

**SECTION 07 31 13  
ASPHALT SHINGLES**

**(BB-3)**

**PART 1 GENERAL**

**1.1 STIPULATIONS**

- A. The specifications sections "General Conditions to the Construction Contract", "Special Conditions" and "Division 01 - General Requirements" form a part of this Section by this reference thereto, and shall have the same force and effect as if printed herewith in full.

**1.2 SECTION INCLUDES**

- A. Asphalt shingle roofing.
- B. Flexible sheet membranes for eave protection, underlayment, and valley protection.
- C. Associated metal flashings and accessories.

**1.3 RELATED REQUIREMENTS**

- A. Section 07 62 00 - Sheet Metal Flashing and Trim: Edge and cap flashings.
- B. Section 07 71 23 - Manufactured Gutters and Downspouts.

**1.4 REFERENCE STANDARDS**

- A. ASTM D226/D226M - Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing 2017.
- B. ASTM D1970/D1970M - Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection 2021.
- C. ASTM D3462/D3462M - Standard Specification for Asphalt Shingles Made From Glass Felt and Surfaced with Mineral Granules 2019.
- D. ASTM D4586/D4586M - Standard Specification for Asphalt Roof Cement, Asbestos-Free 2007 (Reapproved 2018).
- E. ASTM E108 - Standard Test Methods for Fire Tests of Roof Coverings 2020a.
- F. ASTM F1667 - Standard Specification for Driven Fasteners: Nails, Spikes, and Staples 2021.
- G. NRCA (RM) - The NRCA Roofing Manual 2022.
- H. SMACNA (ASMM) - Architectural Sheet Metal Manual 2012.

**1.5 EXTRA MATERIALS**

- A. Furnish extra materials described below that match products installed, are packaged with protective covering for storage, and are identified with labels describing contents.
  - 1. Furnish not less than 1 SQUARE of each type, color, pattern, class, wearing surface, and size of shingles installed.

2. Deliver extra materials to Client Agency.

## **1.6 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data indicating material characteristics.
- C. Samples: Submit two samples of each shingle color indicating color range and finish texture/pattern ; for color selection.
- D. Manufacturer's Installation Instructions: Indicate installation criteria and procedures.
- E. Warranty Documentation: Submit manufacturer warranty and ensure that forms have been completed in Client Agency's name and registered with manufacturer.

## **1.7 FIELD CONDITIONS**

- A. Do not install shingles or eave protection membrane when surface temperatures are below 45 degrees F.

## **1.8 WARRANTY**

- A. Materials: 30-year manufacturer's warranty.

## **PART 2 PRODUCTS**

### **2.1 MANUFACTURERS**

- A. Asphalt Shingles:
  1. Atlas Roofing Corporation: [www.atlasroofing.com/#sle](http://www.atlasroofing.com/#sle).
  2. GAF; Timberline HD Reflector Series: [www.gaf.com/#sle](http://www.gaf.com/#sle).
  3. Owens Corning Corp; Oakridge Architectural series: [www.owenscorning.com/#sle](http://www.owenscorning.com/#sle).
  4. Substitutions: See Section 01 25 00 - Substitution Procedures.

### **2.2 ASPHALT SHINGLES**

- A. Asphalt Shingles: Asphalt-coated glass felt, mineral granule surfaced, complying with ASTM D3462/D3462M.
  1. Fire Resistance: Class A, complying with ASTM E108.
  2. Style: Square.
  3. Color: As selected by Architect.

### **2.3 SHEET MATERIALS**

- A. Eave Protection Membrane:
  1. Eave Protection Membrane: Self-adhering polymer-modified asphalt sheet complying with ASTM D1970/D1970M; 40 mil total thickness; with strippable treated release paper and polyethylene sheet top surface.

