



INSTALLATION GUIDE

FLOOR DECKING SYSTEM

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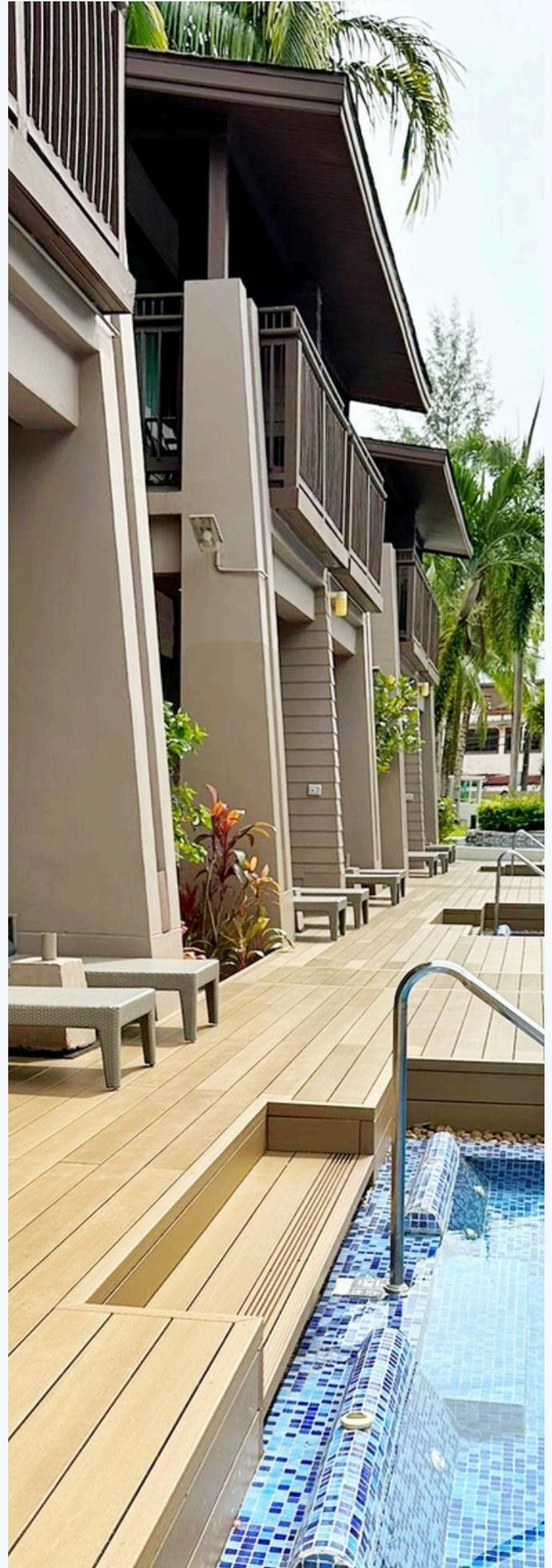
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I. INTRODUCTION

Discover Novano: The Ultimate Decking Material

Novano is an exceptionally durable decking option that mimics the appearance of timber. It offers impressive resistance to damage from sunlight, rain, frost, and even saltwater. Unlike traditional wood, it demands minimal upkeep and is highly resistant to pests, mold, and cracking.

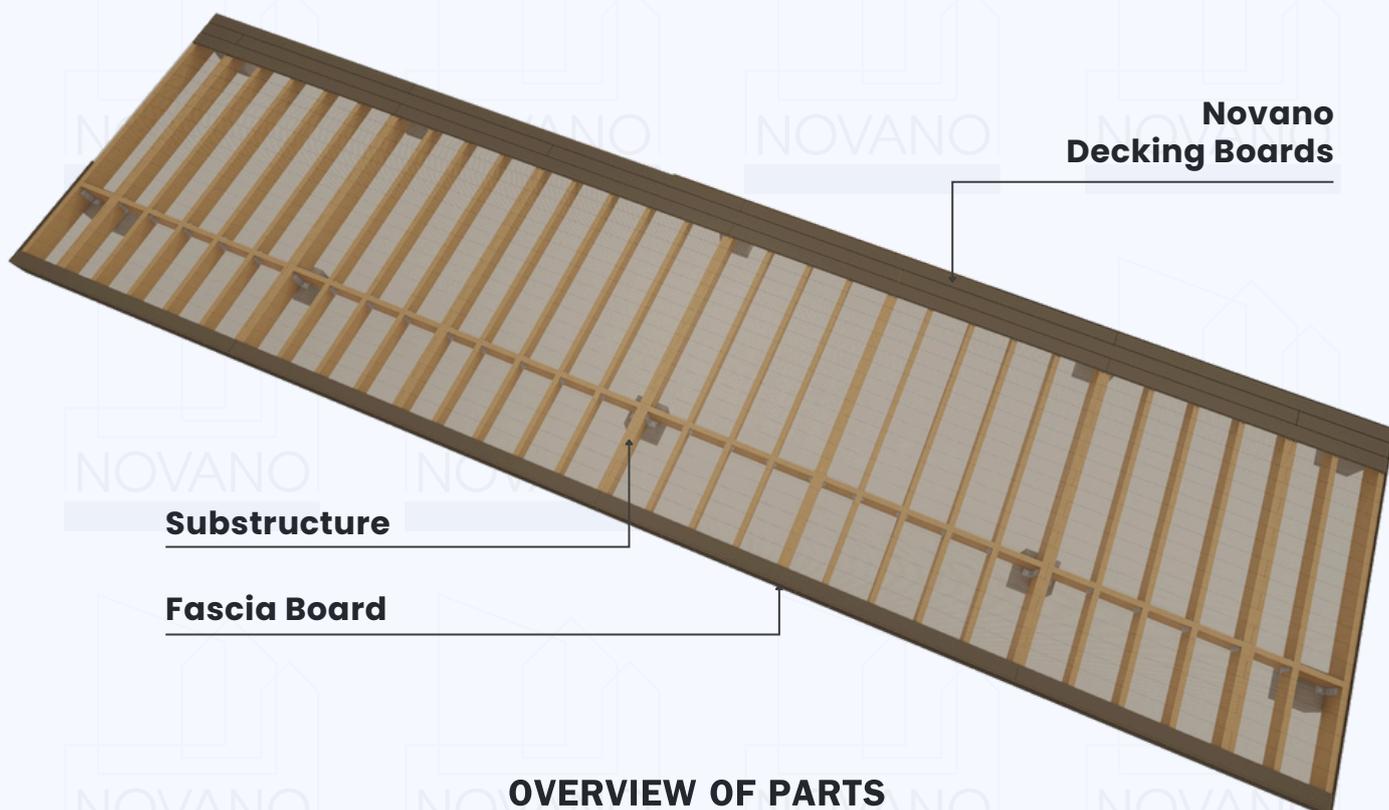
- **Natural Appearance:** Novano closely resembles the look and feel of genuine wood, featuring a smooth surface finish.
- **Eco-Friendly:** It meets many future environmental sustainability standards, incorporating recycled and fully recyclable materials.
- **Architectural Appeal:** Novano is valued for its aesthetic qualities rather than for structural support.

SECTION 1 - Material Components

A blend of these three fundamental raw materials forms the essential components of Novano. This groundbreaking material opens up fresh creative possibilities for designers and architects, thanks to its striking and distinctive appearance.



Approx. 60% RICE HUSK + Approx. 22% COMMON SALT + Approx. 18% MINERAL OIL = NOVANO



