

GENERAL NOTES:

1. 24 GAGE BERTHA GALVANIZED STEEL STORM PANEL (2" DEEP) SHOWN ON THIS PRODUCT EVALUATION DOCUMENT (P.E.D.) HAS BEEN VERIFIED FOR COMPLIANCE IN ACCORDANCE WITH THE 2026 (9th EDITION) OF THE FLORIDA BUILDING CODE. THIS 24 GAGE BERTHA GALVANIZED STEEL STORM PANEL (2" DEEP) SHALL NOT BE INSTALLED AT HIGH VELOCITY HURRICANE ZONES (MIAMI-DADE/BROWARD COUNTIES).

DESIGN WIND LOADS SHALL BE DETERMINED AS PER SECTION 1609 OF THE ABOVE MENTIONED CODE, FOR A WIND SPEED AS REQUIRED BY THE JURISDICTION WHERE THESE SHUTTERS WILL BE INSTALLED AND FOR A DIRECTIONALITY FACTOR Kd= 0.85. USING ASCE 7-22 SHALL NOT EXCEED THE MAXIMUM (A.S.D.) DESIGN PRESSURE RATINGS INDICATED ON SHEETS 2 , 6 THRU 10.

IN ORDER TO VERIFY THE ABOVE CONDITION, ULTIMATE DESIGN WIND LOADS DETERMINED PER ASCE 7-22 SHALL FIRST BE REDUCED TO A.S.D. DESIGN WIND LOADS BY MULTIPLYING THEM BY 0.6 IN ORDER TO COMPARE THESE WITH MAX. (A.S.D.) DESIGN PRESSURE RATINGS INDICATED ON SHEETS 2, 6 THRU 10.

24 GAGE BERTHA GALVANIZED STEEL STORM PANEL (2" DEEP'S) ADEQUACY FOR IMPACT AND CYCLIC RESISTANCE HAS BEEN VERIFIED IN ACCORDANCE WITH SECTION 1609.1.2 OF THE ABOVE MENTIONED CODE, AS PER AMERICAN TESTING LAB OF SOUTH FLORIDA; REPORT # 0304.01-08, AS PER ASTM E 1886, ASTM E 1996 AND ASTM E 330 STANDARDS; AS WELL AS REPORT # 1220.01-05 AS PER ASTM E 1886, ASTM E 1996 AND ASTM E 330 STANDARDS AND REPORT # 0926.01-03 AS PER ASTM E 1886, E 1996 AND ASTM E 330 STANDARDS, QUALIFIED FOR WIND ZONES 1, 2 AND 3, MISSILE TIPE D (BASIC PROTECTION ONLY) AND FOR INSTALLATIONS AT NON ESSENTIAL FACILITIES AS DEFINED BY ASTM E 1996.

2. ALL STEEL SHEET METAL PANELS SHALL HAVE STRUCTURAL QUALITY ASTM A-653, GRADE 80 WITH MIN Fy =106.0 ksi, WITH G-90 GALVANIZED STEEL DESIGNATION.

3. ALL ALUMINUM EXTRUSIONS SHALL BE ALUMINUM ASSOCIATION 6063-T6 ALLOY & TEMPER UNLESS OTHERWISE NOTED. THE THICKNESS OF ALL EXTRUSIONS SHALL BE AS SHOWN ON THIS DRAWING. STORM PANEL COMPONENTS (10) STUDDED SNAP TRACK AND (11) FEMALE COVER CAP ARE PATENT PENDING. ALL ALUMINUM EXTRUSIONS IN CONTACT WITH DISSIMILAR MATERIALS SHALL COMPLY WITH SECTION III-6 OF THE 2020 ALUMINUM DESIGN MANUAL.

4. ALL SCREWS SHALL BE STAINLESS STEEL 304 OR 316 AISI SERIES OR CORROSION RESISTANT COATED CARBON STEEL AS PER DIN 50018 WITH 50 ksi YIELD STRENGTH AND 90 ksi TENSILE STRENGTH & SHALL COMPLY WITH FLORIDA BUILDING CODE SECTIONS 2411.3.3.4 & 1711.

5. BOLTS SHALL BE ASTM A-307 GALVANIZED STEEL OR AISI 304 SERIES STAINLESS STEEL, WITH 35 ksi MINIMUM YIELD STRENGTH.

6. ANCHORS TO WALL SHALL BE AS FOLLOWS (UNLESS OTHERWISE NOTED):

- (A) TO EXISTING POURED CONCRETE, f'c = 3192 psi. MIN.
- 1/4" Ø 410 S.S. TAPCON ANCHORS AS MANUFACTURED BY I.T.W. BUILDEX OR 1/4"Ø ULTRACON+ OR ULTRACON SS4 BY DEWALT.
 - 1/4" Ø PANEL MATE BY ELCO CONSTRUCTION PRODUCTS.
 - 1/4" Ø 304 S.S RODS ANCHORS BY HILLMANS GROUP.

NOTES:

- A.1) MINIMUM EMBEDMENT INTO POURED CONCRETE OF 1/4 Ø ANCHORS IS 1 3/4".
- A.2) 1/4"Ø FEMALE PANEL MATE ANCHORS SHALL BE ENTIRELY EMBEDDED INTO THE POURED CONCRETE. NO EMBEDMENT INTO STUCCO SHALL BE PERMITTED. 1/4" Ø-20 S.S. MACHINE SCREW (SIDEWALK BOLT OR TRUSS HEAD) USED SHALL BE 1 1/2" LONG MINIMUM SHOULD STUCCO EXIST, AND 1" MINIMUM FOR WALLS WITH NO STUCCO.
- A.3) IN CASE THAT PRECAST STONE, PRECAST CONCRETE PANELS, OR PAVERS BE FOUND ON THE EXISTING WALL OR FLOOR, ANCHORS SHALL BE LONG ENOUGH TO REACH THE MAIN STRUCTURE BEHIND SUCH PANELS, ANCHORAGE SHALL BE AS INDICATED ON NOTES A.1) & A.2) ABOVE.
- (B) TO EXISTING CONCRETE BLOCK WALL, ASTM C-90 UNITS:
- 1/4" Ø S.S. TAPCON ANCHORS AS MANUFACTURED BY I.T.W. BUILDEX OR 1/4"Ø ULTRACON OR ULTRACON SS4 BY DEWALT.
 - 1/4" Ø PANEL MATE BY ELCO CONSTRUCTION PRODUCTS.
 - 1/4" Ø 304 S.S RODS ANCHORS, BY HILLMAN GROUP.

NOTES:

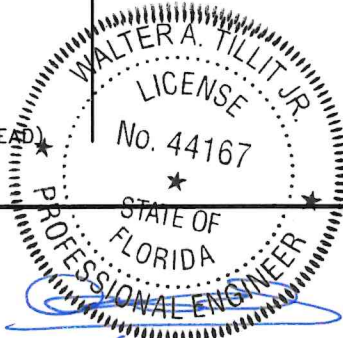
- B.1) MINIMUM EMBEDMENT OF 1/4"Ø INTO CONCRETE BLOCK UNIT SHALL BE 1 1/4".
- B.2) 1/4"Ø FEMALE PANELMATE ANCHORS SHALL BE ENTIRELY EMBBEDED INTO THE CONCRETE BLOCK. NO EMBEDMENT INTO STUCCO SHALL BE PERMITTED. 1/4" Ø-20 S.S. MACHINE SCREW (SIDEWALK BOLT OR TRUSS HEAD) USED SHALL BE 1 1/2" LONG MINIMUM SHOULD STUCCO EXIST, AND 1" MINIMUM FOR WALLS WITH NO STUCCO.
- B.3) IN CASE THAT PRECAST STONE OR PRECAST CONCRETE PANELS BE FOUND ON THE EXISTING WALL, ANCHORS SHALL BE LONG ENOUGH TO REACH THE MAIN STRUCTURE BEHIND SUCH PANELS. ANCHORAGE SHALL BE AS INDICATED ON NOTES B.1) AND B.2) ABOVE.

- (C) TO EXISTING WOOD FRAME BUILDINGS, WITH SPECIFIC GRAVITY G = 0.55
- 1/4" Ø S.S. TAPCON ANCHORS AS MANUFACTURED BY I.T.W. BUILDEX.
 - 1/4" Ø ULTRACON+ OR ULTRACON SS4 AS MANUFACTURED BY DEWALT.
 - 1/4" Ø S.S RODS OR 1/4"Ø PANEL MATE, AS MANUFACTURES BY HILLMAN GROUP & DEWALT RESPECTIVELY.

NOTES:

- C.1) MINIMUM THREADED PENETRATION OF 1/4"Ø ANCHORS (SSC) INTO WOOD UNIT SHALL BE 1 1/2".
- C.2) ANCHORAGE SHALL BE PERFORMED BEYOND ANY FINISH MATERIAL AT WALL LIKE BRICK VENEER, STUCCO OR ANY OTHER FINISH. ANCHORAGE SHALL BE AS INDICATED ON NOTE C.1) ABOVE.
- (D) ANCHORS SHALL BE INSTALLED FOLLOWING ALL OF THE RECOMMENDATIONS AND SPECIFICATIONS OF THE ANCHOR'S MANUFACTURER. ONLY S.S ANCHORS ARE ALLOWED AT INSTALLATION WITHIN 300ft OF THE COASTAL SHORELINE.
7. PANELS MAY ALSO BE INSTALLED HORIZONTALLY FOLLOWING INSTALLATION DETAILS SHOWN ON SECTIONS 1 THRU 5 (SHEETS 4 & 5 FOR CONCRETE/BLOCK SUBSTRATES) AND ALTERNATIVES 1 THRU 6 (SHEETS 8 & 9 FOR WOOD SUBSTRATES) EXCEPT THAT HEADERS 2, 2A, 3 & 4 SHALL NOT BE USED.
8. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE SOUNDNESS OF THE STRUCTURE WHERE THE PANEL IS TO BE ATTACHED TO ENSURE PROPER ANCHORAGE. THIS PANEL SHALL ONLY BE ATTACHED TO POURED CONCRETE, CONCRETE BLOCK OR WOOD FRAME BUILDINGS.
9. THE INSTALLATION CONTRACTOR IS TO SEAL/CAULK ALL PANEL COMPONENT EDGES WHICH REMAIN IN CONTINUOUS CONTACT WITH THE BUILDING TO PREVENT WIND/RAIN INTRUSION. CAULK AND SEAL SHUTTER TRACKS ALL AROUND FULL LENGTH.
10. 24 GAGE BERTHA GALVANIZED STEEL STORM PANEL (2" DEEP) SHALL COMPLY WITH SPECIFICATIONS INDICATED IN THIS DRAWING PLUS ANY BUILDING AND ZONING REGULATIONS PROVIDED BY THE JURISDICTION WHERE A PERMIT IS APPLIED FOR.
11. SHUTTER MANUFACTURER'S LABEL SHALL BE LOCATED ON A READILY VISIBLE LOCATION AT PANEL IN ACCORDANCE WITH SECTION 1709.9.3 OF FLORIDA BUILDING CODE. ONE LABEL SHALL BE PLACED FOR EVERY OPENING. LABELING TO COMPLY WITH SECTION 1709.9.2 OF THE FLORIDA BUILDING CODE.
12. (a) THIS P.E.D. PREPARED BY THIS ENGINEER IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT; i.e. WHERE THE SITE CONDITIONS DEVIATE FROM THE P.E.D.
- (b) THE CONTRACTOR IS TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND INSTALLATION INCLUDING LIFE SAFETY OF THIS PRODUCT, BASED ON THIS P.E.D. PROVIDED HE/SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED ON THIS DOCUMENT. CONSTRUCTION SAFETY AT SITE IS THE CONTRACTOR'S RESPONSIBILITY.
- (c) THIS P.E.D. WILL BE CONSIDERED INVALID IF ALTERED BY ANY MEANS.
- (d) SITE SPECIFIC PROJECTS SHALL BE PREPARED BY A PROFESSIONAL ENGINEER OR REGISTERED ARCHITECT WHO WILL BECOME THE ENGINEER OF RECORD (E.O.R.) FOR THE PROJECT AND WHO WILL BE RESPONSIBLE FOR THE PROPER USE OF THE P.E.D. ENGINEER OF RECORD, ACTING AS A DELEGATED ENGINEER TO THE P.E.D. ENGINEER, SHALL SUBMIT TO THE LATTER THE SITE SPECIFIC DRAWINGS FOR REVIEW.
- (e) THIS P.E.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER OF RECORD WHO PREPARED IT.

