

DIAMOND KOTE®

Building Products

APPLICATION GUIDE

IMPORTANT:

PLEASE READ BEFORE YOU BEGIN INSTALLATION. Before installing any projects with Diamond Kote Building Products, it is highly recommended the entire installation guide is reviewed.

Click on the chapter heading to go directly to a specific section.

INDEX:

02 PRIOR TO INSTALL

02 GENERAL GUIDELINES

03 INSULATED SHEATHINGS

03 MOISTURE

03 WEATHER-RESISTANT BARRIER

04 STUD SPACING

04 GAPS + SEALANTS

04 TOUCH-UP PAINT GUIDELINES

04-05 TRIM

06 FLASHING, WINDOWS, DOORS
& OPENINGS

07 WHERE TO FASTEN

07-08 ALTERNATIVE FASTENING

09-10 RIGIDMOUNT APPLICATION

11 PRO-POST WRAP

12 KICK-OUT & SPACER FLASHING

13 BRICK LEDGE FLASHING

14 TRADITIONAL LAP APPLICATION

15-16 RIGIDSTACK APPLICATION

17 RIGIDSHAKE | STRAIGHT EDGE
APPLICATION

18 RIGIDSHAKE | STAGGERED EDGE
APPLICATION

19 OCTAGON + SCALLOPS

20 OCTAGON APPLICATION

21 SCALLOP APPLICATION

22-23 OUTSIDE + INSIDE CORNER
APPLICATION

24-25 NAIL FIN TRIM APPLICATION

26 ARCH TRIM

26 ROSETTES

27-30 BOARD + BATTEN APPLICATION

31-32 VERTICAL SIDING APPLICATION

33-34 LAP INSTALLED VERTICALLY

34-36 FASCIA APPLICATION

36-38 SOFFIT APPLICATION

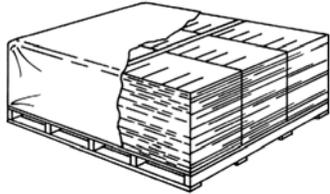
PRIOR TO INSTALLATION

- Inspect product for any issues before installing. (breakage, surface defects, foreign objects, color inconsistency or color correctness)
- Do not install questionable product.
- Report any problems you may have to your dealer BEFORE installing.

STORAGE

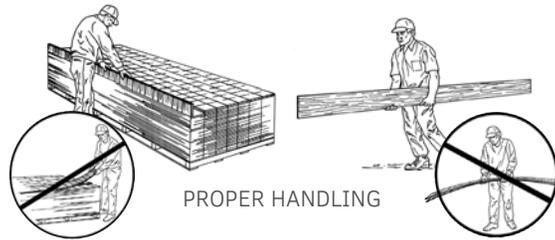
It is important to properly store all Diamond Kote® products for protection.

- Store siding flat on a dry, clean and well supported surface. Protect material from direct exposure to weather.
- Do not store directly on the ground.
- Diamond Kote® 4-Packs and 2-Packs are not waterproof. All products must be kept dry and covered at all times.



STORE UNDERCOVER

- Product may come in long, heavy sections, which requires proper handling.
- Carry shrinkwrapped bundles to desired location before opening to avoid damaging the painted surface.



PROPER HANDLING

- Don't carry in a flat position.
- Pick up product from the center to avoid marring the surface of items below.
- Only carry multiple pieces of siding: face-to-face or back-to-back.
- Do not slide pre-finished siding material across each other.
- Support the product when you cut large pieces.
- Sealed product could become saturated if not protected during storage.
- If the product becomes saturated, do not install until it dries out completely.

GENERAL GUIDELINES

****Note: DO NOT USE STAPLES.**

Minimum 6" clearance must be maintained between siding and finish grade.

- Siding applied adjacent to porches, patios, walks, roof lines, etc. must have a 1" clearance above any surface.
- 3/8" clearance should be left between siding and horizontal flashings.
- All exposed wood substrate must be primed and painted to prevent moisture intrusion and water buildup.

- Best practice for blind or exposed nailing is to use only 316 stainless steel nails within 15 miles of the seacoast. Beyond 15 miles, either 304 stainless steel or hot-dipped galvanized is acceptable.
- See Alternate Fastening Options for fastening lap siding to SIP, ICF and Steel Frame assemblies. (PG 10)
- Adequate drying time must be allowed prior to enclosing the wall cavity when using wet blown cellulose insulation.
- With wet blown cellulose insulation, the insulation must not be in direct contact with the siding and it will need time to dry, a minimum of 24 hours or longer if specified by the insulation manufacturer.
- Diamond Kote® Building Products should be cut in a manner to avoid marring the finished face.
- It is recommended to face the board up when using a combination blade power miter saw.
- Do NOT force or spring siding into place. Where siding butts window trim, door casing, masonry, etc., leave a 3/16" gap and caulk. **DO NOT caulk butt joints.**
- Seal all gaps with a paintable sealant that meets ASTM-C920 Specification, it is recommended to use DAP SpecLine 920.
- Use drip-cap flashing above all horizontal trim to ensure a weather-tight installation. 1" drip cap is available in all Diamond Kote colors.

INSULATED SHEATHINGS

Diamond Kote® Building Products may be installed over low-compression rigid foam or exterior gypsum sheathings.

The following precautions must be followed:

- Nailable structural sheathing must be behind the insulated sheathing.
- Make sure to brace the wall accordingly to the required international and other building codes.
- For rigid foam sheathing up to 1" thick, siding may be nailed directly to the foam sheathing unless a drainage plane is required by the local building code. Nail length must be increased to ensure a minimum 1-1/2" fastener penetration into the structural framing.

Note: Diamond Kote® Building Products may also be installed in compliance with category 8140-Exterior wall siding and sheathing for Wildland Urban Interface applications atop LP® FlameBlock® sheathing. Refer to FlameBlock® installation instructions and product data sheets.

All Diamond Kote® Building Products may be installed as exterior siding in Wildland Urban Interface applications. It can be installed over one layer 5/8" Type X gypsum sheathing applied behind the exterior covering or cladding on the exterior side of the framing. They may also be installed over the exterior portion of a 1-hour fire-resistive exterior wall that has been assembly designed for exterior fire exposure which also includes assemblies using the gypsum

panel and sheathing products listed in the Gypsum Association Fire Resistance Design Manual.

- For rigid foam sheathing that is greater than 1", a minimum 1-1/2" thick by 3-1/2" wide vertical strapping or furring strip must be installed over the sheathing to provide a solid, level nailing base for the siding. The strapping must be securely fastened to structural framing spaced no greater than 16" o.c. with a minimum fastener penetration of 1-1/2".
- Diamond Kote® Building Products will not assume any responsibility for conditions arising from the use of foam sheathing or damage.

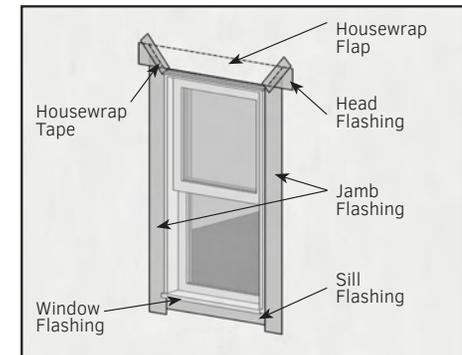
MOISTURE

- Moisture and vapor control are critical elements of proper housing design.
- Check local building codes for application procedures for handling moisture and moisture vapor in your area.
- Do not apply engineered wood siding to a structure having excessive moisture conditions such as drying concrete or plaster or wet blown cellulose insulation.
- If conditions exist, the building should be well ventilated to ensure the substrate is completely dry prior to siding.
- Siding must not be applied to any green or crooked structural framing members.
- Do not apply siding over rain-soaked or buckled sheathing materials.
- We recommend protection for your

home from rainfall with gutters and downspouts. Always be sure that your drainage system is free of debris and working properly.

WEATHER-RESISTANT BARRIER

- It is required to have a water-resistant, properly breathable barrier behind the siding.
- When integrating flashing with a water-resistive barrier (WRB), be sure to follow the WRB installation instructions.
- Diamond Kote® Building Products will not assume responsibility for water penetration.
- Consult local building codes for more details.



STUD AND SPACING

- Diamond Kote® Building Products must be applied over sheathed walls into studs spaced no greater than 16" on center.
- When installing over masonry walls, the wall must be furred out with wood framing spaced 16" on center and with a adequate thickness to accept the full length of the recommended nail.

GAPS AND SEALANTS

Note: DO NOT apply sealant to butt joints.

- Seal all gaps with a paintable sealant that meets ASTM C920 Specification.
- We recommend the DAP® Spec Line 920 Check out the application instructions for the manufactured sealant or view our [Proper Caulking Techniques Video](#).

TOUCH-UP PAINT GUIDELINES

Before starting, read all label instructions and warnings. Diamond Kote® touch-up paint is intended for use on Diamond Kote® pre-finished products only. We cannot guarantee the performance of Diamond Kote® touch-up paint on products not originally pre-finished with Diamond Kote®.

Only apply paint to bare area. DO NOT APPLY PAINT OVER PAINT. *Do not allow touch-up paint to freeze. Keep container from freezing.*

For Touch- Up Paint, please do the following:

- Paint all exposed cut edges of siding surfaces including drip edges.
- Apply a small amount of touch-up paint using the provided foam brush to seal all cut edges.
- Avoid getting touch-up paint on the face of the boards and try not to apply more paint than what is needed.
- Thoroughly paint all the bottom edges of siding especially the cut ends next to the roof line. Touch-up paint all exposed face nails.
- Cotton swabs are recommended for touch-up painting on the finished face of products.



- Follow the Diamond Kote® application/maintenance instructions and/or watch the **Diamond Kote Touch-Up Paint Best Practices Video**.

PAINT CARE

- Stir touch-up paint for ten minutes before use. Heavier pigments in the paint settle to the bottom requiring the paint to be thoroughly mixed before use and cleaned up with water after.

SURFACE PREP

- Surface must be clean and dry. Test the color on a sample piece or hidden area of the siding/trim before applying. **Do NOT fan out or try to blend the paint.**
- Allow 24 hours dry time. Touch up nail heads or small imperfections by using a cotton swab to dot the desired area.

TRIM

- Trim should be thick enough so the siding does not extend beyond the face of the trim.
- Trim and fascia are not designed for siding/structural applications. It should not be used as a structural member in construction (trellis, railing, fencing, decking, decking trim or sills.)
- Trim must be applied so it will not allow moisture intrusion or water buildup.
- LP® Lap and Panel siding is not designed and/or manufactured to be used as trim or fascia. LP® SmartSide® trim and fascia are available in a variety of dimensions.

CONTINUED ON NEXT PAGE

TRIM | FASTENER INFORMATION

- **Fastener length:** Long enough to fully penetrate structural framing or wood structural panels and structural framing a minimum of 1".
- **Fastener placement:** 3/8" from ends and edges, when framing support allows.
- **Fastener spacing:** Must be fastened with two nails at both ends, with additional fasteners spaced a maximum of 24 inches o.c. along the length of the board, or with additional fasteners spaced a max. of 12 inches o.c. along alternating edges the length of the board.
- **Fastener quantity:** For trim under 7 inches wide use a minimum of 2 nails per width. For trim 7 to 12 inches wide use a minimum of 3 nails per width. For trim over 12 inches wide use a minimum of 4 nails per width.
- Where edges of trim meet siding material, windows, etc., leave a min. 3/16 inch space to allow for proper sealing. Provide increased spacing along the trim if specified by the siding application instructions.

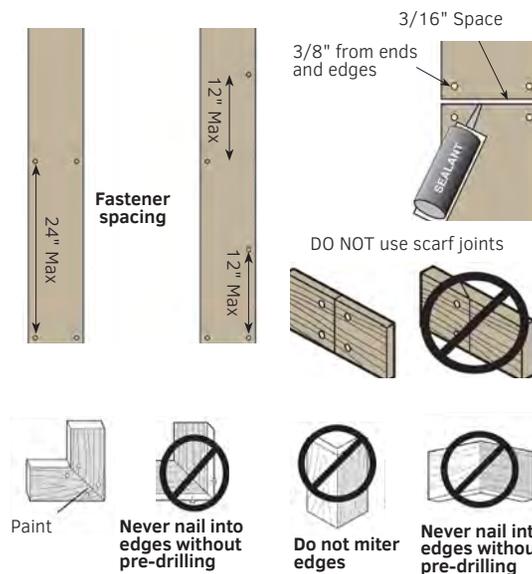
CUTTING

- A fine-tooth carbide tipped blade is recommended for the cleanest cut.
- Trim and fascia are manufactured with a special edge coating which reduces moisture-related issues.
- Don't rip and/or route the trim and fascia, as it will leave the edges unprotected.

- If the trim/fascia materials are ripped you must take special care to prime, paint and seal all exposed wood fiber as described in the finishing section.
- **Do not miter trim ends or edges.** 45 degree diagonal cuts of trim ends around door and window opening is acceptable, as well as joining. (See below)

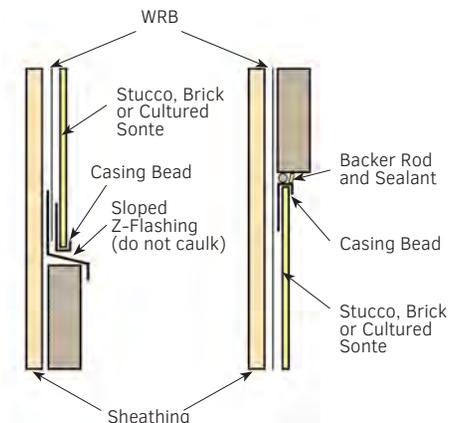
BUTT JOINTS FOR TRIM

- Ends and butt joints require a 3/16 inch space and seal with a high quality non-hardening paintable long-life sealant. Joints may lightly touch around windows and doors only.
- Butt joints require 4 nails with 2 nails on either side of the joint at each edge.



