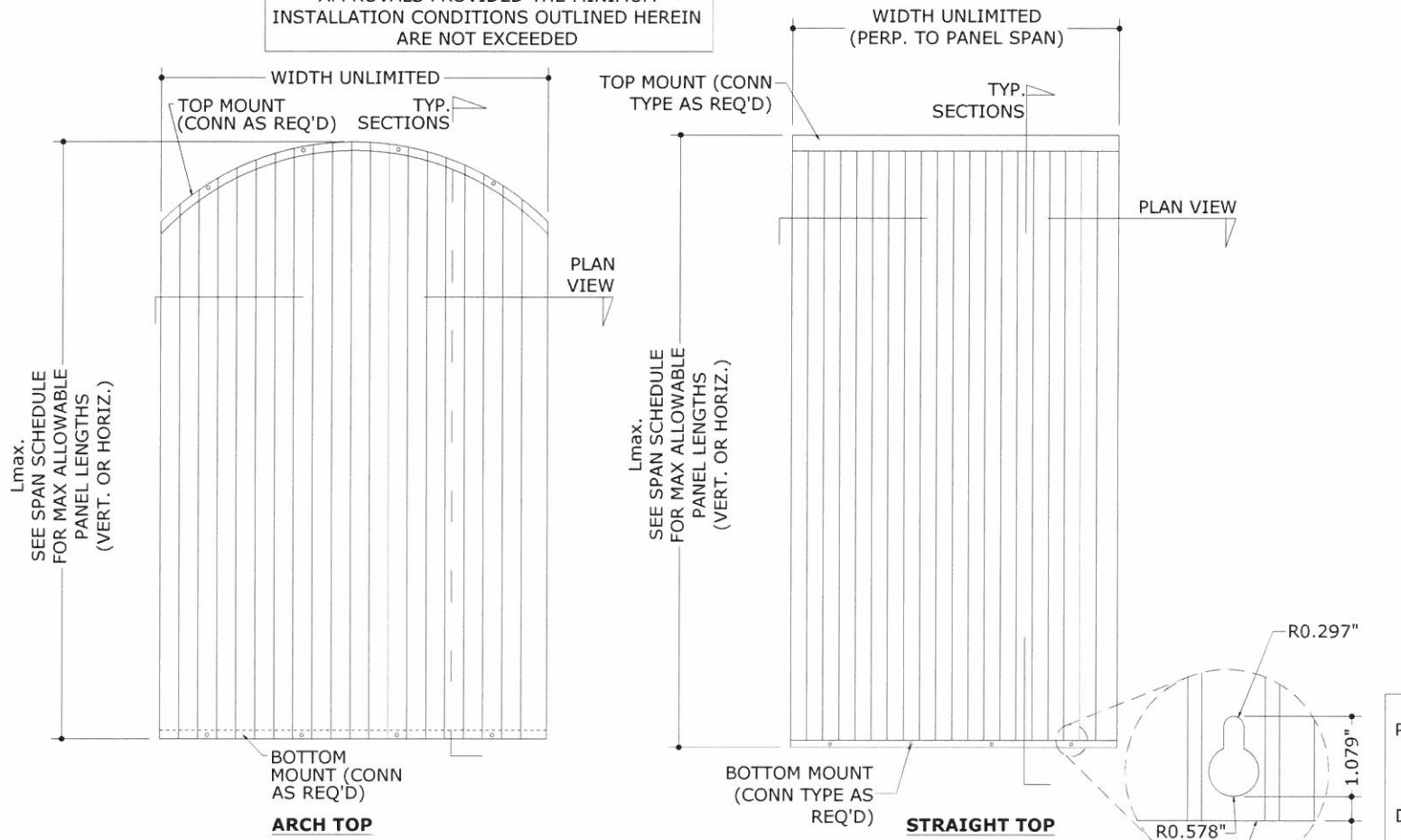


EASTERN METAL SUPPLY

2" CLEAR BERTHA STORM PANEL

THE CLEAR POLYCARBONATE PANELS APPROVED IN THIS DOCUMENT MAY BE INTEGRATED WITH ALTERNATE STEEL/ALUMINUM PANEL APPROVALS PROVIDED THE MINIMUM INSTALLATION CONDITIONS OUTLINED HEREIN ARE NOT EXCEEDED



FIELD DRILLED PANEL HOLES SHALL NOT EXCEED THE LIMITATIONS SHOWN IN THESE DETAILS AND SHALL NOT HAVE ANY CRACKS/BREAKS

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

MINIMUM POLYCARBONATE PANEL PROPERTIES FOR USE WITH THIS APPROVAL:		
SPECIFIC GRAVITY	1.20 G/CC	ASTM D792
TENSILE YIELD STRENGTH	8700 PSI	ASTM D638
FLEXURAL STRENGTH AT YIELD	12500 PSI	ASTM D790
FLEXURAL MODULUS	340000 PSI	ASTM D790
NOTCHED IZOD	18 FT-LB/IN	ASTM D256
SMOKE DENSITY	75 MAX	ASTM D2843
RATE OF BURNING	C-1 CLASS MAX	ASTM D635
SELF IGNITION	650 DEG. F	ASTM D1929

DESIGN NOTES:

POSITIVE & NEGATIVE (ASD) DESIGN PRESSURES FOR USE WITH THIS SYSTEM SHALL BE DETERMINED ON A SITE-SPECIFIC BASIS AND COMPARED TO LIMITING FACTORS AS STIPULATED HEREIN. THEY SHALL BE CALCULATED IN ACCORDANCE WITH THE GOVERNING CODE REQUIREMENTS & IN ACCORDANCE WITH ASCE 7 AND CHAPTER 1609 OF THE INTERNATIONAL BUILDING CODE. THEY SHALL BE LESS THAN OR EQUAL TO THE POSITIVE OR NEGATIVE DESIGN PRESSURE CAPACITY VALUES LISTED HEREIN FOR ANY ASSEMBLY AS SHOWN.

TOP & BOTTOM DETAILS SHOWN MAY BE INTERCHANGED AS FIELD CONDITIONS DICTATE. PANELS MAY BE MOUNTED VERTICALLY OR HORIZONTALLY AS APPLICABLE.

