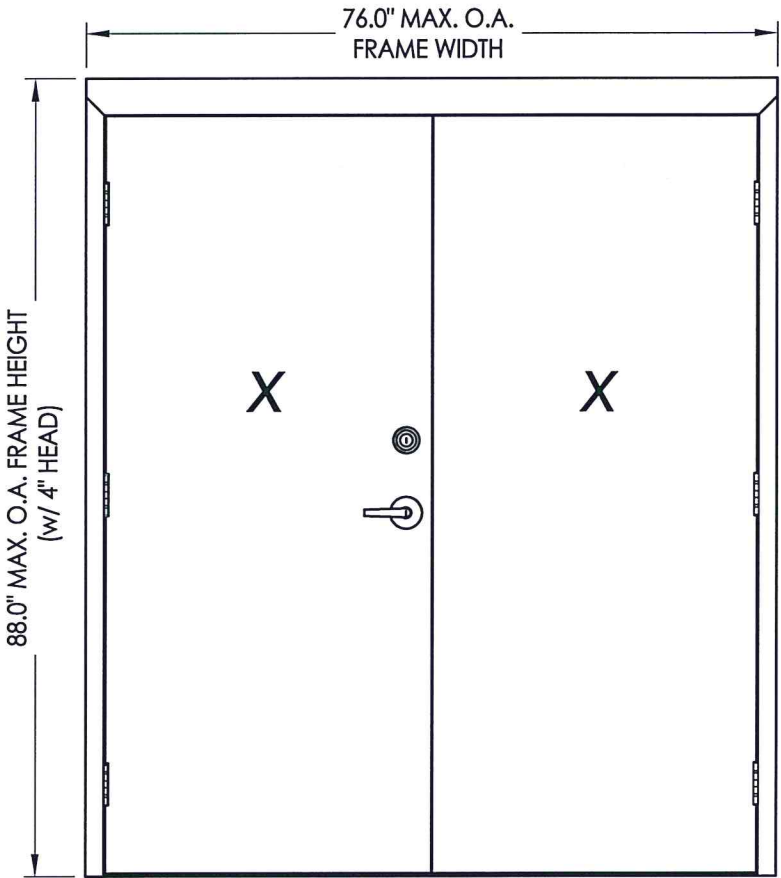




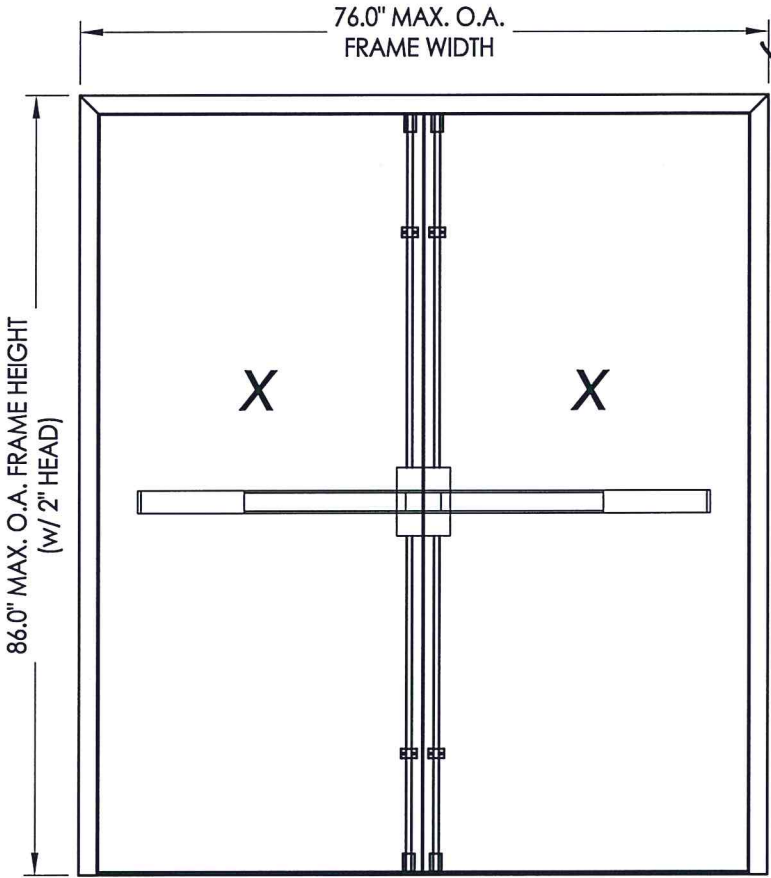
**DKS SERIES 1800
STEEL COMMERCIAL DOUBLE DOOR
INSWING / OUTSWING
"IMPACT"**

1. This product has been evaluated and is in compliance with the 7th Edition (2020) Florida Building Code (FBC) structural requirements excluding the "High Velocity Hurricane Zone" (HVHZ).
2. Product anchors shall be as listed and spaced as shown on details. Anchor embedment to base material shall be beyond wall dressing or stucco.
3. When used in areas requiring wind borne debris protection this product complies with FBC Sections 1609.1.2 & R301.2.1.2 and does not require an impact resistant covering. This product meets missile level "D" and excludes Wind Zone 4 as defined in ASTM E1996 and FBC Sections 1609.1.2.2 & R301.2.1.2.1.
4. This door achieves a Class I Stiffness classification per Section 8.2.2 of ANSI A250.13.
5. Site conditions that deviate from the details of this drawing require further engineering analysis by a licensed engineer or registered architect.

TABLE OF CONTENTS	
SHEET#	DESCRIPTION
1	Typical elevation, design pressures & general notes
2	Door panel details
3	Door panel details
4	Horizontal cross sections
5	Vertical cross sections
6	Frame anchoring
7	Frame anchoring
8	Components
9	Bill of materials and components

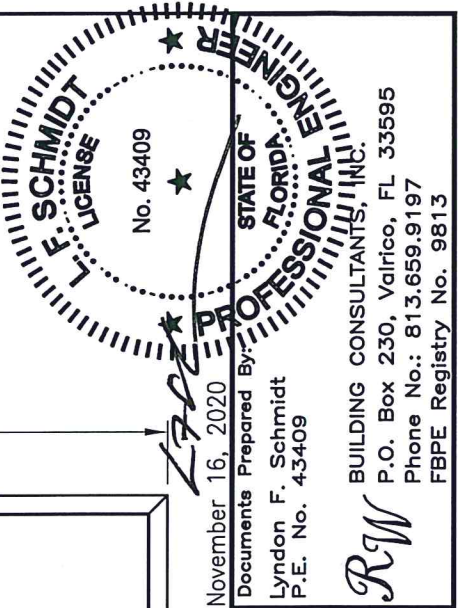


161 Latch & Deadbolt
"Pioneer SL/CSL Series" Latch
"T300 Series" Deadbolt

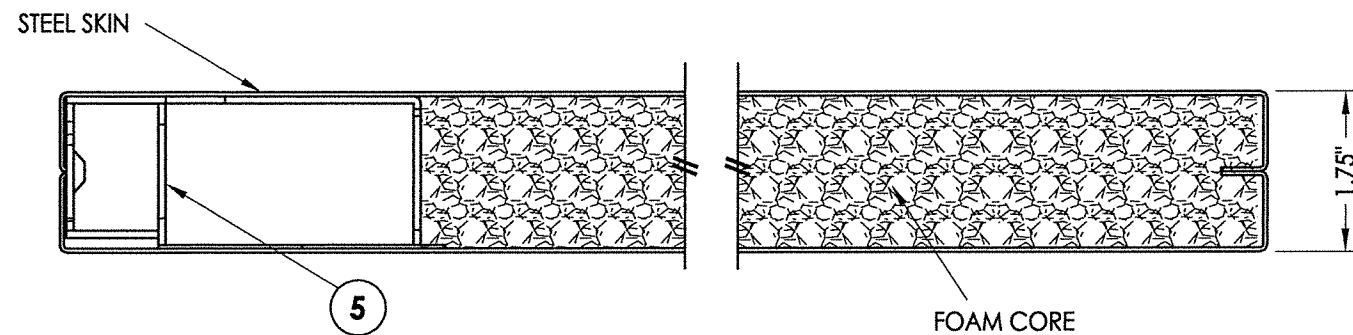


Panic Bar Exit Device w/ Vertical Rods "7700-V Series"

