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Product Approval
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FL #	FL11968-R4						
Application Type	Revision						
Code Version	2017						
Application Status	Approved						
Comments							
Archived	<input type="checkbox"/>						
Product Manufacturer	Eastern Metal Supply						
Address/Phone/Email	4268 Westroads Drive West Palm Beach, FL 33407 (800) 432-2204 lrodriguez@easternmetal.com						
Authorized Signature	Bill Feeley lrodriguez@easternmetal.com						
Technical Representative							
Address/Phone/Email							
Quality Assurance Representative							
Address/Phone/Email							
Category	Shutters						
Subcategory	Storm Panels						
Compliance Method	Evaluation Report from a Florida Registered Architect or a Licensed Florida Professional Engineer <input type="checkbox"/> Evaluation Report - Hardcopy Received						
Florida Engineer or Architect Name who developed the Evaluation Report	Walter A. Tillit, Jr.						
Florida License	PE-44167						
Quality Assurance Entity	National Accreditation and Management Institute						
Quality Assurance Contract Expiration Date	12/31/2020						
Validated By	John Henry Kampmann Jr. <input checked="" type="checkbox"/> Validation Checklist - Hardcopy Received						
Certificate of Independence	FL11968_R4_COI_EASTERN METAL SUPPLY, INC. DRAWING 17-098 CERTIFICATION OF INDEPENDENCE.PDF FL11968_R4_COI_EASTERN METAL SUPPLY, INC. DRAWING 17-095 CERTIFICATION OF INDEPENDENCE.PDF FL11968_R4_COI_EASTERN METAL SUPPLY, INC. DRAWING 17-096 CERTIFICATION OF INDEPENDENCE.PDF FL11968_R4_COI_EASTERN METAL SUPPLY2c INC. DRAWING 17-094 CERTIFICATION OF INDEPENDENCE.pdf						
Referenced Standard and Year (of Standard)	<table border="0"> <thead> <tr> <th>Standard</th> <th>Year</th> </tr> </thead> <tbody> <tr> <td>ASTM E330</td> <td>2002</td> </tr> <tr> <td>SSTD12-99</td> <td>1999</td> </tr> </tbody> </table>	Standard	Year	ASTM E330	2002	SSTD12-99	1999
Standard	Year						
ASTM E330	2002						
SSTD12-99	1999						

Equivalence of Product Standards
Certified By

Florida Licensed Professional Engineer or Architect
[FL11968 R4 Equiv EASTERN METAL SUPPLY, INC. DRAWING 17-095 LETTER EQUIVALENCE BETWEEN SSTD 12-99 AND ASTM E-1996.PDF](#)
[FL11968 R4 Equiv EASTERN METAL SUPPLY, INC. DRAWING 17-098 LETTER OF EQUIVALENCE SSTD 12-99 AND ASTM E-1996.PDF](#)
[FL11968 R4 Equiv EASTERN METAL SUPPLY, INC DRAWING 17-096 LETTER EQUIVALENCE BETWEEN SSTD 12-99 AND ASTM E-1996.PDF](#)
[FL11968 R4 Equiv EASTERN METAL SUPPLY2c INC. DRAWING 17-094 LETTER EQUIVALENT BETWEEN SSTD 12-99 AND ASTM E-1996.pdf](#)

Sections from the Code

Product Approval Method

Method 1 Option D

Date Submitted

09/20/2017

Date Validated

10/28/2017

Date Pending FBC Approval

10/29/2017

Date Approved

12/12/2017

Summary of Products

FL #	Model, Number or Name	Description
11968.1	0.040" Bertha Aluminum Storm Panel (2.25" Deep)- Non-HVHZ - Drawing Number 17-094	Corrugated aluminum storm panels retained or not by tracks to provide hurricane protection.
Limits of Use Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: Yes Design Pressure: N/A Other: Large Missile. Max. span is 12'-0" for +25, -25 p.s.f. and 4'-0" for +125, -130 p.s.f. for sections 1, 3, 4, 6, 7, 8, 8A, 9 and 11. See sheet 10 of installation drawing for other spans and pressures. Valid only for wind zones 1,2 & 3 as defined by ASTM E-1996.		Installation Instructions FL11968 R4 II EASTERN METAL SUPPLY2c INC. DRAWING 17-094 0.040 BERTHA ALUMINUM STORM PANEL.pdf Verified By: American Test Lab of South Florida, Inc. Created by Independent Third Party: Yes Evaluation Reports FL11968 R4 AE EASTERN METAL SUPPLY2c INC. DRAWING 17-094 PRODUCT EVALUATION REPORT.pdf Created by Independent Third Party: Yes
11968.2	0.050" Bertha Aluminum Storm Panel (2.25" Deep)- Non-HVHZ - Drawing Number 17-096	Corrugated aluminum storm panels retained or not by tracks to provide hurricane protection.
Limits of Use Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: Yes Design Pressure: N/A Other: Large Missile. Max. span is 12'-11" for +30, -30 p.s.f. and 8'-2" for +75, -80 p.s.f. for mountings without "h" header. See sheet 5 of installation drawing for other spans and pressures. Valid only for wind zones 1,2 & 3 as defined by ASTM E-1996.		Installation Instructions FL11968 R4 II EASTERN METAL SUPPLY, INC. DRAWING 17-096 0.050 BERTHA ALUMINUM STORM PANEL.PDF Verified By: American Test Lab of South Florida, Inc. Created by Independent Third Party: Yes Evaluation Reports FL11968 R4 AE EASTERN METAL SUPPLY, INC. DRAWING 17-096 PRODUCT OF EVALUATION REPORT.PDF Created by Independent Third Party: Yes
11968.3	24 Gage Galvanized Bertha Steel Storm Panel (2.25" Deep)- Non-HVHZ - Drawing Number 17-095	corrugated galvanized steel storm panels retained or not by tracks to provide hurricane protection.
Limits of Use Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: Yes Design Pressure: N/A Other: Large Missile. Max. span is 9'-8" for +30, -40 p.s.f. and 7'-2" for +70, -80 p.s.f. for panels mounted without "H" header. See sheet 4 of installation drawing for other spans and pressures. Valid only for wind zones 1,2 & 3 as defined by ASTM E-1996.		Installation Instructions FL11968 R4 II EASTERN METAL SUPPLY, INC. DRAWING 17-095 24 GAGE GALVANIZE BERTHA STEEL STORM PANEL.PDF Verified By: American Test Lab of South Florida, Inc. Created by Independent Third Party: Yes Evaluation Reports FL11968 R4 AE EASTERN METAL SUPPLY, INC. DRAWING 17-095 PRODUCT EVALUATION REPORT.PDF Created by Independent Third Party: Yes

