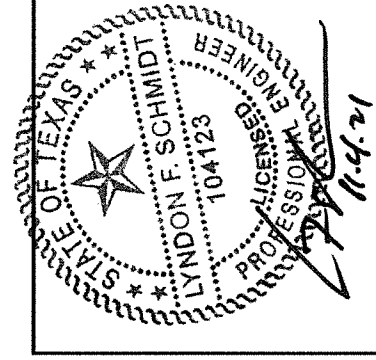


Vision Hollow Metal Limited

400 Zenway Blvd. Unit #1
Woodbridge, ON L4H 0S7

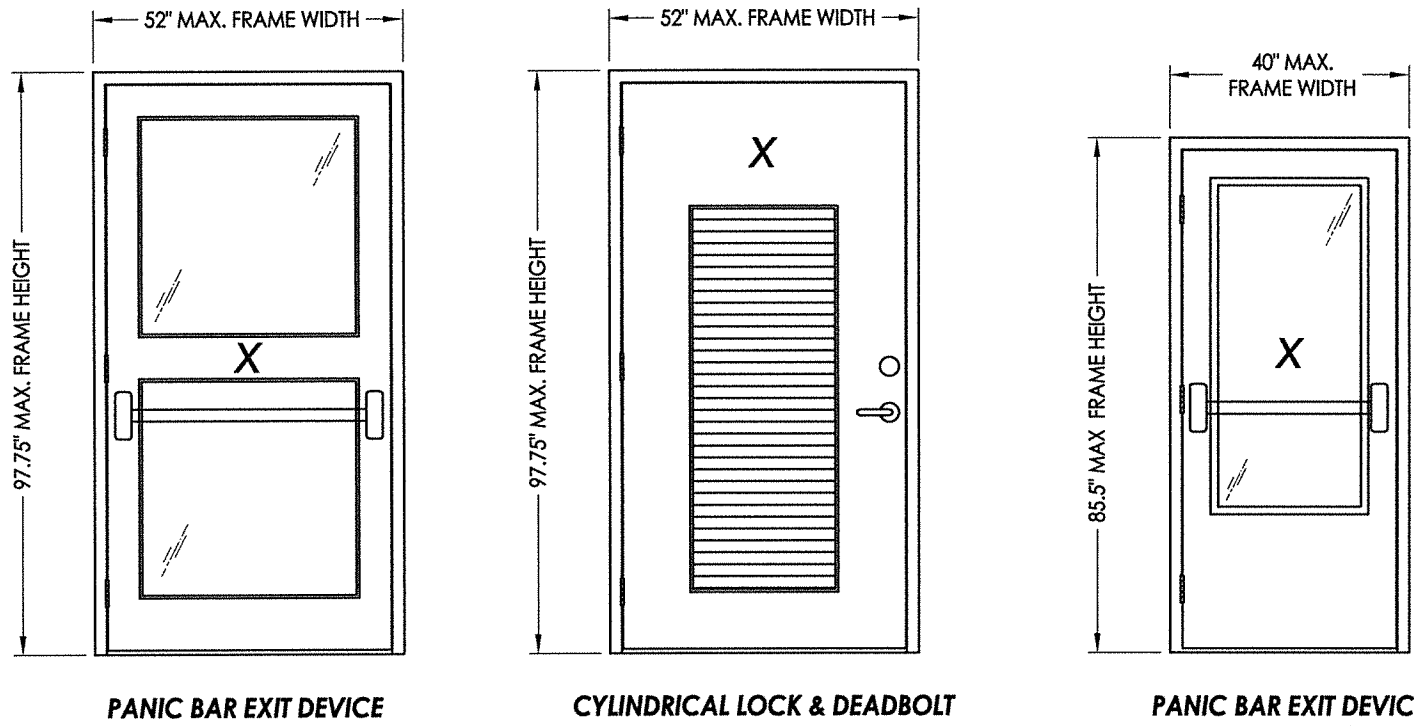


Documents Prepared By: Lyndon F. Schmidt, P.E.
TEXAS P.E. #104123

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

TEXAS BOARD OF PROFESSIONAL ENGINEERS
CERTIFICATE OF REGISTRATION # F-11852

LS18 STEEL SINGLE DOOR OUTSWING "IMPACT"



EVALUATED FOR USE IN THE STATE OF TEXAS

TDI DR-893

The Steel Door system described herein complies with the 2018 International Residential Code (IRC), Sections R301 & R609 and the 2018 International Building Code (IBC), Sections 1404.13, 1609, 1709.5, 2403 and 2404 subject to the following conditions:

1. Anchors shall be as listed and spaced as shown in the details. Anchor embedment to base material shall be beyond wall dressing or stucco.
2. This system has been tested and evaluated as a large missile impact protective system for installation in areas that require wind borne debris protection. This product meets missile level "D" as defined in ASTM E 1996.
3. Allowable design pressure requirements must be equal to or less than the design pressure rating shown in the design pressure chart, sheet 1 of this drawing.
4. Conditions not covered by this drawing are subject to further engineering analysis.

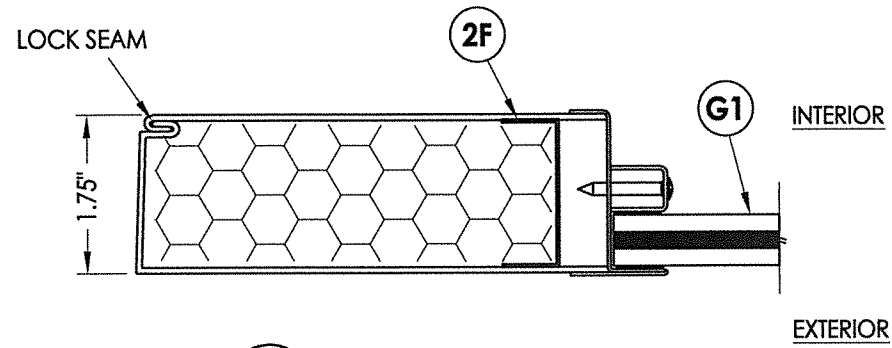
TABLE OF CONTENTS	
SHEET #	DESCRIPTION
1	Typical elevation, design pressures & general notes
2	Glazed door panel details
3	Louvered door panel details
4	Elevations
5	Horizontal cross sections
6	Vertical cross sections
7	Frame anchoring
8	Frame anchoring
9	Bill of materials and components

MAX FRAME DIMENSION	LOCK TYPE OPTIONS	DESIGN PRESSURE (PSF) OUTSWING	
		POSITIVE	NEGATIVE
52" x 97.75"	CYLINDRICAL LOCK & DEADBOLT	+65.0	-65.0
40" x 85.5"	PANIC BAR EXIT DEVICE	+65.0	-65.0

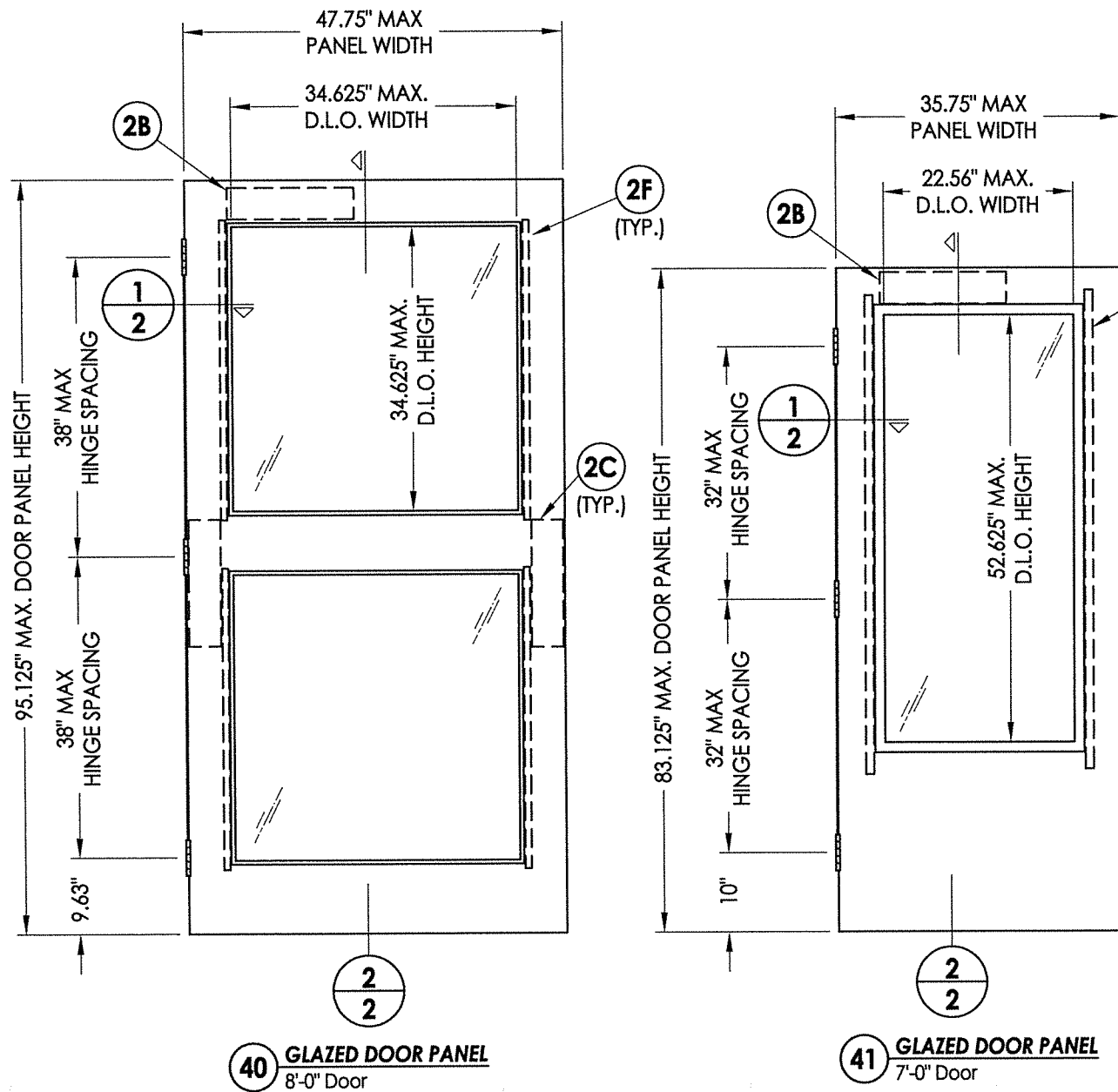
PRODUCT:	LS18 STEEL DOOR	
PART OR ASSEMBLY:	TYPICAL ELEVATIONS, DESIGN PRESSURES & GENERAL NOTES	
NO.	DATE	BY
1	11/4/21	LFS
UPDATE TO 2018 IBC/IRC REVISIONS		
DATE:	6/06/17	
SCALE:	N.T.S.	
DWG. BY:	JK	
CHK. BY:	LFS	
DRAWING NO.:	TX-4701	
SHEET	1	OF 9

