SECTION 07720

ROOFING ACCESSORIES

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\*\* NOTE TO SPECIFIER \*\* Quarrix Building Products; specialty roofing products.
This section is based on the products of Quarrix Building Products, which is located at:5600 Hwy. 169 N.New Hope, MN 54428Toll Free Tel: 800-438-2920Tel: 763-540-9700Fax: 763-540-9709Email: [request info (marketing@quarrix.com)](https://arcat.com/rfi?action=email&company=Quarrix%252BBuilding%252BProducts&message=RE%253A%2520Spec%2520Question%2520(07720qrx)%253A%2520&coid=48632&spec=07720qrx&rep=&fax=763-540-9709)
Web: <https://www.quarrix.com>

 [ [Click Here](https://arcat.com/company/quarrix-building-products-48632) ] for additional information.

Quarrix Building Products is a part of the Liberty Diversified International (LDI) family of companies and a brand within the Liberty Plastics, Inc. business unit. LDI founded Liberty Plastics, Inc. in 1985 and, with LDI's support and passion for innovation, developed several patented designs that lead to advanced building materials and breakthroughs within the roofing industry. Quarrix quickly emerged as a leader in the specialty roofing products industry.
Fast forward to today, Quarrix is uncompromising in its commitment to quality and purpose to provide protective solutions for attics, roofs, and walls. Entrusted by millions to keep their homes beautiful and healthy, inside and out, we strive for product excellence. Values-driven and customer-focused, we care for and treat our customers as though they're family. We strive to act our LDI values of Caring, Innovation, Trust and Excellence in everything we do.
Quarrix Building Products is headquartered in Minneapolis, Minnesota, with manufacturing facilities and suppliers throughout the USA.

1. GENERAL
	1. SECTION INCLUDES
		1. Roof Vents:
			1. Storm stop ridge vents.
			2. Off ridge intake and exhaust vents.
			3. Attic defense ridge vent.
			4. ContinU flow soffit vent.
		2. Tile Roof Accessories:
			1. Dry roof roof batten.
			2. Universal tile ridge vent.
			3. Universal tile flashing.
		3. Pipe Flashings: ProBoot pipe flashing.
		4. Roof Patch: Smart Plug Roof Patch.
	2. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 06100 - Rough Carpentry.
		2. Section 07310 - Asphalt Shingles.
		3. Section 07222 - Roof Board Insulation.
		4. Section 07322 - Clay Roof Tiles.
		5. Section 07410 - Metal Wall Panels
		6. Section 07600 - Flashing and Sheet Metal.
		7. Section 07610 - Sheet Metal Roofing.
		8. Section 07713 - Manufactured Copings.
		9. Section 07720 - Roof Accessories.
	1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. International Chamber of Commerce Evaluation Service (ICC-ES):
			1. ICC-ES Report ESR-2664 August 1, 2017.
		2. Miami-Dade County, Florida:
			1. NOA No. 17-0530.08, Expiration Date: 10/31/22.
		3. Florida Building Code 2014:
			1. Certificate of Product Approval # is #FL 16096.
		4. Texas Department of Insurance (TDI):
			1. TDI RV-21 - Roof Vent Product Evaluation.
		5. American National Standards Institute (ANSI):
			1. ANSI/UL 790 - Tests for Fire Resistance of Roof Covering Materials.
		6. National Roofing Contractors of America (NRCA):
			1. NRCA - Steep Roofing Manual.
		7. Underwriters Laboratories (UL):
	1. SUBMITTALS
		1. Submit under provisions of Section 01300.
		2. Product Data:
			1. Manufacturer's data sheets on each product to be used.
			2. Preparation instructions and recommendations.
			3. Storage and handling requirements and recommendations.
			4. Typical installation methods.

\*\* NOTE TO SPECIFIER \*\* Delete if not applicable to product type.

* + 1. Verification Samples: Two representative units of each type, size, pattern, and color.
		2. Shop Drawings: Include details of materials, construction, and finish. Include relationship with adjacent construction.
		3. Manufacturer's Certificates: Certify products meet or exceed specified requirements.
	1. QUALITY ASSURANCE
		1. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with a minimum five years documented experience.
		2. Installer Qualifications: Company specializing in performing Work of this section with minimum two years documented experience with projects of similar scope and complexity.
		3. Source Limitations: Provide each type of product from a single manufacturing source to ensure uniformity.

