

VINYLAST, INC.

TEST REPORT

SCOPE OF WORK

ICC-ES AC174 COMPLIANCE EVALUATION ON 42 IN POST POCKET BRACKET
(SIDE RIM JOIST INSTALLATION)

REPORT NUMBER

Q3748.01-119-19 R0

TEST DATE

08/04/23

ISSUE DATE

01/03/24

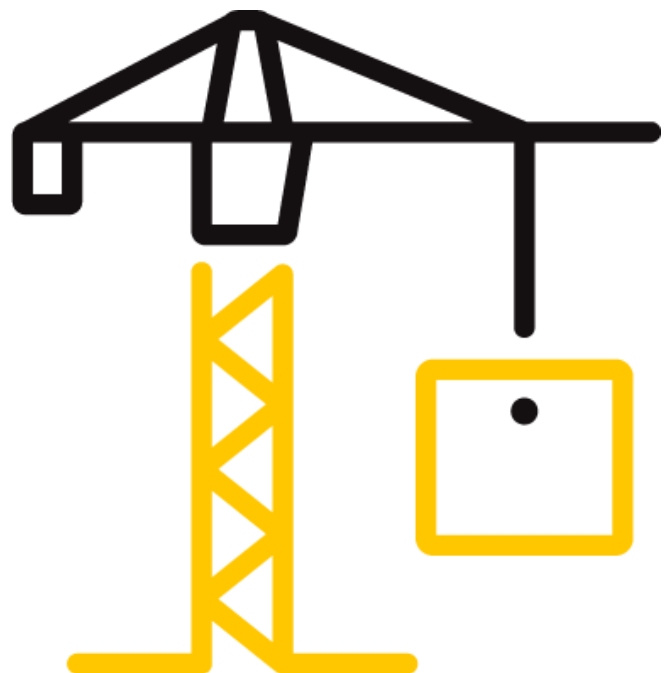
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TEST REPORT FOR VINYLAST, INC.

Report No.: Q3748.01-119-19 R0

Date: 01/03/24

REPORT ISSUED TO

VINYLAST, INC.

1830 Swarthmore Avenue

Lakewood, NJ 08701

SECTION 1

SCOPE

Architectural Testing, Inc. (an Intertek company) dba Intertek Building & Construction (B&C) was contracted by Vinylast, Inc. to perform testing in accordance with ICC-ES™ AC174, on their 42 in Post Pocket Bracket for a side rim joist installation. Results obtained are tested values and were secured by using the designated test method(s). Testing was conducted both at the Intertek B&C test facility in York, Pennsylvania.

Intertek B&C in York, Pennsylvania has demonstrated compliance with ISO/IEC International Standard 17025 and is consequently accredited as a Testing Laboratory (TL-144) by International Accreditation Service, Inc. (IAS). Intertek B&C is accredited to perform all testing reported herein.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. 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. Intertek will service this report for the entire test record retention period. The test record retention period ends four years after the test date. Test records, such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation, will be retained for the entire test record retention period.

For INTERTEK B&C:

COMPLETED BY:	Adam J. Schrum	REVIEWED BY:	Travis A. Hoover
TITLE:	Project Manager	TITLE:	Senior Manager
SIGNATURE:		SIGNATURE:	
DATE:	01/03/24	DATE:	01/03/24

AJS:tah/aas

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SECTION 2

TEST METHODS

The purpose of the testing was code compliance evaluation in accordance with the following criteria:

ICC-ES™ AC174 (approved January 2012, editorially revised April 2021), Acceptance Criteria for Deck Board Span Ratings and Guardrail Systems (Guards and Handrails)

ICC-ES™ AC174-12 was developed by the ICC Evaluation Service, Inc. (ICC-ES™) as acceptance criteria to evaluate compliance with the following building codes:

2015 *International Building Code*®, International Code Council

2015 *International Residential Code*®, International Code Council

Limitations

All tests performed were to evaluate structural performance of the post assembly to carry and transfer imposed loads to the supporting structure. The test specimen evaluated included the post and wood joist reinforcements.

SECTION 3

MATERIAL SOURCE/INSTALLATION

All materials utilized for testing reported herein were provided to Intertek B&C by Vinylast, Inc. and were not sampled or selected by an independent inspection agency.

Representative samples of the test specimen(s) will be retained by Intertek B&C for a minimum of four years from the test completion date.

