QORA®
CLADDING | crafted by Arcitell®

INSTALLATION GUIDE

Qora Cladding is made by Arcitell, manufacturer of patented fiber reinforced polymer panels for residential and siding applications.

Qora Cladding is Approved for Exterior Use Only

REFERENCES

House Wrap and Flashing Manufacturer Suggestions

www.dupont.com

www.typar.com

www.dow.com

www.huberwood.com

Resources for Wall Preparation

www.buildingscience.com

www.constructioninstruction.com

Trim Materials

www.royalbuildingproducts.com

www.azek.com

www.jameshardie.com

www.allurausa.com

www.truexterior.com

www.miratecexteria.com

www.lpsmartside.com

www.realcedar.com

TOOLS & SUPPLIES NEEDED

When installing Qora Cladding, proper supplies, equipment and accessories help ensure a high-quality installation and long-term performance. Our recommendations and guidance is below:

Tools

- Table Saw
- Jig Saw
- Drill
- Disc grinder *(optional)*
- Rubber mallet
- Shims
- Putty knife
- Fast-setting exterior adhesive
- High-quality acrylic sealant *(i.e. C920 class 25)*
- Color-matched paint *(optional)*

Saw Blades

Cutting Edge: Diamond coated (masonry blades) for smoothest cut and multiple cuts

Cutting Edge: Carbide type (standard blades) for dust minimization, but can dull quickly

Drill Bits

Brad tipped drill bits are recommended for ease of use and long life

Regular tipped drill bits can be used with care

Nails

Minimum length: 1 1/2”

Head style: flat only
(no bugle or tapered heads)

Minimum shank diameter: 11 gauge

2”+ Ring Shank nails preferred, Smooth is also acceptable or 2”+ Roofing Nails

Coating: Electro Galvanized, Zinc or Stainless Steel

Screws

Minimum length: 1 1/2”

Head style: flat only
(no bugle or tapered heads)

#8 modified truss head lath screws

Shank style: coarse thread

Coating: Electro Galvanized, Zinc or Stainless Steel

TOOLS & SUPPLIES NEEDED (CONTINUED)

Caulks

- Exterior Grade
- Elastomeric

Recommended Adhesive for Bridge Veneers:

- *Loctite PowerGrab* fast setting adhesive

Recommended Caulk/Sealants:

- Color- coordinated *DAP Dynaflex 920* OR *DAP Dynaflex Ultra*

Mounting Blocks:

- 1” pocket to receive siding
- Ability to be properly flashed during wall preparation

Recommended Products:

- Engineered Wood Material: *https://diamondkotesiding.com/light-and-utility-blocks/*
- High grade plastics: *www.sturdimount.com*

Pest Deterrents and Ventilation Strips

- Minimum 1/4” thickness
- Crushable design allows for easier installation
- Allows for proper air and vertical flow

Example of Ventilation Strips

Recommended Products

- Cora Vent® strips
  https://www.cor-a-vent.com/siding-vent-sv-3.cfm
- Quarrix®
  https://quarrix.com/Products/Furring-Strips

For instructions on installation as a skirting application, see page 13

WALL PREPARATION AND INSTALLATION

Before installing Qora Cladding, it is important to ensure the walls are flat, a weather resistive barrier is installed, and opening are properly flashed. For attachment over walls where the air inside the structure is not conditioned (i.e. sheds, some portable buildings, pole barns and similar structures), Qora Cladding can be installed directly over other cladding materials like DuraTemp®, T1-11 plywood, LP SmartSide® or steel siding where the weather barrier is integrated or unnecessary.

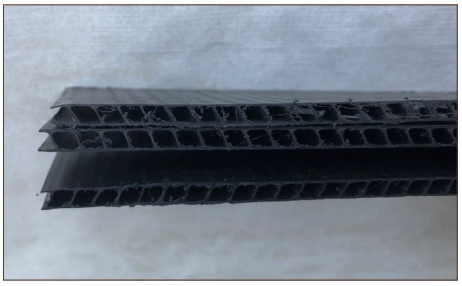
In some cases, it will be necessary to use mounting blocks, various trim materials and other accessories to ensure the wall is prepared to receive Qora Cladding. There are many materials, techniques and designs to address the various scenarios where Qora Cladding will be used. Below are several links to references for preparing walls properly. This list is by no means exhaustive, so please reference both local building codes if applicable and follow standard best practices for cladding installation.

