SECTION 1 - GETTING STARTED

Tru-Brix Real Brick Siding is a revolutionary new method of installing brick that can be easily accomplished by reading and following Tru-Brix’s Installation Instructions. Following Tru-Brix Installation Instructions will result in an attractive long lasting brick wall that provides all of the benefits of traditional brick masonry.

Read this Installation Manual completely before starting your project. Create an installation plan that includes scheduling each area and preparing your work area to improve efficiency and productivity. Make sure that you have all of the necessary tools, scaffolding, and safety equipment to insure a safe, efficient, and beautiful project.

Suggested Tools

- **Metal Cut Off Saw** - A good quality metal cut off saw with a metal cutting abrasive blade is required for cutting Tru-Brix steel rails.

- **Jig Saw** - A good quality jig saw with a 18 point metal cutting blade will be required to make any Tru-Brix steel rail horizontal or pattern cuts.

- **Miter Saw or Masonry Wet Saw** - A miter saw with a masonry blade or masonry wet saw may be used to cut Tru-Brix tiles and special shapes. (Note: A brick guillotine cutter may also be used. This is available from a masonry supply dealer or equipment rental center. A brick guillotine cutter works well for Tru-Brix tile straight cuts.)

- **Screw Gun** - Battery powered screw guns will be required to install Tru-Brix steel rail using Tru-Brix screw fasteners.

- **Electric Drill and Mortar Paddles** - To adequately mix Tru-Brix mortar, we recommend using Tru-Brix mortar paddles and an Electric Drill. Tru-Brix mortar paddles may be purchased from your Tru-Brix dealer.

- **Tru-Brix Mortar Pointing Gun** - We recommend using a Tru-Brix Mortar Pointing Gun for grouting your Tru-Brix project. This tool may be purchased from your Tru-Brix dealer.

- **Miscellaneous Hand Tools** - Tool Belt, Rubber Mallet, Hammer, Nail Punch, Tape Measure, Tin Snips, Utility Knife, Carpenter Pencil, Chalk Line, Caulk Gun, Slap Stapler, Mason's Pointing Trowel, Garden Trowel, Mason's Soft Bristle Brush

Job Safety

- Always wear safety glasses.

- Respirators (dust masks) must be worn when you are cutting brick or in the area that the brick are being cut. N-90 rated dust masks or better must be worn to avoid exposure to the silica dust created when dry cutting brick.

- Hard hats must be worn when any work is being performed above head height.

- Wear hearing protection equipment when exposed to the high sound volume of masonry and metal cutting saws.

- Do not wear loose fitting clothing while using power equipment or climbing
SECTION 2 - WALL TYPES & FASTENER SELECTION

Choosing the Correct Tru-Brix Fastener

You will need to choose a screw that will go all the way thru the sheathing material and grip into the structural framing at least 1 inch but no more than 1-1/4 inches at each place the rail is attached with a Tru-Brix fastener. This maximum depth is intended to avoid electrical wiring or plumbing that may be installed through the studs.

To prevent damage while installing the Tru-Brix rail onto the substrate, it is in your best interest to have a qualified professional determine whether or not you may damage plumbing pipes, gas lines, electrical wiring, etc. It is the installers responsibility to prevent damaging these items during the siding installation.

Structure Types

Typical Residential Construction - Most typical modern construction wood frame homes will have 2x4 or 2x6 wood studs with a 7/16 inch O.S.B. sheathing on the exterior. This type of framing will require that you use a 1-5/8 inch Tru-Brix fastener.

Tru-brix can be applied to ALMOST any modern building. Installers should be aware that some structures MAY NOT be suitable for the application of Tru-brix.

If you are attempting an installation not covered in this Installation Manual, contract your Tru-Brix representative.

Older Homes or Buildings - Older frame homes or buildings with an existing wood siding that also serves as the structural sheathing will need special attention. In these cases do not remove the wood siding, adding a layer of 7/16 inch O.S.B. or plywood will smooth the wall so the steel rail can be applied to a smooth surface. Screws of the appropriate size will need to be used to hold the rails to the framing members. (See above, Choosing the Correct Tru-Brix Fastener.)

Never screw the rail to the siding / sheathing only. Screws must go through the siding / sheathing and into the framing member. This may require you to pre-drill for screws on older structures. The screws need to be long enough to go into the studs at least 1 inch but no more than 1-1/4 inch to hold fast and not be so long that there is the potential for the screws to contact electrical wiring in the frame wall.
Typical Modern Wood-Frame Construction

You must first remove all of the existing siding from the wall. In the case shown in Figure 1A, there is an existing 7/16 inch sheathing. The screw must penetrate the existing sheathing and grip into the stud at least 1 inch but no more than 1-1/4 inch, so you will need a Tru-Brix screw that is at minimum 1-3/4 inch and at maximum 2 inches.
Projects with Exterior Insulating Sheathing

In the case shown in Figure 1B, the screws will be going through 1 inch of exterior insulating sheathing. The screws must grip into the wood framing member at least 1 inch but no more than 1-1/4 inch, so you will need a Tru-Brix screw that is at minimum 2 inches and at maximum 2-1/4 inches.

Figure 1B
In the case shown in Figure 1C, the screws will be going through 1/2 inch of exterior insulating sheathing. The screws must grip into the wood framing member at least 1 inch but no more than 1-1/4 inch, so you will need a Tru-Brix screw at minimum 1-1/2 inch and at maximum 1-3/4 inch.
Projects with Existing Clapboard Siding

In the case shown in Figure 1D, the 3/4 inch siding will remain and a 7/16 inch O.S.B. or plywood will be installed over the siding. In this case it may be necessary to pre-drill the holes to prevent the screws from breaking or not tightening down sufficiently. The screw must grip into the framing member by at least 1 inch but no more than 1-1/4 inch, so you will need a Tru-Brix screw at minimum 2-1/4 inches and at maximum 2-1/2 inches.