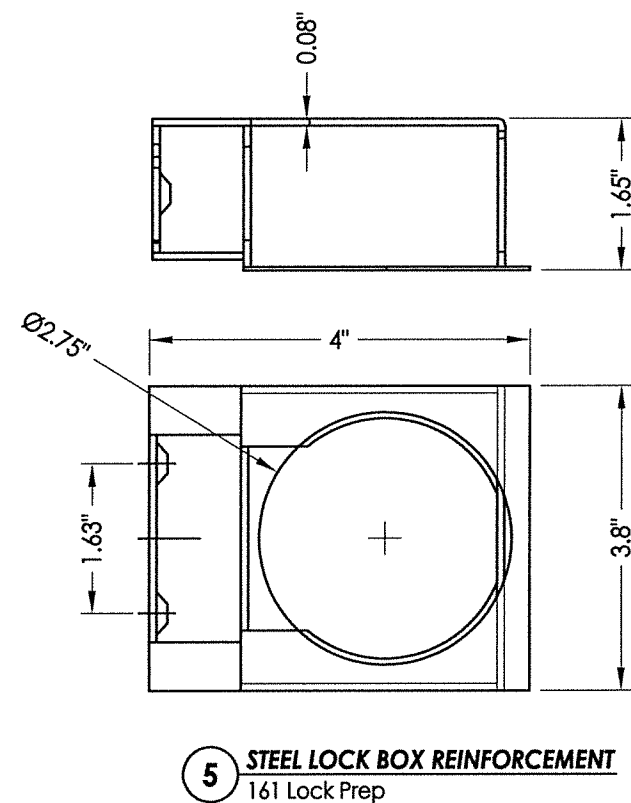
MAX FRAME DIMENSION	LOCK TYPE	DESIGN PRESSURE (PSF) INSWING		DESIGN PRESSURE (PSF) OUTSWING	
		POSITIVE	NEGATIVE	POSITIVE	NEGATIVE
76.00" x 88.00"	161 LATCH & DEADBOLT "Pioneer SL/CSL & T300 Series"	+55.0	-55.0	+55.0	-55.0
76.00" x 88.00"	PANIC BAR EXIT DEVICE w/ VERTICAL RODS "7700-V Series"	N/A	N/A	+70.0	-70.0



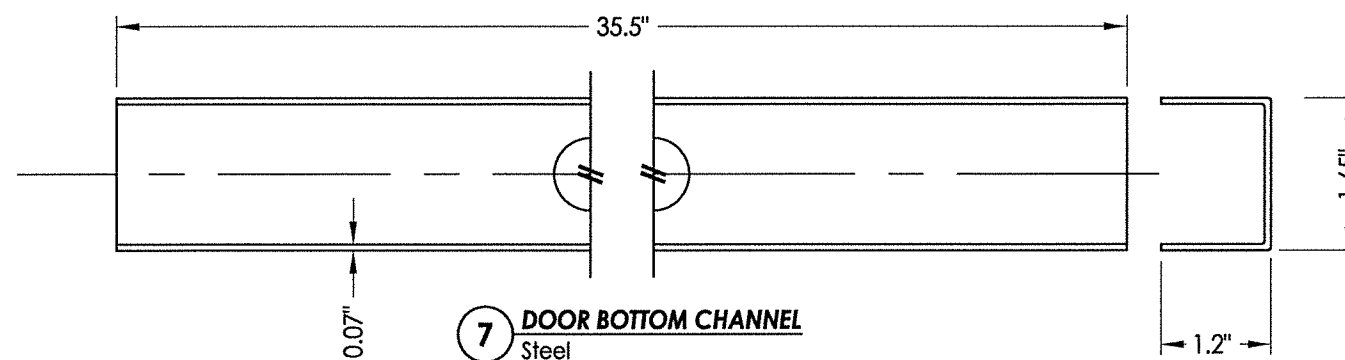
SHEET		1		OF		9	
DRAWING NO.: FL-13624.5							
CHK. BY:		LFS					
DWG. BY:		JK					
SCALE:		N.T.S.					
DATE:		5/25/10					
6	11/16/20	UPDATE TO 7TH ED.	(2020)	FBC	LFS	PRODUCT: CAL-ROYAL STEEL COMMERCIAL DOOR	
5	9/27/17	UPDATE TO 6TH ED.	(2017)	FBC	JK		
4	1/27/15	UPDATE TO 5TH ED.	(2014)	FBC	JK		
3	8/04/14	UPDATE ANCHORING			LFS		
2	1/26/12	UPDATE TO 2010 FBC			JK		
1	1/4/11	REVISE PANIC BAR MODEL NO.			LFS	PART OR ASSEMBLY: TYPICAL ELEVATION, DESIGN PRESSURES & GENERAL NOTES	
NO.	DATE				BY		
REVISIONS							



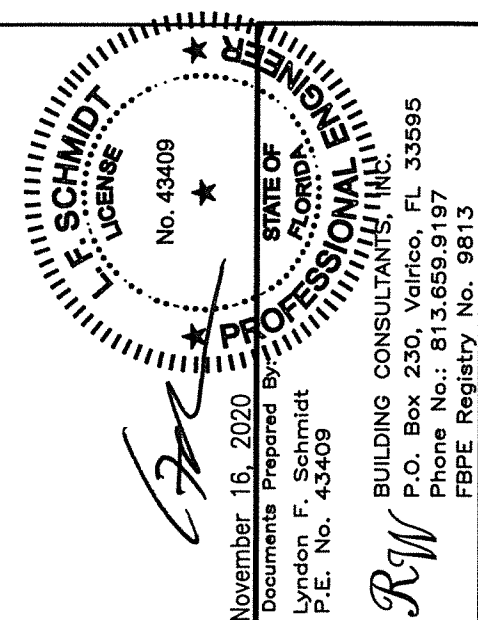
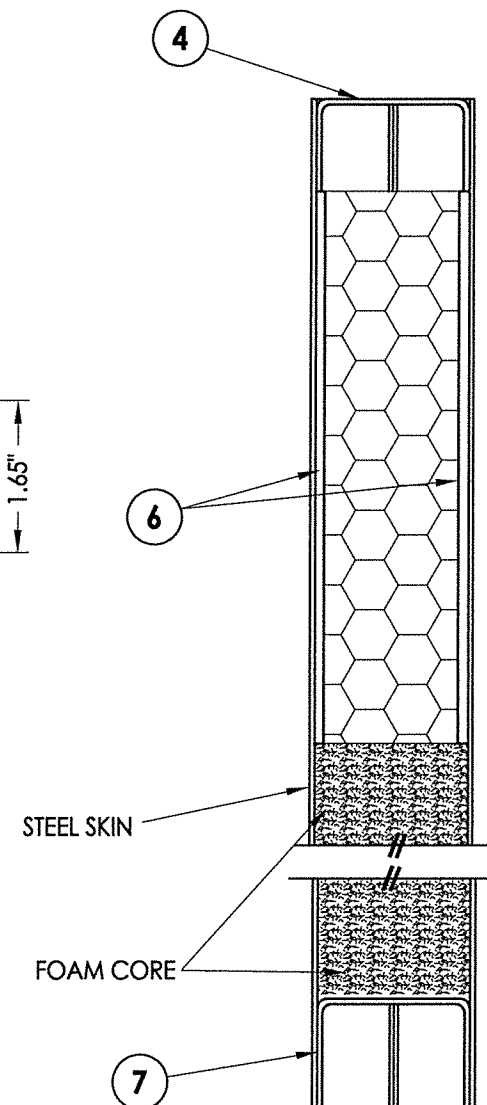
1 HORIZONTAL CROSS SECTION



4 DOOR TOP CHANNEL
Steel



2 VERTICAL CROSS SECTION



DATE:	5/25/10			
SCALE:	N.T.S.			
DWG. BY:	JK			
CHK. BY:	LFS			
DRAWING NO.:	FL-13624.5			
SHEET	2	OF	9	

STEEL DOOR SKIN

87

14

FOAM CORE

75"

1 **HORIZONTAL CROSS SECTION**
3

0.06

14 STILE REINFORCEMENT

29 DOOR BOTTOM REINFORCEMENT

STEEL DOOR SKIN

FOAM CORE

7

29

2 VERTICAL CROSS SECTION

4

6

STEEL DOOR SKIN

FOAM CORE

7

29

2 VERTICAL CROSS SECTION

November 16, 2020

Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

RW BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE Registry No. 9813

November 16, 2020
Documents Prepared
Lyndon F. Schmidt
P.E. No. 43409

PRODUCT: CAL-ROYAL
STEEL COMMERCIAL DOOR

PART OR ASSEMBLY:
DOOR PANEL DETAILS

6	11/16/20	UPDATE TO 7TH ED. (2020)	FBC	LFS
5	9/27/17	UPDATE TO 6TH ED. (2017)	FBC	JK
4	1/27/15	UPDATE TO 5TH ED. (2014)	FBC	JK
3	8/04/14	UPDATE ANCHORING		LFS
2	1/26/12	UPDATE TO 2010 FBC		JK
1	1/4/11	REVISE PANIC BAR MODEL NO.		LFS
NO.	DATE	REVISIONS		

DATE: 5/25/10

SCALE: N.T.S.

