

**Hollow Metal, Inc.**  
**5275 Causeway Blvd. Suite #4**  
**Tampa, Florida 33619**

**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: Outswing Flush Commercial Steel Door-Impact**

**APPROVAL DOCUMENT:** Drawing No. **1212 Rev C**, titled "Outswing Flush Commercial Impact Steel Doors", sheets 1 through 3 of 3, dated 03/05/03 and last revised on DEC 06, 2011, prepared by W. W. Schaefer Engineering & Consultant, P. A., signed and sealed by Warren W. Schaefer, 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 Section.

**MISSILE IMPACT RATING: Large and Small Missile Impact Resistant**

**Limitation:** 1. Min grout compressive strength (fm') for filled block must be  $\geq 2000$  psi.

**LABELING:** Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and 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 **revises NOA # 08-0520.04** and consists of this page 1 and evidence pages E-1, as well as approval document mentioned above.

The submitted documentation was reviewed by **Ishaq I. Chanda, P.E.**

12/22/11

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

**A. DRAWINGS**

1. Manufacturer's die drawings and sections (transferred from file # **08-0520.04**)
2. Drawing No. **1212, Rev B**, titled "Outswing Flush Commercial Impact Steel Doors", sheets 1 through 3 of 3, dated 03/05/03 and last revised on May 16, 2008, prepared by W. W. Schaefer Engineering & Consultant, P. A., signed and sealed by Warren W. Schaefer, P.E.

**B. TESTS (transferred from file # **08-0520.04**)**

1. Test reports on
  - 1) Air Infiltration Test, per PA 202-94
  - 2) Uniform Static Air Pressure Test, Loading per PA 202-94
  - 3) Water Resistance Test, per PA 202-94
  - 4) Large Missile Impact Test per PA 201-94
  - 5) Cyclic Wind Pressure Loading per PA 203-94
  - 6) Forced Entry Resistant test per PA 202-94

Along with marked-up drawings and installation diagram of outswing flush commercial steel doors, issued by Certified Testing Laboratories for test reports **CTLA-887W** and **CTLA-887W1** both dated July 15, 2002 and revised under **CTLA887W Revised** and **CTLA-887W-1**, both dated April 02, 2003, signed and sealed by Ramesh Patel, P.E..

**C. CALCULATIONS**

1. Statement letters of conformance to FBC 2010, dated OCT 03, 2011, prepared by W. W. Schafer Engineering & Consulting, P. A., signed and sealed by Warren W. Schafer, P.E.
2. Anchor verification calculations, complying w/ FBC-2007 & 2010, dated 12/05/11 and last revised on DEC 06, 2011, prepared by W. W. Schaefer Engineering & Consultant, P. A., signed and sealed by Warren W. Schaefer, P. E.

**D. QUALITY ASSURANCE BY:**

1. Miami Dade Department of Permitting, Environment, and Regulatory Affairs (PERA).

**E. MATERIAL CERTIFICATIONS (transferred from file # **08-0520.04**)**

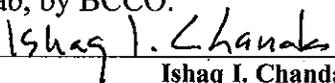
1. Tensile Test prepared by Certified Testing Laboratories. test report No. **CTLA 887W-1 (0567H)**, dated 06 June 2002, for steel samples, tested per ASTM-E8, signed and sealed by Ramesh Patel, P.E.
2. Notice of Acceptance # 06-1228.07, issued to Carpenter Company for "Carpenter Expanded Polystyrene Insulation", expiring April 11, 2012.