Figure 1D
Projects with Existing 1x6 Sheathing

In the case shown in Figure 1E, the existing 1x6 is not sufficiently smooth enough to accept the rail, so it will be necessary to install a layer of 7/16 inch O.S.B. or plywood over the existing sheathing; this prevents the rail from being deformed when it is attached to the substrate. In this case it may be necessary to pre-drill the holes to prevent the screws from breaking or not tightening down sufficiently. The screws in Figure 1E will be going thru 3/4 inch of 1x6 sheathing and 7/16 inch of O.S.B. or CDX plywood. The screws must grip into the wood framing member at least 1 inch but no more than 1-1/4 inch, so you will need a Tru-Brix screw at minimum 2-1/2 inches and at maximum 2-1/4 inches.

Figure 1E
In the case shown in Figure 1F, the existing 1x6 is smooth enough to accept the rail. In this case it may be necessary to pre-drill the holes to prevent the screws from breaking or not tightening down sufficiently. The screws in Figure 1F will be going thru 3/4 inch of 1x6 sheathing. The screws must grip into the wood framing member at least 1 inch but no more than 1-1/4 inch, so you will need a Tru-Brix screw at minimum 1-3/4 inches and at maximum 2 inches.
Steel Framed or Steel Stud Buildings

Self tapping metal-screws will be required to attach the Tru-Brix steel rail on projects that contain steel framing and supports (typically used for commercial projects). See Figure 1G.
Tru-Brix over Masonry Substrates

Tru-Brix Siding can be easily installed over brick, block, or concrete substrates. You will need to use masonry screws to attach the rail to block, brick or concrete substrates. If you are installing Tru-Brix over an exterior block or concrete substrate and the interior contains heated living space, then it is required to install Tru-Brix Building Wrap on the wall prior to installing Tru-Brix rail. Block or concrete exterior surfaces over unheated crawl spaces do not require Tru-Brix Building Wrap. If you are installing Tru-Brix over a properly functioning brick wall it is not necessary to install Tru-Brix Building Wrap over the wall before installing the rail. For most masonry substrates, a 3/16 x 1-1/4 inch masonry screw is recommended.

For interior block or concrete walls it may be necessary to use an appropriate masonry sealer prior to Tru-Brix rail installation. If the wall shows any signs of dampness, we recommend consulting with a professional waterproofing contractor for advice prior to Tru-Brix installation.

Here are three methods of installing Tru-brix on a C.M.U. (block), concrete, or other masonry type wall.

- **Method One** - This method is appropriate for both interior and exterior applications. In this method, the rails are applied directly to the wall with masonry screws. This method should only be used when the wall receiving the rail is very straight and smooth and no extra insulation is desired or needed. **See Figure 1H.**

![Figure 1H](image-url)
• **Method Two** - This method is appropriate for both interior and exterior applications. In this method, furring strips are installed on the wall before installing the rails. This allows the furring strips to be shimmed when there are minor deviations in the wall that may be adjusted for when installing the furring strips. This will also allow a thin foam board installation to be cut and put between the furring strips before the rail is installed to give some insulation value to the wall while taking up a minimum amount of space in the room. Pressure treated lumber should always be used when lumber comes into direct contact with masonry. **See Figure 1I.**

![Figure 1I](image)

• **Method Three** - This method is appropriate only for interior applications. In this method, the installer will frame a stud wall and install it along the wall to receive the Tru-Brix. This will allow you to make a straight and plumb wall that will not be affected by the irregularities of the existing wall and leaves room for roll or batting insulation. **See Figure 1J.**
Masonry substrates can vary and may require a different diameter and length masonry screw. When installing with masonry screws, secure the rail in place and use a masonry drill bit (size as recommended by masonry screw supplier) to drill a hole through one of the pre-punched rail holes. Then screw the rail to the wall using a masonry screw. Make sure that the screw seats properly and does not spin. Repeat this for each screw location. If the screw spins and will not tighten, drill another hole 2 inches away and fasten with another screw.

For faster installation and longer drill bit life, use a hammer drill when drilling into masonry.

For faster installation and longer drill bit life, use a hammer drill when drilling into masonry.

Brick at Grade

Tru-Brix Rail is galvanized and coated with a polymer paint and rated to withstand continuous ground contact. Simply dig enough soil away from the foundation to allow the brick to go below grade and place the soil back against the brick after the mortar has cured for a minimum of 12 hours.

If a special situation arises, contact your Tru-Brix representative.

Place ground cover such as straw, mulch, or sod around the foundation to prevent mud from splashing onto the new Tru-Brix tiles and causing discoloration. It is very difficult to remove mud stains from brick and often replacing the discolored brick is the only solution. Prevention is the best cure for mud stained brick.
SECTION 3 - WALL PREPARATION

Siding Removal

It is important to plan your project and not remove the existing siding unless you have time to install Tru-Brix building wrap and keep the wall weather tight. If you remove the entire project’s existing siding, you should completely install the Tru-Brix building wrap and window and door flashing.

If you choose to remove the siding on one wall section at a time, make sure that you allow for an additional 6 inches of building wrap at each corner of the wall section. See Figure 2. This extra building wrap will be used to turn corners and will be placed under the Tru-Brix rail on adjacent walls. After installing rail, secure the extra 6 inches building wrap and prevent it from blowing and allowing water to penetrate through the corner seam.

You should also properly install Tru-Brix Building Wrap and Flashing around all window and door openings once you remove the existing siding. Refer to Installing Tru-Brix Building Wrap and Flashings on Page 18 for proper flashing instructions.

Figure 2
Brick Front Only Projects

A brick front only project will require Tru-Brix corner tiles and Tru-Brix J-Channel, and will be similar to normal masonry design. You will need to remove 3 inches of the siding material adjacent to the front exterior. See Figure 3.

