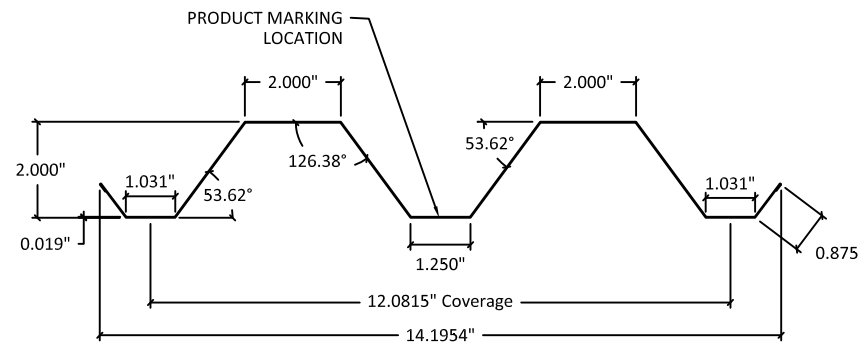


# EASTERN METAL SUPPLY

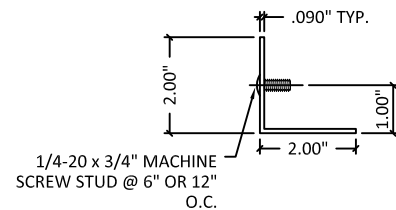
## 28 GAUGE STORM PANEL WIND ZONE 3 IMPACT RATED



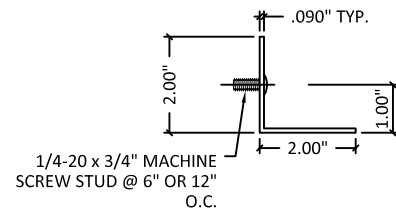
4268 WESTROADS DRIVE  
WEST PALM BEACH, FL 33407  
PH: 1-800-432-2204 FX: 561-841-0852



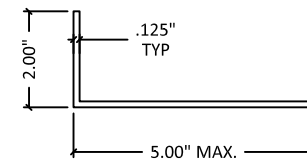
**1 28 GA. STORM PANEL**  
GALVANIZED STEEL  
Scale: 3" = 1'-0"



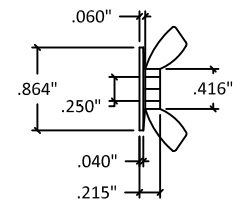
**2 STUDDED ANGLE**  
STAINLESS STEEL  
Scale: 3" = 1'-0"



**2a REVERSE STUDDED ANGLE**  
STAINLESS STEEL  
Scale: 3" = 1'-0"



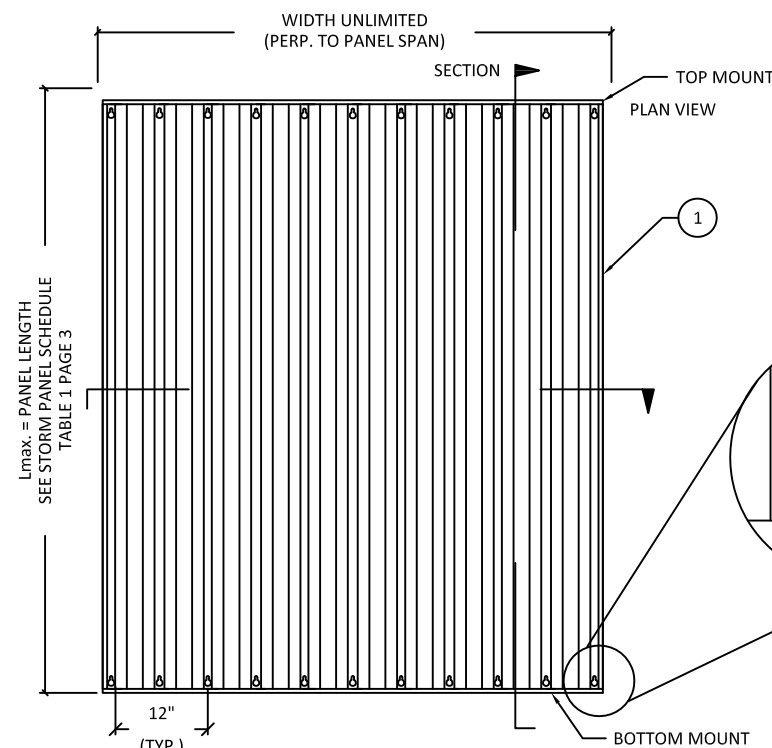
**3 ANGLE**  
ALUMINUM  
Scale: 3" = 1'-0"



