



Farabaugh Engineering and Testing LLC.

Project No. T363-25

Report Date: December 22, 2025

No. Pages: 24 (inclusive)

PERFORMANCE TEST REPORT TAS 202 & 203

**FL PANEL SYSTEM
48"/96 3/4" WIDE X 48" HIGH X 0.063 ALUMINUM PANEL
WITH STIFFENERS @ 12" O.C.
(TESTED WEEK OF 11/3/25 -ROUND 6 – SPECIMEN #18)**

FOR

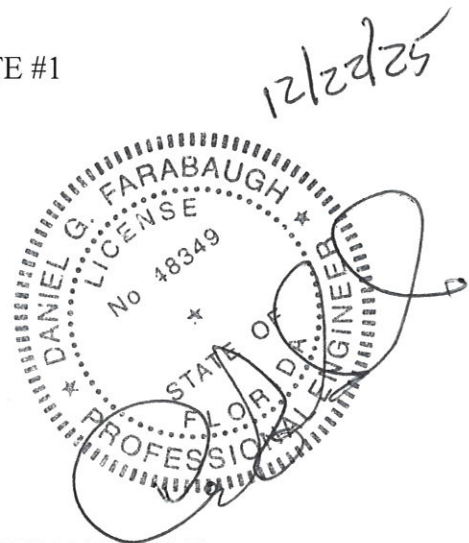
DRI-DESIGN
12480 SUPERIOR CT. SUITE #1
HOLLAND, MI. 49424

Prepared by:

Paul G. Farabaugh

Approved by:

Daniel G. Farabaugh PE.



DANIEL G. FARABAUGH, P.E.
255 Saunders Station Rd
Trafford, PA 15085
412-417-5153



AAMA
ACCREDITED
LABORATORY



FLORIDA
ACCREDITED
LABORATORY
& QC ENTITY



ACCREDITED
INSPECTION
AGENCY

AA-715

PERFORMANCE TEST REPORT

Test Specimen

Manufacturer: Dri-Design
12480 Superior Court
Holland, MI 49424

Panel: FL Metal Panel, Panel perimeter length was 48", 96 3/4" wide x 48" high. See installation drawings for panel coverage dimension. Panels consisted of 0.063" aluminum skin bonded with 0.063" aluminum "U" stiffeners spaced 12" o.c. using 3M G16 VHB tape. See panel drawing for fabrication of each panel. Note: All stiffeners and perimeter supports were shop applied. See panel layout for location of panels and location of stiffeners on each panel.

Substrate: 5/8" Dens Glass

Supports: C8 x 16 ga. steel channel supports

Test Date Completion: 11/7/2025

Design Pressure

SPECIMEN A, B, C = +60 PSF / -60 PSF

Test Witness:

Daniel G. Farabaugh, PE (Florida PE. #0048349)
255 Saunders Station Road
Trafford, PA. 15085

Test Procedure

The tests were conducted in accordance with the following test methods:

- Testing Application Standard (TAS) 202-94 Criteria for Testing Impact and Non Impact Resistant Building Envelope Components Using Static Air Pressure.
- Testing Application Standard (TAS) 203-94 Criteria for Testing Products Subject to Cyclic Wind Pressure Loading.

Test Assembly

- The test specimen mock-up consisted of metal panel system that measured as 12'-1"4" wide x 8'-4" high (approximately). The mock-up had two panels on the bottom with three horizontal panels on top. See Drawing 1 of 16 for layout of panels and panel dimensions. The mock-up support framing consisted of 16 ga. steel horizontal studs spaced at 16" o.c. that attached to a 16 ga. track at the ends of the studs.
- On top of the stud supports was a layer of 5/8" thick DensGlass that was attached to the metal studs with #6 x 1-1/4" long, #2 self drill pt. drywall screws with a spacing of 8" o.c. along each horizontal stud support. 16 ga. steel hat girts located at 16" o.c. were attached vertically to the top of the DensGlass and into the horizontal stud supports that were perpendicular to the girts using (2) 1/4"-14 x 1-1/2" long, hex head, self-drilling fasteners.
- The panels were then attached into 16ga. vertical steel girt supports that were located at 16" o.c. A single extruded aluminum start track was attached to the studs with (2) 1/4"-14 x 1-1/2" long, hex head, self-drilling fasteners at each support. The bottom panels slid under the starter track leg. The panel was fastened to the steel girt supports with (2) 1/4"-14 x 1-1/2" long, hex head, self-drilling fasteners at each girt support. The next column of panels slid under the first set of panels and the opposite end was fastened to the steel girts located at 16" o.c. using same fasteners. See installation drawings for fastener locations and panel installation.
- 4 mil Plastic Sheeting was placed over top face of panel for the positive direction testing and then the panel had the plastic covering between the DensGlass substrate and the exposed back of the panel and tested in the negative direction.

TAS 202-94

UNIFORM STATIC AIR PRESSURE TEST

TEST SPECIMEN "A"

SPECIMEN: 4' Wide FL Metal Panel, 0.063" thick aluminum panel w/12" o.c. stiffeners

DESIGN PRESSURE = +60 psf / -60 psf

UNIFORM STATIC AIR PRESSURE TEST AT DESIGN LOAD

Test Load (psf)	Max. Net Deflection (in)
+60	0.590
-60	0.631

UNIFORM STATIC AIR PRESSURE TEST AT 1.5 X DESIGN LOAD

Test Load (psf)	Max. Net Permanent Set (in)
+90	0.047
-90	0.210

Results

Upon completion of the pressures noted above there were no noticeable failures of the specimen.

TEST SPECIMEN "A"

SPECIMEN: 8' Wide FL Metal Panel, 0.063" thick aluminum panel w/12" o.c. stiffeners

DESIGN PRESSURE = +60 psf / -60 psf

UNIFORM STATIC AIR PRESSURE TEST AT DESIGN LOAD

Test Load (psf)	Max. Net Deflection (in)
+60	0.612
-60	0.746

UNIFORM STATIC AIR PRESSURE TEST AT 1.5 X DESIGN LOAD

Test Load (psf)	Max. Net Permanent Set (in)
+90	0.021
-90	0.277

Results

Upon completion of the pressures noted above there were no noticeable failures of the specimen.

