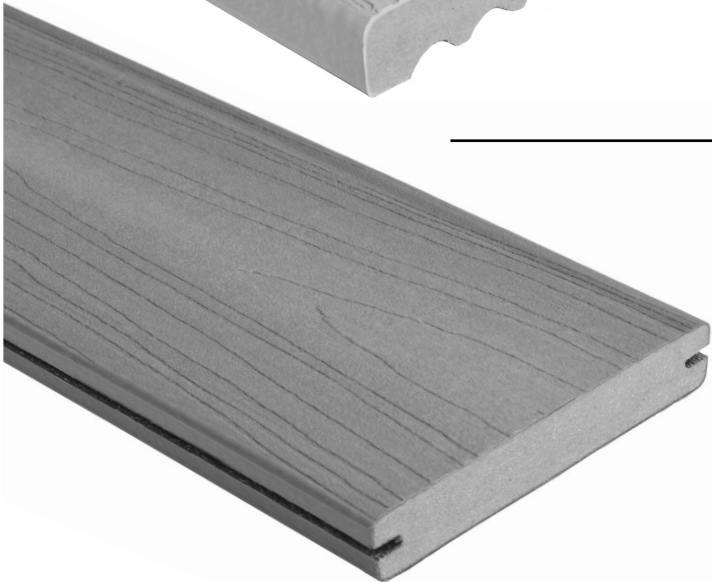
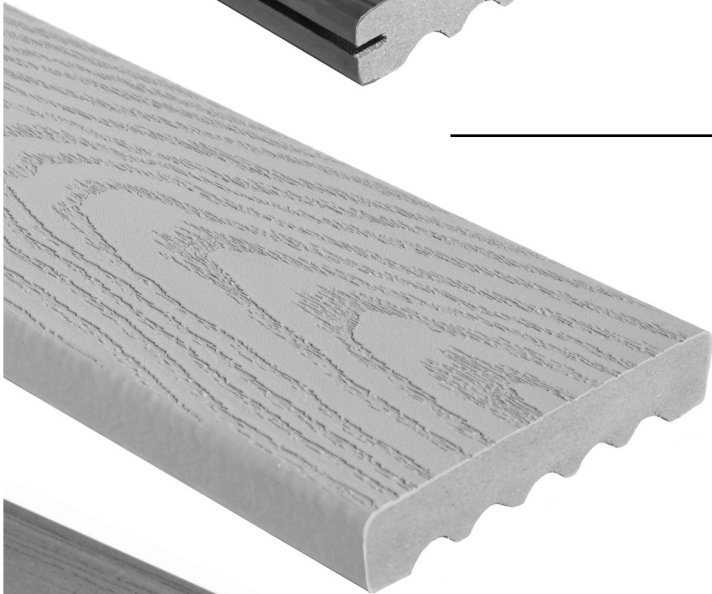
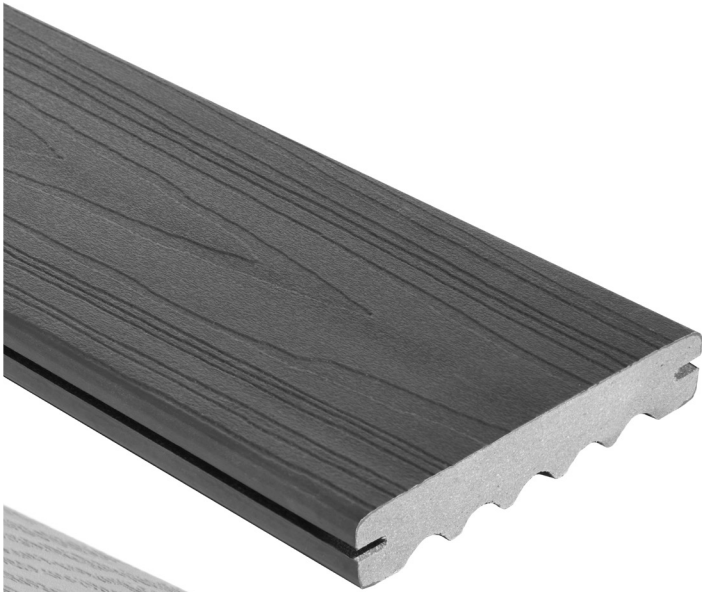