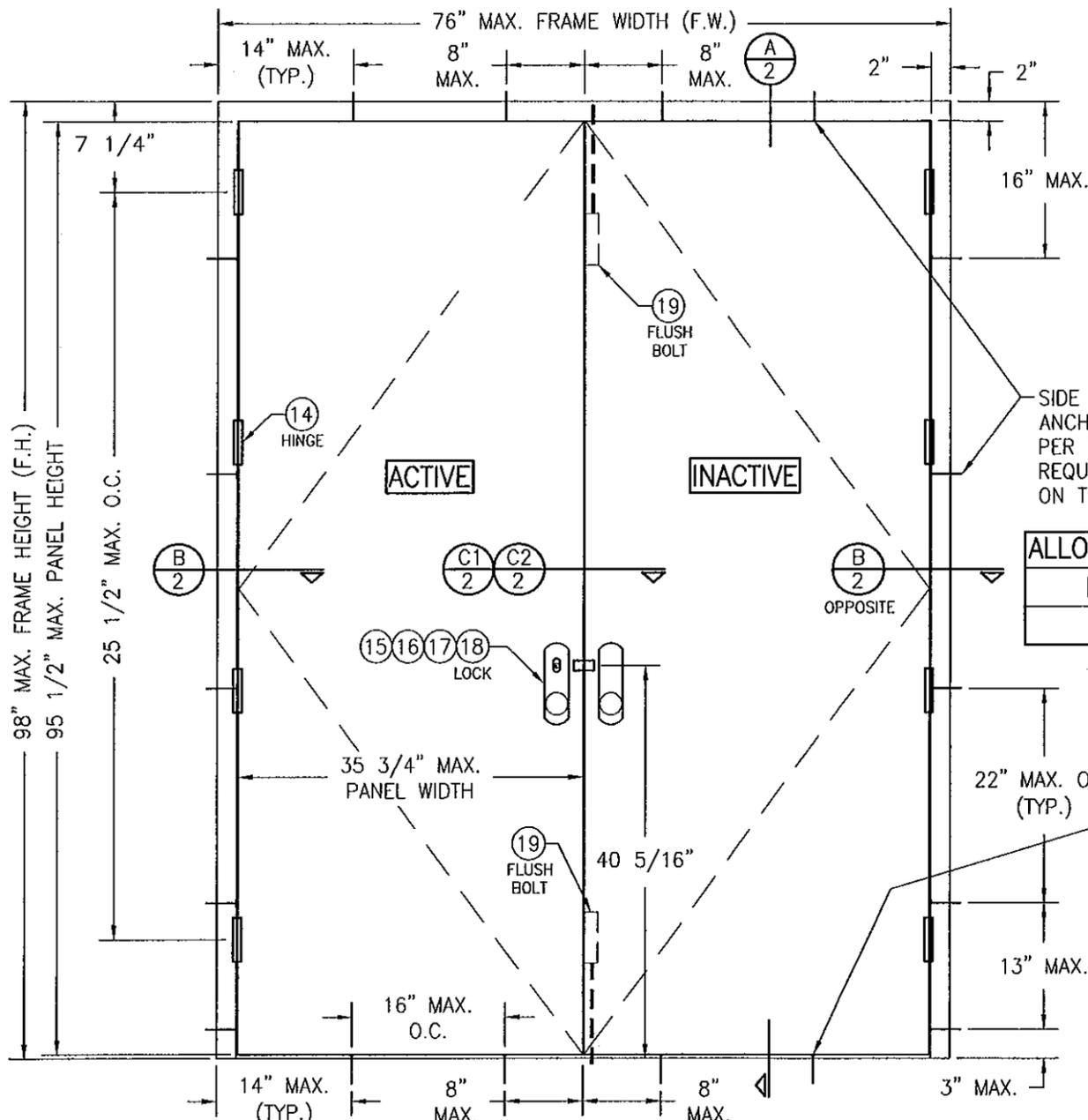
**F. STATEMENTS**

1. Statement letters of conformance to FBC 2010 and "No financial interest", both dated OCT 03, 2011, prepared by W. W. Schafer Engineering & Consulting, P. A., signed and sealed by Warren W. Schafer, P.E.
2. Statement letter dated May 16, 2008 for "No financial interest" and conformance to FBC, 2007, signed and sealed by Warren W. Schaefer, P.E. (transferred from file # **08-0520.04**)
3. Statement of compliance, as part of above referenced test reports

