

GENERAL NOTES:

1. ROLL-UP SHUTTER SHOWN ON THIS PROJECT EVALUATION DOCUMENT (P.E.D.) HAS BEEN VERIFIED FOR CODE COMPLIANCE IN ACCORDANCE WITH THE 2017 (6th EDITION) OF THE FLORIDA BUILDING CODE. ROLL-UP SHUTTER SHALL NOT BE INSTALLED AT HIGH-WIND-VELOCITY HURRICANE ZONES (HAWI, DAGE/BROWARD COUNTIES).

DESIGN WIND LOADS SHALL BE DETERMINED AS PER SECTION 1609 OF THE ABOVE MENTIONED CODE. FOR A BASIC WIND SPEED REQUIRED BY THE JURISDICTION WHERE SHUTTER WILL BE INSTALLED WITH A DIRECTIONAL FACTOR K_{zt} OF 1.0 FOR INSTALLATIONS UNDER 2017 FBC AND SHALL NOT EXCEED THE MAXIMUM (A.S.D.) DESIGN PRESSURE RATINGS INDICATED ON NOTE 2 BELOW. 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 NOTE 2 BELOW.

IN ORDER TO VERIFY THAT ANCHORS ON THIS P.E.D. AS TESTED, WERE NOT OVERSTRESSED, A 10% INCREASE IN ALLOWABLE STRESS FOR WIND LOADS WAS NOT USED IN THEIR ANALYSIS. SHUTTER WEIGHTS AND WIDTHS EQUAL OR SMALLER THAN MAXIMUM ALLOWABLE INDICATED IN THIS DRAWING ARE ACCEPTABLE FOR INSTALLATION.

+50.0 PSF, -55.0 PSF

2. MAXIMUM A.S.D. DESIGN PRESSURE RATINGS:
ANY DESIGN WIND LOAD, SLAT SPAN, SHUTTER WEIGHTS AND WIDTHS EQUAL OR SMALLER THAN MAXIMUM ALLOWABLE INDICATED IN THIS DRAWING ARE ACCEPTABLE FOR INSTALLATION.

3. ALL ALUMINUM EXTRUSIONS SHALL BE 6063-T5 ALLOY (UNLESS OTHERWISE NOTED).
4. ALL SCREWS TO BE STAINLESS STEEL 304 OR 316 SERIES W/ 80 LB YIELD STRENGTH AND 80 LB TENSILE STRENGTH OR CORROSION RESISTANT COATED CARBON STEEL AS PER DIM 50018 OR ASTM A 510-02 AND SHALL COMPLY WITH FLORIDA BUILDING CODE SECTION 2411.1.1.4.

5. BOLTS TO BE 2024-T4 ALUMINUM ALLOY: ASTM A-317 GALVANIZED OR A51 304 SERIES STAINLESS STEEL WITH 35 ksi MAXIMUM YIELD STRENGTH & SHALL COMPLY W/ FLORIDA BUILDING CODE SECTION 2411.1.1.4.

6. STORM BARS AT FLOOR AND CEILING MOUNTING INSTALLATIONS MAY BE REMOVABLE AT NEW HURRICANE CONDITIONS. HOWEVER, EACH STORM BAR SHALL BEAR A PERMANENT LABEL IN A VISIBLE PLACE WITH A WARNING NOT TO RESTRICT THE DESIGN AND OWNER THAT STORM BARS MUST BE INSTALLED WITH CORRESPONDING HURRICANE DURING PERIODS OF HURRICANE WARNING AND THAT ROLL UP SHUTTERS WILL NOT OPERATE PROTECTION UNLESS ALL STORM BARS ARE INSTALLED AS DIRECTED.

7. REMOVABLE STORM BARS SHALL BE STORED IN A CONVENIENT PLACE WITH EASY AND UNRESTRICTED ACCESS SO THAT THEY CAN BE REACHED AND INSTALLED ANY TIME (HURRICANE CONDITIONS OR NOT). SLATS ARE ROLLED DOWN, THE EFFECT OF THE SLATS ROLLED DOWN WITHOUT STORM BARS IS, THESE SLATS WILL SLIP OUT OF TRACK DUE TO THE DISTORTION CAUSED BY WIND FORCES.

