

STEVES AND SONS

203 Humble Ave.
San Antonio, TX 78225

Opaque Steel Door OUTSWING "IMPACT"

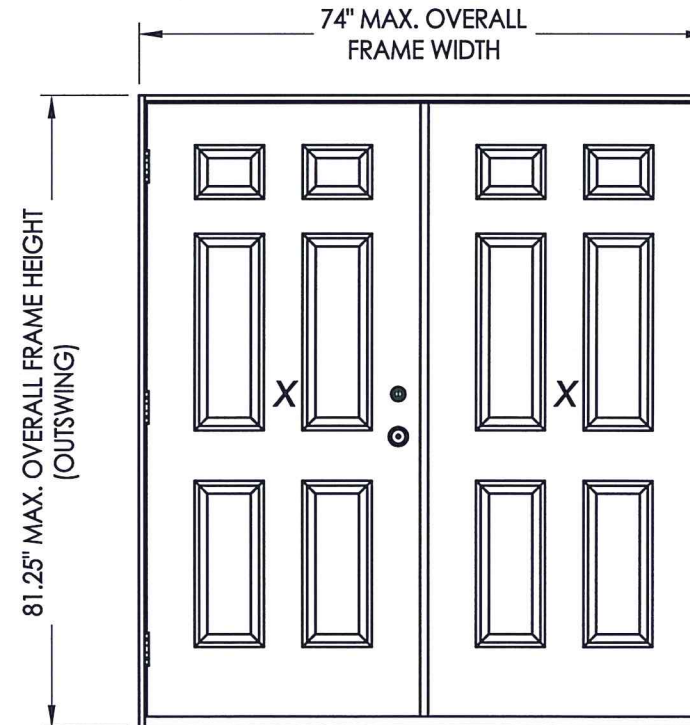
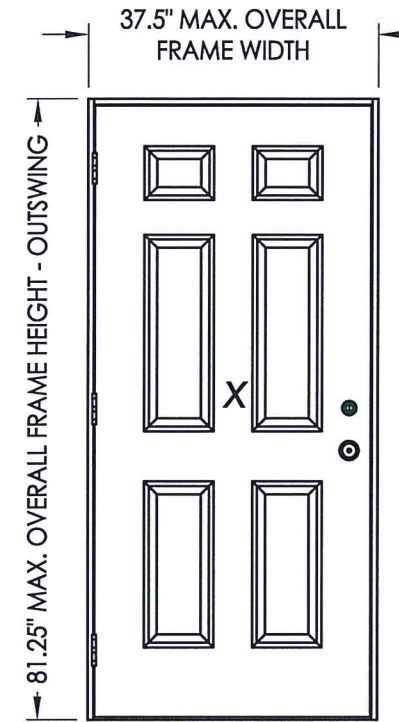
EVALUATED FOR USE IN THE STATE OF TEXAS

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:

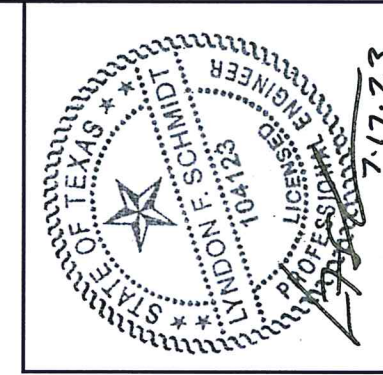
1. Anchors shall be as listed and spaced as shown in the details. Anchor embedment to base material shall be beyond wall dressing or stucco.
2. This system has been tested and evaluated as a large missile impact protective system for installation in areas that require wind borne debris protection. This 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.

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SHEET#	DESCRIPTION
1	Typical elevations, design pressures & general notes
2	Door panel details
3	Elevations
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5	Vertical cross sections
6	Frame anchoring
7	Frame anchoring
8	Components and bill of materials



CONFIGURATION	MAX. FRAME DIMENSION	DESIGN PRESSURE (PSF) OUTSWING	
		POSITIVE	NEGATIVE
X	37.5" x 81.25"	+50.0	-50.0
XX	74.0" x 81.25"	+50.0	-50.0



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

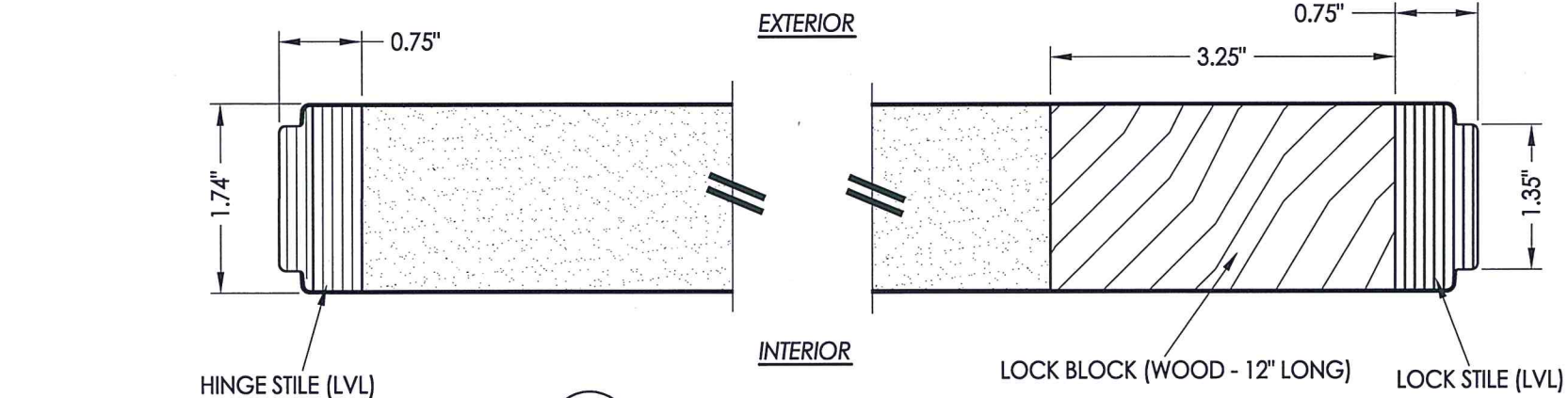
RW BUILDING CONSULTANTS, INC.
P.O. Box 230 Vairico FL 33595
Phone No.: 813.659.9197
TEXAS BOARD OF PROFESSIONAL ENGINEERS
CERTIFICATE OF REGISTRATION # F-11852