\*\* NOTE TO SPECIFIER \*\* Include mock-up if the project size or quality warrant the expense. The following is one example of how a mock-up on might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

* + 1. Mock-Up: Construct a mock-up with actual materials in sufficient time for Architect's review and to not delay construction progress. Locate mock-up as acceptable to Architect and provide temporary foundations and support.
			1. Intent of mock-up is to demonstrate quality of workmanship and visual appearance.
			2. If mock-up is not acceptable, rebuild mock-up until satisfactory results are achieved.
			3. Retain mock-up during construction as a standard for comparison with completed work.
			4. Do not alter or remove mock-up until work is completed or removal is authorized.
	1. PRE-INSTALLATION CONFERENCE
		1. Convene a conference approximately two weeks before scheduled commencement of the Work. Attendees shall include Architect, Contractor and trades involved. Agenda shall include schedule, responsibilities, critical path items and approvals.
	2. DELIVERY, STORAGE, AND HANDLING
		1. Store and handle in strict compliance with manufacturer's written instructions and recommendations.
			1. Store products in manufacturer's unopened packaging until ready for installation.
		2. Protect from damage due to weather, excessive temperature, and construction operations.
			1. Maintain dry storage area for products of this section until installation of products.
	3. PROJECT CONDITIONS
		1. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.
	4. WARRANTY
		1. Manufacturer's limited warranty unless indicated otherwise.
1. PRODUCTS
	1. MANUFACTURERS
		1. Acceptable Manufacturer: Quarrix Building Products, which is located at:5600 Hwy. 169 N.New Hope, MN 54428Toll Free Tel: 800-438-2920Tel: 763-540-9700Fax: 763-540-9709Email: [request info (marketing@quarrix.com)](https://arcat.com/rfi?action=email&company=Quarrix%252BBuilding%252BProducts&message=RE%253A%2520Spec%2520Question%2520(07720qrx)%253A%2520&coid=48632&spec=07720qrx&rep=&fax=763-540-9709);Web: <https://www.quarrix.com>

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
		2. Requests for substitutions will be considered in accordance with provisions of Section 01600.

\*\* NOTE TO SPECIFIER \*\* Delete article if not required. Or delete basis of design options not required.

* 1. ROOF VENTS
		1. Basis of Design: Quarrix StormStop Ridge Vents as manufactured by Quarrix Building Products.
			1. Corrosion-free, laminated high-density polyethylene corrugated plastic with a thin spun bound non-absorbent polypropylene membrane bonded to it. The membrane prevents direct water, weather, dust, and insects from entry.
				1. Color: Black.
				2. Layers of corrugated product must be z-folded and glued, not stapled.
				3. Capable of being used on applications with pitches from 3/12 to 20/12.
				4. Warranty: Lifetime manufacturer's warranty.
			2. Ridge Vents: Quarrix StormStop.
				1. Net Free Area: 12.7 sq inches per lineal foot (26882 sq mm per lineal m).
				2. Dimensions (WxLxH): 11-1/4 x 240 x 5/8 inches (296 x 6096 x 16 mm).

\*\* NOTE TO SPECIFIER \*\* Coil nails are optional. Delete if not required.

* + - * 1. Included: Coil nails.
			1. Ridge Vents: Quarrix StormStop:
				1. Net Free Area: 12.7 sq inches per lineal foot (26882 sq mm per lineal m).
				2. Dimensions (WxLxH): 9 x 240 x 5/8 inches (229 x 6096 x 16 mm).
			2. Ridge Vents: Quarrix StormStop:
				1. Net Free Area: 12.7 sq inches per lineal foot (26882 sq mm per lineal m).
				2. Dimensions (WxLxH): 7 x 240 x 5/8 inches (178 x 6096 x 16 mm).
			3. Ridge Vents: Quarrix StormStop:
				1. Net Free Area: 12.7 sq inches per lineal foot (26882 sq mm per lineal m).
				2. Dimensions (WxLxH): 11-1/4 x 48 x 5/8 inches (286 x 1219 x 16 mm).

\*\* NOTE TO SPECIFIER \*\* Coil nails are optional. Delete if not required.