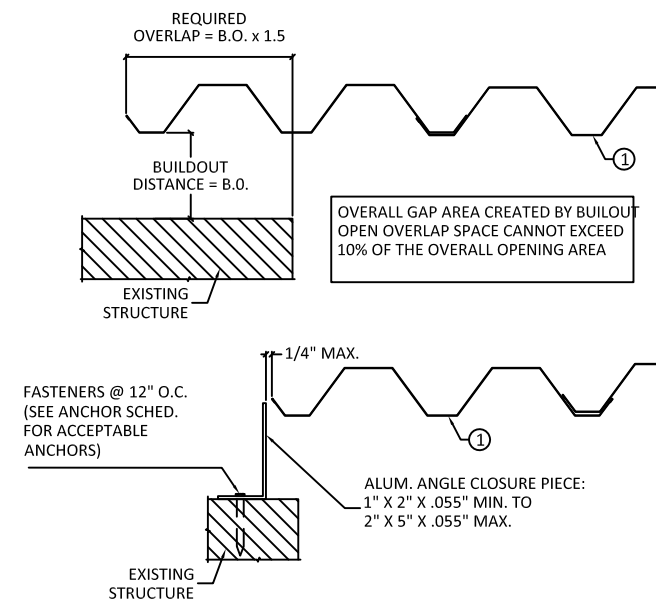
**4 WASHERED WINGNUT**  
STAINLESS STEEL  
Scale: HALF SIZE

### GENERAL NOTES

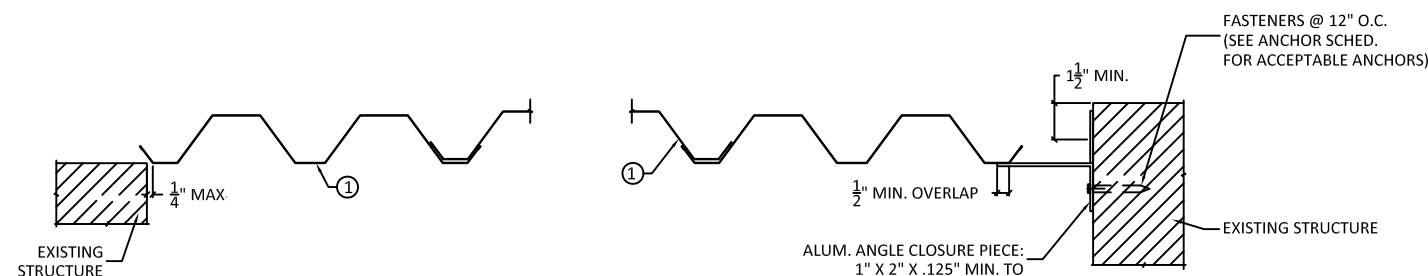
- STORM PANELS SHOWN ON THESE APPROVAL DOCUMENTS HAVE BEEN VERIFIED FOR COMPLIANCE IN ACCORDANCE WITH THE 2017 (6TH EDITION) FLORIDA BUILDING CODE. PRODUCTS HAVE BEEN EVALUATED FOR USE PER THE FBC AND ASTM E1996 WIND ZONE 3 MISSILE LEVEL D IMPACT REQUIREMENTS AND HAVE BEEN TESTED IN ACCORDANCE WITH ASTM E330-02, ASTM E1886-02, AND ASTM E1996-05.
- NO INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THIS PRODUCT.
- DETERMINE THE POSITIVE AND NEGATIVE DESIGN LOADS TO USE WHEN REFERENCING THESE DOCUMENTS IN ACCORDANCE WITH THE GOVERNING CODE AND GOVERNING WIND VELOCITY. FOR WIND LOAD CALCULATIONS IN ACCORDANCE WITH ASCE 7-10 A DIRECTIONALITY FACTOR OF  $K_d = 0.85$  SHALL BE USED.
- THESE APPROVAL DOCUMENTS ARE GENERIC AND DO NOT INCLUDE INFORMATION FOR SITE SPECIFIC APPLICATION OF THIS SHUTTER SYSTEM.
- THESE APPROVAL DOCUMENTS ARE SUITABLE TO BE APPLIED BY LICENSED CONTRACTOR, PROVIDED THE CONTRACTOR DOES NOT DEVIATE FROM THE CONDITIONS DETAILED HEREIN AND THE CONTRACTOR VERIFIES THAT THE EXISTING STRUCTURE DOES NOT DEVIATE IN EITHER FORM OR MATERIAL FROM THE STRUCTURAL SUBSTRATES DETAILED HEREIN.
- ANY MODIFICATIONS OR ADDITIONS TO THESE APPROVAL DOCUMENTS WILL VOID THE APPROVAL DOCUMENTS.
- WHEN THE SITE CONDITIONS DEVIATE FROM THESE APPROVAL DOCUMENTS, THE BUILDING OFFICIAL MAY ELECT ONE OF THE FOLLOWING OPTIONS.
  - REQUIRE THAT SITE SPECIFIC DOCUMENTS BE PREPARED, SIGNED, DATED AND SEALED BY A LICENSED ENGINEER OR REGISTERED ARCHITECT, WHICH DETAIL AND JUSTIFY THE DEVIATION. SAID DOCUMENTS SHALL BE SUBMITTED TO THE PRODUCT ENGINEER FOR REVIEW AS A CONDITION TO THE BUILDING OFFICIAL GRANTING HIS/HER APPROVAL.
  - REQUIRE THAT A ONE TIME SITE SPECIFIC APPROVAL BE APPLIED FOR AND SECURED FROM THE MIAMI-DADE COUNTY PRODUCT CONTROL SECTION.
- WHEN THE SITE CONDITIONING DEVIATIONS OCCUR WITHIN THE HIGH VELOCITY HURRICANE ZONE AREAS ONLY OPTION "B" SHALL BE ACCEPTED BY THE BUILDING OFFICIAL
- MANUFACTURER'S PRODUCT LABEL SHALL BE LOCATED IN A VISIBLE LOCATION ON THE EXTERIOR OF THE PANEL PER FBC SECTION 1709.9.3, LOCATED A MAXIMUM OF EVERY THREE (3) LINEAL FEET. LABEL SHALL CONTAIN INFORMATION AS REQUIRED BY FBC SECTION 1709.9.2.
- STORM PANELS SHALL BE 28 GAUGE GALVANIZED STEEL OF MINIMUM 0.190" THICKNESS (WITH  $F_y = 50$  K.S.I. MIN.) ALL EXTRUSIONS SHALL BE 6063-T6 ALUMINUM ALLOY, U.O.N.
- ITW TAPCON FASTENERS SHALL BE CARBON STEEL WITH CLIMASEAL COATING OR 410 STAINLESS STEEL. ELCO PANELMATES MALE/FEMALE SHALL BE CARBON STEEL WITH STALGARD COATING OR 18-8 STAINLESS STEEL. ELCO PANELMATE INSERTS SHALL BE CARBON STEEL WITH SILVER STALGARD COATING. ALL POINTS SOLID-SET SHALL BE LEAD ALLOY AND ZAMAC ALLOY. ALL REMAINING FASTENERS AND BOLTS TO BE 304 SERIES STAINLESS STEEL, 18-8 STAINLESS STEEL OR GALVANIZED STEEL WITH A 33 K.S.I. MINIMUM YIELD STRENGTH.
- TOP & BOTTOM DETAILS SHOWN MAY BE INTERCHANGED AS FIELD CONDITIONS DICTATE. PANELS MAY BE MOUNTED HORIZONTALLY WERE APPLICABLE.
- THE PERMIT HOLDER SHALL VERIFY THE ADEQUACY OF THE EXISTING STRUCTURE TO SUSTAIN THE NEW SUPERIMPOSED LOADS AND TO VERIFY ALL DIMENSIONS AT THE JOB SITE, BEFORE COMMENCING WITH THE WORK.



