



**VHR ROOF TILE MFG LLC**  
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## CONCRETE ROOF TILES

### FLAT, RIVIERA, AND SPANISH PROFILES

#### CSI Section:

07 32 16 Concrete Roof Tiles

#### 1.0 RECOGNITION

VHR Roof Tile MFG LLC’s Concrete Roof Tiles recognized in this report have been evaluated for use as concrete roof tiles. The weather resistance, wind uplift resistance, and fire classification properties of the roof tiles comply with the intent of the provisions of the following codes and regulations:

- 2018, 2015, 2012, 2009, and 2006 International Building Code® (IBC)
- 2018, 2015, 2012, 2009, and 2006 International Residential Code® (IRC)
- 2020 Florida Building Code, Building (FBC, Building) – Supplement attached
- 2020 Florida Building Code, Residential (FBC, Residential) – Supplement attached

#### 2.0 LIMITATIONS

Use of the VHR Roof Tile MFG LLC’s Concrete Roof Tiles recognized in this report is subject to the following limitations:

**2.1** The roof tiles shall be manufactured, identified, and installed in accordance with this report and the applicable code. In the event of a conflict this report governs.

**2.2** VHR Roof Tile MFG LLC’s Concrete Roof Tile “shall be installed on roof slopes of 2½ units vertical in 12 units horizontal (21-percent slope) or greater.” IBC Section 1507.3.2.

**2.3** The supporting structure shall be designed to support the loads and is beyond the scope of this report.

**2.4** The VHR Roof Tile MFG LL’s Concrete Roof Tiles recognized in this report are manufactured in Little Chute, WI.

#### 3.0 PRODUCT USE

**3.1 General:** VHR Roof Tile MFG LLC’s Concrete Roof Tiles shall be used as a roof covering in accordance with IBC Section 1503 or IRC Section 903, as applicable.

#### 3.2 Installation:

**3.2.1 Installation in accordance with the 2018 IBC or IRC:** VHR Roof Tile MFG LLC’s Concrete Roof Tiles shall be installed in accordance with 2018 IBC Section 1507.3 or 2018 IRC Section R905.3, including the attachment requirements of 2018 IBC Section 1507.3.7 or 2018 IRC Section R905.3.7, as applicable. Underlayment shall conform to 2018 IBC Section 1507.1.1 or 2018 IRC Section R905.1.1.

**3.2.2 Installation in accordance with the 2015, 2012, 2009, or 2006 IBC or IRC:** VHR Roof Tile MFG LLC’s Concrete Roof Tiles shall be fastened in accordance with the code specific requirements in Table 1 of this report using The Concrete and Clay Roof Tile Installation Manual for Moderate Climate Regions, dated July 2015, published by the Tile Roofing Institute and the Western States Roofing Contractors Association. The July 2015 TRI manual is associated with ER-2015 in the UES Evaluation Report Directory and available for download at [www.uniform-es.org](http://www.uniform-es.org).

TABLE 1 – ATTACHMENT DESIGN

Applicable Code	Criteria for Applicability	Design Information Location
2015 or 2012 IBC	Ultimate Design Wind Speeds ( $V_{ult}$ ) ≤ 130 MPH and Mean Roof Height ≤ 60 feet	Roof Tile Installation Manual & Table 1507.3.7 of the applicable IBC
2009 or 2006 IBC	Basic Wind Speed (3 sec gust) ≤ 100 mph and Mean Roof Height ≤ 60 feet	
2015, 2012, 2009, or 2006 IRC	Mean Roof Height ≤ 40 feet	Roof Tile Installation Manual & Section R905.3.7

For SI: 1 foot = 305 mm, 1 mph = 1.6 m/s

**3.3 Anchoring:** VHR Roof Tile MFG LLC’s Concrete Roof tiles may be anchored using mortar in accordance with the applicable building code and, where permitted, the TRI Manual or adhesively attached in accordance with the adhesive manufacturer’s research report issued by an approved evaluation service agency.





## 4.0 PRODUCT DESCRIPTION

**4.1 General:** VHR Roof Tile MFG LLC's Concrete Roof Tiles comply with ASTM C1492 as required by Section 1507.3.5 of the IBC.

**4.2 Class A Roof Covering:** When installed in accordance with this report on minimum 15/32-inch-thick (12 mm) AC plywood solid sheathing or non-combustible decks, with one ply of 30 pound felt stapled, 1 x 2 Wood Battens, VHR tiles with 3-inch (76.2 mm) overlap and fastened with 2½-inch (63.5 mm) screws, the assembly incorporating the roof tiles achieve an ASTM E108 Class A rating per Section 1505.2 of the IBC and Section R902.1 of the IRC, as applicable. Roof classifications for adhesively attached systems shall be in accordance with the adhesive manufacturer's approved research report.

### 4.3 Profile Details

**4.3.1 Flat:** VHR Roof Tile MFG LLC's Flat Concrete Roof Tiles are classified as Type III, low profile, and are available in four styles Cotswold Stone, Custom Brushed, Shake, and Slate. Dimensions of the Flat Concrete Roof Tiles are 15 ¾ inches long by 10 ¼ inches wide (390 x 260 mm) with a nominal thickness, measured at the tile nose, of 15/16 inches (23.8 mm). The weight is 8.1 pounds per tile (3.7 kg) nominal, and when installed with a 3-inch (76.2 mm) head lap translates to 9.9 pounds per square foot (48.3 kg/m<sup>2</sup>).

