

GENERAL NOTES:

1. TITAN II FOLDING IMPACT PROTECTIVE SYSTEM SHOWN ON THIS PRODUCT EVALUATION DOCUMENT (P.E.D.) HAS BEEN VERIFIED FOR COMPLIANCE IN ACCORDANCE WITH THE 2014 EDITION OF THE FLORIDA BUILDING CODE. THIS FOLDING IMPACT PROTECTIVE SYSTEM MAY BE INSTALLED AT HIGH VELOCITY HURRICANE ZONES (HVHZ) AND OUT OF THEM (NHVHZ).

DESIGN WIND LOADS SHALL BE DETERMINED AS PER SECTIONS 1620 (HVHZ) & 1609 (NHVHZ) OF THE ABOVE MENTIONED CODE, FOR A BASIC WIND SPEED AS REQUIRED BY THE JURISDICTION WHERE THIS PRODUCT TO BE INSTALLED FOR A DIRECTIONALITY FACTOR Kd=0.85, USING ASCE 7-10 AND SHALL NOT EXCEED THE MAXIMUM A.S.D. DESIGN PRESSURE RATING INDICATED ON SHEET 13.

IN ORDER TO VERIFY THE ABOVE CONDITION, ULTIMATE DESING 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 SHEET 13.

IN ORDER TO VERIFY THAT COMPONENTS & ANCHORS ON THIS P.E.D., AS TESTED, WERE NOT OVERSTRESSED, A 33 % INCREASE IN ALLOWABLE STRESS FOR WIND LOADS WAS NOT USED IN THEIR ANALYSIS. A DURATION FACTOR CD = 1.60 WAS USED FOR VERIFICATION OF FASTENERS IN WOOD.

FOLDING IMPACT PROTECTIVE SYSTEM ADEQUACY FOR IMPACT AND FATIGUE RESISTANCE HAS BEEN VERIFIED IN ACCORDANCE WITH SECTIONS 1626 & 1609.1.2 OF THE ABOVE MENTIONED CODE AS PER TESTING PERFORMED AT HURRICANE ENGINEERING TESTING, INC. (H.E.T.I.), HURRICANE TESTING LABORATORY (H.T.L.) & AMERICAN TESTING LAB OF SOUTH FLORIDA AS PER PROTOCOLS TAS-201, TAS-202 AND TAS-203, AND AS PER SUBMITTED STRUCTURAL CALCULATIONS, PERFORMED AS PER SECTION 1616 & 1604 OF THE FLORIDA BUILDING CODE.

2. STAINLESS STEEL SHEET METAL SCREWS USED AT SLATS ① & ② SHALL BE # 10 x 3", 410-HT MINIMUM SERIES W/ 173.6 ksi YIELD STRENGTH & 187.4 ksi TENSILE STRENGTH. SCREWS SHALL BE COATED WITH XYLAN 5000 SERIES FLUOROPOLYMER COATING, AS MANUFACTURED BY WHITFORD Co, BOX 507. WEST CHESTER PA. 19381.
3. ALL ALUMINUM EXTRUSIONS SHALL BE ALUMINUM ASSOCIATION ALLOY AND TEMPER AS INDICATED ON SHEET 2. MINIMUM YIELD STRENGTH FOR 6063-T6 ALLOY AT SLATS SHALL BE Fy=25.9 ksi.
4. ALL SCREWS TO BE STAINLESS STEEL 304 OR 316 SERIES W/ 50 ksi YIELD STRENGTH AND 90 ksi TENSILE STRENGTH OR CORROSION RESISTANT COATED CARBON STEEL ITW/BUILDEX TEK SCREWS AND SHALL COMPLY W/ FLORIDA BUILDING CODE SECTION 2411.3.3.4. ALL ALUMINUM POP RIVETS TO BE 5052 ALUMINUM ALLOY WITH ALUMINUM MANDREL.
5. BOLTS TO BE ASTM A-307 GALVANIZED STEEL, OR AISI 304 OR 316 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:

- 1/4" Ø TAPCON W/ ADVANCED THREADFORM TECHNOLOGY, AS MANUFACTURED BY I.T.W. BUILDDEX, INC. TO MIN. f'c=3192 psi.
- 1/4" Ø x 3/4" SOLID SET, AS DISTRIBUTED BY ALL POINT SOLID SET ANCHORS TO MIN. f'c=3000 psi.
- 1/4" Ø CRETE-FLEX, AS MANUFACTURED BY ELCO CONSTRUCTION PRODUCTS TO MIN. f'c=3350 psi.

NOTES:

- A.1) MINIMUM EMBEDMENT OF 1/4" Ø TAPCON ANCHORS OR 1/4" Ø CRETE-FLEX INTO CONCRETE IS 1 3/4". MINIMUM EDGE DISTANCE (E.D.) SHALL BE AS PER SHEET 13.
- A.2) 3/4" SOLID SET ANCHORS SHALL BE ENTIRELY EMBEDDED (7/8") INTO THE POURED CONCRETE. NO EMBEDMENT INTO STUCCO SHALL BE PERMITTED. 1/4" Ø-20 S.S SCREWS USED SHALL BE 1 1/2" LONG MINIMUM SHOULD STUCCO EXIST.
- A.3) IN CASE THAT PRECAST STONE, PRECAST CONCRETE PANELS, OR PAVERS BE FOUND ON THE EXISTING WALL 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.

- 1/4" Ø TAPCON W/ ADVANCED THREADFORM TECHNOLOGY, AS MANUFACTURED BY I.T.W. BUILDDEX, INC.
- 1/4" Ø x 3/4" SOLID SET, AS DISTRIBUTED BY ALL POINT SOLID SET ANCHORS.
- 1/4" Ø CRETE-FLEX, AS MANUFACTURED BY ELCO CONSTRUCTION PRODUCTS.

NOTES:

- B.1) MINIMUM EMBEDMENT OF 1/4" Ø TAPCON ANCHORS OR 1/4" Ø CRETE-FLEX INTO CONCRETE BLOCK UNIT IS 1 1/4". MINIMUM EDGE DISTANCE (E.D.) SHALL BE AS PER SHEET 13.
- B.2) 3/4" SOLID SET ANCHORS SHALL BE ENTIRELY EMBEDDED (7/8") INTO THE CONCRETE BLOCK UNIT. NO EMBEDMENT INTO STUCCO SHALL BE PERMITTED. 1/4" Ø-20 S.S SCREWS 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 & B.2 ABOVE.

(C) TO EXISTING WOOD FRAME BUILDING: G=0.46 MIN.

- 1/4" Ø TAPCON W/ ADVANCED THREADFORM TECHNOLOGY, OR 1/4" Ø CRETE-FLEX, AS MANUFACTURED BY ITW/BUILDDEX, INC & ELCO CONSTRUCTION PRODUCTS, RESPECTIVELY, OR # 14 NDS WOOD SCREWS OR 1/4" Ø NDS LAG SCREWS.

NOTES:

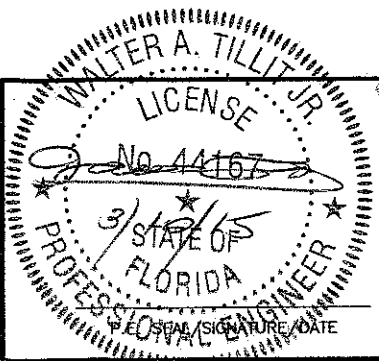
- C.1) MINIMUM THREADED PENETRATION OF 1/4" Ø TAPCON OR 1/4" Ø CRETE-FLEX OR #14 NDS WOOD SCREWS OR 1/4" Ø NDS LAG SCREWS INTO THE WOOD FRAME UNIT SHALL BE 1 1/2" FOR C1 THRU C4 AND C6 THRU C8 CONNECTION TYPE, AND 2" FOR C5, OR AS INDICATED ON WOOD SECTIONS ON SHEETS 10 THRU 12. NO THREADED PENETRATION INTO WALL FINISH SHALL BE CONSIDERED AS PART OF THE REQUIRED THREADED PENETRATION.
- C.2) MINIMUM EDGE DISTANCE OF 1/4" Ø TAPCON OR 1/4" Ø CRETE-FLEX OR #14 NDS WOOD SCREWS OR 1/4" Ø NDS LAG SCREWS INTO WOOD SHALL BE AS SHOWN ON SHEETS 10 THRU 12.
- C.3) IN CASE THAT PRECAST STONE, PRECAST CONCRETE OR BRICK PANELS, VENEER OR PAVERS BE FOUND ON THE EXISTING WALL, ANCHORS SHALL BE LONG ENOUGH TO REACH THE MAIN SUBSTRATE BEHIND SUCH PANELS. MINIMUM THREADED PENETRATION SHALL BE AS INDICATED ON NOTE C.1 ABOVE.
- (D) TO EXISTING STEEL STRUCTURE: MIN. 12 GAGE, FY=33 KSI (MIN.) MATERIAL.
- 1/4" Ø ITW BUILDDEX TEK SCREWS, W/ FULL THREAD PENETRATION.

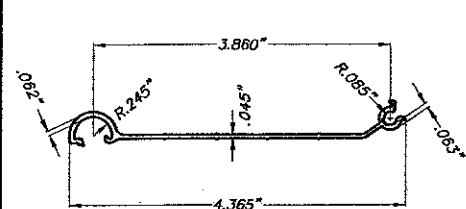
NOTES:

- D.1) MINIMUM EDGE DISTANCE OF ITW BUILDDEX TEK SCREW 1".
7. ANCHORS SHALL BE INSTALLED FOLLOWING ALL OF THE RECOMMENDATIONS AND SPECIFICATIONS OF THE ANCHOR MANUFACTURER.
8. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE SOUNDNESS OF THE STRUCTURE WHERE PRODUCT IS TO BE ATTACHED TO INSURE PROPER ANCHORAGE. THIS SHUTTER SHALL ONLY BE ATTACHED TO CONCRETE, BLOCK OR WOOD FRAME BUILDINGS.
9. EACH UNIT MUST BEAR PERMANENT LABEL IN A VISIBLE PLACE WITH WARNING NOTE: DURING PERIODS OF HURRICANE WARNINGS HOME OWNER, TENANT, OR OTHERS, MUST PROPERLY CLOSE ALL CENTERPIECES AND ENGAGE OR LOCK ALL LOCKS.
10. PRODUCT MANUFACTURER'S LABEL SHALL BE LOCATED ON A READILY VISIBLE LOCATION AT PRODUCT IN ACCORDANCE WITH SECTION 1710.8.3 OF THE FLORIDA BUILDING CODE. ONE LABEL SHALL BE PLACED FOR EVERY OPENING. LABELING TO COMPLY WITH SECTION 1710.8.2 OF THE FLORIDA BUILDING CODE.
11. FOLDING IMPACT PROTECTIVE SYSTEM'S INSTALLATION SHALL COMPLY WITH SPECS INDICATED IN THIS DRAWING PLUS ANY BUILDING AND ZONING REGULATIONS PROVIDED BY THE JURISDICTION WHERE PERMIT IS APPLIED TO.
12. (A) THIS PRODUCT EVALUATION DOCUMENT (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) CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND INSTALLATION INCLUDING LIFE SAFETY OF THIS PRODUCT BASED ON THIS PRODUCT EVALUATION DOCUMENT PROVIDED HE/SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED ON THIS DOCUMENT. CONSTRUCTION SAFETY AT SITE IS THE CONTRACTOR'S RESPONSIBILITY.
- (C) THIS PRODUCT EVALUATION DOCUMENT WILL BE CONSIDERED INVALID IF MODIFIED.
- (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. ENGINEER OF RECORD, ACTING AS DELEGATED ENGINEER TO THE P.E.D. ENGINEER, SHALL SUBMIT TO THIS 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 THAT PREPARED IT.

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

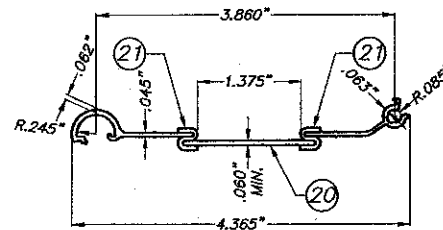
FLORIDA BUILDING CODE (High & Non High Velocity Hurricane Zone)

	 © 2015 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 EB-0006719 WALTER A. TILLIT JR., P.E. FLORIDA Lic. # 44167	TITAN II FOLDING IMPACT PROTECTIVE SYSTEM			DRAWN BY: A.G./M.L.
		FOLDING SHUTTER CORP.			03/10/15 DATE
7089 HEMSTREET PLACE WEST PALM BEACH, FL 33413 PH: 1800-643-6371 www.foldingshutters.com			15-014 DRAWING No		
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-080	03/10/15	3		
2			4		
SHEET 1 OF 13					



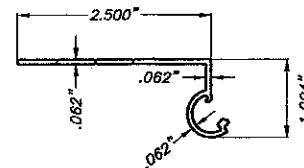
① **SLAT**

6063-T6 ALLOY
(TO BE USED FOR ALL INSTALLATIONS,
MAY INCLUDE PERFORATIONS AS PER
DETAIL ON SHEET 3)



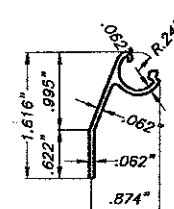
①A **SLAT WINDOW**

6063-T6 ALLOY
(TO BE USED ONLY FOR INSTALLATIONS
30 FEET OR HIGHER ABOVE GRADE
MEASURED AT BOTTOM OF OPENING
SEE COMPONENTS 20, 21 & 22 ON
SHEET 3.)



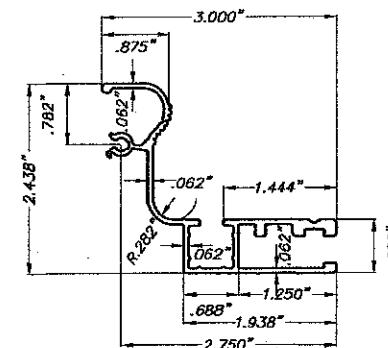
② **L-END**

6063-T5 ALLOY



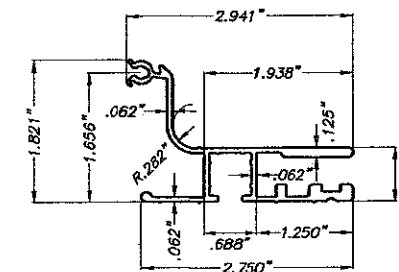
③ **FLAT END**

6063-T5 ALLOY



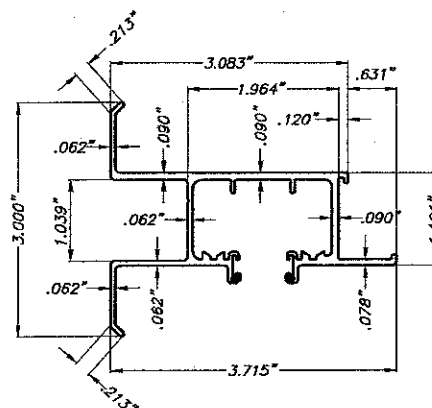
④ **INTERIOR CENTERPIECE**

6063-T6 ALLOY



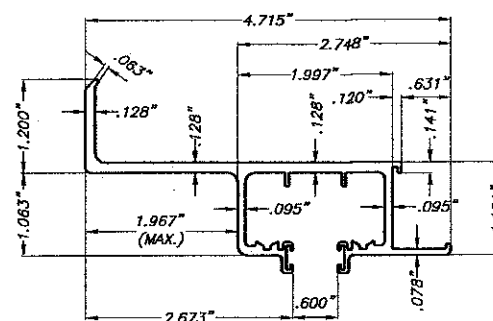
⑤ **EXTERIOR CENTERPIECE**

6063-T6 ALLOY



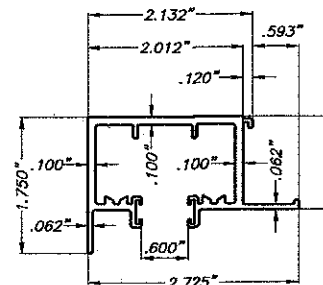
⑥ **WALL HEADER**

6063-T5 ALLOY



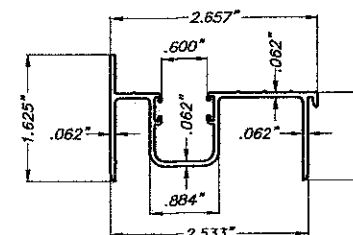
⑦ **2" MAX. B.O. SILL/HEAD TRACK**

6063-T6 ALLOY



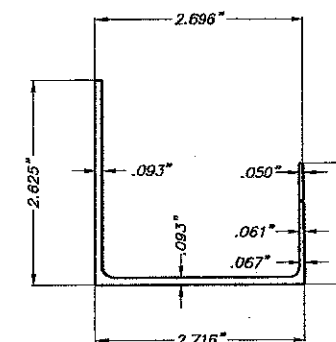
⑧ **CEILING HEADER**

6063-T5 ALLOY



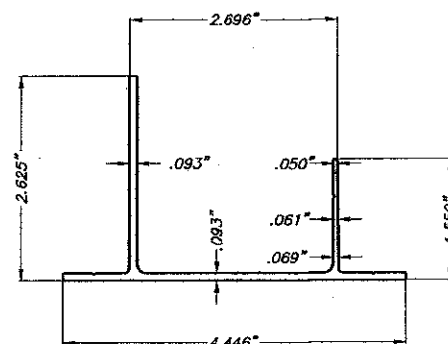
⑨ **BOTTOM SILL TRACK**

6063-T6 ALLOY



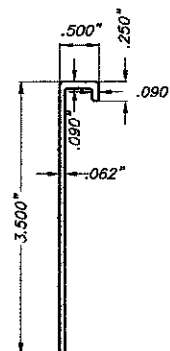
⑩ **BOTTOM TRACK ADAPTER**

6063-T6 ALLOY



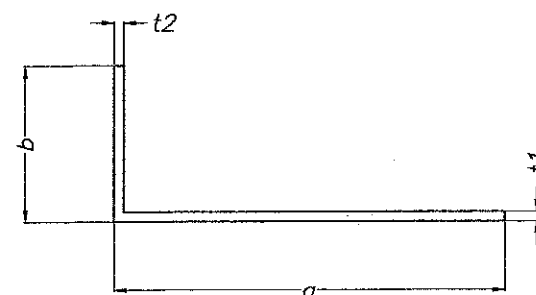
⑪ **ALT. BOTTOM TRACK ADAPTER**

6063-T6 ALLOY



⑫ **BOTTOM RAIN GUARD**

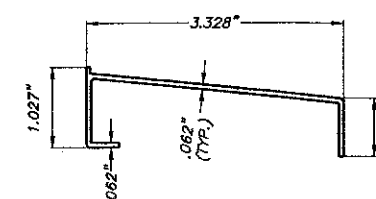
6063-T6 ALLOY



⑬⑬⑬ **ALUMINUM ANGLES**

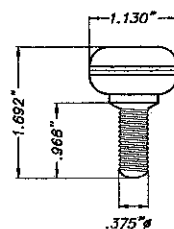
6063-T6 ALLOY

COMPONENT	a	b	t1	t2
⑬	2"	5" MAX.	0.125"	0.125"
⑬	2"	4" MAX.	0.25"	0.25"
⑬	1"	2" MAX.	0.062"	0.062"