8. PROTECTED PLANK DETACHMENT ISG IS A POLYPROPYLENE MANUFACTURED BY POLY N SOLUTION, INC. USED AT STRAND LOADED SYSTEM FOR REMOVABLE STORM BARS & COMPLES W/ THE FOLLOWING SPECIFICATIONS:

DESCRIPTION	PROPERTIES	VALUE
ASTM D-302	DENSITY	94.57 lbs/ft ³ (APPROX)
ASTM D-638	YIELD POINT	3800 psi (APPROX)
ASTM D-638	TENSILE BREAK	4200 psi (APPROX)
ASTM D-638	ELONGATION AT BREAK	600 % (APPROX)
ASTM D-750	FLEXURAL MODULUS	145000 psi (APPROX)
ASTM D-4020	100 IMPACT	0.15 ft-lb/inch (APPROX)
UL 24	ULTRA RADIANT	12 " (APPROX)
ASTM E-84	FLAME SPREAD INDEX	375 " (APPROX)
ASTM E-84	SMOKE DEVELOPMENT INDEX	375 " (APPROX)

9. ANCHORS TO WALL FOR SIDE RAISE & BOX CONNECTION SHALL BE AS FOLLOWS:
- 1/4" 3 BARON ANCHORS AS MANUFACTURED BY LTK BULLOCK OR ELOCO CONSTRUCTION PRODUCTS.

NOTES:
A.1) MAXIMUM EMBEDMENT OF BARON ANCHORS INTO FOUNDED CONCRETE IS 1 3/4" - NO EMBEDMENT INTO STUCCO SHALL BE CONSIDERED AS PART OF THE REQUIRED EMBEDMENT.
A.2) IN CASE THAT PRECAST STONE, PRECAST CONCRETE OR BRICK PANELS, KICKER OR PAGES BE FOUND ON THE EXISTING WALL OR FLOOR ANCHORS SHALL BE LONG ENOUGH TO REACH THE MAIN STRUCTURE BEHIND SLOT COVERS. ANCHORING SHALL BE AS INDICATED ON NOTE A.1 ABOVE.

(B) TO EXISTING CONCRETE A.S.T.M. C-80 BLOCK WALL:
- 1/4" 3 BARON ANCHORS AS MANUFACTURED BY LTK BULLOCK OR ELOCO CONSTRUCTION PRODUCTS.

NOTES:
B.1) MAXIMUM EMBEDMENT OF BARON ANCHORS INTO CONCRETE BLOCK UNIT SHALL BE 1 1/4".
B.2) IN CASE THAT PRECAST STONE, PRECAST CONCRETE OR BRICK PANELS, KICKER OR PAGES BE FOUND ON THE EXISTING WALL OR FLOOR ANCHORS SHALL BE LONG ENOUGH TO REACH THE MAIN STRUCTURE BEHIND SLOT COVERS. ANCHORING SHALL BE AS INDICATED ON NOTE B.1 ABOVE.

(C) TO EXISTING WOOD FRAME WALL (MIN SPECIFIC GRAVITY = 0.38):
- 3/16" 3 WOOD SCREWS W/ 2" MIN EMBEDMENT INTO WOOD BEYOND ANY WALL FINISH.

(D) ANCHORS SHALL BE INSTALLED FOLLOWING ALL OF THE RECOMMENDATIONS AND SPECIFICATIONS OF THE ANCHOR'S MANUFACTURER.
(E) ANCHORS REQUIRED FOR STORM BARS & HEADER CONNECTIONS SHALL BE AS SPECIFIED ON APPLICABLE SECTIONS SHOWN ON SHEETS 4 & 5 OF 5. POWER BOLT ANCHORS TO BE AS MANUFACTURED BY POWERS FASTENERS, INC. WOOD SCREWS SHALL BE COMPLY W/ THE NATIONAL DESIGN SPECIFICATION FROM AERIAL.

