

WALL PANEL SYSTEMS, INC. MIAMI-DADE TEST REPORT

SCOPE OF WORK

ASTM E330 STRUCTURAL WIND LOAD TESTING, TAS 202 (LOADS ONLY) AND TAS 203 TESTING ON WPS ES-500 CONCEALED FASTENER SYSTEM

REPORT NUMBER

M8124.03-303-44 R4

TEST DATE(S)

11/11/21 – 12/06/21 TAS 202, TAS 203
06/28/22 – ASTM E330/E330M-14 (PROCEDURE B)

ISSUE DATE

07/07/22

REVISION 4 DATE

09/23/22

RECORD RETENTION END DATE

06/28/32

MIAMI-DADE COUNTY NOTIFICATION NO.

ATI LA21012

LABORATORY CERTIFICATION NO.

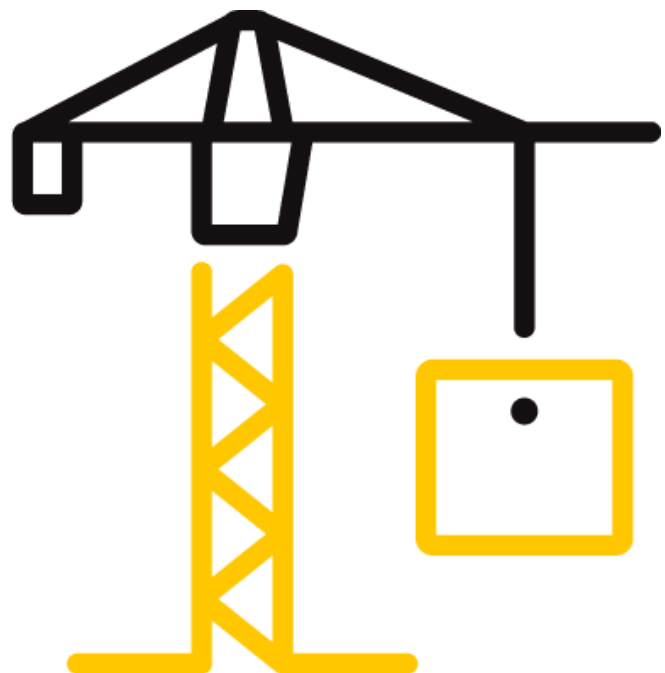
22-0428.08

PAGES

21

DOCUMENT CONTROL NUMBER

ATI 00651 (07/24/17)
RT-R-AMER-Test-2816





Total Quality. Assured.

25800 Commercentre Drive
Lake Forest, California 92630

Telephone: 949-460-9600
Facsimile: 717-764-4129
www.intertek.com/building

TEST REPORT FOR WALL PANEL SYSTEMS, INC.

Report No.: M8124.03-303-18 R3

Date: 09/23/22

REPORT ISSUED TO

WALL PANEL SYSTEMS, INC.

1815 Rustin Ave, Suite A
Riverside, California 92507

SECTION 1

SCOPE

Intertek Building & Construction (B&C) was contracted by Wall Panel Systems, Inc. to perform ASTM E330/E330M-14 (Procedure B) Structural Load Testing, TAS 202 (Loads only), and TAS 203 testing in accordance with ICC-ES Acceptance Criteria AC92 and Miami-Dade County requirements on their WPS ES-500, Concealed Fastener Panel System. Results obtained are tested values and were secured by using the designated test method(s). Testing was conducted at the Intertek B&C test facility in Lake Forest, California. This report does not constitute certification of this product nor an opinion or endorsement by this laboratory.

This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample(s) tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

TEST REPORT FOR WALL PANEL SYSTEMS, INC.

Report No.: M8124.03-303-18 R3

Date: 09/23/22

SECTION 2

SUMMARY OF TEST RESULTS

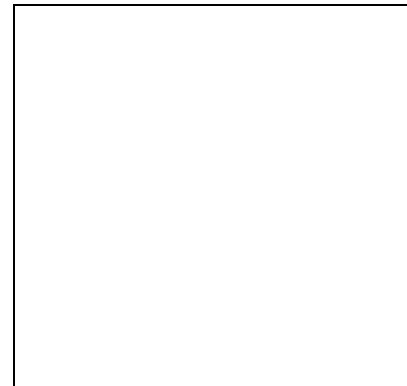
The specimen(s) tested met the performance requirements set forth in the protocols.

Product Type: Concealed Fastener Panel System

Series/Model: WPS ES-500

SPEC.	TEST PROTOCOL	DESIGN PRESSURE
1	TAS 202	±60.15
2	TAS 203	±60.15
3	TAS 203	±60.15
4	TAS 203	±60.15
5	ASTM E330/E330M Procedure B	+150.00
6	ASTM E330/E330M Procedure B	+100.00*
7	ASTM E330/E330M Procedure B	+100.00*
8	ASTM E330/E330M Procedure B	-95.00
9	ASTM E330/E330M Procedure B	-100.00
10	ASTM E330/E330M Procedure B	-100.00

*Unable to Achieve higher pressure



For INTERTEK B&C:

COMPLETED BY: Ricardo Cortez
TITLE: Technician
SIGNATURE:
DATE: 09/23/22

REVIEWED BY: Tyler Westerling, P.E.
TITLE: Senior Project Engineer
SIGNATURE:
DATE: 09/23/22

jsh:ms

This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample(s) tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

TEST REPORT FOR WALL PANEL SYSTEMS, INC.

Report No.: M8124.03-303-18 R3

Date: 09/23/22

SECTION 3

TEST METHOD(S)

The specimens were evaluated in accordance with the following:

ASTM E330/E330M-14 (Procedure B) , *Standard Test Method for Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure*

TAS 202-94, *Criteria for Testing Impact & Non-Impact Resistant Building Envelope Components Using Uniform Static Air Pressure (Loads Only)*

TAS 203-94, *Criteria for Testing Products Subject to Cyclic Wind Pressure Loading*

SECTION 4

MATERIAL SOURCE/INSTALLATION

Test specimens were provided by the client. Representative samples of the test specimen(s) were selected at random by Intertek at client's location. Specimens were tagged, dated, signed and photographed before assembly. Materials were verified on the assembled product at Intertek lab before testing began.

The specimen was installed into a Spruce-Pine-Fir wood test buck. Installation of the tested product was performed by the client per attached Drawings Section 11.

SECTION 5

EQUIPMENT

Cycling Mechanism: Computer controlled centrifugal blower with electronic pressure measuring device

Deflection Measuring Device: Linear transducers

SECTION 6

LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
William Fitch	Phyrefish.com, for Wall Panel Systems
Benjamin Johns	Intertek B&C

TEST REPORT FOR WALL PANEL SYSTEMS, INC.

Report No.: M8124.03-303-18 R3

Date: 09/23/22

SECTION 7

TEST SPECIMEN DESCRIPTION

Product Type: Concealed Fastener Panel System

Series/Model: WPS ES-500

Architectural Testing, Inc. (an Intertek company) dba Intertek Building & Construction (B&C) has verified construction of test units and their associated materials against manufacturers documentation.