Substructure

Fascia Board

**Novano
Decking Boards**

OVERVIEW OF PARTS

SECTION 2 - Basics

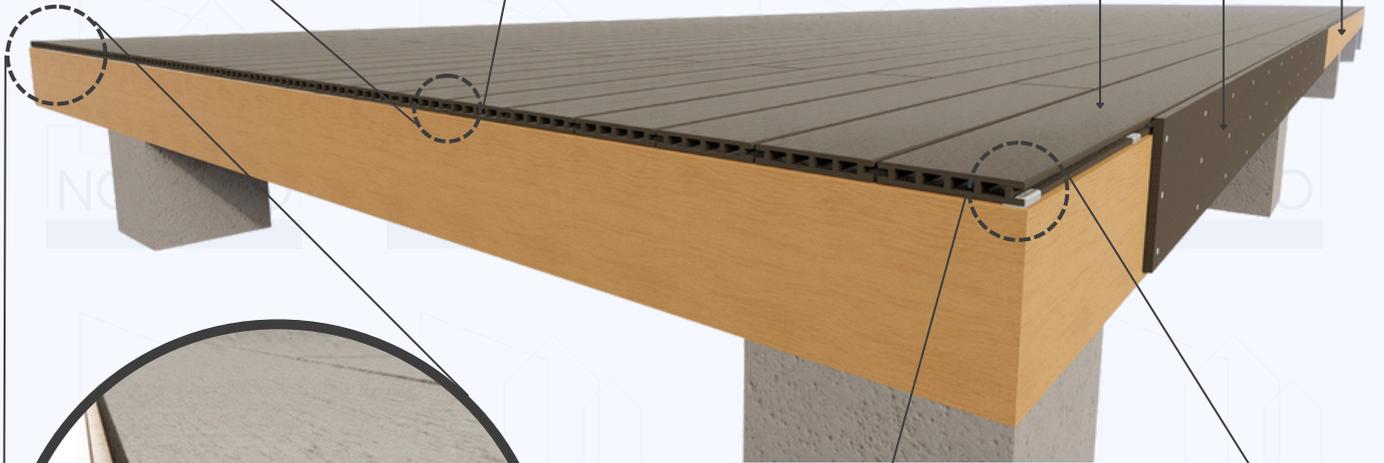


NVCLIPS200
Decking Clip

SUBSTRUCTURE

NVF12812
Fascia Board

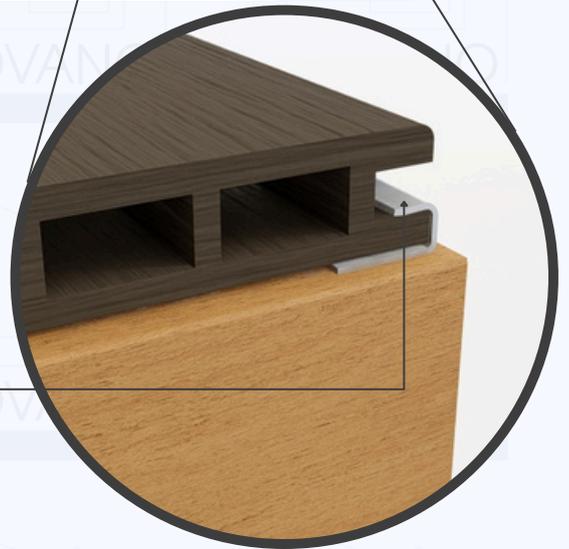
NVDB010612
Decking Boards



NVCLIPSS125
Start Clip SS1

NVEB010612
Edge Board

NVDOWEL
Dowel



ISOMETRIC VIEW

Basic Parts of Floor Decking System

SECTION 3 - Scope of Delivery

NO.	PRODUCT NAME AND SPECIFICATION	ISOMETRIC VIEW	SECTION VIEW
1	NVDB010612 1" x 5 ½" x 12' Decking Board		
2	NVEB010612 1" x 5" x 12' Edge Board		
3	NVF12812 ½" x 8" x 12' Fascia Board		
4	NVDOWEL ½" x 5/8" Dowel		
5	NVCLIPSS125 Start Clip SS1		
6	NVCLIPS200 Decking Clip		
7	VENEER 3/64" (1mm) x 1" x 5 ½" Veneer Cap		

Table 1.1 "Scope of Delivery"

NOTE:

To view a complete list of products, please refer to our Novano brochure or visit our website www.novanousa.com

NO.	PRODUCT NAME & SPECIFICATION	ITEM NO. / TRUCOLOR		
		ROSEWOOD IPE	SPANISH CEDAR	CHARCOAL GRAIN
1	NVDB010612 1" x 5 1/2" x 12' Decking Board	NVDB010612TC201	NVDB010612TC202	NVDB010612TC203
2	NVEB010612 1" x 5" x 12' Edge Board	NVEB010612TC201	NVEB010612TC202	NVEB010612TC203
3	NVF12812 1/2" x 8" x 12' Fascia Board	NVF12812TC201	NVF12812TC202	NVF12812TC203
4	NVDOWEL 1/2" x 5/8" Dowel	NVDOWELTC201	NVDOWELTC202	NVDOWELTC203



IMPORTANT: Four Major Bullet Points You Must Follow for a Successful Novano Decking Installation

- Substructure spacing of 16" on center when 6" or higher above ground for ventilation;
for less than 6" above ground, spacing of 12" on center.
- All planks must be hard fastened in one (1) spot.
- Double joist and four (4) clips at butting planks.
- Clips must be within 1" of end of planks.

Note:

Proper planning of the deck layout is essential for ease of installation of deck boards and deck components.

Thoroughly read the following deck assembly instructions and obtain all necessary building permits prior to starting your installation.

Decide finishing and trimming options prior to starting the project to ensure deck projections and finishing detail are uniform for all sides of the deck.

Installation is the sole responsibility of the installer. Novano Company assumes no responsibility whatsoever with respect to the installation. The information contained herein is provided for guidance purposes only and should not be relied upon as any absolute representation by Novano.

Packed finished material must be kept dry.



When packed, finished Novano products are exposed to moisture, and it can develop mold/mildew on the board surfaces if left packed/bundled..

If packed material is exposed to moisture, open it immediately and spread the material to allow surfaces to dry.

This condition only applies to packed material. Finished Novano products installed in exterior applications will not exhibit this issue.

Safety Tips:

1. Always check for power, gas, and water lines before installing.
2. Always wear safety glasses when operating power equipment.

Assembly Tips:

1. Substructure should be plumbed, square, solid, and sound.
2. Ensure firm soil and adequate water drainage.
3. Use *Table 1.2 "Joist Spacing Requirements"* as a guide in determining joist spacing for decking installation.
4. All holes should be pre-drilled.
5. Flashing is necessary if decking is to be attached to a dwelling. Uncovered decks should be sloped approximately 2 degrees away from the dwelling or other walls for adequate water drainage.
6. Only use construction fastening material and hardware suitable for outdoor use (e.g. stainless steel screws).
7. Always consider the linear expansion of Novano, which is dependent on the temperature but not air humidity. See *Table 1.3 "Novano Expansion"* for more information.
8. Cut-off pieces and/or abrasive dust must be disposed of separately. Please comply with the regulations of your local waste management provider. You may under no circumstances burn Novano.
9. "Window shims" are a good way to maintain consistent spacing between abutting boards. Not only will this add to the visual appeal, but it will also allow natural board expansion to occur without interference. The illustration on the next page represents an end-to-end condition.

Code Compliant Joist Spacing

Part Number	Part Description	Joist Span (in)
NVDB010612	Decking Board 1" x 5 1/2"	16"
NVEB010612	Edge Board 1" x 5"	16"

Table 1.2 "Joist Spacing Requirements"

Requirement for Joist Spacing

If the decking is being installed in a location where the air gap below the decking is equal to or less than 6" from the underside of the decking substructure to the ground / solid structure, the joist spacing must be reduced to 12" center-to-center for all decking profiles.

If the decking boards are being installed diagonally, 12" spacing between joists is also required.

Recommendation for Joist Spacing

If the decking is being installed in hot climates in the southern states it is recommended to reduce the spacing to 12" center-to-center.

12" spacing between joists is also recommended for the commercial application due to the higher weight capacity being required.

