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DIVISION: 07 00 00 – THERMAL AND MOISTURE PROTECTION
Section: 07 31 26 – Slate Shingles

REPORT HOLDER:

GAF
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REPORT SUBJECT:

TruSlate® Premium Roofing System

1.0 SCOPE OF EVALUATION

1.1 This Research Report addresses compliance with the following Codes:

- 2006 *International Building Code®* (IBC) including 2007 Supplements
- 2006 *International Residential Code®* (IRC) including 2007 Supplements

1.2 The *TruSlate® Premium Roofing System* has been evaluated for the following properties (see Table 1):

- Fire Classification
- Weather Resistance
- Wind Resistance

1.3 The *TruSlate® Premium Roofing System* has been evaluated for the following use:

- The *TruSlate® Premium Roofing System* is used as a Class A or Class B roof covering when installed according to the manufacturer's instructions and this report. See Figure 1 and Figure 2.

2.0 STATEMENT OF COMPLIANCE

The *TruSlate® Premium Roofing System* complies with the Codes listed in Section 1.1, for the properties stated in Section 1.2 and uses stated in Section 1.3, when installed as

described in this report, including the Conditions of Use stated in Section 6.

3.0 DESCRIPTION

3.1 The *TruSlate® Premium Roofing System* consists of a series of stainless steel battens and hangers (TruGrip™ system) that are attached to a structurally sound sheathed roof. Naturally quarried slates are supported by the hangers. The system also uses GAF VersaShield® Fire-Resistant Roof Deck Protection, GAF Tiger Paw™ Roof Deck Protection, or GAF Deck-Armor™ Premium Breathable Roof Deck Protection, as well as GAF Leak Barriers (such as GAF StormGuard® or GAF Weather Watch®), adhered to the deck. *TruSlate® UnderBlock™ UV & Moisture Barrier* is used as an interlayer between slates. See Figure 1.

3.1.1 Natural Slates – *TruSlate® Premium* slate is a natural stone product quarried from various sources domestically and internationally. The slates measure 12 inches wide by 12 inches long and have beveled edges on all four sides. *TruSlate® Premium* slates approved by this report include three colors: Charcoal, Autumn Dusk, Onyx Black, and that are hand-split to a minimum thickness of 6.3 mm. Color is dependent upon chemical and mineral composition.

3.1.2 A 0.022 inch thick black high-density polyethylene *TruSlate® UnderBlock™ UV and Moisture Barrier* is supplied in rolls 12-3/4 inches wide and is installed as an interlayer between slates.

3.1.3 The TruGrip™ battens consist of battens manufactured from 430 stainless steel measuring 2 inches wide by 48 inches long. The battens are anchored with nails through the roof underlayment and into the solid roof sheathing. See Figure 2.

3.1.4 The TruGrip™ hangers are 14 gauge 304 grade stainless steel spring wire that is powder coated. One



end is bent to clip into the battens and the other is bent to capture the lower edge of the slate. See Figure 2.

4.0 PERFORMANCE CHARACTERISTICS

4.1 The *TruSlate® Premium Roofing System* is tested per ASTM C 406-05 and is classified by grade based on the test results as outlined in ASTM C 406-05.

4.2 Fire Classification – The *TruSlate® Premium Roofing System* is classified as a Class A roof covering when used in conjunction with one layer of GAF VersaShield® Fire-Resistant Roof Deck Protection. See Section 5 for underlayment installations.

The system is classified as a Class B roof covering when used in conjunction with ASTM D 226 Type I and/or ASTM D 4869 compliant underlayment or other evaluated alternative as further identified herein (see Section 5.2 under Installation).

4.3 The *TruSlate® Premium Roofing System* has been tested for wind uplift resistance to UL 580 and UL 1897. Both standard and high wind installations were tested to each of these specifications. A description of each installation and their associated uplift values are shown in Table 1.

5.0 INSTALLATION

5.1 General:

The *TruSlate® Premium Roofing System* must be installed in accordance with the manufacturer's published installation instructions, the applicable Code, and this Research Report. A copy of the manufacturer's instructions must be available on the jobsite during installation.