**TYP. ELEVATION**



**BUILDOUT END CLOSURE PLAN VIEWS**  
Scale: 1 1/2" = 1'-0"



**TYPICAL PLAN VIEWS**  
Scale: 1 1/2" = 1'-0"

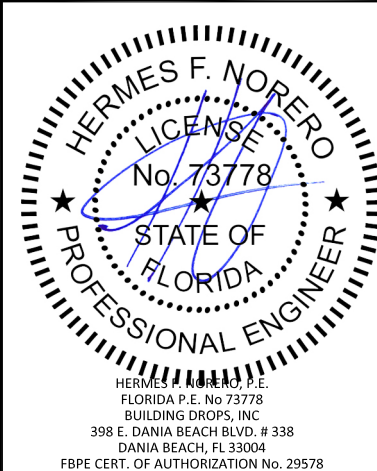
TITLE:  
28 GAUGE STEEL STORM PANEL  
WIND ZONE 3 IMPACT RATED

### GENERAL NOTES

PREPARED BY:  
**BUILDING DROPS, INC.**  
398 E. DANIA BEACH BLVD., STE. 338  
DANIA BEACH, FL 33004  
PH: (954)399-8478  
FAX: (954)744-4738  
WEB: www.buildingdrops.com

REMARKS	BY	DATE

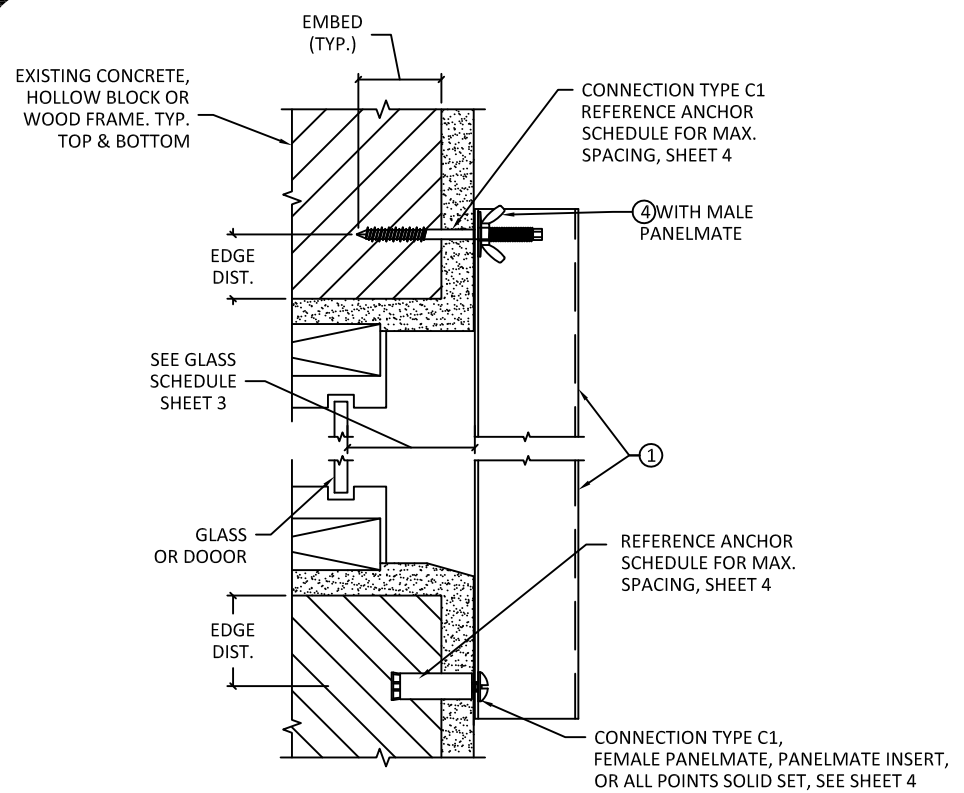
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398 E. DANIA BEACH BLVD. # 338  
DANIA BEACH, FL 33004  
FBPE CERT. OF AUTHORIZATION No. 29578