MAXIMUM ALLOWABLE DESIGN PRESSURES: AS NOTED IN DESIGN SCHEDULES

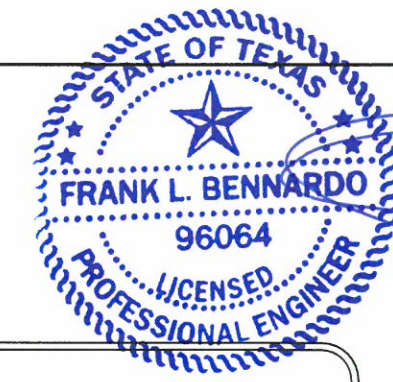
GENERAL NOTES:

- THIS SPECIFICATION HAS BEEN DESIGNED AND SHALL BE FABRICATED IN ACCORDANCE WITH THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE (2018) FOR USE IN ACCORDANCE WITH TEXAS DEPARTMENT OF INSURANCE REQUIREMENTS, PER TAS 201, 202 & 203 AND ASTM E330, E1886 & E1996 TEST PROTOCOLS. CONTRACTOR SHALL INVESTIGATE AND CONFORM TO ALL LOCAL BUILDING CODE AMENDMENTS WHICH MAY APPLY. DESIGN CRITERIA BEYOND AS STATED HEREIN MAY REQUIRE ADDITIONAL SITE-SPECIFIC SEALED ENGINEERING.
- NO 33-1/3% INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THIS SYSTEM.
- THE ARCHITECT/ENGINEER OF RECORD FOR THE PROJECT SUPERSTRUCTURE WITH WHICH THIS DESIGN IS USED SHALL BE RESPONSIBLE FOR THE INTEGRITY OF ALL SUPPORTING SURFACES TO THIS DESIGN WHICH SHALL BE COORDINATED BY THE PERMITTING CONTRACTOR.
- SEPARATE "SITE-SPECIFIC" SIGNED AND SEALED ENGINEERING SHALL BE REQUIRED IN ORDER TO DEVIATE, INTERPOLATE, AND EXTRAPOLATE FROM LOADS, DEFLECTIONS, OR SPANS CONTAINED HEREIN. CONTACT THIS ENGINEER AND VISIT THE ACCOMPANYING DIGITAL INFORMATION REFERENCED HEREIN FOR ALTERNATE SPAN CALCULATIONS AS MAY BE REQUIRED.
- THE SYSTEM DETAILED HEREIN IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SPECIFIC SITE. FOR SITE CONDITIONS DIFFERENT FROM THE CONDITIONS DETAILED HEREIN, A LICENSED ENGINEER OR REGISTERED ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE IN CONJUNCTION WITH THIS DOCUMENT.
- DESIGN PRESSURES NOTED HEREIN ARE BASED ON MAXIMUM TESTED PRESSURES DIVIDED BY A 1.5 SAFETY FACTOR.
- ALL FASTENERS TO BE 1/2"Ø OR GREATER SAE GRADE 5 UNLESS NOTED OTHERWISE. FASTENERS SHALL BE CADMIUM-PLATED OR OTHERWISE CORROSION-RESISTANT MATERIAL AND SHALL COMPLY WITH "SPECIFICATIONS FOR ALUMINUM STRUCTURES" SECTION J.3 BY THE ALUMINUM ASSOCIATION, INC., & ANY APPLICABLE FEDERAL, STATE, AND/OR LOCAL CODES.
- ALL STORM PANELS SHALL BE CLEAR POLYCARBONATE, t=0.100" AND CONFORM TO THE SPECIFICATIONS LISTED HEREIN.
- ALL ALUMINUM EXTRUSIONS SHALL BE 6063-T6 ALUMINUM ALLOY OR BETTER, UNLESS NOTED OTHERWISE.
- CONCRETE ANCHORS NOTED HEREIN SHALL BE EMBEDDED TO NON-CRACKED CONCRETE ONLY. INSTALL ALL CONCRETE ANCHORS PER MANUFACTURER'S RECOMMENDATIONS.
- THE CONTRACTOR IS RESPONSIBLE TO INSULATE OR PROTECT ALL MEMBERS FROM DISSIMILAR MATERIALS TO PREVENT ELECTROLYSIS.
- ENGINEER SEAL AFFIXED HERE TO VALIDATES STRUCTURAL DESIGN AS SHOWN ONLY. USE OF THIS SPECIFICATION BY CONTRACTOR, et. al. INDEMNIFIES & SAVES HARMLESS THIS ENGINEER FOR ALL COST & DAMAGES INCLUDING LEGAL FEES & APPELLATE FEES RESULTING FROM MATERIAL FABRICATION, SYSTEM ERECTION, & CONSTRUCTION PRACTICES BEYOND THAT WHICH IS CALLED FOR BY LOCAL, STATE, & FEDERAL CODES & FROM DEVIATIONS OF THIS PLAN.
- EXCEPT AS EXPRESSLY PROVIDED HEREIN, NO ADDITIONAL CERTIFICATIONS OR AFFIRMATIONS ARE INTENDED.
- ALTERATIONS, ADDITIONS, OR OTHER MARKINGS TO THIS DOCUMENT ARE NOT PERMITTED AND INVALIDATE THIS CERTIFICATION.
- PANELS SHALL BE PERMANENTLY LABELED WITH A MINIMUM OF (1) LABEL PER PANEL, CONTAINING THE FOLLOWING INFORMATION:

EASTERN METAL SUPPLY, INC.
WEST PALM BEACH, FL
TAS 201, TAS 202 & TAS 203
ASTM E330, ASTM E1886 & ASTM E1996
TDI EVALUATED

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FOR SITE SPECIFIC DEVIATIONS & MORE INFORMATION ABOUT THIS DOCUMENT OR SCAN THIS QR CODE
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FRANK BENNARDO, PE
PE# 96064 CA# F-11383

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(800) 432-2204
2" CLEAR BERTHA STORM PANEL
INTERNATIONAL BUILDING CODE
TEXAS DEPARTMENT OF INSURANCE