Follow the steps below to create an attractive transition from Tru-Brix on the front of your project to the existing side exteriors:

- Snap a vertical chalk line from the soffit to the ground 3 inches in from the exterior corner. Use the appropriate snips or saw to remove the existing siding and/or corner trim from the chalk line back to the corner. Do not damage the substrate or building wrap while trimming back this existing siding.
- Install an 8-inch flexible roll flashing on the corner that will be tucked behind the siding as shown in Figure 3.
- Install the J-Channel by tucking it into place over the ends of the siding.
- Caulk all along the J-Channel and flashing with a high-quality sealant.
- Place a 90° corner brick on the corner, then adjust the J-Channel to meet the corner tile to make sure the J-Channel is placed correctly.

Check the Condition of the Wall

Before installing the Tru-Brix Building Wrap, inspect and repair any damage to the wall including rotten wood and insect infestation.

You must also repair any of the following problem areas prior to installing building wrap:

☐ Nails that are not flush with the wall
☐ Warped and bowed studs (See Wall Repairs below)
☐ Wall Framing Corners that are not Flush (See Wall Repairs below)
☐ Wall Offset (Framing that is not flush from top of wall framing to deck framing; see Wall Repairs)
Wall Repairs

Warped and Bowed Studs - It is recommended to reduce the appearance of uneven walls due to warped or bowed studs prior to installing Tru-Brix steel rail. For studs that are bowed in, a simple solution is tack a cut strip of a fiberglass shingle or wood shim to the bowed area of the wall stud.

If a supporting stud is bowed out, it is recommended to tack fiberglass shingle strips or wood shims to the adjacent wall studs.

Following this suggested procedure should result in a smooth wall plane.

Vertical Wall Offset - (Shown in Figures 4A and 4B.) For large offsets, it is recommended that you cut wood wedges and have them start the same distance as the offset and taper no more than 1/16 inch per inch of vertical height. Attach these tapered wedges to the vertical studs that the rail will be attached to. Make sure that the Tru-Brix fastener will be long enough to grip a minimum of 1 inch and a maximum of 1-1/4 inch into the supporting stud after being installed through the wood taper.
**Corner Not Flush** - In the examples shown in Figure 4C and Figure 4D, you will need to use plywood that is the correct thickness to make the corner offset flush. Cut the plywood to the appropriate width and install where needed to eliminate any offset. Make sure that the Tru-Brix fastener will penetrate a minimum of 1 inch and maximum of 1-1/4 inch into the corner supporting studs.

![Figure 4C](image)

![Figure 4D](image)
Removing Objects (Electrical Boxes and Fixtures, Hose Bibs, etc.)

The Tru-Brix siding system is 1 inch thick, therefore if you are doing a re-siding job it will be necessary to have an electrician install "box extenders" to allow the electrical fixtures to be reattached to the wall.

If the job is new construction you will need to have the electrician install the electric boxes 1 inch beyond the face of the sheathing to accommodate the thickness of the Tru-Brix. After the mortar has been installed the electrician can install the lighting fixtures etc. on the wall.

You have two options when installing Tru-Brix on a wall that has permanent objects attached to it, such as electrical outlets, hose bibs, meter boxes, etc. If these items can be loosened from the wall and have enough free movement to allow the Tru-Brix tile to be installed behind it, that will be your best option.

If there is not enough room to run the tile behind the fixture, you can have a licensed electrician or licensed plumber extend or remove the fixture, then have them reinstall the fixture in accordance with the local building codes.

Another solution may be to install J-channel around the fixture and install the brick into the J-channel, as you would around a window. See Figure 5.

Installing Tru-Brix Building Wrap and Flashings

**Tools Required**

- Utility knife
- Slap stapler
- Hammer
- Roofing nails

**CAUTION!**

All Warranties are null and void if the Tru-Brix Building Wrap and the recommended flashings are not used or are installed incorrectly. Be certain to use only Tru-Brix supplied materials and follow these installation instructions carefully.

Tru-Brix Building Wrap is a special “drainage” type material that will protect the wall system from condensation or leaks when properly installed. It is important to install the wrap properly with no gaps or tears because Tru-Brix Building Wrap is an air barrier and a moisture barrier.

For proper window flashing, use a minimum 4 inch wide high-quality plastic or self-sticking flashing product. For corner flashing, use a minimum 6 inch wide high-quality plastic or self-sticking flashing product. Both of these are available from your Tru-Brix supplier. Corner flashing should be used at all interior and exterior corners for extra protection.
**Tru-Brix Building Wrap** - After completing all wall preparation, apply the Tru-Brix Building Wrap to as much of the walls as is practical. The wrap must be placed horizontally, with the Tru-Brix logo right side up. Cover everything, including windows and doors.

- Start at ground level. Make certain that the wrap reaches the ground over its entire length. Cut the bottom on an angle if the ground slopes. Cut out for steps, porches, etc. as necessary. Use a slap stapler or plastic cap nails to hold the wrap in place. Do not use a slap stapler when installing wrap over soft insulating board; in this case, you will need to use plastic cap nails driven through the foam and into the studs. At top corners, apply 6 to 10 staples or cap nails, then apply staples or cap nails approximately every 6-8 inches along the top. Then apply staples or cap nails along vertical edges approximately every 12 inches. Apply more staples or cap nails as needed to prevent the wrap from sagging or being affected by wind.

- At any place the wrap is damaged, cut or torn, use the Tru-Brix Wrap-Tape.

- At windows and doors, cut the wrap away as shown in the steps in Figure 6. At window and door heads, cut diagonal slits above the window at about 45 degrees for 8 inches, as shown in Figure 7. The flashing will be applied underneath the wrap here later.

- When installing wrap on second or subsequent levels, overlap the lower previously installed wrap by 10 inches. See Figure 8A and Figure 8B. This overlap does not need to be taped.
**Self-Adhesive Window Flashing** - Apply 4-6 inch wide flashing at all windows and doors. See Figure 9. The flashing must completely seal the seams between the walls and window or door frames by turning out against the projection of the frame.