Test specimens were inspected prior to testing to verify the condition of the materials was suitable for testing. No potentially compromising defects were observed.

SECTION 4

LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Steven Leary	Company
Adam J. Schrum	Intertek B&C

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SECTION 5

GENERAL DESCRIPTION

The steel post mount brackets are comprised of 0.060 in thick (16 gauge) steel plate bent and welded to accept a 4x4 (nominal) wood post and attach to a wood deck structure. Drawings are included in Section 9 to verify the overall dimensions and other pertinent information of the tested product, its components and any constructed assemblies.

Unless otherwise indicated, all testing reported herein was conducted in a laboratory set to maintain temperature in the range of 68 ± 4 °F and humidity in the range of $50 \pm 5\%$ RH. All test specimen materials were stored in the laboratory environment for no less than 40 hours prior to testing.

SECTION 6

STRUCTURAL PERFORMANCE TESTING OF POST ASSEMBLY

General

Post mounts were mounted on a mock wood deck fabricated by Vinylast, Inc. Reference Component Descriptions and Fastening Schedule below along with Section 10, Installation Instructions for additional information. The specimen was loaded using an electric winch mounted to a rigid steel test frame. High strength steel cables, nylon straps, and load distribution beams were used to impose test loads on the specimen. Applied load was measured using an electronic load cell located in-line with the loading system. Deflections were measured to the nearest 0.01 in using electronic linear displacement transducers.

Component Descriptions

Post Bracket	0.060 in thick (16 gauge) steel plate bent and welded to accept a 4x4 wood post
Support Post	Preservative treated Southern Yellow Pine 4x4
Mock Wood Deck	Preservative treated 2x8 joists at 16 in on-center, with 2x8 rim joist and, 2x8 support blocks

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Fastening Schedule

CONNECTION	FASTENER
Rim Joist to Joist	Five #10-10 x 4" (0.128 in minor diameter) flat head, star drive, type 17 point, coated steel screws
Wood Support Blocks to Joist	Four #10-10 x 4" (0.128 in minor diameter) flat head, star drive, type 17 point, coated steel screws
Post Bracket Support Block Top Tab to Support Block	Two #10-10 x 4" (0.128 in minor diameter) flat head, star drive, type 17 point, coated steel screws
Post Bracket Support Block Bottom Tab to Support Block	Two #10-10 x 4" (0.128 in minor diameter) flat head, star drive, type 17 point, coated steel screws
Rim Joist to Wood Post	Four #10-10 x 4" (0.128 in minor diameter) flat head, star drive, type 17 point, coated steel screws

Test Setup

The post mount assembly was assembled and installed by an Intertek B&C technician by directly securing the mock wood deck to a rigid test frame, which rigidly restrained the wood deck. Transducers mounted to an independent reference frame were located to record movement of the post mount. See photographs in Section 8 for test setups.

Test Procedure

Testing and evaluation was performed in accordance with Section 5.1 of ICC-ES™ AC174. The test specimen was inspected prior to testing to verify size and general condition of the materials, assembly, and installation. No potentially compromising defects were observed. Each design load test was performed using the following procedure:

1. Zeroed transducers and load cell at zero load; and
2. Increased load to specified test load in no less than ten seconds

Test Results

Unless otherwise noted, all loads and displacement measurements were normal to the post (horizontal).

Key to Test Results Tables:

Load Level: Target test load

Test Load: Actual applied load at the designated load level (target)

Elapsed Time (E.T.): The amount of time into the test with zero established at the beginning of the loading procedure

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42 in Post Pocket Bracket

IRC - One- and Two-Family Dwellings / ICC-ES AC174

Specimen No. 1 of 3

TEST DATE: 08/04/23			
DESIGN LOAD: 200 LB CONCENTRATED LOAD ON TOP OF A SINGLE POST			
LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	DISPLACEMENT (inches)
200 lb (D.L.)	200	00:23	2.12"
500 lb (2.50 x D.L.)	597	01:13	Result: Withstood load equal to or greater than 500 lb without failure
<u>Deflection Evaluation:</u> Maximum post deflection at 200 lb = 2.12 in Limit per AC174 : $\frac{h}{12} = \frac{42}{12} = 3.50" > 2.12" \therefore \text{ok}$			

