

ALLEGION - SCHLAGE LOCK COMPANY, LLC.

STEELCRAFT/REPUBLIC TORNADO STEEL DOOR & FRAME ASSEMBLY

FLUSH INSWING/OUTSWING DOORS

GENERAL NOTES:

1. THESE PRODUCTS HAVE BEEN TESTED TO ICC-500-2020 STANDARDS AND PROTOCOLS AND COMPLY WITH TORNADO SHELTERS AND THE CURRENT INTERNATIONAL BUILDING CODE.
2. DOORS ARE LARGE MISSILE IMPACT RATED AND PRESSURE RATED AS SHOWN IN THE TABLE BELOW.

NOTES:

1. ALL DIMENSIONS SHOWN MAXIMUM (MAX.) AND TYPICAL (TYP.) FOR ALL DOOR/FRAME MODELS, UNLESS OTHER INDICATED.
2. ANCHOR REQUIREMENTS: SEE SHEETS 9-15 FOR APPROVED ANCHORS AND INSTALLATION.
3. HINGE REQUIREMENTS:  
DOOR OPENINGS 6' 8" HIGH THROUGH 7' 6" HIGH - MIN (3) HINGES  
DOOR OPENINGS OVER 7' 6" HIGH THROUGH 8' 0" HIGH - MIN (4) HINGES  
SEE SHEET 8 FOR FRAME PROFILE  
APPROVED CONTINUOUS HINGE MODELS: SEE SHEET 16 & 17
4. SEE SHEETS 2 & 3 FOR AVAILABLE STANDARD OPENING SIZES AND SPECIFICATIONS.
5. HARDWARE INSTALLATION AS PER MANUFACTURER'S INSTRUCTIONS.
6. HEAD SECTION CAN HAVE 4" FACE DIMENSIONS WHEN IT'S GROUTED WITH CONCRETE.
7. APPLY CAULK AS NEEDED
8. T ANCHORS AND EXISTING MASONRY ANCHORS WITHOUT BOLT MAY BE USED IN MIN. 2700PSI POURED CONCRETE TILT UP WALLS.
9. ELECTRIFIED AND FIRE RATED OPTIONS OF APPROVED HARDWARE ARE ACCEPTABLE. INSTALLATION AND APPLICATION IS UNDER SEPARATE APPROVAL AND IS REVIEWED BY THE CORRESPONDING AUTHORITY. FIRE RATING NOT PART OF THIS APPROVAL, CONSULT MANUFACTURER FOR APPROVED CONFIGURATIONS.
10. WATER INFILTRATION IS OUTSIDE THE SCOPE OF THIS APPROVAL. CONTACT THE MANUFACTURER FOR MORE INFORMATION.

DESIGN PRESSURE RATING	IMPACT RATING	SHELTER TYPE
VARIES SEE SHEET 2	LARGE MISSILE IMPACT 15LB 2X4 AT 100MPH	TORNADO

CONSTRUCTION NOTES:

1. DOOR CONSTRUCTION

1.1. NOMINAL DOOR THICKNESS - 1 3/4"

1.2. MINIMUM DOOR SKIN THICKNESS - 14 GA.

1.3. DOOR SIZES MAY VARY
2. FRAME CONSTRUCTION

2.1. JAMB DEPTH - MINIMUM 5 3/4" - MAXIMUM 10 3/4"

2.2. STOP HEIGHT - 5/8"

2.3. FRAMES AVAILABLE AS FLUSH

2.4. MINIMUM FRAME THICKNESS - 14GA.

2.5. FOR MATERIAL SPECIFICATIONS REFERENCE SHEET 8, TABLE 3

2.6. KNOCK DOWN (KD) STANDARD CORNER CONSTRUCTION
3. FRAME CORNER WELD: CONTINUOUS BACK WELD WITH FULL PENETRATION TO FACE SEAM. GRIND, SMOOTH, PRIME, & PAINT. WELD CLASSIFICATION - E70XX. SEE SHEET 8 FOR DETAIL.

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ALLEGION - SCHLAGE LOCK COMPANY, LLC.  
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TITLE: STEELCRAFT/REPUBLIC TORNADO STEEL DOOR & FRAME ASSEMBLY FLUSH INSWING/OUTSWING DOORS

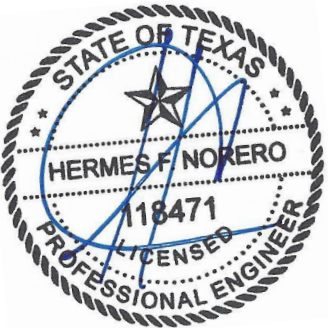
GENERAL NOTES & DESIGN PRESSURE TABLE

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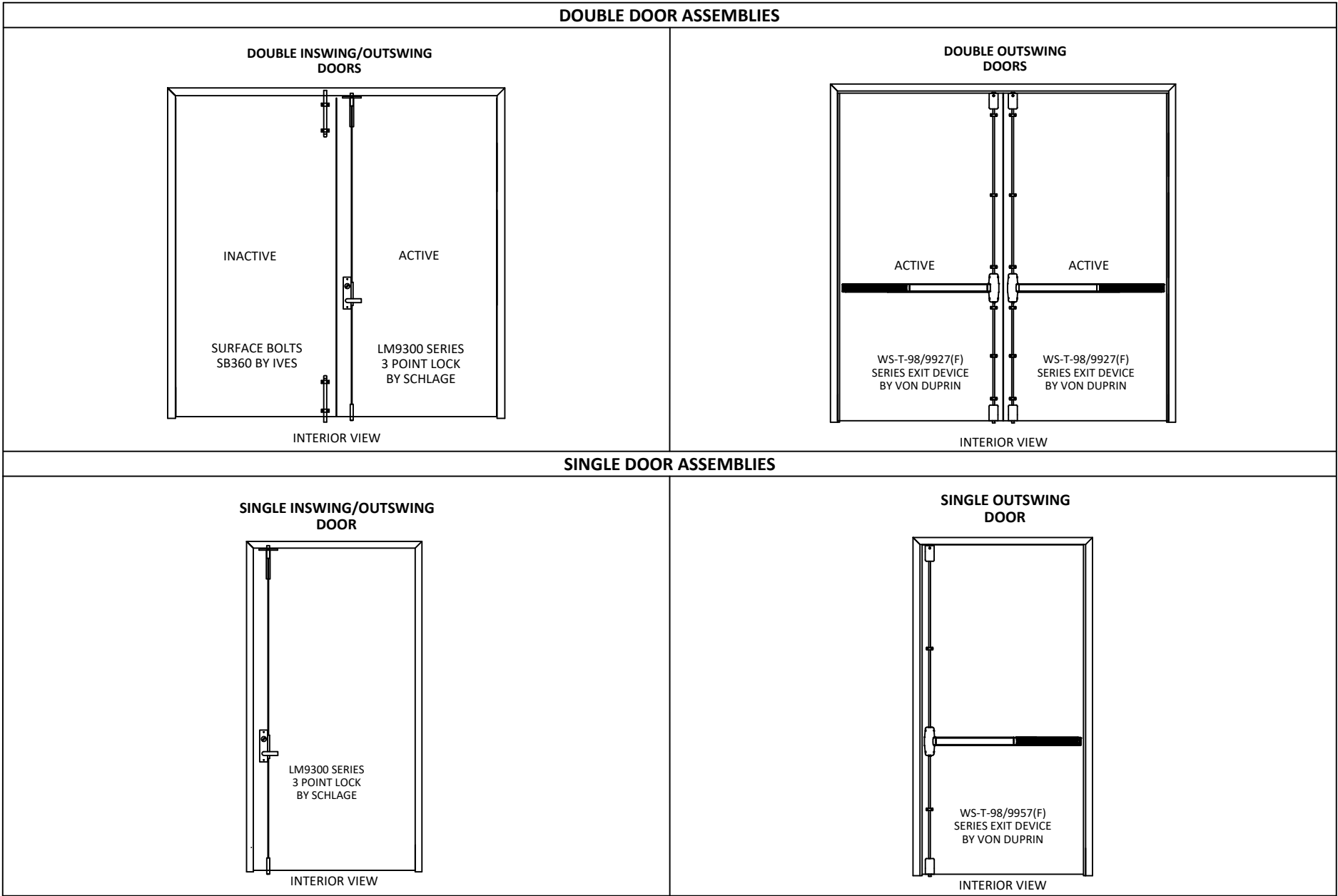
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SHEET:

# STEELCRAFT/REPUBLIC TORNADO STEEL DOOR & FRAME ASSEMBLY

PRODUCT MEETS REQUIREMENTS OF THE CURRENT INTERNATIONAL BUILDING CODE AND ICC 500-2020 IMPACT PROTECTIVE SYSTEMS CERTIFIED FOR TORNADO SHELTERS.

## VON DUPRIN & SCHLAGE DOOR ASSEMBLY CONFIGURATIONS



DOOR ASSEMBLY		APPLICATION	DESIGN PRESSURE	MISSILE CRITERIA	MIN. DOOR OPENING SIZE	MAX. DOOR OPENING SIZE	SWING ORIENTATION	ACTIVE LEAF HARDWARE	BRAND	INACTIVE LEAF HARDWARE	BRAND	COMMENTS
SINGLE	1ST	TORNADO	± 252 psf	15LB 2X4 AT 100 MPH	3'-0" x 6'-8"	4'-0" x 8'-0"	OUTSWING	LM9300	SCHLAGE	N/A	N/A	
	2ST	TORNADO	± 252 psf	15LB 2X4 AT 100 MPH	3'-0" x 6'-8"	4'-0" x 8'-0"	OUTSWING	WS-T-98/9957(F)	VON DUPRIN	N/A	N/A	499F STRIKE REQUIRED
	3ST	TORNADO	± 252 psf	15LB 2X4 AT 100 MPH	3'-0" x 6'-8"	4'-0" x 8'-0"	INSWING	LM9300	SCHLAGE	N/A	N/A	
PAIR	1DDT	TORNADO	± 252 psf	15LB 2X4 AT 100 MPH	6'-0" x 6'-8"	8'-0" x 8'-0"	OUTSWING	LM9300	SCHLAGE	SB360	IVES	Z-ASTRAGAL REQUIRED
	1DDT-1	TORNADO	± 252 psf	15LB 2X4 AT 100 MPH	6'-0" x 6'-8"	8'-0" x 8'-0"	INSWING	LM9300	SCHLAGE	SB360	IVES	Z-ASTRAGAL REQUIRED
	2DDT	TORNADO	± 243 psf	15LB 2X4 AT 100 MPH	6'-0" x 6'-8"	8'-0" x 8'-0"	OUTSWING	WS-T-98/9927(F)	VON DUPRIN	WS-T-98/9927	VON DUPRIN	



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FLUSH INSWING/OUTSWING DOORS  
VON DUPRIN & SCHLAGE DOOR ASSEMBLY CONFIGURATIONS

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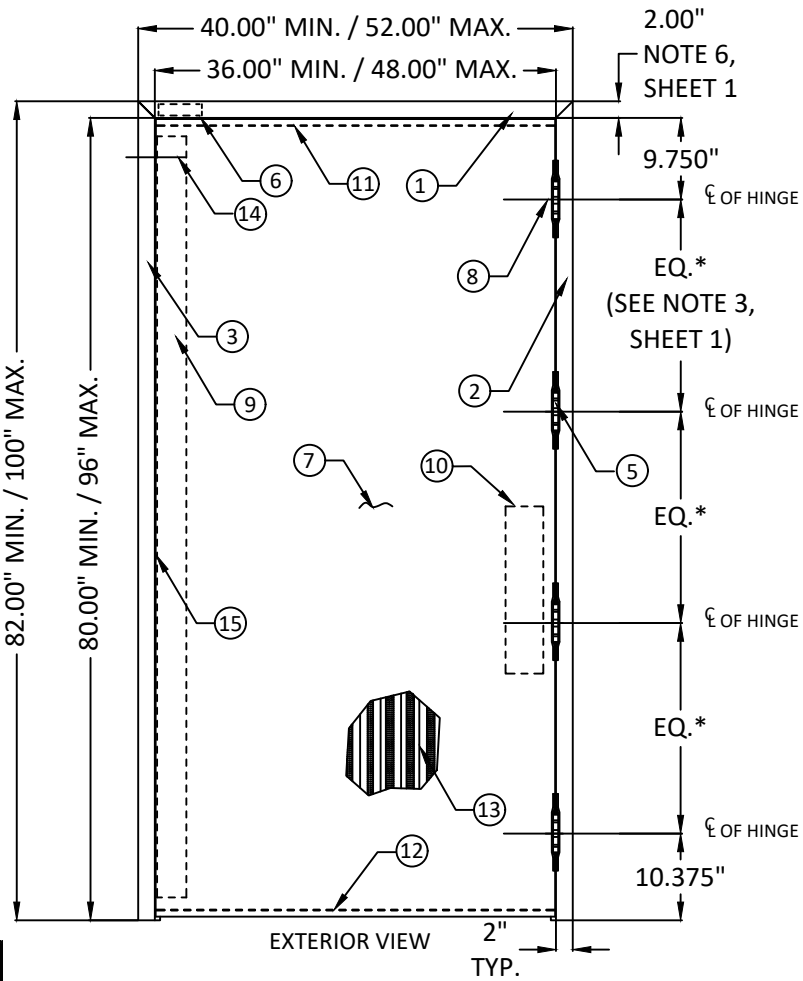
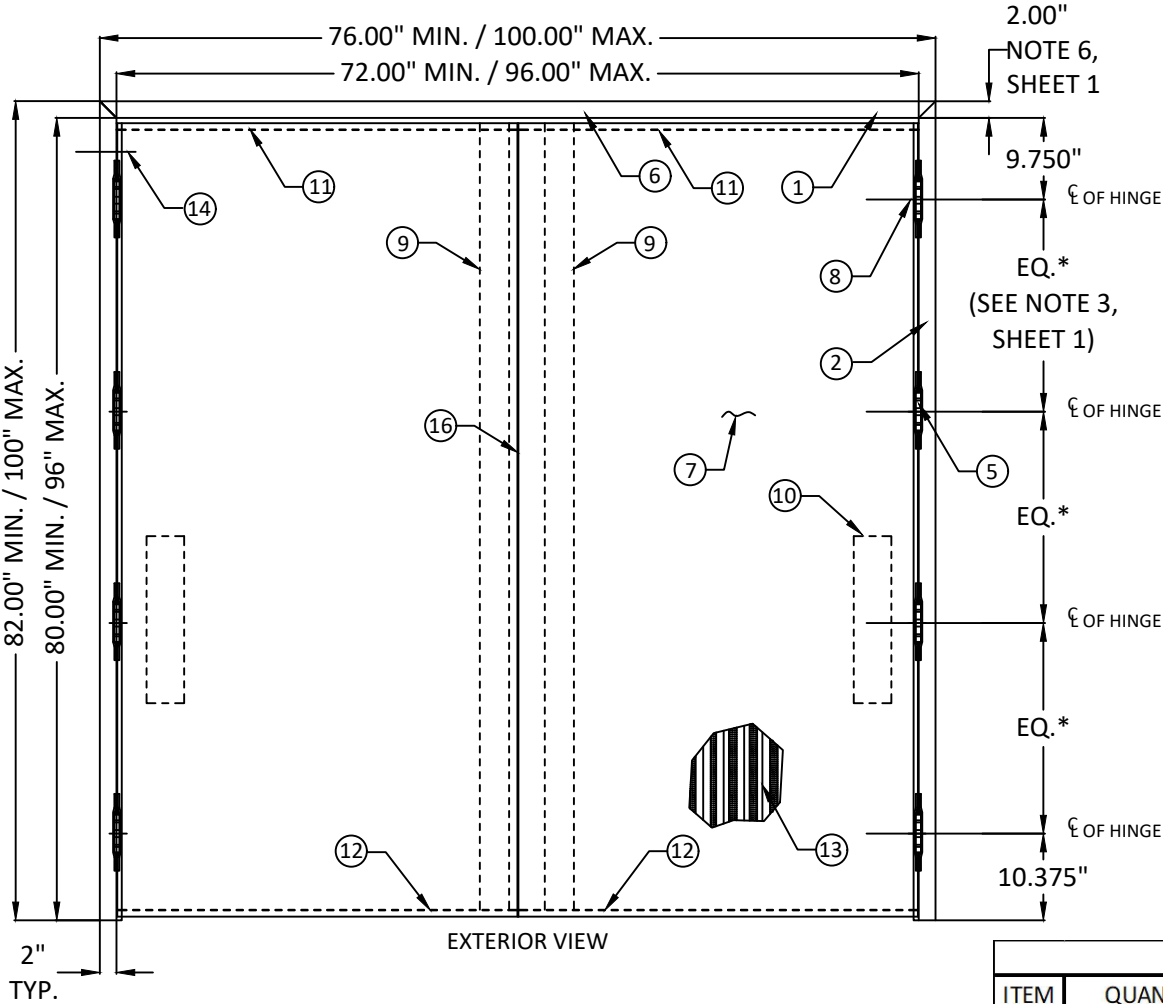
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## OPENING DIMENSIONS & BOM



BILL OF MATERIALS		
ITEM	QUANTITY	DESCRIPTION
1	1	HEAD SECTION
2	VARIES	HINGE JAMB
3	VARIES	STRIKE JAMB
5	VARIES	HINGE
6	1	HEAD REINFORCEMENT
7	VARIES	DOOR SLAB
8	VARIES	DOOR HINGE REINFORCEMENT
9	VARIES	DOOR LOCKSIDE REINFORCEMENT CHANNEL
10	VARIES	DOOR HINGE SIDE REINFORCEMENT BOX
11	VARIES	TOP CHANNEL ASSEMBLY
12	VARIES	BOTTOM CHANNEL
13	VARIES	CORE CONSTRUCTION: STEEL STIFFENED
14	SEE SHTS. 9 -15	FRAME ANCHOR
15	VARIES	12 GA ANSI/ASA STRIKE REINFORCEMENT FRAME
16	1	Z-ASTRAGAL
17	VARIES	DOUBLE DOOR LOCKING HARDWARE - INACTIVE LEAF



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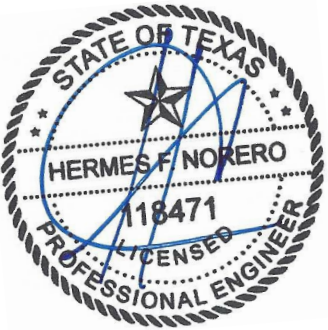
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OPENING DIMENSIONS & BOM