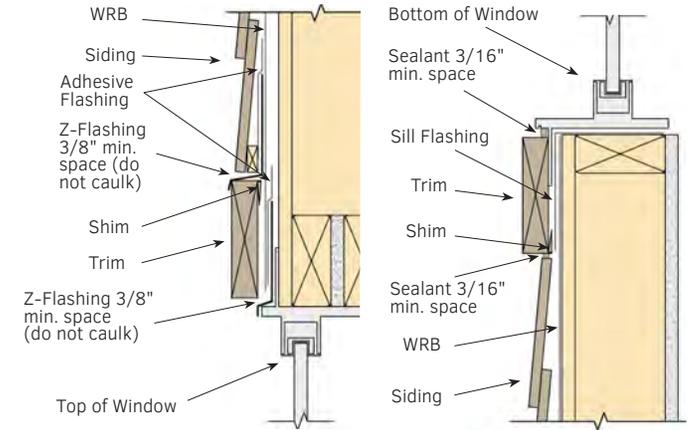
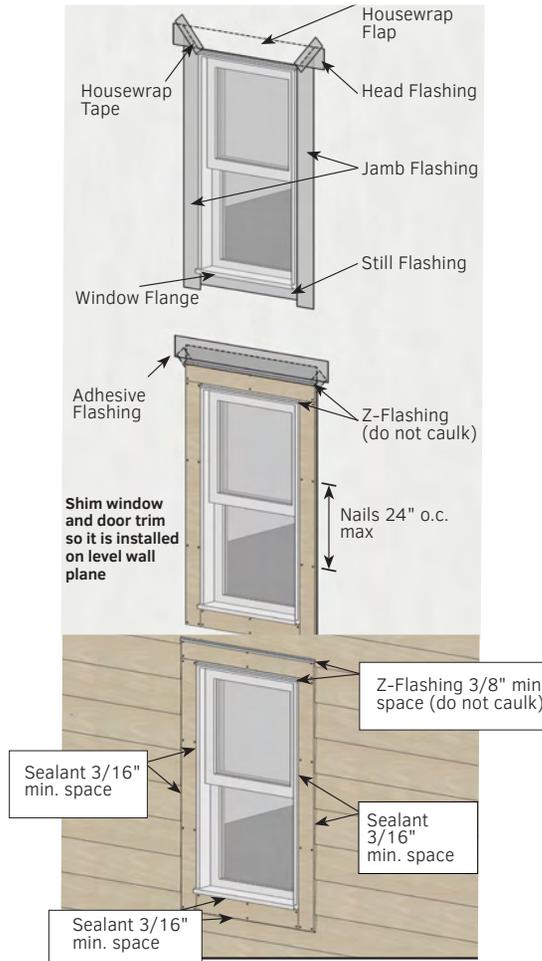
TRIM ADJOINING WITH OTHER MATERIALS

- Trim with Stucco, Brick or Cultured Stone: it is important to use a capillary break so moisture absorbed into the stucco, brick /cultured stone can not transfer into the trim. Avoid direct contact between the trim and stucco, brick or cultured stone.
- Separate with a min. 3/8-inch space and a high-quality sealant (backer rod may be required as per the sealant manufacturers instructions). Additional space may be required by the manufacturer of the stucco, brick or cultured stone cladding.
- Other types of material like aluminum flashing can be used to separate the trim from the stucco, brick or cultured stone but dissimilar materials should be properly spaced to allow for different rates of thermal or moisture movement.
- Apply sloped Z-flashing over horizontal trim so water can be redirected to the outer surface of the wall.



FLASHING FOR WINDOWS, DOORS + OPENINGS

- Trim ends may lightly touch adjacent trim edges around windows and doors only. Paint all cut ends.
- When installing trim around windows and over window flanges, be sure to follow the window manufacturer's installation instructions.
- All openings must be properly sealed and flashed in a manner that prevents moisture intrusion or buildup.
- Siding or trim applied adjacent to porches, patios, walks, etc. must have a clearance of at least 1" above any surface.
- Flashing may be sealed to the water-resistant barrier by using adhesive flashing or housewrap tape. (See ALL diagrams in middle column)
- The surface must be sloped or otherwise designed to provide proper drainage so the siding is at no time directly exposed to standing water.
- Horizontal trim or bands shall be flashed with a sloped metal Z-flashing to redirect water away from the wall assembly.



WHERE TO FASTEN - SIDING

- Fasteners will be exposed on the siding located immediately below window sills, fascia boards, and horizontal trim.
- Fasteners below window sill shall be spaced a maximum of 8" on center.
- Face nailing may be required as necessary in order to obtain satisfactory installations. Blind fasten 3/4" down from the TOP edge.
- For installation with or without wood structural panels, joints must occur over stud locations.
- Best practice for blind or exposed nailing is to use only 316 stainless steel nails within 15 miles of the seacoast. Beyond 15 miles, either 304 stainless steel or hot dipped galvanized is acceptable.
- Nail at all special framing members around openings.

Note: Nails MUST penetrate framing members when available at least 1-1/2".

Nail from the center of the siding toward the ends, or from one end to the other end. NEVER nail from the ends of the siding toward the middle.

- Shim siding at studs as needed, to avoid drawing siding against uneven walls.
- When installing siding over up to 1" rigid foam sheathing be careful not to drive fasteners so hard as to compress the foam and distort surface of the siding.

Note: DO NOT OVERDRIVE FASTENERS. Head should seat firmly to face of siding, but not be overdriven to distort the siding surface.

For info on fastening any of the decorative shape products in high wind speed areas, please refer to ICC-ES Report ESR-1301.

- The transverse windload design values in table 4 of the APA Product Report PR-N124 may be used when the following fasteners specifications are met.

CONDITION	CORRECTION
 Snug	 OK
 Flush	 OK
 Visible fiber	 Paint
 Countersunk 1/16 - 1/8"	 Apply sealant
 Countersunk more than 1/8"	 Apply sealant & re-nail

ALTERNATIVE FASTENING OPTION: FOR WOOD STRUCTURAL PANELS + 24" O.C. STUD SPACING OR SIP ASSEMBLIES

The sheathing must be a min. 7/16 inch thickness with APA rating. The Engineered Wood Association™ contains the consensus standard DOC PS2.

Note: Must be fastened with either corrosion resistant screws or corrosion resistant ring shank nails.

- Minimum 6d (0.091 inch shank diameter) hot-dip galvanized ring shank nail with a 0.200 inch diameter head, spaced a maximum of 8 in. O.C.

ALTERNATIVE FASTENING OPTION: OVER I.C.F ASSEMBLIES

- Minimum #8 hot-dip galvanized tapered head self-drilling screw with a 0.270" diameter head.
- Minimum penetration of 3/8" beyond the thickness of the nailing flange.

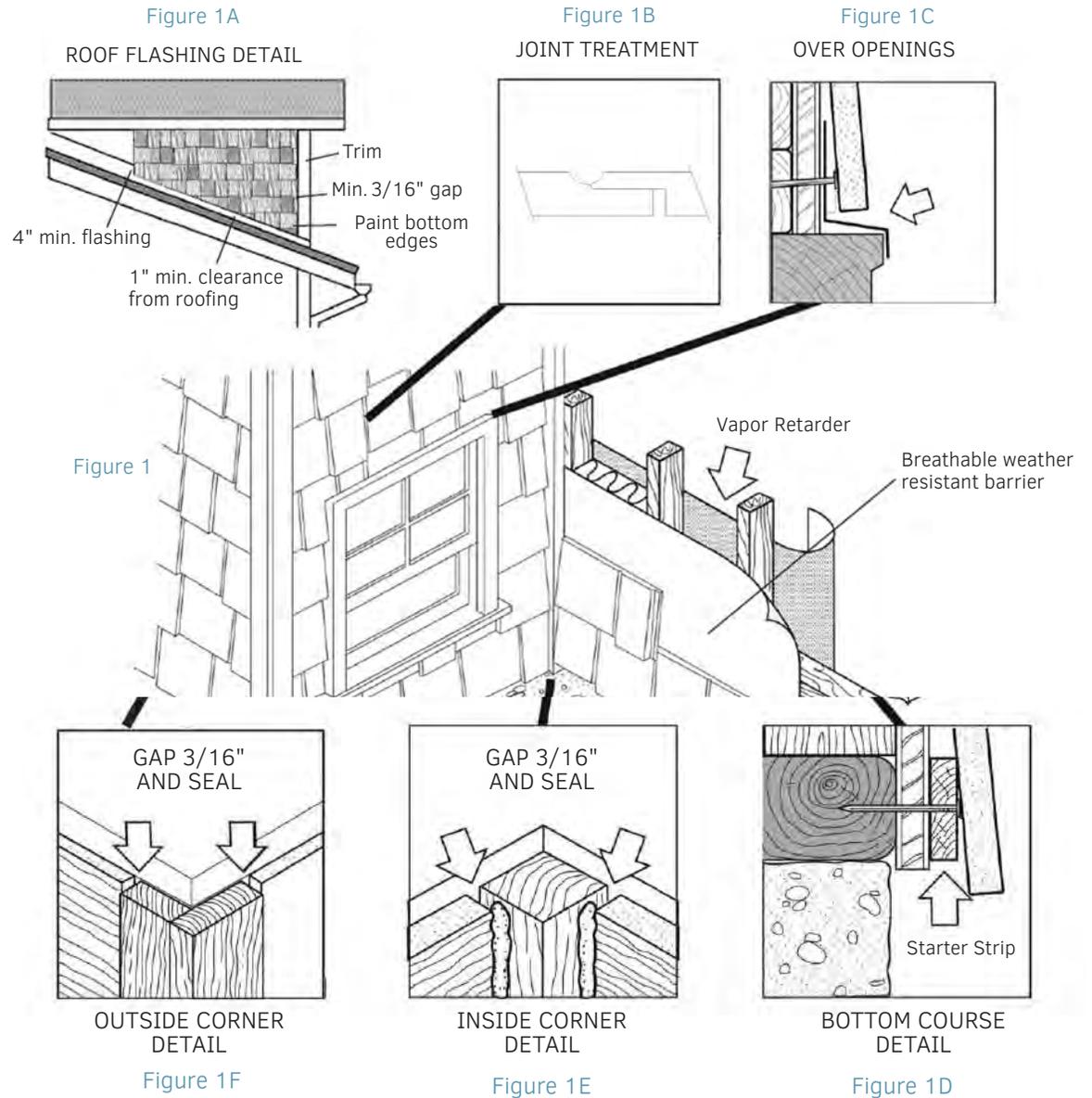
Note: Larger screws may be required by the I.C.F. Manufacturer based on the following minimum withdrawal requirements.

- Keep a minimum withdrawal value of I.C.F. nailing flange must be 50 lbs. with a maximum 12" o.c. screw spacing.
- Keep a minimum withdrawal value of I.C.F. nailing flange must be 31 lbs. with a maximum 6" o.c. screw spacing.

**ALTERNATIVE FASTENING OPTION:
OPTIONS OVER CORROSION
RESISTANT STEEL STUD FRAMING**

Keep a minimum withdrawal value of steel framing must be 50 lbs.

- Refer to the framing manufacturer's evaluation report.
- 38 Series Precision lap must be fastened with the following:
 - Steel stud spacing a maximum spacing of 16" on center
 - Minimum #8 hot-dipped galvanized tapered head self-drilling screw with 0.270" diameter head.
 - Keep a min. of 5 threads beyond the combined thickness of the siding and framing.
 - Minimum steel framing thickness 0.032"/ 20 gauge.

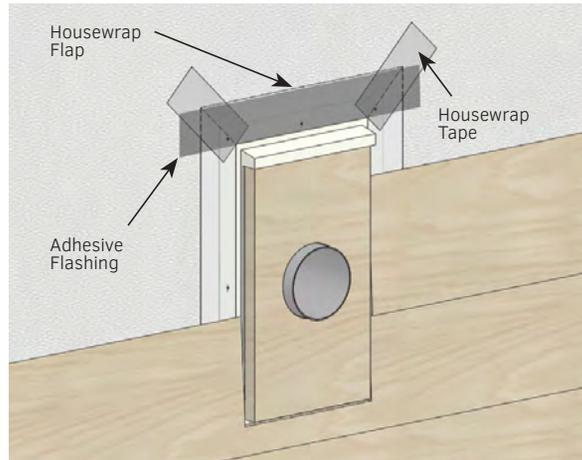


RIGIDMOUNT™

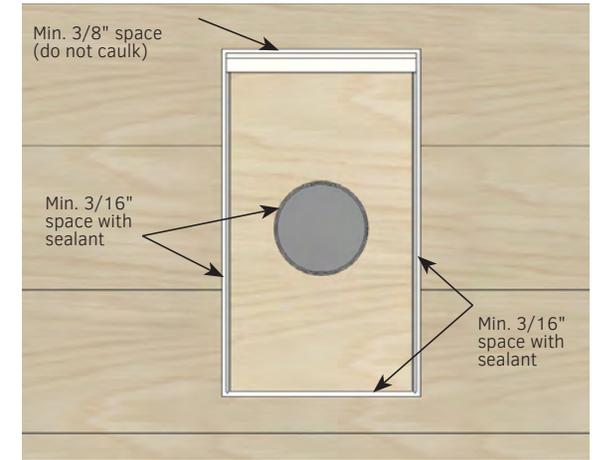
Ensure the penetration is sealed and/or flashed properly by integrating it into the weather-resistive barrier. RigidMount™ trim should extend beyond the face of the siding. [Watch our RigidMount™ Installation Video.](#)

APPLICATION

- Start by preparing for the application needed. Some cutting maybe necessary for fitment of your specific situation.
- Cuts should always be re-sealed with touch up paint.
- A jigsaw works best for cutting, be sure to cut from the back to keep the finished surface intact.
- Set the mount into position and mark the weather resistive barrier by using the nail holes (about 1/2" above the built in flashing) and the outside edges of the flange.
- Remove the mount and slit the weather resistive barrier horizontally (slightly wider than the top flange across those marks) creating a flap in the weather resistive barrier.
- Next install the RigidMount™ by slipping the top of the nailing flange under the weather resistive barrier flap.
- Set the mount at the correct elevation, level and then fasten the RigidMount™ to the wall filling every hole in nail flange.
- Hand driven galvanized roofing nails are recommended for fastening, such as 1-3/4" Maze STORMGUARD®.



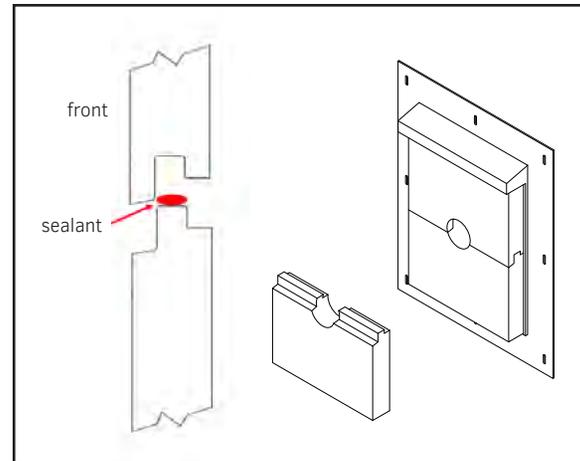
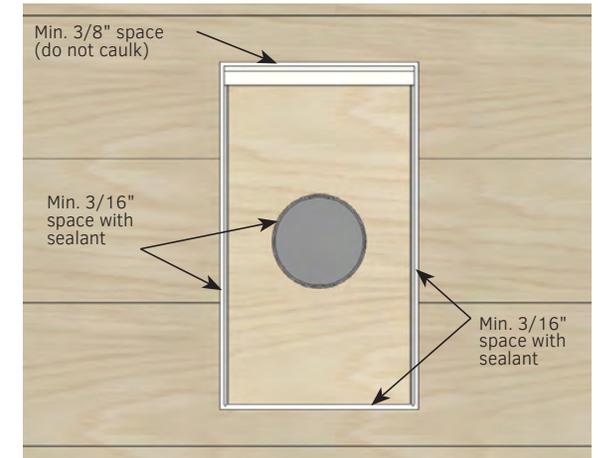
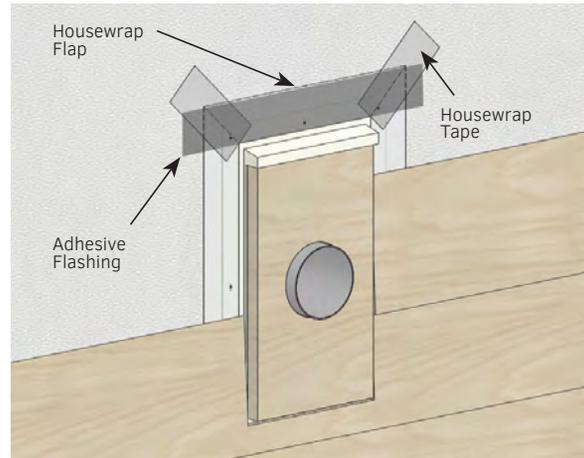
- Place the adhesive flashing tape over the top of the RigidMount™ flange making sure to cover nailing holes.
- Fold the flap down and seal the slit in the weather resistive barrier with compatible building tape.
- This single fashion installation helps shed bulk water out and away from the structure.
- Install siding around the mount and leave the proper spacing between the RigidMount placement flange and the siding. (Min. 3/16")
- Note that the top course of siding should be cut 3/8" above the built in flashing as measured from the face of the siding.
- Make sure to seal cut edges of siding with provided touch-up paint. This area should be left uncaulked.
- Finish by applying sealant, starting approximately 3/4" in from the top corner and then working your way out,



- down the side, and across the bottom.
- Also seal the space between the wall penetrating material and the RigidMount™ cut out.
- DAP® Spec Line 920 sealant which meets ASTM-C920 Specification is recommended.