* + - * 1. Included: Coil nails.
			1. Ridge Vents: Quarrix StormStop:
				1. Net Free Area: 12.7 sq inches per lineal foot (26882 sq mm per lineal m).
				2. Dimensions (WxLxH): 9 x 48 x 5/8 inches (229 x 1219 x 16 mm).
			2. Ridge Vents: Quarrix StormStop:
				1. Net Free Area: 12.7 sq inches per lineal foot (26882 sq mm per lineal m).
				2. Dimensions (WxLxH): 7 x 48 x 5/8 inches (178 x 1219 x 16 mm).
			3. Ridge Vents: Quarrix StormStop:
				1. Net Free Area: 19 sq inches per lineal foot (40217 sq mm per lineal m).
				2. Dimensions (WxLxH): 11-1/4 x 48 x 1 inch (286 x 1219 x 25 mm).
				3. Included: 2-1/2 inch nails.
			4. Ridge Vents: Quarrix StormStop:
				1. Net Free Area: 19 sq inches per lineal foot (40217 sq mm per lineal m).
				2. Dimensions (WxLxH): 9 x 48 x 1 inch (229 x 1219 x 25 mm).
				3. Included: 2-1/2 inch nails.
		1. Basis of Design: Quarrix OffRidge Intake and Exhaust Vents as manufactured by Quarrix Building Products.
			1. Corrosion-free, laminated high-density polyethylene corrugated plastic with a spun bound non-absorbent polypropylene membrane bonded to it. The membrane prevents direct water, weather, dust, and insects from entry.
				1. Capable of being used on applications with pitches from 3/12 to 20/12.
				2. Net Free Area: 6.35 sq inches per lineal foot (13441 sq mm per lineal m).
				3. Dimensions (WxLxH): 8-1/4 x 240 x 5/8 inches (210 x 6096 x 16 mm).
				4. Warranty: Lifetime manufacturer's warranty.
				5. Color: Black.
		2. Basis of Design: Quarrix AtticDefense Ridge Vent as manufactured by Quarrix Building Products.
			1. Engineered nylon material prevents dust and debris from clogging vent. The fabric-free design ensures airflow won't be cut off over time. Compression resistant. Helps keep rain, snow, and insects from filtering through.
				1. Engineered Nylon: Non-wicking. Will not degrade or corrode from long-term exposure to elements.
				2. Capable of being used on applications with pitches from 3/12 to 20/12.
				3. Warranty: Limited lifetime manufacturer's warranty.
				4. Color: Black.
			2. Ridge Vents: Quarrix Attic Defense.
				1. Net Free Area: 19 sq inches per lineal foot (40217 sq mm per lineal m).
				2. Dimensions (WxLxH): 11 x 240 x 7/8 inches (279 x 6096 x 22 mm).
				3. Included: 1-3/4 inch nails.
			3. Ridge Vents: Quarrix Attic Defense.
				1. Net Free Area: 19 sq inches per lineal foot (40217 sq mm per lineal m).
				2. Dimensions: 11 x 600 x 7/8 inches (279 x 15240 x 22 mm).
		3. Basis of Design: Quarrix ContinU Flow Soffit Vent Strip as manufactured by Quarrix Building Products.
			1. Corrosion-free, laminated high density polyethylene corrugated plastic.
				1. Layers of corrugated plastic must be stapled.
				2. Warranty: Lifetime manufacturer's warranty.
				3. Net Free Area: 9-1/2 sq inches per lineal foot (20108 sq mm per lineal m).
				4. Dimensions (WxLxH): 1-1/2 x 48 x 1 inch (38 x 1219 x 25 mm).

\*\* NOTE TO SPECIFIER \*\* Delete color option not required.

* + - * 1. Color: Black.
				2. Color: White.

\*\* NOTE TO SPECIFIER \*\* Delete article if not required or delete basis of design options not required.

* 1. TILE ROOF ACCESSORIES
		1. Basis of Design: Quarrix DryRoof Roof Battens as manufactured by Quarrix Building Products.
			1. Corrosion-free, laminated high-density polyethylene corrugated plastic.
				1. Layers of corrugated plastic must be glued, not stapled.
				2. Color: Black.
				3. Dimensions (WxLxH): 1-1/2 x 96 x 3/4 inches (38 x 2438 x 19 mm).
		2. Basis of Design: Quarrix Universal Tile Ridge Vent as manufactured by Quarrix Building Products.
			1. Combines tile ventilation and expandable weather blocking with an aluminum closure system to attach to tile with a peel-off butyl adhesive.
			2. Dimensions (WxL): 15-3/4 inch x 16 ft (400 mm x 4877 mm).

\*\* NOTE TO SPECIFIER \*\* Delete color options not required.

* + - 1. Color: Black.
			2. Color: Terra Cotta.
			3. Color: Venetian Red.
			4. Color: Brown.
		1. Basis of Design: Quarrix Universal Tile Flashing as manufactured by Quarrix Building Products.
			1. Fully adhered, expandable aluminum flashing. Can be used as primary flashing, counter flashing, in combination with bent metal flashings, or as a weather block wherever mortar would be required.
			2. Dimensions (WxL): 11-3/4 inch x 16 ft (298 mm x 4877 mm).

\*\* NOTE TO SPECIFIER \*\* Delete color options not required.

* + - 1. Color: Black.
			2. Color: Terra Cotta.
			3. Color: Venetian Red.
			4. Color: Brown.

\*\* NOTE TO SPECIFIER \*\* Delete article if not required.