**G. OTHER**

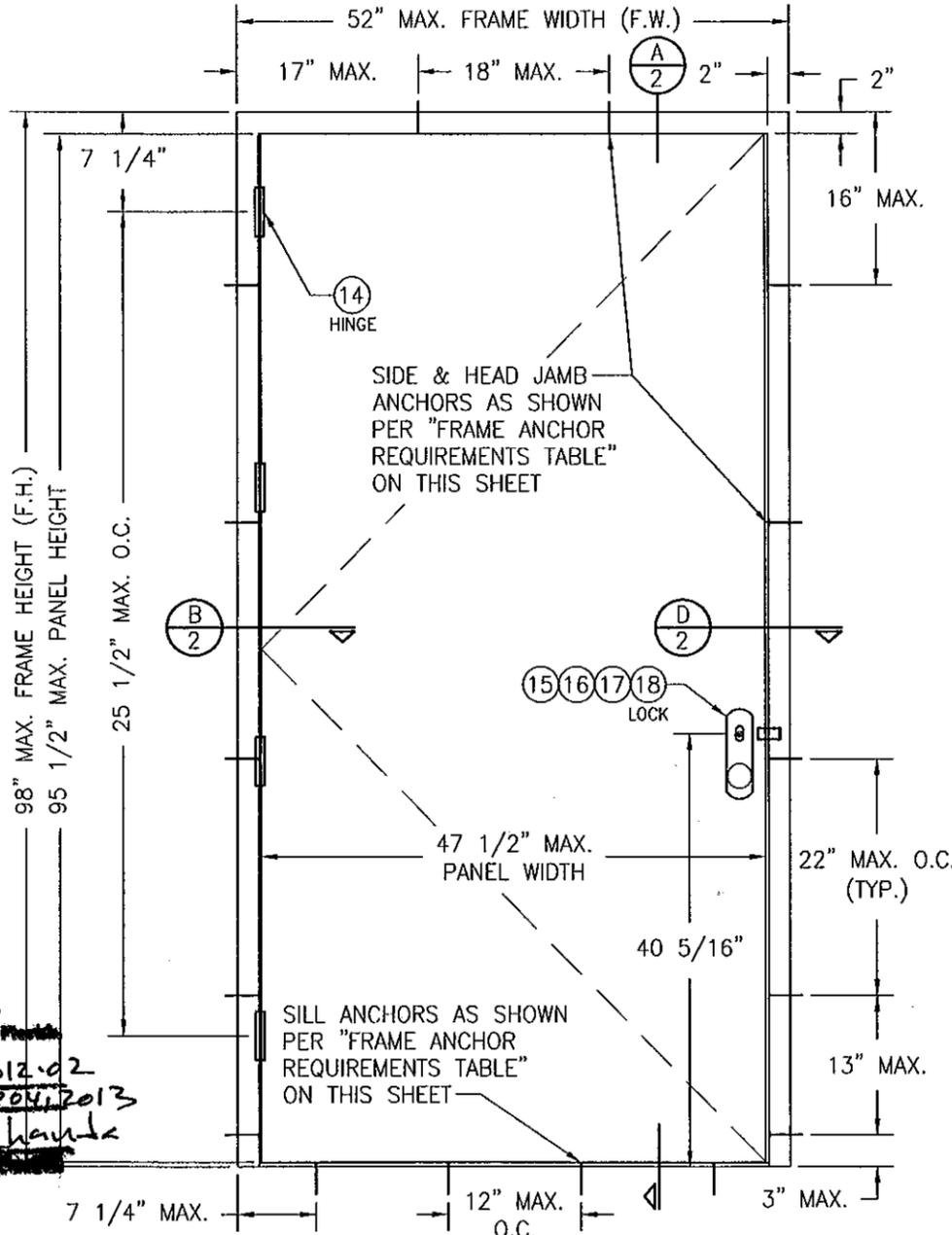
1. This NOA revises NOA # **08-0520.04**, which expires on Sep 04, 2013.
2. Acceptance of duplicate copy of test video from Lab, by BCCO.

  
\_\_\_\_\_  
Ishaq I. Chanda, P.E.  
Product Control Examiner  
NOA No 11-1012.02  
Expiration Date: September 04, 2013  
Approval Date: December 29, 2011



EXTERIOR ELEVATION; DOUBLE OUT-SWING DOOR

SCALE: 3/4" = 1'-0"



EXTERIOR ELEVATION; SINGLE OUT-SWING DOOR

SCALE: 3/4" = 1'-0"

ALLOWABLE DESIGN PRESSURE	
POSITIVE	NEGATIVE
47 PSF	47 PSF

**PRODUCT REVISED**  
 as complying with the Florida Building Code  
 Acceptance No. 11-1012-02  
 Expiration Date: 3/30/2013  
 Ishar I. Chandra

**GENERAL NOTES:**

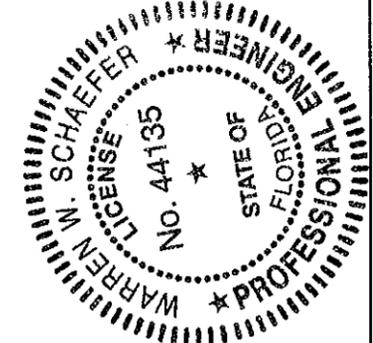
1. THESE DOOR SYSTEMS HAVE BEEN TESTED, ANALYZED & APPROVED FOR DESIGN PRESSURES NOT TO EXCEED THOSE SHOWN IN THE "ALLOWABLE DESIGN PRESSURE TABLE(S)".
2. OPENINGS, BUCKING & BUCKING FASTENERS MUST BE PROPERLY DESIGNED & INSTALLED TO TRANSFER WIND LOADS TO THE STRUCTURE.
3. ALL HARDWARE & FASTENERS SHALL BE IN ACCORDANCE WITH THESE DRAWINGS & SHALL NOT VARY UNLESS SPECIFICALLY MENTIONED ON THE DRAWINGS. SPECIFIED ANCHOR EMBED TO BASE MATERIAL SHALL BE BEYOND WALL FINISH OR STUCCO.
4. THE DETAILS & SPECIFICATIONS SHOWN HEREIN REPRESENT THE PRODUCTS TESTED & PROPOSED FOR WATER, AIR, IMPACT, CYCLIC & UNIFORM STATIC AIR PRESSURE TESTING IN CONFORMANCE WITH THE FLORIDA BUILDING CODE PROTOCOLS TAS-201, 202 & 203 FOR LARGE MISSILE IMPACT DOORS.
5. THESE DOOR SYSTEMS HAVE BEEN DESIGNED IN ACCORDANCE WITH AND MEET THE REQUIREMENTS OF THE FLORIDA BUILDING CODE (FBC) INCLUDING HIGH VELOCITY HURRICANE ZONES (HVHZ).
6. IMPACT SHUTTERS ARE NOT REQUIRED WITH THESE DOORS.
7. ALL ANCHORS SECURING DOOR FRAME TO PRESSURE TREATED BUCKS OR WOOD FRAMING SHALL BE CAPABLE OF RESISTING CORROSION CAUSED BY THE PRESSURE TREATING CHEMICALS IN THE WOOD.
8. DETERMINE THE POSITIVE & NEGATIVE DESIGN LOADS TO USE WHEN REFERENCING THESE DOCUMENTS IN ACCORDANCE WITH THE GOVERNING CODE AND GOVERNING WIND VELOCITY. FOR WIND LOAD CALCULATIONS IN ACCORDANCE WITH THE FLORIDA BUILDING CODE, A DIRECTIONALITY FACTOR OF  $K_d = 0.85$  MAY BE APPLIED PER THE ASCE 7 STANDARD.
9. NO INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE CERTIFICATION OF THIS PRODUCT. WIND LOAD DURATION FACTOR  $C_d = 1.6$  WAS USED FOR WOOD SCREW ANALYSIS ONLY.
10. MATERIALS, INCLUDING BUT NOT LIMITED TO STEEL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF FLORIDA BUILDING CODE CHAPTER 20.

