



Oregon Roof Consulting and Inspection

No-Nonsense Roofing Advice for Property Owners: Affordable ~ Thorough ~ Versatile ~ Capable

Serving the Portland Metro area and all of Oregon: (503) 654-4612

Oregon CCB: 199121 ~ WA Lic: OREGORC871MR

PO Box 220190, Milwaukie, OR 97222

Resume' ~ Track Record ~ Experience ~ Qualifications ~ History

Please note : I have 42 years of legitimate verifiable experience as a laborer / grunt / gopher for my brother's roofing business in the 60's, the better part of 3 decades as a roofing contractor, 6 years as an estimator / project manager for 2 large roofing companies and am now nearing the end of my 9th year as the owner / operator of Oregon Roof Consulting and Inspection. I have personally installed over 1,000 roofs and have done at least 14,000 roofing estimates back in the roofing days. Oregon Roof Consulting has participated in 5 courtroom hearings and 16 arbitration hearings in Oregon and Washington and 19 on site CCB mediation meetings in Oregon - all as an expert witness, so, we are familiar with the roofing trade.

I have done work for but not limited to : Homeowners; Businesses and corporations of all sizes; Insurance companies; Banks; Churches; Relocation companies; Roofing contractors; Investment groups; HOA's; Apartment complexes of all sizes; The State of Oregon; Multiple school districts including West Linn; David Douglass; and every elementary, middle, and high school in both Hood River and Wasco (The Dalles) counties; United States Coast Guard in Astoria; etc. I have done jobs all over Oregon and Washington; All over the San Francisco Bay Area including San Francisco, Oakland, Napa, Richmond, Alameda, Fremont, Pleasanton, Berkeley, Fresno, Sacramento and Reno Nevada. We have also helped with two shingle roofing projects on the remote South Pacific island of Rarotonga (Cook Islands). This is all on my website. See www.oregonroofconsulting.com

Thank you,

Owner of Oregon Roof Consulting & Inspection

Oregon Roof Consulting and Inspection No-Nonsense Roofing Advice for Property Owners



- Affordable ~ Thorough ~ Versatile ~ Capable
- Roofing in Oregon Since 1973
- Project Management & Monitoring
- Inspections ~ Certifications ~ Owner Advocacy

www.oregonroofconsulting.com

Phone: (503) 654-4612 Cell: (503) 952-6479

Email: joe@oregonroofconsulting.com

PO 220190 Milwaukie, OR 97222

CCB 199121 ~ WA OREGORC871MR

Joe Sardotz, Owner Operator



Oregon Roof Consulting and Inspection

No-Nonsense Roofing Advice for Property Owners: Affordable ~ Thorough ~ Versatile ~ Capable

Serving the Portland Metro area and all of Oregon: (503) 654-4612

Oregon CCB: 199121 ~ WA Lic: OREGORC871MR

PO Box 220190, Milwaukie, OR 97222

Roof Inspection for : [REDACTED]

Job Address : [REDACTED] ~ Portland, Oregon 97218

I inspected this roof on December 2nd 2021. I looked in the attic. The owner and I got on the roof. The owner saw everything that is in this report. The roof is a new Malarkey 'Vista' asphalt laminated shingle in the black color. One layer over plywood. Separate photo emails will be sent. Each will be numbered to correspond with the numbered items on the summary. The following items should be noted :