10. THE INSTALLATION CONTRACTOR IS TO SEAL/CALK ALL SHUTTER COMPONENT EDGES WHICH REMAIN IN CONTINUOUS CONTACT WITH THE BUILDING TO PREVENT WIND/RAIN INTRUSION.

11. 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, CONCRETE BLOCK OR WOOD FRAME BUILDINGS.

12. SHUTTER'S INSTALLATION SHALL COMPLY WITH ALL SPECS INDICATED IN THIS DRAWING PLUS ANY BUILDING AND ZONING REGULATIONS PROVIDED BY THE JURISDICTION WHERE PERMIT IS APPLIED TO.

13. LIFTING MECHANISM NOT PART OF THIS APPROVAL, BUT SHALL BE CERTIFIED BY AN INDEPENDENT TESTING AGENCY.

14. (a) THIS P.E.D. PREPARED BY THIS ENGINEER IS GENERAL AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT. (b) WHERE THE SITE CONDITIONS DEVIATE FROM THE P.E.D.

(c) 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.

(d) THIS P.E.D. WILL BE CONSIDERED INVALID IF ALTERED BY ANY MEANS.

(e) THE SPECIFIC PROJECTS SHALL BE PREPARED BY A FLORIDA REGISTERED ENGINEER OR ARCHITECT WHOSE NAME 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 DETACHED ENGINEER TO THE P.E.D. ENGINEER, SHALL SIGN TO THIS LETTER THE SITE SPECIFIC DIMENSIONS FOR RETURN.

(f) THIS P.E.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER OF RECORD THAT PREPARED IT.

15. SHUTTER MANUFACTURER'S LABEL SHALL BE LOCATED ON A READILY VISIBLE LOCATION AT ROLL-UP IN ACCORDANCE WITH SECTION 1709.9.1 OF FLORIDA BUILDING CODE. ONE LABEL SHALL BE PLACED FOR EVERY DRAWING LABELING TO COMPLY WITH SECTION 1709.9.2 OF THE FLORIDA BUILDING CODE.



FLORIDA BUILDING CODE (Non High Velocity Hurricane Zone)