Product Size(s): TAS 202 & 203

OVERALL AREA:	WIDTH		HEIGHT	
	Millimeters	Inches	Millimeters	Inches
2.9 m ² (31.5 ft ²)				
Overall Size	1381	54 3/8	2042	80 3/8
Panel (x2)	686	27	711	28
Panel (x2)	686	27	1321	52

Product Size(s): ASTM E330/E330M-14 (Procedure B)

OVERALL AREA:	WIDTH		HEIGHT	
	Millimeters	Inches	Millimeters	Inches
2.97 m ² (32.0 ft ²)				
Overall Size	1219	48	2438	96
Panel (x2)	605	23 13/16	876	34 1/2
Panel (x2)	605	23 13/16	719	28-5/16
Panel (x2)	605	23 13/16	826	32-1/2

Panel Construction:

PANEL MEMBER	PANEL THICKNESS	MATERIAL	DESCRIPTION
See Drawing for Sizes	10mm	Trespa Meteon	High-pressure compact laminate (HPL)

Reinforcement: *No reinforcement was utilized.*

Weatherstripping: *No weatherstripping was utilized.*

TEST REPORT FOR WALL PANEL SYSTEMS, INC.

Report No.: M8124.03-303-18 R3

Date: 09/23/22

Hardware:

DESCRIPTION	QUANTITY	LOCATION
Horizontal Clip - GEN-018	20	Secured to panel every 24" with panel fastener.
Horizontal Joint – ES-820	1	Secured to face of wall assembly with 1/4" wall fasteners.
Horizontal Rail Top/Btm. – ES-801 (w/GEN-018 clip on panel)	2	Secured to face of wall assembly with 1/4" wall fasteners.

Screen Construction: *No screen was utilized.*

SECTION 8

TEST RESULTS

Protocol: TAS 202-94, *Static Air Pressure*

Test Date(s): 11/11/21 through 12/06/21

The temperature during testing was 26°C (79°F). The results are tabulated as follows:

Test Specimen #1: Preload and Design Load

LOAD (psf)	INDICATOR LOCATION	DEFLECTION (in.)		PERMANENT SET (in.)	
		MEASURED	ALLOWED	MEASURED	ALLOWED
+60.15 Design Pressure	1	0.08	N/A	0.01	N/A
	2	0.10	N/A	0.01	N/A
	3	0.08	N/A	0.01	N/A
	4	0.10	N/A	0.01	N/A
	5	0.12	N/A	0.01	N/A
-60.15 Design Pressure	1	0.26	N/A	0.01	N/A
	2	0.32	N/A	0.02	N/A
	3	0.21	N/A	0.01	N/A
	4	0.25	N/A	0.01	N/A
	5	0.17	N/A	0.03	N/A

TEST REPORT FOR WALL PANEL SYSTEMS, INC.

Report No.: M8124.03-303-18 R3

Date: 09/23/22

Test Specimen #1: Structural Overload Load

LOAD (psf)	INDICATOR LOCATION	DEFLECTION (in.)		PERMANENT SET (in.)	
		MEASURED	ALLOWED	MEASURED	ALLOWED
+90.23 1.5 x Design Pressure	1	0.09	N/A	0.01	N/A
	2	0.12	N/A	0.01	N/A
	3	0.08	N/A	0.01	N/A
	4	0.09	N/A	0.01	N/A
	5	0.16	N/A	0.01	N/A
-90.23 1.5 x Design Pressure	1	0.31	N/A	0.02	N/A
	2	0.37	N/A	0.02	N/A
	3	0.25	N/A	0.01	N/A
	4	0.38	N/A	0.01	N/A
	5	0.20	N/A	0.01	N/A

Note 1: Positive and negative uniform static load test loads were held for 30 seconds.

Note 2: Tape and film were used to seal against air leakage during structural testing. In our opinion, the tape and film did not influence the results of the test.

Note 3: See Sketch #1 for indicator locations. Deflection/permanent set reported is the overall deflection between three points (longest unsupported span) which accounts for support movement.

TEST REPORT FOR WALL PANEL SYSTEMS, INC.

Report No.: M8124.03-303-18 R3

Date: 09/23/22

Protocol TAS 203-94, Cyclic Wind Pressure Loading

Assemblies were tested with no resultant failure or distress. A recovery of at least 90% over maximum deflection was achieved per TAS 203 (Section 6.5) for test specimens 2, 3 & 4

Test Date(s): 11/11/21 through 12/06/21

The temperature during testing was 26°C (79°F). The results are tabulated as follows:

Test Specimen #2:

DESIGN PRESSURE	STAGE		
+60.15 / -60.15 psf	1	2	3
POSITIVE PRESSURE RANGE (psf)	0 – 30.08	0 – 36.09	0 – 78.20
AVERAGE CYCLE TIME (sec.)	3.09	3.58	5.0
NUMBER OF CYCLES	600	70	1
	4	5	6
NEGATIVE PRESSURE RANGE (psf)	0 – 30.08	0 – 36.09	0 – 78.20
AVERAGE CYCLE TIME (sec.)	2.92	3.66	5.0
NUMBER OF CYCLES	600	70	1

Test Specimen #3:

DESIGN PRESSURE	STAGE		
+60.15 / -60.15 psf	1	2	3
POSITIVE PRESSURE RANGE (psf)	0 – 30.08	0 – 36.09	0 – 78.20
AVERAGE CYCLE TIME (sec.)	3.09	3.58	5.0
NUMBER OF CYCLES	600	70	1
	4	5	6
NEGATIVE PRESSURE RANGE (psf)	0 – 30.08	0 – 36.09	0 – 78.20
AVERAGE CYCLE TIME (sec.)	2.92	3.66	5.0
NUMBER OF CYCLES	600	70	1

Test Specimen #4:

DESIGN PRESSURE	STAGE		
+60.15 / -60.15 psf	1	2	3
POSITIVE PRESSURE RANGE (psf)	0 – 30.08	0 – 36.09	0 – 78.20
AVERAGE CYCLE TIME (sec.)	3.09	3.58	5.0
NUMBER OF CYCLES	600	70	1
	4	5	6
NEGATIVE PRESSURE RANGE (psf)	0 – 30.08	0 – 36.09	0 – 78.20
AVERAGE CYCLE TIME (sec.)	2.92	3.66	5.0
NUMBER OF CYCLES	600	70	1

Assemblies were tested with no resultant failure or distress. A recover of at least 90% over maximum deflection was achieved per TAS 203 (Section 6.5) fir test specimens 2, 3 & 4

TEST REPORT FOR WALL PANEL SYSTEMS, INC.