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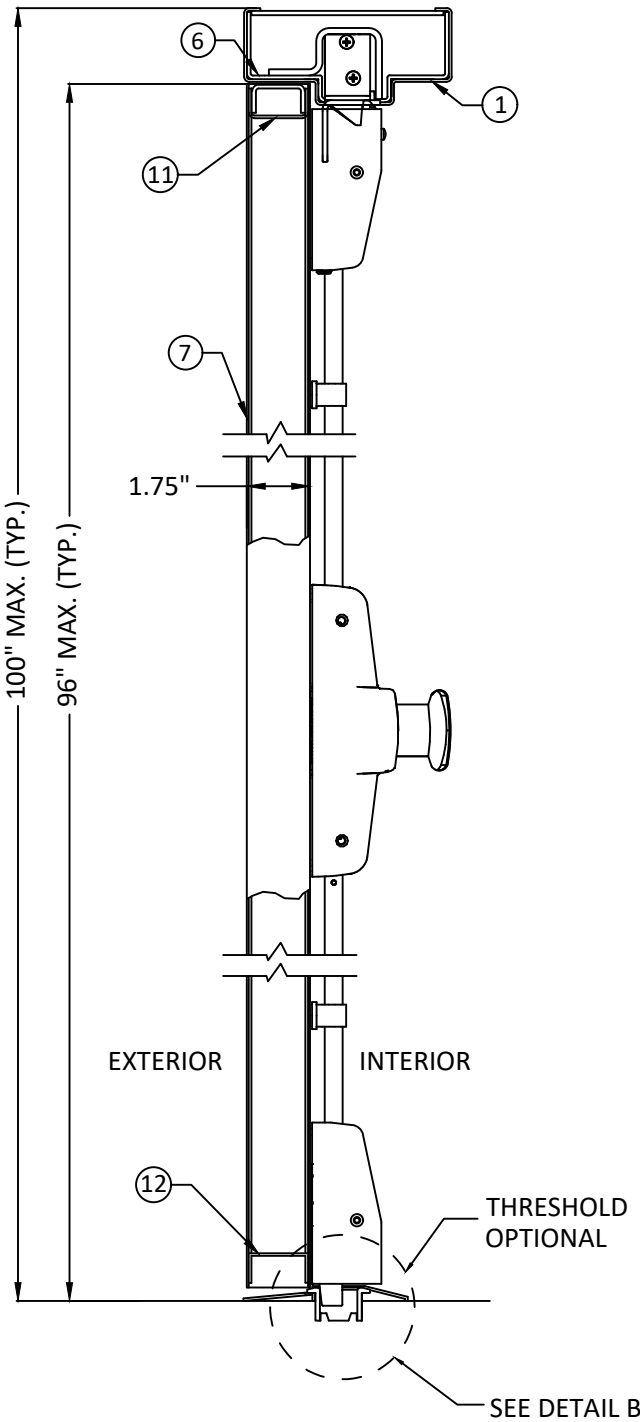
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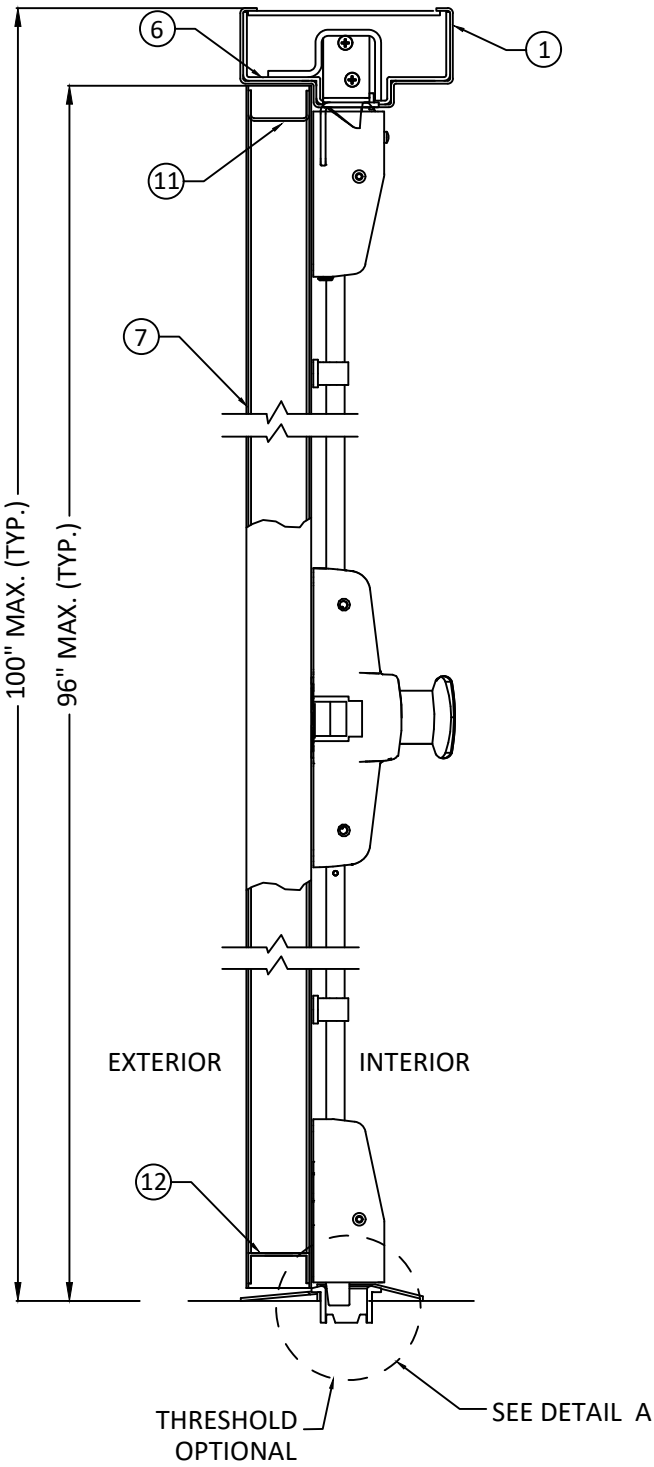
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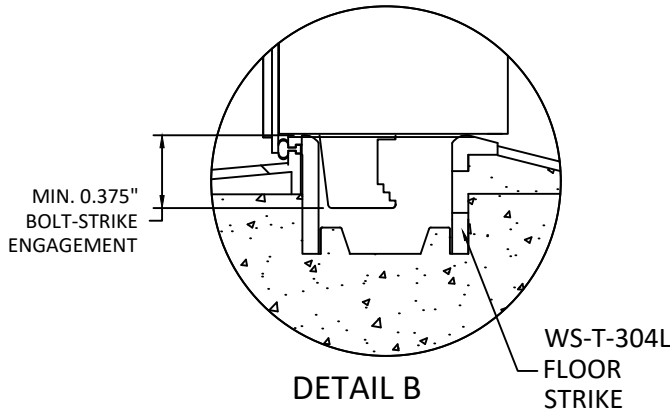
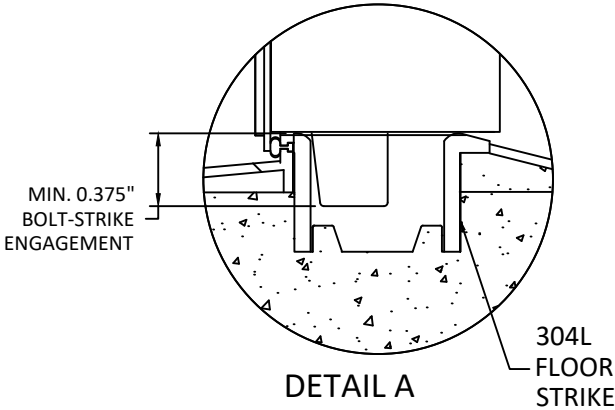
## DOOR & FRAME VERTICAL SECTION VIEWS



DOUBLE OPENING  
VON DUPRIN WS-T-98/9927(F)  
OUTSWING DOOR WITH SURFACE  
VERTICAL ROD DEVICE



SINGLE OPENING  
VON DUPRIN WS-T-98/9957(F)  
OUTSWING DOOR  
WITH THREE POINT SURFACE  
VERTICAL ROD DEVICE



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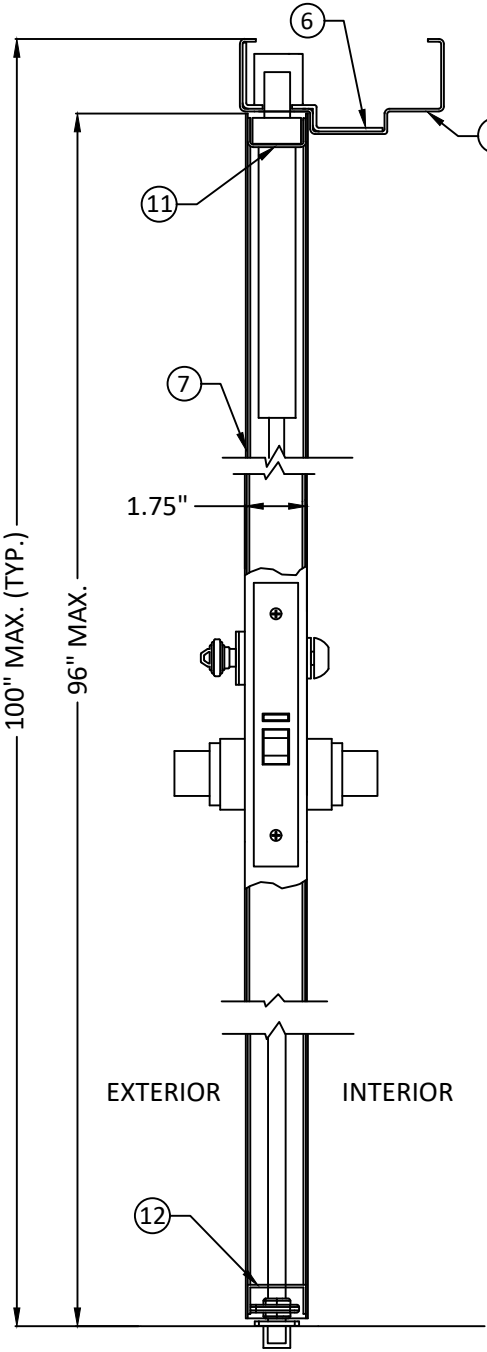
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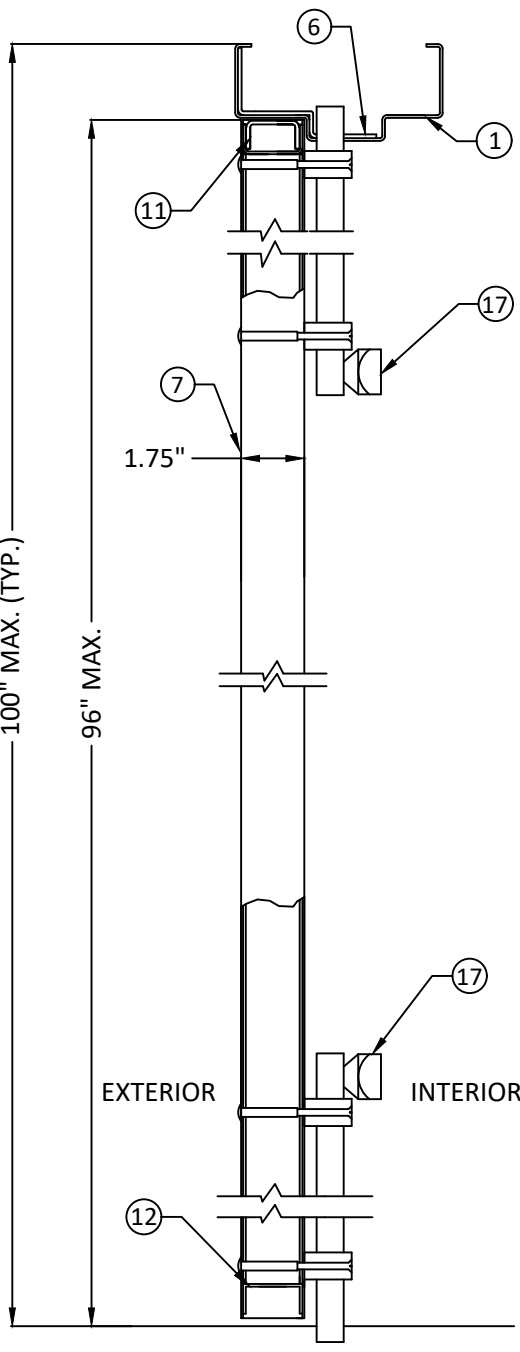
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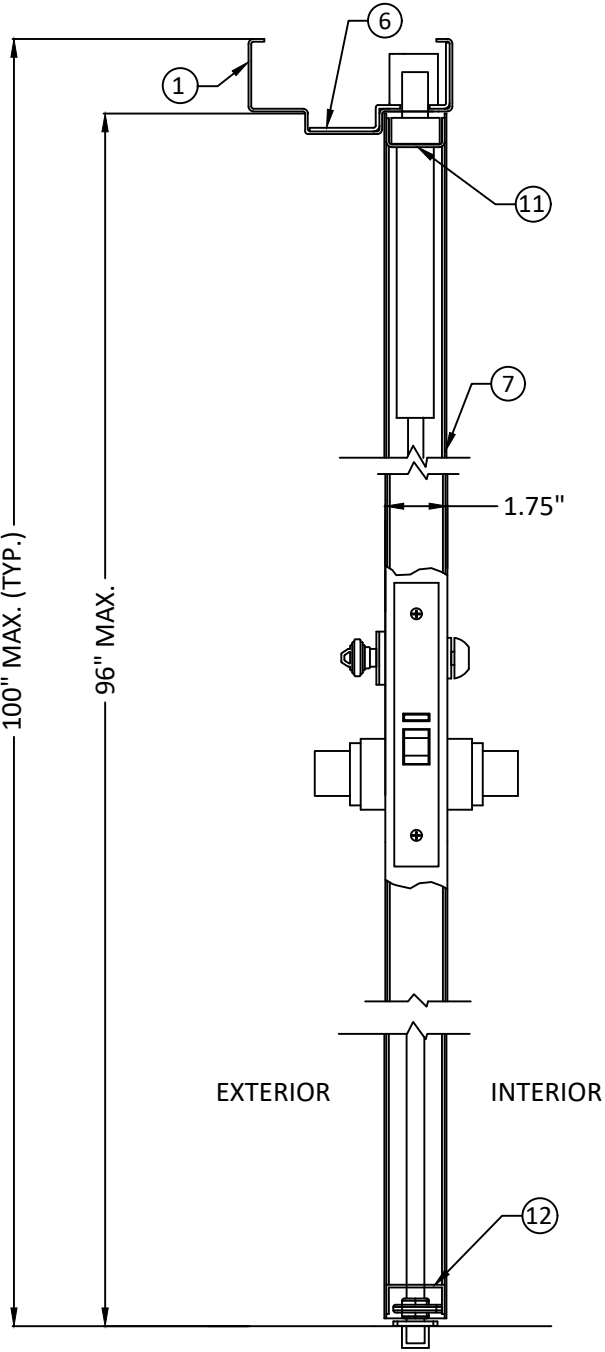
## DOOR & FRAME VERTICAL SECTION VIEWS



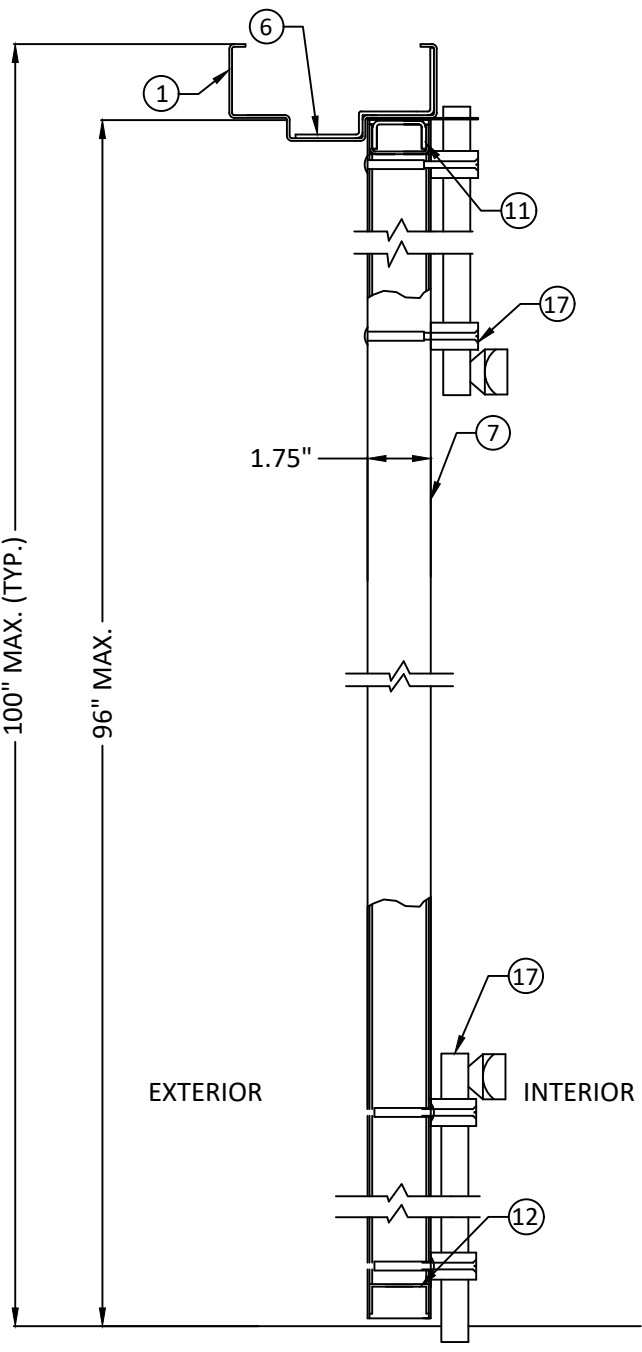
SINGLE OR DOUBLE OPENING  
SCHLAGE LM9300  
INSWING/OUTSWING DOOR WITH  
THREE POINT MORTISE LOCK