RIGIDMOUNT™ SPLIT BLOCK

- After preparing the RigidMount™ Split Block as detailed above, remove the loose lower half of the mount (set this aside until later).
- Feed the pipe or other application through the rectangular flange hole.
- For remodel applications it may be necessary to cut the bottom of the placement flange to slip this over certain items.
- Install the RigidMount™ Split Block as you would the rest of the mounts. (see pg. 6)
- Then, install the lower half of the Split Block by applying a small bead of color matching sealant to the joint as shown below.
- Next, slide the bottom half of the block back up until the joint is tight.
- No fasteners should be needed to secure lower half of Split Block.



PRO-POST WRAP™

Pro-Post Wraps are NOT engineered for structural load-bearing use. These are designed for decorative wraps around structural and non-structural nominal 4x4, 4x6, and 6x6 posts.

- Ensure that areas above brick or stone ledges are properly flashed before installing wraps.
- A min. 3/8" clearance should be maintained between Pro-Post Wraps and metal flashings and a minimum 1" clearance must be maintained between Pro-Post Wrap™ and concrete or decks.

PREPARE INSTALLATION:

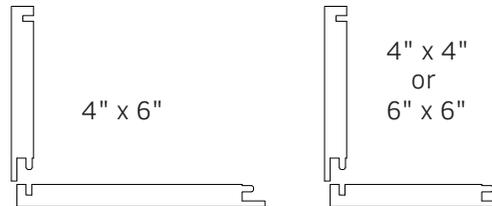
- Glue all joints with a high quality, fast set, weather resistive adhesive. Be sure to keep glue warm for proper spread rates.
- Use adhesive with minimum shear strength of no less than 300 psi, as tested in accordance with ASTM D905 Standard Test Method for Strength Properties of Adhesive Bonds in Shear by Compression Loading. We recommend DAP® Rapid Fuse Wood Adhesive.
- **Special care must be taken when assembling an 4x6 Pro-Post Wraps.**
- **Please note details on proper gluing.**



- Measure each post locations separately as there may be variance from post to post.

INSTALLATION

- Begin by cutting all four sides to the desired length.
- Be sure to repaint all cut ends of the Pro-Post Wrap™ with Diamond Kote® touch-up paint before assembly.
- Start with two boards and begin assembling by applying an even bead of the supplied glue, about 1/8", to Groove A on one board and then Groove B on the other board this will create an "L" shaped piece.



- When assembling the 4x6 post be sure to glue Groove B on the 4" board and Groove A on the 6" board. Assemble so the 4" board is the top of the "L" and the 6" board is the bottom of the "L".
- Working quickly, assemble the pieces and clamp as necessary using bar clamps to bring the joints together tightly. Apply enough pressure to secure fitment being careful not to break edges of trim.

- Repeat this step in order to create a second "L".
- Next, glue Groove A and Groove B on one of the "L" shaped pieces.
- Join the two "L" shaped pieces around the post to be wrapped creating a 4-sided post wrap. Clamp as necessary using bar clamps to bring the joints tightly together. Leave the clamps installed until the glue sets (approx. 5-10 min.)
- Installations in cold temperatures or dry climates may require longer clamping times. Position the wrap on the post for best appearance and plumb as needed.
- Begin fastening on the side that is in the most direct contact with the post. Be careful to keep the nails away from the structural post mounting hardware. Fasten around the post, with one nail minimum, at the top and bottom on all 4 sides. Touch up paint all the nail heads.
- You can complete the installation with a site built trim ring. The best practice is to keep LP® SmartSide® trims 3/8" above flashings and/or 1" above concrete or decks. Trim rings constructed of PVC trim are recommended for areas close to grade. Items installed without the proper clearances to grade may not be covered under manufacturers warranties.

- Watch the [Diamond Kote® Pro-Post Wrap Installation Video](#).

KICK-OUT FLASHING

Note: DO NOT extend the siding or trim into the kick-out flashing or gutter cut siding.

- Install kick-out flashing to direct the water into the gutter.
- A recommended product would be the DryFlekt® Kick-Out Diverters.
- Install step flashing with minimum 4" upper leg.
- Properly integrate flashing with the secondary water-resistive barrier.
- Use DryFlekt® house wrap, flashing tape, z-flashing, or other items as needed to maintain the counter flashing principle.
- Maintain the proper clearance between the end of the gutter and the adjoining wall to allow for proper maintenance of the siding.
- Paint ALL exposed cut edges; Roof to wall details.



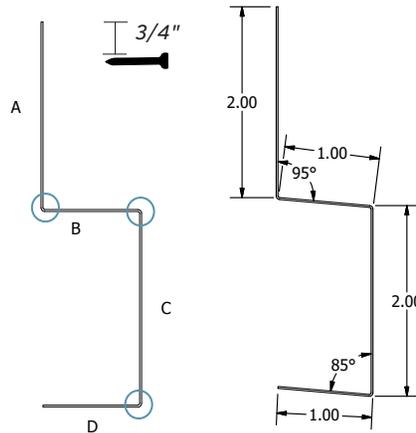
ROOF FLASHING DETAIL



SPACER FLASHING INSTALLATION

GENERAL

- Spacer Flashing is designed to allow for the minimum clearance requirements for proper spacing between siding materials and roofing, decks, driveways, or sidewalks.



Spacer Diagram

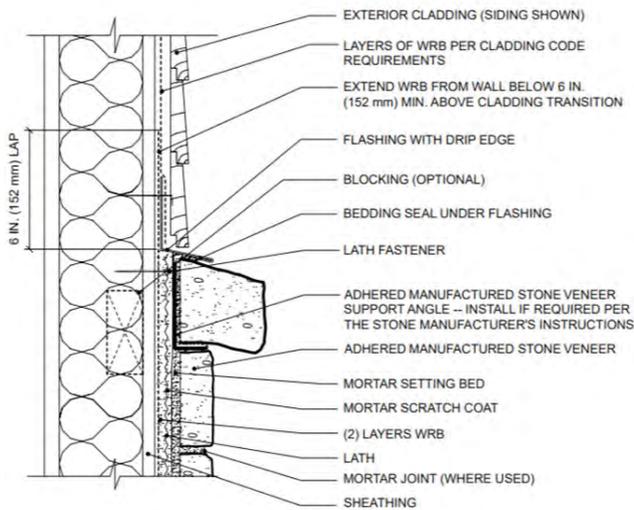
SPACER INSTALL:

- Spacer Flashing can be installed with side "D" in moderate contact, or slightly gapped from the roofing, deck, driveway, or sidewalk.
- It is recommended to close the open end of the Spacer Flashing by making approximately 1" deep cuts on the bends (circled in Spacer Diagram) in from the end of the piece. Then bend the tabs created from those cuts inward in this order: B, D, then C.
- Fasten through side "A" to the wall every 12-16" on center. Place fastener 3/4" down from the top of side "A".
- Properly integrate flashing with the secondary water-resistive barrier.
- Use house wrap, flashing tape, or other items as needed to maintain the counter flashing principle.
- **When installing siding, it's important to retain 3/8" minimum clearance between the siding panels and side "B" of the Spacer Flashing and DO NOT caulk.**

BRICK LEDGE FLASHING INSTALLATION

GENERAL

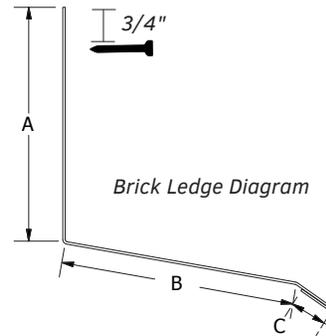
- Brick Flashing is designed to protect the structure from water penetration by flashing behind the siding and shed water away from the house at the transition where siding and stone or brick meet.
- Brick Ledge Flashing should be installed as shown in MVMA diagram.



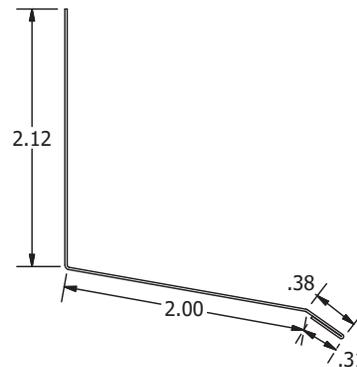
MVMA Diagram

- It is recommended to use bedding sealant under side "B" of the flashing. DAP® Spec Line 920 Sealant is recommended.
- Verify installation requirements with brick or adhered concrete masonry veneer manufacturer.
- Fasten through side "A" to the wall every 12-16" on center. Place fastener 3/4" down from the top of side "A".

- Properly integrate flashing with the secondary water-resistive barrier.
- Use house wrap, flashing tape, or other items as needed to maintain the counter flashing principle. See the MVMA diagram above.
- **When installing siding, it's important to retain 3/8" minimum clearance between the siding panels and side "B" of the Brick Ledge Flashing and DO NOT caulk.**



Brick Ledge Diagram



TRADITIONAL LAP APPLICATION

SPACER CLIPS

- Hook clip to top of the first row of siding.
- Slide siding down into clip shelf.
- Follow the manufacturer's directions for nailing and then strike the clip with hammer to knock it off.

Note: Spacer clip is intended for alignment and spacing only. It's not intended to support the weight of the siding. Break off clips before siding is completely nailed tight.

JOINT PREPARATIONS H-MOLDING

Note: H-Moldings DO NOT space the board for expansion. H-Moldings are designed to cover the expansion gap.

- Leave a 1/4" gap between the siding pieces. 3/16" gap plus the thickness of H-Molding web equals 1/4".
- Apply both adjoining pieces of the siding, fasten along the entire length (except for the ends) with the required gap. Be sure to butt the factory painted ends of the board over the stud.
- Then, slide the H-Molding in place, from the bottom of the siding up, with the **notched end of the molding down**. Slightly bend outward on the flanges to help the H-Molding slide into place. (See Figure 2a)

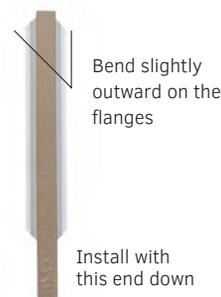


Figure 2a

- Finish fastening by nailing both pieces of siding at the end of the siding. Angle the nails slightly to hit the stud.
- At butt joints, fasteners should be driven 3/4" down from the top and 3/8" in from the ends.

- Fasteners below a window sill need to be spaced a **maximum of 8" o.c.** Fasteners will be exposed on the siding located immediately below window sills, fascia boards, and horizontal trim.
- When attaching siding, avoid nailing closer than 1-1/2" from the end of the board so the power nail does not penetrate the nail fin of Diamond Kote® Trim.

RIGIDSTACK™ APPLICATION

- Apply RigidStack™ siding over properly prepared walls. (see general information)
- Diamond Kote® RigidStack™ is installed as a blind fastened technique.
- It can be installed by starting with a RigidStack Metal Starter Strip, or by stacking onto a Diamond Kote® Starter Board.
- Begin by installing Diamond Kote® Nail Fin Outside Corners and Nail Fin Trim.
- Next, install the appropriate starter material being sure to keep the bottom of the RigidStack™ at least 6" from finished grade.

INSTALL RIGIDSTACK™ USING STARTER BOARD

Starter Board can be installed at or below finished grade. Best practice is to install this with FastenMaster Cortex® Hidden Fastening System for PVC. Install Starter Board using Cortex Hidden Fastening System in the following manner:

Be sure to snap a level line as this will set the exact placement for the first course of RigidStack™ siding. (Figure 2b)

- If the board is 6-12" wide, use three Cortex fasteners at every framing member.
- If the board is less than 6" wide, use two Cortex® fasteners at every framing member. For more info refer to CertainTeed® Restoration Millwork® installation instructions.
- Using the Cortex® setting tool, set the Cortex® fasteners perpendicular to the trim board, spaced a max. of 16" o.c.
- Using a standard 18V cordless impact drill, drive the fastener to the pre-set level below the trim surface.
- Place the PVC trim plug into the hole with the trim-surface-side up and gently tap until it is flush with the trim board.
- Finish by painting the plugs with Diamond Kote® touch-up paint and a cotton swab.

INSTALL USING RIGIDSTACK METAL STARTER STRIP

- The bottom edge of RigidStack™ Metal Starter Strip should be installed at the foundation along the sill plate or up to 1-1/8" below this to properly hold the bottom of RigidStack™ in place.
- Placement may vary as required by course layout. (see Figure 2c)
- Snap a level chalk line 3-3/8" above the bottom of where the first course of siding will start. Align the TOP of the Metal Starter Strip on the chalk line. RigidStack™ Metal Starter Strip will set the exact placement for the 1st course of RigidStack™.
- Fasten the RigidStack™ Metal Starter Strip every 12-16" on center.

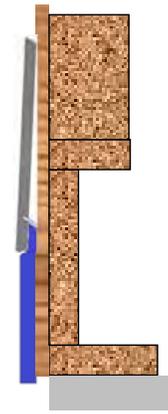


Figure 2b

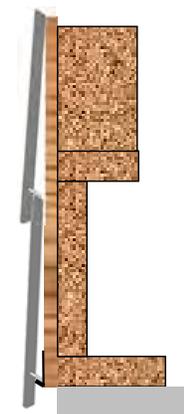


Figure 2c

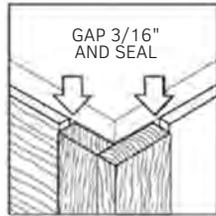
CONTINUED ON NEXT PAGE

RIGIDSTACK™ INSTALLATION

- Now install the first course of siding so that the plastic spline fastened into the back of the siding fits over the beveled edge of the starter board (Figure 2b) or into the Metal Starter Strip, as shown in. (Figure 2c; both on pg 12)

Note: Leave a 3/16" gap where siding butts against trim to allow for expansion.

- When attaching siding, avoid nailing closer than 1-1/2" from the end of the board to avoid penetration of the power nails into the nail fin.
- Fasten the siding by nailing through the nail line (about 3/4" from top edge of siding) **at each stud, leaving no more than 16" between nails.**
- Begin nailing at one end of the siding and work toward the other end to prevent rippling of the siding. Do not countersink nail heads.
- Then, install subsequent courses of siding so that the plastic spline fits over the top edge of the previously installed piece of siding.
- Make sure that the spline is firmly seated to the top of the previous course by pushing in and slightly down on the face, **BEFORE and DURING** nailing, to ensure the material lines up at the butt joints and at course lines at the corners.



- At some point during the installation it may be necessary to remove the spline from the back of RigidStack™ in order to make the courses line up at corners or to adjust for an out of level wall. **Removal of the spline is not uncommon and does not void the substrate or finish warranty.** To remove the spline grasp it using a pliers at first, then with your hand. Wiggle it back and forth while pulling upwards, continue until the entire spline is removed.