TAS 203-94

CYCLIC WIND PRESSURE LOADING

TEST SPECIMENS: A, B, C

SPECIMEN: 4' Wide FL Metal Panel, thick aluminum panel w/12" o.c. stiffeners

DESIGN PRESSURE: +60 PSF / -60 PSF

INWARD (+) ACTING PRESSURE

RANGE	TEST PRESSURE (PSF)	NUMBER OF CYCLES
0 TO 0.5P	0 TO 30	600
0 TO 0.6P	0 TO 36	70
0 TO 1.3P	0 TO 78	1

SPECIMEN	MAX NET. DEFLECTION (IN)	MAX. NET PERMANENT SET (IN)
A	0.730	<1/16"
B	0.665	<1/16"
C	0.675	<1/16"

OUTWARD (-) ACTING PRESSURE

RANGE	TEST PRESSURE (PSF)	NUMBER OF CYCLES
0 TO 0.5P	0 TO 30	600
0 TO 0.6P	0 TO 36	70
0 TO 1.3P	0 TO 78	1

SPECIMEN	MAX NET. DEFLECTION (IN)	MAX NET. PERMANENT SET (IN)
A	0.672	<1/16"
B	0.654	<1/16"
C	0.878	0.082

RESULTS

Upon completion of the cycles at the pressures noted above, there were no noticeable failures of the specimens.

TAS 203-94 CYCLIC WIND PRESSURE LOADING (CONT.)

TEST SPECIMENS: A, B, C

SPECIMEN: 8' Wide FL Metal Panel, 0.063" thick aluminum panel w/12" o.c. stiffeners

DESIGN PRESSURE: +60 PSF / -60 PSF

INWARD (+) ACTING PRESSURE

RANGE	TEST PRESSURE (PSF)	NUMBER OF CYCLES
0 TO 0.5P	0 TO 30	600
0 TO 0.6P	0 TO 36	70
0 TO 1.3P	0 TO 78	1

SPECIMEN	MAX NET. DEFLECTION (IN)	MAX. NET PERMANENT SET (IN)
A	0.712	<1/16"
B	0.557	< 1/16"
C	0.518	< 1/16"

OUTWARD (-) ACTING PRESSURE

RANGE	TEST PRESSURE (PSF)	NUMBER OF CYCLES
0 TO 0.5P	0 TO 30	600
0 TO 0.6P	0 TO 36	70
0 TO 1.3P	0 TO 78	1

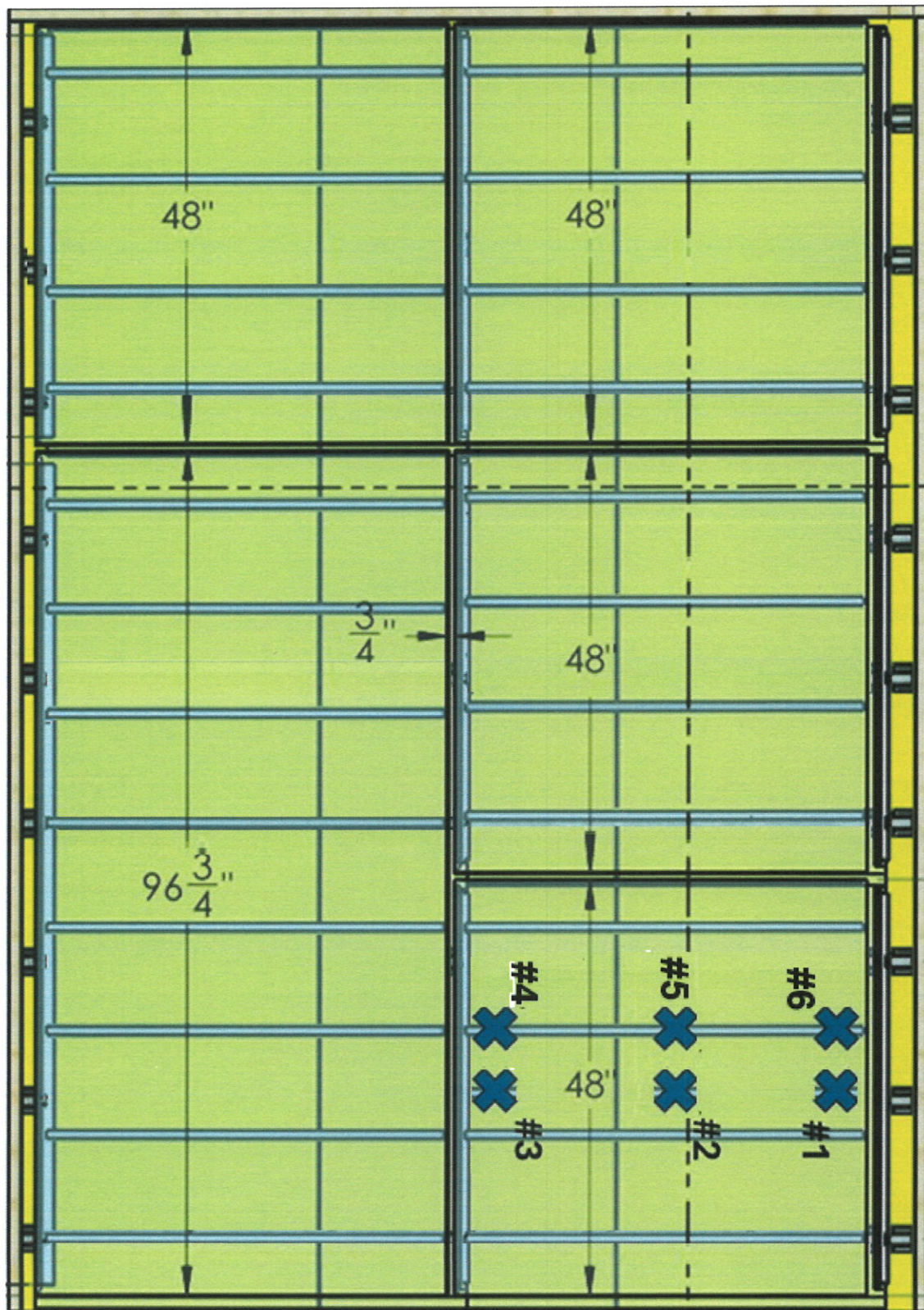
SPECIMEN	MAX NET. DEFLECTION (IN)	MAX NET. PERMANENT SET (IN)
A	0.679	<1/16"
B	0.583	<1/16"
C	0.780	<1/16"

