



WESTERN FIRE CENTER, INC.

2204 Parrott Way, Kelso, Washington 98626

Phone: 360-423-1400 | Fax: 360-423-5003

Deck Testing of Wood Decking Material

Indicative testing conducted in accordance with the test methodology described in CSFM 12-7A-4A, Materials and Construction Materials for Exterior Wildfire Exposure: Decking Alternate Method A

Product:

Nominal 1×6 Mahogany Decking
³/₁₆" Edge-to-Edge Spacing
Underdeck Only

Conducted For:

Hampton Lumber
9600 SW Barnes Rd, Suite 200
Portland, OR 97225

WFCi Report #25046

Test Date: August 18, 2025

Report Issued: September 3, 2025



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INTRODUCTION

This report documents the fire testing of wood decking for the Hampton Lumber of Portland, OR in accordance with the requirements defined in the California Building Code, Chapter 7A (CSFM 12-7A-4A), *Materials and Construction Methods for Exterior Wildfire Exposure – Decking* Alternate Method A. This testing series included under deck tests (Part A) only, but not burning brand tests (Part B).

SUMMARY OF TEST METHOD

Under Deck – Part A

Under deck testing was performed using a 12" × 12" diffusion sand burner providing 80 ± 4 kW for a period of 3 min applied to the underside of a decking test assembly. A 40 min observation period was allowed following burner application to the assembly. The sample holder and burner specifications are included in Figure 1 as well as CSFM 12-7A-4, *Materials and Construction Methods for Exterior Wildfire Exposure – Decking*. The entire assembly was placed under WFCi's hood calorimeter which measured heat release during the test period. Three consecutive tests must pass for approval.

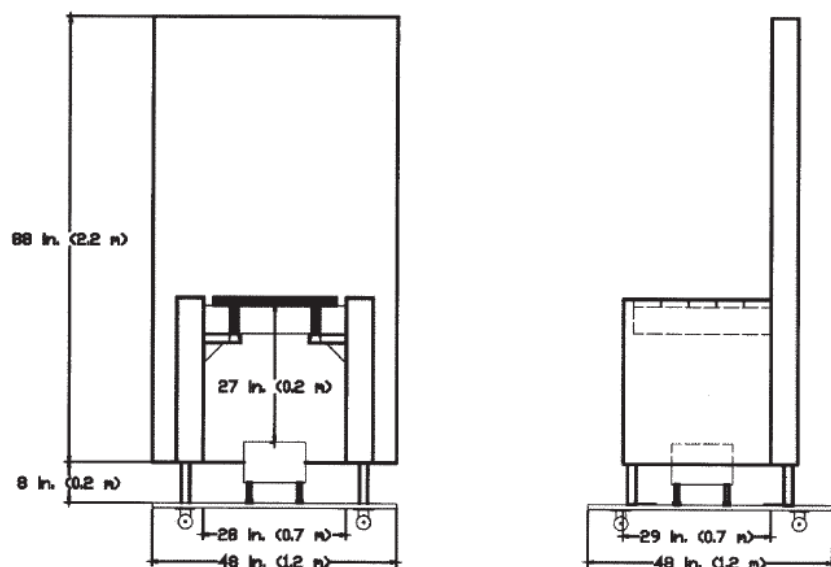


Figure 1. Sample holder and burner for underdeck test.

Conditions of acceptance for the CSFM 12-7A-4, Part A under deck are as follows:

12-7A-4.7.5 **Conditions of acceptance.** Should one of the three replicates fail to meet the Condition of Acceptance, three additional tests may be run. All the additional tests must meet the Condition of Acceptance.

1. Effective net peak heat release rate of less than or equal to 25 kW/ft² (269 kW/m²).

2. Absence of sustained flaming or glowing combustion of any kind at the conclusion of the 40-minute observation period.
3. Absence of falling particles that are still burning when reaching the burner or floor.

An alternate method has also been used by California, CSFM 12-7A-4A (Alternate Method A) under deck are as follows. This is a less-stringent criterion that specified by the regular method.

12-7A-4A.7.5 **Conditions of acceptance.** Should one of the three replicates fail to meet the Condition of Acceptance, three additional tests may be run. All the additional tests must meet the Condition of Acceptance with an effective net peak heat release rate of less than or equal to 25 kW/ft² (269 kW/m²).

SAMPLE DESCRIPTION

A type of Hampton Lumber decking (Mahogany – Square-Edge, 7.17.25 PCC GT, Hampton Lumber Deck # [1-5]) was shipped to WFCi and received on July 25, 2025 as 120" planks. The boards were nominal 1×6 (7/8"×5½" actual). Five boards were positioned on two nominal 2×6 Douglas fir joists, 28¼" long with 16" center-to-center spacing. The edge-to-edge spacing of the planks was maintained at 3/16", resulting in a top deck surface area of 4.708 ft². The test boards were attached to the joists with 2" deck screws. The board samples were conditioned at 70°F and 50% RH until the mass stopped changing. The moisture content of the joists and board samples was approximately 11% at the time of testing.

