

SECTION 073127 - SLATE COMPOSITE SHINGLES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Slate composite shingles composed of hand-split quarried natural slate with factory-bonded synthetic material.
 - 2. Leak barrier membrane and roof deck protection (underlayment).
- B. Related Requirements:
 - 1. Section 077253 "Snow Guards" for prefabricated devices designed to hold snow on the roof surface, allowing it to melt and drain off slowly.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples:
 - 1. Slate Composite Shingles: Full size, of required color.

1.3 INFORMATIONAL SUBMITTALS

- A. Warranty: Sample of special warranty.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: Approved by slate composite shingle manufacturer for installation of roofing products specified in this Section, and complying with the following:
 - 1. Installer Certification: GAF® SlateCrafter™ Specialist Certification.
 - 2. Contractor Certification or Authorization: One or more of the following GAF® Certified Contractor programs:
 - a. Master Elite Contractor.
 - b. Certified Contractor.
 - c. Authorized Installers.
- B. Source Limitations: Obtain slate materials for slate composite shingle from single quarry capable of producing slate of consistent quality in appearance and physical properties.
- C. Mockups: Build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.

1.5 WARRANTY

- A. Special Warranty: Standard form in which roofing Installer agrees to repair or replace slate roofing that fails in materials or workmanship within specified warranty period.
 - 1. Warranty Period: 5 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Exterior Fire-Test Exposure: ASTM E 108 or UL 790, Class B; for application and roof slopes indicated; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

2.2 SLATE COMPOSITE SHINGLES

- A. Slate Composite Shingles: Natural stone complying with ASTM C 406, Grade S1; hard, dense, and sound; with HDPE interlayment factory-bonded to slate.
 - 1. Basis-of-Design Product: Subject to compliance with requirements, provide GAF Materials Corporation; TruSlate® Premium Roofing System with UnderBlock™ UV & Moisture Barrier.
 - 2. Thickness: Nominal 1/4 to 3/8 inch (6 to 10 mm).
 - 3. Size and Exposure: 12 by 12 inches (305 by 305 mm) with 10-inch (254-mm) installed exposure.
 - 4. Slate Color: As selected by Architect from manufacturer's full range.
- B. Hip and Ridge Slates and Spacers: Slate composite shingles fabricated for hip and ridge conditions, with manufacturer's corrugated plastic fastening base pieces.
 - 1. Basis-of-Design Products: GAF® TruSlate® Trim Slate and Hip & Ridge Spacer.
- C. Batten Strips: Manufacturer's pre-assembled stainless-steel strips with powder-coated spring-tempered stainless-steel hangers.
 - 1. Basis-of-Design Product: GAF® TruGrip™ Batten and Hanger System.
- D. Batten Strip Layout Tape: Manufacturer's product used as a guide for installing battens and hanger systems.
 - 1. Basis-of-Design Product: GAF® Lay-Straight™ Alignment Tape.

2.3 LEAK BARRIER MEMBRANES

- A. General: Provide one of the following leak barrier products, as recommended by manufacturer for Project conditions.
- B. Self-Adhering Leak Barrier, Mineral Surfaced: Self-healing, bituminous leak barrier surfaced with fine mineral surfacing.
 - 1. Basis-of-Design Product: GAF® WeatherWatch® Leak Barrier.
- C. Self-Adhering Leak Barrier, Smooth Surfaced: Self-healing, bituminous leak barrier surfaced with smooth polyethylene film.
 - 1. Basis-of-Design Product: GAF® StormGuard® Leak Barrier.
- D. Self-Adhering Leak Barrier: SBS-modified compound with fiberglass-reinforced core.
 - 1. Basis-of-Design Product: GAF® UnderRoof™2.

2.4 ROOF DECK PROTECTION (UNDERLAYMENT) MATERIALS

- A. Premium Underlayment: Water-repellent, breather type non-asphaltic underlayment; UV stabilized polypropylene construction; complying with ASTM D 226 and ASTM D 4869.

