Force Engineering & Testing Inc.
19530 Ramblewood Drive
Humble,TX 77338

Product Evaluation Report
TRI COUNTY METALS

29 Ga. Ultra-Rib Roof Panel over 7/16" OSB

Florida Product Approval # 17094.1
Florida Building Code 2010
Per Rule 61G20-3
Method: 1 –D

Category: Roofing
Subcategory: Metal Roofing
Compliance Method: 61G20-3.005(1)(d)
NON HVHZ

Product Manufacturer:
Tri County Metals
301 SE 16th Street
Trenton, Florida 32693

Engineer Evaluator:
Terrence E. Wolfe, P.E. # 44923
Florida Evaluation ANE ID: 1920

Validator:
Locke Bowden, P.E., FL #49704
9450 Alysbury Place
Montgomery, AL 36117

Contents:
Evaluation Report Pages 1 – 4

COLUMBIA COUNTY BUILDING DEPARTMENT
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Code Compliance
PLANS EXAMINER

TERRENCE E. WOLFE LICENSE No. 44923 STATE OF FLORIDA PROFESSIONAL ENGINEER

State of Florida CDA #12770

June 26, 2014

Force Engineering & Testing Inc.
19530 Ramblewood Drive
Humble, TX 77338

Compliance Statement: The product as described in this report has demonstrated compliance with the Florida Building Code 2010, Sections 1504 3.2, 1504.7.

Product Description: Ultra-Rib Roof Panel, Min. 29 Ga. Steel, 36" Wide, through fastened roof panel over one layer of asphalt shingles (optional) over 7/16" APA OSB decking. Non-Structural Application

Panel Material/Standards: Material: Minimum 29 Ga. Steel conforming to Florida Building Code 2010 Section 1507.4.3.
Yield Strength: Min. 80.0 ksi
Corrosion Resistance: Panel Material shall comply with Florida Building Code 2010, Section 1507.4.3.

Panel Dimension(s):
Thickness: 0 0145" min
Width: 36"
Rib Height: ¾" major rib at 9" O.C.
Panel Rollformer: MR5 Metal Roliforming Systems

Panel Fastener: #12-8 x 1-1/2" Woodgrip XG HWH with sealing washing or approved equal ¼" minimum penetration through decking.
Corrosion Resistance. Per Florida Building Code 2010, Section 1506.6, 1507.4.4

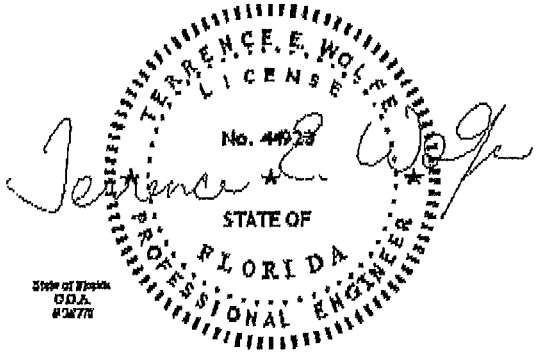
Substrate Description: One layer of asphalt shingles/felt paper (optional) over minimum 7/16" thick, APA Rated OSB over supports at maximum 24" O.C. Design of OSB and OSB supports are outside the scope of this evaluation. Substrate must be designed in accordance w/ Florida Building Code 2010

Design Uplift Pressures:

Table "A"

Maximum Total Uplift Design Pressure:	41.7 psf	123.5 psf
Fastener Pattern Type*	#1	#2
Fastener Pattern:	9"-9"-9"-9"	6"-3"-6"-3"-6"-3"-6"
Fastener Spacing:	24" O C	12" O.C.

*Design Pressure includes a Safety Factor = 2.0.

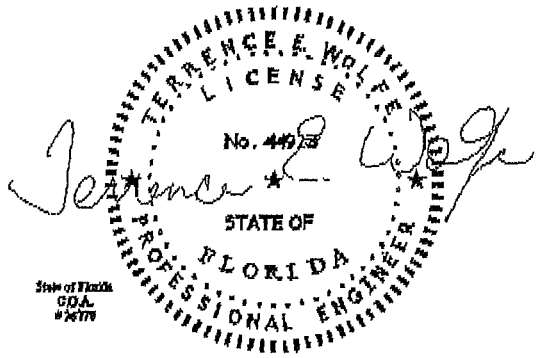


FL# 17094.1

June 26, 2014

Force Engineering & Testing Inc.
19530 Ramblewood Drive
Humble, TX 77338

Code Compliance:	The product described herein has demonstrated compliance with The Florida Building Code 2010, Section 1504.3.2, 1504.7
Evaluation Report Scope:	The product evaluation is limited to compliance with the structural wind load requirements of the Florida Building Code 2010, as relates to Rule 61G20-3
Performance Standards:	The product described herein has demonstrated compliance with: ▪ UL 580-06 - Test for Uplift Resistance of Roof Assemblies ▪ UL 1897-04 - Uplift Test for Roof Covering Systems ▪ FM 4471, Section 4.4 - Foot Traffic Resistance Test.
Reference Data:	1. UL 580-06 / 1897-04 Uplift Test Force Engineering & Testing, Inc. (FBC Organization # TST-5328) Report No 136-0044T-14A, B 2. FM 4471-10, Section 4.4 Foot Traffic Resistance Test Force Engineering & Testing, Inc. (FBC Organization # TST-5328) Report No. 136-0027T-12C 3 Certificate of Independence By Terrence E. Wolfe, P.E. (No. 44923) @ Force Engineering & Testing, Inc. (FBC Organization # ANE ID 1920)
Quality Assurance Entity:	The manufacturer has established compliance of roof panel products in accordance with the Florida Building Code and Rule 61G20-3.005 (3) for manufacturing under a quality assurance program audited by an approved quality assurance entity
Minimum Slope Range:	Minimum Slope shall comply with Florida Building Code 2010, including Section 1507.4.2 and in accordance with Manufacturers recommendations. For slopes less than 3:12, lap sealant must be used in the panel side laps.
Installation:	Install per manufacturer's recommended details
Underlayment:	Per Manufacturer's installation guidelines per Florida Building Code 2010 Section 1507.4.5
Roof Panel Fire Classification:	Fire classification is not part of this acceptance.
Shear Diaphragm:	Shear diaphragm values are outside the scope of this report.