RIGIDSTACK JOINT PREPARATIONS USING H-MOLDINGS

- When using RigidStack™ siding the butt joints are **REQUIRED** to be covered with an H-Molding. (Figure 2f)

H-Moldings DO NOT automatically space the board for expansion. They're designed to cover the expansion gap.

- Leave a 1/4" gap between siding pieces. 3/16" gap plus thickness of H-Molding web equals 1/4".
- The butt joints between adjacent siding pieces must be located over the middle of a stud.
- Best method is to apply both adjoining pieces of RigidStack™ fastening along the entire length except for the butt joint ends.
- Slide the H-Molding in place from

the bottom of the siding, with the notched end of the molding down. Bending slightly outward on the flanges first will help the H-Molding slide into place more easily. (Figure 2f)

- Finish fastening by nailing, both pieces of siding at the end of the siding and angle the nails slightly to hit the stud.
- At butt joints, fasteners should be driven 3/4" down from the top and 3/8" in from the ends.
- Fasteners below window sill need to be spaced a maximum of 8" o.c. Fasteners will be exposed on the siding located immediately below window sills, fascia boards, and horizontal trim.

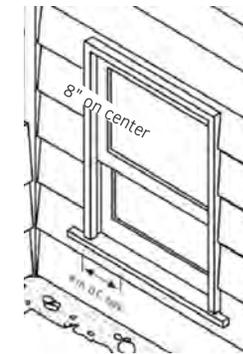


Figure 2e

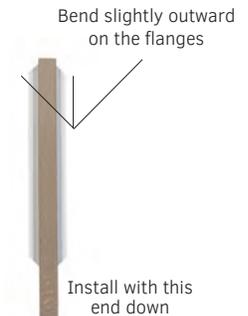


Figure 2f

Watch the RigidStack Installation Video.

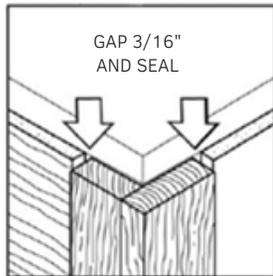
RIGIDSHAKE™ | STRAIGHT EDGE APPLICATION 7", 9" & 12"

- Apply the siding over properly prepared walls. (see general guidelines pg. 2)
- It is REQUIRED to use nailable structural sheathing.
- Diamond Kote® RigidShake™ products can be installed blind fastened.
- Start installation with a RigidStack™ Metal Starter Strip or by overlapping a previous course of lap siding (2-1/16" minimum) or by overlapping the top of Starter Board. (Figure 3)
- It is recommended to use the Metal Starter Strip when starting with the Straight Edge RigidShake. (see Figure 3a)
- WORK installations LEFT TO RIGHT.
- Trim left edge so the that siding section fits against corner board, with a 3/16" gap (see Figure 3b)
- Butt joint seams are not required to land on studs.
- Starting from left, level and install the

Bottom Course Detail
Figure 3a



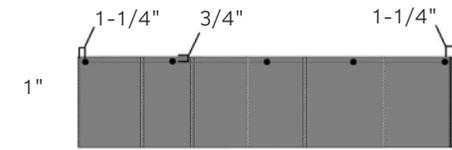
Outside Corner
Figure 3b



first course of shakes so that the plastic spline, fastened into the back of the siding, fits over the beveled edge of the siding, or into the metal starter strip.

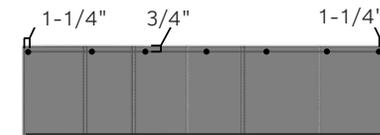
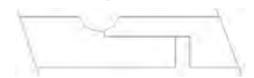
- Do NOT place fasteners into bottoms of grooves or shiplaps.
- Fasten the siding by nailing through the nailing line 3/4" down from the top of panel, into the sheathing and/or framing with one of the below options.
- For screws, fasten 12" o.c. use a minimum #8 corrosion resistant tapered head wood screw. (see Figure 3c)
- For nails, fasten 8" o.c. use a minimum 6d (0.09" shank diameter) corrosion resistant ring shank nail. (see Figure 3d)
- Continue row, working left to right. Overlap shiplap butt ends without any gap. (see Figure 3e)
- Start subsequent courses in same manner, but trim each course to create the effect of staggered joints.
- Best appearance is obtained by trimming the second course starter piece 16" shorter than the first course, and trimming the third course starter piece 32" shorter than the first.
- Repeat this same sequence every 3 courses.
- Shim siding at studs, as needed, to avoid drawing siding against uneven walls. (see Figure 3)

- Then, install subsequent courses of siding so that the plastic spline fits over the beveled edge of the siding, or into the metal starter strip. (see Figure 3f)



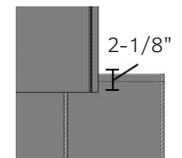
Screw Placement 12" o.c. Detail
Figure 3c

Shiplap Butt Ends
Figure 3e

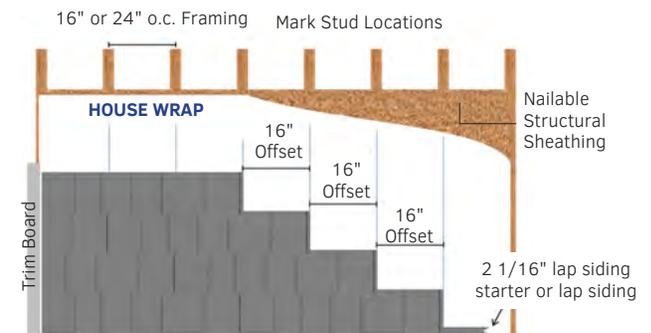


Nail Placement 8" o.c. Detail
Figure 3d

Minimum
Overlap
Figure 3f



Straight Edge Application
Figure 3



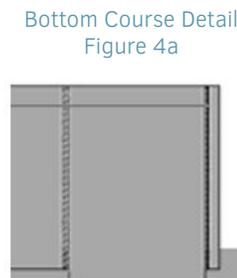
RIGIDSHAKE™ | STAGGERED EDGE APPLICATION 7", 9" & 12"

- Apply the siding over properly prepared walls. (see general guidelines on page 2)
- It is REQUIRED to use nailable structural sheathing.
- Diamond Kote® RigidShakes can be installed blind fastened.
- Work installations left to right. Start installation by overlapping the previous course of lap siding. (see Figure 4)
- If not installing over lap siding the preferred way to begin is to first install a row of straight shakes then all subsequent rows of staggered shakes. (See page 15 for starting Straight RigidShakes).
- **DO NOT CUT OFF THE BOTTOM FACTORY END OF STAGGERED SHAKES TO START A 'STRAIGHT' ROW! THIS PRACTICE WILL VOID SUBSTRATE WARRANTY.**
- An optional starting method is to use a 3/8" x 2-1/16" piece of same color lap siding as a starter shim, as this will partially show because of the staggered bottom edge.
- Cut this at a 30 degree bevel and paint all cut edges. **Install keeping the factory painted edge down.** (see Figure 4a)
- Trim left edge so that siding section fits against the corner board, with a 3/16" gap. (see Figure 4b)

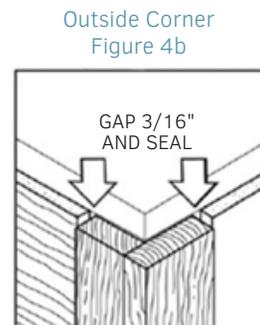
- Butt joint seams are not required to land on studs.
- Starting from left, level and install the first course of Diamond Kote® RigidShake™ so the bottom edge is flush with the shim. **Do NOT place fasteners into bottoms of grooves or shiplaps.**
- Fasten 3/4" down from the top of the panel, into sheathing and/or framing with one of the below options.
- For screws, fasten 12" on center using a minimum #8 corrosion resistant tapered head wood screw. (see Figure 4c)
- For nails, fasten 8" on center using a minimum of 6d (0.09" shank diameter) corrosion resistant ring shank nail. (see Figure 4d)
- Continue row, working left to right. Overlap shiplap butt ends without any gap. (see Figure 4e)
- Start subsequent courses in same manner but trim each course to create the effect of staggered joints.
- Best appearance is obtained by trimming second course starter piece 16" shorter than the first course and trimming the

third course starter piece 32" shorter than the first. Repeat this same sequence every three courses. (see Figure 4)

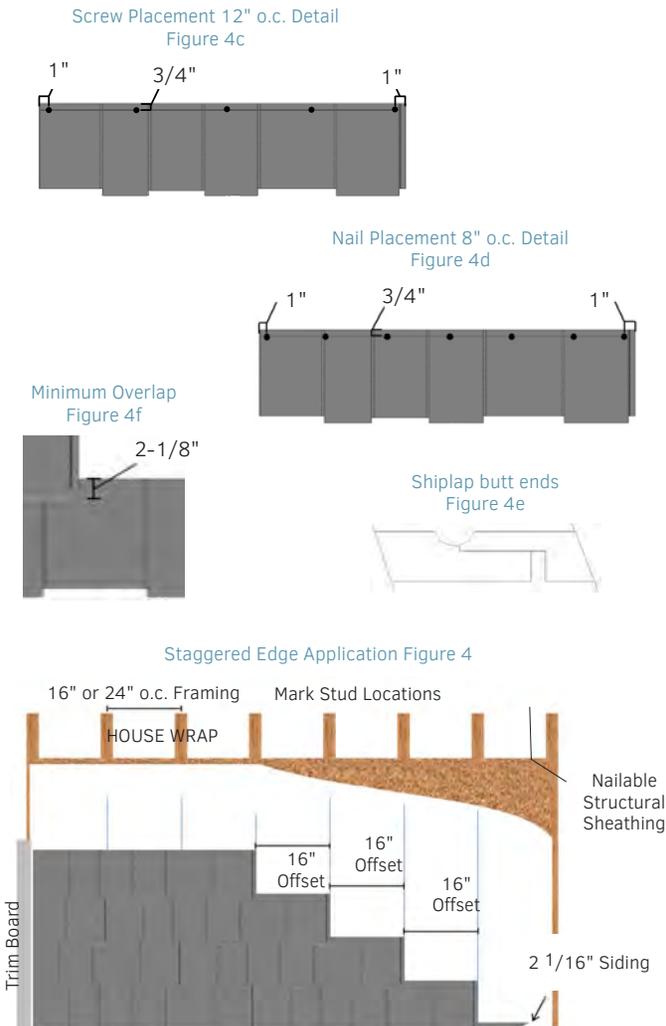
- Shim siding at studs, as needed, to avoid drawing siding against uneven walls.
- Then install subsequent courses of siding so that the plastic spline fits over the top edge of the previously installed piece of siding. (see Figure 4f)



Bottom Course Detail Figure 4a



Outside Corner Figure 4b



Staggered Edge Application Figure 4

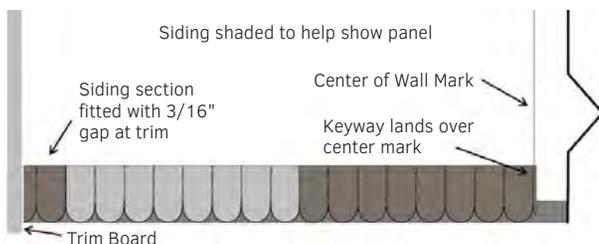
OCTAGONS + SCALLOPS APPLICATION

Prior to installation: Find the center of the gable or wall so that shapes will be visually centered. For best finished appearance, gable installations should end with a single Scallop or Octagon at the peak.

STRAIGHT WALL APPLICATION

- Begin by measuring the length of the wall between the corner trims.
- Next, divide length of wall by two to find the center of the wall.
- Mark the center of the wall.
- The easiest layout for the Octagons or Scallops to be visually centered on the wall, is to start so that a keyway lands over the center of wall mark.
- Calculate the layout of full panels from the center mark and make a mark on the wall (full panels measure 48").
- Measure from the trim to the mark so that siding section fits against corner board, with a 3/16" gap.

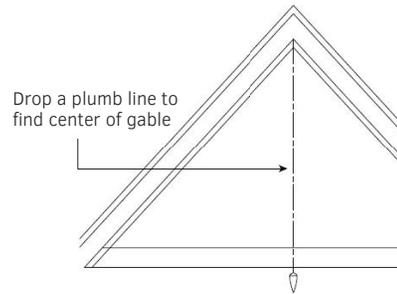
Layout of Scallops and Octagons from Center of Wall Mark



- Trim left side of a panel to fit and begin installation.

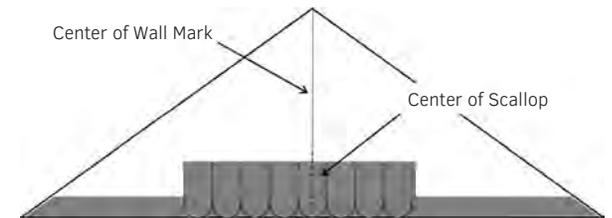
GABLE APPLICATION

- Start by dropping a plumb line to find the center of the gable. Mark this line.
- Next measure the height of the gable (in inches) on this line. For Octagons divide by 9-5/8". For Scallops divide by 7-3/4".



- The purpose of this simple equation is to find out the number of courses or rows.
- Then, divide the height of the gable by the size of the exposure of the profile that will be installed.
- Example: 64" gable height with scallops. ($64 \div 7.75 = 8.25$ - Eight is an even number, do not worry about the decimal, center on a keyway to start.)
- If the answer is an even number, center the first course of Scallop or Octagons on a keyway.

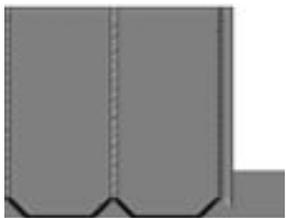
- If the answer is an odd number, center the first course on a Scallop or Octagon.
- Begin by locating the first piece relative to the centerline of the gable. The panel may be positioned anywhere along its length, as long as the keyway or shingle face is centered.



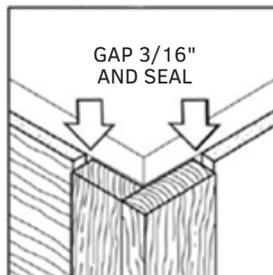
HISTORIC COLLECTION | OCTAGON APPLICATION

- Apply the siding over properly prepared walls. (see general guidelines pg 2)
- It is REQUIRED to use nailable structural sheathing.
- Diamond Kote® Octagons can be installed blind fastened.
- Start installation by overlapping a previous course of lap siding or with a starter strip. (see Figure 5)
- It is recommended to use a 3/8" x 2-1/16" piece of same color lap siding as a starter strip, as this will partially show because of the angled bottom edge. Rip this at a 30 degree angle, paint all cut edges and install keeping the factory painted edge down. (see Figure 5a)
- For octagons installation, starting left to right. Trim left edge so that the siding section fits against corner board, with a 3/16" gap. (see Figure 5b)
- Butt joint seams are not required to land on studs.

Bottom Course Detail
Figure 5a



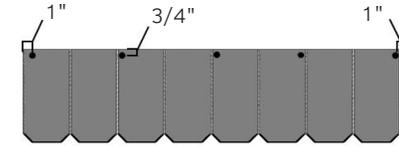
Outside Corner
Figure 5b



- Do NOT place fasteners into bottoms of grooves or shiplaps.
- Fasten the siding by 3/4" down from the top of panel, into sheathing and/or framing with one of the below options.
- For screws, fasten 12" on center use a minimum #8 corrosion resistant tapered head wood screw. (see Figure 5c)
- For nails, fasten 8" on center use a minimum of 6d (0.09" shank diameter) corrosion resistant ring shank nail. (see Figure 5d)
- Continue row, working left to right. Overlap shiplap butt ends without any gap. (see Figure 5e)
- Then install subsequent courses of siding overlapping previously installed piece of siding a minimum of 2-1/8". (see Figure 5f)
- Offset each course to affect staggered joints.
- Best appearance is installing second course starter piece 21" shorter than the first course. (see Figure 5)
- Start the third course starter piece 27" shorter than the 2nd course. (see Figure 5)
- Repeat this same sequence every three courses. Shim siding at studs, as needed, to avoid drawing siding against uneven walls.

