



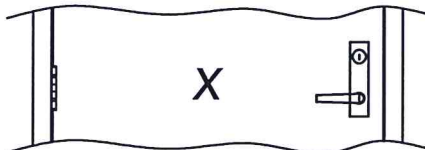
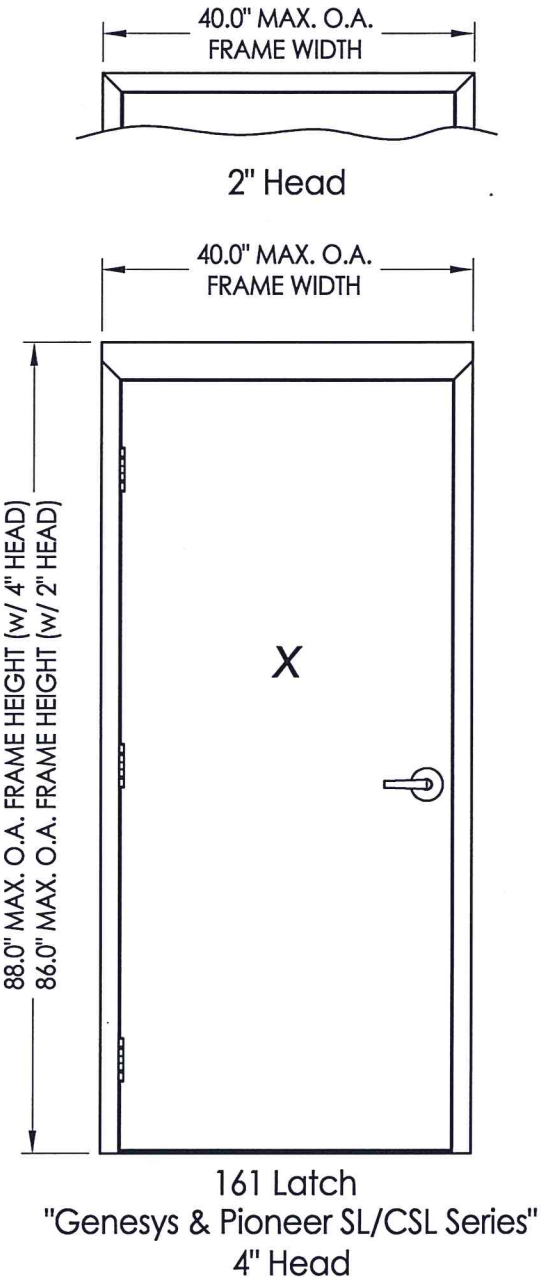
6605 Flotilla Street
City of Commerce
CA 90040

DKS SERIES 1800
STEEL COMMERCIAL SINGLE DOOR
INSWING / OUTSWING
"IMPACT"

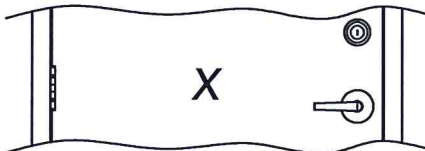
GENERAL NOTES

1. This product has been evaluated and is in compliance with the 7th Edition (2020) Florida Building Code (FBC) structural requirements including 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 the "HVHZ" this product complies with Section 1626 of the Florida Building Code and does not require an impact resistant covering.
4. When used in areas outside of the "HVHZ" 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 includes Wind Zone 4 as defined in ASTM E 1996 and FBC Sections 1609.1.2.2 & R301.2.1.2.1.
5. Site conditions that deviate from the details of this drawing require further engineering analysis by a licensed engineer or registered architect.
6. This product does not meet the water infiltration requirements for the "HVHZ" and shall be installed only in non-habitable areas or at habitable locations protected by an overhang or canopy such that the angle between the edge of canopy or overhang to sill is less than 45 degrees.
7. When used in the "HVHZ", steel must be protected as specified in FBC Section 2222.6

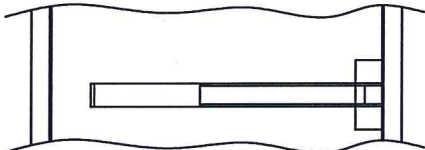
TABLE OF CONTENTS	
SHEET#	DESCRIPTION
1	Typical elevation, design pressures & general notes
2	Door panel details
3	Horizontal cross sections
4	Vertical cross sections
5	Frame anchoring
6	Frame anchoring details
7	Components
8	Bill of materials and components



86E Mortise Lock
"M Series"

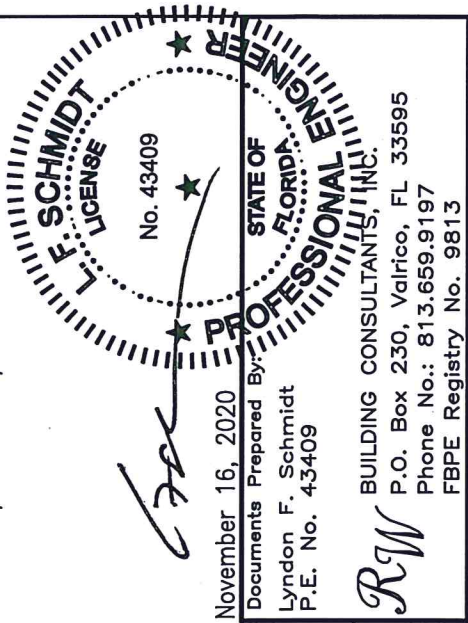


161 Latch & Deadbolt
"Pioneer SL/CSL Series" Latch
"T300 Series" Deadbolt



"F5000/5000 & F7700/7700 Series"
Panic Bar Exit Device

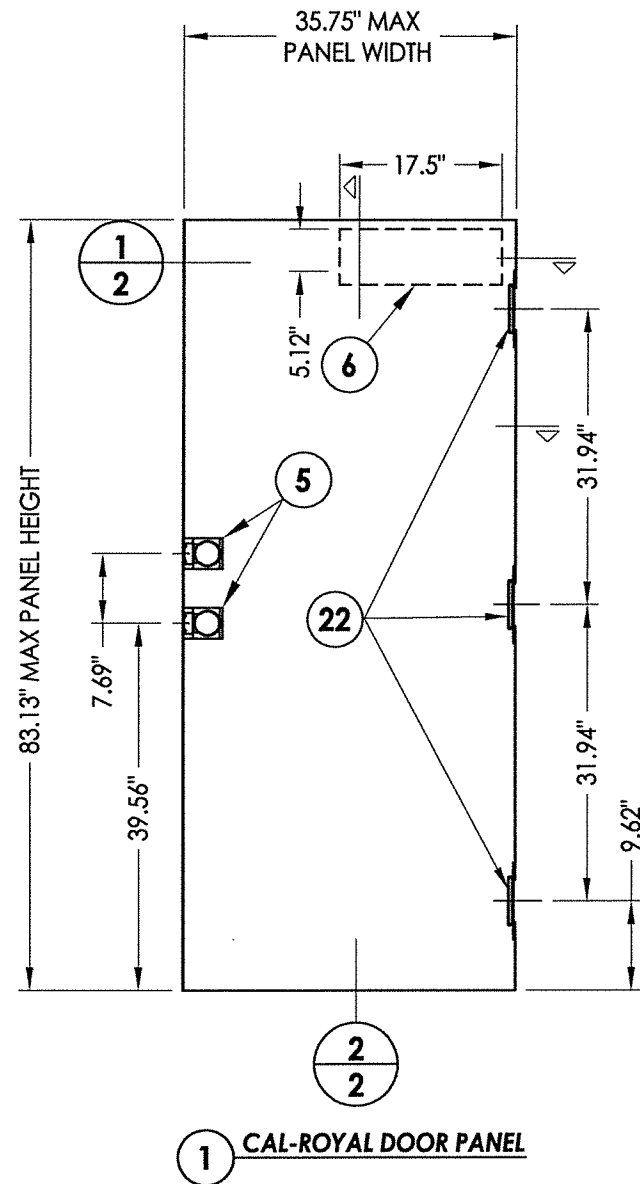
MAX FRAME DIMENSION	LOCK TYPE	DESIGN PRESSURE (PSF) INSWING		DESIGN PRESSURE (PSF) OUTSWING	
		POSITIVE	NEGATIVE	POSITIVE	NEGATIVE
40.00" x 88.00"	161 LATCH "Pioneer SL/CSL Series"	+55.0	-55.0	+55.0	-55.0
40.00" x 88.00"	161 LATCH & DEADBOLT "Pioneer SL/CSL & T300 Series"	+55.0	-55.0	+55.0	-55.0
40.00" x 88.00"	161 LATCH "Genesys Series"	+70.0	-70.0	+70.0	-70.0
40.00" x 88.00"	PANIC BAR EXIT DEVICE "F5000/5000 Series"	N/A	N/A	+50.0	-50.0
40.00" x 88.00"	PANIC BAR EXIT DEVICE "F7700/7700 Series"	N/A	N/A	+70.0	-70.0
40.00" x 88.00"	86E Mortise Lock "M Series"	+80.0	-80.0	+80.0	-80.0