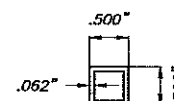


⑭ **RAIN HOOD**

6063-T5 ALLOY

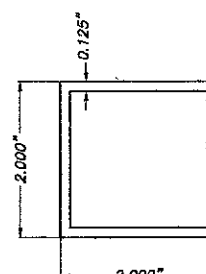


⑮ **3/8"Ø-16 ACETAL THUMBSCREWS FOR ④ & ⑤**



⑯ **LOCKING TUBES AT CENTERPIECE**

6063-T6 ALLOY
MIN. 28 1/2" LONG

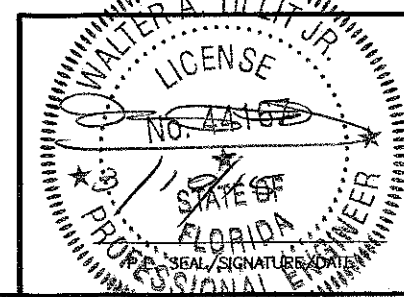


⑰ **CORNER POST**

6063-T6 ALLOY

COMPONENTS

SCALE 3/8" = 1"

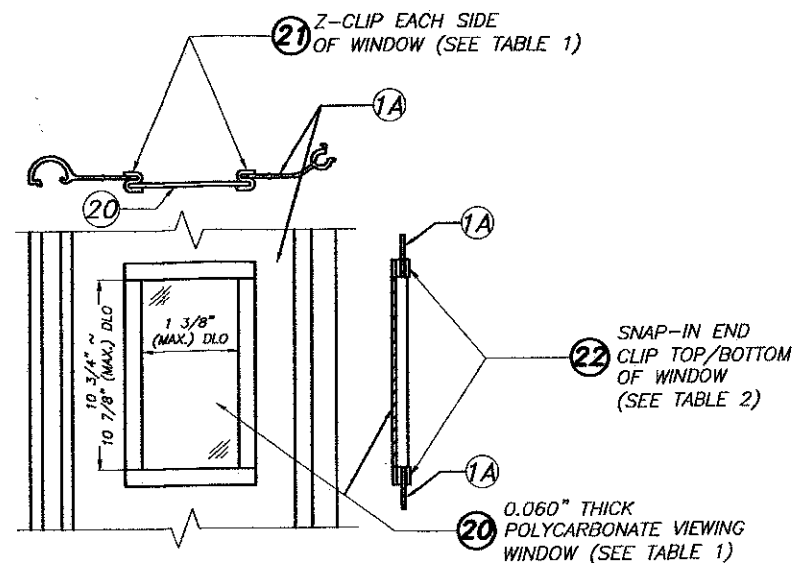
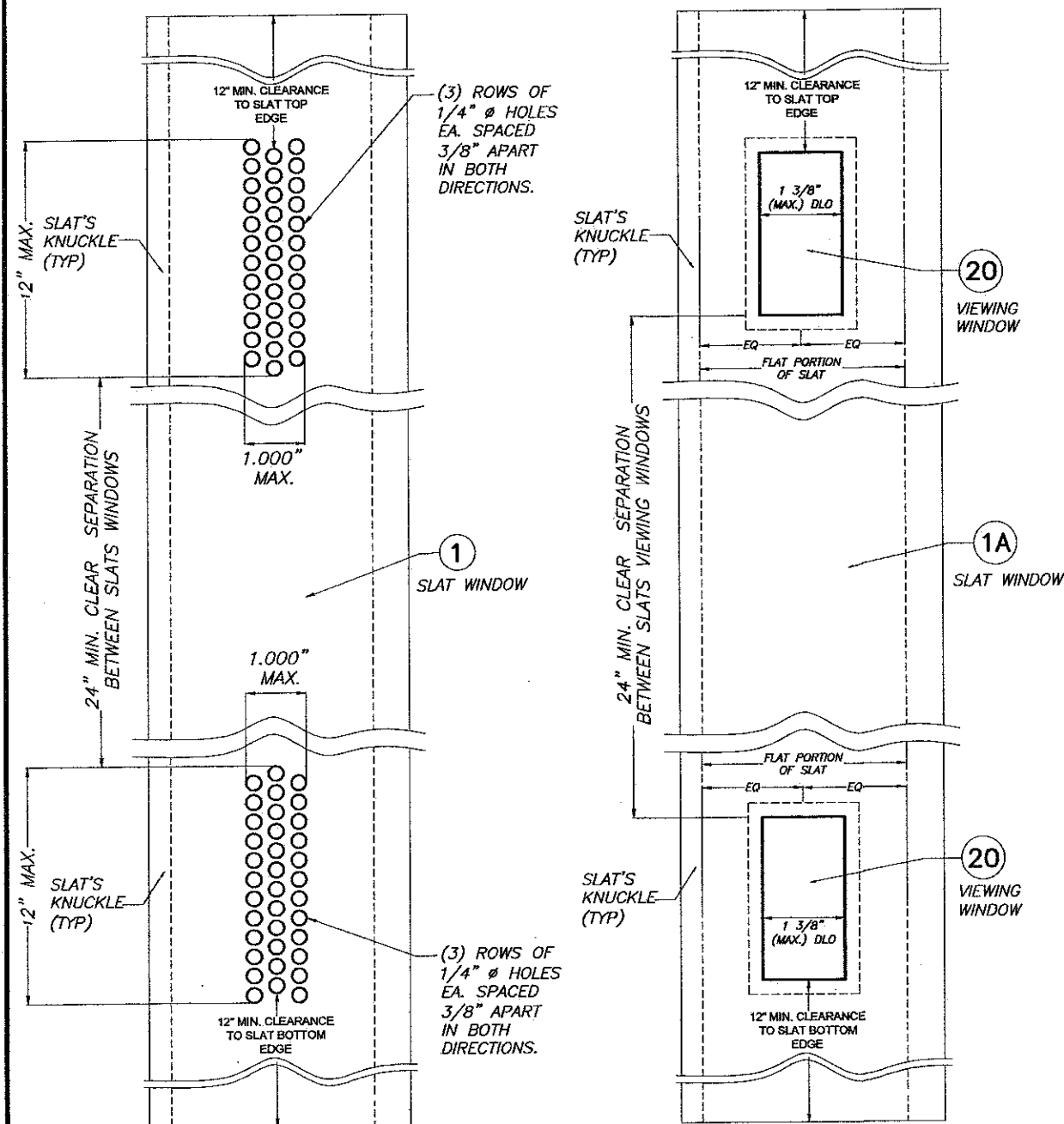


© 2015 TILTECO INC.

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
EB-0006719
WALTER A. TILLIT Jr., P.E.
FLORIDA Lic. # 44167

FLORIDA BUILDING CODE (High & Non High Velocity Hurricane Zone)

TITAN II FOLDING IMPACT PROTECTIVE SYSTEM					DRAWN BY: A.G./M.L.	
FOLDING SHUTTER CORP.					03/10/15 DATE	
7089 HEMSTREET PLACE WEST PALM BEACH, FL 33413 PH: 1800-643-6371 www.foldingshutters.com					15-014 DRAWING No	
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE	SHEET 2 OF 13
1	OLD 13-080	03/10/15	3			
2			4			



NOTES:
 - MAX. (2) WINDOWS MAY BE IN ONE SLAT SPACED A MINIMUM OF 24" APART, WITH 12" MIN. FROM ENDS OF SLAT TOP & BOTTOM.
 - 1A SLAT MUST NEVER BE INSTALLED ADJACENT TO CENTERPIECES (4) OR (5), NOR AT CORNERS OF PRODUCT.

1A SLAT WINDOW DETAIL (ELEVATION)



21 Z-CLIP 22 SNAP-IN END CLIP

NOTES:
 - TO BE USED AS AN OPTION FOR ALL INSTALLATIONS UNDER LARGE MISSILE. MAY INCLUDE PERFORATIONS AS PER THIS DETAIL.
 - MAX. (2) WINDOWS MAY BE IN ONE SLAT SPACED MIN. 24" APART (MAX. EVERY 10 SLATS).

1A SLAT WINDOW ELEVATION

TYPICAL 1A SLAT WINDOW DETAILS W/ 20 VIEWING WINDOW & 21, 22 CLIPS (SMALL MISSILE IMPACT)

TYPICAL ALTERNATE PERFORATED 1 SLAT WINDOW ELEVATION (LARGE MISSILE IMPACT)

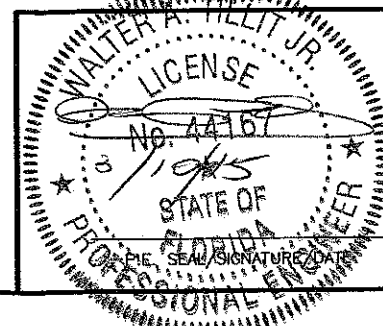
TABLE 1: SOURCES FOR (20) & (21)

TYPICAL PROPERTIES	STANDARD REFERENCE	OPTIONS	
		BAYER MATERIAL / SCIENCE LLC.MAKROLON 3103	SABIC INNOVATIVE PLASTIC LEXAN 103 RESIN
PHYSICAL:			
SPECIFIC GRAVITY	ASTM D792	0.043 lb/in ³	0.043 lb/in ³
MECHANICAL:			
TENSILE YIELD STRENGTH	ASTM D638	9,400 p.s.i.	9,500 p.s.i.
FLEXURAL STRENGTH AT YIELD	ASTM D790	12,500 p.s.i.	13,400 p.s.i.
FLEXURAL MODULUS	ASTM D790	340,000 p.s.i.	345,000 p.s.i.
IMPACT:			
NOTCHED IZOD	ASTM D256	18 FT-lb/in	17 FT-lb/in
FIRE BURNING CHARACTERISTICS:			
SMOKE DENSITY	ASTM D2843	47.2 %	64.5 % MAX
RATE OF BURNING	ASTM D635	C-1 CLASS	C-1 CLASS
SELF IGNITION	ASTM D1929	1040 °F	980 °F
WEATHERING:			
TENSILE STRENGTH AFTER WEATHERING	ASTM G155		
TENSILE STRESS BEFORE WEATHERING	ASTM G38	9302 p.s.i.	8840 p.s.i.
	ASTM G38	8461 p.s.i.	8880 p.s.i.

TABLE 2: SOURCES FOR (22)

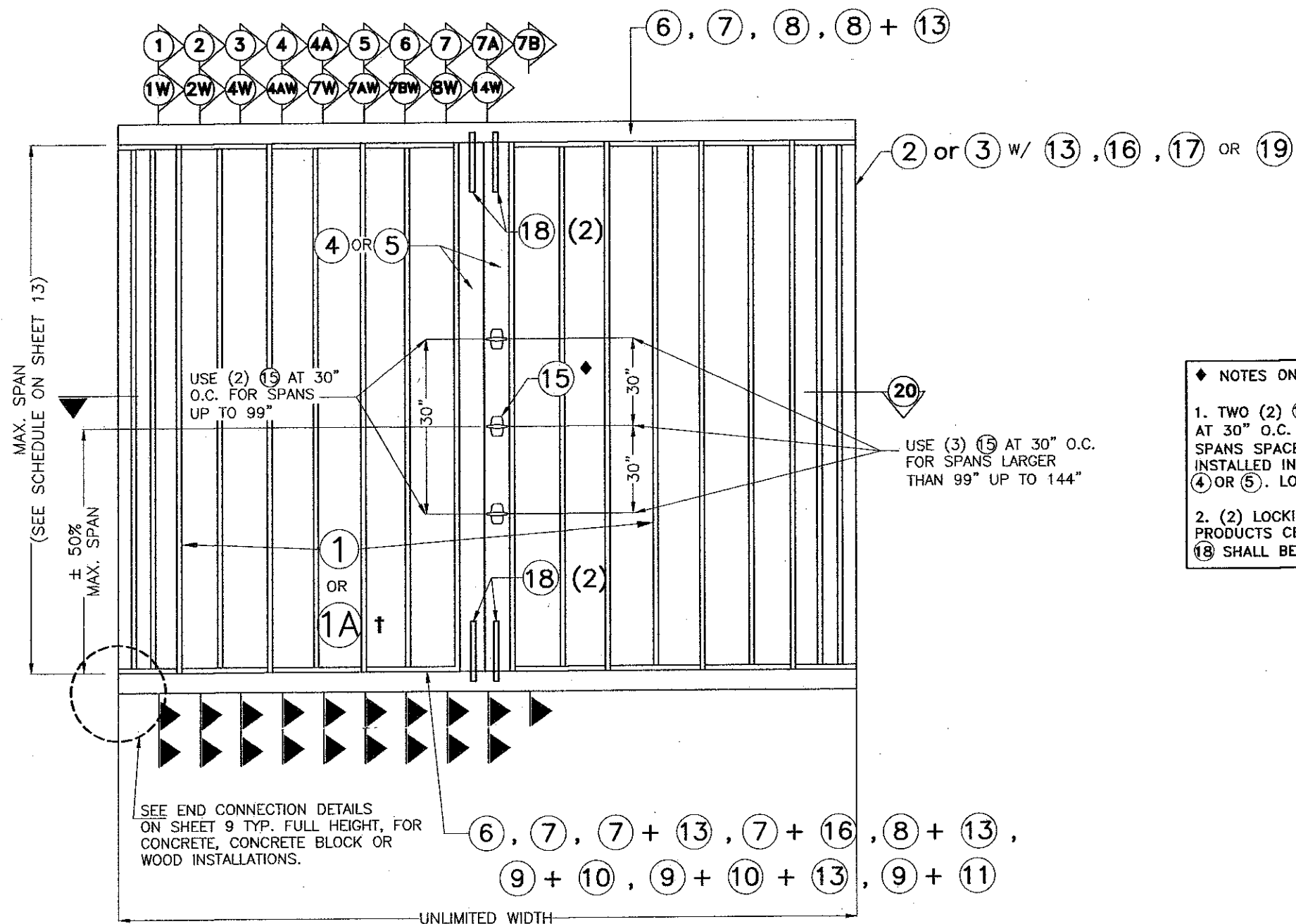
TYPICAL PROPERTIES	STANDARD REFERENCE	MASTER TOOL COMPANY BLACK NYLON PART # 20519A/B
PHYSICAL:		
SPECIFIC GRAVITY	ASTM D792	0.042 lb/in ³
MECHANICAL:		
TENSILE YIELD STRENGTH	ASTM D638	11,500 p.s.i.
FLEXURAL STRENGTH AT YIELD	ASTM D790	15,000 p.s.i.
FLEXURAL MODULUS	ASTM D790	450,000 p.s.i.
IMPACT:		
NOTCHED IZOD	ASTM D256	0.6 FT-lb/in
THERMAL PROPERTIES:		
COEFFICIENT OF THERMAL EXPANSION	ASTM D696	5.5 x 10 ⁻⁵ in/in-°F
FLAMMABILITY	UL 94	V-2
MELTING TEMPERATURE	ASTM D3418	500 °F

FLORIDA BUILDING CODE (High & Non High Velocity Hurricane Zone)



© 2015 TILTECO INC.
TILTECO INC.
 TILLIT TESTING & ENGINEERING COMPANY
 6355 N.W. 36th. St., Ste. 305, VIRGINIA GARDENS, FL 33186
 Phone : (305)871-1530 . Fax : (305)871-1531
 e-mail: tilteco@aol.com
 EB-0006719
 WALTER A. TILLIT Jr. P.E.
 FLORIDA Lic. # 44167

TITAN II FOLDING IMPACT PROTECTIVE SYSTEM						DRAWN BY: A.G./M.L.	
FOLDING SHUTTER CORP.						03/10/15 DATE	
7089 HEMSTREET PLACE WEST PALM BEACH, FL 33413 PH: 1800-643-6371 www.foldingshutters.com						15-014 DRAWING No	
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE	SHEET 3 OF 13	
1	OLD 15-080	03/10/15	3				
2			4				



- ◆ NOTES ON 15 & LOCKING TUBES 18 AT 4 & 5.
1. TWO (2) 15 SHALL ALWAYS BE USED AT PRODUCT'S MIDSPAN SPACED AT 30" O.C. FOR SPANS UP TO 99". USE THREE (3) 15 FOR LARGER SPANS SPACED AT 30" O.C. AT MIDSPAN. COMPONENT 15 MAY BE INSTALLED INTERIOR OR EXTERIOR SCREWED TO TAPPED CENTERPIECES 4 OR 5. LOCATION OF 15 SHALL BE AS SHOWN ON TYPICAL ELEVATION.
 2. (2) LOCKING TUBES 18 SHALL ALWAYS BE USED TOP & BOTTOM AT PRODUCTS CENTERPIECES 4 OR 5 AT ALL INSTALLATIONS. LOCKING TUBES 18 SHALL BE SECURED W/ LEVERS AS SHOWN ON SHEET 9.

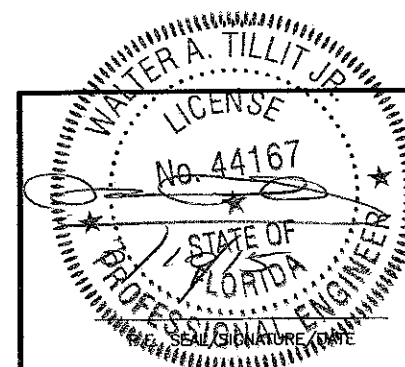
† SEE LIMITATIONS FOR 1A ON SHEET 2

TYPICAL ELEVATION ♣

N. T. S.

- ♣ NOTE:
- SEE SECTIONS 1 THRU 3 ON SHEET 5.
 - SEE SECTIONS 4 THRU 6 ON SHEET 6.
 - SEE SECTIONS 7, 7A & 7B ON SHEET 7.
 - SEE SECTIONS 1W & 2W ON SHEET 10.
 - SEE SECTIONS 4W, 4AW & 7W ON SHEET 11.
 - SEE SECTIONS 7AW, 7BW, 8W & 14W ON SHEET 12.