DRWN	CHKD	DATE
RWN	FLB	09/27/18
CCB	FLB	10/26/20
RWN	FLB	10/29/21

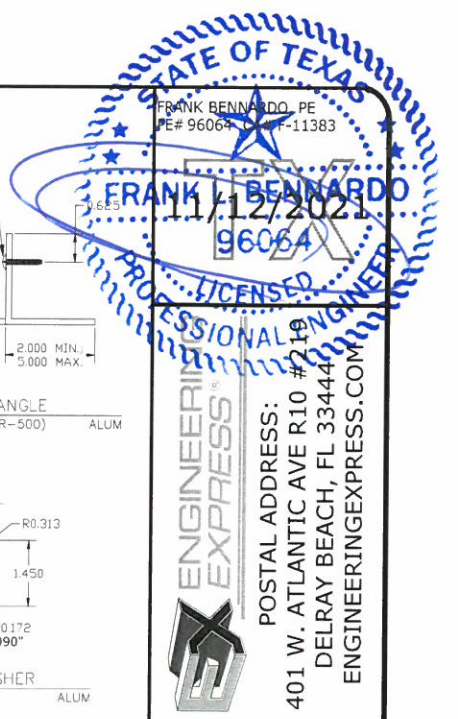
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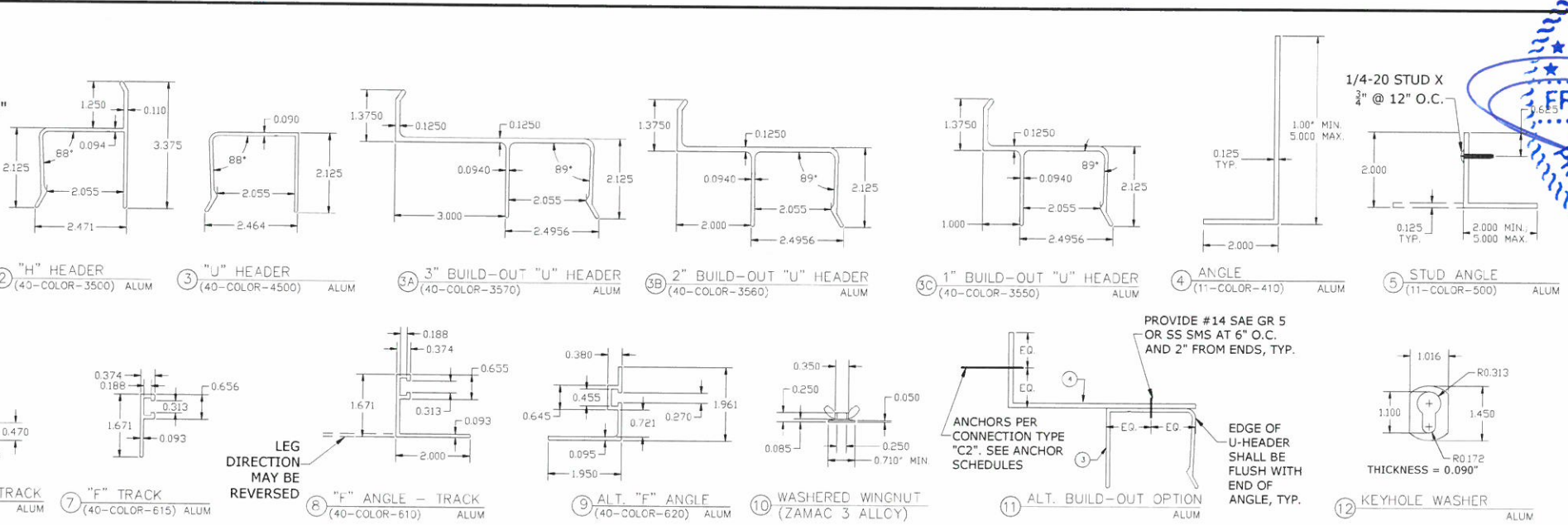
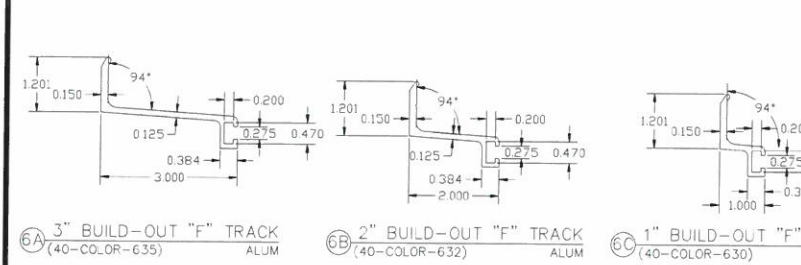
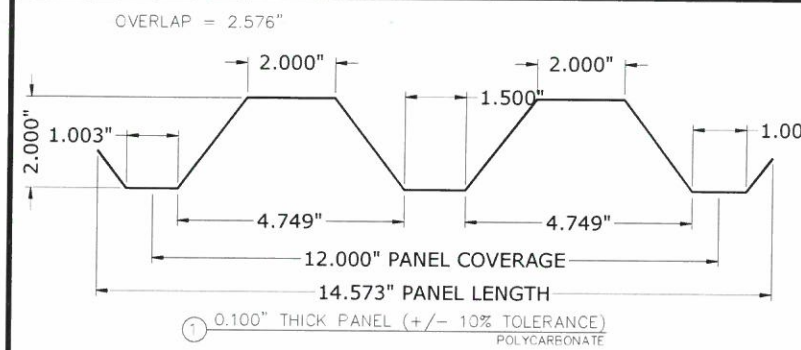
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2" CLEAR BERTHA STORM PANEL
 INTERNATIONAL BUILDING CODE
 TEXAS DEPARTMENT OF INSURANCE

DRWN	CHKD	DATE
RWN	FLB	09/27/18
CBW	FLB	10/26/20
RWN	FLB	10/29/21

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 2 OF 5



**SCHEDULE 1:
 ALLOWABLE PANEL SPANS
 (CONNECTION TYPES OTHER THAN 'C1')**

MAXIMUM DESIGN PRESSURE (PSF)	ALLOWABLE SPAN (Lmax)	MINIMUM STORM PANEL SEPARATION FROM GLASS (SEE GLASS SEPARATION NOTES)	
		INSTALLATIONS LESS THAN 30' ABOVE GRADE	INSTALLATIONS GREATER THAN 30' ABOVE GRADE
+/-21	132.0 in	10.50 in	9.75 in
+/-26	120.0 in	10.00 in	9.25 in
+/-31	108.5 in	9.50 in	8.50 in
+/-36	96.5 in	9.00 in	8.00 in
+/-41	84.5 in	8.50 in	7.25 in
+/-46	73.0 in	8.00 in	6.75 in
+/-51	61.0 in	7.50 in	6.00 in
+/-56	49.5 in	7.00 in	5.25 in
+/-60	40.0 in	6.50 in	4.75 in

- SEE SHEET 4 FOR ANCHORAGE OPTIONS

**SCHEDULE 2: ALLOWABLE PANEL SPANS
 (CONNECTION TYPE 'C1' ONLY)**

MAXIMUM DESIGN PRESSURE (PSF)	ALLOWABLE SPAN (Lmax)	MINIMUM STORM PANEL SEPARATION FROM GLASS (SEE GLASS SEPARATION NOTES)	
		INSTALLATIONS LESS THAN 30' ABOVE GRADE	INSTALLATIONS GREATER THAN 30' ABOVE GRADE
+/-35	144.0 in	10.25 in	7.00 in
+/-40	133.0 in	9.75 in	6.25 in
+/-45	122.0 in	9.50 in	5.50 in
+/-50	111.0 in	9.00 in	4.75 in
+/-55	100.0 in	8.50 in	4.00 in
+/-60	89.0 in	8.00 in	3.00 in