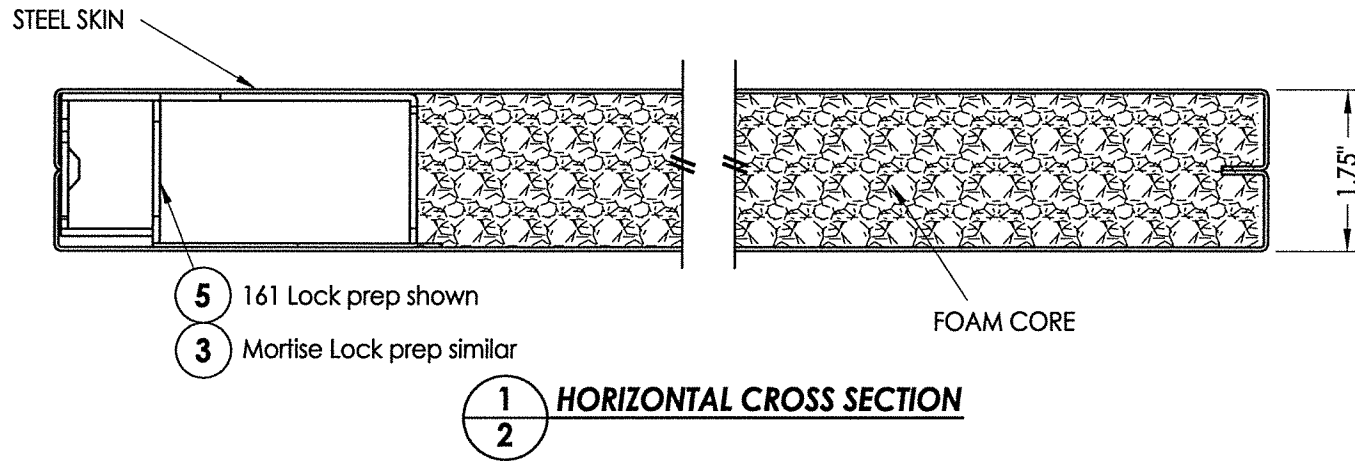
November 16, 2020
Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409
BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE Registry No. 9813

PRODUCT:		CAL-ROYAL STEEL COMMERCIAL DOOR	
PART OR ASSEMBLY:		TYPICAL ELEVATION, DESIGN PRESSURES & GENERAL NOTES	
LFS	JK	JK	JK
FBC	FBC	FBC	FBC
UPDATE TO 7TH ED. (2020)	UPDATE TO 6TH ED. (2017)	UPDATE TO 5TH ED. (2014)	ADD 5000/PIONEER SERIES HDWR
11/16/20	9/27/17	1/27/15	7/31/14
6	5	4	3
DATE: 05/25/10		REVISIONS	
SCALE: N.T.S.		DWG. BY: JK	
CHK. BY: LFS		DRAWING NO.: FL-13624.4	
SHEET 1 OF 8		REVISE PANIC BAR MODEL NO.	
NO. DATE		BY	
1		DATE	

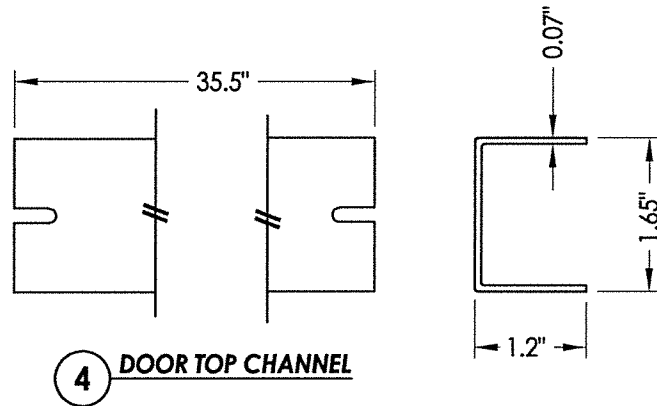
\\dc01\vwbc\Clients\Cal-Royal PERMANENT\A - Florida Product Approvals\FL-13624\C - Drawings\FL 13624 (2020) R8\FL-13624.3-6.dwg



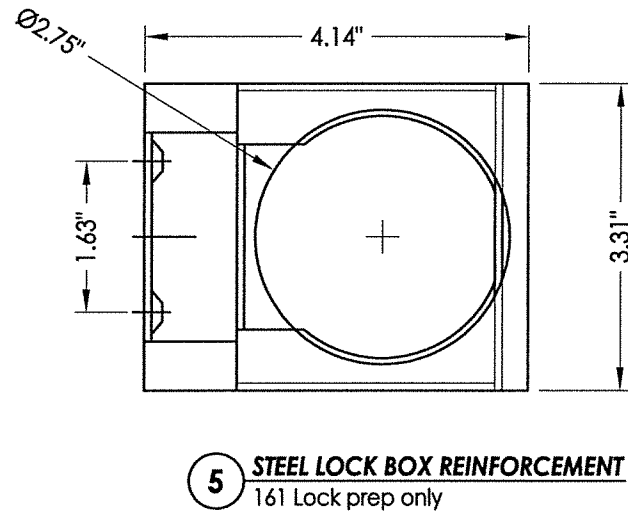
STEEL DOOR SKIN (18 GA.): MIN. 0.045" THK.
STEEL GRADE: ASTM A1008 GALV. STEEL (Fy = 33,000 PSI MIN.)
CORE MATERIAL: EPS FOAM (POLYSTYRENE - 1.0 PCF MIN. DENSITY)



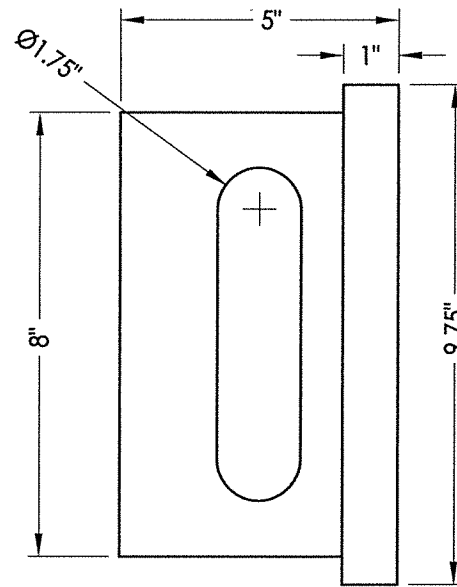
1
2 HORIZONTAL CROSS SECTION



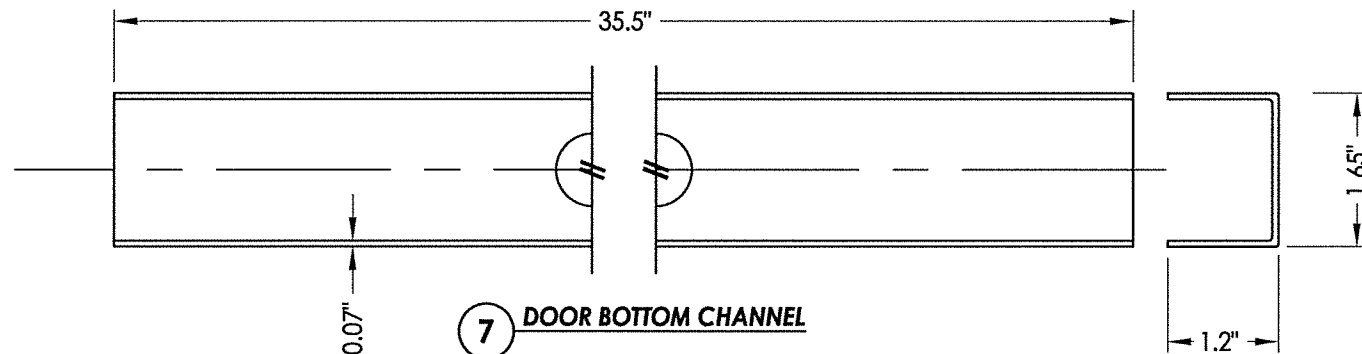
4 DOOR TOP CHANNEL



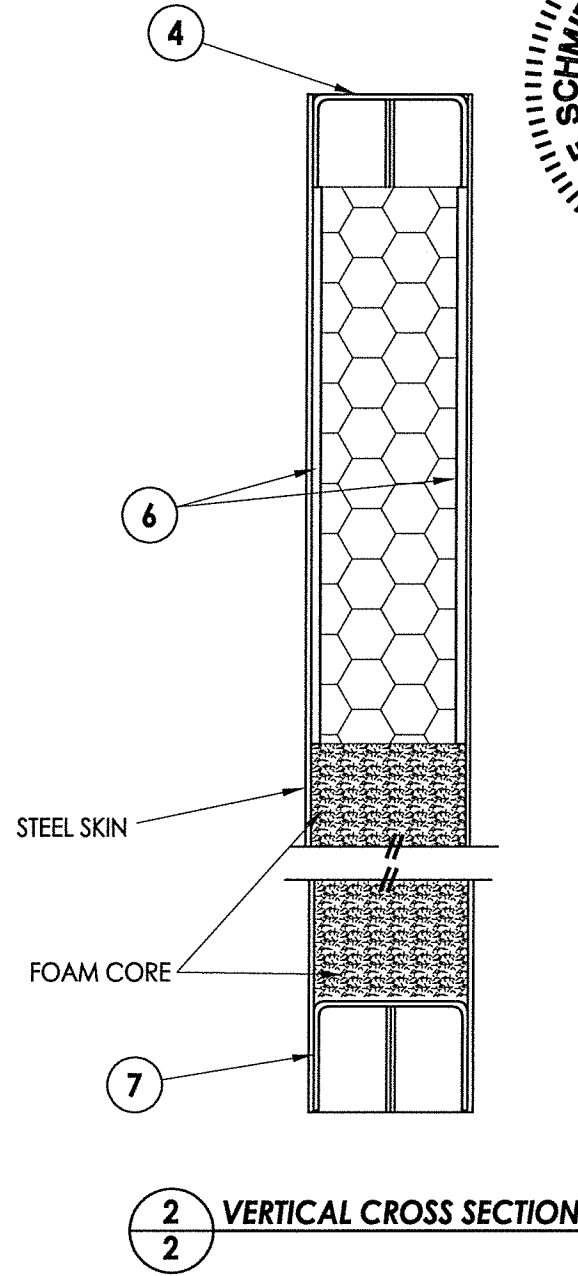
5 STEEL LOCK BOX REINFORCEMENT
161 Lock prep only