FLORIDA BUILDING CODE (High & Non High Velocity Hurricane Zone)

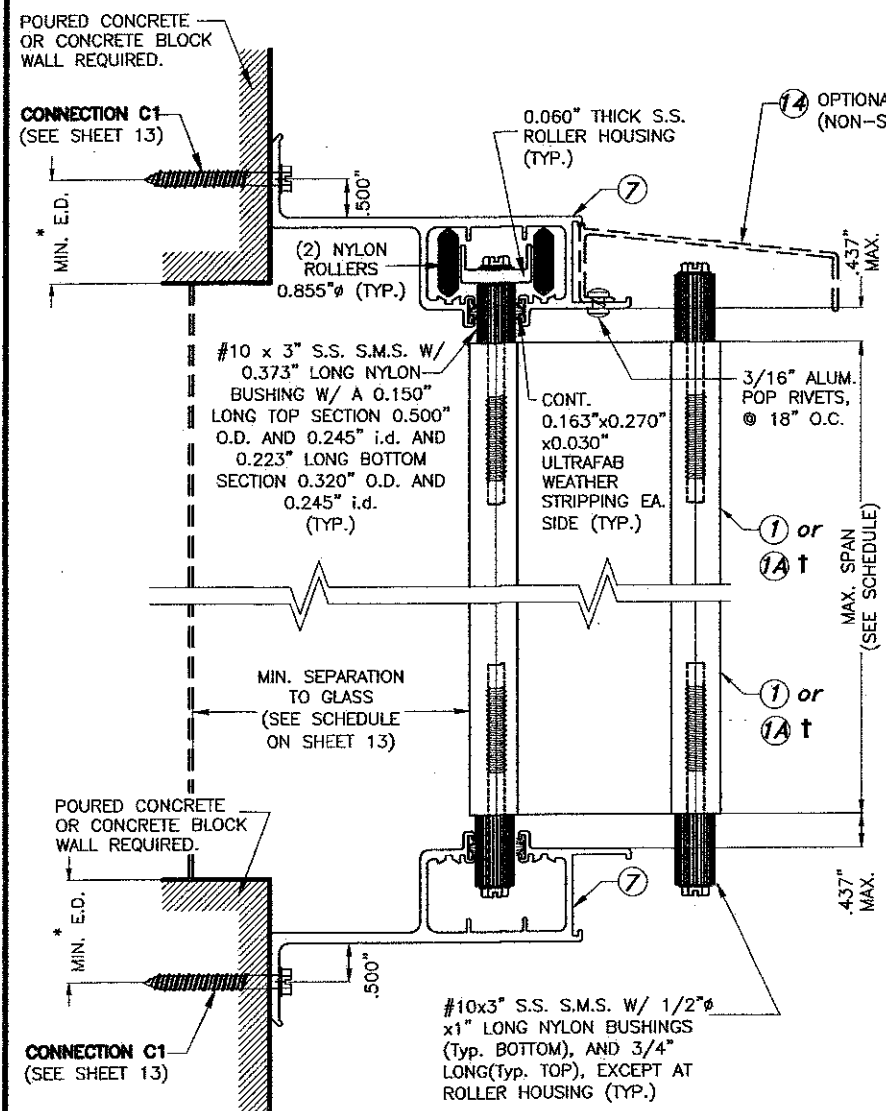


© 2015 TILTECO INC.

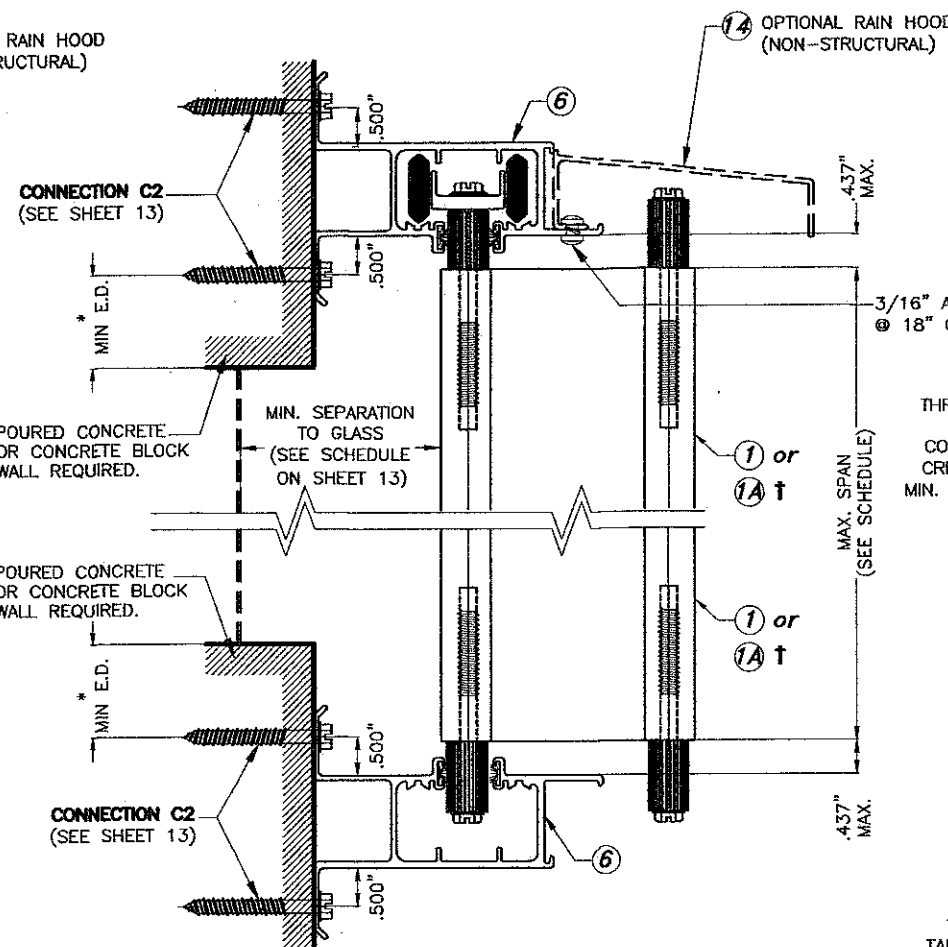
TILTECO INC.

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
EB-0006719
WALTER A. TILLIT Jr. P.E.
FLORIDA Lic. # 44167

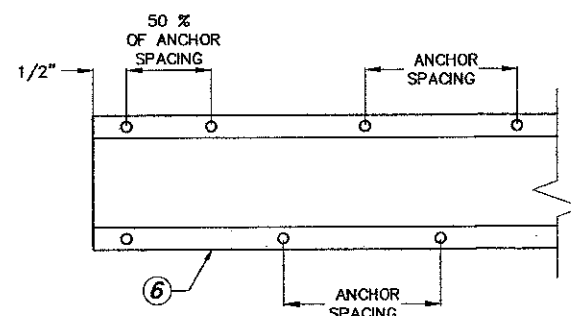
TITAN II FOLDING IMPACT PROTECTIVE SYSTEM						DRAWN BY:
						A.G./M.L.
						03/10/15
						DATE
						15-014
						DRAWING No
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE	SHEET 4 OF 13
1	OLD 13-080	03/10/15	3			
2			4			



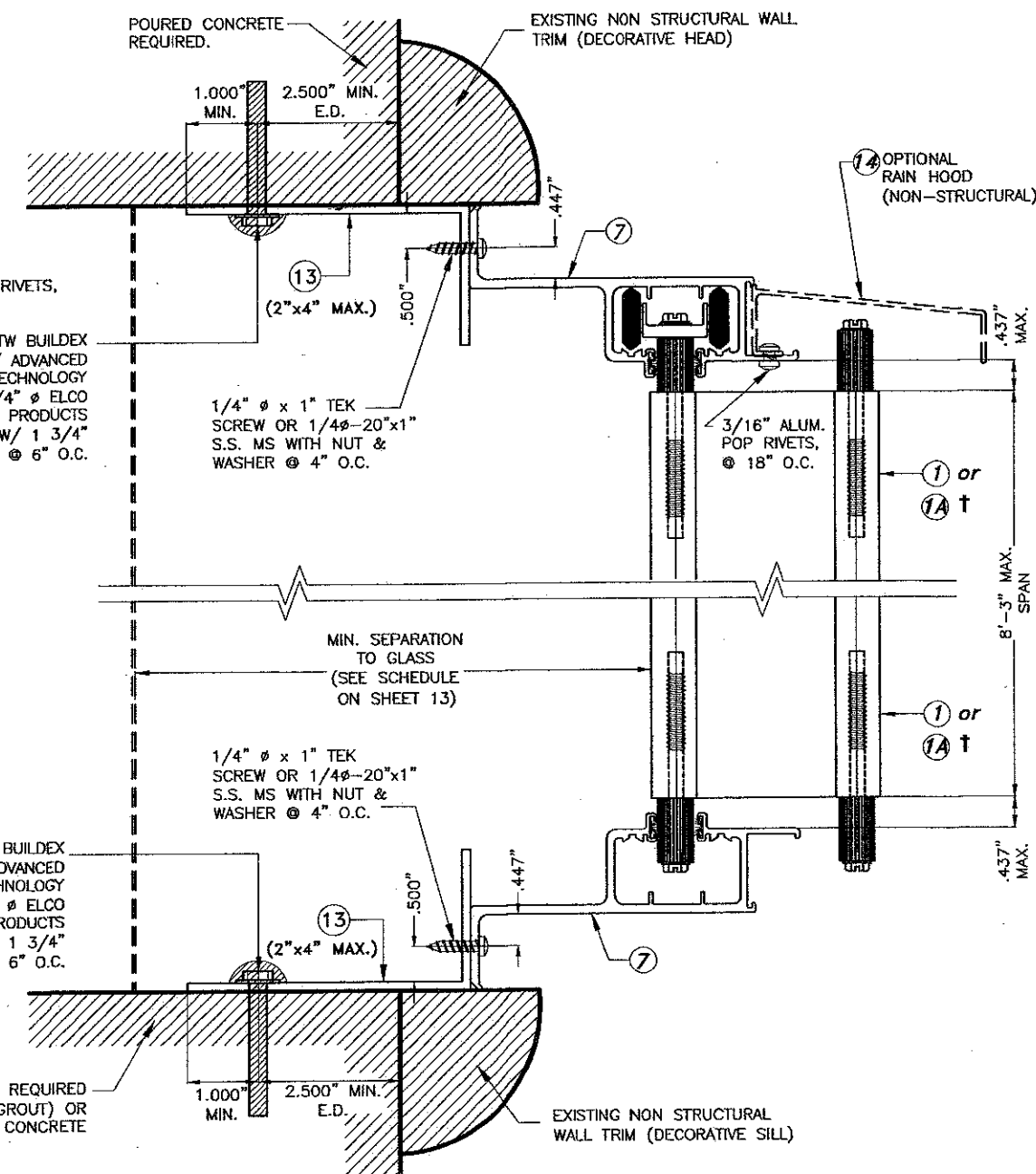
**WALL FACE MOUNTING INSTALLATION
SECTION 1**



**WALL FACE MOUNTING INSTALLATION
SECTION 2**



**STAGGERED ANCHOR SPACING
DETAIL FOR (6)**



**DECORATIVE WALL TRIM TRAPPED
MOUNTING INSTALLATION
SECTION 3**

MAX. A.S.D. DESIGN PRESSURE RATING = +65.0, -90.0 PSF

FLORIDA BUILDING CODE (High & Non High Velocity Hurricane Zone)

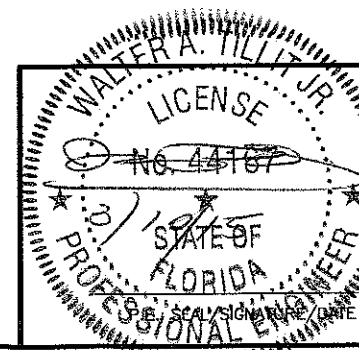
INSTALLATIONS DETAILS INTO CONCRETE & CONCRETE BLOCK

SCALE: N.T.S.

NOTE FOR COMBINATION OF SECTIONS:
1- MOUNTING SECTIONS CAN BE COMBINED
IN ANY WAY TO SUIT ANY INSTALLATION.

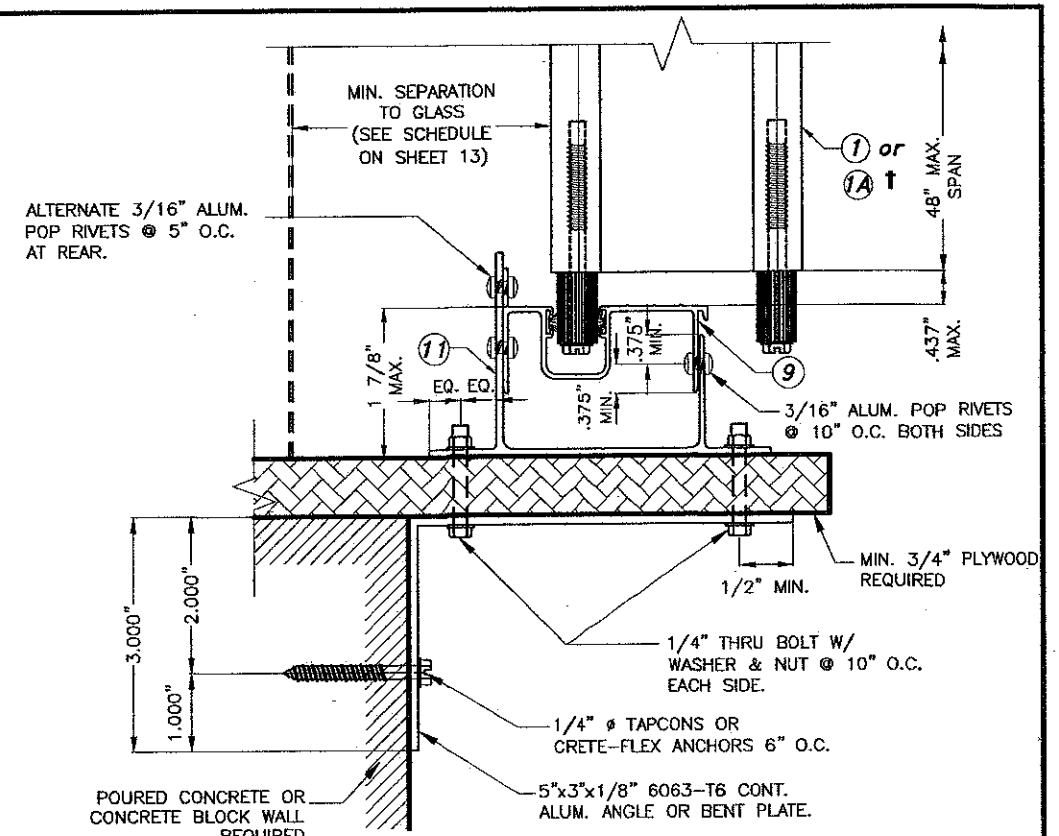
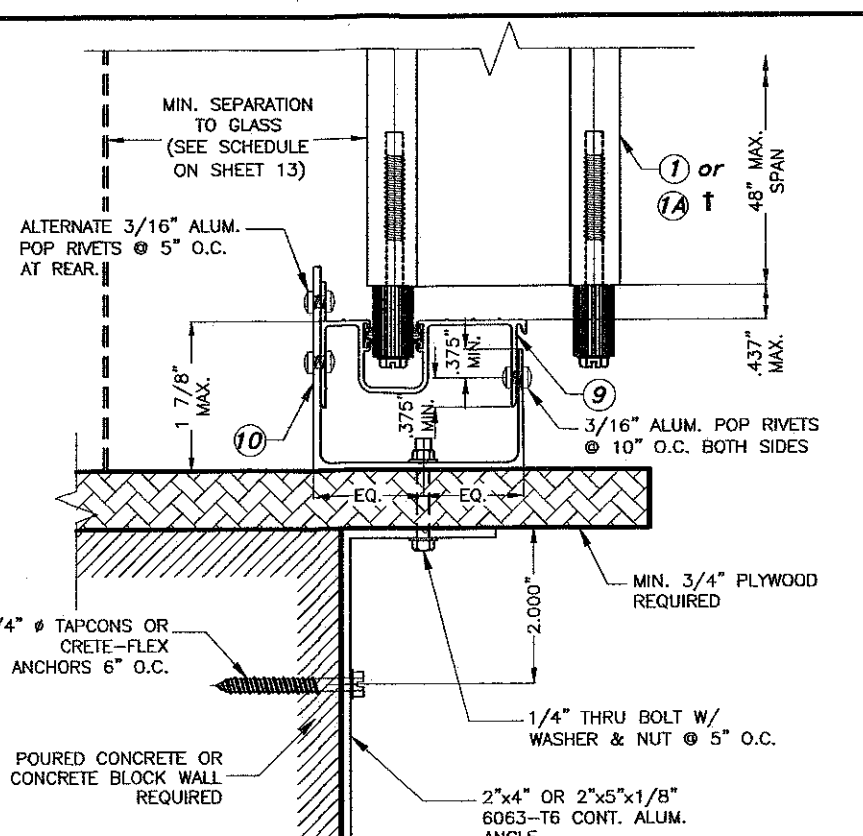
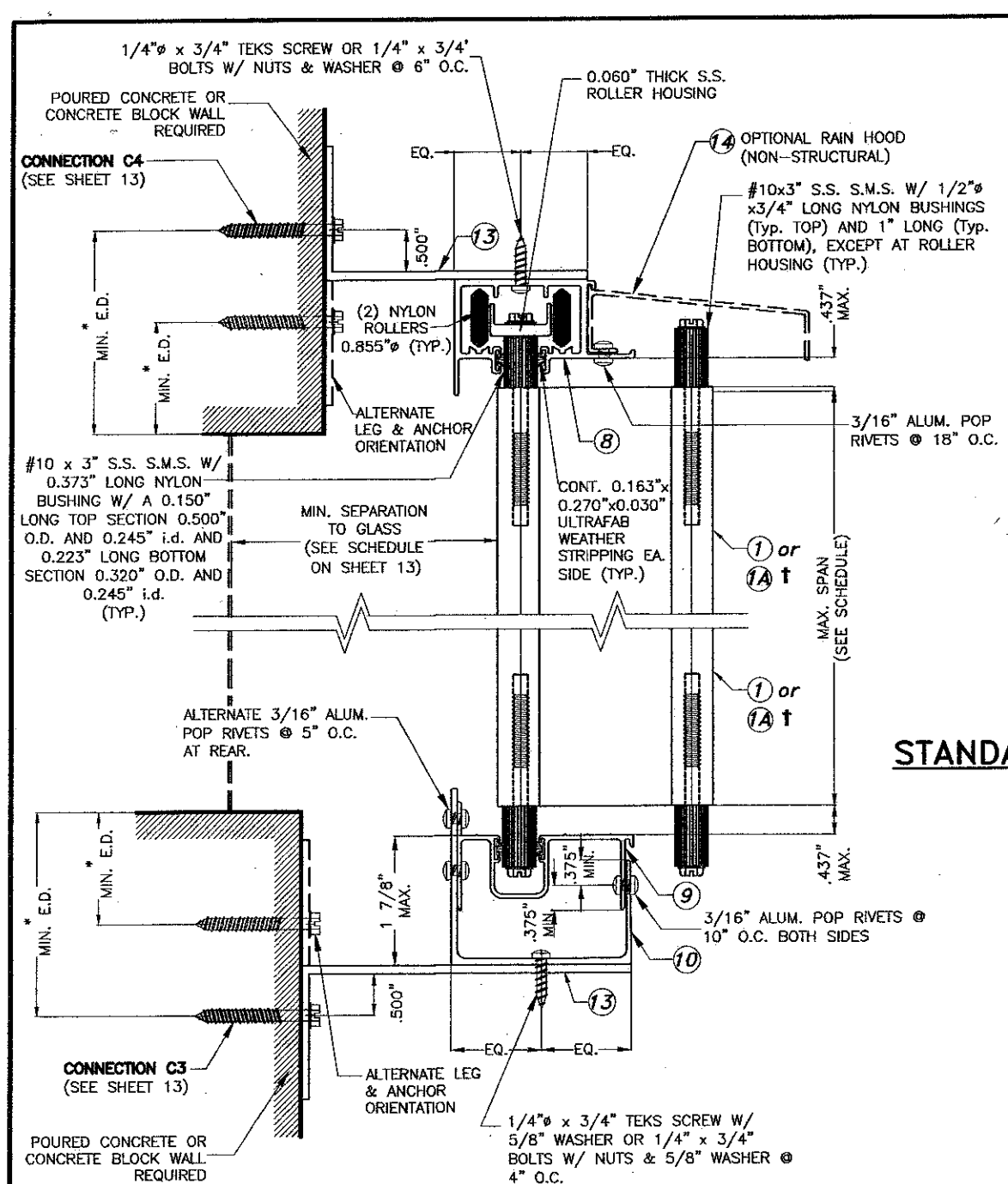
* E.D. = EDGE DISTANCE
(SEE SPECIFICATIONS ON SHEET 13)