- **STEP 1**
  - Self-Adhesive Window Flashing
  - Overlapping Self-Adhesive Window Flashing

- **STEP 2**
  - Overlapping Self-Adhesive Window Flashing

- **STEP 3**
  - Overlapping Self-Adhesive Window Flashing

![Figure 9](image_url)

- Apply flashing below the sill first. Cut the flashing at the window corners and turn the flashing out against the window frame, but not more than 1 inch, which is the most that the J-channel will cover. Apply flashing to the vertical jambs in the same manner.
• When applying the Flashing above the windows, hold up the flap of wrap and apply the flashing directly to the sheathing, but bring it out over the Wrap at the ends. See Figure 10. Do not cut the head flashing at the window corners; instead, force it around the window frame corners as shown in Figure 11. Otherwise, there could be an open seam in the flashing at this critical position. Staple the wrap over the window, if necessary. Use Tru-Brix Wrap Tape to seal the two cuts in the wrap over the flashing as shown in Figure 12.

• At wall corners, you may cut the Tru-Brix Wrap if it is difficult to continue along the next wall. The cut should be at least 3 inches beyond the corner. When continuing with the next layer of wrap, it should overlap the first layer by at least 2 inches. Corner flashing must cover this seam in the wrap as described in the next section.

Corner Flashing - Apply corner flashing on top of the Tru-Brix Building Wrap at all external and internal building corners, including at bump-outs and bays, so that approximately 3 inches is applied to each wall.

• It is best to have one continuous piece of flashing the whole height of the corner. If you must use multiple pieces, overlap the upper piece over the lower piece by 2 inches. Use nails at every 20 - 24 inches on both sides of the corner, approximately 1 inch in from the edges of the Flashing. Nail the Flashing so that the nail heads compress the flashing material without puncturing it.

• When windows, doors, other sidings, or J-Channel are within the 3-inch distance of the corner that would be covered by the corner flashing, turn the corner flashing out against the edge of the other material, similarly to the instructions for window jamb flashing above.

• When doing a retrofit project, do not expose more wall than you can cover with Tru-Brix Building Wrap and Flashings before the end of the work day. Do not leave corners exposed overnight if possible, and certainly never longer than the next day. This could expose the building to leaks that could affect the finished interior of the building. For new construction, this requirement is usually not necessary.
Trimming Doors and Windows with J-Channel

Tools Required

- Screw Gun
- Level
- Chalk Line
- Tape Measure
- Metal Cutting Saw
- Caulk Gun
- Tin Snips

Prior to installing rails, Windows and doors may be trimmed with J-Channel.

If the top of the window will be treated with an Arch or Soldier Course that is made of Tru-Brix tiles that are thicker than the standard 1 inch tile, the J-channel running vertically along the sides of the window will stop flush with the top of the window.

- Cut a piece of J-channel the length of the bottom of the window plus double the height of the J-channel face. See Figure 13.

- Cut out the back of the j-channel the depth of the additional length on each end that was added to the total length of this piece of J-channel. See Figure 14.

- Nail the bottom piece of J-channel into place, centered on the window, with the extra length of face protruding evenly beyond both edges of the window bottom.

- Next, measure from the top of the window to the lower edge of the face of the J-channel that has been installed onto the bottom of the window. Cut a piece of J-channel this length. See Figure 15.
• Cut a 45° angle on the face of the J-channel. Snip the back corner of the J-channel even with the 45° cut on the face of the J-channel and bend this tab back at a 90° angle. See Figure 16.

• Then nail this piece of J-into place lapping the 45° cut over the face of the bottom J-channel (if the two faces will not stay snug you can use an 1/8 inch aluminum pop rivet to hold them together). See Figure 17.

• If you have measured correctly, the top of the J-channel will be flush with the top of the window. See Figure 18. If the J-channel is long you can easily trim it at this time. If it is too short, you will need to start this piece again.

• Nail the J-channel tightly into place, nailing thru the nail slots approximately every 6 inches.

• Repeat this step for installing J-channel on the other side of the window.

See Figure 19 for a completed installation.
If the brick tile above the window will be the same 1 inch thickness as the rest of the wall you will install J-channel at the window head, also. See Figure 20.

- Install the J-channel under the window as shown in Figure 13 and Figure 14.
- Measure from the top of the window to the bottom of the face of the J-channel that has been installed on the bottom of the window; add 1 inch to that measurement.
- Cut the bottom of the J-channel at a 45° angle. See Figure 15.
- Then snip the back corner and bend this tab back at a 90° angle. See Figure 16.
- Cut the extra 1 inch out of the back of the top end of the J-channel. See Figure 14.
- Nail these two side pieces of J-channel into place lapping the 45° cut over the face of the bottom J-channel. If the two faces will not stay snug you can use an 1/8 inch aluminum pop rivet, preferably the same color as the J-channel, to hold them together.
- Measure for the top piece of J-channel by measuring from the outside edge of the left side vertical piece of J-channel to the outside edge of the vertical piece of J-channel on the right side of the window. This measurement will be the window width plus the width of the face of both pieces of J-channel. See Figure 21.

- Cut a 45° angle on both ends of this piece of J-channel.
• Snip the back corner of the J-channel even with the 45° cut and bend this tab down at a 90° angle. See Figure 22.

• Install this piece of J-channel with the 45° angle on both ends overlapping the face of the side pieces. See Figure 23.

• Nail this into place with roofing nails spaced approx. 6 inches apart and nailed 2-4 inches from each end.

• If the two faces will not stay snug you can use an 1/8 inch aluminum pop rivet to hold them together.

• See Figure 24 for a completed installation.
SECTION 4 - TRU-BRIX RAIL INSTALLATION

Tools Required

- Screw Gun
- Chalk Line
- Tape Measure
- Metal Cutting Saw
- Caulk Gun
- Tin Snips

Determining Rail Starting Point

One of the advantages of Tru-Brix is that you can start rail installation at any point on the wall. Tru-Brix rails may be installed from the bottom working up a wall or from the top working down the wall.

The key considerations in finding a starting point are:

- Finding a low starting point that will allow you to easily keep the rails level
- Determining how close to ground level you want to install rails
- Analyzing all openings and determining a starting point that will minimize course adjustments.
- Finding a point that allows for easy chalk line markings

Marking the Location of the First Tru-Brix Rail

Once you have determined a starting point A, you need to take measurements to assure that the rails are installed level and that rails will align at each corner. The easiest way to determine that the rails are installed level is to measure the distance from your starting point A up to the building’s soffit. **See Figure 25.** This measurement from your starting point A to the soffit will be called H1.