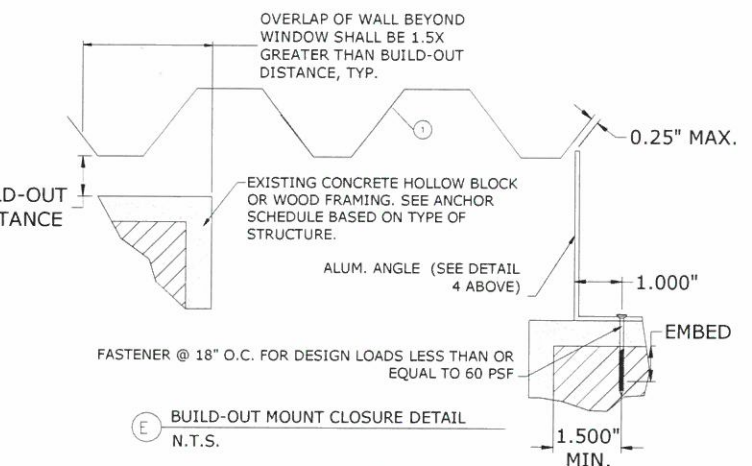
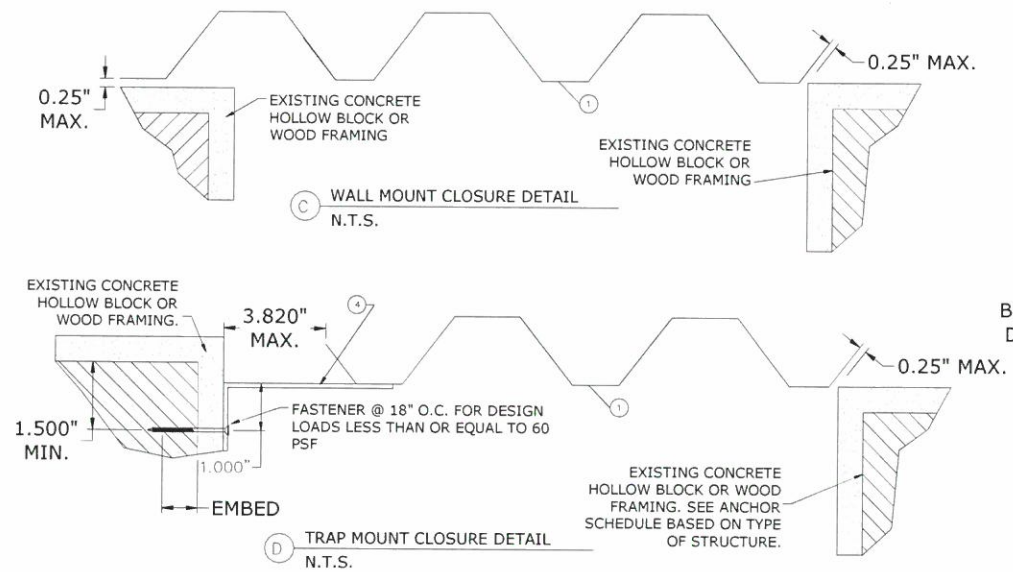
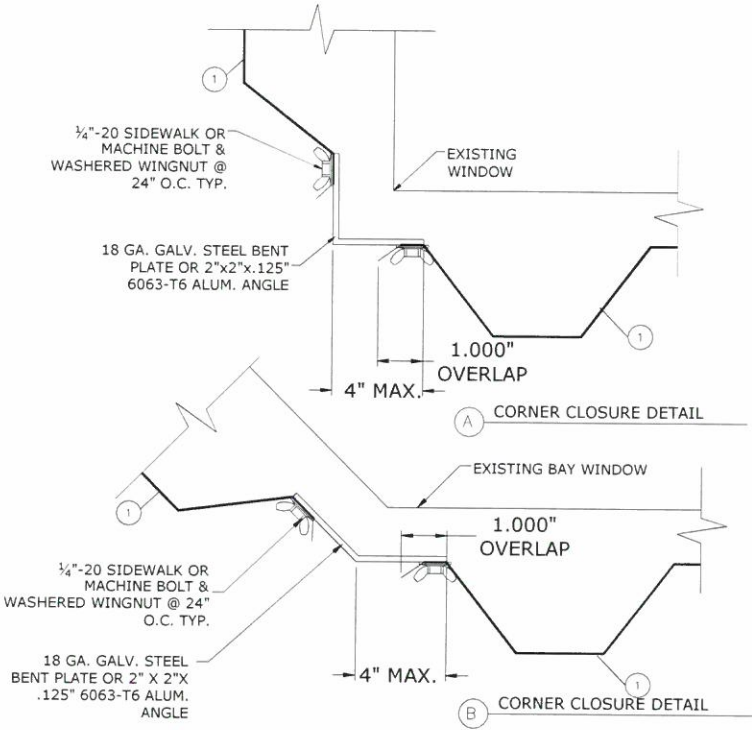
- SEE SHEET 5 FOR ANCHORAGE OPTIONS
 - SPANS AND SEP. FROM GLASS LISTED IN THIS TABLE ARE ONLY APPLICABLE FOR CONNECTION TYPES C1 AND F-TRACK (PART #7) ONLY.
 - "H" HEADER, "U" HEADER AND "C3" CONNECTION OPTIONS SHALL NOT BE USED WITH THIS TABLE
 - MINIMUM PANEL SPAN IS 36.0". UTILIZE GLASS SEPARATION FOR 89" SPAN TIER FOR SPANS LESS THAN SHOWN IN TABLE

SPAN SCHEDULE NOTES:

- 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.
- LINEAR INTERPOLATION BETWEEN LOADS IS ACCEPTABLE, OTHERWISE USE NEXT HIGHER LOAD.

GLASS SEPARATION NOTES:

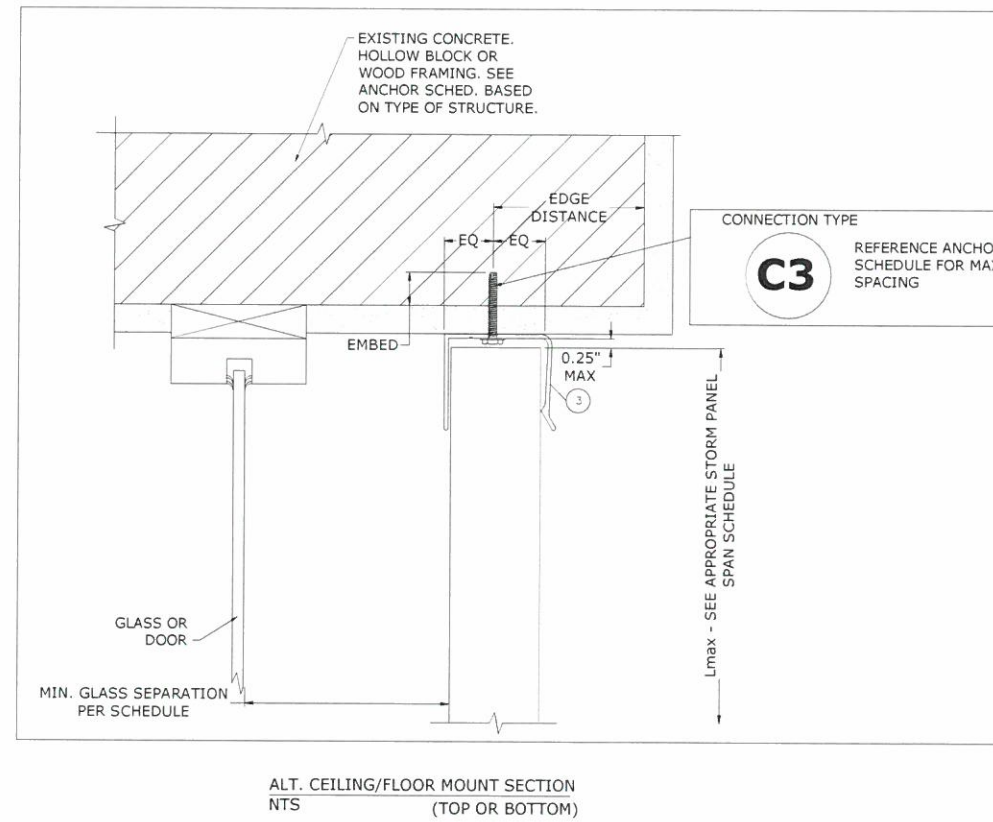
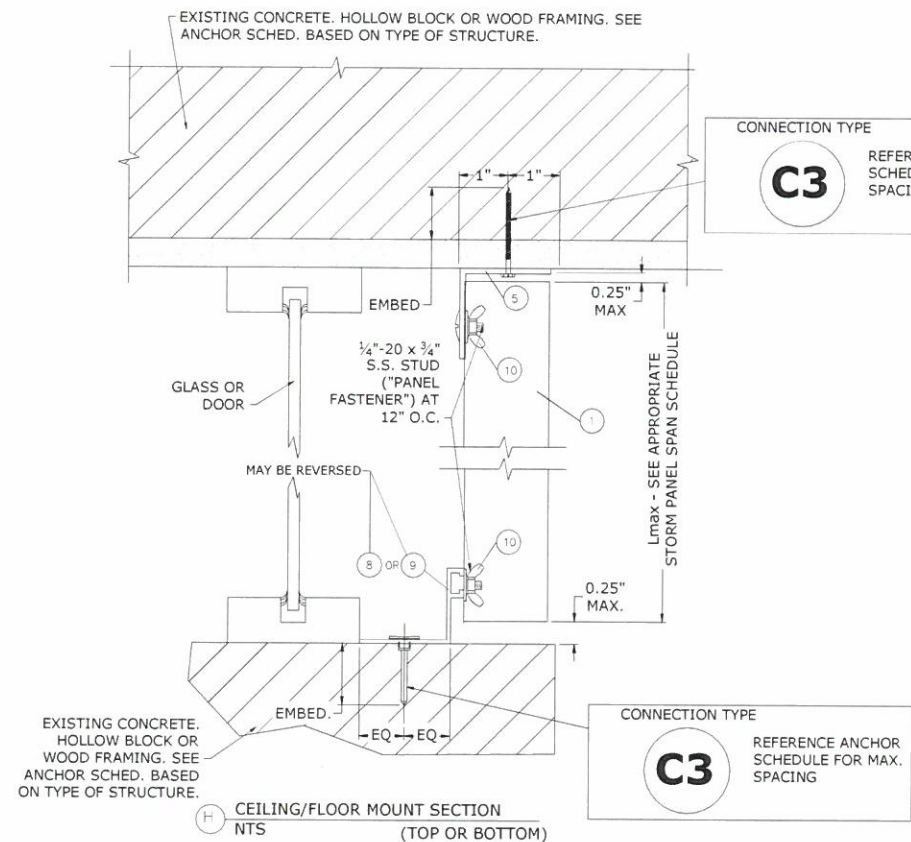
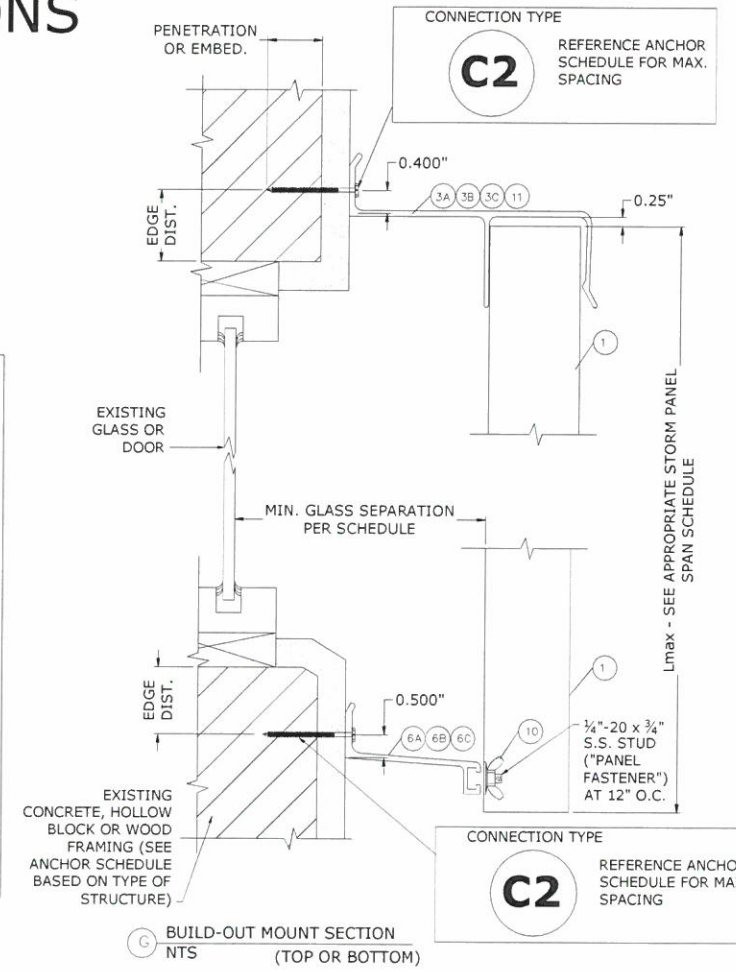
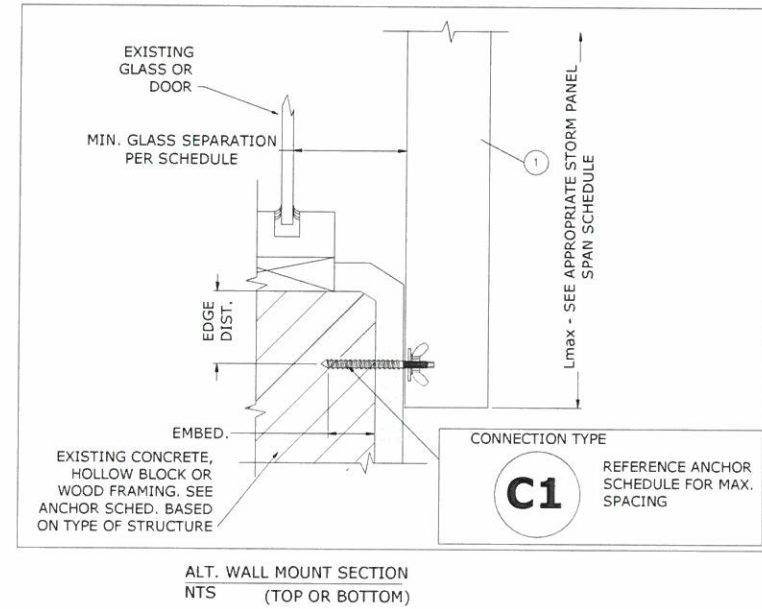
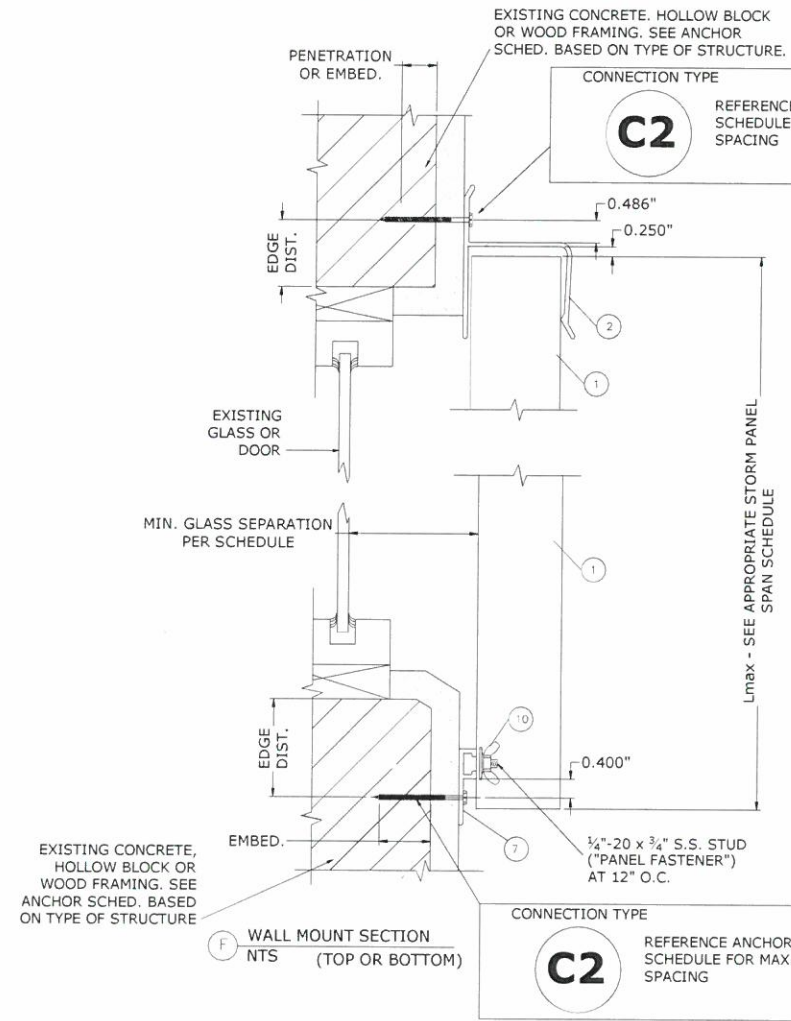
- FOR BASIC PROTECTION, GLASS SEPARATION IS NOT REQUIRED.
- SHUTTERS MAY BE USED IN ESSENTIAL FACILITIES AT HEIGHTS ABOVE 30 FEET ABOVE GRADE IN WIND ZONE 3 AND SHALL ADHERE TO THE GLASS SEPARATION REQUIREMENTS IN THIS SCHEDULE.
- SHUTTERS MAY BE USED IN ESSENTIAL FACILITIES AT ANY HEIGHT IN WIND ZONE 2 AND SHALL ADHERE TO THE GLASS SEPARATION REQUIREMENTS IN THIS SCHEDULE.