# Decking Installation



### Veranda ArmorGuard® Decking

5.3 in. x .93 in. x 8 or 20 ft. (13 cm x 2.3 cm x 3.66, 4.88 & 6.1 m)



.93 in. x 5.3 in. x 12, 16 or 20 ft. (13 cm x 2.3 cm x 3.66 m)



Fascia .75 in. x 11.25 in. x 8 or 12 ft. (2cm x 29 cm x 3.66 m)

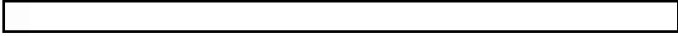


### Veranda® Decking

5.3 in. x .93 in. x 8 or 20 ft. (13 cm x 2.3 cm x 3.66, 4.88 & 6.1 m)



Fascia .75 in. x 11.25 in. x 12 ft. (2cm x 29 cm x 3.66 m)



### Fiberon Horizon® Decking

5.4 in. x .94 in. x 12 ft. (14 cm x 2.4 cm x 610 cm)



5.4 in. x .94 in. x 16 ft. (14 cm x 2.4 cm x 4.88 m)



Manufactured by



verandadeck.com  
800.566.3337 (800.HomeDepot)



## Getting Started

Follow local approved building codes. Careful planning of the finished deck layout will result in better looking finished projects. Failure to follow installation guidelines could void warranty.

- Joist location plays an important role in the safety of the deck itself but may also affect the ease, method and price of your railing system.
- Before starting, read the instructions of both the decking and railing systems planned for the project.
- Dark colors will absorb more heat than lighter colors and as such, will experience greater ranges in expansion/contraction.
- Thoroughly reading all instructions first will make for more profitable projects. Failure to do so may result in more difficult installation and may void warranty.
- For decks using metal joisting, specialized surface fasteners are required. Do not use ArmorGuard Hidden Fasteners. Fasteners for metal that install at a 90 degree angle only are required.

## Joist Spacing

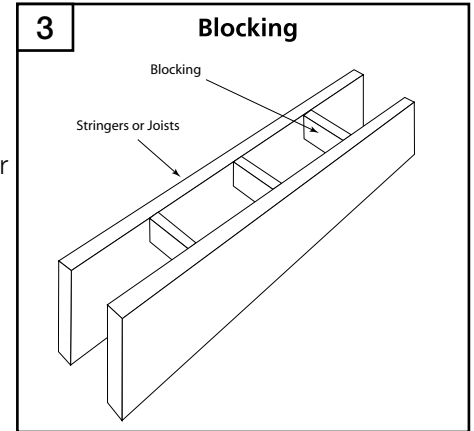
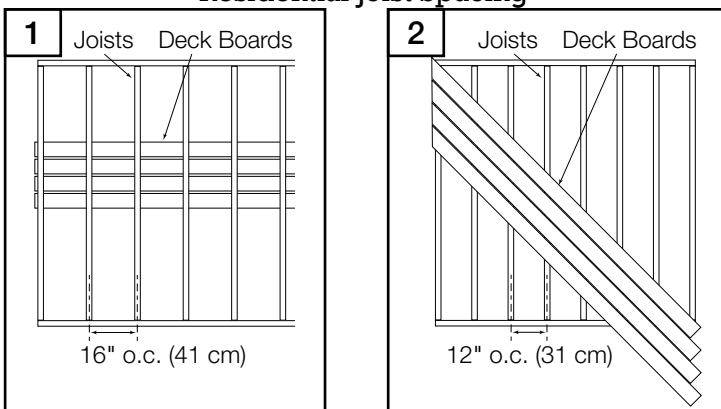
Joists used in deck frame construction should be 2"x 8" (5 cm x 20 cm) or larger (Figure 3).

Joist/Stringer Spacing						
Brand	Residential			Commercial		
	Perpendicular	Diagonal	Stairs	Perpendicular	Diagonal	Stairs
Veranda ArmorGuard	16	12	9	12	8	9
Veranda	16	12	9	12	8	9
Horizon	16	12	12	12	8	9

\* Secure stair treads over and in contact with a treated pine 2x6, installed flat, not on edge, as under support, and secured with Simpson A23 approved connectors and 10d x 1-1/2" hot galvanized nails.