The test specimen identification is as provided by the client and WFCi accepts no responsibilities for any inaccuracies therein. WFCi has not verified the composition, manufacturing techniques or quality assurance procedures. The samples were inspected as shown in Appendix A: Inspection Report.



Figure 2. Representative test assembly for (a) identification and (b) profile.

TEST RESULTS

Under Deck Tests – Part A

Under deck testing of the decks took place on August 18, 2025. The energy from the burner was verified on the day of testing to be 79.4 ± 1.2 kW. All three decks were tested, and all had heat release values below the 25 kW/ft² threshold as can be seen in Table 1 and Figure 3. All tests

self-extinguished around 10 min into the test. Since all of the tests experienced falling embers that continued to burn once hitting the floor (failure criterion for regular Part A), once the flames were out, the test was terminated. These tests did not pass the regular 12-7A-4 (Part A) test, but they did pass the 12-7A-4A test (alternate method). Photographs are also included in Figure 4 through Figure 6 below.

Table 1. Summary of heat release rate results for underdeck tests.

Test Parameter	Test 1	Test 2	Test 3
Peak Heat Release Rate (kW)	144.2	145.9	143.2
Effective Peak Heat Release Rate [HRR - 80 kW]/Area (kW/ft ²)	13.6	14.0	13.4
Time of Peak Heat Release (min)	1.1	1.1	1.6
Flaming Particles	Yes	Yes	Yes
Status at end of test (e.g., smoking)	All Out 27:00	All Out 29:00	All Out 26:00
Results – According to CSFM 12-7A-4 (Part A) or 12-7A-4A	Fail -4 (Part A) Pass -4A	Fail -4 (Part A) Pass -4A	Fail -4 (Part A) Pass -4A

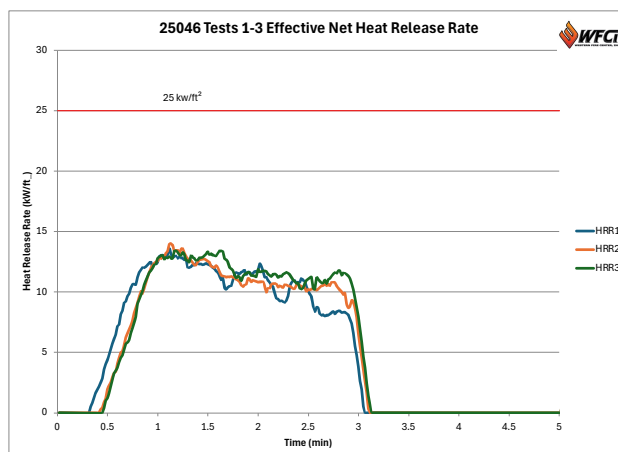


Figure 3. Effective net heat release rate for under deck tests of Tests 1, 2, & 3.

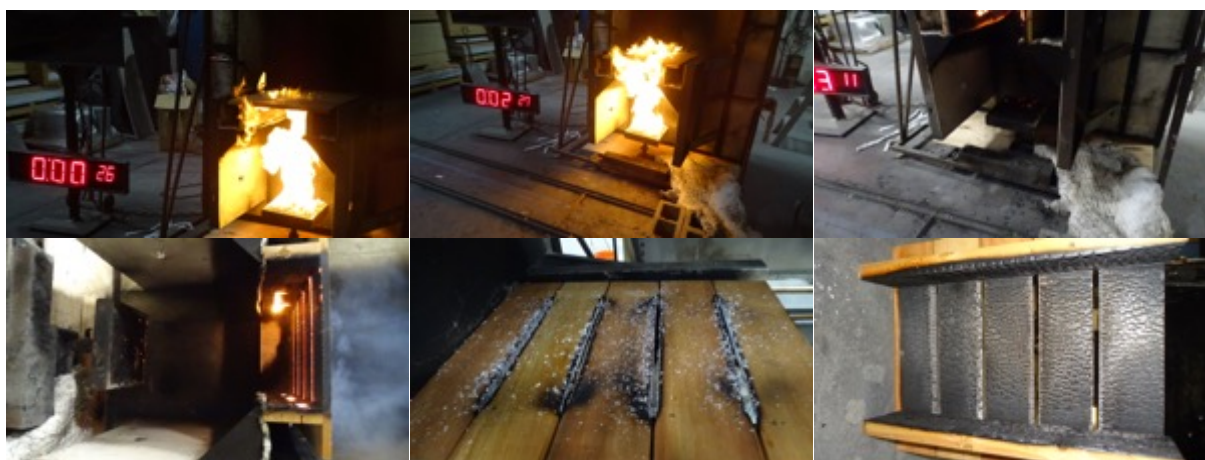


Figure 4. Sequential photographs from Test 1.