DOUBLE OPENING  
INACTIVE LEAF  
OUTSWING DOOR WITH ASTRAGAL  
AND IVES SB360 SURFACE BOLTS IN  
TOP AND BOTTOM



SINGLE OR DOUBLE OPENING  
SCHLAGE LM9300  
INSWING DOOR WITH  
THREE POINT MORTISE LOCK



DOUBLE OPENING  
INACTIVE LEAF  
INSWING DOOR WITH ASTRAGAL  
AND IVES SB360 SURFACE BOLTS IN  
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FLUSH INSWING/OUTSWING DOORS  
DOOR & FRAME  
VERTICAL SECTION VIEWS

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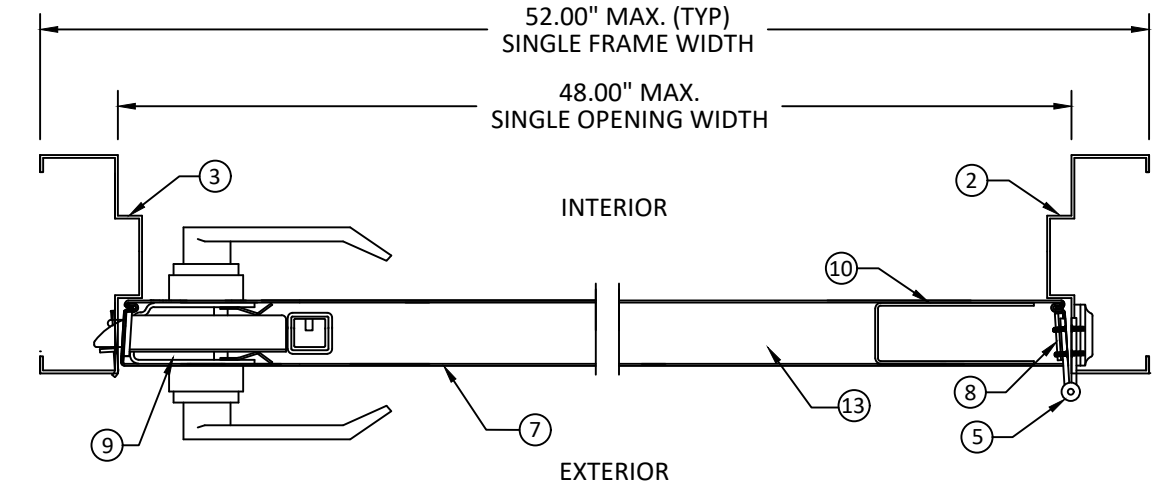
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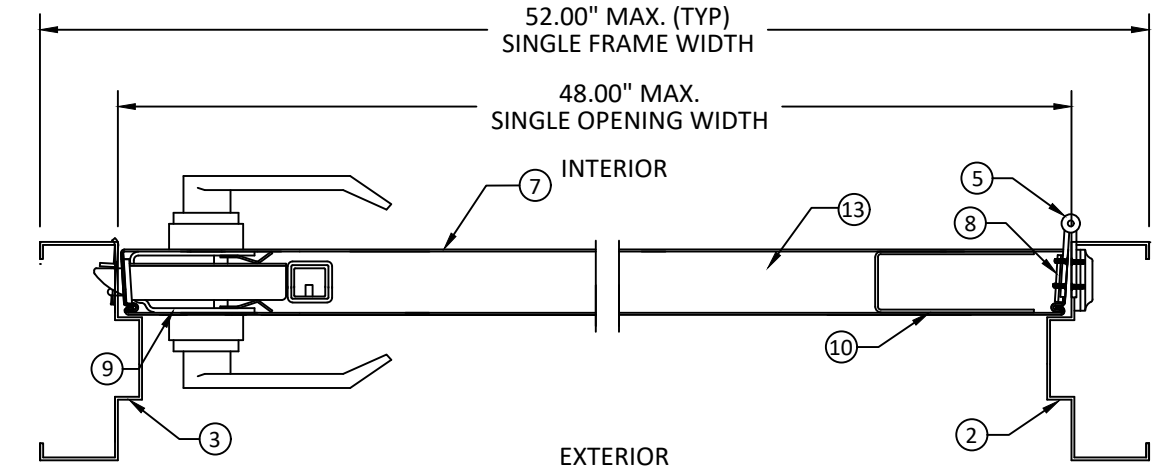
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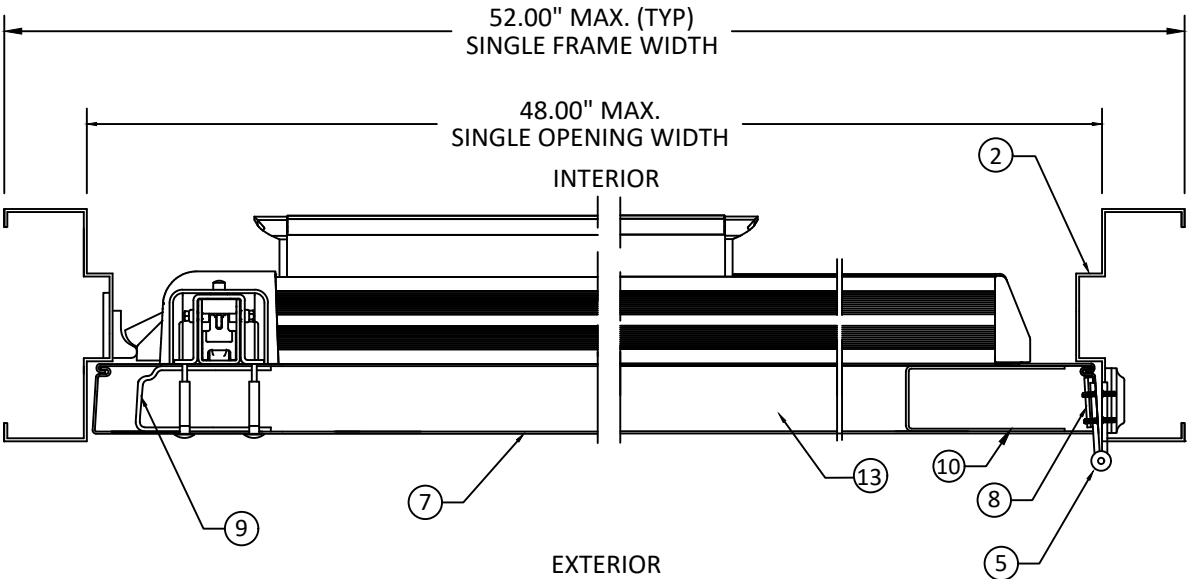
## SINGLE DOOR & FRAME HORIZONTAL SECTION VIEWS



SINGLE OPENING  
OUTSWING DOORS  
WITH SCHLAGE LM9300



SINGLE OPENING  
INSWING DOORS  
WITH SCHLAGE LM9300



SINGLE OPENING  
OUTSWING DOOR  
WITH VON DURPIN WS-T-98/9957 (F)  
SURFACE VERTICAL ROD THREE  
POINT EXIT DEVICE



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SINGLE DOOR & FRAME  
HORIZONTAL SECTION VIEWS

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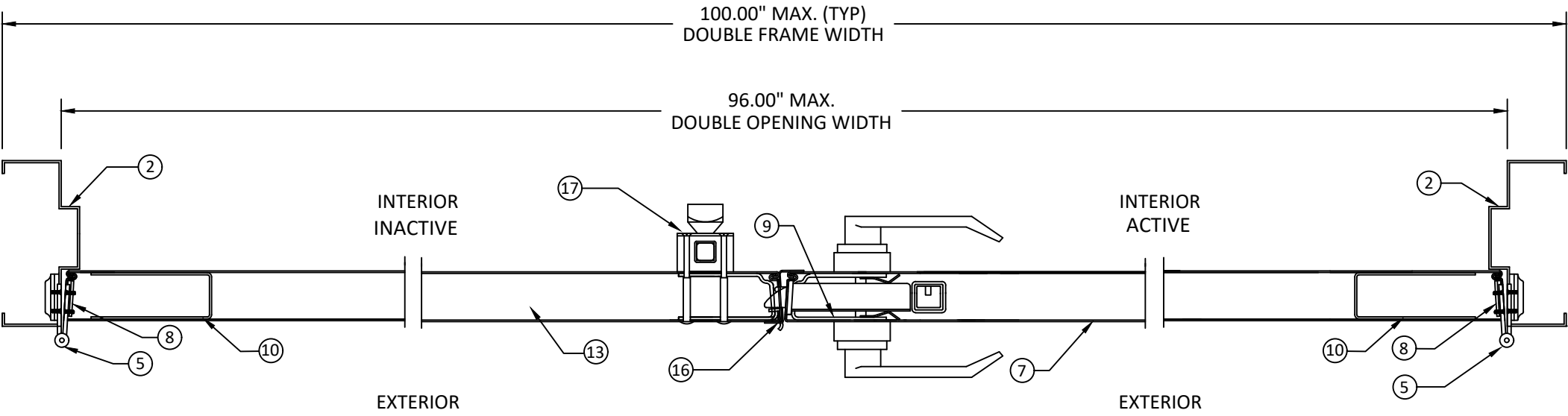
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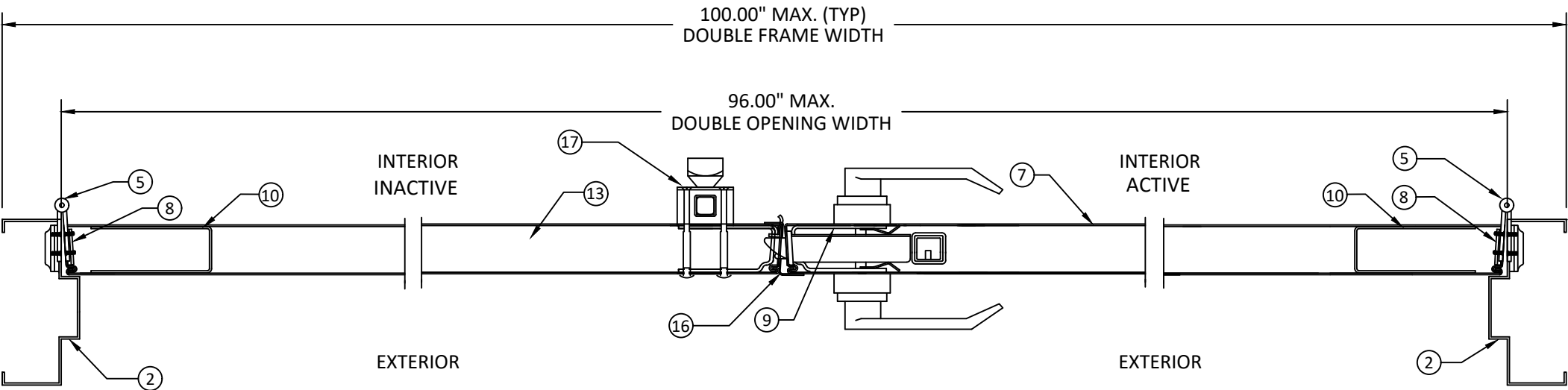
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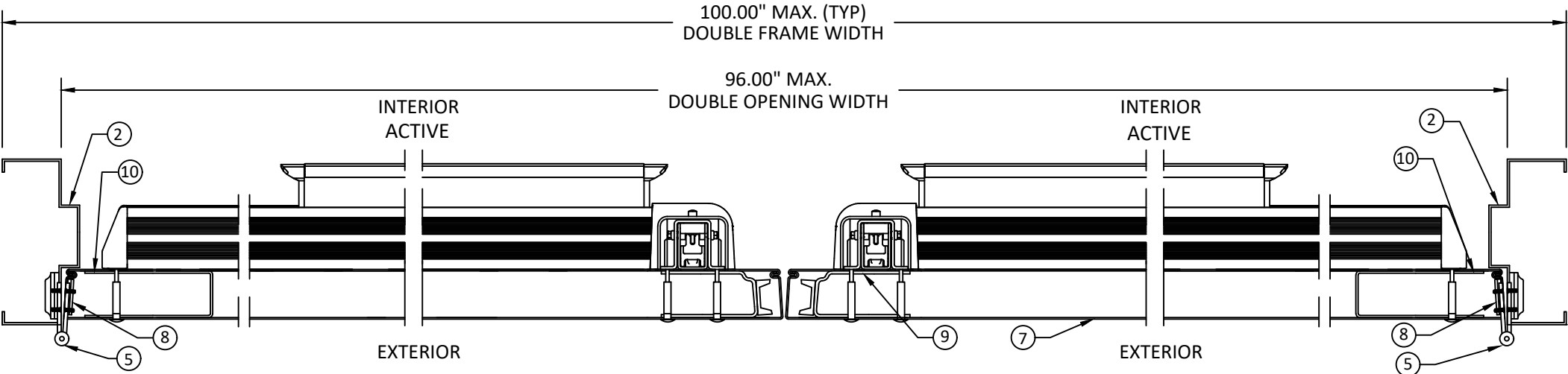
## DOUBLE DOOR & FRAME HORIZONTAL SECTION VIEWS



DOUBLE OPENING  
OUTSWING DOORS  
ACTIVE LEAF: SCHLAGE LM9300  
INACTIVE LEAF: IVES 360 SURFACE BOLTS  
& Z-ASTRAGAL



DOUBLE OPENING  
INSWING DOORS  
ACTIVE LEAF: SCHLAGE LM9300  
INACTIVE LEAF: IVES 360 SURFACE BOLTS  
& Z-ASTRAGAL



DOUBLE OPENING  
OUTSWING DOORS  
VON DUPRIN WS-T-98/9927 (F)  
SURFACE VERTICAL ROD EXIT DEVICES



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## FRAME DETAILS, DOOR PANELS, CORE DETAILS & CORNER CONSTRUCTION

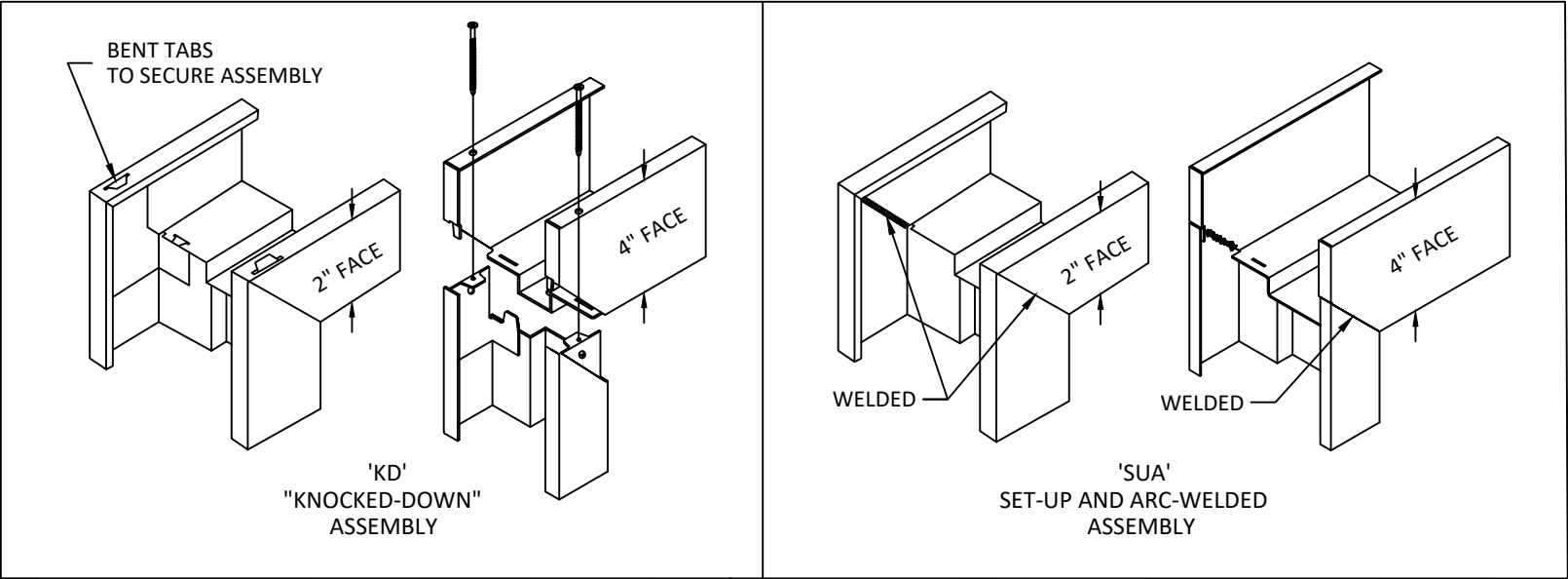


TABLE 1: AVAILABLE DOOR CONFIGURATIONS

DOOR ASSEMBLY	DOOR SERIES	CORE MATERIAL	MINIMUM OPENING SIZE		MAXIMUM OPENING SIZE		SKIN MATERIAL	
			WIDTH	HEIGHT	WIDTH	HEIGHT	DESCR.	GA./MIN. THK
SINGLE	STEELCRAFT PW REPUBLIC DF	POLYSTYRENE & STEEL STIFFENED	3'0"	6'8"	8'0"	8'0"	CRS GALV	14/.067"
PAIRS	STEELCRAFT PW REPUBLIC DF	POLYSTYRENE & STEEL STIFFENED	6'0"	6'8"	8'0"	8'0"	CRS GALV	14/.067"

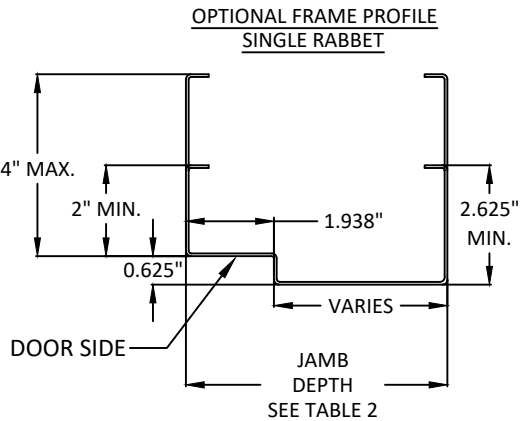
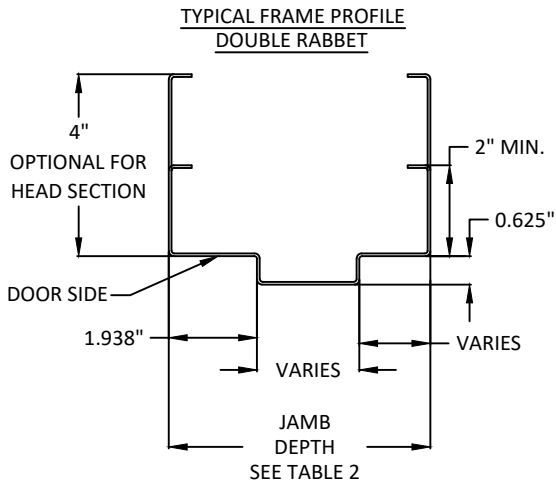


