MIAMI-DADE

BUILDING CODE COMPLIANCE OFFICE (BCCO)
PRODUCT CONTROL DIVISION

MIAMI-DADE COUNTY, FLORIDA
METRO-DADE FLAGLER BUILDING
140 WEST FLAGLER STREET, SUITE 1603
MIAMI, FLORIDA 33130-1563
(305) 375-2901 FAX (305) 375-2908

NOTICE OF ACCEPTANCE (NOA)

Watkins Sawmills Limited
9414 288th Street
Maple Ridge, British Columbia V2X 8Y6
Canada

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed by Miami-Dade County Product Control Division and accepted by the Board of Rules and Appeals (BORA) to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Division (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. BORA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Division that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: Cedar Shakes & Shingles

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This consists of pages 1 through 3.
The submitted documentation was reviewed by Frank Zuloaga, RRC

ROOFING ASSEMBLY APPROVAL

Category: Roofing
Sub-Category: Wood Shingles and Shakes

1. SCOPE:

This approves roofing system using wood shingles and shakes as manufactured by Teal Cedar Products (1977) Ltd. As described in Section 2 of this Notice of Acceptance, designed to comply with The Florida Building Code, HVHZ.

2. PRODUCT DESCRIPTION:

Product	Dimensions	Product Description
Certigrade Shingles (Grade 1)	Length 16", 18" Width 4 to 4 to 11""	Red Cedar sawn shingles and Hip and Ridge from clear heart wood: 100% edge grain, no defects
Certi-Last Shingles (Grade 1)	Length 16", 18" Width 4 to 4 to 11"	Preservative treated Red Cedar sawn shingles made from Certigrade shingles
Certi-Cut (Grade 1)	Length 16", 18" Various	Red Cedar sawn shingles made from Certigrade shingles
Certi-Guard (Grade 1)	Length 16", 18" Width 4 to 4 to 11"	Fire-retardant treated Red Cedar sawn shingles made from Certigrade shingles
Certi-Split (Grade 1)	Length 15", 18", & 24" Width 4 to 4 to 11"	Handsplit and Resawn Shakes and Hip and Ridge from clear heart wood: 20% maximum flat grain
Certi-Guard (Grade 1)	Length 15", 18", & 24" Width 4 to 4 to 11"	Fire-retardant treated Red Cedar shakes made from Certi-Split shakes
Certi-Last (Grade 1)	Length 15", 18", & 24" Width 4 to 4 to 11"	Preservative treated Red Cedar shakes made from Certi-Split shakes
Certi-groove (Grade 1)	Length 15", 18", & 24" Width 4 to 4 to 11"	Machine grooved shakes made from Certi-Split shakes
Certi-Sawn (Grade 1)	Length 15", 18", & 24" Width 4 to 4 to 11"	Taper Sawn Cedar Shakes, 100% clear face with a maximum 10% flat grain.

3. LIMITATIONS:

3.1 Fire classification is not part of this acceptance.

3.2 This Acceptance is for wood deck applications. Minimum deck requirements shall be in compliance with applicable building code.

3.3 Wood shingles and shakes shall not be installed on roof mean heights greater than 33 feet.

3.4 Watkins Cedar Shakes and Shingles shall have a quality control testing program by an approved independent listing agency having unannounced follow up visit. Follow up test results shall be made available to BCCO upon request.

4. LABELING:

4.1 Shingle/ Shake bundles shall be labeled with the Miami-Dade Logo or the wording "Miami-Dade County-Dade Product Control Approved"

5. BUILDING PERMIT REQUIREMENTS:

5.1 Application for building permit shall be accompanied by copies of the following:

5.1.1 This Notice of Acceptance.

5.1.2 Any other documents required by Building Official or the Building Code in order to properly evaluate the installation of this system.

6. INSTALLATION:

6.1 Teal Cedar Products (1977) Ltd. Cedar Shakes and Shingles and its components shall be installed in strict compliance with Roofing Application Standard RAS 130.

Table 1: Fastener Pull Through Resistance [1]

Description	Maximum Pull Force (lbs.)
Red Cedar Shingles 18"	119
Red Cedar Shakes 24"	124

1. Maximum thickness of ¼"

EVIDENCE SUBMITTED

Test Agency	Test Identifier	Test Name/Report	Date
Inchape Testing Services	PA 100-95	488-5018-A	05/27/96
Inchape Testing Services	PA 100-95	488-5018-B	05/27/96
Intertek Testing Services		Fastener Pull-Through Resistance Test 484-0420	05/29/997

END OF THIS ACCEPTANCE

Cedar Shake & Shingle Bureau

IMPORTANT MEMBER NOTICE

Certi-label™ products withstand 245 MPH wind speed

November 30, 2004

The Cedar Shake & Shingle Bureau announced today that Certi-label shakes and shingles have undergone the UL (Underwriters Laboratories) 1897 fourth edition "Uplift Tests for Roof Covering Systems" with exemplary results.

