - ASTM A1008/A653	STEEL	HMF EXPRESS
31	W030317028	COMMERCIAL FLAT ASTRAGAL 0.125" - ASTM A1008/A653	STEEL	HMF EXPRESS
32		#8 X 1/2" PPH SELF TAPPING SHEET METAL SCREW (WEATHERSTRIP TO FRAME)	STEEL	
33		#10 X 3/4" PPH SELF TAPPING SHEET METAL SCREW (SWEEP TO DOOR)	STEEL	
34		3/8" X 1 3/8" DROP-IN ANCHORS (MULLION ANCHOR BRACKET TO SILL)	STEEL	PORTEOUS FASTENERS
35		#12 - 24 X 5/8" LG. MACHINE SCREW (RIM DEVICE STRIKE TO MULLION)	STEEL	
36		#12 - 24 X 1/2" MACHINE SCREW (HINGE TO FRAME & DOOR)	STEEL	
37		#12 - 24 X 1 1/2" PFH WOOD SCREW (SURFACE BOLT STRIKE TO BUCK AT SILL)	STEEL	
38		3/8" X 1 1/2" PPH SCREW W/ 3/8" SEX BOLT (SURFACE BOLT ATTACHMENT)	STEEL	
39		MASONRY "TEE" ANCHOR 0.058" MIN.	STEEL	HMF EXPRESS
40		MASONRY WIRE ANCHOR 0.185" DIA.	STEEL	HMF EXPRESS
41		EMA WELDED ANCHOR 0.058" MIN.	STEEL	HMF EXPRESS
42		EMA BUTTERFLY ANCHOR 0.048" MIN.	STEEL	HMF EXPRESS
43		MASONRY ADJUSTABLE STRAP ANCHOR 0.038" MIN.	STEEL	HMF EXPRESS
44		WOOD/METAL STUD ANCHOR 0.042" MIN.	STEEL	HMF EXPRESS
45		3/8" DYNA BOLT BY ITW RED HEAD (USED W/ EMA WELDED & EMA BUTTERFLY ANCHORS)	STEEL	ITW RED HEAD
46		EXPANDED POLYSTYRENE (EPS) FOAM CORE USED IN THE HMF 18 GA. DOOR	FOAM	
47		FIBERGLASS INSULATION CORE (USED IN THE HMF 16 GA. DOOR)	FIBERGLASS	
48		STEEL STIFFENERS	22 GA. STEEL	HMF EXPRESS
49		3/16" X 1 3/4" TAPCON ANCHOR	STEEL	ITW
50		8d COMMON BRIGHT X 2.0" NAIL	STEEL	COMMON BRIGHT
51		3/8" X 5.0" SLOTTED FLAT HEAD LAG SCREW	STEEL	
52		WELDED FRAME TAB	STEEL	HMF EXPRESS
53		#12 X 1/2" PAN HEAD SELF DRILL & TAPPING SCREW	STEEL	
54		1/4 - 20 SEX BOLT	STEEL	
55		SURFACE BOLT STRIKE	STEEL	IVES
56		RIM DEVICE/CLOSER REINFORCEMENT	14 GA. STEEL	HMF EXPRESS
57		5/16" X 1/2" FHPMS (MULLION ANCHOR BRACKET TO FRAME HEAD)	STEEL	



2501 NORTHCHASE PKWY SE  
WILMINGTON, NC 28405  
PH: (866) 452-1845 FX: (910) 452-1848

TITLE: OS FLUSH STEEL DOOR COMPONENTS, DETAILS & BILL OF MATERIALS  
PREPARED BY: CERTWORKS, LLC  
127 W. FAIRBANKS AVE., STE. 438  
WINTER PARK, FL 32789  
PH: (407) 644-6957 FX: (407) 644-2366

REVISIONS	DESCRIPTION	BY	DATE
		JLR	10.02.09
A	UPDATED B.O.M. PER M-D COMMENT	MS	01.13.10
B	UPDATED PER MD COMMENT	KSD	02.11.10
C	UPDATED PER MD COMMENT		

*[Handwritten Signature]*  
2-12-10  
KRETTNA S. DAUGHERTY  
FLORIDA P. E. NO. 68495  
127 W. FAIRBANKS AVE., STE. 438  
WINTER PARK, FL 32789  
FBPE CERT. OF AUTHORIZATION NO. 28260

PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No. 09-0615.02  
Expiration Date 08/26/2014  
By *[Handwritten Signature]*  
Miami Dade Product Control  
Division

DATE: 06.09.09  
DWN BY: GRN  
CHK BY: HN  
SCALE: NTS  
DWG #: HMF001  
SHEET: 13 OF 13