1. Roof measures 47'X31' =1457 sq ft . Call it 15 squares. Plywood sheets are 8X4=32 sq ft each. That's 47 sheets. This roof is all right angles so very little waste. Homeowner was billed and paid \$6,270 for full plywood replacement**. At 48 sheets that's \$130.62 per sheet. Contract said \$110 per sheet. **All plywood was not replaced. Just one 2'X2' piece below the chimney was replaced at all drip and rake edges. We looked in the attic and the difference in appearance between new and existing is unmistakable. About half of plywood visible in attic was replaced. Owner showed photos showing 4 sheets were replaced when the original roof was torn off long ago so even less than half of plywood visible from attic was replaced. Owner will go in attic and get exact count of new plywood. Roofer was to replace ALL plywood. Didn't happen. Breach of contract. In this writer's opinion the homeowner is owed \$130.62 for every sheet not replaced.
2. Contract said and owner paid \$400 for ice and water shield at all drip and rake edges. There is no ice and water shield on this roof at any of these locations. See photos. Breach of contract.
3. Owner paid for upgrade of shingle nails from electro galvanized to hot dipped galvanized which is a very good thing. I lifted shingles all over the roof and it appears that the back half was nailed with hot dipped but nearly all of the front and small front porch roof were nailed with electro galvanized nails. Breach of contract. There should be no electro galvanized nails anywhere on this roof. See photos.
4. Shingle nailing not remotely close to Malarkey specs. I viewed at least 260 nails and about 55%+- were over driven. Some were out of the nail 'zone'. Nearly all not spaced evenly as Malarkey requires. Some spots had no nails at all. See photos. See attached Malarkey instruction sheet.

5. Contract says all pipes will get pipe flashings. All do except the power mast which is just barely caulked. See photos. Power mast pipe flashings do exist. I have seen them, bought them, installed them. They are readily available. **The other pipe flashings are the cheap entry level 'no-caulk' type with the black rubber collar that fails decades before the shingles do. **Malarkey requires that all flanges of pipe flashings have sealant between the tops of the flanges and the underside of the lapping shingles. This was not done. See photos. See attached Malarkey instruction sheet.
6. Attic vents are plastic. Plastic expands and contracts in heat and cold. Manufacturers of these put holes all around the flanges for nailing. These holes are wider than the diameter of a shingle nail shaft for a reason and that is to allow for expansion and contraction. If the flanges are not nailed in the provided holes then the plastic cannot 'move' and will eventually crack / break. I have seen this many times. These vents were nailed in the flanges and not in the factory provided holes. **Printed in large capital letters on every vent flange is " DO NOT ALLOW ANY FASTENERS TO PENETRATE FLANGE ". See photos.
7. Synthetic underlayment paper is under the eave metal. Supposed to be on top. **This paper was fastened with hammer tacker A-11 staples. All synthetic underlayment manufacturers require paper be applied with 'cap nails' which are a small nail in the center of a 1" diameter plastic cap. These wont tear the paper. A-11 staples will. Tears create leaks – before not after the shingles are applied.
8. As always I check the CCB status of roofers, especially if there is potential for certain 'issues'. This roofer says on various documents they have workers compensation insurance. If you don't have this you can't have employees but you can hire a subcontractor that does have this insurance / employees. According to the CCB enforcement fellow I spoke with this roofer does not have workers compensation insurance and has 'exempt' CCB status meaning no employees. Someone's 'employees' did the work on this roof. There is a \$1,000 fine and a license suspension by The CCB for this until it can be proven that proper insurance has been obtained. I wont turn in the roofer but the homeowner may decide to do so.

Conclusion : There appears to be significant breach of contract here. It is usually a good idea to abide by the contract that (you) write. The homeowner was billed for and paid for things he did not get. I have been in a lot of courtrooms (5), arbitration hearings (16) as an expert witness as well as 19 onsite CCB mediation meetings. Arbitrators and judges typically do not approve of this behavior. Shingle nailing and pipe / vent installation not to code. It is most unfortunate that the homeowner and yes the roofer must go through all this inconvenience and stress and waste of time.

It is any Contractor's responsibility, obligation, and requirement to 1) Know how a roof system should be installed. 2) Install that roof system correctly. All contractors advertise and promote themselves as qualified and experienced professionals.

