

ALL AMERICAN SHUTTERS AND GLASS

24 GA GALVANIZED STEEL STORM PANELS

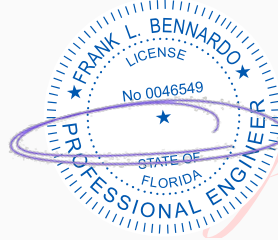
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AUGUST 9, 2023



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ALL AMERICAN SHUTTERS AND GLASS

1540 DONNA ROAD

WEST PALM BEACH, FL 33409

(561) 712-9882

24 Ga Galvanized Steel Storm Panels

FLORIDA BUILDING CODE EIGHTH EDITION (2023)

FLORIDA STATEWIDE APPROVAL (FSA FL #17869.1)

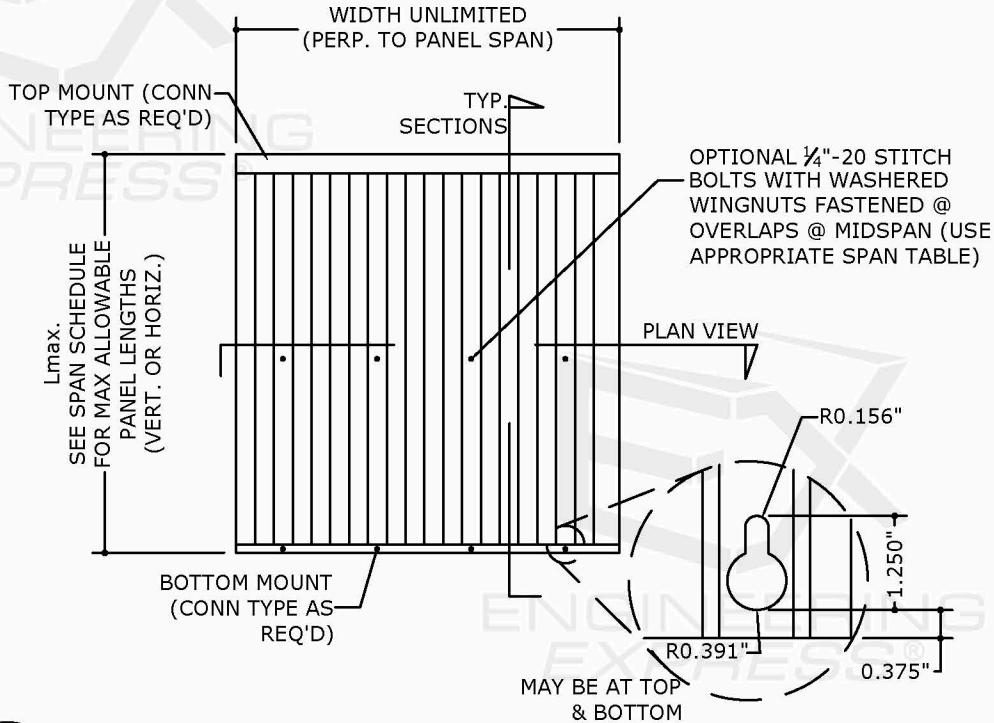
REMARKS
PREV. SUBMITTAL (20-31543)
2023 FBC UPDATE