11968.4	Clear Bertha Storm Panels (2 1/4") - Drawing Number 17-098	corrugated polycarbonate storm panels retained or not by tracks to provide hurricane protection.
Limits of Use Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: Yes Design Pressure: N/A Other: Large Missile. Max/ span is 10'-0" for +28, -28 p.s.f. A.S.D. and 4'-0" for +105, -110 p.s.f. A.S.D desgin load. See sheet 3 of installation drawings for other spans and pressures. Valid only for wind zones 1,2 & 3 as defined by ASTM E-1996.		Installation Instructions FL11968 R4 II EASTERN METAL SUPPLY, INC. DRAWING 17-098 CLEAR BERTHA STORM PANEL 2.25.PDF Verified By: American Test Lab of South Florida, Inc. Created by Independent Third Party: Yes Evaluation Reports FL11968 R4 AE EASTERN METAL SUPPLY, INC. DRAWING 17-098 PRODUCT OF EVALUATION REPORT.PDF Created by Independent Third Party: Yes

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GENERAL NOTES:

1. STORM PANEL SHOWN ON THIS PRODUCT EVALUATION DOCUMENT (P.E.D.) HAS BEEN VERIFIED FOR COMPLIANCE IN ACCORDANCE WITH THE 2017 (6th EDITION) OF THE FLORIDA BUILDING CODE. THIS STORM PANEL SHALL **NOT** BE INSTALLED AT HIGH VELOCITY HURRICANE ZONES (MMW-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 $K_d=0.85$ USING ASCE 7-10 FOR INSTALLATIONS UNDER 2017 FBC AND SHALL NOT EXCEED THE MAXIMUM (A.S.D.) DESIGN PRESSURE RATINGS INDICATED ON SHEETS 4 THRU 8.
- IN ORDER TO VERIFY THE ABOVE CONDITION, ULTIMATE DESIGN WIND LOADS DETERMINED PER ASCE 7-10 SHALL BE FIRST REDUCED TO A.S.D. DESIGN WIND LOADS BY MULTIPLYING THEM BY 0.6 IN ORDER TO COMPARE THESE W/ MAX. (A.S.D.) DESIGN PRESSURE RATINGS INDICATED ON SHEETS 4 THRU 8.
- IN ORDER TO VERIFY THAT COMPONENTS AND ANCHORS ON THIS P.E.D. AS TESTED WERE NOT OVER STRESSED, A 33% INCREASE IN ALLOWABLE STRESS FOR WIND LOADS WAS NOT USED IN THEIR ANALYSIS. A DURATION FACTOR $C_d=1.60$ WAS USED FOR VENTRICATION OF FASTENERS IN WOOD.
- STORM PANEL'S ADEQUACY FOR IMPACT AND FATIGUE RESISTANCE HAS BEEN VERIFIED IN ACCORDANCE WITH SECTION 1609.1.2 OF THE ABOVE MENTIONED CODE AS PER A.I.T. REPORTS # 0121.01-998, # 0293.01-00, #0312.01-03 AND #171.01-04 AS PER IMPACT TESTING EQUIVALENT TO ASTM E-1996 STANDARD & ASTM E-330-02 STANDARD, LIMITED TO INSTALLATIONS WITHIN WIND ZONES 1, 2 & 3 AS DENIED BY ASTM E-1996 STANDARD.
2. ALL STEEL SHEET METAL PANELS SHALL HAVE STRUCTURAL QUALITY ASTM A-653, GRADE 40, WITH G-60 GALVANIZED STEEL DESIGNATION.
3. ALL ALUMINUM EXTRUSIONS SHALL BE ALUMINUM ASSOCIATION 6063-T5 ALLOY & TEMPER UNLESS OTHERWISE NOTED. STORM PANEL COMPONENTS (A) STUDDED PLATE AND (B) SHIP CAP ARE PATENT PENDING.
4. ALL SCREWS TO BE STAINLESS STEEL 304 OR 316 AISI SERIES OR CORROSION RESISTANT COATED CARBON STEEL AS PER DN 50018 W/ 50 ksi YIELD STRENGTH AND 90 ksi TENSILE STRENGTH & SHALL COMPLY W/ FLORIDA BUILDING CODE SECTION 2411.3.3.4.
5. BOLTS TO BE ASTM A-307 GALVANIZED STEEL OR AISI 304 SERIES STAINLESS STEEL, WITH 55 ksi MINIMUM YIELD STRENGTH.
6. ANCHORS TO WALL SHALL BE AS FOLLOWS: (UNLESS OTHERWISE NOTED)
 - (A) TO EXISTING POURED CONCRETE:
 - 1/4" x 7/8" TAPCON ANCHORS AS MANUFACTURED BY I.T.W. BUILDEX.
 - 1/4" x 7/8" GRIP ANCHORS (BERTHA STU-CON), AS MANUFACTURED BY TRU-FAST CORPORATION.
 - 1/4" x 7/8" ZMAG NAIL ANCHORS AS MANUFACTURED BY POWER FASTENERS, INC.
 - 1/4" x 7/8" CALK-IN ANCHORS OR ELCO mole & female PANELMATE AS MANUFACTURED BY POWER FASTENERS, INC. AND ELCO CONSTRUCTION PRODUCTS, RESPECTIVELY.
 - 1/4" x 3/4" ALL POINTS SOLD-SET ANCHORS AS DISTRIBUTED BY ALL POINTS SCREW, BOLT & SPECIALTY COMPANY.
 - (B) TO EXISTING CONCRETE BLOCK WALL:
 - 1/4" x TAPCON ANCHORS AS MANUFACTURED BY I.T.W. BUILDEX.
 - 1/4" x 7/8" GRIP ANCHORS (BERTHA STU-CON), AS MANUFACTURED BY TRU-FAST CORPORATION.
 - 1/4" x ZMAG NAIL ANCHORS AS MANUFACTURED BY POWER FASTENERS, INC.
 - 1/4" x 7/8" CALK-IN ANCHORS OR ELCO mole & female PANELMATE AS MANUFACTURED BY POWER FASTENERS, INC. AND ELCO CONSTRUCTION PRODUCTS, RESPECTIVELY.
 - 1/4" x 3/4" ALL POINTS SOLD-SET ANCHORS AS DISTRIBUTED BY ALL POINTS SCREW, BOLT & SPECIALTY COMPANY.
 - 1/4" x RED HEAD DYNABOLT SLEEVE ANCHORS AS MANUFACTURED BY I.T.W. BUILDEX.