PRODUCT: STEVES AND SONS STEEL DOOR
PART OR ASSEMBLY: TYPICAL ELEVATIONS, DESIGN PRESSURES & GENERAL NOTES

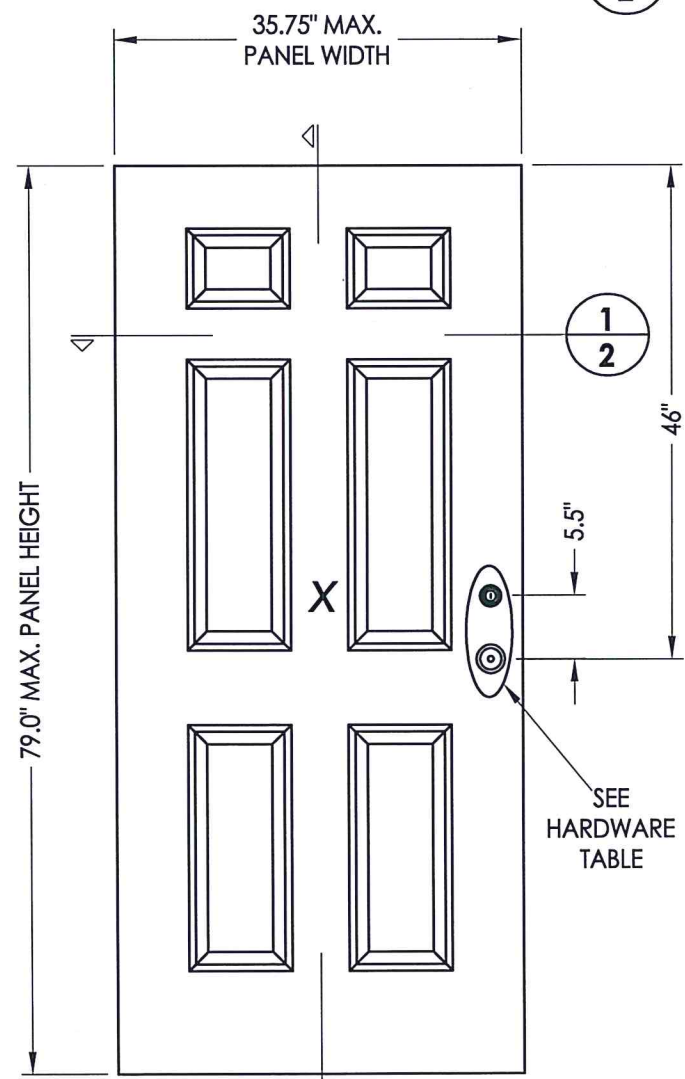
NO.	DATE	REVISIONS
3	7/17/23	REVISE DP FOR NEW TESTING
2	5/28/20	UPDATE TO 2018 IBC/IRC CODE
1	7/21/15	Manuf./Product Name Change

DATE: 05/17/10
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: TX-4083
SHEET 1 OF 8

Z:\Clients\Steves and Sons - Permanent\B - Texas Dept of Ins\Hinged Doors - Steel\DR 432 Opaque Steel Doors\C - Drawings\TX-4083 REV.dwg



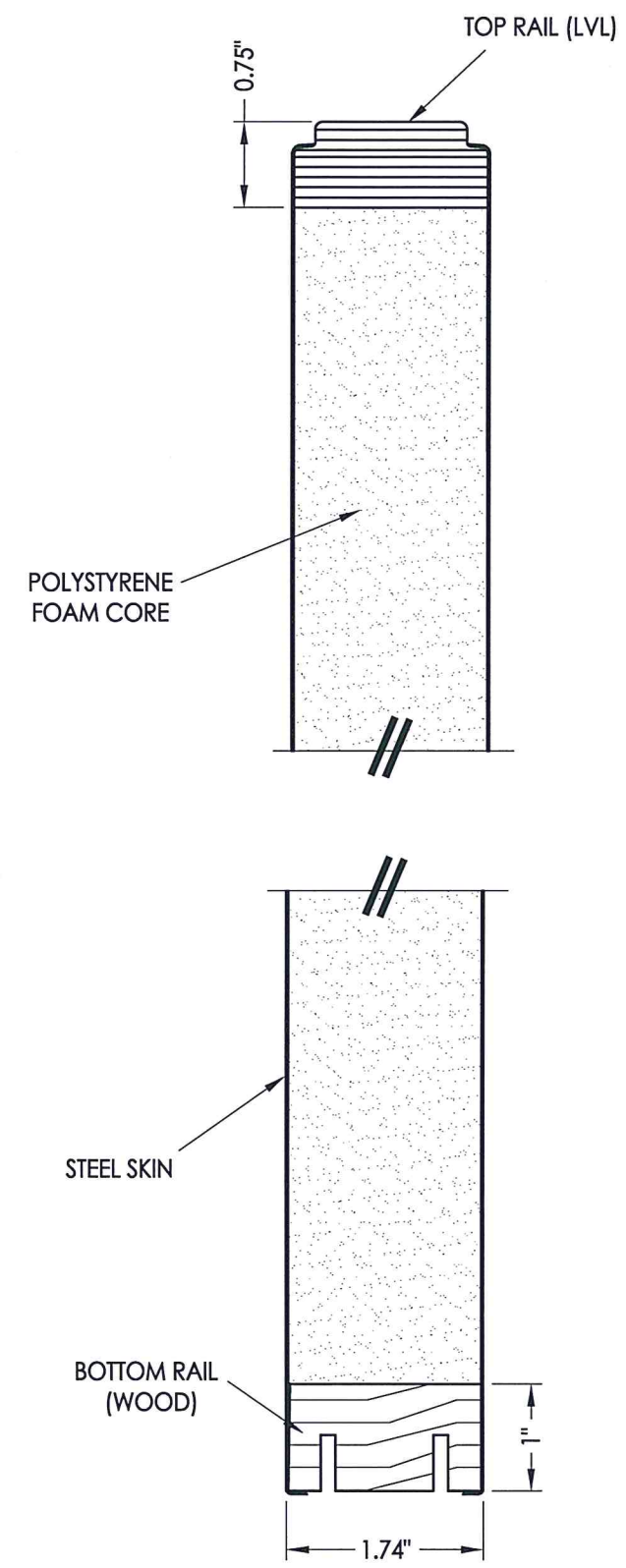
1
2 **HORIZONTAL CROSS SECTION**



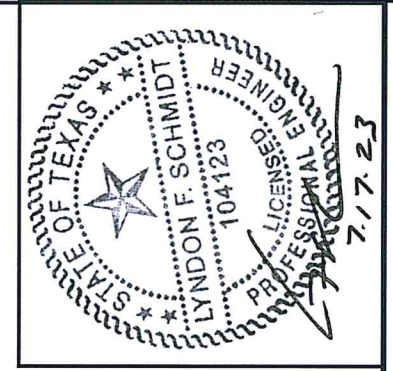
2
2
40 STEEL DOOR OPAQUE

STEEL DOOR SKIN: MIN. 0.020" THK.
CORE MATERIAL: EPS FOAM (POLYSTYRENE)