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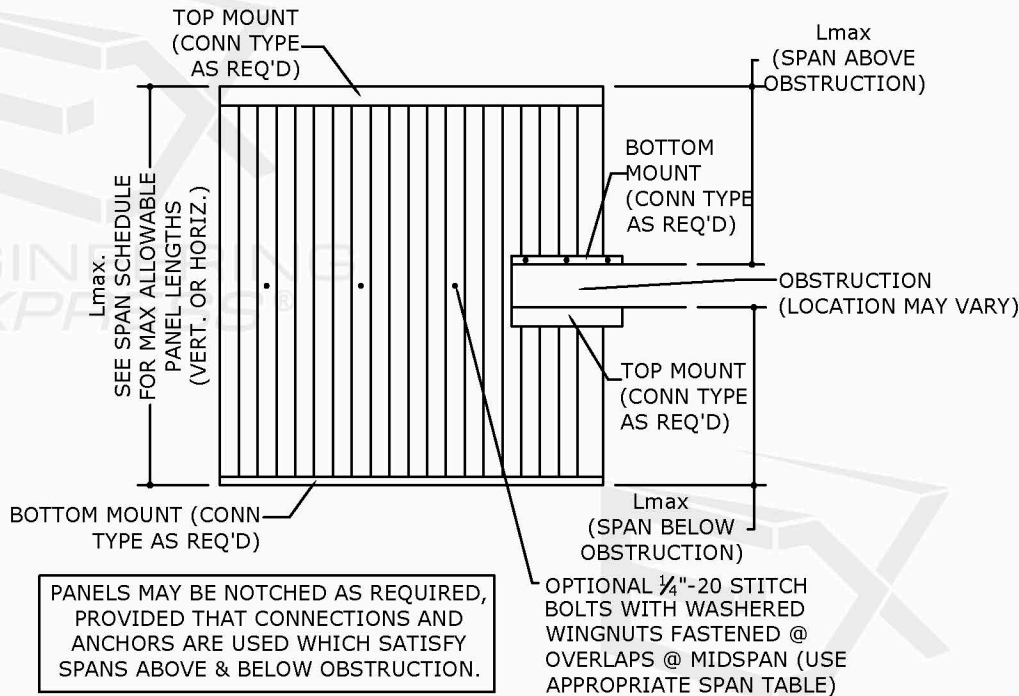
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1 OF 6



1 TYPICAL VERTICAL MOUNT ELEVATION
1 N.T.S. ELEVATION



2 VERTICAL MOUNT ELEVATION (NOTCHED PANELS)
1 N.T.S. ELEVATION

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TERMINOLOGY:

THE FOLLOWING ABBREVIATIONS APPEAR IN THIS APPROVAL: "ALUM" FOR "ALUMINUM", "ASD" FOR "ALLOWABLE STRESS DESIGN", "ASTM" FOR "AMERICAN SOCIETY FOR TESTING AND MATERIALS", "CS" FOR "CARBON STEEL", "CONN" FOR "CONNECTION", "EMBED" FOR "EMBEDMENT", "DIST." FOR "DISTANCE", "GA" FOR "GAUGE", "HVHZ" FOR "HIGH-VELOCITY HURRICANE ZONE", "LB" FOR "POUND", "MAX" FOR "MAXIMUM", "N.T.S." FOR "NOT TO SCALE", "PSF" FOR "POUNDS PER SQUARE FOOT (lb/ft²)", "SPECS" FOR "SPECIFICATIONS", "&" FOR "AND", "MAX" FOR "MAXIMUM". CONTACT ENGINEERING EXPRESS FOR ADDITIONAL ABBREVIATION/TERMINOLOGY CLARIFICATIONS.