Z:\Clients\Vision Hollow Metal Permanent\B - Texas Dept of Ins\TDI - DR-893 7'0" & 8'0" Glazed or Louvered Comm. Steel Doors\C - Drawings\TX-4701-02.dwg

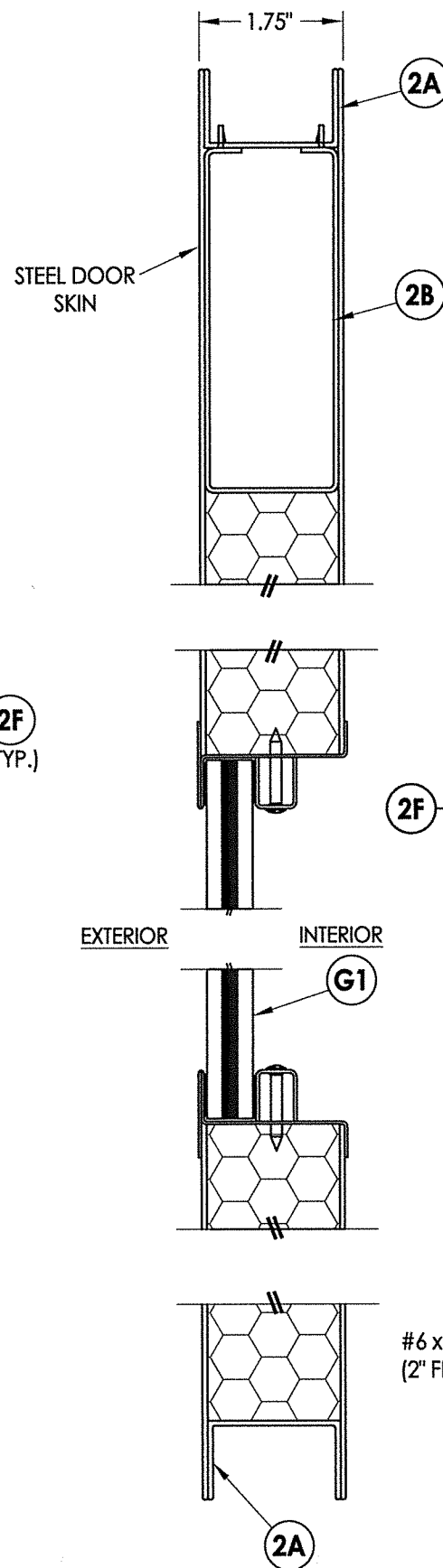
Z:\Clients\Vision Hollow Metal Permanent\B - Texas Dept of Ins\TDI - DR-893 7'-0" & 8'-0" Glazed or Louvered Comm. Steel Doors\C - Drawings\TX-4701-02.dwg



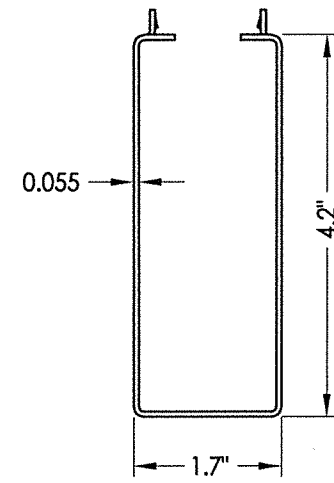
1
2 HORIZONTAL CROSS SECTION



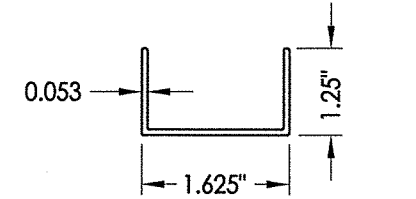
STEEL DOOR SKIN: 18 GA. (MIN. 0.043" THK.) GALV. STEEL (F_y = 54,000 PSI MIN.)
CORE MATERIAL: EPS FOAM (POLYSTYRENE - 1.0 PCF MIN. DENSITY)



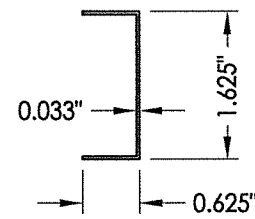
2
2 VERTICAL CROSS SECTION



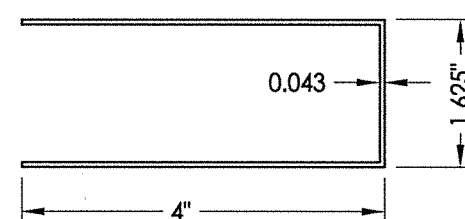
2B CLOSER BOX
16 GA. GALV. STEEL



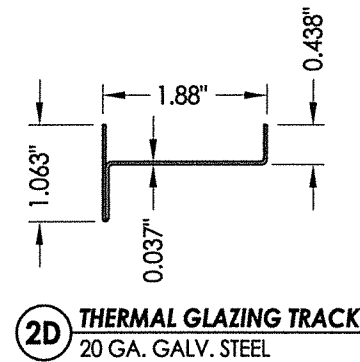
2A END CHANNEL
16 GA. GALV. STEEL



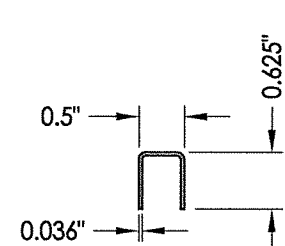
2F PERIMETER CHANNEL REINFORCEMENT
20 GA. GALV. STEEL



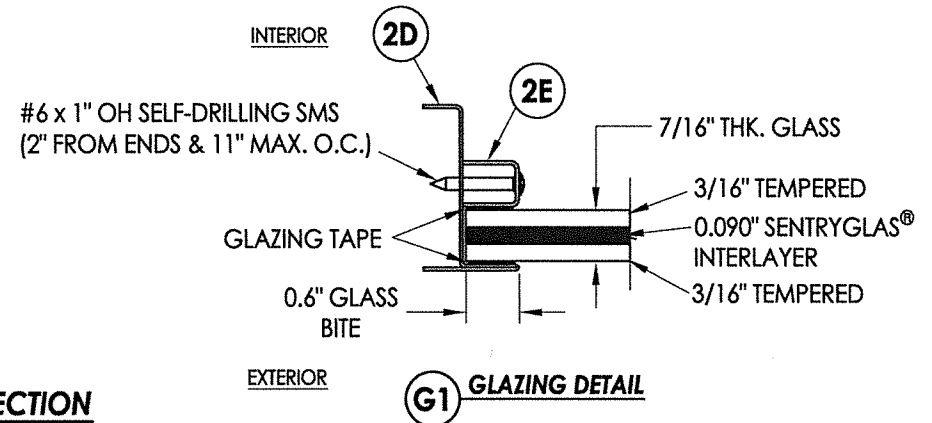
2C RIM PANIC BOX
18 GA. GALV. STEEL



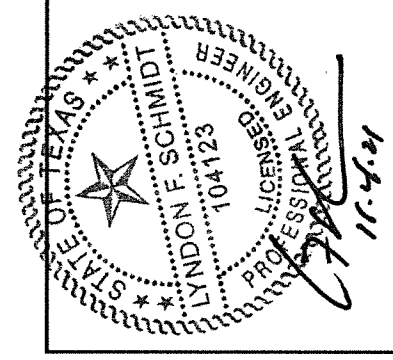
2D THERMAL GLAZING TRACK
20 GA. GALV. STEEL



2E GLAZING STOP
20 GA. GALV. STEEL



G1 GLAZING DETAIL



Documents Prepared By: Lyndon F. Schmidt, P.E.
TEXAS P.E. #104123

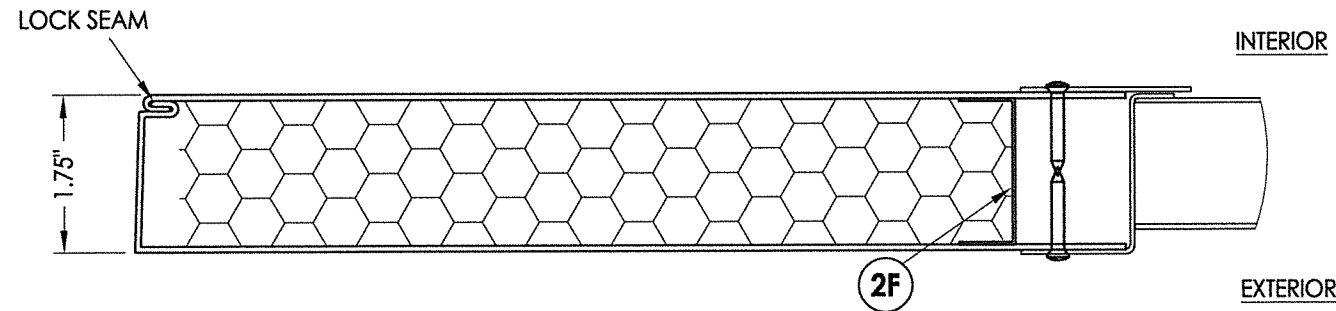
RW BUILDING CONSULTANTS, INC.
P.O. Box 230 Valrico FL 33595
Phone No.: 813.659.9197

