

ALLEGION - SCHLAGE LOCK COMPANY, LLC.

STEELCRAFT/REPUBLIC HURRICANE/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 THE CURRENT FLORIDA BUILDING CODE. PRODUCTS COMPLY WITH TORNADO, HURRICANE, COMBINED HURRICANE/TORNADO SHELTERS, AND THE CURRENT FLORIDA 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
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
VARIES SEE SHEET 2	LARGE MISSILE IMPACT 15LB 2X4 AT 100MPH	HURRICANE

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"

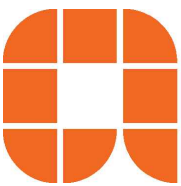
2.3. FRAMES AVAILABLE AS FLUSH

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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TITLE: STEELCRAFT/REPUBLIC HURRICANE/TORNADO STEEL DOOR & FRAME ASSEMBLY FLUSH INSWING/OUTSWING DOORS
GENERAL NOTES & DESIGN PRESSURE TABLE

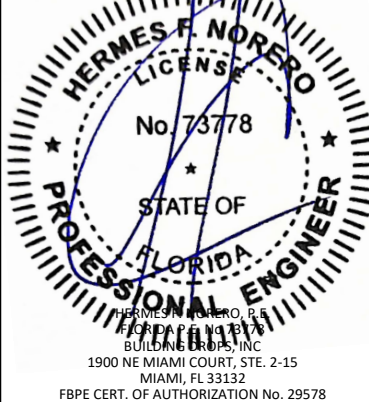
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MIAMI, FL 33132
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REMARKS	BY	DATE
ICC 500 UPDATE	SH	06.11.24
CONFIG. UPDATE	DI	08.18.25

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Reason: I am approving this document
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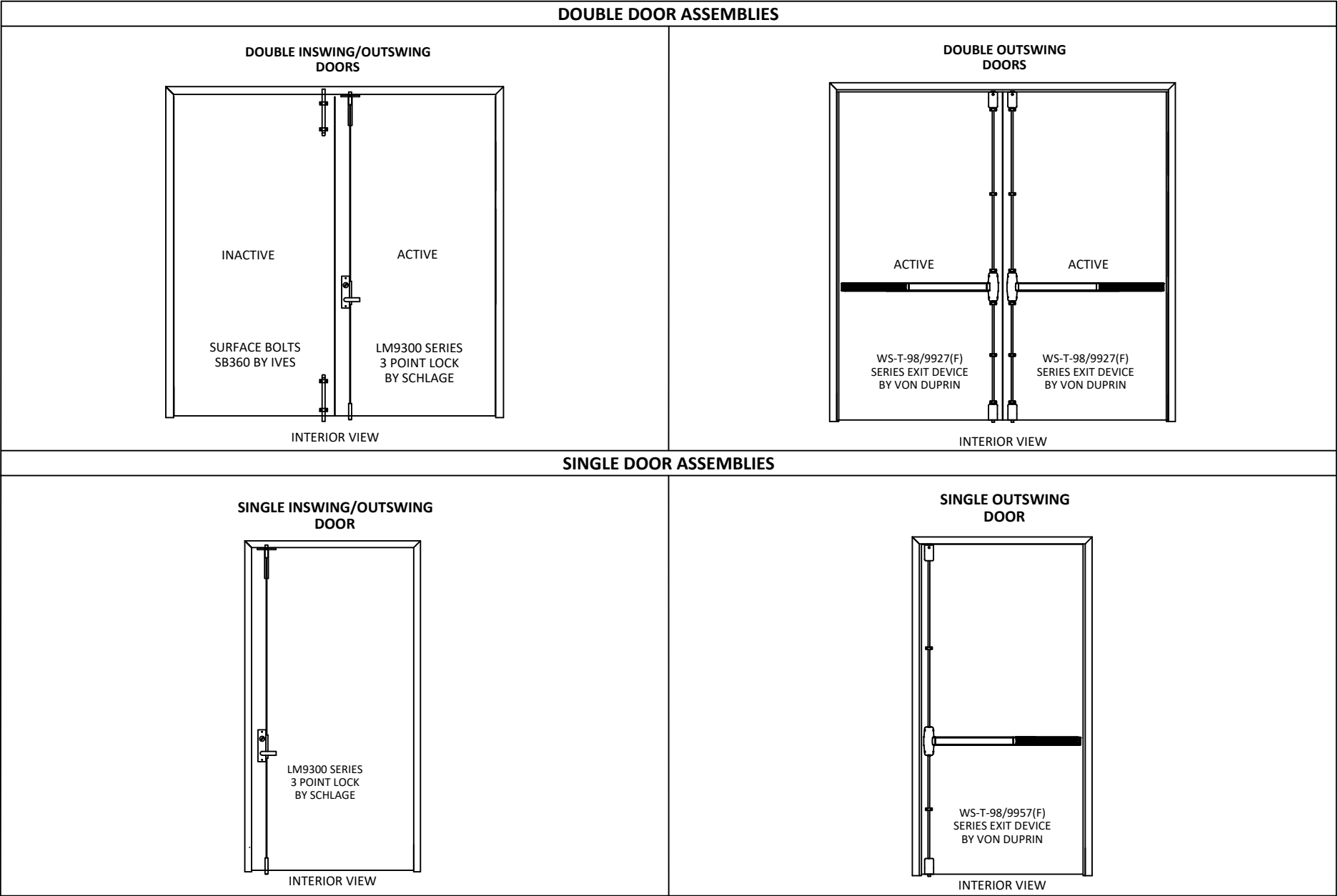
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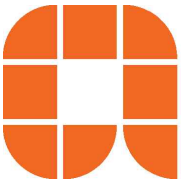
STEELCRAFT/REPUBLIC HURRICANE/TORNADO STEEL DOOR & FRAME ASSMEBLY

PRODUCT MEETS REQUIREMENTS OF ICC 500-2020 IMPACT PROTECTIVE SYSTEMS CERTIFIED FOR TORNADO SHELTERS, HURRICANE, & COMBINED HURRICANE/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	1SH	EHPA - HURRICANE	± 201 psf	15LB 2X4 AT 100 MPH	3'-0" x 6'-8"	4'-0" x 8'-0"	OUTSWING	LM9300	SCHLAGE	N/A	N/A	
	2SH	EHPA - HURRICANE	± 201 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
	3SH	EHPA - HURRICANE	± 201 psf	15LB 2X4 AT 100 MPH	3'-0" x 6'-8"	4'-0" x 8'-0"	INSWING	LM9300	SCHLAGE	N/A	N/A	
PAIR	1DDH	EHPA - HURRICANE	± 201 psf	15LB 2X4 AT 100 MPH	6'-0" x 6'-8"	8'-0" x 8'-0"	OUTSWING	LM9300	SCHLAGE	SB360	IVES	Z-ASTRAGAL REQUIRED
	1DDH-1	EHPA - HURRICANE	± 201 psf	15LB 2X4 AT 100 MPH	6'-0" x 6'-8"	8'-0" x 8'-0"	INSWING	LM9300	SCHLAGE	SB360	IVES	Z-ASTRAGAL REQUIRED
	2DDH	EHPA - HURRICANE	± 194 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	
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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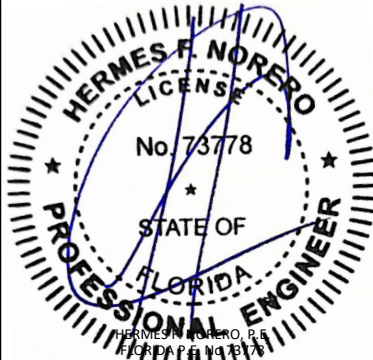
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STEELCRAFT/REPUBLIC
HURRICANE/TORNADO
STEEL DOOR & FRAME ASSEMBLY
FLUSH INSWING/OUTSWING DOORS
VON DUPRIN & SCHLAGE DOOR ASSEMBLY
CONFIGURATIONS

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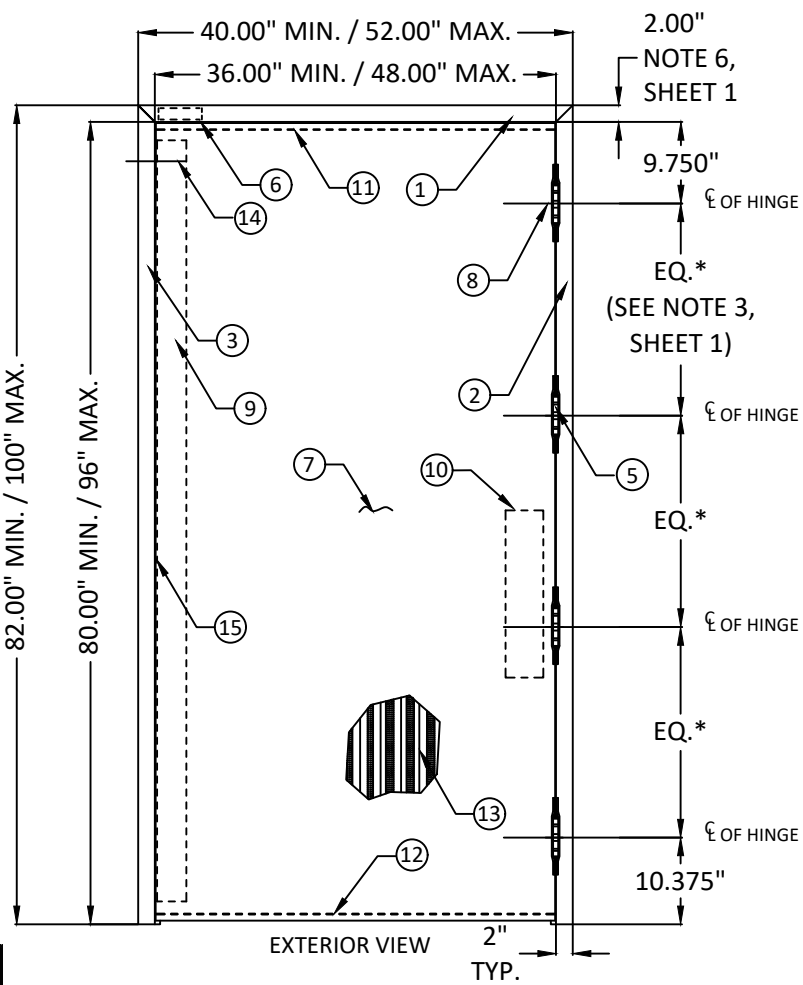
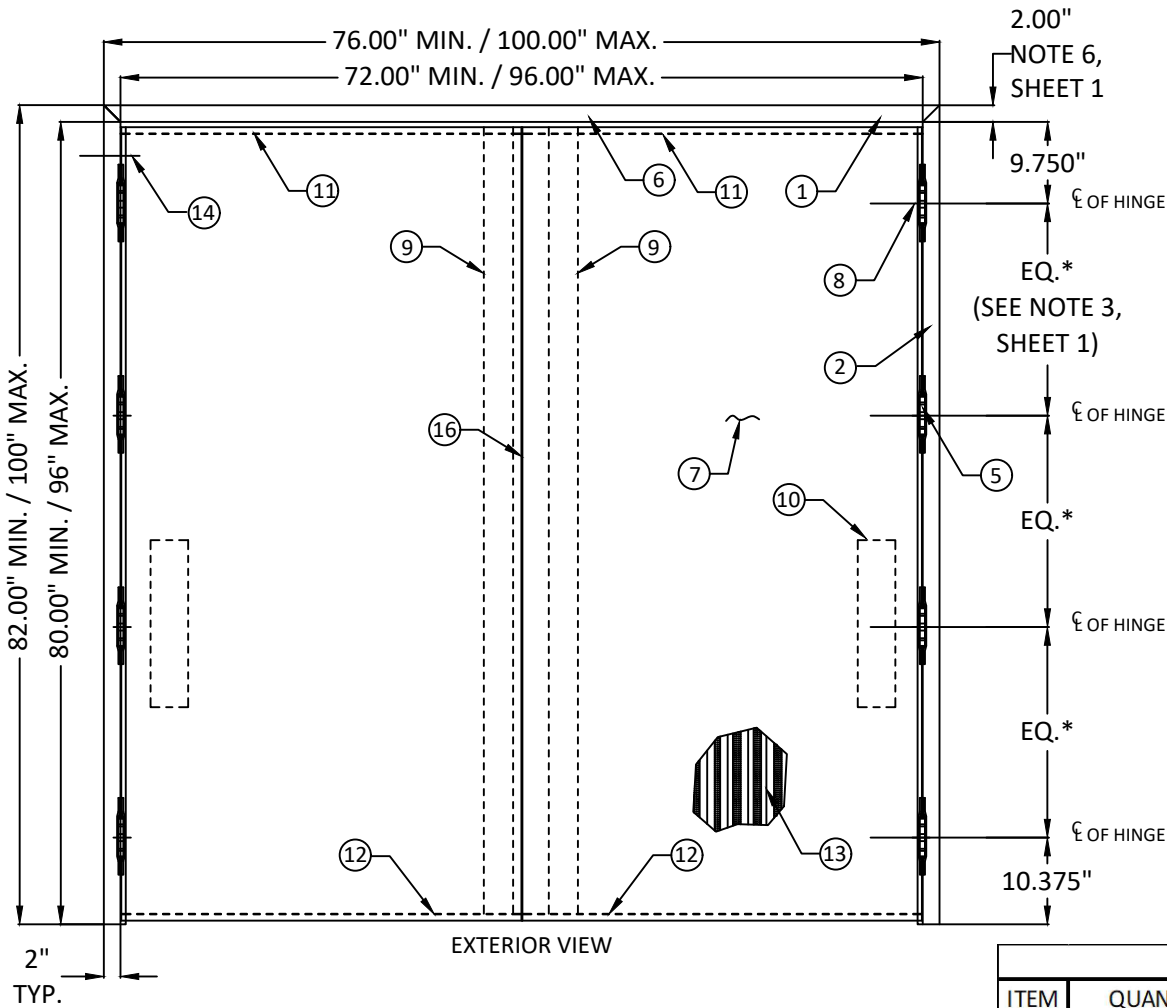
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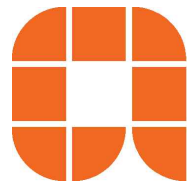
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OPENING DIMENSIONS & BOM