* 1. PIPE FLASHING
		1. Basis of Design: Quarrix ProBoot Pipe Boot as manufactured by Quarrix Building Products.
			1. All steel construction. TightLOCK tops grip the pipe and forms a weather tight seal.
				1. Telescoping Sleeve: Allows for varying pipe heights, roof expansion and works to combat frost in cold climates.
				2. Adjustable Base with Pinch and Push Corners: For use with shingled roofing with slopes of 3/12 to 14/12.
				3. Warranty: Lifetime manufacturer's warranty.

\*\* NOTE TO SPECIFIER \*\* Delete color options not required.

* + - * 1. Color: Mill Finish.
				2. Color: Weathered Wood.
				3. Color: Black.
				4. Color: Dark Brown.

\*\* NOTE TO SPECIFIER \*\* Delete Pro Boot Pipe Boot options not required.

* + - 1. ProBoot Pipe Boot: 1-1/2 inch (38 mm) Standard adjusts from 3/12 to 8/12 pitch.
			2. ProBoot Pipe Boot: 2 inch (51 mm) Standard adjusts from 3/12 to 8/12 pitch.
			3. ProBoot Pipe Boot: 3 inch (76 mm) Standard adjusts from 3/12 to 8/12 pitch.
			4. ProBoot Pipe Boot: 4 inch (102 mm) Standard adjusts from 3/12 to 8/12 pitch.
			5. ProBoot Pipe Boot: 1-1/2 inch (38 mm) High Pitch adjusts from 8/12 to 14/12 pitch.
			6. ProBoot Pipe Boot: 2 inch (51 mm) High Pitch adjusts from 8/12 to 14/12 pitch.
			7. ProBoot Pipe Boot: 3 inch (76 mm) High Pitch adjusts from 8/12 to 14/12 pitch.
			8. ProBoot Pipe Boot: 4 inch (102 mm) High Pitch adjusts from 8/12 to 14/12 pitch.

\*\* NOTE TO SPECIFIER \*\* Delete article if not required.

* 1. ROOF PATCH
		1. Basis of Design: Quarrix SmartPlug Roof Patch as manufactured by Quarrix Building Products.
			1. Heavy duty with reinforced backside that can hold more than 700 lbs (318 kg).
			2. Fits standard sized holes left by box, slant-back and turbine vents.
			3. Construction: 24 ga galvanized steel and 7/16 inch (11 mm) OSB sheeting.

\*\* NOTE TO SPECIFIER \*\* Delete patch size option not required.

* + - 1. Patch Size: 8 x 8 inches (203 x 203 mm), OD: 12 x 12 inches (305 x 305 mm)
			2. Patch Size: 12 x 12 inches (305 x 305 mm), OD: 16 x 16 inches (406 x 406 mm)
1. EXECUTION
	1. EXAMINATION
		1. Do not begin installation until roof openings and substrates have been properly prepared.
		2. Verify deck surfaces are correctly framed, dry free of ridges, warps, or voids.
		3. If openings and substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
	2. PREPARATION
		1. Clean surfaces thoroughly prior to installation.
		2. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

\*\* NOTE TO SPECIFIER \*\* Delete article if not required or delete paragraphs not required.

* 1. INSTALLATION - VENTS
		1. General: Install in accordance with manufacturer's printed instructions.
		2. Ridge Vent: Quarrix StormStop 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.
			3. 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.
		3. Hip Vents: Install Quarrix StormStop 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 (457 mm) 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.
		4. Off Peak Vent: Install as needed to provide adequate ventilation.
			1. Vent Preparation: Use OffRidge 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 OffRidge 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.
				1. 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.
				2. Cut tabs from shingles. Nail starter course of shingles per manufacturer's installation instructions. Caulk front edge of starter course.
				3. 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.
		5. 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.
		6. Quarrix AtticDefense Ridge Vent:
			1. Cut a 2 inch slot (51 mm). Cut a 1 inch (25 mm) slot on each side of the ridge. Length of slot should be determined by the amount of required ventilation. A minimum of 12 inch (305 mm) 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 inch (51 x 102 mm) 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 inches (19 mm). 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 inches (19 mm).
		7. 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
	2. INSTALLATION - TILE ROOF ACCESSORIES
		1. DryRoof 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.
		2. Quarrix Universal Tile Ridge Vent:
			1. Install in accordance with manufacturer's printed instructions.
		3. Quarrix Universal Tile Flashing:
			1. Install in accordance with manufacturer's printed instructions.
	3. INSTALLATION - PIPE FLASHINGS
		1. ProBoot Pipe Flashing 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, (21 to 76 mm) 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 inch (3 mm) 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.
		2. ProBoot Pipe Flashing 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 inches (3 mm) 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.
		3. Roof Patch: Quarrix SmartPlug.
			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.
	4. CLEANING AND PROTECTION
		1. Clean products in accordance with the manufacturers recommendations.
		2. Protect installed products until completion of project.
		3. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION