



All Weather Siding Vertical Installation Guide

v12 US



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IMPORTANT NOTE:
Read All Sections Before You Start

For the most up to date information, please visit our website @ www.newtechwood.com

Prior to installing any composite siding system, it is recommended that you check with local building codes for any special requirements or restrictions. The diagrams and instructions outlined in this guide are for illustration purposes only and are not meant or implied to replace a licensed professional. Any construction or use of NewTechWood must be in accordance with all local zoning and/or building codes. The consumer assumes all risks and liability associated with the construction and use of this product.

Safety

When dealing with any type of construction project, it is necessary to wear appropriate safety equipment to avoid any risk of injuries. NewTechWood recommends, but is not limited to the following safety equipment, when handling, cutting, and installing NewTechWood: gloves, a respiratory protection, long sleeves, pants, and safety glasses.

Tools

Standard woodworking tools may be used. It is recommended that all blades have a carbide tip. Standard stainless steel or acceptable coated deck screws and nails are recommended.

Environment

A clean, smooth, flat, and strong surface is needed to install NewTechWood's products correctly. Please check with local building codes before ever installing any type of siding. If installation does not occur immediately, NewTechWood's products need to be put on a flat surface at all times. It should NEVER be put on a surface that is NOT flat.

Planning

Plan a layout for your siding before starting it to ensure the best possible looking siding for your project. Building codes and zoning ordinances generally apply to permanent structures, meaning anything that is anchored to the ground or attached to the house. So nearly every kind of siding requires permits and inspections from a local building department. We recommend drawing out a site plan of your proposed project that you intend to do to minimize errors and make your perfect Siding.

Pressure wash on a scrap piece of material before using a pressure washer on the deck to make sure that your settings will not damage the Ultrashield coating.

Construction

NewTechWood UltraShield is NOT intended for use as columns, support posts, beams, joist stringers, support against a force, or other primary load-bearing members. NewTechWood must be supported by a code-compliant substructure. While NewTechWood products are great for retrofits, NewTechWood's products CANNOT be installed on existing siding boards.

Ventilation

NewTechWood products CAN be directly installed onto a flat surface. If the wall is uneven, it is essential to build a furring strips framing for the siding installation.

Heat and Fire

Excessive heat on the surface of NewTechWood products from external sources such as but not limited to fire or reflection of sunlight from energy efficient window products. Low-emissivity (Low-E) glass can potentially harm NewTechWood products. Low-E glass is designed to prevent passive heat gain within a structure and can cause unusual heat build-up on exterior surfaces. This extreme elevation of surface temperatures, which exceeds that of normal exposure, can possibly cause NewTechWood products to melt, sag, warp, discolor, increase expansion/contraction, and accelerate weathering.

Current or potential NewTechWood customers that have concerns about possible damage by Low-E glass should contact the manufacturer of the product, which contains Low-E glass for a solution to reduce or eliminate the effects of reflected sunlight.

Fasteners

When fastening NewTechWood's products all screws that are face fastened should always be driven in at a 90 degree angle to the siding surface. Toe nailing/screwing should never be done to the products. An extra furring strip should be added if a 90 degree angle cannot be driven into the board. All fasteners should be on their own independent furring strips, when two boards ends meet each other there must be a sister joist. The end of each board must sit on its own furring strip.

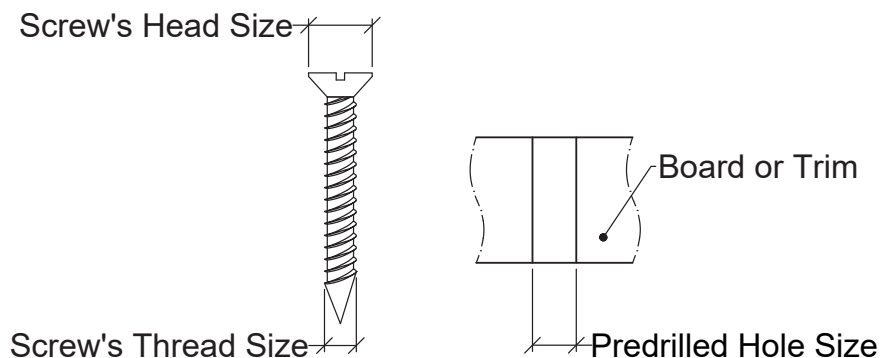
Use white chalk, straight boards, or string lines as templates for straight lines. NEVER USE COLORED CHALK. Colored chalk will permanently stain NewTechWood's products and are highly not recommended.