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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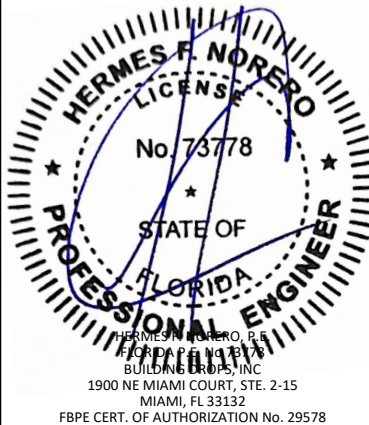
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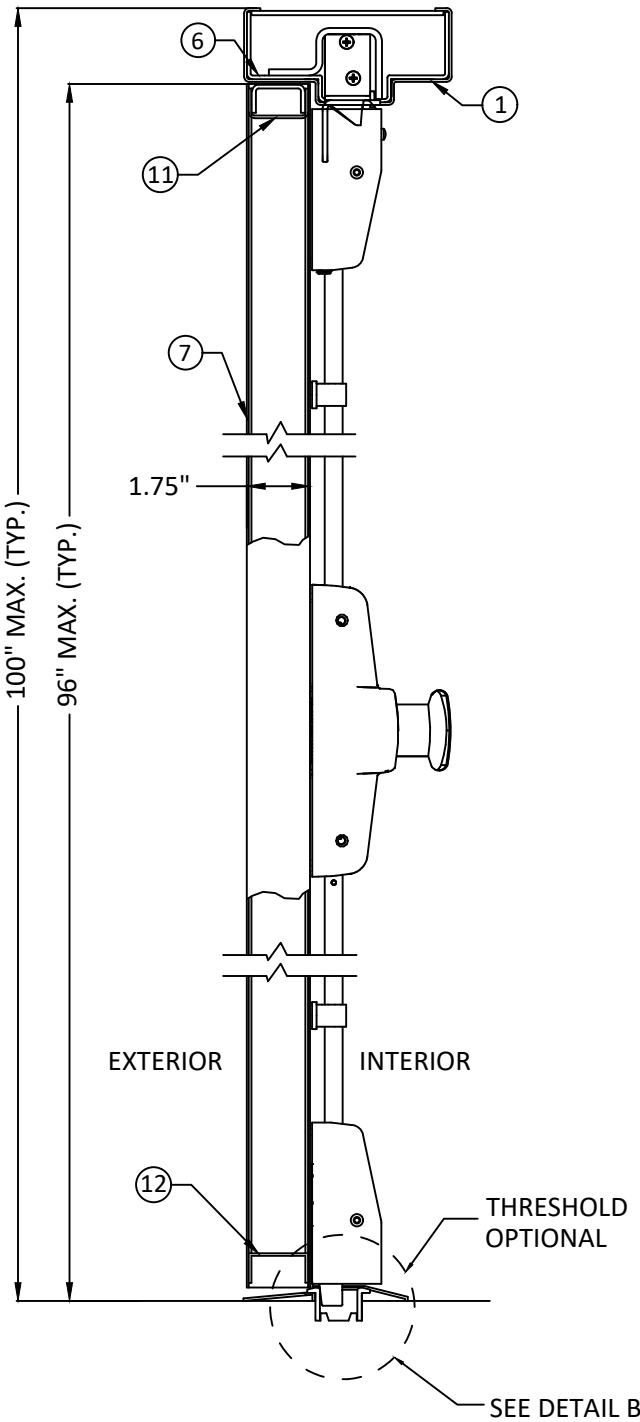


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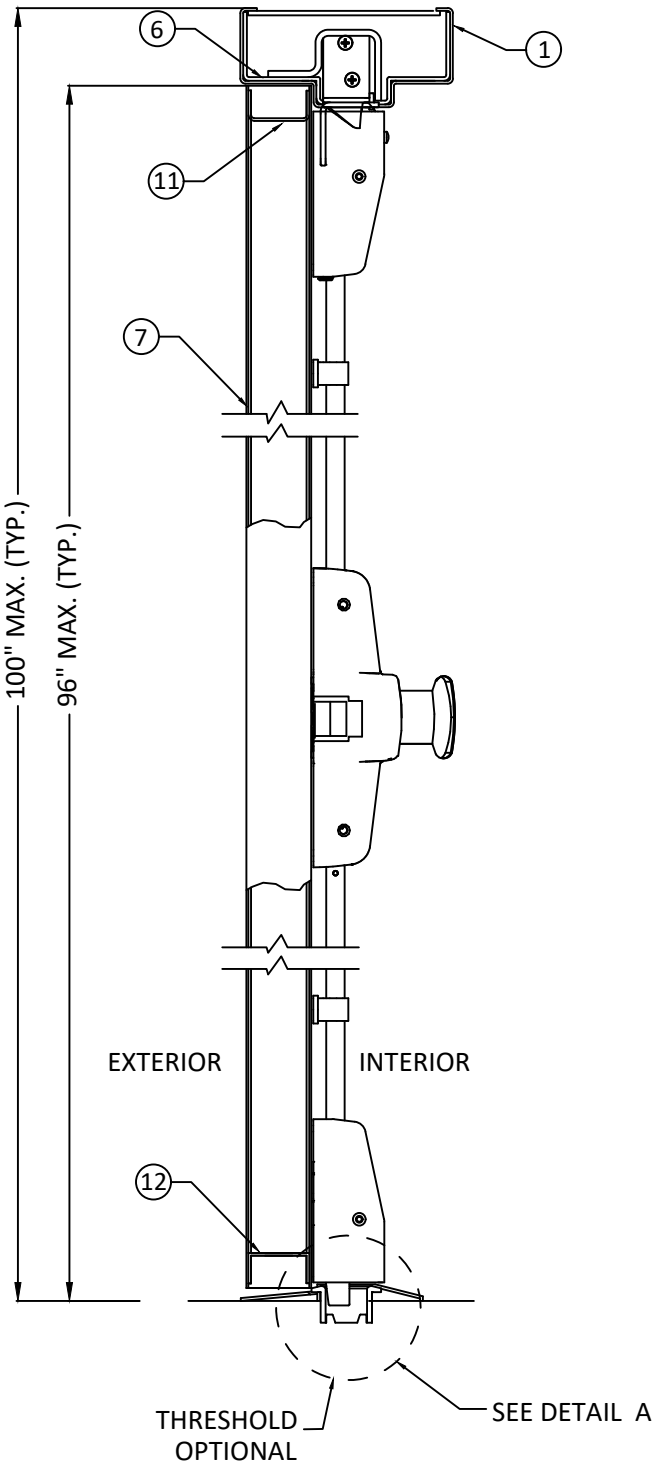
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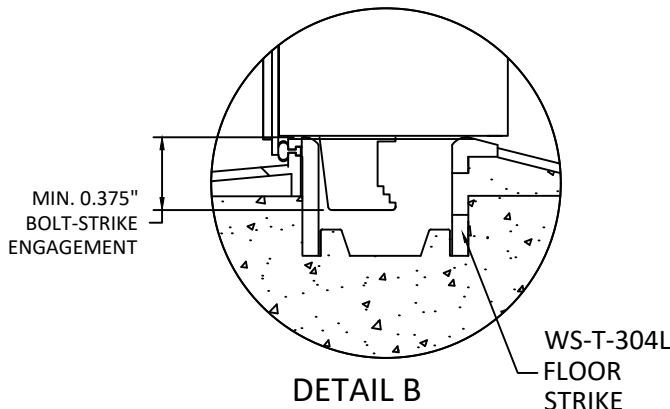
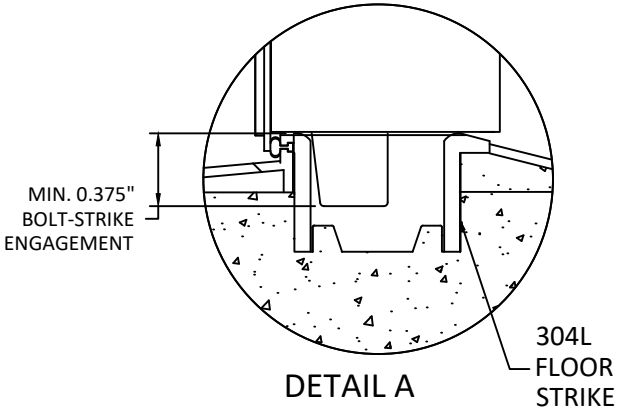
DOOR & FRAME VERTICAL SECTION VIEWS

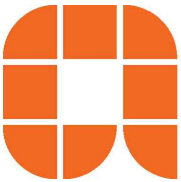


DOUBLE OPENING
VON DUPRIN WS-T-98/9927(F)
OUTSWING DOOR WITH SURFACE
VERTICAL ROD DEVICE



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





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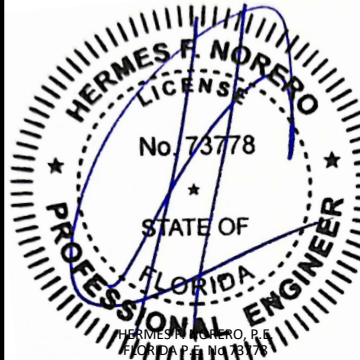
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STEEL DOOR & FRAME ASSEMBLY
FLUSH INSWING/OUTSWING DOORS
DOOR & FRAME
VERTICAL SECTION VIEWS

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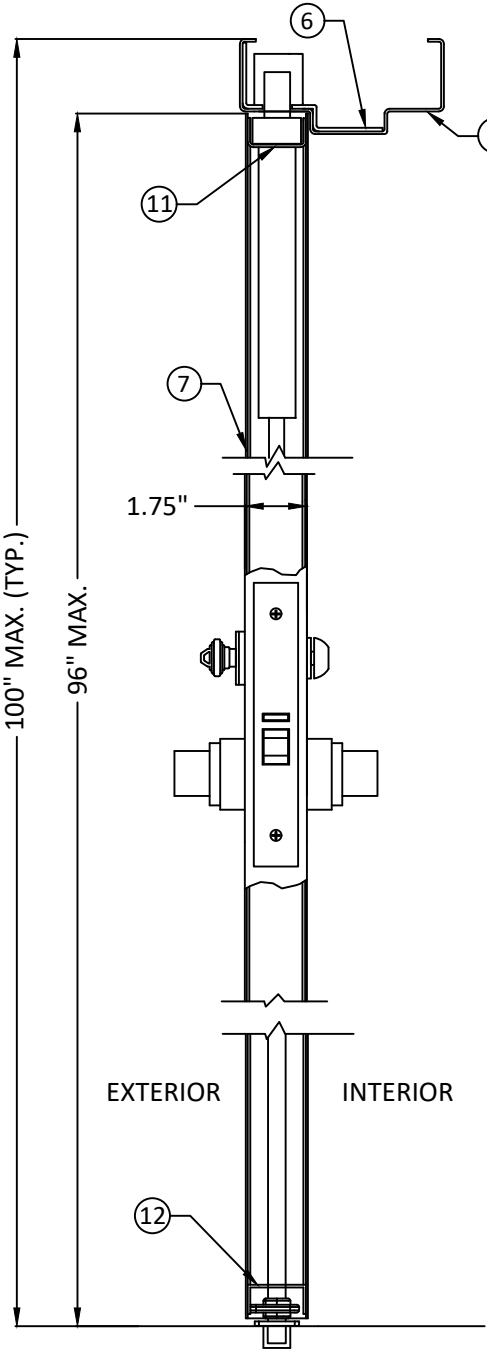
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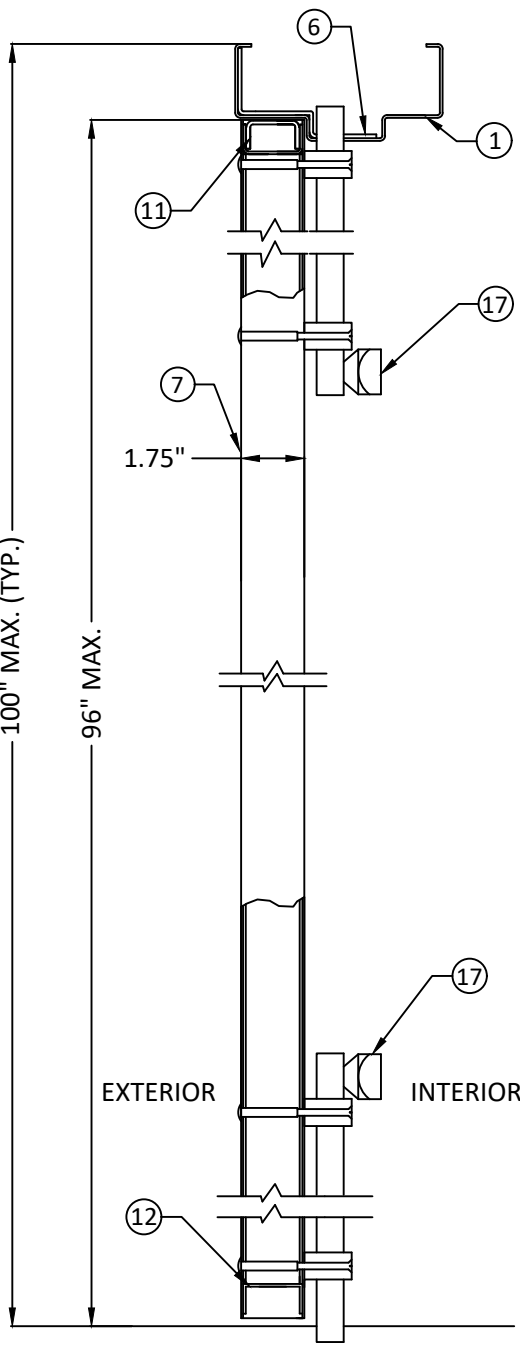
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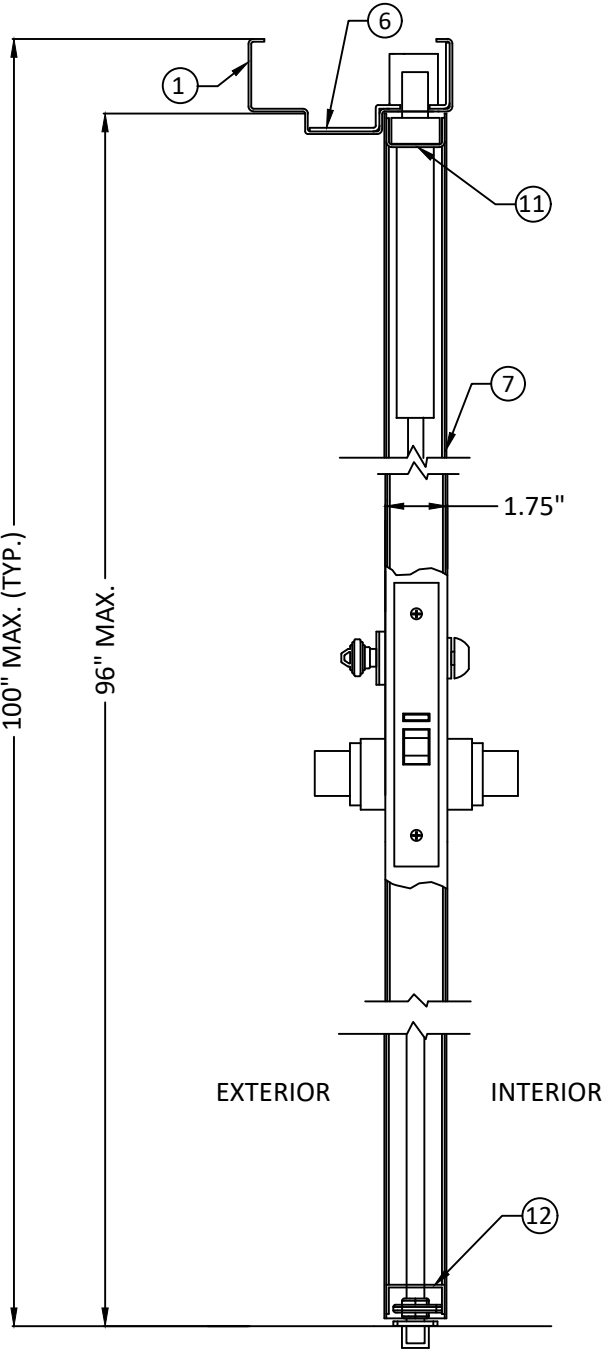
DOOR & FRAME VERTICAL SECTION VIEWS



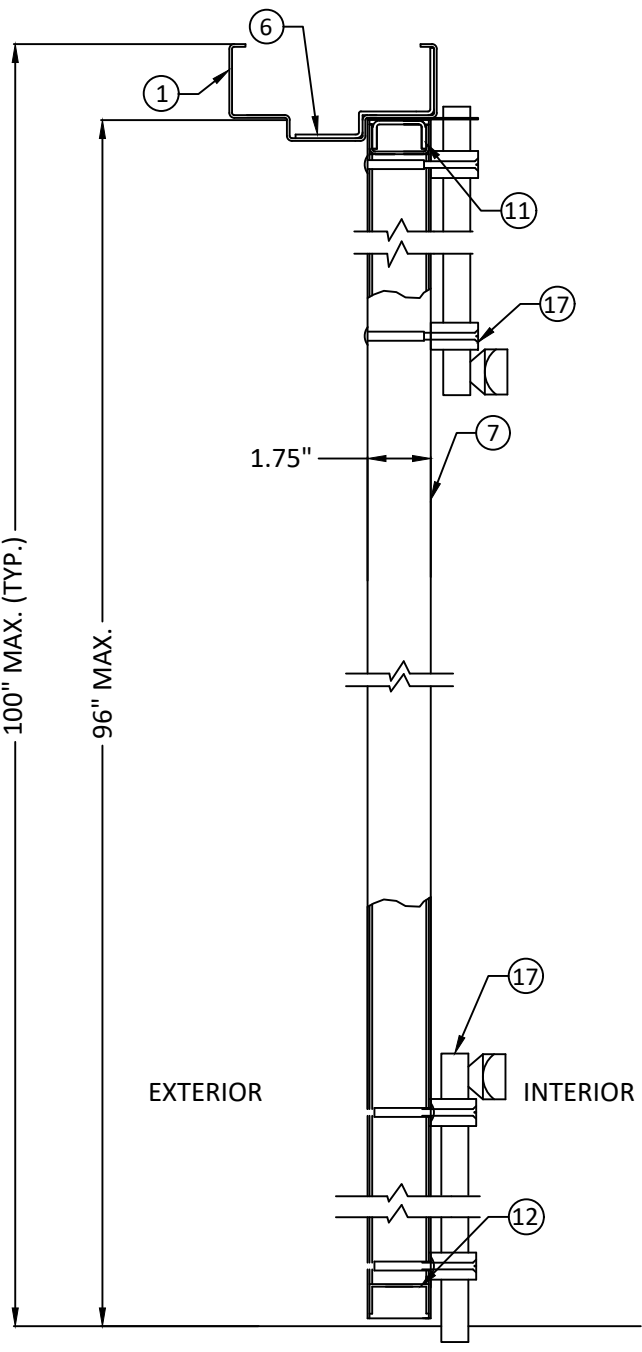
SINGLE OR DOUBLE OPENING
SCHLAGE LM9300
INSWING/OUTSWING DOOR WITH
THREE POINT MORTISE LOCK



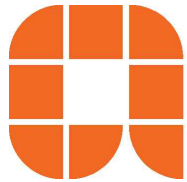
DOUBLE OPENING
INACTIVE LEAF
OUTSWING DOOR WITH ASTRAGAL
AND IVES SB360 SURFACE BOLTS IN
TOP AND BOTTOM



SINGLE OR DOUBLE OPENING
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INSWING DOOR WITH
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DOUBLE OPENING
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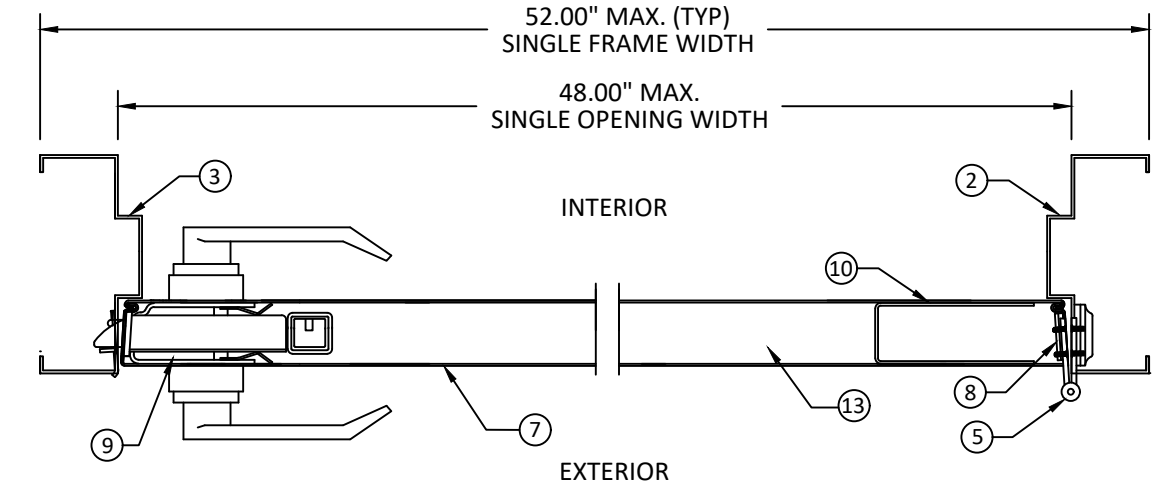


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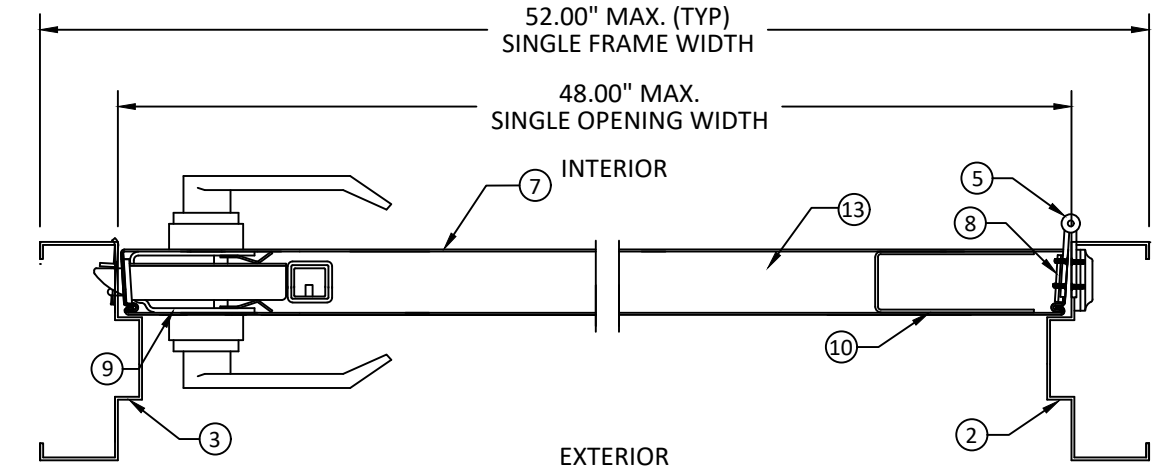
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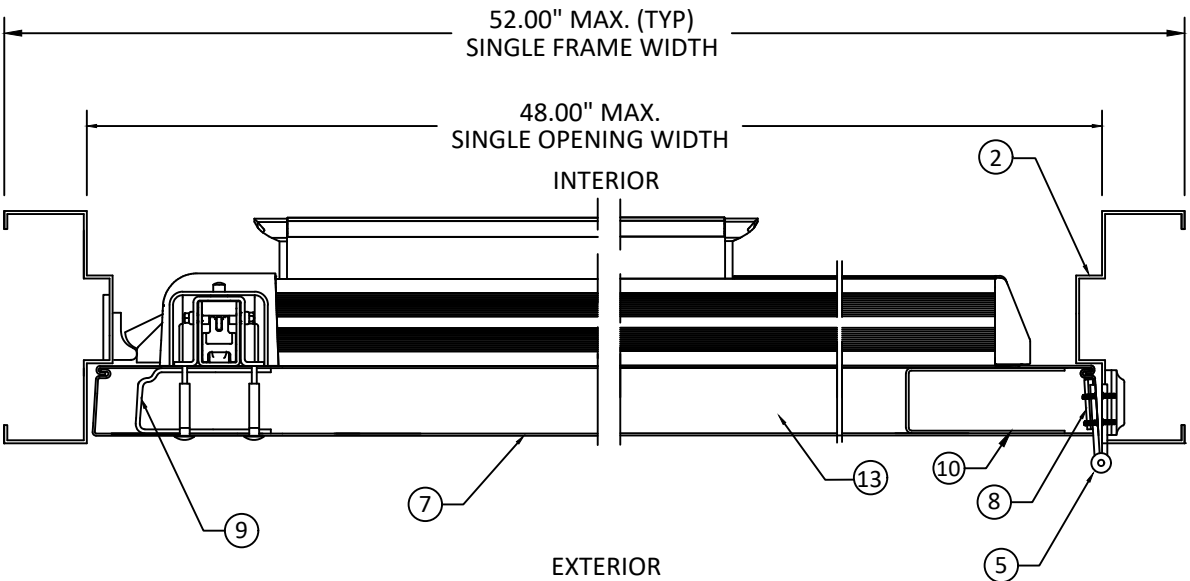
SINGLE DOOR & FRAME HORIZONTAL SECTION VIEWS



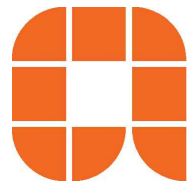
SINGLE OPENING
OUTSWING DOORS
WITH SCHLAGE LM9300



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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FLUSH INSWING/OUTSWING DOORS
SINGLE DOOR & FRAME
HORIZONTAL SECTION VIEWS

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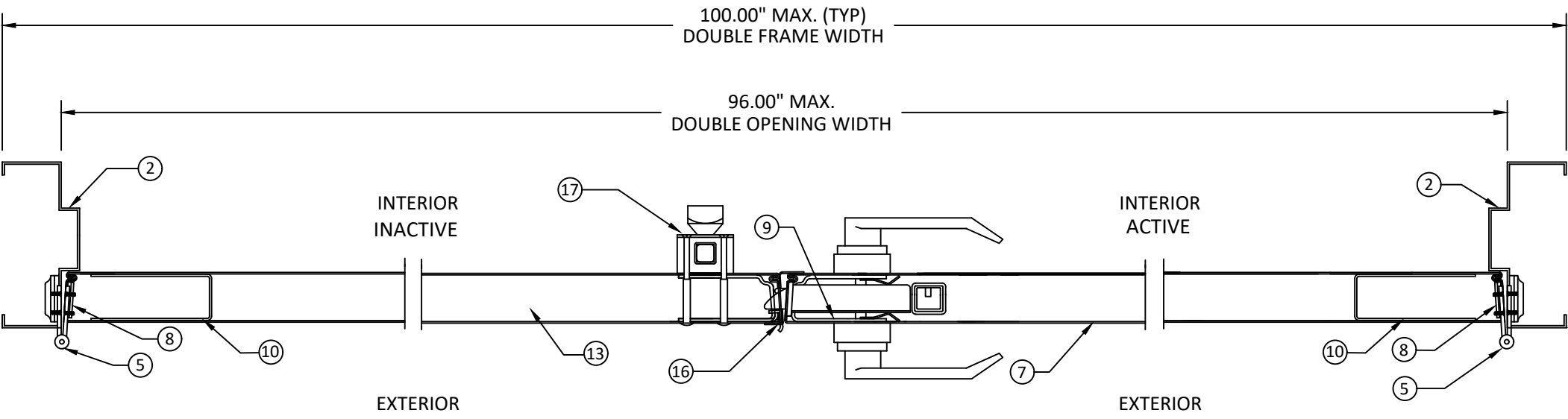


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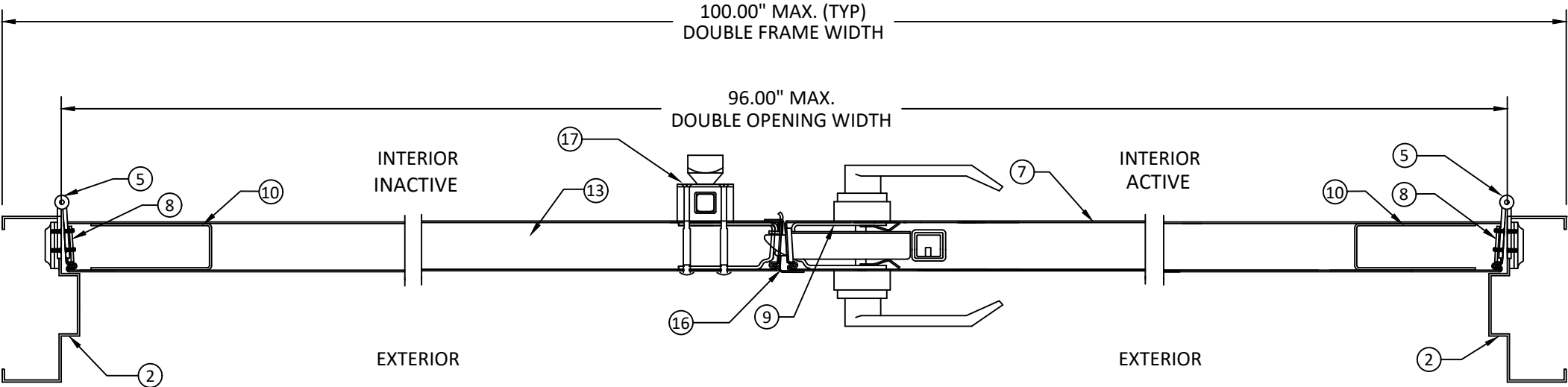
STEELCRAFT/REPUBLIC HURRICANE/TORNADO STEEL DOOR & FRAME ASSMEBLY

PRODUCT MEETS REQUIREMENTS OF ICC 500-2020 IMPACT PROTECTIVE SYSTEMS CERTIFIED FOR TORNADO SHELTERS, HURRICANE, & COMBINED HURRICANE/TORNADO SHELTERS.

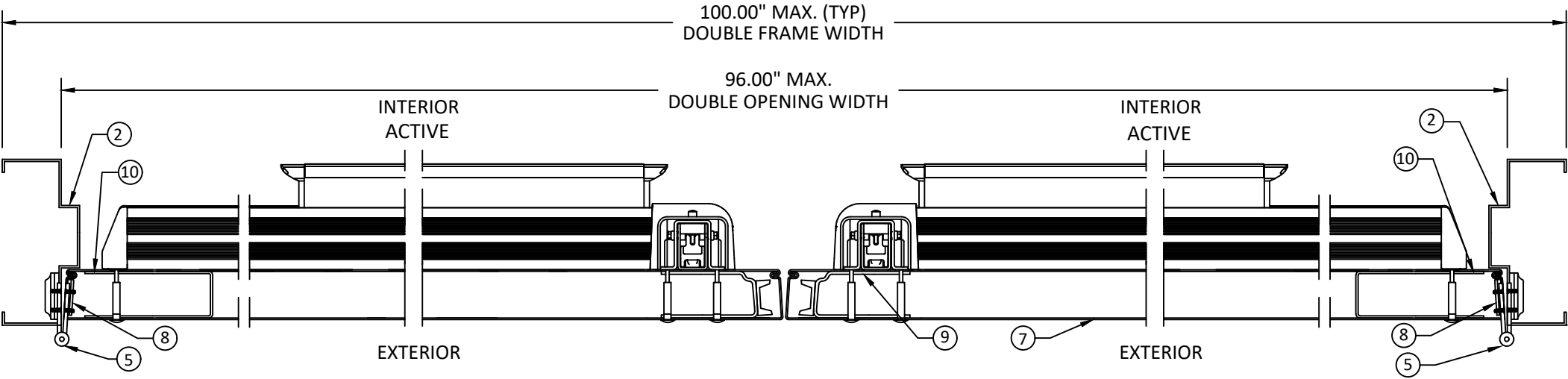
DOUBLE DOOR & FRAME HORIZONTAL SECTION VIEWS



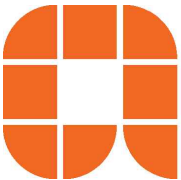
DOUBLE OPENING
OUTSWING DOORS
ACTIVE LEAF: SCHLAGE LM9300
INACTIVE LEAF: IVES 360 SURFACE BOLTS
& Z-ASTRAGAL



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



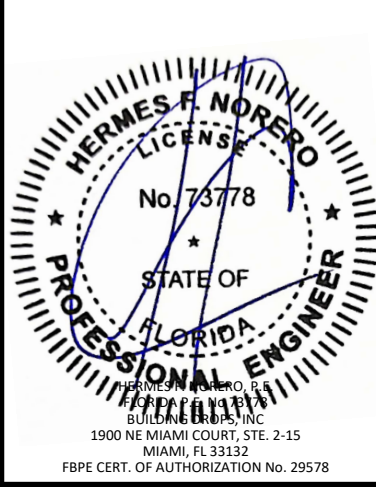
ALLEGION - SCHLAGE LOCK COMPANY, LLC.
11819 N. PENNSYLVANIA STREET
CARMEL, IN 46032
PH: (317) 715-4073

TITLE: STEELCRAFT/REPUBLIC
HURRICANE/TORNADO
STEEL DOOR & FRAME ASSEMBLY
FLUSH INSWING/OUTSWING DOORS
DOUBLE DOOR & FRAME
HORIZONTAL SECTION VIEWS

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

REMARKS	BY	DATE
ICC 500 UPDATE	SH	06.11.24
CONFIG. UPDATE	DI	08.18.25

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SCALE:	NTS
DWG. #:	PWF001
SHEET:	7

STEELCRAFT/REPUBLIC HURRICANE/TORNADO STEEL DOOR & FRAME ASSMEBLY

PRODUCT MEETS REQUIREMENTS OF ICC 500-2020 IMPACT PROTECTIVE SYSTEMS CERTIFIED FOR TORNADO SHELTERS, HURRICANE, & COMBINED HURRICANE/TORNADO SHELTERS.

FRAME DETAILS, DOOR PANELS, CORE DETAILS & CORNER CONSTRUCTION

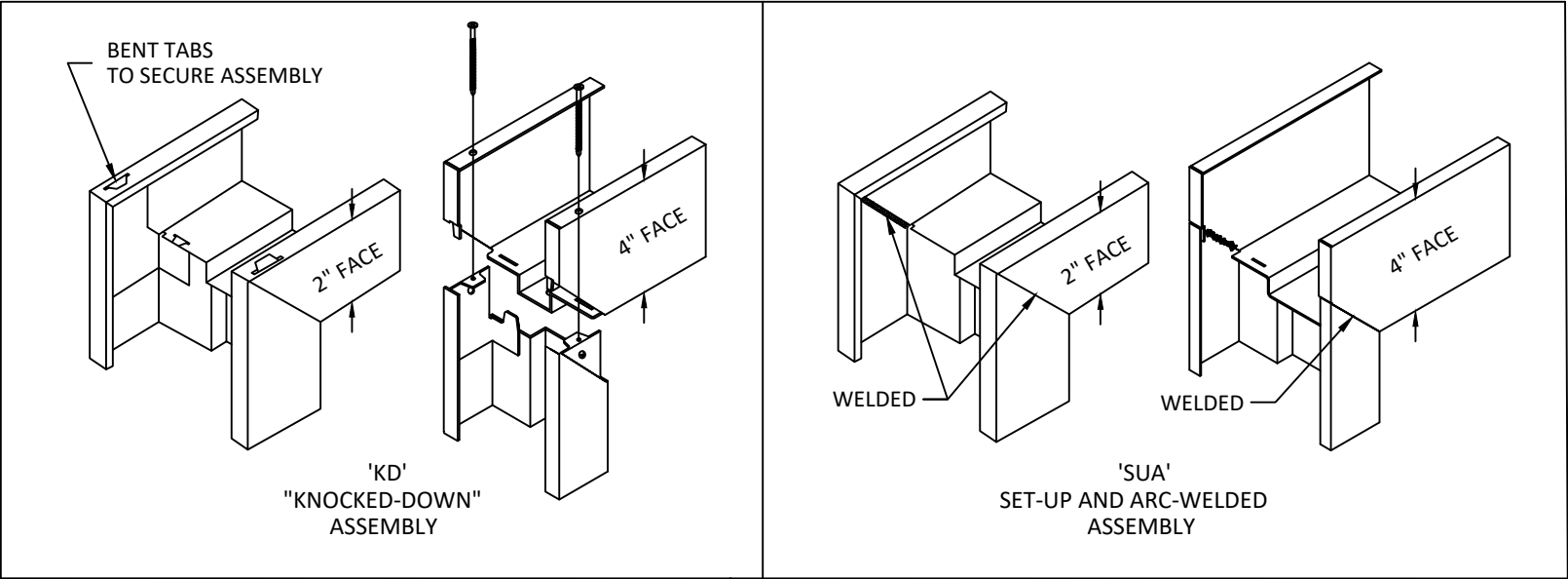


TABLE 1: AVAILABLE DOOR CONFIGURATIONS

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"

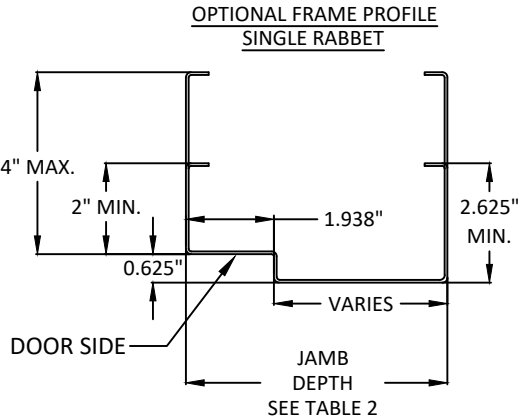
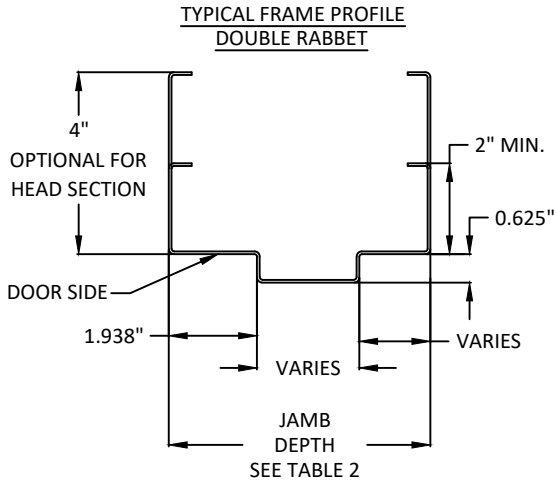
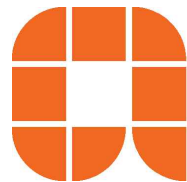


TABLE 2: AVAILABLE FRAME CONFIGURATIONS

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		



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11819 N. PENNSYLVANIA STREET
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TITLE: STEELCRAFT/REPUBLIC
HURRICANE/TORNADO
STEEL DOOR & FRAME ASSEMBLY
FLUSH INSWING/OUTSWING DOORS
FRAME DETAILS, DOOR PANEL, CORE
DETAILS, & CORNER CONSTRUCTION

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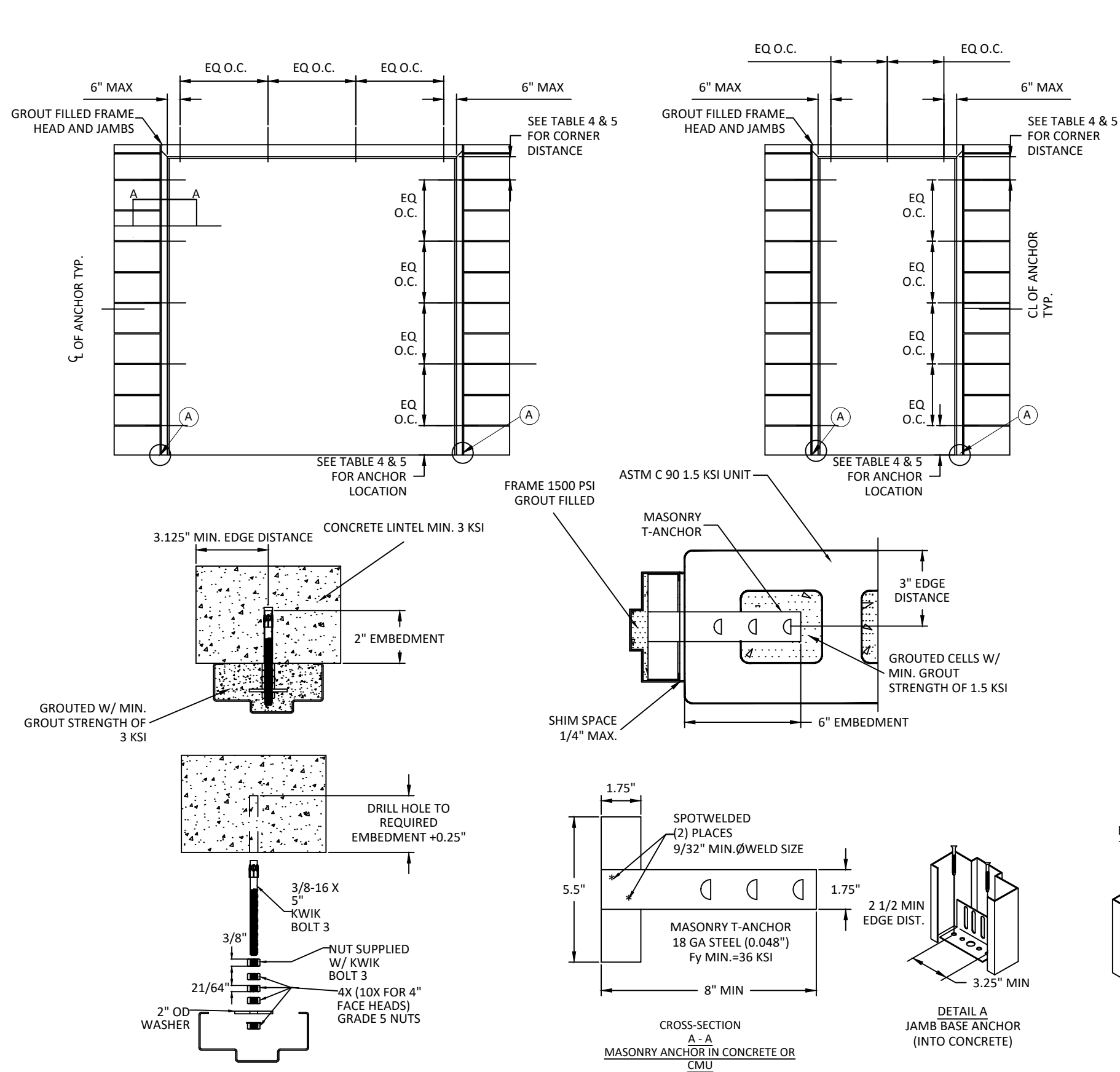
SHEET: **8**

OF 16

STEELCRAFT/REPUBLIC HURRICANE/TORNADO STEEL DOOR & FRAME ASSMEBLY

PRODUCT MEETS REQUIREMENTS OF ICC 500-2020 IMPACT PROTECTIVE SYSTEMS CERTIFIED FOR TORNADO SHELTERS, HURRICANE, & COMBINED HURRICANE/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.

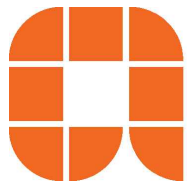
MASONRY T ANCHORS MAY ALTERNATIVELY BE USED IN POURED CONCRETE WALLS, USING THE QUANTITIES SPECIFIED ABOVE.

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
CARMEL, IN 46032
PH: (317) 715-4073

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

PREPARED BY: BUILDING DROPS, INC.
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PH: (954) 399-8478
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HERMES F. NORERO
LICENSE
No. 73778
STATE OF FLORIDA
PROFESSIONAL ENGINEER

HERMES F. NORERO, P.E.
BUILDING DROPS, INC.
1900 NE MIAMI COURT, STE. 2-15
MIAMI, FL 33132
FBPE CERT. OF AUTHORIZATION No. 29578

FL #:

FL41734

DATE: 10.10.22

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CHK. BY: HFN

SCALE: NTS

DWG. #: PWF001

SHEET: 9

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STEELCRAFT/REPUBLIC HURRICANE/TORNADO STEEL DOOR & FRAME ASSMEBLY

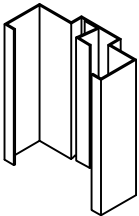
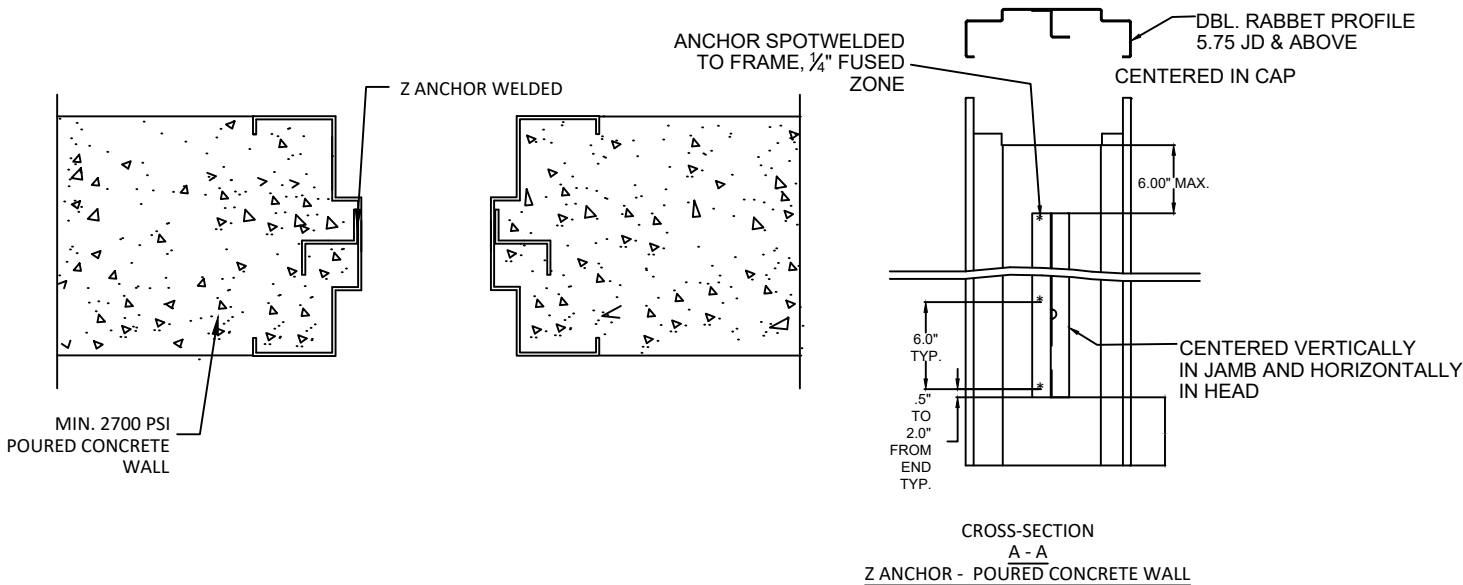
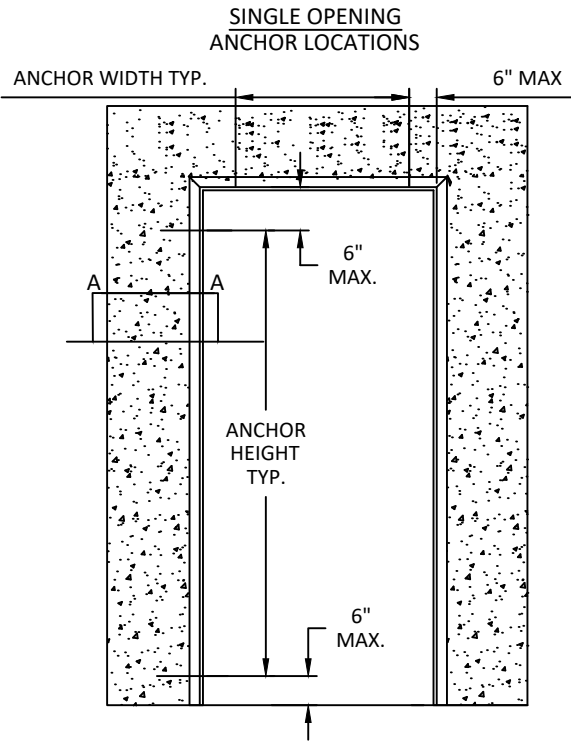
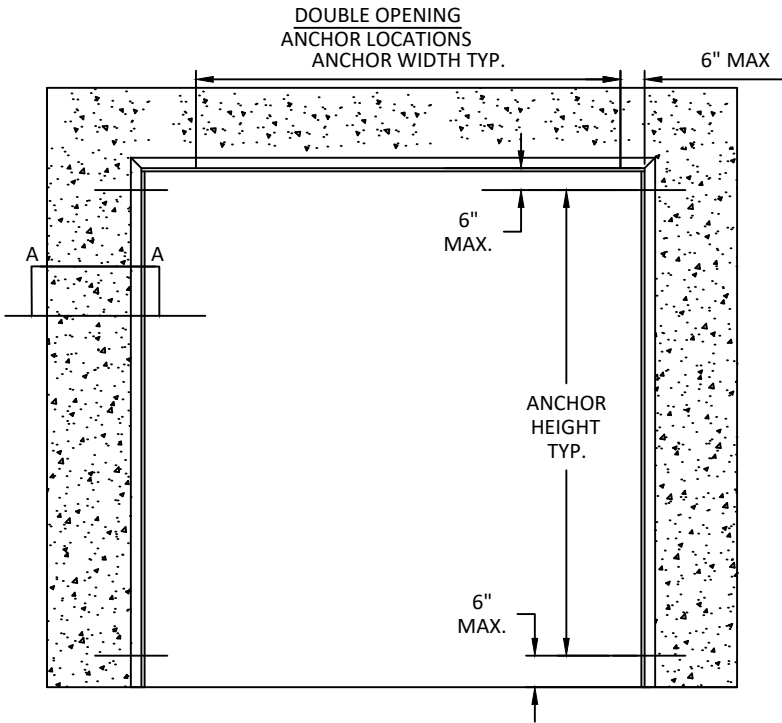
PRODUCT MEETS REQUIREMENTS OF ICC 500-2020 IMPACT PROTECTIVE SYSTEMS CERTIFIED FOR TORNADO SHELTERS, HURRICANE, & COMBINED HURRICANE/TORNADO SHELTERS.

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

B

Z ANCHOR

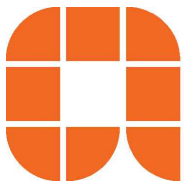
CONCRETE TILT-UP/PRE-FAB/POURED-IN-PLACE WALL



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.



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

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	OF 16

STEELCRAFT/REPUBLIC HURRICANE/TORNADO STEEL DOOR & FRAME ASSMEBLY

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

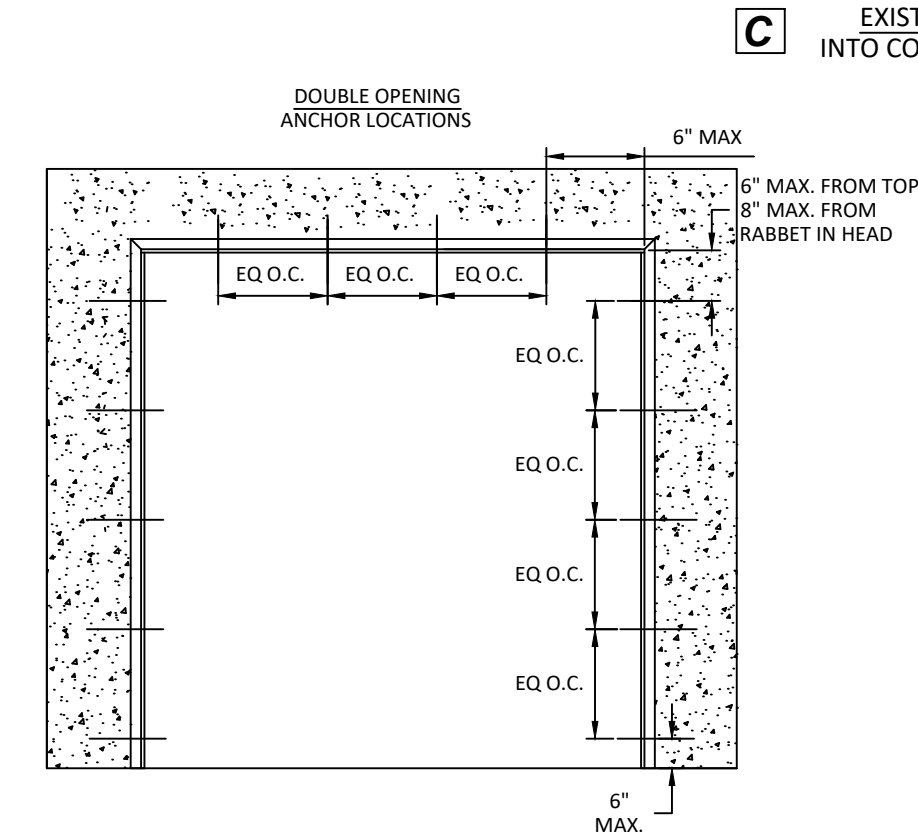


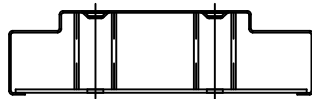
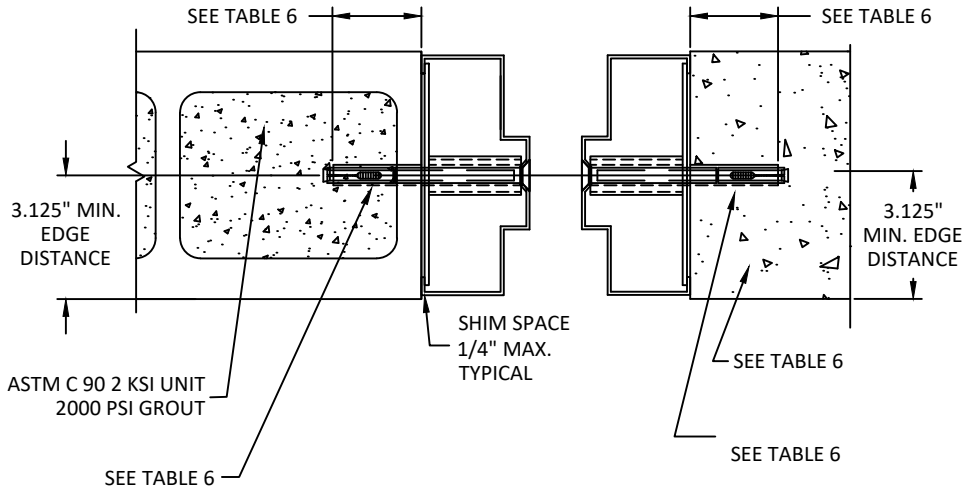
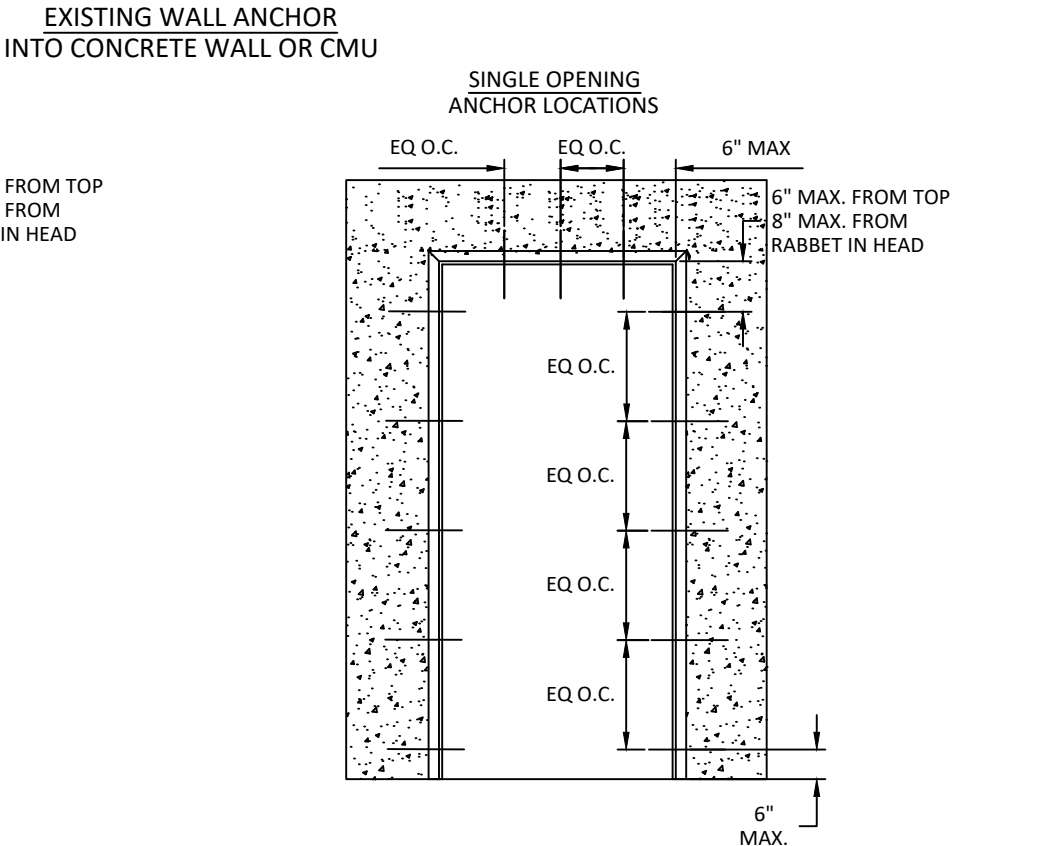
TABLE 6: ANCHOR TYPES AND EMBEDMENT		
ANCHOR	EMBEDMENTS	MIN. CONCRETE PROPERTIES
3/8" HILTI HLC-FPH SLEEVE ANCHOR	1.25"	2000 PSI
3/8" FH POWERS POWER-BOLT	2"	3000 PSI
3/8" FH POWERS LOK BOLT AS	1.25"	3000 PSI
3/8" SIMPSON STRONG TIE SLEEVE-ALL	1.5"	2000 PSI

*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

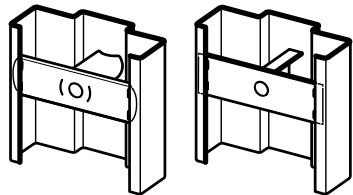
PLACEMENT MAY BE ADJUSTED ± 3" AS REQUIRED TO AVOID INTERFERENCE WITH HARDWARE OR REINFORCEMENT.

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.



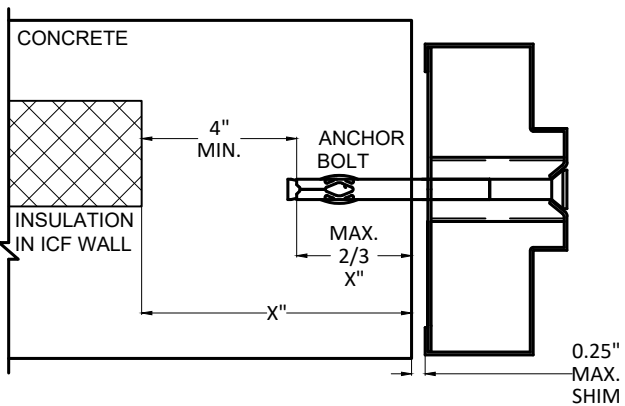
9 1/4" JAMB DEPTH AND ABOVE
REQUIRES 2 ANCHOR BOLTS



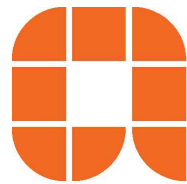
TUBE/CHANNEL &
PLATE BOLT-IN

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.



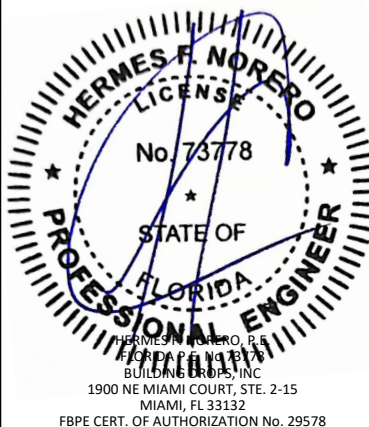
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CARMEL, IN 46032
PH: (317) 715-4073

TITLE: STEELCRAFT/REPUBLIC HURRICANE/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.
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STEELCRAFT/REPUBLIC HURRICANE/TORNADO STEEL DOOR & FRAME ASSMEBLY

PRODUCT MEETS REQUIREMENTS OF ICC 500-2020 IMPACT PROTECTIVE SYSTEMS CERTIFIED FOR TORNADO SHELTERS, HURRICANE, & COMBINED HURRICANE/TORNADO SHELTERS.

