

## Chapter 8. Roofing

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### Tools needed by volunteers:

Hammer  
Nail apron  
Tape measure

### Materials needed:

Shingles  
Cap shingles  
Ice/water shield  
Roof felt  
Gutter apron/drip edge  
Roofing nails  
3” cap nails

### Tools and equipment needed:

Generator  
Extension cords  
Air compressor and hoses  
Pneumatic nailer  
Chalk line  
Utility knife  
Tin snips  
Hammer tacker  
Shingle lift  
Ladders  
Scaffold

**Safety First! Review the Safety Checklist before performing tasks in this chapter.**

### **8.1. INSTALLING GUTTER APRON**

1. Gutter apron (L shaped) is fastened along the eave edges of the roof. Nail with roofing nails and overlap pieces 3” to continue along the roof edge. Use a tin snips to cut material. Take time to mesh pieces together for a tight fit.

### **8.2. INSTALLING ICE AND WATER SHIELD**

1. Make sure roof surface is clean, dry and free of debris.
2. Ice and water shield is installed along all eave edges over heated areas.
3. Peel back the adhesive sheet several feet and align the material with the low edge of the roof sheathing. Press into place.
4. Continue placing ice and water shield along the length of the roof removing the adhesive sheet and pressing the material in place.
5. Where seams are necessary, overlap 6” and continue to the end of the roof. When one course is complete, move to the opposite side of the roof and follow the same procedure.
6. When there are valleys, install the ice and water shield in the valley after it is installed on the eave ends first.

### **8.3. INSTALLING ROOFING FELT**

1. Roll out felt and overlap the ice and water shield 3”. Staple felt to the roof with hammer tacker staplers, using plenty of staples.
2. Overlap successive rows 3”, stapling as you go.
3. Lap last row over the peak of the roof. In the event of rain, the house will remain dry.
4. Follow this procedure on the opposite side of the roof.
5. Set up the Shingle Lift and raise shingle bundles onto the roof placing the bundles across each side of the roof to hold down the roofing felt in the event of wind.

### **8.4. INSTALLING DRIP EDGE**

1. Drip edge (T shaped) is fastened along the gable edges of the roof starting at the eave. Nail with roofing nails and overlap pieces 3” to continue to the peak. Use a tin snips to cut material.

## **8.5. INSTALLING STARTER STRIP**

1. Rolled Starter Strip is installed over the ice and water shield flush to the edge of the roof. Install with adhesive strip down and closest to the edge of the roof.

## **8.6. INSTALLING SHINGLES**

### **8.6.1. Standard Shingling**

1. Read the shingling instructions on the bundles regarding dimensions recommended to stagger seams. Cut starter shingles as per those instructions. Minus 10” and minus 20” is typical.
2. Install first row of shingles so  $\frac{1}{4}$ ” to  $\frac{3}{8}$ ” overhangs the gutter apron. All shingles are installed with four roofing nails per shingle.
3. Measure and snap a chalk line to represent the top edge of the second row of shingles.
4. Start the second course with a shingle minus 10” and honor the chalk line with the top edge of the shingles. Trim at the end of the course.
5. Start the third course with a shingle minus 20” and honor the lip of the double layer of the previous shingle as your guide. Trim at the end of the course.
6. Repeat the shingle stagger to the peak of the roof.
7. Snap chalk lines as needed to ensure rows of shingles stay straight when shingling up the roof.
8. At the ridge, cut away roofing felt and shingle to the opening.
9. Repeat these steps on the opposite side of the roof.
10. Step flashing must be used whenever a roof surface butts into a wall. Step flashing must be installed under each shingle. Alternate step flashing and shingles as you work your way up the roof. Nail only in the top edge of the step flashing to avoid water leakage.

### **8.6.2. Valley Shingling**

1. If there is a porch roof that creates valleys in the roof, start the shingling process here.
2. Follow the same process as Steps 1 thru 10 in Section 8.6.1 above with one **BIG** difference: install the porch roof shingles first from the valley out to the gable end.

3. Lay the first shingle in the valley with 12" of the shingle running up the other side of the valley. From there, lay shingles going out toward the gable end.
4. When running the courses up the roof, always start in the valley and maintain 12" of the shingle running up the other valley (it will be a step pattern).
5. After installing the porch shingles, install the shingles on the main part of the house.

**CAUTION:** When nailing the shingles that are lying in the valley, keep all nails 6" away from the center of the valley.

### **8.7. *INSTALLING RIDGE VENT***

1. Cut away any roofing felt or shingles that cover the ridge vent opening.
2. Install Cap Shingles on first and last 14" of peak.
3. Install the first ridge vent 10" from the end of the roof over the opening and nail with 2½" roofing nails.
4. Continue installing vent pieces butting the previous piece along the opening and trim the last piece to end 10" from the edge of the roof

### **8.8. *INSTALLING CAP SHINGLES***

1. Separate cap shingles.
2. Install over the ridge vent with 2½" roofing nails overlapping in the same fashion as roof shingles.
3. Cover the last two exposed roofing nails with roofing tar to prevent rusting.