FL# 17094.1

June 26, 2014

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Humble,TX 77338

Design Procedure:

Based on the dimensions of the structure, appropriate wind loads are determined using Chapter 16 of the Florida Building Code 2010 for roof cladding wind loads. These component wind loads for roof cladding are compared to the allowable pressure listed above. The design professional shall select the appropriate erection details to reference in his drawings for proper fastener attachment to his structure and analyze the panel fasteners for pullout and pullover. Support framing must be in compliance with Florida Building Code 2010 Chapter 22 for steel, Chapter 23 for wood and Chapter 16 for structural loading.

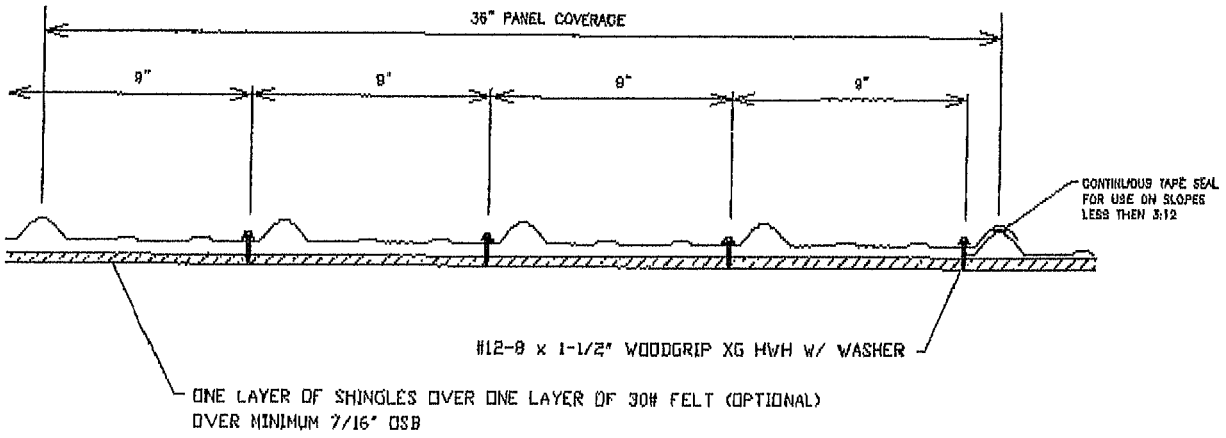
TERRENCE E. WOLFE
LICENSE
No. 44923
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

State of Florida
CBA
#26778

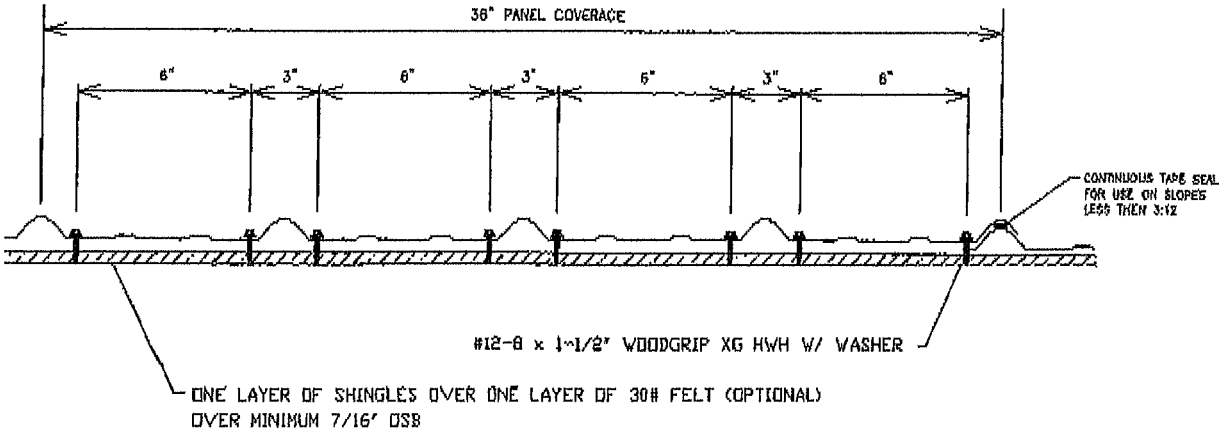
FL# 17094.1

June 26, 2014

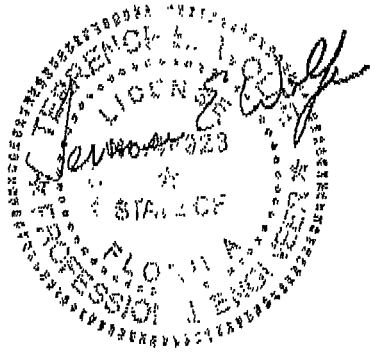
MINIMUM 29 GA. ULTRA-RIB PANEL
TYPE #1 FASTENER PATTERN AT 24" O.C.



MINIMUM 29 GA. ULTRA-RIB PANEL
TYPE #2 FASTENER PATTERN AT 12" O.C.



State of Florida
C.O.A.
28778

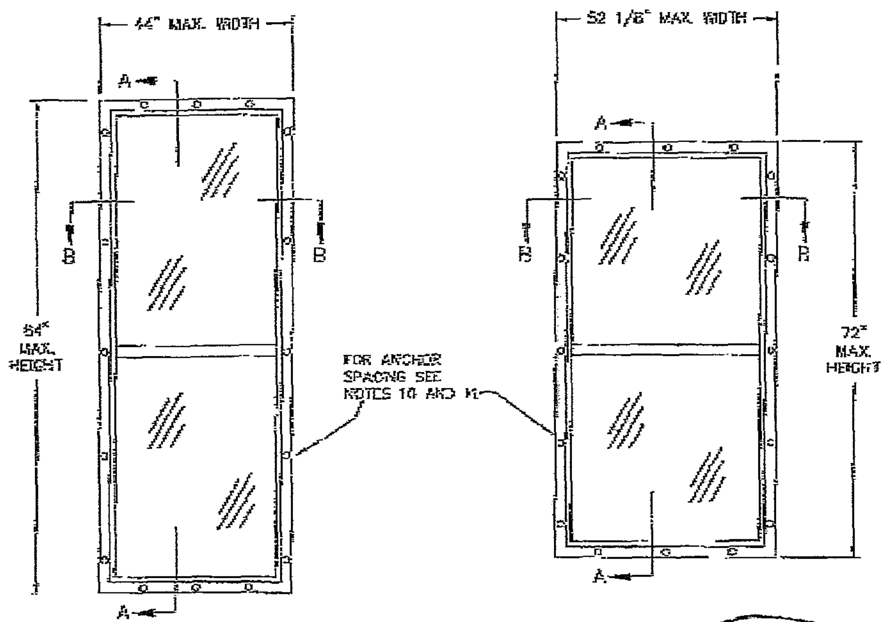


JUN 26 2014

Attn Troy
Fred Allen.
Scott Job.