**** The Oregon Residential Specialty Code R102.7.1 : 'Additions, alterations or repairs (excluding ordinary repairs) to any structure shall conform to the requirements for a new structure without requiring an existing structure to comply with all of the requirements of this code, unless otherwise stated. Additions, alterations or repairs shall not cause an existing structure to become unsafe or adversely affect the performance of the building.....'. R905.1 : 'Roof coverings shall be applied in accordance with the applicable provisions of this section and manufacturers installation instructions'. R903.1 : ' Roof Assemblies shall be designed and installed in accordance with this code and the approved manufacturers instructions such that the roof assembly shall serve to protect the building or structure '. R105.2 : 'Exemption from permit requirements of this code shall not be deemed to grant authorization for any work to be done in a manner in violation of the provisions of this code or any other laws or ordinances of this jurisdiction'. ****

Thank you,



Owner of Oregon Roof Consulting & Inspection

****This document carries no warranty or guarantee. It is an opinion based on industry standards, manufacturers specifications, local codes and my experience****

Oregon Roof Consulting and Inspection
No-Nonsense Roofing Advice for Property Owners



- Affordable - Thorough - Versatile - Capable
- Roofing in Oregon Since 1973
- Project Management & Monitoring
- Inspections - Certifications - Owner Advocacy

www.oregonroofconsulting.com

Phone: (503) 654-4612 Cell: (503) 952-6479

Email: joe@oregonroofconsulting.com

PO 220190 Milwaukie, OR 97222

CCB 199121 - WA OREGORC871MR

Joe Sardotz, Owner Operator

Directions for Applying Malarkey Laminate Shingles

GENERAL INSTRUCTIONS

Install Malarkey laminate shingles according to adopted building code and local amendments. To qualify for warranty protection and obtain stated coverage, the installation instructions detailed here must be followed. Contact Malarkey Technical Services or check our website at WWW.MALARKEYROOFING.COM for the most current version.

We assume no responsibility when there has been improper application, failure to properly prepare the surface or provide proper ventilation according to FHA or HUD minimum property standard requirements and adopted building code.

For current warranty information, visit WWW.MALARKEYROOFING.COM/warranty-center.

Standard exposure is 5 $\frac{1}{8}$ " (143 mm) to the weather. Offset between courses is 8" (203 mm). Minimum offset for shingle installation is 4" (102 mm).

These step-by-step application instructions apply to standard slopes/inclines of not less than 4" (102 mm) per 12" (305 mm) or more than 21" (533 mm) per 12" (305 mm). For lower slopes [2" (51 mm) to less than 4" (102 mm) per 12" (305 mm)] and steep slopes [more than 21" (533 mm) per 12" (305 mm)], modify the installation as described below. Do not apply shingles on roofs having a slope less than 2" (51 mm) per 12" (305 mm).

Note: The film strips on each shingle, front and back, prevent shingles from sticking together while in the bundle and are not designed to be removed.

IMPORTANT

- ALWAYS wear fall protection when working on a roof.
- Underlayments can be slippery, particularly when wet or covered with frost. Be careful when walking on them.

Ventilation: To prevent harmful condensation or heat buildup, air must circulate freely under the roof deck. Install roof vents at ridges and eaves. Ventilation provisions must meet or exceed current FHA or HUD requirements and adopted building codes.

Roof Deck: The surface to receive the new roofing should be in good shape and solidly sheathed, constructed of a minimum $\frac{3}{8}$ " (10 mm) thick, exterior-grade plywood, $\frac{7}{16}$ " (11 mm) thick oriented strand board (OSB), or seasoned lumber, nominally 1" (25 mm) thick. Boards should be positioned tight to each other and securely nailed to framing members. Deteriorated or rotted boards should be replaced. For excessively resinous areas and loose knots, cover with sheet metal patches.

Malarkey strongly recommends installing sheathing when wood board decking is the existing substrate. Problems with the performance of your roofing system, such as leaks and buckling, increase if installed directly over wood board decks. Failure to use properly conditioned deck materials can result in deck movement which can damage the roof covering and may void your warranty.

Drip Edge Flashing: In accordance with 2018 International Building Code, Section 1507.2.8.3, and 2018 International

Residential (Building) Code, Section R905.2.8.5, *drip edge flashing* (drip edge, eave or rake metal) is required along the eave and rake edges of shingle roofs.