STUDIO STAR 40mm ROLL-UP SHUTTER

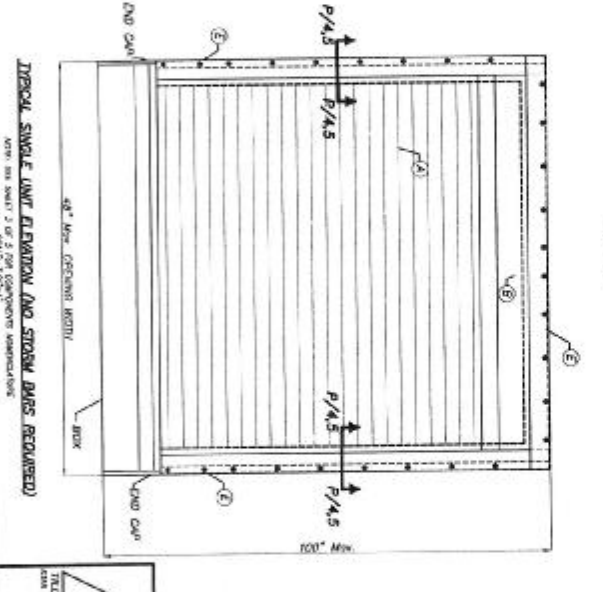
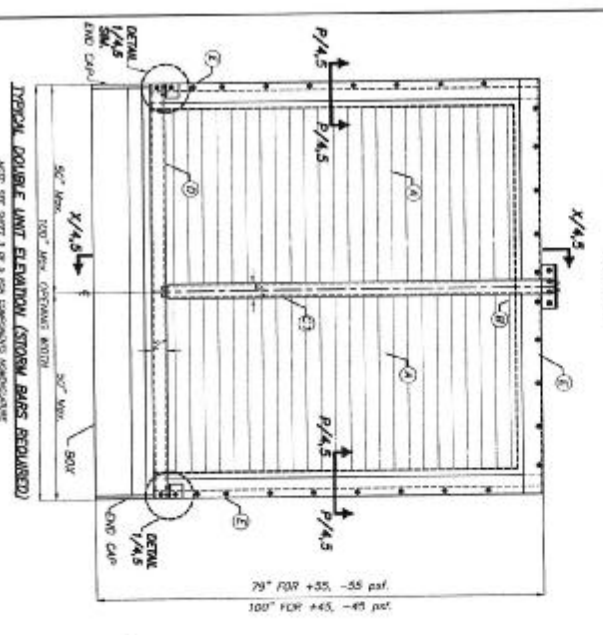
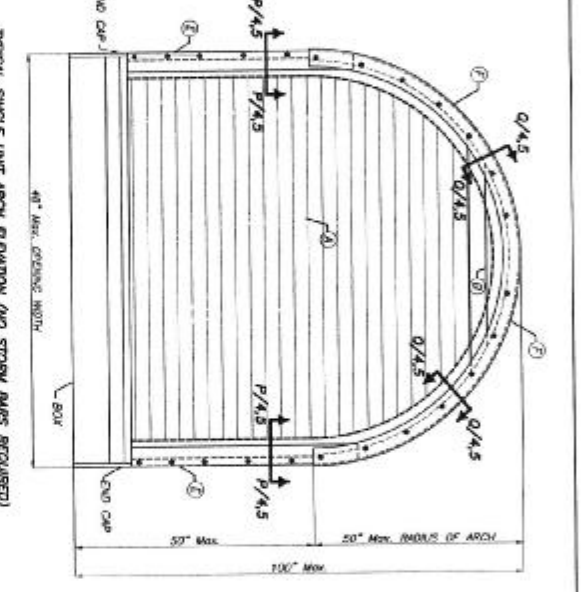
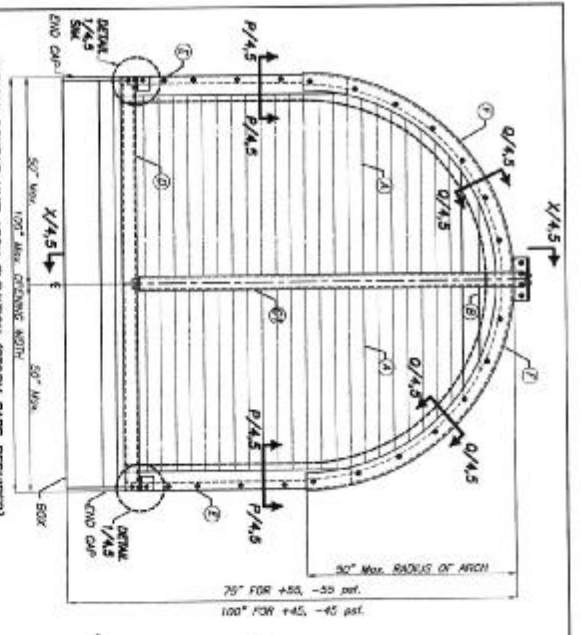
ALUTECH UNITED INC.

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www.alutech.com
AZ-0000713

DATE	REV	BY	DESCRIPTION
02/26/17	1		ISSUED FOR PERMIT
	2		

17-240 DRAWING NO.

SHEET 1 OF 5



93017 N.W. 20th, INC.

TILECO INC.

TILTIT TESTING & ENGINEERING COMPANY
 1500 N.W. 20th St., Suite 200, Ft. Lauderdale, FL 33309
 Phone: (954) 581-1100
 FAX: (954) 581-1101
 WALTER A. TILIT JR., P.E.
 LICENSE NO. 44167