THIS DRAWING SHALL ONLY BE USED TO
OBTAIN PERMITS IN THE STATE OF FLORIDA



P.E. SEAL/SIGNATURE/DATE

FLORIDA BUILDING CODE (Non High Velocity Hurricane Zone)

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TILTECO INC.

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e-mail: tilteco@aol.com
CA-0006719
WALTER A. TILLIT Jr. P.E.
FLORIDA Lic. # 44167

**24 GAGE GALVANIZED BERTHA STEEL STORM PANEL
(2" DEEP)**

EASTERN METAL SUPPLY, INC

4268 WEST ROADS DRIVE
WEST PALM BEACH, FL 33407
PH: (561) 533-6061
FAX: (561) 588-4780

REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 23-142	7/27/26	3		
2			4		

DRAWN BY:
W.H.

7/27/26
DATE

26-235
DRAWING No

SHEET 1 OF 10

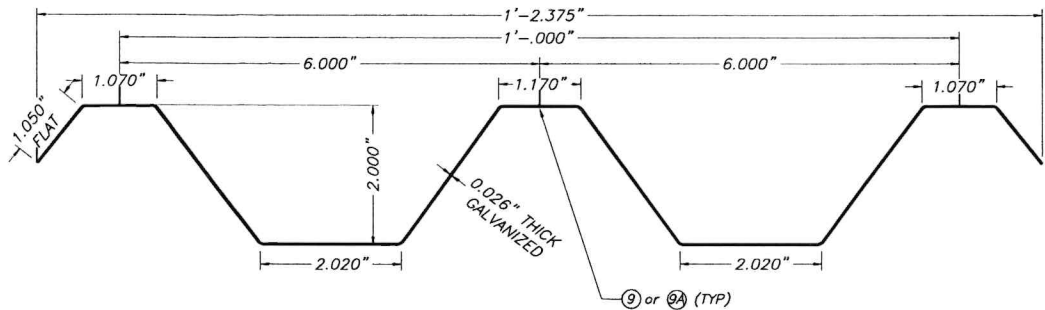
MAXIMUM A.S.D. DESIGN PRESSURE RATING (p.s.f.)
AND CORRESPONDING MAXIMUM PANEL LENGTH "L"

- 0 NOTES:
- (1) L+: MAXIMUM ALLOWABLE PANEL LENGTH FOR A GIVEN POSITIVE A.S.D. DESIGN LOAD.
L-: MAX. ALLOWABLE PANEL LENGTH FOR A GIVEN NEGATIVE A.S.D. DESIGN LOAD.
- (2) PROCEDURE TO DETERMINE MAXIMUM PANEL LENGTH FOR WALL MOUNTINGS OR FLOOR/CEILING:
GIVEN A POSITIVE A.S.D. DESIGN LOAD, DETERMINE MAXIMUM PANEL LENGTH "L+" FROM SCHEDULE.
GIVEN A NEGATIVE A.S.D. DESIGN LOAD, DETERMINE MAXIMUM PANEL LENGTH "L-" FROM SCHEDULE.
FINAL MAXIMUM ALLOWABLE PANEL LENGTH IS EQUAL TO THE MINIMUM DETERMINED PANEL LENGTH BETWEEN "L+" AND "L-".
- (3) MINIMUM PANEL LENGTH TO BE 48"

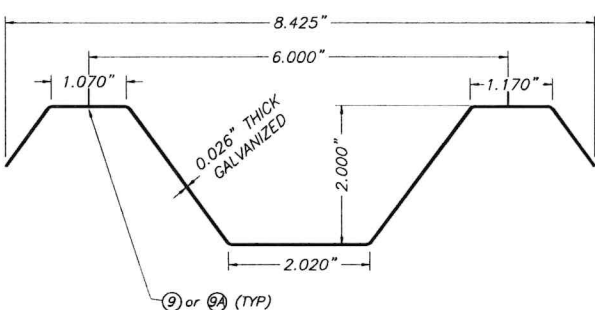
SCHEDULE # 1

VALID FOR POURED CONCRETE, CONCRETE BLOCK AND
WOOD SUBSTRATE INSTALLATIONS *

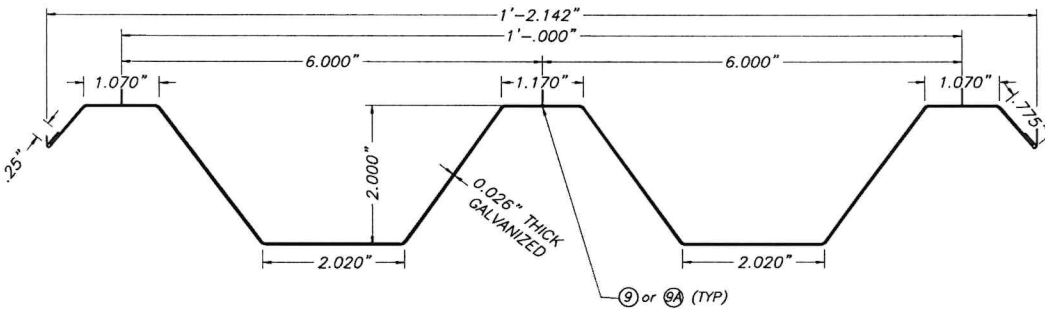
MAXIMUM PANEL LENGTH "L+" OR "L-" (ft.) 0		
MAXIMUM A.S.D. DESIGN PRESSURE RATING (p.s.f.) (+ or -)	CONCRETE, CONCRETE BLOCK & WOOD INSTALLATIONS	
	Max. PANEL LENGTH L+ (ft.)	Max. PANEL LENGTH L- (ft.)
32.6	9'-10"	9'-10"
34.0	9'-7"	9'-10"
36.0	9'-4"	9'-10"
38.0	9'-1"	9'-10"
40.0	8'-10"	9'-10"
42.0	8'-7"	9'-10"
44.0	8'-5"	9'-6"
46.0	8'-3"	9'-1"
48.0	8'-1"	8'-8"
50.0	7'-11"	8'-4"
52.0	7'-9"	8'-0"
54.0	7'-7"	7'-8"
56.0	7'-5"	7'-5"
57.0	7'-4"	7'-4"
58.0	2'-8"	2'-8"



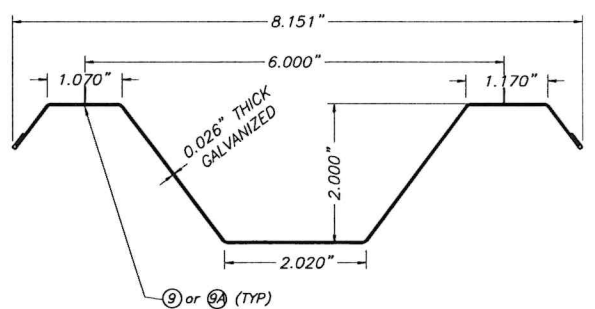
FULL PANEL W/O HEMMED EDGES



HALF PANEL W/O HEMMED EDGES

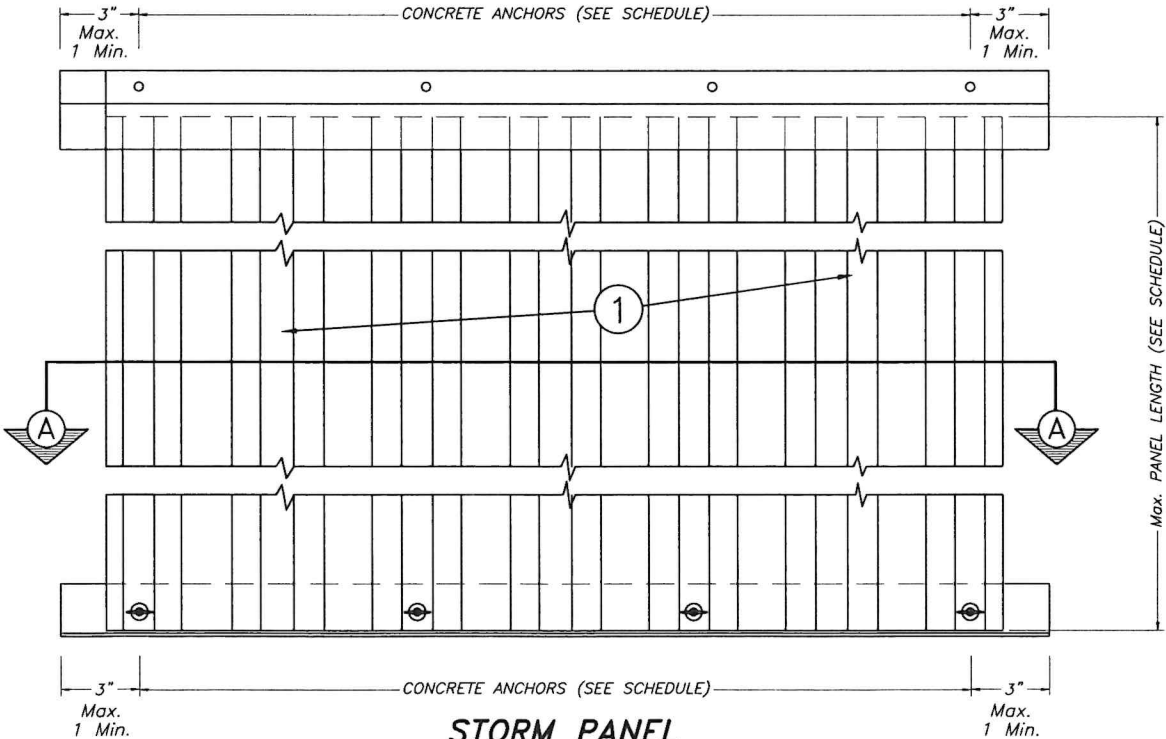


FULL PANEL W/ HEMMED EDGES



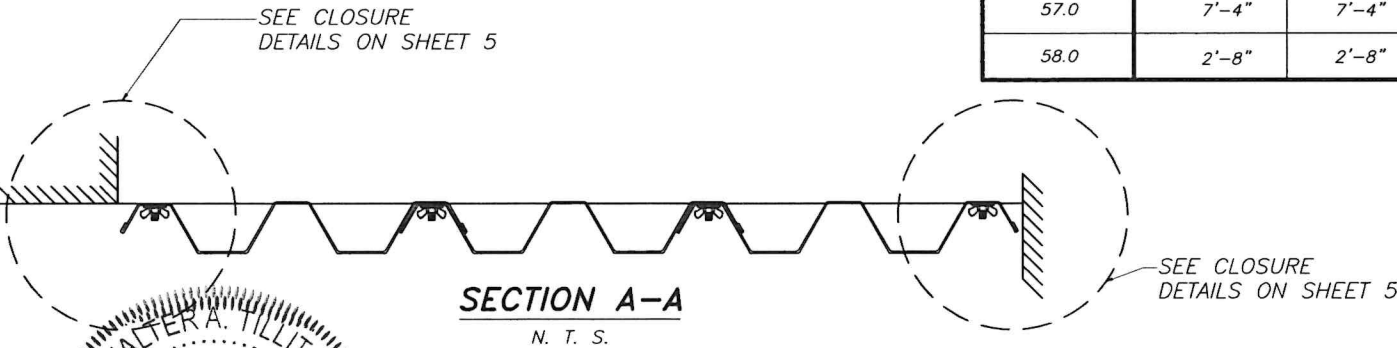
HALF PANEL W/ HEMMED EDGES

1 STORM PANEL
SCALE 3/8" = 1"



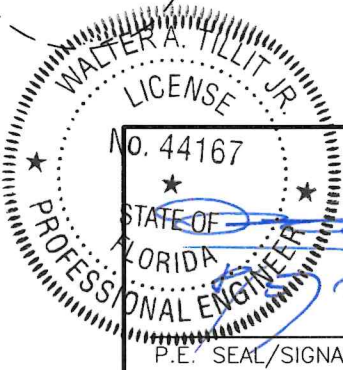
STORM PANEL
TYPICAL ELEVATION

N. T. S.



SECTION A-A
N. T. S.

FLORIDA BUILDING CODE (Non High Velocity Hurricane Zone)



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TILTECO INC.

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24 GAGE GALVANIZED BERTHA STEEL STORM PANEL
(2" DEEP)

EASTERN METAL SUPPLY, INC

4268 WEST ROADS DRIVE
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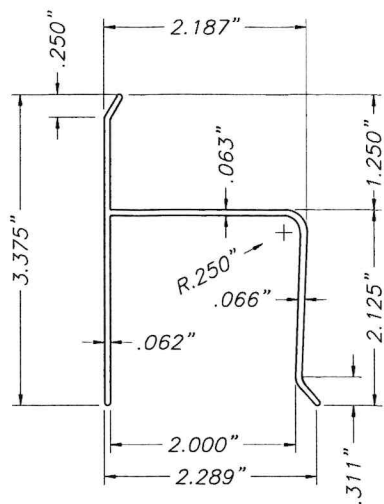
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2			4		

DRAWN BY:
W.H.

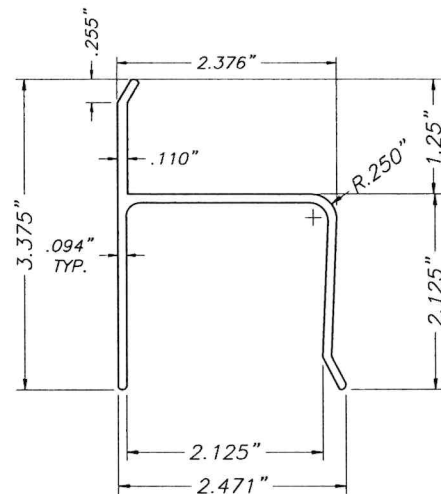
7/27/26
DATE

26-235
DRAWING No

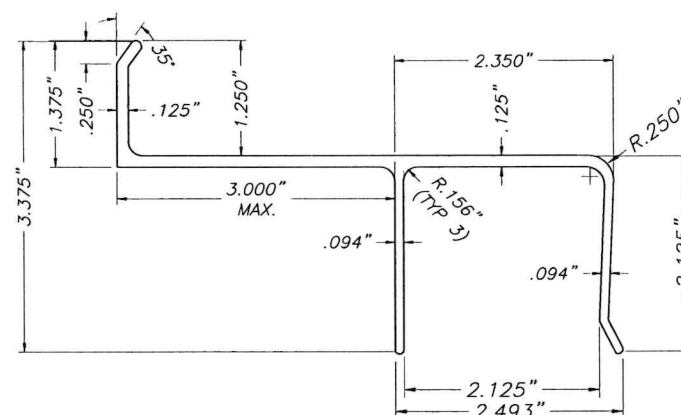
SHEET 2 OF 10



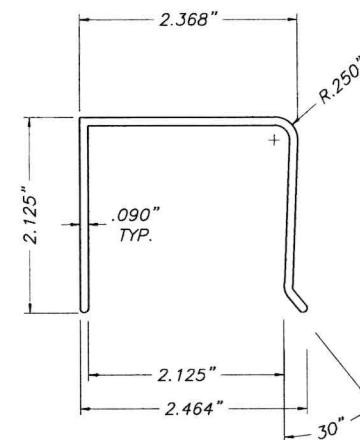
② "h" HEADER



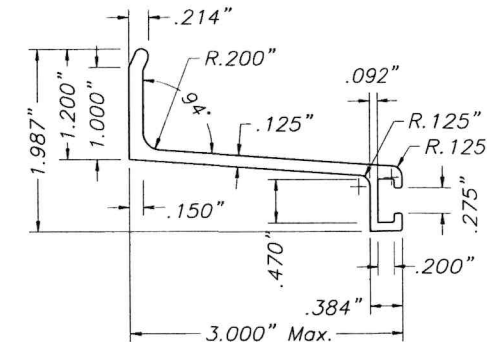
②A "h" HEADER (OPTIONAL)



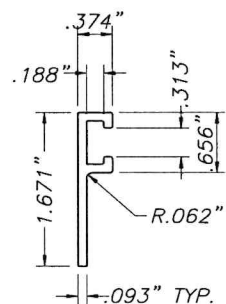
③ BUILD OUT "h" HEADER (3" MAX.)



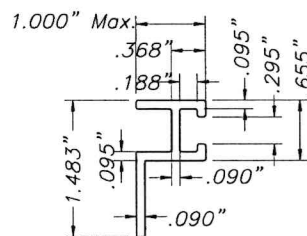
④ "U" HEADER



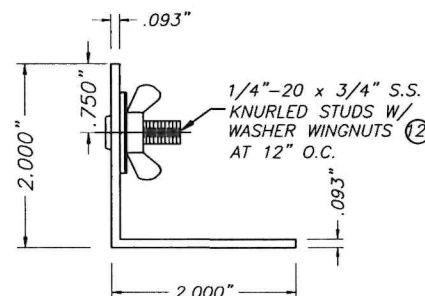
⑤ 3" ANGLE BUILD OUT BRACKET



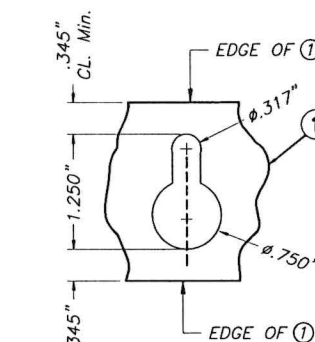
⑥ "F" TRACK



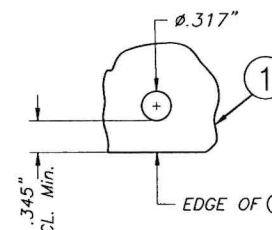
⑦ 1" STUCCO TRACK



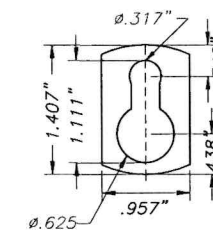
⑧ STUDDED ANGLE



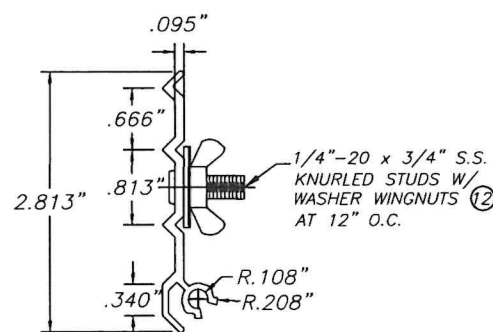
⑨ LARGE KEY HOLE



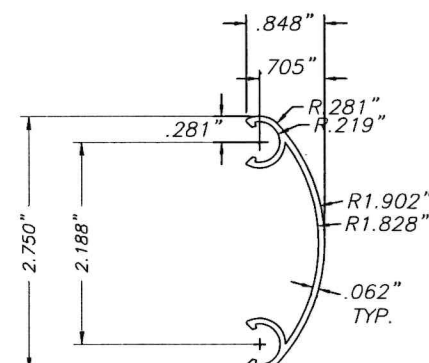
⑨A ROUND HOLE AT PANEL



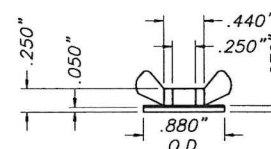
⑨B KEY HOLE WASHER
3105-H154 ALUM. ALLOY



⑩ STUDDED SNAP TRACK



⑪ FEMALE COVER CAP



⑫ WASHERED WING NUT
DIE CAST (ZINC # 7)
NICKEL PLATED



COMPONENTS

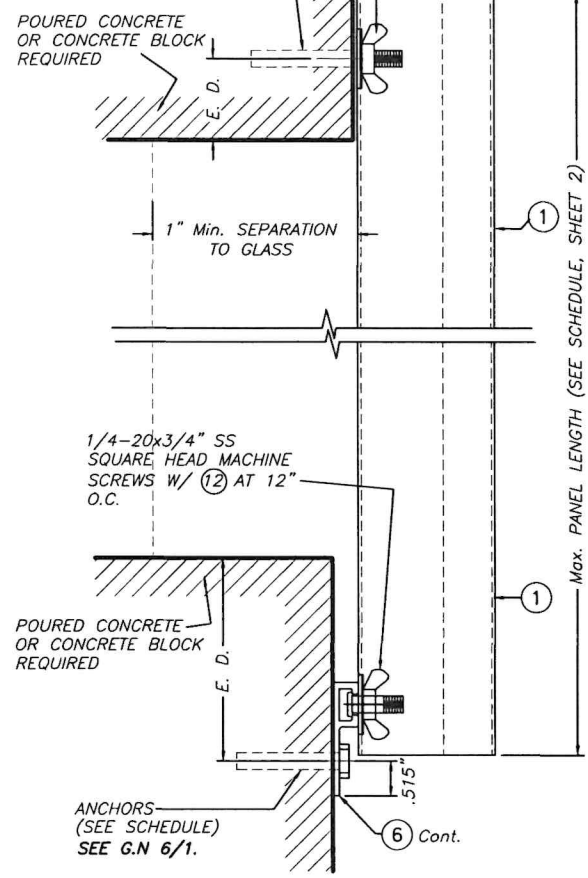
SCALE : 1/2" = 1"

FLORIDA BUILDING CODE (Non High Velocity Hurricane Zone)

© 2026 TILTECO, INC. TILTECO INC. TILLIT TESTING & ENGINEERING COMPANY 6355 N.W. 36th. St., Ste. 305, VIRGINIA GARDENS, FL 33166 Phone : (305) 871-1530 : Fax : (305) 871-1531 e-mail: tilteco@aol.com CA-0006719 WALTER A. TILLIT Jr. P.E. FLORIDA Lic. # 44167			24 GAGE GALVANIZED BERTHA STEEL STORM PANEL (2" DEEP) EASTERN METAL SUPPLY, INC 4268 WEST ROADS DRIVE WEST PALM BEACH, FL 33407 PH: (561) 533-6061 FAX: (561) 588-4780			DRAWN BY: W.H. 7/27/26 DATE 26-235 DRAWING No
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE	
1	OLD 23-142	7/27/26	3			
2			4			

SHEET 3 OF 10

1/4" S.G. RODS AT (9) W/ (9B)
OR (9A) W/ (9B) W/ 1/4"-20
SIDEWALK BOLT OR 1/4"-20
TRUSSHEAD BOLT @ (9) W/ (9B)
OR (9A)++ W/ (9B) (SEE
SCHEDULE FOR SPACING). SEE
G.N 6/1.