Report No.: M8124.03-303-18 R3

Date: 09/23/22

SECTION 9

Protocol: ASTM E330/E330M-14 (Procedure B)

Test Date: 06/28/22

Positive Pressure – Specimen #5 - See sketch for to failure transducer locations

LOAD (psf)	INDICATOR LOCATION	DEFLECTION (in.)	
		POSITIVE	NOTES
25.00 Test Pressure	1	0.03	N/A
	2	0.06	N/A
	3	0.03	N/A
	4	0.07	N/A
	5	0.06	N/A
50.00 Design Pressure	1	0.06	N/A
	2	0.13	N/A
	3	0.07	N/A
	4	0.14	N/A
	5	0.14	N/A
75.00 50% of Test Pressure	1	0.09	N/A
	2	0.19	N/A
	3	0.10	N/A
	4	0.18	N/A
	5	0.19	N/A
100.00 Design Pressure	1	0.12	N/A
	2	0.26	N/A
	3	0.14	N/A
	4	0.21	N/A
	5	0.14	N/A
125.00 Design Pressure	1	0.17	N/A
	2	0.37	N/A
	3	0.20	N/A
	4	0.24	N/A
	5	0.26	N/A
150.00 Design Pressure	1	0.21	N/A
	2	0.44	N/A
	3	0.31	N/A
	4	0.31	N/A
	5	0.29	N/A
175.00 Design Pressure	1	0.26	Could not obtain a higher pressure
	2	0.59	
	3	0.49	
	4	0.35	
	5	0.32	

TEST REPORT FOR WALL PANEL SYSTEMS, INC.

Report No.: M8124.03-303-18 R3

Date: 09/23/22

Positive Pressure – Specimen #6 - See sketch for to failure transducer locations

LOAD (psf)	INDICATOR LOCATION	DEFLECTION (in.)	
		POSitive	NOTES
25.00 Test Pressure	1	0.01	N/A
	2	0.06	N/A
	3	0.04	N/A
	4	0.06	N/A
	5	0.07	N/A
50.00 Design Pressure	1	0.03	N/A
	2	0.12	N/A
	3	0.08	N/A
	4	0.08	N/A
	5	0.07	N/A
75.00 50% of Test Pressure	1	0.06	N/A
	2	0.19	N/A
	3	0.11	N/A
	4	0.10	N/A
	5	0.10	N/A
100.00 Design Pressure	1	0.09	N/A
	2	0.27	N/A
	3	0.15	N/A
	4	0.13	N/A
	5	0.14	N/A
132.00 Design Pressure	1	0.14	Could not obtain a higher pressure
	2	0.38	
	3	0.22	
	4	0.17	
	5	0.19	

TEST REPORT FOR WALL PANEL SYSTEMS, INC.

Report No.: M8124.03-303-18 R3

Date: 09/23/22

Positive Pressure – Specimen #7 - See sketch for to failure transducer locations

LOAD (psf)	INDICATOR LOCATION	DEFLECTION (in.)	
		POSITIVE	NOTES
25.00 Test Pressure	1	0.03	N/A
	2	0.07	N/A
	3	0.05	N/A
	4	0.05	N/A
	5	0.07	N/A
50.00 Design Pressure	1	0.06	N/A
	2	0.15	N/A
	3	0.09	N/A
	4	0.13	N/A
	5	0.14	N/A
75.00 50% of Test Pressure	1	0.10	N/A
	2	0.23	N/A
	3	0.14	N/A
	4	0.18	N/A
	5	0.19	N/A
100.00 Design Pressure	1	0.13	N/A
	2	0.31	N/A
	3	0.19	N/A
	4	0.22	N/A
	5	0.23	N/A
115.00 Design Pressure	1	0.18	Could not obtain a higher pressure
	2	0.38	
	3	0.24	
	4	0.24	
	5	0.26	

TEST REPORT FOR WALL PANEL SYSTEMS, INC.

Report No.: M8124.03-303-18 R3

Date: 09/23/22

Protocol: ASTM E330/E330M-14 (Procedure B)

Test Date: 06/28/22

Negative Pressure – Specimen #8 - See sketch for to failure transducer locations

LOAD (psf)	INDICATOR LOCATION	DEFLECTION (in.)	
		NEGATIVE	NOTES
25.00 Test Pressure	1	0.09	N/A
	2	0.12	N/A
	3	0.05	N/A
	4	0.12	N/A
	5	0.13	N/A
50.00 Design Pressure	1	0.25	N/A
	2	0.26	N/A
	3	0.19	N/A
	4	0.21	N/A
	5	0.25	N/A
75.00 50% of Test Pressure	1	0.33	N/A
	2	0.37	N/A
	3	0.25	N/A
	4	0.19	N/A
	5	0.23	N/A
100.00 Design Pressure	1	Fail 95 psf	N/A
	2	"	N/A
	3	"	N/A
	4	"	N/A
	5	"	N/A
125.00 Design Pressure	1	N/A	N/A
	2	N/A	N/A
	3	N/A	N/A
	4	N/A	N/A
	5	N/A	N/A
150.00 Design Pressure	1	N/A	N/A
	2	N/A	N/A
	3	N/A	N/A
	4	N/A	N/A
	5	N/A	N/A
175.00 Design Pressure	1	N/A	N/A
	2	N/A	N/A
	3	N/A	N/A
	4	N/A	N/A
	5	N/A	N/A

TEST REPORT FOR WALL PANEL SYSTEMS, INC.

Report No.: M8124.03-303-18 R3

Date: 09/23/22

Negative Pressure – Specimen #9 - See sketch for to failure transducer locations

LOAD (psf)	INDICATOR LOCATION	DEFLECTION (in.)	
		NEGATIVE	NOTES
25.00 Test Pressure	1	0.06	N/A
	2	0.08	N/A
	3	0.05	N/A
	4	0.08	N/A
	5	0.06	N/A
50.00 Design Pressure	1	0.14	N/A
	2	0.16	N/A
	3	0.10	N/A
	4	0.16	N/A
	5	0.15	N/A
75.00 50% of Test Pressure	1	0.20	N/A
	2	0.28	N/A
	3	0.20	N/A
	4	0.22	N/A
	5	0.21	N/A
100.00 Design Pressure	1	Fail 100 psf	N/A
	2	“	N/A
	3	“	N/A
	4	“	N/A
	5	“	N/A
132.00 Design Pressure	1	N/A	N/A
	2	N/A	N/A
	3	N/A	N/A
	4	N/A	N/A
	5	N/A	N/A

TEST REPORT FOR WALL PANEL SYSTEMS, INC.