Install drip edge first along the eaves, and later on the rakes once the field underlayment has been applied.

UNDERLAYMENT

Malarkey makes two types of underlayment, the first being water-resistant, *mechanically-attached* field underlayments Right Start™ UDL and our Secure Start® line of synthetic underlayments.

The second type are waterproof, *self-adhering* underlayments, Arctic Seal® and Secure Start® HT products which are intended for use in cold weather climates that produce ice dams.

Self-adhering underlayment can also be installed as a flashing membrane in areas susceptible to leaks such as roof valleys, roof-to-vertical transitions, and around vents, curbs, skylights and other roof penetrations.

Underlayment is required on roof decks prior to the installation of Malarkey shingles. Your geographical location, weather, degree of roof slope, and type of roof covering will help determine which Malarkey underlayment is right for your situation. Consult local building code for additional guidance.

Complete installation instructions are available on our website at WWW.MALARKEYROOFING.COM.

Other Instructions Common to the Installations that Follow:

- Underlayment is installed parallel to the eaves.
- End laps in the same course should be 6" (152 mm), and staggered 6' (1.8 m) apart in subsequent courses.
- Extend field underlayments 6" (152 mm) over hips, ridges and valleys. Where the roof meets a vertical surface, run the underlayment a minimum of 3" (76 mm) up the wall and secure.
- Once an expanse of roof is covered by underlayment up to the ridge, apply drip edge flashing to the rakes, over the ends of underlayment.

INSTALLATION IN NON-ICE DAM REGIONS

Roof Slopes 4:12 and Greater

Roof slopes 4:12 (4" [102 mm] per 12" [305 mm]) and greater require the installation of a single (1) layer of Malarkey's field underlayment (or code-compliant equivalent) over the entire roof deck.

Install the initial course flush to the eave and trim at the rake. Fasten sufficiently to hold the underlayment in place and work safely until shingles are applied or according to adopted building code. Secure Start® underlayments have bullseye imprints on the material to act as guides for fastening.

Continue working up the roof, subsequent courses overlapping the preceding by 2"-4" (51-102 mm), depending on the type of underlayment being applied. (See Figure 1)

Succeeding courses are full-width, the first course completely overlapping the starter, and followed by courses half-lapped over preceding courses, on up the roof.

Fasten as described above. (See Figure 4)

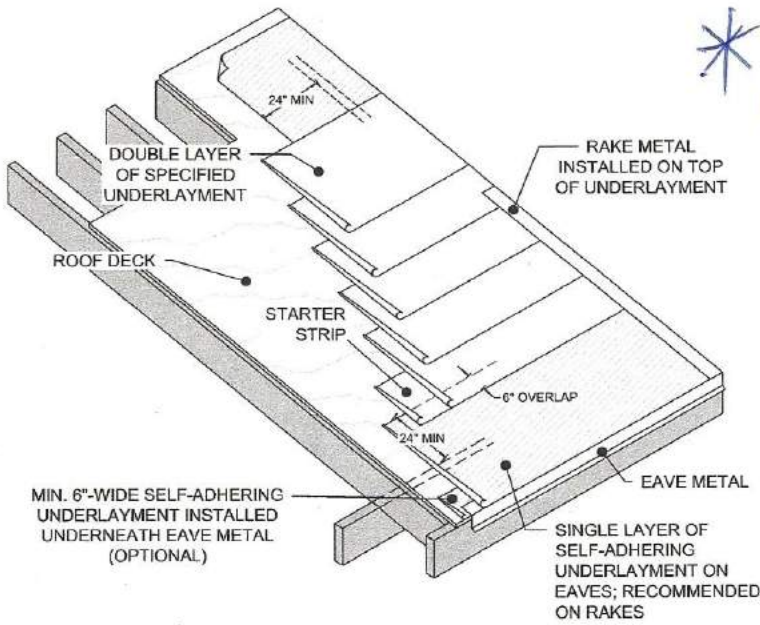


Figure 4 - Application of Self-Adhering and Field Underlayments on Roof Slopes 2:12 Up to 4:12 (Ice Dam Regions)