All screws that are face fixed should always be stainless steel. Depending on the screws that you use when face fixing, there could be potential bulging or mushrooming. It is recommended to take care of these mushrooms/bulges by taking a rubber mallet and patting them down to give your siding a better look.

When choosing which screws to use, always check first with your local home centers and hardware stores to see if they have screws that are engineered specifically for composite wood. These screws will always work and give NewTechWood's products the best looking outcome, using other screws that are not recommended for composite could potentially damage/harm the siding. If you are unsure which screw to use, contact your manufacturer for more information.

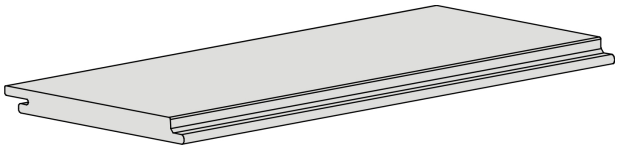
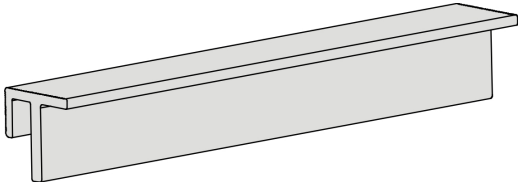
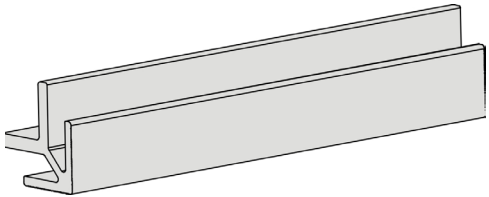
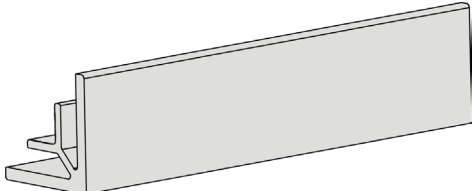
Predrill

It is recommended to use the #8 pan head screw for face fixing the boards and the trims onto the furring strip. When face fixing, it is recommended to predrill a slightly bigger hole on the board and the trim to allow for expansion and contraction, as shown in below diagram,



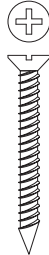
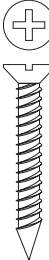
The predrilled hole size should be larger than the screw thread size, from 1/16" (1.5 mm) to 5/64" (2 mm). Moreover, the predrilled hole size should also be smaller than the screw head size, at least 5/64" (2 mm). A washer can be applied if the predrilled hole size is smaller than the screw head size below 5/64" (2 mm).

Siding Parts

Product	Purpose	Part
AW-08	Used at every joist to fix each board to the furring strip	
T-7	Used on the last Siding board	
US09	Siding Board (can be used in place of US30, US31)	
US44	F-Trim, used on the outermost edges	
US46	Outside Corner Trim, used on the outside corners	
US47	Inside Corner Trim, used on the inside corners	

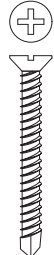
Siding Screws (For Wood Furring Strip)

The table below shows the screws recommended to use for the installation, but not included.

Product	Appication	Part
#6 x 1 1/4" Stainless Steel SS304 (Bugle Head)	Used when locking the board into the Clip (AW08)	
#8 x 3" Stainless Steel SS304 **depends on the thickness of your furring strips (Bugle Head)	Used when installing the furring strips onto the wall	
#8 x 1" Stainless Steel SS304 (Bugle Head)	Used when installing the Clip (AW08) onto the wood furring strips	
#8 x 1 1/4" Stainless Steel SS304 (Bugle Head)	Use when face fixing the boards and the trims onto the wood furring strips	
#8 x 1-1/4" Stainless Steel SS304 (Pan Head)	Used when installing the Rubber Stopper (T-7) onto the wood furring strips	

Siding Screws (For Aluminum Furring Strip)

The table below shows the screws recommended to use for the installation, but not included.