RESULTS

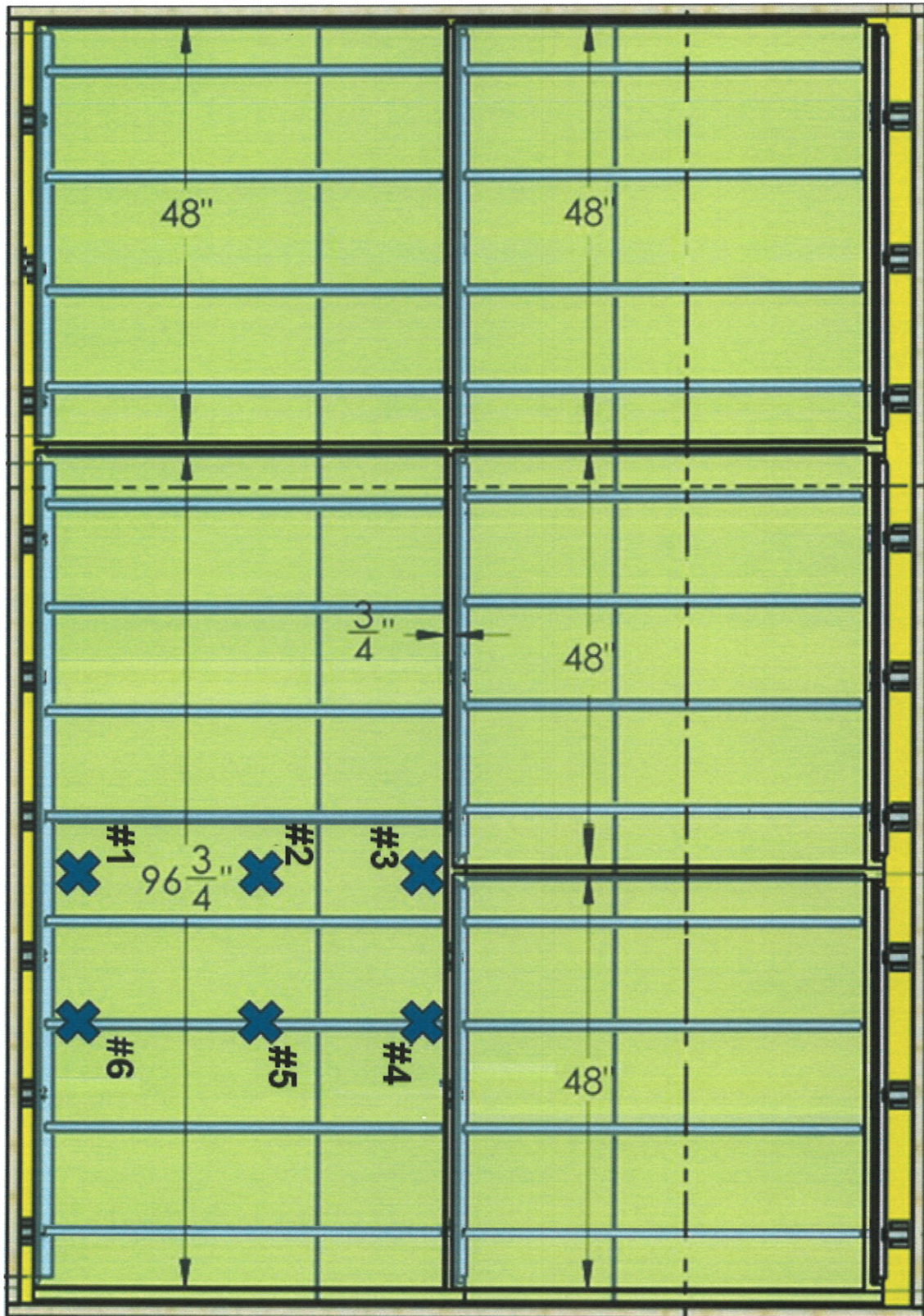
Upon completion of the cycles at the pressures noted above, there were no noticeable failures of the specimens.

TAS 202 & TAS 203 DEFLECTOMETER LOCATIONS

4' Panel



8' Panel



Test Setup #18 (TAS 201-202, 203)

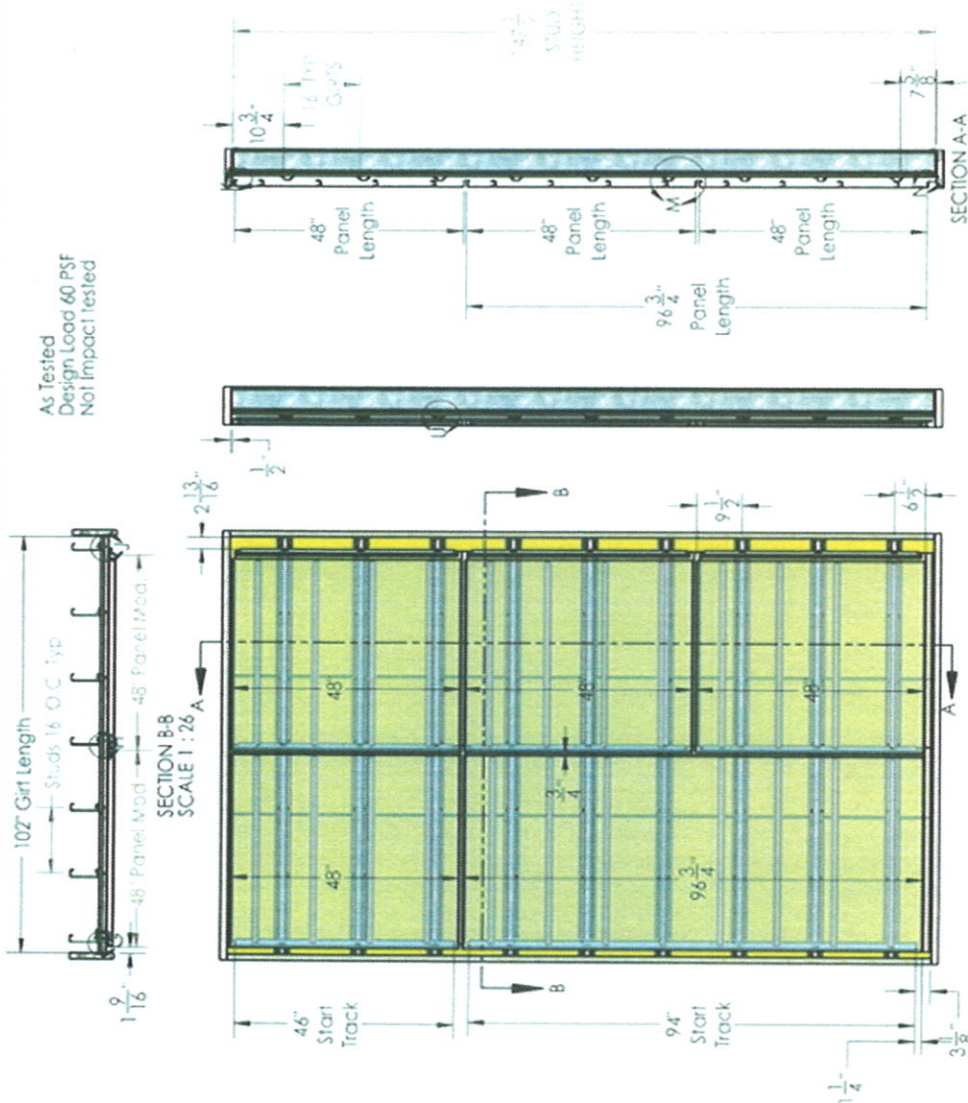
- (4) 48" x 48" Panels ✓
- (1) 48" x 96 3/4" Panel ✓
- .063" Panel Skins ✓
- .063" Stiffeners, 12" O.C. ✓
- 3/4" Wide 3M G16 VHB Tape ✓
- 16 GA Girts, 16" O.C. ✓
- 16 GA Studs, 16" O.C. ✓
- 2x 1/4-14 Fasteners, 16" O.C. ✓
- .125" Formed Aluminum Start Tracks ✓
- 1x .063" Top-Edge ✓
- 2x .080" Top Edge ✓