Report No.: M8124.03-303-18 R3

Date: 09/23/22

Positive Pressure – Specimen #10 - See sketch for to failure transducer locations

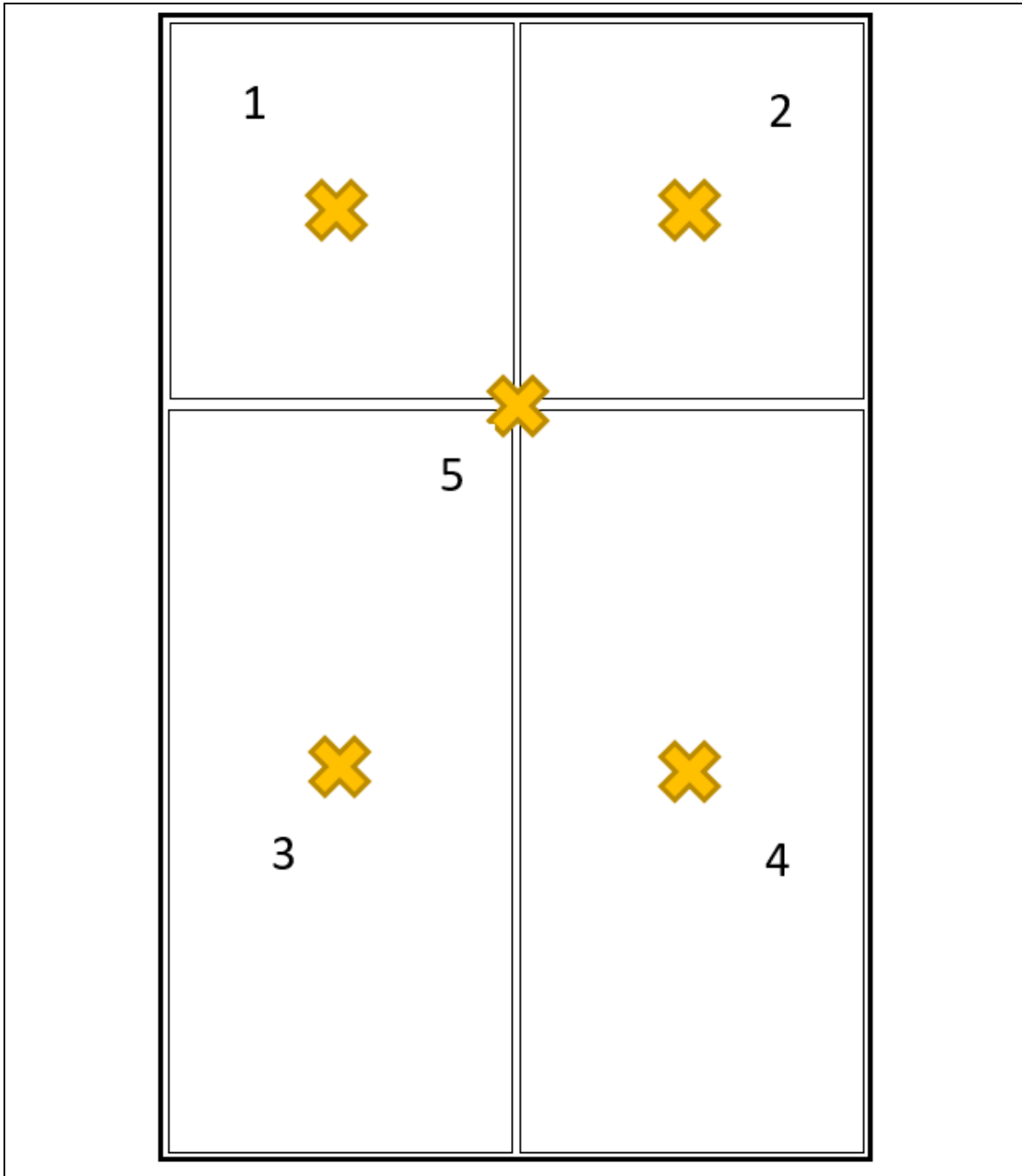
LOAD (psf)	INDICATOR LOCATION	DEFLECTION (in.)	
		NEGATIVE	NOTES
25.00 Test Pressure	1	0.04	N/A
	2	0.08	N/A
	3	0.06	N/A
	4	0.07	N/A
	5	0.09	N/A
50.00 Design Pressure	1	0.10	N/A
	2	0.15	N/A
	3	0.14	N/A
	4	0.15	N/A
	5	0.16	N/A
75.00 50% of Test Pressure	1	0.11	N/A
	2	0.25	N/A
	3	0.19	N/A
	4	0.23	N/A
	5	0.22	N/A
100.00 Design Pressure	1	Fail @ 100 psf	N/A
	2	"	N/A
	3	"	N/A
	4	"	N/A
	5	"	N/A
115.00 Design Pressure	1	N/A	N/A
	2	N/A	N/A
	3	N/A	N/A
	4	N/A	N/A
	5	N/A	N/A

TEST REPORT FOR WALL PANEL SYSTEMS, INC.

Report No.: M8124.03-303-18 R3

Date: 09/23/22

SECTION 10 SKETCH(ES)

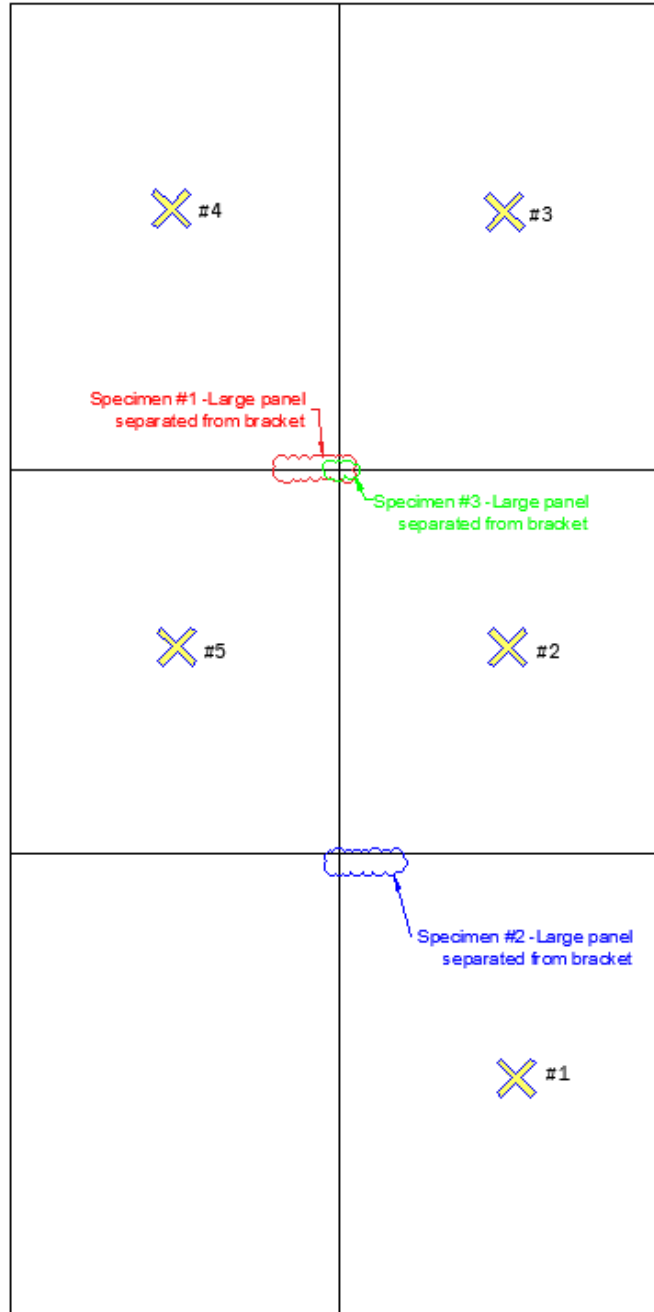


Sketch No. 1
TAS 202 Indicator Locations

TEST REPORT FOR WALL PANEL SYSTEMS, INC.

