

GUIDE SPECIFICATION



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SECTION 07 72 00

ROOFING ACCESSORIES

This specification guide is written in Construction Specifications Institute (CSI) 3-Part Format and has been prepared by Quarrix Building Products. The information provided is to assist Specifiers in preparing written construction documents for roofing accessories specifically Ridge Vents for use with shingles, shakes, flat tile, slate and metal roofing for residential and commercial roof ventilation. Sections must be carefully reviewed and edited by the Architect to meet the requirements of the project and local building code. Quarrix reserves the right to change or make modifications to the specification guide at any time. Updates can be found on manufacturer's website and distributed in print.

Specifier notes are highlighted in blue text. Delete all Specifier notes after editing the section. Notes can be hidden or shown by clicking on the Show/Hide button in Word taskbar. To print notes, select File in the Word taskbar. Then select Options, click Display, select Print Options and check Print Hidden. These instructions vary depending on Word versioning.

For specification assistance,
contact Quarrix Customer Service toll-free at 800-438-2920 or info@quarrix.com

QUARRIX ROOFING ACCESSORIES SPECIFICATION

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Roof Vents.
 - 1. Storm Stop Ridge Vents
 - 2. Off Ridge Intake and Exhaust Vent
 - 3. Attic Defense Ridge Vent
 - 4. ContinU Flow Soffit Vent
- B. Tile Roof Accessories.
 - 1. Dry Roof Roof Batten
 - 2. Universal Tile Ridge Vent
 - 3. Universal Tile Flashing
- C. Pipe Flashings.
 - 1. Pro Boot Pipe Boot
- D. Roof Patch.
 - 1. Smart Plug Roof Patch

1.2 RELATED SECTIONS

- A. Section 06 10 00 - Rough Carpentry.
- B. Section 07 31 12 – Asphalt Shingles.
- C. Section 07 32 13 – Clay Roof Tiles.
- D. Section 07 22 16 – Roof Board Insulation.
- E. Section 07 72 00 – Roof Accessories.
- F. Section 07 60 00 – Flashing and Sheet Metal.
- G. Section 07 71 13 - Manufactured Copings.
- H. Section 07 61 00 - Sheet Metal Roofing.
- I. Section 07 42 13 – Metal Wall Panels

1.3 REFERENCES

- A. ICC-ES Report ESR-2664 August 1, 2017.
- B. Miami-Dade County, Florida, NOA No. 17-0530.08, Expiration Date: 10/31/22.
- C. Florida Certificate of Product Approval # is #FL 16096. 2014 Code.
- D. Texas Department of Insurance – TDI RV-21.
- E. ANSI/UL 790 – Tests for Fire Resistance of Roof Covering Materials.
- F. NRCA - Steep Roofing Manual; National Roofing Contractors of America.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01 30 00 - Administrative Requirements.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- C. Verification Samples: For each finish product specified, two full size samples representing actual product, color, and patterns.
- D. Manufacturer's Certificates: Certify products meet or exceed specified requirements.

1.5 QUALITY ASSURANCE

- A. Quarrix Ridge Vents, when properly installed with soffit or eave vents, meet or exceed the requirements of all recognized national building codes for ventilation. Quarrix StormStop ridge vents were tested and passed all tests for performance and suitability for use as follows:
 - 1. ICC-ES Report ESR-2664.
 - 2. Miami-Dade County, Florida, NOA NO. 20-0505.11
 - 3. Florida Certificate of Product Approval #FL 16096.
 - 4. TDI Evaluated RV-21.
 - 5. ANSI/UL 790, Class A or C as to an external fire exposure only when installed in accordance with instructions provided with ridge vents 8FA1. Reference UL Report 21038.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Maintain dry storage area for products of this section until installation of products

1.7 PROJECT CONDITIONS

- A. Maintain environmental conditions within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Quarrix Building Products, A Division of Liberty Plastics Inc an LDI Company, which is located at: 705 Pennsylvania Ave. S.; Minneapolis, MN 55426; Toll Free Tel: 800-438-2920; Tel: 763-540-9700; Fax: 763-540-9709; Email to request info (Info@quarrix.com); Web: <http://www.quarrix.com>
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 ROOF VENTS

- A. Storm Stop Ridge Vents: Quarrix Storm Stop ridge vents are, a corrosion-free, laminated high-density polyethylene corrugated plastic with a thin spun bound non-absorbent polypropylene membrane bonded to it not permitting direct water or weather, dust, and insects from entry. Layers of corrugated product must be z-folded and glued, not stapled. Product backed by lifetime manufacturer's warranty and

capable of being used on applications with pitches from 3/12 to 20/12.