INSTALLATION STEPS

Start First Course

The installer might want to strike a line for the bottom of the first course of panels, then install pest deterrent/vent strip along the line before installing the first panel.

- Level first course of panels and leave bottom edge exposed
- If required, install pest/vent strip behind bottom edge of first course panel



1-3 layers of vent strip may be required to fill space between panel and wall.

Vent strip applied behind bottom edge of first course of panels.

Installed vent strip.

Note: Panels marked A, B, C, are to ensure pattern variation only and do no affect installation sequencing.

FIRST COURSE PANEL INSTALLATION

Option A:

- Trim off 6” of the leading edge of the panel to eliminate the veneer seats

- Seal the cut edge

FIRST COURSE PANEL INSTALLATION (CONTINUED)

Option B:

- Install full panels into side trim
- Trim bridge veneer
- Installed trimmed bridge veneer *(See Adhering Bridge Veneers Section)*
- Tap panel for tight fit
- Fasten Screws into each of the veneer seats *(2 per side of panel, for a total of 4 per panel)*
- See fastener schedule below
- Ensure first panel and the course is level to structure

- Insert next panel, lightly butt to adjust panel and ensure level with adjacent panel
- Fasten in a similar fashion as first panel
- Continue to install panels until space left requires a cut panel
- Install bridge veneer between two panels *(See Adhering Bridge Veneers Section)*

Second and Subsequent Courses

- Measure and cut terminal panel to lightly butt to trims
- Repeat process for first course panels and bridge veneers

- May need to use a rubber mallet to ensure snug fit between panels
- Ensure tongue on bottom of panel is secured in groove of panel below to prevent damage

Fastener Schedule:

	Total pull-through resistance of the panel(lb) per reccomended schedule	lb/ft^2 resistance to pull-through	Head Type	Minimum Shank Diameter	Minimum Length		Coating
Roofing (hammer) Nail	1,218	185	Flat Only	11 Gauge	1.5"	Smooth/Ring	Electro Galvanized, Zinc Coated or Stainless
Coil Nail	1,328	209	Flat Only	11 Gauge	1.5"	Smooth/Ring	Electro Galvanized, Zinc Coated or Stainless
Screw (self tapping)	1,784	270	Flat Only	#8	1.5"	Smooth/Ring	Zinc Coated or Stainless Steel

Terminal Course

- Measure and cut terminal panel to fit roughly against and fit to trim
- Prime cut edge with 100% acrylic and color matched paint
- If fastening plates are cut off, face fasten screws no closer than 1/2” from cut edge and in the joint
- Fastener should adhere to back skin of panel creating a shallow hole above screw head
- Fill void over screw head with color matched sealant *(i.e. DynaFlex 920)*
- Using color-matched caulk, seal top of terminal panel to trim

Cut Panels to Accommodate Any Openings in the Siding

- Seal/caulk interfaces between panels and prime as needed
- Seal any cut edges with elastomeric coating
- Ensure any flashing diverts water to air gap between the weather resistive barrier/sheathing and back of panel

Adhering Bridge Veneers

- Dry fit bridge veneers to fit in space over veneer seats
- Trim and sand veneer to fit into space as needed
- Apply small amount of fast-setting construction adhesive *(such as Loctite PowerGrab)* to back of bridge veneer
- Fit bridge veneer in to space and apply medium pressure to ensure good bond
- Repeat for all remaining bridge veneers

Optional Enhancements

- Seal any joints with color-matched caulk of gap if visible
- Touch up scuffs or abrasions with color-matched high-quality acrylic paint

LEDGE SILL INSTALLATION

Determine Installation Height For Ledge Sill

The primary method of ledge sill installation is to install the Qora panels to the desired height of the wainscot first then install the ledge sill to the top course of Qora panels. In most cases, it will be easiest to snap a chalk line at the desired height of the wainscot and install the panels level to that chalk line. If the grade is uneven, it may be best to rip the bottom sides of the first course to match the contour of the land while ensuring the uppermost panels are straight and level to the ledge sill.