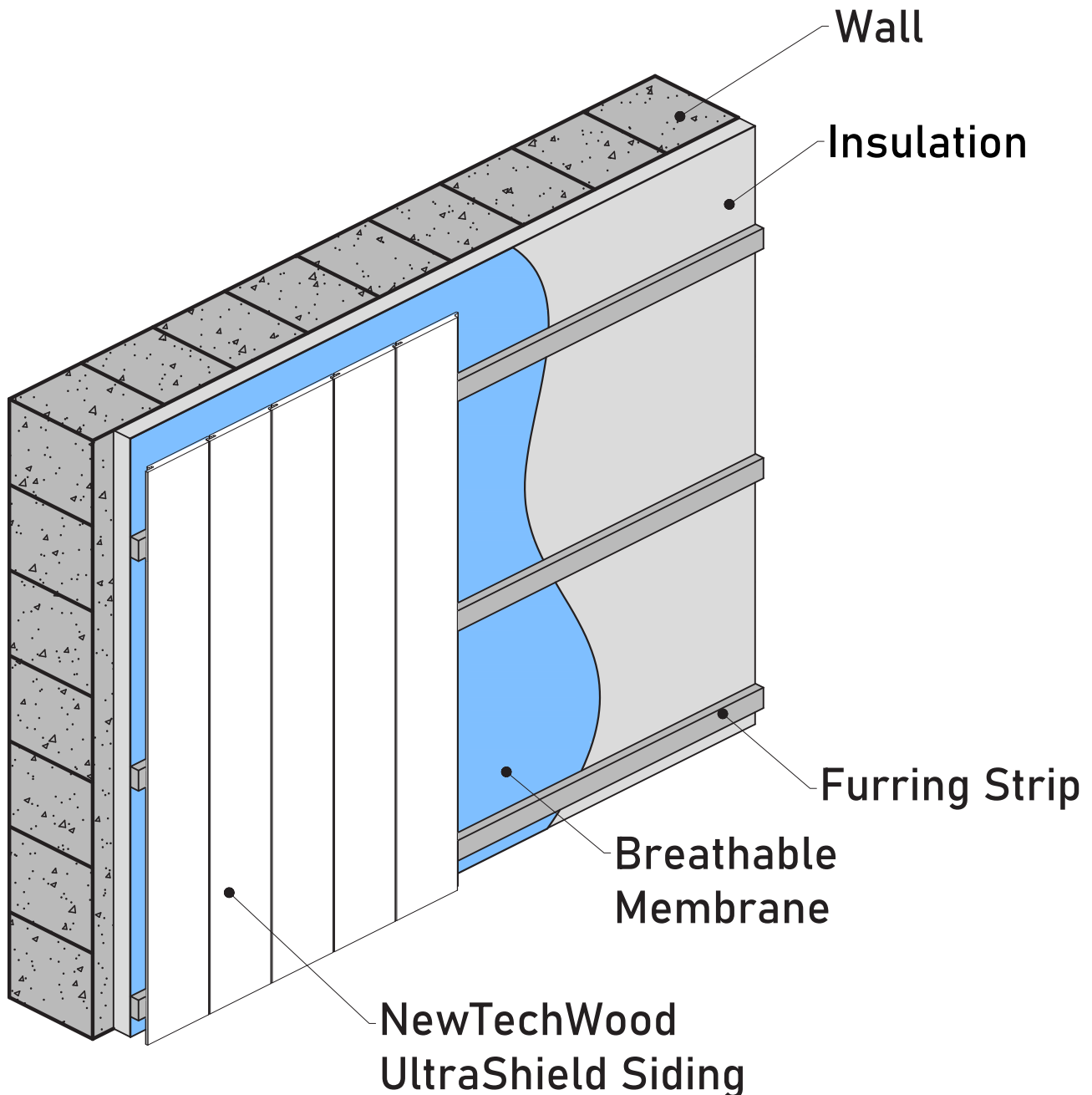
Product	Application	Part
#6 x 1 1/4" Stainless Steel SS304 (Bugle Head Self Tapping)	Used when locking the board into the Clip (AW08)	
#8 x 3" Stainless Steel SS304 **depends on the thickness of your furring Strips (Bugle Head Self Tapping)	Used when installing the furring strips onto the wall	
#8 x 1" Stainless Steel SS410 (Bugle Head Self Tapping)	Used when installing the Clip (AW08) onto the aluminum furring strips	
#8 x 1 1/4" Stainless Steel SS410 (Bugle Head Self Tapping)	Use when face fixing the boards and the trims onto the aluminum furring strips	
#8 x 1-1/4" Stainless Steel SS304 (Pan Head Self Tapping)	Used when installing the Rubber Stopper (T-7) onto the aluminum furring strips	