Screw Placement 12" o.c. Detail

Figure 5c



Minimum
Overlap

Shiplap butt ends
Figure 5e

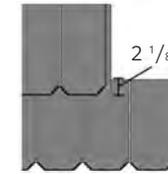
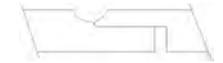
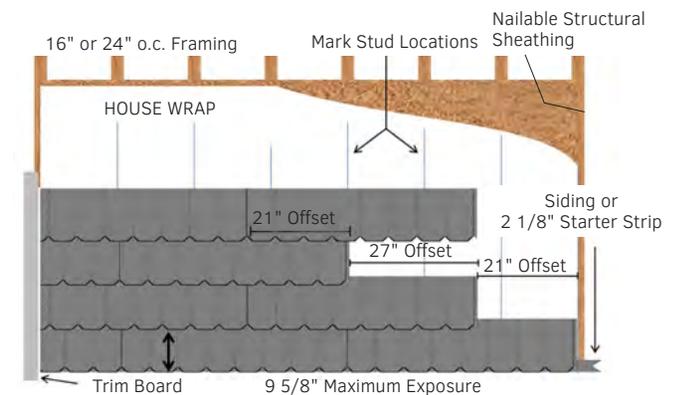
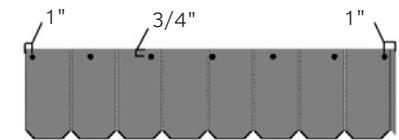


Figure 5f



Nail Placement 8" o.c. Detail

Figure 5d



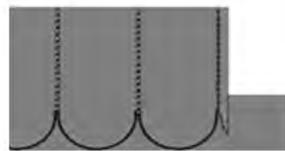
Octagon Application - Figure 5

HISTORIC COLLECTION | SCALLOP APPLICATION

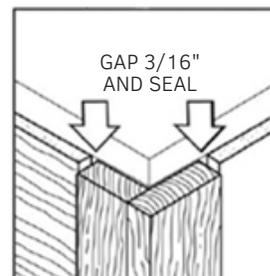
Apply siding over properly prepared walls.
(see general guidelines page 2)

- It is **REQUIRED** to use Nailable structural sheathing. Scallops can be installed blind fastened.
- Scallops can be installed by starting with a starter strip or by overlapping a previous course of lap siding (4" minimum). (see Figure 6)
- For scallops, start installation left to right. It is recommended to use a 3/8" x 4" piece of same color lap siding as a starter shim, as this will partially show because of the rounded bottom edge. (see Figure 6a)
- Trim left edge so that siding section fits against corner board, with a 3/16" gap. (see Figure 6b)
- Butt joint seams are not required to land on studs.
- Starting from left, level and install the first course of Scallops so bottom edge is flush with the shim. Do NOT place fasteners into bottoms of grooves or shiplaps.
- Fasten 3/4" down from the top of panel, into sheathing and/or framing with one of the below options.

- For screws, fasten 12" on center use a minimum #8 corrosion resistant tapered head wood screw. (see Figure 6c)
- For nails, fasten 8" no center use a minimum of 6d (0.09" shank diameter) corrosion resistant ring shank nail. (see Figure 6d)
- Continue row, working left to right. Overlap shiplap butt ends without any gap. (see Figure 6e)
- Start subsequent courses in the same manner by overlapping courses a minimum of 4". (see Figure 6f)
- Best appearance is obtained by installing second course starter piece 21" shorter than the first course. (see Figure 6)
- Start the 3rd course starter piece 27" shorter than the 2nd course. (Figure 6)
- Repeat this sequence every 3 courses. Shim siding at studs, as needed, to avoid drawing siding against uneven walls.

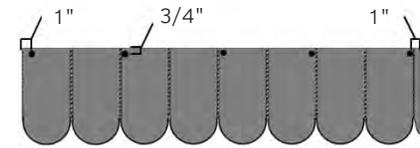


Bottom Course Detail
Figure 6a

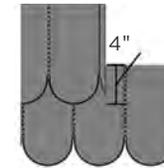


Outside Corner
Figure 6b

Screw Placement 12" o.c. Detail
Figure 6c



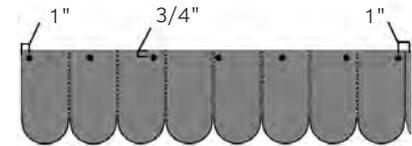
Minimum
Overlap
Figure 6f



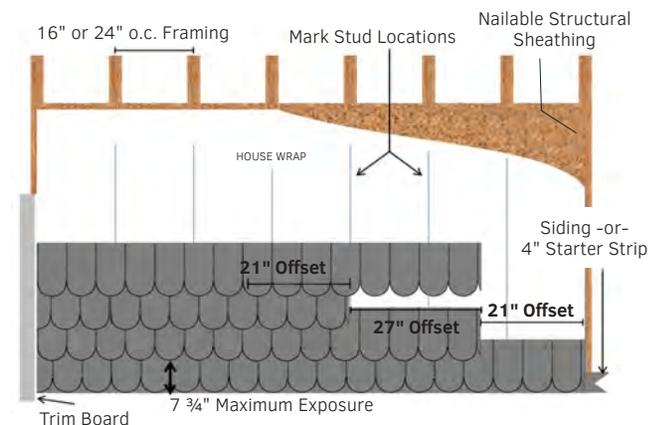
Shiplap butt ends
Figure 6e



Nail Placement 8" o.c. Detail
Figure 6d



Scallops Application Figure 6



OUTSIDE + INSIDE CORNER WITH NAIL FIN APPLICATION

It is recommended to install corners with nailing fin over nailable structural sheathing. Some face nailing may be required if nailable sheathing is not present.

- Apply corners over properly prepared walls. (see general guidelines pg 2)
- Diamond Kote® Outside and Inside Corners with Nail Fin are designed to be installed blind nailed through the attached nail fins to help complete a hidden fastener install.
- Install corners and trims first before beginning installation of the siding products. Start by carefully removing the corners from protective shipping packaging. **Do not cut packaging on face of material.**
- Avoid drawing corners against uneven or out of square walls. Before installation make sure that the foundation or foundation coverings do not project beyond the plane of the wall.
- Shim as necessary to avoid potential to split corners lengthwise.

FINGER JOINTS

- 10' Corners are manufactured with a random finger jointed trim board. For aesthetic purposes it is recommended to attempt to turn, flip, and/or cut off corners in order to reduce the visibility of the finger joints around high traffic areas of the building. **16' corners DO NOT contain finger joints.**

CUTTING

- Measure and mark corners for length typically 1/2" - 3/4" lower than the bottom course of siding.
- Cut outside corners carefully to avoid marring the finished surface, 4" corners can be cut utilizing power compound miter saws. 6" corners typically require cutting by hand or by circular saw.
- It is recommended to cover the bed of circular saws with tape or protective coverings to avoid marring the finished surfaces.

SEALING

- Cotton swabs are recommended for touch-up painting on the finished face of products. Paint and/or seal ALL cut ends and edges of corners. (see Figure 7a) **NOT RECOMMENDED to use pneumatic roofing, or siding nail guns to install trim with nailing fin.**
- When attaching siding, avoid nailing closer than 1-1/2" from the end of the board so the power nail does not penetrate the nail fin of Diamond Kote® Trims.
- Use hand driven galvanized roofing nails for installation on Corner.
- 1-3/4" StormGuard Ring shank nails from Maze Nails are recommended.
- When installing inside and outside corners over (up to) 1" rigid foam sheathing, be careful not to drive nails so hard as to compress the foam and distort the fin. Nail length must be increased to ensure penetration of the wood substrate.



Figure 7a

OUTSIDE + INSIDE CORNER WITH NAIL FIN APPLICATION

INSTALLATION

- Hold outside and inside corners with nailing fin up to the wall, level, plumb and set it to the correct height before nailing.
- Alternate nailing through the fin in the provided holes on both sides of the corner.
- Fasten EVERY 3RD HOLE. (Figure 7b)
- DO NOT OVERDRIVE NAILS.
- Nail heads should be set firmly to the face of fin, but should not be overdriven to distort or damage the fin surface.

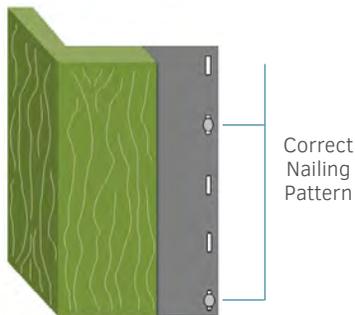


Figure 7b

STACKING:

- **FOR 2 CORNERS, ONE JOINT:** Lightly butt painted cut ends together and leave a 3/16" gap where the top corner meets the soffit.
- **FOR 3 OR MORE CORNERS 2+ JOINTS:** Leave a 1/8" gap between painted cut ends and apply a small bead of color matched sealant by back caulking during assembly. Leave a 3/16" gap where the top corner meets the soffit.

TRIM WITH NAIL FIN APPLICATION

- Apply trim over properly prepared walls. (general guidelines page 2)
- It's recommended to install Diamond Kote® Trim with Nail Fin over nailable structural sheathing.
- If nailable sheathing is not present, some face nailing may be required.

GENERAL

- Trim with nail fin is designed to be blind nailed through the attached nailing fin and with clip to help complete a hidden fastener installation.
- Install the outside corners and trim first before installation of siding products.
- Start by carefully removing trim from protective shipping packaging.
- Do not cut packaging on face of material. Avoid drawing trim against uneven or out of plane surfaces. Shim as necessary to ensure acceptable trim joints.

CUTTING

- It is recommended to cut the trim with nail fin face up and to utilizing power compound miter saws.
- Align edge of trim without attached fin against fence.
- When cutting by circular saw, it is recommended to cut face down.
- Be careful to avoid marring the finished surfaces.

SEALING

- Paint and/or seal ALL cut ends and edges of trim. (Figure 7a pg. 17) Cotton swabs are recommended for touch-up painting on the finished face.

TRIM NAILING REQUIREMENTS

- Hand-driven galvanized roofing nails are recommended for installing trim with nailing fin. (1-3/4" StormGuard® Ring shank nails from Maze Nails are recommended).

NOT RECOMMENDED to use pneumatic roofing, or siding nail guns to install trim with nailing fin.

- When attaching siding, avoid nailing closer than 1-1/2" from the end of the board so the power nail does not penetrate the nail fin.
- When installing trim over up to 1" rigid foam sheathing, be careful not to drive nails so hard as to compress the foam and distort the fin.

OPTION 1: TRIM CLIPS & NAIL FIN TRIM

- Position the clips, tight on the sides and bottom of the item to be trimmed out and leave a 3/8" gap between clips and top of item. Nail through the clips into substrate.
- Place clips no greater than 16" o.c. around the item. Then measure and cut the trim to length.
- Cut trim for windows/other openings as shown Fig. 7C.



Figure 7c

- Place trim on wall; make sure the edge with the kerf and dado is faced towards the clips. Starting at one end of the trim align and slide the first clip into the kerf side of the trim. Using a slight up and down motion continue rotating the trim into position with the trim clips. Hold the trim with nail fin against the wall, level, plumb and set it to the correct height before nailing it. Make sure to leave a proper gap between trim and windows shown in Fig. A (pg 21)
- **Make sure that you do not overdrive nails. Fasten EVERY 3RD HOLE.**
- Nail head should set firmly to the face of the fin, but be careful to not overdrive to distort or damage the surface.
- Shim at trim intersections as needed to establish flush and tight joints. Then apply sealant.

CONTINUED ON NEXT PAGE

OPTION 2: POCKET HOLE JOINERY & NAIL FIN TRIM

- Follow these steps to assemble the Nail Fin Trim by screwing the trim together using a pocket hole joinery and then installing the trim on the wall as a unitized frame.
- The advantage with this option is that the trim joints will be tighter, and should not require shimming to keep them flush.
- Joints may be assembled with either 45° miters or butt & pass methods.

POCKET HOLE REQUIRED EQUIPMENT:

- Pocket hole jig w/drill bit
- 2" Pocket screws (exterior grade)
- Portable pocket hole jigs are readily available from retail suppliers.

INSTALL:

- Measure and cut the trim pieces to the proper length as normal, then touch up paint all cut ends. **Be sure to add the proper gap amount to your measurements.** (Fig. A)

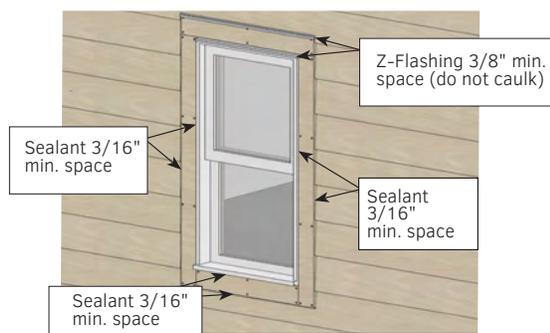
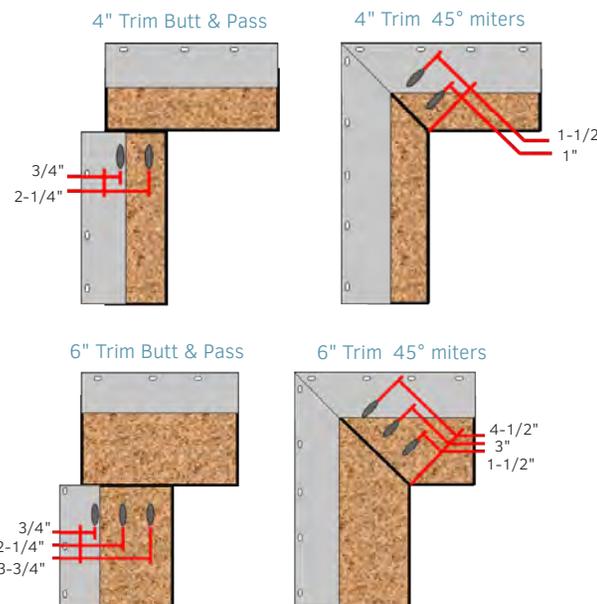


Fig. A

- Please follow the tool manufactures instructions by setting up the jig and drill. From our experience best results are obtained by setting the jig for 1" material and the drill depth gauge for 3/4" material using 2" screws. Because manufactures differ, find the settings that work best for you. Experiment on a test piece first.
- Follow the hole placement diagrams below for your situation. Drill 2 holes for 4" trim and 3 holes for 6" trim. Place the holes from the edge of the material at the dimensions shown for each joint to join the material together.

Proper hole placement is important for screw holding power. **Caution: drilling too close to the edge may cause material to split.**



- Using a scrap piece of the nail fin, approximately 2" x 3.5" (circled), will help keep the trim clamped securely in the jig while drilling. (See Fig. B, C, & D)



Fig. B



Fig. C



Fig. D

- After all four joints are drilled begin assembling the frame. (Fig. E)
- Follow recommendations from the manufacturer on installing screws with the trim face down. Take care to protect the pre-finished surface from damage during assembly.