- B. Underlayment: Asphalt-saturated organic roofing felt, unperforated, complying with ASTM D226/D226M, Type I ("No.15").
- C. Underlayment: Synthetic Roofing Underlayment
  - 1. Manufacturer: InterWrap (1818-1177 West Hastings Street; Vancouver BC, Canada V6E 2K3; Toll free: 1-800-567-9727; www.interwrap.com); or approved equal
  - 2. Product: Titanium® UDL30
  - 3. Description: Professional grade 25 mil synthetic roofing underlayment for use under all metal, tile, slate, synthetic, ceramic, and shingle roofing. Up to 6 months UV exposure rating. Meets and exceeds ASTM D226 Types I & II. Class A Fire ASTM E108. Not recommended for roof slopes less than 2:12.
  - 4. Warranty: Manufacturer's Lifetime Limited Warranty that the underlayment is free of manufacturing defects and will retain its ability to shed water and not deteriorate or decompose under the primary roofing material.

## **2.4 ACCESSORIES**

- A. Roofing Nails: Standard round wire shingle type, galvanized steel, stainless steel, aluminum roofing nails, or copper roofing nails, minimum 3/8 inch head diameter, 12 gauge, 0.109 inch nail shank diameter, 1-1/2 inch long and complying with ASTM F1667.
- B. Staples: Standard wire shingle type, of hot dipped zinc coated steel, 16 wire gauge, 0.0508 inch diameter, 15/16 inch crown width, of sufficient length to penetrate through roof sheathing or 3/4 inch into roof sheathing or decking.
- C. Plastic Cement: ASTM D4586/D4586M, asphalt roof cement.
- D. Ridge Vent: GAF Cobra Exhaust Vent

## **2.5 METAL FLASHINGS**

- A. Metal Flashings: Provide sheet metal eave edge, gable edge, ridge, ridge vents, open valley flashing, chimney flashing, dormer flashing, and other flashing indicated.

## **PART 3 EXECUTION**

### **3.1 EXAMINATION**

- A. Verify existing conditions prior to beginning work.
- B. Verify deck surfaces are dry, free of ridges, warps, or voids.

### **3.2 PREPARATION**

- A. Broom clean deck surfaces before installing underlayment or eave protection.

### **3.3 INSTALLATION - EAVE PROTECTION MEMBRANE**

- A. Install eave protection membrane from eave edge to minimum 2 ft up-slope beyond interior face of exterior wall.

### **3.4 INSTALLATION - UNDERLAYMENT**

- A. Underlayment At Roof Slopes Up to 4:12: Install two layers of underlayment over area not protected by eave protection, with ends and edges weather lapped minimum 4 inches, stagger end laps of each consecutive layer, and nail in place.
- B. Underlayment At Roof Slopes Greater Than 4:12: Install underlayment perpendicular to slope of roof, with ends and edges weather lapped minimum 4 inches, stagger end laps of each consecutive layer, nail in place, and weather lap minimum 4 inches over eave protection.
- C. Weather lap and seal watertight with plastic cement any items projecting through or mounted on roof.

### **3.5 INSTALLATION - VALLEY PROTECTION**

- A. Install valley protection in accordance with SMACNA (ASMM).

### **3.6 INSTALLATION - METAL FLASHING AND ACCESSORIES**

- A. Weather lap joints minimum 2 inches and seal weather tight with plastic cement.
- B. Secure in place with nails and conceal fastenings.
- C. Items Projecting Through or Mounted on Roofing: Flash and seal weather tight with plastic cement.

### **3.7 INSTALLATION - SHINGLES**

- A. Install shingles in accordance with manufacturer's instructions manufacturer's instructions and NRCA (RM) applicable requirements.
  - 1. Fasten individual shingles using two nails per shingle, or as required by manufacturer and local building code, whichever is greater.
  - 2. Fasten strip shingles using four nails per strip, or as required by manufacturer and local building code, whichever is greater.
- B. Place shingles in straight coursing pattern with 5 inch weather exposure to produce double thickness over full roof area, and provide double course of shingles at eaves.
- C. Project first course of shingles 3/4 inch beyond fascia boards.
- D. Extend shingles 1/2 inch beyond face of gable edge fascia boards.
- E. Complete installation to provide weather tight service.

### **3.8 PROTECTION**

- A. Do not permit traffic over finished roof surface.

**END OF SECTION**