Report No.: M8124.03-303-18 R3

Date: 09/23/22



Sketch No. 2
ASTM E330/E330M-14 – Transducer Locations

TEST REPORT FOR WALL PANEL SYSTEMS, INC.

Report No.: M8124.03-303-18 R3

Date: 09/23/22

SECTION 11

CONCLUSIONS

No signs of failure were observed in any area of the test specimen during the TAS 202 testing; as such, the test specimen satisfies the requirements of TAS 202. Upon completion of testing, specimens tested for TAS 202-94 met the requirements of Section 1620 of the Florida Building Code, Building.

No signs of failure were observed in any area of the test specimens during the cyclic load test; as such, the test specimens satisfy the cyclic load requirements of TAS 203. Upon completion of testing, specimens tested for TAS 203-94 met the requirements of Section 1625 of the Florida Building Code, Building.

Unless differently required, Intertek reports apply the "Simple Acceptance" rule, also called "Shared Risk approach," of ILAC-G8:09/2019, Guidelines on Decision Rules and Statements of Conformity.



Total Quality. Assured.

25800 Commercentre Drive
Lake Forest, California 92630

Telephone: 949-460-9600
Facsimile: 717-764-4129
www.intertek.com/building

TEST REPORT FOR WALL PANEL SYSTEMS, INC.