TEXAS BOARD OF PROFESSIONAL ENGINEERS
CERTIFICATE OF REGISTRATION # F-11852

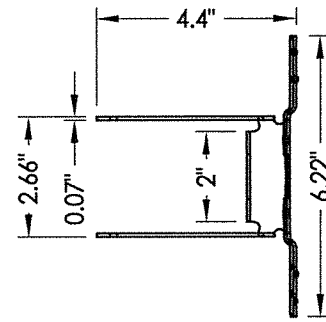
PRODUCT:		LS18 STEEL DOOR	
PART OR ASSEMBLY:		GLAZED DOOR PANEL DETAILS	
NO.	DATE	BY	REVISIONS
1	11/4/21	LFS	UPDATE TO 2018 IBC/IRC
DATE: 6/06/17		SCALE: N.T.S.	
DWG. BY: JK		CHK. BY: LFS	
DRAWING NO.: TX-4701		SHEET 2 OF 9	

© 2017 R.W. BUILDING CONSULTANTS INC.

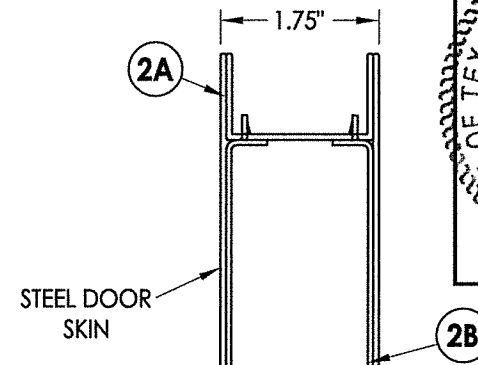
Z:\Clients\Vision Hollow Metal Permanent\B - Texas Dept of Ins\TDI - DR-893 7'0" & 8'0" Glazed or Louvered Comm. Steel Doors\C - Drawings\TX-4701-02.dwg



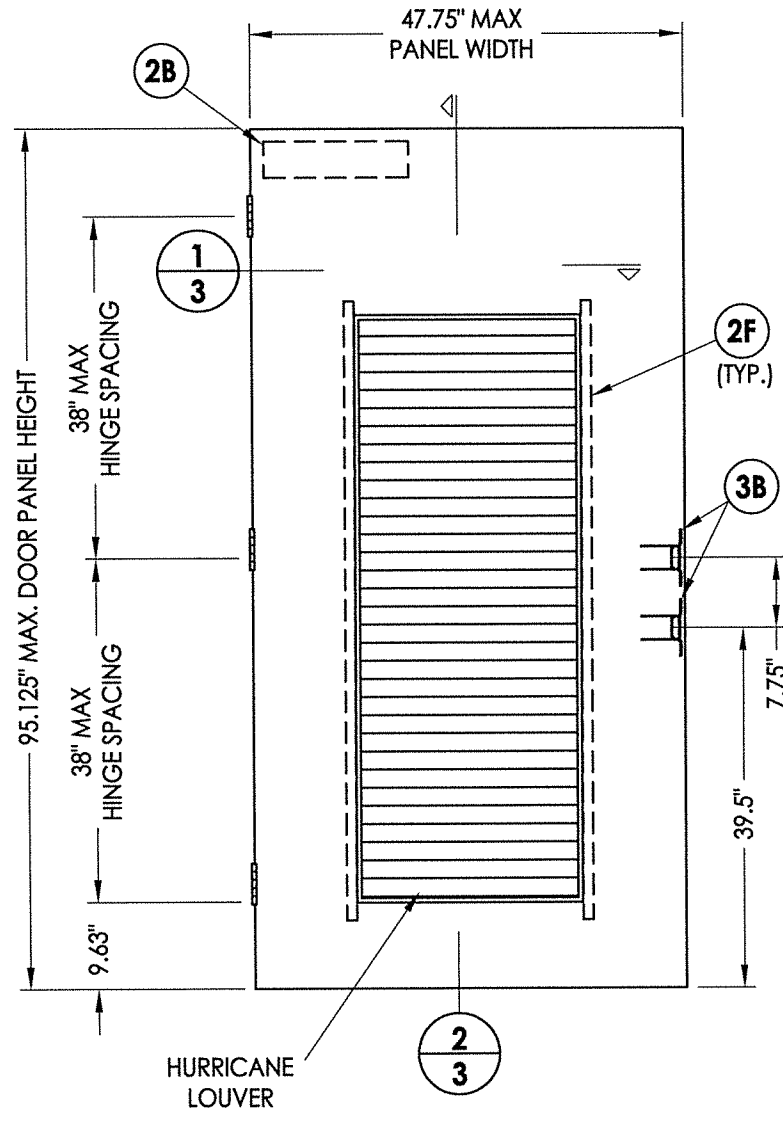
1
3 HORIZONTAL CROSS SECTION



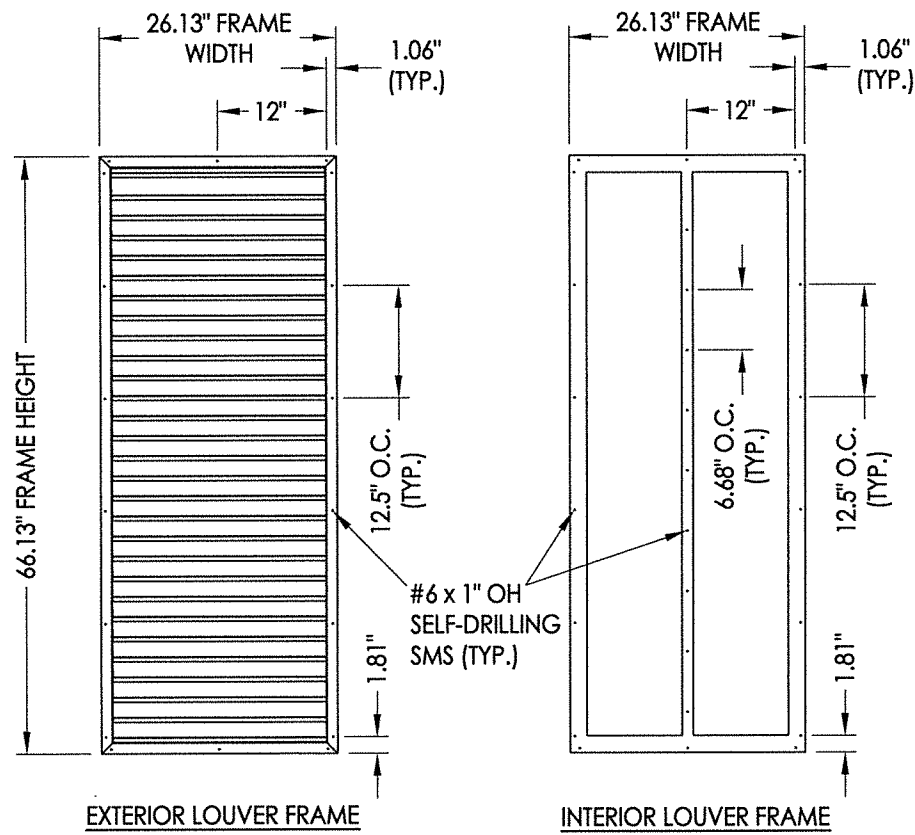
3B CYLINDRICAL LOCK REINFORCEMENT
18 GA. GALV. STEEL



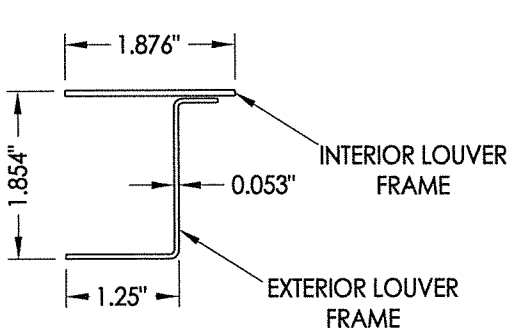
2A
2B STEEL DOOR SKIN



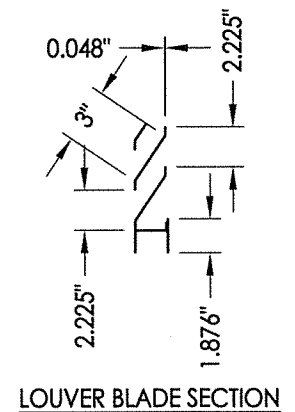
42 LOUVERED DOOR PANEL
8'-0" Door



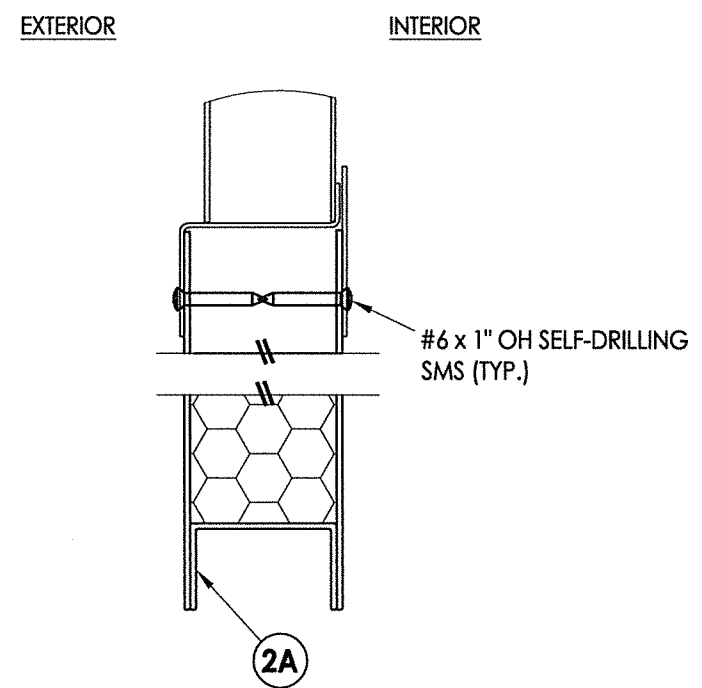
EXTERIOR LOUVER FRAME INTERIOR LOUVER FRAME