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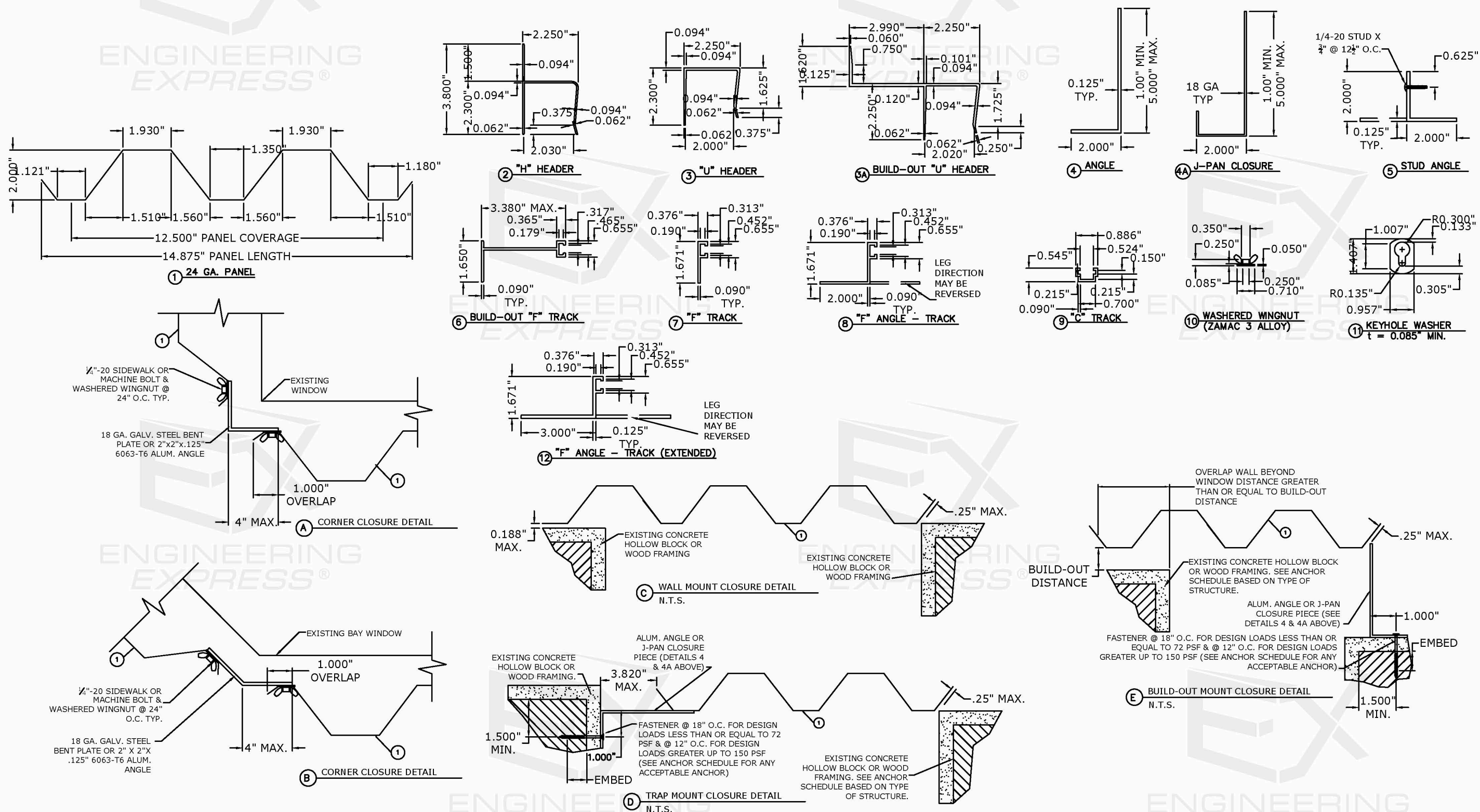
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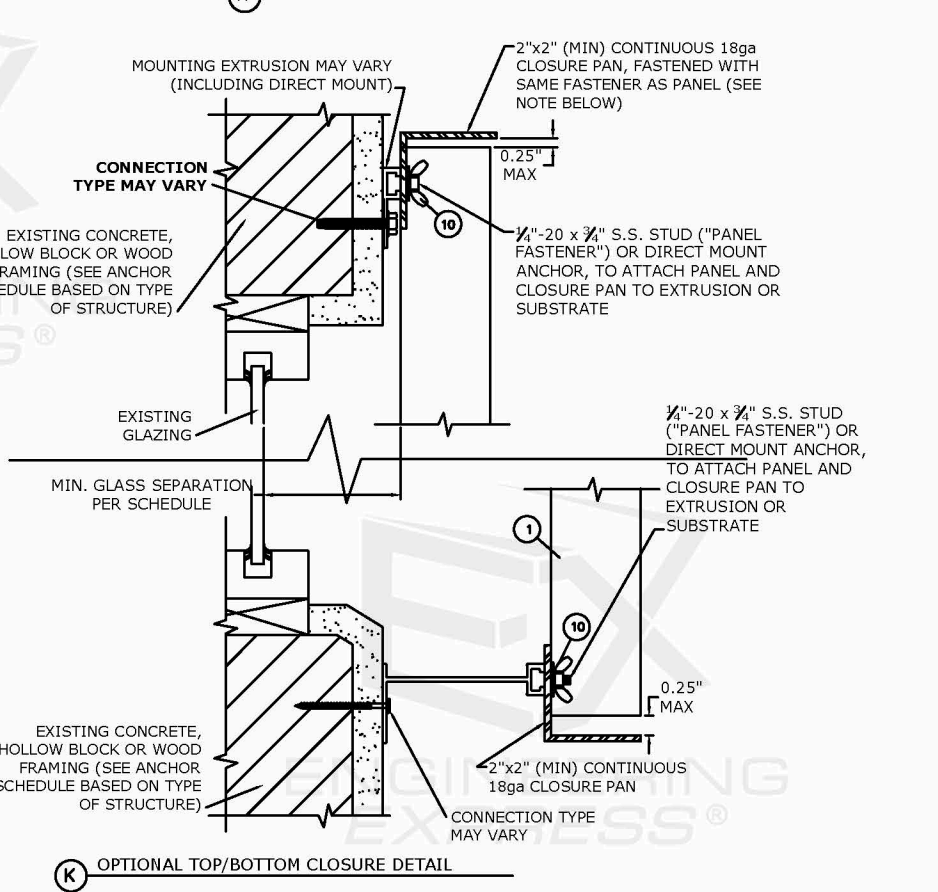
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ALLOWABLE PANEL SPAN & GLASS SEPARATION SCHEDULE:

24 GAUGE PANELS

MAXIMUM DESIGN PRESSURE (PSF)	ALLOWABLE SPAN (Lmax)	MINIMUM STORM PANEL SEPARATION FROM GLASS (HVHZ, WIND ZONE 4 & ESSENTIAL FACILITIES)	
		INSTALLATIONS LESS THAN 30' ABOVE GRADE	INSTALLATIONS GREATER THAN 30' ABOVE GRADE
+/-30	130.0 in	6.06 in	2.16 in
+/-35	130.0 in	6.06 in	2.16 in
+/-40	130.0 in	6.06 in	2.16 in
+/-45	130.0 in	6.06 in	2.16 in
+/-50	130.0 in	6.06 in	2.16 in
+/-55	106.6 in	6.08 in	2.35 in
+/-60	83.2 in	6.09 in	2.53 in
+/-65	59.8 in	6.11 in	2.72 in
+/-70	36.4 in	6.12 in	2.90 in
+/-72	27.0 in	6.13 in	2.98 in

SPAN SCHEDULE NOTES:

1. ENTER SPAN SCHEDULES WITH NEGATIVE DESIGN LOAD & PANEL FASTENER SPACING TO DETERMINE MAXIMUM ALLOWABLE STORM PANEL SPAN. SCHEDULE IS ACCEPTABLE FOR USE WITH POSITIVE LOADS LESS THAN OR EQUAL TO NEGATIVE DESIGN LOADS.
2. "PANEL FASTENERS" ARE STUDS USED IN CONJUNCTION WITH ALL MOUNTING EXTRUSIONS ("F"-TRACK, STUDDED ANGLE, ETC.). USE 6.25" O.C. PANEL FASTENER SPACING TABLE VALUES FOR ALL "H"- AND "U"-HEADERS (INCLUDING BUILD OUT CONDITIONS).
3. LINEAR INTERPOLATION BETWEEN LOADS IS ACCEPTABLE, OTHERWISE USE NEXT HIGHER LOAD.