† SEE LIMITATIONS FOR (1A) ON SHEET 2



© 2015 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: tiltco@aol.com
EB-0006719
WALTER A. TILLIT Jr. P.E.
FLORIDA Lic. # 44167

TITAN II FOLDING IMPACT PROTECTIVE SYSTEM						DRAWN BY: A.G./M.L.	
FOLDING SHUTTER CORP.						03/10/15 DATE	
7089 HEMSTREET PLACE WEST PALM BEACH, FL 33413 PH: 1800-643-6371 www.foldingshutters.com						15-014 DRAWING No	
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE	SHEET 5 OF 13	
1	OLD 13-080	03/10/15	3				
2			4				



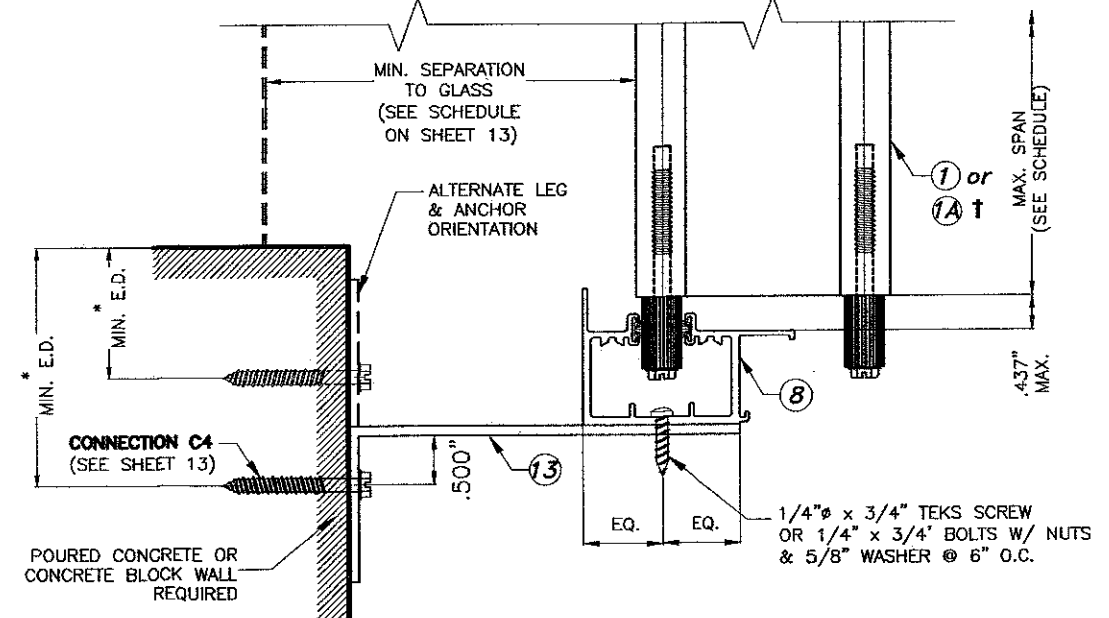
STANDARD COUNTER-TOP MOUNTING INSTALLATION SECTION 5

MAX. A.S.D. DESIGN PRESSURE RATING= +66.0, -66.0 PSF

ALTERNATE COUNTER-TOP MOUNTING INSTALLATION SECTION 6

MAX. A.S.D. DESIGN PRESSURE RATING= +66.0, -66.0 PSF

BUILD-OUT FACE MOUNTING INSTALLATION SECTION 4



BUILD-OUT FACE MOUNTING INSTALLATION SECTION 4A (BOTTOM)

INSTALLATIONS DETAILS INTO CONCRETE & CONCRETE BLOCK

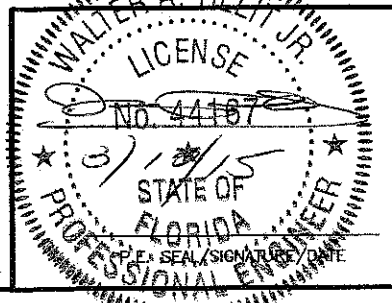
SCALE : N.T.S.

NOTE FOR COMBINATION OF SECTIONS:
1- MOUNTING SECTIONS CAN BE COMBINED
IN ANY WAY TO SUIT ANY INSTALLATION.

* E.D. = EDGE DISTANCE
(SEE SPECIFICATIONS ON SHEET 13)

† SEE LIMITATIONS FOR (1A) ON SHEET 2

FLORIDA BUILDING CODE (High & Non High Velocity Hurricane Zone)

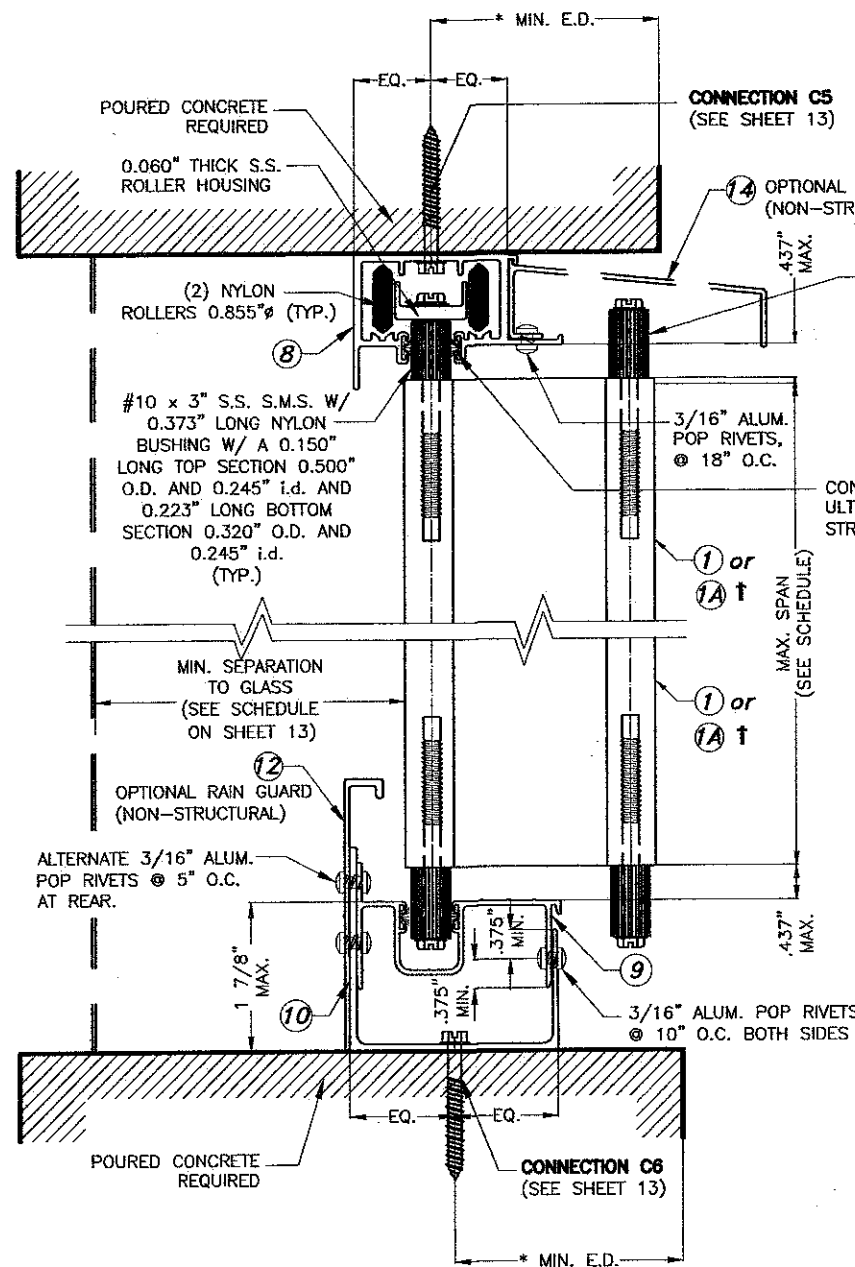


© 2015 TILTECO INC.

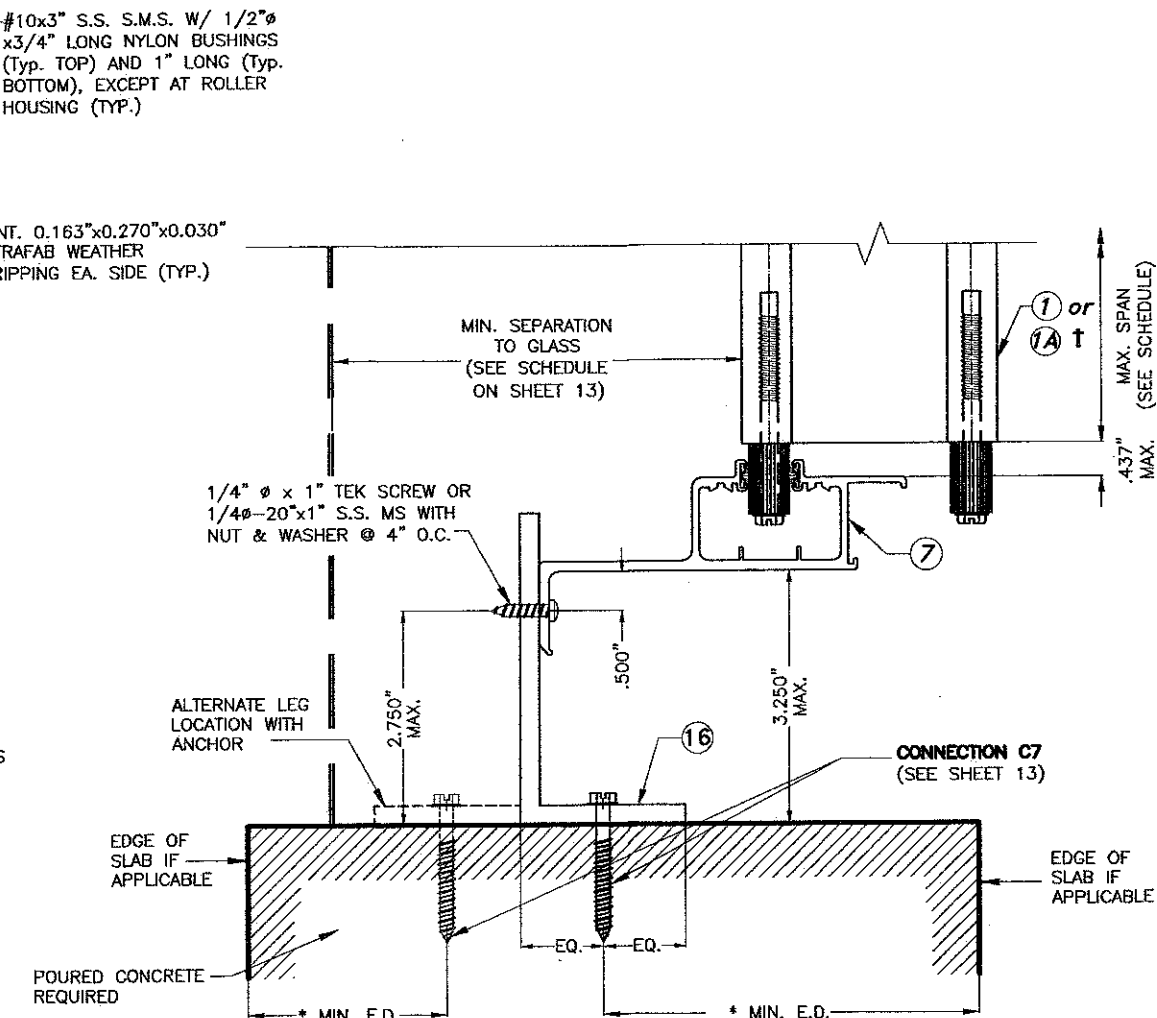
TILTECO INC.

TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33416
Phone : (305)871-1530 . Fax : (305)871-1531
e-mail: tilteco@aol.com
EB-0006719
WALTER A. TILLIT Jr., P.E.
FLORIDA Lic. # 44167

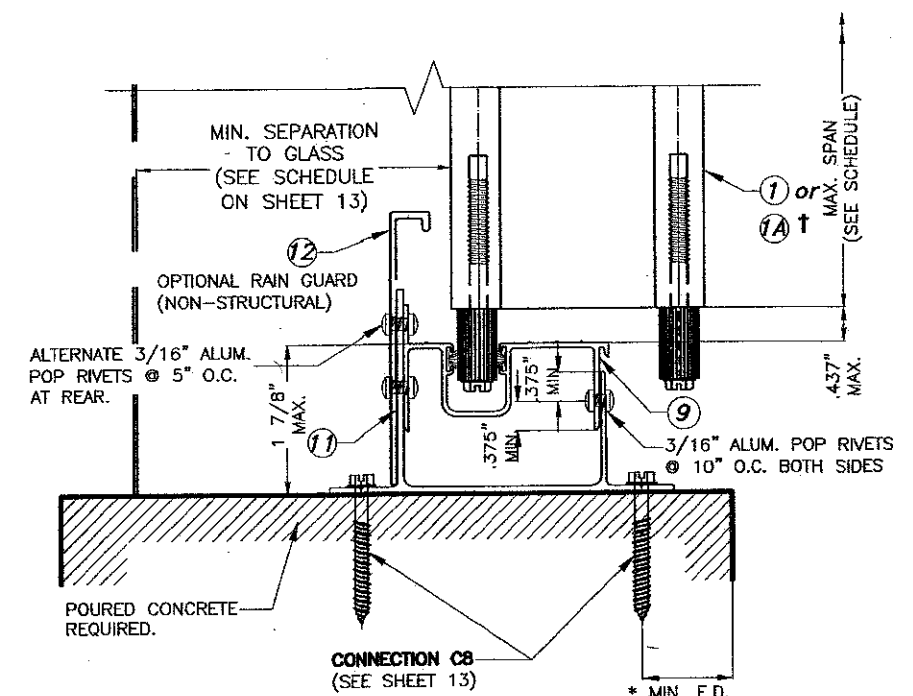
TITAN II FOLDING IMPACT PROTECTIVE SYSTEM						DRAWN BY: A.G./M.L.	
FOLDING SHUTTER CORP.						03/10/15 DATE	
7089 HEMSTREET PLACE WEST PALM BEACH, FL 33413 PH: 1800-643-6371 www.foldingshutters.com						15-014 DRAWING No	
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE	SHEET 6 OF 13	
1	OLD 13-080	03/10/15	3				
2			4				



**TRAPPED MOUNTING INSTALLATION
SECTION 7**



**ALTERNATE TRAPPED MOUNTING
INSTALLATION AT BOTTOM
SECTION 7A**



**ALTERNATE TRAPPED MOUNTING
INSTALLATION AT BOTTOM
SECTION 7B**

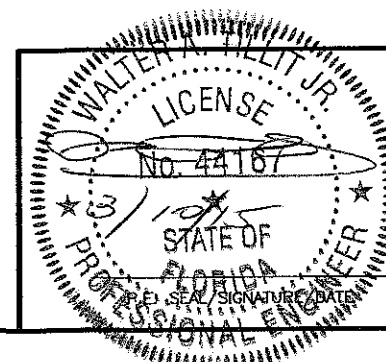
INSTALLATIONS DETAILS INTO CONCRETE & CONCRETE BLOCK

SCALE: N.T.S.

NOTE FOR COMBINATION OF SECTIONS:
1- MOUNTING SECTIONS CAN BE COMBINED
IN ANY WAY TO SUIT ANY INSTALLATION.

† SEE LIMITATIONS FOR ①A ON SHEET 2

* E.D. = EDGE DISTANCE
(SEE SPECIFICATIONS ON SHEET 13)



© 2015 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: tiltco@aol.com
EB-0006719
WALTER A. TILLIT Jr. P.E.
FLORIDA Lic. # 44167

FLORIDA BUILDING CODE (High & Non High Velocity Hurricane Zone)

TITAN II FOLDING IMPACT PROTECTIVE SYSTEM

FOLDING SHUTTER CORP.

7089 HEMSTREET PLACE
WEST PALM BEACH, FL 33413
PH: 1800-643-6371
www.foldingshutters.com

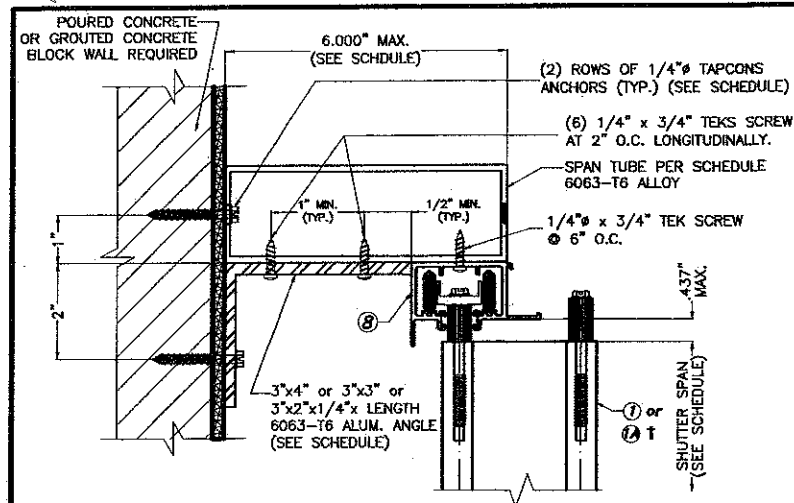
DRAWN BY:
A.G./M.L.