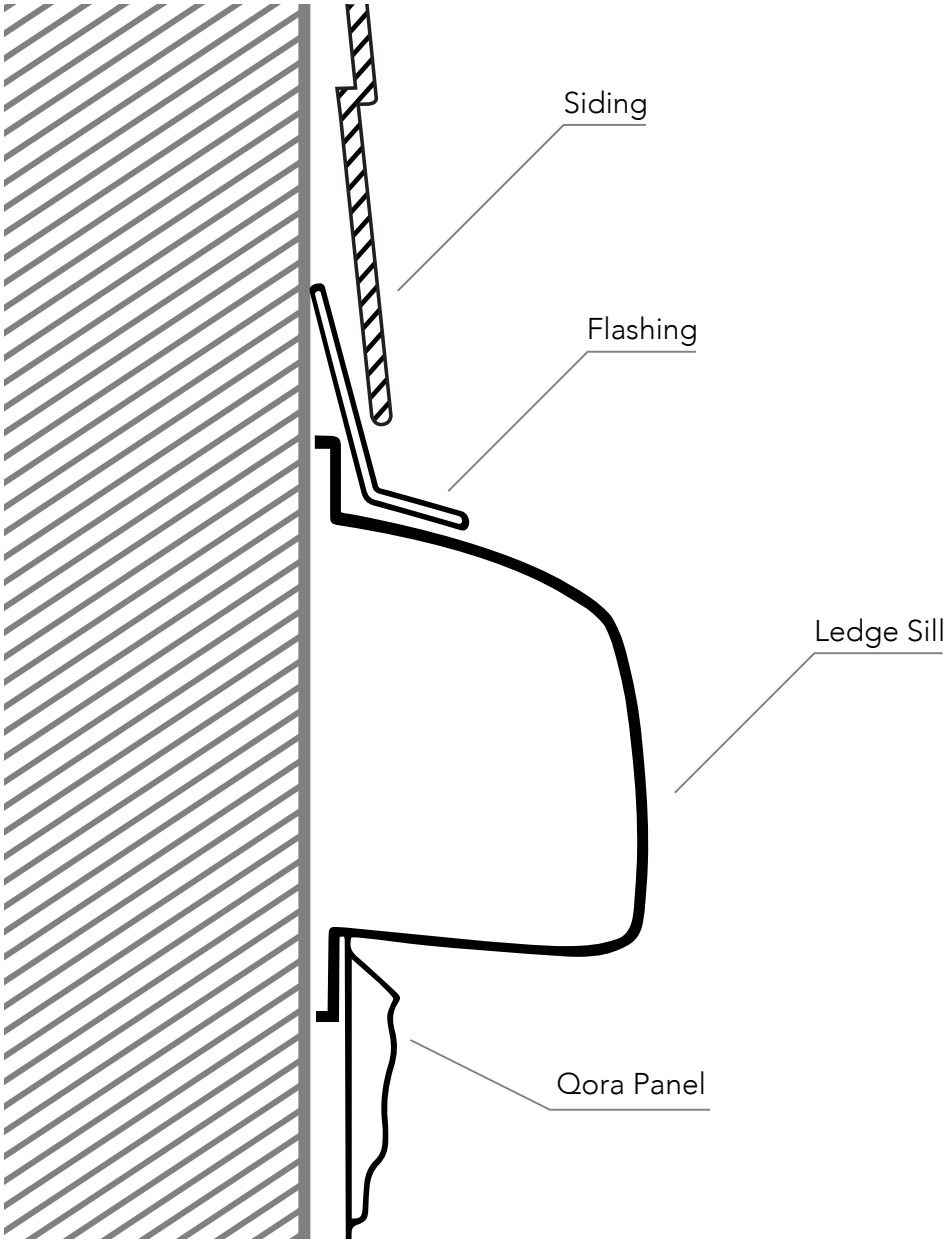
Fasten *(nails or screws with low profile heads)*

- Using low profile head fasteners, install fasteners every 16”
  - a.) Put fasteners through the top flange of the ledge sill
  - b.) Fasteners should be no less than 1” from the edge of the flange
- The bottom flange on the ledge sill is to be inserted behind the top row of the Qora panel
- To ensure the back side of the ledge sill is not flush to the substrate, shims may be necessary
  - a.) Shims also help ensure a snug fit between the ledge sill and panel
  - b.) Shims can be cedar, composite or other material
  - c.) Shims may be necessary to ensure the bottom flange of the ledge sill is at least ¼” set off of the WRB

FLASHING LEDGE SILL

For applications where moisture management is critical, proper flashing will be required.

- Consult local building codes and flashing manufacturer sites for best practices
- In general, flashing needs to be bonded to the WRB with flashing tape and extend over the top flange of the ledge sill to divert water to the top surface of the sill
  - a.) Z flashings can be used
  - b.) Bent metal flashing can be also used, especially for application where color coordination is important
  - c.) Dry fit the corners and re-cut if necessary, to ensure a proper fit



Optional: use color matched or clear caulk to seal any gaps in the assembly

FIELD CUTS AND EDGE SEALING

- Any field cut edges need to be sealed with a color matched sealant
- If two field cut edges are joined together
  - a.) Ensure a proper adhesive is used to join the two cut edges along the perimeter
  - b.) Use a color matched sealant or touch up paint to improve the appearance of the joint
- For aesthetic purposes, color match caulk may be used to join two factory ends of ledge sills

(color matched caulk and/or touch up paint)

FABRICATING CORNERS

- Measure the corner and cut the ledge sill ends to match the angle of the corner.
  - a.) If the corner is close to 90 degrees, simply cut two ends of the ledge sill at 45 degree angles to form the corner.
  - b.) If the corner is not close to 90 degrees, measure the corner and cut the ledge sills at angles to match the corner.
  - c.) Using a fast-setting adhesive, like Loctite PowerGrab Ultra Clear, bond the two halves to form the corner.

- Fasten the corner along the top hem (see below)
  - a.) Ensure fasteners are no closer than 1” from the edge
  - b.) Ensure the corner is level to the rest of the ledge sill installation (left)

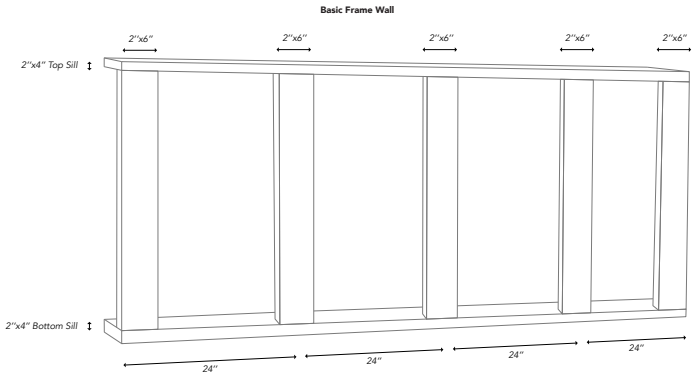
- Touch up corner seam with color matched sealant and/or touch up paint if necessary (right)

SKIRTING INSTALLATION

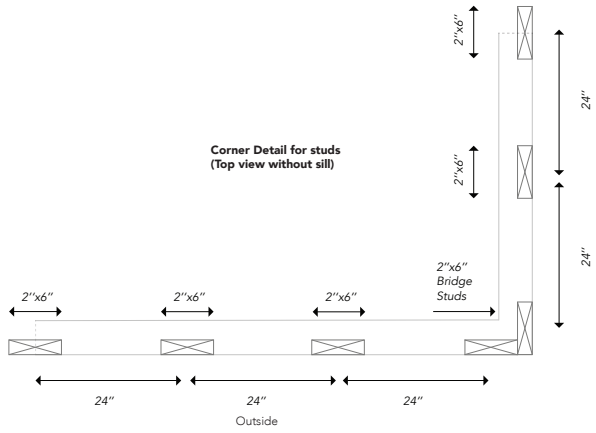
Qora Cladding is approved for installation directly to framing members only when used as a skirting or foundation curtain wall. This installation guidance is only for walls around unconditioned air spaces under structures and not for sidewall applications.

