



**EXTERIOR RESEARCH & DESIGN, LLC.**

*Certificate of Authorization #9503*

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**EVALUATION REPORT**

**DECRA Roofing Systems, Inc.**

1230 Railroad Street,

Corona, CA 92882

**Evaluation Report D30800.10.09-R4**

**FL11255-R5**

**Date of Issuance: 10/14/2009**

**Revision 4: 04/16/2015**

**SCOPE:**

This Evaluation Report is issued under Rule 61G20-3 and the applicable rules and regulations governing the use of construction materials in the State of Florida. The documentation submitted has been reviewed by Robert Nieminen, P.E. for use of the product under the Florida Building Code. The product described herein has been evaluated for compliance with the 5<sup>th</sup> Edition (2014) Florida Building Code sections noted herein.

**DESCRIPTION: DECRA Metal Roof Systems**

**LABELING:** Labeling shall be in accordance with the requirements the Accredited Quality Assurance Agency noted herein.

**CONTINUED COMPLIANCE:** This Evaluation Report is valid until such time as the named product(s) changes, the referenced Quality Assurance documentation changes, or provisions of the Code that relate to the product change. Acceptance of this Evaluation Report by the named client constitutes agreement to notify Robert Nieminen, P.E. if the product changes or the referenced Quality Assurance documentation changes. Trinity|ERD requires a complete review of this Evaluation Report relative to updated Code requirements with each Code Cycle.

**ADVERTISEMENT:** The Evaluation Report number preceded by the words "Trinity | ERD Evaluated" may be displayed in advertising literature. If any portion of the Evaluation Report is displayed, then it shall be done in its entirety.

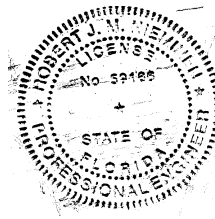
**INSPECTION:** Upon request, a copy of this entire Evaluation Report shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This Evaluation Report consists of pages 1 through 5, plus a 28-page Appendix.

**Prepared by:**

**Robert J.M. Nieminen, P.E.**

*Florida Registration No. 59166, Florida DCA ANE1983*



The facsimile seal appearing was authorized by Robert Nieminen, P.E. on 04/16/2015. This does not serve as an electronically signed document. Signed, sealed hardcopies have been transmitted to the Product Approval Administrator and to the named client

**CERTIFICATION OF INDEPENDENCE:**

1. Exterior Research & Design, LLC. d/b/a Trinity | ERD does not have, nor does it intend to acquire or will it acquire, a financial interest in any company manufacturing or distributing products it evaluates.
2. Exterior Research & Design, LLC. d/b/a Trinity | ERD is not owned, operated or controlled by any company manufacturing or distributing products it evaluates.
3. Robert Nieminen, P.E. does not have nor will acquire, a financial interest in any company manufacturing or distributing products for which the evaluation reports are being issued.
4. Robert Nieminen, P.E. does not have, nor will acquire, a financial interest in any other entity involved in the approval process of the product.
5. This is a building code evaluation. Neither Trinity|ERD nor Robert Nieminen, P.E. are, in any way, the Designer of Record for any project on which this Evaluation Report, or previous versions thereof, is/was used for permitting or design guidance unless retained specifically for that purpose.

**ROOFING SYSTEMS EVALUATION:**

**1. SCOPE:**

**Product Category:** Roofing

**Sub-Category:** Non-Structural Metal Roofing

**Compliance Statement:** DECRA Metal Roof Systems, as produced by DECRA Roofing Systems, have demonstrated compliance with the following sections of the Florida Building Code through testing in accordance with the following Standards. Compliance is subject to the Installation Requirements and Limitations / Conditions of Use set forth herein.