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PANEL CONNECTION OPTIONS



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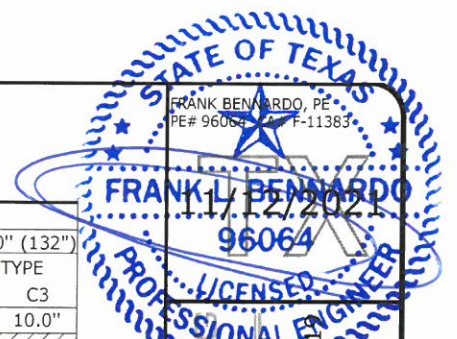
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ANCHOR SPACING (FOR SCHEDULE 1 - CONNECTION TYPES OTHER THAN 'C1'):

2" CLEAR PANELS



HOST STRUCT.	ANCHOR	LOAD (psf)	EDGE DISTANCES AS NOTED										
			Spans Up To 3'-4" (40")			Spans Up To 7'-0" (84")			Spans Up To 11'-0" (132")				
			CONNECTION TYPE	C1	C2	C3	CONNECTION TYPE	C1	C2	C3	CONNECTION TYPE	C1	C2
CONCRETE	1/4" ITW TAPCON WITH 1-3/4" EMBED AND 1-1/2" MIN. EDGE DISTANCE (3192 psi MIN CONCRETE) 	21	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
		31	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
		41	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
		51	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
		60	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
		1/4" DEWALT ULTRACON WITH 1-3/4" EMBED AND 1" MIN. EDGE DISTANCE (2846 psi MIN CONCRETE) 	21	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
	31		12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
	41		12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
	51		12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
	60		12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
	1/4" DEWALT PANELMATE (FEMALE, MALE, or PLUS) W/ 2" EMBED AND 2-1/2" MIN. EDGE DISTANCE (3350 psi MIN CONC) 		21	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
		31	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
		41	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
		51	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
		60	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
		1/4" ITW TAPCON STORM GAURD W/ 1-3/4" EMBED AND 1-1/4" MIN. EDGE DISTANCE (3295 psi MIN CONCRETE) 	21	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
	31		12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
	41		12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
	51		12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
	60		12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
1/4-20 ALL POINTS SOLID- SET WITH 7/8" EMBED AND 1-1/4" MIN. EDGE DISTANCE (3000 psi MIN CONCRETE) 	21		12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
	31	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	
	41	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	
	51	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	
	60	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	

HOST STRUCT.	ANCHOR	LOAD (psf)	EDGE DISTANCES AS NOTED										
			Spans Up To 3'-4" (40")			Spans Up To 7'-0" (84")			Spans Up To 11'-0" (132")				
			CONNECTION TYPE	C1	C2	C3	CONNECTION TYPE	C1	C2	C3	CONNECTION TYPE	C1	C2
WOOD	1/4" ITW TAPCON WITH 1-3/8" THREAD PEN. AND 3/4" MIN. EDGE DISTANCE (G=0.42 MIN) 	21	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
		31	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
		41	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
		51	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
		60	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
		1/4" DEWALT ULTRACON WITH 1-3/8" THREAD PEN. AND 3/4" MIN. EDGE DISTANCE (G=0.42 MIN) 	21	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
	31		12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
	41		12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
	51		12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
	60		12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
	1/4" DEWALT PANELMATE (FEMALE, MALE, or PLUS) W/ 1-7/8" EMBED AND 3/4" MIN. EDGE DISTANCE (G=0.54 MIN.) 		21	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
		31	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
		41	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
		51	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
		60	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
		1/4" ITW TAPCON STORM GAURD W/ 1-3/4" EMBED AND 1-1/4" MIN. EDGE DISTANCE (G=0.42 MIN) 	21	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
	31		12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
	41		12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
	51		12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
	60		12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
1/4-20 PANELMATE INSERT WITH 1-5/8" EMBED AND 3/4" MIN. EDGE DISTANCE (G=0.42 MIN.) 	21		12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	11.5"
	31	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	11.5"	
	41	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	11.5"	
	51	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	11.5"	
	60	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	11.5"	
	1/4" WOOD OR LAG SCREW WITH 1-3/8" MIN THREAD PEN. AND 3/4" MIN. EDGE DISTANCE (G=0.42 MIN.) 	21	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	9.5"
31		12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	9.5"	
41		12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	9.5"	
51		12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	9.5"	
60		12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	9.5"	