TABLE 2: AVAILABLE FRAME CONFIGURATIONS

DOOR ASSEMBLY	FRAME SERIES	JAMB DEPTH	MIN. OPENING SIZE		MAX. OPENING SIZE		MATERIAL	
			WIDTH	HEIGHT	WIDTH	HEIGHT	DESCR.	GA./MIN. THK
SINGLE	STEELCRAFT FP REPUBLIC DF	5.75" MIN. 10.75" MAX.	3'0"	6'8"	8'0"	8'0"	CRS/HRS GALV	14/.067"
PAIRS	STEELCRAFT FP REPUBLIC DF	5.75" MIN. 10.75" MAX.	6'0"	6'8"	8'0"	8'0"	CRS/HRS GALV	14/.067"

TABLE 3: STEEL MECHANICAL PROPERTIES

MATERIAL	ASTM REF.	YIELD KSI	TENSILE KSI
CRS	A1008	MIN. 30.1	MIN. 44.7
HRS	A1011		
GALV: A60	A924		



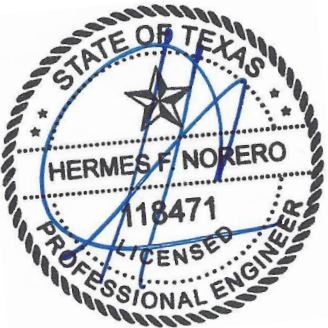
ALLEGION - SCHLAGE LOCK COMPANY, LLC.  
11819 N. PENNSYLVANIA STREET  
CARMEL, IN 46032  
PH: (317) 715-4073

TITLE: STEELCRAFT/REPUBLIC  
TORNADO  
STEEL DOOR & FRAME ASSEMBLY  
FLUSH INSWING/OUTSWING DOORS  
FRAME DETAILS, DOOR PANEL, CORE  
DETAILS, & CORNER CONSTRUCTION

PREPARED BY:  
BUILDING DROPS, INC.  
1900 NE MIAMI COURT, STE. 2-15  
MIAMI, FL 33132  
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TO DEVIATE FROM THE REQUIREMENTS DETAILED HEREIN, A  
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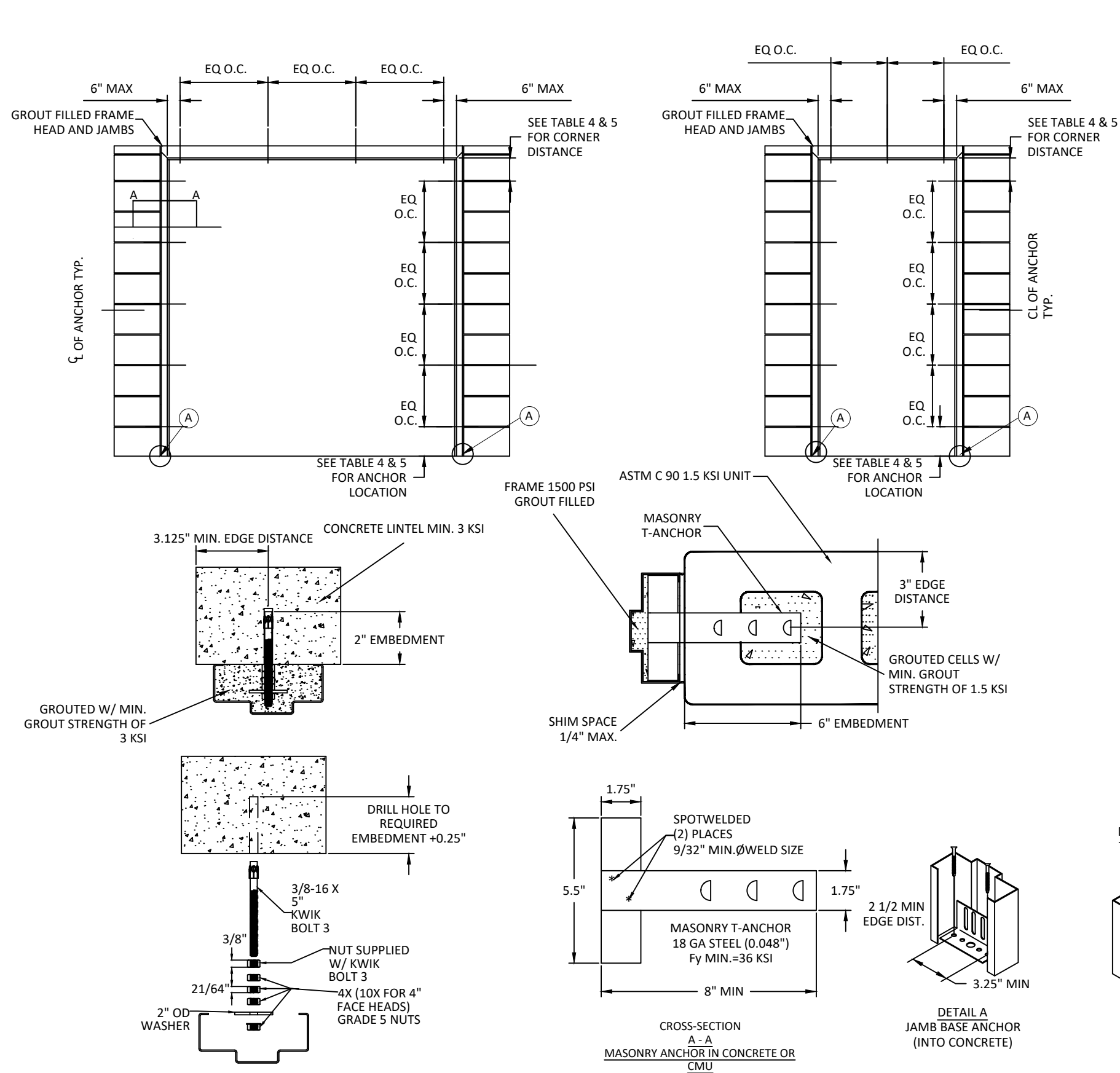
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CHK. BY:	HFN
SCALE:	NTS
DWG. #:	PWF002
SHEET:	8



STEELCRAFT/REPUBLIC TORNADO STEEL DOOR & FRAME ASSEMBLY

PRODUCT MEETS REQUIREMENTS OF THE CURRENT INTERNATIONAL BUILDING CODE AND ICC 500-2020 IMPACT PROTECTIVE SYSTEMS CERTIFIED FOR TORNADO SHELTERS.

ANCHOR DETAILS: MASONRY ANCHOR INTO GROUT FILLED FRAME & BLOCK WALL



**A** MASONRY ANCHOR INTO GROUT FILLED FRAME AND BLOCK WALL, CONCRETE OR CONCRETE LINTEL

TABLE 4: MASONRY T ANCHOR LAYOUT					
SUBSTRATE	FRAME SIZES		ANCHOR QUANTITY		
ASTM C 90 1.5 KSI UNIT STRENGTH CMU BLOCK WALL	HEIGHT	SINGLE	82"	JAMB	4 ANCHORS MIN
			> 82"		5 ANCHORS MIN
	PAIR		82"		4 ANCHORS MIN
			> 82"		5 ANCHORS MIN

\*NOTE:  
ALTERNATE ANCHORAGE MAY BE USED AT HEAD AND BASE OF JAMB. OPTIONS SHOWN ON SHEETS 9-15 FOR DIFFERENT ANCHOR METHODS MAY BE INTERMIXED TO ACCOMMODATE CONDITION SPECIFIC TO HEAD, BASE OF JAMB AND JAMBS.

MASONRY T TO BE PLACED BETWEEN TOP 2 BLOCKS, BOTTOM 2 BLOCKS, AND EVERY OTHER BLOCK AS EVENLY AS POSSIBLE FOR NOMINAL 8" X 8" X 16" CMU BLOCKS.

MASONRY T ANCHORS MAY ALTERNATIVELY BE USED IN POURED CONCRETE WALLS, USING THE QUANTITIES SPECIFIED ABOVE.

TABLE 5: ANCHOR LAYOUT IN CONCRETE LINTEL			
SUBSTRATE	DOOR QUANTITIES	ANCHOR QUANTITY	
3000 PSI CONCRETE LINTEL	SINGLE	HEAD/SILL	3 ANCHORS MIN
	PAIR		4 ANCHORS MIN

\*NOTE:  
ANCHORS SHALL BE SPACED AT 4.5" TYP. (6" MAX) FROM TOP, 2.5" TYP. (8" MAX) FROM BOTTOM, 6" TYP. (8" MAX) FROM RABBET IN HEAD AND EQUALLY SPACED THEREAFTER

PLACEMENT MAY BE ADJUSTED ± 3" AS REQUIRED TO AVOID INTERFERENCE WITH HARDWARE OR REINFORCEMENT.

- NOTES:
- STRUCTURAL MEMBERS MUST BE DESIGNED TO CARRY AT LEAST 1050 LB/FT. LOAD FOR ASSEMBLIES RATED AT ±243 OR ±252 PSF & AT LEAST 846 LB/FT LOAD FOR ASSEMBLIES RATED AT ±194 OR ±203 PSF, WHICH SHOULD BE VERIFIED BY THE APPROPRIATE OFFICIAL.
  - ANCHOR LAYOUT SHOWN REPRESENTS MAX OPENING SIZE, REFER TO EACH SUBSTRATES RESPECTIVE TABLE FOR ANCHOR SPACING FOR MIN. OPENING SIZE
  - BOTH JAMBS MUST HAVE EQUAL NUMBER OF WELDS OR ANCHORS.
  - 4" FACE HEADS WILL USE 7" HILTI KWIK BOLT 3 REQUIRING MINOR ASSEMBLY AND 10 NUTS INSTEAD OF 4.
  - 2" FACE AND 4" FACE HEADS REQUIRE FULL GROUT FILL USING STANDARD PRACTICE METHODS (HOLE IN HEAD, LATER PLUG WELDED & FINISHED SMOOTH).



ALLEGION - SCHLAGE LOCK COMPANY, LLC.  
11819 N. PENNSYLVANIA STREET  
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PH: (317) 715-4073

TITLE: STEELCRAFT/REPUBLIC TORNADO STEEL DOOR & FRAME ASSEMBLY  
FLUSH INSWING/OUTSWING DOORS  
ANCHOR DETAILS: MASONRY ANCHOR INTO GROUT FILLED FRAME & BLOCK WALL

PREPARED BY: BUILDING DROPS, INC.  
1900 NE MIAMI COURT, STE. 2-15  
MIAMI, FL 33132  
PH: (954) 399-8478  
FAX: (954) 744-4738  
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TBPE FRIM No. 13734

DATE:	09.02.25
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CHK. BY:	HFN
SCALE:	NTS
DWG. #:	PWF002
SHEET:	9

# STEELCRAFT/REPUBLIC TORNADO STEEL DOOR & FRAME ASSEMBLY

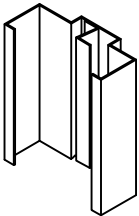
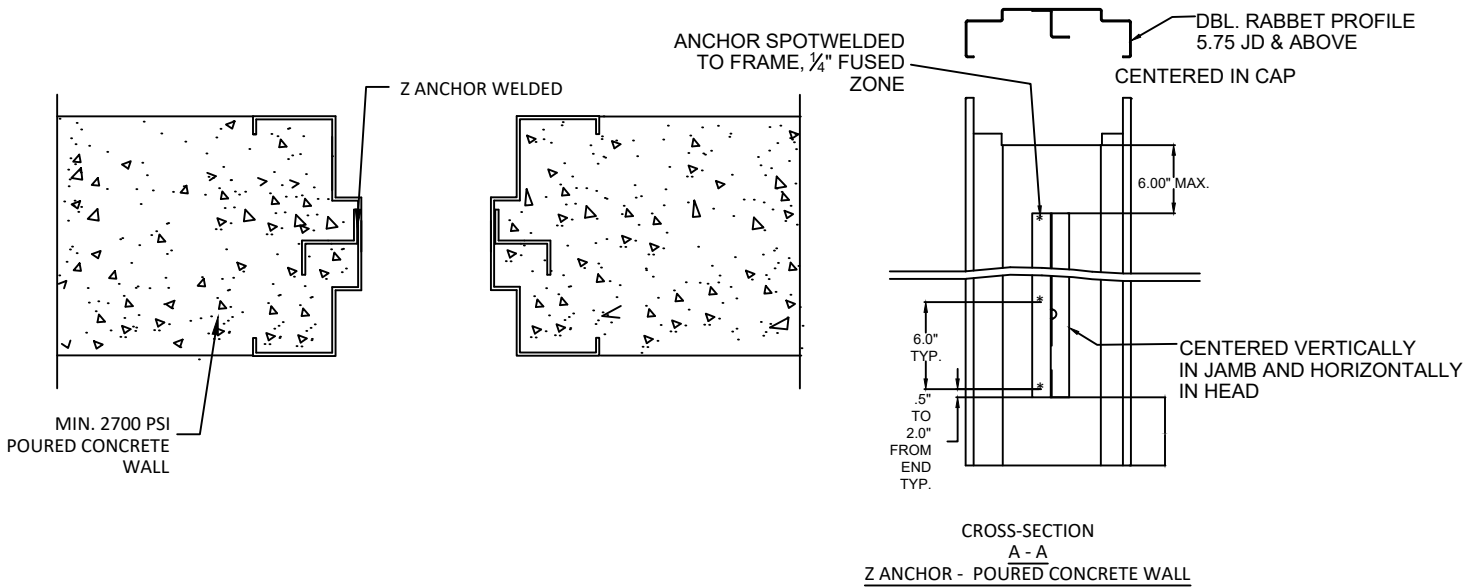
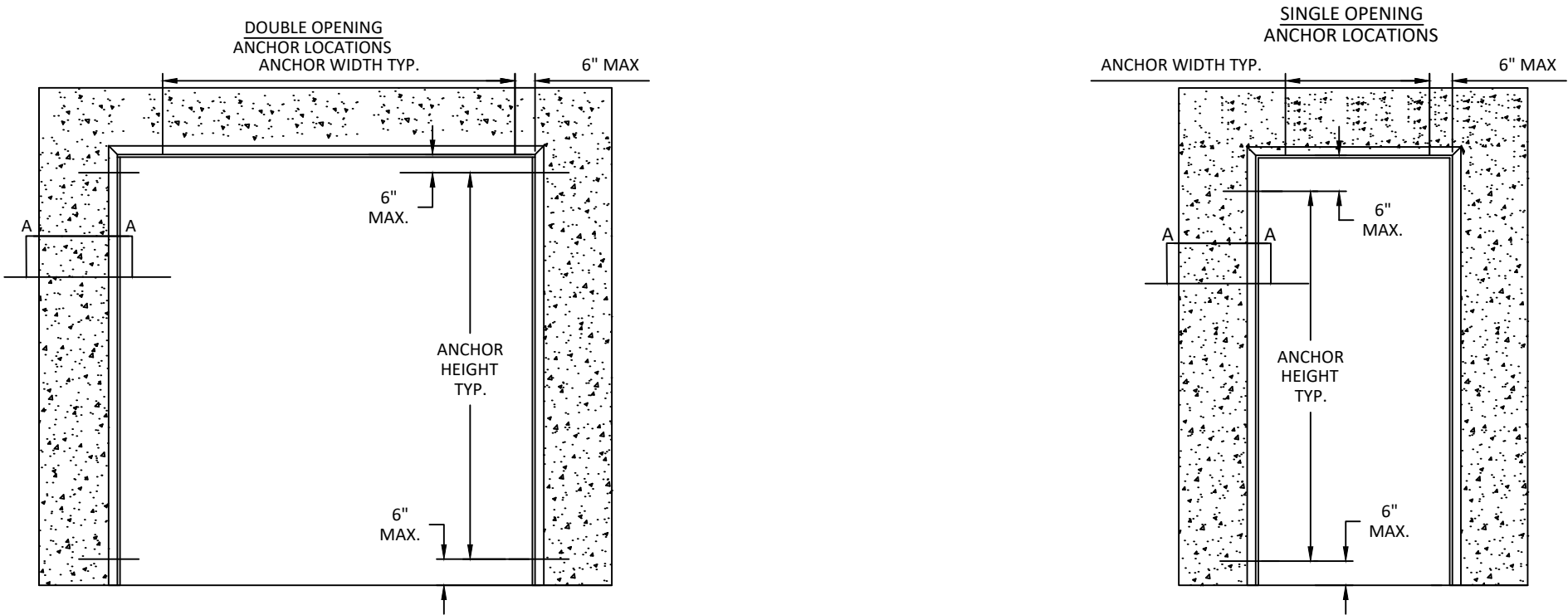
PRODUCT MEETS REQUIREMENTS OF THE CURRENT INTERNATIONAL BUILDING CODE AND ICC 500-2020 IMPACT PROTECTIVE SYSTEMS CERTIFIED FOR TORNADO SHELTERS.

## ANCHOR DETAILS: Z ANCHOR-CONCRETE TILT-UP/PRE-FAB/POURED-IN-PLACE WALL

**B**

Z ANCHOR

CONCRETE TILT-UP/PRE-FAB/POURED-IN-PLACE WALL



WELD-IN Z

**\*NOTE:**  
Z ANCHOR SHOULD BE USED CONTINUOUSLY UNLESS TO ACCOMMODATE HARDWARE OR REINFORCEMENT LOCATIONS. OVERALL ANCHOR LENGTH SHALL BE A MINIMUM OF 75% OF THE FRAME MEMBER LENGTH STARTING 6" FROM FLOOR AND HEAD/JAMB RABBETS

- NOTES:**
1. STRUCTURAL MEMBERS MUST BE DESIGNED TO CARRY AT LEAST 1050 LB/FT. LOAD FOR ASSEMBLIES RATED AT ±243 OR ±252 PSF & AT LEAST 846 LB/FT LOAD FOR ASSEMBLIES RATED AT ±194 OR ±203 PSF, WHICH SHOULD BE VERIFIED BY THE APPROPRIATE OFFICIAL.
  2. NUMBER OF ANCHORS FOR VARIOUS OPENING HEIGHTS IS LIMITED BY MAXIMUM DISTANCE BETWEEN ANCHORS, SHOWN ON THIS SHEET.
  3. BOTH JAMBS MUST HAVE EQUAL NUMBER OF WELDS OR ANCHORS.