HARDWARE TABLE		
MANUFACTURER	MODEL	
KWIKSET	KNOB:	SIGNATURE SERIES
	DEADBOLT:	SIGNATURE SERIES (980)
SCHLAGE	KNOB:	F51
	DEADBOLT:	B60N



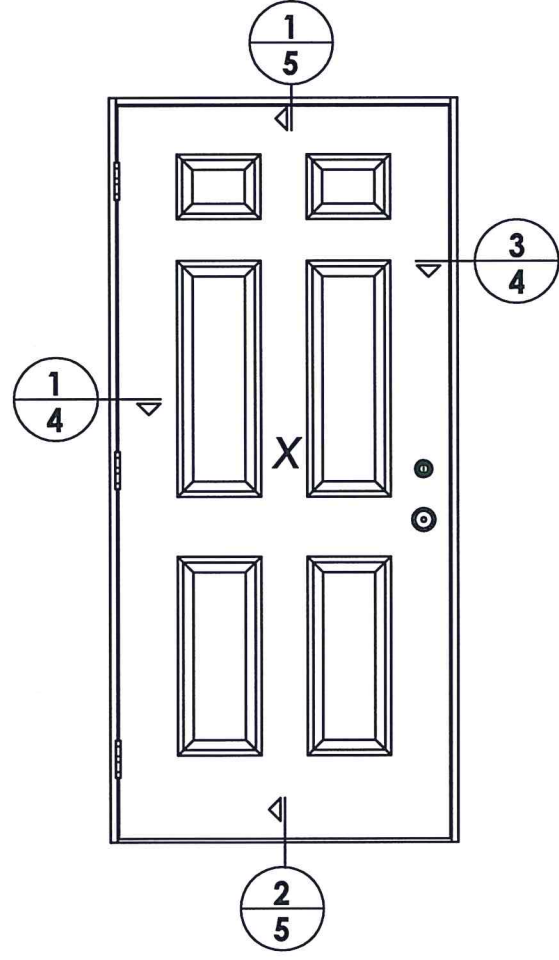
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2 **VERTICAL CROSS SECTION**



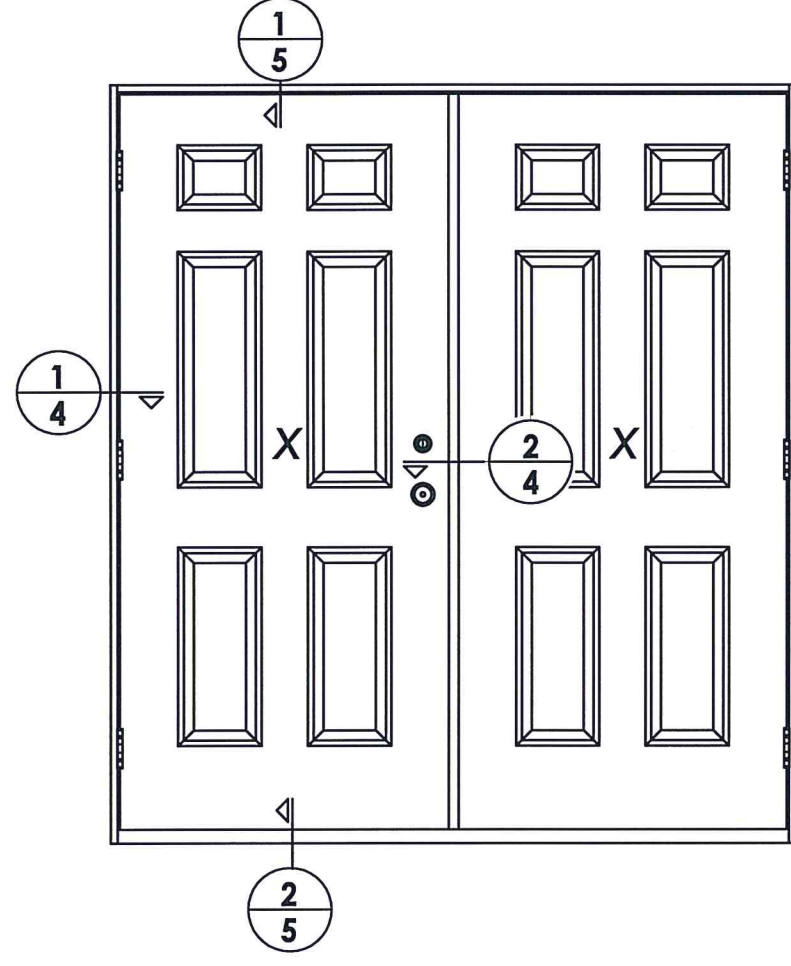
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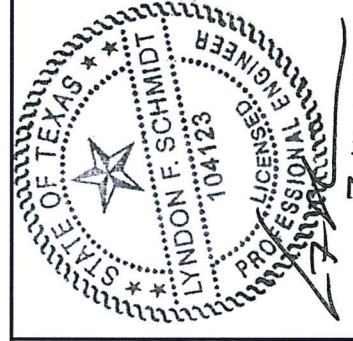
PRODUCT:		STEVES AND SONS	
PART OR ASSEMBLY:		DOOR PANEL CONSTRUCTION DETAILS	
NO.	DATE	BY	REVISIONS
3	7/17/23	LFS	REVISE DP FOR NEW TESTING
2	5/28/20	LFS	UPDATE TO 2018 IBC/IRC CODE
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SHEET 2 OF 8			



ELEVATION (X)



ELEVATION (XX)



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PRODUCT: STEVES AND SONS
STEEL DOOR

PART OR ASSEMBLY:
ELEVATIONS

NO.	DATE	REVISIONS	BY
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DATE: 05/17/10

