

# R W Building Consultants, Inc.

Consulting and Engineering Services for the Building Industry

P.O. Box 230 Valrico, FL 33595 Phone 813.659.9197

Florida Board of Professional Engineers Registry License No. 9813

## Product Evaluation Report

Report No.: FL-41130.1

Date: July 1, 2023

Product Category	Sub Category	Manufacturer	Product Name
Exterior Doors	Swinging Exterior Door Assemblies	DKS Steel Door & Frame Systems, Inc. 2142 Tubeway Ave. Commerce, CA 90040 (323) 888-7763	DKS Series 1800 Steel Commercial Door Outswing "Impact"

**Scope:** This is a Product Evaluation report issued by R W Building Consultants, Inc. and Lyndon F. Schmidt, P.E. for DKS Steel Door & Frame Systems, Inc. based on Rule Chapter No. 61G20-3, Method 1D of the State of Florida Product Approval, Department of Business & Professional Regulation.

RW Building Consultants and Lyndon F. Schmidt, P.E. do not have nor will acquire financial interest in the company manufacturing or distributing the product or in any other entity involved in the approval process of the product named herein.

### Limitations:

- This product has been evaluated and is in compliance with the 8th Edition (2023) Florida Building Code (FBC) structural requirements excluding the "High Velocity Hurricane Zone" (HVHZ).
- Product anchors shall be as listed and spaced as shown on details. Anchor embedment to base material shall be beyond wall dressing or stucco.
- 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 includes Wind Zone 4 as defined in ASTM E 1996 and FBC Sections 1609.1.2.2 & R301.2.1.2.1.
- Site conditions that deviate from the details of drawing FL-41130.1 require further engineering analysis by a licensed engineer or registered architect.
- See drawing FL-41130.1 for size and design pressure limitations.

### Supporting Documents:

- |   |   |  |  |
|---|---|--|--|
| 1. <b>Test Report No.</b><br>ATI 95951.01-201-18<br>TEL 01821113<br>ITS 3053378 | <b>Test Standard</b><br>ASTM E 330-02 & E 1886-05/1996-06<br>ASTM E 330-02 & E 1886-05/1996-06<br>UL 10C - 09 | <b>Testing Laboratory</b><br>Architectural Testing, Inc.<br>Testing Evaluation Lab., Inc.<br>Intertek Testing Services | <b>Signed by</b><br>Joseph A. Reed, P.E.<br>V.K. Wright<br>Mike van Geyn |
| 2. <b>Drawing No.</b><br>No. FL-41130.1   | <b>Prepared by</b><br>RW Building Consultants, Inc. (#9813)   |  | <b>Signed &amp; Sealed by</b><br>Lyndon F. Schmidt, P.E.                 |
| 3. <b>Calculations</b><br>Anchoring   | <b>Prepared by</b><br>RW Building Consultants, Inc. (#9813)   |  | <b>Signed &amp; Sealed by</b><br>Lyndon F. Schmidt, P.E.                 |

- Quality Assurance**  
Certificate of Participation issued by National Accreditation and Management Institute, certifying that DKS Steel Door & Frame Systems, Inc. is manufacturing products within a quality assurance program that complies with ISO/IEC 17020 and Guide 53.

Digitally signed by Lyndon F Schmidt  
Date: 2023.07.19 09:16:25 -04'00'

LYNDON F. SCHMIDT, State of Florida, Professional Engineer, License No. 43409  
This item has been digitally signed and sealed by L. F. Schmidt on 7-19-23.  
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.  
**THIS PRODUCT APPROVAL IS VALID ONLY FOR THE STATE OF FLORIDA**



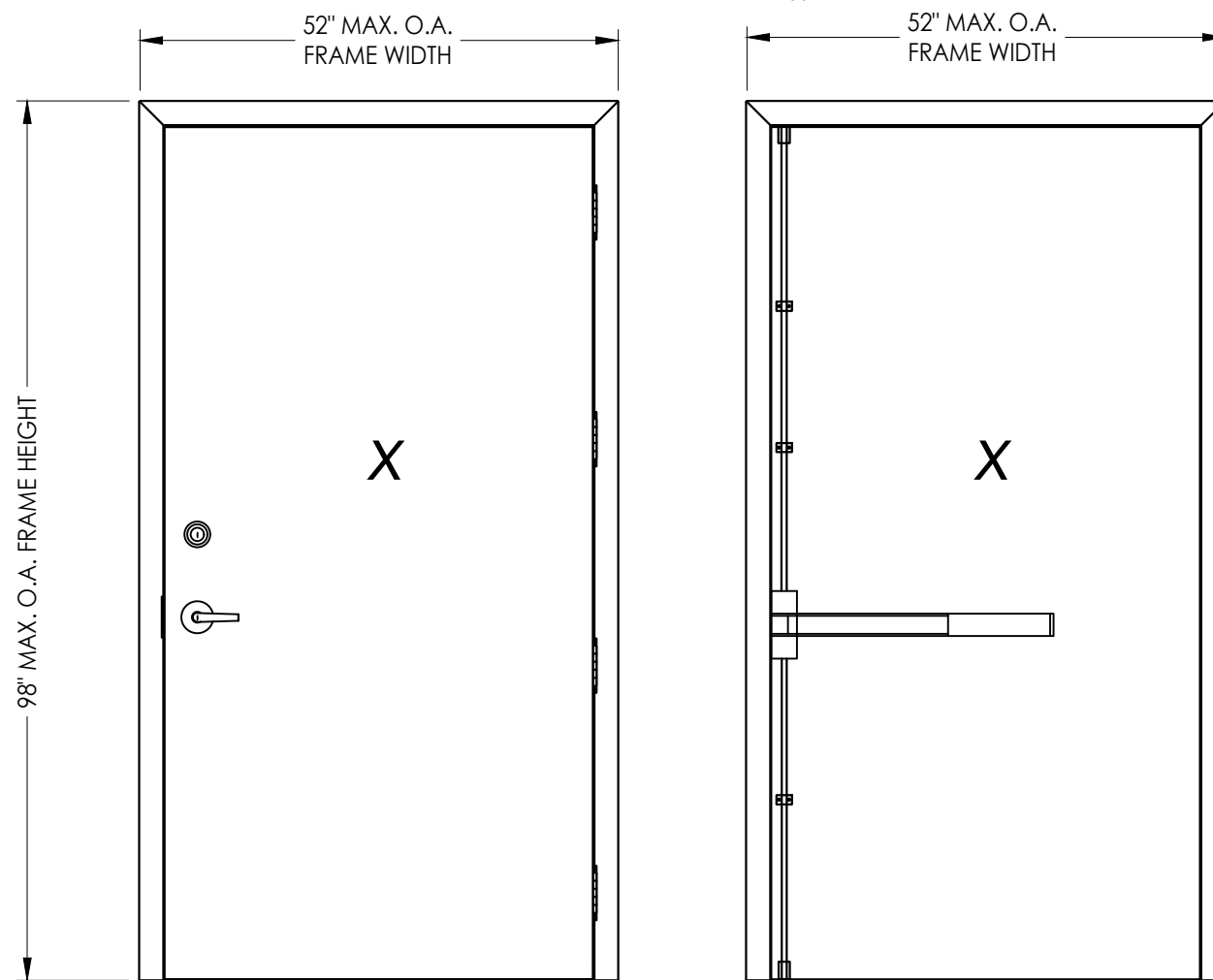
STEEL DOOR & FRAME SYSTEMS, INC.