**2. STANDARDS:**

<u>Section</u>	<u>Property</u>	<u>Standard</u>	<u>Year</u>
1504.3.1	Wind	UL 1897	2004
1504.3.1	Wind	UL 580	2006
1518.9.1, 1523.6.5.2.4.1	Wind	TAS 125	2003

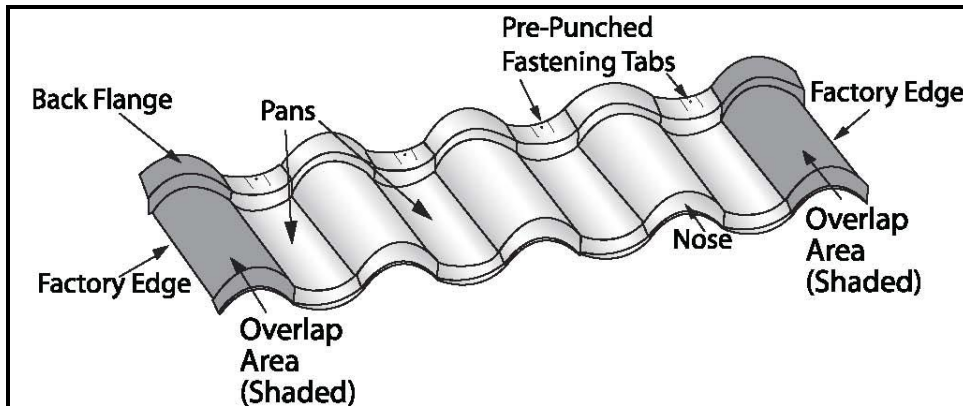
**3. REFERENCES:**

<u>Entity</u>	<u>Examination</u>	<u>Reference</u>	<u>Date</u>
UL (TST 1740)	Wind Uplift	01NK283	09/05/2001
UL (TST 1740)	Wind Uplift	07NK09386	06/04/2007
UL (TST 1740)	Wind Uplift	07NK22905	11/12/2007
UL (TST 1740)	Wind Uplift	07NK22905	06/18/2008
UL (TST 1740)	Wind Uplift	07NK22905	06/19/2008
ATI (TST 1558)	Wind Uplift	A1395.01-109-44	08/10/2010
Metal suppliers	Metal Physicals	Mill Certs	Current
UL LLC (QUA 9625)	Quality Assurance	Inspection Report, R14710/2QA	03/19/2015

**4. PRODUCT DESCRIPTION:**

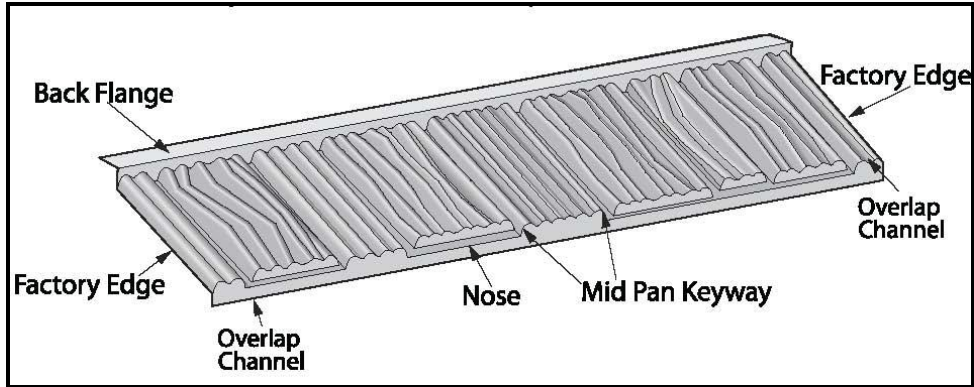
The following DECRA non-structural metal roof panels are mechanically attached to Approved substrate, as outlined in the Limitations / Conditions of Use herein. Panels are produced from sheet steel complying with ASTM A792, Grade 37 with an AZ50 hot-dip aluminum-zinc alloy coating and a ceramic coated stone granular finish.