ANCHOR DETAILS: FRAMES BOLTED TO BUILDING STRUCTURE

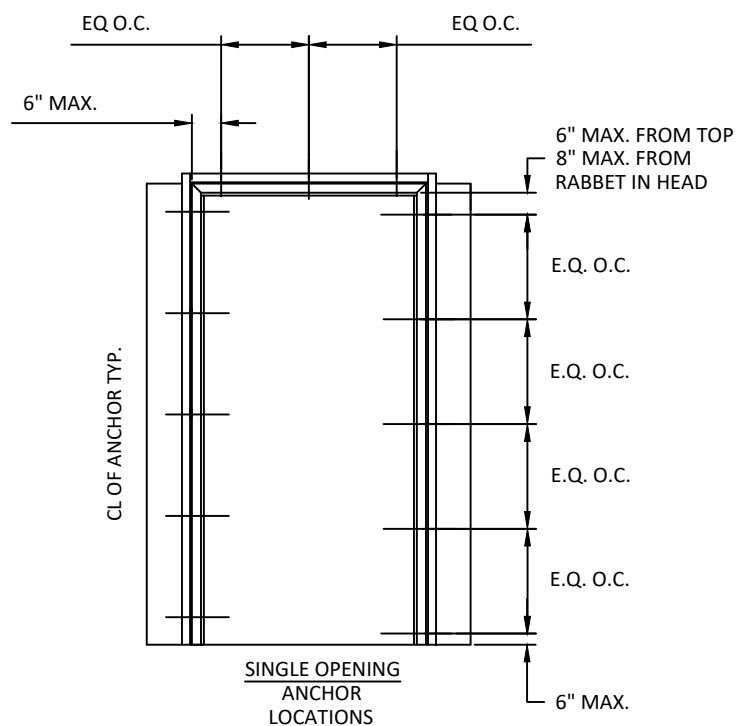
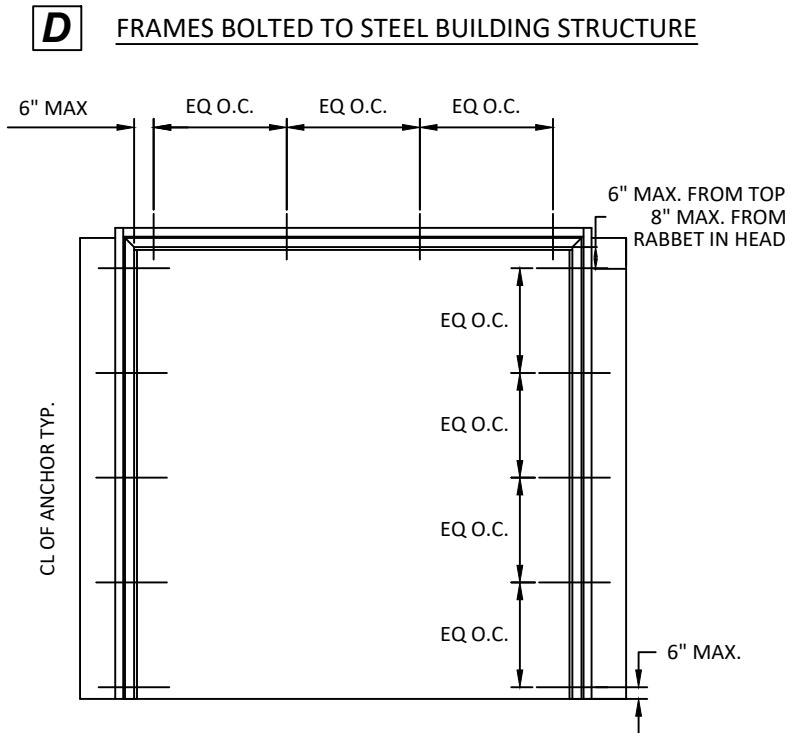
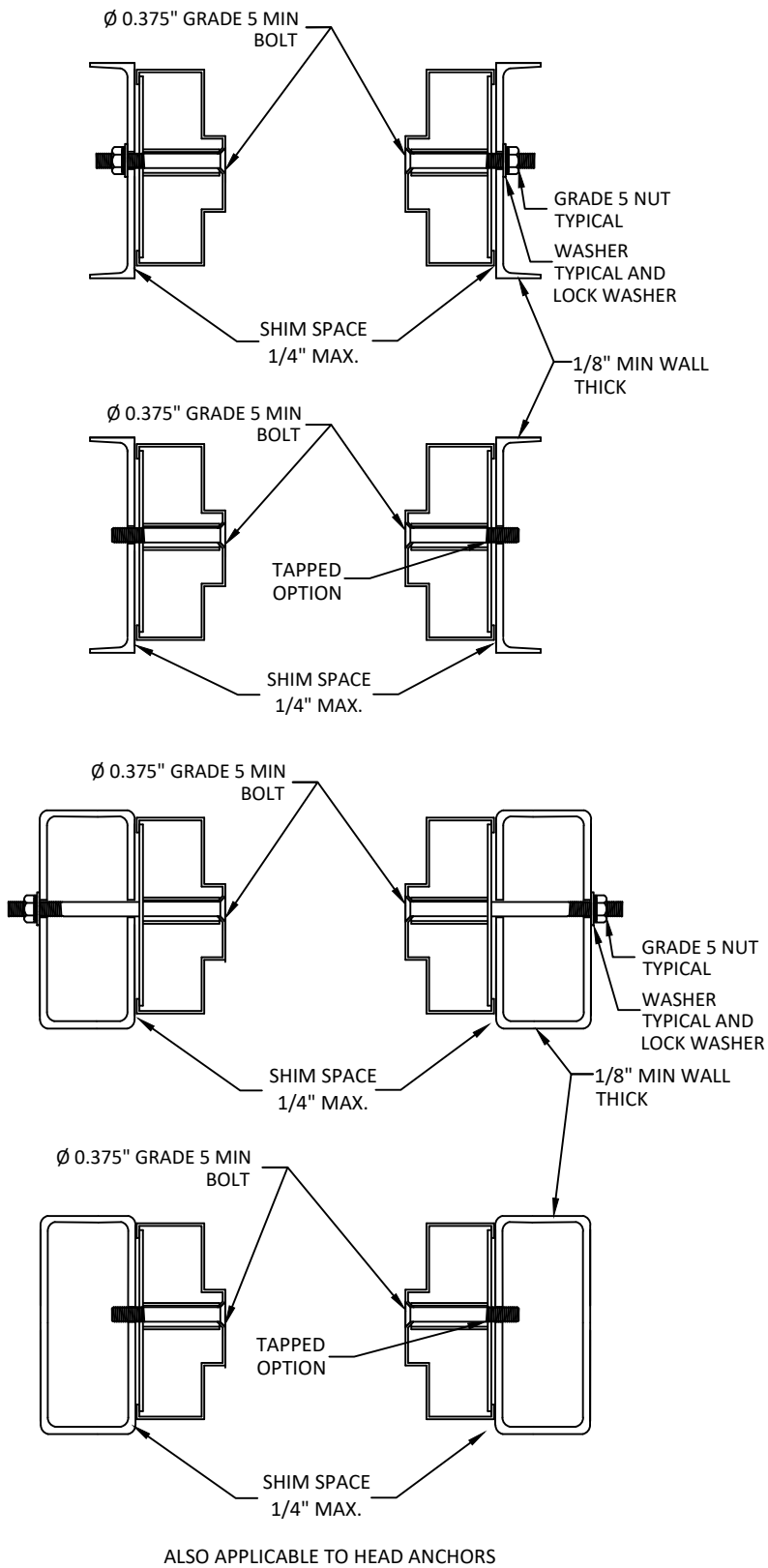
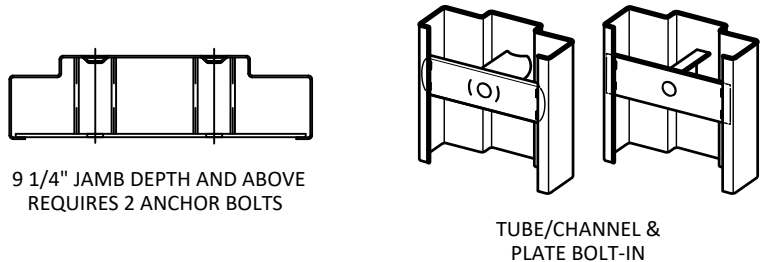


TABLE 9: ANCHOR LAYOUT STRUCTURAL STEEL					
SUBSTRATE	FRAME SIZES			ANCHOR QUANTITY	
STRUCTURAL STEEL MIN. 14 GA. MIN. F _y = 45 KSI	WIDTH	SINGLE		HEAD/SILL	3 ANCHORS MIN.
		PAIR			4 ANCHORS MIN.
	HEIGHT	SINGLE	82"	JAMB	4 ANCHORS MIN.
			> 82"		5 ANCHORS MIN.
		PAIR	82"		4 ANCHORS MIN.
			> 82"		5 ANCHORS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

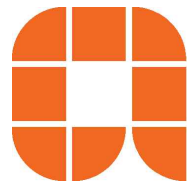
*NOTE:
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PLACEMENT MAY BE ADJUSTED ± 3" AS REQUIRED TO AVOID INTERFERENCE WITH HARDWARE OR REINFORCEMENT.

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.



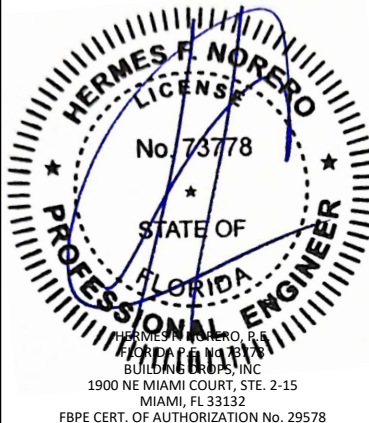
ALLEGION - SCHLAGE LOCK COMPANY, LLC.
11819 N. PENNSYLVANIA STREET
CARMEL, IN 46032
PH: (317) 715-4073

TITLE: STEELCRAFT/REPUBLIC
HURRICANE/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
MIAMI, FL 33132
PH: (954) 399-8478
FAX: (954) 744-4738
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STEELCRAFT/REPUBLIC HURRICANE/TORNADO STEEL DOOR & FRAME ASSMEBLY

PRODUCT MEETS REQUIREMENTS OF ICC 500-2020 IMPACT PROTECTIVE SYSTEMS CERTIFIED FOR TORNADO SHELTERS, HURRICANE, & COMBINED HURRICANE/TORNADO SHELTERS.

ANCHOR DETAILS: FRAMES WELDED TO STEEL STRUCTURE BUILDING

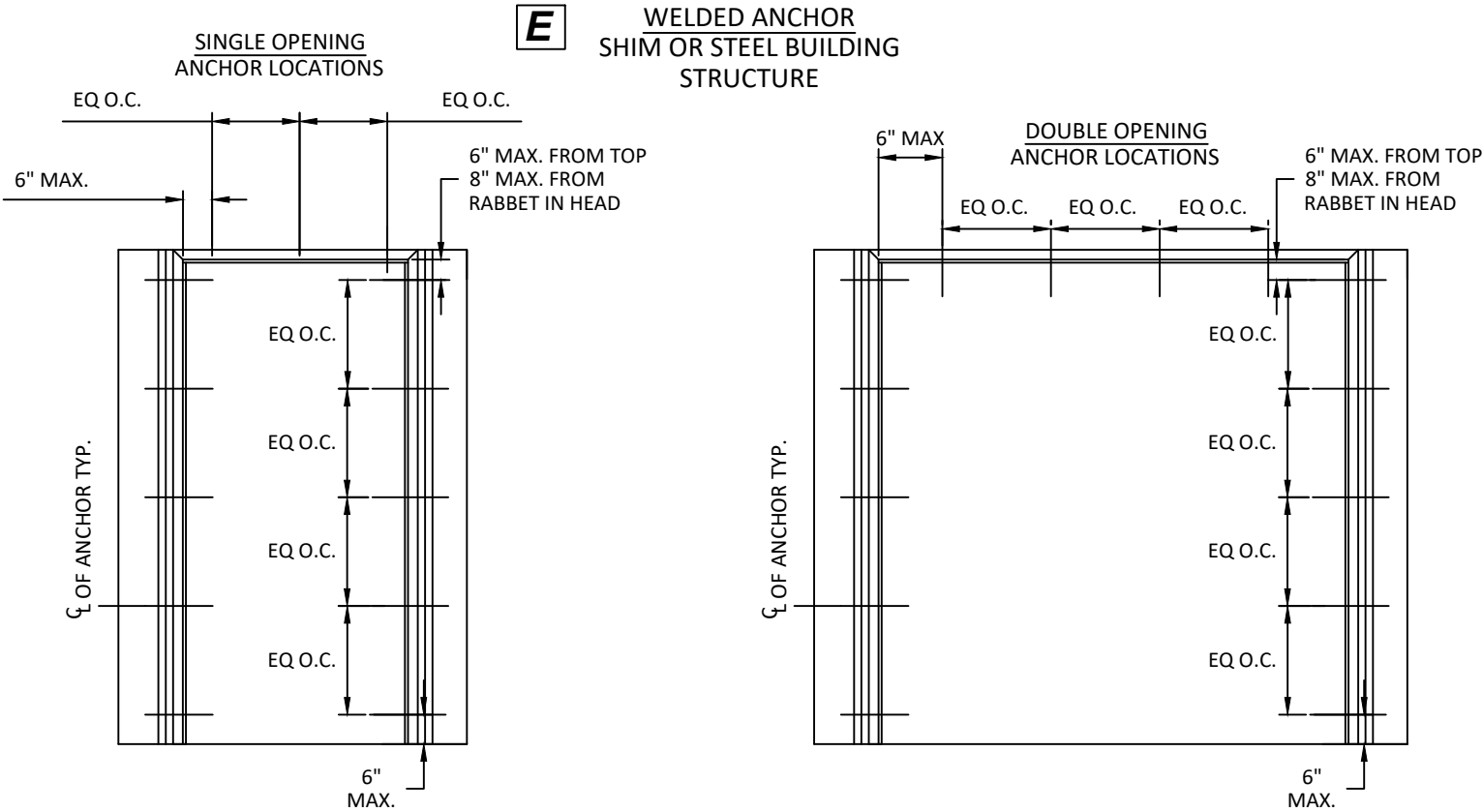
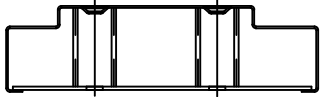
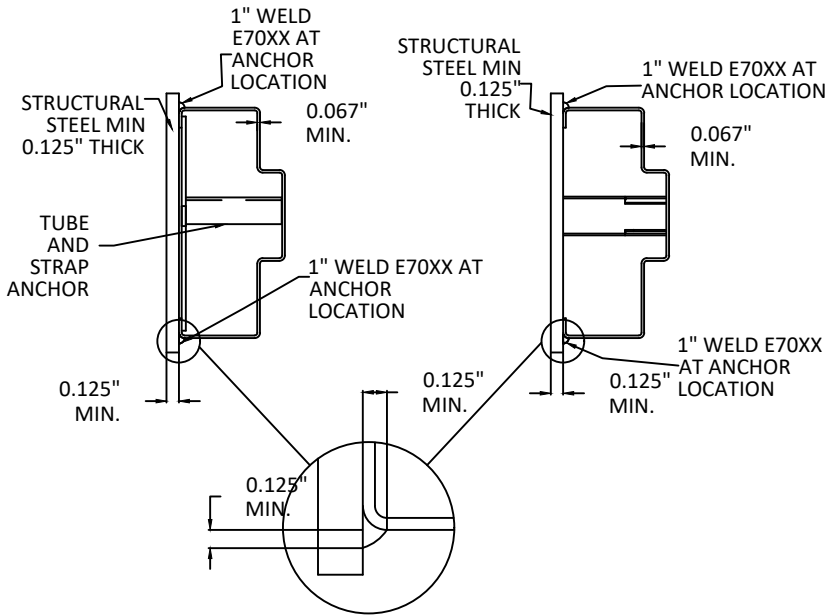


TABLE 10: ANCHOR LAYOUT STEEL STRUCTURE OR STEEL PLATE EMBEDMENT IN CONCRETE					
SUBSTRATE	FRAME SIZES			ANCHOR QUANTITY	
STEEL MIN. 14 GA. MIN. Fy = 45 KSI	WIDTH	SINGLE		HEAD/SILL	3 ANCHORS MIN.
		PAIR			4 ANCHORS MIN.
	HEIGHT	SINGLE	82"	JAMB	4 ANCHORS MIN.
			> 82"		5 ANCHORS MIN.
		PAIR	82"		4 ANCHORS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

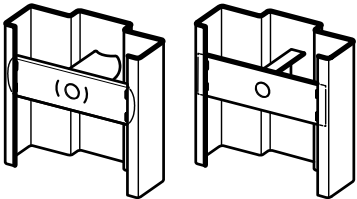
*NOTE:
ANCHORS SHALL BE SPACED AT 4.5" TYP. (6" MAX) FROM TOP, 2.5" TYP. (6" MAX) FROM BOTTOM, 6" TYP. (8" MAX) FROM RABBET IN HEAD AND EQUALLY SPACED THEREAFTER

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.

