

SAF METAL FABRICATORS
COMPOSITE WALL PANEL SYSTEM

GENERAL NOTES

1. THESE COMPOSITE WALL PANELS SHALL BE USED FOR WALL CONSTRUCTION, SOFFITS, AND OTHER EXTERIOR DETAILS WHOSE REQUIREMENTS FOR POSITIVE AND NEGATIVE PRESSURES ARE WITHIN THE VALUES STATED IN NOTE 2 OF THIS DRAWING. EACH ACTUAL WALL PROJECT SHALL BE CONSTRUCTED USING THE DETAILS SHOWN ON THESE DRAWINGS AS MINIMUM REQUIRED SPECIFICATIONS.
2. THE MAXIMUM DESIGN ALLOWABLE PRESSURES FOR THIS WALL PANEL SYSTEM ARE +70.0 PSF / –90.0 PSF
3. THIS WALL PANEL SYSTEM IS TESTED IN ACCORDANCE WITH THE FOLLOWING PROTOCOLS:
TAS–201–94, IMPACT TEST, LARGE MISSILE
TAS–202–94, UNIFORM STATIC AIR PRESSURE TEST, WATER PENETRATION AND AIR INFILTRATION
TAS–203–94, CYCLIC WIND PRESSURE TEST
AND IT SHALL BE INSTALLED AS SHOWN IN THESE APPROVED DRAWINGS.

MATERIAL SPECIFICATIONS:

ALUMINUM EXTRUSIONS

1. MATERIAL: 42620, 42621, 42622, 42623, AND 38500B STIFFENER ARE EXTRUDED ALUMINUM ALLOY 6063 WITH A T5 TEMPER. (By SAF Metal Fabrication)
2. MOUNTING FASTENERS: #12 x 2” HEX WASHER HEAD ITW TEK SCREW
3. FINISH: MILL FINISH.

COMPOSITE PANEL

1. ALUMINUM COMPOSITE METAL PANEL 4MM THICK (0.157”)

2. CORE: STANDARD & FIRE RATED THERMOPLASTIC MATERIAL WHICH IN COMPOSITE ASSEMBLY MEETS PERFORMANCE CHARACTERISTICS SPECIFIED. APPROVED CORES INCLUDE:

2.1.ALPOLIC/PE (4mm)
2.2.ALPOLIC/FR (4mm)
2.3.ALUCOBOND PE (4mm)
2.4.ALUCOBOND PLUS (FR Core) (4mm)
2.5.REYNOBOND RB160PE–4mm
2.6.REYNOBOND RB160FR–4mm

3. FACE SHEETS: 0.020” ALUMINUM 3105 (STRAIN HARDENED) ALLOY

4. FINISH: LUMIFLON–BASED FLUOROPOLYMER RESIN COATING.

5. MAXIMUM DIMENSIONS: 5’ WIDE X 12’ LONG

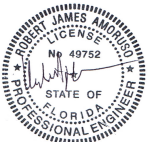
FRAMING & ACCESSORIES

1. STEEL STUDS AND TRACKS: 18 GA. MIN. GALVANIZED STEEL WITH MIN. PROPERTIES OF 50 KSI YIELD, 65 KSI ULTIMATE.
2. STUD & TRACK FASTENERS: #12 x 1 1/2” HEX WASHER HEAD ITW TEK SCREW.
3. PANEL FASTENERS: 5/32” DIA FLUSH HEAD BLIND RIVET SPACED AT 16” O.C.
4. STIFFENER FASTENERS: #10 x 1–1/2” WAFER HEAD ITW TEK SCREW.
5. STRUCTURAL SILICONE: DOW CORNING #1199 SILICONE SEALANT.
6. WALL PANEL SYSTEM SUPPORT:

6.1. THE STRUCTURAL ADEQUACY OF THE 18 GA. GALVANIZED STUDS AND THE 2X10 WOOD BUCK STRUCTURAL FRAMING USED IN TESTING TO SUPPRTT THE METAL PANELS/SUPPORTING EXTRUSIONS IS NOT PART OF THIS PRODUCT APPROVAL.
6.2. THE WOOD BUCK AND STEEL STUD FRAMING DETAILED IN THIS DRAWING WAS FOR TEST PURPOSES ONLY AND IS NOT INTENDED AS A RECOMMENDATION FOR ACTUAL CONSTRUCTION.
6.3. WALL PANEL SYSTEM SUPPORTING STRUCTURE SHALL BE REVIEWED BY THE STRUCTURAL PLANS EXAMINER OF THE CORRESPONDING BUILDING DEPARTMENT.