- A.1) MINIMUM EMBEDMENT INTO POURED CONCRETE OF TAPCON ANCHORS IS 1 3/4"; FOR ZMAG NAIL ANCHORS IS 1 3/8"; FOR ELCO PANELMATE ANCHORS IS 1 3/4"; AND FOR GRIP ANCHORS IS 1 1/4".
- A.2) 7/8" CALK-IN ANCHORS SHALL BE ENIRELY EMBEDDED INTO THE POURED CONCRETE. NO EMBEDMENT INTO STUCCO SHALL BE PERMITTED. 1/4" x 20 S.S. MACHINE SCREW USED SHALL BE 1 1/2" LONG MINIMUM SHOULD STUCCO EXIST, AND 1" MINIMUM FOR WALLS WITH NO STUCCO.
- A.3) MINIMUM EMBEDMENT OF 1/4" x 3/4" ALL POINTS SOLD-SET ANCHORS SHALL BE 7/8" INTO THE POURED CONCRETE. NO EMBEDMENT INTO STUCCO SHALL BE PERMITTED. 1/4" x 20 S.S. MACHINE SCREW USED SHALL BE 1 1/2" LONG MINIMUM SHOULD STUCCO EXIST, AND 1" MINIMUM FOR WALLS WITH NO STUCCO.
- A.4) IN CASE THAT PRECAST STONE, PRECAST CONCRETE PANELS, OR PARTS 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.

NOTES:

- B.1) MINIMUM EMBEDMENT OF TAPCON, ELCO PANELMATE, AND OF TRU-GRIP ANCHORS INTO CONCRETE BLOCK UNIT SHALL BE 1 1/4"; 1 3/8" FOR ZMAG NAIL ANCHORS AND 1 1/8" FOR RED HEAD DYNABOLT SLEEVE ANCHORS
 - B.2) 7/8" CALK-IN ANCHORS SHALL BE ENTIRELY EMBEDDED INTO THE CONCRETE BLOCK UNIT. NO EMBEDMENT INTO STUCCO SHALL BE PERMITTED. 1/4" x 20 S.S. MACHINE SCREW USED SHALL BE 1 1/2" LONG MINIMUM SHOULD STUCCO EXIST, AND 1" MINIMUM FOR WALLS WITH NO STUCCO.
 - B.3) MINIMUM EMBEDMENT OF 1/4" x 3/4" ALL POINTS SOLD-SET ANCHORS SHALL BE 7/8" INTO THE CONCRETE BLOCK. NO EMBEDMENT INTO STUCCO SHALL BE PERMITTED. 1/4" x 20 S.S. MACHINE SCREW USED SHALL BE 1 1/2" LONG MINIMUM SHOULD STUCCO EXIST, AND 1" MINIMUM FOR WALLS WITH NO STUCCO.
 - B.4) 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 IN B.1) AND B.2) ABOVE.
- (C) ANCHORS SHALL BE INSTALLED FOLLOWING ALL OF THE RECOMMENDATIONS AND SPECIFICATIONS OF THE ANCHOR'S MANUFACTURER.
 7. PANELS MAY ALSO BE INSTALLED HORIZONTALLY FOLLOWING INSTALLATION DETAILS SHOWN ON SECTIONS 1 THRU 3 (SHEET 2 & 3 OF B) EXCEPT THAT HEADERS 2, 3 & 4 SHALL NOT BE USED.
 8. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE SOUNDNESS OF THE STRUCTURE WHERE SHUTTER IS TO BE ATTACHED TO INSURE PROPER ANCHORAGE. THIS SHUTTER SHALL ONLY BE ATTACHED TO CONCRETE BLOCK OR WOOD FRAME BUILDINGS.
 9. THE INSTALLATION CONTRACTOR IS TO SEAL/CALK ALL SHUTTER COMPONENT EDGES WHICH REMAIN IN CONTINUOUS CONTACT WITH THE BUILDING TO PREVENT WIND/RAIN INTRUSION. CALK AND SEAL SHUTTER TRACKS ALL AROUND FULL LENGTH.
 10. (A) THIS P.E.D. PREPARED BY THIS ENGINEER IS GENERAL AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT, I.E. WHERE THE SITE CONDITIONS DEVIATE FROM THE P.E.D.
 - (B) CONTRACTOR 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 FLORIDA REGISTERED ENGINEER OR ARCHITECT WHICH 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. SPECIFIC DRAWINGS FOR REVIEW.
 - (E) THIS P.E.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER OF RECORD THAT PREPARED IT.

11. SHUTTER MANUFACTURER'S LABEL SHALL BE LOCATED ON A READILY VISIBLE LOCATION AT STORM PANEL IN ACCORDANCE WITH SECTION 1703.3 OF THE FLORIDA BUILDING CODE. THE LABEL SHALL BE PLACED FOR EVERY OPENING. LABELING TO COMPLY WITH SECTION 1703.2 OF THE FLORIDA BUILDING CODE.

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

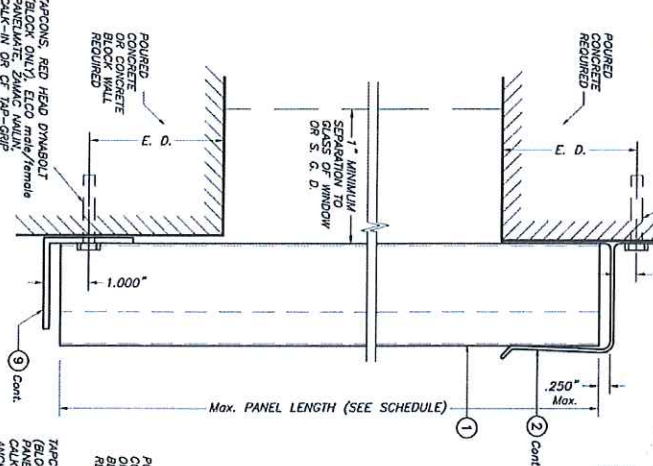


FLORIDA BUILDING CODE (Non High Velocity Hurricane Zone)
24 GAUGE GALVANIZED BERTHA STEEL STORM PANEL
(2.25" DEEP)

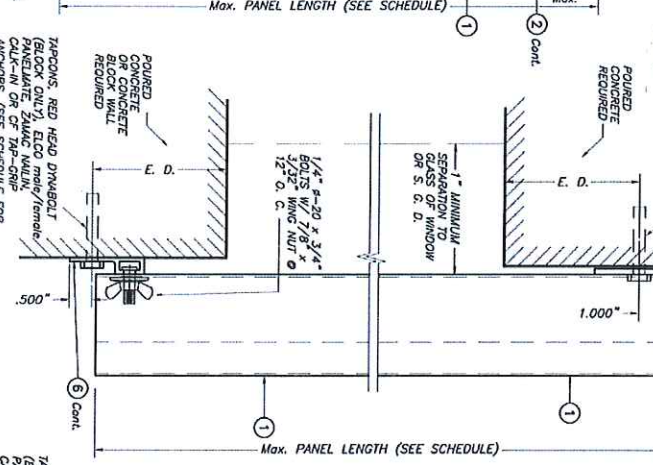
<p style="text-align: center;">TILECO Inc.</p> <p style="text-align: center;">TILT TESTING & ENGINEERING COMPANY 4268 WEST ROADS DRIVE WEST PALM BEACH, FL 33407 PHONE: (561)269-0263 FAX: (561)841-1716</p>	<p style="text-align: center;">EASTERN METAL SUPPLY, INC</p> <p style="text-align: center;">L.C. 07/25/17 DATE</p>
<p>©2017 TILECO, INC.</p>	<p>17-095 DRAWING NO</p>

