

Section R905

Requirements for Roof Coverings

Recommended Amendments by Braswell Construction Group

KEY: BEST PRACTICES

MANUFACTURER'S RECOMMENDATION

R904.2 Compatibility of Materials. Roof assemblies shall be of materials that are compatible with each other per *manufacturers installation recommendations* and with building or structure to which the materials are applied

For example, the use of true starter on the rakes and eaves and not 3 tab shingles and architectural shingles. True hip and ridge shingles should be used at all hips and ridges and laminated of 3 tab shingles – per manufactures installation guidelines

R905.1.1 Underlayment. New Construction. Application of underlayment's

15 and 30 lb Asphalt based Felt – should not be exposed to the elements for more than 24 hours

Synthetic felt should not be exposed for longer than 90 days

Ice and water shield underlayment shouldn't be exposed longer than the manufacturers recommendations but some will be good up to 180 days.

Includes Fasteners. Manufacturers recommend 3/8" head and 1" leg ring shank or smooth nails when roofing the same day. When exposed for longer than 24 hours, manufacturer recommends 1" diameter plastic or metal cap nails.

ASPHALT

R905.2.2 Slope. Clarify clearer that a low slope is considered 4/12 and below to a 2/12. 4/12 should have two layers of underlayment.

For example, insurance adjusters read the code that it is only required on a 3/12 and 2/12 and that their interpretation of the code means 4/12 and up only apply single layer. 4/12 is a low slope and should have two layers of felt or ice and water

R905.2.5 Fasteners. In addition, if copper flashings are presents, copper nails must be used to avoid Galvanic Corrosion

R905 2.8.2 Valleys.

1. For open valleys lined with metal, the valley should be lined with the underlayment, then valley metal applied and then another overlapping layer of lining should be applied down both sides on the valley

Additional considerations for Asphalt Roofing Application

Asphalt starter course. A true asphalt starter course designed and manufactured specifically for the rakes and eaves should be installed at all rakes and eaves. A cut 3 tab shingle should never be used for starter as this does not provide adequate water-tight application due to the sealing strip is not installed directly at the roof edge and will allow wind driven rain under the starter course. If 3-tab starter is allowed, then it should be code to install ice and water shield at all rakes and eaves to prevent wind driven rain from penetrating the roof deck. Felt is water resistant not waterproof and when penetrated over time by wind driven rain, the felt paper will disintegrate, leaving the exposed decking saturated.

Hip and Ridge Cap. A true hip and ridge cap shingle designed and manufactured specifically for the hips and ridges should be installed at all hips, ridges and when applicable at headwalls. A 3 tab shingle and a laminated shingle should never be cut, bent and installed at the hips or ridges. Without the use of the designed hip and ridge cap specific for a certain line of shingles, the manufacturer will not warranty the roofing material installation.

New Construction Asphalt Wall Flashings. Ice and water shield should be mandatory at all walls, valleys penetrations and chimney's. Ice and water should extend up walls at a minimum of 12"

SLATE

R905.6.2 Slope. On slopes from 4/12 – 12/12, a double layer of 30 lb felt or a single layer of 40 lb felt is recommended when the felt is not going to be slated over immediately. Slopes over 12/12 and greater may use single layer of felt

R905.6.3 Underlayment. Per manufactures installation instructions for real slate shingles, roofing underlayment shall, at minimum, comply with ASTM D 226 asphalt-saturated rag felt, Type II, No, 30

WOOD SHINGLE

R905.7.4 Could potentially include more detail and insight

MATERIAL	MINIMUM GRADES	APPLICABLE GRADING RULES
Wood shingles of naturally durable wood for roofing material	1	Cedar Shake and Shingle Bureau
Wood starter shingles or exterior walls	2	Cedar Shake and Shingle Bureau

*** Grade 2 & 3 wood shingles should never be applied as a roofing shingle – Flat grains and slash grains both expose the sapwood to weather and are unstable and most likely to crack, erode, split and distort during natural weathering***

WOOD SHAKE

R905.8.1 Sheathing Requirements. In addition to the current code, there should be a subsection for High Humidity Areas similar to Georgia. “In high humidity areas where solid sheathing is required or already present, the following options are available:

1. Apply a continuous ventilation product directly to the sheathing – this product will allow a 1” air gap between the shakes to allow for continuous airflow. This aides in allowing natural wood material to dry evenly and prevent premature splitting and curling.
2. Install furring strips to the sheathing to create the 1” air gap for even drying

TABLE R905.8.5 Wood Shake Material Requirements. Should look as followed:

MATERIAL	MINIMUM GRADES	APPLICABLE GRADING RULES
Preservative-treated shakes and shingles of naturally durable wood	1	Cedar Shake and Shingle Bureau
Fire-retardant-treated shakes and shingles of naturally durable wood	1	Cedar Shake and Shingle Bureau
Tapersawn shakes of naturally durable wood	1 or 2	Cedar Shake and Shingle Bureau

Pine shakes and shingles are no longer manufactured – Only durable option is for CCA treated shakes and shingles

R905.7.3 Underlayment. Per manufactures installation guidelines section R905.1.1 should be change to the following underlayment only.

- ASTM D 226 Type II
- ASTM D4869 Type 4
- Must be a permeable underlayment designed to allow airflow for even drying a natural material

R905.8.4 Interlayment. Interlayment shall comply with ASTM D226 Type II or No. 30 ASTM D4869 Type IV roofing felt per the Cedar Shake and Shingle Bureau

R905.8.9 Valley Flashing. For open valleys lined with metal, the valley should be lined with the underlayment, then valley metal applied and then another overlapping layer of lining should be applied down both sides on the valley

Additional considerations for Wood Shake Roofing Application

1. ***Ice and water should be applied at all eaves and rakes for wood shingle installations***
2. ***Ice and water should be applied at all eaves and rakes for wood shake installations***
3. **Transitions.** Metal transition flashing is required across the change in slope and a starter shingle/shake is required by the manufacturers to be installed at the transitions similar to the installation at the eaves.

Section R908 Re-Roofing

Additional considerations for Re- Roofing Application on all materials

1. **Valley Metal** – Must be replaced, once removed from the original roofing system, cannot be reconstructed in accordance with approved manufactures application – must be removed and replaced new

2. Side Wall Flashings – If installed above the shingle, once removed from the original roofing system, cannot be reconstructed in accordance with approved manufactures application – must be removed and replaced new

*****ADDITIONAL SECTION SHOULD BE ADDED FOR THE INSTALTION OF SYNTHETIC ROOFING MATERIAL***
BRASWELL CONSTRUCTION GROUP WILL OFFER OUR EXPERTISE AND RECOMMENDATIONS FOR THE PROPER INSTALLATION OF ALL SYNTHETIC ROOFING MATERIAL SINCE CURENLY THERE IS NO CODE ENFORCEMENT ON THESE MATERIALS**