F.E.T. INC.
Review for general compliance
with test report AS NOTED ONLY

BY: JF
PROJECT # T363-25

✓-JF

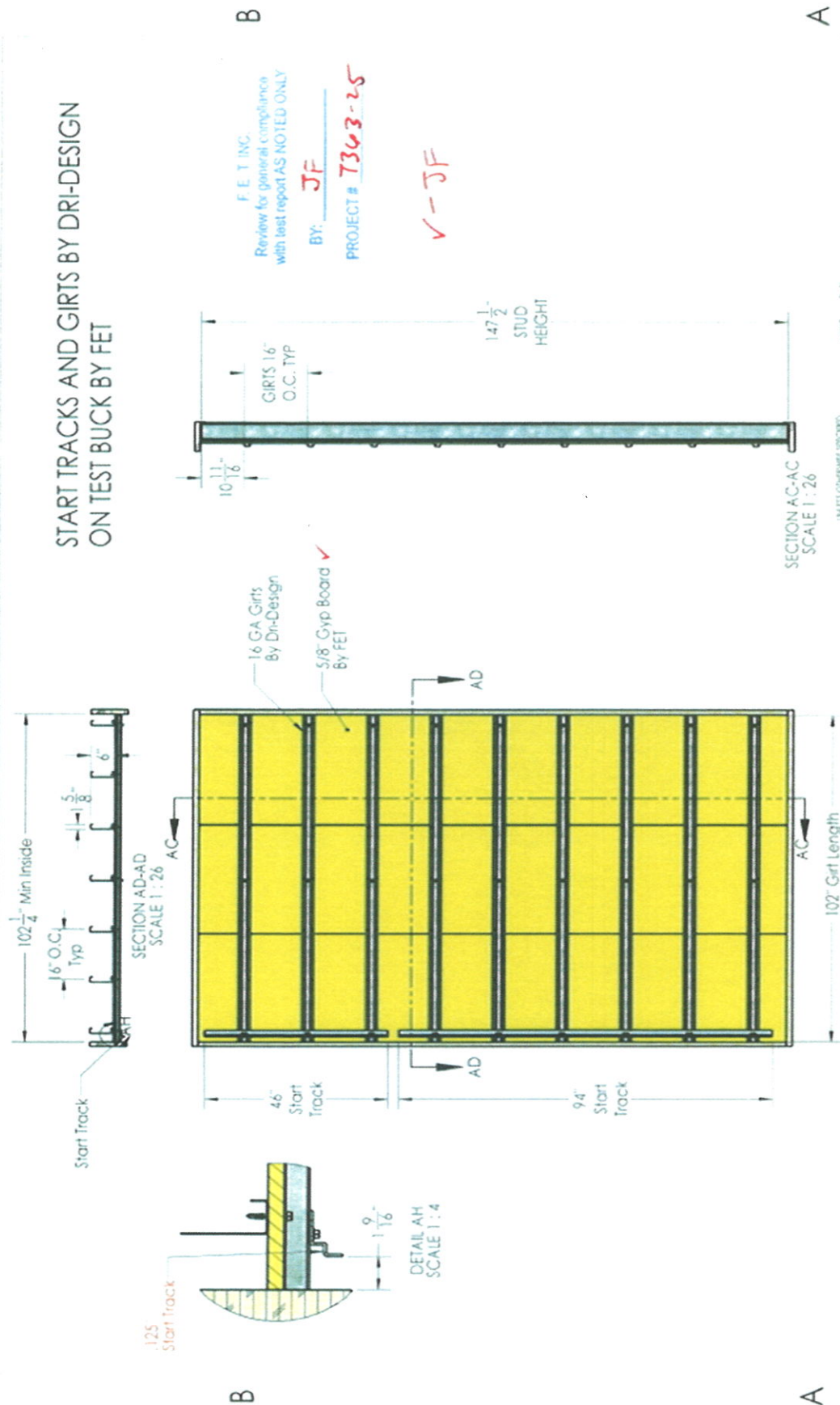
As Tested
Design Load 60 PSF
Not Impact Tested



UNLESS OTHERWISE SPECIFIED:		NAME	DATE
DESIGNED BY	ENGINEER		
CHECKED	DESIGNER		
ANGULAR MATCH	END 1		
THREE PART DETAIL	END 1		
INTERIOR CORNER	END 1		
TO FINISH	END 1		
FINISH	END 1		
DO NOT SCALE DRAWING			

Note:
All .063" components 3003-H14 Aluminum
All .125" components 5052-H32 Aluminum
All 16 GA hats / girts G90 Galvanized steel
All 1/4-14 Fasteners 300 Series stainless steel

TITLE:
Test Assembly 063
R5 T18
GFF FWG: NF
B
As Teste
SCALE: 1/24 WEIGHT:
SHEET 1 OF 15



TITLE: **Test Assembly 063**
R5 T18

SHEET 2 OF 15

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

SUE DWG. NO. **B** REV **As Tested**

PROPRIETARY AND CONFIDENTIAL
The information contained in this document is the sole property of Hewlett-Packard Company and is not to be distributed outside of HP without the express written consent of HP. This document is not to be used for any other purpose than the one intended by HP.