When installing heavy loads on top of your decking project, a hot tub, for example, it is important to also understand the requirements of the manufacturer as they may have specific framing and support requirements for their warranty coverage.

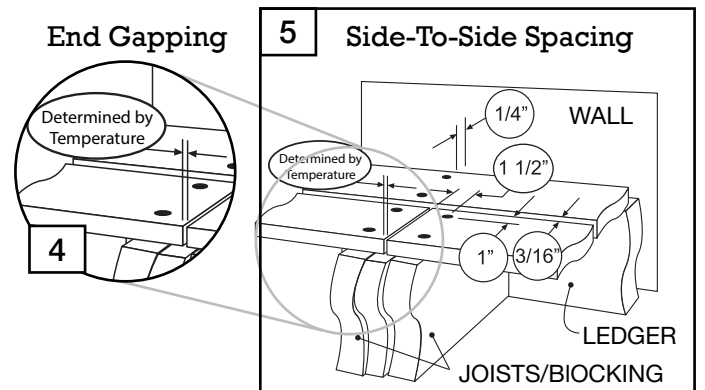
### Residential Joist Spacing



When installing blocking for more intricate decking patterns, remember that solid blocking (blocking laid on the flat) will inhibit water flow and result in buildup of organic materials over time, which will make cleaning more difficult. For best results when blocking is required, it should be installed ladder style (Figure 3).

## Board Spacing

All decking materials, whether wood, composite or metal, undergo some degree of linear expansion with the changes of weather and the season. To compensate for the effects of contraction and expansion, the following installation standards must be maintained:



Note: Special consideration should be taken when working with dark colors as they will experience larger temperature swings during normal use. To help control end-to-end spacing, dark color decking should be kept at ambient temperature and shaded from direct sun prior to cutting and immediate securing.

The following procedures will result in less visible gapping:

- Keep boards out of direct sun during storage and cutting processes, and through to installation if possible. Never cut and install boards in direct sun assuming them to be at ambient temperature.
- Use lighter colored boards in the field of the deck with darker colored boards as design accents.
- Use short boards where possible.
- Use splitter/divider boards between each continuous run of boards.
- Surface fasten using heavy gauge (#9 or #10) quality composite deck screws.

## Gapping

End-To-End Spacing by Temperature					
Brand	30° & Under	50° - 69°	70° - 89°	90° - 109°	110° & Up
Veranda ArmorGuard	1/4"	3/16"	1/8"	1/16"	1/32"
Veranda	1/4"	3/16"	1/8"	1/16"	1/32"
Horizon	1/4"	3/16"	1/8"	1/16"	1/32"

Note: For locations with extreme temperature swings, double-joisting and surface fastening may be required to minimize shifting of material.

### Adhering to these spacing parameters will:

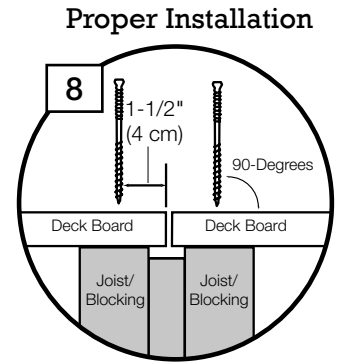
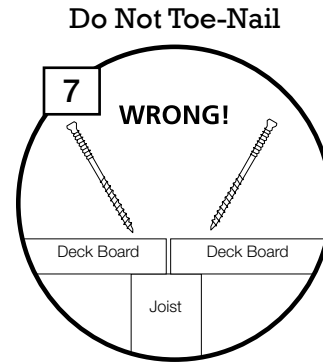
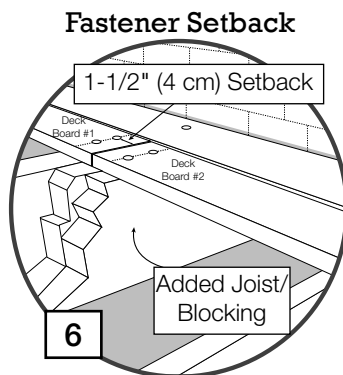
- Promote proper drainage and ventilation
- Aid in the removal of organic debris
- Meet board spacing requirements for Fiberon warranty coverage

## Surface Fasteners

The use of stainless steel composite deck screws is strongly recommended. Composite surface fasteners may be used - check with manufacturer for coating warranty. Pre-drilling is recommended. Plain, galvanized surface fasteners are not recommended.