3 STEEL LOCK BOX REINFORCEMENT
Mortise Lock prep only



7 DOOR BOTTOM CHANNEL



2
2 VERTICAL CROSS SECTION

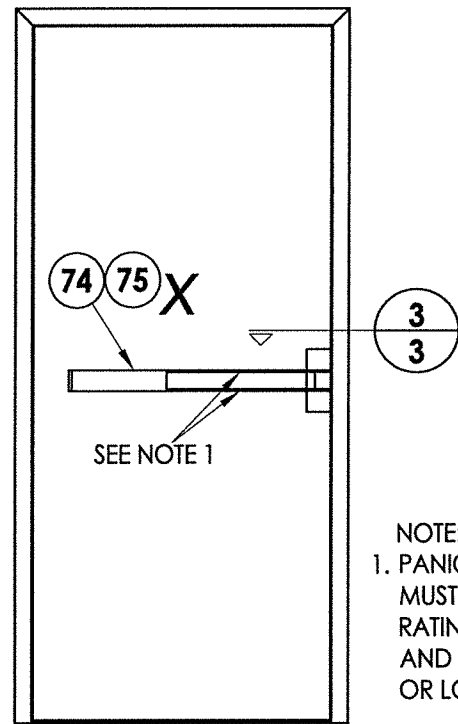
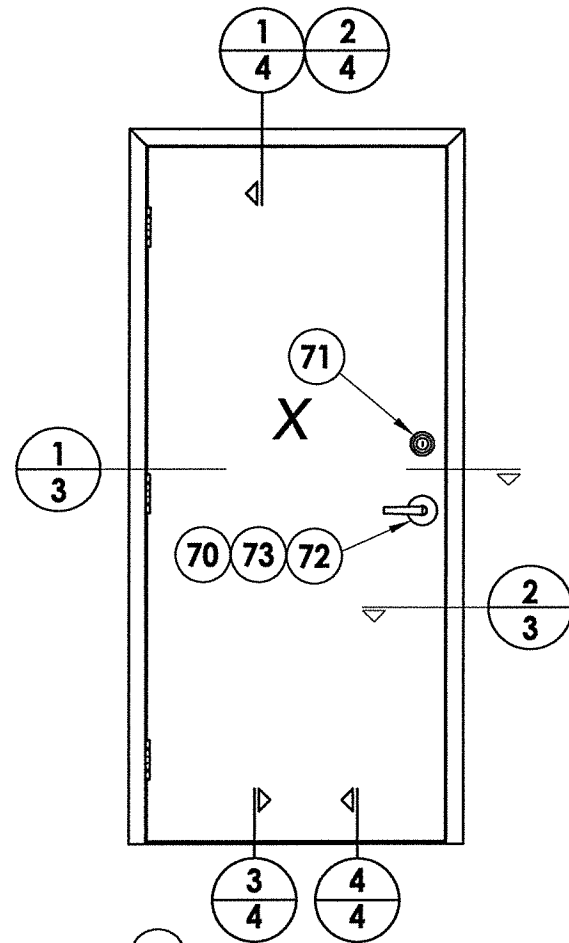
November 16, 2020
Documents Prepared By: Lyndon F. Schmidt
P.E. No. 43409

STATE OF FLORIDA
PROFESSIONAL ENGINEER
No. 43409

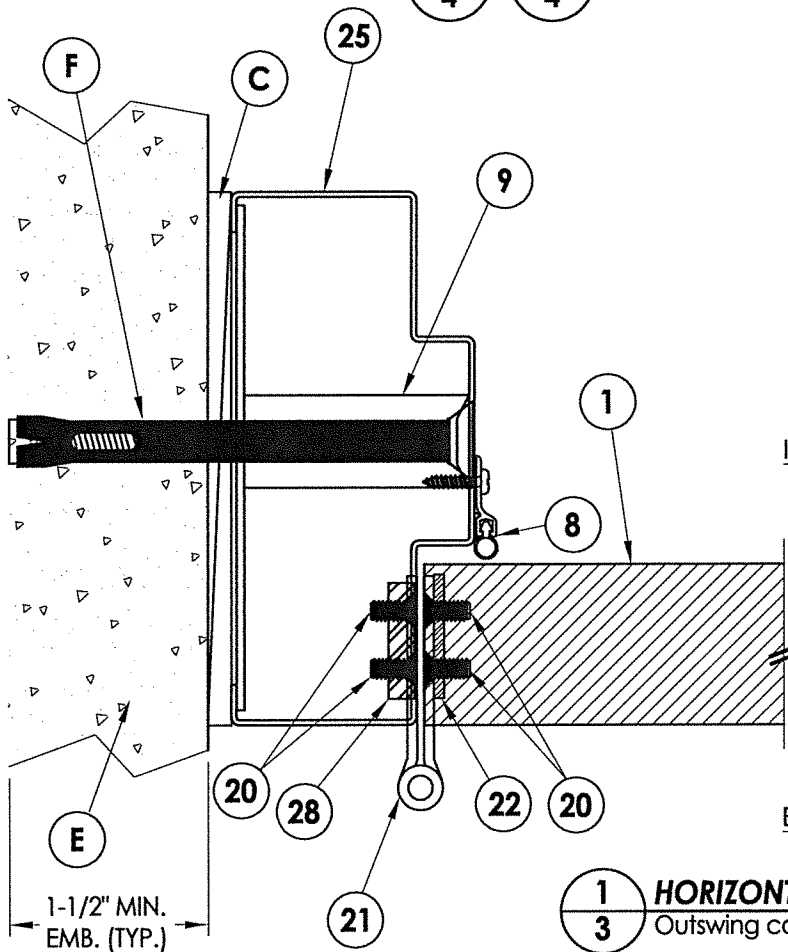
R.W. BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE Registry No. 9813

PRODUCT:		CAL-ROYAL		STEEL COMMERCIAL DOOR		PART OR ASSEMBLY:		DOOR PANEL DETAILS			
LFS	JK	LFS	JK	LFS	JK	LFS	JK	LFS	BY		
6	11/16/20	UPDATE TO 7TH ED. (2020) FBC	6	11/16/20	UPDATE TO 7TH ED. (2020) FBC	6	11/16/20	UPDATE TO 7TH ED. (2020) FBC	6	11/16/20	
5	9/27/17	UPDATE TO 6TH ED. (2017) FBC	5	9/27/17	UPDATE TO 6TH ED. (2017) FBC	5	9/27/17	UPDATE TO 6TH ED. (2017) FBC	5	9/27/17	
4	1/27/15	UPDATE TO 5TH ED. (2014) FBC	4	1/27/15	UPDATE TO 5TH ED. (2014) FBC	4	1/27/15	UPDATE TO 5TH ED. (2014) FBC	4	1/27/15	
3	7/31/14	ADD 5000/PIONEER SERIES HDWR	3	7/31/14	ADD 5000/PIONEER SERIES HDWR	3	7/31/14	ADD 5000/PIONEER SERIES HDWR	3	7/31/14	
2	1/26/12	UPDATE TO 2010 FBC	2	1/26/12	UPDATE TO 2010 FBC	2	1/26/12	UPDATE TO 2010 FBC	2	1/26/12	
1	1/4/11	REVISE PANIC BAR MODEL NO.	1	1/4/11	REVISE PANIC BAR MODEL NO.	1	1/4/11	REVISE PANIC BAR MODEL NO.	1	1/4/11	
NO.	DATE		NO.	DATE		NO.	DATE		NO.	DATE	
DATE: 05/25/10		SCALE: N.T.S.		DWG. BY: JK		CHK. BY: LFS		DRAWING NO.: FL-13624.4		SHEET 2 OF 8	
REVISIONS											