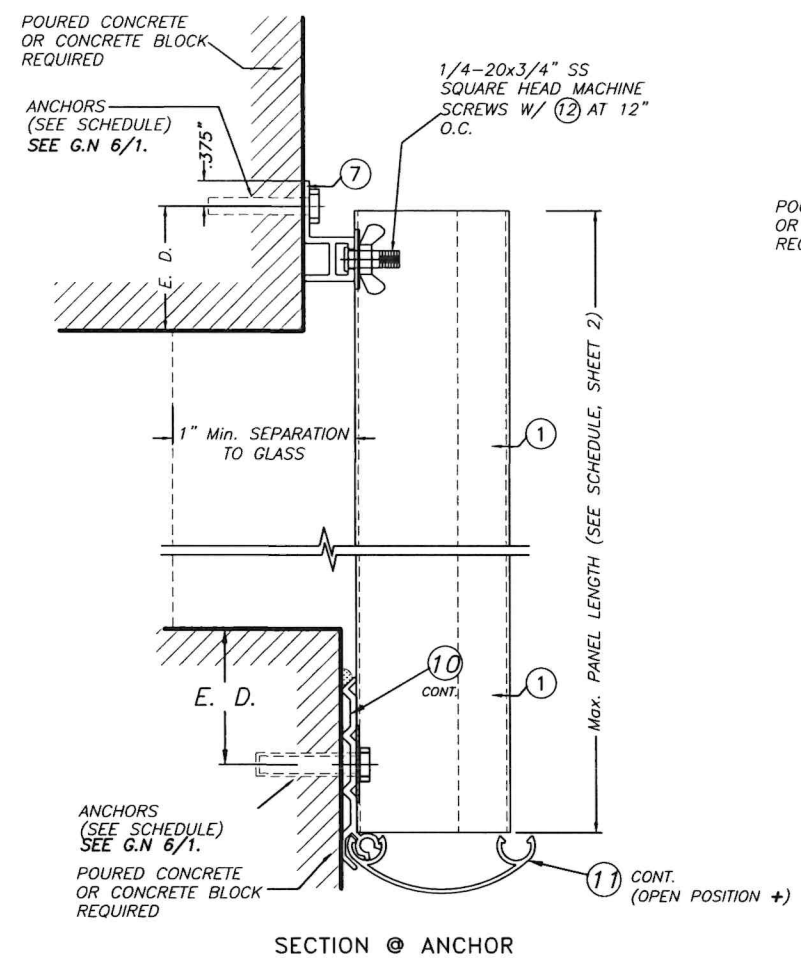
++
SIDE WALK BOLTS ARE 3/4"x3/32" THICK HEAD
MACHINE SCREW W/LENGTH AS PER NOTES A.2 &
B.2 (SHEET 1)
++
TRUSS HEAD BOLTS ARE 1/2"x1/8" THICK HEAD
MACHINE SCREW W/LENGTH AS PER NOTES A.2 &
B.2 (SHEET 1)

SECTION 1

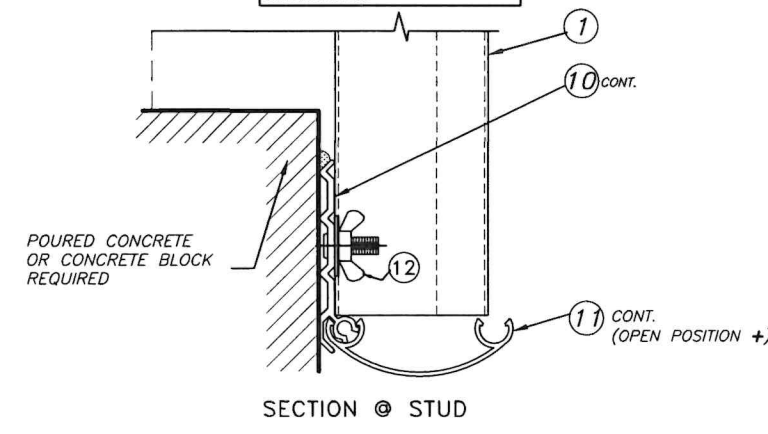
WALL MOUNTING INSTALLATION

NOTE FOR COMBINATION OF SECTIONS :
WALL/FLOOR MOUNTING SECTIONS CAN BE
COMBINED IN ANY WAY TO SUIT ANY INSTALLATION.

E. D. = EDGE DISTANCE
(SEE SCHEDULE ON
SHEET 7)

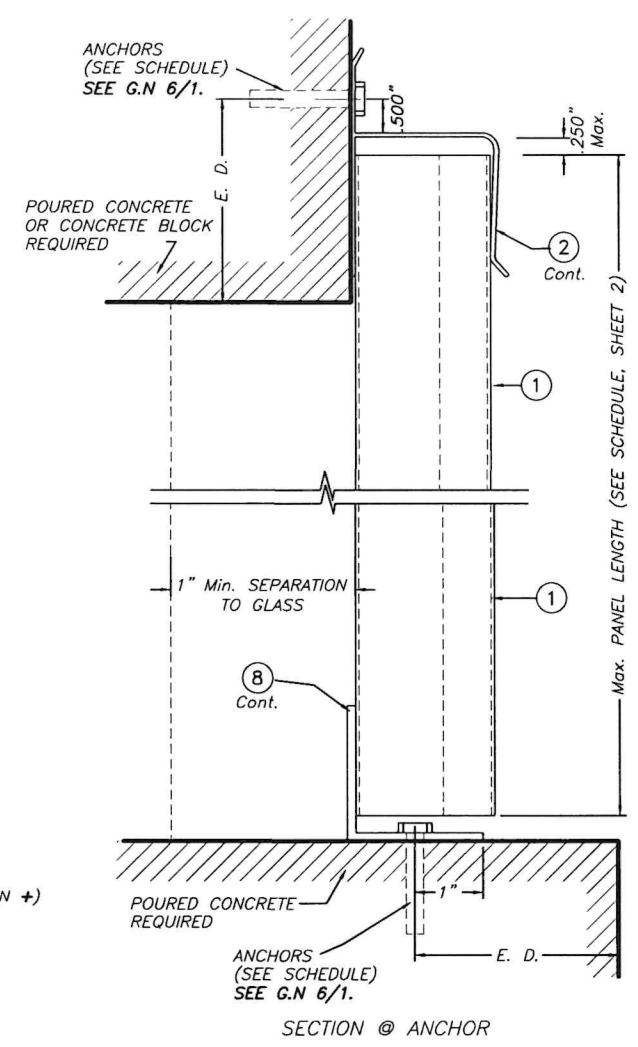


SECTION 2

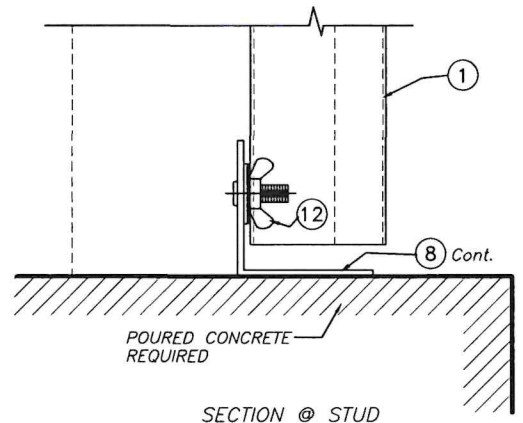


SECTION 3

SECTION 2

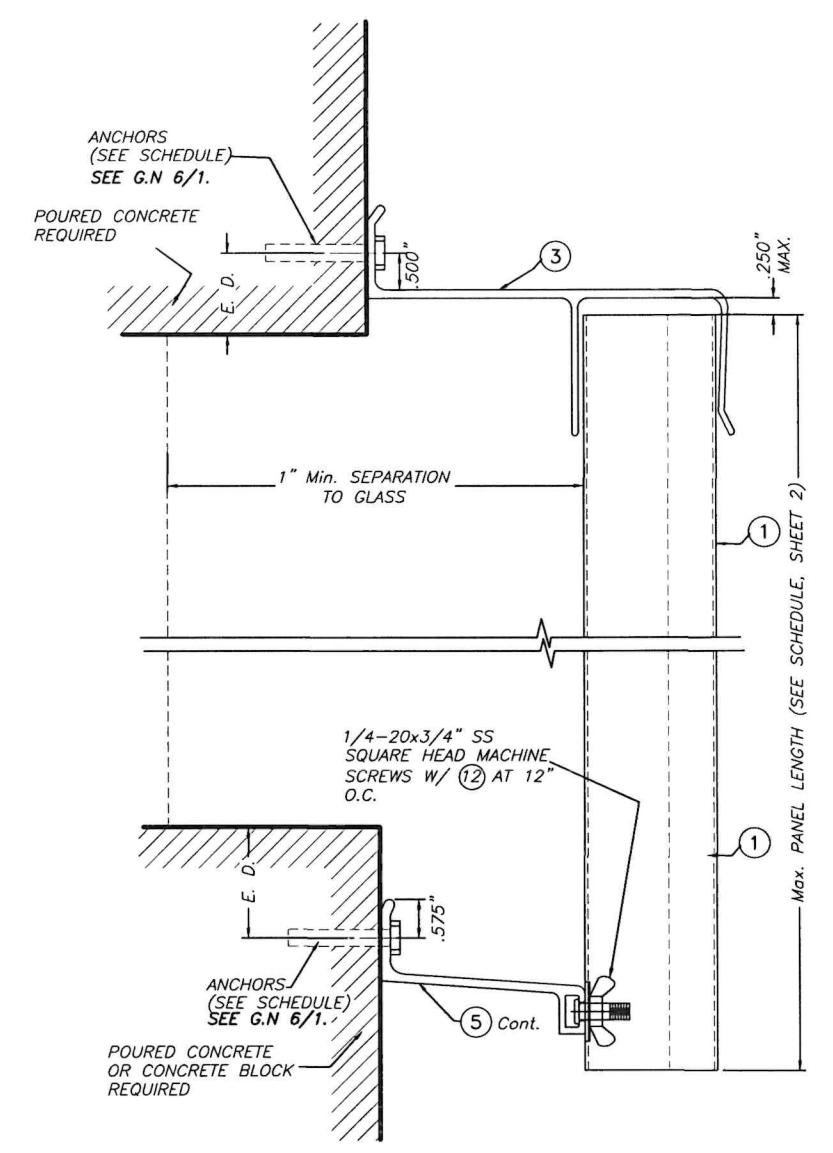


SECTION 4

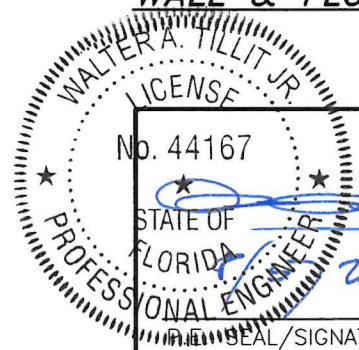


SECTION 5

**WALL & FLOOR MOUNTING INSTALLATION
SECTION 3**



**BUILD OUT INSTALLATION
SECTION 4**



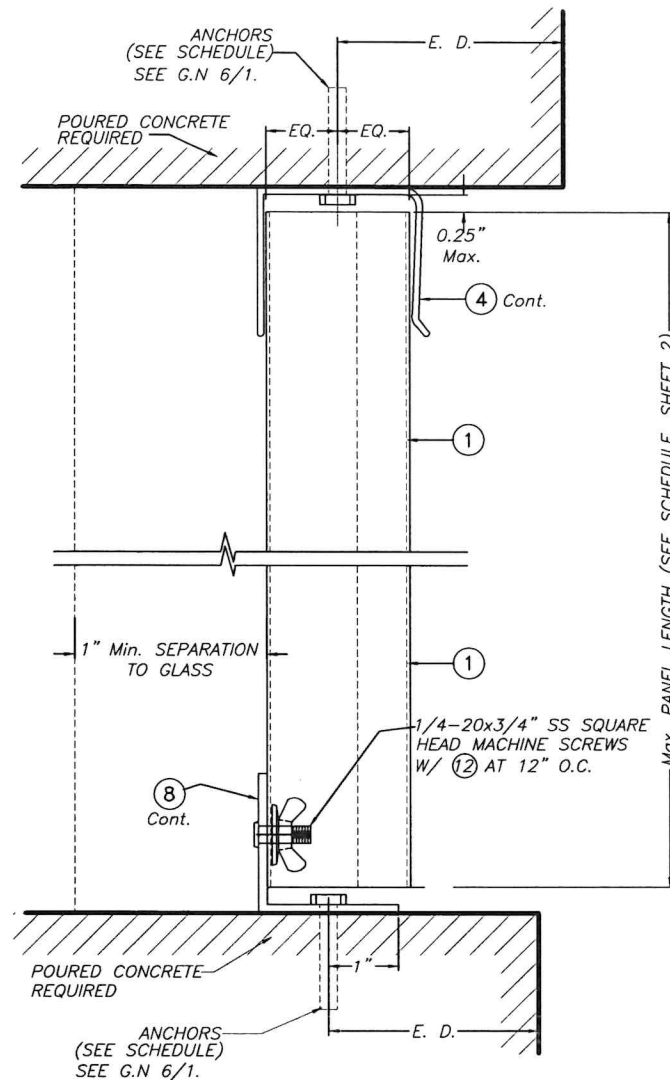
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(2" DEEP)**
EASTERN METAL SUPPLY, INC
4268 WEST ROADS DRIVE
WEST PALM BEACH, FL 33407
PH: (561) 533-6061
FAX: (561) 588-4780