## DKS SERIES 1800 STEEL COMMERCIAL DOOR OUTSWING "IMPACT"

GENERAL NOTES

1. This product has been evaluated and is in compliance with the 8th Edition (2023) 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. Site conditions that deviate from the details of this drawing require further engineering analysis by a licensed engineer or registered architect.

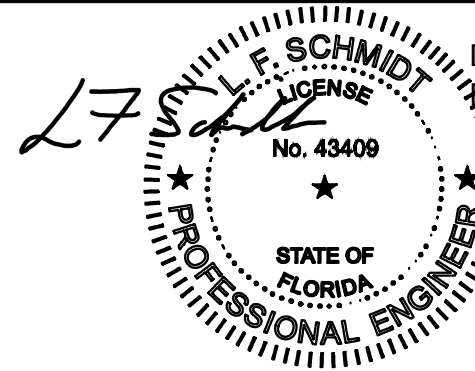
TABLE OF CONTENTS	
SHEET#	DESCRIPTION
1	Typical elevation, design pressures & general notes
2	Door panel details
3	Horizontal and vertical cross sections
4	Frame anchoring
5	Bill of materials and components



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

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

OVERALL FRAME DIMENSION	LOCK TYPE	DESIGN PRESSURE (PSF)	
		POSITIVE	NEGATIVE
52.0" x 98.0"	<b>161 LATCH &amp; DEADBOLT "PIONEER SL/CSL &amp; T300 Series"</b>	<b>+80.0</b>	<b>-80.0</b>
40.0" x 98.0"	<b>PANIC BAR EXIT DEVICE w/ VERTICAL RODS "7700-V Series"</b>	<b>+70.0</b>	<b>-70.0</b>
52.0" x 98.0"	<b>PANIC BAR EXIT DEVICE w/ VERTICAL RODS "7700-V Series"</b>	<b>+50.0</b>	<b>-50.0</b>



Digitally signed by Lyndon F Schmidt  
Date: 2023.07.19 09:05:49 -04'00'

This item has been digitally signed and sealed by  
**L. F. Schmidt, P.E.** on the date adjacent to the seal.  
Printed copies of this document are not  
considered signed and sealed and the signature  
must be verified on any electronic copies.

THIS PRODUCT APPROVAL IS VALID  
ONLY FOR THE STATE OF FLORIDA

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

RW

PRODUCT: DKS STEEL COMMERCIAL DOOR  
PART OR ASSEMBLY: TYPICAL ELEVATION, DESIGN PRESSURES & GENERAL NOTES

NO.	DATE	BY	REVISIONS
1	7/01/23	LFS	UPDATE TO 8TH ED. (2023) FBC

DATE: 3/21/22

SCALE: N.T.S.