FL #:	<b>FL22270</b>
DATE:	<b>10.03.17</b>
DWG. BY:	<b>SM</b>
CHK. BY:	<b>HFN</b>
SCALE:	<b>NTS</b>
DWG. #:	<b>EMS005</b>
SHEET:	<b>1</b>

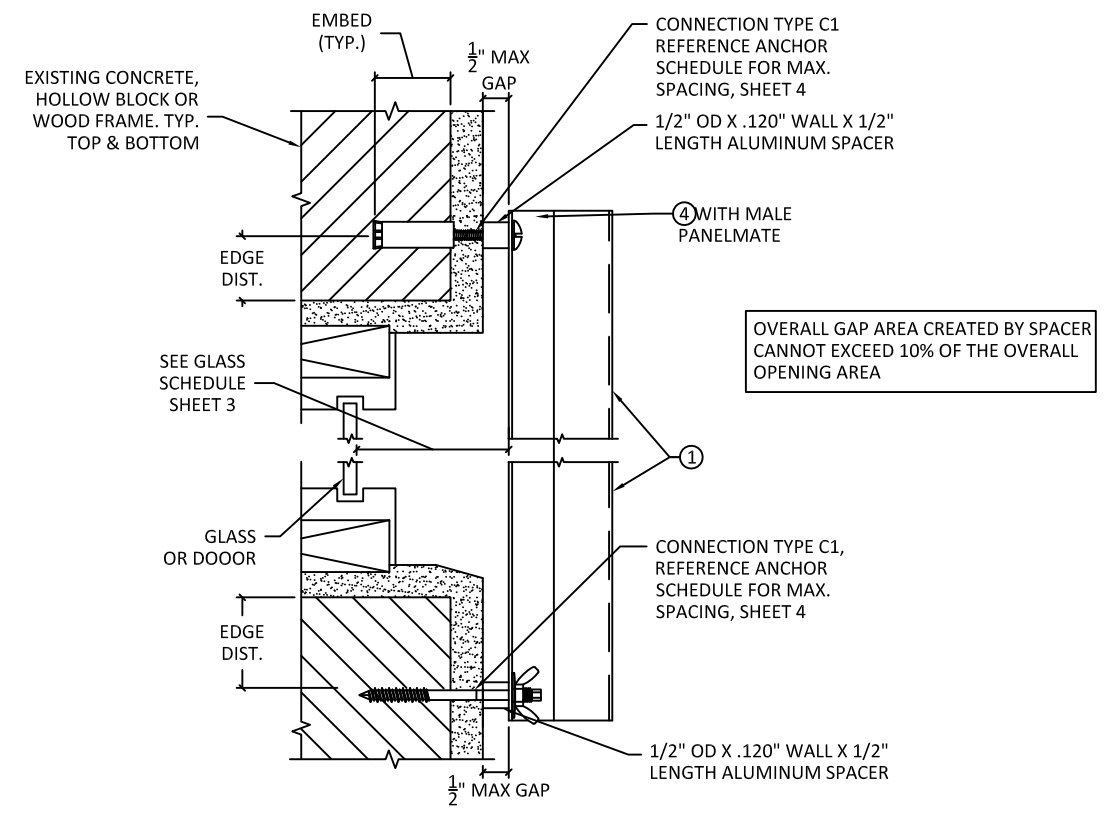
10/18/2017 9:25 AM  
s:\projects\eastern\_metal\_supply\lbc-27-0741-1-1022270-revision-wr3-28-ga-storm-panel\dwg\ems005-wr3-28-gauge-storm-panel.dwg