5.2 The *TruSlate® Premium Roofing System* must be installed over a solidly sheathed roof. For installations with slopes 4:12 up to and including 5:12, see Section 5.2.1 for underlayment installation. For installations with slopes greater than 5:12, see Section 5.2.2 for underlayment installation.

5.3 Underlayment used with this system must comply with ASTM D 226 Type I, ASTM D 4869 Type IV, or one of the following evaluated alternatives:

5.3.1 For Class A fire rating installations: GAF VersaShield® Fire-Resistant Roof Deck Protection (subject of ICC-ES ESR-2053).

5.3.2 For Class B fire rating installations: GAF Deck-Armor™ Premium Breathable Roof Deck Protection (subject of ICC-ES ESR-2808); GAF StormGuard® and GAF Weather Watch® (subjects of ICC-ES ESR-1322); or GAF Tiger Paw™ Roof Deck Protection (subject of ICC-ES ESR-3286).

5.3.3 Underlayment installation for slopes 4:12 up to and including 5:12 – Apply one of GAF's self-adhering Leak Barriers over the full deck according to the manufacturer's installation instructions. For Class A installations, install one layer of GAF VersaShield® Fire-Resistant Roof Deck Protection over the GAF Leak Barrier.

5.3.4 Underlayment installation for slopes greater than 5:12 – Apply one layer of self-adhering GAF Leak Barrier at all vulnerable areas of the roof. Over the full deck, apply either one layer of a GAF Leak Barrier, one layer of GAF Deck-Armor™ Premium Breathable Roof Deck Protection, GAF TigerPaw™ Roof Deck Protection, or two layers of ASTM D 226 Type I asphalt saturated underlayment. Alternatively, for Class A fire rating installations, install one layer of GAF VersaShield® Fire-Resistant Roof Deck Protection over the GAF Leak Barrier or GAF Roof Deck Protection All GAF Leak Barriers and underlayment products are to be applied in accordance with manufacturer's installation instructions.

5.4 In areas where the average daily temperature in January is 25°F or less or where the possibility of ice forming along the eaves causing a backup of water, an ice barrier that consists of at least two layers of underlayment cemented together or a self-adhering GAF Leak Barrier recognized by ICC-ES ESR-1322 shall be used from the lowest edges of all roof surfaces to at least 24 inches inside the exterior wall of the building.

5.5 Flashings and edge materials shall meet the minimum requirements of IBC Section 1507.7 and/or IRC Sections R903.2 and R905.6.6.

5.6 TruGrip® battens are fastened as described in Table 1 with 9-1/2 to 10 inches vertical spacing. Two TruGrip™





hangers are attached to the batten for each slate. Each slate must be secured with two hangers.

5.7 *TruSlate*® UnderBlock™ UV & Moisture Barrier must be installed under each slate as described in the manufacturer's installation instructions and as shown in Figure 1. Following the UnderBlock™ installation, the *TruSlate*® Premium slates are placed in the hangers. See Figure 2.

6.0 CONDITIONS OF USE

6.1 Installation must comply with this Research Report, the manufacturer's published installation instructions, and the applicable Code. In the event of a conflict, this report governs.

6.2 The *TruSlate*® Premium Roofing System is designed for steep roofing applications and must not be installed on any roof slope less than 4:12. The *TruSlate*® Premium Roofing System is manufactured under a quality control program with inspections by Intertek Testing Services NA, Inc. (AA-647).

6.3 Installation of GAF VersaShield® Fire-Resistant Roof Deck Protection shall be in accordance with ICC-ES ESR-2053. The recognition of GAF VersaShield® Fire-Resistant Roof Deck Protection as an approved element of the *TruSlate*® Premium Roofing System is contingent on the maintenance of a valid ICC-ES ESR-2053 report.

6.4 Installation of GAF Tiger Paw™ Roof Deck Protection shall be in accordance with ICC-ES ESR-3286. The recognition of GAF Tiger Paw™ Roof Deck Protection as an approved element of the *TruSlate*® Premium Roofing System is contingent on the maintenance of a valid ICC-ES ESR-3286 report.

6.5 Any construction other than that described in Section 4.3 shall be evaluated for effects on stated wind uplift values.

6.6 *TruSlate*® Premium Roofing products are specified, monitored, and administered at the Parsippany, NJ facility by GAF. Materials are distributed through GAF warehouse located in Dallas, Texas. The products are in accordance with the manufacturer's approved quality control system with inspections by Intertek Testing Services NA.