1. Ridge Vents: Quarrix Storm Stop
 - a. Net Free Area: 12.7sq. inches (268.8 cm sq/lineal m) per lineal foot.
 - b. Color: Black
 - c. Dimensions: 11-1/4 inches (28.58 mm) wide by 20 feet (6.1 m) long by 5/8 inch (15.875 mm) high. Coil nails included.
2. Ridge Vents: Quarrix Storm Stop
 - a. Net Free Area: 12.7sq. inches (268.8 cm sq/lineal m) per lineal foot.
 - b. Color: Black
 - c. Dimensions: 11-1/4 inches (28.58 cm) wide by 20 feet (6.1 m) long by 5/8 inch (15.875 mm) high.
3. Ridge Vents: Quarrix Storm Stop
 - a. Net Free Area: 12.7sq. inches (268.8 cm sq/lineal m) per lineal foot.
 - b. Color: Black
 - c. Dimensions: 9 inches (22.86 cm) wide by 20 feet (6.1 m) long by 5/8 inch (15.875 mm) high.
4. Ridge Vents: Quarrix Storm Stop
 - a. Net Free Area: 12.7sq. inches (268.8 cm sq/lineal m) per lineal foot.
 - b. Color: Black
 - c. Dimensions: 7 inches (17.78 cm) wide by 20 feet (6.1 m) long by 5/8 inch (15.875 mm) high.
5. Ridge Vents: Quarrix Storm Stop
 - a. Net Free Area: 12.7sq. inches (268.8 cm sq/lineal m) per lineal foot.
 - b. Color: Black
 - c. Dimensions: 11-1/4 inches (288.58 cm) wide by 4 feet (1.22 m) long by 5/8 inch (15.875 mm) high.
6. Ridge Vents: Quarrix Storm Stop
 - a. Net Free Area: 12.7sq. inches (268.8 cm sq/lineal m) per lineal foot.
 - b. Color: Black
 - c. Dimensions: 11-1/4 inches (28.58 cm) wide by 4 feet (1.22 m) long by 5/8 inch (15.875 mm) high. Coil nails included
7. Ridge Vents: Quarrix Storm Stop
 - a. Net Free Area: 12.7sq. inches (268.8 cm sq/lineal m) per lineal foot.
 - b. Color: Black
 - c. Dimensions: 9 inches (22.86 cm) wide by 4 feet (1.22 m) long by 5/8 inch (15.875 mm) high.
8. Ridge Vents: Quarrix Storm Stop
 - a. Net Free Area: 12.7sq. inches (268.8 cm sq/lineal m) per lineal foot.
 - b. Color: Black
 - c. Dimensions: 7 inches (17.78 cm) wide by 4 feet (1.22 m) long by 5/8 inch (15.875 mm) high.
9. Ridge Vents: Quarrix Storm Stop
 - a. Net Free Area: 19 sq. inches (402.2 cm sq/lineal m) per lineal foot.
 - b. Color: Black
 - c. Dimensions: 11-1/4 inches (28.58 cm) wide by 4 feet (1.22 m) long by 1 inch (25.4 mm) high. 2-1/2 inch nails included.
10. Ridge Vents: Quarrix Storm Stop
 - a. Net Free Area: 19 sq. inches (402.2 cm sq/lineal m) per lineal foot.
 - b. Color: Black
 - c. Dimensions: 9 inches (22.86 cm) wide by 4 feet (1.22 m) long by 1 inch (25.4 mm) high. 2-1/2 inch nails included.

B. Off Ridge Vent: Quarrix Off Ridge intake and exhaust vent are, a corrosion- free, laminated high-density polyethylene corrugated plastic with a spun bound non-absorbent polypropylene membrane that

does not permit direct water or weather, dust, and insects from entry. Product backed by lifetime manufacturer's warranty and capable of being used on applications with pitches from 3/12 to 20/12.

1. Ridge Vents: Quarrix Off Ridge

- a. Net Free Area: 6.35sq. inches (134.4 cm sq/lineal m) per lineal foot.
- b. Color: Black
- c. Dimensions: 8-1/4 inches (20.96 cm) wide by 20 feet (6.1 m) long by 5/8 inch (15.875 mm) high.