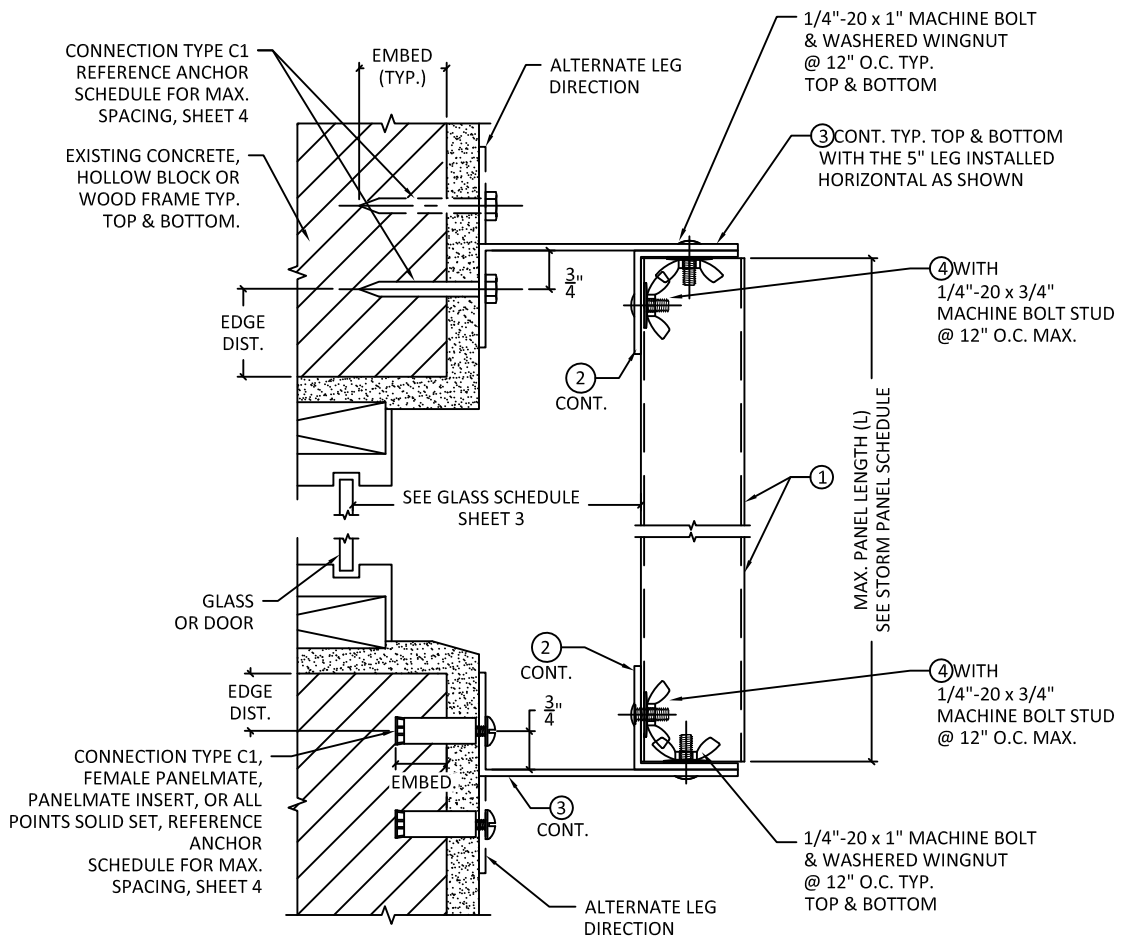
**A WALL MOUNT SECTION - FLUSH**  
Scale: 3" = 1'-0"

TABLE 1 - MAXIMUM ALLOWABLE STORM SPAN SCHEDULE	
POS/NEG DESIGN LOAD (PSF)	L MAX (FT)
50	9' - 2"
55	8' - 3"
60	7' - 5"
65	6' - 7"
70	5' - 11"
72	5' - 7"

- TABLE 1 NOTES:**
- ENTER TABLE 1 WITH REQUIRED NEGATIVE DESIGN LOAD TO DETERMINE MAX. ALLOWABLE PANEL SPAN (L<sub>max</sub>). POSITIVE LOADS LESS THAN OR EQUAL TO THE NEGATIVE LOAD ARE ACCEPTABLE.
  - FOR DESIGN LOADS BETWEEN TABULATED VALUES, USE NEXT HIGHER LOAD OR LINEAR INTERPOLATION MAY BE USED TO DETERMINE ALLOWABLE SPANS.