Fastener Schedule				
Description of Use	Fastener Type	Specification	Size	Corrosion Resistance - Remarks
Panel Support Extrusions to Steel Stud	ITW Buildex Teks Self-Drilling Fasteners, Hex Washer Head	ICC-ES ESR-1976	#12 x 2"	ITW Proprietary Climaseal® or plated with electrodeposited zinc (E-Zinc) complying with the minimum corrosion resistance requirements of ASTM F1941
Panel to Support Extrusions	Flush Head Blind Rivet	n/a	5/32"	300 Stainless Steel
	ITW Buildex Teks Self-Drilling Fasteners, Wafer Head	ITW Product Report No. 02705	#10 x 1-1/2"	Gray Spex
Steel Stud to Test Buck (not recommended for actual construction)	Pan or Hex Head Wood Screw	ANSI B18.6.1	#12 x 1-1/2"	This screw is used for test buck installation only. Corrosion resistance is not required.
Steel Stud to Steel Track (not part of this product approval)	ITW Buildex Tek 3 Self-Drilling Fasteners, Hex Washer Head	ICC-ES ESR-1976	#12 x 1-1/2"	This screw is used for test buck installation only. Corrosion resistance is not required.
5/8" Plywood to Steel Studs (not recommended for actual construction)	Self Drilling Flat Head Screw	n/a	#12 x 1-1/2" located 16" on center. Not shown on drawing section views.	This screw is used for test buck installation only. Corrosion resistance is not required.
The installation of the panel wall and support structure to substrate comprised of 5/8" plywood supported by steel studs and a wood test buck is not part of this product approval document and was for test purposes only. Fastening requirements for other code conforming substrates shall be the responsibility of others in conformance with the current edition of the Florida Building Code including use of corrosion resistant fasteners.				

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Date: 2014.12.19 13:30:02 -05'00'

REVISIONS		DESCRIPTION	DATE	BY
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ENGINEER
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PRODUCT
COMPOSITE WALL
PANEL SYSTEM

SAF0001 DRAWING – SHEET TITLE
GENERAL NOTES
AND TABLES

JOB NUMBER
414–0113
DRAWN BY: RJA
DATE: 12/9/2014
DRAWING DESCRIPTION
COVER
DRAWING NUMBER

1.01

PANEL ENGINEERING PROPERTIES

Property	ASTM	Testing Standard	Manufacturer Testing Data					
			Mitsubishi Plastics Composites America, Inc.		3A Composites USA		Reynobond	
			ALPOLIC/PE (4mm)	ALPOLIC/FR (4mm)	ALUCOBOND PE (4mm)	ALUCOBOND PLUS (FR Core) (4mm)	RB160PE-4mm	RB160FR-4mm
Strength Properties	E8/D638	Tensile Strength (psi)	6913 psi (ASTM E8)	7126 psi (ASTM E8)	6180 psi (ASTM D638)	6480 psi (ASTM D638)	6405 psi	6367 psi
	E8/D638	Tensile Yield Strength (psi)	6429 psi (ASTM E8)	6344 psi (ASTM E8)	6180 psi (ASTM D638)	5040 psi (ASTM D638)	6405 psi	6367 psi
	C297	Bond Integrity - Vertical Peel	1806 psi	427 psi	1625 psi	1160 psi	1371 psi	961 psi
	D1781	Bond Integrity - Drum Peel	33.6 in-lb/in	27.6 in-lb/in	177 N mm/mm	123 N mm/mm	40 in-lb/in	22.5 in-lb/in
	C273	Bond Integrity - Flatwise Shear	1225 psi	949 psi	920 psi	2180 psi	1221 psi (ASTM D1002)	928 (ASTM D1002)
Material Properties	D1929	Self-Ignition Temp > 650 deg. F	752°F	837°F	716°F	783°F	740°F	740°F
	E84	Flame Spread Index < 75	0	0	5	10	<25	<25
	E84	Smoke Density Index < 450	0	10	0	5	<450	<450
	D635	Rate of Burning, Class CC1 or CC2	CC1	CC1	CC1	CC1	CC1	CC1
Other	Thickness (in)		0.157	0.157	0.157	0.157	0.157	0.157
	Weight (lb/ft ²)		1.12	1.56	1.12	1.56	1.12	1.53