![Figure 25](image-url)
Move along your starting wall to the next opening, Point B, and measure from the soffit down a distance equal to H1; mark this as Point B. Repeat this procedure for Points C, D, E, and F. Once all marks have been made, snap a chalk line between Points A and B, Points C and D, and Points E & F. Make sure that the chalk line between Point C and D and the chalk line between Point E and F align at the corner. Rails that intersect at all corners must align or the Tru-Brix corner units will not fit properly.

**Marking Vertical Coursing Lines**

Tru-Brix rails are 3.20 inches in height and 5 rails will course every 16 inches when installed snugly against each other. This is the ideal condition to maintain the optimum joint size and spacing. There will be times when you will spread the rails out slightly in order to adjust coursing to meet certain conditions, such as window sills. **See Section 5 - Adjusting Coursing to Meet Window Openings.** The rails should never be spaced at more than 3-5/16 inches, maintaining at least 1/8 inch overlap of the flanges where the rails meet. Snap additional chalk lines in 16 inch intervals above or below the chalk lines marked in the step above.

**Finding and Marking Wall Studs**

Prior to installing rails, it is helpful to locate and mark the location of wall studs. Marking the stud locations will speed up installation and prevent fasteners from being incorrectly installed in the exterior sheathing.

**Installing the First Rail**

Align your first rail at Starting Point A and parallel with Chalk Line A-B, as referenced in Figure 25 on the previous page. Using a screw gun, insert a Tru-Brix fastener through the Tru-Brix rail and into the closest stud. Tighten the screw until the screw head is flush with the rail surface. Before inserting another screw, check the alignment of the rail and make sure that it is aligned with the chalk line. Insert another screw through the Tru-Brix rail and into the closest stud at the opposite end of the rail from Starting Point A. Check the alignment of the rail and finish inserting screws into every stud along the length of the rail.

All screws should be tight and anchored into supporting wall studs. Remove all improperly installed screws and caulk the screw hole with exterior grade silicon sealant to prevent water penetration. Screws should penetrate into the supporting wall stud or frame member by at least 1 inch and no more than 1-1/4 inch.
Completing Rail Installation and Joint Staggering

You may install additional rails either moving up or down the wall depending on your starting point. The design rail spacing is 3.2 inches which requires the flanges to be firmly seated and the backs of the rails touching each other. However, when you need to spread the rails slightly to meet certain conditions, the rails must never be spaced at more than 3-5/16 inches per course. Make certain that every rail flange is firmly seated into the next rail by at least 1/8 inch as shown in Figure 26. Use chalk lines and check for level as you install additional rails. Make certain that rails will meet precisely at all corners.

Figure 26
Tru-Brix rails are available only in 12 foot lengths. When installing rails along a wall section that is longer than 12 feet, it is important to stagger the rail joints and maintain a minimum 16 inches offset in joint placement between adjacent rails. See Figure 27. Use the appropriate fastener and install a fastener at every stud along the length of each rail.

It is important to check the entire length of every rail to be sure the rails are positioned correctly. If they are not positioned correctly, you may have to remove rails, which can cause hidden damage to the Tru-Brix Building Wrap.

Joints between rail ends must always occur halfway between two studs. Both rail ends should be the same distance from the nearest studs. Never attempt to join two rail ends at the same stud. Always maintain 1/8 inch gap between rail ends.

Walls will often be out of plumb containing both bowed and concave wall studs. It is possible to remove much of the unevenness in a wall by inserting shims behind Tru-Brix rails during installation. Shims can be purchased from your local lumber dealer or fiberglass shingles can be cut and used for the same purpose.
SECTION 5 - ADJUSTING BRICK COURSING TO FIT WINDOW OPENINGS

Tools Required

- Tape Measure
- Level or Carpenter's Square
- Angle Grinder

Determining Required Coursing Adjustment

- Install Tru-Brix Building Wrap and flashing around window openings prior to beginning rail installation. Also install J-Channel, if desired, before beginning rail installation.

- Measure the width of the opening from outside edge to outside edge of the J-Channel. Cut one piece of Tru-Brix steel rail to fit the opening measurement.

- Insert a Tru-Brix Window Sill tile into each end of the cut rail piece. See Figure 28. See Section 6 - Tru-Brix Tile Installation for sill tile installation instructions.

- Place the steel rail with inserted Window Sill pieces snugly up against the J-Channel at the bottom of the window opening. Attach the steel rail in accordance with Tru-Brix rail installation instructions in Section 4 - Tru-Brix Rail Installation.

- Using your tape measure, measure from the bottom of the rail (Point A), down to your rail starting point. See Figure 29. Divide this measurement by 3.2 to calculate the Measurement From Point A to the Starting Point.

- Round down your rail calculation number to the lowest whole number. Multiply that number by 3.2 to calculate Coverage Before Adjustment.

- Subtract the Coverage Before Adjustment measurement from the Measurement From Point A to the Starting Point, as shown in the following example.
Measurement From Point A to Starting Point  46.5"

Divide by 3.2" / 3.2"

14.52 rail pieces

Round down to nearest whole number  14

Multiply by 3.2"  x 3.2"

Coverage Before Adjustment  44.8"

Measurement From Point A to Starting Point  46.5"

Subtract Coverage Before Adjustment  - 44.8"

Difference  1.7"

Determining Rail Adjustment - Tru-Brix rails can be adjusted up to 1/8 inch for each rail, allowing installers to adjust coursing to meet window sill or other wall openings. Since each rail can be adjusted up by 1/8 inch, it is possible to gain one vertical inch for every 8 rails installed.

Using the example above, it has been determined that it is necessary to adjust coursing by 1.7 inches, or rounding up to 1-3/4 inch. After installing the first rail at Starting Point A, install the second rail tightly against the first rail. Before fastening, slightly raise the second rail 1/8 inch. Repeat this process until you reach your wall opening. You must maintain at least a 1/8 inch overlap between rails. See Figure 30.