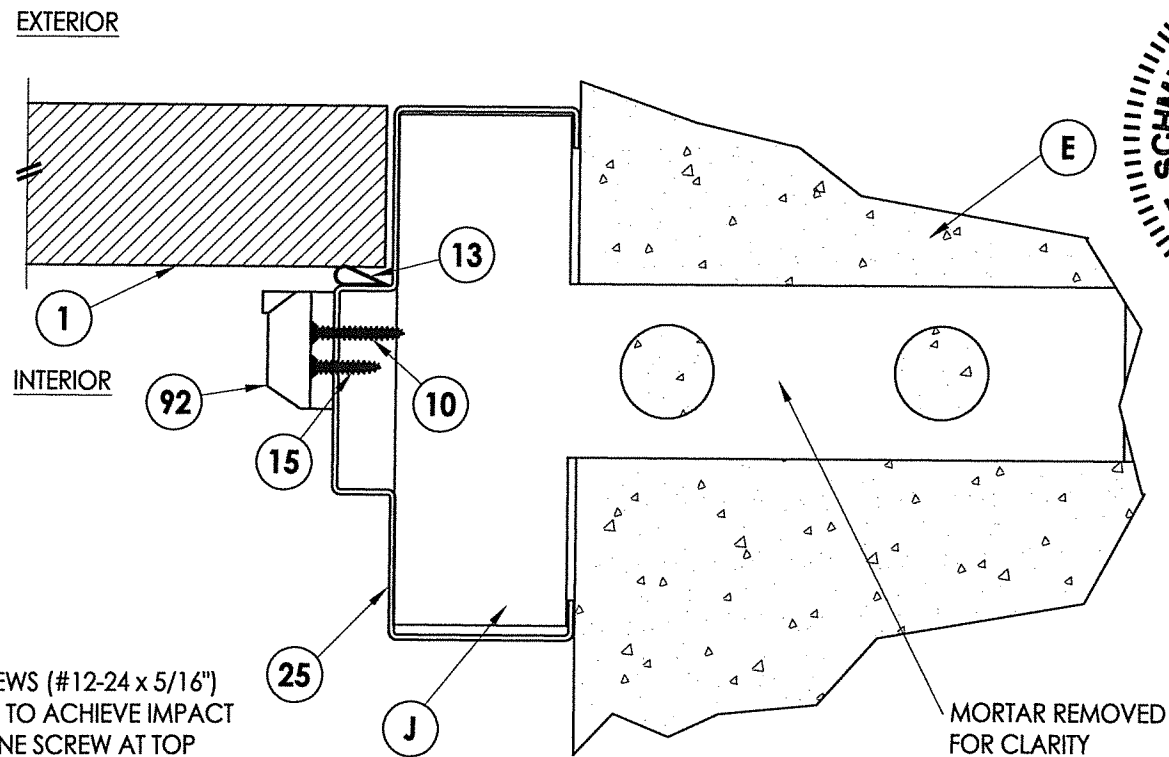
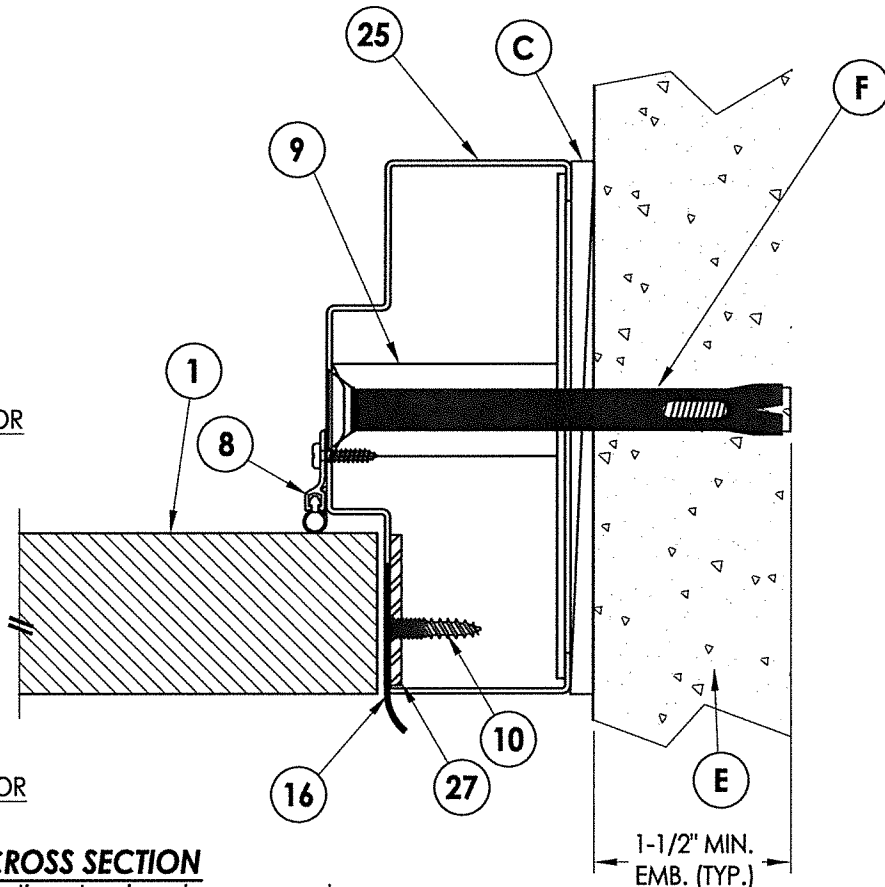
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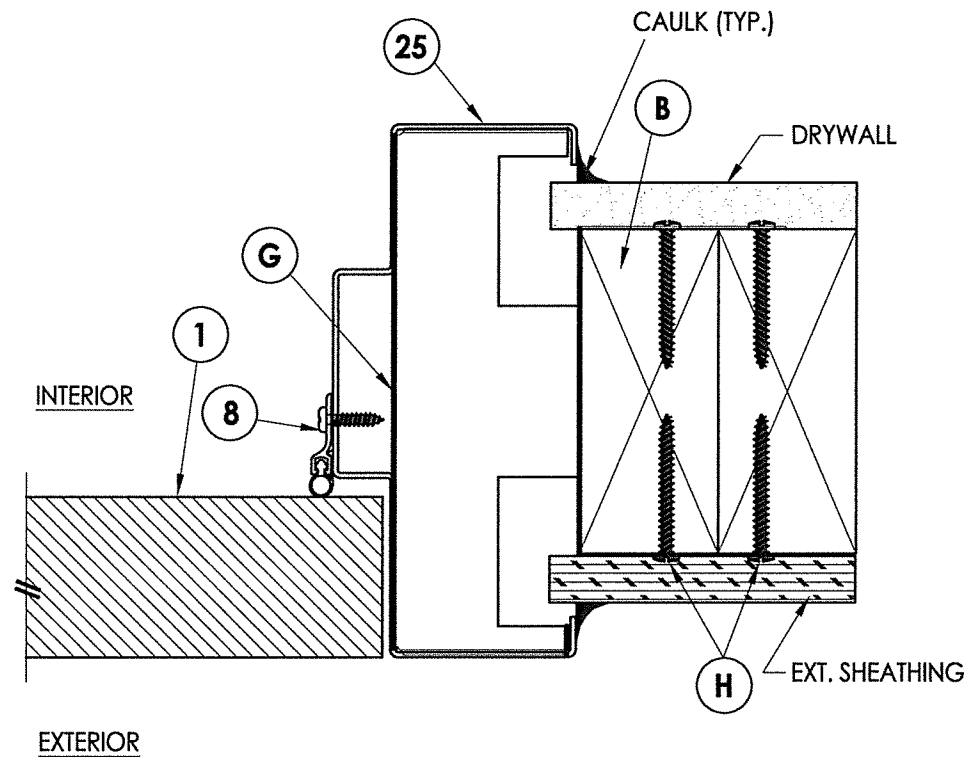
NOTE:
1. PANIC BAR SET SCREWS (#12-24 x 5/16")
MUST BE ACTIVATED TO ACHIEVE IMPACT
RATING. LOCATE ONE SCREW AT TOP
AND BOTTOM AT CENTER OF PUSH RAIL
OR LOCATE ONE SCREW AT EACH END OF BAR.



1
3 HORIZONTAL CROSS SECTION
Outswing configuration - Inswing also approved



3
3 HORIZONTAL CROSS SECTION
Masonry Construction
Masonry "Tee" Anchor



2
3 HORIZONTAL CROSS SECTION
2X Stud Construction
Wood Stud Anchor

November 16, 2020
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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:	
		HORIZONTAL CROSS SECTIONS	
LFS	JK	LFS	JK
UPDATE TO 7TH ED. (2020) FBC	UPDATE TO 6TH ED. (2017) FBC	UPDATE TO 5TH ED. (2014) FBC	ADD 5000/PIONEER SERIES HDWR
6	5	4	3
11/16/20	9/27/17	1/27/15	7/31/14
DATE	DATE	DATE	DATE
5/25/10	N.T.S.	JK	LFS
SCALE	DWG. BY:	CHK. BY:	DRAWING NO.:
	JK	LFS	FL-13624.4
NO.	DATE	REVISIONS	
1	1/4/11	REVISE PANIC BAR MODEL NO.	
2	1/26/12	UPDATE TO 2010 FBC	
3	7/31/14	ADD 5000/PIONEER SERIES HDWR	
4	1/27/15	UPDATE TO 5TH ED. (2014) FBC	
5	9/27/17	UPDATE TO 6TH ED. (2017) FBC	
6	11/16/20	UPDATE TO 7TH ED. (2020) FBC	
SHEET 3 OF 8			

A cross-sectional view of a window assembly. The exterior side (top) is labeled "EXTERIOR" and shows a multi-pane glass unit with a textured surface. The interior side (bottom) is labeled "INTERIOR" and shows a solid frame. The assembly includes a central cavity (26) and a bottom flange (8) with a screw (1) and a seal (C). The top flange is labeled (E).

EXTERIOR

INTERIOR

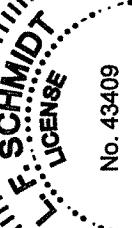
1-3/4" MIN.
EMB. (TYP.)