Screw heads must be flush with board surface. Use caution to avoid over-tightening fasteners. Excess tightening may cause immediate or eventual cracking of the fastener locations.

Do not surface fasten within 1 1/2" (4 cm) of the end of a board or 1" (3 cm) from the side of the board.



## Pre-drilling

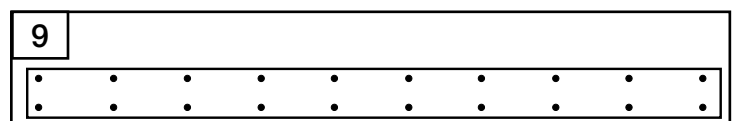
- It is necessary to pre-drill end of board screw holes to prevent immediate or eventual end splitting (Figure 6).
- Pre-drilling all holes will result in better looking finished projects. DO NOT over-tighten fasteners. Over-tightening will induce cracking at board ends.
- Surface fasteners should always be driven in at a 90° angle to the decking surface. Toe-nailing screws is not recommended (Figure 7). Instead, the placement of blocking/sister joists, when needed, is recommended to allow perpendicular installation of surface fasteners at board ends (Figure 8).
- Pre-drilling is required in cold temperatures.

## Requirements

- Clean, straight lines of fasteners look better than wobbly lines. Use white chalk, straight boards or string lines as templates for straight lines.
- All brands of Fiberon decking may be surface fastened. Annular thread, ring shank and spiral shank nails, of sufficient length, have excellent holding power and produce good results.
- Screws have superior holding power. Use only screws designed for composite decking. DO NOT USE traditional bugle-head screws.
- For a cleaner look, stainless steel composite screws are recommended. These screws are engineered specifically to work with composite decking and prevent mushrooming, resulting in better looking finished projects.

## Fastening Boards

Veranda and Fiberon decking requires two fasteners at every joist location (Figure 9). While surface fastening is allowed on all decking products, the use of ArmorGuard Hidden Fasteners are highly recommended with grooved (GV) decking to create a smooth, unblemished, decking surface. GV boards cannot be used as stair treads.