Basic Framing

- 2x4 top and bottom sills
- 2x6 vertical studs installed sideways, 24” o.c. and proud to the outer perimeter
- If required, bottom sills to be anchored to ground to prevent wall buckling
- Build walls to correct height from bottom of structure to grade
- In the case of uneven ground, it may be necessary to vary the heights of each wall to accommodate any variation in the skirt height.



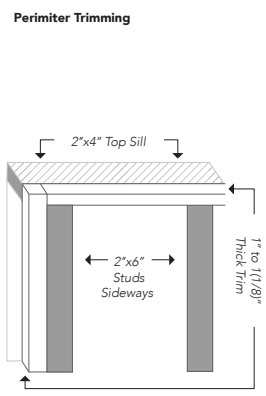
Base Frame Wall

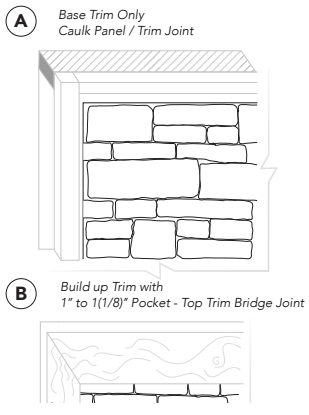


Corner Detail for Studs

- Continue this process until area to be paneled is completely framed.
- Framing system can be prebuilt and then attached to the underside of the structure and pinned to the ground.

Perimeter Trimming

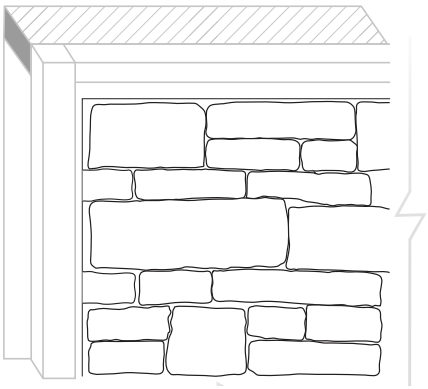




SKIRTING INSTALLATION (CONTINUED)

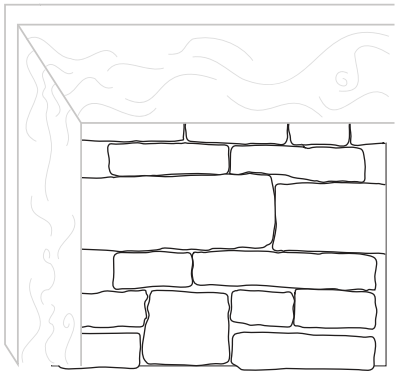
- Picture frame trim the area to be paneled on the sides/corners and top. Trimming the bottom of the area to be paneled is optional.
- Use trim that is 1” to 1 1/8” thick. This helps ensure a flush fit between a cut panel and the trim. Once panel is complete, clear or color matched caulk can be used to seal the interface of the panel.
- Optionally, a built up trim design with a 1” to 1 1/8” pocket can be created by overlaying a thinner trim to cover the joint between the panel and the base trim.