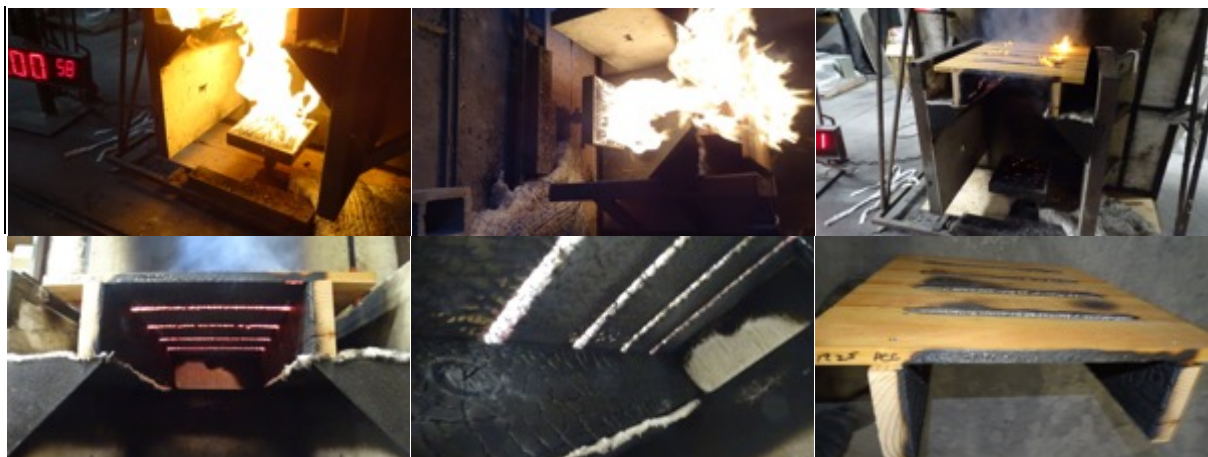


Figure 5. Sequential photographs from Test 2.

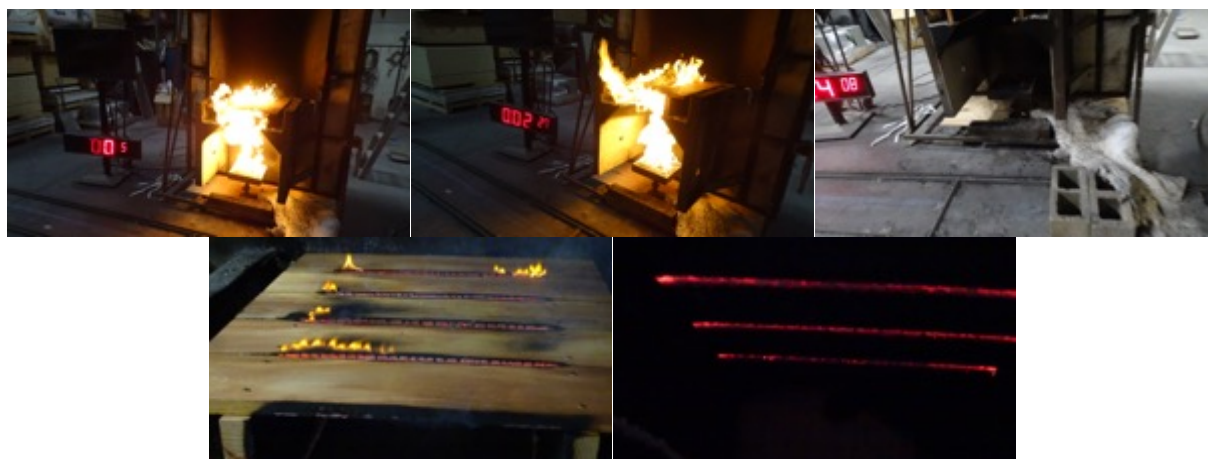


Figure 6. Sequential photographs from Test 3.

SUMMARY

This type of wood decking boards described above in this report with an edge-to-edge gap spacing of $\frac{3}{16}$ " were tested to CSFM 12-7A-4A, *Materials and Construction Methods for Exterior Wildfire Exposure – Decking Alternate Method A* (underdeck only). Each of the three replicate tests passed the corresponding requirements according to the alternate method (12-7A-4A). These results can be extended for a thinner edge-to-edge gap space (e.g., $\frac{1}{8}$ ") or for any wider deck product (e.g., nominal 1×8).