1. Basis-of-Design Product: GAF® Deck-Armor™ Premium Breathable Roof Deck Protection.

2.5 ACCESSORIES

- A. Asphalt Roofing Cement: ASTM D 4586, Type I or II, asbestos free.
- B. Slating Nails and Other Fasteners: Copper, of type recommended by manufacturer; of sufficient length to penetrate a minimum of 3/4 inch (19 mm) into sheathing or blocking.

1. Where nails are in contact with metal flashing, use nails made from same metal as flashing.

2.6 METAL FLASHING AND TRIM

- A. General: Comply with requirements in Section 076200 "Sheet Metal Flashing and Trim."

1. Sheet Metal: Stainless-steel.

PART 3 - EXECUTION

3.1 ROOF DECK PROTECTION (UNDERLAYMENT) INSTALLATION

- A. Roof Deck Protection Underlayment: Install on roof deck parallel with and starting at the eaves. Lap sides a minimum of 2 inches (50 mm) over underlying course. Lap ends a minimum of 4 inches (100 mm). Stagger end laps between succeeding courses at least 72 inches (1830 mm). Fasten with felt underlayment nails.
1. Install underlayment on roof deck not covered by leak barrier. Lap sides of underlayment over leak barrier not less than 3 inches (75 mm) in direction to shed water. Lap ends of underlayment not less than 6 inches (152 mm) over self-leak barrier.
- B. Leak Barrier: Install, wrinkle free, on roof deck. Install at locations indicated below, lapped in direction to shed water. Lap sides not less than 3-1/2 inches (89 mm). Lap ends not less than 6 inches (152 mm), staggered 24 inches (600 mm) between courses. Roll laps with roller.
1. Eaves: Extend from edges of eaves 36 inches (914 mm) beyond interior face of exterior wall.
2. Rakes: Extend from edges of rakes 36 inches (914 mm) beyond interior face of exterior wall.
3. Valleys: Extend from lowest to highest point 18 inches (455 mm) on each side.
4. Hips: Extend 18 inches (455 mm) on each side.
5. Ridges: Extend 36 inches (914 mm) on each side without obstructing continuous ridge vent slot.
6. Sidewalls: Extend 18 inches (455 mm) beyond sidewalls and return vertically against sidewalls not less than 4 inches (100 mm).
7. Dormers, Chimneys, and Other Roof-Penetrating Elements: Extend 18 inches (455 mm) beyond penetrating elements and return vertically against penetrating elements not less than 4 inches (100 mm).
8. Roof-Slope Transitions: Extend 18 inches (455 mm) on each roof slope.
- C. Metal-Flashed, Open-Valley Underlayment: Install two layers of 36-inch- (914-mm-) wide felt underlayment centered in valley. Stagger end laps between layers at least 72 inches (1830 mm). Lap ends of each layer at least 12 inches (305 mm) in direction to shed water, and seal with asphalt roofing cement. Fasten each layer to roof deck with felt underlayment nails.

1. Lap roof-deck felt underlayment over first layer of valley felt underlayment at least 6 inches (152 mm).

3.2 METAL FLASHING INSTALLATION

- A. General: Install metal flashings and other sheet metal to comply with requirements in Section 076200 "Sheet Metal Flashing and Trim."

1. Install metal flashings according to recommendations in NRCA's "The NRCA Roofing and Waterproofing Manual."

3.3 SLATE COMPOSITE SHINGLE INSTALLATION

- A. General: Beginning at eaves, install slate composite shingles according to manufacturer's written instructions unless superseded by requirements of applicable building code.

1. Use shingle manufacturer's batten strips, located and aligned according to manufacturer's recommended procedures.

- B. Maintain uniform exposure of shingle courses between eaves and ridge.

- C. Cut and fit slate neatly around roof vents, pipes, ventilators, and other projections through roof.

- D. Open Valleys: Cut slate composite shingles to form straight lines at open valleys, trimming upper concealed corners of shingles. Maintain uniform width of exposed open valley from highest to lowest point, unless otherwise indicated.

1. Do not nail shingles to valley metal flashings.

- E. Remove and replace damaged or broken slate composite shingles.

END OF SECTION