DWG. BY: JK

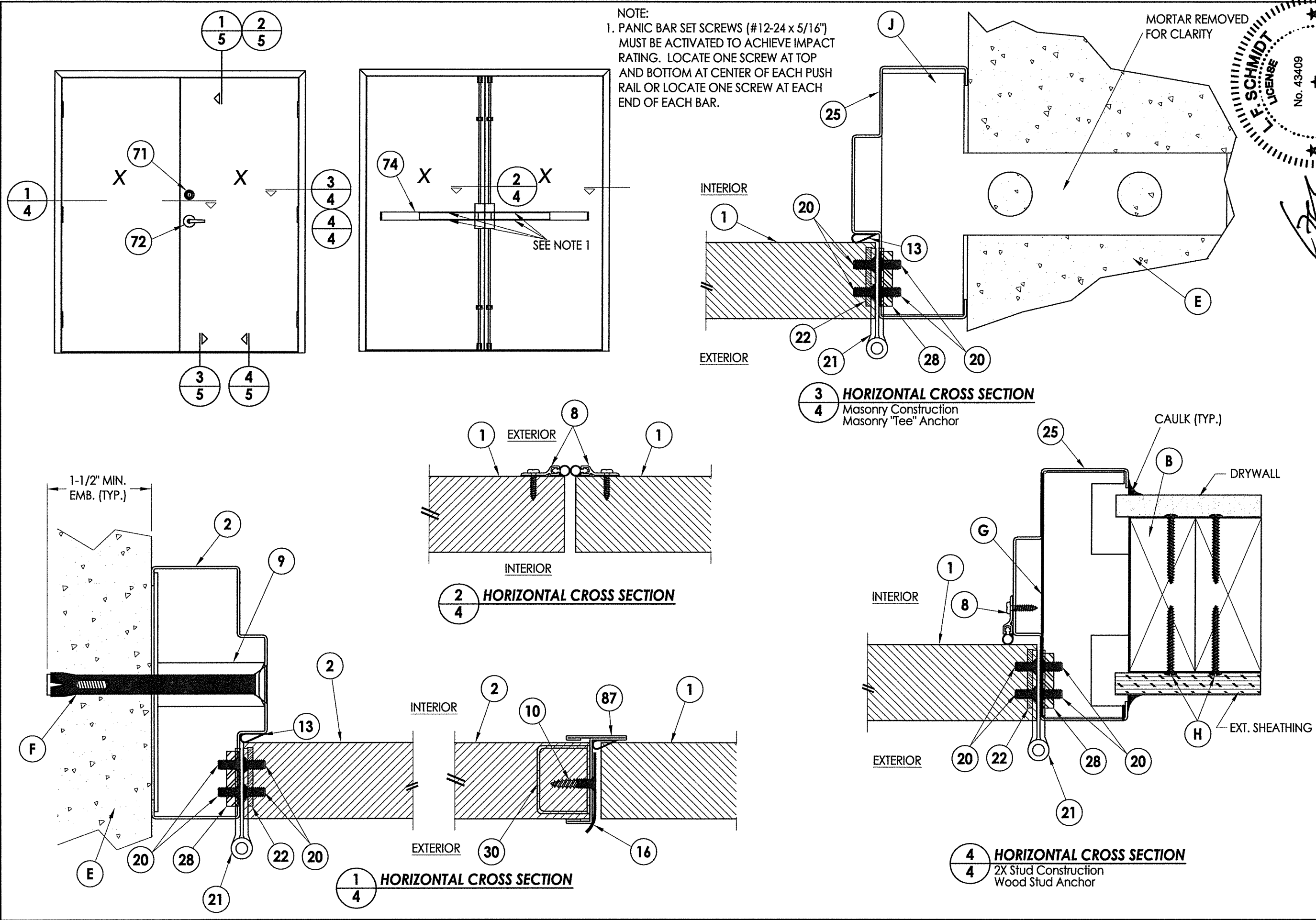
CHK. BY: LFS

DRAWING NO.:
FI-13624.5

SHEET 3 OF 9

© 2010 R.W. BUILDING CONSULTANTS INC.

\\dc01\wbc\Clients\Cal-Royal PERMANENT\A - Florida Product Approvals\FL-13624\C - Drawings\FL 13624 (2020) R8\FL-13624.3-6.dwg



FLORIDA
SCHMIDT
F. SCHMIDT
LICENSE
No. 43409

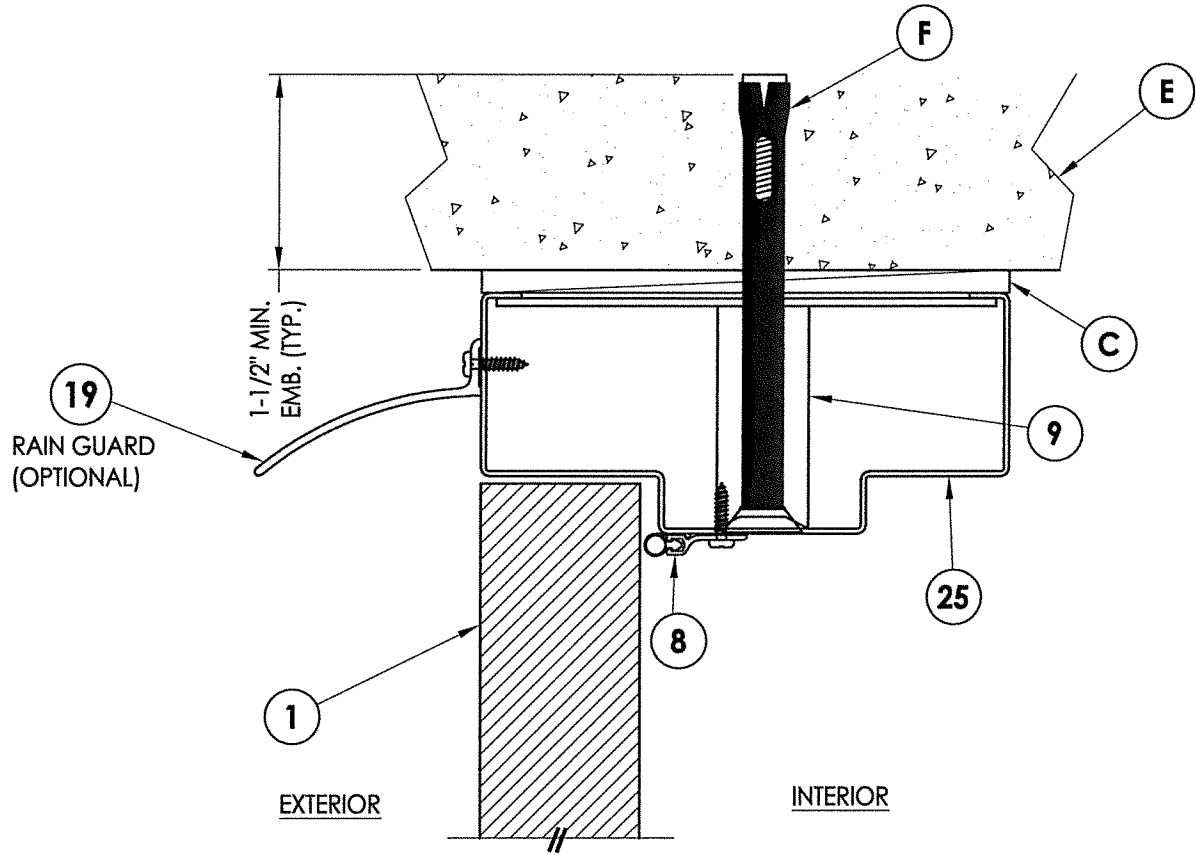
STATE OF
FLORIDA
PROFESSIONAL
ENGINEER
November 16, 2020
Documents Prepared By
Lyndon F. Schmidt
P.E. No. 43409

RW

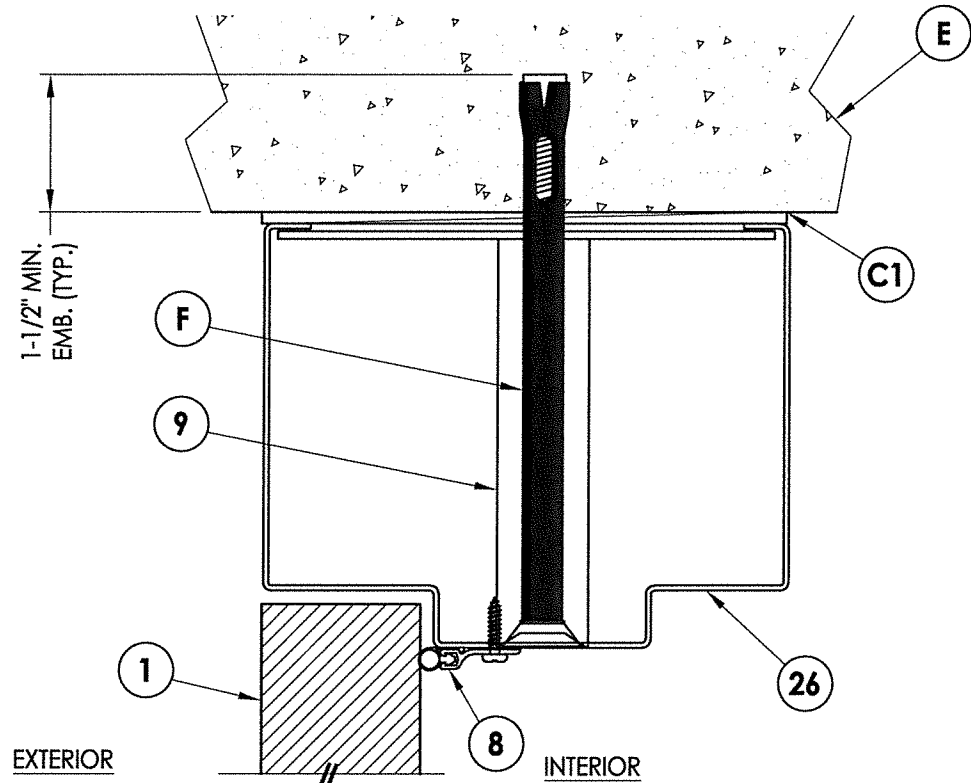
BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE Registry No. 9813

PRODUCT:		CAL-ROYAL	
		STEEL COMMERCIAL DOOR	
PART OR ASSEMBLY:		HORIZONTAL CROSS SECTIONS	
REVISIONS			
NO.	DATE	BY	
6	11/16/20	LFS	UPDATE TO 7TH ED. (2020) FBC
5	9/27/17	JK	UPDATE TO 6TH ED. (2017) FBC
4	1/27/15	JK	UPDATE TO 5TH ED. (2014) FBC
3	8/04/14	LFS	UPDATE ANCHORING
2	1/26/12	JK	UPDATE TO 2010 FBC
1	1/4/11	LFS	REVISE PANIC BAR MODEL NO.

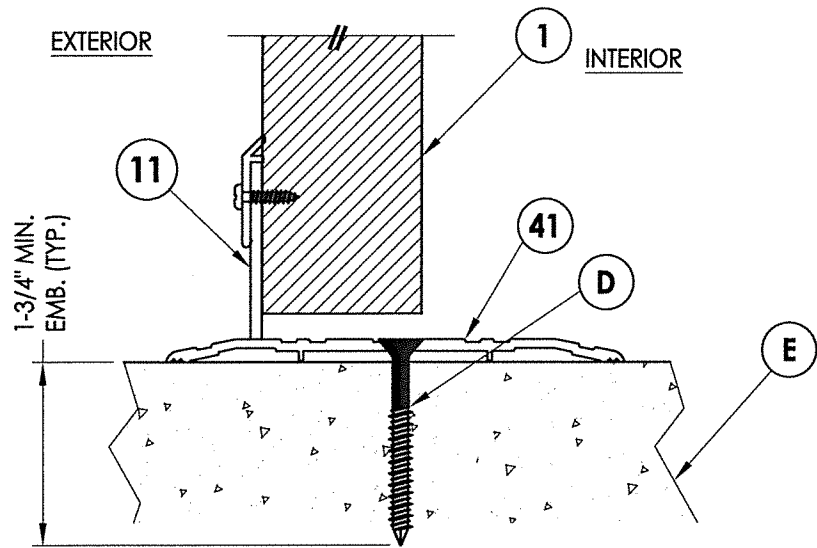
\\dc01\rbwc\Clients\Cal-Royal PERMANENT\A - Florida Product Approvals\FL-13624\C - Drawings\FL 13624 (2020) R8\FL-13624.3-6.dwg



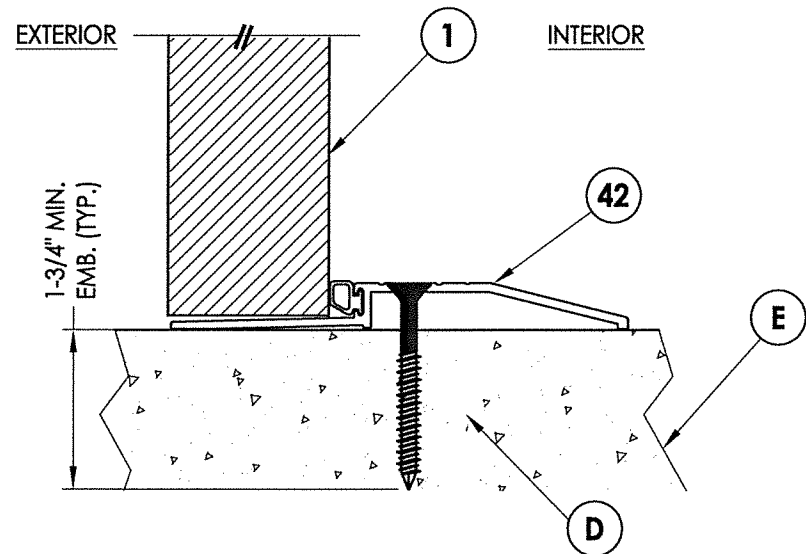
1 **VERTICAL CROSS SECTION**
5 Outswing configuration - Inswing also approved



2 **VERTICAL CROSS SECTION**
5 Outswing configuration - Inswing also approved



3 **VERTICAL CROSS SECTION**
5 Inswing configuration



4 **VERTICAL CROSS SECTION**
5 Outswing configuration

FLORIDA PROFESSIONAL ENGINEER
F. SCHMIDT
LICENSE No. 43409
November 16, 2020
Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409
R.W. BUILDING CONSULTANTS, INC.
P.O. Box 230, Vairco, FL 33595
Phone No.: 813.659.9197
FBPE Registry No. 9813

PRODUCT:		CAL-ROYAL		STEEL COMMERCIAL DOOR		PART OR ASSEMBLY:		VERTICAL CROSS SECTIONS	
LFS	JK	JK	JK	LFS	JK	LFS	BY	REVISIONS	
6	11/16/20	UPDATE TO 7TH ED. (2020)	FBC	6	11/16/20	UPDATE TO 7TH ED. (2020)	FBC	DATE: 5/25/10	
5	9/27/17	UPDATE TO 6TH ED. (2017)	FBC	5	9/27/17	UPDATE TO 6TH ED. (2017)	FBC	SCALE: N.T.S.	
4	1/27/15	UPDATE TO 5TH ED. (2014)	FBC	4	1/27/15	UPDATE TO 5TH ED. (2014)	FBC	DWG. BY: JK	
3	8/04/14	UPDATE ANCHORING		3	8/04/14	UPDATE ANCHORING		CHK. BY: LFS	
2	1/26/12	UPDATE TO 2010 FBC		2	1/26/12	UPDATE TO 2010 FBC		DRAWING NO.: FL-13624.5	
1	1/4/11	REVISE PANIC BAR MODEL NO.		1	1/4/11	REVISE PANIC BAR MODEL NO.		SHEET 5 OF 9	
NO.	DATE			NO.	DATE				

SEE HINGE
DETAIL (TYP.)

Diagram showing the elevation view of the Hinge Jamb. The jamb is a vertical assembly with three hinges. The total height is 10.385". The distance between the top hinge and the middle hinge is 32". The distance between the middle hinge and the bottom hinge is 32". The distance from the top hinge to the top of the jamb is 16". The distance from the middle hinge to the top of the jamb is 24". The distance from the bottom hinge to the top of the jamb is 24". The distance from the bottom hinge to the bottom of the jamb is 4". The hinges are labeled "HINGE JAMB".

2X FRAME
DOOR
FRAME

G

H HEAD & JAMBS
(TYP.)

(2) PER STRAP
(EACH FACE)

2X FRAME
DOOR
FRAME

HINGE DETAIL

DETAIL 1
Flip bolt strike plate
@ head

DETAIL 2
Flip bolt holes
@ sill

Flip bolt holes
@ sill

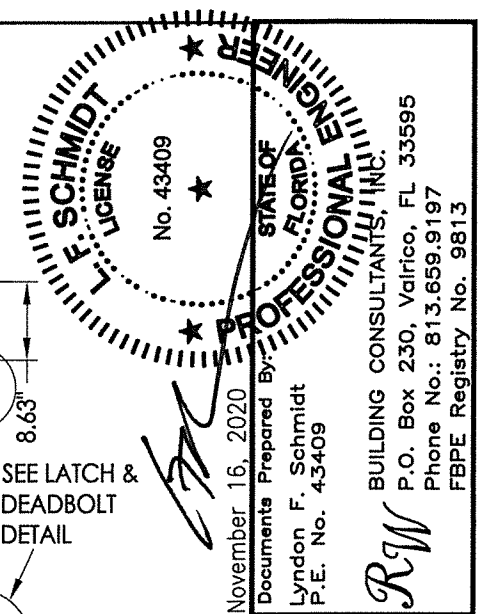
LATCH & DEADBOLT DETAIL

FLIP BOLT DETAIL
1/2" dia. bolt

SEE FLIP BOLT
DETAIL (TYP.)