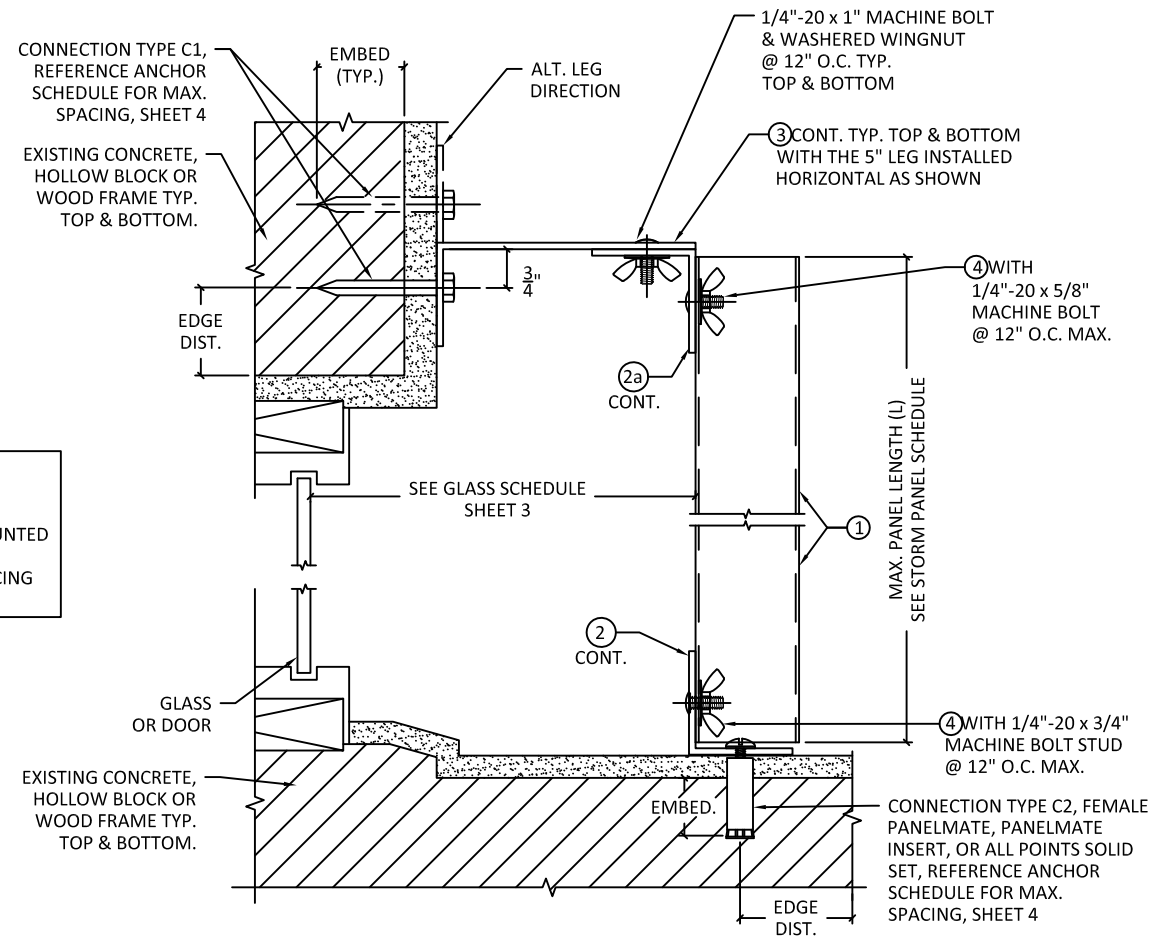


**B WALL MOUNT SECTION - SPACED**  
Scale: 3" = 1'-0"

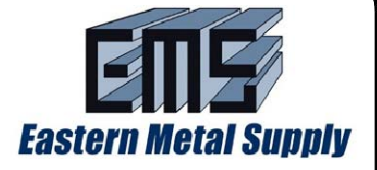


**C BUILD-OUT MOUNT SECTION**  
Scale: 3" = 1'-0"

- NOTES:**
- TOP & BOTTOM DETAILS SHOWN MAY BE INTERCHANGED AND COMBINED AS FIELD CONDITIONS DICTATE. PANELS MAY BE MOUNTED HORIZONTALLY WERE APPLICABLE.
  - SEE SHEET 4 FOR ALLOWABLE ANCHOR SPACING BASED ON CONNECTION TYPE.



**D BUILD-OUT MOUNT SECTION**  
Scale: 3" = 1'-0"



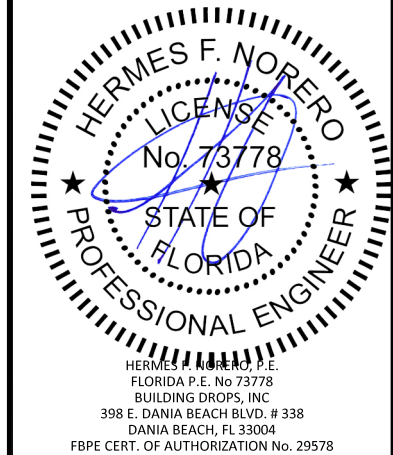
4268 WESTROADS DRIVE  
WEST PALM BEACH, FL 33407  
PH: 1-800-432-2204 FX: 561-841-0852

**TITLE:** 28 GAUGE STEEL STORM PANEL WIND ZONE 3 IMPACT RATED  
**VERTICAL SECTIONS**

**PREPARED BY:** BUILDING DROPS, INC.  
398 E. DANIA BEACH BLVD., STE. 338  
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REMARKS	BY	DATE

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**FL #:** FL22270  
**DATE:** 10.03.17  
**DWG. BY:** SM  
**CHK. BY:** HFN  
**SCALE:** NTS  
**DWG. #:** EMS005  
**SHEET:**



**TITLE:**  
28 GAUGE STEEL STORM PANEL  
WIND ZONE 3 IMPACT RATED

**ANCHOR SCHEDULES**

**PREPARED BY:**  
BUILDING DROPS, INC.  
398 E. DANIA BEACH BLVD., STE. 338  
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DANIA BEACH, FL 33004  
FBPE CERT. OF AUTHORIZATION No. 29578