Course Adjusting to Meet the Top of Window Openings - The first step is to measure the distance from the top of the rail that is level with the bottom of the window opening up to the top of the window opening. To determine the number of required rails, divide this measurement by 3.2 inch. Round this number down to an even number and multiply by 3.2 inch. This is the amount of vertical coverage without adjusting coursing. To determine the distance to be adjusted, subtract this number from you original measurement. Divide the difference between the measurement and normal coverage by 1/8 inch to determine the number of rails that will need to be adjusted to meet your coursing target. See the following example for a sample calculation.
Measurement From Point A to Starting Point 62”
Divide by 3.2” / 3.2”

19.375 rail pieces

Round down to nearest whole number 19
Multiply by 3.2” x 3.2”

Coverage Before Adjustment 60.8”

Measurement From Point A to Starting Point 62”
Subtract Coverage Before Adjustment - 60.8”

Difference 1.2”

In this example it will take 10 rails adjusted by 1/8 inch to meet the coursing targets (1.2 inch divided by 1/8 inch is 9.6, or 10 rails). Any remaining rails can be tightly connected and do not require adjusting.

Placing Rails for Various Window Head Treatments

There are 3 different ways to treat window heads: Arches, Soldiers, or Running Bond. See Figure 31.

Most windows look best when finished with the Tru-Brix Arches. Tru-Brix Arches and Soldier Coursing window treatments offer you a way to adjust coursing if you were unable to meet the window head as described in Section 5 - Course Adjusting to Meet the Top of Window Openings. If you were unable to meet the window head properly, a running bond may not work at all. Gaps above windows where coursing does not meet the window head are not desirable and can lead to water penetration problems and an unprofessional appearance.

Choose one of the treatments and follow the procedure below BEFORE continuing to install any more rails. Be certain that all window flashings and the Tru-Brix Drainage Wrap are installed correctly before doing these procedures.
Tru-Brix Arches

Each Arch requires one Tru-Brix Keystone and several Tru-Brix Arch Pieces, both Left-hand and Right-hand. The number of Left and Right Arch Pieces will be determined by the size of the window opening. These standard Tru-Brix accessories are shown in the Standard Shapes Section in the Appendix. All of the Tru-Brix Arch Pieces are 9-1/8 inches high and can be cut to fit the height required by the position of the Tru-Brix Rail.

- If your coursing matches the window height so that the bottom of the rail above the window is within 1/2 inch of the top of the window casing, skip the next step.

- If the coursing does not meet the window head, then the Tru-Brix Arch can be cut to fit the dimensions required. Mark the positions of the rails that will be installed above the window. Measure the distance from the top of the window casing to the bottom of the rail above the arch. Subtract 1/8 inch to determine the exact height of the arch and keystone pieces. See Figure 38. When you finish placing the arch rail pieces, you will cut the pieces to this dimension. Cut only the tops of the arch pieces and keystone, because the bottoms may be exposed to view and should remain finished.

- If using the Tru-Brix Arch Template, set the center-of-keystone mark on the template at the center of the window casing. Mark the locations of the arch rails using the notches in the template. See Figure 39. Move the template as necessary to reach the window jamb. See Figure 40. If the last position indicated by the template is inside the casing of the window jamb, adjust the marks you have made by spreading them apart until the last mark meets the jamb. See Figure 41. Remember, you must not separate the rails by more than 1/8 inch.

![Always maintain a minimum 1/8 inch interlock of the flanges of adjacent rails.](image)
• If not using the template, find the center of the window head and place marks at 2-1/8 inches on either side. This is the position of the Tru-Brix Keystone. Then, measure out every 3-1/4 inches from those marks and mark the positions of the Arch Pieces. Follow the repositioning procedures described in the preceding paragraph.

• Now cut two rail pieces to fit the opening, and install them, using an actual keystone piece to get started placing the first rails. The top flanges of the rails should always face the Keystone, as shown in Figure 42.

• Once these two rail pieces are installed, you can add the rest in the positions you had determined. Use an anchor (screw) near each end of the rail pieces, but no closer than 1 inch from either end.

• Install all Tru-Brix Rail pieces for the arches prior to continuing to install the remaining standard coursing rails. You will install the Tru-Brix Arch Tiles and Keystones later during Section 6 - Tile Installation.
Tru-Brix Soldier Course

This technique uses regular Tru-Brix Tiles in a vertical position above the windows, similar to an arch. They can be installed with or without a J-channel at the window head.

• Tru-Brix Tiles are 7-5/8 inches long. You will need to measure the distance from the top of the window frame to the apparent top of a horizontal rail position, that is less that 7-5/8 inches. See Figure 43.

• Next, measure the window frame and divide by 3.2. This is the theoretical number of soldier pieces to cover the top of the window if the rails are installed normally (tight against each other). Take the next highest odd number as the actual number of soldiers you will install. Always use an odd number of soldiers for the best appearance. It is okay for the soldiers to end outside the window jambs, but never inside.

• Mark the center of the window head. Mark the center of a soldier brick. Place the soldier brick in a piece of rail and align the center marks. Use a carpenter’s square or level to hold this piece vertical. Mark the two sides of the Rail on the Wrap. You can now install the center rail piece to these marks, and finish installing the other soldier rail pieces.

• Cut the Tru-Brix Tiles to length and install in the Rail sections in the same direction, meaning keep the “lips” all to the left or all to the right. Complete all of the windows at each level before continuing to place the remaining horizontal rails.
Tru-Brix Running Bond Over Windows & Doors

This method works easiest and looks best when the coursing can be adjusted to allow for a whole brick tile to rest in the rail and be placed in the J-channel, as shown in Figure 44.

If coursing does not allow for an entire brick tile over the window, it will be necessary to cut a tile horizontally as shown in Figure 45.