REV. NO.	DATE	BY	CHK.	DESCRIPTION	DATE
1	07/25/17	WAT	WAT	ISSUED FOR PERMIT	
2	07/25/17	WAT	WAT	REVISED	

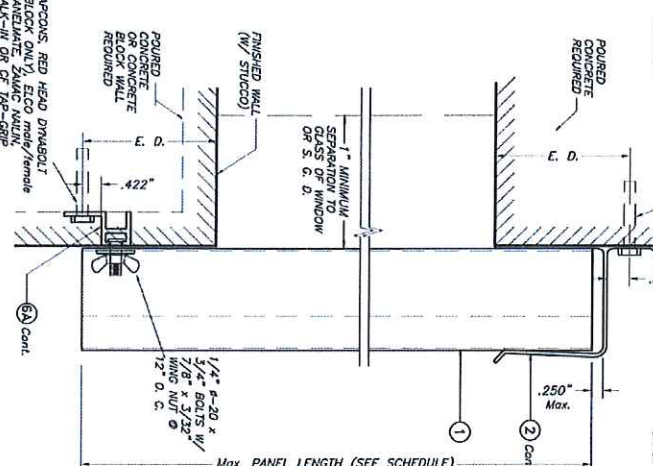
TAPCONS, EICO male/female PANEL/LATE, ZAMAC NUTS, CALK-IN OR OF TAP-GRIP ANCHORS (SEE SCHEDULE FOR SPACING).



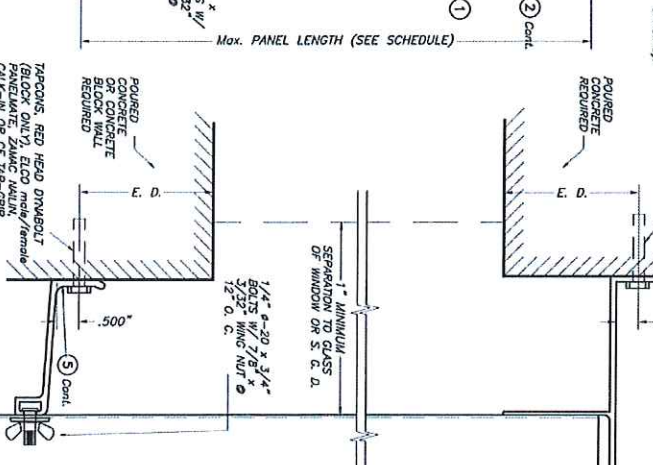
TAPCONS, EICO male/female PANEL/LATE, ZAMAC NUTS, CALK-IN OR OF TAP-GRIP ANCHORS (SEE SCHEDULE FOR SPACING).



TAPCONS, EICO male/female PANEL/LATE, ZAMAC NUTS, CALK-IN OR OF TAP-GRIP ANCHORS (SEE SCHEDULE FOR SPACING).



TAPCONS, EICO male/female PANEL/LATE, ZAMAC NUTS, CALK-IN OR OF TAP-GRIP ANCHORS (SEE SCHEDULE FOR SPACING).



SECTION 1
SCALE: 3/8" = 1"
NOTE: DETAIL OF SECTION @ STUD WALL ALSO FOR WALL MOUNTING INSTALLATION - SECTION 2 (TOP)



SECTION 2
SCALE: 3/8" = 1"
NOTE FOR COMBINATION OF SECTIONS: WALL/FLOOR/CEILING MOUNTING SECTIONS CAN BE COMBINED IN ANY WAY TO SUIT ANY INSTALLATION.



SECTION 3
SCALE: 3/8" = 1"
SECTION 4
SCALE: 3/8" = 1"



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FLORIDA BUILDING CODE (Non High Velocity Hurricane Zone)

24 GAQE GALVANIZED BERTHA STEEL STORM PANEL (2.25" DEEP)

TILTECO INC.

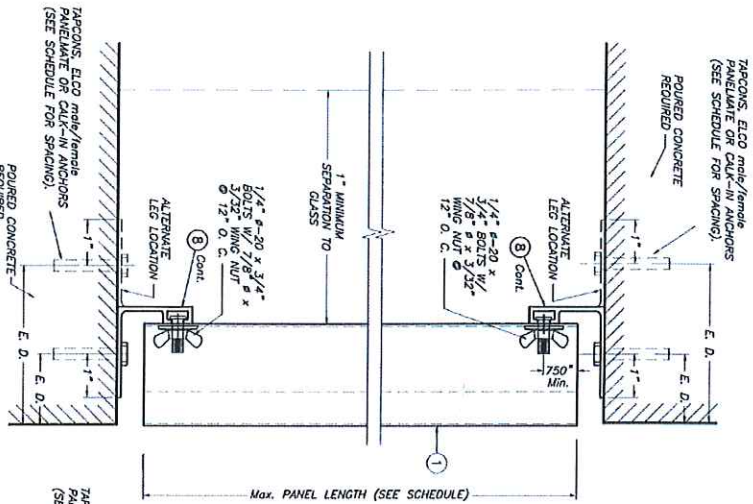
4268 WEST PALM BLVD. SUITE 200
WEST PALM BEACH, FL 33407
PHONE: (561) 299-8263 FAX: (561) 941-1716

EASTERN METAL SUPPLY, INC.

17-095
DRAWING No

REV. NO.	DESCRIPTION	DATE	BY	CHK.
1	AS SHOWN	07/26/17		
2	AS SHOWN	07/27/17		

SHEET 2 OF 8

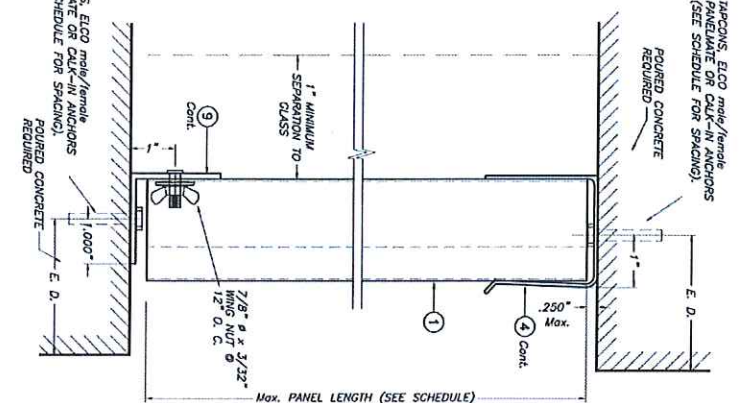


**CEILING & FLOOR MOUNTING
INSTALLATION - SECTION 5**

SCALE: 3/8" = 1"