Fla # 15217.13

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



ELEVATION
VIEWED FROM EXTERIOR

DESIGN PRESSURE RATING	IMPACT RATING
±40.0PSF	NONE

COLUMBIA COUNTY BUILDING DEPARTMENT
Received for FILE COPY Code Compliance
PLANS EXAMINER

GENERAL NOTES:

1) THE PRODUCT SHOWN HEREIN IS DESIGNED AND MANUFACTURED TO COMPLY WITH REQUIREMENTS OF FLORIDA BUILDING CODE.
2) OPENING TO BE DESIGNED AND ANCHORED TO PROPERLY TRANSFER ALL LOADS TO STRUCTURE. OPENING DESIGN IS THE RESPONSIBILITY OF THE ARCHITECT OR ENGINEER OF RECORD.
3) APPROVED IMPACT PROTECTIVE SYSTEM IS REQUIRED ON THIS PRODUCT IN WIND BORNE DEBRIS REGIONS
4) SHIM AS REQUIRED AT EACH INSTALLATION ANCHOR WITH LOAD BEARING SHIM. MAXIMUM ALLOWABLE SHIM STACK TO BE 1/4". SHIM WHERE SPACE IS 1/16" OR GREATER OCCURS.
5) WINDOW FRAME MATERIAL TO BE ALUMINUM ALLOY 6063-T5
6) USE CAULK BEHIND WINDOW FLANGE AT HEAD, JAMBS AND SILL.
7) USE CAULK FOR PERIMETER SEAL AROUND EXTERIOR OF WINDOW FLANGE.
8) GLASS THICKNESS MAY VARY PER THE REQUIREMENT OF ASTM E1300 GLASS CHARTS.
9) WHERE THE WATER RESISTANCE TEST REQUIREMENT OF 15% OF DESIGN LOAD APPLIES, POSITIVE DESIGN LOADS WILL BE LIMITED TO 40PSF DUE TO WATER TEST PRESSURE OF 6.0 PSF ACHIEVED IN TEST.
10) INSTALL FIN FRAME WINDOW WITH 0.120" DIA. 6d NAILS WITH A MINIMUM 1-1/2" EMBEDMENT INTO FRAMING. FOR NUMBER OF ANCHORS NEEDED REFER TO ANCHOR CHARTS IN SHEET 3. LOCATE ANCHORS 6" MAX. SPACING BETWEEN ANCHORS MUST NOT EXCEED 11"
11) INSTALL FIN FRAME WINDOW WITH #8 WOOD SCREW OF SUFFICIENT LENGTH TO ACHIEVE MIN. 1-1/2" EMBEDMENT INTO SUBSTRATE. FOR NUMBER OF ANCHORS REFER TO ANCHOR CHARTS IN SHEET 3. LOCATE ANCHORS 6" MAX. FROM CORNERS. SPACING BETWEEN ANCHORS MUST NOT EXCEED 11"
12) IF EXACT WINDOW SIZE IS NOT LISTED IN ANCHOR CHART, USE ANCHOR QUANTITY LISTED WITH NEXT LARGER SIZE FOR THE APPROPRIATE DESIGN PRESSURE REQUIRED.
13) ALLOWABLE STRESS INCREASE OF 1/3 WAS NOT USED IN THE DESIGN OF THE PRODUCT SHOWN HEREIN. WIND LOAD DURATION FACTOR Cd=1.6 WAS USED FOR WOOD ANCHOR CALCULATIONS.
14) INSTALLATION ANCHOR CAPACITIES FOR PRODUCTS HEREIN ARE BASED ON SUBSTRATE MATERIAL WITH THE FOLLOWING PROPERTIES:
A. WOOD MINIMUM SPECIFIC GRAVITY OF G=0.46

SIGNED: 02/15/2012

GENERAL ALUMINUM COMPANY
1001 W. CROSBY RD
CARROLTON, TX 75006

SERIES 5000/5300 TILT RECTANGULAR SH
44" X 84" AND 52 1/8" X 72" NON - IMPACT
ELEVATION AND GENERAL NOTES

DRAWN: F.A.	DWG NO. 08-00580	REV -
SCALE NTS	DATE 10/08/08	SHEET 1 OF 3

LUIS R. LOMAS LICENSE No. 62514 STATE OF FLORIDA PROFESSIONAL ENGINEER

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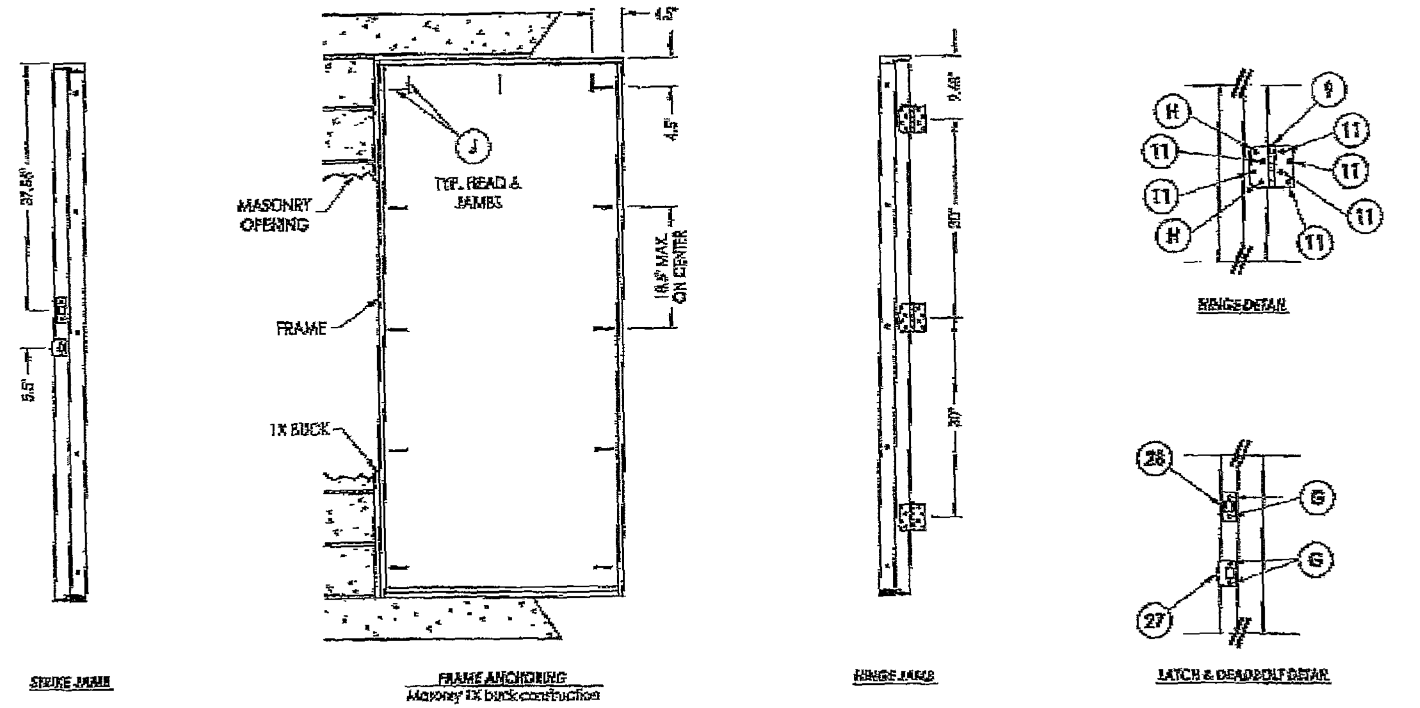