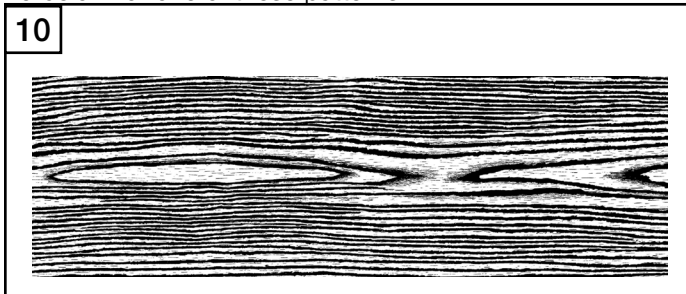


## Hidden Fasteners

**FASTENERS RECOMMENDED FOR USE WITH VERANDA OR FIBERON GV DECKING** include ArmorGuard Hidden Fasteners.

## Wood Grain Patterns

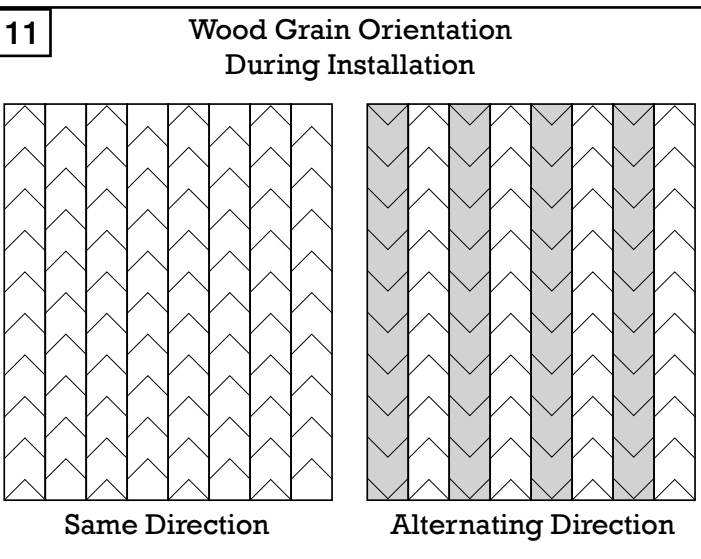
Note that the wood grain patterns on Veranda and Fiberon deck boards are directional. Different looks can be achieved by laying the decking in the same or alternating directions. There are several different wood grain patterns. See Figure 10 below for one of these patterns.



The graining pattern repeats approximately every 44" (1.12 m) feet along the board length. To ensure you orient the boards to achieve the desired effect, a directional label is noted on the side of each board showing grain direction. During the planning phase of any deck project, arrange decking before installation to achieve the desired pattern and color effect (Figure 11). This is also important if different lengths/bundles of material are used as different wood grain patterns and color tones may need to be mixed to achieve the desired look.

## Ventilation

Do not install decking directly to a solid surface. Make sure there is adequate and unobstructed air flow under the deck to prevent excessive water absorption. Improve drainage



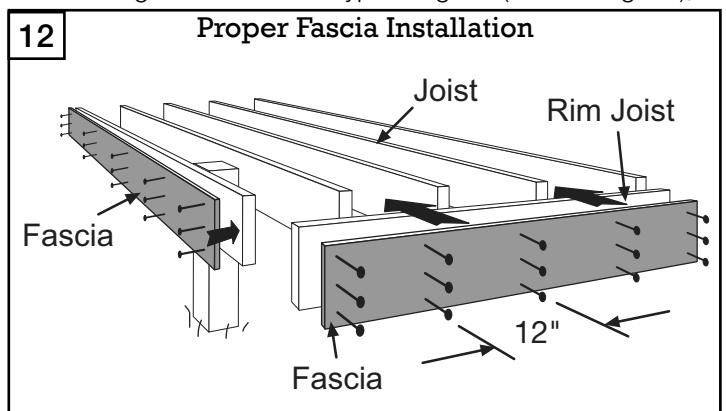
or grade flat areas where standing water may gather. Allow a minimum of 6" (15 cm) between the bottom of the deck substructure/joists and the ground. The deck design must allow unrestricted airflow under at least 50% of its perimeter to permit adequate ventilation.

## Fascia Installation

Fascia is intended as a non-structural covering for rim joists, risers and stringers. Screws should be installed at a maximum 12" (30 cm) interval, with three screws across the face at each interval (Figure 12). Do not over-tighten screws as buckling and cracking may result. Install with 1/8" (3 mm) spacing between the edges and ends in temperatures above 50° F (10° C). Leave 3/16" (5 mm) space between edges and ends in temperatures below 50° F (10° C).

## Fire and Unusual Heat Sources

Composite decking will retain heat when exposed to direct or reflective sunlight. Exercise caution if walking barefoot as footwear may be required. Fire and unusual sources of heat and heat buildup can potentially damage Veranda and Fiberon decking surfaces. Examples would include fire, reflected light from different types of glass (ex. low-e glass),



fire features and under-deck waterproofing installations that do not provide the 6" (15 cm) of un-obstructed net free ventilation.

- **Low-E Glass/Reflected Heat**

Low-emissivity glass is designed to prevent heat gain inside the house by reflecting sunlight outward. This reflective property can result in excessive heat buildup on the surface of Veranda and Fiberon decking and on exterior surfaces.

When the sunlight is reflected and concentrated it can harm a range of building materials that include doors, windows, siding, trim and decking. Damage caused to these products can include melting, sagging, warping, discoloration, increased expansion and contraction and accelerated weathering.

If you have questions on how to reduce this risk, contact

the manufacturer of the product which contains the Low-E glass for suggestions on how to reduce or eliminate the reflected heat.

