SECTION 07310CPPR -- ROOF SHINGLES

PART 1 - GENERAL

1.01 This section includes asphalt and slate roofing shingle systems .

1.02 Reference standards include the National Slate Association, the Asphalt Roofing Manufacturers Association, the National Roofing Contractors Association, the National Roofing Foundation, the Roof Consultants Institute, *The Slate Book*, the Roofing Industry Education Institute and the Single Ply Roofing Institute.

1.03 Data shall be provided on product characteristics, performance criteria, limitations and manufacturer’s installation instructions indicating preparation, requirements and techniques.

1.04 Performance level standard shall be a minimum of 30 years for asphalt shingles.

1.05 Installation warranty for roofs shall be no less than 2 years unless approved by a Brown University Project Manger.

1.06 Workmanship guarantee – interior damage caused by roof leaks during removal and installation of new roof to be repaired at no additional cost to the owner.

1.07 Prior to installation, a Manufacturer's Certificate shall be provided certifying that products meet or exceed specified requirements.

1.08 Prior to installation shop drawings shall be submitted in conjunction with roofing installation.

1.09 Prior to installation samples of products specified shall be submitted in conjunction with roofing installation.

1.10 Factory Mutual (FM) Engineering Corporation roof inspections shall be required at pre-construction and at 25% completion with approved reports.

1.11 RELATED WORK

A.	Section 00100	General Conditions for as-built samples
B.	Section 07500	Roofing
C.	Section 07600	Sheet Metal Flashing and Trim

PART 2 - PRODUCTS

2.01 The following slate roofing manufacturers shall be used for the conditions listed unless otherwise approved in writing by the Brown University Project Manager.

EVERGREEN
VERMONT STRUCTURAL

2.02 The following fiberglass shingle manufacturers shall be used for the conditions listed unless otherwise approved in writing by the Brown University Project Manager.

CERTAINTEED
GAF

2.03 Artificial slate shall not be allowed.

2.04 Proper ventilation shall be required for all roofing.

2.05 MOISTURE BARRIER

A. Ice and water shield shall be manufactured by W. R. Grace & Co. or equal approved in writing by the Brown University Project Manager.

2.06 SNOW GUARDS AND SNOW RAILS

A. Snow guards or snow rails shall be installed on all sloped roofs with pedestrian walkways and parking lots irrespective of the surface.

B. Slate roofs shall have both snow guards and rails.

C. Snow guards to be the proper model and type per specific roofing material as manufactured by Zaleski, Inc. of New Britain CT or equal.

D. Snow Rail Assemblies shall be as manufactured by David Levow, Inc of Hackensack NJ or equal.

PART 3 - EXECUTION

3.01 PREPARATION

A. On existing reproofing, remove the existing shingles and underlayment felts. Remove dust, dirt, loose nails or other protrusions and broom the surface clean to expose a clean, dry deck. Repair and refasten all loose boarding.

B. The roofing contractor shall remove all deck nailing that penetrates sheathing visibility extending into the interior of the building.

3.02 INSTALLATION OF MOISTURE BARRIER MEMBRANE

A. Install W. R. Grace Ice and Water Shield protection over 100% of the roof surface.

B. Install moisture barrier in accordance with manufacturer's direction. Roof deck is to be dry and broom clean.

C. Membrane shall be pressed or rolled in place to assure full adherence to the deck.

D. At end hip and vertical wall intersection, apply membrane starting at the low point and work upwards. End laps must be at least 6"; side laps at least 3 1/2".

E. If nailing is necessary during hot weather, backnail and cover nails by overlapping with the next sheet.

F. For valley and ridge applications, center the sheet over the valley of ridge, drape and press it into place working from the center of the valley or ridge outward in each direction. For valleys, apply membrane starting at the low point and work upwards. End laps must be at least 6", side laps at least 3 1/2". Membrane in valleys should be applied before membrane is applied to the eaves. Hips and intersection of roof and wall is to occur first before roof surface.

G. At first course (edges), leave enough (3") to wrap between sheathing and wood trim.

3.03 INSTALLATION OF ASPHALT SHINGLES

A. Install asphalt shingles according to manufacturer's installation instructions.

B. If new plywood sheathing exists, a nail gun may be used to fasten shingles based upon manufacturer's recommendations. If the roof is not sheathed and has planking, a minimum of six nails installed by hand are required per shingle on the finished roof, no staples shall be allowed. Nails are to be 11 or 12 gauge barbed shank corrosion-resistant roofing nails with 3/8" heads.

3.04 INSTALLATION OF SLATE

A. Nails shall be placed so as not to pierce sheet metal work and so as not to strain the slate. Expose nails only where necessary and point same with elastic cement.

B. Lay hip and ridge slates in cement spread thickly over unexposed surface of Under course. Point all exposed joints and nail holes with cement.

C. Under courses of slate shall be spread with elastic cement to receive finish. Slates shall be securely nailed. Nail heads shall be pointed with elastic cement.

3.05 INSTALLATION OF SNOW GUARDS AND RAILS

A. Vertical spacing between each row shall be 14".

B. Horizontal spacing shall be 24" o.c.

C. First row of snow guards shall be placed above the outermost bearing wall.

D. Minimum 2 fasteners per snow guard.

E. Coordinate with the installation of the roof to assure proper placement of the snow guards.

F. Snow Rails are to be through bolted, provide blocking as required.

END OF SECTION