ALLEGION - SCHLAGE LOCK COMPANY, LLC.  
11819 N. PENNSYLVANIA STREET  
CARMEL, IN 46032  
PH: (317) 715-4073

TITLE: STEELCRAFT/REPUBLIC TORNADO STEEL DOOR & FRAME ASSEMBLY FLUSH INSWING/OUTSWING DOORS ANCHOR DETAILS: Z ANCHOR - CONCRETE TILT-UP/PRE-FAB/POURED-IN-PLACE WALL

PREPARED BY: BUILDING DROPS, INC. 1900 NE MIAMI COURT, STE. 2-15 MIAMI, FL 33132 PH: (954) 399-8478 FAX: (954) 744-4738 WEB: www.buildingdrops.com

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DATE:	09.02.25
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DWG. #:	PWF002
SHEET:	10

# STEELCRAFT/REPUBLIC TORNADO STEEL DOOR & FRAME ASSEMBLY

PRODUCT MEETS REQUIREMENTS OF THE CURRENT INTERNATIONAL BUILDING CODE AND ICC 500-2020 IMPACT PROTECTIVE SYSTEMS CERTIFIED FOR TORNADO SHELTERS.

## ANCHOR DETAILS: FRAMES BOLTED THROUGH EMA/POA INTO CONCRETE WALL OR CMU

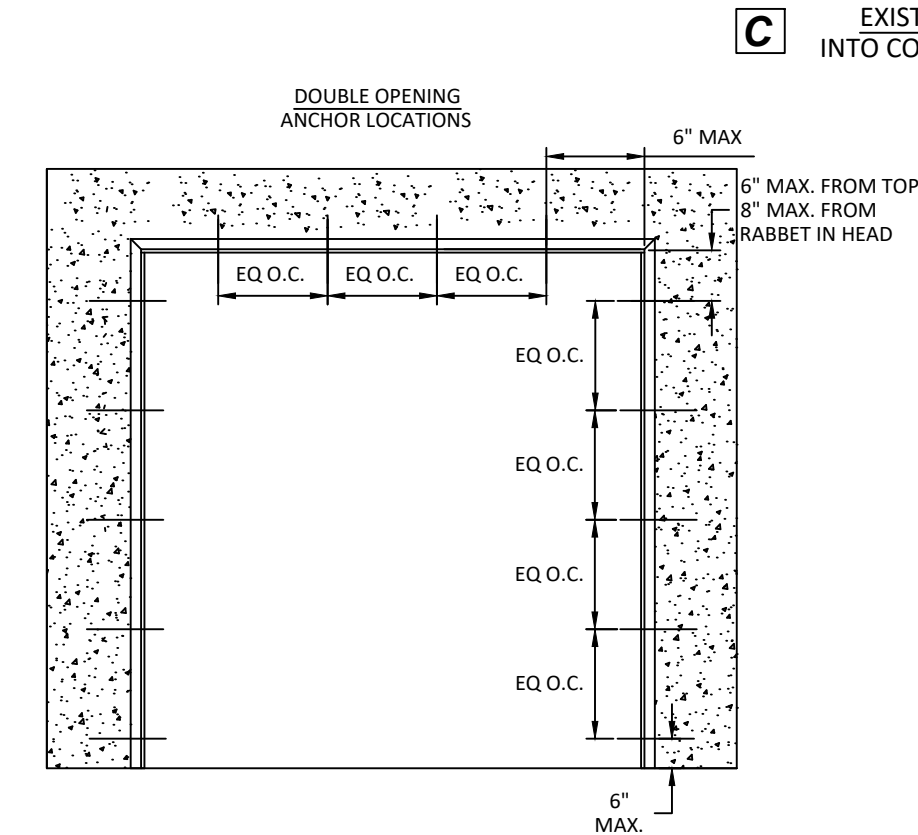


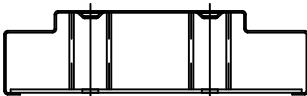
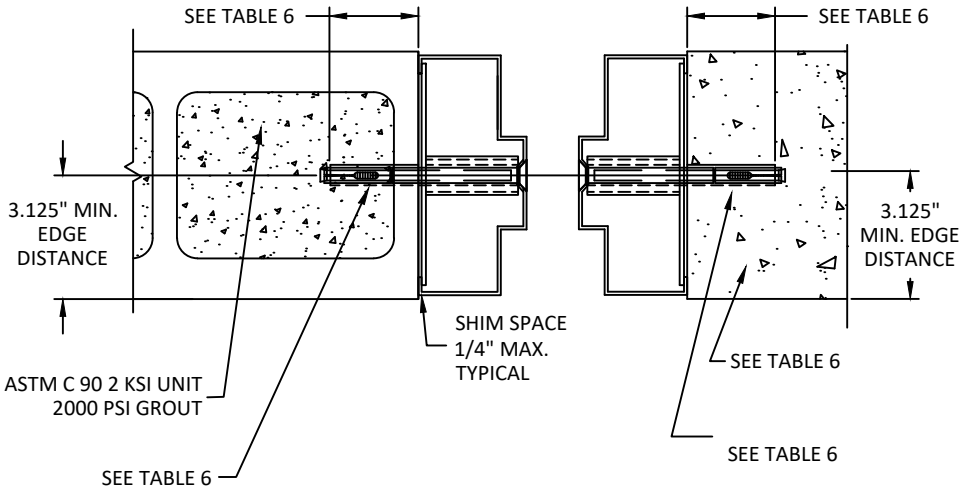
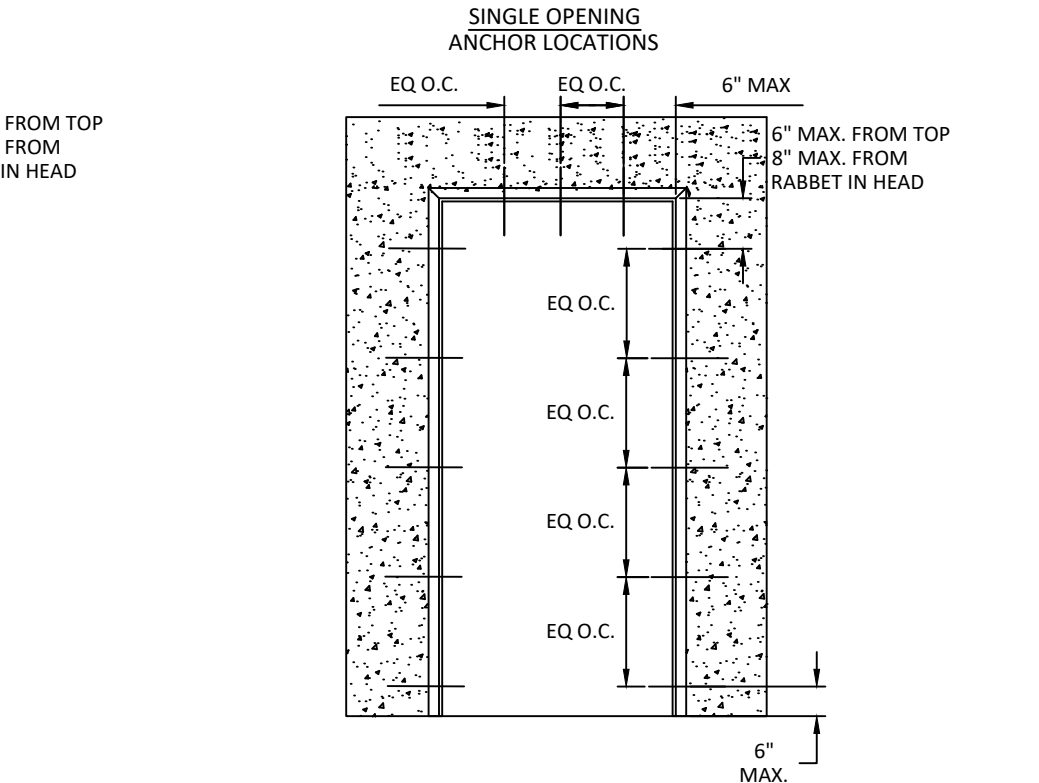
TABLE 6: ANCHOR TYPES AND EMBEDMENT		
ANCHOR	EMBEDMENTS	MIN. CONCRETE PROPERTIES
3/8" HILTI HLC-FPH SLEEVE ANCHOR	1.25"	2000 PSI
3/8" FH POWERS POWER-BOLT	2"	3000 PSI
3/8" FH POWERS LOK BOLT AS	1.25"	3000 PSI
3/8" SIMPSON STRONG TIE SLEEVE-ALL	1.5"	2000 PSI

\*NOTE:  
ANCHORS SHALL BE SPACED AT 4.5" TYP. (6" MAX) FROM TOP, 2.5" TYP. (6" MAX) FROM BOTTOM, 6" TYP. (8" MAX) FROM RABBET IN HEAD AND EQUALLY SPACED THEREAFTER

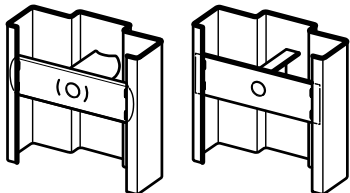
PLACEMENT MAY BE ADJUSTED ± 3" AS REQUIRED TO AVOID INTERFERENCE WITH HARDWARE OR REINFORCEMENT.

TABLE 7 HAS SAME VALUES FOR ALL ANCHOR TYPES

ALTERNATE ANCHORAGE MAY BE USED AT HEAD AND BASE OF JAMB. OPTIONS SHOWN ON SHEETS 9-15 FOR DIFFERENT ANCHOR METHODS MAY BE INTERMIXED TO ACCOMMODATE CONDITION SPECIFIC TO HEAD, BASE OF JAMB AND JAMBS.



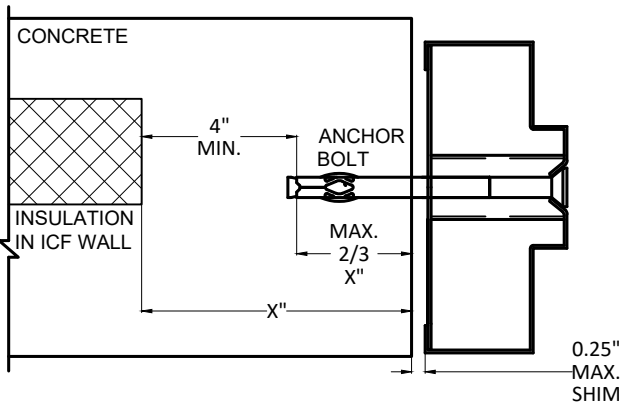
9 1/4" JAMB DEPTH AND ABOVE  
REQUIRES 2 ANCHOR BOLTS



TUBE/CHANNEL &  
PLATE BOLT-IN

TABLE 7: ANCHOR LAYOUT EMA/POA IN CONCRETE					
ANCHOR	FRAME SIZES			ANCHOR QUANTITY	
SEE TABLE 6	WIDTH	SINGLE		HEAD/SILL	3 ANCHORS MIN.
		PAIR			4 ANCHORS MIN.
	HEIGHT	SINGLE	82"	JAMB	4 ANCHORS MIN.
			> 82"		5 ANCHORS MIN.
		PAIR	82"		4 ANCHORS MIN.
			> 82"		5 ANCHORS MIN.

TABLE 8: ANCHOR LAYOUT EMA/POA IN CMU					
ANCHOR	FRAME SIZES			ANCHOR QUANTITY	
3/8" HILTI HLC-FPH SLEEVE ANCHOR	WIDTH	SINGLE		HEAD/SILL	4 ANCHORS MIN.
		PAIR			5 ANCHORS MIN.
	HEIGHT	SINGLE	82"	JAMB	5 ANCHORS MIN.
			> 82"		7 ANCHORS MIN.
		PAIR	82"		5 ANCHORS MIN.
			> 82"		7 ANCHORS MIN.



- NOTES:
- STRUCTURAL MEMBERS MUST BE DESIGNED TO CARRY AT LEAST 1050 LB/FT. LOAD FOR ASSEMBLIES RATED AT ±243 OR ±252 PSF & AT LEAST 846 LB/FT LOAD FOR ASSEMBLIES RATED AT ±194 OR ±203 PSF, WHICH SHOULD BE VERIFIED BY THE APPROPRIATE OFFICIAL.
  - NUMBER OF ANCHORS FOR VARIOUS OPENING HEIGHTS IS LIMITED BY MAXIMUM DISTANCE BETWEEN ANCHORS, SHOWN ON THIS SHEET.
  - BOTH JAMBS MUST HAVE EQUAL NUMBER OF WELDS OR ANCHORS.
  - FOR ANCHORING INTO ICF WALLS (INSULATED CONCRETE FORMS) BOLT EMBEDMENT CANNOT EXCEED 2/3 THE THICKNESS ("X") OF THE SOLID CONCRETE, AND MUST HAVE 4" MINIMUM SOLID CONCRETE BEHIND EMBDDDED BOLT. ALL ANCHOR SPACING AND EDGE DISTANCE REQUIREMENTS MUST BE MAINTAINED. ICF WALL MAY VARY FROM ILLUSTRATION.



ALLEGION - SCHLAGE LOCK COMPANY, LLC.  
11819 N. PENNSYLVANIA STREET  
CARMEL, IN 46032  
PH: (317) 715-4073

TITLE: STEELCRAFT/REPUBLIC TORNADO STEEL DOOR & FRAME ASSEMBLY  
FLUSH INSWING/OUTSWING DOORS  
ANCHOR DETAILS: FRAMES BOLTED THROUGH EMA/POA INTO CONCRETE WALL OR CMU

PREPARED BY: BUILDING DROPS, INC.  
1900 NE MIAMI COURT, STE. 2-15  
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PH: (954) 399-8478  
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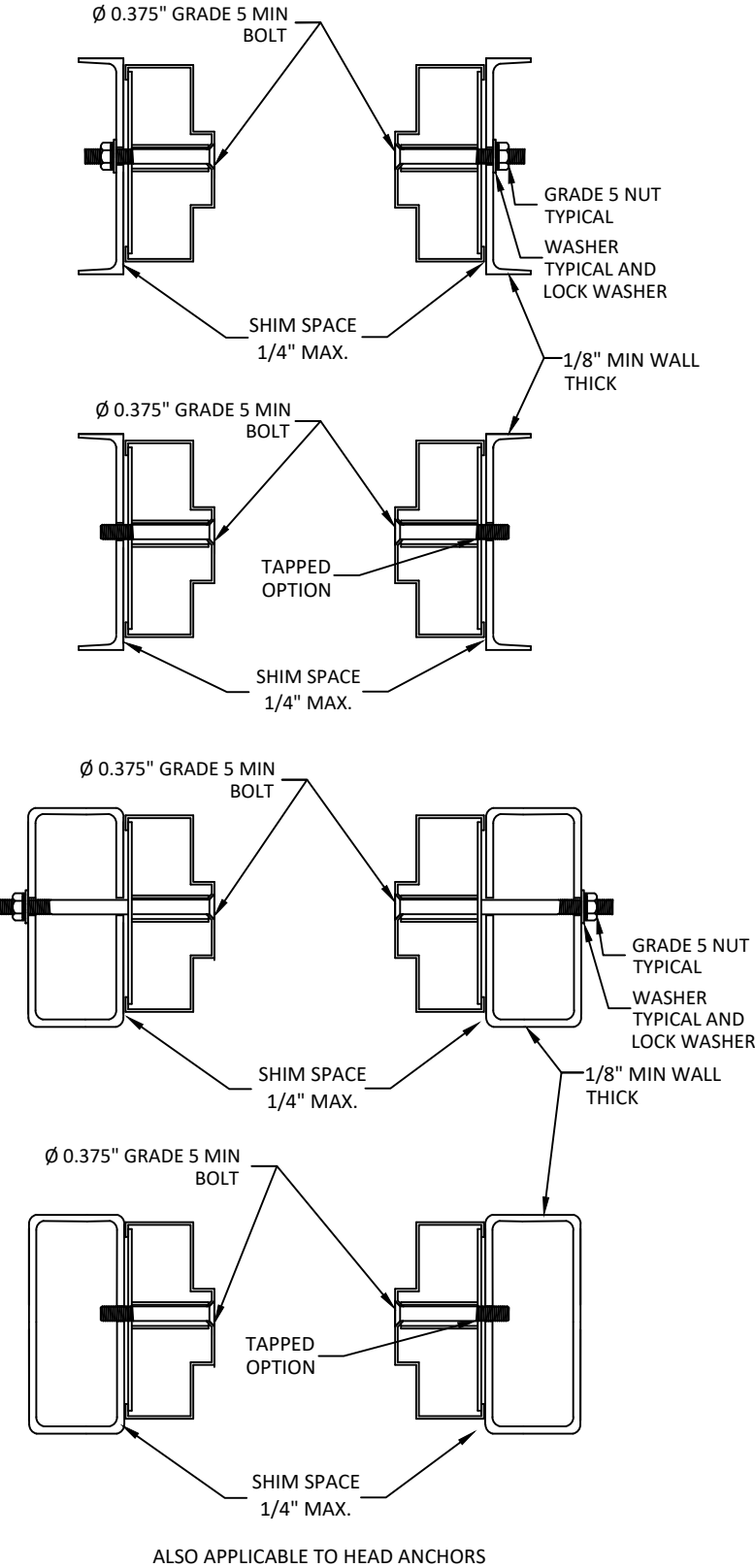
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# STEELCRAFT/REPUBLIC TORNADO STEEL DOOR & FRAME ASSEMBLY

PRODUCT MEETS REQUIREMENTS OF THE CURRENT INTERNATIONAL BUILDING CODE AND ICC 500-2020 IMPACT PROTECTIVE SYSTEMS CERTIFIED FOR TORNADO SHELTERS.