DRAWN BY:
W.H.
7/27/26
DATE
26-235
DRAWING No
SHEET 4 OF 10

REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 23-142	7/27/26	3		
2			4		

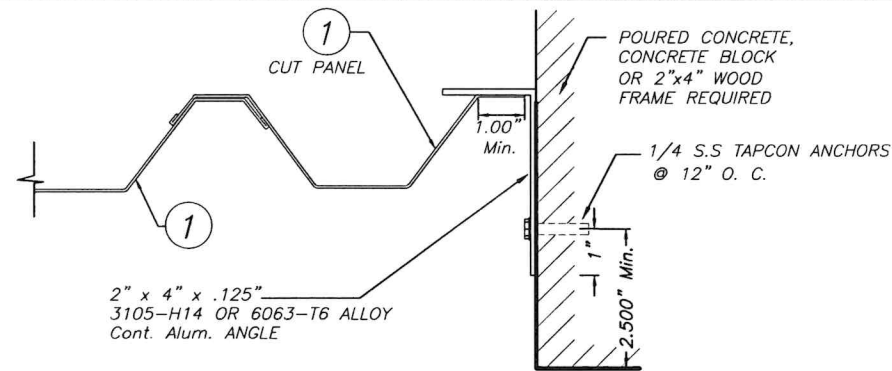


CEILING & FLOOR MOUNTING INSTALLATION - SECTION 5

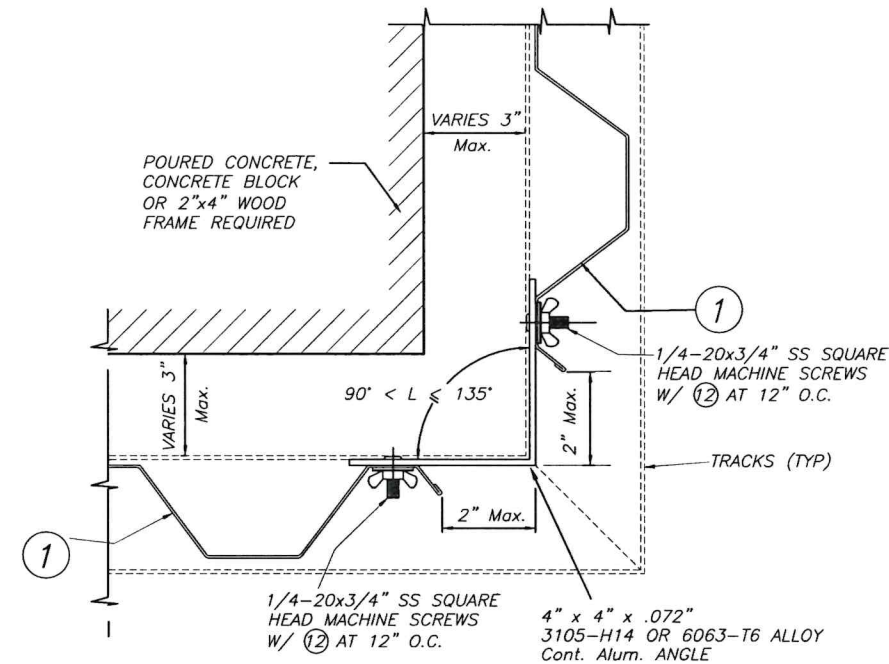
SCALE : 3/8" = 1"

E. D. = EDGE DISTANCE
(SEE SCHEDULE ON
SHEET 6)

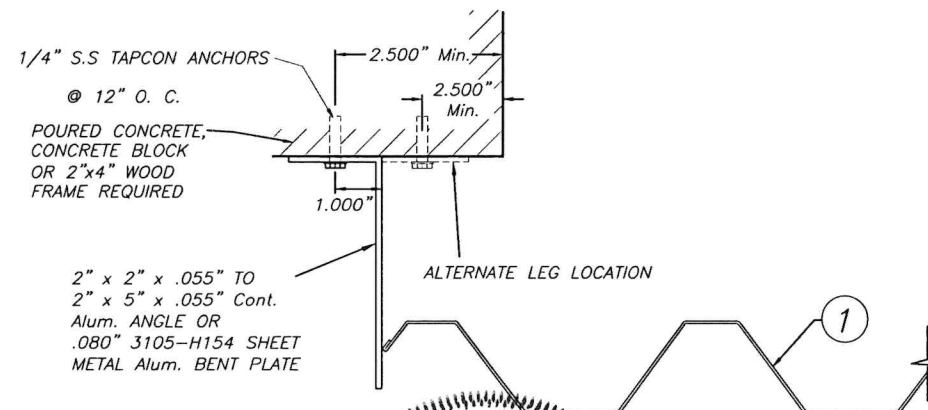
NOTE FOR COMBINATION OF SECTIONS :
WALL/FLOOR/CEILING MOUNTING SECTIONS CAN BE
COMBINED IN ANY WAY TO SUIT ANY INSTALLATION.



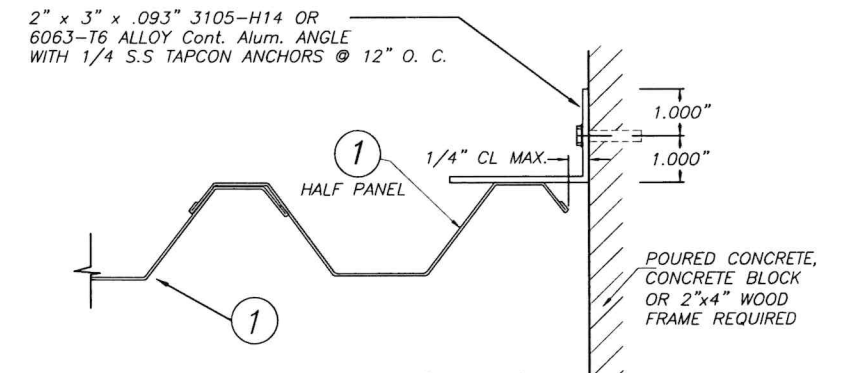
CASE A (Plan)



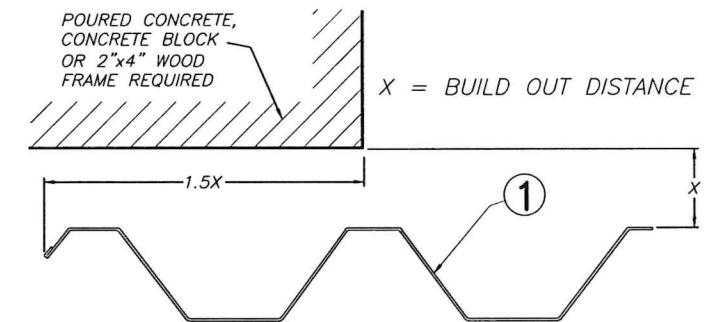
CASE B (Plan)



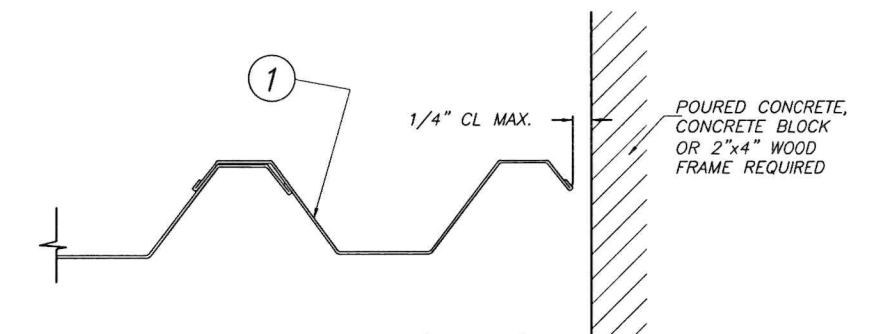
CASE C (Plan)



CASE D (Plan)



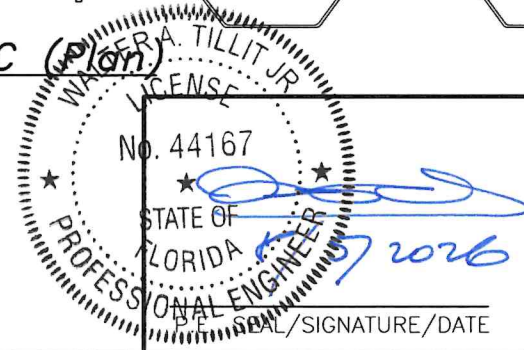
CASE E (Plan)



CASE F (Plan)

END CLOSURES DETAILS

SCALE: 1/4" = 1"



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TILLIT TESTING & ENGINEERING COMPANY
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e-mail: tilteco@aol.com
CA-0006719
WALTER A. TILLIT Jr. P.E.
FLORIDA Lic. # 44167

FLORIDA BUILDING CODE (Non High Velocity Hurricane Zone)

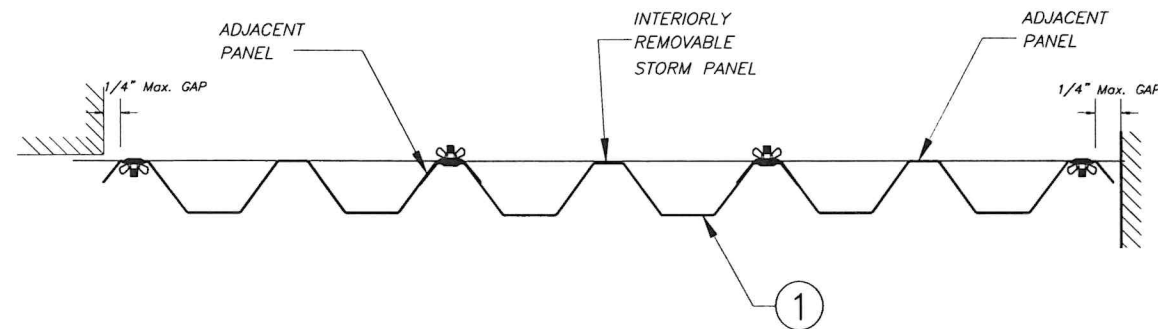
24 GAGE GALVANIZED BERTHA STEEL STORM PANEL (2" DEEP)					
EASTERN METAL SUPPLY, INC					
4268 WEST ROADS DRIVE WEST PALM BEACH, FL 33407 PH: (561) 533-6061 FAX: (561) 588-4780					
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 23-142	7/27/26	3		
2			4		

DRAWN BY:
W.H.