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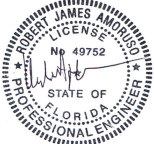
SHEET	DESCRIPTION
1.01	GENERAL NOTES AND TABLES
2.01	ELEVATIONS AND SECTION VIEWS
2.02	ELEVATION – STUD FRAMING
2.03	COMPONENTS & ELEVATIONS – EXTRUSION LAYOUT
3.01	DETAILS – CONNECTIONS

PERFORMANCE RATING

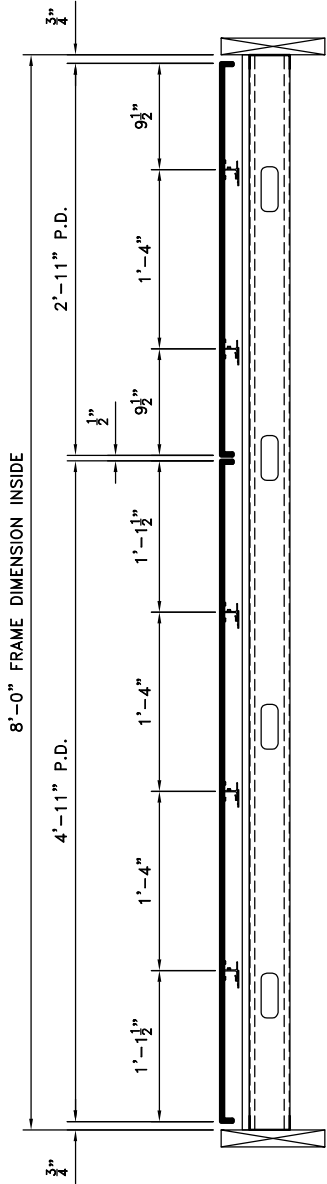
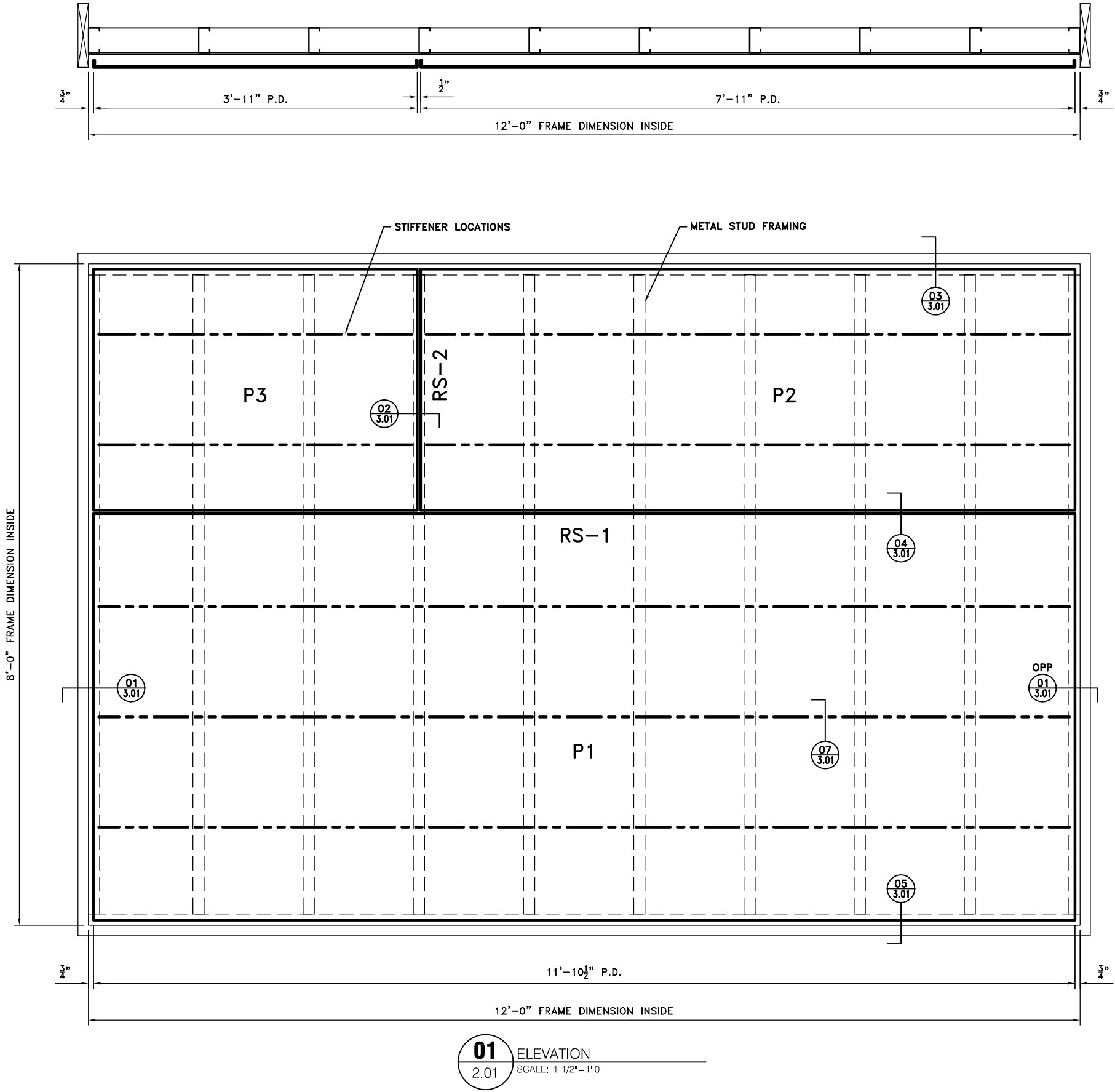
DESIGN PRESSURE	IMPACT RATING
+70/-90 PSF	LARGE MISSILE IMPACT