**FRAME ANCHOR REQUIREMENTS TABLE**

	OPENING TYPE (SUBSTRATE)	JAMB TO OPENING FASTENER TYPE	MINIMUM EMBEDMENT	MINIMUM EDGE DIST.
SIDE JAMBS & HEAD	(4) MIN. 12 GA. A36 STEEL OR MIN. 14 GA. 50 KSI STUD	3/8" MIN. A307 BOLT WITH NUT & FLAT WASHER	FULL	1"
	FILLED C-90 CMU OR MIN. 3000 PSI CONCRETE	(1) 3/8" SLEEVE/WEDGE ANCHOR (FLATHEAD) (3) 3/8" CONCRETE SCREW	2 1/2" 2"	2 1/2" 2 1/2"
SILL	(4) MIN. 12 GA. A36 STEEL OR MIN. 14 GA. 50 KSI STUD	#12-14 KWIK-PRO SELF DRILLING SCREWS BY HILTI	FULL	3/4"
	MIN. 3000 PSI CONCRETE	(2) 1/4" CONCRETE SCREW	1 3/4"	2 1/2"

- (1) SLEEVE/WEDGE ANCHOR MAY BE A RAMSET/RED HEAD DYNABOLT, POWERS RAWL POWER BOLT OR HILTI HLC SLEEVE ANCHOR.
- (2) 1/4" CONCRETE SCREWS SHALL BE ELCO ULTRACONS, ELCO CRETE-FLEX, ITW RAMSET/RED HEAD TAPCONS, HILTI KWIK-CON II OR POWERS RAWL TAPPER (HARDENED STEEL OR S.S.).
- (3) 3/8" CONCRETE SCREWS SHALL BE RAMSET/RED HEAD LOT (C.S. OR S.S.) OR HILTI HUS-H SCREW ANCHOR (C.S.).
- (4) STEEL SHALL BE MIN.  $F_y = 36$  KSI; STUDS SHALL BE MIN.  $F_y = 33$  KSI

THESE DRAWINGS ARE APPLICABLE ONLY TO THE PRODUCT SPECIFIED. THEY MAY NOT BE USED FOR THE ASSEMBLY AND/OR INSTALLATION OF ANY OTHER PRODUCT NOR MAY THEY BE USED FOR RATIONAL AND/OR LOCAL APPROVAL OF ANY PRODUCT NOT PRODUCED BY THE MANUFACTURER STATED ON THESE DRAWINGS.



DRAWN BY: K.P.S.	CHECKED BY: W.W.S.
PLOT: 1=16	DATE: 03/05/03
DATE 08/10/05	DATE 08/10/05
BY K.P.S.	BY K.P.S.
REVISION DESCRIPTION	REVISION DESCRIPTION
A1 UPDATE GENERAL NOTES TO 2004 CODE COMPLIANT	A2 INCREASED CONCRETE SCREW EDGE DISTANCE TO 2.5"
	B1 UPDATE TO PRESENT STANDARDS
	C1 UPDATE TO PRESENT STANDARDS