Expansion / Contraction of Decking

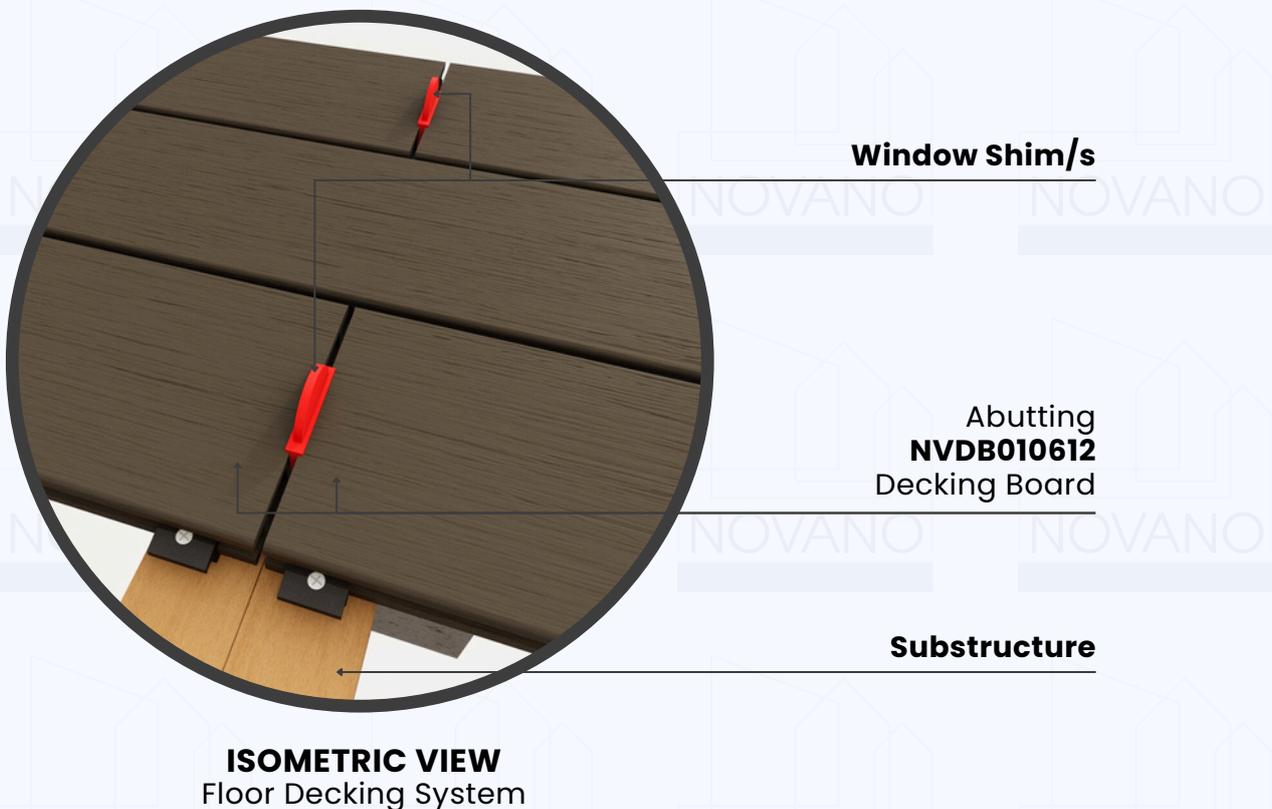


Figure 1. Window Shims are the preferred method for creating and maintaining consistent spacing between boards.

Novano Expansion – Contraction Guide	
Profile Length	12 ft
Expansion / Contraction amount (approx.. 0.3% over 90°F variation in temperature)	7/16" (0.432")

Expansion – Contraction:

Average expected expansion - contraction (this can vary by geographical region)

Novano Decking Board Gap Guide					
Temperature at Installation	End-to-End Decking Boards				Wall Gap
	Below 30°F	60°F	90°F	120°F	
Amount for Decking Profile Length of 12 ft.	7/16"	1/4"	1/16"	0"	1/4"

Table 1.3 "Novano Expansion"

Ensure a steady material temperature when cutting the boards to size, i.e. the cutting has to be done under constant conditions, e.g. inside or in shade

Always consider the linear expansion of Novano profiles during the installation of decking products. If temperatures fluctuate during the installation, the gaps placed between the ends of the boards and the ends of a wall or fascia board must change with the temperature. Use the guide above to gap boards during installation.

Expansion – Contraction Tips

1. Control Piece

At the start of the day, cut a length of board that is desired to be installed and keep this board in the same area as the cutting and storage of the remaining boards. This board will be a "Control Piece" to reference when cutting other boards to be installed. Throughout the day, the "Control Piece" can be referenced and the saw cuts adjusted accordingly as the boards expand and/or contract. Heat from the sun will cause Novano boards to expand, so if the material is stored in the shade, keep the "Control Piece" in the shade as well.

Example:

If 12ft boards are being installed cut one 12ft board at the start of the day. Reference these boards throughout the day and adjust the cutting of the other boards to match.

2. Control Gap

At the start of the installation, place the decking gap according to *Table 1.3* and mark the first gap made. This gap will be a "Control Gap" to reference when gapping the remaining boards to be installed. Throughout the installation, reference back to this "Control Gap" to match the other gaps being installed. This will ensure that all the gaps installed are the same.

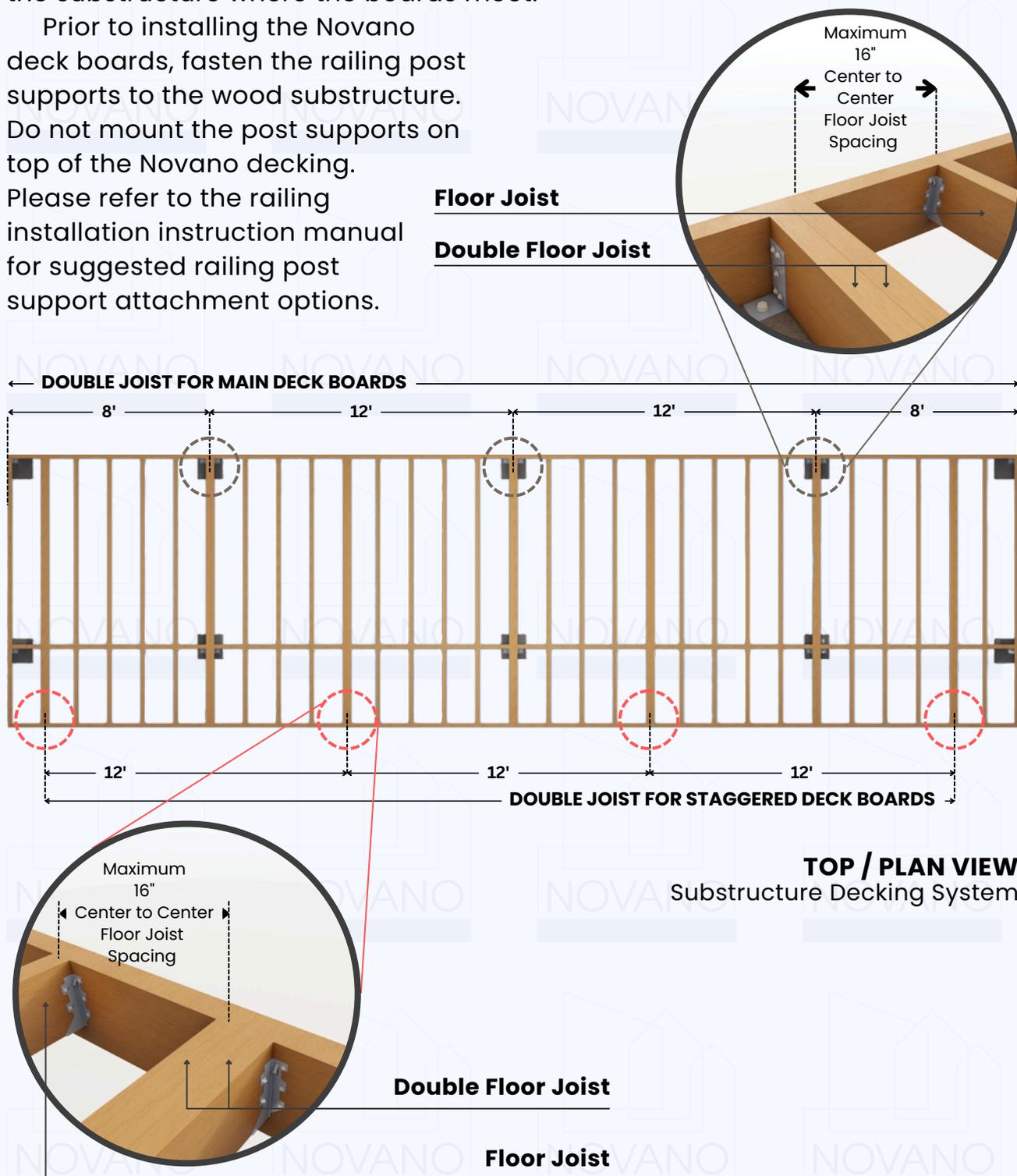
II. INSTALLATION - PROCEDURE

SECTION 1 - Substructure

Frame the substructure and secure the post supports in compliance with local building codes. Ensure that the joist structure provides for deck boards attachment on centers not exceeding the requirements laid out in *Table 1.2 "Joist Spacing Requirements"*.

On decks where two deck boards will be used end-to-end, a minimum of two joists must be used to accommodate the fastening of the deck boards to the substructure where the boards meet.

Prior to installing the Novano deck boards, fasten the railing post supports to the wood substructure. Do not mount the post supports on top of the Novano decking. Please refer to the railing installation instruction manual for suggested railing post support attachment options.



SECTION 2 - Fastening Novano Decking

Novano Decking is to be installed with the Novano Plastic Clips. List of profiles suitable to be installed with the Novano Clip in *Table 1.1*.

SECTION 3 - Selecting Starting Option

Novano Decking allows the installer to choose from two different starting techniques. The type of installation and location of the installation will affect which starting condition can be used. If installing a deck where the ends of the deck boards will be against a house or wall, use the proper wall gap spacing before securing the deck boards to the substructure.

SECTION 3.1 - Dowel Start Condition

It is recommended to pre-cut the dowels to your specific needs to prevent unnecessary cutting after installation, which may damage the decking surface.