ANCHOR NOTES:

1. 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 3 FOR IDENTIFICATION OF CONNECTION TYPE).
3. "PANEL FASTENERS" ARE STUDS USED IN CONJUNCTION WITH ALL MOUNTING EXTRUSIONS ("F"-TRACK, STUDDED ANGLE, ETC.). "PANEL FASTENERS" SHALL BE SPACED AT 12" O.C. ALL END PANEL HOLES SHALL HAVE PANEL FASTENERS, TYP.
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 G=0.42 OR GREATER DENSITY, U.N.O. LAG SCREWS SHALL HAVE PHILLIPS PAN HEAD OR HEX HEAD.
11. REMOVABLE ANCHORS ARE: DEWALT PANELMATE, ALL-POINTS SOLID-SET.
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. [Hatched pattern] 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.
17. PROVIDE KEYHOLE WASHER FOR 1/4-20 SIDEWALK BOLTS (OR TRUSS HEAD SCREWS)

HOST STRUCT.	ANCHOR	LOAD (psf)	EDGE DISTANCES AS NOTED											
			Spans Up To 3'-4" (40")			Spans Up To 7'-0" (84")			Spans Up To 11'-0" (132")					
			CONNECTION TYPE	C1	C2	C3	CONNECTION TYPE	C1	C2	C3	CONNECTION TYPE	C1	C2	C3
HOLLOW (OR GROUT-FILLED) BLOCK	1/4" ITW TAPCON WITH 1" EMBED AND 2" MIN. EDGE DISTANCE (1900 psi MIN CMU) 	21	12.0"	12.0"	12.0"	12.0"	12.0"	11.0"	12.0"	12.0"	7.0"			
		31	12.0"	12.0"	12.0"	12.0"	12.0"	7.5"						
		41	12.0"	12.0"	12.0"	12.0"	6.0"	9.5"	5.5"					
		51	12.0"	12.0"	9.5"									
		60	12.0"	12.0"	8.0"									
		1/4" DEWALT ULTRACON WITH 1-1/4" EMBED AND 1" MIN. EDGE DISTANCE (1900 psi MIN CMU) 	21	12.0"	12.0"	12.0"	12.0"	12.0"	11.0"	12.0"	12.0"	7.0"		
	31		12.0"	12.0"	12.0"	12.0"	12.0"	7.5"						
	41		12.0"	12.0"	12.0"	12.0"	6.0"	11.5"	5.5"					
	51		12.0"	12.0"	9.5"									
	60		12.0"	12.0"	8.0"									
	1/4" DEWALT PANELMATE (FEMALE, MALE, or PLUS) W/ 1-1/4" EMBED AND 2" MIN. EDGE DISTANCE (2000 psi MIN CMU) 		21	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	11.0"		
		31	12.0"	12.0"	12.0"	12.0"	12.0"	11.5"						
		41	12.0"	12.0"	12.0"	12.0"	12.0"	9.0"						
		51	12.0"	12.0"	12.0"	12.0"	12.0"							
		60	12.0"	12.0"	12.0"	12.0"	12.0"							
		1/4-20 ALL POINTS SOLID- SET WITH 7/8" EMBED AND 1-1/4" MIN. EDGE DISTANCE (1800 psi MIN CMU) 	21	12.0"	12.0"	12.0"	12.0"	12.0"	11.5"	12.0"	12.0"	7.0"		
	31		12.0"	12.0"	12.0"	12.0"	12.0"	7.5"						
	41		12.0"	12.0"	12.0"	12.0"	12.0"	5.5"						
	51		12.0"	12.0"	9.5"									
	60		12.0"	12.0"	8.0"									

EASTERN METAL SUPPLY
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WEST PALM BEACH, FL
(800) 432-2204

2" CLEAR BERTHA STORM PANEL
INTERNATIONAL BUILDING CODE
TEXAS DEPARTMENT OF INSURANCE

DRWN	CHKD	DATE
RWN	FLB	09/27/18
CCB	FLB	10/26/20
RWN	FLB	10/29/21

REMARKS
INIT ISSUE
2020 FCC
TDI

20-28341

SCALE: NTS UNLESS NOTED

C:\Users\rickn\Downloads\20-28341a 2in Clear Bertha Storm Panels (TDI).dwg
11/12/2021 - 11:31am
rickn

ANCHOR SPACING (FOR SCHEDULE 2 - CONNECTION TYPE 'C1' ONLY):

2" CLEAR PANELS

HOST STRUCT.	ANCHOR	LOAD (psf)	EDGE DISTANCES AS NOTED		
			Spans Up To 3'-0"	Spans Up To 7'-0"	Spans Up To 12'-0"
			CONN TYPE	CONN TYPE	CONN TYPE
CONCRETE	1/4" ITW TAPCON WITH 1-3/4" EMBED AND 1-1/2" MIN. EDGE DISTANCE (3192 psi MIN CONCRETE)	35	C1	C1	C1
		40	12.0"	12.0"	12.0"
		45	12.0"	12.0"	12.0"
		50	12.0"	12.0"	12.0"
		55	12.0"	12.0"	12.0"
		60	12.0"	12.0"	12.0"
	1/4" DEWALT ULTRACON WITH 1-3/4" EMBED AND 1" MIN. EDGE DISTANCE (2846 psi MIN CONCRETE)	35	12.0"	12.0"	12.0"
		40	12.0"	12.0"	12.0"
		45	12.0"	12.0"	12.0"
		50	12.0"	12.0"	12.0"
		55	12.0"	12.0"	12.0"
		60	12.0"	12.0"	12.0"
	1/4" DEWALT PANELMATE (FEMALE, MALE, or PLUS) W/ 2" EMBED AND 2-1/2" MIN. EDGE DISTANCE (3350 psi MIN CONC)	35	12.0"	12.0"	12.0"
		40	12.0"	12.0"	12.0"
		45	12.0"	12.0"	12.0"
		50	12.0"	12.0"	12.0"
		55	12.0"	12.0"	12.0"
		60	12.0"	12.0"	12.0"
	1/4" ITW TAPCON STORM GAURD W/ 1-3/4" EMBED AND 1-1/4" MIN. EDGE DISTANCE (3295 psi MIN CONCRETE)	35	12.0"	12.0"	12.0"
		40	12.0"	12.0"	12.0"
		45	12.0"	12.0"	12.0"
		50	12.0"	12.0"	12.0"
		55	12.0"	12.0"	12.0"
		60	12.0"	12.0"	12.0"
1/4-20 ALL POINTS SOLID- SET WITH 7/8" EMBED AND 1-1/4" MIN. EDGE DISTANCE (3000 psi MIN CONCRETE)	35	12.0"	12.0"	12.0"	
	40	12.0"	12.0"	12.0"	
	45	12.0"	12.0"	12.0"	
	50	12.0"	12.0"	12.0"	
	55	12.0"	12.0"	12.0"	
	60	12.0"	12.0"	12.0"	