Always apply a bead of high-quality exterior sealant where the J-channel meets the Tru-Brix tiles at the tops of windows, doors, and other openings.
Window Sill Treatment

Using a Tru-Brix S6 Sill is an easy and attractive method of installing Tru-Bix below windows.

• First, cut a piece of Tru-Brix steel rail the same length as the width of the J-channel below the window or the bottom of the window frame (if J-channel was not used).

• Second, snap two Tru-Brix S6 sills into each end of the cut rail.

• Third, place the rail and S6 sills directly below the bottom of the window frame. Slide the rail up until the top of each S6 sill is snug against the J-channel. See Figure 46A. If not using J-Channel, trim the top flange of the rail so the rail sits snugly against the bottom of the window frame. See Figure 46B. Using your screw gun, apply fasteners until the rail is securely fastened. If J-channel was not used, apply a bead of high-quality exterior sealant in the gap between the S6 sill and the window frame as shown in Figure 46B.

Finally, remove the two S6 sills and install fasteners at each end of the rail.

Next you must lay out the S6 sills to determine if it is necessary to trim the sill tiles. Each S6 sill measures 7 5/8 inches in length. After adding 3/8 inch for the mortar joint, an installed S6 will measure 8 inches. Re-measure the length of the rail you installed below the window. Divide this measurement by 8 inches to determine the quantity of sills required.

It is important to trim the S6 sills so that they are equal in length. See the following example for a sample calculation.
Window Bottom Rail Measurement 42"  
Divided by 8" (Mortared S6 Length) / 8"

S6 Sill Quantity 5.25

Round Up to Even Pieces 6

Width of All S6 Sill Pieces w/ Mortar 48"  
Subtract Window Bottom Rail Measurement - 42"

Difference 6"

Divide Difference by Number of Pieces 6" / 6 pieces = 1"  
Subtract Trim Amount from Mortared S6 Length 8" - 1" = 7"

After cutting each S6 Sill down to 7 inches, insert the cut S6 Sills into the rail below the window. Prior to grouting, align the sills so that the sills at each end match with the end of the window J-channel or window frame.

Running Bond Under a Window or Other Wall Opening

Another option to installing Tru-Brix under a window or opening is to not use a Tru-Brix sill but instead continue the running bond pattern.

If you have adjusted the rail coursing so that the Tru-Brix rail fits flush with the bottom of the window or opening, then you simply install Tru-Brix tiles without any cutting or trimming. It is easier to insert tiles to the right or left of the opening and then slide them along the rail until they are positioned correctly and match the running bond pattern.

If the rail coursing does not fit flush with the bottom of the window or opening, then you will need to cut both rail and Tru-Brix tiles. Measure the distance between inside of the J-channel and the rail below the window. Measure the width of the bottom of the window or opening. Cut a piece of Tru-Brix rail to fit this measurement.

Install the bottom half of the cut rail, overlapping the bottom rail and under the window J-channel.

Measure the distance from the underside of the J-channel to the bottom flange of the rail. This measurement will determine the height of the Tru-Brix rails that will be inserted into the rail directly below the window. Using a masonry blade, cut the Tru-Brix tile to the desired height. Slide the cut tiles into the rail, making sure that the tiles fit snug and are covered by the J-channel.
Special Details

Gable/Roofline Areas

Here are two ways to finish your project when Tru-Brix walls end at roof lines.

• **Traditional Stepped Counter Flashing** - Shown in Figure 47.
• **Straight Counter Flashing** - Shown in Figure 48.

Gable/Eave Areas

There are two ways to finish your project where a Tru-Brix wall intersects at an eave or gable.

• **Using Tru-Brix J-Channel** - If you choose this option, you must install the J-Channel prior to installing Tru-Brix rails and tiles. **See Figure 49.**

• **Using Tru-Brix Snap on Lineals** - Finishing this detail with a lineal not only provides a very attractive appearance but also allows the installer more flexibility when cutting rail and tiles to fit at an eave or gable line. Tru-Brix Lineals are designed to snap into Tru-Brix J-Channel. Install J-Channel prior to installing rail and tiles, then snap the Lineal on to the J-Channel after the Tru-Brix tiles have been installed and grouted. **See Figure 50.**
SECTION 6 - TRU-BRIX TILE INSTALLATION

Tools Required
- Rubber mallet
- Miter Saw with Masonry Blade
- Brick Guillotine (Chopper)

Proper Installation of Tru-Brix Tiles
Each Tru-Brix tile contains grooves on each long edge. Each tile also has one long edge that is slightly tapered. **Always install Tru-Brix tiles with the tapered edge down.** Insert a tile into the rail until the top groove fits into the top rail edge. Using a rubber mallet, tap the bottom of the tile in an upward motion until the rail bottom edge snaps into the tile’s bottom groove. See Figure 52.

Starting with a Tru-Brix Corner Tile
It is recommended to begin tile installation in the two Tru-Brix rails immediately below the lowest window opening. See Figure 53. If you are starting on a wall that requires corner units, begin the tile installation by inserting a Tru-Brix Corner tile (using the long end) at one end of the wall. Move to the other end of the wall and insert another Tru-Brix Corner unit (using the long end). Begin filling the first rail completely with Tru-Brix tiles, allowing 1/2 inch vertical head joints between all tiles.

Starting with a Tru-Brix Tile
If you are not starting at a corner, start the first row with a full Tru-Brix tile. Move to the other end of the wall and insert another full Tru-Brix tile. Completely fill the first rail with Tru-Brix tiles, allowing 1/2 inch vertical head joints between all tiles.
**Adjusting for Bond Pattern**

If it is necessary to use a Tru-Brix tile that is less than full-length, it is best to place this tile at a wall end, corner, or wall opening. To maintain an attractive bond pattern, you may adjust vertical head joints and slide brick tiles in the rail until the rail only contains full brick tiles. Do not open the vertical head joints larger than 5/8 inch or smaller than 3/8 inch.

**Filling the Second Rail**

If you started the first rail with a Tru-Brix Corner unit, start filling the second rail by inserting a full tile centered directly above the first vertical joint. If you started the first row with a full tile, start the second row by inserting a half-tile at one end of the wall. The first vertical joint of the second row should be directly above the center of the tile below.