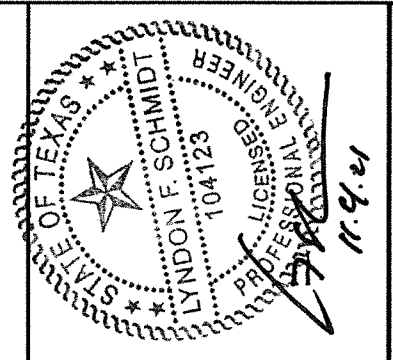
3A HURRICANE LOUVER
18 GA. GALV. STEEL



LOUVER BLADE SECTION



2
3 VERTICAL CROSS SECTION



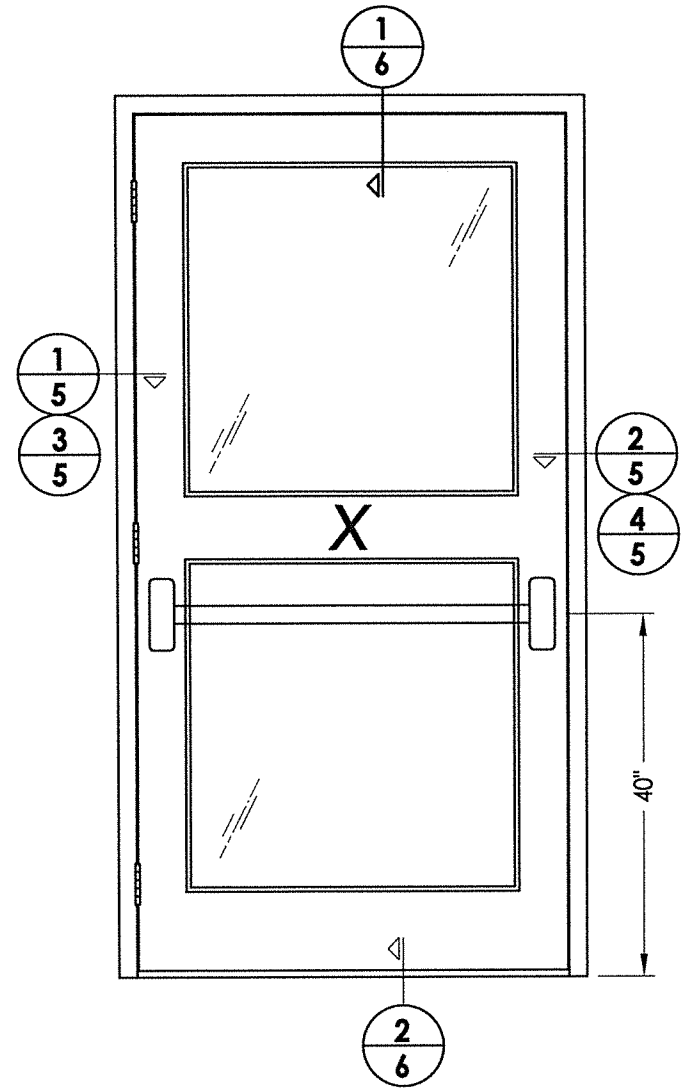
Documents Prepared By: Lyndon F. Schmidt, P.E.
TEXAS P.E. #104123
RW BUILDING CONSULTANTS, INC.
P.O. Box 230 Valrico FL 33595
Phone No.: 813.659.9197
TEXAS BOARD OF PROFESSIONAL ENGINEERS
CERTIFICATE OF REGISTRATION # F-11852

PRODUCT: LS18 STEEL DOOR
PART OR ASSEMBLY: LOUVERED DOOR PANEL DETAILS

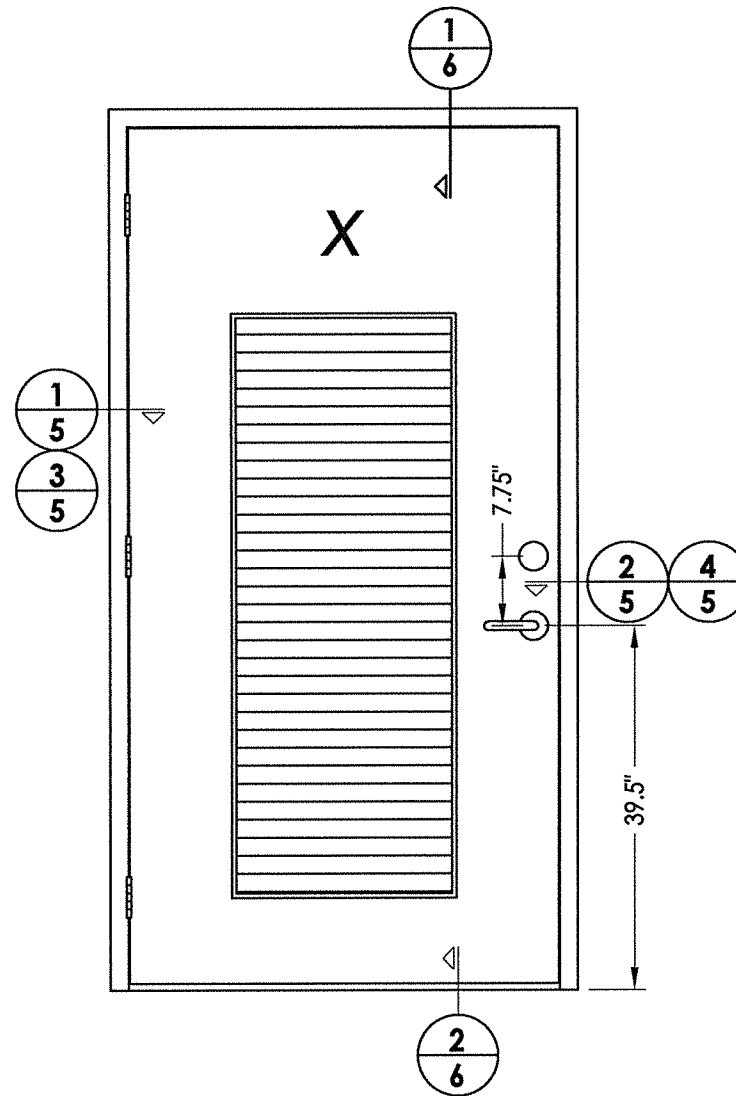
NO.	DATE	DESCRIPTION	BY
1	11/4/21	UPDATE TO 2018 IBC/IRC	LFS

DATE: 6/06/17
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: TX-4701
SHEET 3 OF 9

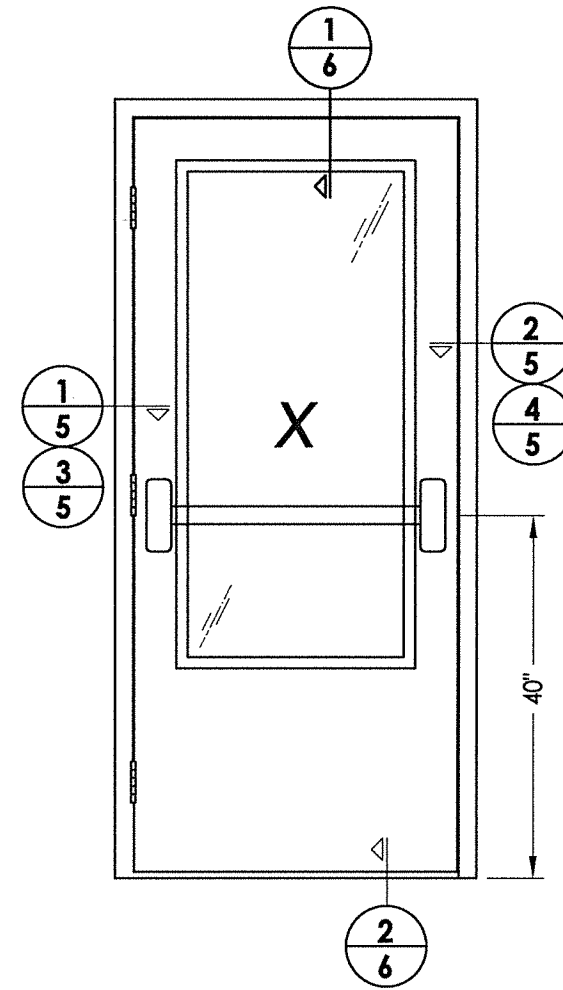
© 2017 R.W. BUILDING CONSULTANTS INC.