CHANG AND TAYLOR

SCALE: 1/24 WEIGHT: SHEET 2 OF 15

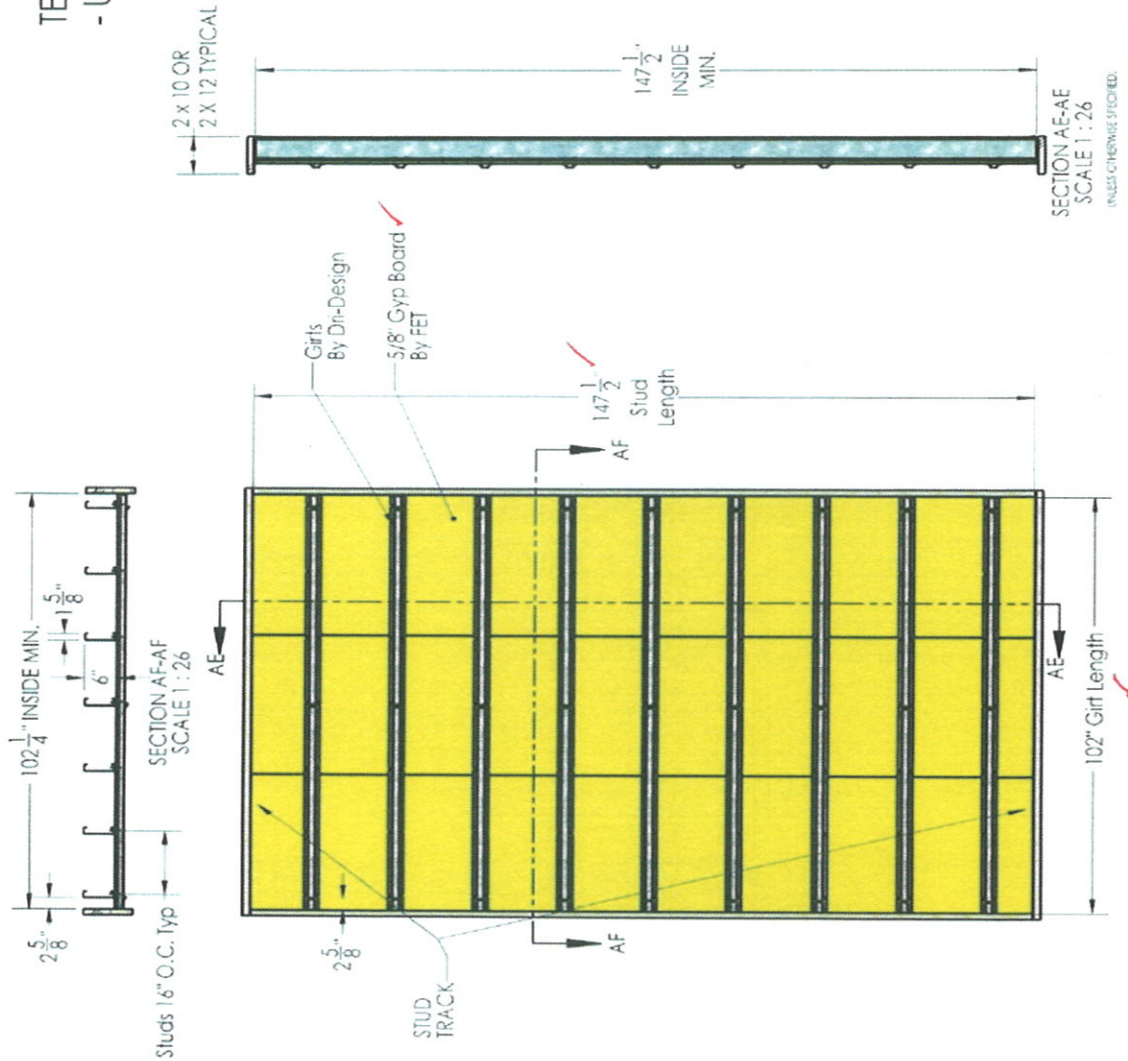
1

2

3

4

TEST BUCK BY FET - USE FOR ALL FL TAS TESTS



F. E. T. INC.
Review for general compliance
with test report AS NOTED ONLY

BY: **3F**

PROJECT # **T363-25**

V-3F

A

DATE

UNLESS OTHERWISE SPECIFIED:

DRAWING ARE IN INCHES
TOLERANCES:
FRACTIONAL:
ANGULAR: MACH. ± .001
HOLE POSITION: ± .005
HOLE SIZE: ± .005
HOLE LOCATION: ± .005
HOLE DEPTH: ± .005
HOLE DIAMETER: ± .005
HOLE LENGTH: ± .005
HOLE WIDTH: ± .005
HOLE THICKNESS: ± .005
HOLE WEIGHT: ± .005