SEE LATCH &
DEADBOLT
DETAIL

ASTRAGAL



November 16, 2020
Documents Prepared By
Lyndon F. Schmidt
P.E. No. 43409

BUILDING CONSULTANTS, INC.
P.O. Box 230, Vairico, FL 33595
Phone No.: 813.659.9197
FBPE Registry No. 9813

PRODUCT: CAL-ROYAL
STEEL COMMERCIAL DOOR

PART OR ASSEMBLY: FRAME ANCHORING

6	11/16/20	UPDATE TO 7TH ED. (2020)	FBC	LFS
5	9/27/17	UPDATE TO 6TH ED. (2017)	FBC	JK
4	1/27/15	UPDATE TO 5TH ED. (2014)	FBC	JK
3	8/04/14	UPDATE ANCHORING		LFS
2	1/26/12	UPDATE TO 2010 FBC		JK
1	1/4/11	REVISE PANIC BAR MODEL NO.		LFS
NO.	DATE			BY
			REVISIONS	

DATE: 05/25/10

SCALE: N.T.S.

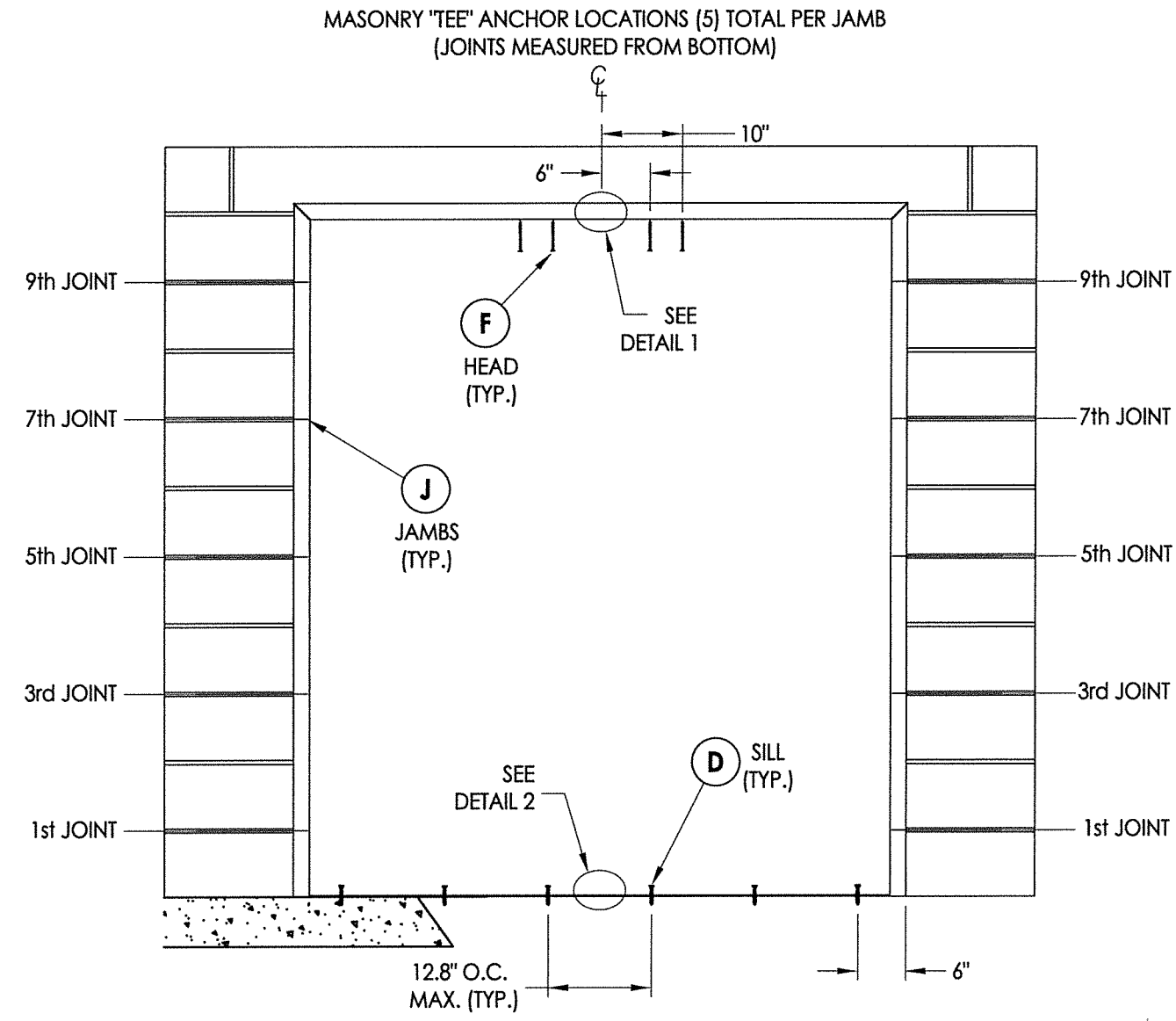
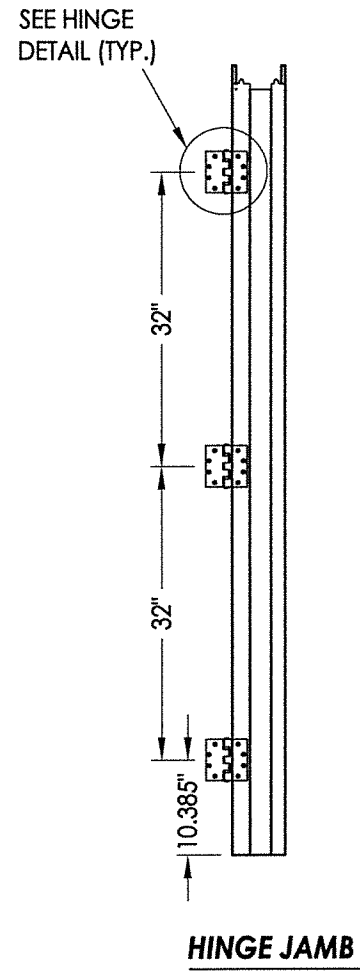
DWG. BY: JK

CHK. BY: LFS

DRAWING NO.: FL-13624.5

SHEET 6 OF 9

2010 R.W. BUILDING CONSULTANTS, INC.

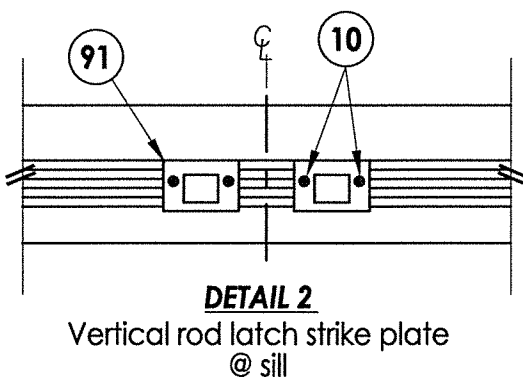
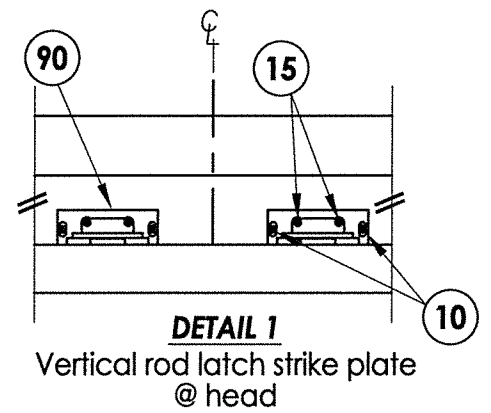
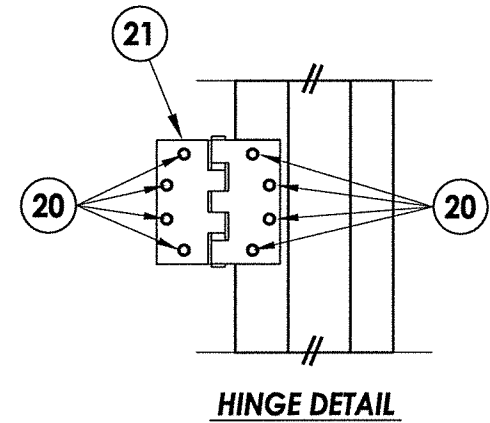


CONCRETE ANCHOR NOTES:

1. Substitution of equal concrete screws from a different supplier may have different edge distance and center distance requirements.
2. Concrete screw locations at the corners may be adjusted to maintain the minimum edge distance to mortar joints. If concrete screw locations noted as "MAX. ON CENTER" must be adjusted to maintain the minimum edge distance to mortar joints, additional concrete screws may be required to ensure the maximum on center dimension is not exceeded.
3. Concrete anchor table:

ANCHOR TYPE	ANCHOR SIZE	MIN. EMBEDMENT	MIN. CLEARANCE TO MASONRY EDGE	MIN. CLEARANCE TO ADJACENT ANCHOR
ITW TAPCON®	1/4"	1-3/4"	2-1/2"	4"
DeWALT ULTRACON®	1/4"	1-3/4"	1"	4"
DYNABOLT SLEEVE ANCHOR	3/8"	1-1/2"	2-1/4"	4-1/2"

FRAME ANCHORING
Masonry Construction
Masonry "Tee" Anchors

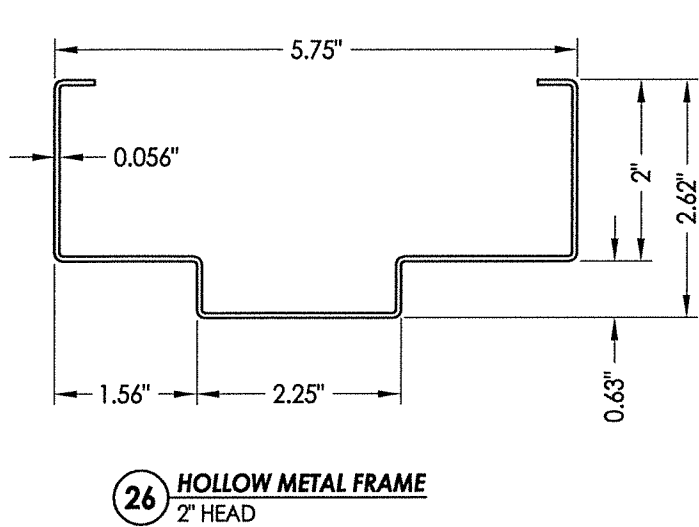


FLORIDA
STATE OF
ENGINEER
L. E. SCHMIDT
LICENSE
No. 43409

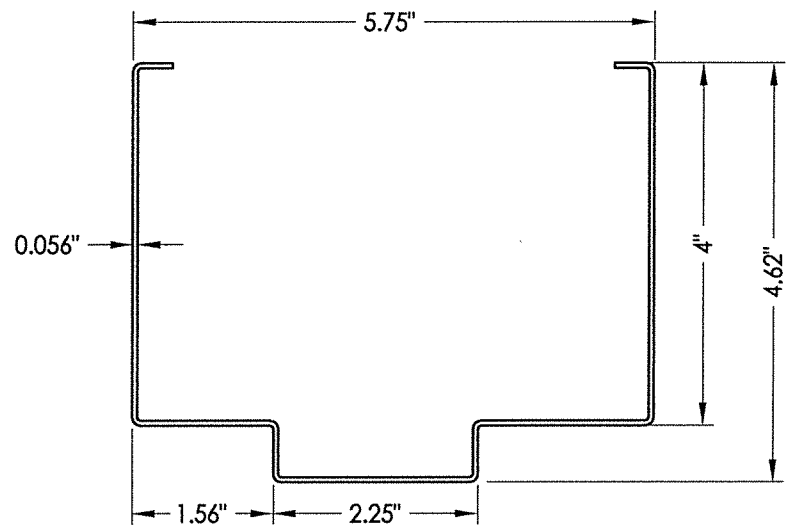
November 16, 2020
Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

R.W.
BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE Registry No. 9813

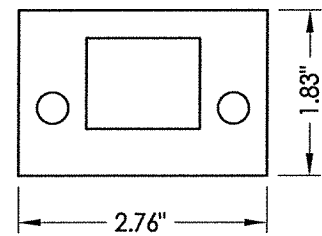
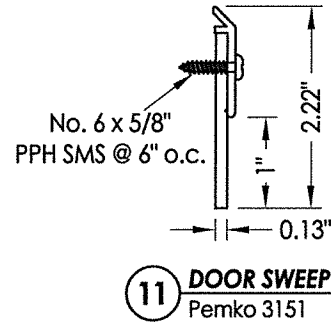
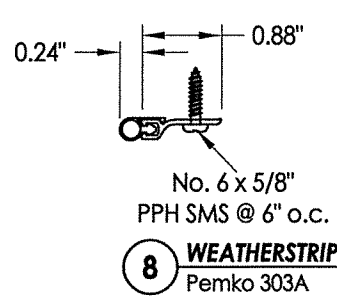
PRODUCT:		CAL-ROYAL STEEL COMMERCIAL DOOR		PART OR ASSEMBLY:		FRAME ANCHORING							
LFS	JK	LFS	JK	LFS	JK	LFS	BY						
6	11/16/20	UPDATE TO 7TH ED. (2020) FBC	4	1/27/15	UPDATE TO 5TH ED. (2014) FBC	3	8/04/14						
5	9/27/17	UPDATE TO 6TH ED. (2017) FBC	2	1/26/12	UPDATE TO 2010 FBC	1	1/4/11						
4	1/27/15	UPDATE TO 5TH ED. (2014) FBC	1	1/4/11	REVISE PANIC BAR MODEL NO.	NO.	DATE						
				REVISIONS									
DATE: 05/25/10													
SCALE: N.T.S.													
DWG. BY: JK													
CHK. BY: LFS													
DRAWING NO.: FL-13624.5													
SHEET 7 OF 9													



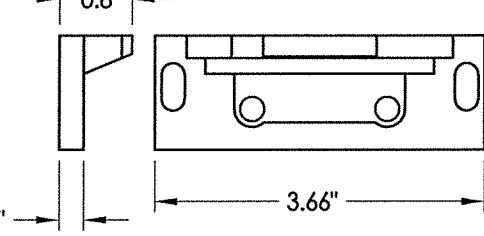
26 HOLLOW METAL FRAME
2" HEAD



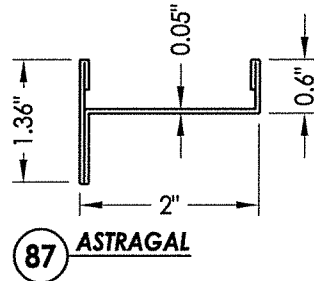
26 HOLLOW METAL FRAME
4" HEAD



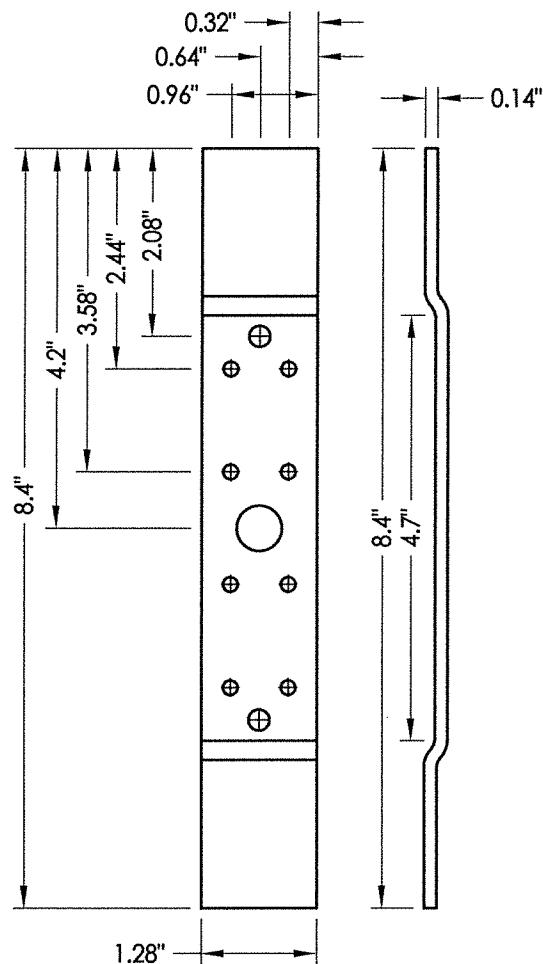
91 VERTICAL ROD LATCH STRIKE PLATE
@ Sill



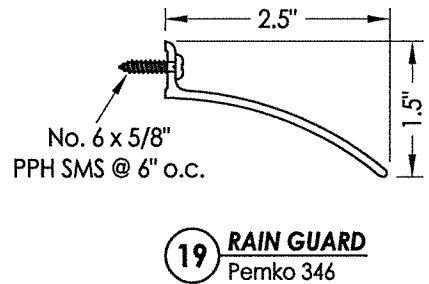
90 VERTICAL ROD LATCH STRIKE PLATE
@ Head