CONCRETE ANCHOR NOTES:

1. Substitution of equal concrete anchors from a different supplier may have different edge distance and center distance requirements.
2. Concrete anchor locations at the corners may be adjusted to maintain the min. edge distance to mortar joints. If concrete anchor locations noted as "MAX. ON CENTER" must be adjusted to maintain the min. edge distance to mortar joints, additional concrete anchors may be required to ensure the "MAX. ON CENTER" dimensions are not exceeded.
3. Concrete anchor table:

ANCHOR TYPE	ANCHOR SIZE	MIN. EMBEDMENT	MIN. CLEARANCE TO MASONRY EDGE	MIN. CLEARANCE TO ADJACENT ANCHOR
ITW	1/4"	1-1/4"	2-1/2"	3"
ITW	3/16"	1-1/4"	3-5/8"	2-1/4"

NO.	DATE	REVISIONS	BY

PRODUCT: PLASTPRO INC. FIBERGLASS DOOR

PART OR ASSEMBLY: FRAME ANCHORING 1X BUCK MASONRY CONSTRUCTION

Documents Prepared By:
R.W. BUILDING CONSULTANTS, INC.
P.O. Box 230 Valrico FL 33595
Phone No.: 813.659.9197
Florida Board of Professional Engineers Certificate Of Authorization No. 9813
Lyndon F. Schmidt, P.E. No. 43409

DATE: 02/15/12
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-15215.1
SHEET 6 OF 7

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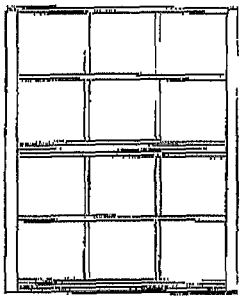
5000
5300
SINGLE HUNG



DIVIDED LITES

Report No.: ETC-11-014-25176.0
Expiration Date: June 20, 2015

Clear / Clear

Clear / Clear

Clear / Clear

Clear / Clear

National Fenestration Rating Council ®
CERTIFIED

Series 5000/5300
Aluminum Frame
Double Glazed Clear / Clear
AIR FILL With Muntins
Product Type: Single Hung
GEN-A-13-00022-00002

ENERGY PERFORMANCE RATINGS

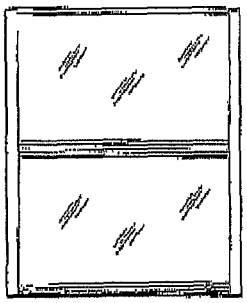
U-Factor(U.S./I.P.)	Solar Heat Gain Coefficient
0.64	**0.61**

ADDITIONAL PERFORMANCE RATING

Visible Transmittance	
0.62	———

Manufacturer stipulates that these ratings conform to applicable NFRC procedures for determining whole product performance. NFRC ratings are determined for a fixed set of environmental conditions and a specific product size. NFRC does not recommend any product and does not warrant the suitability of any product for any specific use. Consult manufacturer's literature for other product performance information.
www.nfrc.org

5000
5300
SINGLE HUNG



1/1 LITE

Clear / Clear

Clear / Clear

Clear / Clear

Clear / Clear

National Fenestration Rating Council ®
CERTIFIED

Series 5000/5300
Aluminum Frame
Double Glazed Clear / Clear
AIR FILL Without Muntins
Product Type: Single Hung
GEN-A-13-00022-00001

ENERGY PERFORMANCE RATINGS

U-Factor(U.S./I.P.)	Solar Heat Gain Coefficient
0.64	**0.67**

ADDITIONAL PERFORMANCE RATING

Visible Transmittance	
0.69	———

Manufacturer stipulates that these ratings conform to applicable NFRC procedures for determining whole product performance. NFRC ratings are determined for a fixed set of environmental conditions and a specific product size. NFRC does not recommend any product and does not warrant the suitability of any product for any specific use. Consult manufacturer's literature for other product performance information.
www.nfrc.org