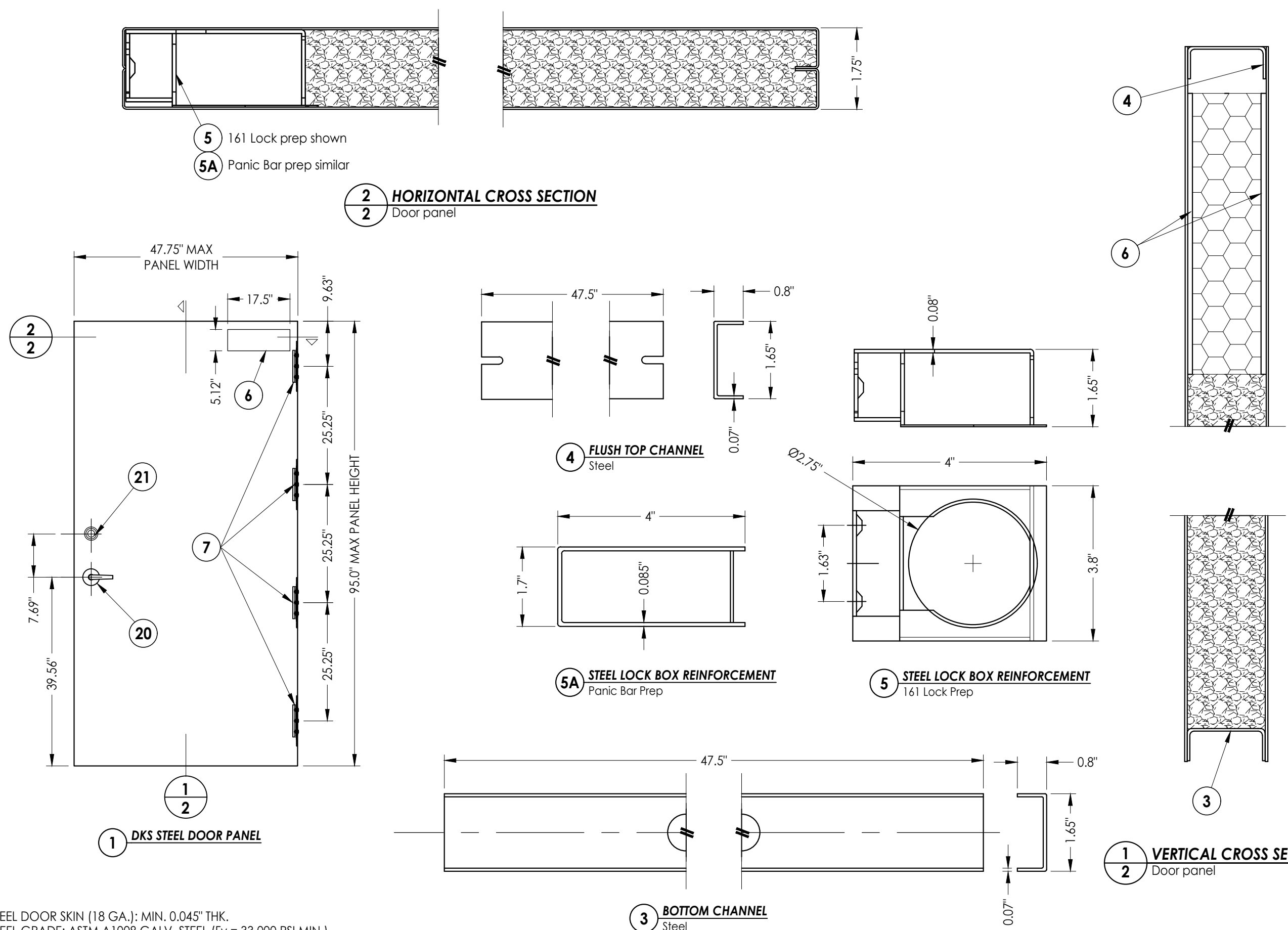
DWG. BY: LFS

CHK. BY: RW

DRAWING NO.: FL-41130.1

SHEET 1 OF 5

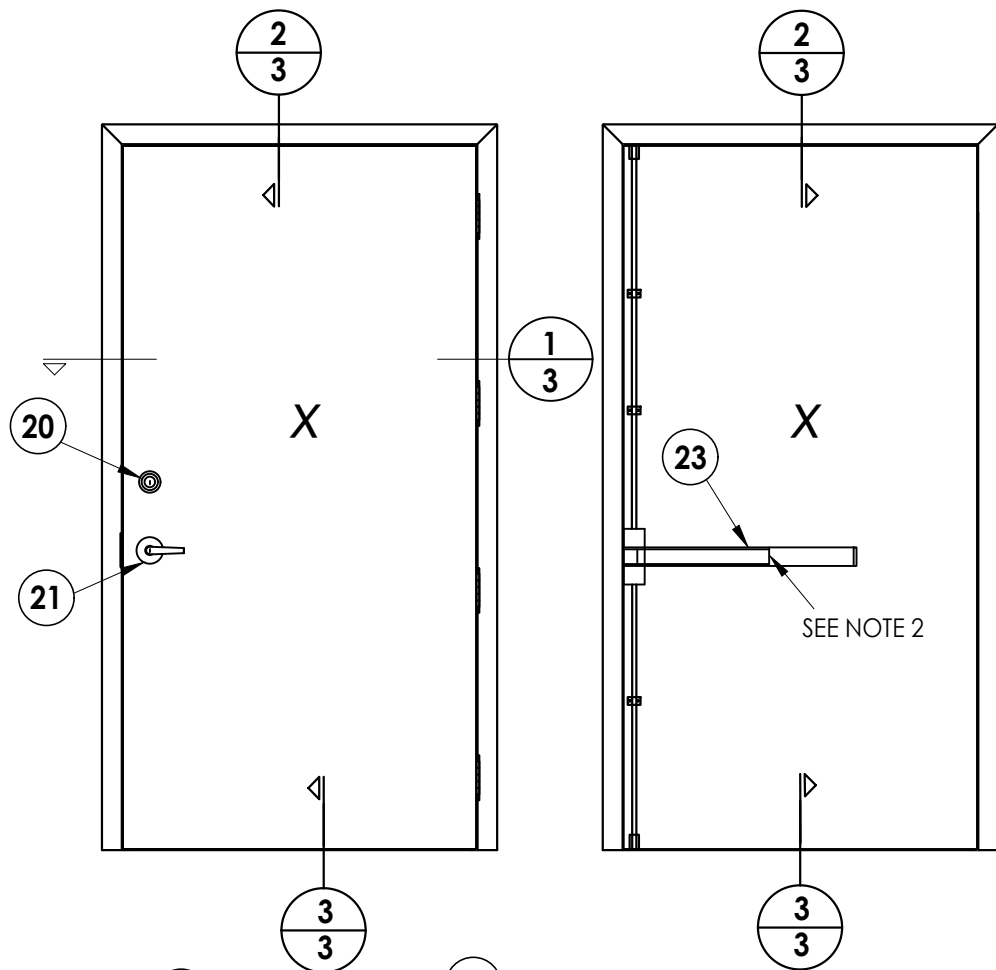
Z:\2023 FBC Drawings\DKS Steel Door & Frames Systems\FL-41130 R1\FL-41130.1-2.dwg



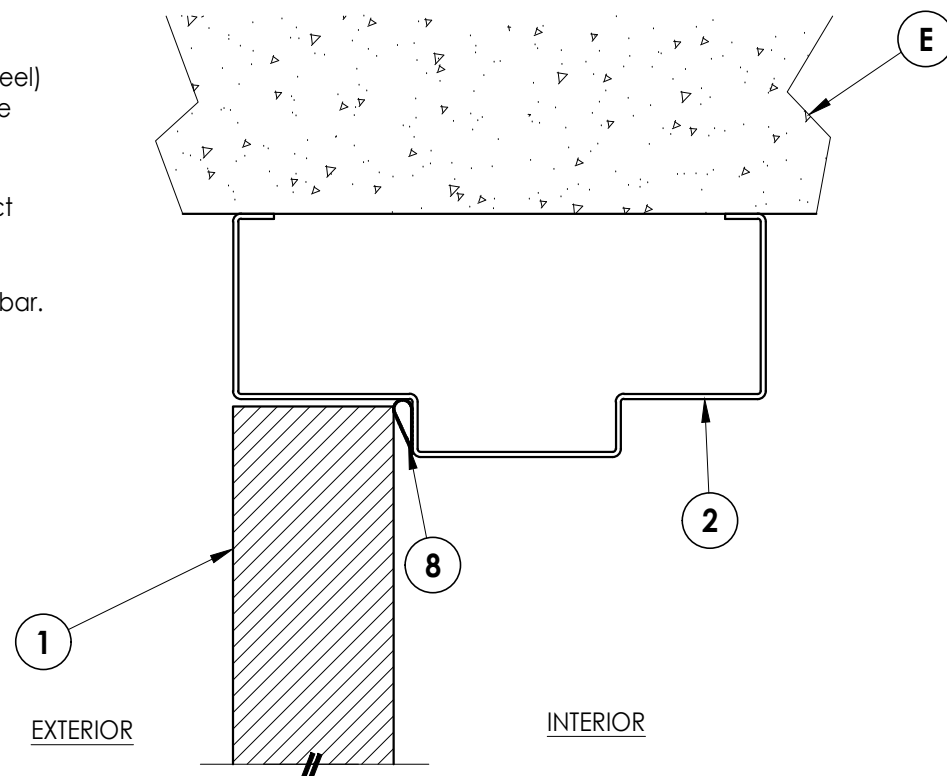
STEEL DOOR SKIN (18 GA.): MIN. 0.045" THK.  
 STEEL GRADE: ASTM A1008 GALV. STEEL (Fy = 33,000 PSI MIN.)  
 CORE MATERIAL: EPS FOAM (POLYSTYRENE - 1.0 PCF MIN. DENSITY)