Specimen No. 2 of 3

TEST DATE: 08/04/23			
DESIGN LOAD: 200 LB CONCENTRATED LOAD ON TOP OF A SINGLE POST			
LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	DISPLACEMENT (inches)
200 lb (D.L.)	200	00:15	1.26"
500 lb (2.50 x D.L.)	506	00:43	Result: Withstood load equal to or greater than 500 lb without failure
<u>Deflection Evaluation:</u> Maximum post deflection at 200 lb = 1.26 in Limit per AC174 : $\frac{h}{12} = \frac{42}{12} = 3.50" > 1.26" \therefore \text{ok}$			

Specimen No. 3 of 3

TEST DATE: 08/04/23			
DESIGN LOAD: 200 LB CONCENTRATED LOAD ON TOP OF A SINGLE POST			
LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	DISPLACEMENT (inches)
200 lb (D.L.)	201	00:22	1.18"
500 lb (2.50 x D.L.)	506	00:48	Result: Withstood load equal to or greater than 500 lb without failure
<u>Deflection Evaluation:</u> Maximum post deflection at 201 lb = 1.18 in Limit per AC174 : $\frac{h}{12} = \frac{42}{12} = 3.50" > 1.18" \therefore \text{ok}$			

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SECTION 7

CONCLUSION

When installed in a wood deck with blocking construction details as noted herein, the post mount assemblies reported meet the structural performance requirements of Section 5.1 of ICC-ES™ AC174.

SECTION 8

PHOTOGRAPHS



Photo No. 1
Concentrated Load on Top of Single Post

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Photo No. 2
Pocket Post Bracket