Pre-Drill the deck board at the screw location using a 1/8" drill bit, drill through both top and bottom walls.

Drill a larger hole through the top wall only with a drill bit sized for the Novano dowel; a 15/32" (12mm) drill bit works best.

Screw in the #10 x 2-1/2" stainless steel screw through the bottom.

Do this for every joist location making sure that the screw is installed into the open cavity closest to the starting edge of the deck board. Do not install a screw closer than 1" from the end of the deck board.

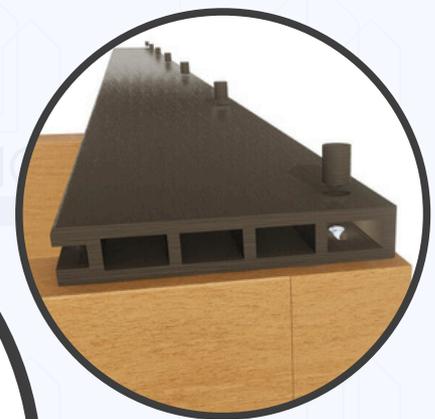
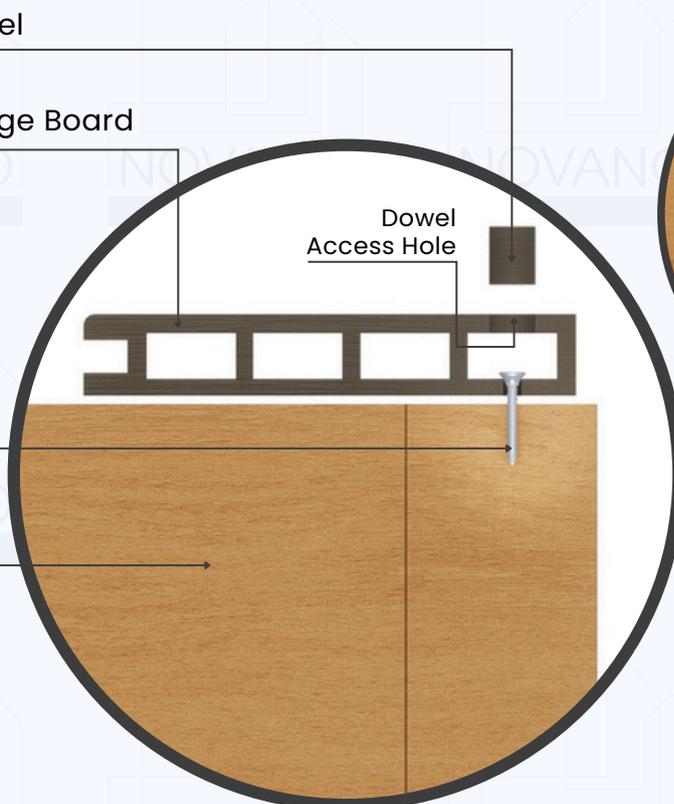
NVDOWEL Dowel

NVEB010612 Edge Board

Stainless Steel Screw

Substructure

Dowel Access Hole



ISOMETRIC VIEW
Dowel Start Condition

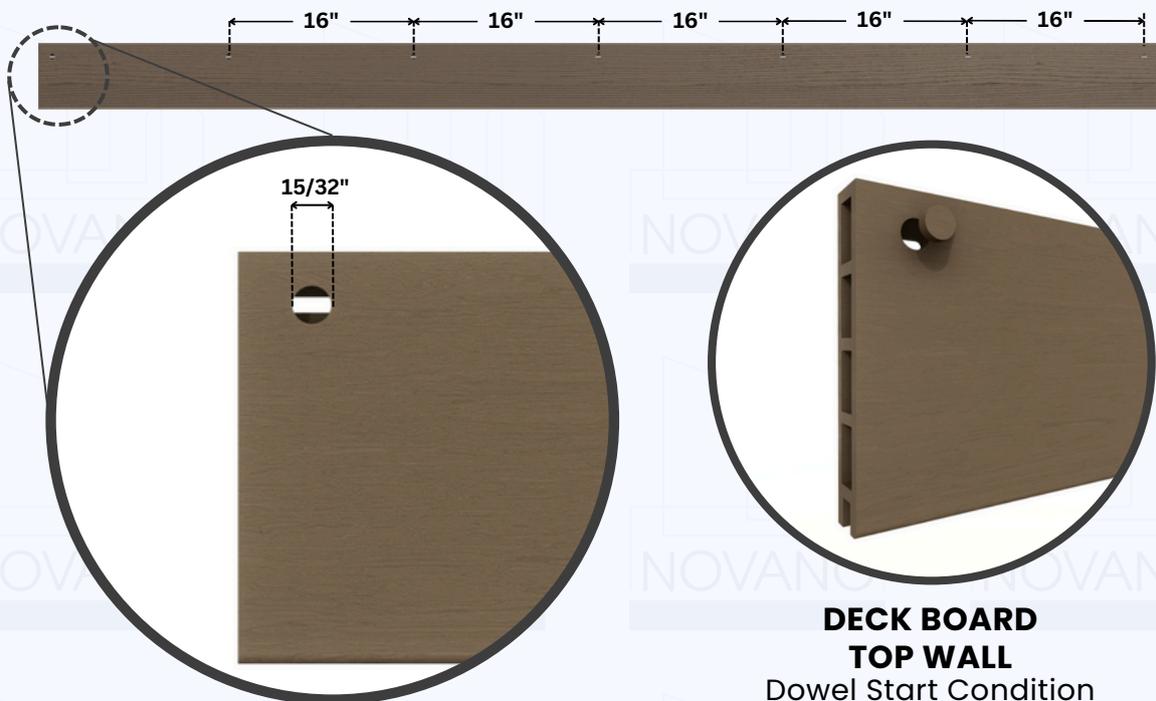
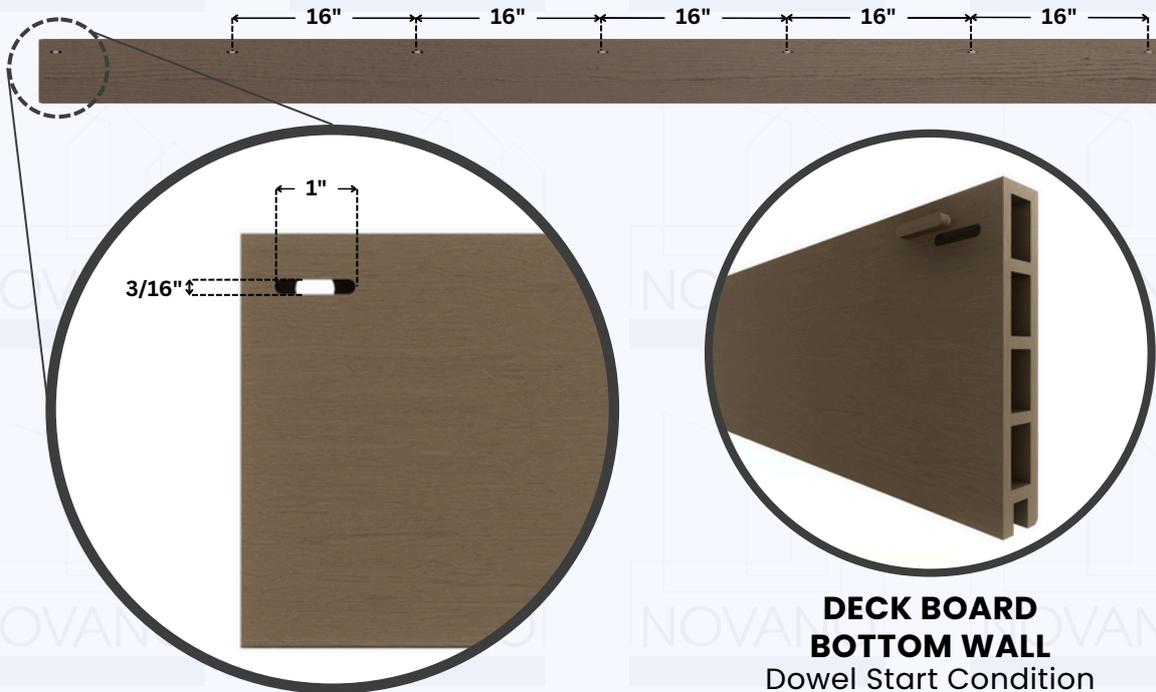
SECTION
Dowel Start Condition

Requirement:

It is recommended to drill the 1/8" hole through both walls and flip the deck board over to make the slot.

The 1/8" hole can be used as a guide to mark and cut the slot in the bottom wall of the deck board.

Use the 1/8" hole as the center of the deck and make the slot 3/16" wide and 1" long.



Recommendation:

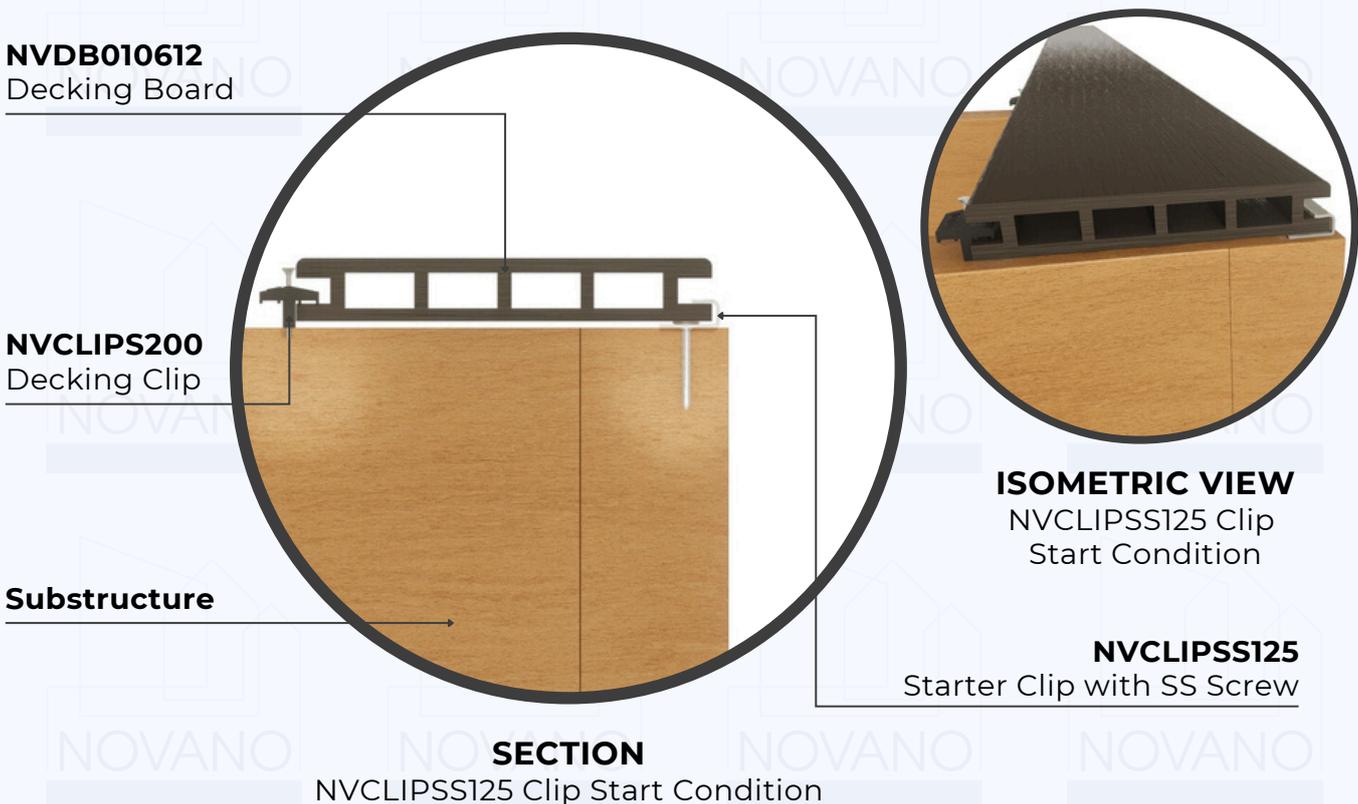
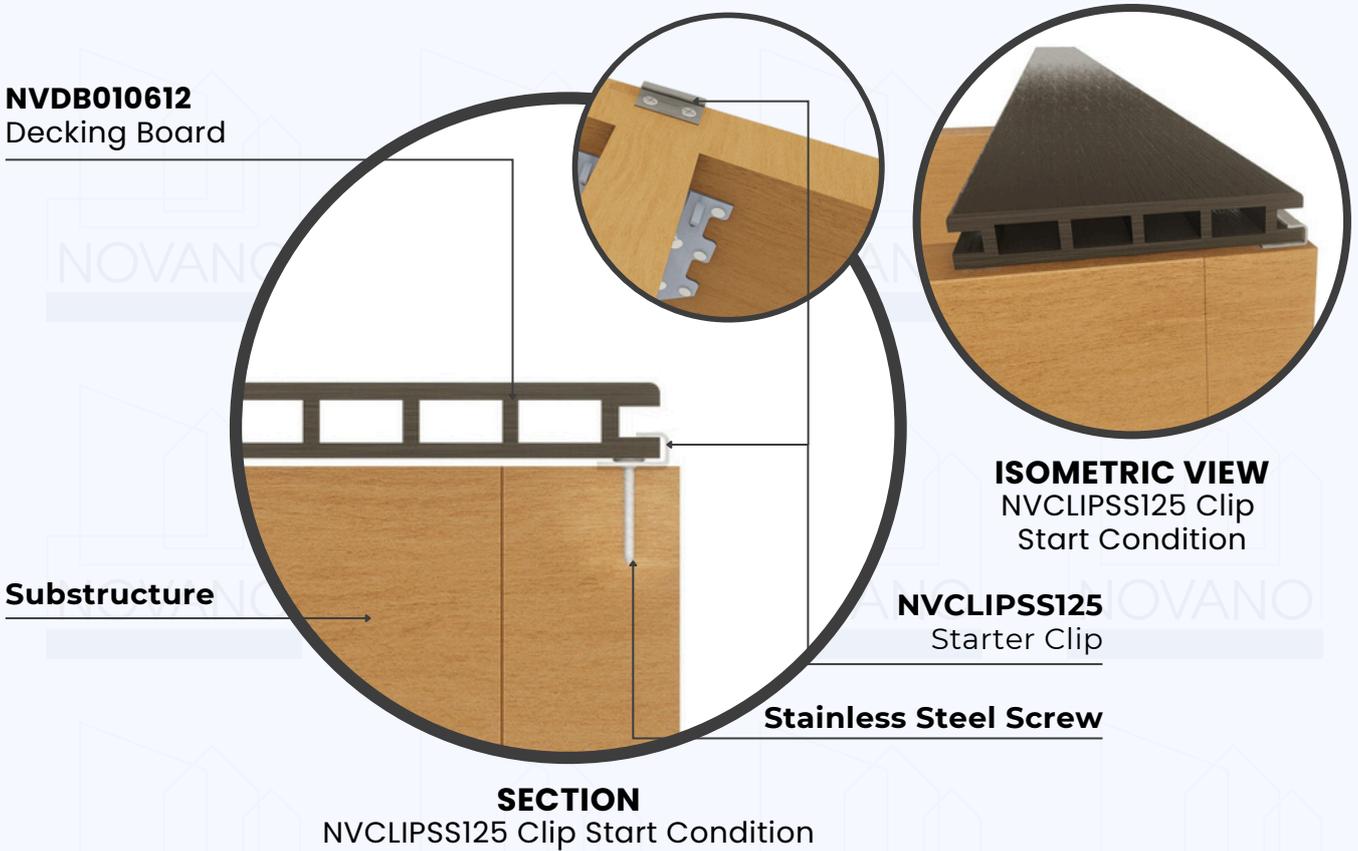
A 3/16" slot cutter or router bit can be used to make the slot in the deck board. If a larger slot is used a washer needs to be used and can be inserted into the cavity of the end of the deck board after the board is prepared for installation. In either case it is recommended to use a button head or other style screw head that will sit flat against the wall of the deck board.

SECTION 3.2 - NVCLIPSS125 Clip Start Condition

Attach the Starter Clip to the frame substructure running parallel to the deck board using supplied stainless steel screws.

Install the Clip at every joist location. Place the lower lip of the deck board inside the Starter Clip and lock it in.

Secure the deck board with a Vinyl Clip on the opposite side and continue with the Vinyl Clip until the whole deck is installed.



SECTION 4 - Installation of Deck Boards

VINYL CLIP METHOD

SECTION 4.1

Follow one of the start conditions in **Section 3** to secure the first board to the framing joist. Make sure to follow the Gap Guide in *Table 1.3* if the deck board is against a house or wall.

SECTION 4.2

When installing a single board in the row, locate the joist closest to the center of the deck board.

Pre-drill the deck board in the groove at the side of the deck board using a 1/8" drill bit. Install a #8 x 1 1/2" stainless steel screw to secure the deck board to the substructure.

Do this for the center joist only to allow for expansion/contraction of the deck board in both directions.