03/10/15
DATE

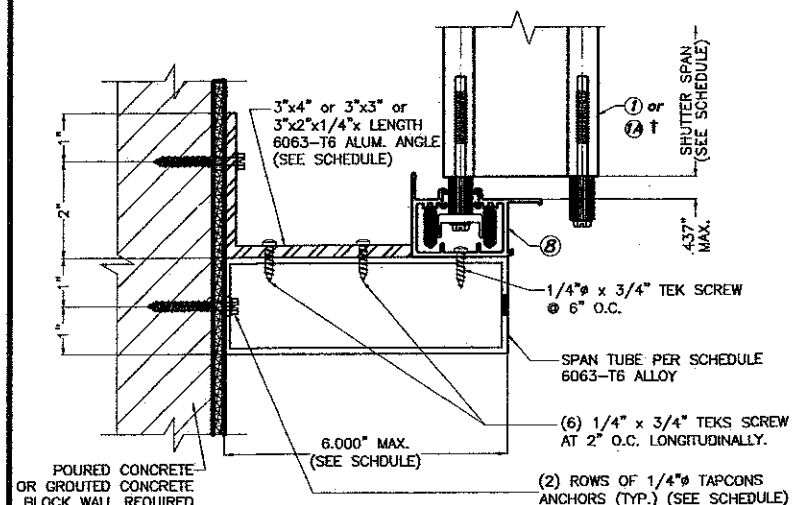
15-014
DRAWING No

REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 15-080	03/10/15	3		
2			4		

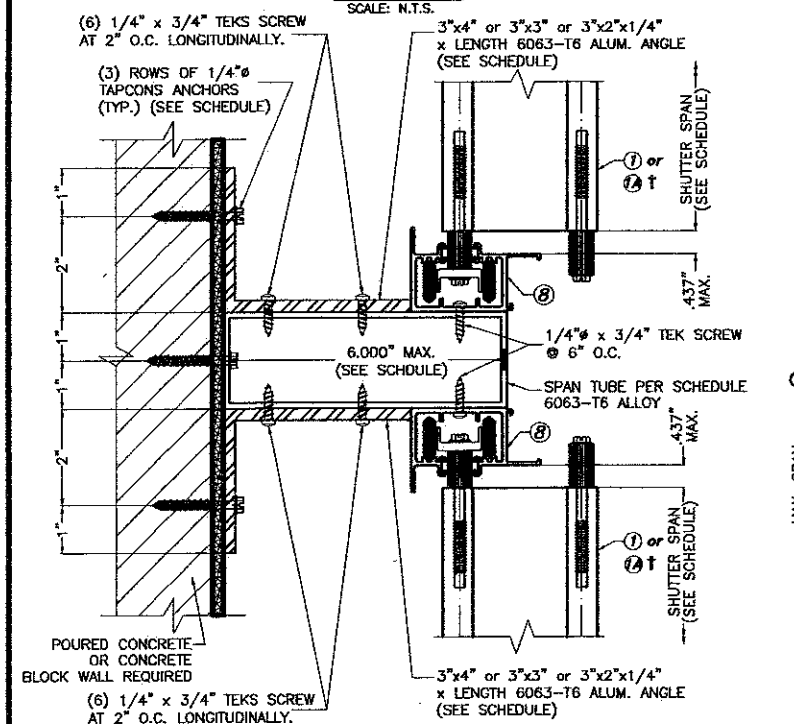
SHEET 7 OF 13



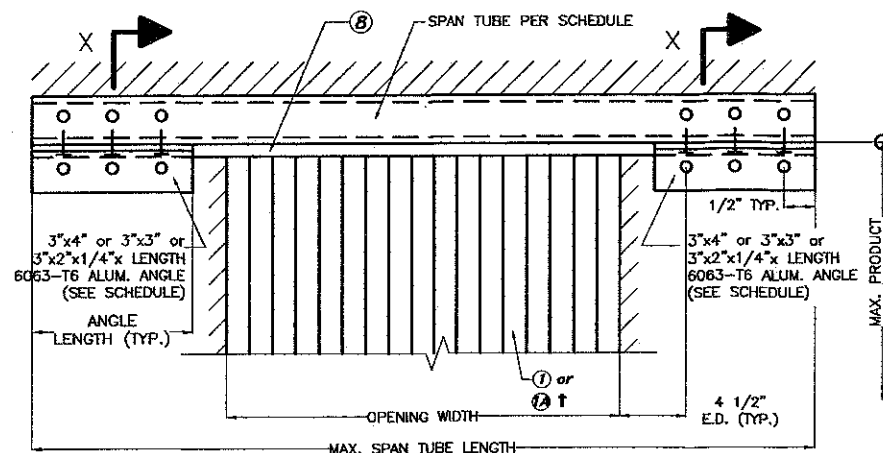
**SPAN TUBE MOUNTING INSTALLATION
SECTION X**
SCALE: N.T.S.



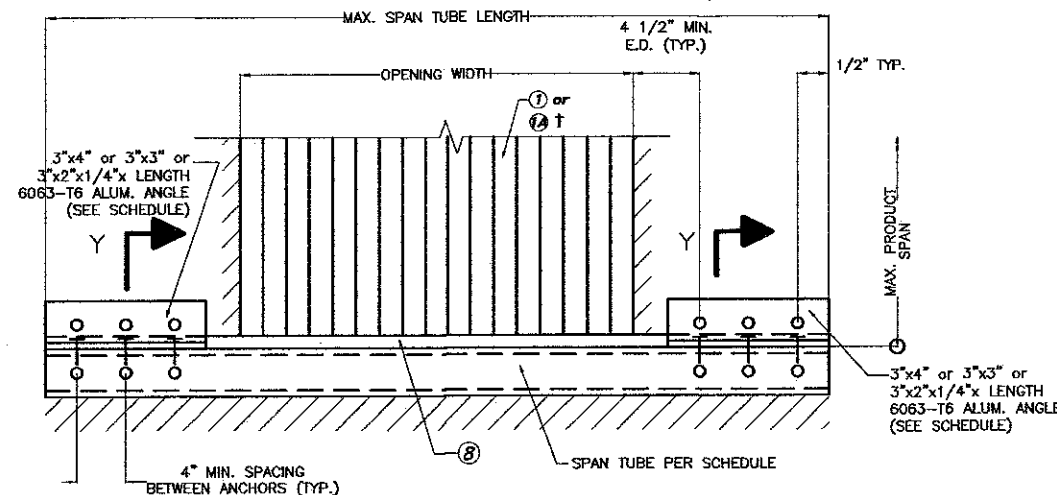
**SPAN TUBE MOUNTING INSTALLATION
SECTION Y**
SCALE: N.T.S.



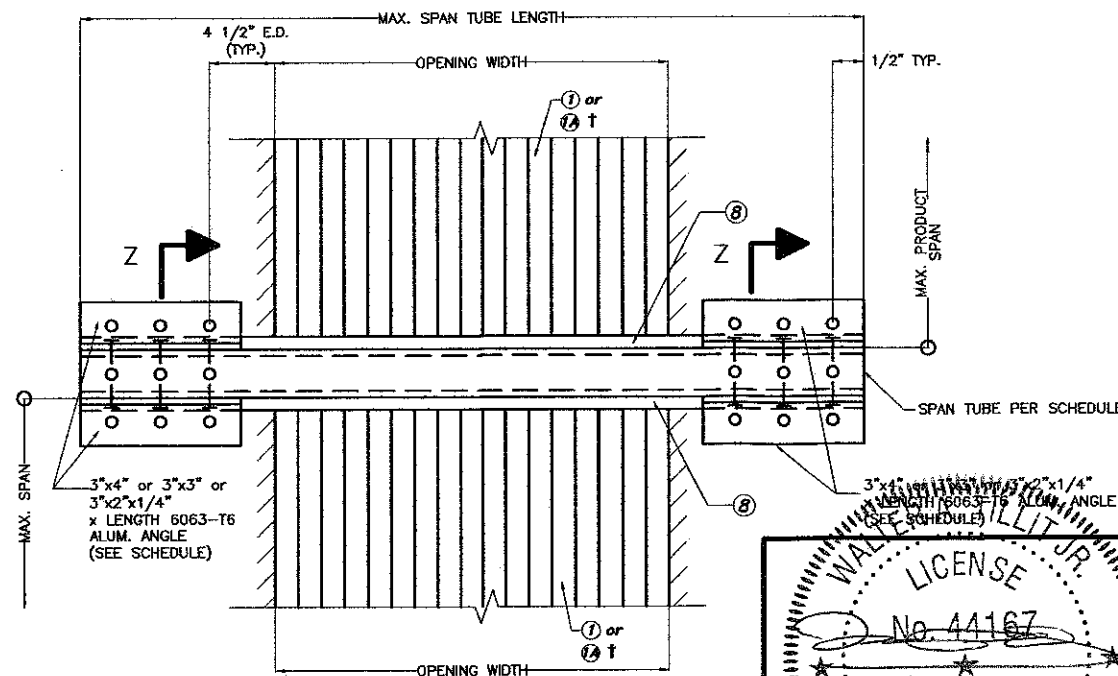
**SPAN TUBE MOUNTING INSTALLATION
SECTION Z**
SCALE: N.T.S.



TYPICAL ELEVATION (TUBE AT TOP)
SCALE: N.T.S.



TYPICAL ELEVATION (TUBE AT BOTTOM)
SCALE: N.T.S.



TYPICAL ELEVATION (TUBE AT MIDHEIGHT)
SCALE: N.T.S.

† SEE LIMITATIONS FOR (1A) ON SHEET 2

TUBE SIZE	MAXIMUM PRODUCT SPAN	ALLOWABLE TUBE SPAN	REQ'D ANGLE LENGTH EA. END	NUMBER OF ANCHORS PER END OF TUBE
		TOP OR BOTTOM TUBE	TOP OR BOTTOM TUBE	TOP OR BOTTOM TUBE
2"x4"x1/8"	60"	106.0"	13	8
	96"	85.0"	17	10
	144"	69.0"	13	8
2"x4"x1/4"	80"	117.0"	17	10
	96"	110.0"	21	12
	144"	91.0"	21	12
2"x5"x1/8"	80"	109.0"	17	10
	96"	100.0"	21	12
	144"	81.0"	17	10
2"x6"x1/8"	80"	124.0"	21	12
	96"	114.0"	21	12
	144"	93.0"	21	12

* VALID ALSO FOR MIDHEIGHT TUBE INSTALLATION ONLY WHEN THE SUMATION OF THE SHUTTERS HEIGHT ABOVE & BELOW DOES NOT EXCEED THE MAX. PRODUCT SPAN SHOWN ON TABLE 1.

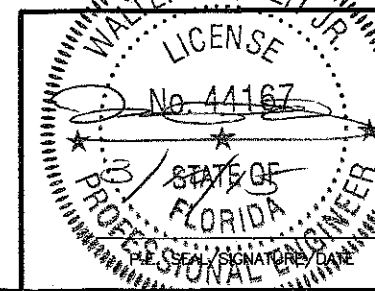
TUBE SIZE	MAXIMUM PRODUCT SPAN	ALLOWABLE TUBE SPAN	REQ'D ANGLE LENGTH EA. END	NUMBER OF ANCHORS PER END OF TUBE
2"x4"x1/8"	60"	76.0"	13	12
	96"	60.0"	17	15
	144"	48.0"	13	12
2"x4"x1/4"	80"	87.0"	21	18
	96"	79.0"	21	18
	144"	65.0"	21	18
2"x5"x1/8"	80"	77.0"	17	15
	96"	70.0"	21	18
	144"	57.0"	17	15
2"x6"x1/8"	80"	88.0"	21	18
	96"	81.0"	21	18
	144"	66.0"	21	18

INSTALLATIONS DETAILS W/ SPAN TUBE INTO POURED CONCRETE OR GROUTED CONCRETE BLOCK WALL

SCALE: N.T.S.

MAX. A.S.D. DESIGN PRESSURE RATING = ± 72.0 PSF

FLORIDA BUILDING CODE (High & Non High Velocity Hurricane Zone)

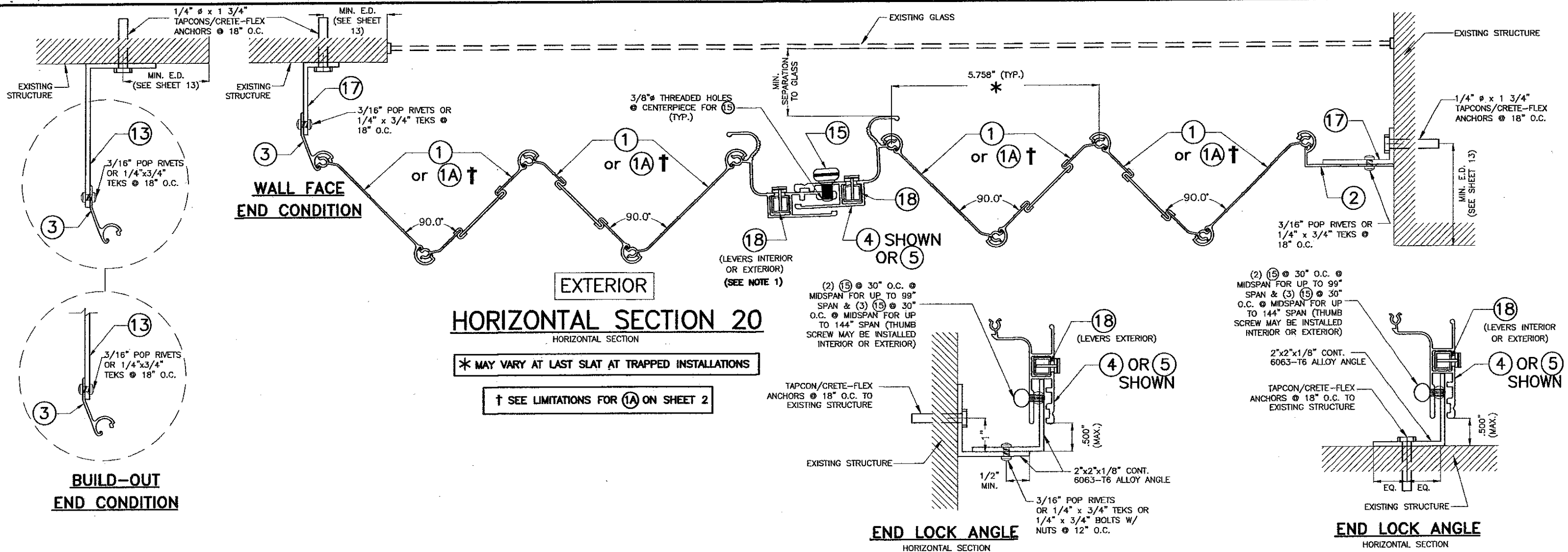


© 2015 TILTECO INC.

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: tiltco@aol.com
EB-0006719
WALTER A. TILLIT JR., P.E.
FLORIDA Lic. # 44167

TITAN II FOLDING IMPACT PROTECTIVE SYSTEM				DRAWN BY: A.G./M.L.	
FOLDING SHUTTER CORP.				03/10/15 DATE	
7089 HEMSTREET PLACE WEST PALM BEACH, FL 33413 PH: 1800-643-6371 www.foldingshutters.com				15-014 DRAWING No	
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-080	03/10/15	3		
2			4		
					SHEET 8 OF 13



NOTE 1

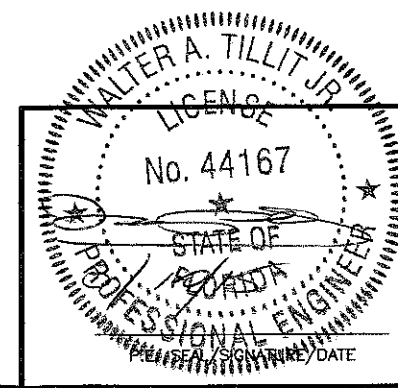
ONE LOCKING TUBE, PART #18, SHALL BE INSERTED INTO THE TOP AND BOTTOM OF EACH EXTERIOR OR INTERIOR CENTERPIECE (4) OR (5), INSERTED INTO THE BOTTOM OF EACH ALUMINUM LOCKING TUBE (18). A SOLID THERMOPLASTIC TIP MUST BE INSTALLED. THE TOP 1.100" OF THE TIP SHALL BE SQUARE, 0.357"x0.357" AND IT SHALL BE FULLY INSERTED INTO THE ALUMINUM LOCKING TUBE (18) AND SECURED INTO IT WITH A 0.120" o.d. HOLLOW PIN. THE BOTTOM 1.100" OF THE TIP SHALL BE 0.363" DIAMETER WITH A 0.200" LONG BEVEL TOWARD THE END AND A FLAT TIP. BETWEEN THE SQUARE TOP AND ROUND BOTTOM OF THE TIP A SQUARE, 0.475"x0.475"x0.085" THICK COLLAR MUST BE INSTALLED. AT THE TOP OF THE ALUMINUM LOCKING TUBE (18), A 2-PIECE, THERMOPLASTIC LATCHING MECHANISM MUST BE INSTALLED. ONE (1) PIECE, 1.375" LONG, WITH A 0.366"x0.366"x0.630" LONG END SHALL BE INSERTED AND DIMPLE CRIMPED INTO THE TOP OF THE ALUMINUM LOCKING TUBE (18). THE TOP OF THE PIECE MUST INCLUDE A 0.684" DEEP BY 0.188" WIDE CHANNEL TO RECEIVE THE THERMOPLASTIC COMPRESSION LATCHING LEVER. SOLID THERMOPLASTIC TIP INSTALLED AT (18) SHALL BE ENGAGED INTO 3/8" HOLES DRILLED ON THE OUTER HORIZONTAL FLANGE OF TOP/BOTTOM TRACKS.