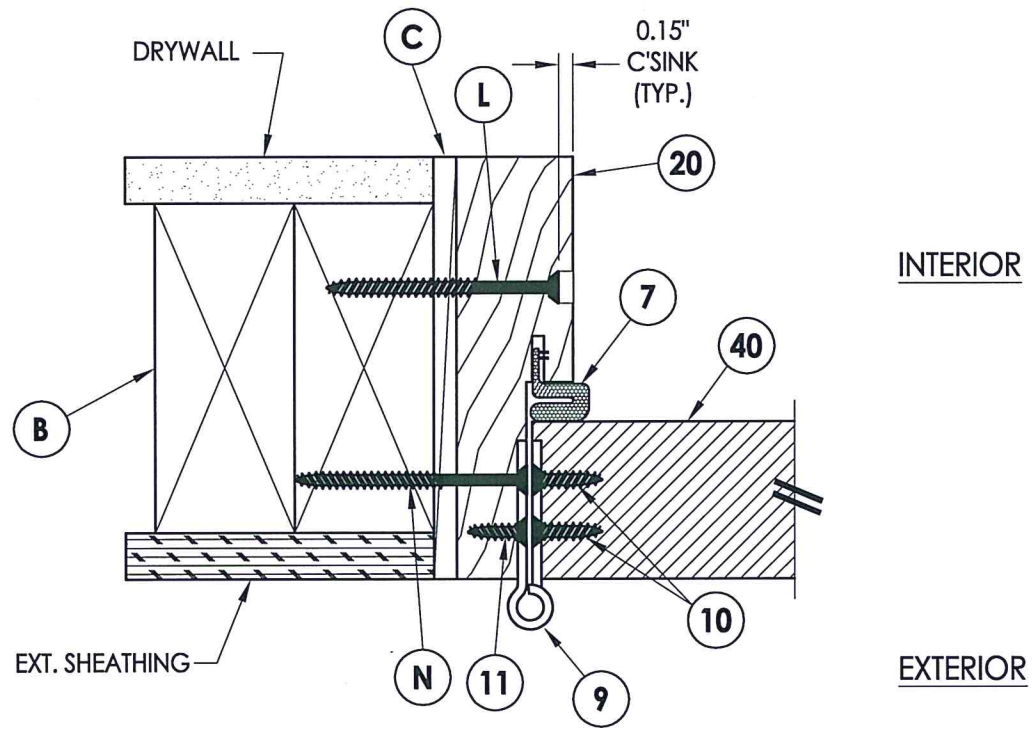
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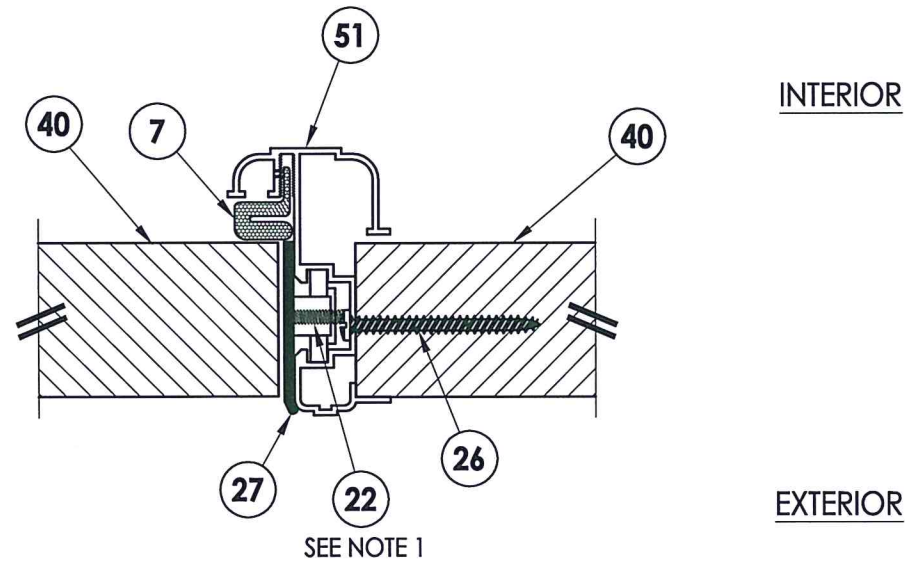
CHK. BY: LFS

DRAWING NO.:
TX-4083

SHEET 3 OF 8

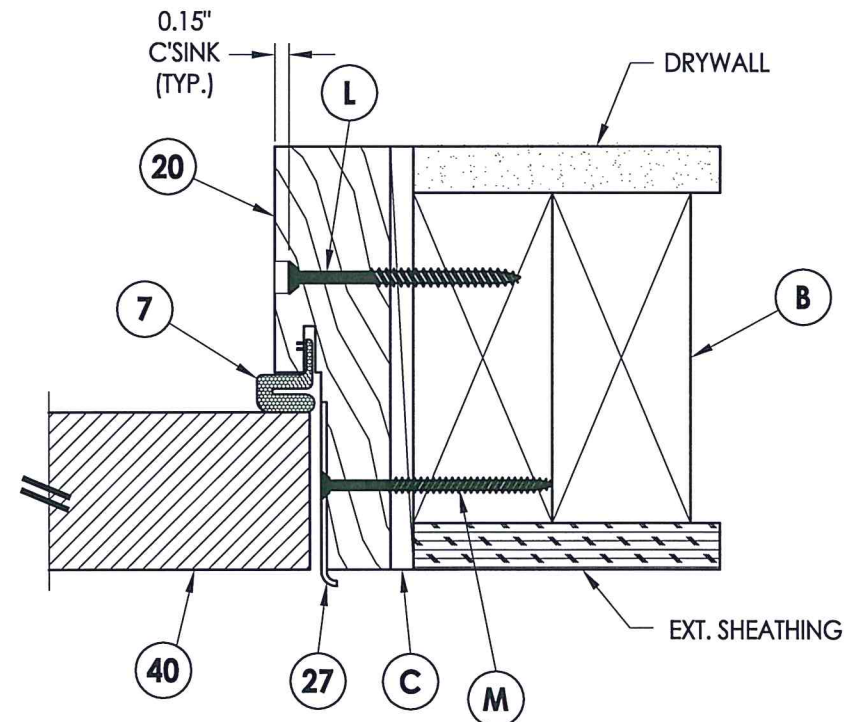


1
4 HORIZONTAL CROSS SECTION

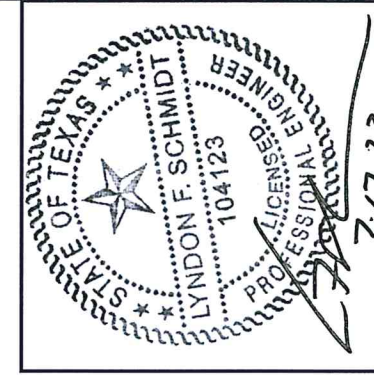


2
4 HORIZONTAL CROSS SECTION

NOTE:
1. Latch & deadbolt strike plate machine screws installed through strike plate into astragal plastic receiver.