A *Base Trim Only*
Caulk Panel / Trim Joint



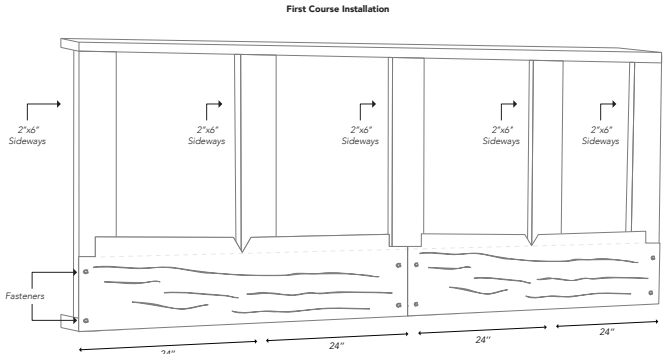
B: Base Trim Only

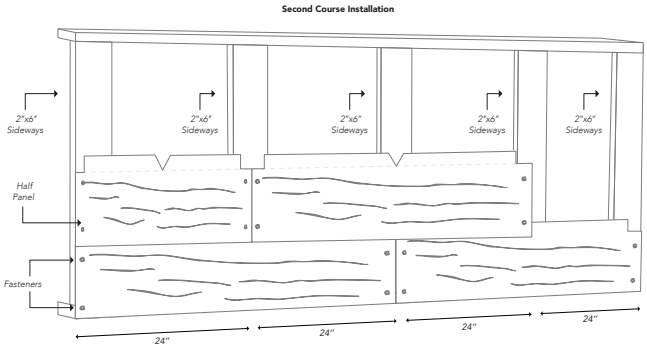
B *Built up Trim with*
1” to 1(1/8)” Pocket - Top Trim Bridge Joint



B: Built up Trim

- First course is installed attaching to every other stud. Follow install guidance in main guide.
- Second course must start with a half panel attaching to the corner stud and the first field stud at 24”.





- If needed, 3rd course installs similar to the first course and a 4th course installs similar to the 2nd course.
- Adhere bridge veneers and other optional finishing elements per main install guide

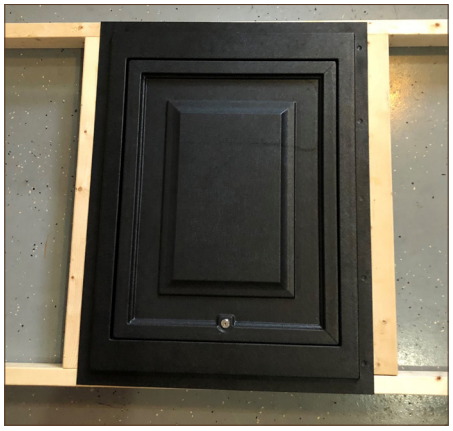
VENT INSTALLATION FOR SKIRTING APPLICATION

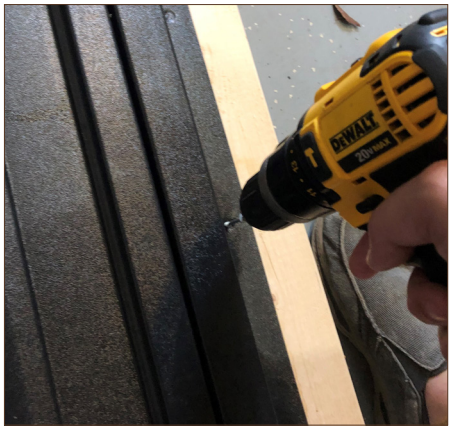
Follow local codes to ensure the appropriate amount of ventilation is installed for the size and type of structure being installed.

- Mark panel for rough opening of vent. Ensure the edges of the rough-cut opening are no less than 6 inches from the edge of the panel.
- If using a jig saw, use a brad tipped drill bit to create a pilot hole. Use a diamond bladed jig saw to cut out the rough opening.
- If using a circular saw with a masonry blade, plunge cut the rough opening.
- Ensure rough opening matches the dimensions of the vent and caulk/seal the inside edges of the opening. Be careful when handling panels with rough cut openings to minimize/ eliminate breakage.
- Insert the vent and fasten with screws or adhesive to ensure the vent is properly attached to the Qora Cladding panel.
- If needed, attached the vent from the back side of the Qora Cladding panel.

Optional, use color matched or clear caulk to seal the spaces behind the flange and the face of the Qora Cladding panel.

ACCESS DOOR FOR SKIRTING APPLICATION





Check local codes to ensure size and placement of access door is appropriate.

- Install framing members to the rough opening of the access door perimeter dimensions. This may require installing a horizontal member if the skirting is taller than the access door.
- Place access door over framing. Ensure there is adequate room to both fasten the flange of the access door and sufficient room on the stud to also fasten the Qora Cladding panels.
- Following the manufacturer's fastening schedule, secure the access door to the framing.

- Field cut panels to fit snugly against raised trim of access door. Use color-match caulk to seal cut edges. Apply panels over door flange and fasten per main installation guide. If face fastening is required for panel, apply through mortar joint and cover with color-matched caulk.
- Continue to cut panels to fit door opening and follow step 3 guidance.