**END INSTALLATION DETAILS INTO CONCRETE,
CONCRETE BLOCK & WOOD (AS APPLICABLE)**

ALTERNATE LOCKING SLAT CORNER LOCKING DETAIL

HORIZONTAL SECTION

FLORIDA BUILDING CODE (High & Non High Velocity Hurricane Zone)



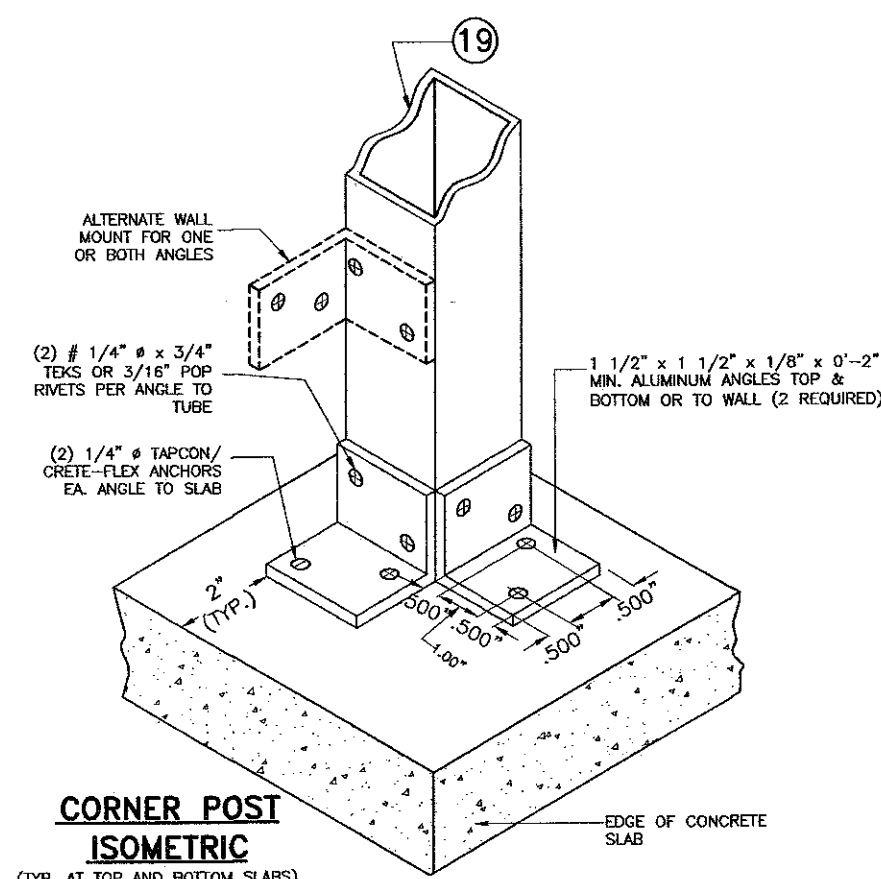
© 2015 TILTECO INC.
TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166
Phone: (305) 871-1530, Fax: (305) 871-1531
e-mail: tilteco@aol.com
EB-0006719
WALTER A. TILLIT Jr. P.E.
FLORIDA Lic. # 44167

TITAN II FOLDING IMPACT PROTECTIVE SYSTEM
FOLDING SHUTTER CORP.
7089 HEMSTREET PLACE
WEST PALM BEACH, FL 33413
PH: 1800-643-6371
www.foldingshutters.com

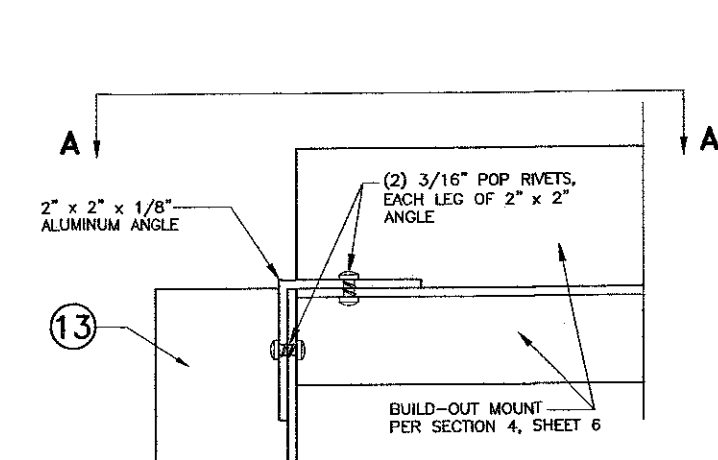
DRAWN BY:
A.G./M.L.
03/10/15
DATE
15-014
DRAWING No

REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-000	03/10/15	3		
2			4		

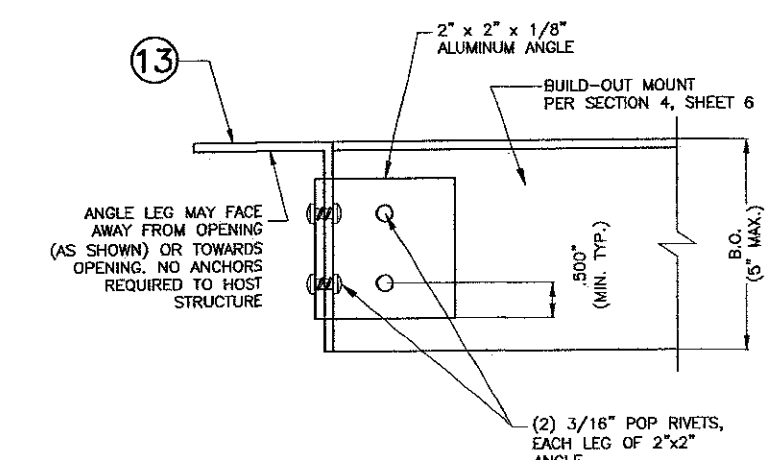
SHEET 9 OF 13



CORNER POST ISOMETRIC
(TYP. AT TOP AND BOTTOM SLABS)



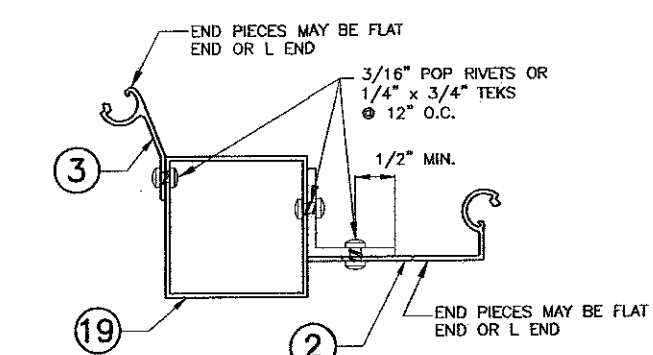
EXTERIOR ELEVATION



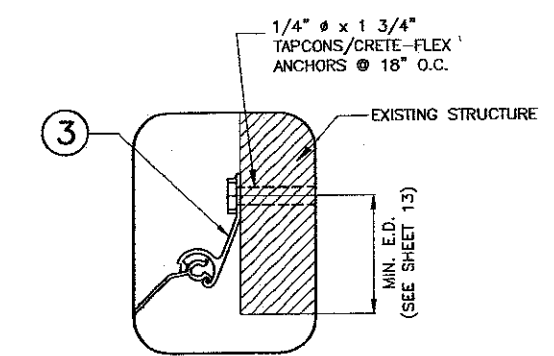
PLAN VIEW A-A

NOTE: SIMILAR AT HEAD AND SILL AND BOTH SIDES OF PRODUCT

OPTIONAL SIDE ANGLE
(FOR SECTION 4, SHEET 6)



CORNER POST HORIZONTAL SECTION

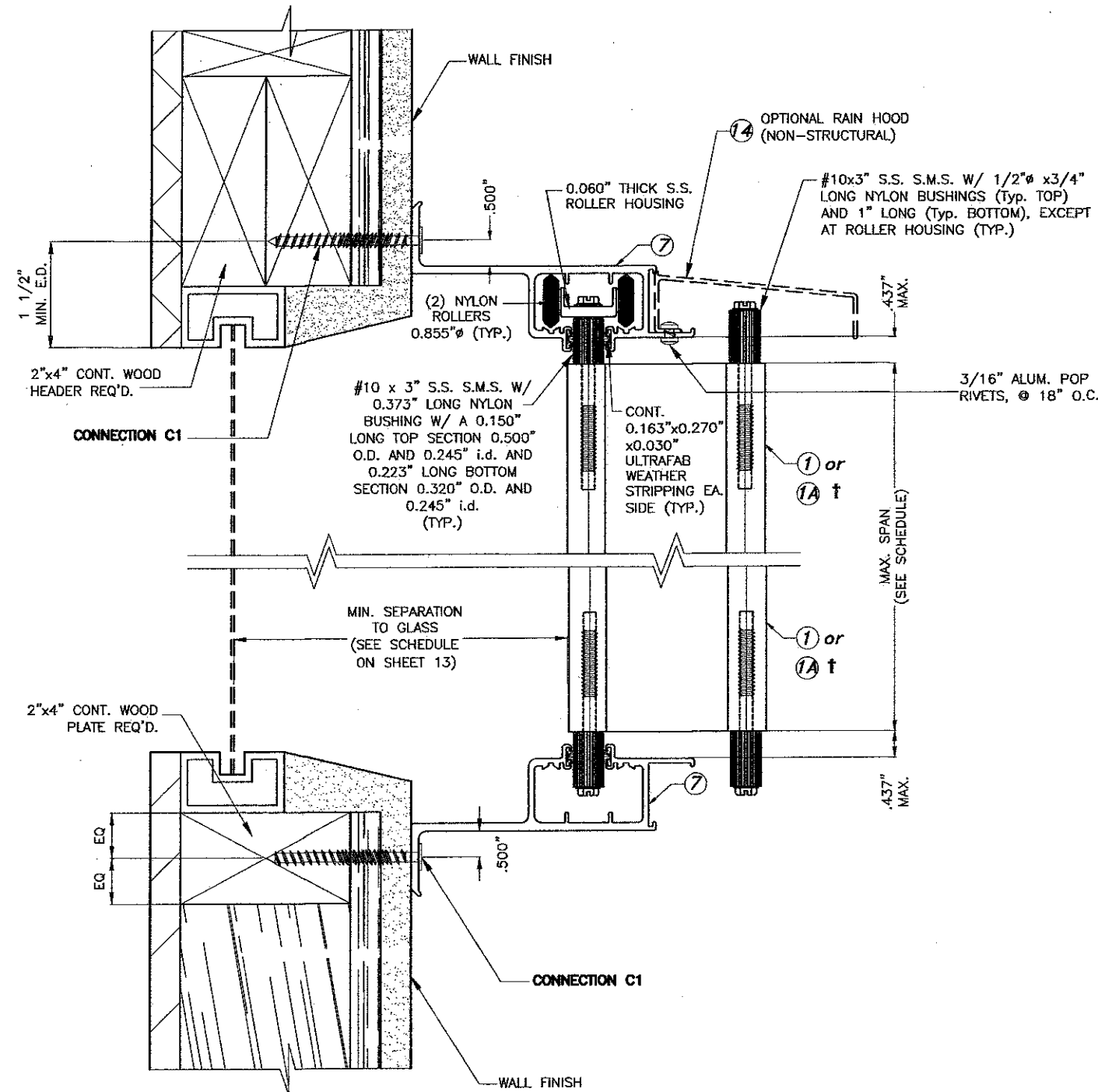


TRAPPED END CONDITION W/ FLAT END

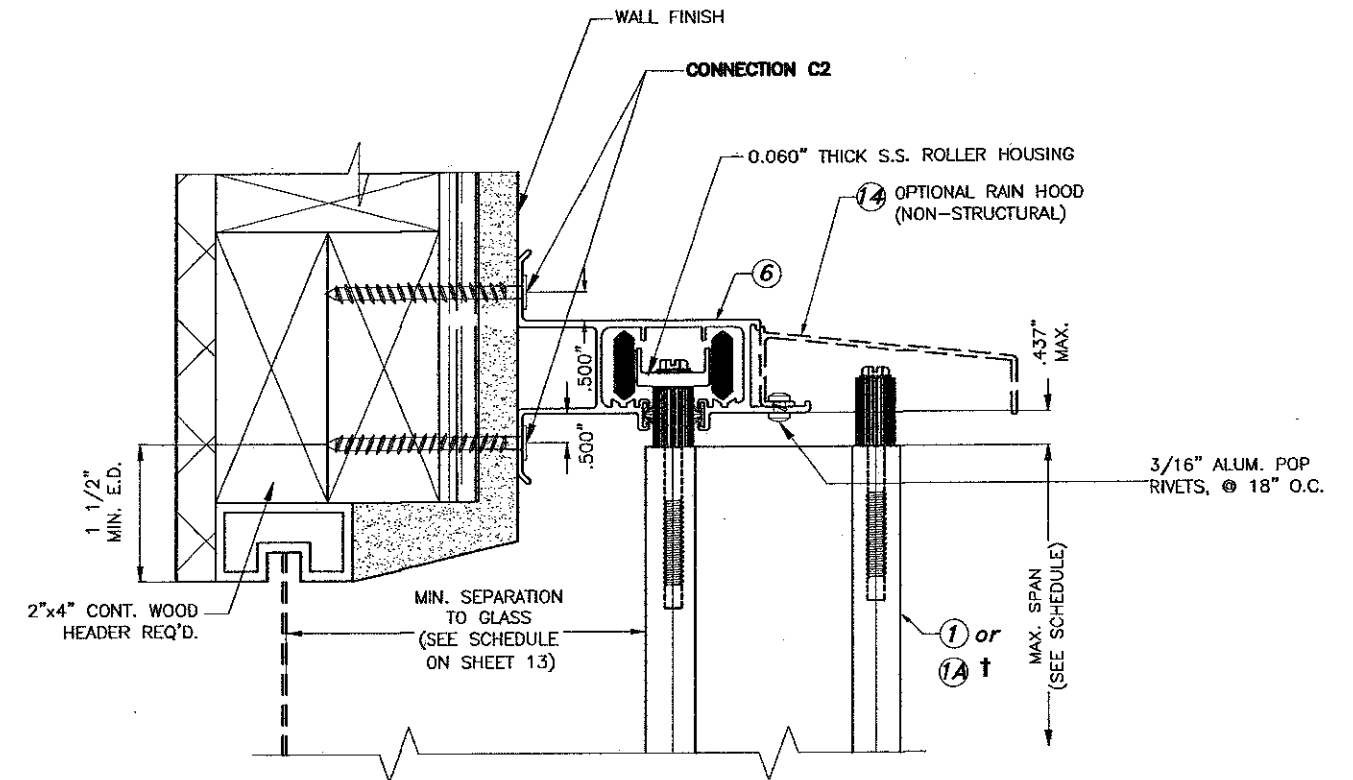
END INSTALLATION DETAILS INTO CONCRETE, CONCRETE BLOCK & WOOD (AS APPLICABLE)

FLORIDA BUILDING CODE (High & Non High Velocity Hurricane Zone)

	© 2015 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 EB-0006719 WALTER A. TILLIT JR. P.E. FLORIDA Lic. # 44167	TITAN II FOLDING IMPACT PROTECTIVE SYSTEM		DRAWN BY: A.G./M.L.																	
		FOLDING SHUTTER CORP. 7089 HEMSTREET PLACE WEST PALM BEACH, FL 33413 PH: 1800-643-6371 www.foldingshutters.com		03/10/15 DATE																	
<table border="1"> <thead> <tr> <th>REV. No</th> <th>DESCRIPTION</th> <th>DATE</th> <th>REV. No</th> <th>DESCRIPTION</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>OLD 13-080</td> <td>03/10/15</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>2</td> <td></td> <td></td> <td>4</td> <td></td> <td></td> </tr> </tbody> </table>		REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE	1	OLD 13-080	03/10/15	3			2			4			15-014 DRAWING No	
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE																
1	OLD 13-080	03/10/15	3																		
2			4																		
				SHEET 9A OF 13																	



**WALL FACE MOUNTING INSTALLATION
SECTION 1W**



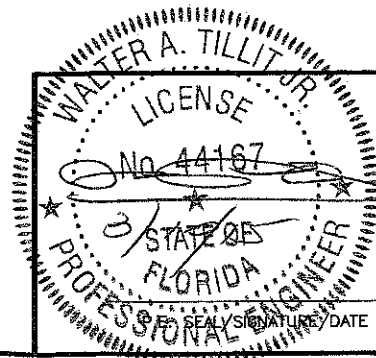
**WALL FACE MOUNTING INSTALLATION
SECTION 2W (TOP)**

INSTALLATIONS DETAILS INTO WOOD

NOTES:
1- FOR WOOD FRAME CONSTRUCTION: WOOD MEMBERS TO BE HAVE A MIN. SPECIFIC DENSITY OF 0.46 OR EQUAL

† SEE LIMITATIONS FOR 1A ON SHEET 2

NOTE FOR COMBINATION OF SECTIONS:
1- MOUNTING SECTIONS CAN BE COMBINED IN ANY WAY TO SUIT ANY INSTALLATION.



© 2015 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
EB-0006719
WALTER A. TILLIT Jr. P.E.
FLORIDA Lic. # 44167

FLORIDA BUILDING CODE (High & Non High Velocity Hurricane Zone)

TITAN II FOLDING IMPACT PROTECTIVE SYSTEM

DRAWN BY:
A.G./M.L.

FOLDING SHUTTER CORP.