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:	DKS	STEEL COMMERCIAL DOOR	
PART OR ASSEMBLY:		DOOR PANEL DETAILS	
NO.	DATE	BY	REVISIONS
1	7/01/23	LFS	UPDATE TO 8TH ED. (2023) FBC
2			
DATE: 3/21/22			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: FL-41130.1			
SHEET 2 OF 5			

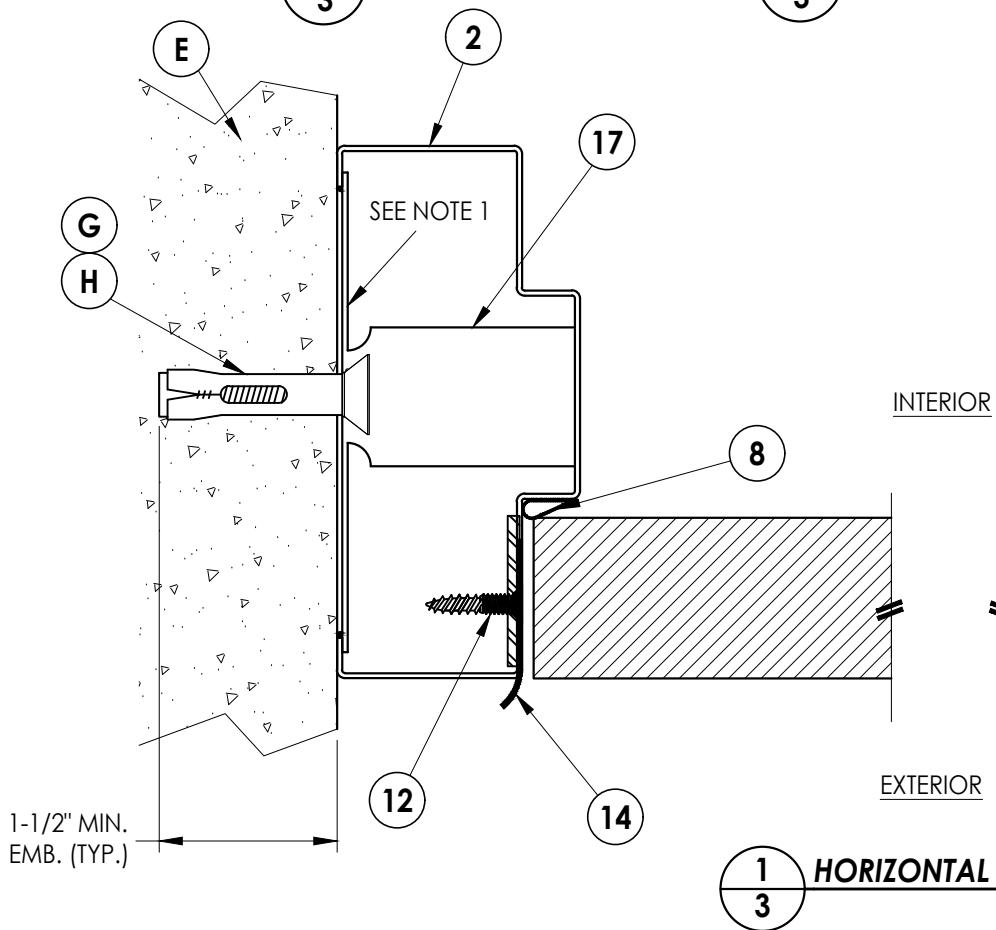
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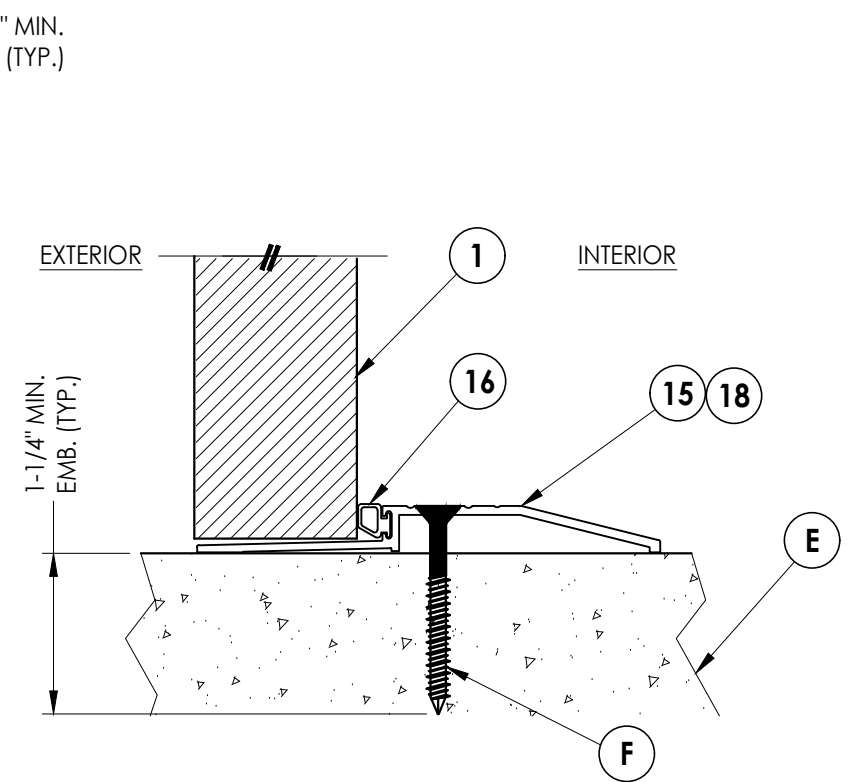
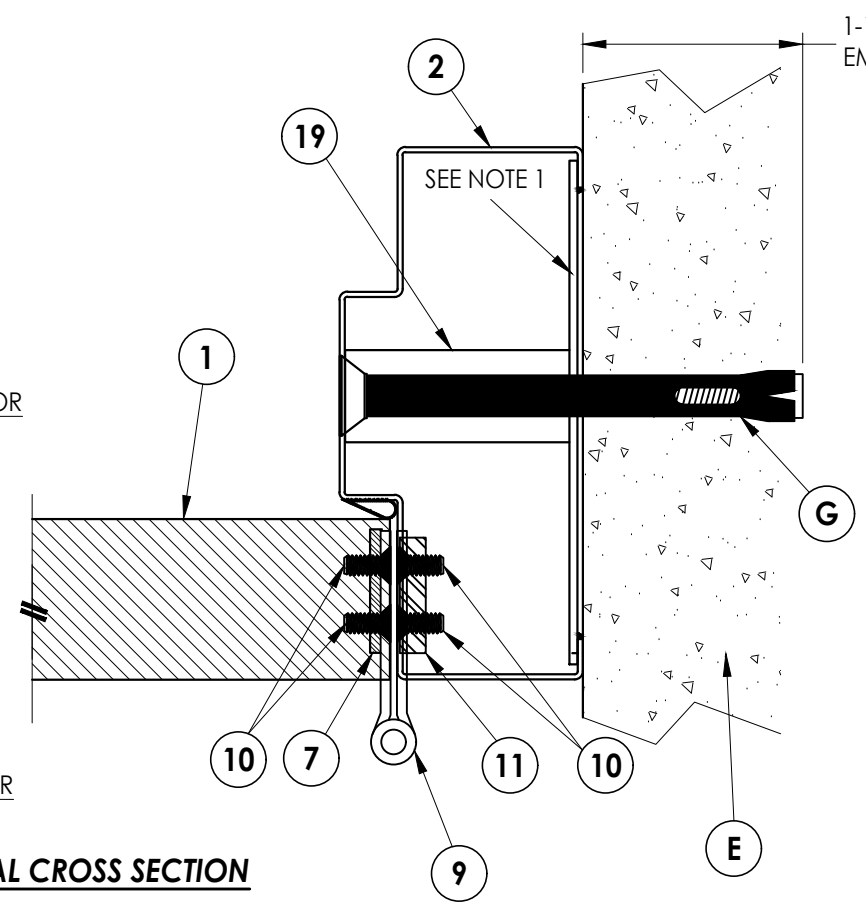
- NOTES:  
 1. Anchor strap (3/4" wide, 18 gauge steel) or Tube Anchor tack welded to frame along each end.  
 2. Panic Bar set screws (#12-24 x 5/16") must be activated to achieve impact rating. Locate one screw at top and bottom at center of push rail or locate one screw at each end of bar.