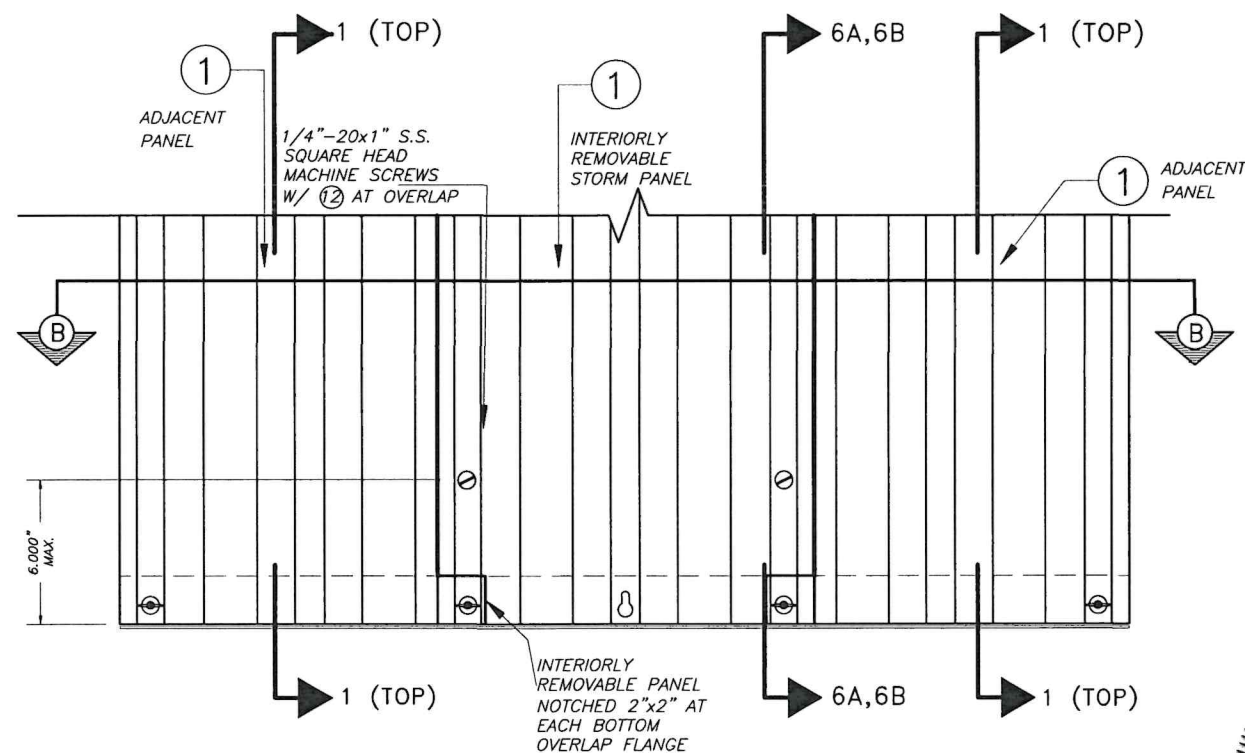
7/27/26
DATE

26-235
DRAWING No

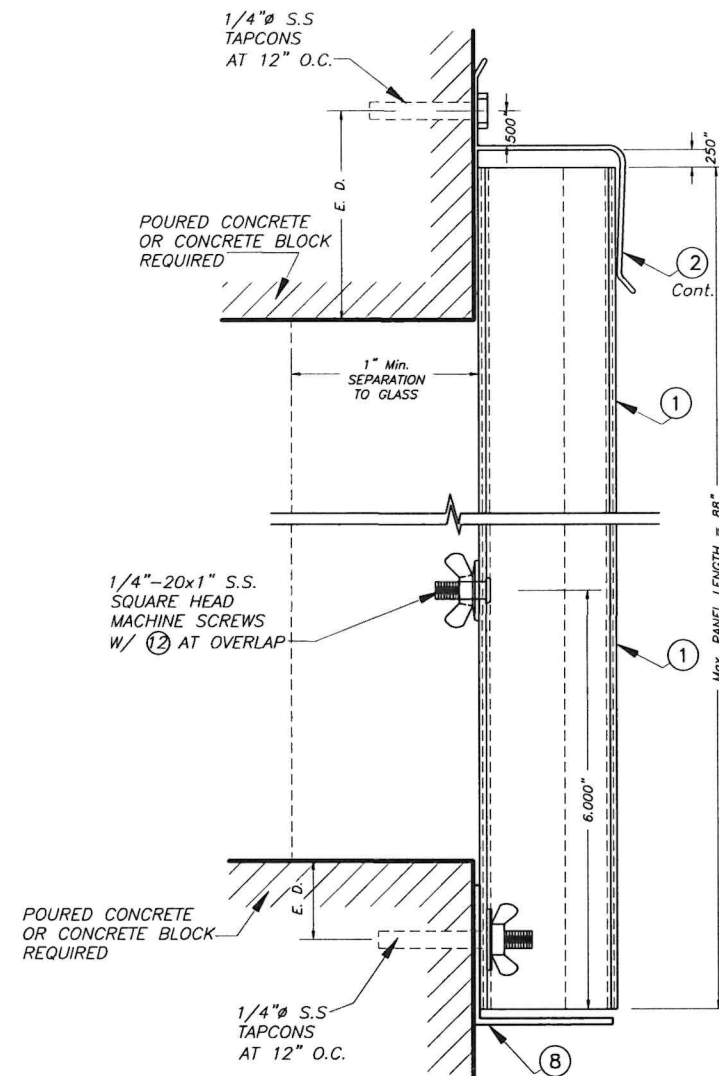
SHEET 5 OF 10



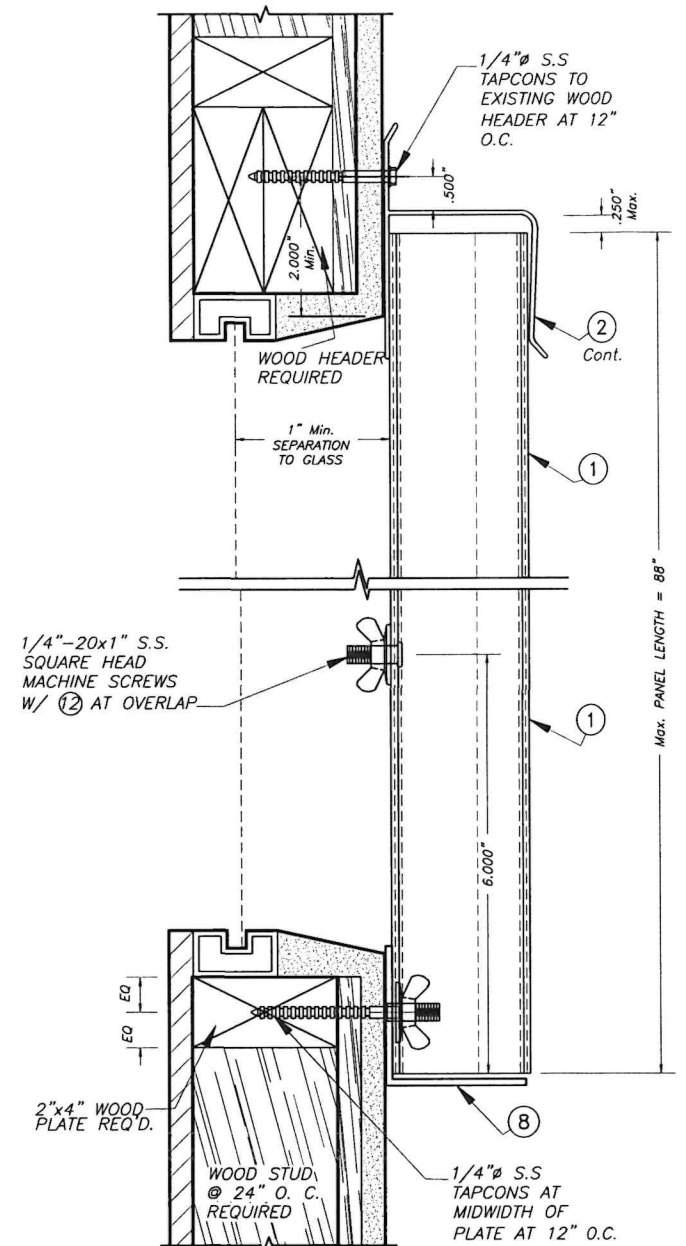
SECTION B-B
SCALE : N.T.S.



**INTERIORLY REMOVABLE STORM PANEL
PARTIAL ELEVATION**
SCALE : N.T.S.



**WALL MOUNTING INSTALLATION
SECTION 6A**
SCALE : 3/8" = 1"



**WALL MOUNTING INSTALLATION
SECTION 6B**
SCALE : 3/8" = 1"

INTERIORLY REMOVABLE STORM PANEL SECTIONS

MAX. A.S.D. DESIGN PRESSURE RATING = +57.0, -57.0 p.s.f.

++
SIDE WALK BOLTS ARE 3/4"Øx3/32" THICK HEAD
MACHINE SCREW W/LENGTH AS PER NOTES A.2 &
B.2 (SHEET 1)
++
WOOD STUD BOLTS ARE 1/2"Øx1/8" THICK HEAD
MACHINE SCREW W/LENGTH AS PER NOTES A.2 &
B.2 (SHEET 1)
WALTER A. TILLIT JR. P.E.
No. 44167
STATE OF FLORIDA
PROFESSIONAL ENGINEER
P.E. SEAL/SIGNATURE/DATE

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WALTER A. TILLIT Jr. P.E.
FLORIDA Lic. # 44167

**24 GAGE GALVANIZED BERTHA STEEL STORM PANEL
(2" DEEP)**
EASTERN METAL SUPPLY, INC
4268 WEST ROADS DRIVE
WEST PALM BEACH, FL 33407
PH: (561) 533-6061
FAX: (561) 588-4780

DRAWN BY:
W.H.
7/27/26
DATE
26-235
DRAWING No
SHEET 6 OF 10

FLORIDA BUILDING CODE (Non High Velocity Hurricane Zone)

REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 23-142	7/27/26	3		
2			4		

MAXIMUM A.S.D DESIGN PRESSURE RATING (p.s.f.) AND CORRESPONDING MAXIMUM ANCHOR
SPACING SCHEDULE FOR INSTALLATIONS IN CONCRETE AND CONCRETE BLOCK STRUCTURES (MASONRY)

MAXIMUM PRESSURE A.S.D. DESIGN RATING (p.s.f.)	MAXIMUM ANCHORS SPACING FOR E. D. = 3 1/2" **		APPLICABLE TO SECTIONS # & ANY COMBINATION OF THEM	MAXIMUM PANEL LENGTH "L" (ft.)
	S.S. TAPCONS OR ULTRACONS OR 1/4" # S.S. RODS OR 1/4" # PANEL MATES.			
	TO CONCRETE	TO MASONRY		
+40.0, -40.0 OR LESS	N/A	N/A	1 (TOP)	6'-0" OR LESS
	12"	12"	1 (BOTTOM)	
	12"	12"	2 (TOP)	
	12"	12"	2 (BOTTOM)	
	12"	12"	3 (TOP)	
	12"	N/A	3 (BOTTOM)	
	12"	N/A	4 (TOP)	
	12"	12"	4 (BOTTOM)	
	12"	12"	5 (TOP)	
	12"	12"	5 (BOTTOM)	

MAXIMUM A.S.D. DESIGN PRESSURE RATING (p.s.f.)	MAXIMUM ANCHORS SPACING FOR E. D. = 3 1/2" #		APPLICABLE TO SECTIONS # & ANY COMBINATION OF THEM	MAXIMUM PANEL LENGTH "L" (ft.)
	S.S. TAPCONS OR ULTRACONS OR 1/4" # S.S. RODS OR 1/4" # PANEL MATES.			
	TO CONCRETE	TO MASONRY		
+40.0, -40.0 OR LESS	N/A	N/A	1 (TOP)	> 6'-0" UP TO 9'-10"
	12"	11"	1 (BOTTOM)	
	12"	11"	2 (TOP)	
	12"	12"	2 (BOTTOM)	
	12"	11"	3 (TOP)	
	12"	N/A	3 (BOTTOM)	
	12"	N/A	4 (TOP)	
	12"	11"	4 (BOTTOM)	
	12"	12"	5 (TOP)	
	12"	12"	5 (BOTTOM)	

MAXIMUM A.S.D. DESIGN PRESSURE RATING (p.s.f.)	MAXIMUM ANCHORS SPACING FOR E. D. = 3 1/2" **		APPLICABLE TO SECTIONS # & ANY COMBINATION OF THEM	MAXIMUM PANEL LENGTH "L" (ft.)
	S.S TAPCONS OR ULTRACONS OR 1/4" # S.S RODS OR 1/4" # PANEL MATES.			
	TO CONCRETE	TO MASONRY		
+40.0, -40.0 UP TO +50.0, -50.0	N/A	N/A	1 (TOP)	6'-0" OR LESS
	12"	12"	1 (BOTTOM)	
	12"	12"	2 (TOP)	
	12"	12"	2 (BOTTOM)	
	12"	12"	3 (TOP)	
	12"	N/A	3 (BOTTOM)	
	12"	N/A	4 (TOP)	
	12"	12"	4 (BOTTOM)	
	12"	12"	5 (TOP)	
	12"	12"	5 (BOTTOM)	