## ANCHOR DETAILS: FRAMES BOLTED TO BUILDING STRUCTURE



**D** FRAMES BOLTED TO STEEL BUILDING STRUCTURE

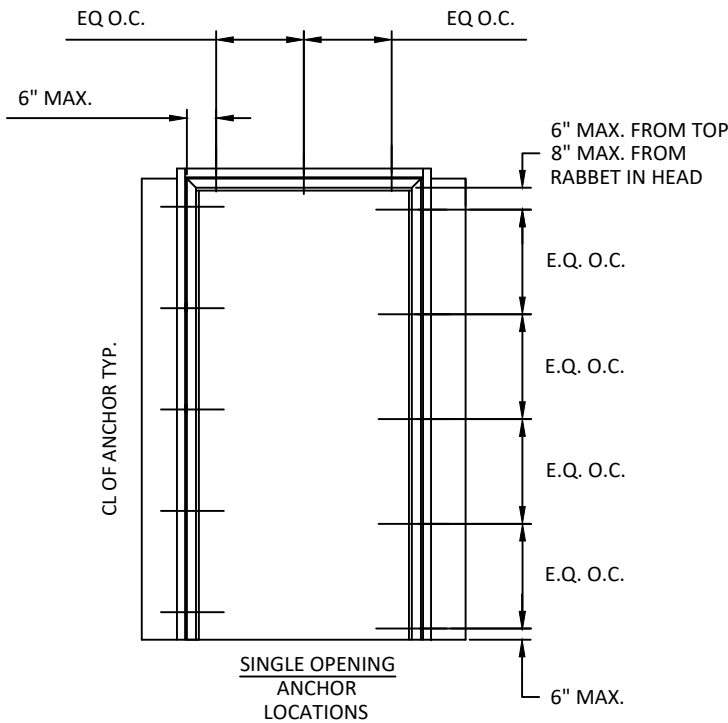
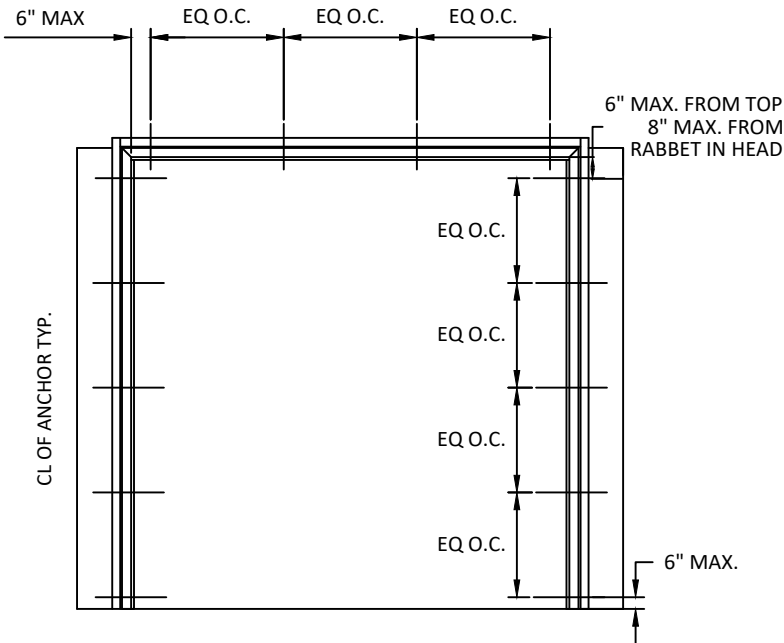
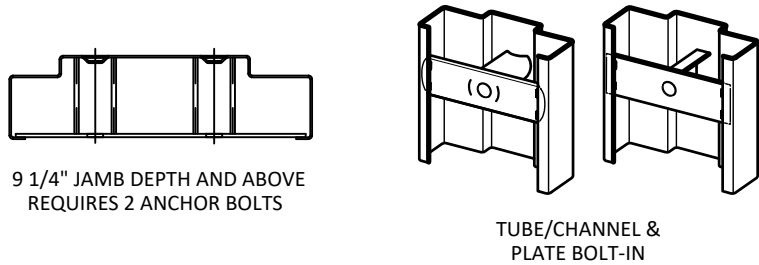


TABLE 9: ANCHOR LAYOUT STRUCTURAL STEEL					
SUBSTRATE	FRAME SIZES			ANCHOR QUANTITY	
STRUCTURAL STEEL MIN. 14 GA. MIN. F <sub>y</sub> = 45 KSI	WIDTH	SINGLE		HEAD/SILL	3 ANCHORS MIN.
		PAIR			4 ANCHORS MIN.
	HEIGHT	SINGLE	82"	JAMB	4 ANCHORS MIN.
			> 82"		5 ANCHORS MIN.
		PAIR	82"		4 ANCHORS MIN.
			> 82"		5 ANCHORS MIN.

\*NOTE:  
ANCHORS SHALL BE SPACED AT 4.5" TYP. (6" MAX) FROM TOP, 2.5" TYP. (6" MAX) FROM BOTTOM, 6" TYP. (8" MAX) FROM RABBET IN HEAD AND EQUALLY SPACED THEREAFTER

PLACEMENT MAY BE ADJUSTED ± 3" AS REQUIRED TO AVOID INTERFERENCE WITH HARDWARE OR REINFORCEMENT.

ALTERNATE ANCHORAGE MAY BE USED AT HEAD AND BASE OF JAMB. OPTIONS SHOWN ON SHEETS 9-15 FOR DIFFERENT ANCHOR METHODS MAY BE INTERMIXED TO ACCOMMODATE CONDITION SPECIFIC TO HEAD, BASE OF JAMB AND JAMBS.



- NOTES:
- STRUCTURAL MEMBERS MUST BE DESIGNED TO CARRY AT LEAST 1050 LB/FT. LOAD FOR ASSEMBLIES RATED AT ±243 OR ±252 PSF & AT LEAST 846 LB/FT LOAD FOR ASSEMBLIES RATED AT ±194 OR ±203 PSF, WHICH SHOULD BE VERIFIED BY THE APPROPRIATE OFFICIAL.
  - ANCHOR LAYOUT SHOWN REPRESENTS MAX OPENING SIZE, REFER TO EACH SUBSTRATES RESPECTIVE TABLE FOR ANCHOR SPACING FOR MIN. OPENING SIZE
  - BOTH JAMBS MUST HAVE EQUAL NUMBER OF WELDS OR ANCHORS.



ALLEGION - SCHLAGE LOCK COMPANY, LLC.  
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PH: (317) 715-4073

TITLE: STEELCRAFT/REPUBLIC TORNADO STEEL DOOR & FRAME ASSEMBLY FLUSH INSWING/OUTSWING DOORS ANCHOR DETAILS: FRAMES BOLTED TO BUILDING STRUCTURE

PREPARED BY: BUILDING DROPS, INC.  
1900 NE MIAMI COURT, STE. 2-15  
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# STEELCRAFT/REPUBLIC TORNADO STEEL DOOR & FRAME ASSEMBLY

PRODUCT MEETS REQUIREMENTS OF THE CURRENT INTERNATIONAL BUILDING CODE AND ICC 500-2020 IMPACT PROTECTIVE SYSTEMS CERTIFIED FOR TORNADO SHELTERS.

## ANCHOR DETAILS: FRAMES WELDED TO STEEL STRUCTURE BUILDING

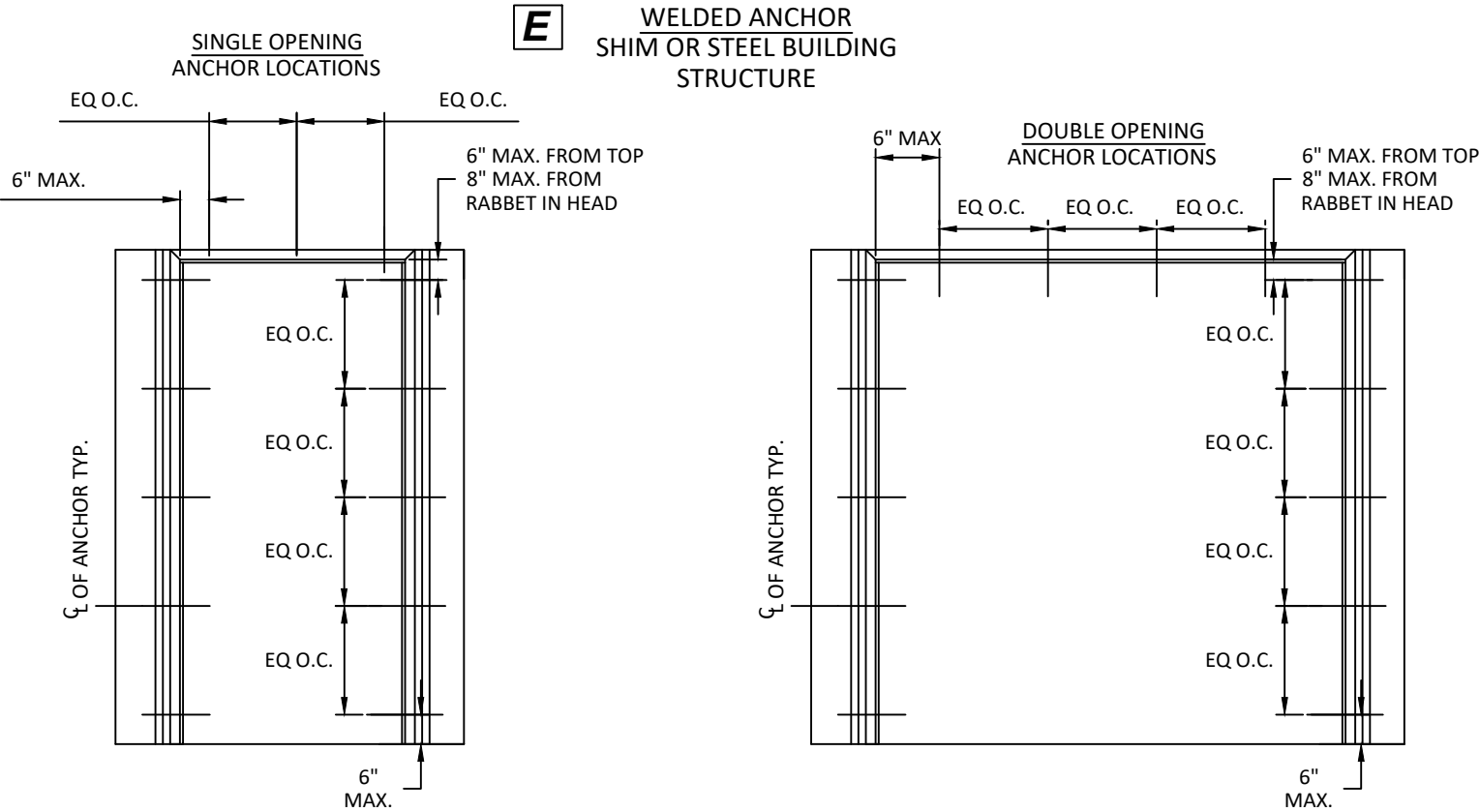
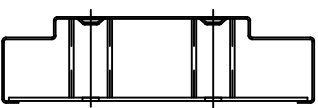
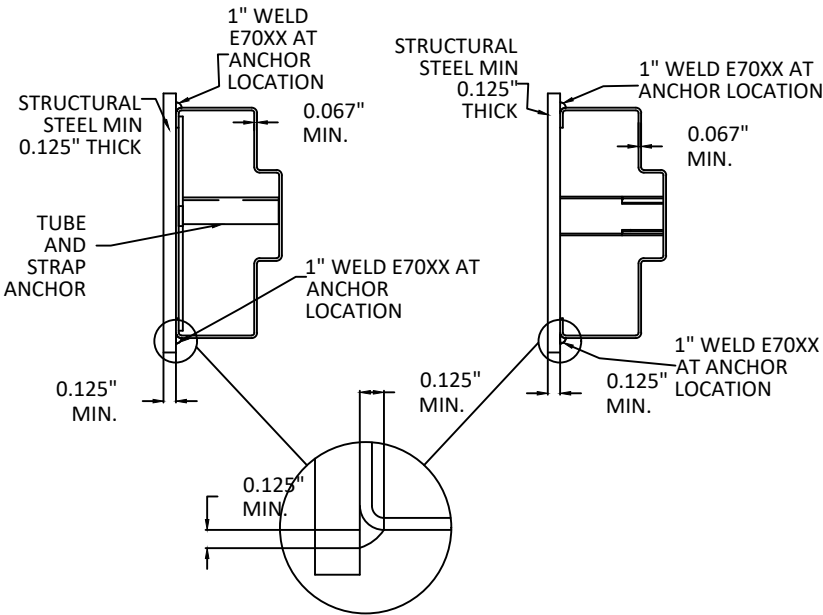


TABLE 10: ANCHOR LAYOUT STEEL STRUCTURE OR STEEL PLATE EMBEDMENT IN CONCRETE					
SUBSTRATE	FRAME SIZES			ANCHOR QUANTITY	
STEEL MIN. 14 GA. MIN. Fy = 45 KSI	WIDTH	SINGLE		HEAD/SILL	3 ANCHORS MIN.
		PAIR			4 ANCHORS MIN.
	HEIGHT	SINGLE	82"	JAMB	4 ANCHORS MIN.
			> 82"		5 ANCHORS MIN.
		PAIR	82"		4 ANCHORS MIN.
			> 82"		5 ANCHORS MIN.

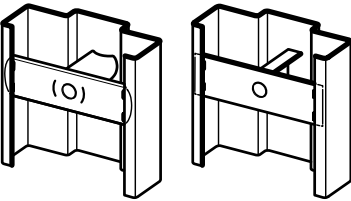
\*NOTE:  
ANCHORS SHALL BE SPACED AT 4.5" TYP. (6" MAX) FROM TOP, 2.5" TYP. (6" MAX) FROM BOTTOM, 6" TYP. (8" MAX) FROM RABBET IN HEAD AND EQUALLY SPACED THEREAFTER

PLACEMENT MAY BE ADJUSTED ± 3" AS REQUIRED TO AVOID INTERFERENCE WITH HARDWARE OR REINFORCEMENT.

ALTERNATE ANCHORAGE MAY BE USED AT HEAD AND BASE OF JAMB. OPTIONS SHOWN ON SHEETS 9-15 FOR DIFFERENT ANCHOR METHODS MAY BE INTERMIXED TO ACCOMMODATE CONDITION SPECIFIC TO HEAD, BASE OF JAMB AND JAMBS.



9 1/4" JAMB DEPTH AND ABOVE  
REQUIRES 2 ANCHOR BOLTS



TUBE/CHANNEL &  
PLATE BOLT-IN

- NOTES:
- STRUCTURAL MEMBERS MUST BE DESIGNED TO CARRY AT LEAST 1050 LB/FT. LOAD FOR ASSEMBLIES RATED AT ±243 OR ±252 PSF & AT LEAST 846 LB/FT LOAD FOR ASSEMBLIES RATED AT ±194 OR ±203 PSF, WHICH SHOULD BE VERIFIED BY THE APPROPRIATE OFFICIAL.
  - NUMBER OF ANCHORS FOR VARIOUS OPENING HEIGHTS IS LIMITED BY MAXIMUM DISTANCE BETWEEN ANCHORS, SHOWN ON THIS SHEET.
  - BOTH JAMBS MUST HAVE EQUAL NUMBER OF WELDS OR ANCHORS.



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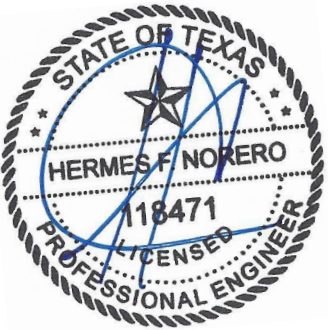
TITLE: STEELCRAFT/REPUBLIC TORNADO STEEL DOOR & FRAME ASSEMBLY FLUSH INSWING/OUTSWING DOORS ANCHOR DETAILS: FRAMES WELDED TO STEEL STRUCTURE BUILDING

PREPARED BY: BUILDING DROPS, INC.  
1900 NE MIAMI COURT, STE. 2-15  
MIAMI, FL 33132  
PH: (954) 399-8478  
FAX: (954) 744-4738  
WEB: www.buildingdrops.com

BUILDING DROPS

REMARKS	BY	DATE

THE INSTALLATION DETAILS DESCRIBED HEREIN ARE GENERIC AND MAY NOT REFLECT ACTUAL CONDITIONS FOR A SPECIFIC SITE. IF SITE CONDITIONS CAUSE INSTALLATION TO DEVIATE FROM THE REQUIREMENTS DETAILED HEREIN, A LICENSED ENGINEER OR ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE WITH THIS DOCUMENT.



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TEXAS P.E. No 118471  
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1900 NE MIAMI COURT, STE. 2-15  
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TBPE FRIM No. 13734

DATE:	09.02.25
DWG. BY:	DI
CHK. BY:	HFN
SCALE:	NTS
DWG. #:	PWF002
SHEET:	

13

OF 17

STEELCRAFT/REPUBLIC TORNADO STEEL DOOR & FRAME ASSEMBLY

PRODUCT MEETS REQUIREMENTS OF THE CURRENT INTERNATIONAL BUILDING CODE AND ICC 500-2020 IMPACT PROTECTIVE SYSTEMS CERTIFIED FOR TORNADO SHELTERS.