**2** VERTICAL CROSS SECTION  
**3** Outwing configuration



**1** HORIZONTAL CROSS SECTION  
**3**



**3** VERTICAL CROSS SECTION  
**3** Outwing configuration

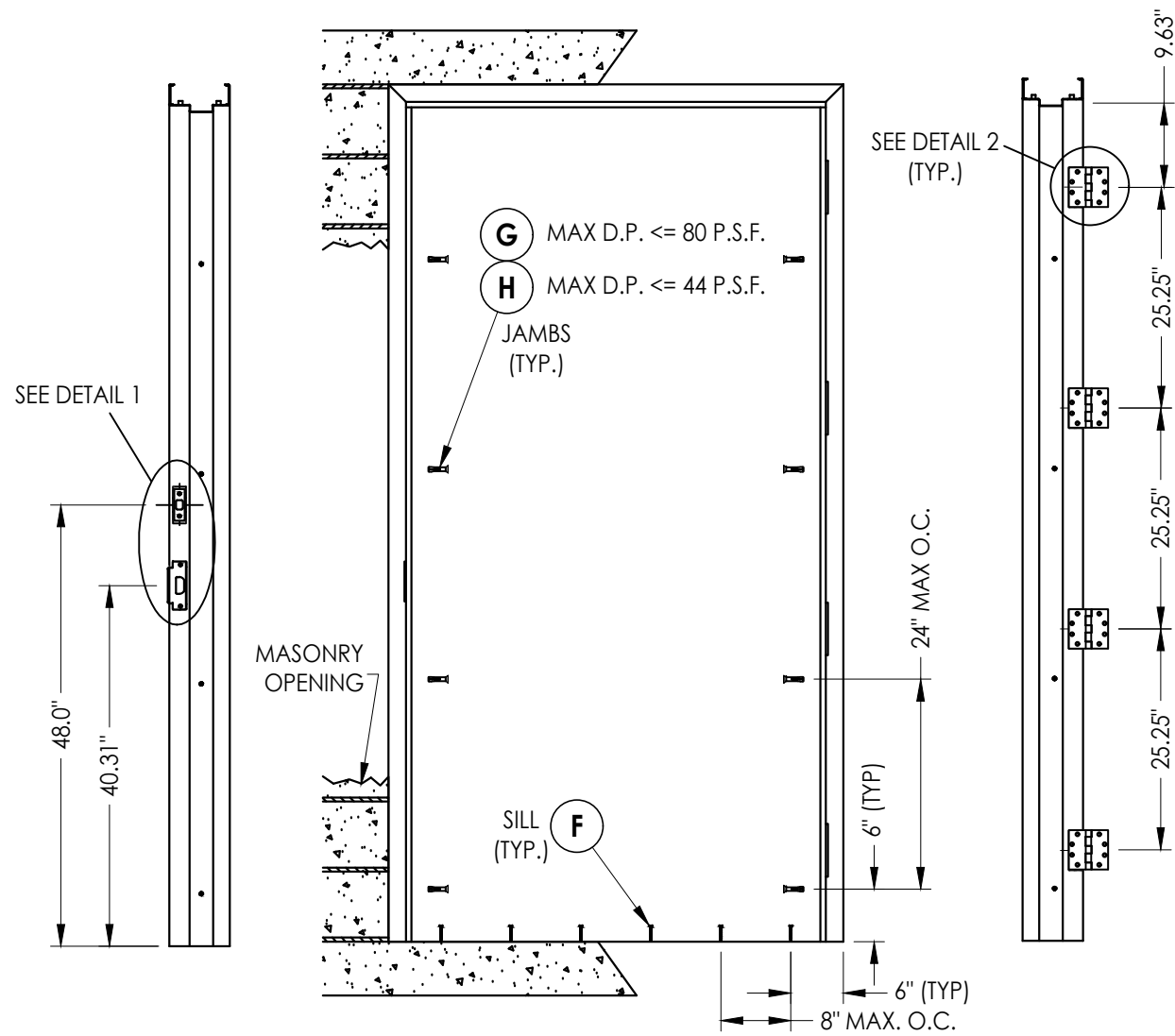
Documents Prepared By:  
 Lyndon F. Schmidt  
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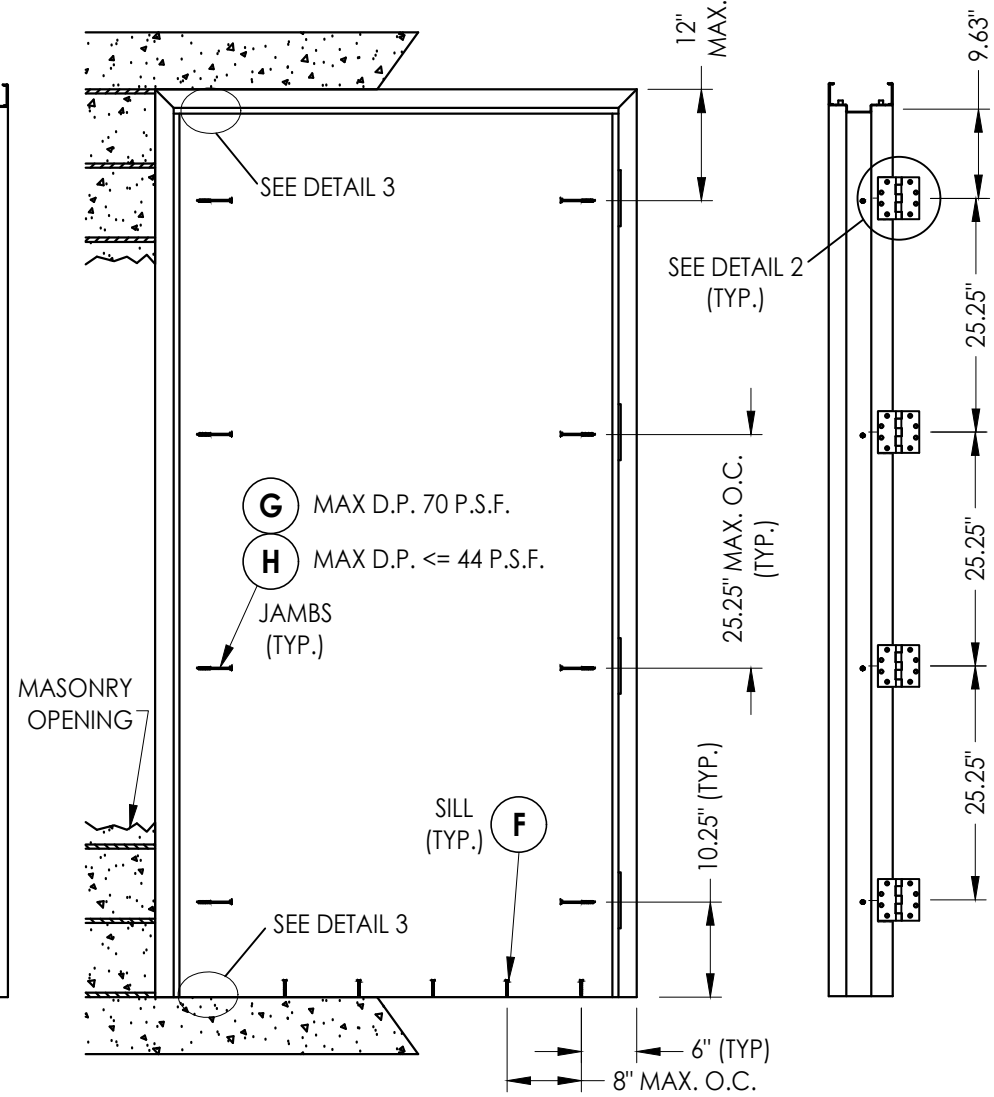
PRODUCT:  
 DKS STEEL COMMERCIAL DOOR  
 PART OR ASSEMBLY:  
 HORIZONTAL AND VERTICAL CROSS SECTIONS