ANCHORS LEGEND

ANCHOR TYPE	Min. ANCHOR SPACING
1/4" ANCHORS	3.0"

E. D. = EDGE DISTANCE

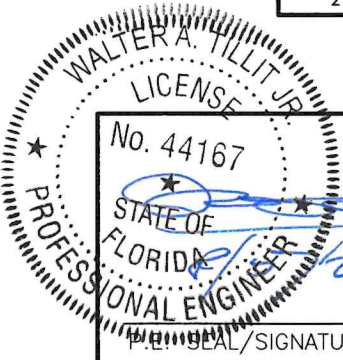
MAXIMUM A.S.D. DESIGN PRESSURE RATING (p.s.f.)	MAXIMUM ANCHORS SPACING FOR E. D. = 3 1/2"		APPLICABLE TO SECTIONS # & ANY COMBINATION OF THEM	MAXIMUM PANEL LENGTH "L" (ft.)
	S.S. TAPCONS OR ULTRACONS OR 1/4" S.S. RODS OR 1/4" PANEL MATES.			
	TO CONCRETE	TO MASONRY		
+40.0, -40.0 UP TO +57.0, -57.0	N/A	N/A	1 (TOP)	> 6'-0" UP TO 7'-4"
	12"	11"	1 (BOTTOM)	
	12"	11"	2 (TOP)	
	12"	12"	2 (BOTTOM)	
	12"	11"	3 (TOP)	
	12"	N/A	3 (BOTTOM)	
	12"	N/A	4 (TOP)	
	12"	11"	4 (BOTTOM)	
	12"	12"	5 (TOP)	
	12"	12"	5 (BOTTOM)	

MAXIMUM A.S.D. DESIGN PRESSURE RATING (p.s.f.)	MAXIMUM ANCHORS SPACING FOR E. D. = 3 1/2" **		APPLICABLE TO SECTIONS # & ANY COMBINATION OF THEM	MAXIMUM PANEL LENGTH "L" (ft.)
	S.S. TAPCONS OR ULTRACONS OR 1/4" # S.S. RODS OR 1/4" # PANEL MATES.			
	TO CONCRETE	TO MASONRY		
+58.0, -58.0 OR LESS	N/A	N/A	1 (TOP)	2'-8" OR LESS
	12"	12"	1 (BOTTOM)	
	12"	12"	2 (TOP)	
	12"	12"	2 (BOTTOM)	
	12"	12"	3 (TOP)	
	12"	N/A	3 (BOTTOM)	
	12"	N/A	4 (TOP)	
	12"	12"	4 (BOTTOM)	
	12"	12"	5 (TOP)	
	12"	12"	5 (BOTTOM)	

** MAXIMUM ANCHOR SPACINGS ARE VALID FOR 3" EDGE DISTANCE. FOR E. D. LESS THAN 3", REDUCE ANCHOR SPACING BY MULTIPLYING SPACING SHOWN ON SCHEDULE BY THE FOLLOWING FACTORS. FOR THIS OPERATION TO BE POSSIBLE, REDUCED SPACING OBTAINED USING FACTOR SHALL NOT BE LESS THAN MINIMUM SPACING INDICATED FOR EACH ANCHOR TYPE AT ANCHORS LEGEND.

ACTUAL E. D.	FACTOR	
	1/4" ANCHORS	
3"	.86	
2 1/2"	.71	
2"	.50	

FLORIDA BUILDING CODE (Non High Velocity Hurricane Zone)



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e-mail: tilteco@aol.com
CA-0006719
WALTER A. TILLIT Jr. P.E.
FLORIDA Lic. # 44167

24 GAGE GALVANIZED BERTHA STEEL STORM PANEL
(2" DEEP)

EASTERN METAL SUPPLY, INC

4268 WEST ROADS DRIVE
WEST PALM BEACH, FL 33407
PH: (561) 533-6061
FAX: (561) 588-4780

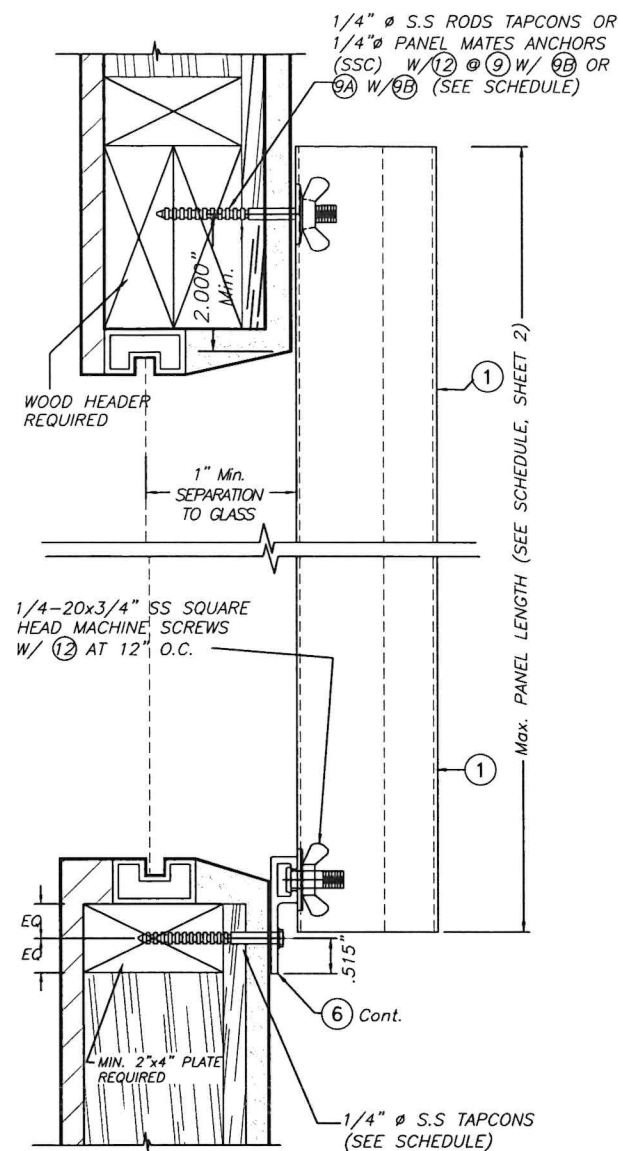
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 23-142	7/27/26	3		
2			4		

DRAWN BY:
W.H.

7/27/26
DATE

26-235
DRAWING No

SHEET 7 OF 10

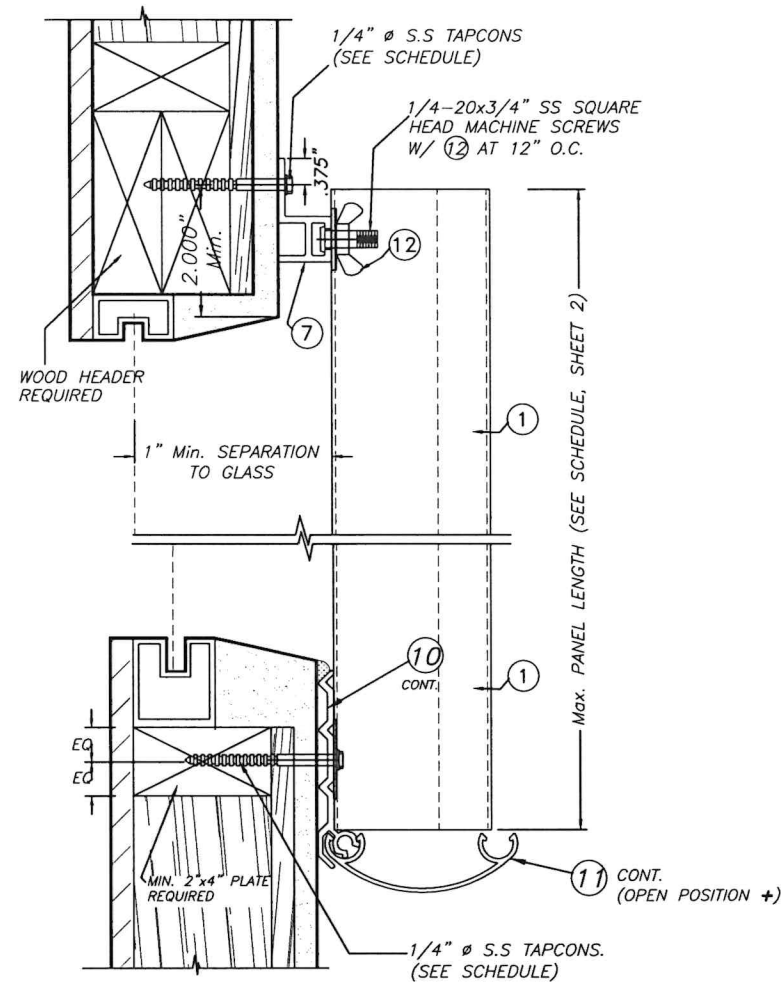


ALTERNATIVE 1

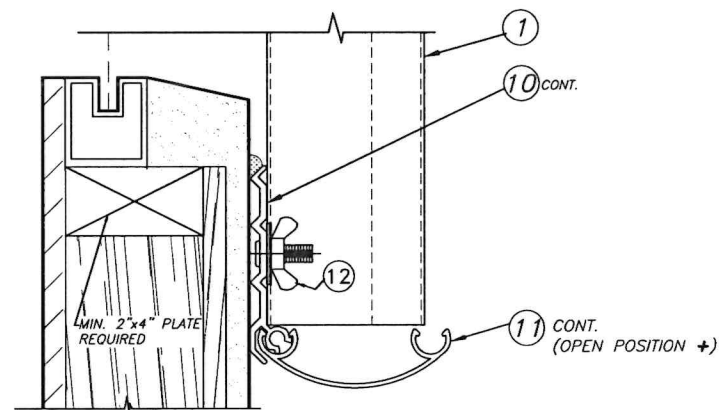
WALL MOUNTING INSTALLATION

NOTES:

1. INSTALLATIONS ARE ONLY VALID FOR MAX. A.S.D. DESIGN PRESSURE RATING AND PANEL'S LENGTHS AS PER SCHEDULES ON SHEET 2 (EXCEPT AS NOTED)
2. SEE ANCHOR SCHEDULE ON SHEET 10.
3. FOR NEW WOOD FRAME CONSTRUCTION: WOOD MEMBERS TO BE SOUTHERN PINE No. 2, W/ SPECIFIC DENSITY (G) OF 0.55 OR EQUAL.