- Certigrade® Shingles 90 PSF (pounds per square foot)
- Certi-Split® Shakes 180 PSF

A subsequent report by a Florida Registered Professional Engineer converted the PSF numbers into miles per hour figures using the analytical method for wind design of roof cladding set forth in Section 6 of ASCE 7-98 (American Society of Engineers). Results, using no safety factors, are as follows:

- Certigrade® shingles withstood wind speeds of 173 MPH
- Certi-Split® shakes withstood wind speeds of 245 MPH

It should be noted that these calculations were conducted for a specific house in the Dade County area of Florida. When converting from PSF to MPH using ASCE 7-98 results will vary depending on many factors including building height, location, roof slope, environment etc. Members are advised that all design parameters, assumptions and limitations of use set forth in the Florida engineer's report are necessary components of further interpretation.

CSSB Chairman, John Cole stated, "this is great news for the members of the Cedar Shake & Shingle Bureau, and it proves what we have always believed. Certi-label products are a natural roofing choice that are able to withstand the elements of Mother Nature." A full report is available: please contact the CSSB at 1-800-843-3578.

MEMO

Date: Dec 2, 2004

From: CSSB Marketing Department

Re: Test Pressure vs. Maxiumum Wind Speed Analysis
Certigrade® shingles and Certi-Split® shakes
ERD Project 03650.04C

Please note:

Further use of the attached information in any form, including all advertising, **MUST** be authorized by the CSSB Marketing Department prior to use.

- The CSSB agreement with Exterior Research & Design, L.L.C strictly states that certain aspects of the report must be included in any advertising of the findings.
- This report was conducted with Certi-label™ products and therefore must only be referenced with Certi-label™ products.
- Any reference to this report in conjunction with non Certi-label products could result in legal action and/or disciplinary action.

We trust you understand that we are acting in our members' best interest by putting these stipulations in place. If you have any questions please do not hesitate to contact our office.

Exterior Research & Design, L.L.C.

Building Science and Envelope Consultants

Certificate of Authorization #9503

November 8, 2004

Lynne Christensen
Cedar Shake & Shingle Bureau
P.O. Box 1178
Sumas, Washington 98295

RE: Test Pressure vs. Maximum Wind Speed Analysis
Certigrade Shingles and Certi-Split Shakes
ERD Project 03650.04C

Dear Lynne:

This letter serves to document the results of an analysis conducted to translate the results of simulated wind uplift testing of Certigrade shingle and Certi-Split shake systems to corresponding maximum allowable basic wind speeds. ERD conducted the analysis utilizing the analytical method for wind design of roof cladding set forth in Section 6 of ASCE 7-98[1] with test results from Underwriters Laboratories, Inc. as the baseline system performance data.

1. **ROOF SYSTEMS:** The following roof systems are examined in this report, as set forth in the referenced UL Report 04CA06279. Note: A 6-mil thick polyethylene film was loose-laid between battens and shingles/shakes to establish the pressure differential across the system.

   TEST ASSEMBLY NO. 1:
   - ***Wood Joists:*** Nominal 2 x 10 in., No. 2 Grade Spruce-Pine-Fir supports spaced 24 in. o.c.
   - ***Wood Battens:*** 1 x 4 in., Douglas-Fir battens spaced per the UL Report attached at each wood joist with two No. 8 x 2½ in. long drywall screws.
   - ***Shingles:*** Certigrade measuring 18 in. long, 0.45 in. thick (butt end) having a 5½ inch exposure attached to battens using two 3d x 1¼ in. long stainless steel ring shank nails positioned ¾ to 1 inch from each edge, 6½ in. from the leading edge.

   TEST ASSEMBLY NO. 2:
   - ***Wood Joists:*** Nominal 2 x 10 in., No. 2 Grade Spruce-Pine-Fir supports spaced 24 in. o.c.
   - ***Wood Battens:*** 1 x 4 in., Douglas-Fir battens spaced per the UL Report attached at each wood joist with two No. 8 x 2½ in. long drywall screws.
   - ***Underlayment:*** ASTM D226, type II (30# felt) installed per CSSB recommendations.
   - ***Shakes:*** Certi-Split measuring 24 in. long, ¾ to 1 in. thick (butt end) having a 10 inch exposure attached to battens using two 6d x 2½ in. long stainless steel ring shank nails positioned ¾ to 1 inch from each edge, 11½ in. from the leading edge.