Optional: use color matched or clear caulk to seal any gaps between the panel and access door trim.

TOUCH-UP PAINT REFERENCE GUIDE

Each Qora Cladding panel has multiple component colors that create the unique look of each piece. It may be necessary to perform touch up paint corrections on your material. Please use the reference chart below to source any required touch-up paint locally. If you are unable to source from a local paint supplier or retail outlet, please contact Arcitell Customer Service by calling **(301) 223-2266 and selecting Option 2.** Alternatively, you can send us an email at **customerservice@arcitell.com.**

Please note, Arcitell uses PPG Sun Proof brand paint in our manufacturing process. We are continually working with other paint suppliers to identify similar color formulas that will work with our products. This chart will be updated frequently as new colors are added and alternative paint suppliers identified. Also, please note that slight variations in color will occur due to the manufacturing process used for initial coloring. Touch up paint and the recommendations below are for touch up only and should not be used to repaint whole stones or sections of a Qora Cladding panel.

Paint Reference Table

Qora Cladding Panel Color	Qora Individual Stone Color	
Cannon	**PPG Sun Proof**	**Sherwin Williams Color**
	Gunship Grey	Roycroft Pewter: SW2848 or Grizzle Gray: SW7068
	Georgia Clay	Arresting Auburn: SW6034 or Sommelier: SW7595 or Rockwood Red: SW2802
	Weathered Earth	Redwood Medium Brown: SW2807 or Plantation Shutters: SW7520
	Antique Slate	Warm Stone: SW7032 or Library Pewter: SW0038 or Adaptive Shade: SW7053
Cannon Mortar Touch Up	Paint: Antique Slate Caulk: DAP Dynaflex GY730	
Garrison	**PPG Sun Proof**	**Sherwin Williams Color**
	Vanilla Sky	Playa Arenosa: SW9094
	Gunship Grey	Roycroft Pewter: SW2848 or Grizzle Gray: SW7068
	Earthen Clay	Jute Brown: SW6096
	Antique Slate	Warm Stone: SW7032 or Library Pewter: SW0038 or Adaptive Shade: SW7053
Garrison Mortar Touch Up	Paint: Antique Slate Caulk: DAP Dynaflex GY730	

Paint Reference Table *(continued)*

Qora Cladding Panel Color	Qora Individual Stone Color	
Bristol	**Qora Individual Stone Color/PPG Sun Proof**	**Sherwin Williams Color**
	Discover	Tony Taupe: SW7038 or Taupe Tone: SW7633
	Brazil Nut	Garret Gray: SW6075 or Homestead Brown: SW7515
	Georgia Clay	Arresting Auburn: SW6034 or Sommelier: SW7595 or Rockwood Red: SW2802
	Black Magic	Black Magic: SW6991 or Greenblack: SW6994
	Antique Slate	Warm Stone: SW7032 or Library Pewter: SW 0038 or Adaptive Shade: SW7053
Bristol Mortar Touch Up	Paint: Antique Slate Caulk: DAP Dynaflex GY730	
Aspen	**Qora Individual Stone Color PPG Sun Proof**	**Sherwin Williams Color**
	Black Magic	Black Magic: SW6991 or Greenblack: SW6994
	Weathered Earth	Redwood Medium Brown: SW2807 or Plantation Shutters: SW7520
	Gunship Grey	Roycroft Pewter: SW2848 or Grizzle Gray: SW7068
	Discover	Tony Taupe: SW7038 or Taupe Tone: SW7633
	Antique Slate	Warm Stone: SW7032 or Library Pewter: SW 0038 or Adaptive Shade: SW7053
Aspen Mortar Touch Up	Paint: Antique Slate Caulk: DAP Dynaflex GY730	
Texas Limestone	**Qora Individual Stone Color/PPG Sun Proof**	**Sherwin Williams Color**
	Milk Paint	Aged White: SW9180 or Muslin: SW6133
	Earthen Clay	Jute Brown: SW6096
	Cinnamon Stone	Cayenne: SW6881
Texas Limestone Mortar Touch Up	Paint: Milk Paint Caulk: DAP Dynaflex BE308	