C. Ridge Vent: Quarrix Attic Defense ridge vent is made of engineered nylon material prevents dust and debris from clogging the vent, and the fabric-free design ensures that airflow won't be cut off over time. The vent is compression resistant and helps keep rain, snow and insects from filtering through. The engineered nylon material is non-wicking and will not degrade or corrode from long-term exposure to the elements. Product backed by limited lifetime manufacturer's warranty and capable of being used on applications with pitches from 3/12 to 20/12.

1. Ridge Vents: Quarrix Attic Defense

- a. Net Free Area: 19 sq. inches (402.2 cm sq/lineal m) per lineal foot.
- b. Color: Black
- c. Dimensions: 11 inches (27.94 cm) wide by 20 feet long (6.1 m) by 7/8 inch (22.2 m) high. 1-3/4 inch nails included.

2. Ridge Vents: Quarrix Attic Defense

- a. Net Free Area: 19 sq. inches (402.2 cm sq/lineal m) per lineal foot.
- b. Color: Black
- c. Dimensions: 11 inches (27.94 cm) wide by 50 feet (15.24 m) long by 7/8 inch (22.2 m) high.

C. ContinU Flow Soffit Vent: Quarrix ContinU Flow Soffit Vent Strip manufactured of corrosion-free, laminated high density polyethylene corrugated plastic. Layers of corrugated plastic must be stapled. Product backed by a lifetime manufacturer's warranty.

1. Soffit Vents: Quarrix ContinU Flow Soffit Ventilation

- a. Net Free Area: 9-1/2 square inches per lineal foot.
- b. Color: Black or White
- c. Dimensions: 1-1/2 inch (37 mm) wide by 4 feet (1219 mm) long by 1 inch (25 mm) high.

2.3 TILE ROOF ACCESSORIES

A. Dry Roof Roof Battens: Quarrix Dry Roof Roof Battens, manufactured of corrosion-free, laminated high-density polyethylene corrugated plastic. Layers of corrugated plastic must be glued, not stapled.

1. Roof Battens: Quarrix Dry Roof Roof Battens.

- a. Color: Black.
- b. Dimensions: 1-1/2 inches (38 mm) wide by 8 feet (2438 mm) long by 3/4 inch (15.875 mm) high.

B. Quarrix Universal Tile Ridge Vent: Combines tile ventilation and expandable weather blocking with an aluminum closure system to attach to tile with a peel-off butyl adhesive.

1. Color / Width:

- a. Black / 15-3/4 inch wide by 16 feet long (400 mm by 4.87 m)
- b. Terra Cotta / 15-3/4 inch wide by 16 feet long (400 mm by 4.87 m)
- c. Venetian Red / 15-3/4 inches wide by 16 feet long (400 mm by 4.87 m)

- d. Brown / 15-3/4 inches wide by 16 feet long (400 mm by 4.87 m)

C. Quarrix Universal Tile Flashing: Fully adhered, expandable aluminum flashing with a width of 11-3/4 inches, can be used as a primary flashing and counter flashing, in combination with bent metal flashings, or as a weather block wherever mortar would be required.

- 1. Color:
 - a. Black / 11-3/4 inches wide by 16 feet long (298 mm by 4.87 m)
 - b. Terra Cotta / 11-3/4 inch wide by 16 feet long (298 mm by 4.87 m)
 - c. Venetian Red / 11-3/4 inches wide by 16 feet long (298 mm by 4.87 m)
 - d. Brown / 11-3/4 inches wide by 16 feet long (298 mm by 4.87 m)

2.4 Pipe Flashing

A. Pro Boot Pipe Boot: Quarrix Pro Boot Pipe Boot, all steel construction with TightLOCK top grips the pipe and forms a weather tight seal. Telescoping sleeve allows for varying pipe heights, roof expansion and works to combat frost in cold climates. Adjustable base with pinch and push corners. For use with shingled roofing with slopes of 3/12 to 14/12. Product backed by a lifetime manufacturer's warranty.