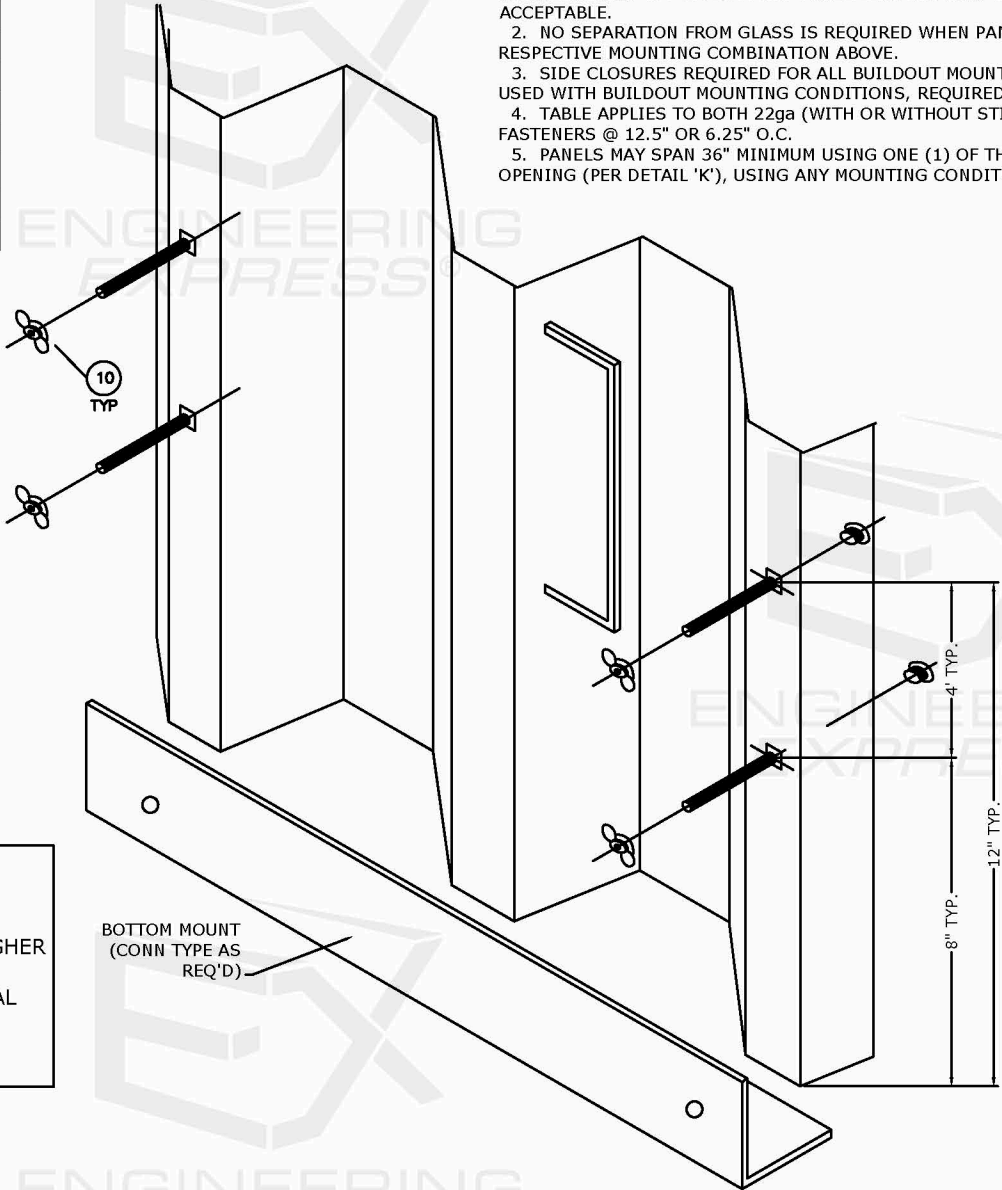
GLASS SEPARATION NOTES:

1. ENTER SPAN SCHEDULE WITH POSITIVE DESIGN LOAD TO DETERMINE MINIMUM ALLOWABLE SEPARATION FROM THE OPENING TO BE PROTECTED.
2. SCHEDULE IS REQUIRED FOR USE WITH POSITIVE LOADS ONLY. INTERPOLATION BETWEEN LOADS IS ACCEPTABLE, OTHERWISE USE NEXT HIGHER LOAD.
3. FOR INSTALLATIONS OUTSIDE OF THE HVHZ AND OUTSIDE OF ESSENTIAL FACILITIES IN ASTM WIND ZONES 1 THROUGH 3, THE GLASS SEPARATION SCHEDULE IS NOT REQUIRED AND NO MINIMUM SEPARATION FROM THE PROTECTED OPENING IS REQUIRED.