3
4 HORIZONTAL CROSS SECTION



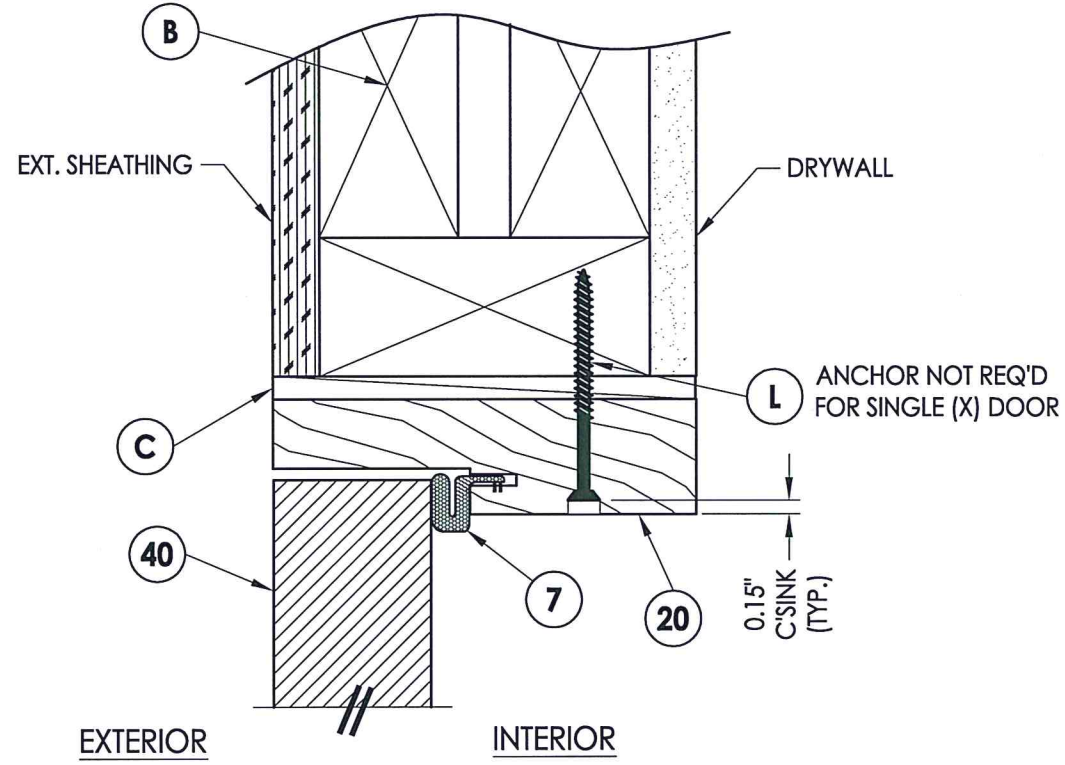
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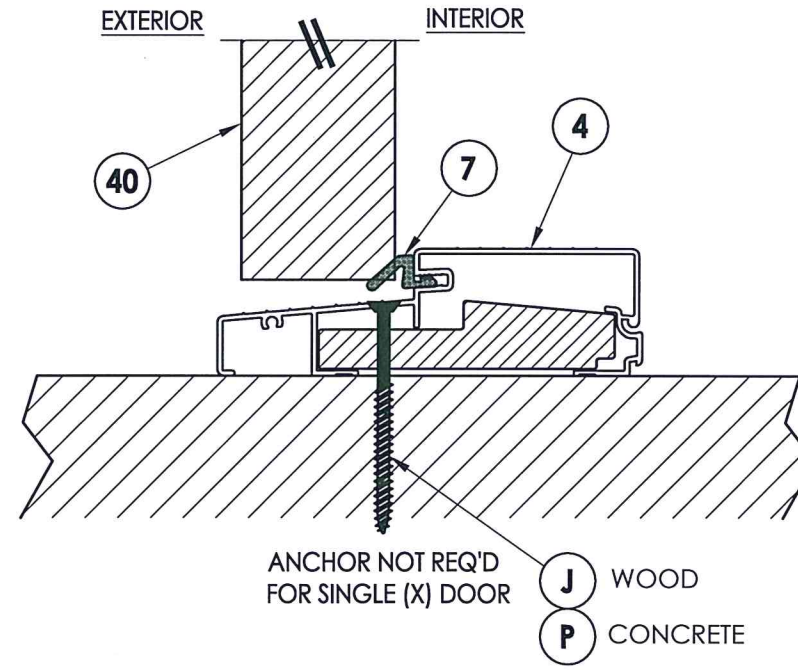
PRODUCT: STEVES AND SONS
STEEL DOOR
PART OR ASSEMBLY:
HORIZONTAL CROSS SECTIONS

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3	7/17/23	LFS
2	5/28/20	LFS
1	7/21/15	LFS