- **DECRA Villa Tile** is a formed steel panel that is mechanically attached to approved decks through pre-punched fastening tabs. Villa Tile measure 17 x 44.75 inches with installed exposure of 14.5 x 39.375 inches.

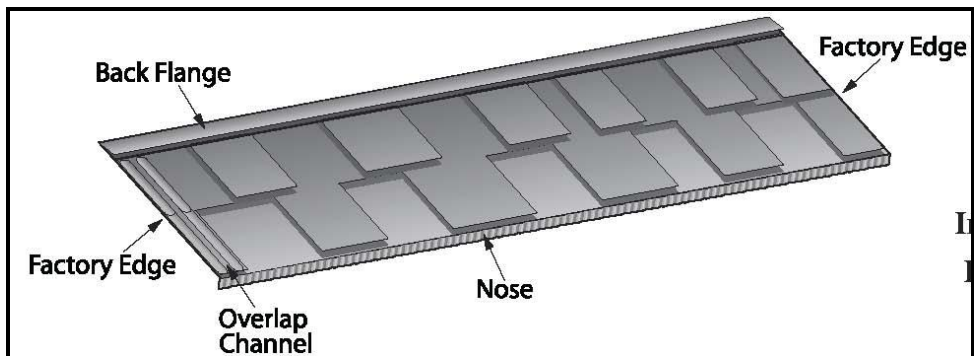


- **DECRA Shake Plus and Shingle Plus** are formed steel panels that are mechanically attached to approved decks. Shake Plus measures 15.5 x 53 inches with installed exposure of 12.625 x 51 inches. Shingle Plus measures 17.5 x 52 inches with installed exposure of 14.5 x 50 inches.

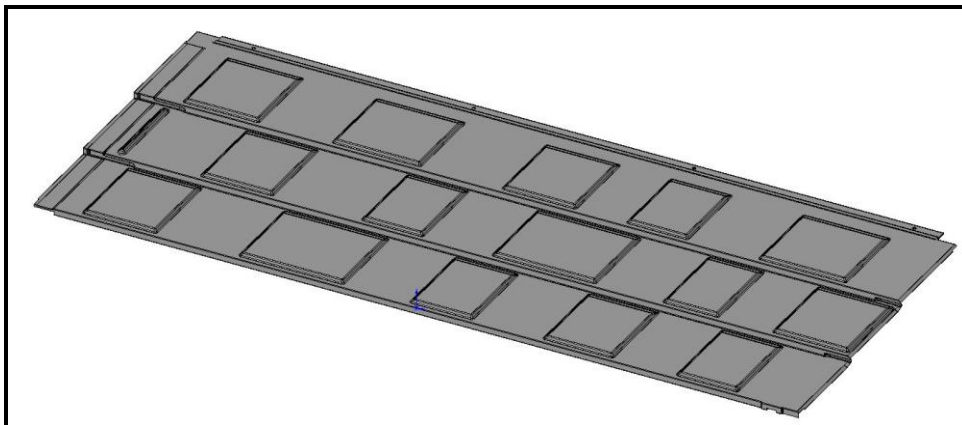
**DECRA Shake Plus:**



**DECRA Shingle Plus:**



- **DECRA Shingle** is a formed steel panel that is mechanically attached to approved decks. Shingle measures 21 x 52 inches with installed exposure of 19.75 x 49 inches.

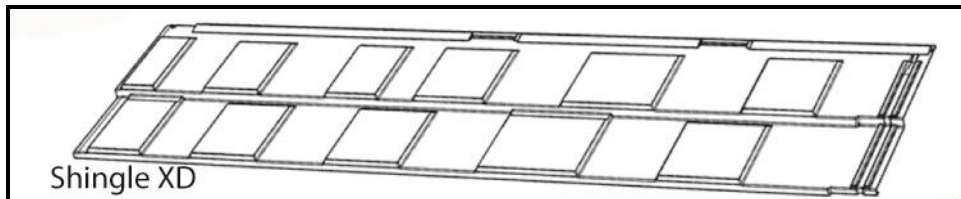


- **DECRA Shake XD & Shingle XD** are formed steel panels that are mechanically attached to approved decks. Shake XD and Shingle XD measure 14.125 x 52.5 inches with installed exposure of 12.625 x 49.75 inches.