TITLE:
**Test Assembly 063
R5 T18**

SIZE DWG. NO. **B** REV **As Tested**

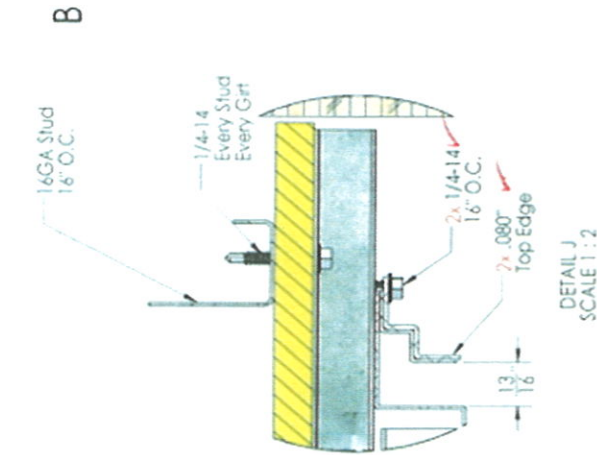
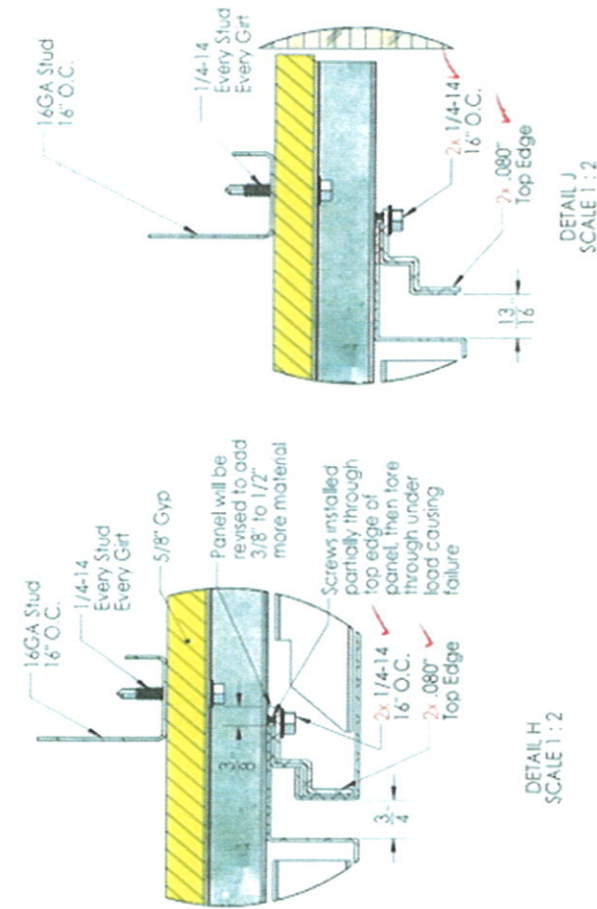
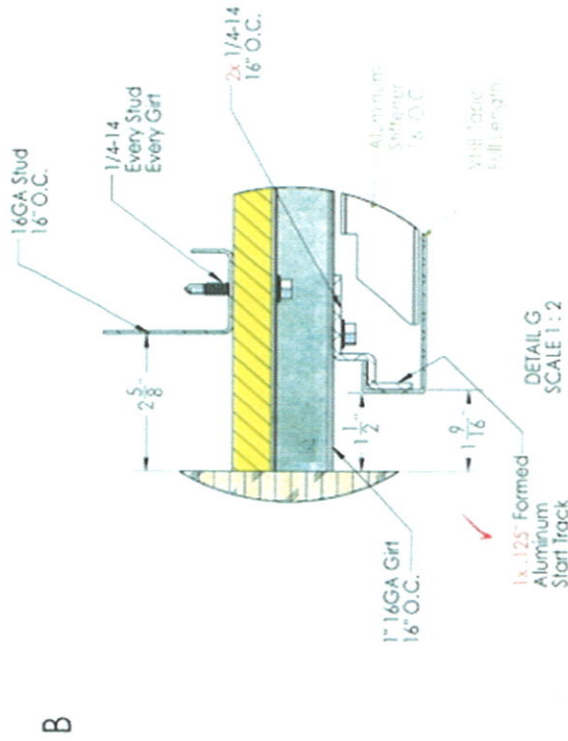
SCALE: 1/2" = 1'-0" SHEET 3 OF 15

PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS
DRAWING IS THE SOLE PROPERTY OF
FET. NO PART OF THIS DRAWING
SHALL BE REPRODUCED OR
TRANSMITTED IN ANY FORM OR
BY ANY MEANS, ELECTRONIC OR
MECHANICAL, INCLUDING
PHOTOCOPYING, RECORDING,
OR BY ANY INFORMATION
STORAGE AND RETRIEVAL
SYSTEM, WITHOUT THE
WRITTEN PERMISSION OF
FET.

NOTED BY: _____
DATE: _____
APPROVED BY: _____

DO NOT SCALE DRAWING

Vertical Panel Joints



F.E.T. INC.
Review for general compliance
with test report AS NOTED ONLY

BY: **3F**

PROJECT # **T363-25**

✓ - JF

NAME	DATE	REVISIONS	DESCRIPTION
		1	AS TESTED

TEST ASSEMBLY 063
R5 T18

REV
As Tested

SITE
B

DWG. NO.
1

SCALE
1:24 WEIGHT

SHEET 4 OF 15

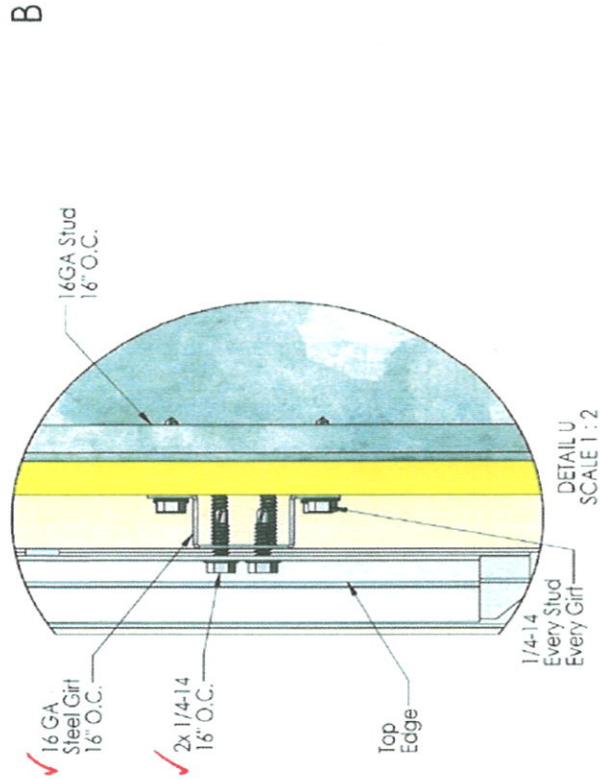
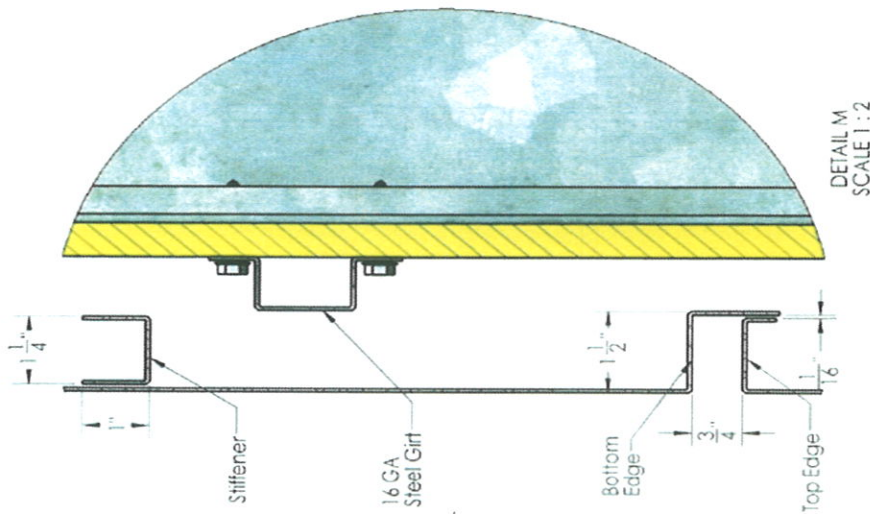
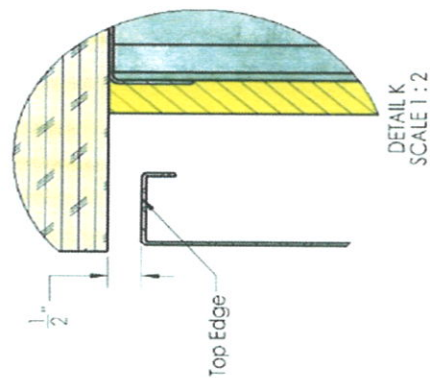
PROPERTY AND CONFIDENTIALITY
THIS DRAWING IS THE PROPERTY OF F.E.T. INC. AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF F.E.T. INC.