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SHEET 4 OF 8



1
5 VERTICAL CROSS SECTION



2
5 VERTICAL CROSS SECTION



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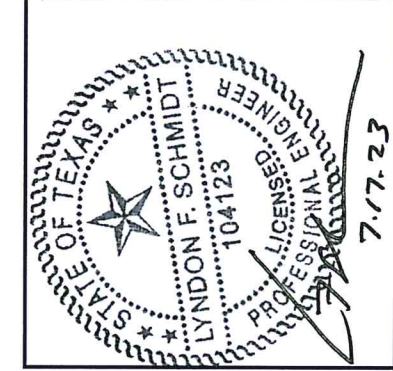
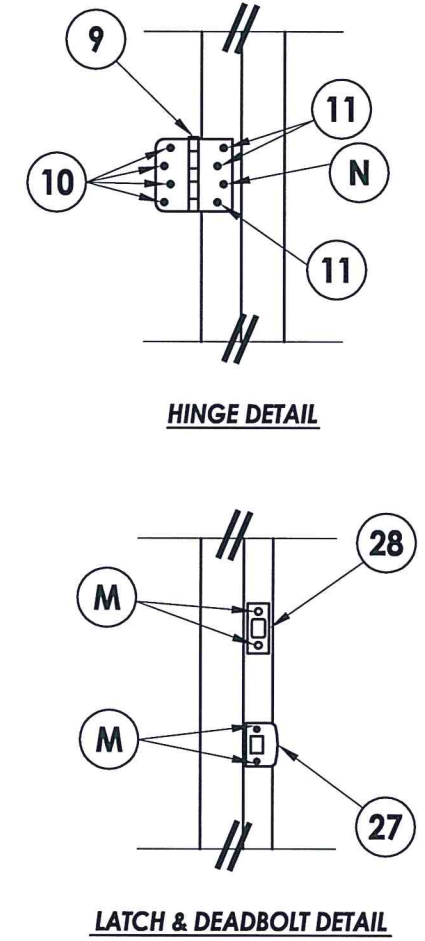
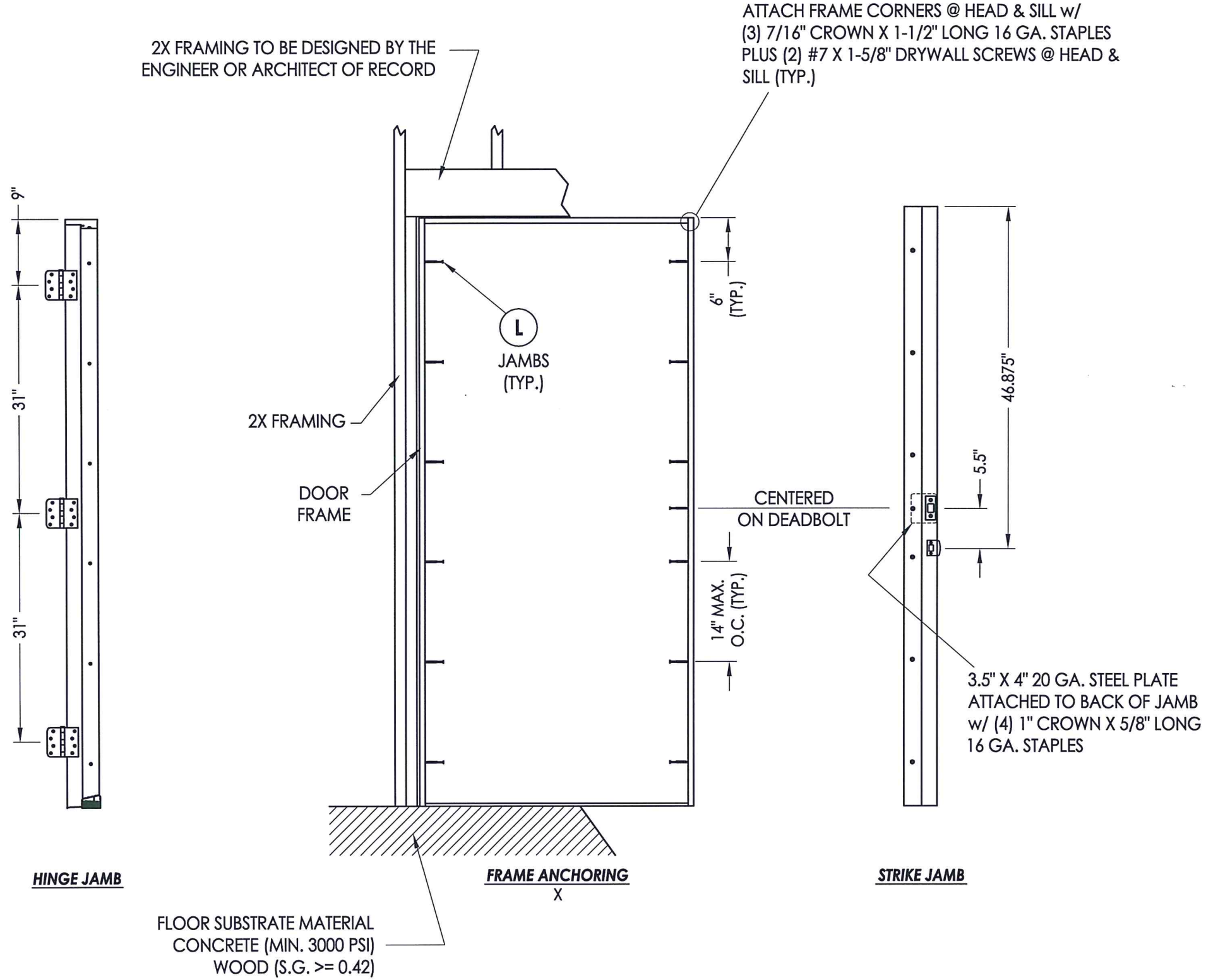
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PART OR ASSEMBLY: VERTICAL CROSS SECTIONS

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3	7/17/23	REVISE DP FOR NEW TESTING	LFS
2	5/28/20	UPDATE TO 2018 IBC/IRC CODE	LFS
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DWG. BY: JK
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SHEET 5 OF 8