1

42

D

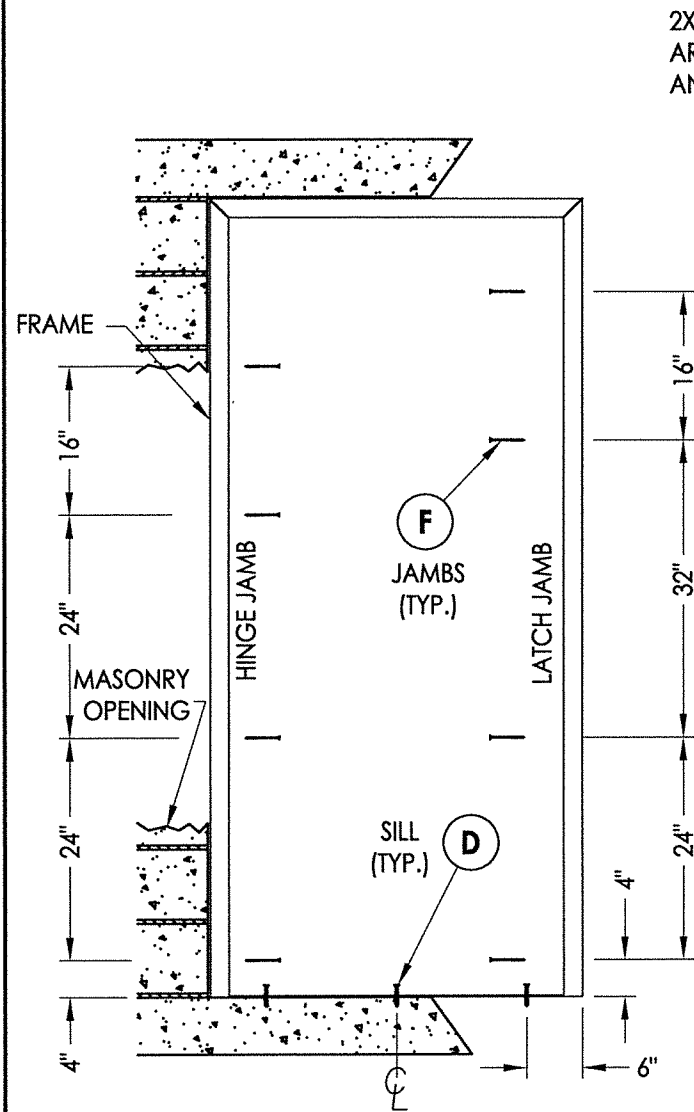
E


November 16, 2020
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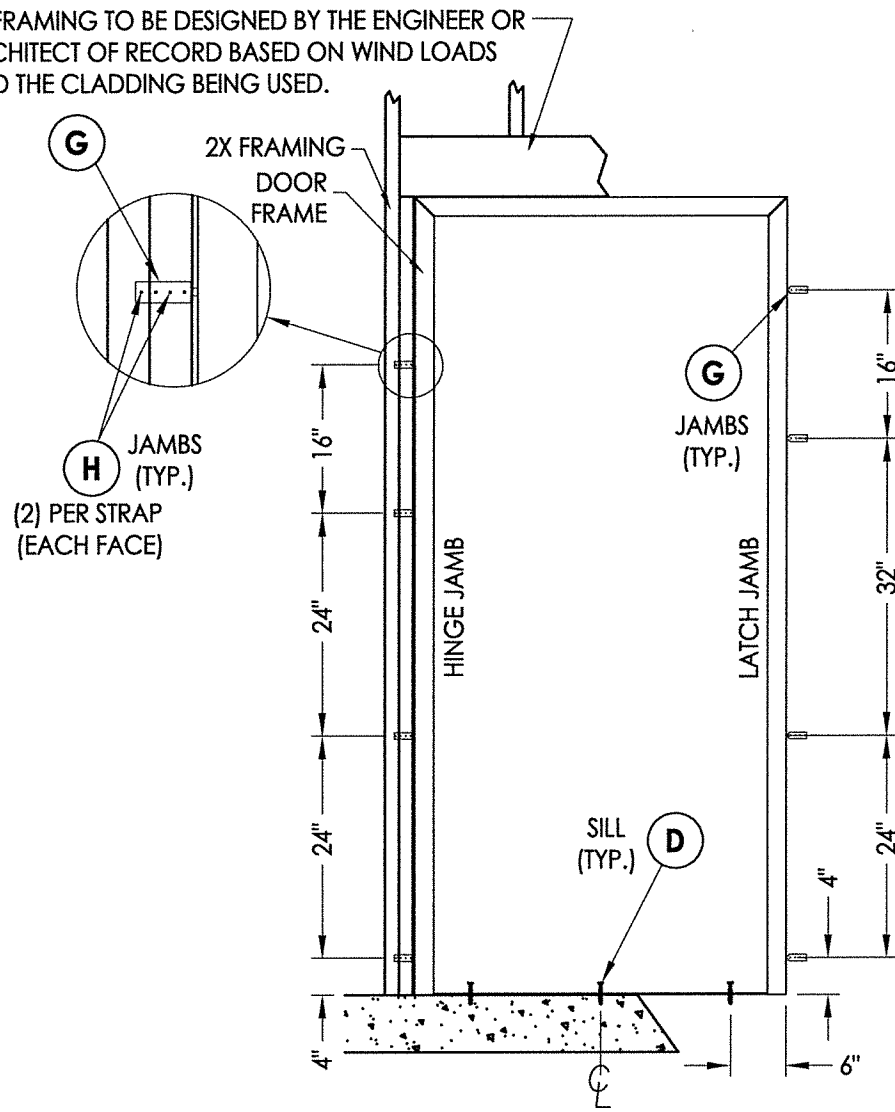
RW BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE Registry No. 9813

© 2010 R.W. BUILDING CONSULTANTS INC.

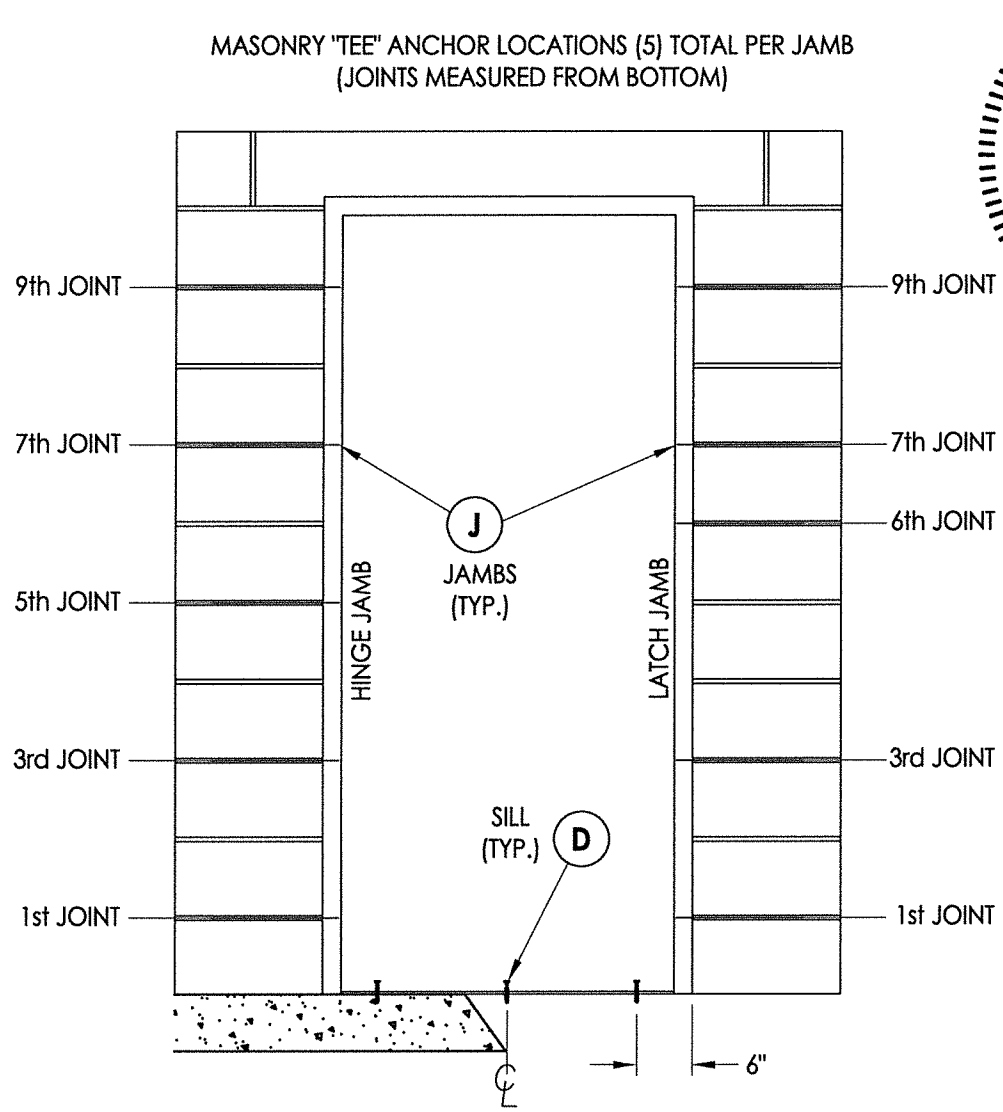
R:\Clients\Cal-Royal Permanent\A - Florida Product Approvals\FL-13624\C - Drawings\FL-13624.3-6.dwg, 4.5



FRAME ANCHORING
Masonry Construction
Concrete Anchors



FRAME ANCHORING
2X Stud Construction
Strap Anchors



FRAME ANCHORING
Masonry Construction
Masonry "Tee" Anchors

CONCRETE ANCHOR NOTES:

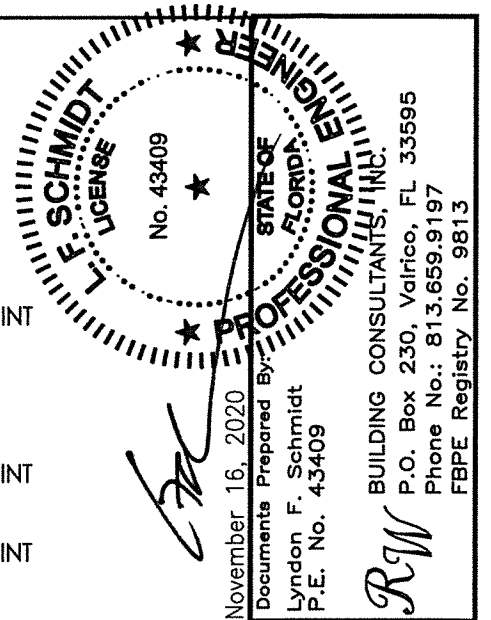
- Substitution of equal concrete screws from a different supplier may have different edge distance and center distance requirements.
- Concrete screw locations at the corners may be adjusted to maintain the minimum edge distance to mortar joints. If concrete screw locations noted as "MAX. ON CENTER" 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.
- 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 ULTRAACON®	1/4"	1-3/4"	1"	4"
DYNABOLT SLEEVE ANCHOR	3/8"	1-1/2"	2-1/4"	4-1/2"

- Embedment may be through 1-1/4" face shell of hollow block.

WOOD SCREW INSTALLATION NOTES:

- Maintain a minimum 5/8" edge distance, 1" end distance, & 1" o.c. spacing of wood screws to prevent the splitting of wood.