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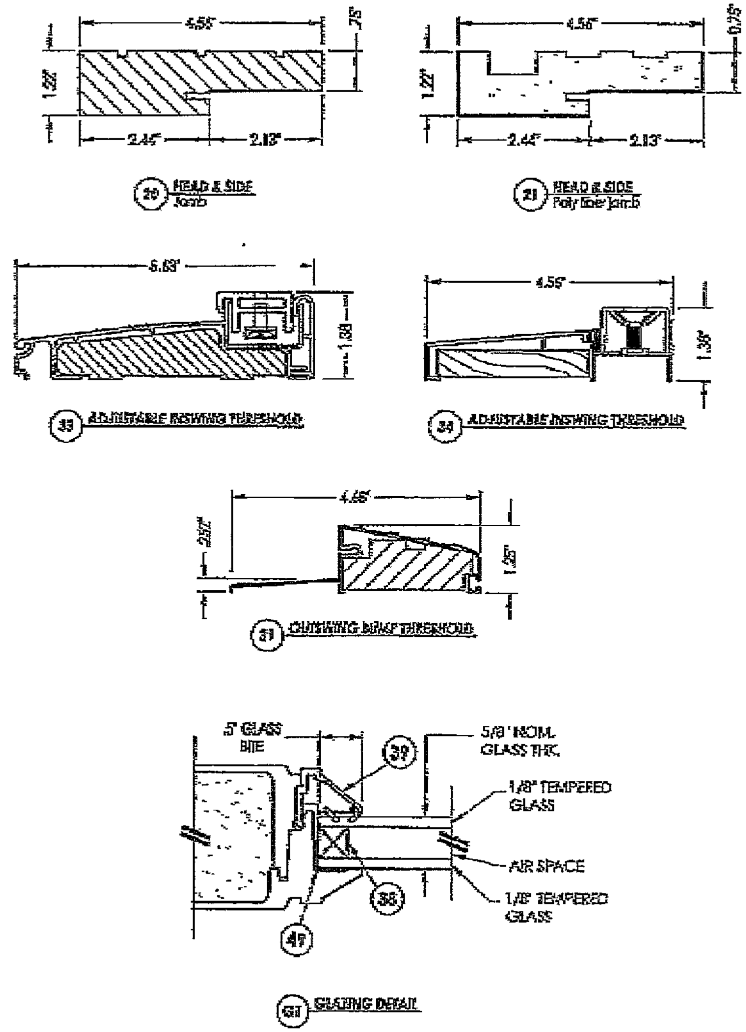
BILL OF MATERIALS

ITEM	DESCRIPTION	MATERIAL
A	1X BUCK SG >= 0.55	WOOD
B	2X BUCK SG >= 0.55	WOOD
C	1/4" MAX. SHIM SPACE	-
D	1/4" X 2-3/4" PFH ELCO OR ITW CONCRETE SCREW	STEEL
E	MASONRY - 3,192 PSI MIN. CONCRETE CONFORMING TO ACI 301 OR HOLLOW BLOCK CONFORMING TO ASTM C90	CONCRETE
G	3/16" X 3-1/4" PFH ITW CONCRETE SCREW	STEEL
H	1/4" x 3-1/4" PFH ITW CONCRETE SCREW	STEEL
J	1/4" X 3-3/4" PFH ITW CONCRETE SCREW	STEEL
K	#8 X 2-1/2" PFH WOOD SCREW	STEEL
L	#10 X 2-1/2" PFH WOOD SCREW	STEEL
M	#9 X 2-1/4" PFH WOOD SCREW	STEEL
7	Q-LON 650 WEATHER STRIP SCHLEGEL	FOAM
9	4" X 4" BUTT HINGE	STEEL
10	NOT USED	-
11	#9 X 3/4" PFH WOOD SCREW	STEEL
17	KWIKSET KEYED ENTRY - SIGNATURE SERIES	STEEL
18	KWIKSET DEADBOLT - SIGNATURE SERIES (780)	STEEL
20	FINGER JOINTED PINE FRAME, HEAD & HINGE JAMBS	WOOD
21	POLYFIBER JAMB	COMP. / VINYL
27	LATCH STRIKE PLATE	STEEL
28	DEADBOLT STRIKE PLATE	STEEL
30	WEATHER-STOP 3647 HOLM INDUSTRIES	VINYL
31	OUTSWING BUMP THRESHOLD	ALUM. / WOOD
33	INSWING ADJUSTABLE THRESHOLD BY ENDURA	ALUM. / WOOD
34	INSWING ADJUSTABLE ALUMINUM THRESHOLD BY DLP	ALUM. / WOOD
38	GLAZING SPACER	ALUM.
39	GLAZING BEAD	PVC
40	DOOR PANEL - SEE DOOR PANEL DETAIL SHEET FOR CONSTRUCTION DETAILS	-
41	DOOR SKIN (MIN. 0.075" THICK)	FIBERGLASS
42	TOP RAIL	CELLULAR PVC
43	LATCH & HINGE STILE	CELLULAR PVC
44	LOCK REINFORCEMENT	WOOD
45	BOTTOM RAIL	CELLULAR PVC
46	POLYURETHANE FOAM BY MAN YA	POLYURETHANE
47	CONTINUOUS LATCH & HINGE STILE REINFORCEMENT	WOOD
49	GLAZING COMPOUND DOW 995	SILICONE



Documents Prepared By:
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P.O. Box 230 Valrico, FL 33595
Phone No.: 813.659.9197
Florida Board of Professional Engineers
Certificate of Authorization No. 9813
Lyndon F. Schmidt, P.E. No. 43409

PRODUCT:	FLASTPRO INC. FIBERGLASS DOOR
PART OR ASSEMBLY:	BILL OF MATERIALS, GLAZING DETAIL, & COMPONENTS

NO.	DATE	REVISIONS	BY

DATE:	02/15/12
SCALE:	N.T.S.
DWG. BY:	JK
CHK. BY:	LFS
DRAWING NO.:	FL-15215.1
SHEET	7 of 7

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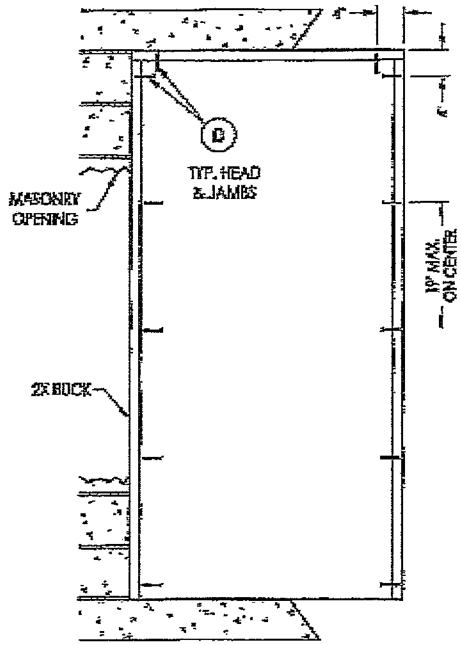
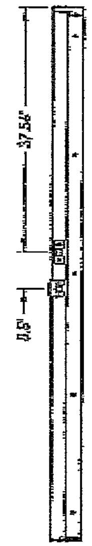
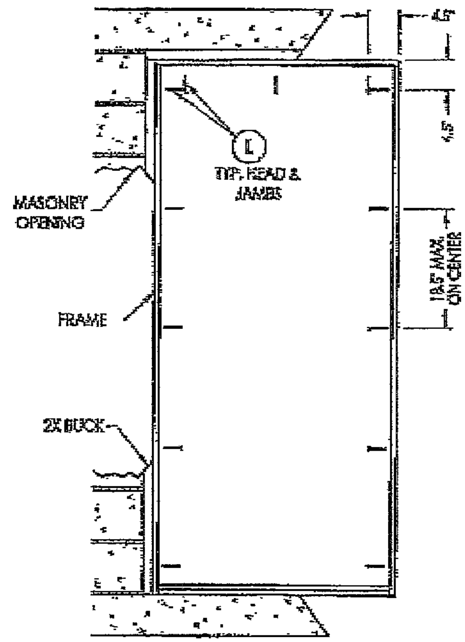