PER ATI/INTERTEK TEST REPORT NO. D9802.01-401-18, DATED 12/3/2014
INCLUDES WATER PENETRATION TESTING TO +70 PSF DP (10.5 PSF POSITIVE TEST PRESSURE) AND AIR INFILTRATION TESTING TO 1.57 PSF & 6.24 PSF.

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RS-2	1	4mm REVEAL STRIP	1.625 X 32.938
RS-1	1	4mm REVEAL STRIP	1.625 X 143.500
P3	1	PANEL	36.875 x 48.875
P2	1	PANEL	36.875 x 96.875
P1	1	PANEL	60.875 x 144.375
PART_ID	Count	PART_DESC1	CUTSIZE
PARTS LIST			

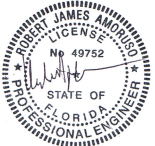
SAF0001 DRAWING - SHEET TITLE	PRODUCT	ENGINEER	REVISIONS		
			No.	DESCRIPTION	DATE BY
ELEVATION AND SECTION VIEWS	COMPOSITE WALL PANEL SYSTEM	PTC PRODUCT DESIGN GROUP LONGWOOD, FL 37252			
JOB NUMBER			414-0113		
DRAWN BY: RJA					
DATE: 12/9/2014					
DRAWING DESCRIPTION			ELEVATIONS		
DRAWING NUMBER			2.01		

**SAF** Metal Fabrication

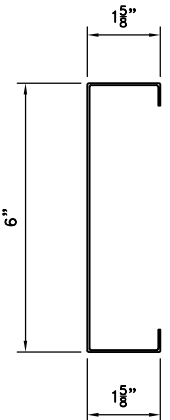
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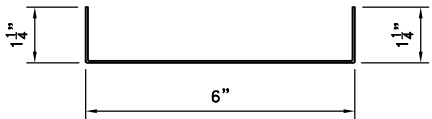
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METAL STUD