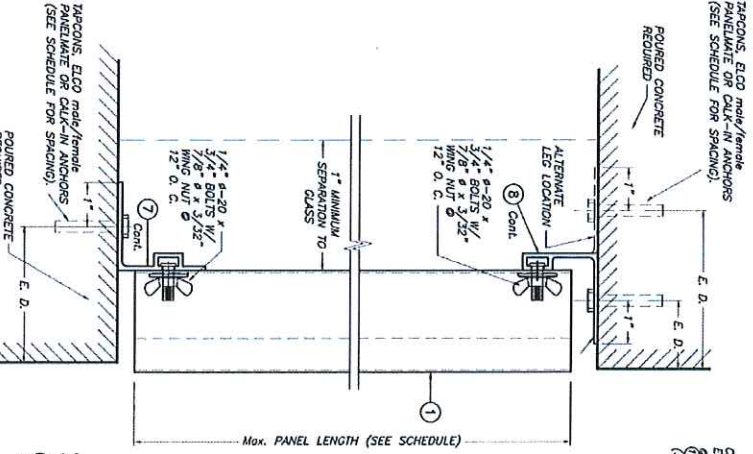
E. D. = EDGE DISTANCE
(SEE SCHEDULE ON
SHEET 3 & 6 OF 8)

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



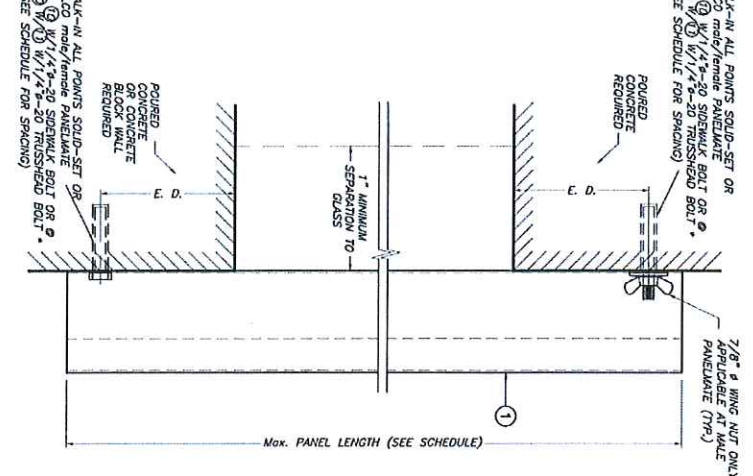
**CEILING & FLOOR MOUNTING
INSTALLATION - SECTION 6**

SCALE: 3/8" = 1"



**CEILING & FLOOR MOUNTING
INSTALLATION - SECTION 7**

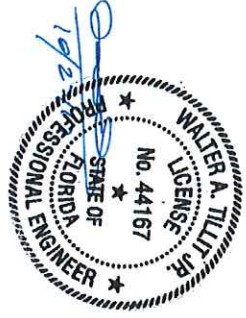
SCALE: 3/8" = 1"



**WALL MOUNTING INSTALLATION (D. M.)
- SECTION 8**

SCALE: 3/8" = 1"

* SIDE WALL BOLTS ARE 3/4" DIA. x 12" THICK
HEAD MACHINE SCREW W/LENGTH
AS PER NOTES A.2 & B.2 (SHEET 1)
TRUSS HEAD BOLTS ARE 1/2" DIA. x 8" THICK
HEAD MACHINE SCREW W/LENGTH
AS PER NOTES A.2 & B.2 (SHEET 1)



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TILTECO INC.

TILT TESTING & ENGINEERING COMPANY
6305 AM. 200, 2nd, 3rd, 4th, 5th, 6th, 7th, 8th, 9th, 10th, 11th, 12th, 13th, 14th, 15th, 16th, 17th, 18th, 19th, 20th, 21st, 22nd, 23rd, 24th, 25th, 26th, 27th, 28th, 29th, 30th, 31st, 32nd, 33rd, 34th, 35th, 36th, 37th, 38th, 39th, 40th, 41st, 42nd, 43rd, 44th, 45th, 46th, 47th, 48th, 49th, 50th, 51st, 52nd, 53rd, 54th, 55th, 56th, 57th, 58th, 59th, 60th, 61st, 62nd, 63rd, 64th, 65th, 66th, 67th, 68th, 69th, 70th, 71st, 72nd, 73rd, 74th, 75th, 76th, 77th, 78th, 79th, 80th, 81st, 82nd, 83rd, 84th, 85th, 86th, 87th, 88th, 89th, 90th, 91st, 92nd, 93rd, 94th, 95th, 96th, 97th, 98th, 99th, 100th

WALTER A. TILT, P.E.
FLORIDA LIC. # 44167

FLORIDA BUILDING CODE (Non High Velocity Hurricane Zone)

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

EASTERN METAL SUPPLY, INC.