ANCHOR DETAILS: FRAMES WELDED TO STEEL PLATES BOLTED TO CONCRETE WALL OR CMU

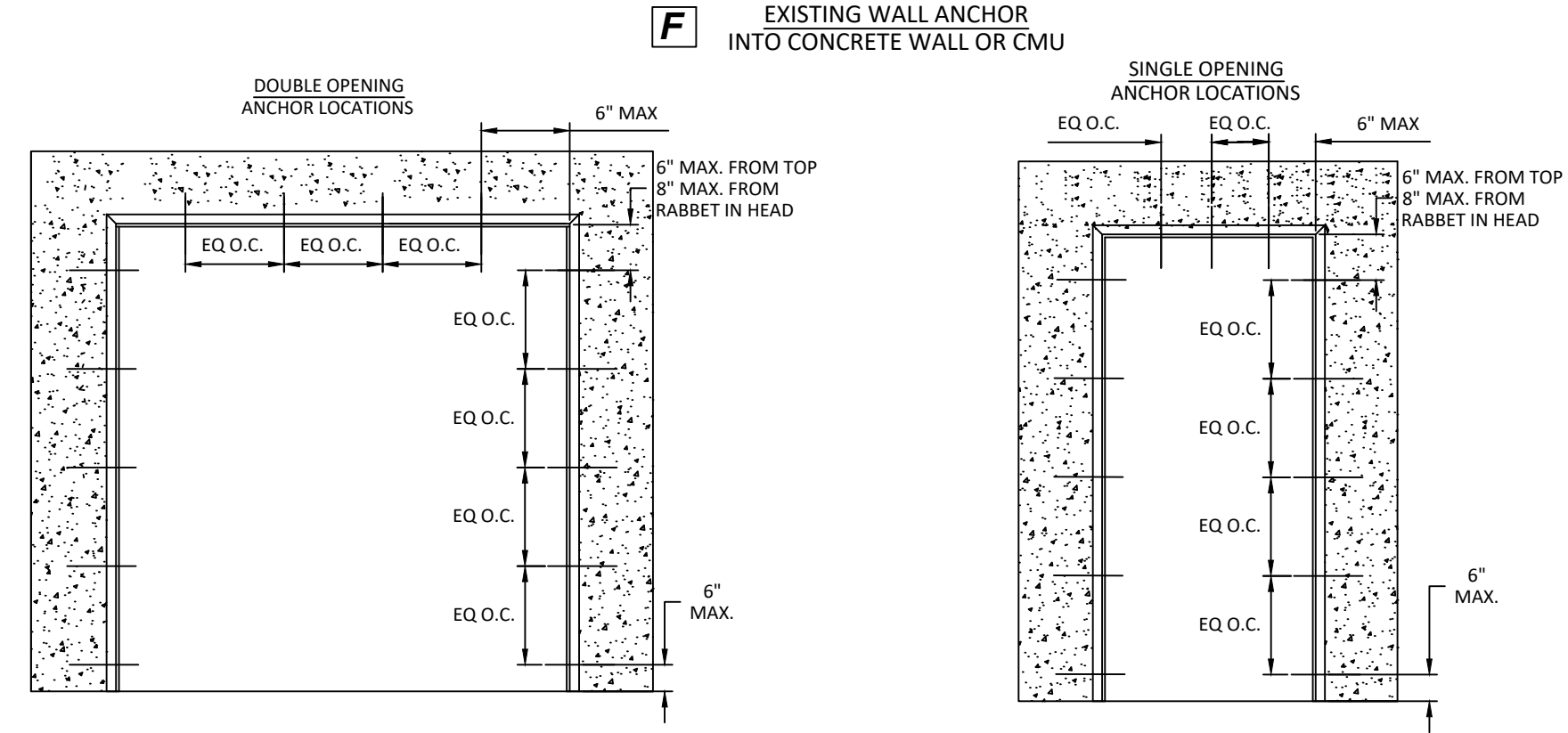


TABLE 12: ANCHOR LAYOUT STEEL BOLTED PLATE TO CONCRETE					
ANCHOR	FRAME SIZES		ANCHOR QUANTITY		
SEE TABLE 11	WIDTH	SINGLE		HEAD/SILL	3 ANCHORS MIN.
		PAIR			4 ANCHORS MIN.
	HEIGHT	SINGLE	82"	JAMB	4 ANCHORS MIN.
			> 82"		5 ANCHORS MIN.
		PAIR	82"		4 ANCHORS MIN.
			> 82"		5 ANCHORS MIN.

TABLE 13: ANCHOR LAYOUT STEEL BOLTED PLATE TO CMU						
ANCHOR	FRAME SIZES			ANCHOR QUANTITY		
3/8" HILTI HLC-FPH SLEEVE ANCHOR	WIDTH	SINGLE		HEAD/SILL	3 ANCHORS MIN.	
		PAIR			4 ANCHORS MIN.	
	HEIGHT	SINGLE	82"	JAMB	4 ANCHORS MIN.	
			> 82"		5 ANCHORS MIN.	
		PAIR			82"	4 ANCHORS MIN.
					> 82"	5 ANCHORS MIN.

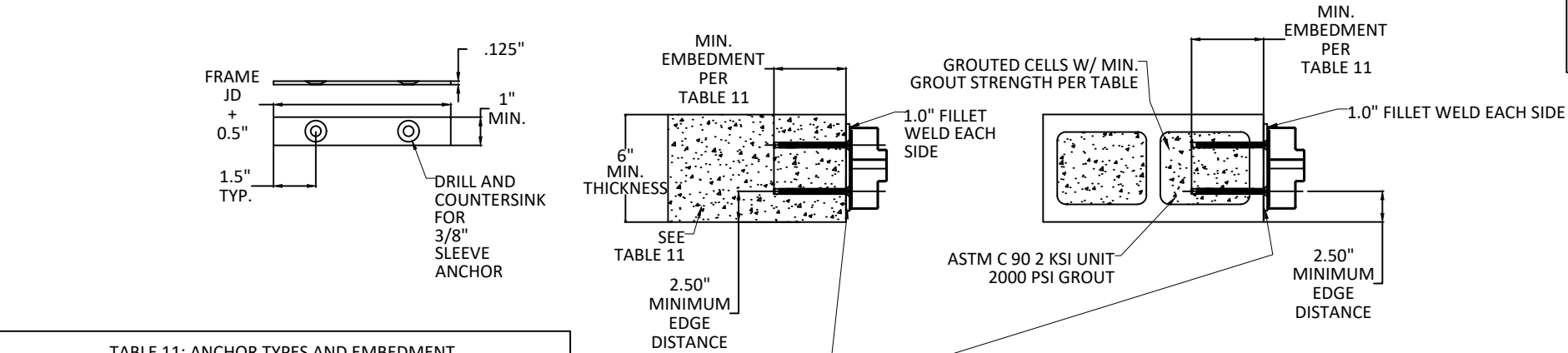
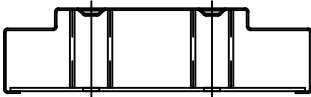
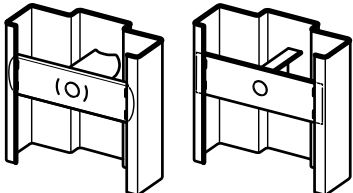


TABLE 11: ANCHOR TYPES AND EMBEDMENT		
ANCHOR	EMBEDMENTS	MIN. CONCRETE PROPERTIES
3/8" HILTI HLC-FPH SLEEVE ANCHOR	1.25"	2000 PSI
3/8" FH POWERS LOK BOLT AS	1.25"	3000 PSI
3/8" SIMPSON STRONG TIE SLEEVE-ALL	1.5"	2000 PSI
3/8" FH POWERS POWER-BOLT	2"	3000 PSI

FILL GAPS WITH CAULK (FILL LARGER GAPS WITH BACKER ROD, WOOD FILLER STRIPS OR SIMILAR AS RECOMMENDED BY ENGINEER OR ARCHITECT FOR AESTHETICS AND TO RESIST AIRFLOW IN WINDSTORM)



9 1/4" JAMB DEPTH AND ABOVE REQUIRES 2 ANCHOR BOLTS



TUBE/CHANNEL & PLATE BOLT-IN

\*NOTE: ANCHORS SHALL BE SPACED AT 4.5" TYP. (6" MAX) FROM TOP, 2.5" TYP. (6" MAX) FROM BOTTOM, 6" TYP. (8" MAX) FROM RABBET IN HEAD AND EQUALLY SPACED THEREAFTER

PLACEMENT MAY BE ADJUSTED ± 3" AS REQUIRED TO AVOID INTERFERENCE WITH HARDWARE OR REINFORCEMENT.

TABLE 12 HAS SAME VALUES FOR ALL ANCHOR TYPES

ALTERNATE ANCHORAGE MAY BE USED AT HEAD. OPTIONS SHOWN ON SHEETS 9-15 FOR DIFFERENT ANCHOR METHODS MAY BE INTERMIXED TO ACCOMMODATE CONDITION SPECIFIC TO HEAD, BASE OF JAMB AND JAMBS.

- NOTES:
- STRUCTURAL MEMBERS MUST BE DESIGNED TO CARRY AT LEAST 1050 LB/FT. LOAD FOR ASSEMBLIES RATED AT ±243 OR ±252 PSF & AT LEAST 846 LB/FT LOAD FOR ASSEMBLIES RATED AT ±194 OR ±203 PSF, WHICH SHOULD BE VERIFIED BY THE APPROPRIATE OFFICIAL.
  - NUMBER OF ANCHORS FOR VARIOUS OPENING HEIGHTS IS LIMITED BY MAXIMUM DISTANCE BETWEEN ANCHORS, SHOWN ON THIS SHEET.
  - BOTH JAMBS MUST HAVE EQUAL NUMBER OF WELDS OR ANCHORS.



ALLEGION - SCHLAGE LOCK COMPANY, LLC.  
11819 N. PENNSYLVANIA STREET  
CARMEL, IN 46032  
PH: (317) 715-4073

TITLE: STEELCRAFT/REPUBLIC TORNADO STEEL DOOR & FRAME ASSEMBLY FLUSH INSWING/OUTSWING DOORS ANCHOR DETAILS: FRAMES WELDED TO STEEL PLATES BOLTED TO CONCRETE WALL OR CMU

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STEELCRAFT/REPUBLIC TORNADO STEEL DOOR & FRAME ASSEMBLY

PRODUCT MEETS REQUIREMENTS OF THE CURRENT INTERNATIONAL BUILDING CODE AND ICC 500-2020 IMPACT PROTECTIVE SYSTEMS CERTIFIED FOR TORNADO SHELTERS.

ANCHOR DETAILS: FRAMES WELDED TO STEEL EMBEDDED PLATES IN CONCRETE

G WELDED ANCHOR  
SHIM OR STEEL EMBEDDED  
PLATES IN CONCRETE

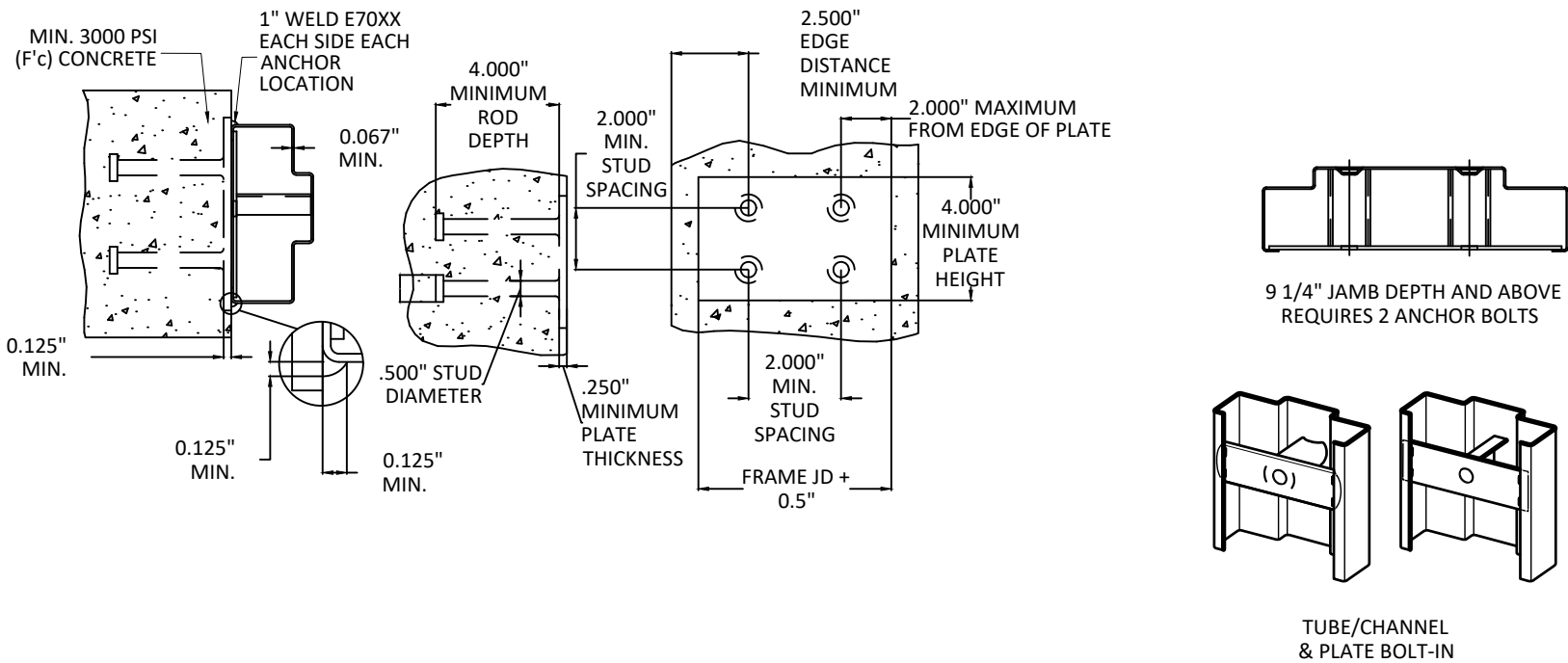
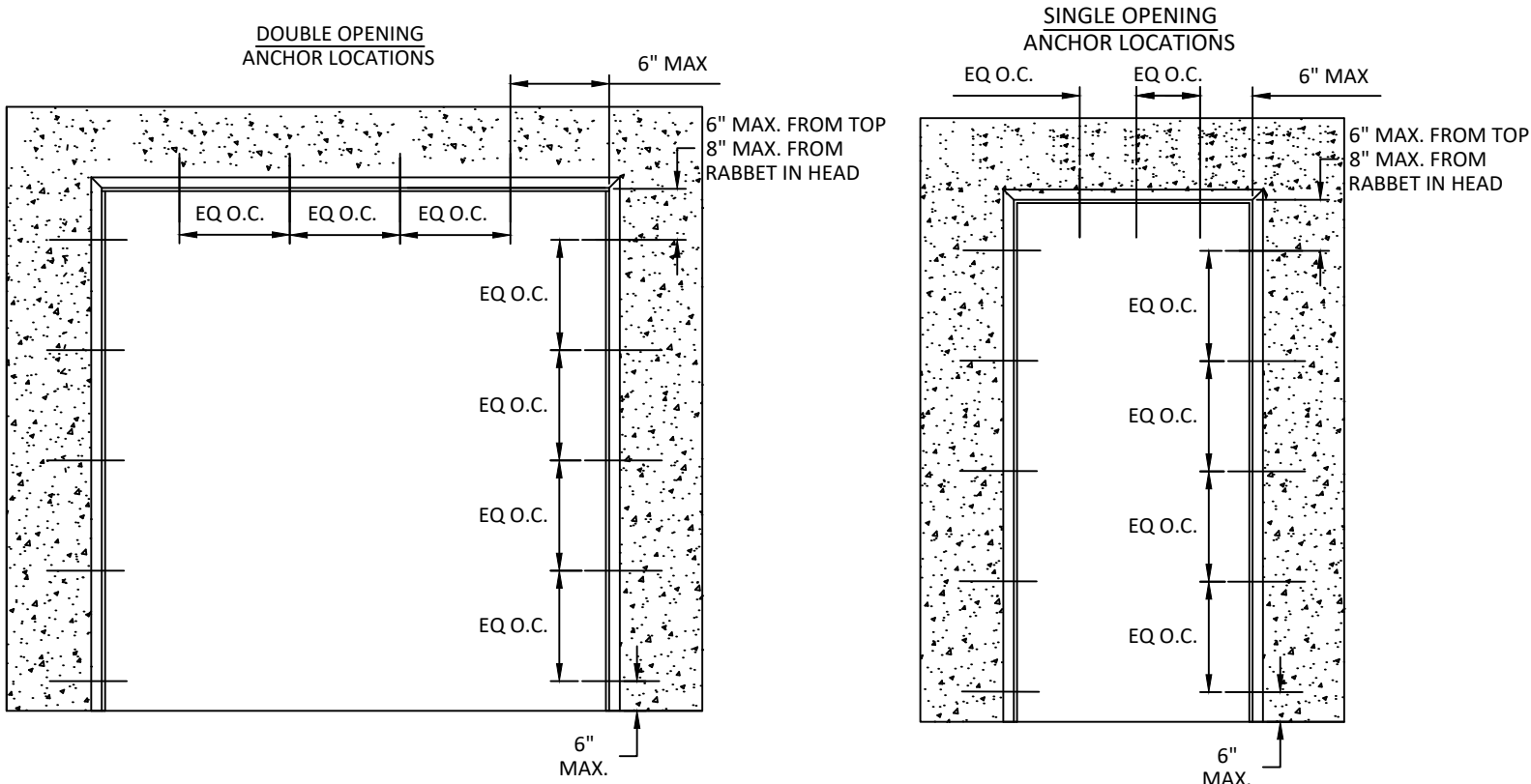


TABLE 14: ANCHOR LAYOUT STEEL STRUCTURE OR STEEL PLATE EMBEDMENT IN CONCRETE					
SUBSTRATE	FRAME SIZES			ANCHOR QUANTITY	
CONCRETE 3000 PSI	WIDTH	SINGLE		HEAD/SILL	3 ANCHORS MIN.
		PAIR			4 ANCHORS MIN.
	HEIGHT	SINGLE	82"	JAMB	4 ANCHORS MIN.
			> 82"		5 ANCHORS MIN.
		PAIR	82"		4 ANCHORS MIN.
			> 82"		5 ANCHORS MIN.

\*NOTE:  
ANCHORS SHALL BE SPACED AT 4.5" TYP. (6" MAX) FROM TOP, 2.5" TYP. (6" MAX) FROM BOTTOM, 6" TYP. (8" MAX) FROM RABBET IN HEAD AND EQUALLY SPACED THEREAFTER

PLACEMENT MAY BE ADJUSTED ± 3" AS REQUIRED TO AVOID INTERFERENCE WITH HARDWARE OR REINFORCEMENT.

ALTERNATE ANCHORAGE MAY BE USED AT HEAD AND BASE OF JAMB. OPTIONS SHOWN ON SHEETS 9-15 FOR DIFFERENT ANCHOR METHODS MAY BE INTERMIXED TO ACCOMMODATE CONDITION SPECIFIC TO HEAD, BASE OF JAMB AND JAMBS.

- NOTES:
- STRUCTURAL MEMBERS MUST BE DESIGNED TO CARRY AT LEAST 1050 LB/FT. LOAD FOR ASSEMBLIES RATED AT ±243 OR ±252 PSF & AT LEAST 846 LB/FT LOAD FOR ASSEMBLIES RATED AT ±194 OR ±203 PSF, WHICH SHOULD BE VERIFIED BY THE APPROPRIATE OFFICIAL.
  - NUMBER OF ANCHORS FOR VARIOUS OPENING HEIGHTS IS LIMITED BY MAXIMUM DISTANCE BETWEEN ANCHORS, SHOWN ON THIS SHEET.
  - BOTH JAMBS MUST HAVE EQUAL NUMBER OF WELDS OR ANCHORS.