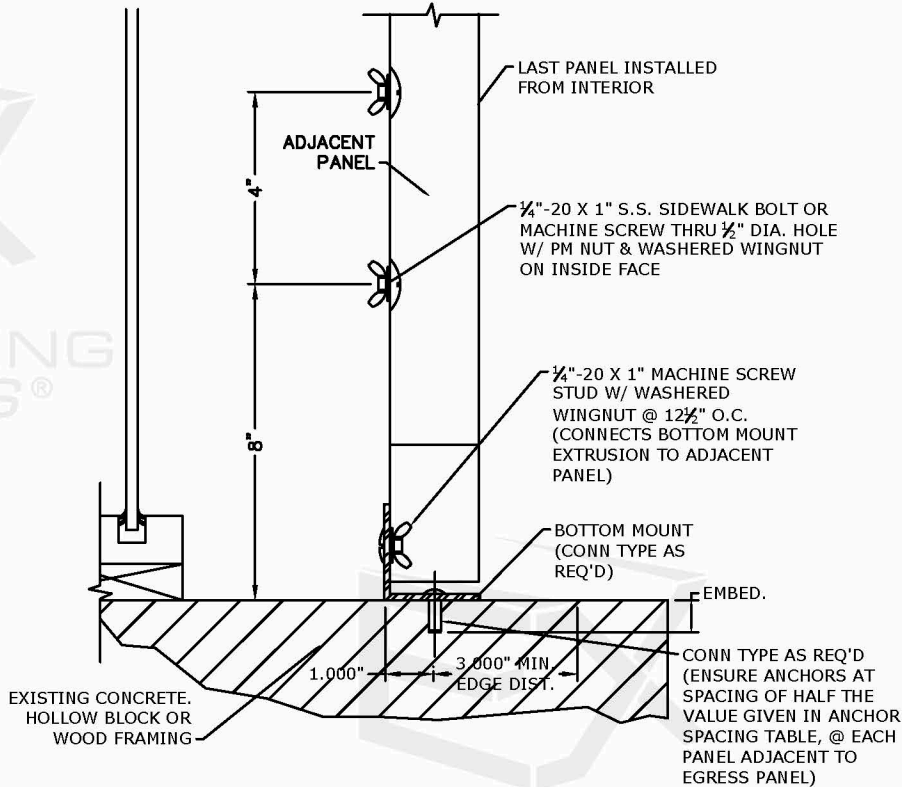
MINIMUM ALLOWABLE SPAN SCHEDULE (ALL PANELS)

		TOP MOUNT											
		"H" Header	Buildout "U" Header	2x5 & "U" Header	2x5 & Stud Angle	Buildout "F" Track	"F" Track	Stud Angle (Wall Mount)	Direct Mount	"U" Header	"F" Angle Track	Stud Angle (Sill Mount)	"C" Track
BOTTOM MOUNT	"H" Header	0"	0"	0"	23"	24"	25"	22"	24"	0"	24"	23"	26"
	Buildout "U" Header	0"	0"	0"	23"	24"	25"	22"	24"	0"	24"	23"	26"
	2x5 & "U" Header	0"	0"	0"	23"	24"	25"	22"	24"	0"	24"	23"	26"
	2x5 & Stud Angle	23"	23"	23"	11"	30"	31"	11"	30"	23"	30"	11"	33"
	Buildout "F" Track	24"	24"	24"	30"	48"	50"	29"	48"	24"	48"	30"	53"
	"F" Track	25"	25"	25"	31"	50"	52"	30"	50"	25"	50"	31"	55"
	Stud Angle (Wall Mount)	22"	22"	22"	11"	29"	30"	11"	29"	22"	29"	11"	31"
	Direct Mount	24"	24"	24"	30"	48"	50"	29"	48"	24"	48"	30"	53"
	"U" Header	0"	0"	0"	23"	24"	25"	22"	24"	0"	24"	23"	26"
	"F" Angle Track	24"	24"	24"	30"	48"	50"	29"	48"	24"	48"	30"	53"
	Stud Angle (Sill Mount)	23"	23"	23"	11"	30"	31"	11"	30"	23"	30"	11"	33"
	"C" Track	26"	26"	26"	33"	53"	55"	31"	53"	26"	53"	33"	58"

1. SPANS SHOWN HERE ARE MINIMUM ALLOWABLE SPANS BASED ON ANY COMBINATION OF MOUNTING CONDITIONS AT TOP OR BOTTOM. PANEL LENGTHS LESS THAN THOSE NOTED IN TABLE ABOVE ARE NOT ACCEPTABLE.
2. NO SEPARATION FROM GLASS IS REQUIRED WHEN PANEL LENGTH IS GREATER THAN THAT NOTED FOR RESPECTIVE MOUNTING COMBINATION ABOVE.
3. SIDE CLOSURES REQUIRED FOR ALL BUILDOUT MOUNTS IN TABLE ABOVE. WHERE SIDE CLOSURES ARE NOT USED WITH BUILDOUT MOUNTING CONDITIONS, REQUIRED SEPARATION FROM GLASS SHALL BE PER DETAIL 'F'.
4. TABLE APPLIES TO BOTH 22ga (WITH OR WITHOUT STITCH BOLTS) AND 24ga PANELS, & BOTH WITH PANEL FASTENERS @ 12.5" OR 6.25" O.C.
5. PANELS MAY SPAN 36" MINIMUM USING ONE (1) OF THE OPTIONAL TOP OR BOTTOM CLOSURES PER OPENING (PER DETAIL 'K'), USING ANY MOUNTING CONDITION SHOWN IN THESE DRAWINGS.