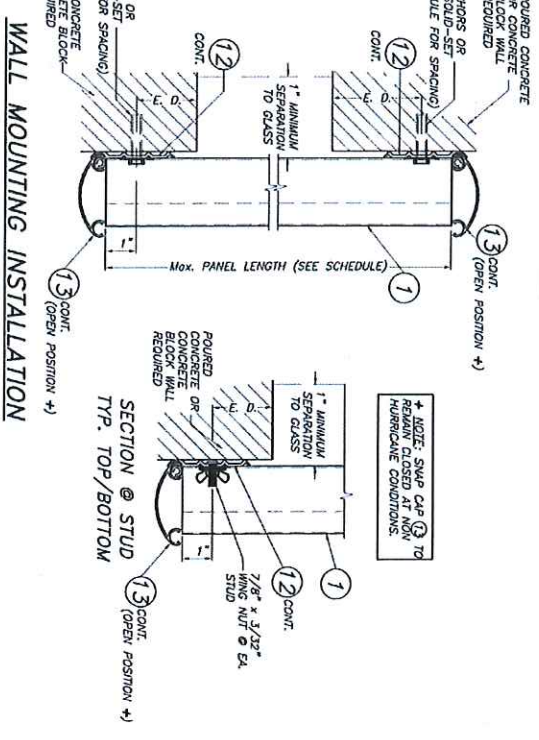
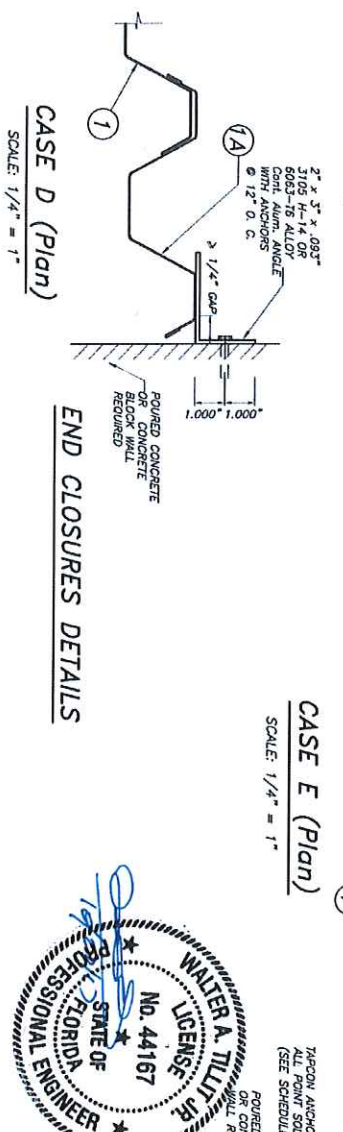
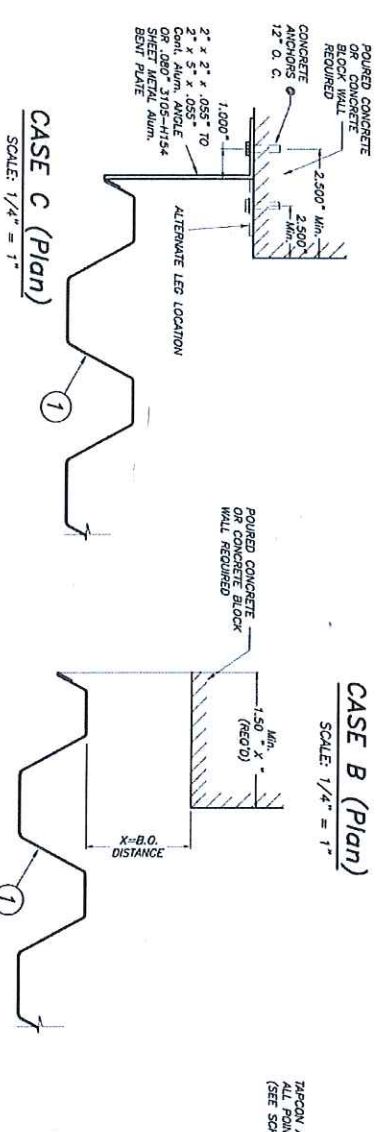
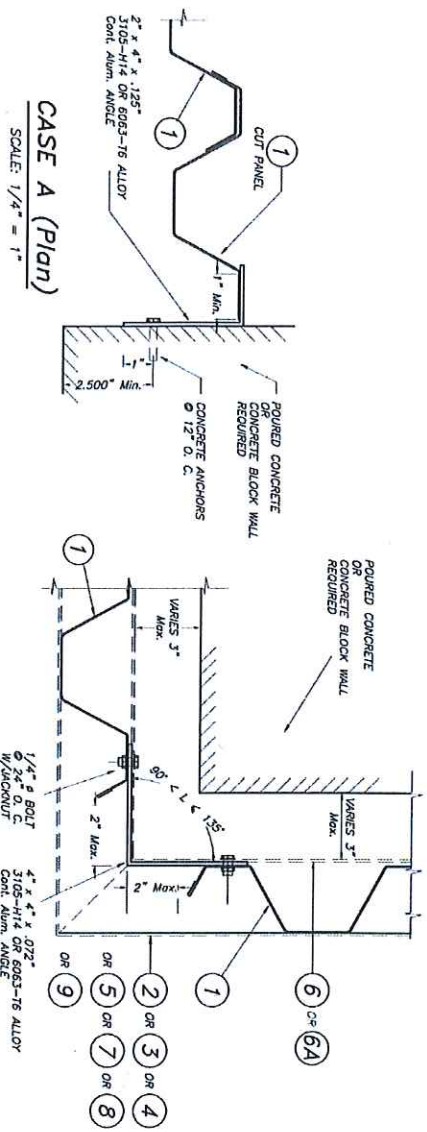
4358 WEST POND DRIVE
WEST PALM BEACH, FL 33407
PHONE: (561)208-8583 FAX: (561)941-1716

L.C. DRAWN BY: 07/26/17
D.M.S. DATE: 17-095
DRAWING No. SHEET 3 OF 8

MAXIMUM A.S.D. DESIGN PRESSURE RATING (P.S.F.) AND CORRESPONDING MAXIMUM PANEL LENGTH "L" (FT.) SCHEDULE

MAXIMUM A.S.D. DESIGN PRESSURE RATING (P.S.F.)	MAX. PANEL LENGTH		
	24 GAGE GALVANIZED BERRITH STEEL STORM PANEL	24 GAGE STEEL	24 GAGE STEEL
+35.0, -40.0	MOUNTING W/O 7/8" HEADER (1)	MOUNTING W/ 7/8" HEADER (2)	MOUNTING W/ COMP. (12) & (13)
+40.0, -45.0	9'-8"	9'-8"	9'-8"
+45.0, -50.0	9'-2"	9'-2"	9'-2"
+50.0, -55.0	8'-4"	8'-4"	8'-4"
+60.0, -65.0	7'-8"	7'-2"	7'-8"
+70.0, -80.0	7'-2"	6'-3"	7'-2"

NOTE: MINIMUM PANEL LENGTH IS 3'-0"



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17-095
 DRAWING No
 07/26/17
 DMS

SHEET 4 OF 8

MAXIMUM A.S.D. DESIGN PRESSURE RATING (P.s.f.) AND CORRESPONDING MAXIMUM ANCHOR SPACING SCHEDULE FOR INSTALLATIONS INTO CONCRETE AND CONCRETE BLOCK STRUCTURES *

E. D. = EDGE DISTANCE

MAXIMUM A.S.D. DESIGN PRESSURE RATING (P.s.f.)	MAXIMUM ANCHOR SPACING FOR E. D. = 3 1/2" **										APPLICABLE TO SECTIONS & PANELS ANY COMBINATION LENGTH 1" (H)	
	TARCONS TO CONCRETE	ZIANG MULLIN/ RED HD. DRYBOLT TO CONCRETE	CLIK-IN TO CONCRETE	SOLID-SET TO CONCRETE	PANELMATES TO CONCRETE	CF TAP-GRIP TO CONCRETE	TO CONCRETE	TO CONCRETE	TO CONCRETE	TO CONCRETE		TO CONCRETE
>+50.0-55.0	8"	7"	10"	12"	12"	12"	12"	12"	12"	12"	12"	1 & 3 (TOP)
	12"	11"++	10"	12"	12"	12"	12"	12"	12"	12"	12"	1, 5 th (BOTTOM)
TO	12"	11"++	10"	12"	12"	12"	12"	12"	12"	12"	12"	2, 9 th (TOP)
	12"	11"++	10"	12"	12"	12"	12"	12"	12"	12"	12"	2 (BOTTOM)
+70.0-80.0	12"	11"++	10"	12"	12"	12"	12"	12"	12"	12"	12"	3 (BOTTOM)
	12"	11"++	10"	12"	12"	12"	12"	12"	12"	12"	12"	4 (TOP)
TO	12"	11"++	10"	12"	12"	12"	12"	12"	12"	12"	12"	5 (TOP/BOTTOM)
	12"	11"++	10"	12"	12"	12"	12"	12"	12"	12"	12"	6 (TOP)
TO	12"	11"++	10"	12"	12"	12"	12"	12"	12"	12"	12"	7 (BOTTOM)
	12"	11"++	10"	12"	12"	12"	12"	12"	12"	12"	12"	8 (TOP/BOTTOM)