November 16, 2020

Documents Prepared By:

Lyndon F. Schmidt

P.E. No. 43409

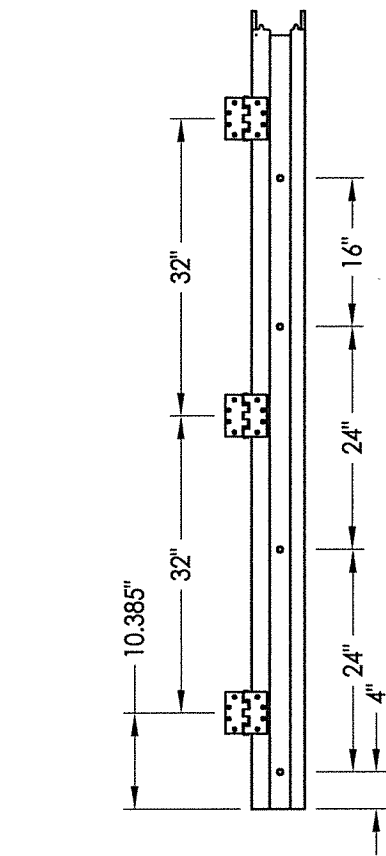
Building Consultants, Inc.

P.O. Box 230, Valrico, FL 33595

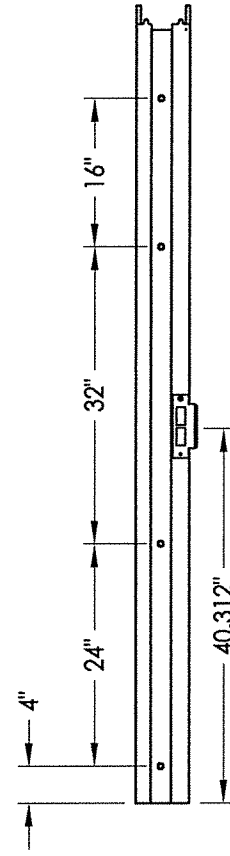
Phone No.: 813.659.9197

FBPE Registry No. 9813

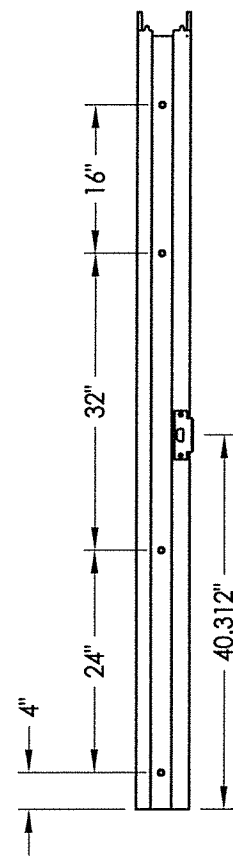
PRODUCT:		CAL-ROYAL	
		STEEL COMMERCIAL DOOR	
PART OR ASSEMBLY:		FRAME ANCHORING	
LFS	JK	JK	JK
JK	JK	JK	JK
LFS	JK	JK	JK
JK	JK	JK	JK
LFS	JK	JK	JK
BY	BY	BY	BY
REVISIONS			
6	11/16/20	UPDATE TO 7TH ED. (2020) FBC	DATE: 05/25/10
5	9/27/17	UPDATE TO 6TH ED. (2017) FBC	SCALE: N.T.S.
4	1/27/15	UPDATE TO 5TH ED. (2014) FBC	DWG. BY: JK
3	7/31/14	ADD 5000/PIONEER SERIES HDWR	CHK. BY: LFS
2	1/26/12	UPDATE TO 2010 FBC	DRAWING NO.: FL-13624.4
1	1/4/11	REVISE PANIC BAR MODEL NO.	SHEET 5 OF 8
NO.	DATE		



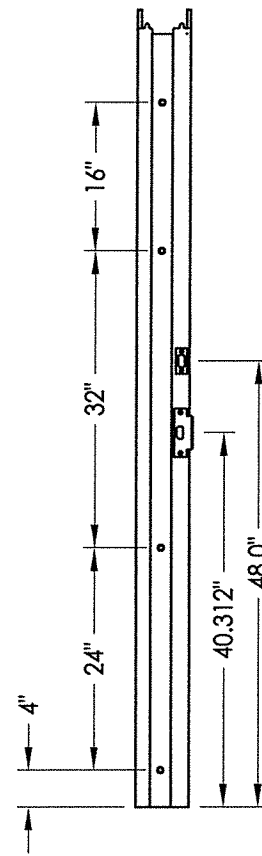
HINGE JAMB



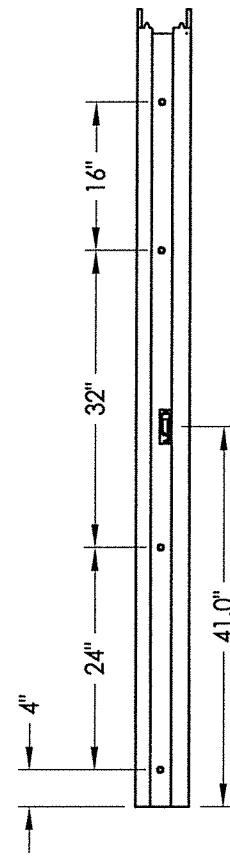
STRIKE JAMB
Mortise Lock



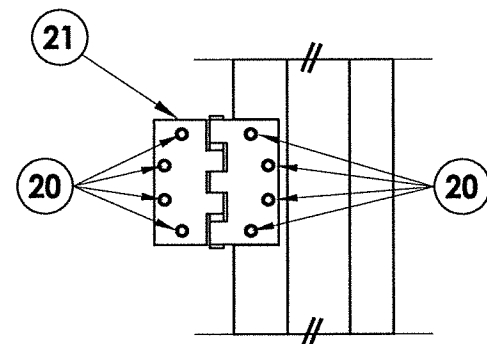
STRIKE JAMB
161 Latch



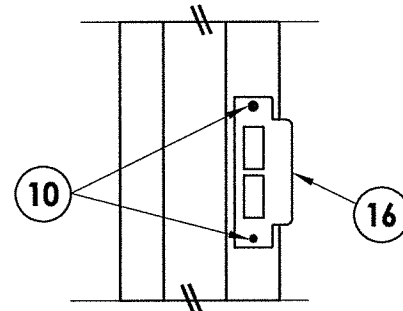
STRIKE JAMB
161 Latch & Deadbolt



STRIKE JAMB
Panic Bar

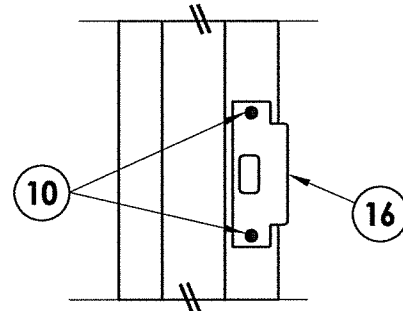


HINGE DETAIL

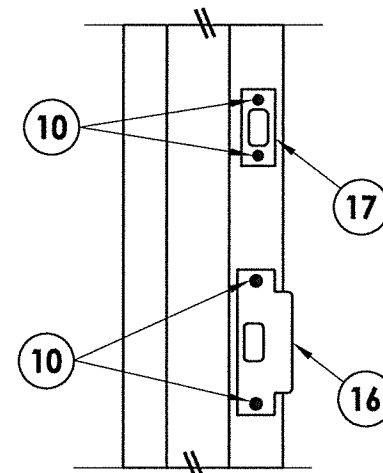


LATCH DETAIL

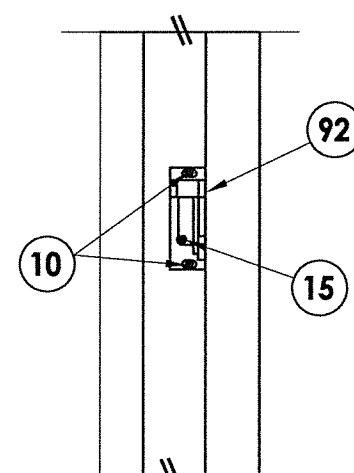
Mortise Lock



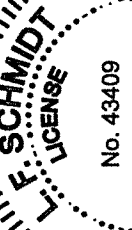
LATCH DETAIL



LATCH & DEADBOLT DETAIL



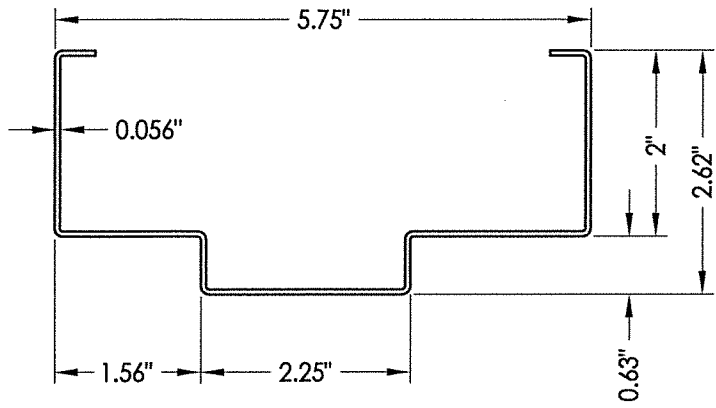
LATCH DETAIL
Panic Bar


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

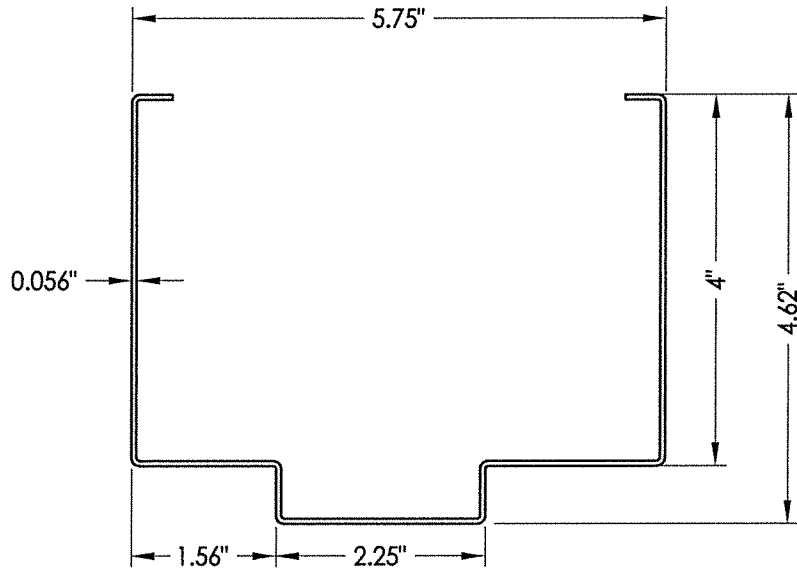
RW BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE Registry No. 9813