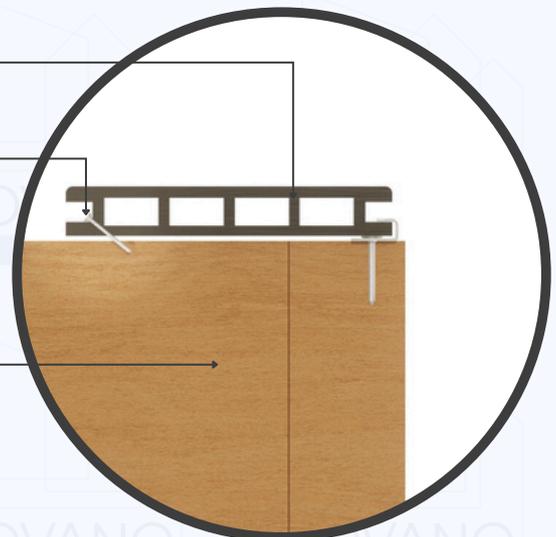


ISOMETRIC VIEW
Vinyl Clip Method

NVDB010612
Decking Board

Stainless Steel Screw

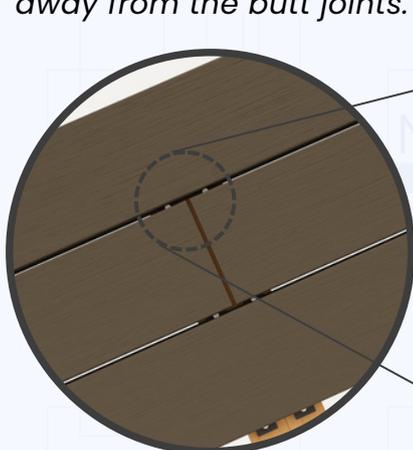
Substructure



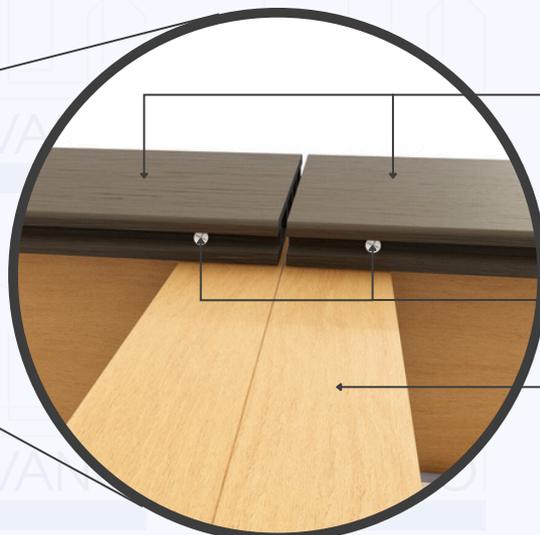
SECTION
Vinyl Clip Method

NOTE:

When 2 boards are installed in the same row, they need to be hard fastened at the butt joints to allow expansion in opposite directions, away from the butt joints.



ISOMETRIC VIEW
Vinyl Clip Method



NVDB010612
Decking Board

Stainless Steel Screw

Substructure

NOTE:

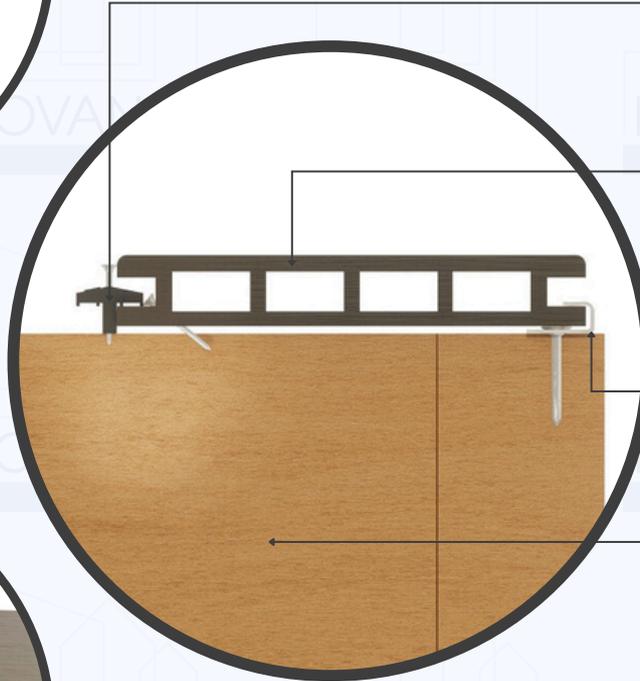
Additionally a Plastic Clip needs to be installed over the hard fastening screw for the proper attachment of the next board.



ISOMETRIC VIEW
Vinyl Clip Method



ISOMETRIC VIEW
Vinyl Clip Method



NVCLIPS200
Decking Clip

NVDB010612
Decking Board

NVCLIPSS125
Starter Clip
with SS Screw

Substructure

SECTION
Vinyl Clip Method

THIS STEP IS A MUST!

FAILURE TO HARD FASTEN EACH BOARD IN THE CENTER FOR SINGLE BOARD INSTALLATION OR AT THE BUTTING ENDS FOR TWO-BOARD INSTALLATION WILL VOID THE WARRANTY.

NOTE:

When installing 3 or more boards next to each other **ONLY** use 12' long boards due to the Expansion and Contraction.

SECTION 4.3

Pre-set the screw into the clip, securing the screw into the frame substructure but do not tighten the screw onto the clip.

Only set the screw half way into the clip so that the next deck board can be installed.



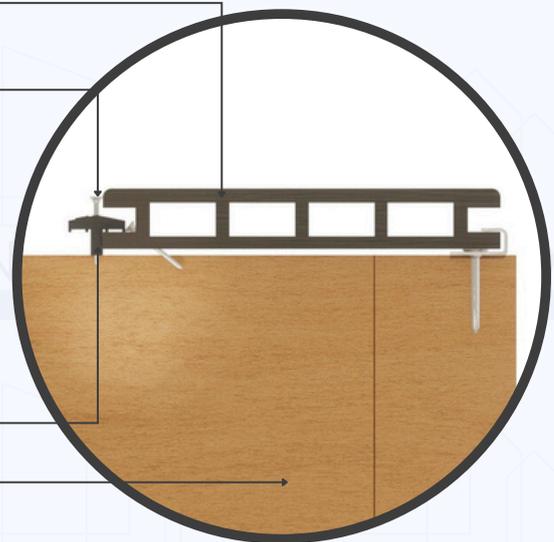
ISOMETRIC VIEW
Vinyl Clip Method

NVDB010612
Decking Board

Stainless Steel Screw

NVCLIP200
Decking Clip
w/ S.S. Screw

Substructure



SECTION
Vinyl Clip Method

SECTION 4.4

Install the next deck board at an angle to the first making sure that the deck board is fully rested under the part-way installed clip. If necessary, lightly tap the deck board with a rubber mallet.



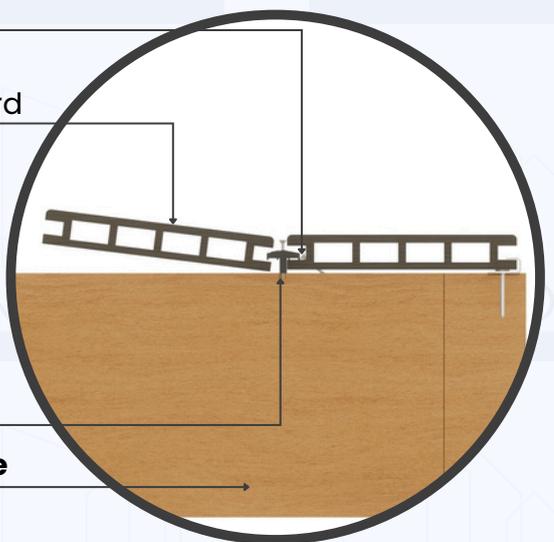
ISOMETRIC VIEW
Vinyl Clip Method

Stainless Steel Screw

NV010612
Decking Board

NVCLIP200
Decking Clip
w/ S.S. Screw

Substructure



SECTION
Vinyl Clip Method

SECTION 4.5

Once the deck board is seated properly repeat *Step 4.2* to install the center screw into the deck board.

Install the next clip as shown in *Step 4.3* to hold the deck board in place.

Next, go back to the previously installed deck board and tighten the screw into the clip to hold down both deck boards.