OPTIONAL INTERIOR FASTENING DETAIL N.T.S.



OPTIONAL EGRESS PANEL DETAIL INTERIOR FASTENING

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AUGUST 9, 2023



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REMARKS	DRWN	CHKD	DATE
PREV. SUBMITTAL (20-31543) CCB	RVIN	ER/RN	09/16/20
2023 FBC UPDATE	MRT		08/09/23

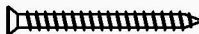
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24 GAUGE PANELS; PANEL FASTENERS @ 12.5" O.C.

EXIST. STRUCT.	ANCHOR TYPE	MAX DESIGN PRESSURE (PSF)	3/4" EDGE DISTANCE											
			SPAN UP TO 6'-0"				SPAN UP TO 8'-8"				SPAN UP TO 10'-10"			
			CONN TYPE				CONN TYPE				CONN TYPE			
			C1	C2	C3	C4	C1	C2	C3	C4	C1	C2	C3	C4
WOOD	1/4" x 2" EMBED	33	12.5"	16.0"	16.0"	10.9"	12.5"	16.0"	16.0"	7.5"	12.5"	16.0"	16.0"	6.7"
	LAG SCREW	41	12.5"	16.0"	16.0"	8.8"	12.5"	16.0"	15.0"	6.1"	12.5"	16.0"	14.8"	6.0"
		48	12.5"	16.0"	16.0"	7.5"	12.5"	16.0"	14.7"	6.0"	12.5"	16.0"	14.7"	6.0"
		52	12.5"	16.0"	16.0"	6.9"	12.5"	16.0"	14.7"	6.0"	12.5"	16.0"	14.7"	6.0"
		72	12.5"	16.0"	14.7"	6.0"	12.5"	16.0"	14.7"	6.0"	12.5"	16.0"	14.7"	6.0"
	#14 x 1 1/2" EMBED	33	12.5"	16.0"	16.0"	10.1"	12.5"	16.0"	12.1"	7.0"	12.5"	16.0"	10.8"	6.2"
	WOOD SCREW	41	12.5"	16.0"	14.1"	8.1"	12.5"	16.0"	9.7"	5.6"	12.5"	16.0"	9.7"	5.6"
		48	12.5"	16.0"	12.0"	7.0"	12.5"	16.0"	9.6"	5.6"	12.5"	16.0"	9.6"	5.6"
		52	12.5"	16.0"	11.1"	6.4"	12.5"	16.0"	9.6"	5.6"	12.5"	16.0"	9.6"	5.6"
		72	12.5"	16.0"	9.6"	5.6"	12.5"	16.0"	9.6"	5.6"	12.5"	16.0"	9.6"	5.6"
	1/4" x 1-1/4" EMBED	33	12.5"	16.0"	16.0"		12.5"	16.0"	11.5"		12.5"	16.0"	10.2"	
	TAP GRIP "CFAS"	41	12.5"	16.0"	13.3"		12.5"	16.0"	9.2"		12.5"	16.0"	9.2"	
		48	12.5"	16.0"	11.4"		12.5"	16.0"	9.1"		12.5"	16.0"	9.1"	
		52	12.5"	16.0"	10.5"		12.5"	16.0"	9.1"		12.5"	16.0"	9.1"	
		72	12.5"	16.0"	9.1"		12.5"	16.0"	9.1"		12.5"	16.0"	9.1"	
	7/16" x 5/8" EMBED	33	12.5"	16.0"	8.6"	7.3"	12.5"	15.5"	6.0"	5.1"	12.5"	13.8"	5.3"	4.5"
	ALL POINTS BRASS	41	12.5"	16.0"	7.0"	5.9"	12.5"	12.5"	4.8"	4.1"	6.25"	12.4"	4.8"	4.1"
	WOOD BUSHING	48	12.5"	15.4"	5.9"	5.0"	6.25"	12.3"	4.7"	4.0"	6.25"	12.3"	4.7"	4.0"
		52	12.5"	14.2"	5.5"	4.7"	6.25"	12.3"	4.7"	4.0"	6.25"	12.3"	4.7"	4.0"
		72	6.25"	12.3"	4.7"	4.0"	6.25"	12.3"	4.7"	4.0"	6.25"	12.3"	4.7"	4.0"