DATE: 05/25/10			PRODUCT: CAL-ROYAL STEEL COMMERCIAL DOOR PART OR ASSEMBLY: FRAME ANCHORING DETAILS		
SCALE: N.T.S.					
DWG. BY: JK					
CHK. BY: LFS					
DRAWING NO.: FL-13624.4					
SHEET 6 OF 8			REVISIONS		
NO.	DATE				
1	1/4/11	REVISE PANIC BAR MODEL NO.	LFS	BY	
2	1/26/12	UPDATE TO 2010 FBC	JK		
3	7/31/14	ADD 5000/PIONEER SERIES HDWR	LFS		
4	1/27/15	UPDATE TO 5TH ED. (2014) FBC	JK		
5	9/27/17	UPDATE TO 6TH ED. (2017) FBC	JK		
6	11/16/20	UPDATE TO 7TH ED. (2020) FBC	LFS		

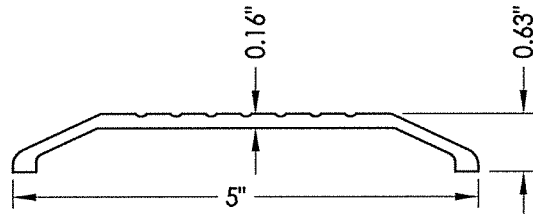
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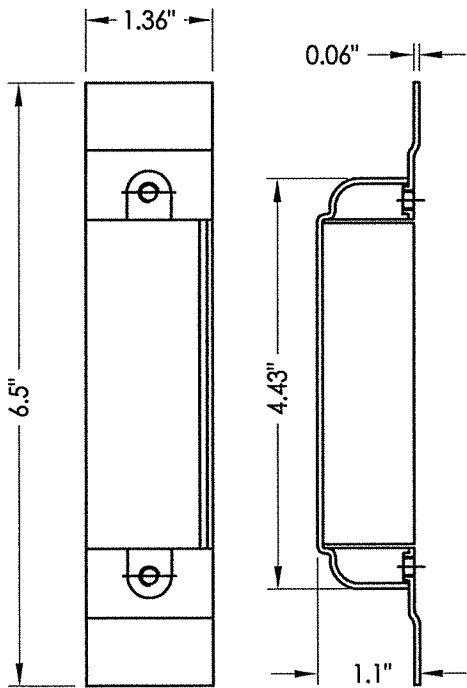
26 HOLLOW METAL FRAME
2" HEAD



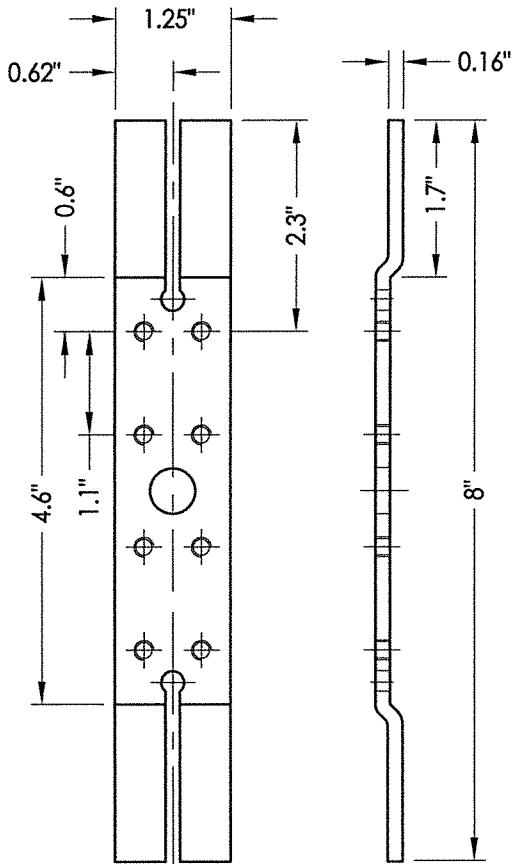
26 HOLLOW METAL FRAME
4" HEAD



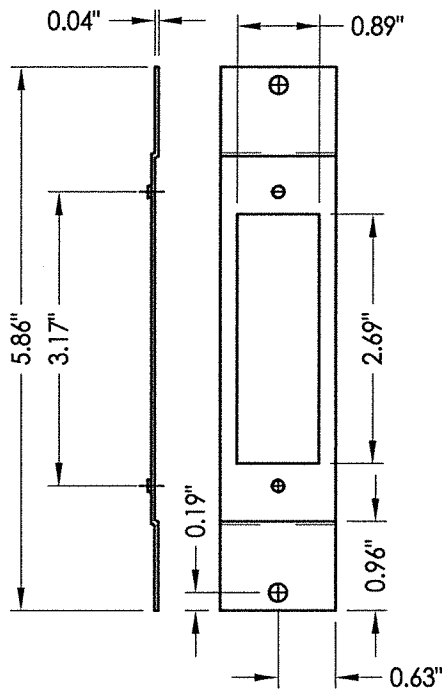
40 THRESHOLD
Pemko 156



30 DOOR LATCH REINFORCEMENT
Mortise Lock only

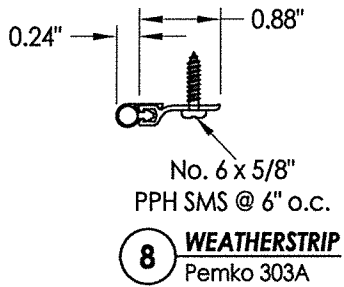
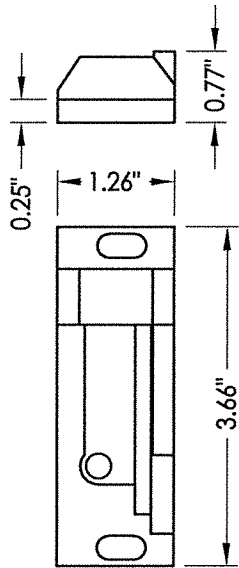