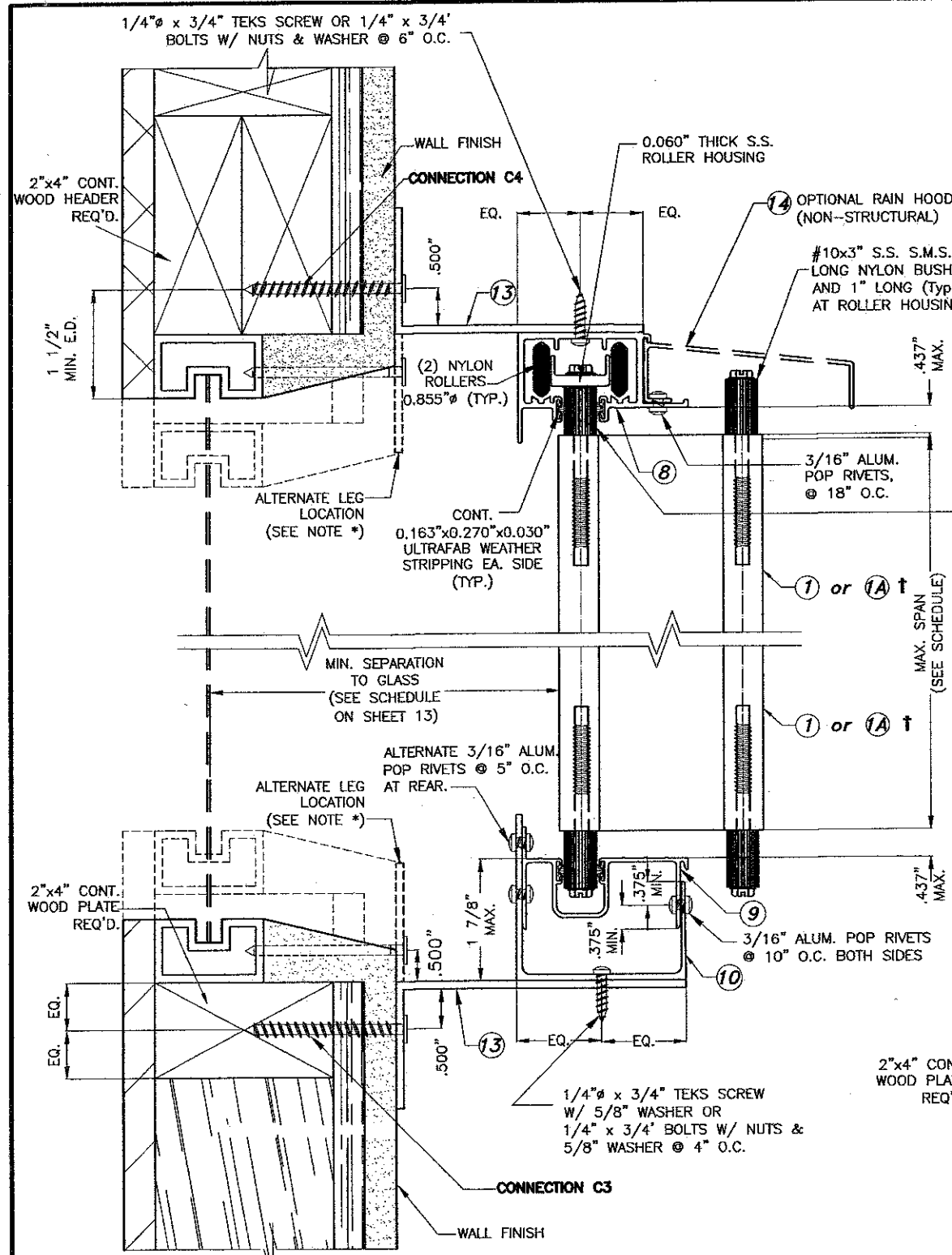
03/10/15
DATE

7089 HEMSTREET PLACE
WEST PALM BEACH, FL 33413
PH: 1800-643-6371
www.foldingshutters.com

15-014
DRAWING No

REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-080	03/10/15	3		
2			4		

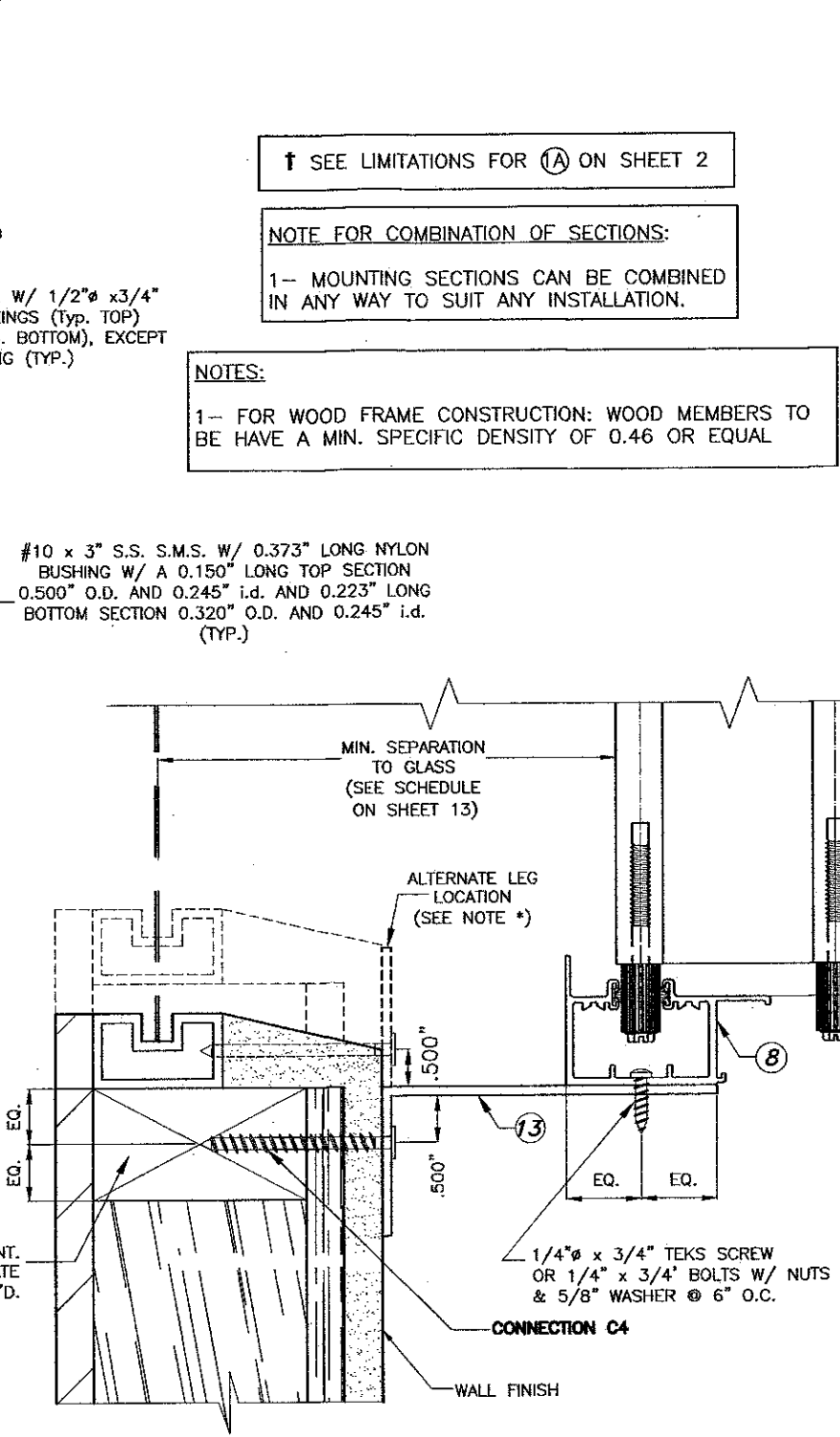
SHEET 10 OF 13



**BUILD-OUT FACE MOUNTING INSTALLATION
SECTION 4W**

NOTE *: ALTERNATE LEG LOCATION AND ANCHORAGE TO WALL SHOWN DOTTED

INSTALLATIONS DETAILS INTO WOOD
SCALE : N.T.S.

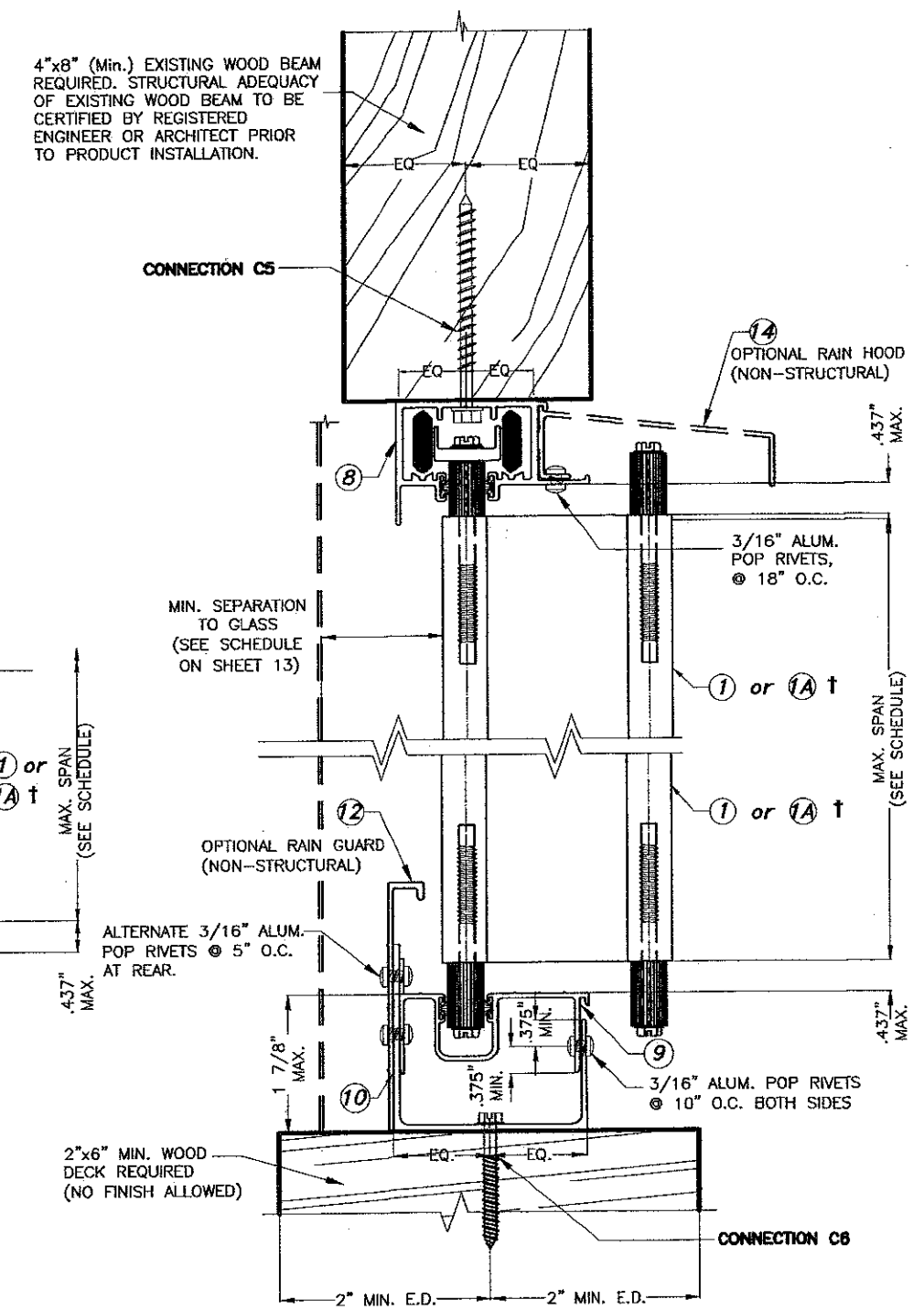


**BUILD-OUT FACE MOUNTING INSTALLATION
SECTION 4AW (BOTTOM)**

† SEE LIMITATIONS FOR (A) ON SHEET 2

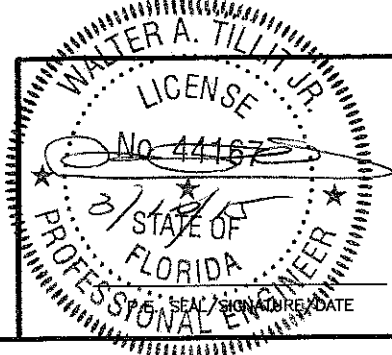
NOTE FOR COMBINATION OF SECTIONS:
1- MOUNTING SECTIONS CAN BE COMBINED IN ANY WAY TO SUIT ANY INSTALLATION.

NOTES:
1- FOR WOOD FRAME CONSTRUCTION: WOOD MEMBERS TO BE HAVE A MIN. SPECIFIC DENSITY OF 0.46 OR EQUAL



**TRAPPED MOUNTING INSTALLATION
SECTION 7W**

FLORIDA BUILDING CODE (High & Non High Velocity Hurricane Zone)

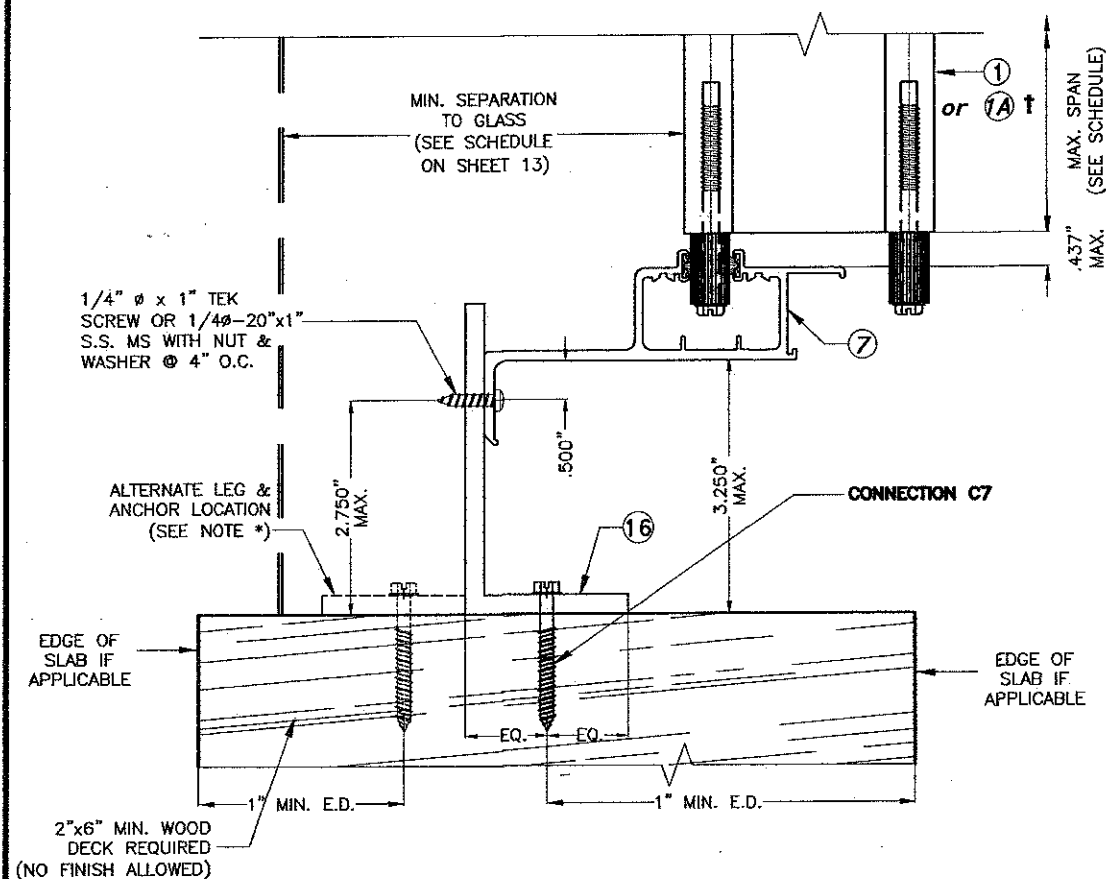


© 2015 TILTECO INC.

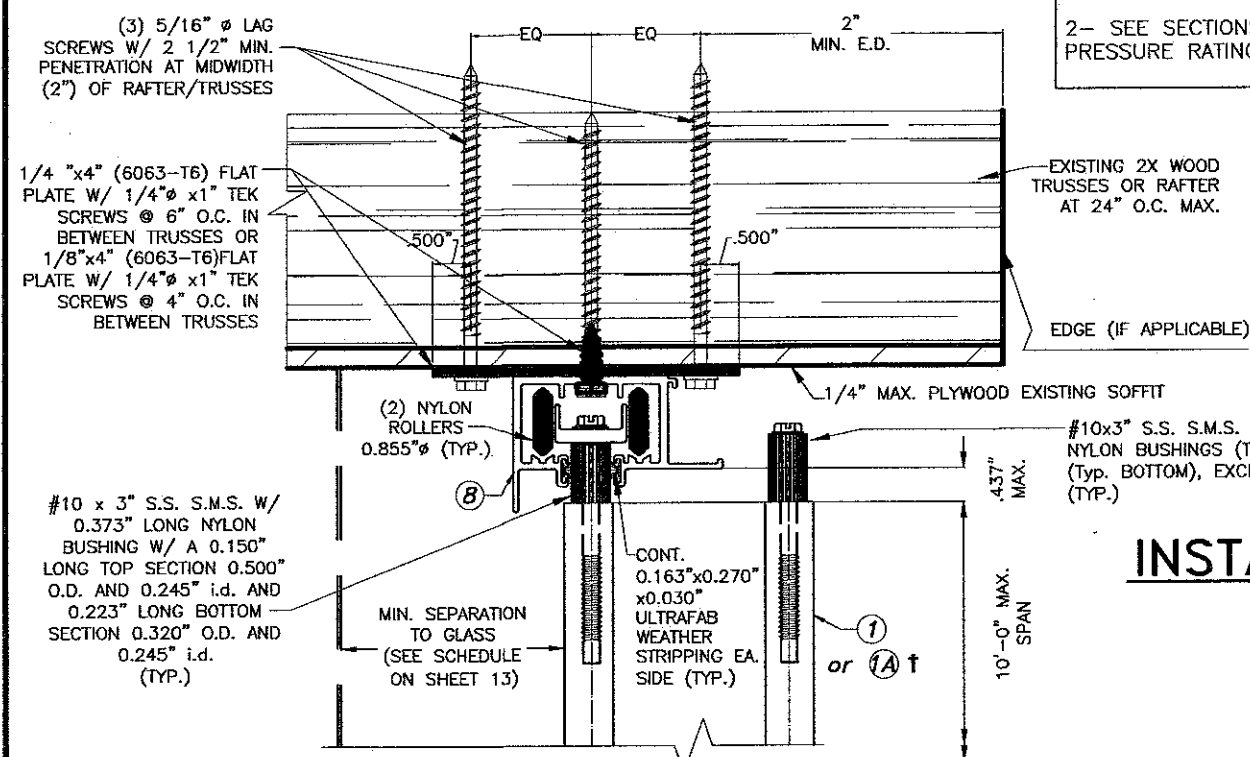
TILTECO INC.