**OUTSWING FLUSH COMMERCIAL IMPACT STEEL DOORS**

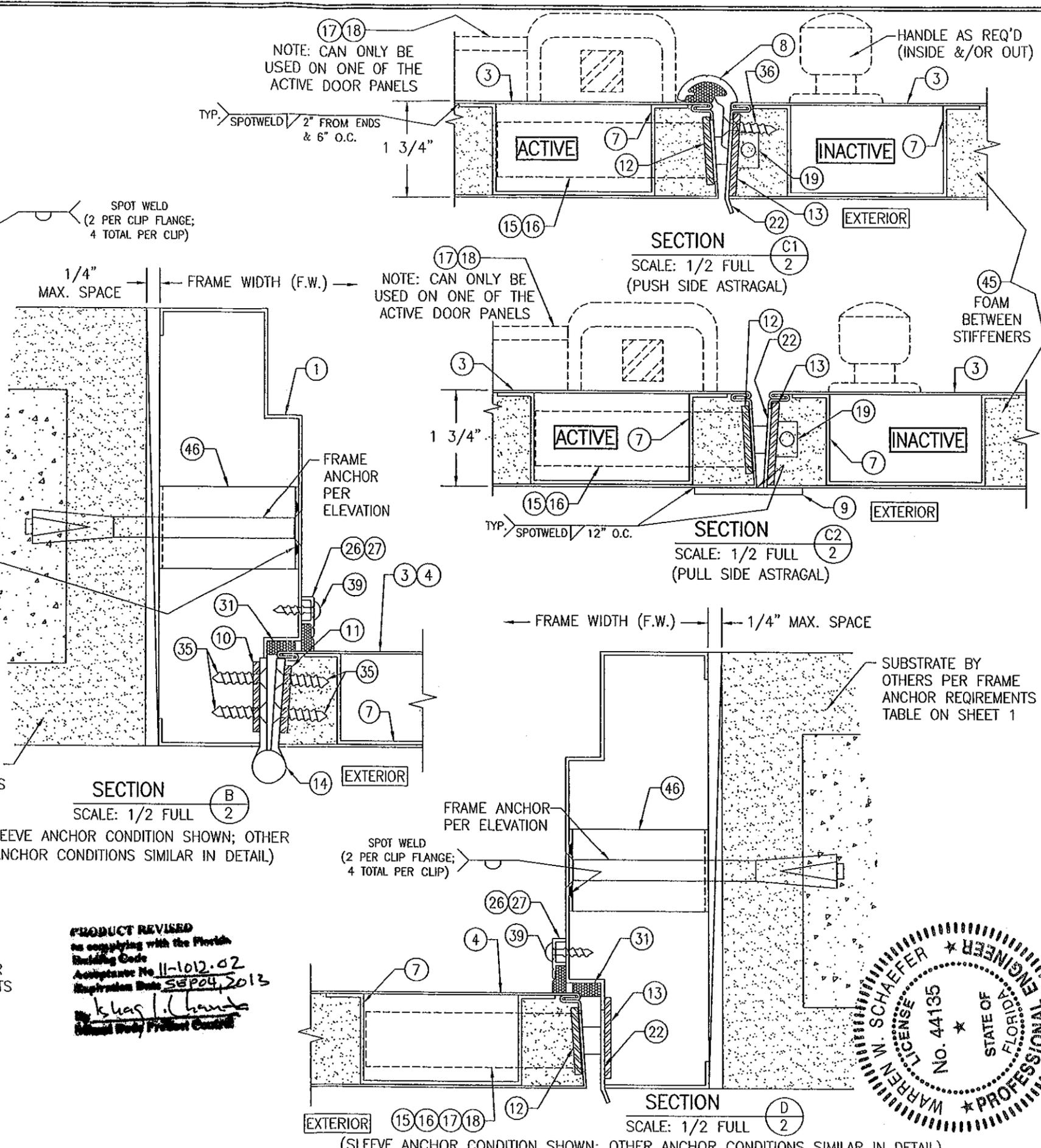
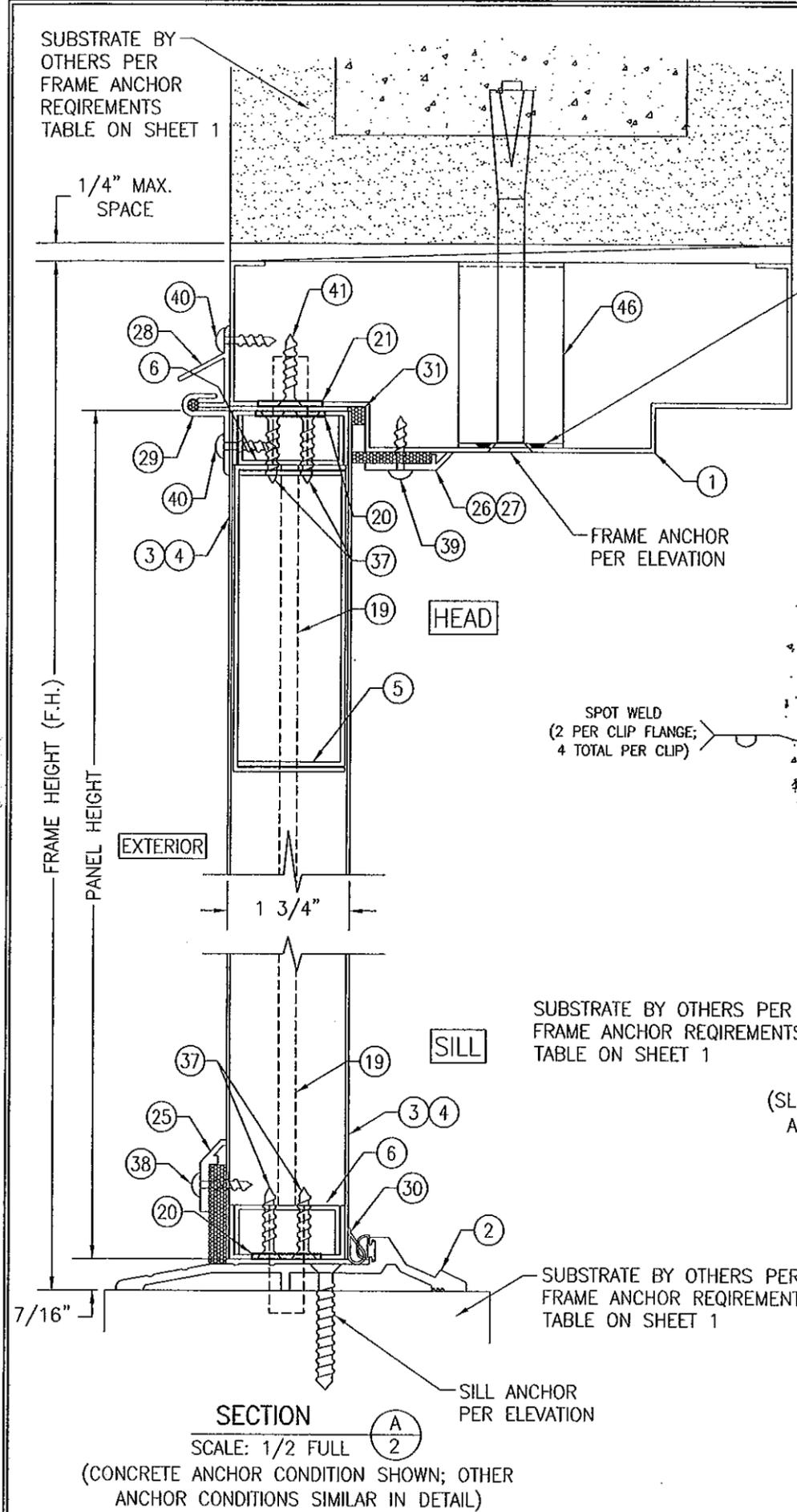
MANUFACTURER  
**HOLLOW METAL, INC.**  
 5275 CAUSEWAY BLVD., SUITE #4  
 TAMPA, FLORIDA 33619  
 813-246-4112