- 1. Pro Boot Pipe Boot, 1-1/2-inch (38 mm) Standard adjusts from 3/12 to 8/12 pitch.
 - a. Color:
 - 1. Mill Finish
 - 2. Weathered Wood
 - 3. Black
 - 4. Dark Brown
- 2. Pro Boot Pipe Boot, 2-inch (51 mm) Standard adjusts from 3/12 to 8/12 pitch.
 - a. Color:
 - 1. Mill Finish
 - 2. Weathered Wood
 - 3. Black
 - 4. Dark Brown
- 3. Pro Boot Pipe Boot, 3-inch (76 mm) Standard adjusts from 3/12 to 8/12 pitch.
 - a. Color:
 - 1. Mill Finish
 - 2. Weathered Wood
 - 3. Black
 - 4. Dark Brown
- 4. Pro Boot Pipe Boot, 4-inch (102 mm) Standard adjusts from 3/12 to 8/12 pitch.
 - a. Color:
 - 1. Mill Finish
 - 2. Weathered Wood
 - 3. Black
 - 4. Dark Brown
- 5. Pro Boot Pipe Boot, 1-1/2-inch (38 mm) High Pitch adjusts from 8/12 to 14/12 pitch.
 - a. Color:
 - 1. Mill Finish
 - 2. Weathered Wood
 - 3. Black
 - 4. Dark Brown
- 6. Pro Boot Pipe Boot, 2-inch (51 mm) High Pitch adjusts from 8/12 to 14/12 pitch.
 - a. Color:
 - 1. Mill Finish
 - 2. Weathered Wood
 - 3. Black
 - 4. Dark Brown
- 7. Pro Boot Pipe Boot, 3-inch (76 mm) High Pitch adjusts from 8/12 to 14/12 pitch.

- a. Color:
 - 1. Mill Finish
 - 2. Weathered Wood
 - 3. Black
 - 4. Dark Brown
8. Pro Boot Pipe Boot, 4-inch (102 mm) High Pitch adjusts from 8/12 to 14/12 pitch.
- a. Color:
 - 1. Mill Finish
 - 2. Weathered Wood
 - 3. Black
 - 4. Dark Brown

2.5 Roof Patch

- A. Smart Plug Roof Patch: Quarrix Smart Plug, heavy duty with a reinforced backside that can hold more than 700 lbs. Fits standard sized holes left by box, slant-back and turbine vents.
- 1. Construction: 24-gauge Galvanized Steel and 7/16 inch OSB Sheeting.
 - 2. Size:
 - a. Patch Size 8 inches by 8 inches (203 mm by 203 mm), O.D. 12 inches by 12 inches (30.48 cm by 30.48 cm)
 - b. Patch Size 12 inches by 12 inches (305 mm by 305 mm), O.D. 16 inches by 16 inches (40.64 by 40.64 cm)

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until roof opening and substrates have been properly prepared
- B. Verify deck surfaces are correctly framed, dry free of ridges, warps, or voids.
- C. If openings and substrate preparation is the responsibility of another installer, notify Architect

3.2 INSTALLATION

- A. General: Install in accordance with manufacturer's printed instructions
- B. Ridge Vent: Quarrix Storm Stop ridge vents.
 - 1. Place vent over the entire length of the ridge vent opening. Butt separate pieces tightly together.
 - 2. Install end caps at both ends of the ridge vent.
 - Secure cap shingles and vents at the same time by nailing ridge caps with roofing nails in a common overlapping pattern. Nails should penetrate the wood deck a minimum of 3/4 inch (19 mm). Position ridge vent to maintain the pitch of the roof before nailing.
- A. Hip Vents: Install Quarrix Storm Stop ridge vents as needed to provide adequate ventilation. To maintain a structural roof and balanced ventilation system stagger the ventilation slot and only vent on the upper 1/3 of the hip..
 - 1. Cut an 18 inches (457 mm) long, 2 inches (50 mm) wide slot, 6 inches (152 mm) from point where hip and ridge meet. Space 18 inch (457 mm) slots with 12 inch (305 mm) uncut widths between each. 18 inch slots should only be cut in the upper 1/3 of the roof.
 - 2. Lay a bead of sealant on each side of the pre-cut slots approximately 1 inch (25 mm) from the edges.
 - 3. Place vent over entire length.
 - 4. Butt multiple lengths tightly and put end cap at end of each section.

5. Secure cap shingles and vents at the same time by nailing ridge caps with roofing nails in a common overlapping pattern. Nails should penetrate the wood deck a minimum of 3/4 inch (19 mm). Position ridge vent to maintain the pitch of the roof before nailing.

B. Off Peak Vent: Install as needed to provide adequate ventilation.

1. Vent Preparation: Use Off Ridge intake and exhaust vent, or modify Storm Stop ridge vent by peeling the membrane from bottom of 3 inch (76 mm) corrugated air return along the one side of vent. Cut off 3 inch (76 mm) corrugated air return attached to membrane.