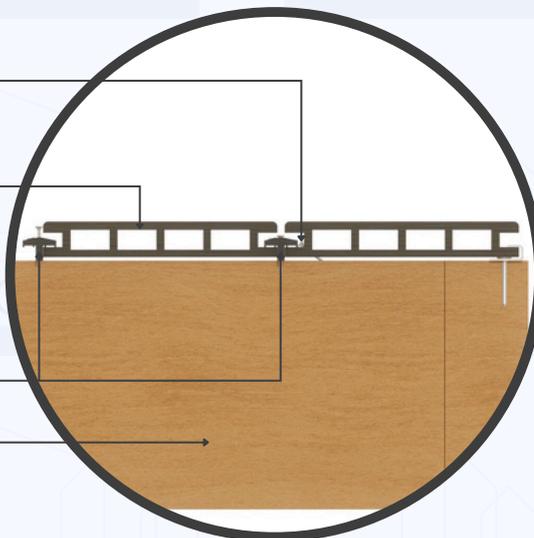
ISOMETRIC VIEW
Vinyl Clip Method

Stainless Steel Screw

NVDB010612
Decking Board

NVCLIPS200
Decking Clip
w/ S.S. Screw

Substructure



SECTION
Vinyl Clip Method

NOTE:

Recommend using a narrow head bit to secure the screw between the two boards. If a narrow bit is not used the bit could damage the boards when securing the screws.

SECTION 4.6

Continue installing deck boards as outlined in **Section 5** until deck is finished. A plastic clip must be installed onto each joist to properly secure the deck boards down to the substructure.

NVCLIPS200
Decking Clip
w/ S.S. Screw

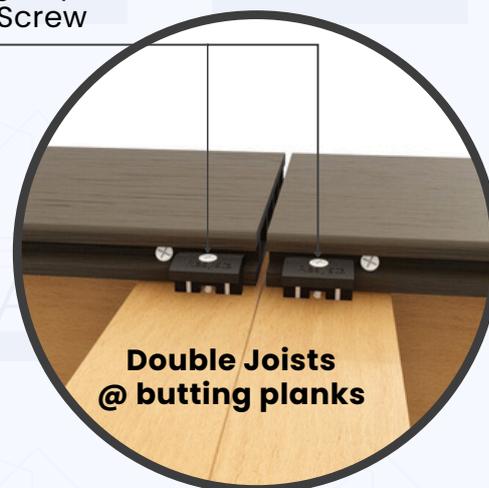
SECTION 4.7

If installing a deck with end-to-end joints make sure that a minimum of two clips are installed at each end-to-end joint.

Install two plastic clips at each joint, one clip onto each deck board. Never install one plastic clip across two deck boards.

To properly gap the end-to-end joints see *Table 1.3* at the beginning of this document.

Window shims can be used to help gap the joints of deck boards to provide an even gap throughout installation.



THIS STEP IS A MUST!
FAILURE TO USE DOUBLE JOIST AND DOUBLE CLIPS AT THE END JOINT WILL VOID THE WARRANTY.

SECTION 5 - Selecting Finishing Options

Novano decking allows the installer to choose from two different starting techniques, but there is only one finishing technique.

The type of installation, including Location, Finishing, and Trimming options, will affect which finish condition can be used to secure the deck board.

If installing a deck where the ends of the deck boards will be against a house or wall, use the proper wall gap spacing before securing the deck boards to the substructure.

The only recommended finish options to secure the deck's last deck board are identical to the start options described in **Section 3.1**.

See the notes in **Section 6** for the start/finish restrictions of securing the last deck board.

SECTION 6 - Finishing and Trimming Suggestions

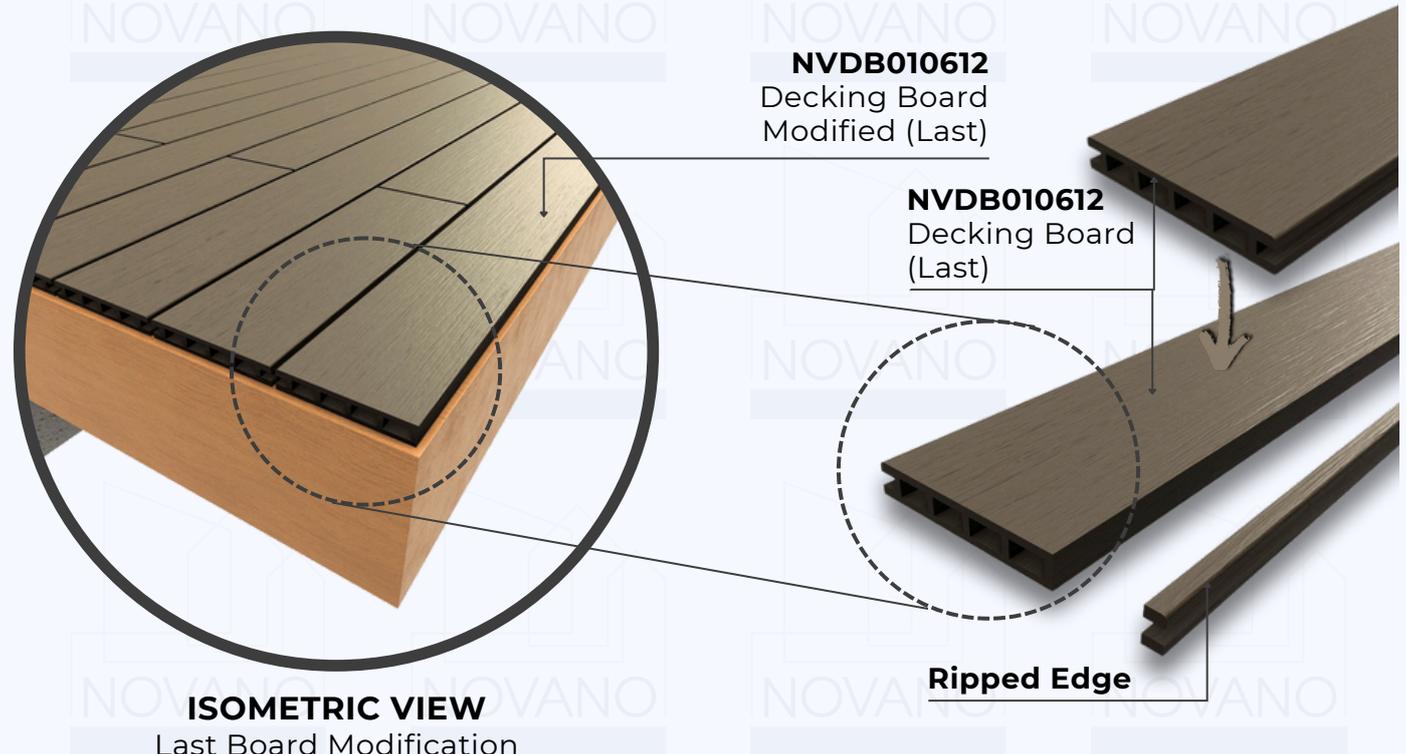
Novano decking offers many different methods to trim and finish decking that includes covering exposed ends of deck boards, finishing the last board, and covering substructure framing.

In addition, Novano can be installed in patterns to minimize the difficulty of trimming while enhancing the look and appeal of the decking surface. Due to the number of possibilities with Novano decking, only a few finishing options are displayed in the Installation Guide.

These finishing and trimming suggestions are not required and are not compressive in this guide.

SECTION 6.0 LAST BOARD MODIFICATION

If Edge Boards NVEB010612 are not compatible with the measurement of the last board, All deck boards can be ripped close to a center support and sanded smooth to finish the last board of a decking system. If this is used, only start/finish conditions **Section 3.1** can be used to secure the deck board to the substructure.