CONSULTANTS  
**W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)**  
 7480 150TH COURT NORTH  
 PALM BEACH GARDENS, FL 33418  
 PHONE: 561-744-3424

CERTIFICATION  
 DEC 06 2011

WARREN M. SCHAEFER, P.E.  
 P.E. NO. 44135

DRAWING NO. 1212  
 SHEET NO. 1 OF 3



NOTE: CAN ONLY BE USED ON ONE OF THE ACTIVE DOOR PANELS

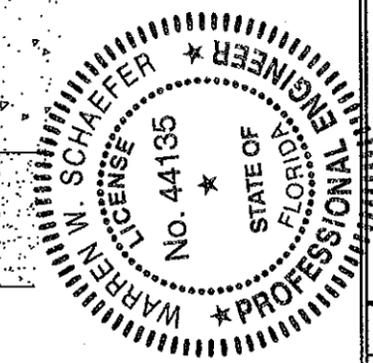
NOTE: CAN ONLY BE USED ON ONE OF THE ACTIVE DOOR PANELS

HANDLE AS REQ'D (INSIDE &/OR OUT)

SUBSTRATE BY OTHERS PER FRAME ANCHOR REQUIREMENTS TABLE ON SHEET 1

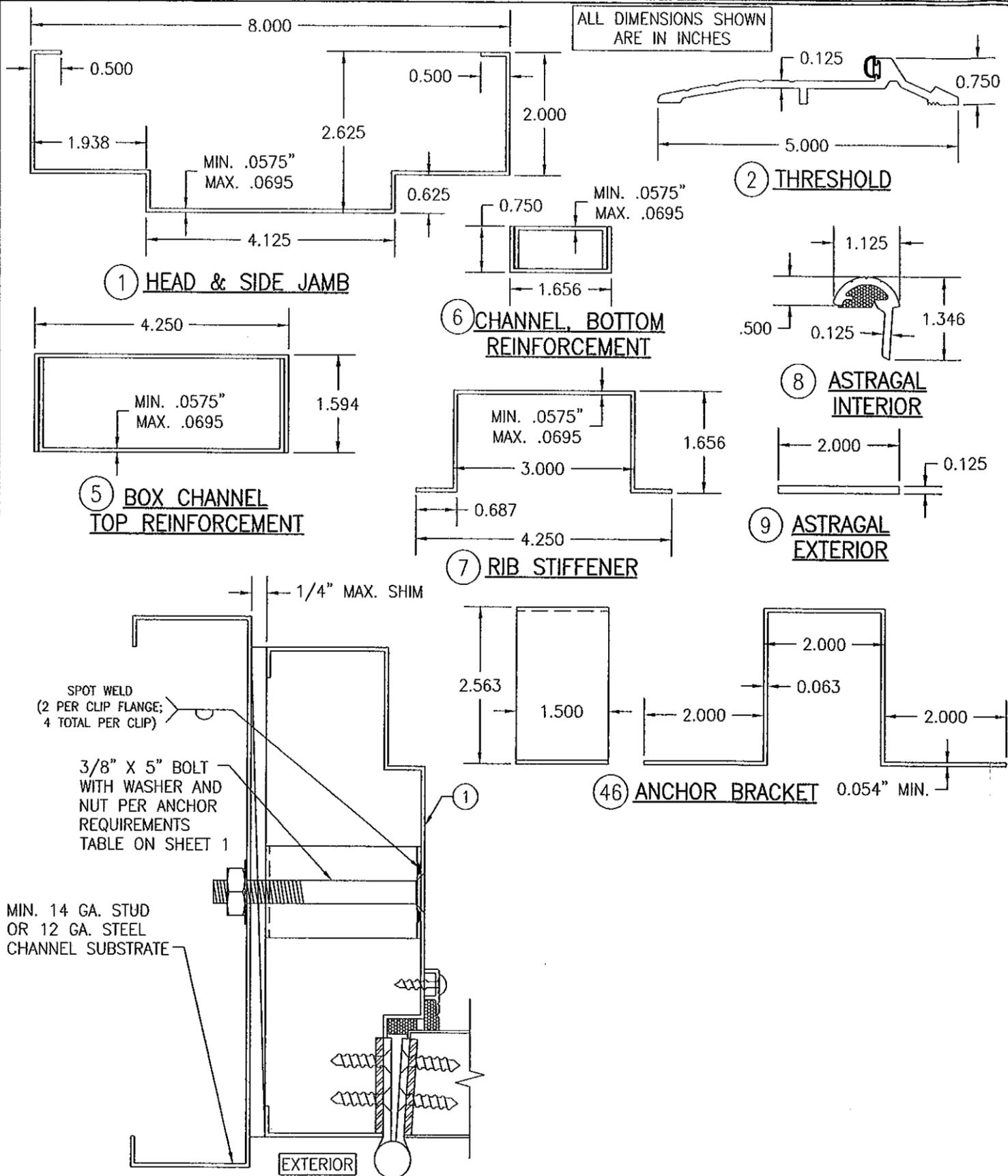
SUBSTRATE BY OTHERS PER FRAME ANCHOR REQUIREMENTS TABLE ON SHEET 1

**PRODUCT REVISED**  
 to comply with the Florida Building Code  
 Acceptance No 11-1012.02  
 Inspection Date SEP 04, 2013  
*K. L. ...*  
 Miami Dade Product Control



DRAWN BY: K.P.S.	CHECKED BY: W.W.S.
PLOT: 1=2	DATE: 03/05/03
DATE	
BY	
REVISION DESCRIPTION	
NO.	
DRAWING TITLE <b>OUTSWING FLUSH COMMERCIAL IMPACT STEEL DOORS</b>	
CONSULTANTS <b>W. W. SCHAEFER ENGINEERING &amp; CONSULTING, P.A. (CA 6809)</b>	MANUFACTURER <b>HOLLOW METAL, INC.</b>
7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424	5275 CAUSEWAY BLVD., SUITE #4 TAMPA, FLORIDA 33619 813-246-4112
CERTIFICATION <b>DEC 06 2011</b>	WARREN W. SCHAEFER, P.E. P.E. NO. 44135
DRAWING NO. 1212	REV. C
SHEET NO. 2 OF 3	