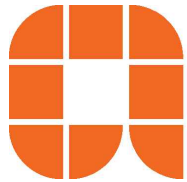


9 1/4" JAMB DEPTH AND ABOVE
REQUIRES 2 ANCHOR BOLTS



TUBE/CHANNEL &
PLATE BOLT-IN

- NOTES:
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 - 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.
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PH: (317) 715-4073

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

PREPARED BY: BUILDING DROPS, INC.
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STEELCRAFT/REPUBLIC HURRICANE/TORNADO STEEL DOOR & FRAME ASSMEBLY

PRODUCT MEETS REQUIREMENTS OF ICC 500-2020 IMPACT PROTECTIVE SYSTEMS CERTIFIED FOR TORNADO SHELTERS, HURRICANE, & COMBINED HURRICANE/TORNADO SHELTERS.

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

F EXISTING WALL ANCHOR INTO CONCRETE WALL OR CMU

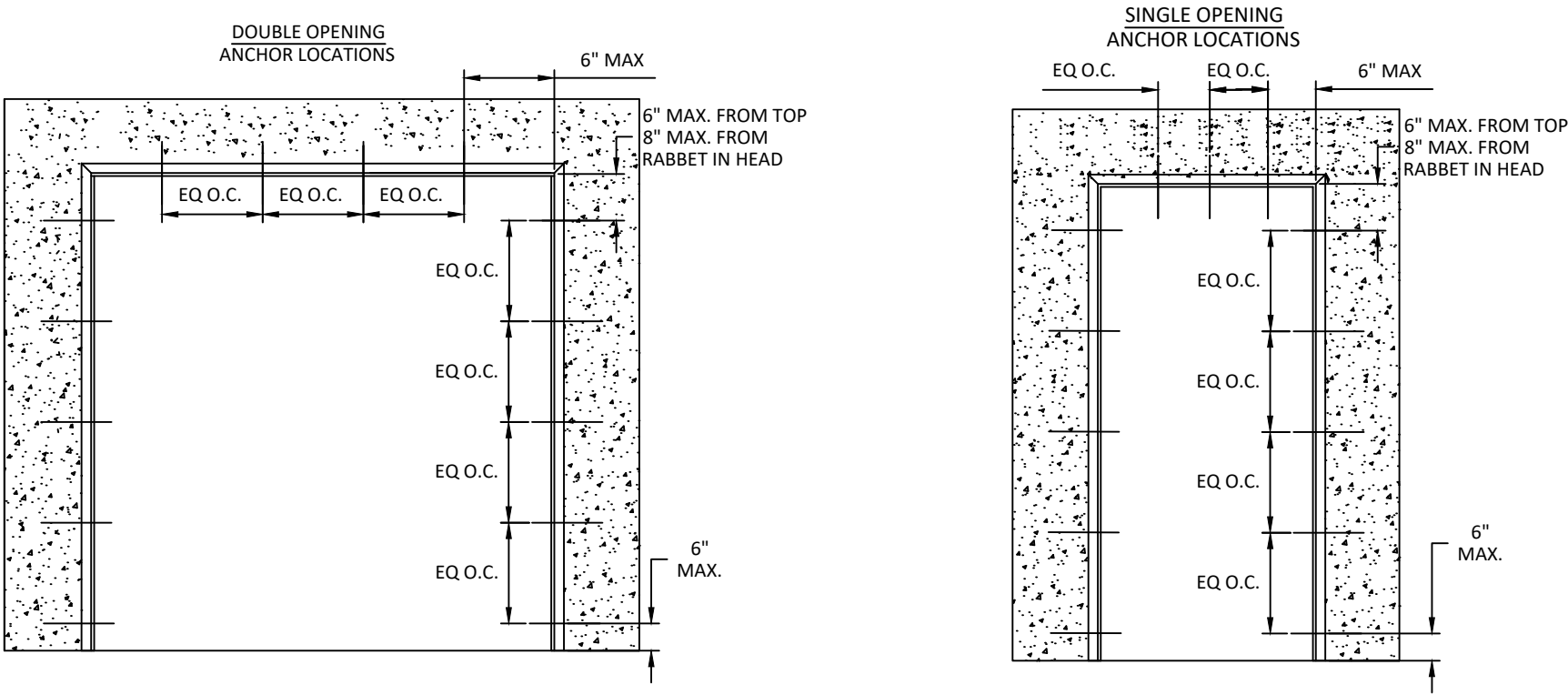


TABLE 12: ANCHOR LAYOUT STEEL BOLTED PLATE TO CONCRETE					
ANCHOR	FRAME SIZES			ANCHOR QUANTITY	
SEE TABLE 11	WIDTH	SINGLE		HEAD/SILL	3 ANCHORS MIN.
		PAIR			4 ANCHORS MIN.
	HEIGHT	SINGLE	82"	JAMB	4 ANCHORS MIN.
			> 82"		5 ANCHORS MIN.
		PAIR	82"		4 ANCHORS MIN.
			> 82"		5 ANCHORS MIN.

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.

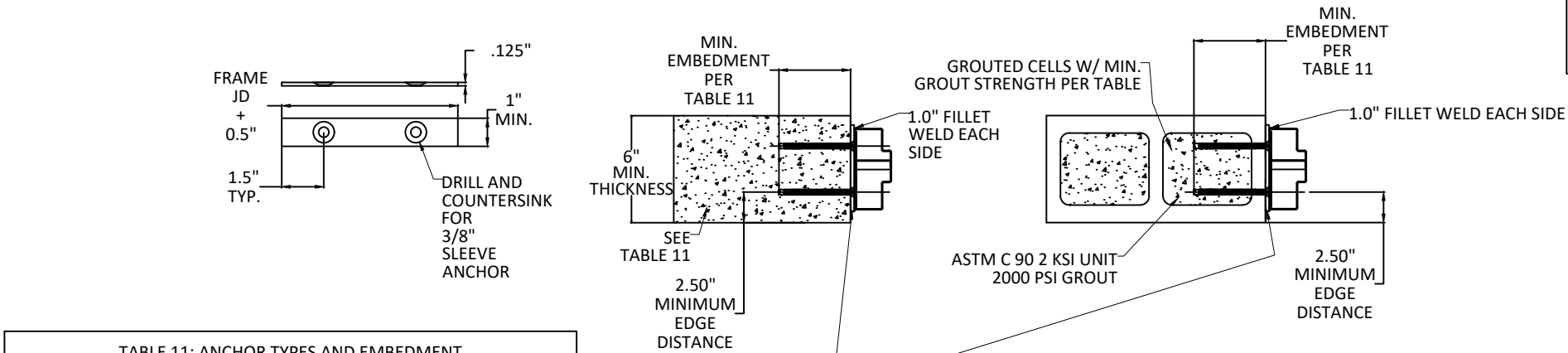


TABLE 11: ANCHOR TYPES AND EMBEDMENT		
ANCHOR	EMBEDMENTS	MIN. CONCRETE PROPERTIES
3/8" HILTI HLC-FPH SLEEVE ANCHOR	1.25"	2000 PSI
3/8" FH POWERS LOK BOLT AS	1.25"	3000 PSI
3/8" SIMPSON STRONG TIE SLEEVE-ALL	1.5"	2000 PSI
3/8" FH POWERS POWER-BOLT	2"	3000 PSI

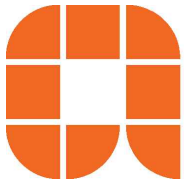
*NOTE:
ANCHORS SHALL BE SPACED AT 4.5" TYP. (6" MAX) FROM TOP, 2.5" TYP. (6" MAX) FROM BOTTOM, 6" TYP. (8" MAX) FROM RABBET IN HEAD AND EQUALLY SPACED THEREAFTER

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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.
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 - BOTH JAMBS MUST HAVE EQUAL NUMBER OF WELDS OR ANCHORS.



ALLEGION - SCHLAGE LOCK COMPANY, LLC.
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CARMEL, IN 46032
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TITLE: STEELCRAFT/REPUBLIC HURRICANE/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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HERMES F. NORERO
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No. 73778
STATE OF FLORIDA
PROFESSIONAL ENGINEER

HERMES F. NORERO, P.E.
BUILDING DROPS, INC.
1900 NE MIAMI COURT, STE. 2-15
MIAMI, FL 33132
FBPE CERT. OF AUTHORIZATION No. 29578

FL #:
FL41734

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DWG. BY: **DI** CHK. BY: **HFN**

SCALE: **NTS**

DWG. #: **PWF001**

SHEET:
14
OF 16

STEELCRAFT/REPUBLIC HURRICANE/TORNADO STEEL DOOR & FRAME ASSMEBLY

PRODUCT MEETS REQUIREMENTS OF ICC 500-2020 IMPACT PROTECTIVE SYSTEMS CERTIFIED FOR TORNADO SHELTERS, HURRICANE, & COMBINED HURRICANE/TORNADO SHELTERS.

ANCHOR DETAILS: FRAMES WELDED TO STEEL EMBEDDED PLATES IN CONCRETE

G WELDED ANCHOR SHIM OR STEEL EMBEDDED PLATES IN CONCRETE

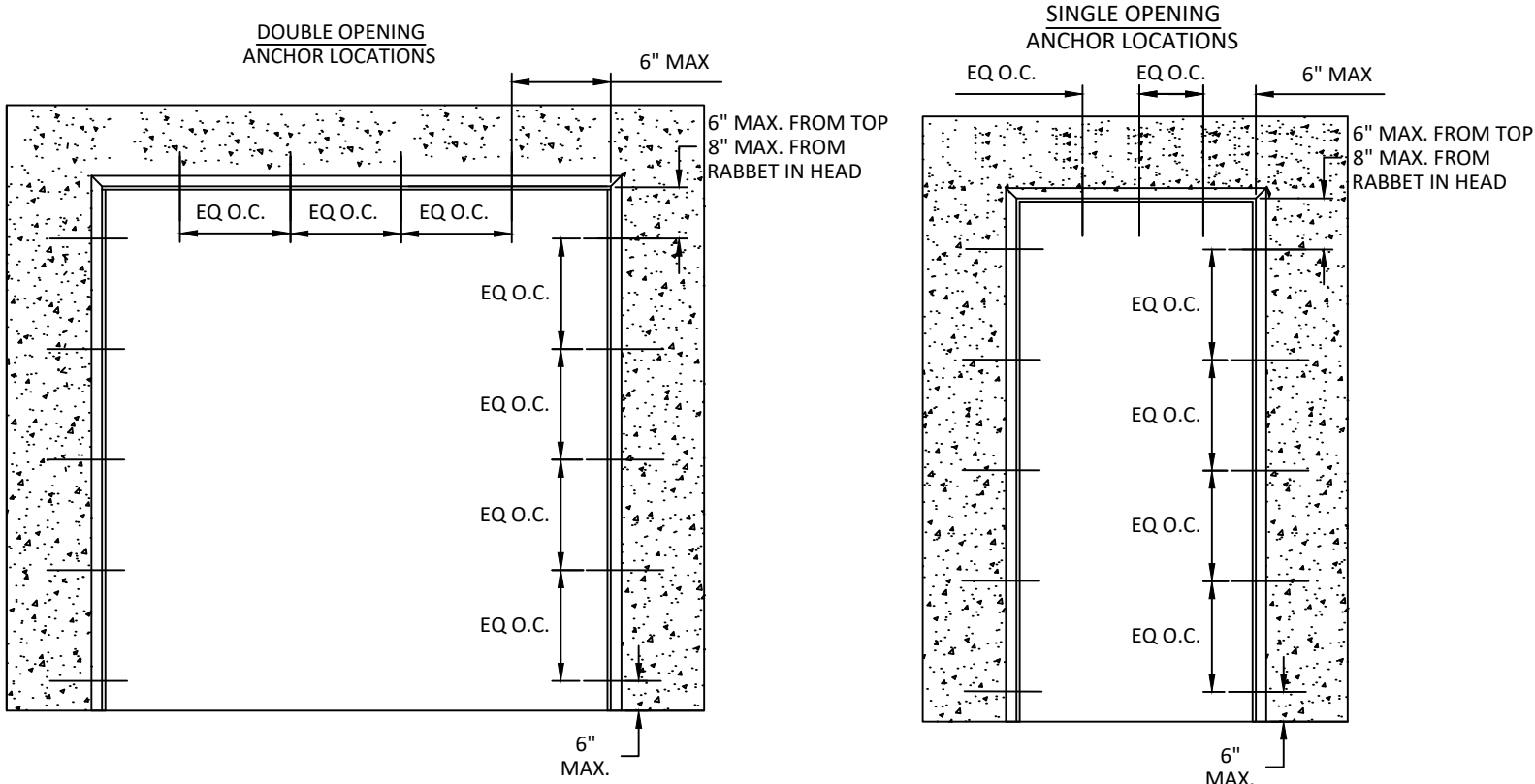
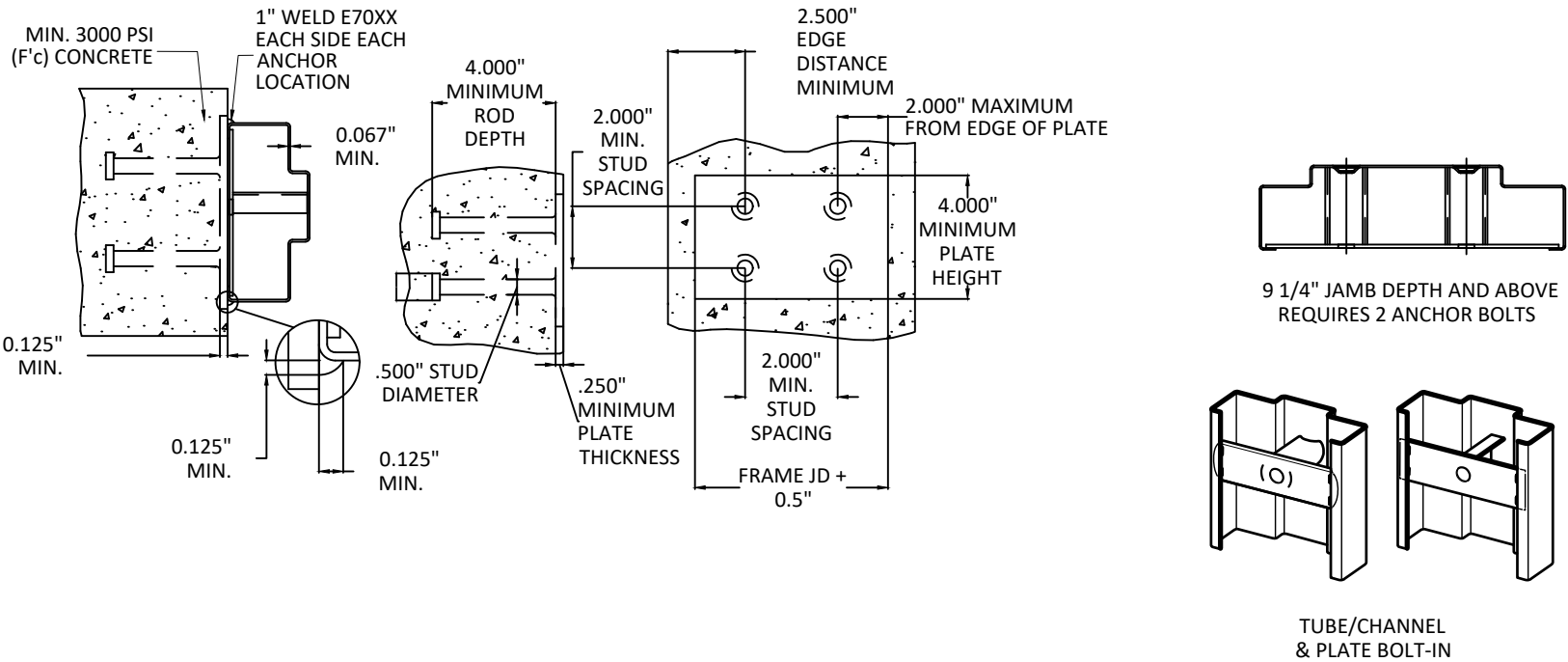