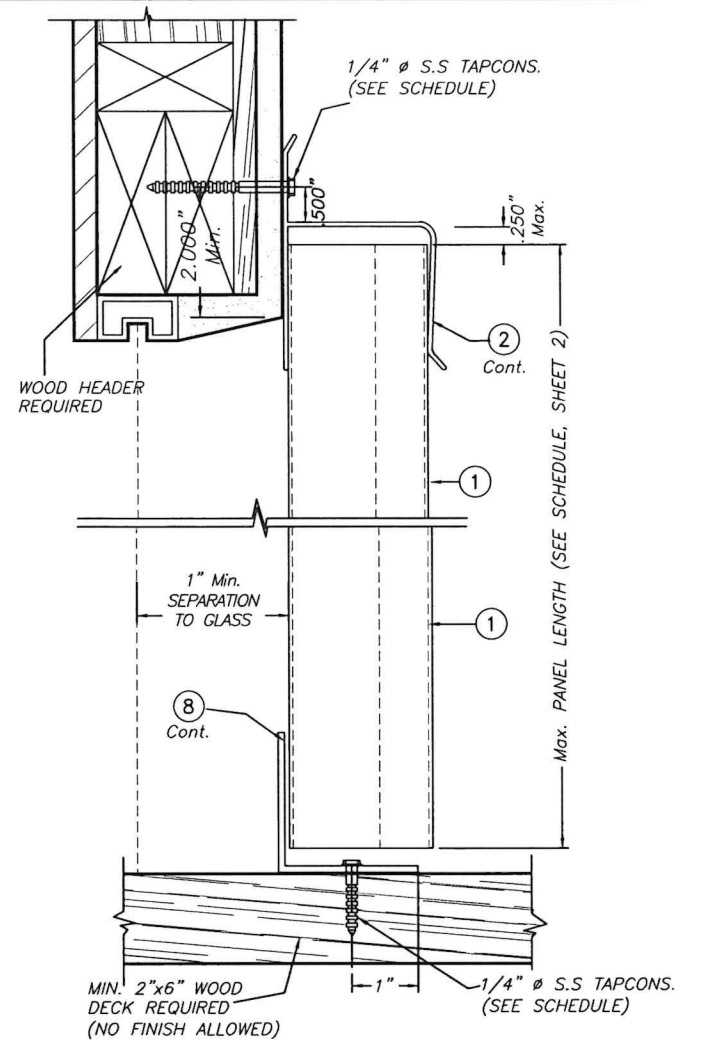
SECTION @ ANCHOR



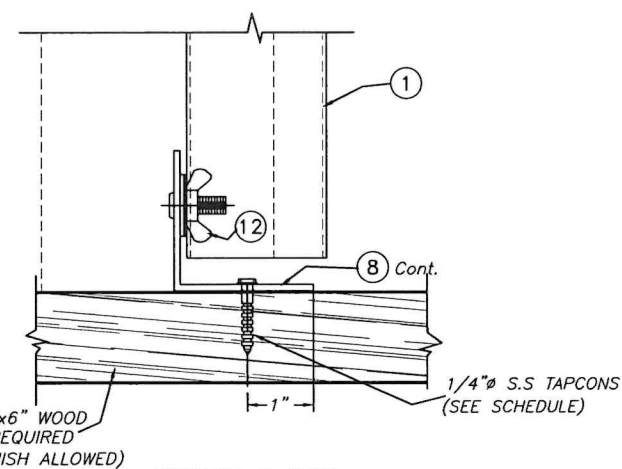
SECTION @ STUD

ALTERNATIVE 2

+ NOTE: FEMALE COVER CAP (1) TO REMAIN CLOSED AT NON HURRICANE CONDITIONS.



SECTION @ ANCHOR



SECTION @ STUD

WALL & FLOOR MOUNTING INSTALLATION

ALTERNATIVE 3

FLORIDA BUILDING CODE (Non High Velocity Hurricane Zone)

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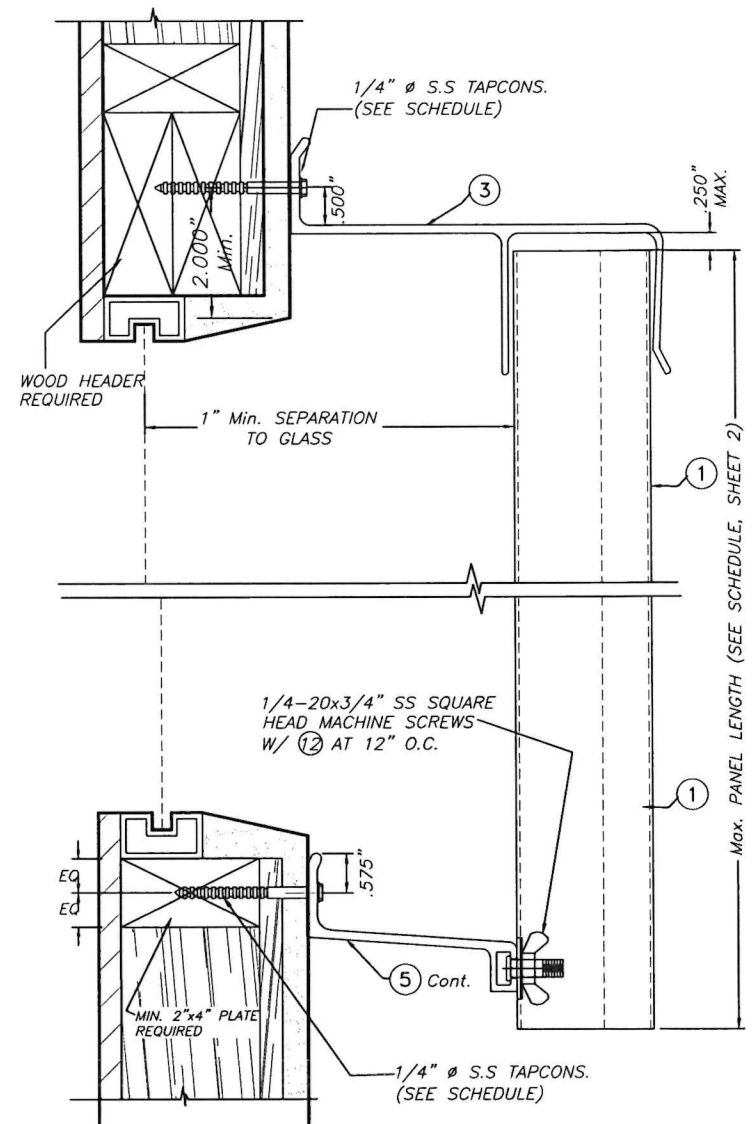
TILTECO INC.

TILLIT TESTING & ENGINEERING COMPANY
6355N.W. 36th. St., Ste.305, VIRGINIA GARDENS, FL 33166
Phone : (305)871-1530 . Fax : (305)871-1531
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WALTER A. TILLIT Jr. P.E.
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FLORIDA Lic. # 44167

PROFESSIONAL ENGINEER
STATE OF FLORIDA
LICENSE No. 44167

P.E. SEAL/SIGNATURE/DATE



BUILD OUT INSTALLATION
ALTERNATIVE 4

NOTE FOR COMBINATION OF SECTIONS :
WALL/FLOOR MOUNTING SECTIONS CAN BE COMBINED IN ANY WAY TO SUIT ANY INSTALLATION.

24 GAGE GALVANIZED BERTHA STEEL STORM PANEL (2" DEEP)					DRAWN BY: W.H.	
EASTERN METAL SUPPLY, INC					7/27/26 DATE	
4268 WEST ROADS DRIVE WEST PALM BEACH, FL 33407 PH: (561) 533-6061 FAX: (561) 588-4780					26-235 DRAWING No	
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE	SHEET 8 OF 10
1	OLD 23-142	7/27/26	3			
2			4			



HEET 9 OF 10

MAXIMUM A.S.D. DESIGN PRESSURE RATING (p.s.f.) AND CORRESPONDING MAXIMUM ANCHOR
SPACING SCHEDULE FOR INSTALLATIONS INTO WOOD FRAME BUILDINGS

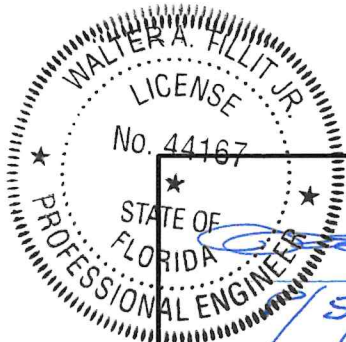
MAXIMUM A.S.D. DESIGN PRESSURE RATING (p.s.f.)	WOOD FASTENERS	APPLICABLE TO ALTERNATIVES # & ANY COMBINATION OF THEM	MAXIMUM PANEL LENGTH "L" (ft.)
	S.S TAPCONS OR ULTRACONS OR S.S RODS OR PANELMATES.		
+40.0, -40.0 OR LESS	N/A	1 (TOP)	6'-0" OR LESS
	12"	1 (BOTTOM)	
	12"	2 (TOP)	
	12"	2 (BOTTOM)	
	12"	3 (TOP)	
	12"	3 (BOTTOM)	
	12"	4 (TOP)	
	12"	4 (BOTTOM)	
	11"	5 (TOP)	
	12"	5 (BOTTOM)	
	6"	6 (TOP)	
	6"	6 (BOTTOM)	

MAXIMUM A.S.D. DESIGN PRESSURE RATING (p.s.f.)	WOOD FASTENERS	APPLICABLE TO ALTERNATIVES # & ANY COMBINATION OF THEM	MAXIMUM PANEL LENGTH "L" (ft.)
	S.S TAPCONS OR ULTRACONS OR S.S RODS OR PANELMATES.		
+40.0, -40.0 UP TO +57.0, -57.0	N/A	1 (TOP)	> 6'-0" UP TO 7'-4"
	12"	1 (BOTTOM)	
	12"	2 (TOP)	
	12"	2 (BOTTOM)	
	12"	3 (TOP)	
	7"	3 (BOTTOM)	
	12"	4 (TOP)	
	12"	4 (BOTTOM)	
	6.5"	5 (TOP)	
	7"	5 (BOTTOM)	
	6"	6 (TOP)	
	6"	6 (BOTTOM)	

MAXIMUM A.S.D. DESIGN PRESSURE RATING (p.s.f.)	WOOD FASTENERS	APPLICABLE TO ALTERNATIVES # & ANY COMBINATION OF THEM	MAXIMUM PANEL LENGTH "L" (ft.)
	S.S TAPCONS OR ULTRACONS OR S.S RODS OR PANEL MATES.		
+40.0, -40.0 OR LESS	N/A	1 (TOP)	> 6'-0" UP TO 9'-10"
	12"	1 (BOTTOM)	
	12"	2 (TOP)	
	12"	2 (BOTTOM)	
	12"	3 (TOP)	
	7.5"	3 (BOTTOM)	
	12"	4 (TOP)	
	12"	4 (BOTTOM)	
	7	5 (TOP)	
	7.5"	5 (BOTTOM)	
	6"	6 (TOP)	
	6"	6 (BOTTOM)	

MAXIMUM A.S.D. DESIGN PRESSURE RATING (p.s.f.)	WOOD FASTENERS	APPLICABLE TO ALTERNATIVES # & ANY COMBINATION OF THEM	MAXIMUM PANEL LENGTH "L" (ft.)
	S.S TAPCONS OR ULTRACONS OR S.S RODS OR PANELMATES.		
+58.0, -58.0 OR LESS	N/A	1 (TOP)	2'-8" OR LESS
	12"	1 (BOTTOM)	
	12"	2 (TOP)	
	12"	2 (BOTTOM)	
	12"	3 (TOP)	
	12"	3 (BOTTOM)	
	12"	4 (TOP)	
	12"	4 (BOTTOM)	
	12"	5 (TOP)	
	12"	5 (BOTTOM)	
	6"	6 (TOP)	
	6"	6 (BOTTOM)	

MAXIMUM A.S.D. DESIGN PRESSURE RATING (p.s.f.)	WOOD FASTENERS	APPLICABLE TO ALTERNATIVES # & ANY COMBINATION OF THEM	MAXIMUM PANEL LENGTH "L" (ft.)
	S.S TAPCONS OR ULTRACONS OR S.S RODS OR PANELMATES.		
+40.0, -40.0 UP TO +50.0, -50.0	N/A	1 (TOP)	6'-0" OR LESS
	12"	1 (BOTTOM)	
	12"	2 (TOP)	
	12"	2 (BOTTOM)	
	12"	3 (TOP)	
	10"	3 (BOTTOM)	
	12"	4 (TOP)	
	12"	4 (BOTTOM)	
	9"	5 (TOP)	
	10"	5 (BOTTOM)	
	6"	6 (TOP)	
	6"	6 (BOTTOM)	



P.E. SEAL/SIGNATURE/DATE

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DRAWN BY:
W.H.

7/27/26
DATE

26-235
DRAWING No

SHEET 10 OF 10

REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 23-142	7/27/26	3		
2			4		