F. E. T. INC.
Review for general compliance
with test report AS NOTED ONLY

BY: **3F**
PROJECT # **T363-25**

V-3F

Horizontal Panel Joints



A

TITLE:
Test Assembly 063
R5 T18

SIZE DWG. NO. **B** REV **As Tested**
SCALE: 1:24 WEIGHT: SHEET 5 OF 15

UNLESS OTHERWISE SPECIFIED:	NAME	DATE
DRAWINGS ARE IN INCHES	DRAWN	
TOLERANCES	CHECKED	
FINISHES	APPROVED	
ASSEMBLY	ENG APPR.	
TEST PLACE DESIGN	ENG APPR.	
TEST PLACE DESIGN	ENG APPR.	
PREPARED	Q.A.	
TOLERANCES PER	COMMENTS	
MATERIAL		
INCH		
NOT ASY	USED ON	
APPLICATION		
DO NOT SCALE DRAWING		

PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS
DRAWING IS THE SOLE PROPERTY OF
F. E. T. INC. AND IS NOT TO BE
REPRODUCED OR TRANSMITTED IN ANY
FORM OR BY ANY MEANS, ELECTRONIC
OR MECHANICAL, INCLUDING PHOTOCOPYING,
RECORDING, OR BY ANY INFORMATION
SYSTEM WITHOUT THE WRITTEN PERMISSION OF
F. E. T. INC.

Panel Skin .063" x 48"

F. E. T. INC.
Review for general compliance
with test report AS NOTED ONLY

BY: SF

PROJECT # T363-25

✓-5-11

SECTION P-P

SECTION AG-AG

SECTION AG-AG

me

© 2005 Blackwell Publishing Ltd *Journal of Internal Medicine* 258: 103–110

© 1999 Blackwell Science Ltd

IMPROVING AIR QUALITY
TOGETHER

FRACTIONAL 1

1. *THEORY OF THE FIRM* 1

THE UNIVERSITY OF CHICAGO

[illegible]

Following the

MATH

3

100% (100%)

Chunmei's "Shells of the Sea"

PROPRIETARY AND CONFIDENTIAL

The INFORMATION CONTAINED IN THE DRAWING IS THE SOLE PROPERTY OF GEACOR COMPANY NAME +DES+ AND ANY COPIES THEREOF ARE TO BE DESTROYED BY DATE CH AS A MANDATE OF AMERICAN INSTITUTION OF ARCHITECTS COMPANY NAME +DES+ B
 REC-080622

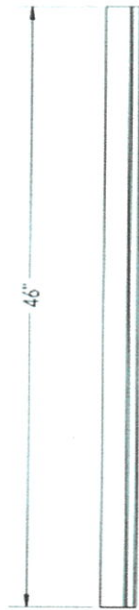
SIZE DWG. NO. REV

Test Assembly 063 Rev'd B

SCALE: 1:12 WEIGHT: SHEET 7 OF 15

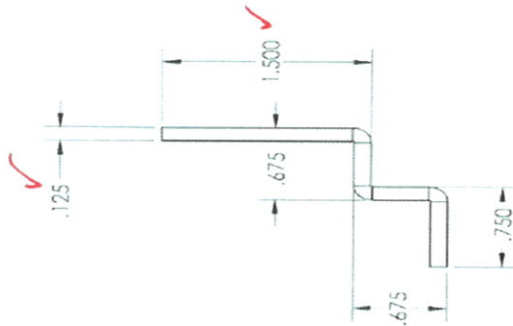
DETAIL R
SCALE 1:1.5

CHARTERED BY THE U.S. ARMY



B

Start Track 125 48



F. E. T. INC.
Review for general compliance
with test report AS NOTED ONLY
BY: JF
PROJECT # T363-25

DETAIL AW
SCALE 1:1

A

TITLE:
Test Assembly 063 R5 T18

REV
As Tested

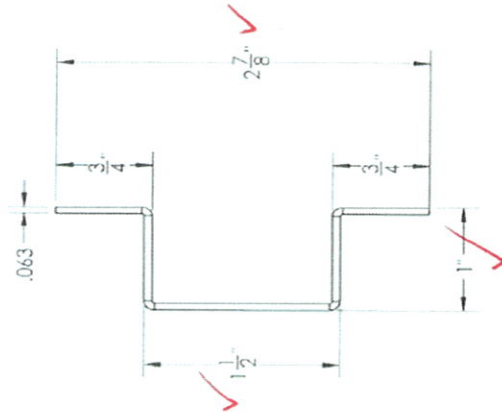
SIZE DWG. NO. **B**

SCALE: 1:1 WEIGHT: SHEET 12 OF 15

UNLESS OTHERWISE SPECIFIED:	NAME	DATE
DRAWINGS ARE IN INCHES	DRAWN	
FRACTIONAL	CHECKED	
ANGULAR VALUES	ENG APPR	
SURFACE DECIMAL	ENG APPR	
THREE PLACE DECIMAL	Q.A.	
PERFECT GEOMETRIC	COMMENTS	
TOLERANCES PER		
MATERIAL		
FINISH		

FOR TREAT AND COMPLIANCE
THE INFORMATION CONTAINED IN THE
DRAWING IS THE SOLE PROPERTY OF
F. E. T. INC. AND IS NOT TO BE
REPRODUCED OR TRANSMITTED IN ANY
FORM OR BY ANY MEANS, WITHOUT THE
WRITTEN PERMISSION OF F. E. T. INC.