HOST STRUCT.	ANCHOR	LOAD (psf)	EDGE DISTANCES AS NOTED		
			Spans Up To 3'-0"	Spans Up To 7'-0"	Spans Up To 12'-0"
			CONN TYPE	CONN TYPE	CONN TYPE
HOLLOW (OR GROUT-FILLED) BLOCK	1/4" ITW TAPCON WITH 1" EMBED AND 2" MIN. EDGE DISTANCE (1900 psi MIN CMU)	35	C1	C1	C1
		40	12.0"	6.0"	6.0"
		45	12.0"	6.0"	6.0"
		50	12.0"	6.0"	6.0"
		55	12.0"	6.0"	6.0"
		60	12.0"	6.0"	6.0"
	1/4" DEWALT ULTRACON WITH 1-1/4" EMBED AND 1" MIN. EDGE DISTANCE (1900 psi MIN CMU)	35	12.0"	12.0"	6.0"
		40	12.0"	12.0"	6.0"
		45	12.0"	6.0"	6.0"
		50	12.0"	6.0"	6.0"
		55	12.0"	6.0"	6.0"
		60	12.0"	6.0"	6.0"
	1/4" DEWALT PANELMATE (FEMALE, MALE, or PLUS) W/ 1-1/4" EMBED AND 2" MIN. EDGE DISTANCE (2000 psi MIN CMU)	35	12.0"	12.0"	12.0"
		40	12.0"	12.0"	12.0"
		45	12.0"	12.0"	12.0"
		50	12.0"	12.0"	12.0"
		55	12.0"	12.0"	12.0"
		60	12.0"	12.0"	12.0"
	1/4-20 ALL POINTS SOLID- SET WITH 7/8" EMBED AND 1-1/4" MIN. EDGE DISTANCE (1800 psi MIN CMU)	35	12.0"	12.0"	6.0"
		40	12.0"	12.0"	6.0"
		45	12.0"	12.0"	6.0"
		50	12.0"	6.0"	6.0"
		55	12.0"	6.0"	6.0"
		60	12.0"	6.0"	6.0"

HOST STRUCT.	ANCHOR	LOAD (psf)	EDGE DISTANCES AS NOTED		
			Spans Up To 3'-0"	Spans Up To 7'-0"	Spans Up To 12'-0"
			CONN TYPE	CONN TYPE	CONN TYPE
WOOD	1/4" ITW TAPCON WITH 1-3/8" THREAD PEN. AND 3/4" MIN. EDGE DISTANCE (G=0.42 MIN)	35	C1	C1	C1
		40	12.0"	12.0"	12.0"
		45	12.0"	12.0"	12.0"
		50	12.0"	12.0"	12.0"
		55	12.0"	12.0"	12.0"
		60	12.0"	12.0"	12.0"
	1/4" DEWALT ULTRACON WITH 1-3/8" THREAD PEN. AND 3/4" MIN. EDGE DISTANCE (G=0.42 MIN)	35	12.0"	12.0"	12.0"
		40	12.0"	12.0"	12.0"
		45	12.0"	12.0"	12.0"
		50	12.0"	12.0"	12.0"
		55	12.0"	12.0"	12.0"
		60	12.0"	12.0"	12.0"
	1/4" DEWALT PANELMATE (FEMALE, MALE, or PLUS) W/ 1-7/8" EMBED AND 3/4" MIN. EDGE DISTANCE (G=0.54 MIN.)	35	12.0"	12.0"	12.0"
		40	12.0"	12.0"	12.0"
		45	12.0"	12.0"	12.0"
		50	12.0"	12.0"	12.0"
		55	12.0"	12.0"	12.0"
		60	12.0"	12.0"	12.0"
	1/4" ITW TAPCON STORM GAURD W/ 1-3/4" EMBED AND 1-1/4" MIN. EDGE DISTANCE (G=0.42 MIN)	35	12.0"	12.0"	12.0"
		40	12.0"	12.0"	12.0"
		45	12.0"	12.0"	12.0"
		50	12.0"	12.0"	12.0"
		55	12.0"	12.0"	12.0"
		60	12.0"	12.0"	12.0"
1/4-20 PANELMATE INSERT WITH 1-5/8" EMBED AND 3/4" MIN. EDGE DISTANCE (G=0.42 MIN.)	35	12.0"	12.0"	12.0"	
	40	12.0"	12.0"	12.0"	
	45	12.0"	12.0"	12.0"	
	50	12.0"	12.0"	12.0"	
	55	12.0"	12.0"	12.0"	
	60	12.0"	12.0"	12.0"	
1/4" WOOD OR LAG SCREW WITH 1-3/8" MIN THREAD PEN. AND 3/4" MIN. EDGE DISTANCE (G=0.42 MIN.)	35	12.0"	12.0"	12.0"	
	40	12.0"	12.0"	12.0"	
	45	12.0"	12.0"	12.0"	
	50	12.0"	12.0"	12.0"	
	55	12.0"	12.0"	12.0"	
	60	12.0"	12.0"	12.0"	

ANCHOR NOTES:

- 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.
- 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. THIS SHEET APPLIES TO CONNECTION TYPE "C1" AND F-TRACK (PART #7) ONLY (SEE MOUNTING DETAILS ON SHEET 3 FOR IDENTIFICATION OF CONNECTION TYPE). "H" HEADER AND "U" HEADER OPTIONS ARE NOT APPLICABLE FOR THESE TABLES.
- ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS.
- HOLLOW BLOCK HOST STRUCTURE SHALL CONFORM TO ASTM C90 BLOCK.
- MINIMUM EMBEDMENT SHALL BE AS NOTED IN ANCHOR SCHEDULE.
- 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.
- CONCRETE ANCHORS NOTED HEREIN SHALL BE EMBEDDED TO UN-CRACKED CONCRETE ONLY.
- 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.
- 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 G=0.42 OR GREATER DENSITY, U.N.O. LAG SCREWS SHALL HAVE PHILLIPS PAN HEAD OR HEX HEAD.
- REMOVABLE ANCHORS ARE: DEWALT PANELMATE, ALL-POINTS SOLID-SET.
- 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.
- MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDES STUCCO OR OTHER WALL FINISHES.
- DESIGNATES ANCHOR CONDITIONS WHICH ARE NOT ACCEPTABLE USES.
- DIRECT MOUNTING CONDITIONS.
- LINEAR INTERPOLATION IS NOT PERMITTED FOR USE WITH THE ANCHOR SCHEDULES LISTED ON THIS SHEET.
- PROVIDE KEYHOLE WASHER FOR 1/4-20 SIDEWALK BOLTS



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2" CLEAR BERTHA STORM PANEL
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REMARKS	DATE
INITIALS	09/27/19
2020 FBC	10/26/20
TDI	10/29/21

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