22 DOOR HINGE REINFORCEMENT

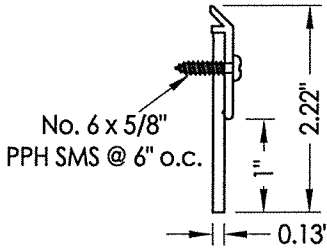


27 FRAME LATCH STRIKE REINFORCEMENT

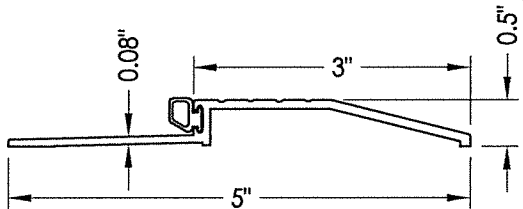
92 PANIC BAR LATCH STRIKE PLATE
@ Jamb



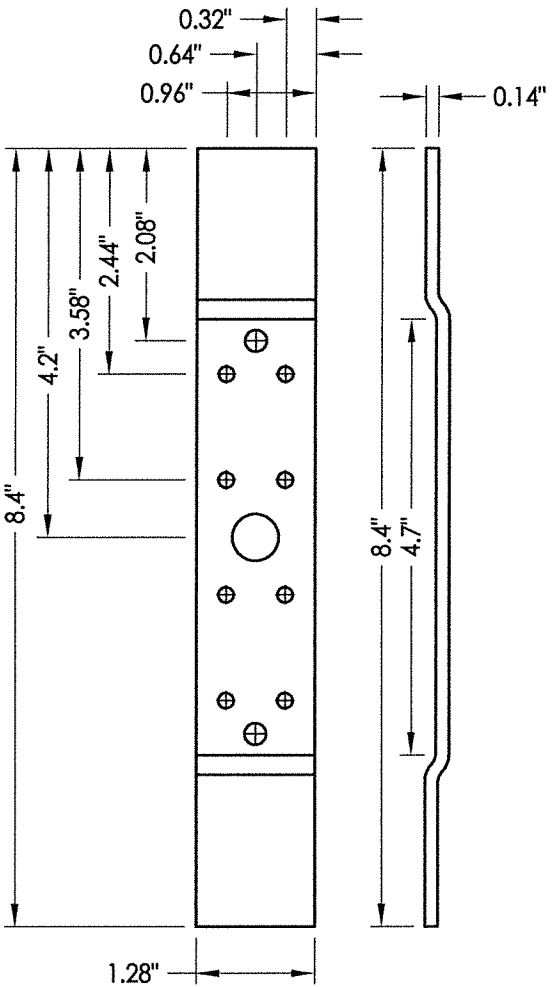
8 WEATHERSTRIP
Pemko 303A



11 DOOR SWEEP
Pemko 3151



42 THRESHOLD
Pemko 2001P



28 FRAME HINGE REINFORCEMENT

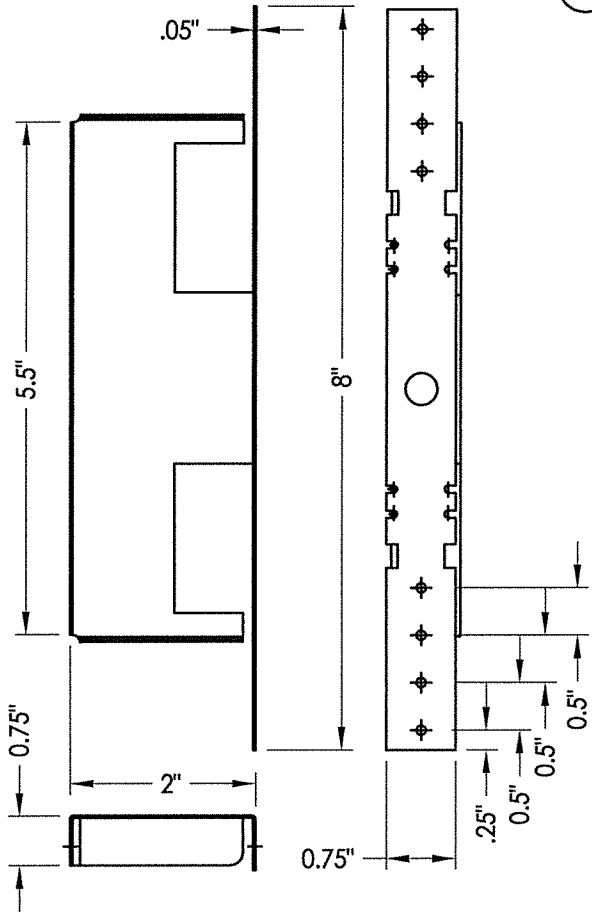
November 16, 2020
Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

FLORIDA PROFESSIONAL ENGINEER
No. 43409

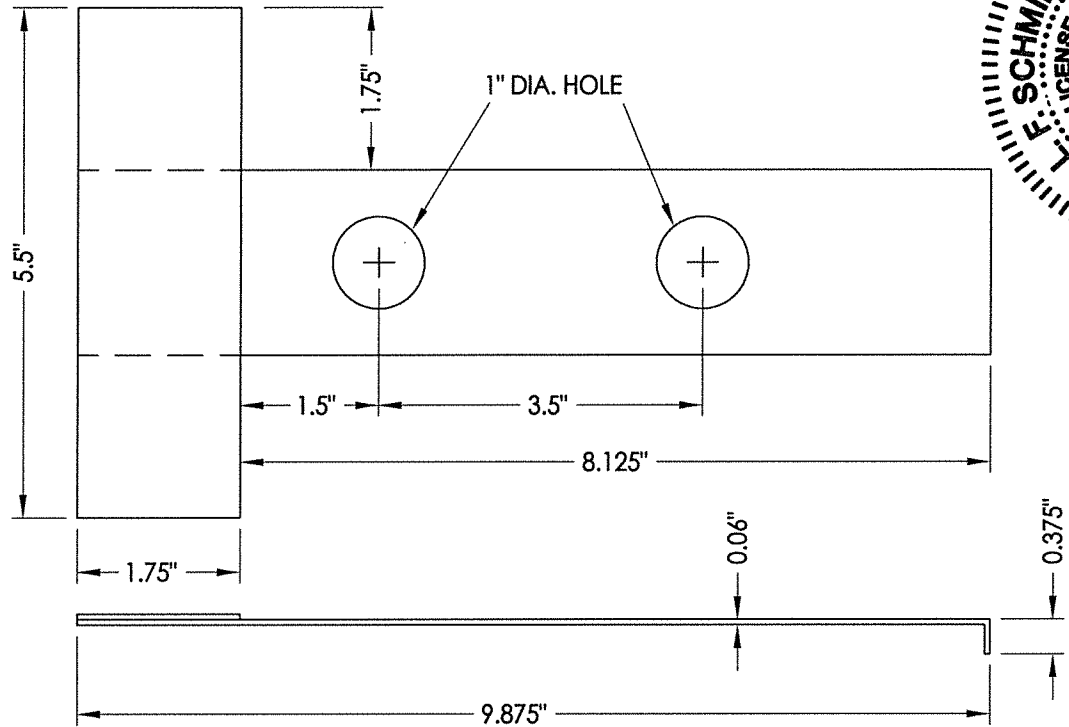
R.W. BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE Registry No. 9813

PRODUCT:		CAL-ROYAL		STEEL COMMERCIAL DOOR	
PART OR ASSEMBLY:		COMPONENTS			
REVISIONS		DATE		BY	
6	11/16/20	UPDATE TO 7TH ED. (2020)	FBC	LFS	JK
5	9/27/17	UPDATE TO 6TH ED. (2017)	FBC	JK	JK
4	1/27/15	UPDATE TO 5TH ED. (2014)	FBC	JK	JK
3	7/31/14	ADD 5000/PIONEER SERIES HDWR	HDWR	LFS	JK
2	1/26/12	UPDATE TO 2010 FBC	FBC	JK	JK
1	1/4/11	REVISE PANIC BAR MODEL NO.	MODEL NO.	JK	JK

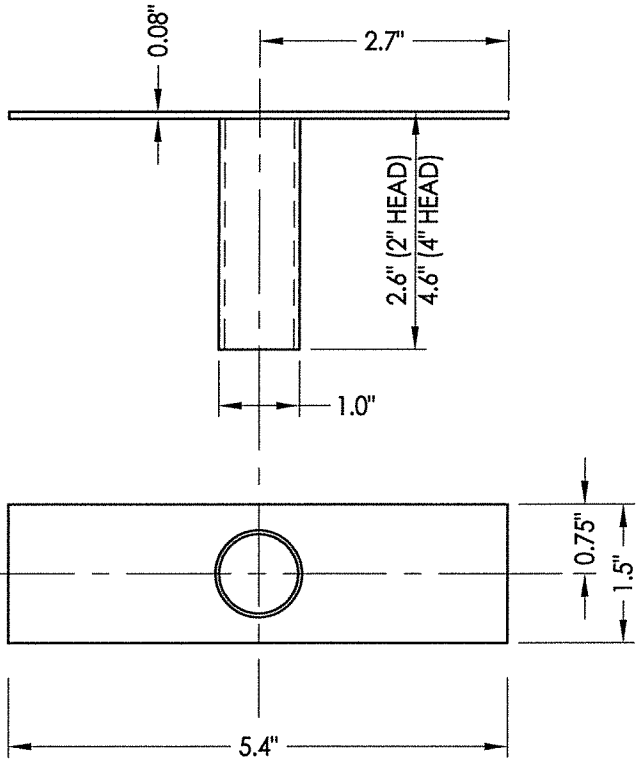
BILL OF MATERIALS		
ITEM #	DESCRIPTION	MATERIAL
B	2 X 4 FRAMING (SG >= 0.55)	WOOD
C	1/4" MAX. SHIM SPACE	-
D	1/4" X 2-3/4" PFH DeWALT OR ITW CONCRETE SCREW	STEEL
E	MASONRY - 3,000 PSI MIN. CONCRETE CONFORMING TO ACI 301 OR HOLLOW BLOCK CONFORMING TO ASTM C90	CONCRETE
F	3/8" PFH ITW DYNABOLT SLEEVE ANCHOR	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	-
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
15	#8-24 X 3/4" COMBINATION MACHINE / WOOD SCREW	STEEL
16	ANSI LATCH STRIKE	STEEL
17	DEAD BOLT STRIKE	STEEL
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
30	FRAME LATCH STRIKE REINFORCEMENT (MORTISE LOCK)	STEEL
40	INSWING THRESHOLD - PEMKO 156	ALUM
42	OUTSWING THRESHOLD - PEMKO 2001P	ALUM
70	CAL-ROYAL M SERIES MORTISE LOCK	-
71	CAL-ROYAL T300 SERIES DEADBOLT	-
72	CAL-ROYAL PIONEER SL/CSL SERIES CYLINDRICAL LOCK	-
73	CAL-ROYAL GENESYS SERIES CYLINDRICAL LOCK	-
74	CAL-ROYAL F7700/7700 SERIES RIM TYPE PANIC BAR	-
75	CAL-ROYAL F5000/5000 SERIES RIM TYPE PANIC BAR	-
92	PANIC BAR LATCH STRIKE PLATE	STEEL



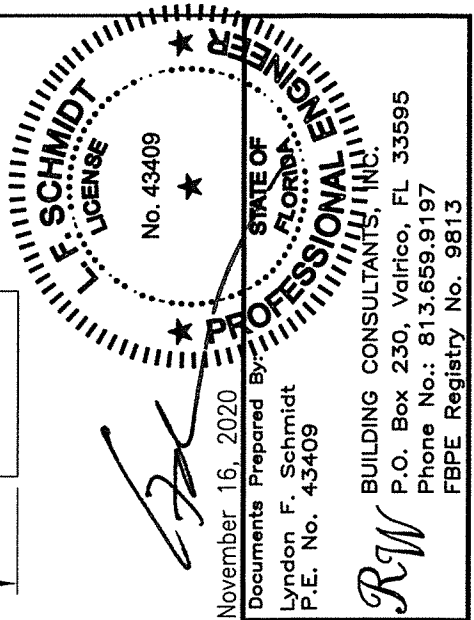
G WOOD STRAP ANCHOR



J MASONRY TEE' ANCHOR



9 TUBE ANCHOR



PRODUCT:		CAL--ROYAL STEEL COMMERCIAL DOOR	
PART OR ASSEMBLY:		BILL OF MATERIALS AND COMPONENTS	
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	7/31/14	ADD 5000/PIONEER SERIES HDWR	LFS
2	1/26/12	UPDATE TO 2010 FBC	JK
1	1/4/11	REVISE PANIC BAR MODEL NO.	LFS
NO.	DATE	REVISIONS	
DATE: 05/25/10			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.: FL-13624.4			
SHEET 8 OF 8			