NOT A PART
OF THE
DRAWING



16 GA. G-90, 50 KSI (min) Steel

F. E. T. INC.
Review for general compliance
with test report AS NOTED ONLY

BY: 3F

PROJECT # T363-25

V-3F

UNLESS OTHERWISE SPECIFIED:	NAME	DATE	TITLE
CONSTRUCTION: ARE IN INCHES			
TOLERANCES:			
FRACTIONAL:	DRAWN		
DECIMAL:	CHECKED		
ANGULAR: EACH: INFO: 1	ENG APPR		
TWO PLACE DECIMAL: 2			
THREE PLACE DECIMAL: 3			
FOUR PLACE DECIMAL: 4			
FIVE PLACE DECIMAL: 5			
SIX PLACE DECIMAL: 6			
SEVEN PLACE DECIMAL: 7			
EIGHT PLACE DECIMAL: 8			
NINE PLACE DECIMAL: 9			
TEN PLACE DECIMAL: 10			
MATERIAL:			
FINISH:			
USE ON:			
NOT FAST:			
APPLICATION:			
DO NOT SCALE DRAWING			

PROPERTY AND CONFIDENTIALITY
THE INFORMATION CONTAINED IN THIS
DRAWING IS THE SOLE PROPERTY OF
F. E. T. INC. AND IS NOT TO BE
REPRODUCED OR TRANSMITTED IN
ANY FORM OR BY ANY MEANS
ELECTRONIC, MECHANICAL, PHOTOCOPYING,
RECORDING, OR BY ANY INFORMATION
SYSTEMS WITHOUT PERMISSION IN
WRITING FROM F. E. T. INC.

Test Assembly 063 Rev 14

SIZE DWG. NO. REV

SCALE: 1:24 WEIGHT: SHEET 14 OF 15

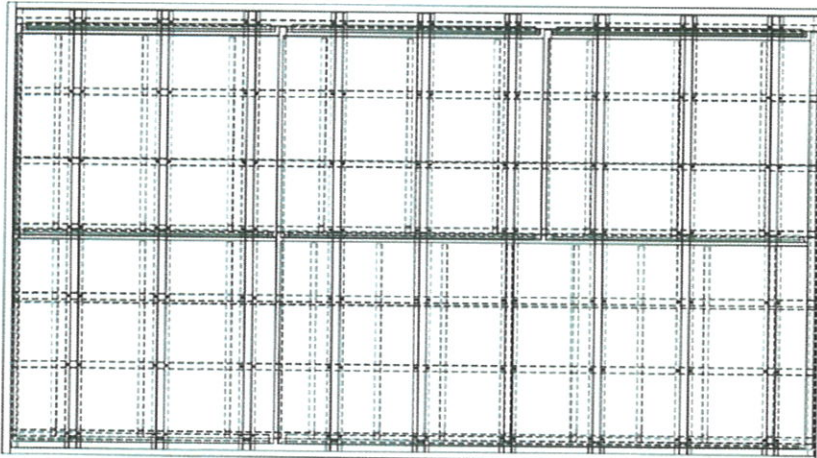
Test 18 R5

F. E. T. INC.
Review for general compliance
with test report AS NOTED ONLY

BY: JF
PROJECT # T363-25

✓ -3C

B



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	FL Panel 48x48 063		4
2	FL Panel 48x96 063		1
3	Stiffener LT 063 48		20
4	Start Track Formed Zee 125 96		1
5	Start Track Formed Zee 125 48		1
6	Top Edge Formed Zee 080 48		6
7	DensGlass		6
8	Stud 6 in		7
9	Stud Track 6 in		2
10	2x10 Sides		2
11	2x10 Top Bot		2
12	Hat 750		9
13	90064A620	External Hex Head Drilling Screws for Metal	36
14	Hex Head Drilling Screw 150		144

A

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONS DECIMALS
ANGULARS: W/IN. DEC. :
HOLE LOCATIONS: 1
THREE PLACE DECIMALS :
INTERFIT: GEOMETRIC
TOLERANCING: AS
MATERIAL:
FINISH:
DATE:
TITLE:

PROPRIETARY AND CONFIDENTIAL
THIS INFORMATION IS THE PROPERTY OF F. E. T. INC.
AND IS NOT TO BE REPRODUCED OR
TRANSMITTED IN ANY FORM OR BY ANY
MEANS, WITHOUT THE WRITTEN PERMISSION OF
F. E. T. INC.
INSERT COMPANY NAME HERE

SIZE DWG. NO. REV
Test Assembly 063 R5 18
SCALE: 1/24 WEIGHT: SHEET 15 OF 15

TENSILE TEST REPORT

Client: Dri-Design
12480 Superior Court, Suite #1
Holland, MI 49424

Test Date: 12/12/25

Test Method: ASTM

Material Description: FL Metal Panel, 0.063" Aluminum Panel

Sample No.	Width (in)	Thickness (in)	Yield Load (lb)	Max. Load (lb)	0.2% Offset Yield Strength (psi)	Tensile Strength (psi)	Elongation (% in 2 inches)
25258	0.494	0.060	604.47	657.44	20,394	22,181	2.8

Equipment Used: Tensile Machine #QT7-061196-020
Caliper #1074379
Extensometer #10311744D
Micrometer #110596927

Revision Log

<u>Rev. #</u>	<u>Date</u>	<u>Page(s)</u>	<u>Revision(s)</u>
0	12/22/25	N/A	Original report issue.

This report is confidential and exclusively intended for FET's Client as per the agreement between FET and its Client. FET is responsible only within the terms and conditions of the agreement and assumes no liability to any other party for any loss, expense or damage arising from the use of this report. The report may be copied or distributed only with the Client's authorization and in its entirety, and the observations and test results are relevant only to the specific sample tested.