NO.	DATE	BY
1	7/01/23	LFS
	UPDATE TO 8TH ED. (2023)	FBC

DATE: 3/21/22  
 SCALE: N.T.S.  
 DWG. BY: LFS  
 CHK. BY: RW  
 DRAWING NO.: FL-41130.1  
 SHEET 3 OF 5



**FRAME ANCHORING**  
161 Latch & Deadbolt



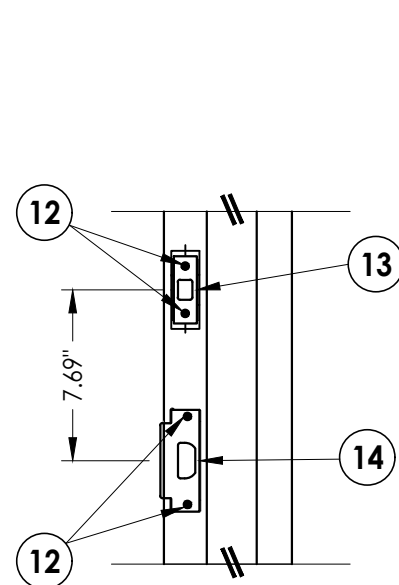
**FRAME ANCHORING**  
Panic Bar Exit Device  
w/ Vertical Rods

**CONCRETE ANCHOR NOTES:**

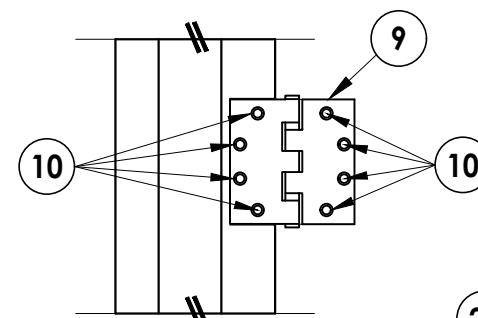
1. Substitution of equal concrete screws from a different supplier may have different edge distance and center distance requirements.
2. Concrete screw locations at the corners may be adjusted to maintain the minimum edge distance to mortar joints. If concrete screw locations noted as "MAX. ON CENTER"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

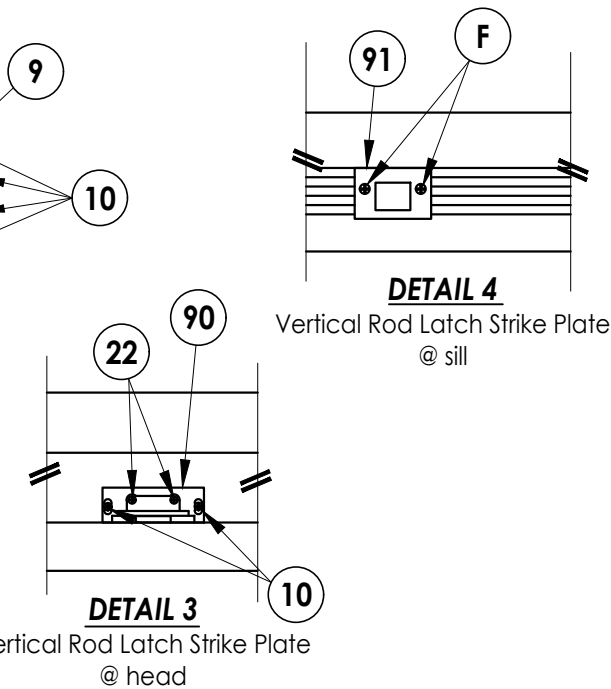
4. Embedment may be through 1-1/4" face shell of hollow block.