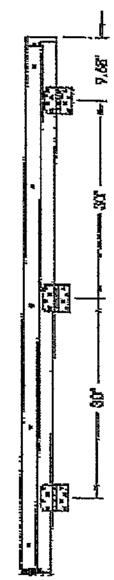
BUCK ANCHORING



STRIKE JAMB



FRAME ANCHORING
Masonry 2X buck construction



HINGE JAMB

CONCRETE ANCHOR NOTES:
1. Substitution of equal concrete anchors from a different supplier may have different edge distance and center distance requirements.
2. Concrete anchor locations at the corners may be adjusted to maintain the min. edge distance to mortar joints. If concrete anchor locations noted as "MAX. ON CENTER" must be adjusted to maintain the min. edge distance to mortar joints, additional concrete anchors may be required to ensure the "MAX. ON CENTER" dimensions are not exceeded.
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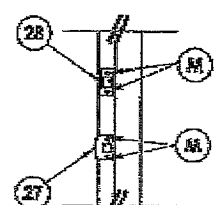
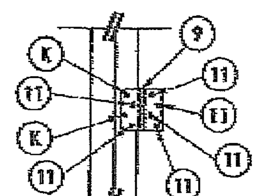
ITW	1/4"	1-1/4"	2-1/2"	3"
ELCO	1/4"	1-1/4"	1"	4"



LATCH & DEADBOLT DETAIL



HINGE DETAIL

NO.	DATE	REVISIONS	BY

PRODUCT: PLASTPRO INC. FIBERGLASS DOOR

PART OR ASSEMBLY: BUCK AND FRAME ANCHORING 2X BUCK MASONRY CONSTRUCTION

DATE: 02/15/12
SCALE: N.T.S.
DRN. BY: JR
CHK. BY: LFS
DRAWING NO.: FL-15215.1
SHEET 5 OF 7

Documents Prepared By:
RW BUILDING CONSULTANTS, INC.
P.O. Box 230 Valrico FL 33595
Phone No.: 813.659.9197
Florida Board of Professional Engineers Certificate Of Authorization No. 9813
Lyndon F. Schmidt, P.E. No. 43409

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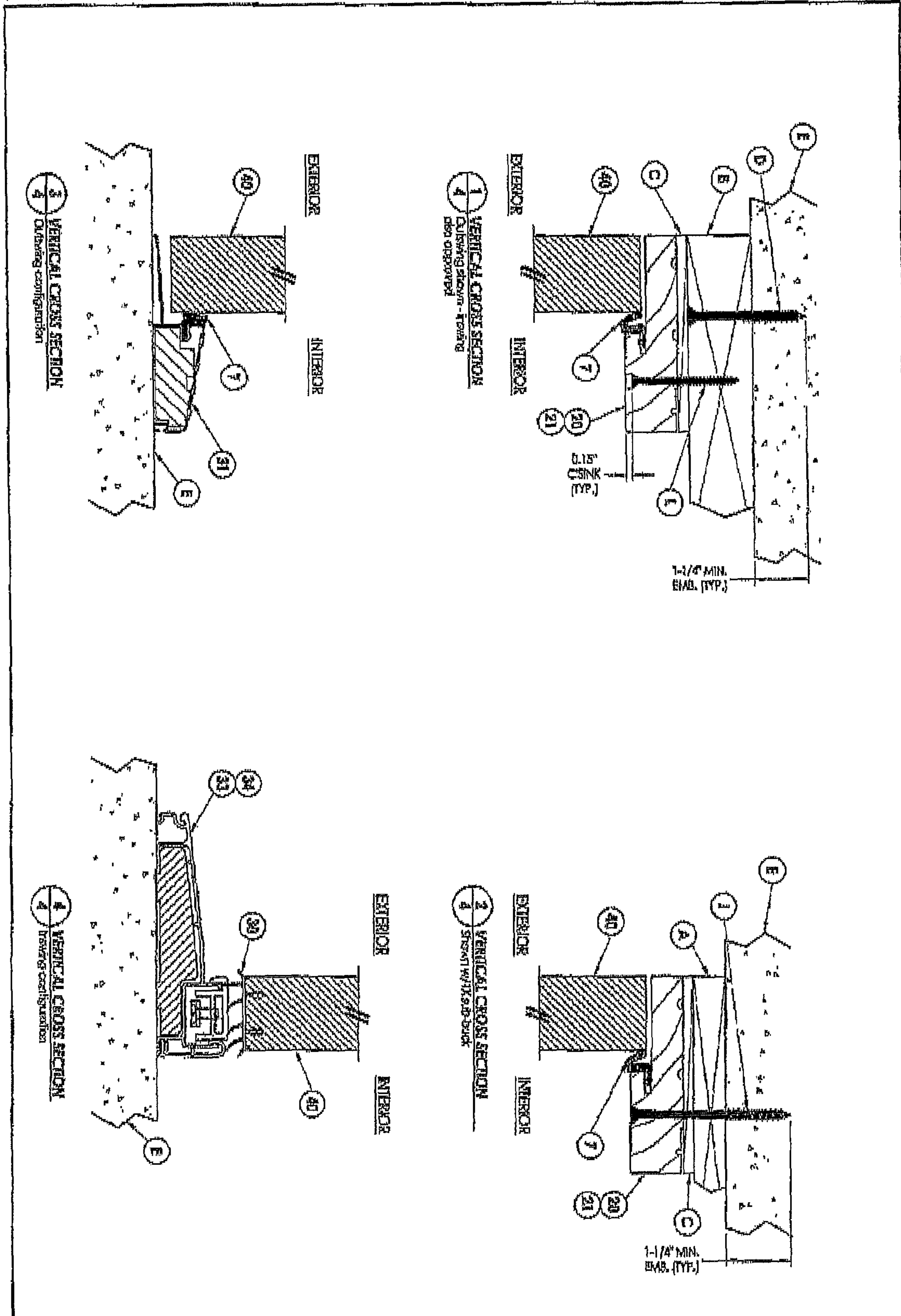