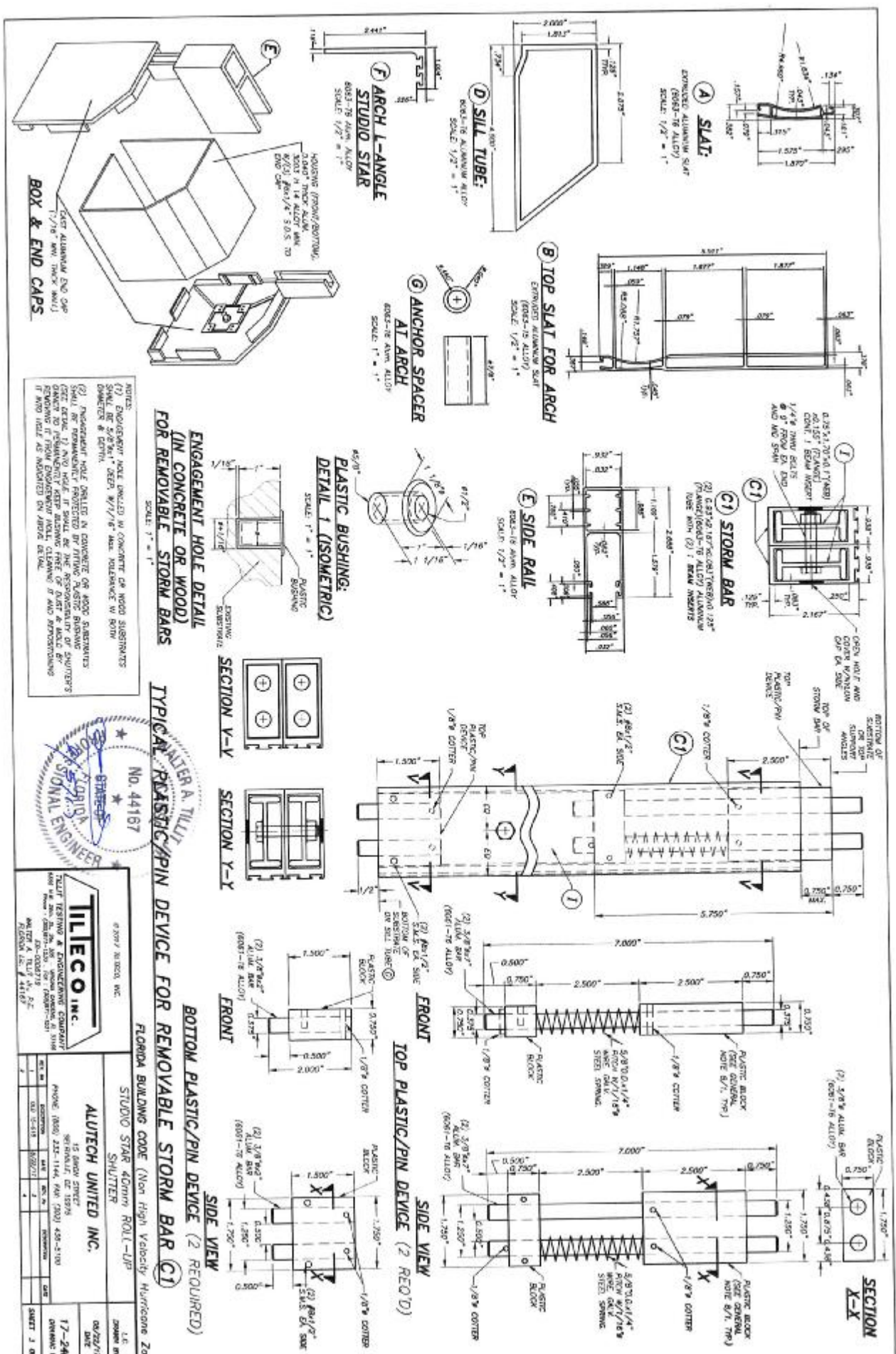
FLORIDA BUILDING CODE (Non High Velocity Hurricane Zone)

STUDIO STAR 40mm Roll-Up
 SHUTTER

ALUTECH UNITED INC.
 15 GARDEN STREET
 SCOTTSVILLE, FL 32959
 PHONE: (888) 233-1144 FAX: (352) 438-9100

DATE: 08/28/17
 DRAWING NO: 17-240
 SHEET 2 OF 5

REV	NO.	DESCRIPTION	DATE
1	1	ISSUED FOR PERMIT	8/28/17
2	2	REVISED	8/28/17



NOTES:

(1) ENGAGEMENT HOLE DRILLED IN CONCRETE OR WOOD SUBSTRATES SHALL BE 5/8" DIA. DEEP 3/16" MAX. RECESSED TO 3/8" DIAMETER & 1/2" DEEP.