Report No.: M8124.03-303-18 R3

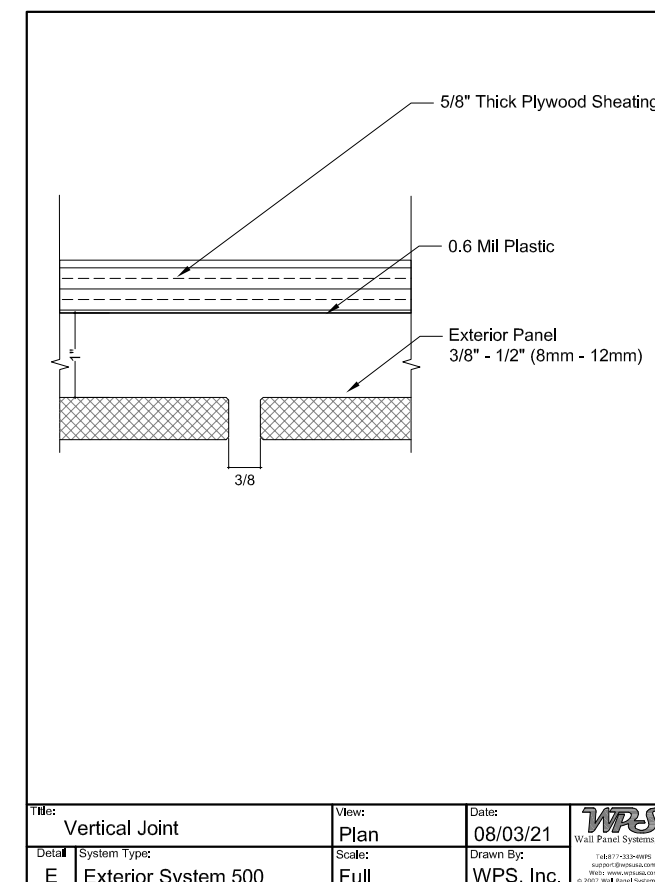
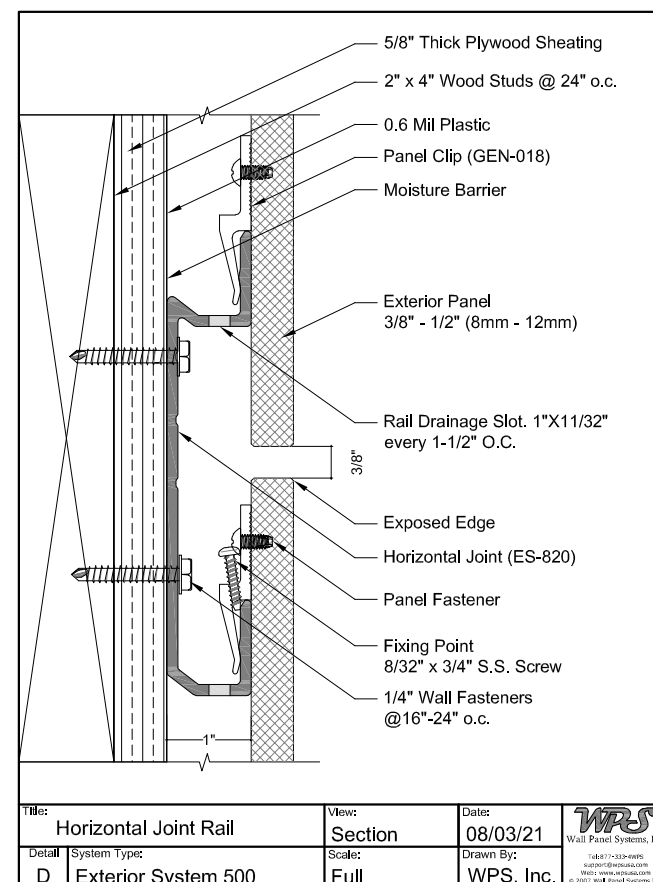
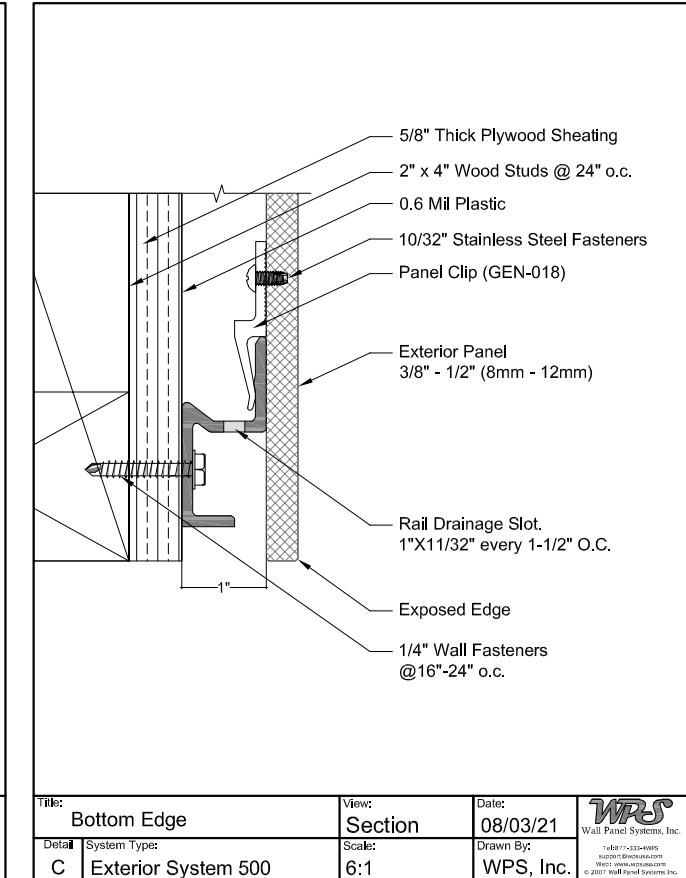
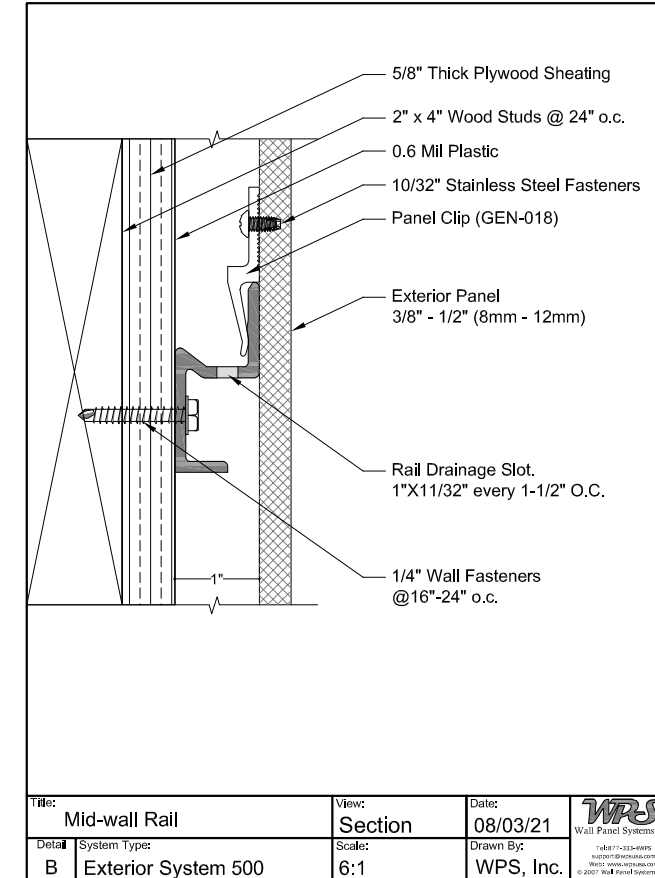
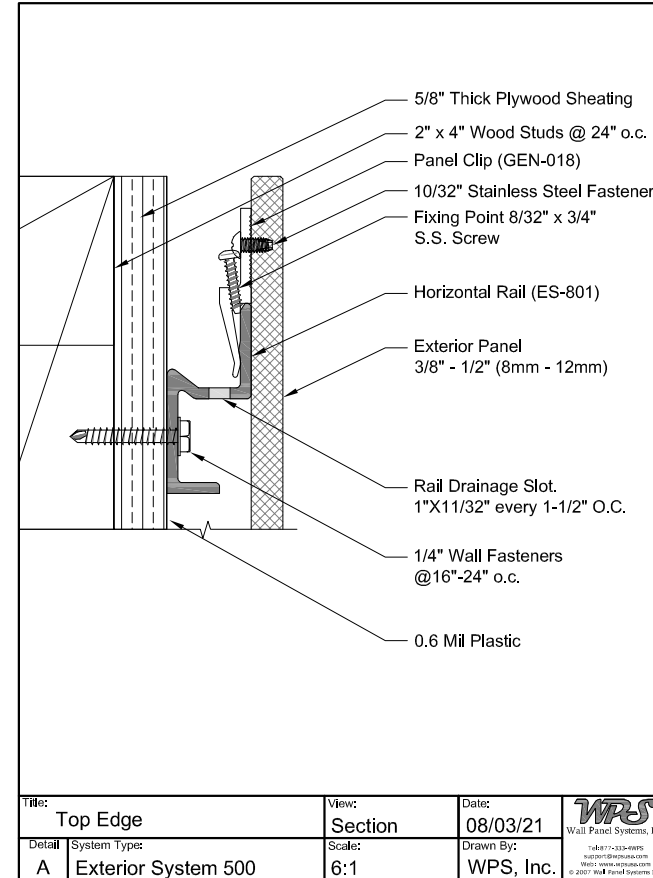
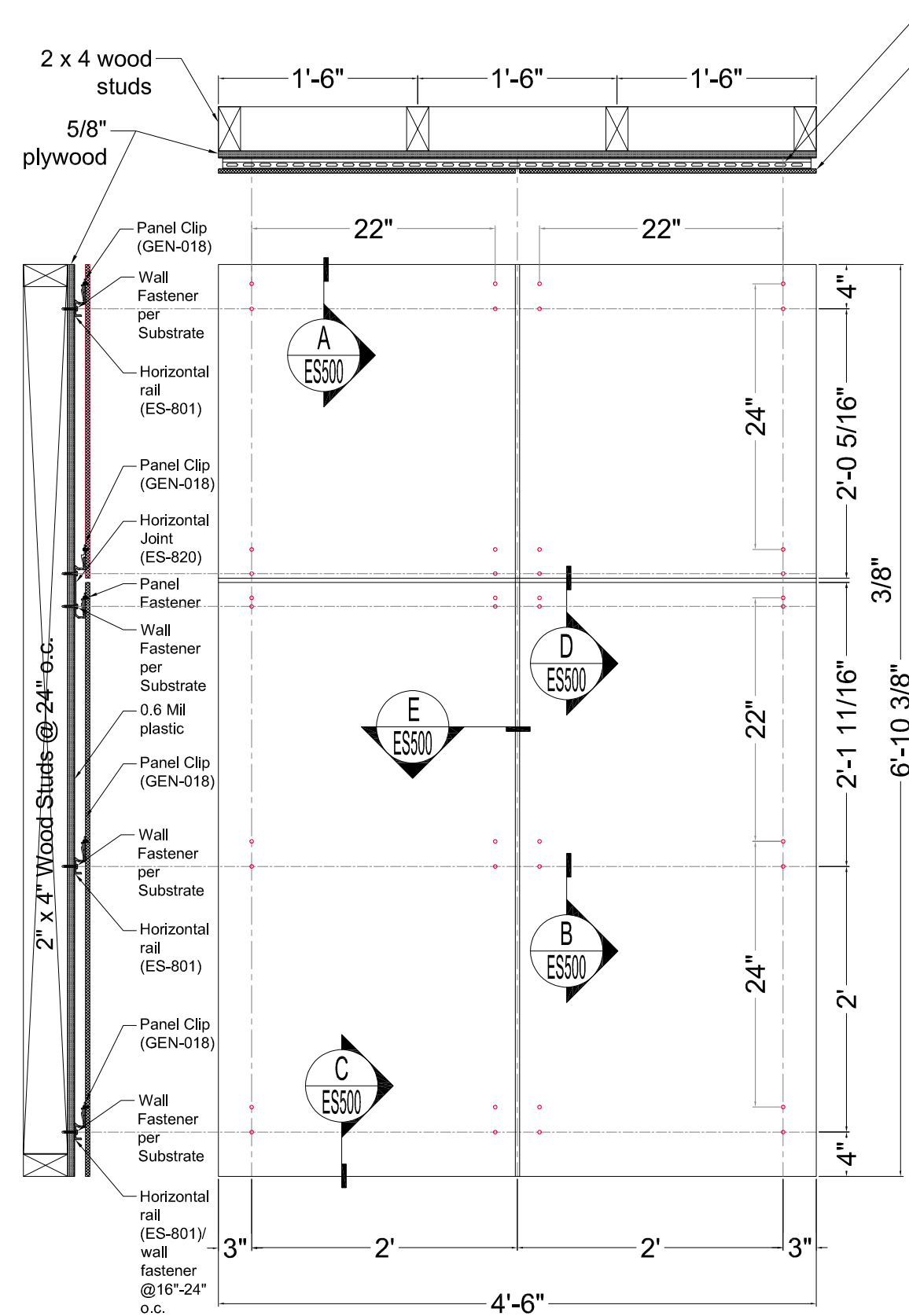
Date: 09/23/22