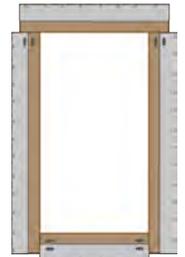


Fig. E

- With the pieces of trim assembled, take the unitized frame to the desired area on the wall, fit the trim frame to the opening leaving the required gap between trim and opening. (Fig. A) Level the trim frame and fasten through the nailing fin filling every 3rd hole. Nail heads should set firmly to the face of the fin, but be careful to not overdrive to distort or damage the fin surface.
- Make sure that you do not overdrive nails. Fasten EVERY 3RD HOLE. We recommend using 1-3/4" StormGuard® Ring shank nails from Maze Nails.
- Apply sealant as shown on Fig. A
- Watch the Pocket Hole Joinery Video.**

ARCH TRIM INSTALLATION

GENERAL

- It's recommended to install arched trims around the opening before cutting or installing the sides or bottom trim.
- Read and understand instructions.
- Carefully remove trim from protective packaging.
- Place the Arched Trim over the arched area and center it so the bottom ends are level.

FASTENING:

- Fastener length needs to be long enough to fully penetrate structural framing or wood structural panels and structural framing a minimum of 1 inch.
- Minimum hot-dipped galvanized nail with a full round head is required, ring shank fasteners are recommended.
- Trim must be fastened with two nails at both ends, with additional fasteners spaced a maximum of 24 inches o.c. along the length of the board.

FLASHING:

- Flashing is required to protect the top edge of trim from weather.
- It's recommended to flash along the top of trim utilizing a bendable head flashing such as ASTRO Flashing, or similar. (go to: astroplastics.com/products/astro-flashing/)
- Follow all head flashing manufactures installation guidelines.
- All flashing materials should have a minimum 4 inch upper leg. Add a minimum 4 inch wide adhesive flashing to flashing legs less than 4 inches.
- When integrating flashing with a water-resistant barrier (WRB), be sure to follow the WRB installation instructions.

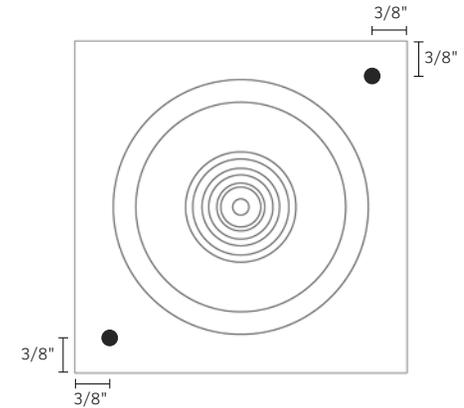
FINISHING:

- Install siding around the Diamond Kote® Arched Trim leaving the proper gap, and sealing joints as required by the manufacturer.

ROSETTES

FASTENING PLACEMENT:

- Fasten Rosettes with a minimum of 2 fasteners placed at alternating edges 3/8" from ends and edges.



FASTENER TYPE:

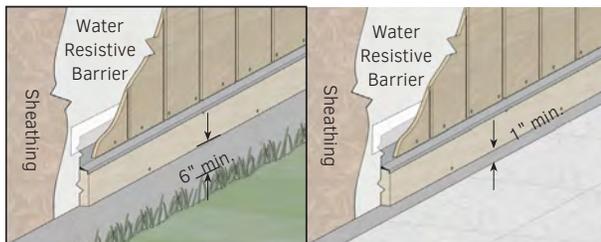
- Fastener length needs to be long enough to fully penetrate structural framing or wood structural panels and structural framing a minimum of 1 inch.
- Minimum hot-dipped galvanized nail with a full round head is required, ring shank fasteners are recommended.

4'X8',9',10' BOARD & BATTEN PANEL

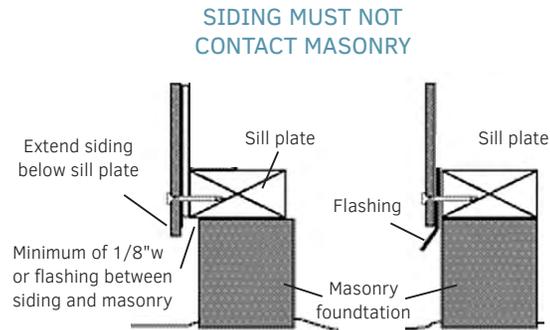
At the time of manufacture, siding meets or exceeds the performance standards set forth in ICC-ES-AC321 and has achieved code recognition under ESR-1301, CCNC 11826, APA recognition under PR-N124, and HUD recognition under HUD-MR-1318.

(For copies of ESR-1301, call LP Support at 1-800-648-6893 or go to apawood.org.)

- Minimum 6 inch clearance must be maintained between siding and finish grade.
- Siding applied adjacent to porches, patios, walks, etc. must have a clearance of at least 1 inch above any surface.
- Minimum 1 inch clearance at intersection with roof line.
- Apply siding in a manner that prevents moisture intrusion and water buildup.
- All exposed wood substrate must be sealed in a manner that prevents moisture intrusion and water buildup.
- LP® does not recommend LP®SmartSide® Panel for use in ICF and SIP assemblies.

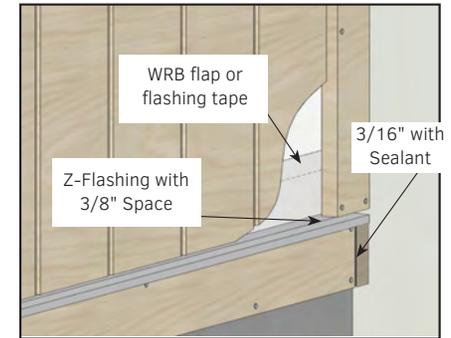


- If used, LP® will not warrant for buckling and shrinkage. However, balance of warranty does remain intact.
- **Do not use staples.**
- Siding must not be in direct contact with masonry, concrete, brick, stone, stucco, or mortar.



HORIZONTAL TRIM

- Properly integrate flashing with siding, WRB and vertical trim.
- At corners, allow the end of the trim to overlap the end of the adjoining trim. Leave a 3/16 inch space and seal with sealant.

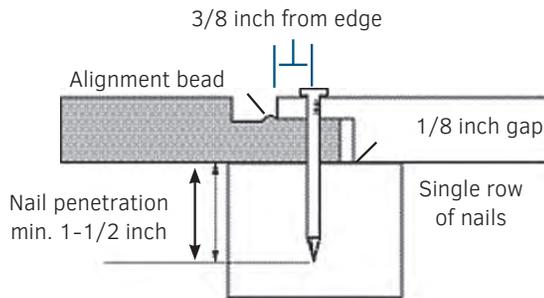


STUD AND SPACING

- Diamond Kote® Building Products must be applied over sheathed walls into studs spaced no greater than 16" on center.
- Installations over masonry walls, the wall must be furred out with wood framing spaced 16" on center and with adequate thickness to accept the full length of the recommended nail.

4'X8',9',10' BOARD & BATTEN PANEL NAILING INSTRUCTIONS

- In braced wall assemblies, use minimum 6d hot-dip galvanized nails for 38 and 76 Series panels (0.113 inch shank diameter, 0.270 head diameter) and minimum 8d for 190 Series panels (0.131 inch shank diameter, 0.290 head diameter) for 190 Series panels.
- Do not use electroplated fasteners.
- Refer to your local building code to verify the minimum allowable fastener size.
- Penetrate structural framing or wood structural panels and structural framing a minimum of 1-1/2 inch.

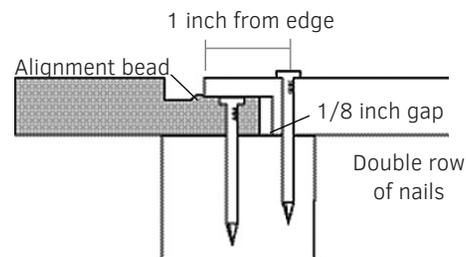


For 76 and 190 Series panels:

- Single nailing for 76 and 190 series meets wall bracing requirements.
- To meet the equivalent 3/8 inch shear wall design values, double nailing procedures must be used.
- It may be necessary to angle drive the second nail in order to penetrate the framing. Seal nails driven below the surface.
- Shear values for panels applied directly to studs shall be no greater than noted in Table 1 of the ICC-ES Report ESR-1301 or Table 1 of APA PR-N 124.
- Not warranted for application on SIP and ICF assemblies.

For 38 Series panels:

- Procedure is to double nail in order to meet the wall bracing requirements and 5/16 inch shear wall design values.



CAUTION

- 38 and 76 Series panels must be installed on 16 inch O.C. framing only. When installing on 24 inch O.C. framing, 190 Series panels are required.
- Back of panel must not come in contact with masonry/concrete foundation.
- Do not force siding into place.
- Maintain the illustrated 1/8 inch space behind the joint to allow for expansion while the panel equilibrates with the local environment.
- LP® SmartSide® Panel siding must not be attached by stapling.
- Install panels in light contact to the edge of alignment bead. (see Figure 1 and Figure 2 far left column) **Do not install over alignment bead.**
- Climb cut the surface of the siding such that the rotation of the blade cuts downward on the primed or pre-finished surface.
- Where siding butts window trim, door casings and masonry, etc. leave a 3/16 inch gap and seal.

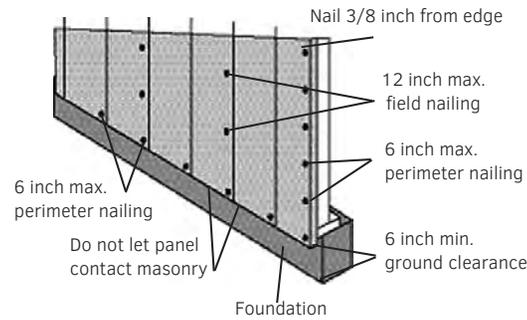
CONTINUED ON NEXT PAGE

INSULATED SHEATHINGS

- LP® SmartSide® Panel siding may be installed over low-compression rigid foam or exterior gypsum.

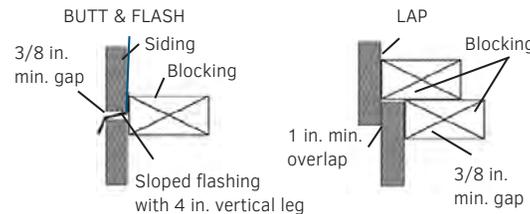
These precautions must be followed:

- Adequate bracing of the wall in accordance with International Codes or other ruling building code is required.
- For rigid foam sheathing up to 1 inch (25.4 mm) thick, siding may be nailed directly to the foam sheathing unless a drainage plane is required by the local building code. Nail length must be increased to ensure a minimum 1-1/2" (38.1 mm) fastener penetration into the structural framing.
- For rigid foam sheathing greater than 1" (25.4 mm), a minimum 1-1/2" (38.1 mm) thick by 3-1/2" (88.9 mm) wide vertical strapping or furring strip must be installed over the sheathing to provide a solid, level nailing base for the siding. The strapping must be securely fastened to structural framing, spaced no greater than 16" on center (406 mm), with a minimum nail penetration of 1-1/2" on center (38.1 mm) and a maximum nail spacing no greater than the width of the siding.
- LP® will assume no responsibility for any damage or condition arising from the use of rigid foam or exterior gypsum.

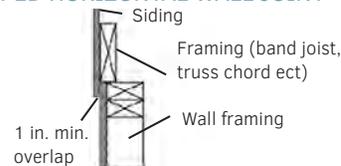


CONDITION	CORRECTION
Snug	OK
Flush	OK
Visible fiber	Paint
Countersunk 1/16 - 1/8"	Apply sealant
Countersunk more than 1/8"	Apply sealant & re-nail

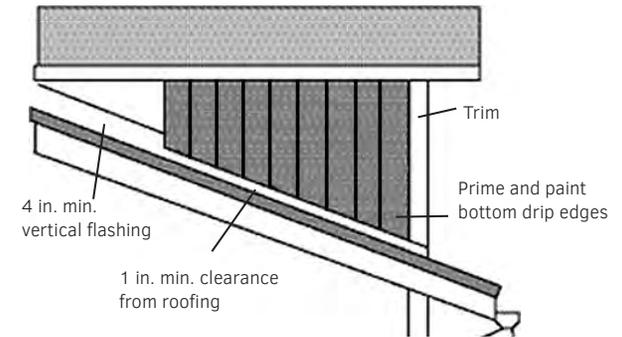
HORIZONTAL WALL JOINTS



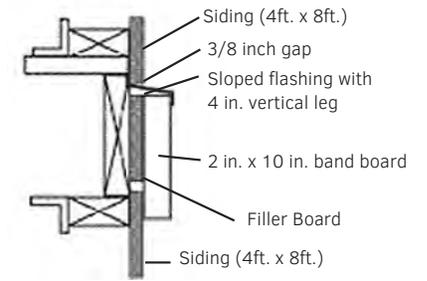
LAPPED HORIZONTAL WALL JOINT



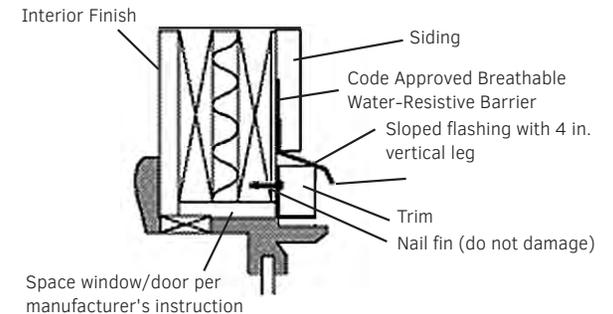
1 IN. ROOF & CHIMNEY CLEARANCE



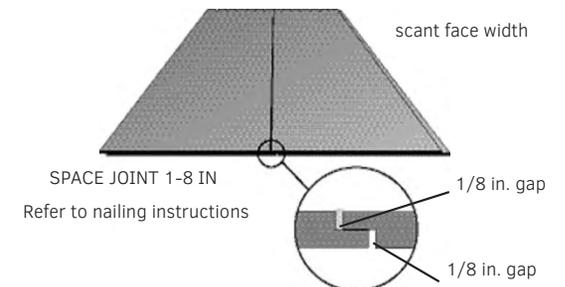
HORIZONTAL BELTLINE JOINTS



GAP, FLASH DOORS & WINDOWS



4 FT. X 8 FT. UNGROOVED SHIPLAP PANEL



ALTERNATIVE FASTENING OPTION: ATTACHING TRIM AS BATTEN STRIPS

- In cases where trim/batten strips are fastened just into the structural sheathing, attachment will require additional support from a construction adhesive.
- First, secure the trim to the structure while the construction adhesive completely cures, using hot-dipped galvanized ring-shanked nails no smaller than 0.091 inch shank diameter.
- Second, use an exterior grade construction adhesive that meets the following specifications.