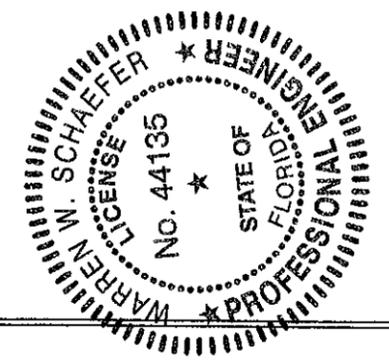
ALL DIMENSIONS SHOWN ARE IN INCHES



ITEM #	PART #	ITEM DESCRIPTION	MANUFACTURER/NOTES
PARTS			
1	-	HEAD & SIDE JAMB	16 GA. A60 GALVANIZED STEEL
2	179AV	THRESHOLD	PEMKO - MILL FINISH ALUMINUM
3	-	DOUBLE DOOR PANEL FACE SHEET (Fy=36,800 PSI MIN.)	18 GA. A60 GALVANIZED STEEL
4	-	SINGLE DOOR PANEL FACE SHEET (Fy=36,800 PSI MIN.)	18 GA. A60 GALVANIZED STEEL
5	-	BOX CHANNEL, TOP REINFORCEMENT FULL LENGTH	16 GA. A60 GALVANIZED STEEL
6	-	CHANNEL, BOTTOM REINFORCEMENT FULL LENGTH	16 GA. A60 GALVANIZED STEEL
7	-	PANEL VERTICAL RIB STIFFENER FULL LENGTH	16 GA. A60 GALVANIZED STEEL
8	352CR	ASTRAGAL - INTERIOR	PEMKO - ANODIZED ALUMINUM
9	357SC	ASTRAGAL - EXTERIOR	PEMKO - ANODIZED ALUMINUM
10	-	HINGE REINF. BAR .179" X 1.28" X 9.5"	STEEL; AT FRAME
11	-	HINGE REINF. BAR .179" X 1.23" X 9.5"	STEEL; AT STILE
12	-	LOCK REINF. BOX AS REQ'D FOR LOCK	STEEL; AT ACTIVE DOOR STILE
13	-	LOCK REINF. BOX AS REQ'D FOR LOCK	STEEL; AT INACTIVE DOOR STILE & LOCK JAMB
HARDWARE			
14	BB1279	STEEL HINGE (4.5" X 4.5" X .134" THICK)	HAGER BB1279 OR BB1191
15	096 X 14-02-42 X 10-025	LOCK SET (D SERIES CYLINDRICAL LOCK)	SCHLAGE
16	L9457 X 05B	LOCK SET (MORTISE W/DEAD BOLT)	SCHLAGE MORTISE
17	9975NLX990NL-MX575-2	PANIC EXIT W/MORTISE LOCK & 575 STRIKE PLATE	VON DUPRIN (MAY BE USED AT ONLY ONE ACTIVE PANEL OF A DOUBLE DOOR)
18	98NL X 990NL-R	PANIC EXIT DEVICE W/299F STRIKE PLATE	VON DUPRIN (MAY BE USED AT ONLY ONE ACTIVE PANEL OF A DOUBLE DOOR)
19	555 X 12"	FLUSH BOLT	ROCKWOOD
20	-	FLUSH BOLT GUIDE PLATE 1" X 2"	5/64" THK. S.S OR PLATED STEEL
21	-	FLUSH BOLT STRIKE PLATE 2 1/4" X 15/16"	5/64" THK. S.S OR PLATED STEEL
22	-	LOCK STRIKE PLATE (SUPPLIED W/LOCK SET)	S.S OR PLATED STEEL
SEALS & SEALANTS			
25	368CN	DOOR SWEEP	PEMKO - ANODIZED ALUMINUM
26	312CR	GASKET	PEMKO - ANODIZED ALUMINUM
27	315CR	GASKET	PEMKO - ANODIZED ALUMINUM
28	347A	DOOR TOP MALE WEATHERSTRIP	PEMKO - MILL FINISH ALUMINUM
29	68AR	DOOR TOP FEMALE WEATHERSTRIP	PEMKO - MILL FINISH ALUMINUM
30	S88	SILICONSEAL WEATHERSTRIPPING	PEMKO
31	P497	WEATHERSTRIPPING TAPE	PEMKO - NEOPRENE
FASTENERS			
35	-	.210" DIA. X .525" SELF TAP FH SCREW	8 AT EACH HINGE
36	-	FH SCREW	12" O.C. AT ASTRAGAL
37	-	PH SCREW	2 AT EACH GUIDE PLATE
38	-	PH SCREW	AS REQ'D TO SECURE SWEEP
39	-	PH SCREW	AS REQ'D TO SECURE GASKET
40	-	PH SCREW	AS REQ'D TO SECURE SEAL
41	-	PH SCREW	2 AT EACH STRIKE PLATE
MISCELLANEOUS ITEMS			
45	-	EXPANDED POLYSTYRENE INSULATION FOAM	CARPENTER CO. (HOLDING CURRENT NOA)
46	-	ANCHOR BRACKET	A60 GALVANIZED STEEL 16 GA.

DRAWN BY: K.P.S.	CHECKED BY: W.W.S.
PLOT: 1-2	DATE: 03/05/03
DATE	BY
REVISION DESCRIPTION	NO.
DRAWING TITLE	
OUTSWING FLUSH COMMERCIAL IMPACT STEEL DOORS	
CONSULTANTS	MANUFACTURER
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)	HOLLOW METAL, INC.
7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424	5275 CAUSEWAY BLVD., SUITE #4 TAMPA, FLORIDA 33619 813-246-4112

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Ishaq, Chandu  
Product Control



CERTIFICATION

DEC 06 2011

WARREN W. SCHAEFER, P.E.  
E. NO. 44135

DRAWING NO.	REV.
1212	C
SHEET NO.	3 OF 3