SECTION 12 DRAWINGS

The test specimen drawings have been reviewed by Intertek B&C and are representative of the test specimen(s) reported herein. Test specimen construction was verified by Intertek B&C per the drawings included in this report. Any deviations are documented herein or on the drawings.

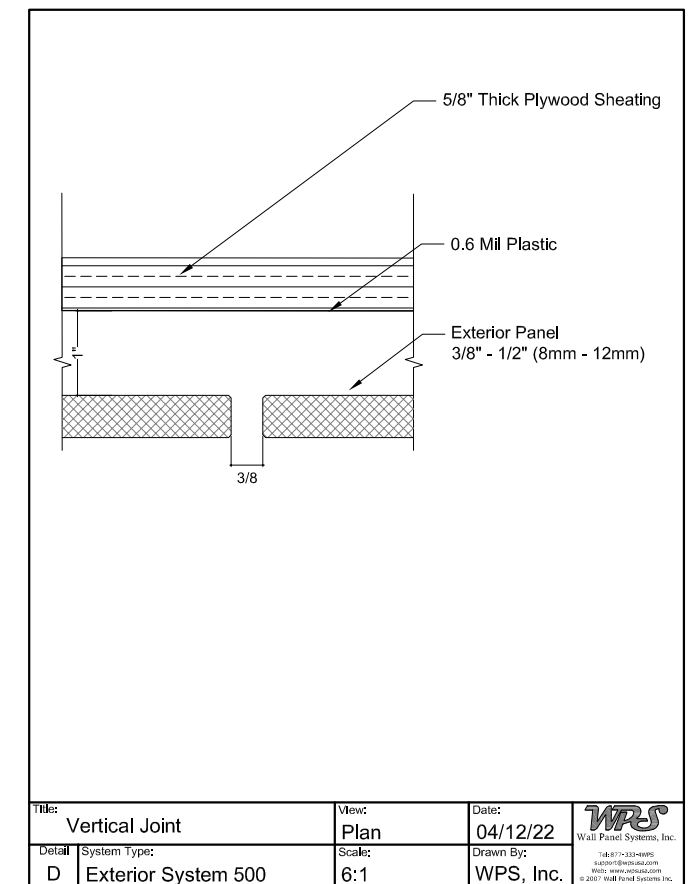
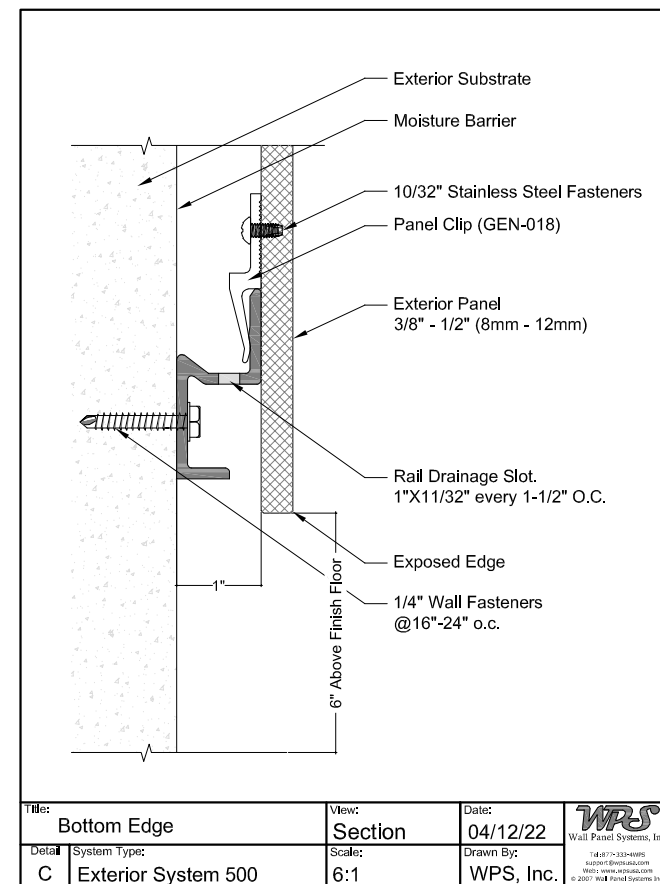
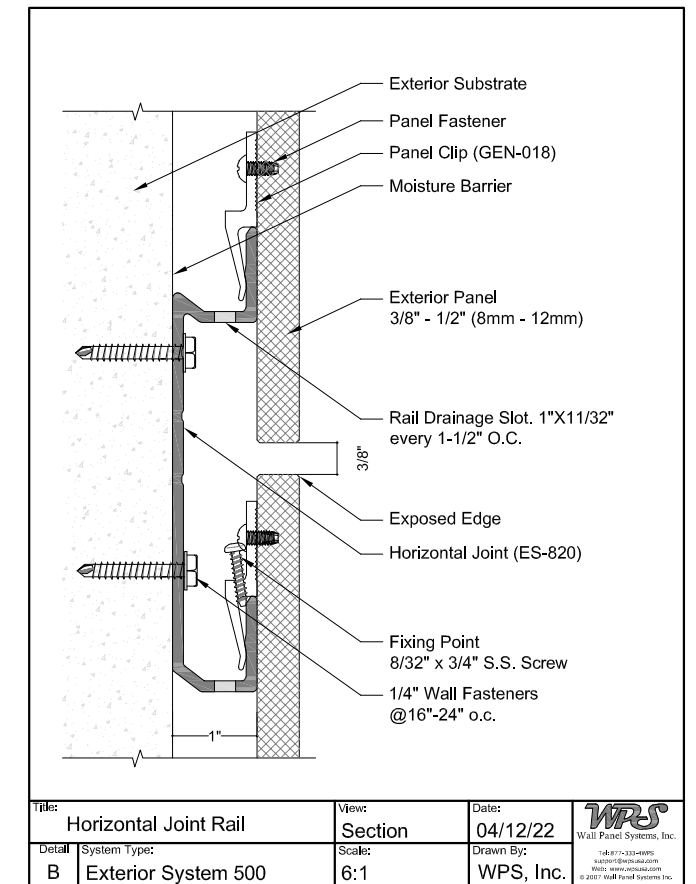
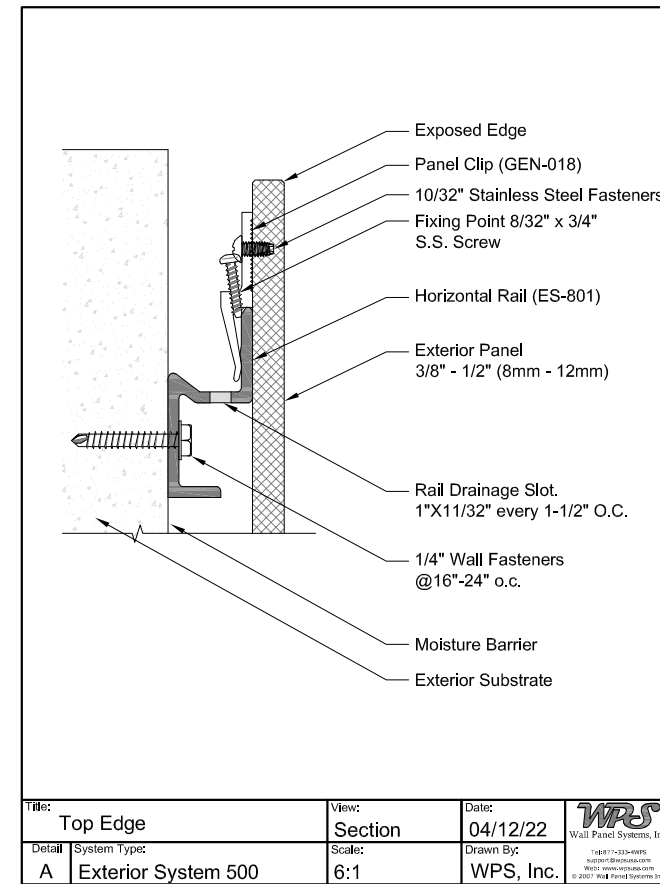
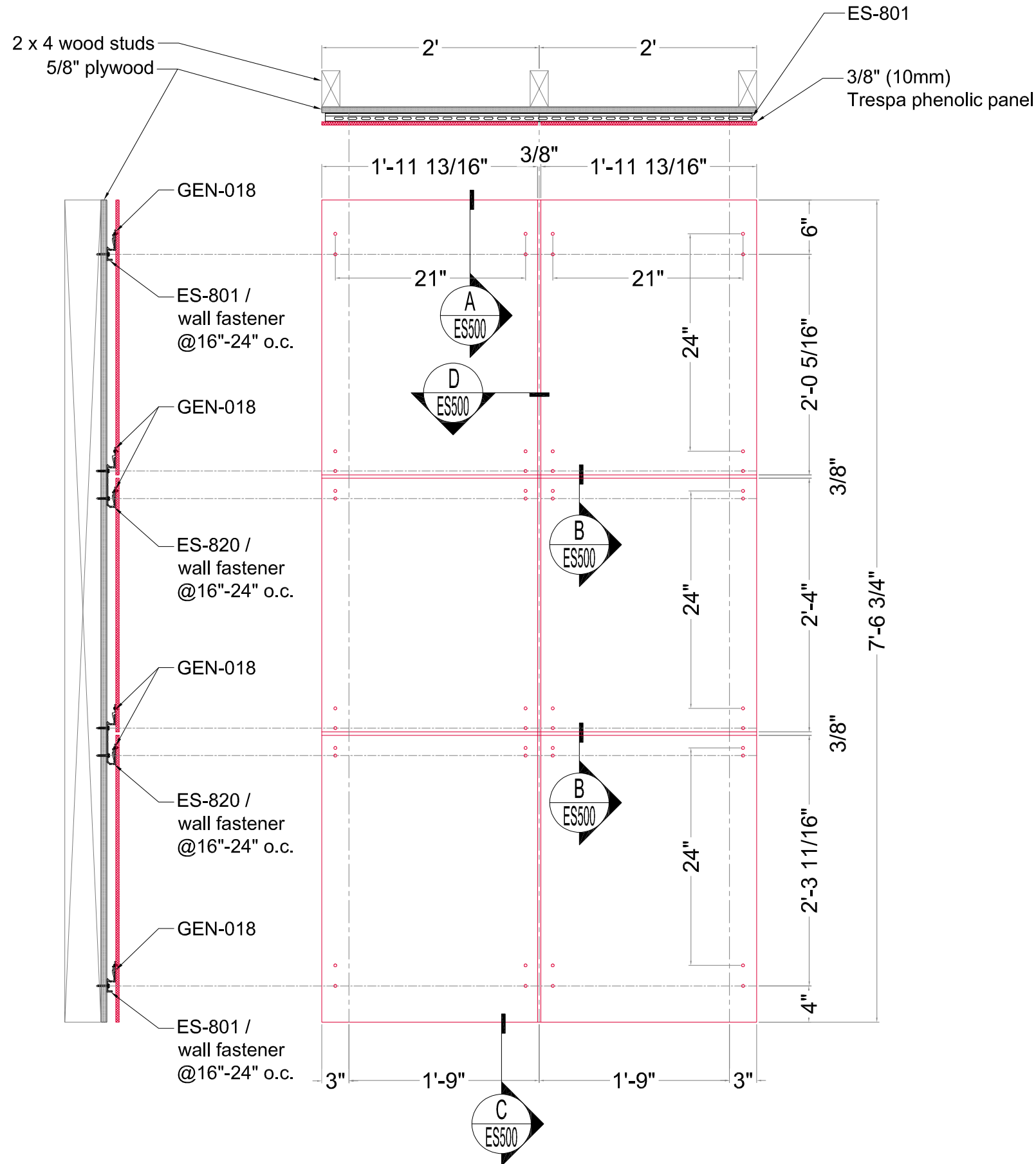
WPS ES-500 SYSTEM