THIS SCHEDULE INDICATES REQUIRED ANCHOR SPACING FOR A GIVEN DESIGN LOAD AND PANEL LENGTH. HOWEVER, THE MAXIMUM PANEL LENGTH FOR A GIVEN ANCHOR TYPE MUST BE VERIFIED AS PER SCHEDULE ON SHEET # OF 8.



MAXIMUM A.S.D. DESIGN PRESSURE RATING (P.s.f.)	MAXIMUM ANCHOR SPACING FOR E. D. = 3 1/2" **										APPLICABLE TO SECTIONS & PANELS ANY COMBINATION LENGTH 1" (H)	
	TARCONS TO CONCRETE	ZIANG MULLIN/ RED HD. DRYBOLT TO CONCRETE	CLIK-IN TO CONCRETE	SOLID-SET TO CONCRETE	PANELMATES TO CONCRETE	CF TAP-GRIP TO CONCRETE	TO CONCRETE	TO CONCRETE	TO CONCRETE	TO CONCRETE		TO CONCRETE
>+50.0-55.0	6"	5"++	8"	12"	12"	12"	12"	12"	12"	12"	12"	1 & 3 (TOP)
	11"	9"++	11"	12"	12"	12"	12"	12"	12"	12"	12"	1, 9 th (BOTTOM)
TO	11"	9"++	11"	12"	12"	12"	12"	12"	12"	12"	12"	2, 9 th (TOP)
	11"	9"++	11"	12"	12"	12"	12"	12"	12"	12"	12"	2 (BOTTOM)
+70.0-80.0	11"	9"++	11"	12"	12"	12"	12"	12"	12"	12"	12"	3 (BOTTOM)
	11"	9"++	11"	12"	12"	12"	12"	12"	12"	12"	12"	4 (TOP)
TO	11"	9"++	11"	12"	12"	12"	12"	12"	12"	12"	12"	4 (BOTTOM)
	11"	9"++	11"	12"	12"	12"	12"	12"	12"	12"	12"	5 (TOP/BOTTOM)
TO	11"	9"++	11"	12"	12"	12"	12"	12"	12"	12"	12"	6 (TOP)
	11"	9"++	11"	12"	12"	12"	12"	12"	12"	12"	12"	7 (BOTTOM)
TO	11"	9"++	11"	12"	12"	12"	12"	12"	12"	12"	12"	8 (TOP/BOTTOM)
	11"	9"++	11"	12"	12"	12"	12"	12"	12"	12"	12"	8 (TOP/BOTTOM)

MAXIMUM A.S.D. DESIGN PRESSURE RATING (P.s.f.)	MAXIMUM ANCHOR SPACING FOR E. D. = 3 1/2" **										APPLICABLE TO SECTIONS & PANELS ANY COMBINATION LENGTH 1" (H)	
	TARCONS TO CONCRETE	ZIANG MULLIN/ RED HD. DRYBOLT TO CONCRETE	CLIK-IN TO CONCRETE	SOLID-SET TO CONCRETE	PANELMATES TO CONCRETE	CF TAP-GRIP TO CONCRETE	TO CONCRETE	TO CONCRETE	TO CONCRETE	TO CONCRETE		TO CONCRETE
>+50.0-55.0	5"	4"++	7"	10"	12"	12"	12"	12"	12"	12"	12"	1 & 3 (TOP)
	10"	8"++	10"	12"	12"	12"	12"	12"	12"	12"	12"	1, 9 th (BOTTOM)
TO	10"	8"++	10"	12"	12"	12"	12"	12"	12"	12"	12"	2, 9 th (TOP)
	10"	8"++	10"	12"	12"	12"	12"	12"	12"	12"	12"	2 (BOTTOM)
+70.0-80.0	10"	8"++	10"	12"	12"	12"	12"	12"	12"	12"	12"	3 (BOTTOM)
	10"	8"++	10"	12"	12"	12"	12"	12"	12"	12"	12"	4 (TOP)
TO	10"	8"++	10"	12"	12"	12"	12"	12"	12"	12"	12"	4 (BOTTOM)
	10"	8"++	10"	12"	12"	12"	12"	12"	12"	12"	12"	5 (TOP/BOTTOM)
TO	10"	8"++	10"	12"	12"	12"	12"	12"	12"	12"	12"	6 (TOP)
	10"	8"++	10"	12"	12"	12"	12"	12"	12"	12"	12"	7 (BOTTOM)
TO	10"	8"++	10"	12"	12"	12"	12"	12"	12"	12"	12"	8 (TOP/BOTTOM)
	10"	8"++	10"	12"	12"	12"	12"	12"	12"	12"	12"	8 (TOP/BOTTOM)

ACTUAL E. D.	FACTOR			
	TARCON	ZIANG MULLIN / DRYBOLTS	CLIK-IN	SOLID-SET
3"	-	.86	.75	.78
2 1/2"	-	.71	.50	.80
2"	-	.50	-	-
1 1/2"	.35	-	-	-

ONLY TARCON ANCHORS OR ALL POINT SOLID-SET ALLOWED FOR MOUNTING SECTION 9.
 ANCHORS SPACING ONLY VALID FOR ZIANG MULLIN ANCHORS.
 SEE SHEET 7 & 8 OF 8 FOR ANCHORS TYPE & SPACING FOR INSTALLATIONS INTO WOOD FRAME BUILDINGS.
 MAXIMUM ANCHOR SPACINGS ARE VALID FOR 3 1/2" EDGE DISTANCE.
 FOR E. D. LESS THAN 3 1/2", REDUCE ANCHOR SPACING BY MULTIPLYING SPACINGS SHOWN ON SCHEDULE BY THE FOLLOWING FACTORS: (MIN. E. D. FOR CLIK-IN ANCHORS & ELCO FOR CLIK-IN IS 2 1/2" AND 3 1/2" FOR SOLID-SET ANCHORS).
 FOR E. D. LESS THAN 3 1/2" AND 3 1/2" EDGE DISTANCES RESULTING FROM APPLYING ABOVE FACTORS SHALL NOT RESULT IN SPACINGS LESS THAN 3" FOR ALL ANCHORS (EXCEPT 4.5" FOR RED HD. DRYBOLT ANCHORS).