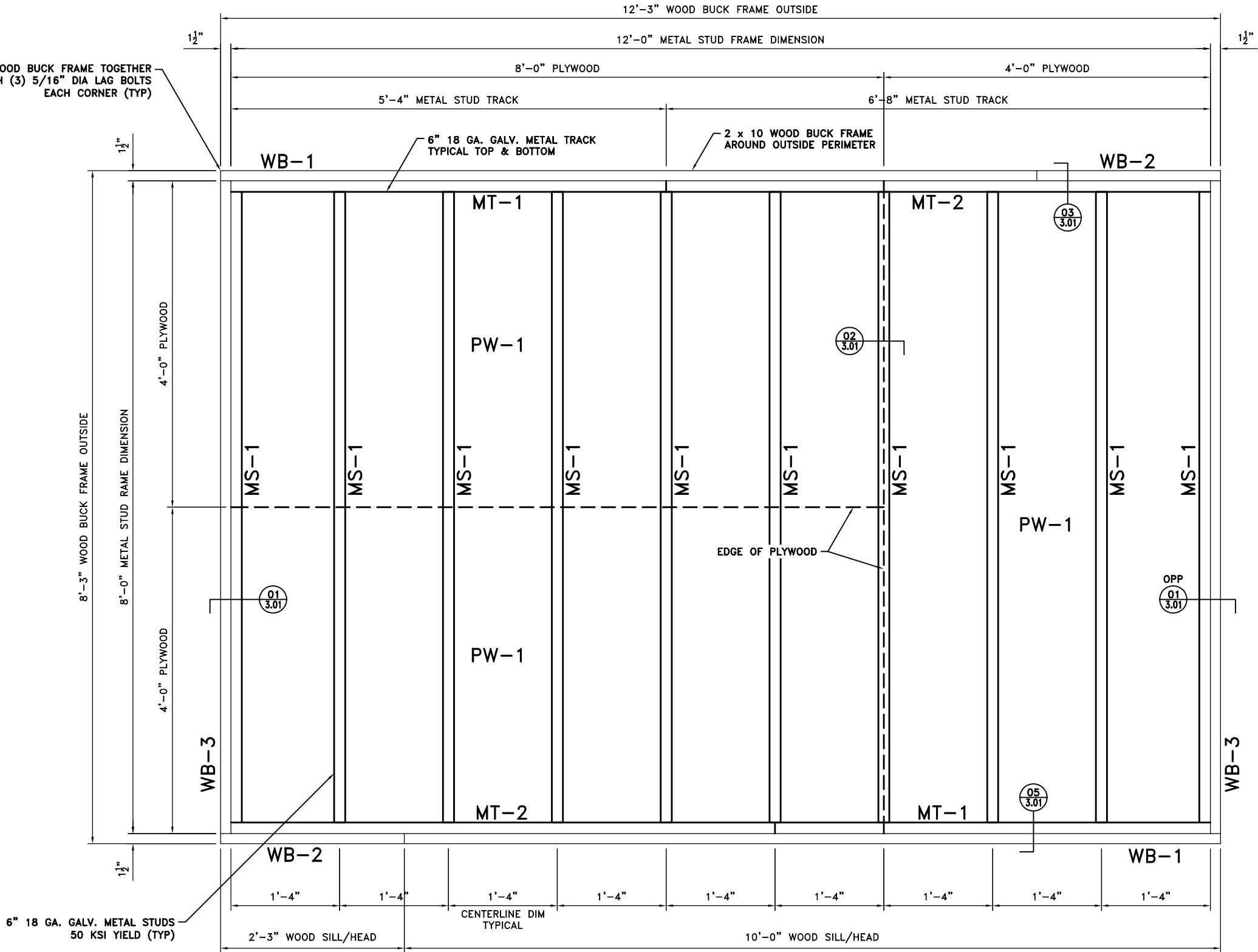


STUD TRACK

CONNECT WOOD BUCK FRAME TOGETHER
WITH (3) 5/16" DIA LAG BOLTS
EACH CORNER (TYP)