(2) PLASTIC HOLE DRILLED IN CONCRETE OR WOOD SUBSTRATES SHALL BE PERMANENTLY PROTECTED BY FITTING PLASTIC BUSHING. SEE DETAIL (F) AND HOLE PROTECTIVE SHEATHING DETAIL (G) FOR PROTECTIVE SHEATHING. IT MUST BE REMOVED FROM ENGAGEMENT HOLE CLEANING & MUST BE REPOSITIONED IF NOT HELD AS INDICATED ON ABOVE DETAIL.

FLORIDA REGISTERED PROFESSIONAL ENGINEER

NO. 44187

TILTECO INC.

15 8000 STREET
 ALUTECH UNITED INC.
 PHONE: (888) 233-1144 FAX: (202) 435-1100
 17-240
 DRAWING NO.

ALUTECH UNITED INC.

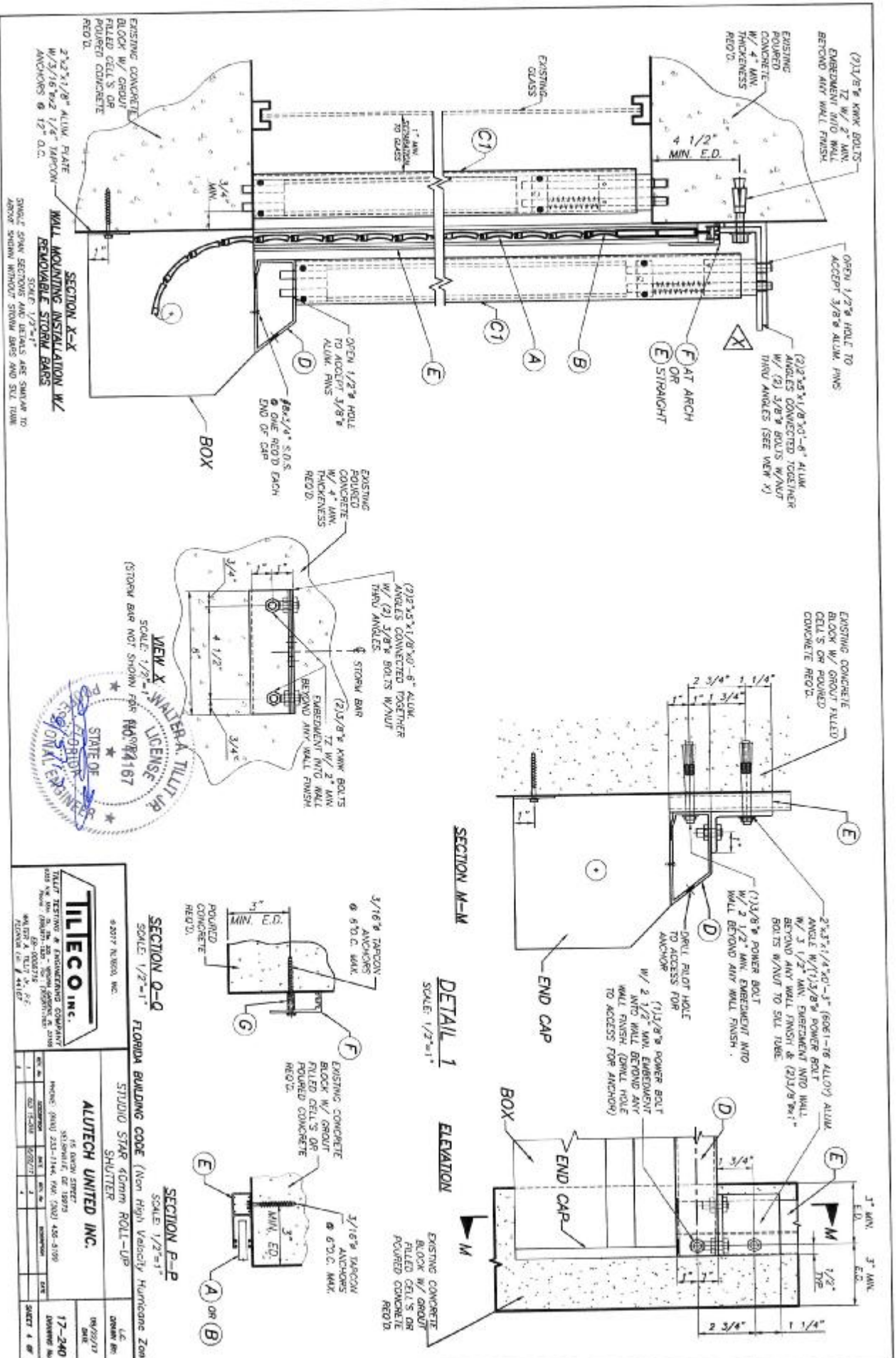
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 DRAWING NO.