- ANCHOR SCHEDULE APPLIES TO ALL PRODUCTS CERTIFIED HEREIN, BUT ONLY PROVIDES MAXIMUM ALLOWABLE ANCHOR SPACING. MAXIMUM ALLOWABLE SPANS AND PRESSURES INDICATED IN SPAN SCHEDULE SHALL APPLY.
2. ENTER ANCHOR SCHEDULE BASED ON PANEL FASTENER SPACING, THE EXISTING STRUCTURE MATERIAL, & ANCHOR TYPE. SELECT DESIGN LOAD GREATER THAN OR EQUAL TO NEGATIVE DESIGN LOAD ON SHUTTER AND SELECT SPAN GREATER THAN OR EQUAL TO SHUTTER SPAN. SELECT CONNECTION TYPE BASED ON APPROPRIATE MOUNTING CONDITION (SEE MOUNTING DETAILS ON SHEET 2 FOR IDENTIFICATION OF CONNECTION TYPE).
3. "PANEL FASTENERS" ARE STUDS USED IN CONJUNCTION WITH ALL MOUNTING EXTRUSIONS ("F"-TRACK, STUDDER ANGLE, ETC.). USE 6.25" O.C. PANEL FASTENER SPACING TABLE VALUES FOR ALL "H"- AND "U"-HEADERS (INCLUDING BUILDOUT CONDITIONS).
4. ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS.
5. HOLLOW BLOCK HOST STRUCTURE SHALL CONFORM TO ASTM C90 BLOCK.
6. MINIMUM EMBEDMENT SHALL BE AS NOTED IN ANCHOR SCHEDULE.
7. MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDES STUCCO, FOAM, BRICK, AND OTHER WALL FINISHES. WALL FINISHES SHALL BE LIMITED TO 1/4" MAX OR SHALL BE VERIFIED BY OTHERS TO ADEQUATELY TRANSFER LOADS TO HOST STRUCTURE.
8. CONCRETE ANCHORS NOTED HEREIN SHALL BE EMBEDDED TO UN-CRACKED CONCRETE ONLY.
9. WHERE EXISTING STRUCTURE IS WOOD FRAMING, EXISTING CONDITIONS MAY VARY. FIELD VERIFY THAT FASTENERS ARE INTO ADEQUATE WOOD FRAMING MEMBERS, NOT PLYWOOD. FASTENING TO PLYWOOD IS ACCEPTABLE ONLY FOR SIDE CLOSURE PIECES.
10. WHERE ANCHORS FASTEN TO NARROW FACE OF STUD FRAMING, FASTENER SHALL BE LOCATED IN CENTER OF NOMINAL 2" X 4" (MIN.) WOOD STUD (3/4" EDGE DISTANCE IS ACCEPTABLE FOR WOOD FRAMING). WOOD STUD SHALL BE "SOUTHERN PINE" G=0.55 OR GREATER DENSITY. LAG SCREW SHALL HAVE PHILLIPS PAN HEAD OR HEX HEAD.
11. REMOVABLE ANCHORS ARE: DEWALT PANELMATE, ALL-POINTS SOLID-SET & BRASS BUSHING.
12. MACHINE SCREWS SHALL HAVE 1/2" MINIMUM ENGAGEMENT OF THREADS INTO THE BASE ANCHOR AND MAY HAVE EITHER A PAN HEAD, TRUSS HEAD, OR WAFER HEAD (SIDEWALK BOLT) U.N.O.
13. MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDES STUCCO OR OTHER WALL FINISHES.
14. ■■■ DESIGNATES ANCHOR CONDITIONS WHICH ARE NOT ACCEPTABLE USES.
15. * DIRECT MOUNTING CONDITIONS.
16. LINEAR INTERPOLATION IS NOT PERMITTED FOR USE WITH THE ANCHOR SCHEDULES LISTED ON THIS SHEET.

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