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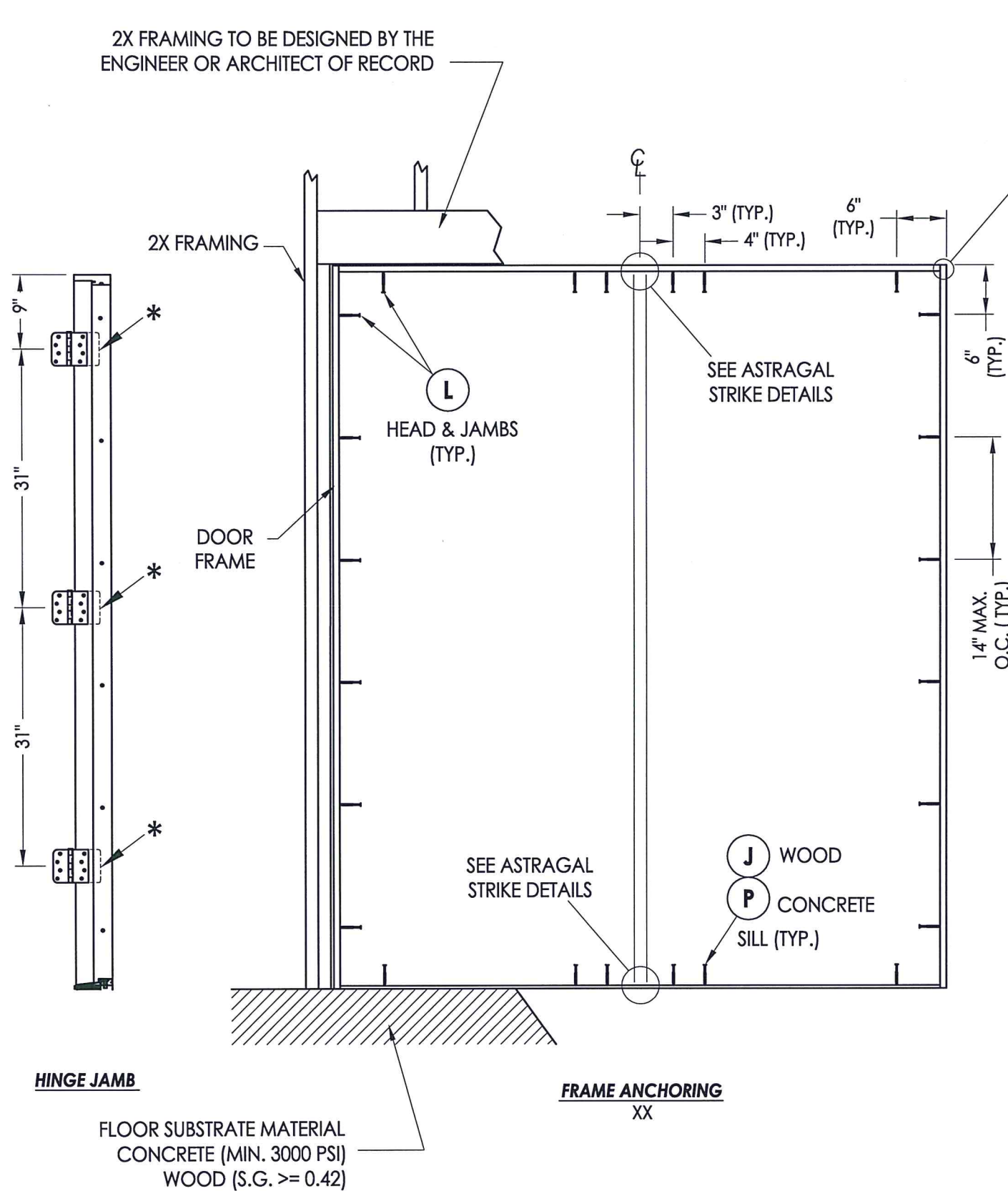
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Phone No.: 813.659.9197

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PRODUCT:	STEVES AND SONS STEEL DOOR
PART OR ASSEMBLY:	FRAME ANCHORING

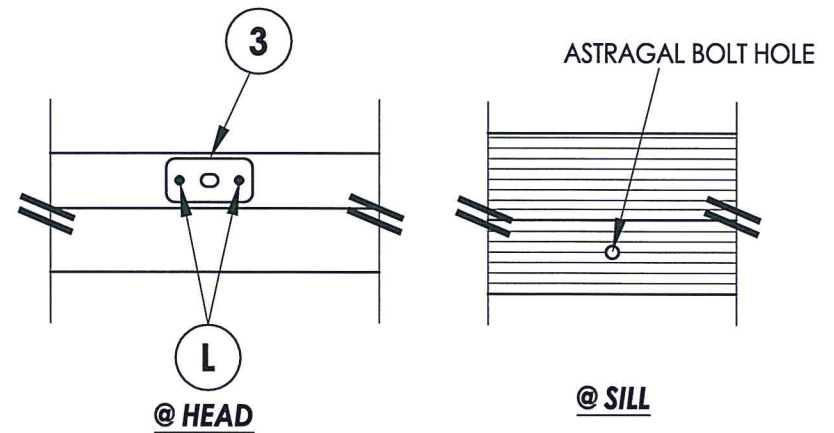
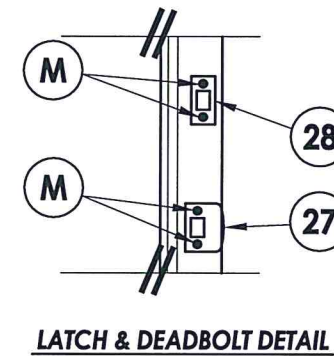
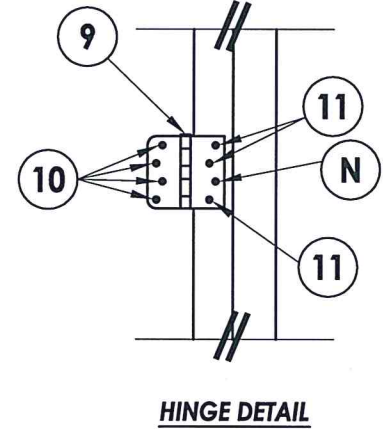
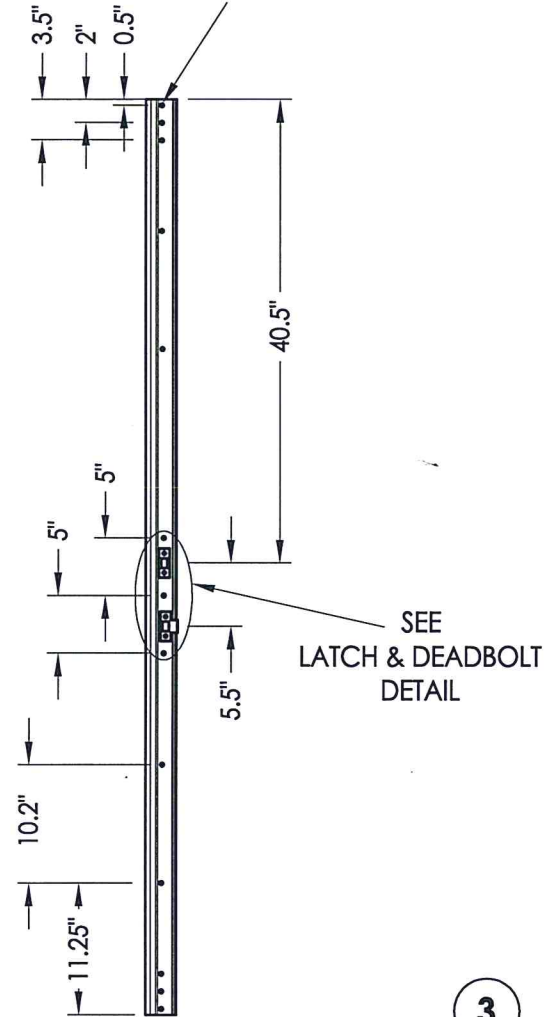
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2	5/28/20	UPDATE TO 2018 IBC/IRC CODE	LFS
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DATE:	05/17/10
SCALE:	N.T.S.
DWG. BY:	JK
CHK. BY:	LFS
DRAWING NO.:	TX-4083
SHEET	6 OF 8

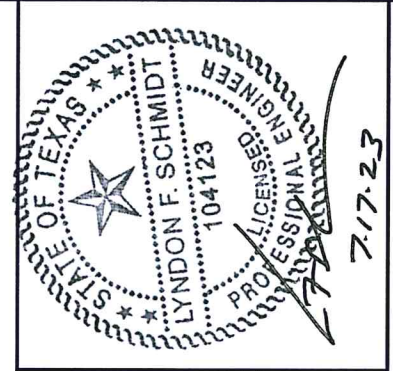


ATTACH FRAME CORNERS @ HEAD & SILL w/
(3) 7/16" CROWN X 1-1/2" LONG 16 GA. STAPLES
PLUS (2) #7 X 1-5/8" DRYWALL SCREWS @ HEAD &
SILL (TYP.)