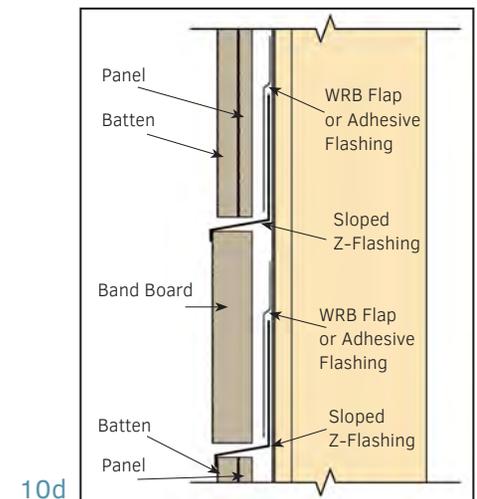
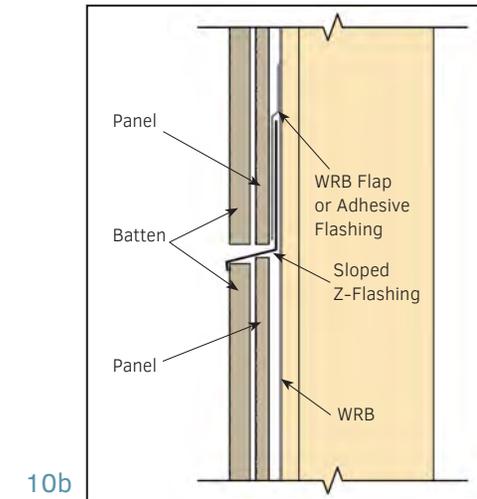
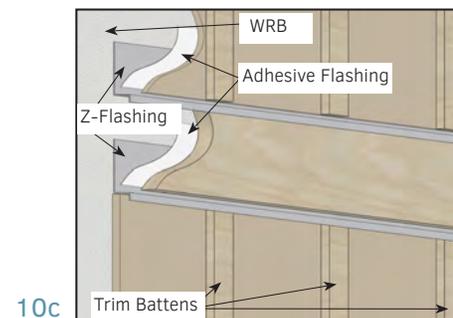
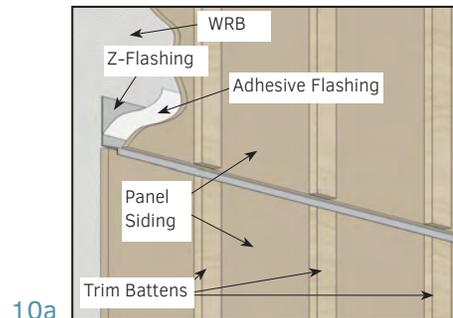
Construction Adhesive Specifications:

- Minimum bond strength: 300 psi
- Minimum application temperature: 40° F
- Paintable grade

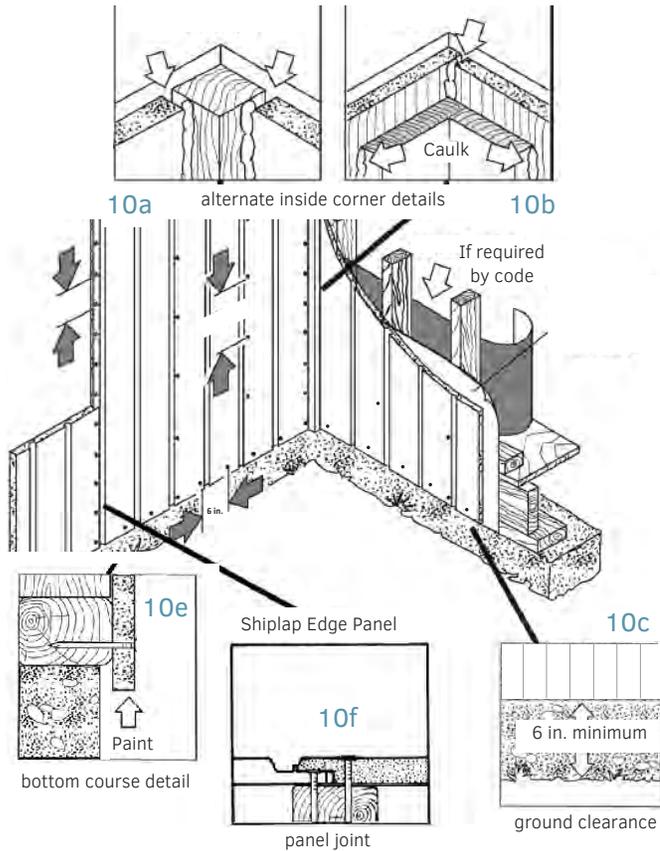
INSTALLATION

- When attaching trim as batten strips, follow the Fastening Instructions section in this document.
- Exception: When using trim less than 3 inches wide as battens, apply only one nail per width, a maximum of every 36 inches vertically.
- When batten strips are applied over panel siding at vertical joints, sealant is not required.

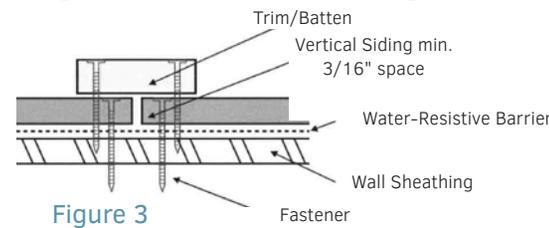
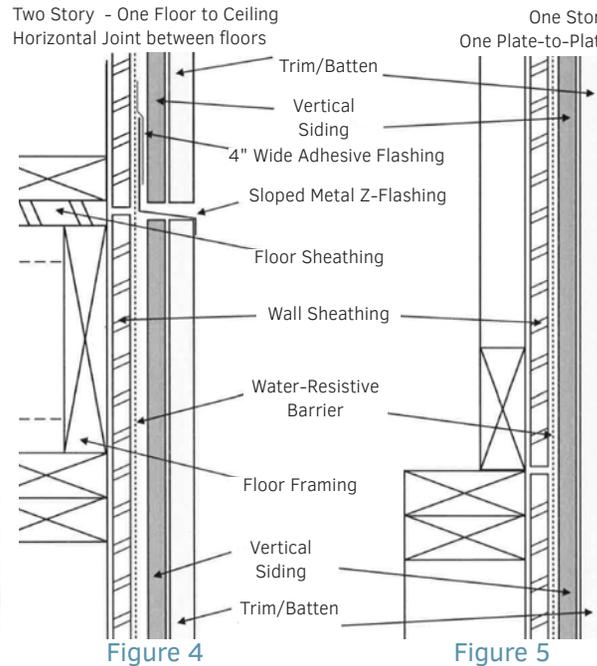
- When batten strips are applied to walls with horizontal panel joints, do not run battens over the panel joint and flashing. Terminate the trim battens above and below the horizontal panel joint to allow for proper spacing and flashing. (See diagrams 10a and 10b)
- When batten strips are applied to walls with horizontal band boards be sure to properly flash above and below the band board. Leave a minimum 3/8 inch space between the ends of the batten strips and the band board. Prime and paint all cut ends and exposed substrate. Z-flashing installed below the band board must cover the top ends of the batten strips below. (See diagrams 10c and 10d)



INSTALLATION DIAGRAM



- Vertical Siding or Batten may only span one plate-to-plate. Due to plate shrinkage, each vertical application is not to span beyond one floor to ceiling distance, or one floor to top of gable distance. (See Figures 4 & 5)



- Vertical Siding SHALL NOT be installed horizontally. **Battens must be a minimum 0.5 x 2.5 inches actual size.**
- Must be installed over a non-compressible drainable housewrap to provide drainage behind siding.

- Touch-up paint all cut/exposed ends.
- Vertical Siding must be spaced a minimum of 3/16" (See Figure 3) Sealant is not required in any vertical joint covered by Batten & backed by a WRB.

Minimum Fastener Type for Vertical Siding:

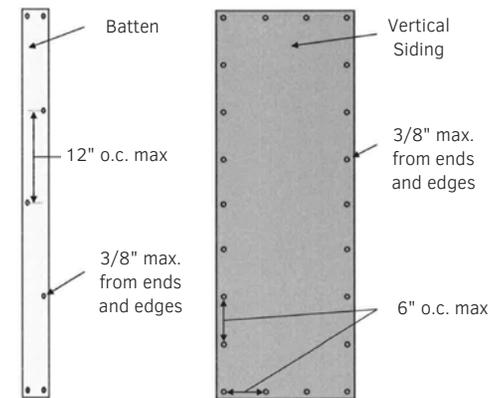
- Corrosion Resistant: (ASTM A153) Hot-dipped galvanized or stainless steel
- Ring Shank: Shank diameter = 0.091 inch, Head diameter = 0.221 inch, Length = fastener shall be long enough to fully penetrate structural panel sheathing. Ensure that the ring shanks of the nail fully engage the wood structural panel wall sheathing.
- Caution: Choose a fastener length that will not damage wiring or other utilities in the exterior wall assembly

Fastener Placement for Vertical Siding:

Maximum 3/8 inch from ends and edges (Figure 2)

Fastener Spacing for Vertical Siding:

Fastened a maximum of 6 o.c. along the perimeter (Figure 2)



VERTICAL SIDING APPLICATION

- LP® SmartSide® 38 Series Strand Substrate Vertical Siding for Board & Batten applications, according to the following requirements.
- Siding must be installed over a minimum 7/16 Category wood structural panels with an APA Trademark that contains the consensus Standard DOC PS 1 or PS 2.
- Except with LP® FlameBlock® Fire-Rated OSB Sheathing.

VERTICAL SIDING APPLICATION continued

Minimum Fastener Type for Batten:

- Corrosion Resistant - (ASTM A153) Hot-dipped galvanized or stainless steel
- Ring Shank nails provide superior resistance to fastener pull-through.
- In Hurricane-Prone Regions or locations where negative wind loads are a concern, ring shank nails should be used.

Trim nails may be used in other locations with the following cautions:

- Do not overdrive or countersink the fastener, nail flush with the surface of batten.
- Batten nails shall be installed per the length, placement, spacing and quantity requirements listed in this document.
- Detachment of Batten is not covered by the LP® SmartSide® limited warranty whether ring shank or trim nails are used
- Shank diameter= 0.091 inch, Head diameter= 0.221 inch, Length = fastener shall be long enough to fully penetrate Vertical Siding.
- Caution: Choose a fastener length that won't damage wiring or other utilities in the exterior wall assembly.

Fastener Placement for Battens:

- Maximum 3/8 inch from ends and edges (See Figure 1 pg. 27)

Fastener Spacing for Battens:

- Fastened with two nails at both ends, with additional fasteners spaced a maximum of 12 inches o.c. along alternating edges the length of the batten (Figure 1 pg. 27)
- Do not bridge floors with Vertical Siding or Battens. Create a horizontal joint between floors. (Figure 4 pg. 27)
- Vertical Siding must be applied in a manner that will not allow moisture intrusion or water buildup.
- Refer to LP® Strand Panel Siding Instructions and LP® Trim and Fascia Instructions for additional application information.

LAP SIDING INSTALLED VERTICALLY

- LP® Strand Lap may be installed Vertically for Board & Batten or Board-on-Board applications, according to the following requirements.
- Siding must be installed over a minimum 7/16 Category wood structural panel with an APA Trademark that contains the consensus Standard DOC PS 1 or PS 2, or LP® FlameBlock® Fire-Rated OSB Sheathing.
- Lap Siding installed vertical/batten may only span one plate-to-plate. Due to expected plate shrinkage, each vertical application is not to span beyond one floor to ceiling distance, or one floor to top of gable distance. (Figure 5 & 6)
- Battens must be a minimum 0.5 x 2.5 inches actual size.

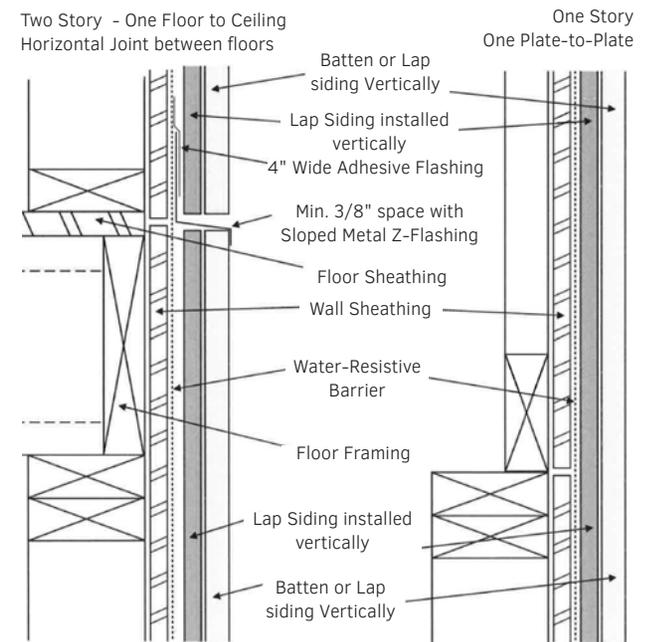


Figure 5

Figure 6

- Siding must be installed over a non-compressible drainable housewrap to provide drainage behind siding.
- Touch-up paint all cut/exposed ends.
- The edges of Lap Siding installed vertically must be spaced a minimum of 3/16 inch from each other. Spacing cannot exceed the distance that will allow a minimum 1 inch of bearing surface for the overlapping piece of Lap Siding. (See Figure 3 & 4 on pg. 29)
- Sealant is not required in any vertical joint covered by Lap Siding or Batten and backed by a water-resistive barrier.

CONTINUED ON NEXT PAGE

LAP SIDING
INSTALLED VERTICALLY continued

Minimum Fastener Type:

- Corrosion Resistant= (ASTM A153) Hot-dipped Galvanized or stainless steel
- Ring Shank: Shank diameter= 0.092 inch, Length= fastener shall be long enough to fully penetrate structural panel sheathing.
- Ensure that the ring shanks of the nail fully engages the wood structural panel wall sheathing.
- Caution: The length of fastener should be chosen to reduce possible damage to wiring or other utilities in the exterior wall assembly

Fastener Placement:

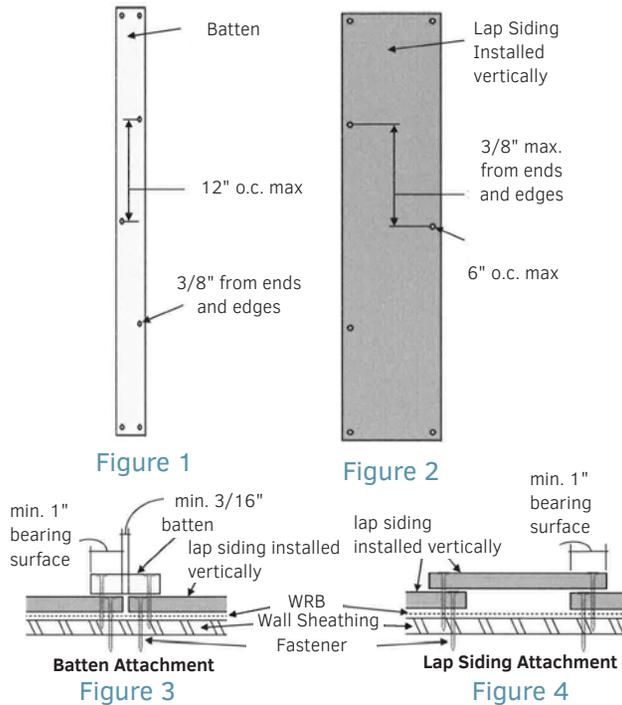
- 3/8 inch from ends and edges (Figure 2)

Fastener Spacing:

- Fastened with two nails at both ends, with additional fasteners spaced a max of 12 inches o.c. along alternating edges (See Figure 2)

Minimum Fastener Type for Batten:

- Corrosion Resistant= (ASTM A153) Hot-dipped galvanized or stainless steel
- Ring Shank nails provide superior resistance to fastener pull-through.
- In Hurricane-Prone Regions or locations where negative wind loads are a concern, ring shank nails should be used.