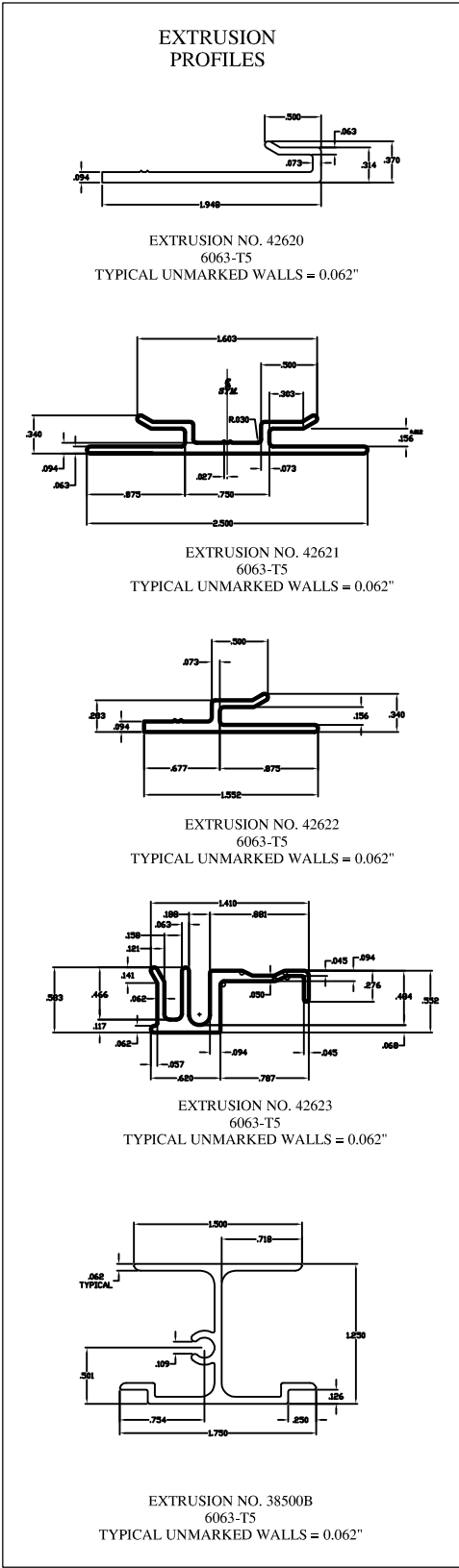
6" 18 GA. GALV. METAL STUDS
50 KSI YIELD (TYP)

WB-3	2	2x10 WOOD BUCK	8'-0"
WB-2	2	2x10 WOOD BUCK	2'-3"
WB-1	2	2x10 WOOD BUCK	10'-0"
PW-1	3	5/8" PLYWOOD	4' x 8'
MT-2	2	METAL TRACK	80.000
MT-1	2	METAL TRACK	64.000
MS-1	10	METAL STUD	95.750
PART_ID	Count	PART_DESC1	CUTSIZE
PARTS LIST			