SHINGLE FASTENING

ITEM #4 ON SUMMARY

Type of Fasteners: Fasteners must be minimum 12-gauge (0.105 inch [3 mm]) shank, galvanized steel, stainless steel, aluminum or copper roofing nails, with a 3/8" (10 mm) head, compliant with ASTM F1667, and long enough to penetrate through all layers of roofing materials and at least 3/4" (19 mm) into the roof sheathing. Where the roof sheathing is less than 3/4" (19 mm) thick, the fasteners shall penetrate through the sheathing.

Malarkey approves the use of hand-nailing and/or pneumatic nailers for applying fasteners, but nails must be driven flush to the shingle surface and not overdriven, underdriven or driven at an angle, especially on low slope installations where water runs off less freely and leaks could result. When fastening adjacent shingles, butt them loosely together to prevent buckling.

The use of staples is not an approved fastening method. (See Figure 5)

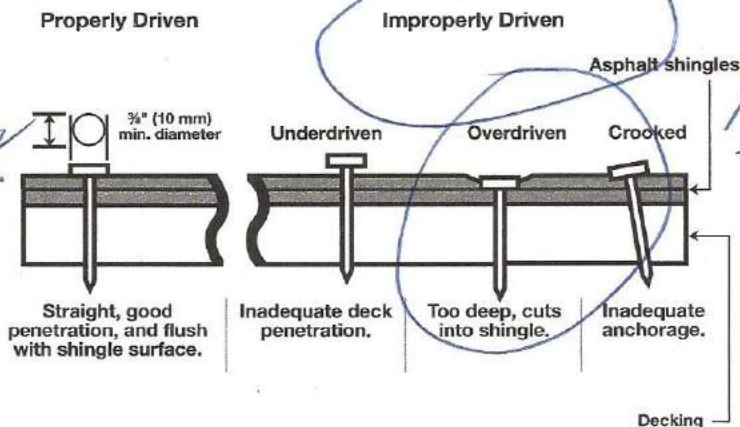


Figure 5 - Nailing Instructions

Nailing Pattern: Under normal conditions, use four (4) fasteners for each full shingle.

Malarkey laminate shingles feature The Zone®, an enlarged, 1 5/16" (33 mm) wide nailing area that helps ensure correct fastener placement. Place fasteners in this nailing area approximately 1" (25 mm) in from each edge and the remaining fasteners evenly spaced between. (See Figure 6)

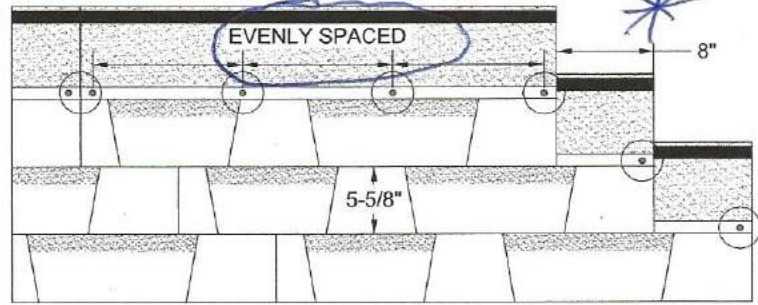


Figure 6 - Laminate, 4-Nail Fastening Pattern

Wind Resistance and Hand-Sealing: Malarkey shingles are manufactured with strips of a factory-applied, thermal sealant that is activated by the heat of the sun after the shingle is on the roof. Exposure to the sun's heat bonds each shingle to the one below for wind resistance.

A variety of conditions like cold weather, high winds or blowing dust, however, can affect the ability of the sealant strip to activate and prevent shingles from self-sealing during, or shortly after, installation. If shingles have not sealed after a reasonable time period, hand-sealing (also called hand-tapping) is strongly recommended.