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: tiltco@aol.com
EB-0006719
WALTER A. TILLIT JR. P.E.
FLORIDA Lic. # 44167

TITAN II FOLDING IMPACT PROTECTIVE SYSTEM						DRAWN BY: A.G./M.L.	
FOLDING SHUTTER CORP.						03/10/15 DATE	
7089 HEMSTREET PLACE WEST PALM BEACH, FL 33413 PH: 1800-643-6371 www.foldingshutters.com						15-014 DRAWING No	
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE	SHEET 11 OF 13	
1	OLD 15-080	03/10/15	3				
2			4				



**FLOOR MOUNTING INSTALLATION
SECTION 7AW (BOTTOM)**



**HEADER TO TRUSS MOUNTING INSTALLATION
SECTION 8W (TOP)**

MAX. A.S.D. DESIGN PRESSURE RATING +60.0, -60.0 PSF

$\dagger$ SEE LIMITATIONS FOR 1A ON SHEET 2

NOTE FOR COMBINATION OF SECTIONS:

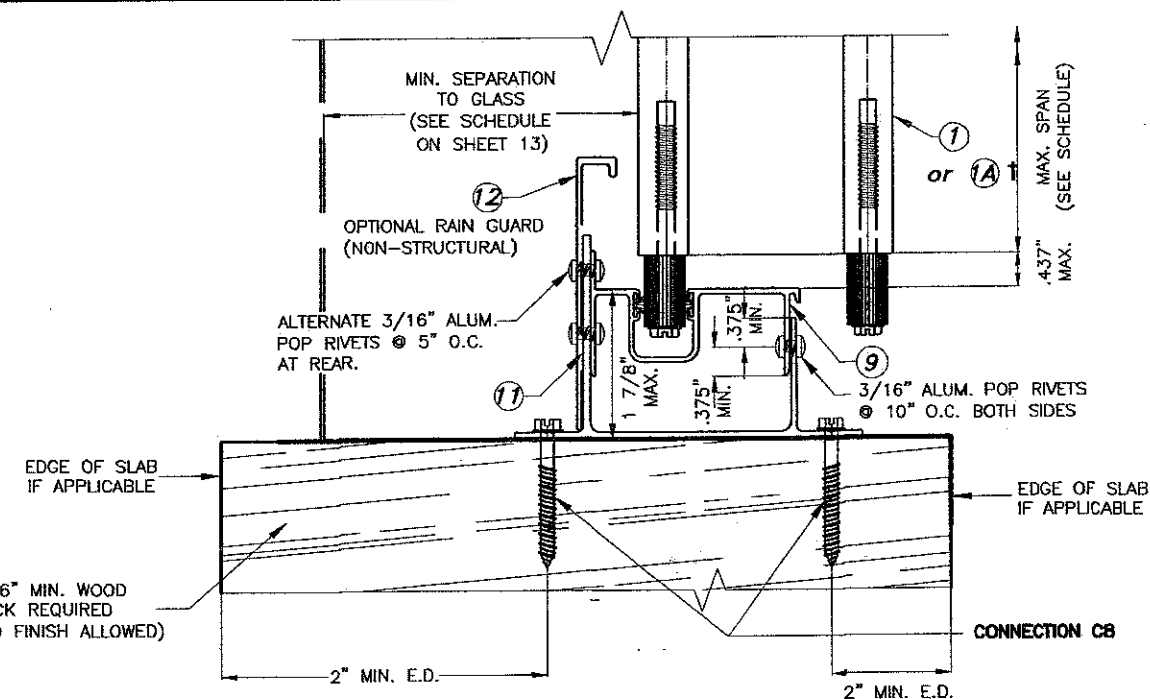
1-- MOUNTING SECTIONS CAN BE COMBINED IN ANY WAY TO SUIT ANY INSTALLATION.

NOTES:

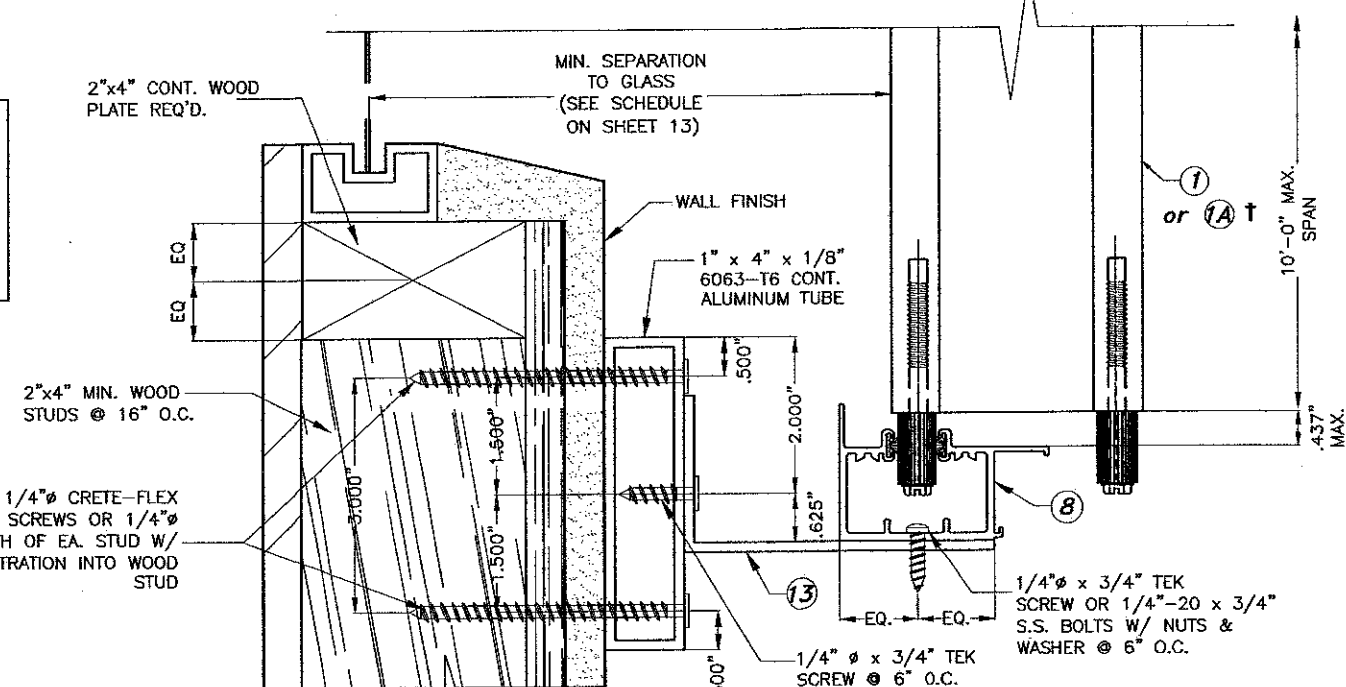
- 1-- FOR WOOD FRAME CONSTRUCTION: WOOD MEMBERS TO BE HAVE A MIN. SPECIFIC DENSITY OF 0.46 OR EQUAL
- 2-- SEE SECTIONS 8W & 14W FOR MAX. A.S.D. DESIGN PRESSURE RATING & SPANS

**INSTALLATIONS DETAILS
INTO WOOD**

SCALE : N.T.S.



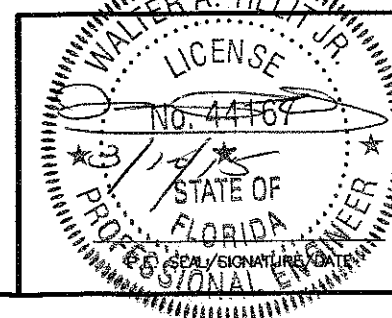
**ALT TRACK ADAPTER MOUNTING INSTALLATION
SECTION 7BW (BOTTOM)**



**MOUNT TO WOOD STUDS MOUNTING INSTALLATION
SECTION 14W (BOTTOM)**

MAX. A.S.D. DESIGN PRESSURE RATING= +60.0, -60.0 PSF

FLORIDA BUILDING CODE (High & Non High Velocity Hurricane Zone)



© 2015 TILTECO INC.

TILTECO INC.

TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33416
Phone : (305)871-1530 . Fax : (305)871-1531
e-mail: tiltco@aol.com
EB-0006719
WALTER A. TILLIT JR., P.E.
FLORIDA Lic. # 44167

TITAN II FOLDING IMPACT PROTECTIVE SYSTEM

FOLDING SHUTTER CORP.

7089 HEMSTREET PLACE
WEST PALM BEACH, FL 33413
PH: 1800-643-6371
www.foldingshutters.com

DRAWN BY:
A.G./M.L.

03/10/15
DATE

15-014
DRAWING No

REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-08D	03/10/15	3		
2			4		

SHEET 12 OF 13

MAXIMUM WIND PRESSURE (p.s.f.)
AND CORRESPONDING MAXIMUM
SLATS SPANS SCHEDULE.

WIND PRESSURE (+/-)	MAXIMUM SLATS SPANS Δ		MAX. ALLOWABLE REACTION AT TOP & BOTTOM
	POSITIVE PRESSURE (L+)	NEGATIVE PRESSURE (L-)	
30 psf	144.0"	144"	180 lb/ft
35 psf	60.0"	60"	88 lb/ft
	100.0"	100"	146 lb/ft
	144"	144"	210 lb/ft
40 psf	60.0"	60"	100 lb/ft
	100.0"	100"	167 lb/ft
	144"	144"	240 lb/ft
46 psf	60.0"	60.0"	115 lb/ft
	80.0"	80.0"	154 lb/ft
	97.0"	97.0"	187 lb/ft
	115.0"	115.0"	221 lb/ft
	144"	144"	276 lb/ft
50 psf	60.0"	60.0"	125 lb/ft
	89.0"	89.0"	187 lb/ft
	100.0"	100.0"	208 lb/ft
	120.0"	120.0"	250 lb/ft
55 psf	60.0"	60.0"	138 lb/ft
	81.0"	81.0"	187 lb/ft
	100.0"	100.0"	229 lb/ft
	120.0"	120.0"	275 lb/ft
	137"	134"	330 lb/ft
60 psf	60.0"	60.0"	150 lb/ft
	80.0"	80.0"	200 lb/ft
	100.0"	100.0"	250 lb/ft
	115.0"	115.0"	288 lb/ft
65 psf	59.0"	59.0"	160 lb/ft
	92.0"	92.0"	249 lb/ft
	100.0"	100.0"	271 lb/ft
	126"	123"	360 lb/ft
70 psf	60.0"	60.0"	175 lb/ft
	100.0"	100.0"	292 lb/ft
	121"	118"	374 lb/ft
75 psf	59.0"	59.0"	187 lb/ft
	100.0"	100.0"	313 lb/ft
	117"	114"	387 lb/ft
80 psf	113"	111"	400 lb/ft
90 psf	107"	104"	424 lb/ft
100 psf	101"	99"	447 lb/ft
110 psf	94"	90"	468 lb/ft
120 psf	87"	82"	484 lb/ft
130 psf	80"	76"	483 lb/ft
140 psf	74"	70"	484 lb/ft
150 psf	69"	66"	483 lb/ft
160 psf	65"	62"	483 lb/ft

Δ NOTES:

L+: MAXIMUM ALLOWABLE PRODUCT SPAN FOR A GIVEN POSITIVE A.S.D. DESIGN PRESSURE RATING.
L-: MAX. ALLOWABLE PRODUCT SPAN FOR A GIVEN NEGATIVE A.S.D. DESIGN PRESSURE RATING.

FINAL MAXIMUM ALLOWABLE PRODUCT SPAN IS EQUAL TO THE MINIMUM DETERMINED PRODUCT SPAN BETWEEN "L+" AND "L-".

CONNECTION CAPACITY SCHEDULE

(MAX. ALLOWABLE REACTION TOP & BOTTOM LB/FT)
FOR MIN. EDGE DISTANCES SHOWN ON ANCHOR SCHEDULE

CON. TYPE	ANCHOR SPACING	CONCRETE ANCHOR TYPE			CONCRETE BLOCK ANCHOR TYPE		STEEL ANCHOR TYPE	WOOD ANCHOR TYPE
		A	B	C	A	C	E	A C F
C1	9	425 LB/FT	--	388 LB/FT	157 LB/FT	134 LB/FT	256 LB/FT	397 LB/FT
	6	473 LB/FT	--	418 LB/FT	236 LB/FT	202 LB/FT	383 LB/FT	432 LB/FT
C2	12	387 LB/FT	--	334 LB/FT	166 LB/FT	142 LB/FT	271 LB/FT	347 LB/FT
	9	456 LB/FT	--	362 LB/FT	250 LB/FT	190 LB/FT	318 LB/FT	380 LB/FT
	6	525 LB/FT	--	419 LB/FT	312 LB/FT	285 LB/FT	353 LB/FT	443 LB/FT
C3	9	390 LB/FT	--	309 LB/FT	157 LB/FT	134 LB/FT	257 LB/FT	329 LB/FT
	6	496 LB/FT	--	375 LB/FT	236 LB/FT	202 LB/FT	298 LB/FT	405 LB/FT
	3	813 LB/FT	--	572 LB/FT	326 LB/FT	304 LB/FT	418 LB/FT	631 LB/FT
C4	9	466 LB/FT	--	370 LB/FT	157 LB/FT	134 LB/FT	256 LB/FT	393 LB/FT
	6	592 LB/FT	--	448 LB/FT	236 LB/FT	202 LB/FT	357 LB/FT	483 LB/FT
C5	9	281 LB/FT	--	224 LB/FT	81 LB/FT	83 LB/FT	143 LB/FT	103 LB/FT
	6	421 LB/FT	--	334 LB/FT	122 LB/FT	125 LB/FT	214 LB/FT	155 LB/FT
C6	3	843 LB/FT	--	670 LB/FT	243 LB/FT	250 LB/FT	432 LB/FT	311 LB/FT
	9	273 LB/FT	325 LB/FT	215 LB/FT	--	--	138 LB/FT	102 LB/FT
	6	410 LB/FT	487 LB/FT	323 LB/FT	--	--	207 LB/FT	153 LB/FT
C7	3	822 LB/FT	975 LB/FT	648 LB/FT	--	--	414 LB/FT	307 LB/FT
	4	269 LB/FT	301 LB/FT	183 LB/FT	--	--	114 LB/FT	153 LB/FT
	3	358 LB/FT	402 LB/FT	244 LB/FT	--	--	152 LB/FT	204 LB/FT
C8	2	--	--	--	--	--	--	305 LB/FT
	12	491 LB/FT	596 LB/FT	409 LB/FT	--	--	265 LB/FT	168 LB/FT
	8	736 LB/FT	894 LB/FT	614 LB/FT	--	--	397 LB/FT	252 LB/FT
C8	6	982 LB/FT	1194 LB/FT	819 LB/FT	--	--	530 LB/FT	336 LB/FT

MIN. SEPARATION TO GLASS SCHEDULE

SLAT SPAN	HIGH VELOCITY HURRICANE ZONE	NON HIGH VELOCITY HURRICANE ZONE Δ	
		ZONE 1,2,3	ZONE 4
5'-10" AS LESS	2 1/2"	1"	2 5/8"
>5'-10" TO 8'-3"	2 5/8" +	1"	2 3/4" +
>8'-3" TO 12'-0"	3 1/2"	1"	3 5/8"

Δ AS DEFINED BY ASTM E-1996 STANDARD.

+ EXCEPT THAT 3 5/8" SHALL BE USED
FOR MOUNTINGS AS PER SECTIONS 3,
4, 4A & 7A.

CONNECTION CAPACITY SCHEDULE

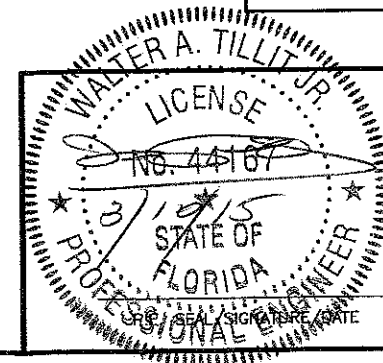
(MAX. ALLOWABLE REACTION TOP & BOTTOM LB/FT)
FOR CONCRETE & CONCRETE BLOCK
FOR SHORTER E.D. (2" FOR A, 2 1/2" FOR B & 2 1/4" FOR C ANCHORS)
THAN MIN. E.D. SHOWN ON ANCHOR SCHEDULE

CONNECTION TYPE	ANCHOR SPACING	CONCRETE ANCHOR TYPE			CONCRETE BLOCK ANCHOR TYPE	
		A	B	C	A	C
C1	9	417 LB/FT	--	388 LB/FT	--	134 LB/FT
	6	461 LB/FT	--	418 LB/FT	--	202 LB/FT
C2	12	375 LB/FT	--	334 LB/FT	--	142 LB/FT
	9	417 LB/FT	--	362 LB/FT	--	190 LB/FT
	6	502 LB/FT	--	419 LB/FT	--	285 LB/FT
C3	9	372 LB/FT	--	309 LB/FT	--	134 LB/FT
	6	469 LB/FT	--	375 LB/FT	--	202 LB/FT
	3	760 LB/FT	--	572 LB/FT	--	304 LB/FT
C4	9	445 LB/FT	--	370 LB/FT	--	134 LB/FT
	6	561 LB/FT	--	448 LB/FT	--	202 LB/FT
	3	912 LB/FT	--	682 LB/FT	--	364 LB/FT
C5	9	226 LB/FT	--	224 LB/FT	--	83 LB/FT
	6	339 LB/FT	--	334 LB/FT	--	125 LB/FT
	3	681 LB/FT	--	670 LB/FT	--	250 LB/FT
C6	9	221 LB/FT	251 LB/FT	215 LB/FT	--	--
	6	332 LB/FT	378 LB/FT	323 LB/FT	--	--
	3	663 LB/FT	756 LB/FT	646 LB/FT	--	--
C7	4	232 LB/FT	236 LB/FT	183 LB/FT	--	--
	3	310 LB/FT	315 LB/FT	244 LB/FT	--	--
C8	12	388 LB/FT	460 LB/FT	409 LB/FT	--	--
	8	582 LB/FT	691 LB/FT	614 LB/FT	--	--
	6	777 LB/FT	921 LB/FT	819 LB/FT	--	--

ANCHORS SCHEDULE Δ SEE GENERAL NOTE C.2 ON SHEET 1

ANCHORS TYPE	ANCHORS DESCRIPTION	MIN. E.D.				MIN. SPACING			
		CONC.	C.BLOCK	WOOD	STEEL	CONC.	C.BLOCK	WOOD	STEEL
A	1/4"Ø TAPCON W/ ADVANCED THREADFORM TECHNOLOGY	3.50"	2.50"	Δ	N/A	4.00"	4.00"	N/A	N/A
B	1/4" Ø x 3/4" SOLID SET	3.50"	3.50"	N/A	N/A	3.00"	3.00"	N/A	N/A
C	1/4" Ø CRETE-FLEX	3.00"	3.00"	Δ	N/A	3.00"	3.00"	N/A	N/A
E	1/4" Ø ITW-BUILDEX TEK SCREWS	N/A	N/A	N/A	1.00"	N/A	N/A	N/A	2.00"
F	#14 NDS WOOD SCREWS OR 1/4" NDS LAG SCREWS	N/A	N/A	Δ	N/A	N/A	N/A	2.00"	N/A

FLORIDA BUILDING CODE (High & Non High Velocity Hurricane Zone)



© 2015 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
EB-0006719
WALTER A. TILLIT JR. P.E.
FLORIDA Lic. # 44167

TITAN II FOLDING IMPACT PROTECTIVE SYSTEM

FOLDING SHUTTER CORP.

7089 HEMSTREET PLACE
WEST PALM BEACH, FL 33413
PH: 1800-643-6371
www.foldingshutters.com

DRAWN BY:
A.G./M.L.

03/10/15
DATE

15-014
DRAWING No

REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-080	03/10/15	3		
2			4		

SHEET 13 OF 13