7.0 SUPPORTING EVIDENCE

7.1 Manufacturer's drawings and installation instructions.

7.2 Documentation of an Intertek approved quality control system for the manufacturing of products recognized in this report.

7.3 Reports of testing demonstrating compliance with the following: for durability, ASTM C 406-05 "Standard Specification for Roofing Slate"; for uplift, UL 580 "Tests for Uplift Resistance of Roof Assemblies" and UL 1897 "Uplift Tests for Roof Covering Systems"; and for fire resistance, UL 790 "Tests for Fire Resistance of Roof Covering Materials".

8.0 IDENTIFICATION

The *TruSlate*® Premium Roofing System is/are identified with the manufacturer's name (GAF), address and telephone number, the product name (The *TruSlate*® Premium Roofing System), the Intertek Mark as shown below, and the Code Compliance Research Report number (CCRR-0142).



9.0 OTHER CODES

This section is not applicable.

10.0 CODE COMPLIANCE RESEARCH REPORT USE

10.1 Approval of building products and/or materials can only be granted by a building official having legal authority in the specific jurisdiction where approval is sought.

10.2 Code Compliance Research Reports shall not be used in any manner that implies an endorsement of the product by Intertek.

10.3 Reference to the <https://bpdirectory.intertek.com> is recommended to ascertain the current version and status of this report.





TABLE 1 – UPLIFT RESISTANCE AND ASSOCIATED MINIMUM CONSTRUCTION

<i>TruSlate® Premium Roofing System</i> Uplift Resistance and Associated Minimum Construction		
	Standard Application	High Wind Application ⁽¹⁾
UL 580 Rating	Class 90	Class 90
UL 1897 ⁽²⁾ (Allowable uplift pressure)	62 psf	92 psf
Deck	5/8" (min 19/32") thk, CDX plywood	Min 15/32" thk, Type B-C Plywood
Fasteners, Battens to Deck	3/8" head dia, x 1-1/4" long, Stainless steel STD roofing nails	3/8" head dia, x 1-1/4" long, stainless steel ring shank nails
Underlayment	ASTM D 226, Type I, with min 2" lap	
Battens Spacing	9-1/2" to 10"	
Hanger Spacing	6" OC, 2 per slate	
Interlayment	<i>TruSlate® UnderBlock™</i> UV & Moisture Barrier	
<i>TruSlate®</i> Slate Exposure	9-1/2" to 10"	

⁽¹⁾ The high wind uplift testing was performed on an assembly installed as defined in UL Construction No. NM536.

⁽²⁾ The allowable uplift pressure utilizes a factor of safety of 2.0 applied to maximum test pressures obtained.

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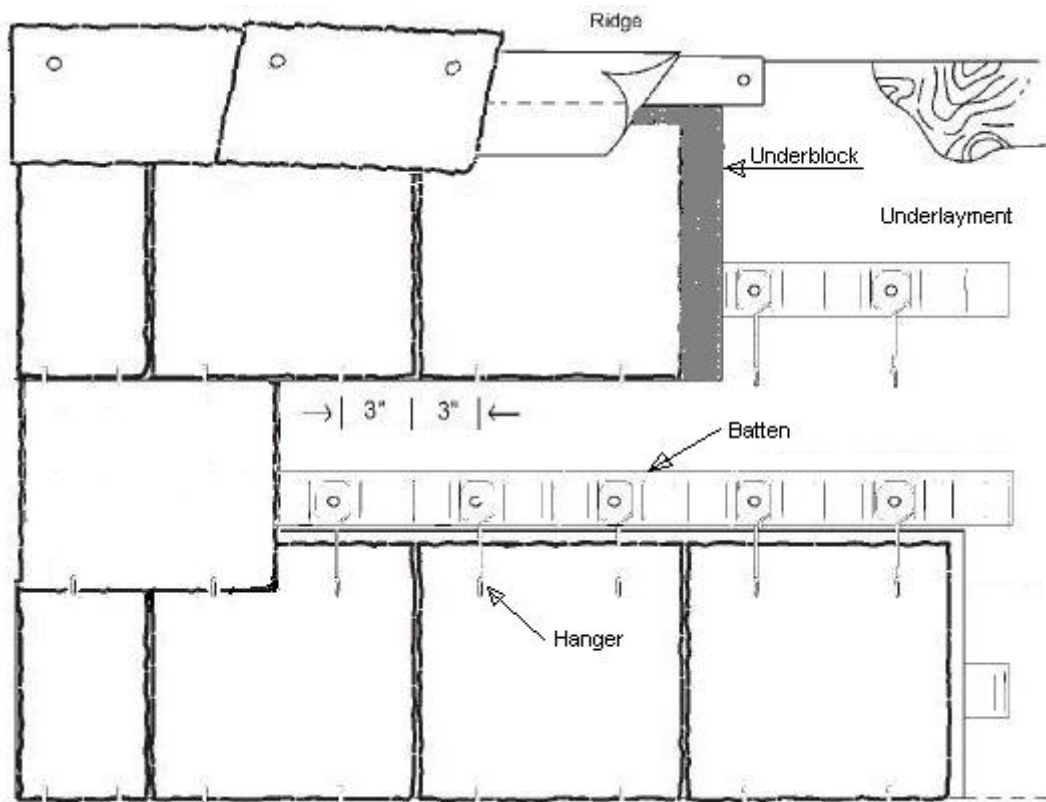