Main Office: 2412 7th Ave W • Suite 101 • Seattle, WA 98119 • Voice (206) 467-0054 • Fax (206) 467-5840
Laboratory: 600 W. Nickerson St • Seattle, WA 98119 • Voice (206) 298-3620 • Fax (206) 298-3130
ERD East: 2 Mattoon Road • Waterbury, CT 06708 • Voice (203) 596-7884 • Fax (203) 596-7058

ERD
Certificate of
Authorization #9503

2. SYSTEM PERFORMANCE TESTING:

UL Report 04CA06279 dated 08/24/2004 documents results of simulated wind uplift testing of the above noted assemblies in accordance with UL1897[ii] as follows:

- ***Assembly No. 1:*** Pass 90 psf.
- ***Assembly No. 2:*** Pass 180 psf.

3. DESIGN PARAMETERS: ERD utilized the following parameters, as specified by the client, for the analysis outlined in Section 4 herein.

Design Parameter	Value
Max. Roof Height (h):	$\leq$ 15 ft
Roof Slope (θ):	$30° < \theta \leq 45°$
Building Exposure:	C
Category:	II
Importance Factor:	1.0
Designing for:	Mechanically attached cladding
Tributary Area:	$\leq$ 10 ft2

Assumptions:

a. Enclosed Buildings ⇨ $GC_{pi} = +0.18$
b. The building is not located atop any significant hill, ridge or escarpment ($Kzt = 1$)
c. No load combinations apply ($Kd = 1.0$)
d. No overhangs.

4. ANALYSIS: ASCE 7-98, Section 6.5.12.4 specifies the following equation in the determination of design pressures (p) for any particular cladding system at the client-specified roof height.

$p = q_h [(GC_p) - (GC_{pi})]$ where q_h = velocity pressure (psf)
GC_p = external pressure coefficient
GC_{pi} = internal pressure coefficient

Velocity pressure (q_h) is a function of basic wind speed, as noted below:

$q_h = 0.00256 K_z K_{zt} K_d V^2 I$ where K_z = velocity pressure exposure coefficient
K_{zt} = topographical factor
K_d = directionality factor
V = basic wind speed (mph)
I = importance factor

Combining these questions and solving for basic wind speed (V) yields the following:

$$V = \{p / [0.00256\ K_z\ K_{zt}\ K_d\ I\ (GC_p - GC_{pi})]\}^{1/2}$$

where the following variables apply for the purposes of this analysis.

p	=	test pressure[1]	= -90 psf (Certigrade) = -180 psf (Certi-Shake)
K_z	=	velocity pressure exposure coefficient	= 0.85
K_{zt}	=	topographical factor	= 1.00
K_d	=	directionality factor	= 1.00
I	=	importance factor	= 1.00
GC_p	=	critical external pressure coefficient	= -1.20 (for critical zones 2 & 3)
GC_{pi}	=	internal pressure coefficient	= +0.18

Results:

Table 1: Maximum Basic Wind Speed
Certigrade and Certi-Shake

System	Maximum Basic Wind Speed (V)
Certigrade:	173 mph
Certi-Shake:	245 mph

5. LIMITATIONS OF USE:

A. The maximum basic wind speed results outlined in Table I are a function of the design parameters and assumptions outlined in Section 3. Building conditions falling outside of these parameters require supplemental analysis.

B. The maximum basic wind speed results outlined in Table I are a function of baseline system performance data with no margin of safety applied. Any margin of safety required by the Authority Having Jurisdiction requires supplemental analysis. It should be noted that the relationship between test pressure and wind speed is non-linear (i.e., one cannot simply apply the specified margin to Table I wind speed results).

C. The system performance data upon which the Table I results are based are specific to the systems described in Section I and in the referenced UL Report. Variations to these tested assemblies could affect system performance and, therefore, affect maximum basic wind speed.

[1] At the request of the client, this analysis includes no margin of safety applied to test pressures.

ERD
Certificate of Authorization #9503

6. CONCLUSIONS:

The maximum basic wind speed, as defined in ASCE 7-98, for the roof assemblies described in Section 2 are as set forth in Table I herein, subject to the Limitations of Use set forth in Section 5.

Please contact our office with any questions.

11/08/04

Sincerely,

Robert Nieminen, P.E.
Florida Reg. No. 59166
General Manager, ERD East

[I] ASCE 7-98, *Minimum Design Loads for Building and Other Structures*, © 2000 American Society of Civil Engineers.

[II] UL 1897, *Uplift Tests for Roof Covering Systems*, © Underwriters Laboratories, Inc.