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TITLICO INC.

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 LICENSE # 44161

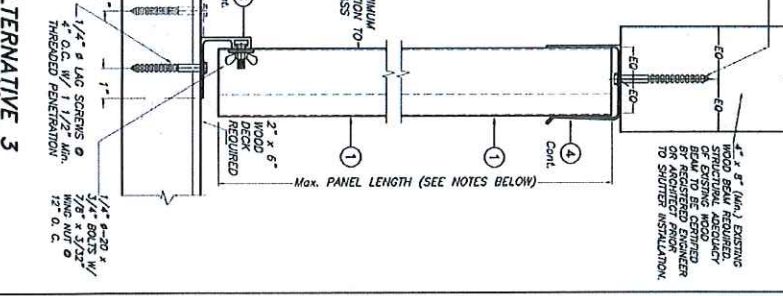
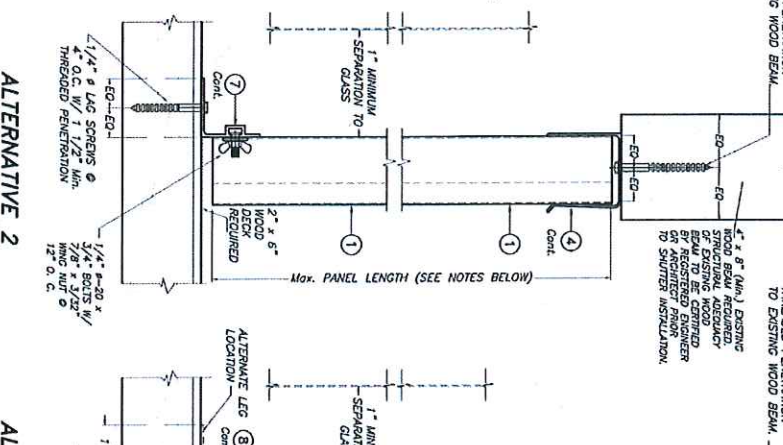
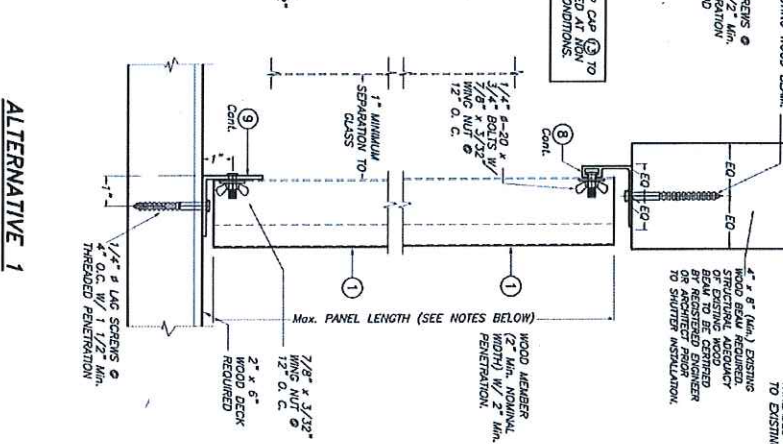
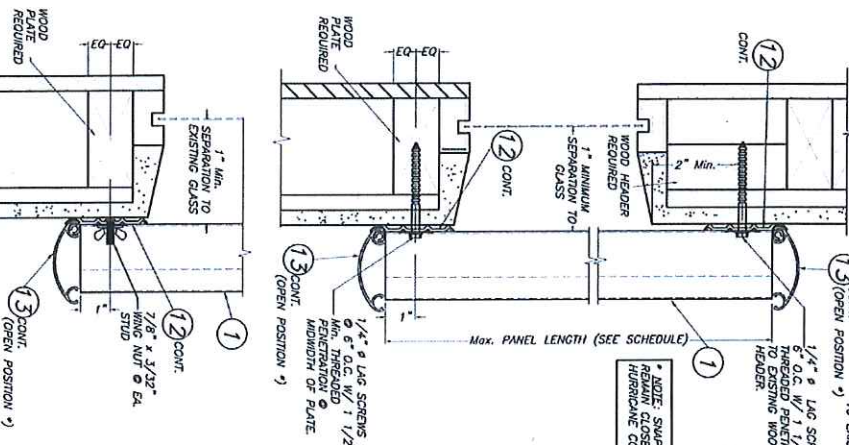
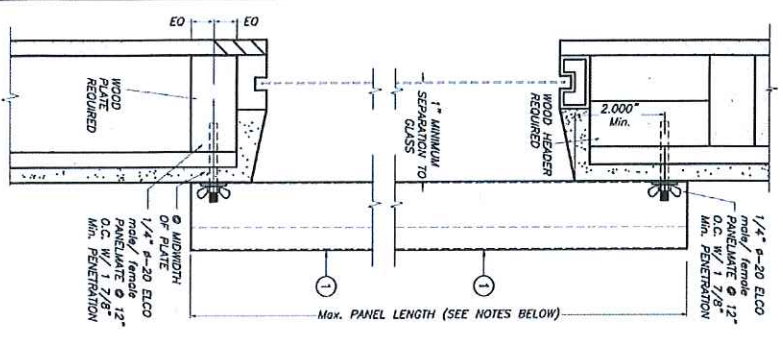
EASTERN WEST SUPPLY, INC.

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17-095
 DRAWING NO.

SHEET 6 OF 8

FLORIDA BUILDING CODE (Non High Velocity Hurricane Zone)
 24 GAGE GALVANIZED BERTHA STEEL STORM PANEL
 (2.25" DEEP)



WALL MOUNTING INSTALLATION
SECTION A

CEILING & FLOOR MOUNTING INSTALLATIONS
SECTIONS B



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

NOTES:
1. INSTALLATIONS ARE ONLY VALID FOR MAX. A.S.D. DESIGN PRESSURE RATING UP TO +60.0, -65.0 psf AND PANEL'S LENGTHS UP TO 7'-8".
2. FOR WOOD FRAME CONSTRUCTION: WOOD MEMBERS TO BE SOUTHERN PINE No. 2, W/ SPECIFIC DENSITY OF 0.55 OR EQUAL.

24 GAUGE GALVANIZED BERTHA STEEL STORM PANEL (2.25" DEEP)

TILECO INC.
4268 WEST ROADS DRIVE
WEST PALM BEACH, FL 33407
PHONE: (561)209-8265, FAX: (561)841-1716

EASTERN METAL SUPPLY, INC.
DRAWN BY: 07/28/17
DATE: 17-095
DRAWING NO.

REV. NO.	DESCRIPTION	DATE	BY	CHKD BY
1	CD 15-24-4	02/28/17	3	
2				

SHEET 8 OF 8

FLORIDA BUILDING CODE (Non High Velocity Hurricane Zone)