DATE: 02/15/12
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-15215.1
SHEET 4 OF 7

NO. | DATE | REVISIONS | BY

PRODUCT: PLASTPRO INC. FIBERGLASS DOOR

PART OR ASSEMBLY: VERTICAL CROSS SECTIONS

Documents Prepared By: RW BUILDING CONSULTANTS, INC. P.O. BOX 230 Valrico FL 33595 Phone No.: 813.659.9197
Florida Board of Professional Engineers Certificate Of Authorization No. 9813
Lyndon F. Schmidt, P.E. No. 43409

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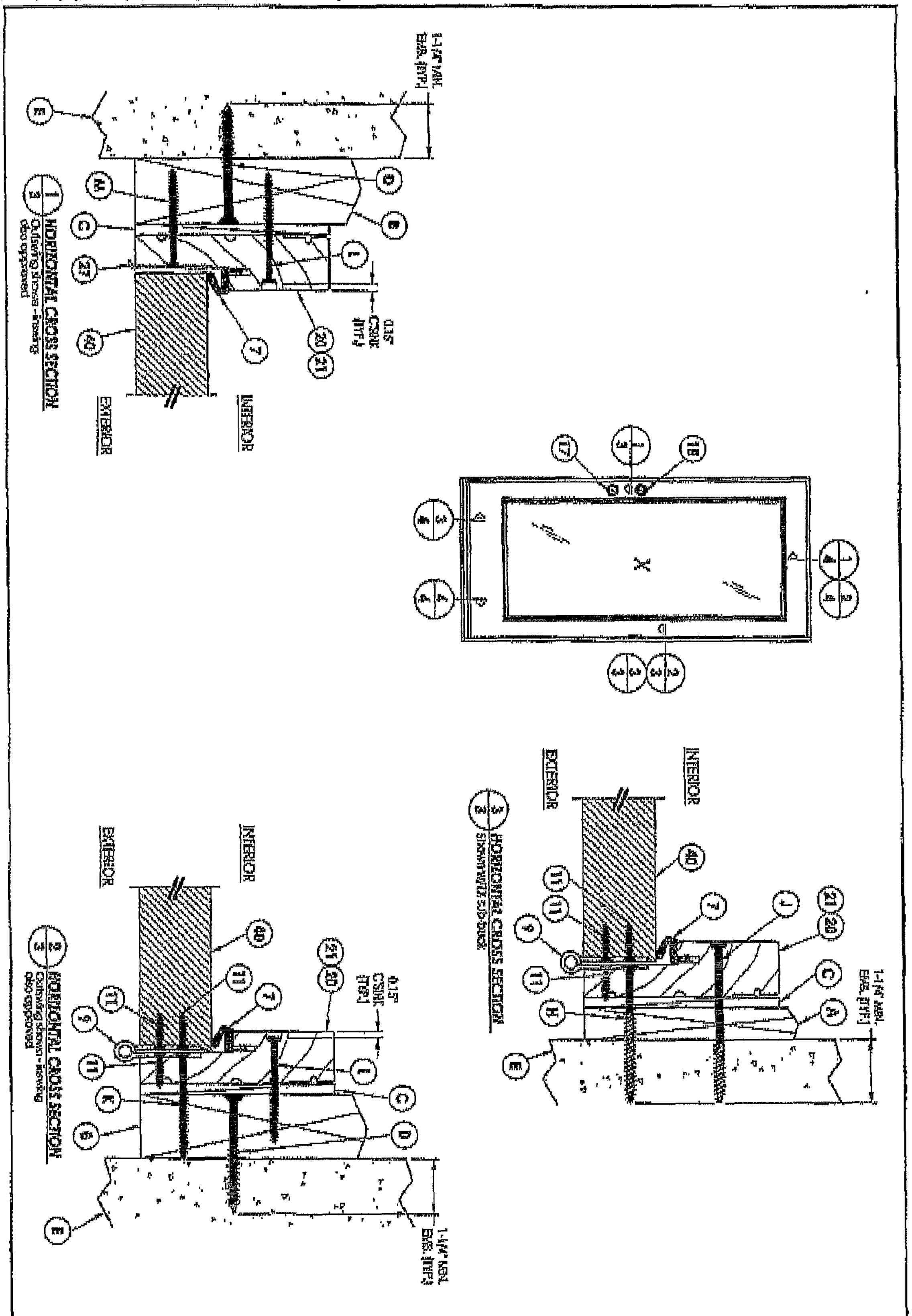

NO.	DATE	REVISIONS	BY

DATE: 02/15/12
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO. FL-15215.1
SHEET 3 OF 7

PRODUCT: PLASTPRO INC. FIBERGLASS DOOR

PART OR ASSEMBLY: HORIZONTAL CROSS SECTIONS

Documents Prepared by:
RW BUILDING CONSULTANTS, INC.
P.O. Box 230 Valrico FL 33595
Phone No.: 813.659.9197
Florida Board of Professional Engineers
Certificate of Authorization No. 9813
Lyndon F. Schmidt, P.E. No. 43409