ASTRAGAL SCREWS LOCATED AS SHOWN w/
(3) LOCATED ON EACH SIDE OF LOCK &
DEADBOLT STRIKE PLATES (13 SCREWS TOTAL)
#8 X 2" PH SMS (TYP.)



ASTRAGAL STRIKE PLATE DETAILS



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PRODUCT: STEVES AND SONS STEEL DOOR

PART OR ASSEMBLY: FRAME ANCHORING

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DWG. BY: JK

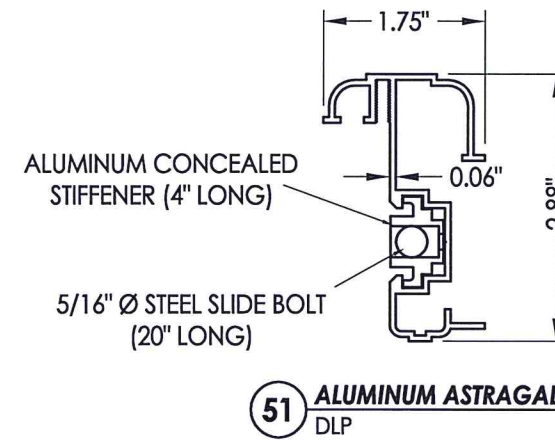
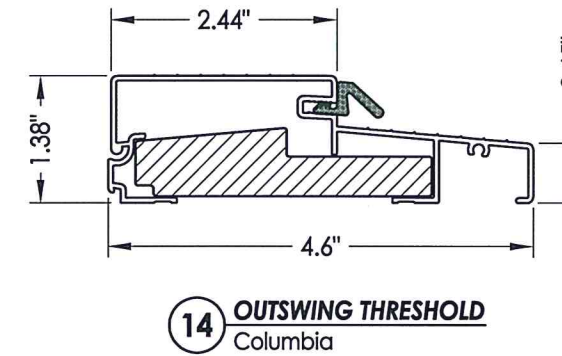
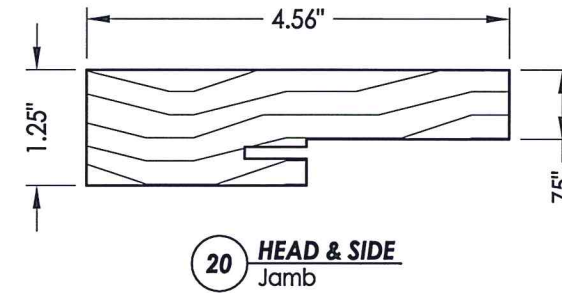
CHK. BY: LFS

DRAWING NO.: TX-4083

SHEET 7 of 8

BILL OF MATERIALS

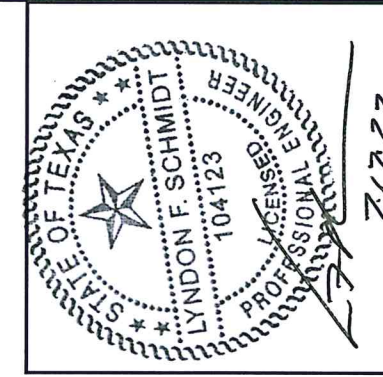
ITEM #	DESCRIPTION	MATERIAL
B	2X FRAMING (G >= 0.42)	WOOD
C	1/4" MAX. SHIM SPACE	-
J	#10 X 3" PFH WOOD SCREW	STEEL
L	#10 X 2-1/2" PFH WOOD SCREW (1.15" MIN. EMBEDMENT)	STEEL
M	#8 X 2-1/2" PFH WOOD SCREW	STEEL
N	#9 X 2-1/2" PFH WOOD SCREW	STEEL
P	1/4" PFH DeWALT OR ITW CONCRETE SCREW (1-3/4" MIN. EMB.)	STEEL
3	ASTRAGAL STRIKE PLATE	STEEL
4	OUTSWING THRESHOLD ALUMINUM W/ COMPOSITE SUBSTRATE	ALUM/COMP.
7	WEATHERSTRIP BY Q-LON	FOAM
9	4" HINGE	STEEL
10	#9 X 1" PFH WOOD SCREW	STEEL
11	#9 X 5/8" PFH WOOD SCREW	STEEL
20	JAMB FINGER - JOINT - PINE (SG >= 0.42)	WOOD
22	#8 X 5/8" PFH MACHINE SCREW	STEEL
26	#8 X 2" PH SMS	STEEL
27	LATCH STRIKE PLATE	STEEL
28	DEADBOLT PLATE	STEEL
40	DOOR PANEL - SEE DOOR PANEL DETAIL SHEET FOR CONSTRUCTION DETAILS	-
51	ASTRAGAL (DLP)	ALUM



CONCRETE ANCHOR NOTES:

- Concrete anchor locations at the corners may be adjusted to maintain the min. edge distance to mortar joints.
- Concrete anchor locations noted as "MAX. ON CENTER" must be adjusted to maintain the min. edge distance to mortar joints, additional concrete anchors may be required to ensure the "MAX. ON CENTER" dimension are not exceeded.
- Concrete anchor table:

ANCHOR TYPE	ANCHOR SIZE	MIN. EMBEDMENT	MIN. CLEARANCE TO MASONRY EDGE	MIN. CLEARANCE TO ADJACENT ANCHOR
ITW TAPCON®	3/16"	1-3/4"	3"	1-1/2"
	1/4"	1-3/4"	1-1/2"	4"
DeWALT ULTRACON+®	1/4"	1-3/4"	1"	4"



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PRODUCT: STEVES AND SONS
STEEL DOOR

PART OR ASSEMBLY:

COMPONENTS
AND B.O.M.

NO.	DATE	REVISIONS
3	7/17/23	REVISE DP FOR NEW TESTING LFS
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DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: TX-4083
SHEET 8 OF 8