**4.3.2 Riviera:** VHR Roof Tile MFG LLC's Riviera Concrete Roof Tiles have a beveled surface and are classified as Type III, low profile. Riviera Tiles are available in two styles, Mediterranean and Spanish. Dimensions of the Flat Concrete Roof Tiles are 15 ¾ inches long by 10 ¼ inches wide (390 x 260 mm) with a nominal thickness, measured at the tile nose, of 13/16 inches (20.6 mm). The weight is 7.1 pounds per tile (3.2 kg) nominal, and when installed with a 3 inch (76.2 mm) head lap translates to 9.0 pounds per square foot (43.9 kg/m<sup>2</sup>).

**4.3.3 Spanish:** VHR Roof Tile MFG LLC's Spanish Concrete Roof Tiles are classified as Type I, high profile, Grade 1 and are available in various colors. Dimensions of the Flat Concrete Roof Tiles are 17¼ inches long by 13 inches wide (438 x 330 mm) with a nominal thickness, measured at the tile nose, of 13/16 inches (20.6 mm). The weight is 11.2 pounds per tile (3.7 kg) nominal, when installed with a 3 inch (76.2 mm) head lap translates to 9.75 pounds per square foot (47.6 kg/m<sup>2</sup>).

**4.3.4 Trim:** The Trim tiles for the Flat, Riviera, and Spanish concrete tiles include hip, end cap, ridge, rake, and starter.

## 5.0 IDENTIFICATION

Shipping pallets are identified with the report holder's name (VHR Roof Tile MFG LLC), manufacturing address, product name, installed weight, inspection agency, and evaluation report number (ER-790). The IAPMO Uniform Evaluation Service Mark of Conformity may be used as shown below:



IAPMO UES ER-790

## 6.0 SUBSTANTIATING DATA

**6.1** Data in accordance with ICC-ES AC180, dated February 2012 (editorially revised March 2018), manufacturer's descriptive literature, and installation instructions.

**6.2** Test reports are from laboratories in compliance with ISO/IEC 17025.

## 7.0 STATEMENT OF RECOGNITION

This evaluation report describes the results of research completed by IAPMO Uniform Evaluation Service on VHR Roof Tile MFG LLC's Concrete Roof Tiles to assess conformance to the codes shown in Section 1.0 of this report and serves as documentation of the product certification. Products are manufactured at locations noted in Section 2.4 of this report under a quality control program with periodic inspection under the supervision of IAPMO UES.

For additional information about this evaluation report please visit [www.uniform-es.org](http://www.uniform-es.org) or email us at [info@uniform-es.org](mailto:info@uniform-es.org)



## FLORIDA SUPPLEMENT

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## CONCRETE ROOF TILES

### CSI Section:

07 32 16 Concrete Roof Tiles

### 1.0 RECOGNITION

VHR Roof Tile MFG LLC's Concrete Roof Tiles and accessories evaluated in IAPMO UES ER-790 are a satisfactory alternative roof covering material in accordance with to the following codes and regulations:

- 2020 Florida Building Code, Building (FBC, Building)
- 2020 Florida Building Code, Residential (FBC, Residential)

### 2.0 LIMITATIONS

Use of the VHR Roof Tile MFG LLC's Concrete Roof Tiles recognized in ER-790 and this supplement is subject to the following limitations:

**2.1** Verification shall be provided that a quality assurance agency audits the manufacturer's quality assurance program and audits the production quality of products, in accordance with Section (5)(d) of Florida Rule 61G20-3.008. The quality assurance agency shall be approved by the Commission (or the building official when the report holder does not possess an approval by the Commission).

**2.2** Evaluation to the high-velocity hurricane zone provisions in Section 1512 of the FBC, Building, and Chapter 44 of the FBC, Residential, is beyond the scope of this report.

### 3.0 PRODUCT USE

The design and installation of the VHR Roof Tile MFG LLC's concrete roof tiles shall be in accordance with the 2018 International Building Code and the 2018 International Residential Code, as applicable, as noted in ER-412. The FBC, Building, Section 1507.3 and FBC, Residential, Section R905.3 states that the installation of the VHR Roof Tile MFG

LLC's Roofing concrete roof tiles "shall be in accordance with the requirements of the FRSA/TRI *Florida High Wind Concrete and Clay Roof Tile Installation Manual*, Sixth Edition (December 31, 2020) where the  $V_{asd}$  is determined in accordance with" FBC, Building Section 1609.3.1, FBC-Residential Section R301.2.1.3, or the recommendations of RAS 118, 119, or 120. Load combinations shall be in accordance with Sections 1605.2 or 1605.3 of the FBC, Building, as applicable. Design wind loads shall be in accordance with Section 1609.5 of the FBC, Building, or Section R301.2.1 of the FBC, Residential, as applicable.

**3.1** This supplement expires concurrently with ER-790.

For additional information about this evaluation report please visit [www.uniform-es.org](http://www.uniform-es.org) or email us at [info@uniform-es.org](mailto:info@uniform-es.org)