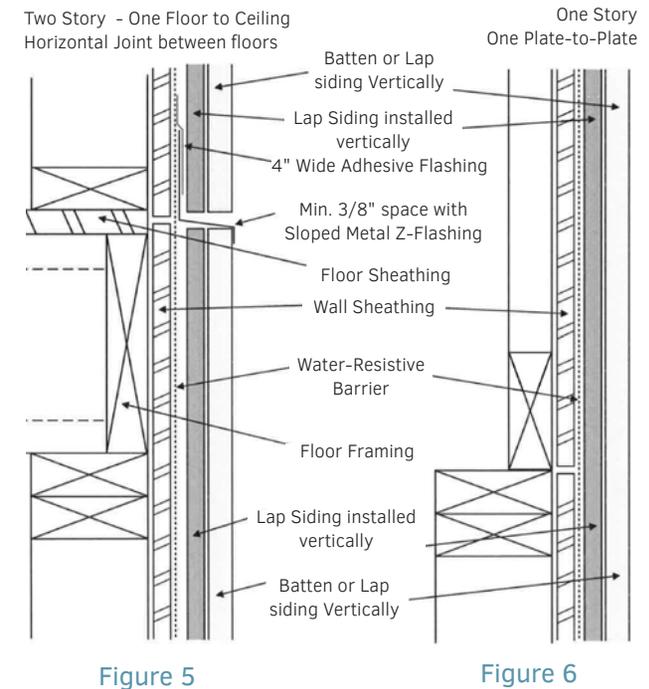
- Trim nails may be used in other locations with the following cautions:
- Do not overdrive or countersink the fastener, nail flush with the surface of batten. Detachment of battens is not covered by the LP® SmartSide® limited warranty whether ring shank or trim nails are used.
- Shank diameter = 0.092 inch, Head diameter = 0.221 inch, Length = fastener shall be long enough to fully penetrate Lap Siding. Caution: The length of fastener should be chosen to reduce possible damage to wiring or other utilities in the exterior wall assembly.

Fastener Placement for Battens:

- 3/8 inch from ends and edges (Figure 1)

Fastener Spacing for Battens:

- Fastened with two nails at both ends, with additional fasteners spaced a max. of 12 inches o.c. along alternating edges the length of the batten (Figure 1)
- Do not bridge floors with Lap Siding installed vertically or Battens.
- Create a horizontal joint between floors. Horizontal joint must be flashed with Sloped Metal Z-flashing. (Figure 5)



LAP SIDING

INSTALLED VERTICALLY continued

- Lap Siding installed vertically must be applied in a manner that will not allow moisture intrusion or water buildup.
- When using LP® SmartSide® siding with other siding products like stucco, brick or cultured stone veneers, it is important to use a capillary break so moisture absorbed into those veneers cannot be transferred into SmartSide siding. Separate SmartSide siding from veneers with min. 3/8" space for horizontal joints and 3/8" for vertical joints, use sealant. Backer rod may be required by the sealant manufacturer. (Figure 7 & 8)
- All other requirements of the LP® Lap Siding Instructions and Trim and Fascia Instructions must be followed.

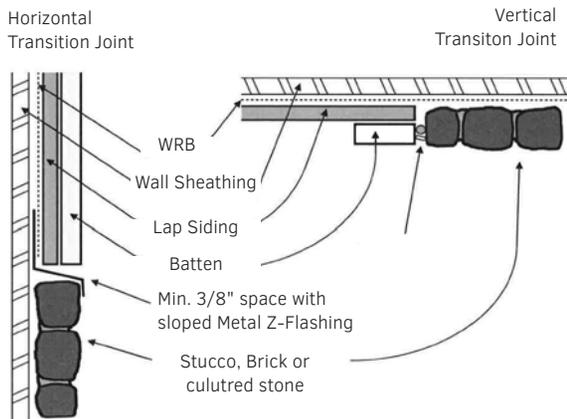


Figure 7

Figure 8

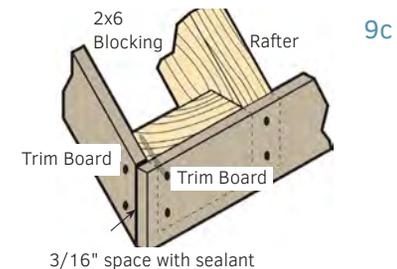
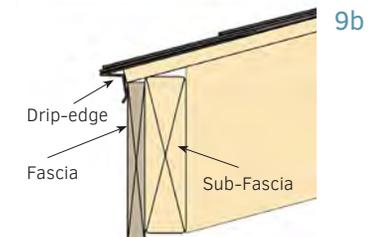
FASCIA APPLICATION

Trim may be installed as fascia, without sub fascia, if it is 440 Series or larger and the following specifications are met:

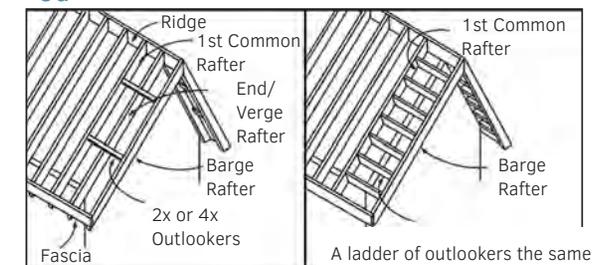
- Trim and Fascia must be greater than 5 inches wide. Maximum roof truss or rafter spacing of 24 inches on-center.
- If trim is installed directly to outlookers on an overhanging rake, the outlookers must be installed edgewise and must be spaced no wider than 24 inches o.c. (Diagram 9d)
- 190 Series Trim and Fascia products **MUST BE** supported with solid wood sub-fascia.
- Trim and Fascia are not designed for structural applications and cannot be used in the structural design of a roof assembly.
- Exposed flying or suspended barge, rake or fascia tails are not covered under the LP® SmartSide® trim limited warranty if trim is extended beyond the protection of the roof system.
- If LP® SmartSide® trim is extended beyond the protection of the roof system, cap the top of the trim with a metal coping that is integrated with the roofing system. (Diagram 9a)
- Install drip-edge to prevent water buildup behind fascia and trim. (Diagrams 2c and 9b)

AT CORNERS: (See diagram 9c)

- All joints must be supported by framing.
- Do not nail from the face of one trim member into the edge of another.
- Do not miter cut the corner joint.



9d



A ladder of outlookers the same dimension as rafters at 24" o.c. max

FASCIA APPLICATION continued

These steps show the correct procedure for installing roof edge products to facilitate easy installation of the LP® SmartSide® Soffit and Fascia.



Depending on the situation you will need to use your discretion to install Soffit or Fascia first.



STEP 1: Hold the metal roof edge up to the eave edge of the roof line. Keep the top edge of the metal on the plane of the sheathing, slide the metal roof edge up or down the roof until a 5/8" measurement is achieved perpendicularly out from the Fascia to the inside of the bend in the metal roof edge.



Continue to hold it in this position.



STEP 2: While in the same position as Step 1, mark the top edge of the metal roof edge on the roof sheathing.



STEP 3:

Take the distance of the mark from Step 2 measure the edge of the roof to the mark on the opposite of the eave. Snap a chalk line from end to end for reference.



STEP 4: Install the metal roof edge by aligning to the chalk line and fasten. Be sure excess material hangs over past the ends of the roof corners, gable or eave intersection.



Trim the edge of the metal roof once it is installed on the gable ends or around the corners (for hip roof lines).



STEP 5: For hip roof lines, repeat steps 1 through 3 for the other sides of the roof system and then skip to Step 10.



STEP 6: Install roofing underlayment.

STEP 7: For gable ends, hold the metal roof edge up to the gable edge of the roof line. Keep the top edge of the metal roof edge on the plane of the sheathing.



Then slide the metal roof edge in or out from the edge of the roof until 5/8" measurement is achieved from the fascia to the inside of the bend in the metal roof edge. Continue to hold it in this position.



STEP 8: While holding it in position, mark the edge of the metal roof edge onto the roof underlayment.

STEP 9: Measure and then mark the distance from the edge of the

roof at the top end of the gable and snap a chalk line from the bottom to the top. The metal roof edge on the eave will be trimmed later (Approx. 2")

STEP 10: Next trim the metal roof edge on the eave so that it fits with the metal roof edge going up the gable or around the corner for hip roof lines. Leaving the installed piece longer than necessary. (Approx. 2") Trim AFTER the Fascia is added.

FASCIA APPLICATION continued

STEP 11: Install the metal drip edge up the gable end using the chalk line as a reference and fasten. Be sure to overhang excess material (Approx. 2") Note: This will need to be trimmed AFTER the LP® SmartSide® Fascia is installed.



STEP 12: Next lift up on the metal roof edge on the eave end and slide your ruler up until it bumps the top of the inside. Record the measurement where the bottom of the sub-fascia ends.



STEP 13: Measure and mark the LP® SmartSide® Fascia from Step 12 at the recorded measurement. It is important that this measurement be pulled from the dado as shown. Rip the Fascia to width, and use Diamond Kote® touch-up paint on all cut edges.



STEP 14: Cut the fascia to length and paint all cut edges. Start by installing the Fascia on the eaves. First lift up on the metal roof edge and slip the Fascia behind the metal.



Make sure to fasten the fascia every 24" o.c. maximum. Use Diamond Kote® touch-up paint on all face nails.

STEP 15: Install the gable end Fascia or/ other sides of a hip roof. Finish by trimming the excess metal roof edge off of the corners.

STEP 16: After finishing the Fascia, the next step is adding the Soffit if it is not already installed.

SOFFIT APPLICATION

- Architectural Collection Vented Cut-To-Width (CTW) soffit provides a minimum of 10 square inches per lineal foot of ventilation.
- Recommended spans for open and closed soffits are given in Table 1. The recommendations in Table 1 for open Soffits also apply to combined roof/ceiling construction.
- Panels are assumed continuous over two or more spans with the long dimension or strength axis across supports for both applications.
- In open and closed soffit construction, protect panel edges against direct exposure to the weather with LP® SmartSide® Trim and Fascia.

- Apply the Soffit in a manner that prevents moisture intrusion and water build-up. All openings, other than the vents, must be sealed, caulked, and/or flashed.
- SOFFIT MUST NOT BE IN DIRECT CONTACT WITH MASONRY, CONCRETE, BRICK, STONE, STUCCO OR MORTAR.

TABLE 1 - LP® SmartSide® CTW, Vented CTW and Soffit Panels (Long Dimension Across Supports)

Maximum Span (inches) All Edges Supported	Nominal Panel Thickness	Nail Size + Type
24	Precision Series 38 Series SmartSide soffit	6d (0.099") nonstaining, hot-dipped galvanized box
24	Precision Series 76 and 190 Series SmartSide soffit	8d (0.113") nonstaining, hot-dipped galvanized box
24	Foundations 76 Series LP SmartSide soffit	8d (0.113") nonstaining, hot-dipped galvanized box

INSTALLATION

- Panels must be installed perpendicular to supports.
- Minimum size framing should be nominal 2" x 4"
- All panel edges must be supported or backed by solid framing.
- Consult your local building code for open soffit applications.
- **When installing Soffit with Soffit Channel, it is highly recommended to double up framing members at all soffit joints and seams.**

SOFFIT APPLICATION continued

- Space nails 6" o.c. at panel edges and 12" o.c. at intermediate supports. **Do not use staples.**
- When installing the Architectural Collection vented soffit, avoid cutting through the vented areas. If it cannot be avoided, take special precautions to avoid damage to spokes within the vent.
- Avoid diagonal cuts through the vented areas. If necessary all soffit edges must be supported or backed by solid framing.
- Use construction adhesive to attach spokes within the cut area of the vent to solid framing.
- Exhaust ducts shall terminate not less than 3' in any direction from openings in vented soffit. Refer to your local code.
- The spokes within the vent may warp slightly during acclimation to the local environment. This condition is only temporary and the spokes will straighten.
- In closed soffit applications factory manufactured Cut-To-Width soffit is approved.
- Field prepared Cut-To-Width soffit should comply with local building codes.

SOFFIT CHANNEL OPTION

- When using 16' soffit, space the end and/or edge joints 1/4" then install Soffit Channel.

- When using 8' soffit, space the end and edge joints 3/16" then install Soffit Channel.
- When fastening at the soffit ends and edges fasten as close to the Soffit Channel as possible and angle fasteners slightly to ensure penetration into framing members.

CAULKING OPTION

- When using 8' soffit, space the end and edge joints 3/16" then caulk.
- When using 16' soffit, space the end and edge joints 3/16" then caulk.

LP® SmartSide® Soffit products are not designed for and are not suitable for use as siding or trim other than Smooth Foundations Soffit.

GAPS + SEALANTS

- Seal all gaps with a high-quality, non hardening, paintable sealant.
- Follow the sealant manufacturer's instructions for application or [watch caulking video on our YouTube Channel.](#)

FIGURE 3: VENTED SOFFIT

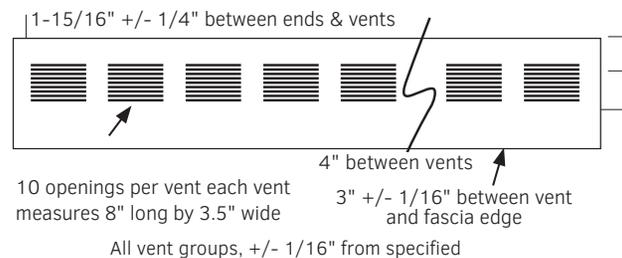


FIGURE 4: 12 IN. CUT TO WIDTH SOFFIT FRAMING DIAGRAM

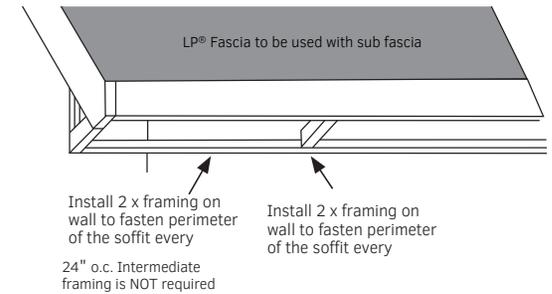


FIGURE 5: 16 IN. AND 24 IN. CUT TO WIDTH SOFFIT FRAMING DIAGRAM

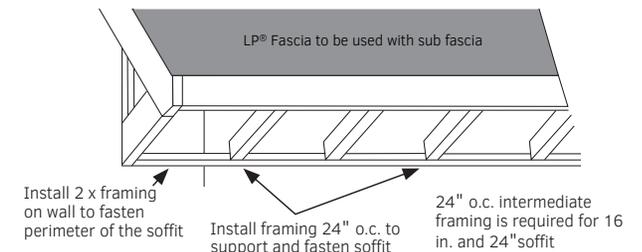


FIGURE 6: 12 IN. CUT TO WIDTH SOFFIT NAILING DIAGRAM

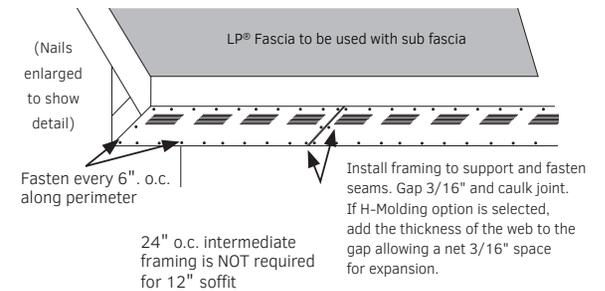


FIGURE 7: 16 IN. + 24 IN. CUT TO WIDTH NAILING FRAMING DIAGRAM