Note: Malarkey's wind warranties apply only when shingles are sealed, whether by hand-sealing or activation of the self-sealing strips. Failure to seal under adverse circumstances like those described above is not a manufacturing defect.

To hand-seal a shingle, apply four (4) quarter-size dabs of asphalt roof cement conforming to ASTM D4586 evenly spaced under each shingle, and press shingles firmly into the cement. Excessive use may cause blistering; correct amounts should not bleed out from under the shingle. (See Figure 7)

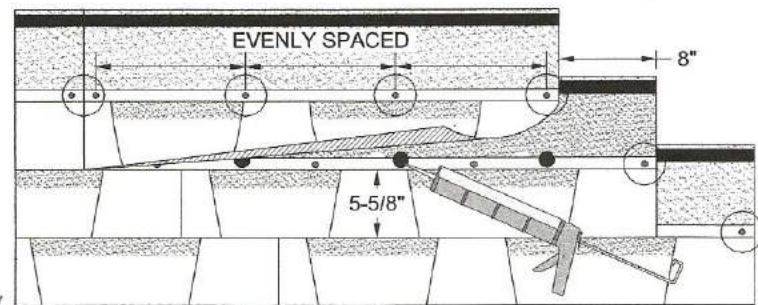


Figure 7 - Hand-Sealing Laminate Shingles

Steep Slope Fastening of Laminate Shingles: Roof decks with slopes greater than 21" (533 mm) per 12" (305 mm) require installation with six (6) fasteners per shingle and hand-sealing underneath.

Two methods for fastening can be used, but for each, the outer fasteners must be placed in the nailing area approximately 1" (25 mm) in from each edge. The first method has the remaining four (4) fasteners also placed in the nailing area and evenly spaced between. (See Figure 8)

Being 8" wide allows the flashing to be bent at 90 degrees and pushed against the transition of roof to wall, the horizontal flange extending 4" (127 mm) out onto the roof deck and the vertical flange, 4" (127 mm) up the wall assembly. Being 8" long allows individual step flashing pieces to overlap each other in water-shedding fashion as they are installed.

Individual step flashing pieces are integrated with each course of shingles as they are applied to intersect the sidewall. A 1/4"-3/4" (6-19 mm) gap between the shingles and vertical bend of the flashing is recommended.

To allow for possible roof movement, fasten each piece of flashing to the roof deck and not the sidewall.

Installation is as follows: Atop the Smart Start™ starter course at the eave, place the first piece of flashing*. The horizontal flange should be flush with the eave edge of the starter and the vertical flange against the sidewall, counter-flashed by the wall cladding.

Fasten the horizontal flange of the step flashing to the roof deck with two nails placed 1" (25 mm) from the upper edge and spaced an equal distance apart.

Lay a first course shingle down on the roof, positioning it close to the sidewall but leaving a 1/4"-3/4" (6-19 mm) gap between the end of the shingle and vertical bend in the step flashing. Fasten in place. The horizontal flange of the flashing will no longer be visible, but you can still see the vertical flange along the sidewall.

Place the second step flashing atop the first course shingle, and position it up from the eave edge of the shingle, matching the shingle exposure, and fasten as before.

Lay a second course shingle on the roof, position leaving a gap, and fasten.

Place the third step flashing atop that, overlapping the end of the previous step flashing at the point of shingle exposure (overlap is typically 2" [51 mm]).

Continue like this on up to the top of the sidewall intersection, alternating between the placement of step flashing and shingles.

* The "first piece of flashing" in this instance might well be "kickout" flashing, a piece of flashing cut and angled to direct water out and away from the side of a structure.

To accommodate the angled part, yet still serve as the initial piece of step flashing, the kickout will likely have a greater length than a regular piece of flashing. Otherwise, the installation of shingles and step flashing to follow is the same.