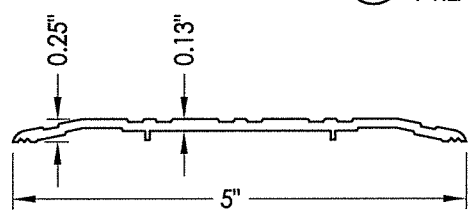
87 ASTRAGAL



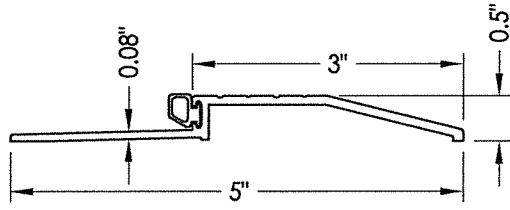
28 FRAME HINGE REINFORCEMENT



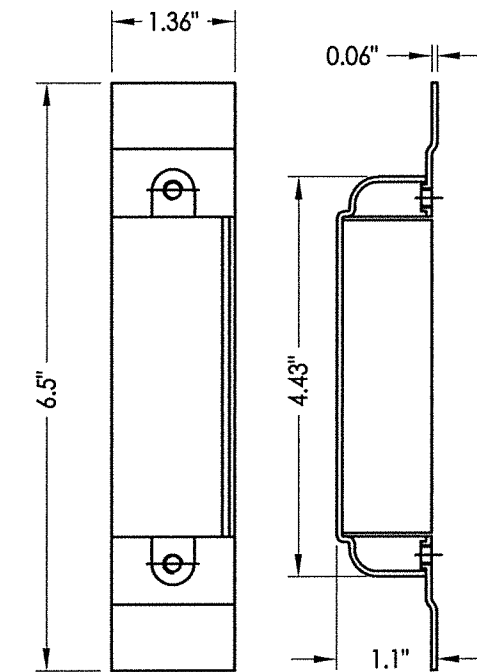
19 RAIN GUARD
Pemko 346



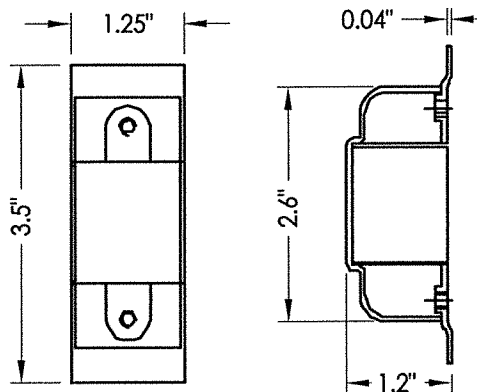
41 THRESHOLD
Pemko 271



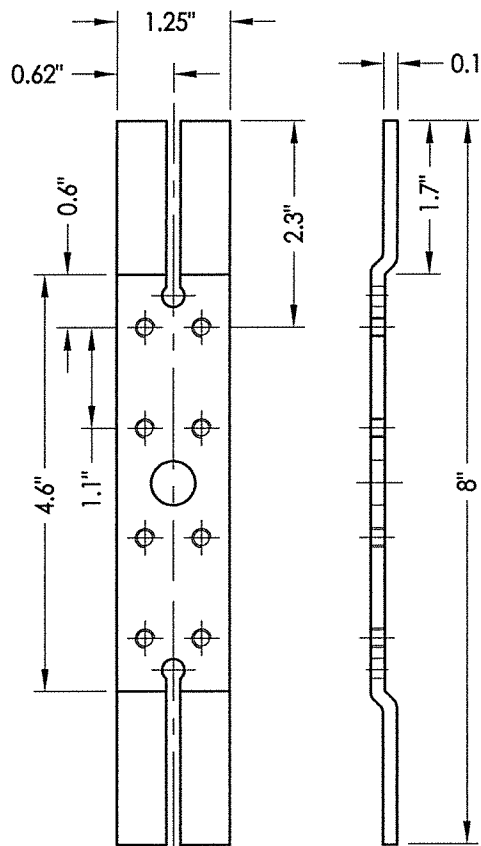
42 THRESHOLD
Pemko 2001P



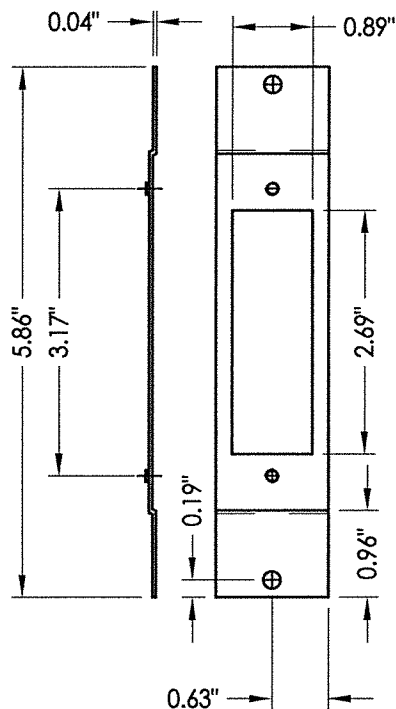
30 DOOR LATCH REINFORCEMENT



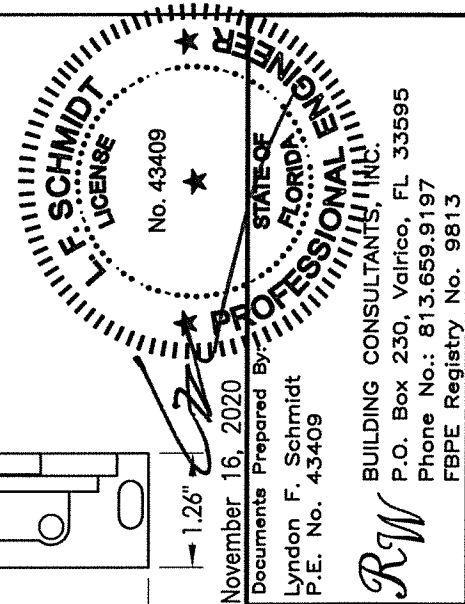
31 DOOR DEADBOLT REINFORCEMENT



22 DOOR HINGE REINFORCEMENT



27 FRAME LATCH STRIKE REINFORCEMENT

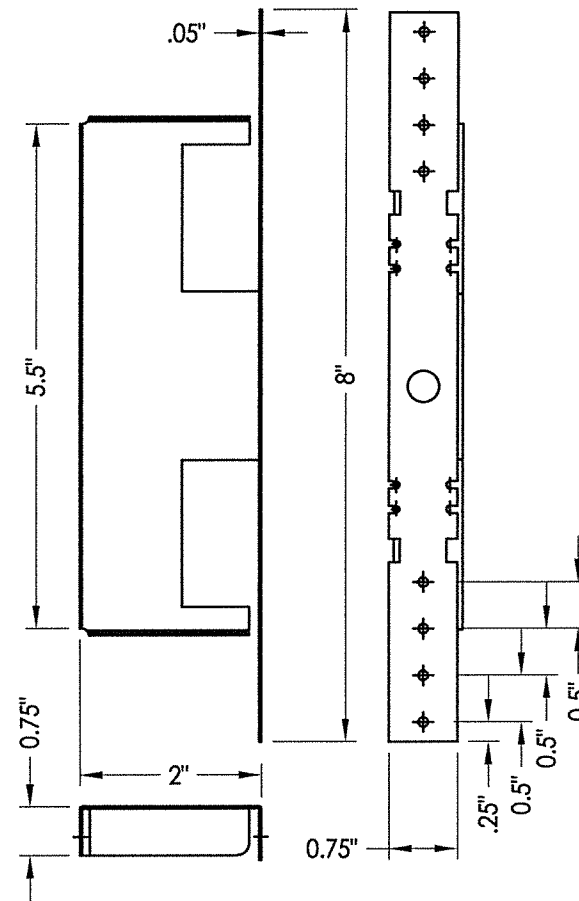


November 16, 2020
Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

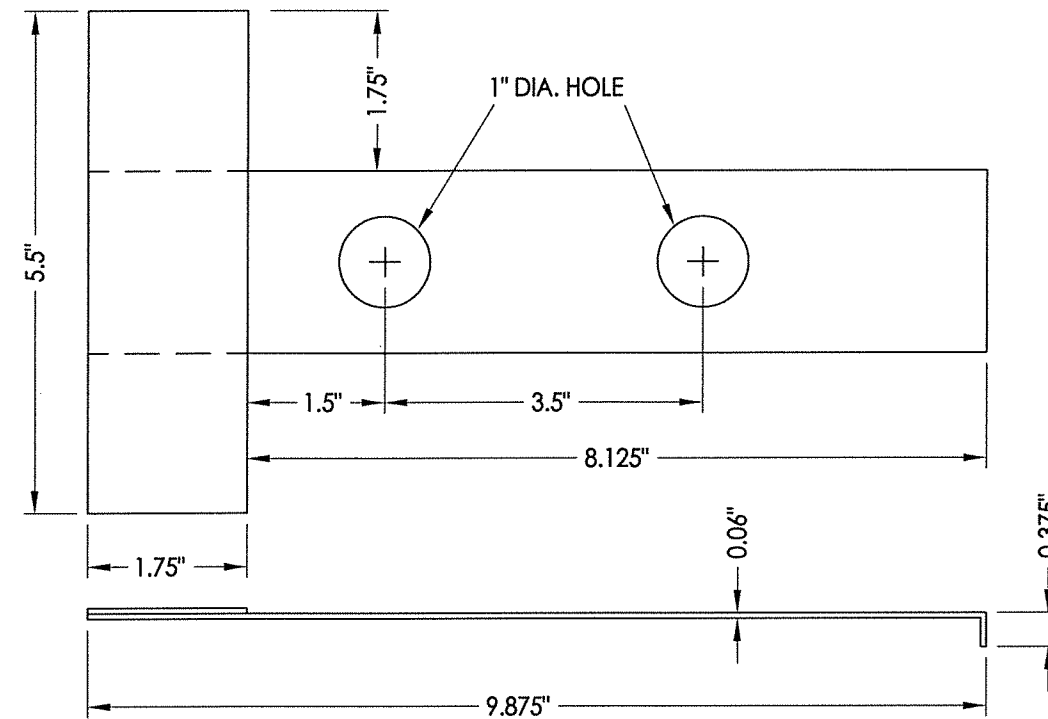
RW
BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE Registry No. 9813