17-240
 DRAWING NO.

TYPICAL PLASTIC/PIN DEVICE FOR REMOVABLE STORM BAR (2 REQUIRED)

FLORIDA BUILDING CODE (Non High Velocity Hurricane Zone)

STUDIO STAR 400mm ROLL-UP SHUTTER



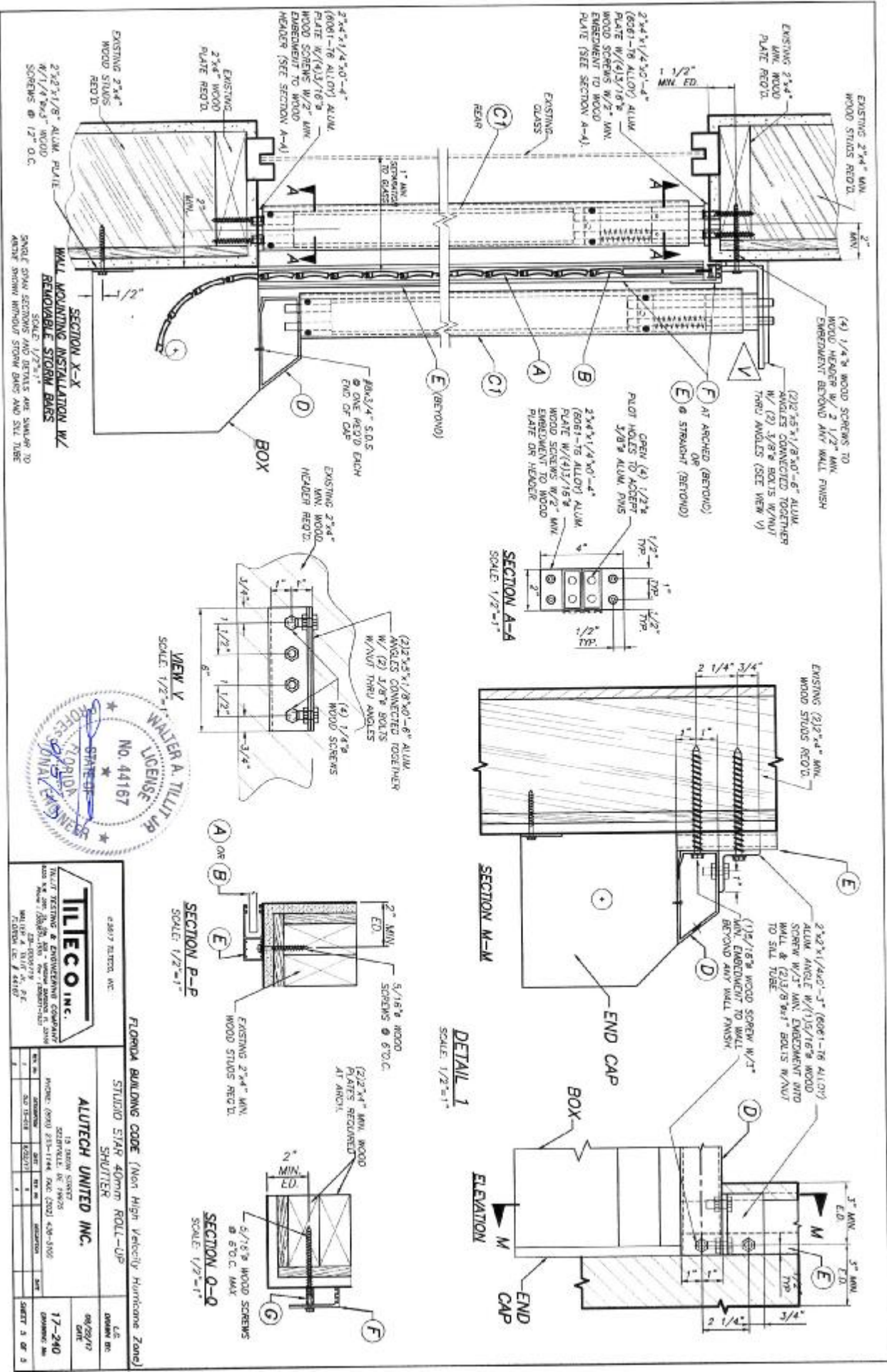
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TILE TESTING & ENGINEERING COMPANY
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17-240
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CHECKED BY
DATE