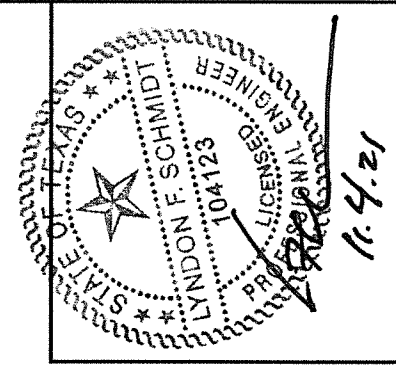
LOCK HARDWARE
RIM EXIT DEVICE: PDQ 6200R SERIES



LOCK HARDWARE
CYLINDRICAL LOCK: PDQ: GP SERIES
CYLINDRICAL LOCK: SCHLAGE: AL53PD
DEADBOLT: SCHLAGE: B660P



LOCK HARDWARE
RIM EXIT DEVICE: PDQ 6200R SERIES



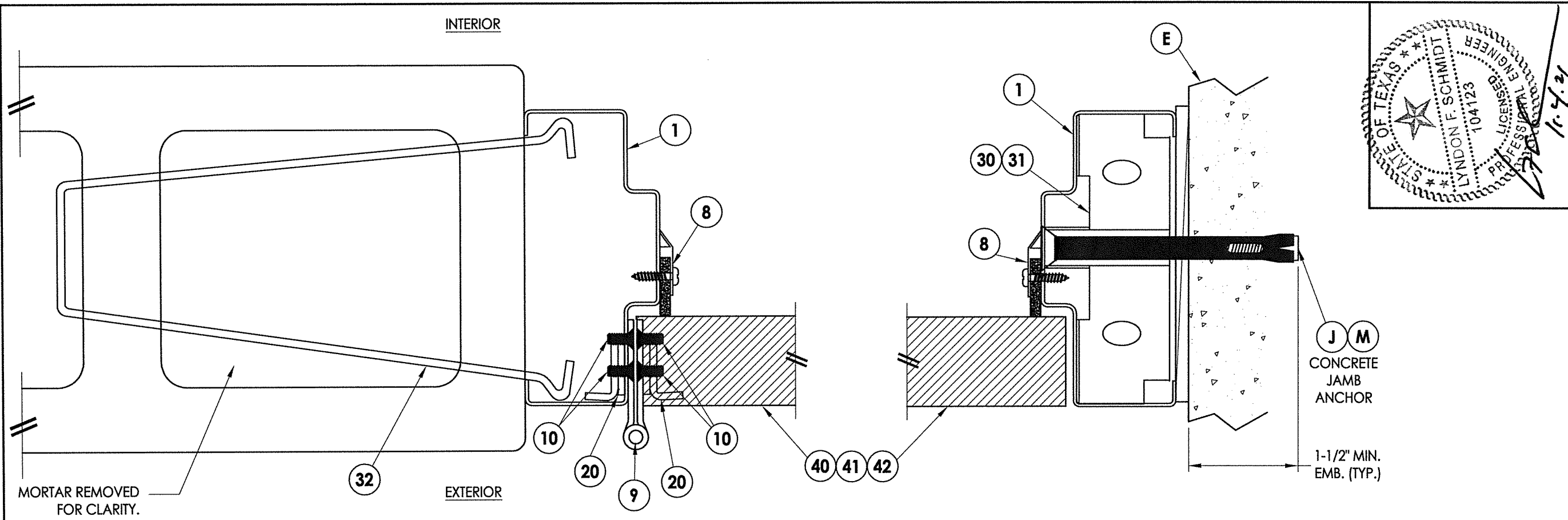
Documents Prepared By: Lyndon F. Schmidt, P.E.
TEXAS P.E. #104123

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

TEXAS BOARD OF PROFESSIONAL ENGINEERS
CERTIFICATE OF REGISTRATION # F-11852

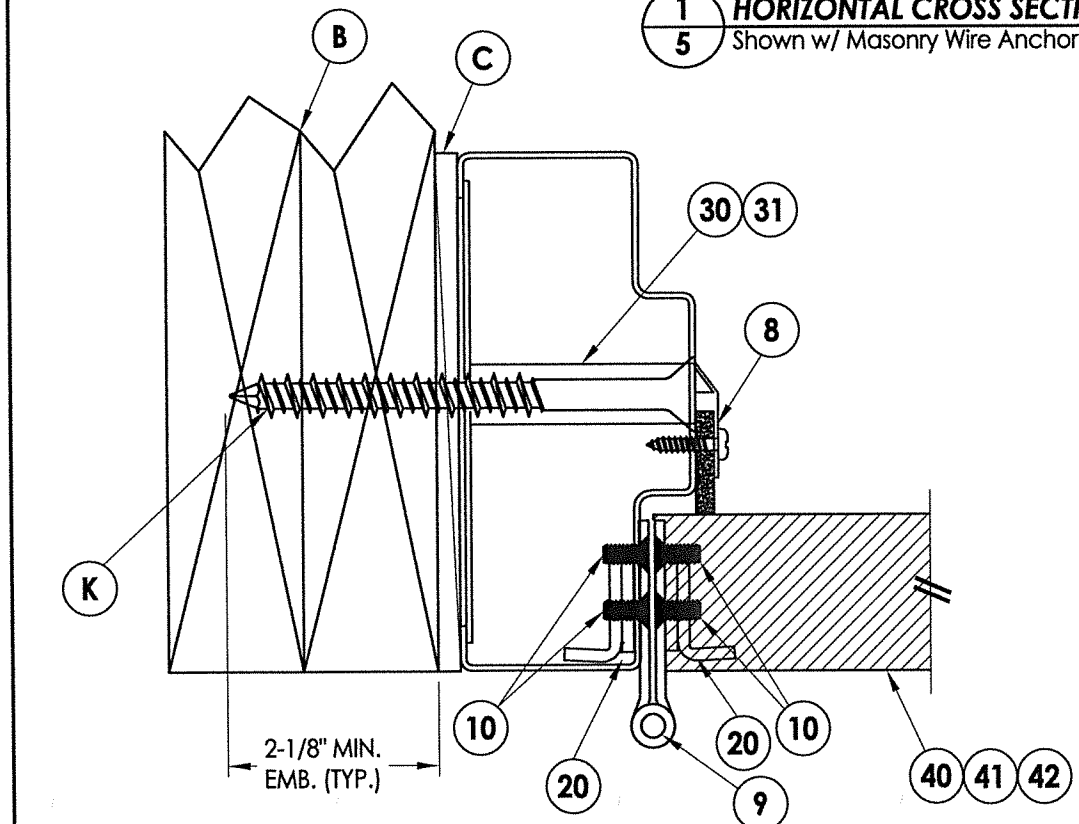
PRODUCT:		LS18 STEEL DOOR	
PART OR ASSEMBLY:		ELEVATIONS	
NO.	DATE	BY	REVISIONS
1	11/4/21	LFS	UPDATE TO 2018 IBC/IRC
DATE: 6/06/17			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.: TX-4701			
SHEET 4 OF 9			

Z:\Clients\Vision Hollow Metal Permanent\B - Texas Dept of Ins\TDI - DR-893 7'0" & 8'0" Glazed or Louvered Comm. Steel Doors\C - Drawings\TX-4701-02.dwg

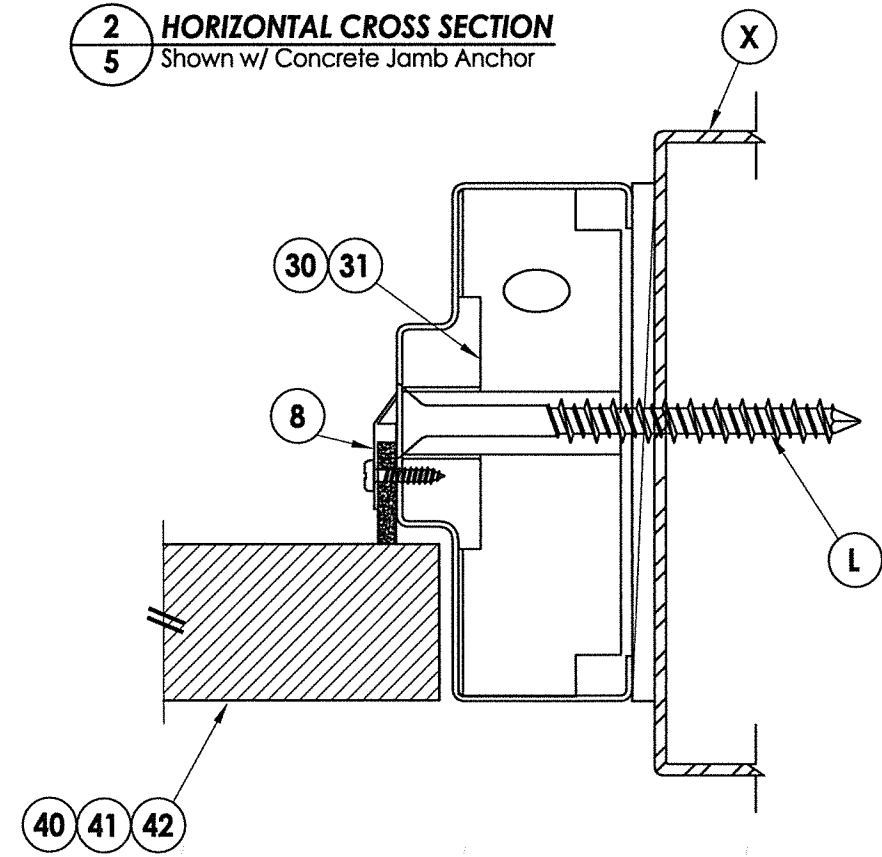


1 HORIZONTAL CROSS SECTION
5 Shown w/ Masonry Wire Anchor

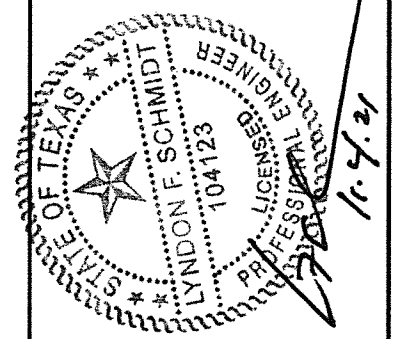
2 HORIZONTAL CROSS SECTION
5 Shown w/ Concrete Jamb Anchor