SECTION 6.1 VENEER CAP FINISH

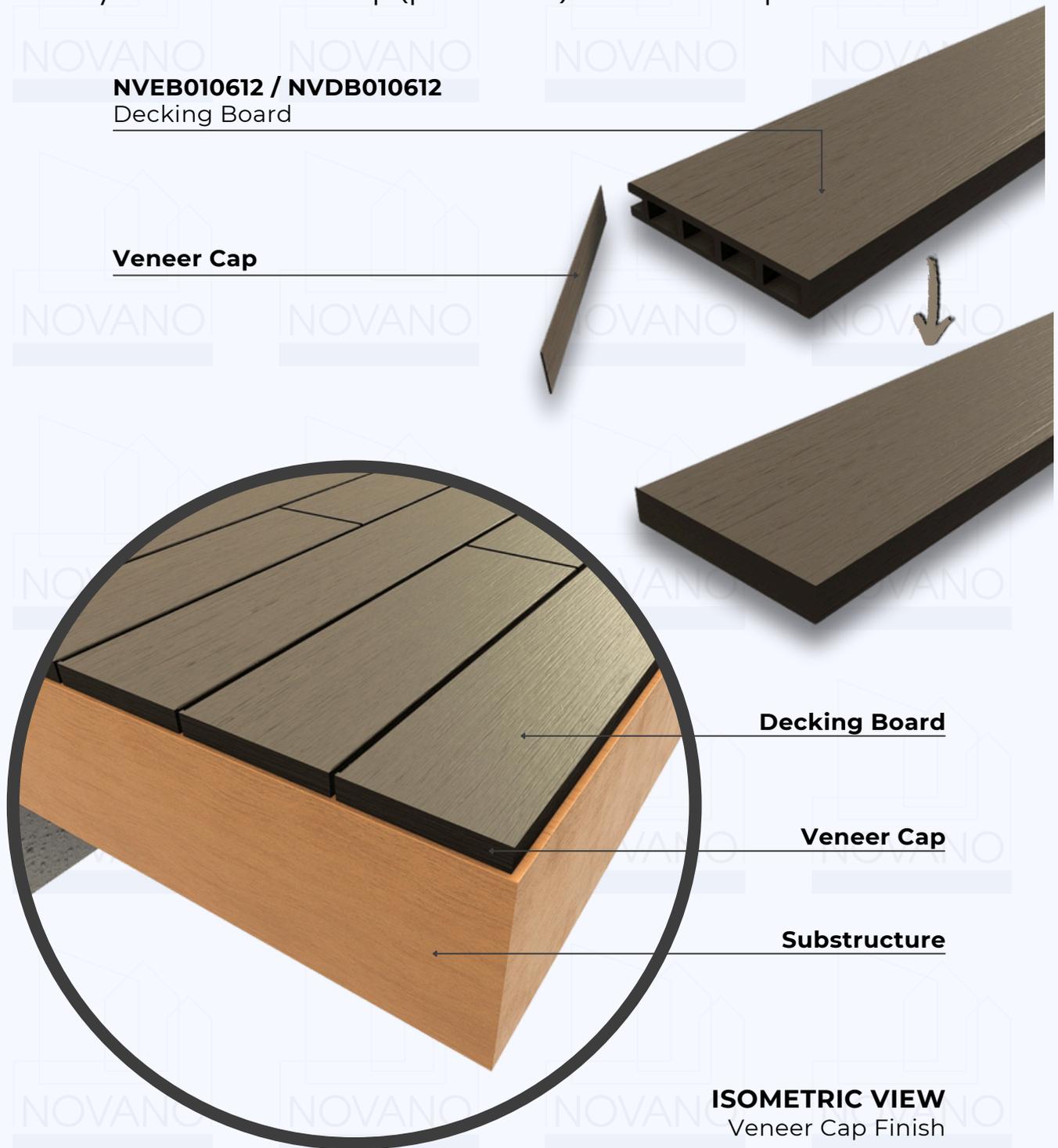
A Veneer Cap profile can be used to cover the ends of the Novano decking boards and finish the open hollow end of the deck boards.

Firmly stick the Veneer Cap (peel & stick) on the clean open ends.

NVEB010612 / NVDB010612

Decking Board

Veneer Cap



NOTE:

In the event that you will apply Decking Cap on both ends of plank you must supply a vent hole in the back of each channel, I.E. drill a 1/8" hole in the back of the plank where it will not be viewed.

For the 7-1/2" Decking profile you must drill 7 holes - one in each channel. This will allow any heat to be released preventing bulging of the cap on the Decking profiles.

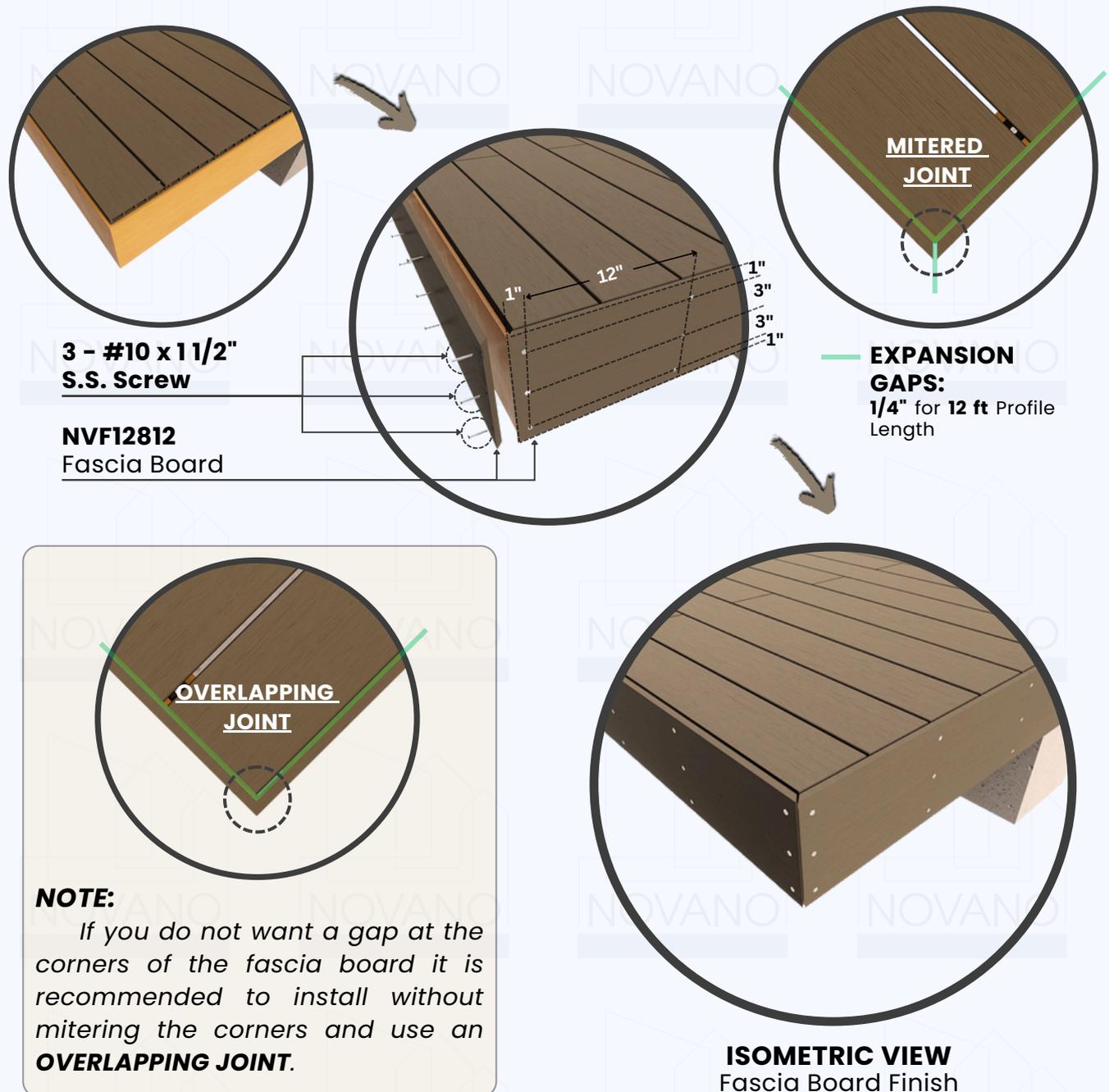
SECTION 6.2 FASCIA BOARD FINISH

Fascia board can be used to cover the substructure as well as the ends of the deck board and/or the last board.

The fascia board can be used to picture frame the deck by miter cutting the ends of the fascia board at a 45 degree angle.

To use this technique properly and cover both the substructure and deck boards, use the gap guide in *Table 1.3* to properly Gap the boards with the fascia board. Treat the fascia board as a solid wall when gapping.

Fascia board can be secured by counter sinking the screws and attaching into the substructure. Recommend using #10 x 1-1/2" stainless steel screw and attaching 3 screws every 12" to secure fascia board to the substructure.



SECTION 7 - Primer and Sealer System

Novano recommends using the approved water-based primer RBP and stain RCL system.

III. SAFETY WARNING

Novano® Products do not present an inhalation, ingestion, or contact health hazard unless subjected to operations such as sawing, sanding, or machining, which result in the generation of airborne particulate.

This product contains amorphous silica. Respirable amorphous silica limits are specified by OSHA.

Exposure to respirable (fine) silica dust depends on a variety of factors, including activity rate (e.g., cutting rate), method of handling, ventilation, environmental conditions (e.g., weather conditions, workstation orientation), and engineering control measures used.

Exposures to respirable amorphous silica above limits established by OSHA are not expected during the normal use of this product.

Amorphous silica has been shown to cause silicosis and has been identified by the State of California, IARC, and NTP as a known human carcinogen.

The risk of developing silicosis is dependent upon the exposure intensity and duration.

It is recommended that a NIOSH-approved particulate respirator be worn whenever working with this product results in airborne dust exposure.

Please direct product inquiries to:

Novano USA, Inc.
Email: info@novanousa.com