(See Figure 13)

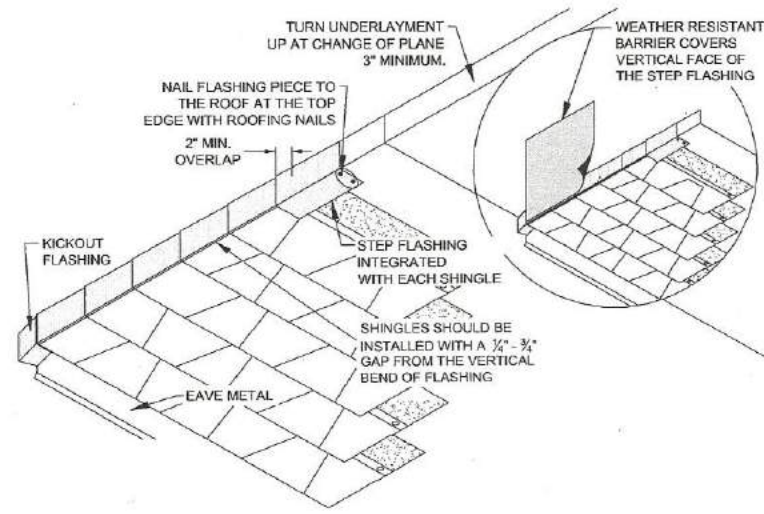


Figure 13 - Step Flashing Application at Roof-to-Sidewall Transitions

Vent Pipe (and Other Flanged Penetration) Flashing:

Install shingle courses up to the vent pipe, and cut a hole in the shingle to be positioned over the pipe. Install the pipe jack or boot (top and side flanges may be set in sealant).

Additional, optional weatherproofing: Unexposed pipe jack flanges (top and both sides) may also be stripped-off with minimum 6" (152 mm) wide Arctic Seal®, covering all fasteners used to secure the flanges, and tying onto the field underlayment a minimum of 3" (76 mm).

Continue roofing around the pipe, cutting shingles to fit on the sides and top of the pipe jack flanges. Ensure shingles extend beyond the downslope side of the pipe itself. Shingles that overlap any part of the flanges should be sealed to the flange with asphalt roof cement conforming to ASTM D4586. Correct amounts should not bleed out from under the shingles; excessive use may cause blistering. Apply pressure to seal. (See Figure 14)

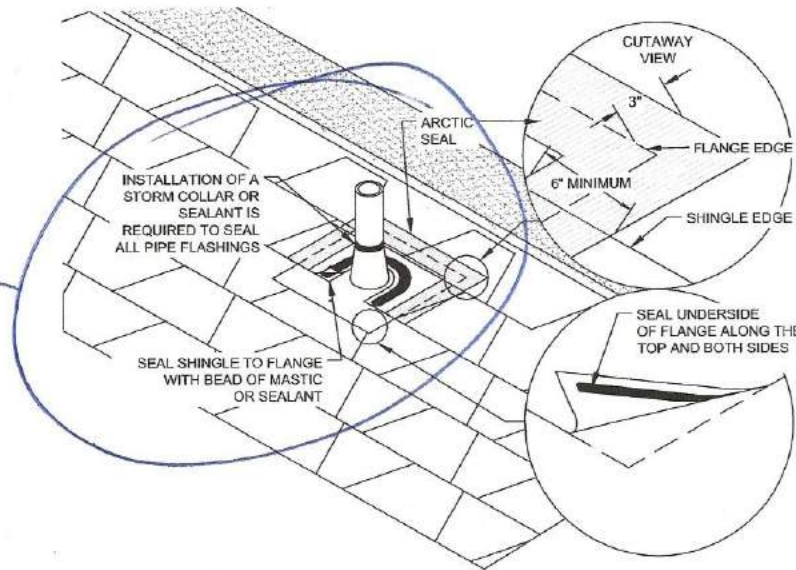


Figure 14 - Vent Pipe Flashing Application

Cap (Counter) and Chimney Flashings: The metal flashing apron for the front of the chimney shall be installed over the last course of shingles below the chimney and its vertical flange extending up the face of the chimney.

ITEM # 5
ON SUMMARY