**DETAIL 1**  
Latch & Deadbolt Strike Plates



**DETAIL 2**  
Hinges



**DETAIL 3**  
Vertical Rod Latch Strike Plate  
@ head

**DETAIL 4**  
Vertical Rod Latch Strike Plate  
@ sill

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

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PRODUCT: DKS STEEL COMMERCIAL DOOR

PART OR ASSEMBLY: FRAME ANCHORING

NO.	DATE	BY
1	7/01/23	LFS
UPDATE TO 8TH ED. (2023) FBC		

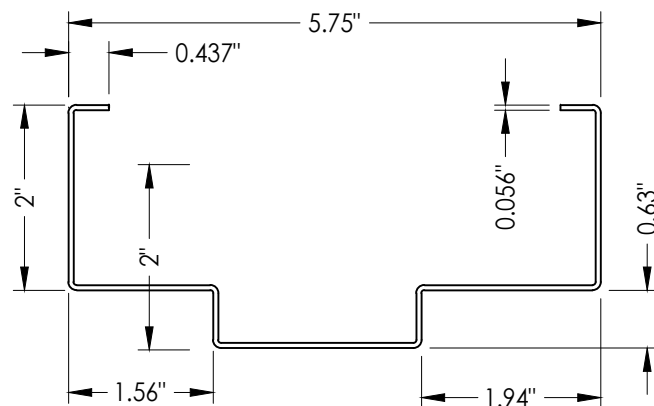
DATE: 3/21/22  
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DWG. BY: LFS  
CHK. BY: RW  
DRAWING NO.: FL-41130.1

SHEET 4 OF 5

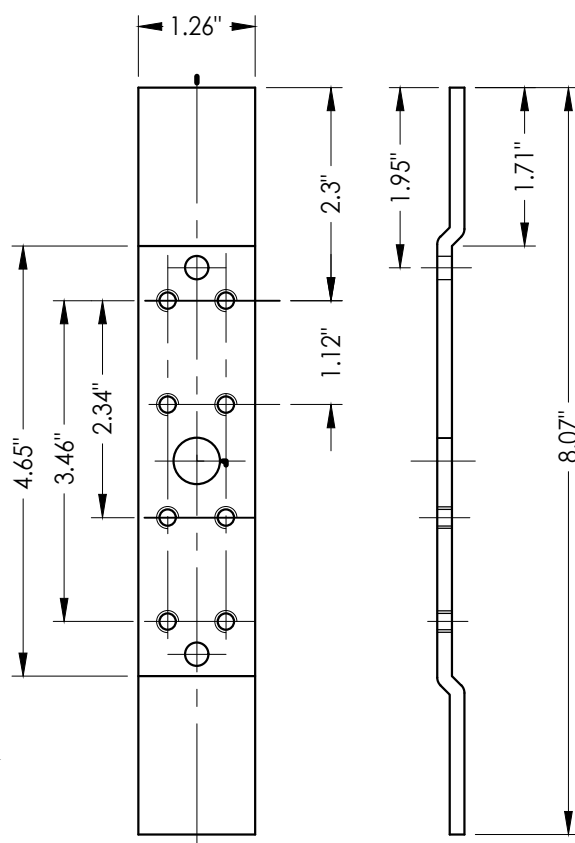
REVISIONS

**BILL OF MATERIALS**

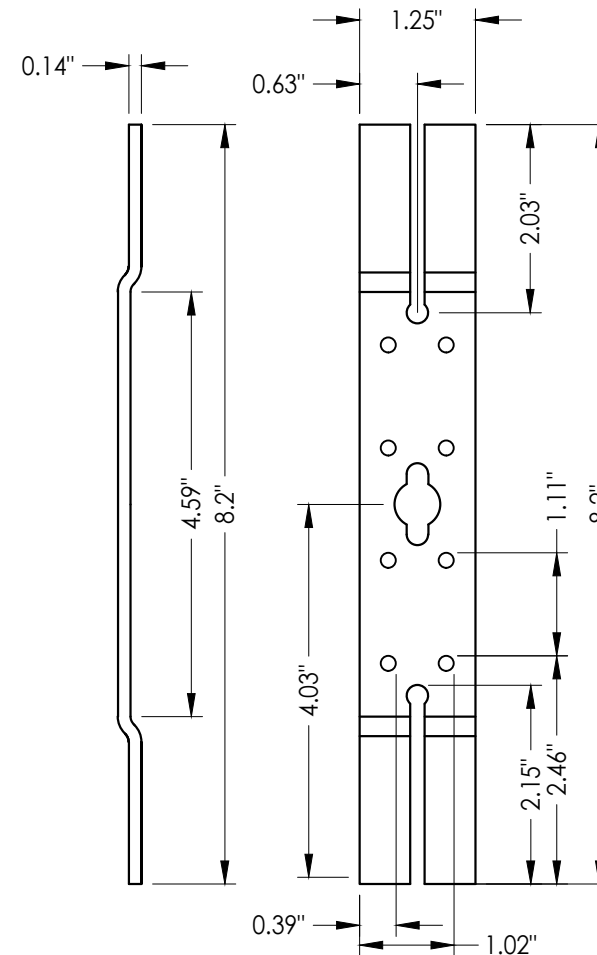
ITEM #	DESCRIPTION	MATERIAL
E	MASONRY - 3,000 PSI MIN. CONCRETE CONFORMING TO ACI 301 OR HOLLOW BLOCK CONFORMING TO ASTM C90	CONCRETE
F	1/4" X 2-1/4" ITW PFH CONCRETE SCREW	STEEL
G	3/8" PFH ITW DYNABOLT SLEEVE ANCHOR	STEEL
H	3/8" PFH TAPPER CONCRETE SCREW BY POWERS FASTENERS	STEEL
1	DKS DOOR PANEL	STEEL
2	HOLLOW FRAME 2"	STEEL
3	BOTTOM CHANNEL	STEEL
4	FLUSH TOP CHANNEL	STEEL
5	LOCK BOX REINFORCEMENT	STEEL
5A	LOCK BOX REINFORCEMENT	STEEL
6	DOOR CLOSER REINFORCEMENT (11 GA.)	STEEL
7	DOOR HINGE REINFORCEMENT	STEEL
8	WEATHERSTRIP - COMPRESSION BULB 1/4" X 1/2" (PEMKO S88)	NEOPRENE
9	4-1/2" X 4-1/2" X 0.125" TEMPLATE HINGE	STEEL
10	#12-24 X 1/2" PFH MACHINE SCREW	STEEL
11	FRAME HINGE REINFORCEMENT	STEEL
12	#12-24 X 1" COMBINATION MACHINE / WOOD SCREW	STEEL
13	DEAD BOLT STRIKE	STEEL
14	ANSI LATCH STRIKE	STEEL
15	THRESHOLD (PEMKO #181_T)	ALUM
16	WEATHERSTRIP (THERMOSEAL™)	NEOPRENE
17	UNIVERSAL WALL ANCHOR REINFORCEMENT	STEEL
18	THRESHOLD (PEMKO 2001P)	ALUM
19	TUBE ANCHOR REINFORCEMENT	STEEL
20	CAL-ROYAL PIONEER SL/CSL SERIES GRADE 2 CYLINDRICAL LOCK	-
21	CAL-ROYAL T300 MAX. SECURITY HEAVY-DUTY DEAD BOLT GRADE 2 LOCK	-
22	#8-24 X 3/4" COMB. MACHINE / WOOD SCREW	STEEL
23	CAL-ROYAL 7700-V SERIES VERTICAL ROD EXIT DEVICE	-
90	VERTICAL ROD LATCH STRIKE PLATE @ HEAD	STEEL
91	VERTICAL ROD LATCH STRIKE PLATE @ SILL	STEEL