TABLE 14: ANCHOR LAYOUT STEEL STRUCTURE OR STEEL PLATE EMBEDMENT IN CONCRETE					
SUBSTRATE	FRAME SIZES			ANCHOR QUANTITY	
CONCRETE 3000 PSI	WIDTH	SINGLE		HEAD/SILL	3 ANCHORS MIN.
		PAIR			4 ANCHORS MIN.
	HEIGHT	SINGLE	82"	JAMB	4 ANCHORS MIN.
			> 82"		5 ANCHORS MIN.
		PAIR	82"		4 ANCHORS MIN.
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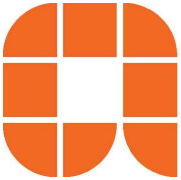


*NOTE:
ANCHORS SHALL BE SPACED AT 4.5" TYP. (6" MAX) FROM TOP, 2.5" TYP. (6" MAX) FROM BOTTOM, 6" TYP. (8" MAX) FROM RABBET IN HEAD AND EQUALLY SPACED THEREAFTER

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

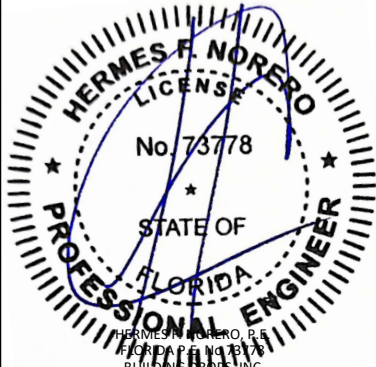
ANCHOR DETAILS: FRAMES WELDED TO STEEL EMBEDDED PLATES IN CONCRETE

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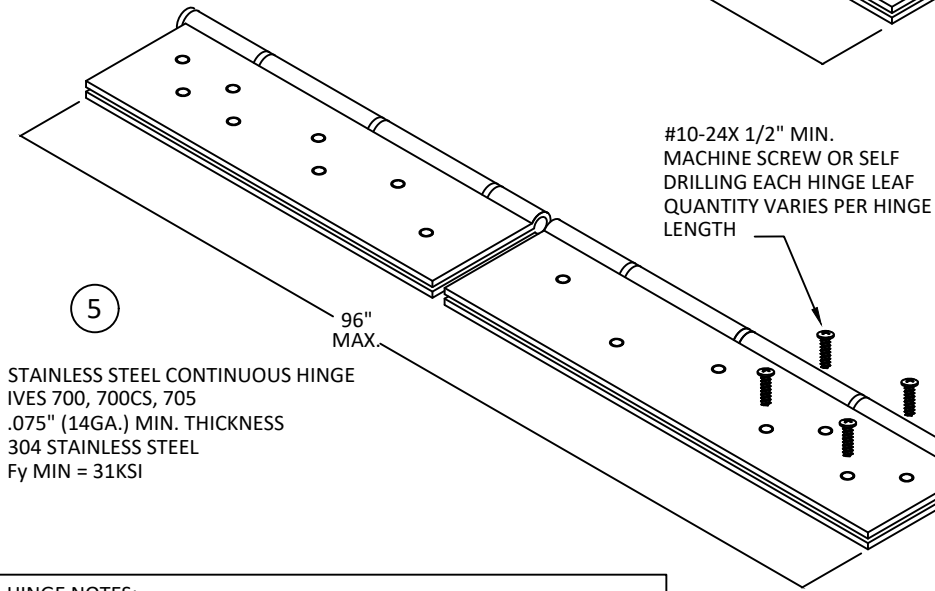
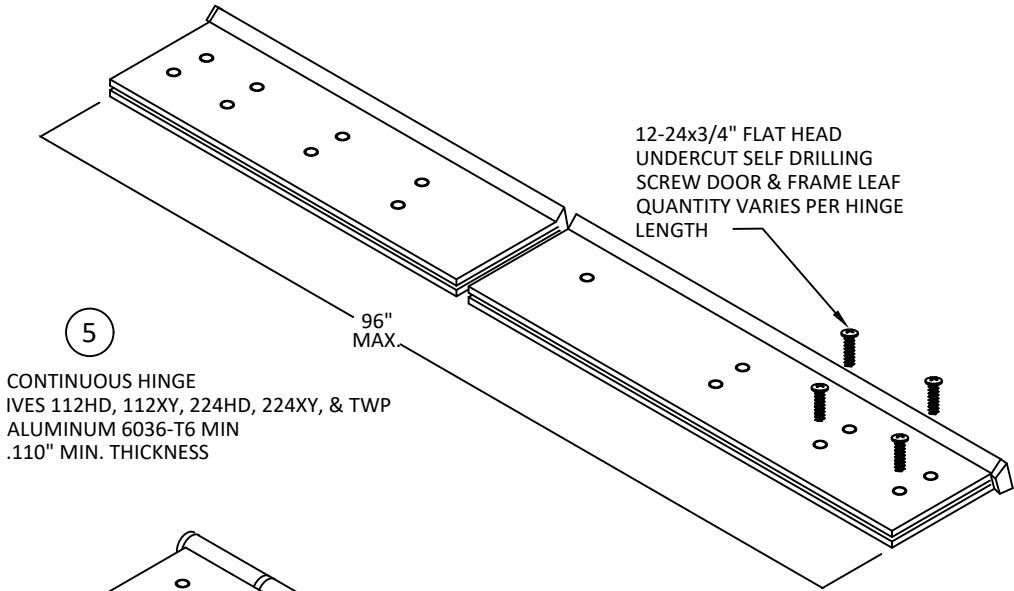
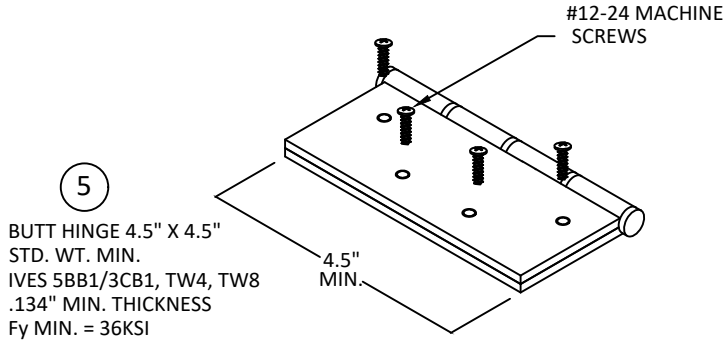
STEELCRAFT/REPUBLIC HURRICANE/TORNADO STEEL DOOR & FRAME ASSMEBLY

PRODUCT MEETS REQUIREMENTS OF ICC 500-2020 IMPACT PROTECTIVE SYSTEMS CERTIFIED FOR TORNADO SHELTERS, HURRICANE, & COMBINED HURRICANE/TORNADO SHELTERS.

APPROVED HARDWARE & ACCESSORIES

TABLE 15: ALLOWABLE HARDWARE & ACCESSORIES

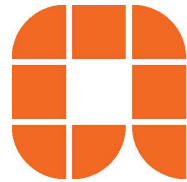
HARDWARE TYPE	BRAND	MODEL	DESCRIPTION/NOTES
LATCHES - PANIC EXIT HARDWARE - OUTSWING ONLY	Von Duprin	WS-T-98/9927 or WS-T-98/9927-F Series	2-point Panic, SVR (no primary), electrified options. Grout in WS-T-304L strike.
	Von Duprin	WS-T-98/9957 or WS-T-98/9957-F Series	3-point Panic, SVR, electrified options. Grout in 304L strike.
	Von Duprin	WS-LGO-3, WS-LGO-4	ADA bottom latch guard cover with ramp used with WS-T 98/9927/57
	Von Duprin	WS-T Auxiliary Stop	Required for use with WS-T-98/9927 or WS-T-98/9927-F series applications
LATCHES - MULTI-POINT LEVER HARDWARE - OUTSWING & INSWING	Schlage	LM/LMV9300 Series	3-point lock
	Ives	SB360	Manual surface bolt for inactive leaf in pair and grouted-in 304L strike
BUTT HINGES	Ives	3CB1, 3CB1HW, 3CB1NRP, 3CB1HWNRP, 3CB1SH, 3CB1HWSH, 5BB1, 5BB1HW, 5BB1WT, 5BB1NRP, 5BB1HWNRP, 5BB1SH, 5BB1HWSH, TW4, TW8	Ives butt hinges - 4.5 High (0.134 Min) or 5 high (0.146 Min)
	Ives	TW4, TW8	Ives electric hinge options
CONTINUOUS HINGES	Ives	112HD, 112XY, 224HD, 224XY	Ives aluminum geared continuous hinge - nominal leaf thickness 0.110
	Ives	700, 700CS, 705	Ives steel pin & barrel continuous hinge - nominal leaf thickness 14 gage
	Ives	TW8, TWP	Ives electric continuous hinge options
ELECTRONIC POWER TRANSFER	Von Duprin	EPT-2, EPT-10	
SURFACE MOUNTED CLOSERS	LCN	4000 Series door closers surface mounted.	Closers must be attached to door with through bolts per manufacturer's installation instructions. Covers must be steel and attached with steel screws.
	Falcon	FALCON SC70 (heavy duty), SC80A (med duty), SC60A (light duty)	
SURFACE MOUNTED OVERHEAD HOLDER/STOP	Glynn Johnson	70S, 79S, 81S, 90S	79 Series does not open to 180 degrees, so application should be confirmed.
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.
AUTO-DOOR OPERATOR	LCN	9542, 9553, 9530, 9540	To be mounted only to the exterior side of storm shelter or safe room. 9530 series (pull side), 9540 series (push side). For Inside/safe side mounting, must be thru bolted with metal covers.
MAGNETIC HOLDER	LCN	SEM7830, SEM7840 and SEM7850	Screw applied to door. Extenders not permitted on inswing applications
DOOR POSITION SWITCH	Schlage	679-05 (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.
	Sentrol	1076, 1078 (round)	
KICK PLATES	Ives	8400 (Metal or plastic), 8402 (metal)	Must be secured with steel screws. 48" Max height bottom of door only.
FLOOR & WALL HOLDERS/STOPS	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.
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.
Rain Drip	Zero	multiple	Threat side only mounted only.



- 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 16: ZERO INTERNATIONAL THRESHOLDS & GASKETING	
TYPE	ZERO MODELS
SADDLE THRESHOLD	63, 64, 544, 545, 546, 547, 548, 653, 664, 164, 655, 8655, 656, 6570, 647, 657, 6575
RABBETED/BUMPER THRESHOLD	564, 566, 567, 568, 267, 663, 65, 560, 561, 563, 565
ADJUSTABLE THRESHOLD	671, 6710, 672, 673, 674, 675, 676, 678
TRACTION TREAD THRESHOLD	3672, 3673
PERIMETER HEAD AND JAMB (SELF ADHESIVE)	188S, 488S, 8145S, 117S, 8042S, 8150S, 8144S, 8216, 8172N, 8770N, 312N, 8780N, 139N, 926N, 318N
PERIMETER HEAD AND JAMB (SCREW-APPLIED)	50, 139, 312, 314, 326, 328, 429, 8303, 485, 870, 140, 318, 322, 1370, 98, 99, 100, 31, 32, 33, 570, 370, 8305, 302FS, 328FS, 8193, 8879, 8302, 8877, 8878
MEETING EDGE (THREAT SIDE MOUNTING)	55/555, 55FS/555FS, 326, 328, 99, 100, 873, 155, 55FS, 555FS, 871, 873, 8192, 8194, 8879, 8195, 98, 370, 375, 3217
DOOR SWEEPS (THREAT SIDE MOUNTING)	39, 339, 328, 329, 50M, 539, 8191, 8197, 8198, 8192, 8193, 39W, 339W, 477, 571, 871, 255, 98, 96, 8194
DOOR SWEEPS (SAFE SIDE MOUNTING)	39, 339, 328, 329, 50M, 539, 8191, 8197, 39W, 339W, 571, 8194
RAIN DRIPS (THREAT SIDE MOUNTING)	11, 25, 142, 144

- *NOTES:
1. AVOID SPECIAL GASKETING TO TORNADO. MAINTAIN PROPER LATCHING AND AVOID POTENTIAL BINDING OR INTERFERENCE.
 2. WHEN USING THRESHOLD, REFER TO HARDWARE INSTALLATION OF STRIKES.
 3. WITH OR WITHOUT THRESHOLD, LM9300 BOTTOM STRIKE MUST BE ANCHORED INTO SLAB WITH BOLTS.
 4. SCREW APPLIED HEAD AND JAMB GASKET OR SWEEPS INSTALLED ON SAFE SIDE REQUIRE ATTACHMENT WITH #8 SCREW.



ALLEGION - SCHLAGE LOCK COMPANY, LLC.
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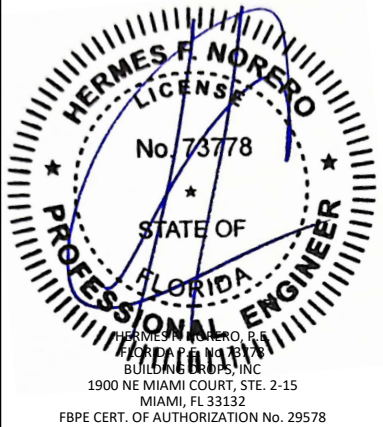
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