

## SECTION 07 30 00 - SLOPED ROOFING

### PART I – GENERAL

1.1 This section includes natural slate, synthetic slate, clay tile, and composite shingles.

- A. Natural slate shingles or clay tile are to be considered the standard for sloped roofs on this campus. There are circumstances where the use of synthetic products which are intended to replicate the appearance of these materials are permitted. In the case of existing buildings, this must be approved by the Campus Historic Preservation Officer and, potentially, the Illinois Historic Preservation Agency. For new buildings, this must be approved by the Architectural Review Committee and the technical expert.
- B. This standard is not intended to be a comprehensive specification covering all aspects of the shingle roof systems. It is merely intended to cover those areas of the technical specifications that may be particular to the University

1.2 Warranty

- A. Provide a 2 year Contractor Installation Warranty.

### PART 2 - PRODUCTS

#### 2.1 NATURAL SLATE

- A. Natural slate shall comply with ASTM standard C406 Standard Specification for Slate Roofing and shall meet the testing criteria for Grade S1 slate.
  - 1. It is understood that quarries do not test each batch of slate, nor do they test annually. As part of the product data submittal, the supplier/quarry shall furnish laboratory test results that are a maximum of 3 – 5 years old. These results shall demonstrate compliance with Grade S1 – that is to say that they shall have the minimum breakage strength, maximum absorption, and maximum depth of softening as required in ASTM C406 Table 1.
  - 2. For large jobs, the University will require testing of the material prior to shop drawing approval. In some instances, the University may even require testing of material that that has been delivered to the job site.
- B. Standard roofs shall have a minimum nominal thickness of ¼". Roofs may be standard or graduated.
- C. All slate must be quarried on the North American continent

#### 2.2 SYNTHETIC SLATE AND TILE

- A. Synthetic slate and tile may be used when project conditions warrant.
- B. The only manufacturers whose products are permitted are:
  - 1. EcoStar
  - 2. DaVinci
  - 3. Euroshield (manufactured by GEM, Inc of Canada)

Products must have a 50 year warranty, Class 4 impact rating, and wind resistance of 110 mph. Underlayments will vary from below as required to comply with manufacturer's requirements.

#### 2.3 ROOFING ACCESSORY MATERIALS

- A. Underlayment: Number 30 unperforated felts minimum asphalt-saturated felt.

- B. Nails for Slate or Tile roofs: Nails for slate or clay tile roofs shall be copper or stainless steel, and shall be long enough to conform to the requirements of the NRCA steep Slope Roofing Manual.
- C. Nails for Shingles: Standard barbed or die-formed shank shingle nail of hot-dipped zinc-coated steel. Minimum 3/8-inch diameter round head and 10 to 12 gage shank, length sufficient to penetrate 3/4-inch minimum depth into the wood deck. *Staples are not acceptable.*
- D. Eave and Valley Protection: Ice dam protection in the form of self-adhering sheets of rubberized asphalt bonded to polyethylene or modified asphalt reinforced with fiberglass: minimum 40 mil total thickness is required on all sloped roofs. It shall be provided at all eaves and valleys, hips and ridge, and intersection with vertical surfaces such as chimneys and dormers. . Install ice dam protection along low eave, extending up slope to a point a minimum of 24 inches from the inside of the exterior wall line of the building. It is also required around openings for skylights.
  - 1. For use with slate or metal roofing, products by the following manufacturers may be used on campus without a variance:
    - a. Grace Ice and Water Shield
    - b. Carlisle Coatings & Waterproofing CCW 300 HT
    - c. Henry Blueskin 200 HT
    - d. GAF Storm Guard
    - e. Mfm Building Products Ultra HT Wind & Water Seal
    - f. To use any other product, manufacturers product data as well as a physical sample of the material must be submitted to the University technical representative BEFORE the project is bid

2.4 SHINGLES – Minimum standard: 25 year minimum warranty or 235 lbs. per square

- A. Fire Rating: Class A fire rating
- B. Wood shingles shall be A rated. Do not provide continuous coverage of Ice dam protection when using wood shingles. Use Ice dam only at eaves, valleys, & ridges.

2.5 ROOF SAFETY ANCHORS

- A. Requirement: Roof safety anchors shall be installed on every new or re-roofing Project. Locations of anchors shall be in accordance with OSHA standards.
- B. Type: Drop-forged Type 316 stainless steel threaded eyebolts with shoulder, number 10 by 3/4-inch diameter. 1-1/2 inch eye inner diameter; 6-inch shank length. Provide with 3-inch diameter oversized plate washer and nuts.

PART 3 - EXECUTION

END OF SECTION 07 30 00

This section of the *U of I Facilities Standards* establishes minimum requirements only. It should not be used as a complete specification.