FL #:  
**FL22270**

DATE:  
**10.03.17**

DWG. BY:  
**SM**

CHK. BY:  
**HFN**

SCALE:  
**NTS**

DWG. #:  
**EMS005**

SHEET:  
**3**

OF 3

FASTENER MAXIMUM SPACING (INCHES) REQUIRED FOR VARIOUS DESIGN LOADS AND SPANS

EXIST. STRUC.	ANCHOR TYPE	LOAD (W) P.S.F. MAX. (SEE NOTE 1)	MIN. 2" EDGE DISTANCE								MIN. 3" EDGE DISTANCE								
			SPANS UP TO 3'-0" (SEE NOTE 1)		SPANS UP TO 5'-7" (SEE NOTE 1)		SPANS UP TO 8'-0" (SEE NOTE 1)		SPANS UP TO 9'-2" (SEE NOTE 1)		SPANS UP TO 3'-0" (SEE NOTE 1)		SPANS UP TO 5'-7" (SEE NOTE 1)		SPANS UP TO 8'-0" (SEE NOTE 1)		SPANS UP TO 9'-2" (SEE NOTE 1)		
			CONNECTION TYPE (SEE NOTE 3)		CONNECTION TYPE (SEE NOTE 3)		CONNECTION TYPE (SEE NOTE 3)		CONNECTION TYPE (SEE NOTE 3)		CONNECTION TYPE (SEE NOTE 3)		CONNECTION TYPE (SEE NOTE 3)		CONNECTION TYPE (SEE NOTE 3)		CONNECTION TYPE (SEE NOTE 3)		
			C1	C2	C1	C2	C1	C2	C1	C2	C1	C2	C1	C2	C1	C2	C1	C2	
CONCRETE	1/4" Ø ITW TAPCON WITH 1-3/4" MIN. EMBEDMENT (MIN. 3,192 PSI CONCRETE)	30	12	12	12	12	12	12	12	12	12	12	12	12	12	12			
		40	12	12	12	12	12	12	11	12	12	12	12	12	12	12			
		50	12	12	12	12	12	10	12	9	12	12	12	12	12	12			
		60	12	12	12	12	12	9	12	9	12	12	12	12	12	12			
		72	12	12	12	10	12	9			12	12	12	12	12				
	1/4" Ø ELCO MALE/FEMALE PANELMATE W/ 1-3/4" MIN. EMBED. & 1/4-10 MACHINE SCREW WITH NUT (MIN. 3,000 PSI CONCRETE)	30									12	12	12	12	12	12			
		40									12	12	12	12	12	12			
		50									12	12	12	12	11	12			
		60									12	12	12	12	10	12			
		72									12	12	12	11	12	10			
	1/4" Ø ALL POINTS SOLID SET WITH 7/8" MIN. EMBED. & 1/4-20 STAINLESS STEEL MACHINE SCREW (MIN. 2,000 PSI CONCRETE)	30	12	12	12	12	12	12	12	12	12	12	12	12	12	12			
		40	12	12	12	12	12	12	11	12	12	12	12	12	12	12			
		50	12	12	12	12	12	11	12	9	12	12	12	12	12	12			
		60	12	12	12	12	12	9	12	9	12	12	12	12	12	12			
		72	12	12	12	11	12	9			12	12	12	12	12				
	1/2" Ø X 2-1/8" ELCO PANELMATE INSERT WITH MIN. 1-1/4" EMBEDMENT & 1/4-20 STAINLESS STEEL MACHINE SCREW (MIN. 2,700 PSI CONCRETE)	30	12	12	12	12	12	10	12	12	12	12	12	12	12	11			
40		12	12	12	12	12	9	12	7	12	12	12	12	10	12				
50		12	12	12	10	12	7	12	6	12	12	12	11	12	8				
60		12	12	12	8	12	6	12	6	12	12	12	9	12	7				
72		12	12	12	7	12	6			12	12	12	7	12	7				
HOLLOW CONC. BLOCK	1/4" Ø ITW TAPCON WITH 1-1/4" MIN. EMBEDMENT (CONFORMING TO ASTM C-90)	30	12	12	12	9	12	6	11	5	12	12	12	12	8	12	7		
		40	12	12	12	6	10	4	8	4	12	12	12	9	12	6	11	5	
		50	12	10	11	5	8				12	12	12	7	10	5	9	4	
		60	12	8	9	4	7				12	11	12	6	9	4	9	4	
		72	12	7	8		7				12	9	10	5	9	4			
	1/4" Ø ELCO MALE/FEMALE PANELMATE W/ 1-1/4" MIN. EMBED. & 1/4-10 MACHINE SCREW WITH NUT (CONFORMING TO ASTM C-90)	30									12	12	12	12	12	8	12	7	
		40									12	12	12	12	9	12	6	12	5
		50									12	12	12	12	7	12	5	10	4
		60									12	11	12	12	6	10	4	10	4
		72									12	9	12	5	10	4			
	1/4" Ø ALL POINTS SOLID SET WITH 7/8" MIN. EMBED. & 1/4-20 STAINLESS STEEL MACHINE SCREW (CONFORMING TO ASTM C-90)	30	12	12	12	12	12	10	12	9	12	12	12	12	12	12	12		
		40	12	12	12	12	11	12	7	12	6	12	12	12	12	10	12	9	
		50	12	12	12	8	12	6	12	5	12	12	12	12	11	12	8	12	7
		60	12	12	12	7	12	5	12	5	12	12	12	12	9	12	7	12	7
		72	12	11	12	6	12	5			12	12	12	12	8	12	7		
	1/2" Ø X 2-1/8" ELCO PANELMATE INSERT WITH MIN. 1-1/4" EMBEDMENT & 1/4-20 STAINLESS STEEL MACHINE SCREW (MIN. 2,700 PSI CONCRETE)	30	12	12	12	12	12	12	10	12	12	12	12	12	12	12	11		
40		12	12	12	12	12	9	12	7	12	12	12	12	12	10	12	8		
50		12	12	12	10	12	7	12	6	12	12	12	12	11	12	8	12	7	
60		12	12	12	8	12	6	12	6	12	12	12	12	9	12	7	12	7	
72		12	12	12	7	12	6			12	12	12	12	7	12	7			