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TITLE: STEELCRAFT/REPUBLIC  
TORNADO  
STEEL DOOR & FRAME ASSEMBLY  
FLUSH INSWING/OUTSWING DOORS  
ANCHOR DETAILS: FRAMES WELDED TO  
STEEL EMBEDDED PLATES IN CONCRETE

PREPARED BY:  
BUILDING DROPS, INC.  
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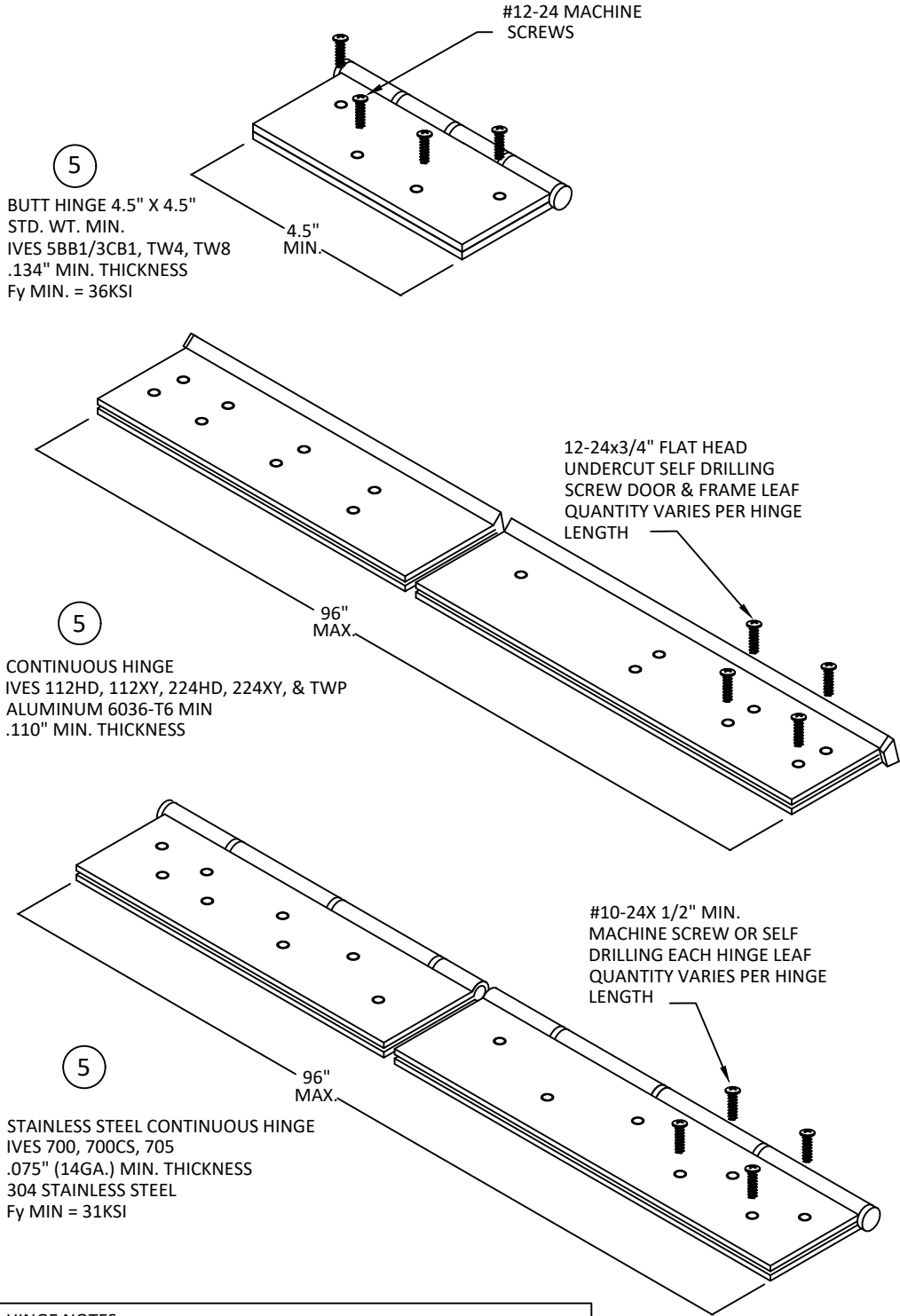
OF 17



# STEELCRAFT/REPUBLIC TORNADO STEEL DOOR & FRAME ASSEMBLY

PRODUCT MEETS REQUIREMENTS OF THE CURRENT INTERNATIONAL BUILDING CODE AND ICC 500-2020 IMPACT PROTECTIVE SYSTEMS CERTIFIED FOR TORNADO SHELTERS.

## APPROVED HARDWARE & ACCESSORIES



- HINGE NOTES:
1. QUANTITY OF SCREWS VARIES PER HINGE LENGTH, MANUFACTURER AND MODEL NUMBER
  2. SCREW SPACING VARIES PER HINGE LENGTH, MANUFACTURER AND MODEL NUMBER
  3. INSTALL HINGES PER THE MANUFACTURERS INSTALLATION INSTRUCTIONS
  4. BUTT AND CONTINUOUS HINGES MAY INCLUDE ELECTRICAL THROUGH-WIRE, POWER TRANSFER AND MONITORING.
  5. DOOR AND FRAME DO NOT REQUIRE REINFORCEMENT WHEN USING CONTINUOUS HINGE

TABLE 15: ALLOWABLE UL HARDWARE & ACCESSORIES

Type	Brand	Model		Description/Notes	UL Fire listings
Latches - Panic Exit hardware Outswing only	Von Duprin	WS-T-98/9927 Series	with or without (F)	2-point Panic, SVR (no primary), electrified options. Grout in WS-T-304L.	R4504 & SA163
Protection / Latch Guard	Von Duprin	WS-LGO-3, WS-LGO-4 (Not bearing the UL mark)		ADA bottom latch guard cover with ramp used with WS-T-98/9927	
Exit Trim and Function	Von Duprin	Trim 996, 377. Functions EO, DT, L-DT, L-BE, L-KC.		With or without 377T-KC control with required ingress along egress path	R4504
Latches - Three-point Lever	Schlage	LM9325 EO, LM9350 Entrance/Office, LM9371, Classroom, LM9380 Storeroom		Trim indicators approved for Thumbturn and Key Cylinders (safe side mounting), also Coin turn and Emergency key (threat side mount only)	R26280 R3515
Inactive leaf Surface Bolt	Ives	SB360-WS, manual type		Required on inactive leaf with Pair configurations	R4942
Glazing - Narrow Light	TGP	Pilkington Pyrostop Type 60-102 TRSL		1 3/8" Nominal, 4 in. by 25 (4-1/8"x26-11/16", 43"AFF)	R38707
Glazing - Vision Light	TGP	Pilkington Pyrostop Type 60-102 TRSL		1 3/8" Nominal, 10"x10" (9.5"x9.5", 57.5"AFF)	R38707
Door Viewer	Surelock McGill	M0666		Not bearing the UL mark	
Hinges	Ives	Butt Hinge Models 3CB1, 3CB1HW, 3CB1NRP, 3CB1HW NRP, 5BB1, 5BB1HW, 5BB1NRP, 5BB1HWNRP. Continuous Hinge Models 112XY, 224XY, 112HD, 224HD, 600, 700, 705, 700CS		Ives butt hinges - 4.5 High (0.134 Min) or 5 high (0.146 Min)	R37965
	Ives	Electric Hinges TW4, TW8, and TWP Concealed		Ives electric hinge options	BP9752
Auxiliary	Von Duprin	WS-T Auxiliary Stop		10 gauge (not bearing UL Mark)	
Electronic power transfer	Von Duprin	EPT-2 and EPT-10			SA163
Surface mounted closers	LCN	4000 series		May be mounted on interior or exterior side of storm shelter. Thru-bolt mounting of body to door only. Metal cover screw applied safe side.	R1943
Holder Arm	LCN	4040 with suffix SE, SE-DE, SEL, SEC, SEC-DE, SEH, or SP		May be mounted on interior or exterior side of storm shelter. Thru-bolt mounting of body to door only. Metal cover screw applied safe side.	R1943
Auto-door operator with automatic closer	LCN	9530 and 9540		Fire Door Operator with Automatic Closer can be mounted on either side of the door	R7303
Electromagnetic door holders	LCN	SEM7820, SEM7830, SEM7840, SEM7850, and SEM 828 Armature.		Screw applied to door only. Extensions allowed.	R8327
Surface mount Overhead holder/stop	Glynn Johnson	90 Series Overhead Stops Models 902, 903, 904, 905 (Suffix S). Hold-Open (Suffix H) and Friction Hold-Open (Suffix F) not bearing the UL mark		Verify ability to open 180 degrees as needed; application should be confirmed.	R18895
Door position switch	Schlage	679-05HM (round), L483-055		Must be mortised into the hinge side or top edge of the door, and into the door rabbet of the hinge jamb or head of the frame.	R21149
Protection / Kick Plates	Ives	8400 Series Kick Plate (Screw Applied), no UL mark		Must be secured with steel screws. 48" Max height bottom of door only.	R22142
Thresholds - Saddle	Zero	63, 64, 544, 545, 546, 547, 548, 653, 654, 664, 164, 655, 8655, 656, 6570, 647, 657, 6575		Must not impede strike or affect the function of the opening or latching hardware. Must grout full in area around bottom strike to secure in slab.	R18465
Thresholds - Offset	Zero	102, 103, 104			R18465
Thresholds - Rabbeted	Zero	564, 566, 567, 568, 267, 663, 65, 560, 561, 563, 565			R18465
Thresholds - Adjustable	Zero	672, 673, 674, 675, 676, 678, 6710, 671			R18465
Thresholds - Traction Tread	Zero	3672, 3673			R18465
Perimeter Gaskets, Edge Gaskets, Perimeter Seals	Zero	485, 139, 312, 314, 140, 318, 322, 50, 1370, 98, 99, 100, 31, 32, 33, 485, 570, 370?, 326, 328, 8305, 302FS, 328FS, 429, 8193, 8879, 8302, 8877, 8303, 8878		Safe side secured using #8 stainless steel screws	R18465
Meeting Stiles	Zero	55, 155, 555, 55FS, 555FS, 871, 873, 8192, 8193, 8194, 8879, 8195, 98, 99, 100, 326, 328, 370, 375 Between doors, Model 8217S		Threat side mounting only	
Adhesive Weather Stripping	Zero	188, 8144, 8042, 488, 8145, 8216, 117, 8150, 8172N, 8770N, 312N, 8780N, 139N, 926N, 318N			
Door Sweeps	Zero	Models 39, 339, 539, 39W, 339W, 328, 50M, 477, 8191, 329, 8197, 571, 871, 255, 8192, 98, 96, 8194, 8193, 8198		Threat side mounting only	
		Models 39, 339, 539, 39W, 339W, 328, 50M, 8191, 329, 8197, 571, 8194		Safe side, Surface applied using #8 stainless steel screws	
Rain Drips	Zero	11, 25, 142, 144		Threat side mounting only	R18465
Floor & Wall Holders/Stops	Ives	Semi-Auto Models FS9, FS40, FS41, FS42, FS43, FS496, FS497. Manual Models WS20, WS20X, FS446, FS450, FS445, WS445, WS449. Automatic Models WS40, WS45, WS45X.		Mounted threat side only, surface applied. Through bolting allowed at the bottom only. Not bearing the UL mark	

- \*NOTE:
1. AVOID INSTALLATION OF GASKETING THAT WOULD HINDER PROPER LATCHING OF HARDWARE AND AVOID BINDING OR INTERFERENCE.
  2. WHEN USING THRESHOLD, REFER TO MANUFACTURERS HARDWARE INSTALLATION OF STRIKES.
  3. WITH OR WITHOUT THRESHOLD, LM9300 BOTTOM STRIKE MUST BE ANCHORED INTO SLAB WITH PROVIDED BOLTS, AND WS-T BOTTOM STRIKES MUST BE GROUTED INTO SLAB PER INSTALLATION INSTRUCTIONS.
  4. ADDITIONAL GASKETING MAY BE ADDED. ANY ZERO BRAND GASKETS, SEALS, OR THRESHOLDS MAY BE USED, BUT MUST NOT IMPEDE OR AFFECT THE FUNCTION OF THE OPENING OR LATCHING HARDWARE.



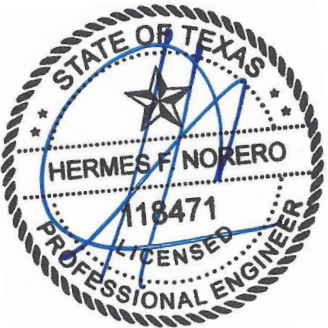
ALLEGION - SCHLAGE LOCK COMPANY, LLC.  
11819 N. PENNSYLVANIA STREET  
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TITLE: STEELCRAFT/REPUBLIC TORNADO STEEL DOOR & FRAME ASSEMBLY FLUSH INSWING/OUTSWING DOORS APPROVED HARDWARE & ACCESSORIES

PREPARED BY: BUILDING DROPS, INC. 1900 NE MIAMI COURT, STE. 2-15 MIAMI, FL 33132 PH: (954) 399-8478 FAX: (954) 744-4738 WEB: www.buildingdrops.com

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STEELCRAFT/REPUBLIC TORNADO STEEL DOOR & FRAME ASSEMBLY

PRODUCT MEETS REQUIREMENTS OF THE CURRENT INTERNATIONAL BUILDING CODE AND ICC 500-2020 IMPACT PROTECTIVE SYSTEMS CERTIFIED FOR TORNADO SHELTERS.

APPROVED HARDWARE & ACCESSORIES

TABLE 16: ALLOWABLE INTERTEK HARDWARE & ACCESSORIES

Type	Brand	Model		Description/Notes	UL Fire listings
Latches - Panic Exit hardware Outswing only  For exit pairs only, see UL listing for approved accessories p. 215	Von Duprin	WS-T-98/9957 Series	with or without (F)	3-point Panic, SVR, electrified options. Grout-in 304L strike.	R4504 & SA163
	Von Duprin	WS-LGO Series		ADA bottom latch guard cover with ramp used with WS-T-98/9957	
	Securitech	7T/7C Series		3-point, IHD, HVL option (single-only), electric options	R27798
	Securitech	83T, 83C 84T, 84C Series		Autolock, 3-point, 4-point, SBD, IHD, HVL option (single-only) electric options. Pair inactive leaf requires SB360-WS surface bolt, manual type.	R27798
Latches - Multi-point Lever hardware Outswing & inswing	Schlage	LM/LMV9300 Series		3-point lock	R27031
	Von Duprin			CVR used with Schlage 3-point lock	R21149
	Ives	SB360-WS		Manual surface bolt for inactive lever pair and grouted-in 304L strike	R4942
Latches - Multi-point Lever hardware Outswing only	Securitech	5200 Series V		2-point, IHD concealed vertical rods (no primary)	R27798
	Securitech	5300 Series, 5400 Series		3 or 4-point, IHD concealed vertical rods, HVL option (single-only)	R27798
	Securitech	73L, 74L, 83L, 84L Series		3 or 4-point IHD/SBD, HVL option (single-only), electrified options	R27798
Latches - Latching hardware for FEMA 320 only - Inswing only multi-action 3 deadbolt system for <16 occupancy (small business/residential)	Medeco	Maxum		3 manual deadbolts in conjunction with cylindrical locks shown below	R18248
	Schlage	ND Series		Cylindrical locks used with Medeco Maxum	R3515
	Falcon	T Series			GWVV
Butt hinges	Ives	3CB1, 3CB1HW, 3CB1NRP, 3CB1HWNRP, 3CB1SH, 3CB1HWSH, 5BB1, 5BB1HW, 5BB1WT, 5BB1NRP, 5BB1HWNRP, 5BB1SH, 5BB1HWSH, 5BB1HW WT		Ives butt hinges - 4.5 High (0.134 Min) or 5 high (0.146 Min)	R16697
	Ives	TW4, TW8		Ives electric hinge options	BP9752
Continuous hinges	Ives	112HD, 112XY, 224HD, 224XY		Ives aluminum geared continuous hinge - nominal leaf thickness 0.110	R16697
	Ives	600, 700, 700Cs, 705		Ives steel pin & barrel continuous hinge - nominal leaf thickness 14 gage	R16697
	Ives	TW8, TWP		Ives electric continuous hinge options	BP9752
Electronic power transfer	Von Duprin	EPT-2, EPT-10			SA163
Surface mounted closers	LCN	4000T, 4010, 4010T, 4020, 4020T, 4030, 4030T, 4040XP, 4040XPT, 4050, 4110, 4110T		All surface mounted closers must be attached to door with through bolts per manufacturer's installation instructions. Covers must be attached with steel screws. 4010, 4040XPT, 4000T & 4050 do not open to 180 degrees, so application should be confirmed.	R1943
	Falcon	FALCON SC70 (heavy duty), SC80A (med duty), SC60A (light duty)			R1943
Surface mount Overhead holder/stop	Glynn Johnson	70S, 79S, 81S, 90S		79 Series does not open to 180 degrees, so application should be confirmed.	R18895
Electronic door closer	LCN	Sentronic 4040SE, 4310ME		4310ME May be mounted on interior or exterior side of storm shelter or safe room. 4040SE exterior side only.	R1943
Auto-door operator	LCN	9542, 9553		To be mounted only to the exterior side of storm shelter or safe room.	R7303
Magnetic holder	LCN	SEM 7800		Extenders not permitted on inswing applications	R8327
Door position switch	Schlage	679-05HM (round)		Must be mortised into the edge or top of the door, and into the door rabbet of the jamb or head of the frame.	R21149
	Sentrol	1076, 1078 (round)			R13778
Kick plates	Ives	8400 (Metal or plastic), 8402 (metal)		Must be secured with steel screws. 48" Max height bottom of door only.	R22142
Thresholds & gasketing	Zero	multiple		Must not impede or affect the function of the opening or latching hardware. Must grout full in area around strike to secure strike in slab.	R18465
Floor & wall stops/holders	Ives	multiple		Attached to exterior with steel screws per manufacturer's instructions. Interior application must be Ives FS495 through bolted to the door, at the bottom only, minimum 6" from lock or strike side of door.	

- \*NOTE:
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