3 HORIZONTAL CROSS SECTION
5 Shown w/ Wood Stud Anchor



4 HORIZONTAL CROSS SECTION
5 Shown w/ Steel Stud Anchor



Documents Prepared By: Lyndon F. Schmidt, P.E.
TEXAS P.E. #104123

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

TEXAS BOARD OF PROFESSIONAL ENGINEERS
CERTIFICATE OF REGISTRATION # F-11852

PRODUCT: LS18 STEEL DOOR

PART OR ASSEMBLY: HORIZONTAL CROSS SECTIONS

NO.	DATE	DESCRIPTION	BY
1	11/4/21	UPDATE TO 2018 IBC/IRC	LFS

DATE: 6/06/17

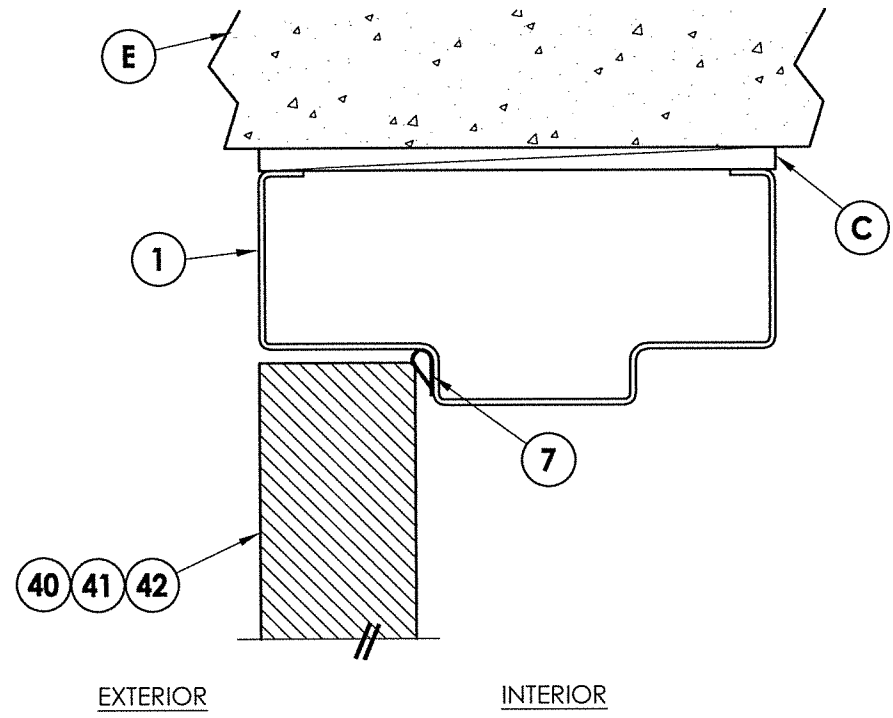
SCALE: N.T.S.

DWG. BY: JK

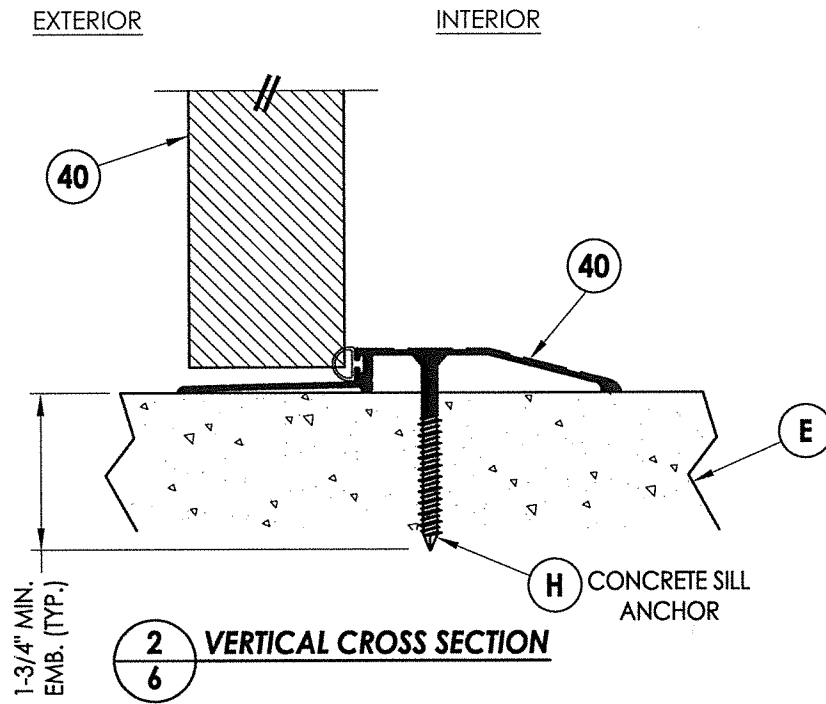
CHK. BY: LFS

DRAWING NO.: TX-4701

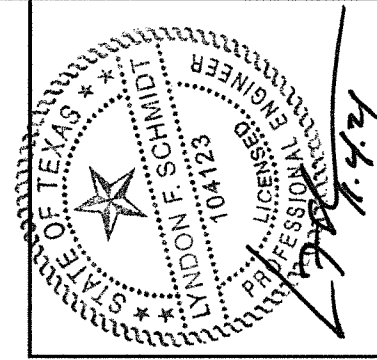
SHEET 5 of 9



1
6 VERTICAL CROSS SECTION



2
6 VERTICAL CROSS SECTION



Documents Prepared By: Lyndon F. Schmidt, P.E.
TEXAS P.E. #104123

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

TEXAS BOARD OF PROFESSIONAL ENGINEERS
CERTIFICATE OF REGISTRATION # F-11852

PRODUCT: LS18 STEEL DOOR

PART OR ASSEMBLY: VERTICAL CROSS SECTIONS

REVISIONS	
NO.	DATE
1	11/4/21
	UPDATE TO 2018 IBC/IRC
	LFS BY

DATE: 6/06/17

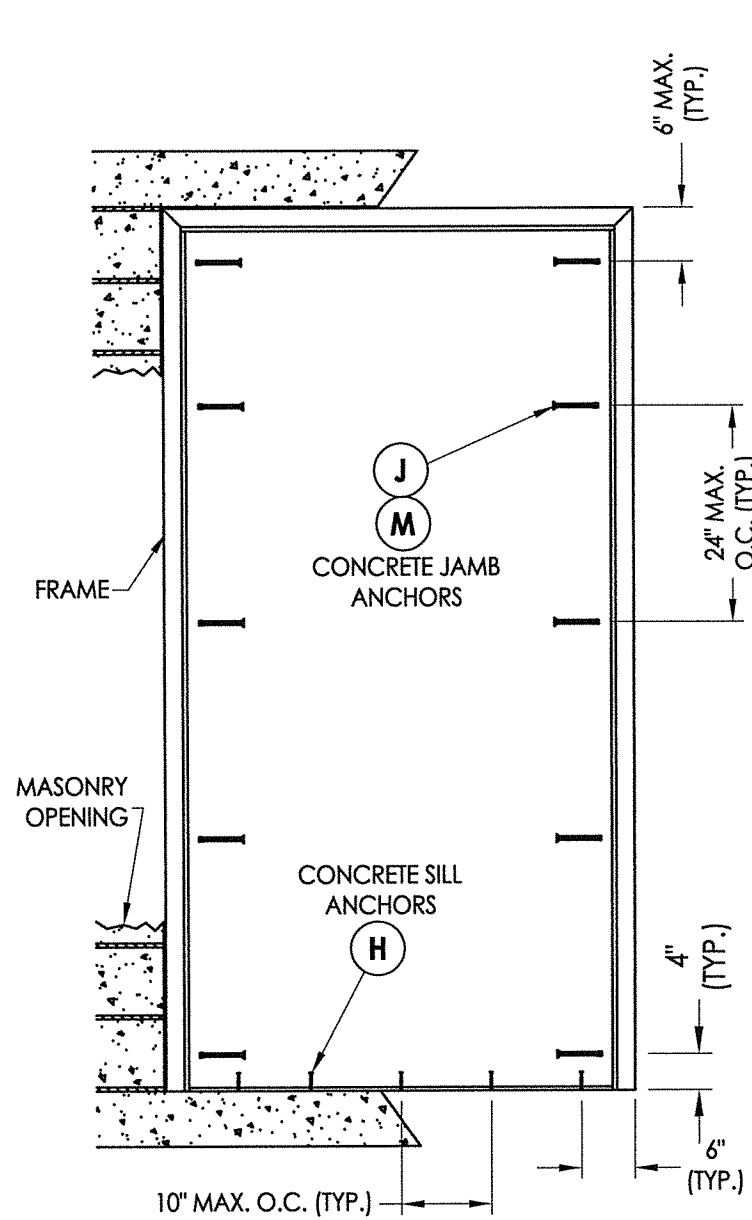
SCALE: N.T.S.