**Tru-Brix Front Exterior Projects Only**

If you removed existing siding as described in [Section 3 - Wall Preparation](#), it will be necessary to cut the long leg of a Tru-Brix corner tile down to 3-5/8 inch for use on the second rail and every alternate rail on the front exterior. Only one leg of a Tru-Brix Corner unit contains a groove and the groove end of the cut corner should be installed in the front exterior rails.

**Maintaining Bond Pattern between Window and Door Openings**

Before installing tiles between window openings, inspect the tile positions in the first two rails to determine if this tile pattern will create an attractive appearance between and around any wall openings.

**CAUTION!**

It is recommended to not install Tru-Brix tiles that are less than 2 inches long. If maintaining the bond pattern will result in pieces less than 2 inches around any opening, then it is suggested to go back and re-adjust the tile positions in the first two rails.
SECTION 7 - MORTARING TRU-BRIX TILE

Tools Required

- Tru-Brix Pointing Gun
- Grout Bag
- Electric Drill
- Mortar Paddles
- Masonry Strikers
- Tru-Brix Mortar Scoop or Garden Trowel
- Mason’s Soft Bristle Brush

Inspect all wall areas for any defects prior to starting the grouting process. Remove and replace any tiles before grouting.

Read and follow completely the Tru-Brix mortar mixing instructions contained on each mortar bag. Tru-Brix mortar is available in 80 lb. bags which will cover approximately 55 square feet. It is recommended to mix small batches of mortar.

Useful life of mixed Tru-Brix mortar is only 30 to 40 minutes. If you cannot complete 55 square feet within this time period, the we recommend mixing smaller batches.

CAUTION!

Be careful not to add too much water, which will make the mortar too thin. Soupy mortar may slump during application resulting in sloppy walls that will require cleaning after grouting.

Small Batch Mixing

- Fill a clean 5 gallon bucket with 5 quarts of clean water.
- Pour 1/2 of a bag of Tru-Brix mortar into the bucket.
- Using an electric drill and mortar paddles, mix the mortar and water for approximately 4 minutes. Let stand 8-10 minutes to allow the polymers in the mortar to completely hydrate.
- Remix the mortar and water for an additional 3 minutes. If the mix is still too dry, add no more than 4 ounces of water and mix thoroughly.

HINT!
Large Batch Mixing

Use a cement mixer or tumble mixer for best results.

- Fill the mixer with 10 quarts of clean water.
- Pour the entire 80 lb. bag of Tru-Brix mortar into the mixer and mix for 4 minutes.
- Dump the mortar mixture into a tub. The mortar will appear to be too dry; do not add any water at this time.
- Let stand for 8-10 minutes. Now is a good time to clean the mixer.
- Thoroughly remix the entire batch with the turbo mixer, which is supplied with your Tru-Brix mortar gun. The mortar mixture will become creamy and smooth as it is remixed.
- If the mix is too dry, add no more than 8 ounces of water and remix thoroughly.

Preparing the Tru-Brix Mortar Pointing Gun

- Once assembled, lightly spray WD40 or a similar lubricant into the gun’s tube. Also lightly coat the rubber gasket attached to the gun’s plunger.
- Using the garden trowel, fill the pointing gun cartridge completely with mortar.
- Begin filling the Tru-Brix joints by starting with the vertical head joints. Work carefully to prevent excess mortar from dripping on the brick faces.
- After two rows of vertical head joints, begin filling the adjacent horizontal bed joints.

CAUTION!

Make sure that all head joints are completely filled. If some joints are not completely filled, take mortar from a joint that has been overfilled. Simply scrape the excess off with the striking tool and apply the mortar to the joint that is underfilled.

HINT!

If you spill mortar on to the faces of the tiles, wait until striking is completed before trying to remove the mortar droppings. If you immediately try to remove the droppings, the mortar will smear and cleaning will be required when finished grouting.
Striking the Joints

- Joints are ready to strike once the mortar is thumbprint hard and will not stick to your thumb when pushing down into the joint.
- Once the mortar is ready to be struck, begin by striking the vertical head joints.
- After striking several courses of head joints, begin striking the horizontal bed joints. When striking a bed joint corner, always pull back away from the corner, never push the striking tool towards the corner.
- To complete the tooling process, re-strike the vertical head joints after striking the bed joints.
- The three acceptable mortar joint styles are shown in Figure 54.

![Figure 54](image_url)

Brushing the Wall

The last step to the grouting process is brushing the wall and removing any excess mortar from the brick faces. Use a mason’s soft bristle brush to brush the wall.

![CAUTION!](image_url)

If the mortar begins to smear or the joints show brush marks, the mortar is too wet to brush.
SECTION 8 - COMPLETING THE PROJECT & CLEANING

Cleaning Instructions

Because Tru-Brix is easy to install, cleaning Tru-Bix projects should not be necessary. However, if cleaning is necessary to remove unsightly mortar smears, please contact your Tru-Brix supplier for cleaning details.

Improper cleaning may result in damage to your Tru-Brix project and you should clean only after obtaining advice from your Tru-Brix supplier.

CAUTION!

Soil/Wall Staining Prevention

After finishing your project, you should make sure that exposed ground around the base of the Tru-Brix walls is covered and prevented from staining the Tru-Brix tiles during rainstorms. Straw is an excellent temporary ground cover prior to final landscaping.

Photography

Take a picture of your completed project and proudly show it to your friends, relatives, neighbors, and customers.
Appendix A - Standard Shapes

- Tru-Brix OX-45 Corner Tile
- Tru-Brix S-6 Sill Tile
- Tru-Brix 90° Left Corner Tile
- Tru-Brix 90° Right Corner Tile
- Tru-Brix Left Arch Tile
- Tru-Brix Right Arch Tile
- Tru-Brix Standard Tile
- Tru-Brix Keystone
- SLOPED EDGE TOWARD KEYSTONE