For TAS 202 & 203 Tests



WPS ES-500 SYSTEM

For ASTM E330 Tests



TEST REPORT FOR WALL PANEL SYSTEMS, INC.

Report No.: M8124.03-303-18 R3

Date: 09/23/22

SECTION 13

REVISION LOG

REVISION #	DATE	PAGES	REVISION
0	07/07/22	N/A	Original Report Issue
1	07/12/22	2	Added Reference to Procedure B to Scope
1	07/12/22	4	Changed Thickness from 8 to 10 mm
2	07/20/22	4	Material Verification Note Added
3	08/23/22	4	Added Product Size Descriptions
3	08/23/22	5,8-12	Protocol Updated
3	08/23/22	DWG	Added Drawing for ASTM E330 Specimen
4	09/23/22	All	Revised Report Number
4	09/23/22	3	Correct Load Descriptions
4	09/23/22	4	Added Material Verification Note
4	09/23/22	5	Corrected Product Sizes
4	09/23/22	6-7	Corrected Load Descriptions
4	09/23/22	8	Added Cycling Times
4	09/23/22	8-14	Revised Specimen ID Numbers
4	09/23/22	9-14	Removed Load Descriptions
4	09/23/22	16	Revised Specimen ID Numbers
4	09/23/22	19-20	Show Fasteners on Drawings