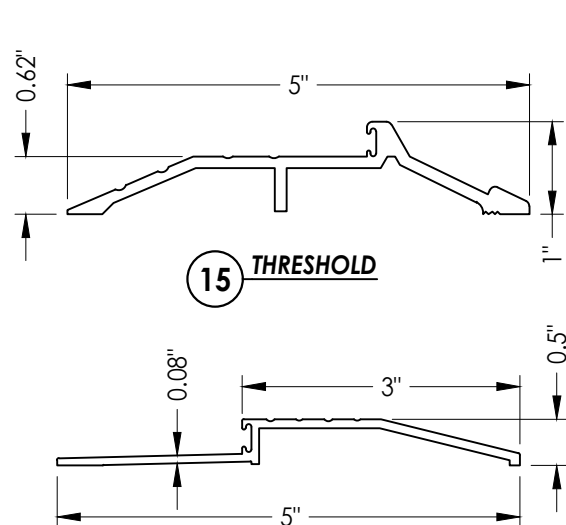
**2 FRAME**  
16 Ga. Steel



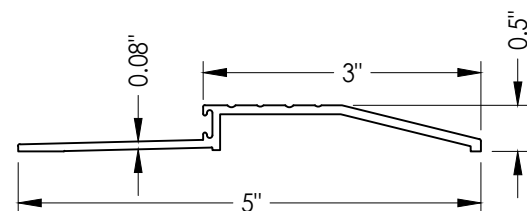
**11 FRAME HINGE REINFORCEMENT**  
8 Ga. Steel



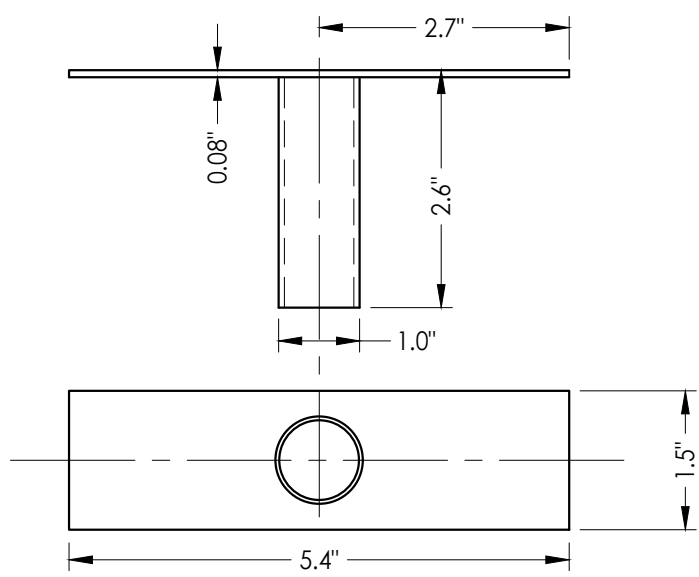
**7 DOOR HINGE REINFORCEMENT**  
8 Ga. Steel



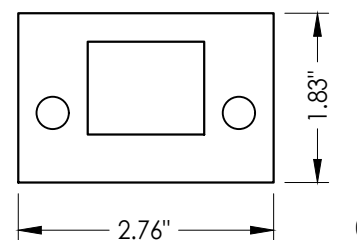
**15 THRESHOLD**



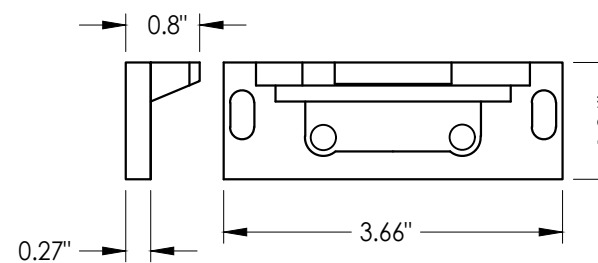
**18 THRESHOLD**



**19 TUBE ANCHOR**



**91 VERTICAL ROD LATCH STRIKE PLATE**  
@ Sill



**90 VERTICAL ROD LATCH STRIKE PLATE**  
@ Head

Documents Prepared By:  
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P.E. No. 43409

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PRODUCT:  
DKS  
STEEL COMMERCIAL DOOR

PART OR ASSEMBLY:  
BILL OF MATERIALS AND  
COMPONENTS

NO.	DATE	DESCRIPTION	LFS	BY
1	7/01/23	UPDATE TO 8TH ED. (2023) FBC		

DATE: 3/21/22

SCALE: N.T.S.

DWG. BY: LFS

CHK. BY: RW

DRAWING NO.:

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SHEET 5 OF 5