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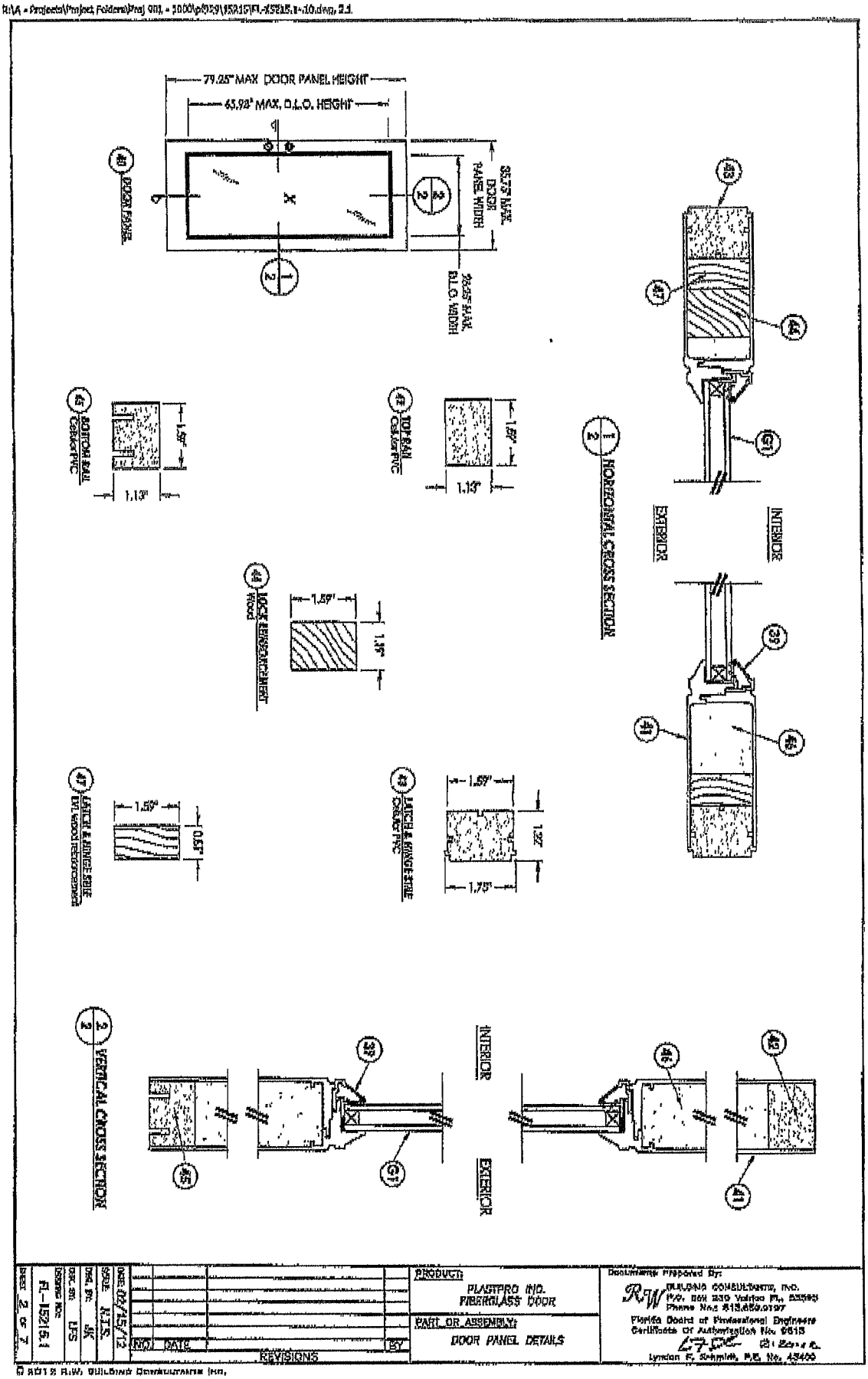

Sheet 2 of 7	FL-15215.1	DWG. BY: JK	ISSUE: N.T.S.	DATE: 08/15/12			
	Drawing No.	DSC. BY: LFS					
					NO.	DATE	REVISIONS

PRODUCT: PLASTPRO INC. FIBERGLASS DOOR

PART OR ASSEMBLY: DOOR PANEL DETAILS

Documents Prepared By:
R.W. BUILDING CONSULTANTS, INC.
P.O. Box 220 Valrico FL, 33595
Phone No.: 813.659.0197
Florida Board of Professional Engineers
Certificate of Authorization No. 9615
Lyndon F. Schmieh, P.E. No. 43406

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Fl # 15215.1

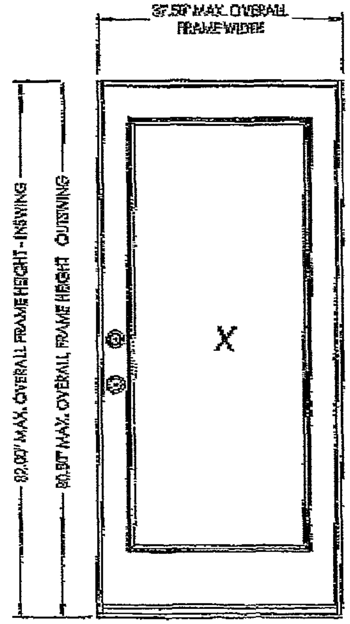
plastpro

5200 W. CENTURY BLVD.
LOS ANGELES, CA 90045

ONELITE SERIES
FLUSH GLAZED FIBERGLASS DOOR
INSWING / OUTSWING
"NON-IMPACT"

GENERAL NOTES

1. This product has been evaluated and is in compliance with the 2010 Florida Building Code (FBC) structural requirements excluding the "High Velocity Hurricane Zone" (HVHZ).
2. Product anchors shall be as listed and spaced as shown on details. Anchor embedment to base material shall be beyond wall dressing or stucco.
3. When used in areas requiring wind borne debris protection this product is required to be protected with an impact resistant covering that complies with Section 1609.1.2 of the 2010 FBC.
4. For 2x stud framing construction, anchoring of these units shall be the same as that shown for 2x buck masonry construction.
5. Site conditions that deviate from the details of this drawing require further engineering analysis by a licensed engineer or registered architect.



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SWING	OVERALL FRAME DIMENSION	OVERALL D.L.O. DIMENSION	GLASS TYPE	DESIGN PRESSURE (PSF) POSITIVE	DESIGN PRESSURE (PSF) NEGATIVE
INSWING	37.50" x 82.00"	26.25" x 65.93"	G1	+50.0	-50.0
OUTSWING	37.50" x 80.50"	26.25" x 65.93"	G1	+50.0	-50.0

NO.	DATE	REVISIONS	BY

PRODUCT: PLASTPRO INC. FIBERGLASS DOOR
PART OR ASSEMBLY: TYPICAL ELEVATION, DESIGN PRESSURES & GENERAL NOTES

Documents Prepared By: R.W. BUILDING CONSULTANTS, INC. P.O. Box 230 Valrico FL 33595 Phone No.: 813.659.9197 Florida Board of Professional Engineers Certificate of Authorization No. 8813
Lyndon F. Schmidt, P.E. No. 43409

DATE: 02/15/12
SCALE: N.T.S.
DWN. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-15215.1
SHEET 1 OF 7

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