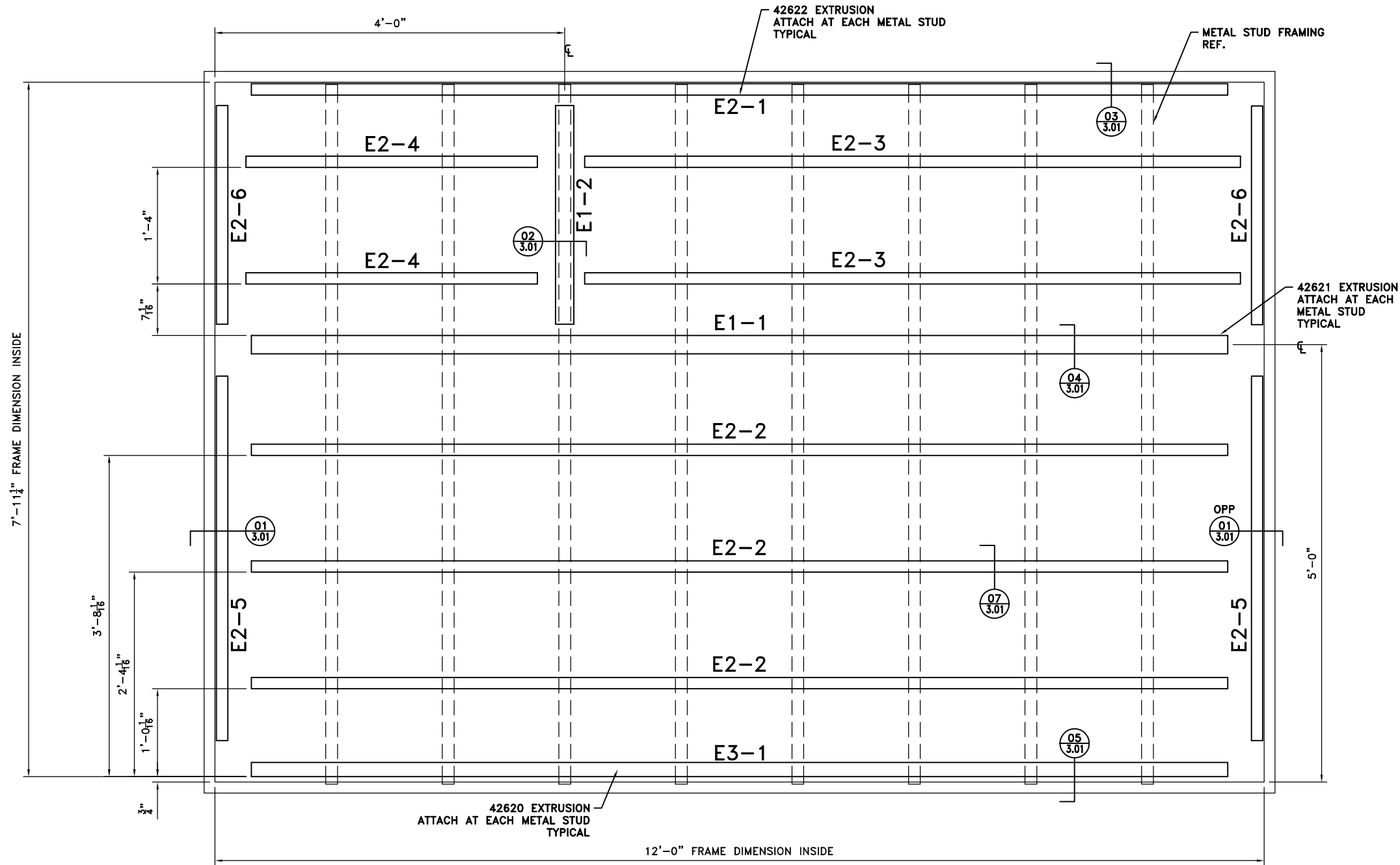


02 ELEVATION - STUD FRAMING
2.02 SCALE: 1-1/2" = 1'-0"

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SAF0001 DRAWING - SHEET TITLE			ELEVATION STUD FRAMING	
JOB NUMBER			414-0113	
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DRAWING DESCRIPTION			ELEVATIONS	
DRAWING NUMBER			2.02	

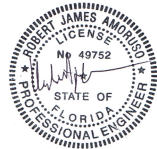


PART_ID	Count	PART_DESC1	CUTSIZE
PARTS LIST			
E3-1	1	42620 EXTRUSION	134.000
E2-6	2	42622 EXTRUSION	30.000
E2-5	2	42622 EXTRUSION	50.000
E2-4	2	42622 EXTRUSION	40.000
E2-3	2	42622 EXTRUSION	90.000
E2-2	3	42622 EXTRUSION	134.000
E2-1	1	42622 EXTRUSION	134.000
E1-2	1	42621 EXTRUSION	30.000
E1-1	1	42621 EXTRUSION	134.000



03
2.03
ELEVATION - EXTRUSION LAYOUT
SCALE: 1-1/2"=1'-0"

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SAF0001 DRAWING – SHEET TITLE		PRODUCT	ENGINEER	REVISIONS			
COMPONENTS & ELEVATION EXTRUSION LAYOUT		COMPOSITE WALL PANEL SYSTEM	PTC PRODUCT DESIGN GROUP LONGWOOD, FL 37252	No.	DESCRIPTION	DATE	BY
JOB NUMBER 414-0113							
DRAWN BY: RJA							
DATE: 12/9/2014							
DRAWING DESCRIPTION ELEVATIONS							
DRAWING NUMBER 2.03							

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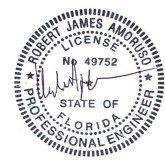
PRODUCT
COMPOSITE WALL
PANEL SYSTEM

01 JAMB DETAIL
3.01 SCALE: FULL

02 VERT DETAIL
3.01 SCALE: FULL

06 STIFFENER DETAIL
3.01 SCALE: FULL

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**TYPICAL NOTE:
SHIM IS OPTIONAL
USE AS REQUIRED**

07 STIFFENER DETAIL
3.01 SCALE: FULL

03 HEAD DETAIL
3.01 SCALE: FULL

04 HORZ DETAIL
3.01 SCALE: FULL

05 SILL DETAIL
2.01 SCALE: FULL

SAF0001 DRAWING - SHEET TITLE		PRODUCT	ENGINEER		Metal Fabrication 8370 HIGHWAY 78 PHONE: (770) 942-1207 VILLA RICA, GA 30180 FAX: (877) 949-4759			
JOB NUMBER 414-0113		COMPOSITE WALL PANEL SYSTEM	PTC PRODUCT DESIGN GROUP LONGWOOD, FL 37252		R E V I S I O N S			
DATE: 12/9/2014		DETAILS CONNECTIONS		No.	DESCRIPTION	DATE	BY	
DRAWING DESCRIPTION DETAILS								
DRAWING NUMBER 3.01								