- **Under-deck waterproofing systems**

Under-deck waterproofing systems, properly installed, can provide additional living or storage space. Improper installations are those that restrict air flow and result in buildup of heat and/or humidity which can result in unwanted consequences.

Contact the manufacturer of the specific under-deck waterproofing system for installation instructions to ensure required 6" (15 cm) of un-obstructed net-free ventilation is achieved for Veranda and Fiberon decking. If already installed, seek methods to achieve the ventilation requirement.

- **Fire Features/Fire Pits**

Fire features and fire pits are increasingly popular in outdoor living environments. Fire can damage many building products including Veranda and Fiberon decking. Improperly installed fire features and fire pits can cause damage to the surface of Veranda and Fiberon decking via direct exposure to the flame or excessive radiated heat.

Proper caution should be taken when designing, installing and using these features to ensure damage does not result.

## **Static**

Dry or windy environments may create a temporary condition of static electricity, which will vary depending on climate and site conditions.

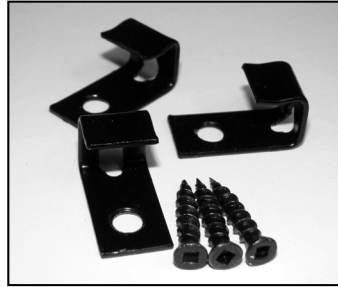
In the case of excessive static buildup on an installed HDPE capped deck, Fiberon recommends to use the following procedure:

1. Remove loose debris from the deck surface.
2. Dilute ACL Staticide® Concentrate 1 part to 39 parts water (1:39).
3. Spray or mop entire surface of the deck.
4. Allow to air dry - do not attempt to wipe the surface dry as wiping will reduce the effectiveness of the anti-static coating (\*Although very safe in diluted form, ACL Staticide® Concentrate is considered a hazardous chemical non-diluted. DO NOT use ACL Staticide® Concentrate non-diluted.)

## **Important Ladder Usage Safety Instructions**

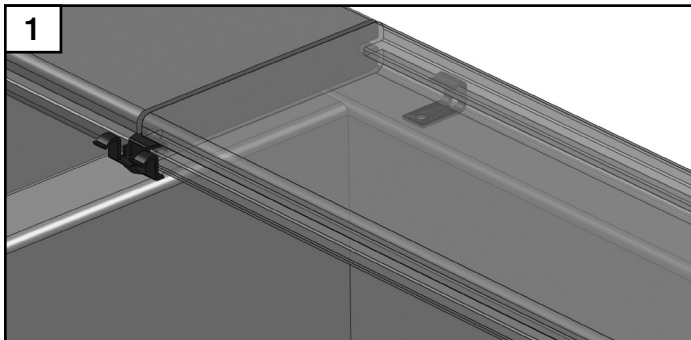
When using a ladder on composite decking, it is mandatory to lay down a sheet of plywood over the deck surface to disperse the load of the ladder's feet to nearby underlying joists. Drill fasteners downward through the top of the plywood sheet to keep it from slipping. Position fasteners so they adequately protrude and rest firmly in the gaps between the deck boards and into the joists. This will avoid leaving holes in your decking once the plywood sheet is removed. Be sure to always follow the ladder manufacturer's instructions and safety tips.

The ArmorGuard Hidden Fastener is a deck fastening system designed specifically for a fastener-free surface around the perimeter of the deck to create a smooth deck surface, uninterrupted by visible screws or nails.



**CAUTION:** Contains parts with sharp edges. Use proper care. Use of gloves is recommended.

- Place End Clip a minimum of 1/4" (6 mm) from wall and secure with a single screw into joist. Repeat no further than 12" (30 cm) on center.
- Position deck board, and insert clips into edge groove. It may be helpful to angle the board slightly to start the clips.
- With the deck board fully inserted into the clips, use ArmorGuard Hidden Deck Fasteners to secure the board along the other side (1).

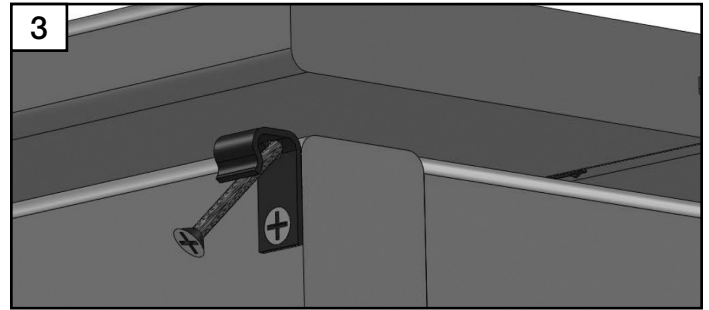


### To Secure the Final Deck Board, There Are Two Options Using the End Clip

1. Position the clip on the inside of the rim joist securing it with a single screw inserted perpendicular to the joist. After positioning the last deck board in place, secure the board by angling a screw through the clip and into the board at a 30°- 45° angle. Be careful to make sure the screw inserts fully and pulls the board down (2). When thickness of rim joist exceeds 1 1/2" (4 cm), End Clips should be secured to the outer edge of the joist. Space no more than 12" (30 cm) apart.



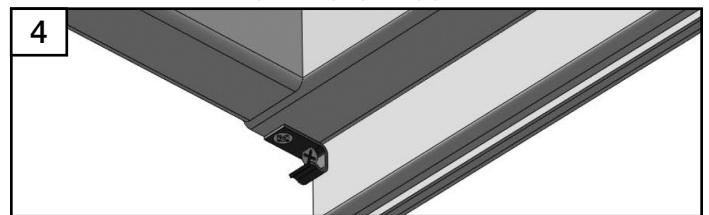
2. Position the clip on the outside of the rim joist securing it with a single screw inserted perpendicular to the joist. After positioning the last deck board in place, secure it by angling a screw through the clip and into the board at a 30°- 45° angle. Be careful to make sure the screw inserts fully and pulls the board down (3). Space no more than 12" (30 cm) apart.



### Using Two Deck Boards As Fascia

(approximately 1 1/8" (28 cm) of fascia coverage)

1. Secure the outermost deck board using the End Clip with the longer leg secured into the rim joist, and spaced no more than 12" (30 cm) apart (3).
2. Size and cut the first fascia/deck board, allowing for 1/4" (6 mm) clearance from the wall or other permanent structures.
3. Insert the fascia/deck board over the upper half of the rim joist and into the End Clips.
4. Secure the lower edge of the deck board with ArmorGuard Hidden Deck Fasteners spaced no more than 12" (30 cm) apart. Tip: Use a field-made jig or clamp to keep the fascia/deck board fully engaged during installation.
5. Attach End Clips to the underside of the rim joist, spaced no more than 12" (30 cm) apart (4).



6. Insert the lower deck board into the ArmorGuard Hidden Deck Fasteners, and secure the board by fully inserting a screw at an angle through the End Clip and into the board, making sure to draw the board tight (Figure 5).
7. Continue around entire fascia surface.



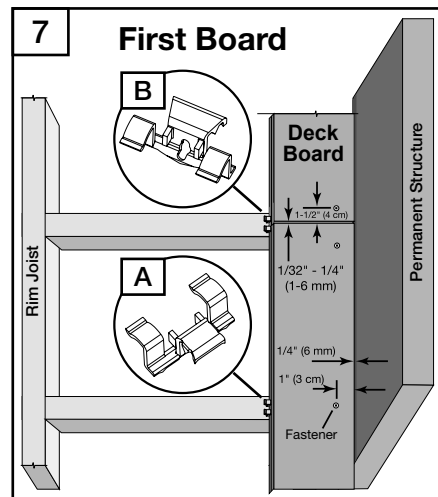
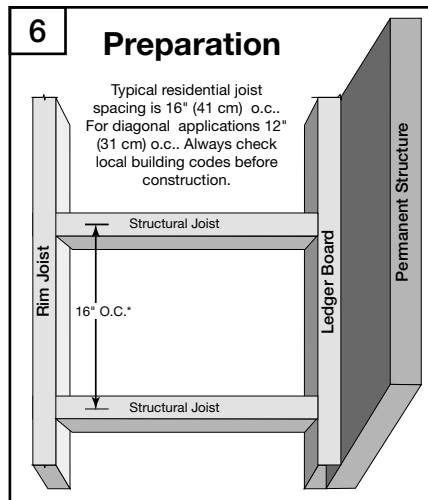
The ArmorGuard Hidden Fastener is a deck fastening system designed specifically for grooved (GV) deck boards, and is a fast and simple way to create a smooth deck surface, uninterrupted by visible screws or nails.