2. Slot Preparation: Cut horizontal 3/4 inch (19 mm) slot in the deck for desired ventilation. Leave a minimum of 6 inches (152 mm) uncut on each end of slot. Install felt underlayment per manufacturer's instructions on the deck past cut slot. Trim felt from slot opening. Caulk edges of felt. Install roof shingles per manufacturer's installation instructions, past slot. Caulk the top edge of shingles. Trim shingles from slot opening.

3. Vent Placement: Use Off Ridge intake and exhaust vent (or modified Storm Stop ridge vent) along the slot opening with the 3 inch (76 mm) corrugated air return 1 inch (25 mm) below the ventilation slot. Tack down the lead edge of the roll through the 3 inch (76 mm) air return. Tack the middle and the other end through air return. Pull membrane tight and caulk, 4-1/2 inches (114 mm) up the deck from slot between the roof deck and the membrane, for the entire length of slot. Nail through modified plastic cap and membrane into the deck. Install foam end caps.

- a. Caulk the front edge of Storm Stop ridge vent and on top and behind vent. Install felt underlayment on top of Storm Stop ridge vent a minimum of 15 inches (381 mm). Lap felt from the vent to ridge. Caulk front edge of felt underlayment.
- b. Cut tabs from shingles. Nail starter course of shingles per manufacturer's installation instructions. Caulk front edge of starter course.
- c. Install a minimum of one course of shingles, lapped on top of starter course, over vent. Nails should penetrate wood deck a minimum of 3/4 inch (19 mm). Install remaining shingles per manufacturer's installation instructions.

C. Shed or Clerestory Vents: Install shed or clerestory vents as needed to provide adequate ventilation.

1. Vent Preparation: Use Off Ridge Intake and Exhaust vent, or modify Storm Stop ridge vent by peeling membrane from bottom of 3 inch (76 mm) corrugated air return along the one side of vent. Cut off 3 inch (76 mm) corrugated air return attached to membrane.

2. Slot Preparation: Cut horizontal 1 inch (25 mm) slot in deck before the wall, where ventilation is needed. Leave a minimum of 6 inches (152 mm) uncut on each end of slot. Install felt underlayment per manufacturer's instructions on the deck past cut slot. Trim felt from slot opening. Caulk edges of felt. Install roof shingles per manufacturer's installation instructions, past slot.

3. Vent Placement: Place the vents along the slot opening with the 3 inch (76 mm) corrugated air return 1 inch (25 mm) below the ventilation slot, also covering the 6 inch (152 mm) minimum uncut on both ends. Products with membrane must have an end cap inserted at the end of each section. Apply sealant to the roof shingles, before installing the vent filling any voids between the bottom of the vent and the surface of the shingle. Use high-density polyethylene (HDPE)-compatible sealants that conform to ASTM C920.

4. End Cap, Vent and Flashing Installation: Pull apart a precut section of the foam end cap found with the vent. Trim enclosed end caps to fit at each end of the vent. Using a utility knife, make a cut in the membrane material 1/2 inch (12.5 mm) on the side with the air return, back from the end of the section. Using construction adhesive or sealant, coat both sides of the membrane where it has been cut back at the end of the vent. Insert the foam end cap with the cut back material between the foam end cap and the underside of the vent to assure a weather tight seal. Install foam end caps at the end of roof and where Quarrix ridge vents are joined together.

5. Nail lead edge of vent through the 3 inch (76 mm) air return and end cap. Nail the middle and the other end of vent through the 3 inch (76 mm) air return. Pull membrane is tight up against wall and caulk, 4-1/2 inches (114 mm) up the wall from slot. Secure lead edge of ridge vent at lead edge and insert end cap. Pull vent tight and secure at about 10 feet (3.05 m). Pull the rest of the vent tight and secure,

inserting the end cap. Multiple lengths of vent can be joined by butting the sections tightly together. Finish nailing the vent along the roof deck and along the wall. Nails should penetrate the wood deck and siding at least 3/4 inch (19 mm). Nail every 6 inches (152 mm).

6. Install metal flashing on top of the Quarrix ridge vent, it is important that the vent is protected from UV exposure. See detail Flashing Details for dimensions of Metal Flashing.