Photo No. 3
Pocket Post Bracket

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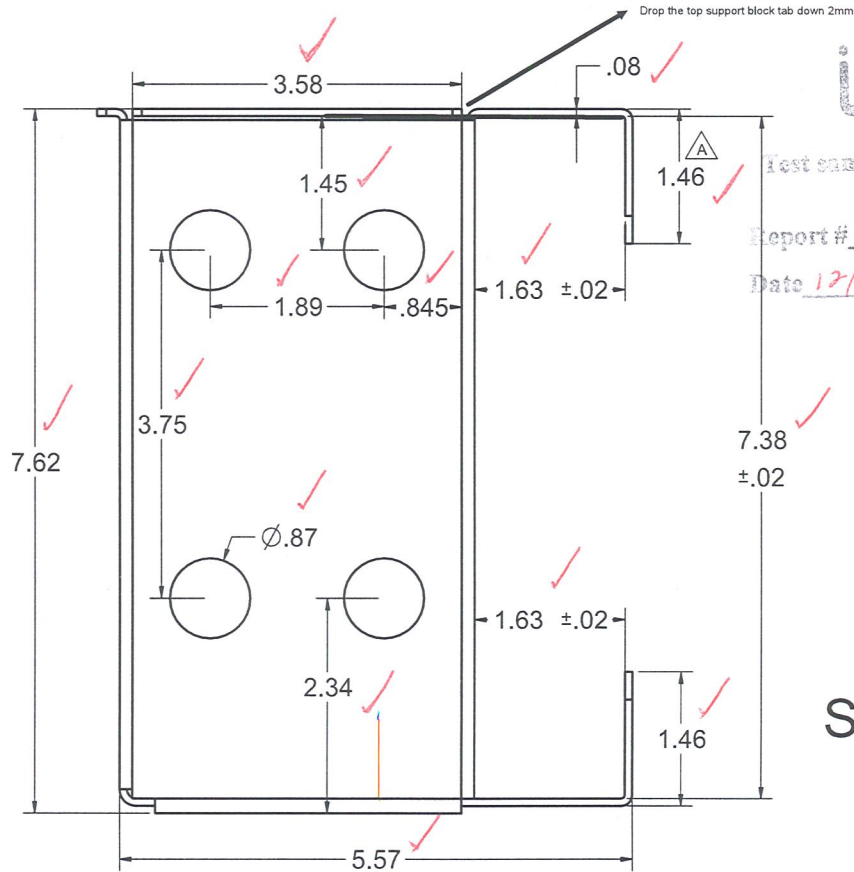
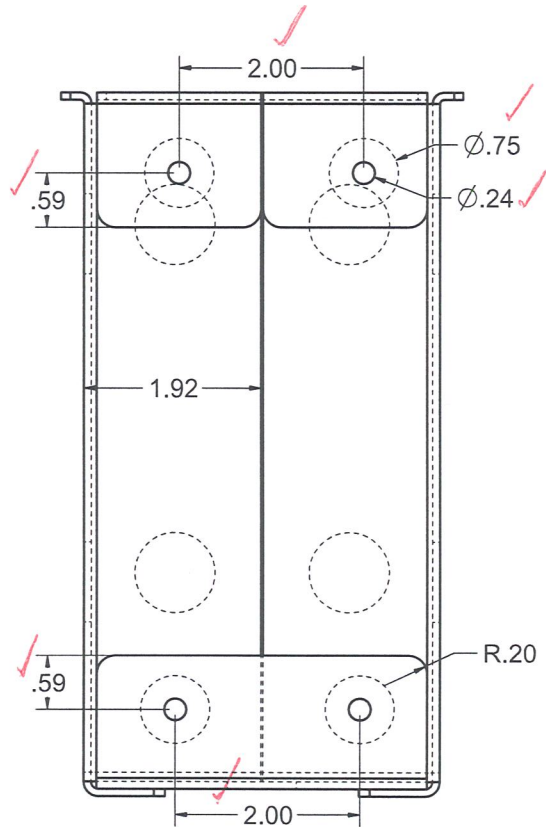
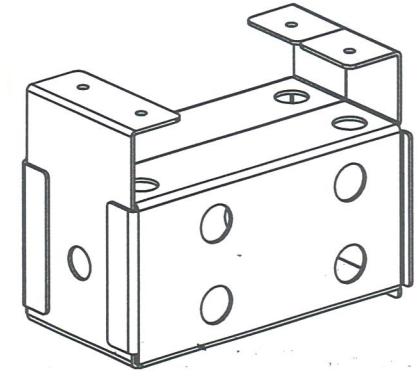
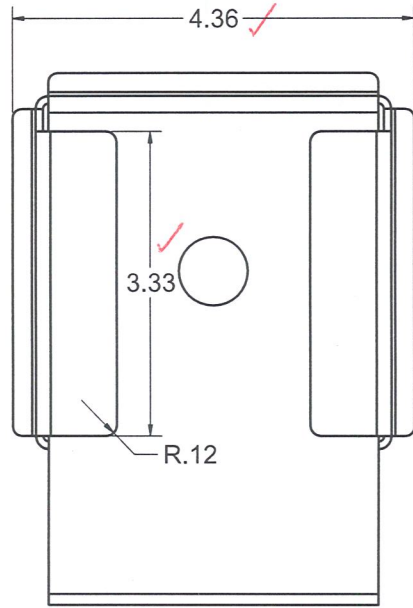
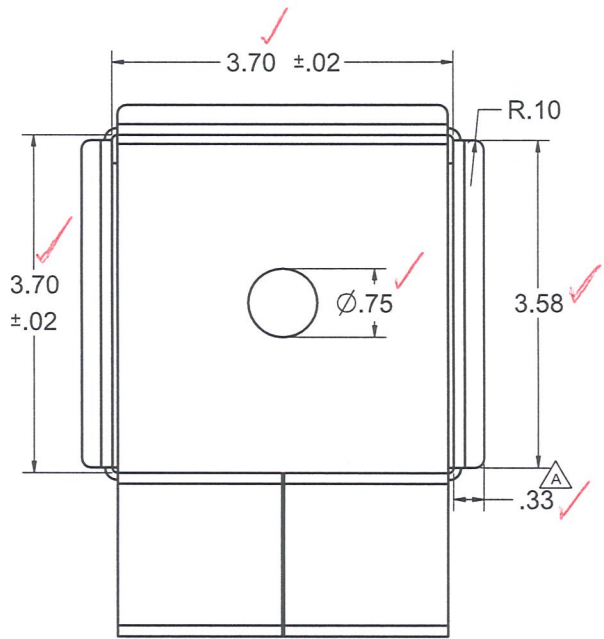
Date: 01/03/24



Photo No. 4
Pocket Post Bracket

SECTION 9 **DRAWINGS**

The "As-Built" drawings for the 42 in Post Pocket Bracket (Side Rim Joist Installation), which follow, have been reviewed by Intertek B&C and are representative of the project reported herein. Project construction was verified by Intertek B&C per the drawings included in this report. Any deviations are documented herein or on the drawings.



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Test sample complies with these details.
 Deviations are noted.

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Date 12/19/23 Tech AJS

Stl Post Pocket
 2023/5/24



Total Quality. Assured.

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SECTION 10

REVISION LOG

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