DWG. BY: JK

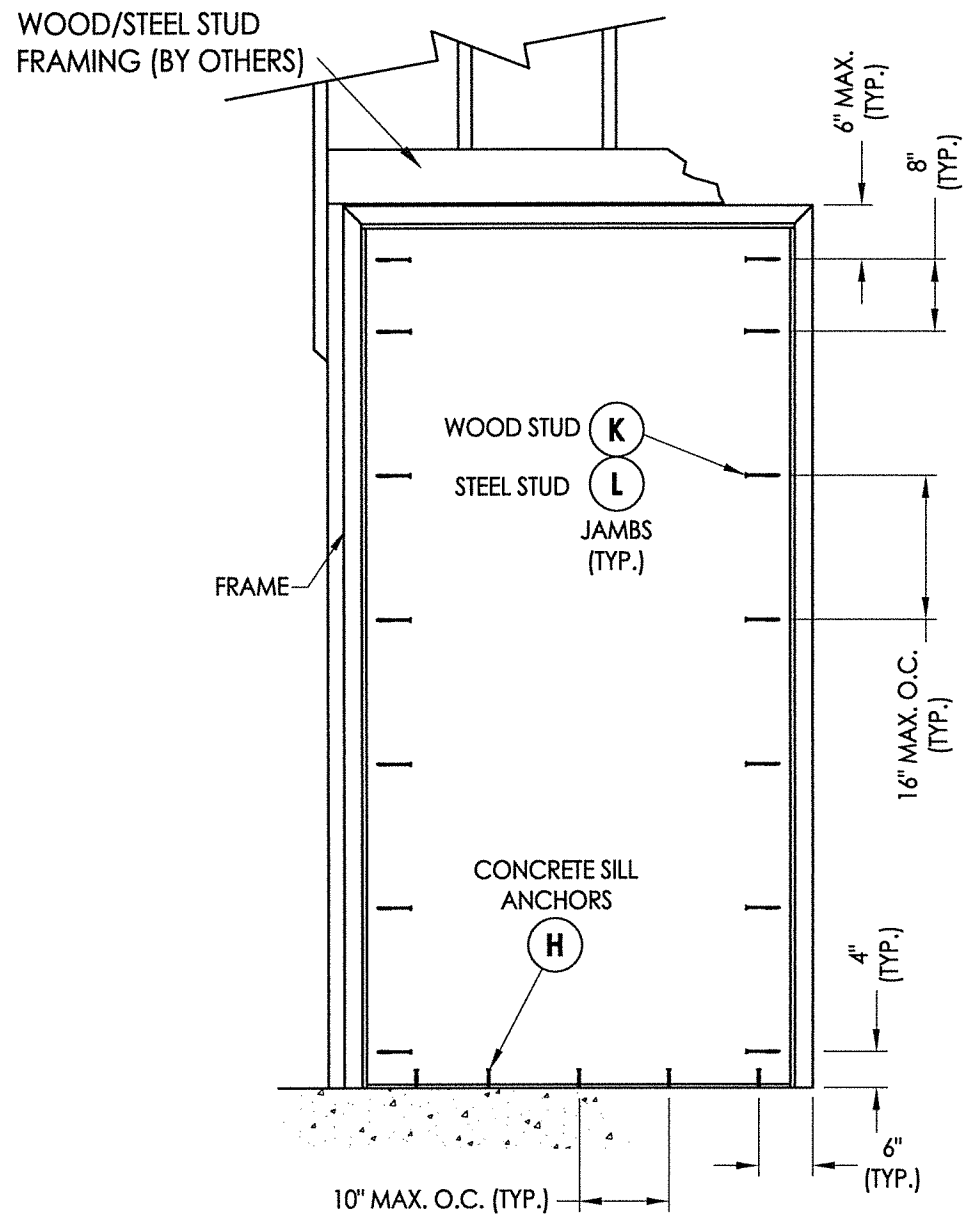
CHK. BY: LFS

DRAWING NO.: TX-4701

SHEET 6 OF 9



FRAME ANCHORING
Masonry Construction
Concrete Anchors

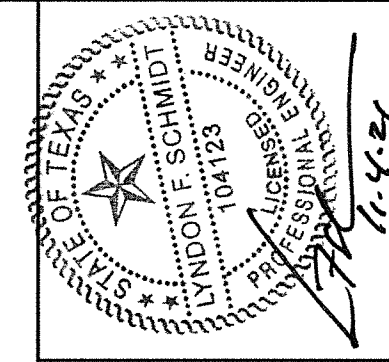


FRAME ANCHORING
Wood/Steel Stud

CONCRETE ANCHOR NOTES:

- Concrete screw locations at the corners may be adjusted to maintain a minimum 1" edge distance to mortar joints. If concrete screw locations noted as "MAX. O.C." 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 LOCATION	ANCHOR SIZE	MANUFACTURER	MIN. EDGE DISTANCE	MIN. EMBEDMENT
CONCRETE ANCHOR SCREW	JAMBS	3/8"	LDT TAPCON® (ITW BUILDEX)	3"	1-1/2"
	SILL	1/4"	TAPCON® (ITW BUILDEX) ULTRACON+® (DeWALT)	2-1/2"	1-3/4"
CONCRETE SLEEVE ANCHOR	JAMBS	3/8"	DYNABOLT SLEEVE ANCHOR® (ITW REDHEAD)	2-1/4"	1-1/2"

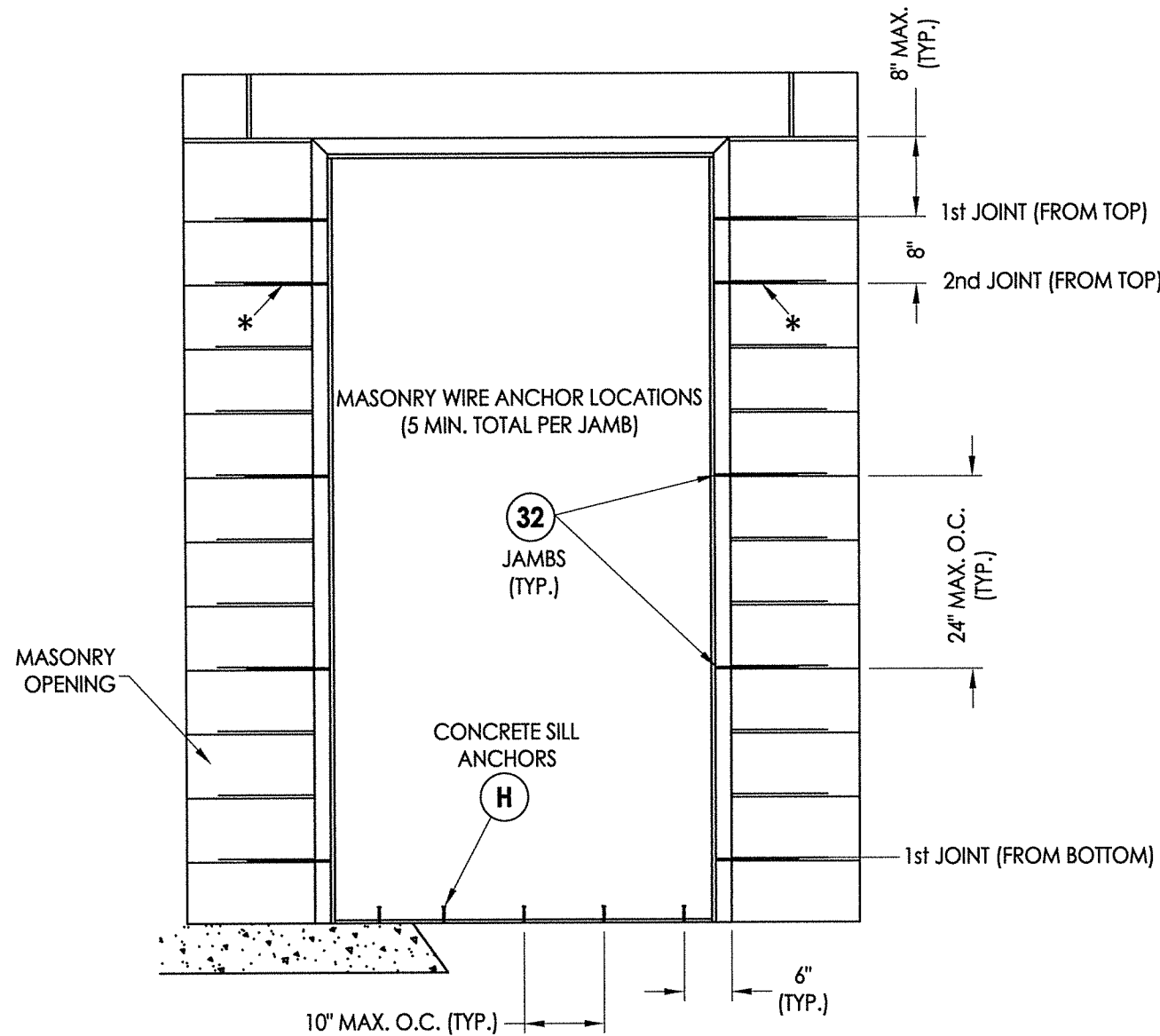


Documents Prepared By: Lyndon F. Schmidt, P.E.
TEXAS P.E. #104123

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

TEXAS BOARD OF PROFESSIONAL ENGINEERS
CERTIFICATE OF REGISTRATION # F-11852

PRODUCT:	LS18 STEEL DOOR
PART OR ASSEMBLY:	FRAME ANCHORING
NO.	1
DATE	11/4/21
UPDATE TO	2018 IBC/IRC
BY	LFS
REVISIONS	
DATE:	6/06/17
SCALE:	N.T.S.
DWG. BY:	JK
CHK. BY:	LFS
DRAWING NO.:	TX-4701
SHEET	7 of 9



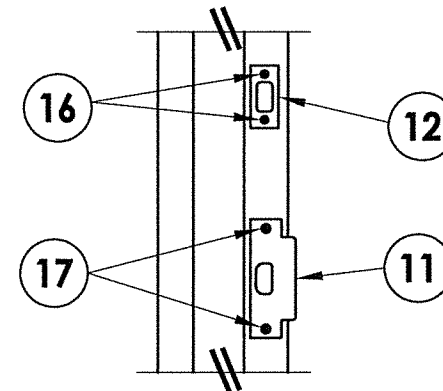
FRAME ANCHORING
Masonry Construction
Masonry Wire Anchors

* THIS ANCHOR REQUIRED FOR DESIGN PRESSURES > 50 PSF ONLY.