SIGNATURES

Reviewed and approved by,



Mike White

Laboratory Manager

Testing performed by,



Brent M. Pickett, Ph.D.

Technical Director

WESTERN FIRE CENTER AUTHORIZES THE CLIENT NAMED HEREIN TO
REPRODUCE THIS REPORT ONLY IF REPRODUCED IN ITS ENTIRETY

Underdeck heat release uncertainty is approximately 5% by a simple acceptance decision rule.

The test specimen identification is as provided by the client and WFCi accepts no responsibilities for any inaccuracies therein. WFCi has not verified the composition, manufacturing techniques or quality assurance procedures.

Version	Date Issued	Document Number	Changes
Original	September 3, 2025	25046	Original report

Appendix A: Inspection Report

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Product Certification Consultants LLC

Making A Difference In Your Business

1676 Tapolo Drive
San Jose, CA 95124
Phone: (408) 234-2418
Email: garrett@productcc.com

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REPORT FOR

HAMPTON LUMBER
9600 SW BARNES ROAD, SUITE 200
PORTLAND, OR 97225



Email: garrett@productcc.com
Website: www.productcc.com

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INSPECTION FOR DECKING

The product and information described in this Report are representative samples of the product supplied by the Applicant and submitted for this investigation by the Applicant.

Product Description: The product is comprised of nominal 1 x 6 inch Mahogany deck boards

Date of Inspection: July 17, 2025

Location of Inspection: Conrad
7085-C Eddy Road
Arbuckle, CA 95912

On Site Inspection Contact: Daniel Piaz

PCC LLC Inspector: Mr. Garrett S Tom P.E.

Sample Description:

One (1) bundle of five (5) boards nominal 1 x 6 x 120 inches
(actual 7/8 x 5-1/2 x 120 inches)

The bundles were received from Hampton Lumber under Bill of Lading dated June 25, 2025 Shipment Number 2020990

The samples were identified on one edge with the following information.
7.17.24, PCC-GT, Hampton Lumber, Deck #1 thru #5

SCOPE OF INVESTIGATION

The investigation as specified in this Report has been conducted to provide a chain of custody inspection for the product. The product is to be shipped to Western Fire Center, Inc. in Kelso, WA for fire testing.

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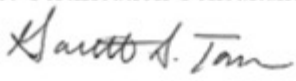
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DIMENSIONS (measurements in inches)

Sample #	Thickness	Width	Length
1	7/8	5-1/2	120
2	7/8	5-1/2	120
3	7/8	5-1/2	120
4	7/8	5-1/2	120
5	7/8	5-1/2	120

Report By

Product Certification Consultants LLC

By: 

Garrett S. Tom, LLC Manager

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INSPECTION PHOTOS

Photo 1—Incoming Material



Photo 2—Sample Inspection Marking



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INSPECTION PHOTOS

Photo 3—Finished Product



Photo 4—Bill of Lading

PC 4, 7, 5 Section *ATTN: TFC*

HAMPTON LUMBER SALES
 1000 W. 10TH AVE. S.
 TULSA, OK 74103-1000
 (918) 438-1000

BILL OF LADING Page 1 of 1
 Shipment # **2020999**
 Print Date: 06/23/2025
 Time: 11:40
 Ship From: 06/19/2025

Commodity: **CUMULATIVE WOOD PRESERVING**
 Ship To: **1000 W. 10TH AVE. S.**
 ADDRESS: **TULSA, OK 74103-1000**

Carrier: **OK MOBILE**
 Equip. Number: **000010000000000000**
 Reg. Number: **000**

Bill of Lading # **00000000** Customer PO # **00000000** Est. **000-100-0000** Seal # **000**

Description	Quantity	Unit	Weight	Volume
2 x 4 S4S DRY KID-DOCKING 648	20,000	PCS	1,770	1,770
TOTAL PRICE				
2 x 4 S4S DRY KID-DOCKING 648				
Total L.P.			1,770	1,770
Total TACOS				
Total Pieces				

NO STOPS

This is to certify that above named materials are properly described, packaged, loaded, stowed, and as proper condition for transportation according to the applicable regulations of the Department of Transportation.

Notes: Shipper and carrier agree that transportation of commodities specified by this manifest are subject to all printed terms and conditions of the Uniform Freight Bill of Lading, which are modified by separate agreements, as specified in the National Motor Freight Classification (NMFC) or as otherwise agreed effective at time of shipment.

Shipper: *[Signature]* Carrier: *[Signature]* Consignor: *[Signature]*
 Signature: *[Signature]* Signature: *[Signature]* Signature: *[Signature]*
 Date: *6/27/25* Date: *6/27/25* Date: *6/27/25*

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