FASTENER MAXIMUM SPACING (INCHES) REQUIRED FOR VARIOUS DESIGN LOADS AND SPANS

EXIST. STRUC.	ANCHOR TYPE	LOAD (W) P.S.F. MAX. (SEE NOTE 1)	MIN. 3/4" EDGE DISTANCE								
			SPANS UP TO 3'-0" (SEE NOTE 1)		SPANS UP TO 5'-7" (SEE NOTE 1)		SPANS UP TO 8'-0" (SEE NOTE 1)		SPANS UP TO 9'-2" (SEE NOTE 1)		
			CONNECTION TYPE (SEE NOTE 3)		CONNECTION TYPE (SEE NOTE 3)		CONNECTION TYPE (SEE NOTE 3)		CONNECTION TYPE (SEE NOTE 3)		
			C1	C2	C1	C2	C1	C2	C1	C2	
WOOD	1/2" Ø X 2-1/8" ELCO PANELMATE INSERT WITH MIN. 1-5/8" EMBEDMENT & 1/4-20 STAINLESS STEEL MACHINE SCREW (MIN. .55 S.G.)	30	12	12	12	12	12	12	10	12	8
		40	12	12	12	10	12	7	12	6	6
		50	12	12	12	8	12	6	12	5	5
		60	12	12	12	7	12	5	12	5	5
		72	12	11	12	6	12	5			
	1/4" Ø ELCO MALE/FEMALE PANELMATE W/ 1-7/8" MIN. EMBED. & 1/4-10 MACHINE SCREW WITH NUT (MIN. .55 S.G.)	30	12	12	12	12	12	12	12	12	12
		40	12	12	12	12	12	12	10	12	9
		50	12	12	12	12	12	12	8	12	7
		60	12	12	12	10	12	7	12	7	7
		72	12	12	12	8	12	7			

**ANCHOR NOTES:**

- SPANS AND LOADS SHOWN HERE ARE FOR DETERMINING ANCHOR SPACING ONLY. ALLOWABLE STORM PANEL SPANS FOR SPECIFIC LOADS MUST BE LIMITED TO THOSE SHOWN IN TABLE 1, SHEET 2.
- ENTER ANCHOR SCHEDULE BASED ON THE EXISTING STRUCTURE MATERIAL, ANCHOR TYPE AND EDGE DISTANCE. SELECT DESIGN LOAD GREATER THAN OR EQUAL TO NEGATIVE DESIGN LOAD ON SHUTTER AND SELECT SPAN GREATER THAN OR EQUAL TO SHUTTER SPAN.
- SEE MOUNTING SECTION DETAILS FOR IDENTIFICATION OF CONNECTION TYPES.
- FOR WALL MOUNT INSTALLATION, ANCHOR SPACING IS CONTROLLED BY SPACING OF ANCHOR SLOTS, AND CAN THEREFORE ONLY BE INSTALLED EVERY 6" OR EVERY 12". IF TABLE SHALL REQUIRE SPACING LESS THAN 12" BUT MORE THAN 6" WHEN WALL MOUNT INSTALLATION IS USED, DEFAULT TO 6" ANCHOR SPACING. ANCHOR SPACING LESS THAN 6" NOT PERMITTED. FOLLOW TABLE ANCHOR SPACING REQUIREMENTS FOR INSTALLING ANGLES WHEN BUILD OUT INSTALLATION IS USED.
- EXISTING STRUCTURE MAY BE CONCRETE, HOLLOW BLOCK OR WOOD FRAMING. REFERENCE ANCHOR SCHEDULE FOR PROPER ANCHOR TYPE BASED ON TYPE OF EXISTING STRUCTURE.
- ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS.
- MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDES WALL FINISH OR STUCCO.
- WHERE EXISTING STRUCTURE IS POST-TENSIONED CONCRETE CONTRACTOR SHALL LOCATE CABLES PRIOR TO ANCHORING AND COORDINATE ANCHORAGE SUCH THAT CABLES ARE NOT DAMAGED.
- WHERE EXISTING STRUCTURE IS WOOD FRAMING, WOOD FRAMING CONDITIONS VARY. FIELD VERIFY THAT FASTENERS ARE INTO ADEQUATE WOOD FRAMING MEMBERS, NOT PLYWOOD. FASTENING TO PLYWOOD IS ACCEPTABLE ONLY FOR SIDE CLOSURE PIECES.
- WHERE SCREWS/ANCHORS FASTEN TO NARROW FACE OF WOOD 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" S.G.=0.55 OR GREATER DENSITY.
- MACHINE SCREWS SHALL HAVE MINIMUM OF 1/2" ENGAGEMENT OF THREADS IN BASE ANCHOR (ALL POINTS SOLID SET OR ELCO PANELMATE INSERT) AND MAY HAVE EITHER A PAN HEAD, TRUSS HEAD, OR WAFER HEAD (SIDEWALK BOLT), U.O.N.
- DESIGNATES ANCHOR CONDITIONS WHICH ARE NOT ACCEPTABLE USES.
- \* DESIGNATES ANCHORS WHICH ARE REMOVABLE BY REMOVING MACHINE SCREW. NUT OR WASHERED WINGNUT.
- THE ALL POINTS SOLID SET ANCHOR MAY NOT BE USED IN CONCRETE FLOORS BEAMS OR CEILINGS. EXCEPTION: CONCRETE SLABS ON GRADE.