FIGURE 1
GAF TRUSLATE® PREMIUM ROOFING SYSTEM

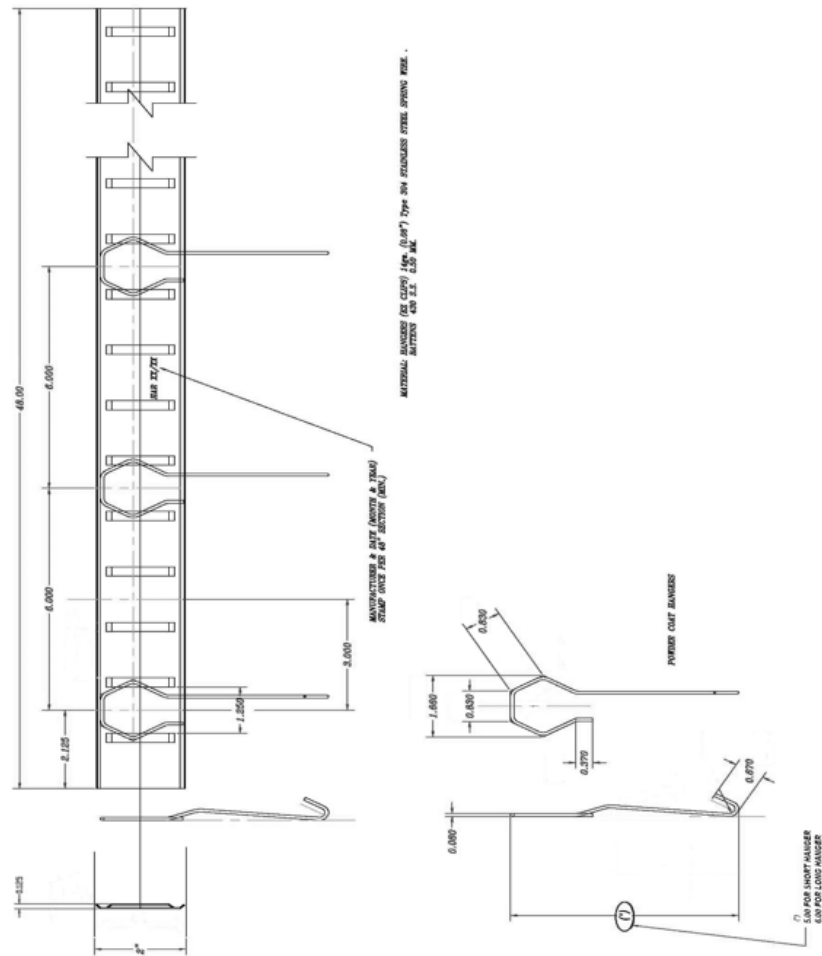


FIGURE 2
GAF TRUSLATE® PREMIUM ROOFING SYSTEM – TRUGRIP™ BATTERS AND HANGER