FLORIDA BUILDING CODE (Non High Velocity Hurricane Zone)
STUDIO STAR 60mm ROLL-UP SHUTTER

SINGLE SHIM SECTIONS ARE SHOWN TO ABOVE SHOWN WITHOUT STORM BARS AND SILL TIE



EXISTING 2"x4" MIN. WOOD STUDS REQ'D.
 (4) 1/4" WOOD SCREWS TO WOOD HEADER W/ 2 1/2" MIN. EMBEDMENT BEYOND ANY WALL FINISH
 (2) 1/2" x 1/8" x 30" - 6" ALUM. ANGLE CONNECTED TOGETHER W/ (2) 3/8" BOLTS W/ NUT THRU ANGLES (SEE VIEW V)
 AT ARCHED (BEYOND) F
 OR STRAIGHT (BEYOND) E
 2"x4" x 1/4" x 30" - 4" (6061-T6 ALLOY) ALUM. PLATE W/ (4) 1/2" x 1/8" WOOD SCREWS W/ 2" MIN. EMBEDMENT TO WOOD PLATE (SEE SECTION A-A-1)
 2"x4" x 1/4" x 30" - 4" (6061-T6 ALLOY) ALUM. PLATE W/ (4) 1/2" x 1/8" WOOD SCREWS W/ 2" MIN. EMBEDMENT TO WOOD HEADER (SEE SECTION A-A-1)
 2"x4" EXISTING WOOD PLATE REQ'D.
 EXISTING 2"x4" WOOD STUDS REQ'D.
 2"x4" x 1/8" ALUM. PLATE W/ 1/4" x 1/8" WOOD SCREWS @ 12" O.C.
 WALL MOUNTING INSTALLATION W/ REMOVABLE STORM DOOR
 SCALE: 1/2" = 1'-0"

SECTION X-X
 SCALE: 1/2" = 1'-0"

SECTION A-A
 SCALE: 1/2" = 1'-0"

SECTION M-M
 SCALE: 1/2" = 1'-0"

DETAIL 1
 SCALE: 1/2" = 1'-0"

SECTION P-P
 SCALE: 1/2" = 1'-0"

SECTION O-O
 SCALE: 1/2" = 1'-0"



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 LICENSE NO. 44167

FLORIDA BUILDING CODE (Non High Velocity Hurricane Zone)

PROJECT:	STUDIO STAR 40TH FL. ROLL-UP SHUTTER	DATE:	08/29/13
DRAWN BY:	ALUTECHECH UNITED INC.	CHECKED BY:	
SCALE:	AS SHOWN	PROJECT NO.:	17-240
DATE:		DRAWING NO.:	
REVISION:		SHEET:	3 OF 3