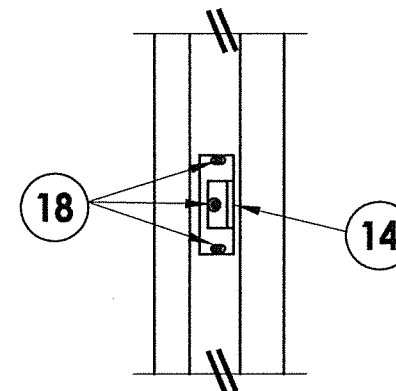
CONCRETE ANCHOR NOTES:

- Concrete screw locations at the corners may be adjusted to maintain a minimum 1" edge distance to mortar joints. If concrete screw locations noted as "MAX. O.C." 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:

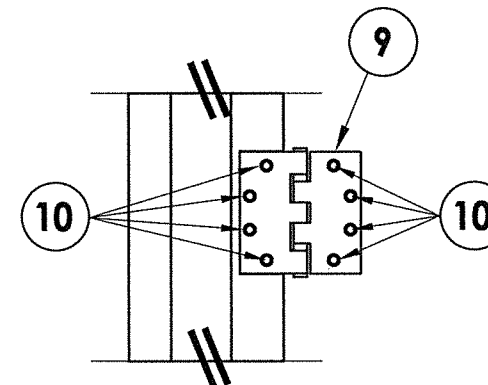
ANCHOR TYPE	ANCHOR LOCATION	ANCHOR SIZE	MANUFACTURER	MIN. EDGE DISTANCE	MIN. EMBEDMENT
CONCRETE ANCHOR SCREW	SILL	1/4"	TAPCON® (ITW BUILDEX) ULTRACON+® (DeWALT)	2-1/2"	1-3/4"



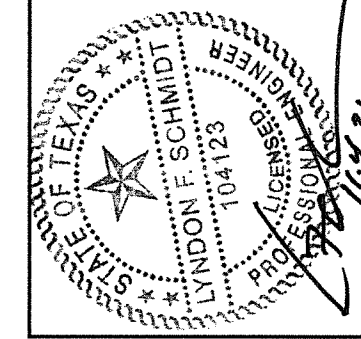
STRIKE DETAIL
Latch & Deadbolt



STRIKE DETAIL
Rim Exit Device



HINGE DETAIL



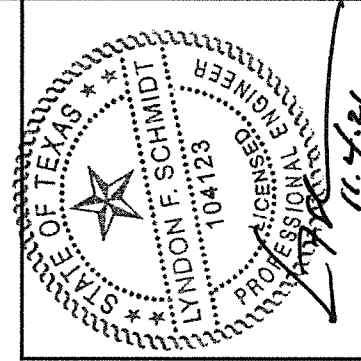
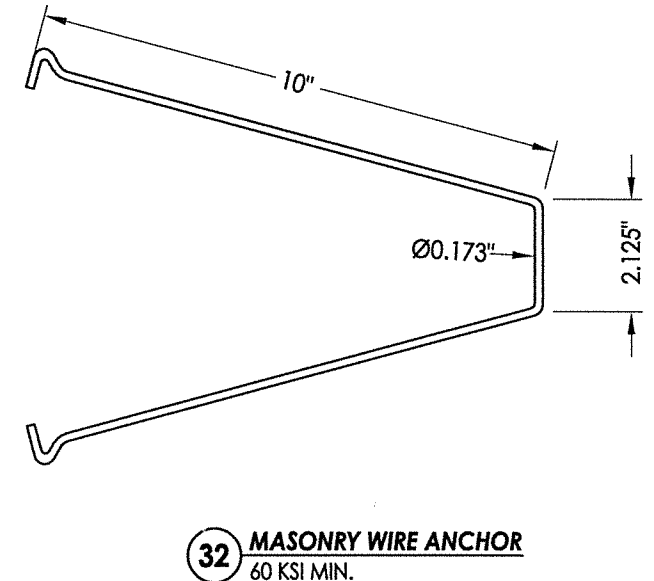
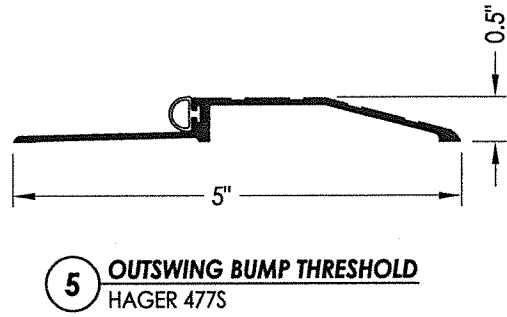
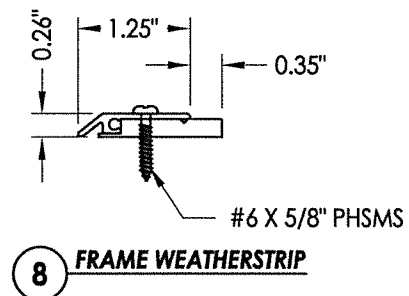
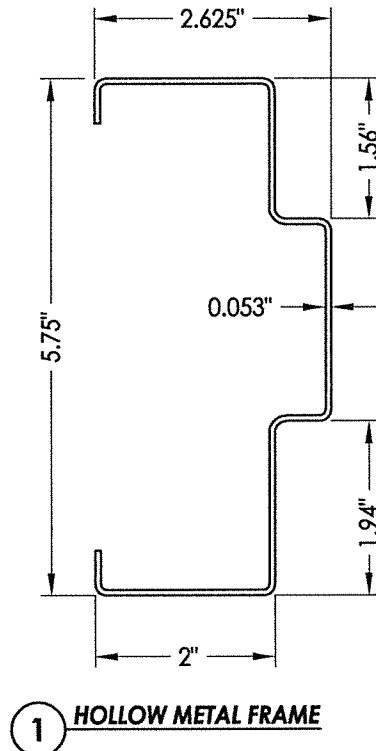
Documents Prepared By: Lyndon F. Schmidt, P.E.
TEXAS P.E. #104123

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

TEXAS BOARD OF PROFESSIONAL ENGINEERS
CERTIFICATE OF REGISTRATION # F-11852

PRODUCT:	LS18 STEEL DOOR	
PART OR ASSEMBLY:	FRAME ANCHORING	
NO.	DATE	BY
1	11/4/21	LFS
UPDATE TO 2018 IBC/IRC		
REVISIONS		
DATE:	6/06/17	
SCALE:	N.T.S.	
DWG. BY:	JK	
CHK. BY:	LFS	
DRAWING NO.:	TX-4701	
SHEET	8	OF 9

BILL OF MATERIALS		
ITEM #	DESCRIPTION	MATERIAL
B	2X STUD FRAMING (G>= 0.55)	WOOD
C	1/4" MAX. SHIM SPACE	-
E	MASONRY - 3,000 PSI MIN. CONCRETE CONFORMING TO ACI 301 OR HOLLOW BLOCK (GROUT FILLED) CONFORMING TO ASTM C90	CONCRETE
H	1/4" X 1-3/4" PFH CONCRETE SCREW (SEE CONCRETE ANCHOR TABLE)	STEEL
J	3/8" X 5" PFH DYNABOLT SLEEVE ANCHOR (SEE CONCRETE ANCHOR TABLE)	STEEL
K	3/8" X 5" FH LAG SCREW (2-1/8" MIN. EMBEDMENT)	STEEL
L	3/8" Ø SMS (MUST PENETRATE MIN. 3 THREADS THROUGH STEEL STUD)	STEEL
M	3/8" X 5" LDT TAPCON CONCRETE SCREW (SEE CONCRETE ANCHOR TABLE)	STEEL
X	STEEL STUD (0.125" MIN. THK, Fu = 50 ksi, Fy = 33 ksi)	STEEL
1	HOLLOW METAL FRAME	-
5	OUTSWING BUMP THRESHOLD	ALUM
7	WEATHERSTRIP (HAGER 736 PRESS-ON)	-
8	FRAME WEATHERSTRIP (HAGER 875S)	-
9	HINGE 4.5" X 4.5"	STEEL
10	#12-24 x 1/2" FH MACHINE SCREW	STEEL
11	LATCH STRIKE PLATE	STEEL
12	DEADBOLT STRIKE PLATE	STEEL
13	VERTICAL ROD STRIKE PLATE	STEEL
14	RIM EXIT DEVICE STRIKE	STEEL
16	#8 x 3/4" FH SCREWS	STEEL
17	#12 x 13/16" FH SCREWS	STEEL
18	#12 x 1-1/8" PH SMS	STEEL
20	HINGE REINFORCEMENT (10 GA.)	STEEL
21	FLUSH BOLT GUIDE (0.050" THK.)	STEEL
22	FLUSH BOLT FRAME REINFORCEMENT (16 GA)	STEEL
30	EMA PIPE ANCHOR (18 GA)	STEEL
31	EMA BUTTERFLY ANCHOR (18 GA)	STEEL
32	MASONRY WIRE ANCHOR	STEEL
40	GLAZED STEEL DOOR PANEL (8'-0" DOOR)	STEEL
41	GLAZED STEEL DOOR PANEL (7'-0" DOOR)	STEEL
42	LOUVERED STEEL DOOR PANEL (8'-0" DOOR)	STEEL



Documents Prepared By: Lyndon F. Schmidt, P.E.
TEXAS P.E. #104123

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

TEXAS BOARD OF PROFESSIONAL ENGINEERS
CERTIFICATE OF REGISTRATION # F-11852

PRODUCT:	LS18 STEEL DOOR	
PART OR ASSEMBLY:	BILL OF MATERIALS & COMPONENTS	
NO.	DATE	BY
1	11/4/21	LFS
UPDATE TO 2018 IBC/IRC		
REVISIONS		
DATE:	6/06/17	
SCALE:	N.T.S.	
DWG. BY:	JK	
CHK. BY:	LFS	
DRAWING NO.:	TX-4701	
SHEET	9	OF 9