PRODUCT:		CAL-ROYAL STEEL COMMERCIAL DOOR	
PART OR ASSEMBLY:		COMPONENTS	
LFS	JK	UPDATE TO 7TH ED. (2020)	FBC
JK	JK	UPDATE TO 6TH ED. (2017)	FBC
JK	JK	UPDATE TO 5TH ED. (2014)	FBC
LFS		UPDATE ANCHORING	
JK		UPDATE TO 2010 FBC	
LFS		REVISE PANIC BAR MODEL NO.	
BY			
NO. DATE		REVISIONS	
DATE: 05/25/10			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.: FL-13624.5			
SHEET 8 OF 9			

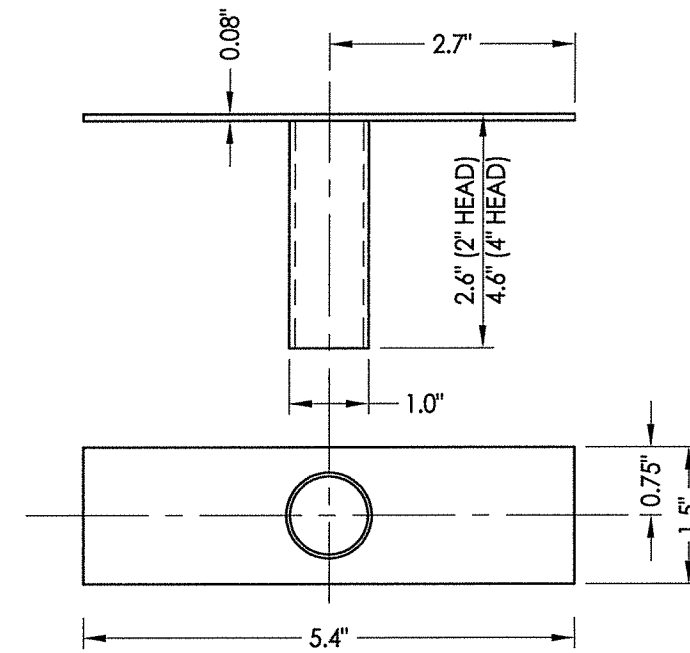
BILL OF MATERIALS		
ITEM #	DESCRIPTION	MATERIAL
B	2 X 4 FRAMING (SG >= 0.55)	-
C	1/4" MAX. SHIM SPACE	-
C1	1/8" MAX. SHIM SPACE	-
D	1/4" X 2-3/4" PFH DeWALT OR ITW CONCRETE SCREW	STEEL
E	MASONRY - 3,000 PSI MIN. CONCRETE CONFORMING TO ACI 301 OR HOLLOW BLOCK CONFORMING TO ASTM C90	CONCRETE
F	3/8" PFH ITW DYNABOLT SLEEVE ANCHOR	STEEL
G	WOOD STRAP ANCHOR	STEEL
H	#8 X 1-1/2" PH WOOD SCREW (1-3/8" MIN. EMBEDMENT)	STEEL
J	MASONRY "TEE" ANCHOR	STEEL
1	CAL-ROYAL DOOR PANEL (ACTIVE DOOR)	-
2	CAL-ROYAL DOOR PANEL (INACTIVE DOOR)	-
4	DOOR TOP CHANNEL	STEEL
5	LOCK BOX REINFORCEMENT	STEEL
6	CLOSER REINFORCEMENT (11 gauge)	STEEL
7	DOOR BOTTOM CHANNEL	STEEL
8	WEATHERSTRIP - PEMKO 303A	NEOPRENE
9	TUBE ANCHOR	STEEL
10	#12-24 X 1" COMBINATION MACHINE / WOOD SCREW	STEEL
11	DOOR SWEEP- PEMKO 3151	PVC
13	WEATHERSTRIP - COMPRESSION BULB 1/4" X 1/2" (PEMKO S88)	NEOPRENE
14	STILE REINFORCEMENT	STEEL
15	#8-24 X 3/4" COMBINATION MACHINE / WOOD SCREW	STEEL
16	ANSI LATCH STRIKE	STEEL
17	DEAD BOLT STRIKE	STEEL
18	FLIP BOLT - CAL- ROYAL	-
19	RAIN GUARD (PEMKO 346)	ALUM.
20	#12-24 X 1/2" PFH MACHINE SCREW	STEEL
21	4-1/2" X 4-1/2" X 0.125" TEMPLATE HINGE	STEEL
22	DOOR HINGE REINFORCEMENT	STEEL
25	HOLLOW FRAME 2"	STEEL
26	HOLLOW FRAME 4" HEAD	STEEL
27	FRAME LATCH STRIKE REINFORCEMENT	STEEL
28	FRAME HINGE REINFORCEMENT	STEEL
29	DOOR BOTTOM REINFORCEMENT w/ STRIKE PLATE	STEEL
30	DOOR LATCH REINFORCEMENT	STEEL
31	DOOR DEADBOLT REINFORCEMENT	STEEL
41	INSWING THRESHOLD - PEMKO 271	ALUM
42	OUTSWING THRESHOLD - PEMKO 2001P	ALUM
71	CAL-ROYAL PIONEER SL/CSL SERIES CYLINDRICAL LOCK	-
72	CAL-ROYAL T300 SERIES DEADBOLT	-
74	CAL-ROYAL 7700-V SERIES VERTICAL ROD EXIT DEVICE	-
87	ASTRAGAL	STEEL
90	VERTICAL ROD LATCH STRIKE PLATE @ HEAD	STEEL
91	VERTICAL ROD LATCH STRIKE PLATE @ SILL	STEEL



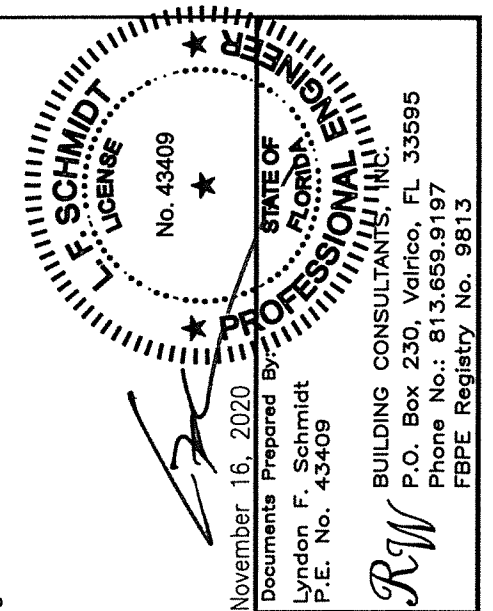
G WOOD STRAP ANCHOR



J MASONRY 'TEE' ANCHOR



9 TUBE ANCHOR



DATE: 05/25/10		6		11/16/20	UPDATE TO 7TH ED. (2020)	FBC	LFS	PRODUCT: CAL - ROYAL STEEL COMMERCIAL DOOR
SCALE: N.T.S.		5		9/27/17	UPDATE TO 6TH ED. (2017)	FBC	JK	
DWG. BY: JK		4		1/27/15	UPDATE TO 5TH ED. (2014)	FBC	JK	
CHK. BY: LFS		3		8/04/14	UPDATE ANCHORING		LFS	
DRAWING NO.: FL-13624.5		2		1/26/12	UPDATE TO 2010	FBC	JK	
SHEET 9 OF 9		1		1/4/11	REVISE PANIC BAR MODEL NO.		LFS	PART OR ASSEMBLY: BILL OF MATERIALS AND COMPONENTS
		NO.		DATE			BY	
REVISIONS								