7. Siding Installation: Install siding over the vent piece on wall. When finished siding should cover the wall and overlap the metal flashing over the vent.

D. Quarrix Attic Defense Ridge Vent:

1. Cut a 2" Slot (50.8 mm). Cut a 1" (25.4 mm) slot on each side of the ridge. Length of slot should be determined by the amount of required ventilation. A minimum of 12" must be left uncut on each end of the ridge.
2. Cut End Caps. End caps will need to be installed where the ridge vent runs into a rake edge. Cut a 2" x 4" end cap from the thick portion of the vent (not the flat center or flat outer edges) and place in the center of the vent so that any exposed openings on the rake edge are closed off.
3. Roll out Quarrix Attic Defense ridge vent along entire ridge. Multiple lengths may be butted together. Nail both ends of vent, nails must penetrate sheathing 3/4". If using nail gun, adjust the air pressure so the ridge vent is not over-compressed
4. Nail Ridge Caps directly over the ridge vent, using a coil nail gun or hand nail. Nails must penetrate sheathing 3/4".

A. Quarrix ContinU Flow Soffit Vents:

1. Install continuous vents along full length of soffit unless otherwise noted. Install in accordance with manufacturer's printed instructions

3.3 TILE ROOF ACCESSORIES

A. Dry Roof Roof Battens:

1. Install ridge batten with top edge approximately 1 inch (25 mm) from ridge nailers or vent.
2. Strike horizontal line for top edge of first batten 15 inches (381 mm) up roof slope, and parallel to, eave edge.
3. Strike intermediate horizontal lines between line for top edge of first batten and top edge of ridge batten; space lines equally, at maximum spacing of 13- 1/2 inches (343 mm).
4. Install battens with top edges aligned with struck lines; nail or screw battens to roof deck 10 inches (254 mm) on center, maximum using 5 penny non- corrosive nails or screws long enough to penetrate 3/4 inch (19 mm) sheathing.

B. Quarrix Universal Tile Ridge Vent:

1. Install in accordance with manufacturer's printed instructions.

A. Quarrix Universal Tile Flashing:

1. Install in accordance with manufacturer's printed instructions.

3.4 PIPE FLASHINGS

A. Pro Boot Pipe Boot Re-Roofing:

1. Preparation: Remove up to three courses of shingles above the existing pipe flashing to ensure that the back flange is covered by the shingles. Remove existing pipe flashing and remove any old roof cement. Apply roofing cement around the pipe and underlayment, as it penetrates the roof to create a weather seal. If necessary, install new shingles up to the pipe penetration and notch shingles around the plumbing pipe.

2. Pipe Boot Preparation: On painted pipe boots, remove the protective plastic layer. Place new pipe boot next to plumbing pipe and visually check pitch alignment. If pitch adjustment is needed, pinch

front corners to increase the pitch or push down on the front of the pipe boot to decrease the pitch. Plumbing pipe should extend enough (2 to 3 inches) above the base sleeve to allow for roof expansion and contraction.

3. Boot Placement: Apply a bead of a polyurethane sealant on the rim of the plumbing pipe. Place the Pipe Boot over the plumbing pipe seating the TightLOCK Top on to the pipe. Turn the top clockwise 1/8" so that the TightLOCK Top is secured. Nail the base to the roof using the embossed guides. Install two nails into flange on the back of the base.

4. Finishing: Continue installing shingles, lap the shingles over the side and back flanges (notch as required). Apply a bead of sealant to the exposed nail heads on the base.

B. Pro Boot Pipe Boot New Roofing:

1. Boot Placement: Apply a bead of a polyurethane sealant on the rim of the plumbing pipe. Place the Pipe Boot over the plumbing pipe seating the TightLOCK Top on to the pipe. Turn the top clockwise 1/8" so that the TightLOCK Top is secured. Nail the base to the roof using the embossed guides. Install two nails into flange on the back of the base.

2. Finishing: Continue installing shingles, lap the shingles over the side and back flanges (notch as required). Apply a bead of sealant to the exposed nail heads on the base.

C. Roof Patch: Quarrix Smart Plug.

1. Preparation: Remove vent to patch size openings required for patch size specified.

2. Placement: Place the plug over the opening with edges overlapping the sheathing.

3. Finishing: Nail perimeter of the Smart Plug to sheathing.

3.5 PROTECTION

D. Protect installed products until completion of project.

E. Repair or replace damaged products before Substantial Completion.

END OF SECTION