**DECRA Shake XD:**



**DECRA Shingle XD:**



**5. LIMITATIONS:**

- 5.1 This is a building code evaluation. Neither Trinity|ERD nor Robert Nieminen, P.E. are, in any way, the Designer of Record for any project on which this Evaluation Report, or previous versions thereof, is/was used for permitting or design guidance unless retained specifically for that purpose.
- 5.2 This evaluation report is not for use in HVHZ.
- 5.3 Fire Classification is not part of this Evaluation Report; refer to current Approved Roofing Materials Directory for fire ratings of this product.
- 5.4 The minimum roof slope per manufacturer's installation instructions is 3:12. Slope shall not be less than that set forth in FBC 1507.5.2. See 5.3.1 below.
- 5.4.1 If the roof deck is covered with a Florida Statewide Approved low-slope roof system, meeting all Chapter 15 requirements for use below 3:12 slope, then DECRA Metal Roof Systems may be installed below 3:12 roof slope atop the Approved roof system provided the applicable attachment requirements for the system in Appendix 1 are maintained.
- 5.5 Sheet materials used to produce the panels shall comply with FBC Section 1507.5.5.
- 5.6 The roof system evaluation herein pertains to above-deck roof components. Roof decks and structural members shall be in accordance with FBC requirements to the satisfaction of the AHJ. Load resistance of the roof deck shall be documented through proper codified and/or FBC Approval documentation.
- 5.7 Appendix 1 outlines attachment requirements for design wind pressure resistance. "MDP" = Maximum Design Pressure is the result of testing for wind load resistance based on allowable wind loads. Refer to FBC 1609 for determination of design wind pressures. The MDP for the selected assembly shall meet or exceed the design wind pressure requirements for the project for each pressure zone of the roof.

- 5.7.1 Reference to “OK” indicates the system performance exceeds requirements for that pressure zone. Reference to “NO” indicates additional testing or rational analysis by a qualified design professional is required to address that particular pressure zone.
- 5.8 For existing roof decks, fasteners shall be tested in the existing deck for withdrawal resistance. A qualified design professional shall review the data for comparison to the minimum requirements for the system.
- 5.9 Perimeter and ridge details shall be designed and installed to resist the wind load requirements of FBC Chapter 16.
- 5.10 All products in the roof assembly shall have quality assurance audit in accordance with the F.A.C. Rule 61G20-3.

**6. INSTALLATION:**

- 6.1 DECRA Metal Roofing Systems shall be installed in accordance with DECRA Roofing Systems, Inc. published installation instructions, subject to the Limitations / Conditions of Use noted herein.
- 6.2 System attachment requirements for wind load resistance are set forth in Appendix 1. “MDP” = Maximum Design Pressure is the result of testing for wind load resistance based on allowable wind loads, and reflects the ultimate passing pressure divided by 2 (the 2 to 1 margin of safety per FBC 1504.9 has already been applied). Refer to FBC 1609 for determination of design wind loads.

**7. BUILDING PERMIT REQUIREMENTS:**

As required by the Building Official or Authority Having Jurisdiction in order to properly evaluate the installation of this product.

**8. MANUFACTURING PLANTS:**

Contact the named QA entity for manufacturing facilities covered by F.A.C. Rule 61G20-3 QA requirements.

**9. QUALITY ASSURANCE ENTITY:**

UL LLC – QUA9625; (414) 248-6409; karen.buchmann@us.ul.com

**- THE 28-PAGES THAT FOLLOW FORM PART OF THIS EVALUATION REPORT -**