**CAUTION:** Contains parts with sharp edges. Use proper care. Use of gloves is recommended.

### Initial Installation of Deck Boards

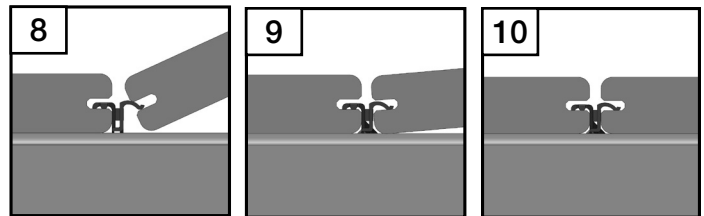
1. Refer to figure 6 - typical joist spacing is 16" (41 cm) o.c.. Diagonal installations typically require 12" (30 cm) o.c.. 1/4" (6 mm) spacing from any permanent structure (wall or post) is required. Side board spacing: 3/16" (5 mm); between board and any permanent structure or post 1/4" (6 mm). Between board ends: at temperatures up to 30°F (-1°C) space 1/4" (6 mm); at 50°F (10°C) space 3/16" (5 mm); at 70°F (21°C) space 1/8" (3 mm); at 90°F (32°C) space 1/16" (2 mm); at temps over 110°F (43°C) space 1/32" (1 mm). ArmorGuard Hidden Fasteners are not to be used on stair treads. (Stair treads require the use of Fiberon square-edge boards and must be surface fastened/screwed).

2. Requires 6" (15 cm) of unobstructed airflow. See deck ventilation information page 9.
3. Position the first deck board on the support joists. Leave a 1/4" (6 mm) gap from any permanent structure (7).
4. Pre-drill the first deck board with a 1/8" (3 mm) drill bit along the outside edge of the board at every support joist. To prevent cracking of the board, the holes at the end of the board should be a minimum of 11/2" (4 cm) from the board end. The holes along the grooved edge of the board should be a minimum of 1" (3 cm) from the board side.



5. Secure the first deck board by face-fastening with a stainless steel or high quality composite decking screw in each pre-drilled hole. Do not over-tighten screws.
6. On opposite side of first deck board, insert a ArmorGuard Hidden Fastener into the side groove of the board at every support joist (single tab first). The single tab should engage the deck board by a minimum of 5/16" (1 cm) (8-10). Center the screw hole on the joist. To secure the ends of two boards use the Butt Joint fastener as shown below. (7B)
7. Install a screw (provided with the fasteners) through the hole in the ArmorGuard Hidden Fastener into the center of each support joist. Angle the fastener toward the first deck board (8). Do not over-tighten screws.
8. Position the next deck board against the fastener tabs and slide the board onto the tabs. If necessary, slightly lift the outer edge of the board to ease the assembly of the board onto the fastener tabs (8-9). When installed properly, the fastener will ensure a 3/16" (5 mm) gap (10).

### Line Fastener Installation



9. Repeat steps 6 - 8 for each deck board.
10. Position the final deck board onto the last set of ArmorGuard Hidden Fasteners. For face fastening, to ensure a consistent gap between boards, predrill the final deck board with a 1/8" (3 mm) drill bit along the outside edge of the board at every support joist. The holes at the end of the board should be a minimum of 11/2" (4 cm) from the board end. The holes along the grooved edge of the board should be a minimum of 1" (3 cm) from the board side. See ArmorGuard for installing hidden fastener end clips around the perimeter of the deck for a fastener-free surface.
11. Secure the final deck board by fastening a minimum #8 x 2 1/2" (6 cm minimum) long stainless steel or composite deck screw in each pre-drilled hole. Do not over-tighten screws.