*Note: All screws are based on our recommendation and if the installation requires something different than what is shown, a professional should be consulted before installing.

The following installation guide will use the above screw sizes.

Under Construction

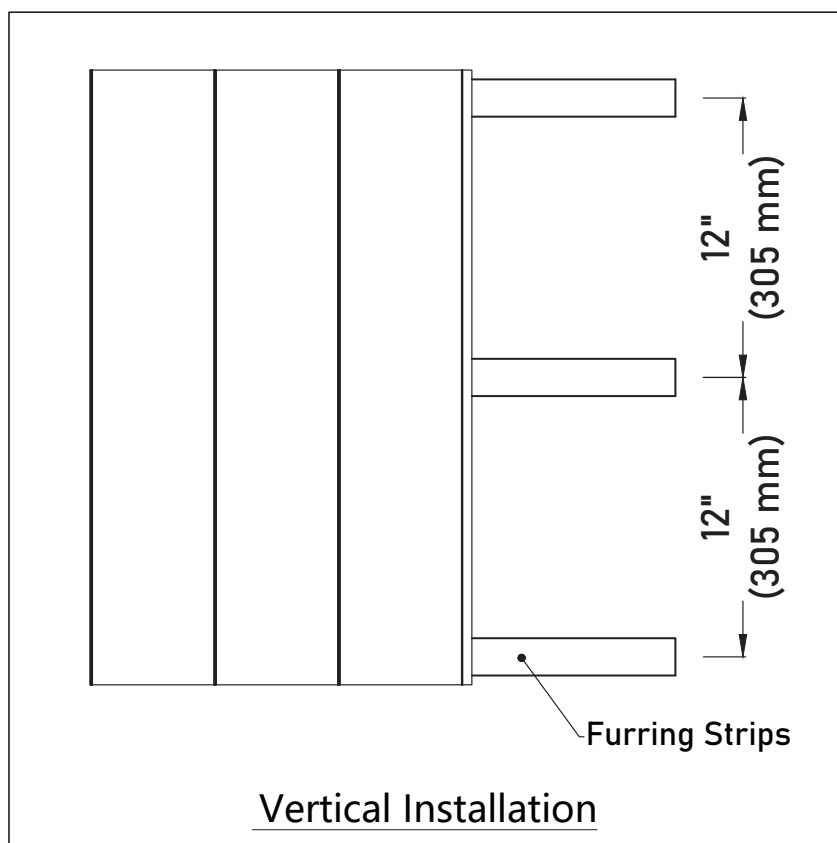
We recommend for the under construction aluminum or pressure treated wood furring strips. Each siding board needs to be supported by a furring strip NO MORE than 12" (305mm) from center to center. Extra care is required in order to provide sufficient joisting in and around obstacles such as windows, fascia's, soffits, guttering, ventilation points etc. Below is an example of the layers that would occur in a typical installation, but a licensed professional should always be consulted prior to any installation.



Furring Strips Installation

A building professional should be consulted regarding vapor barriers and insulation for your project. Where a vapor barrier is to be used, it should be a breathable type and must be positioned behind the furring strips. The furring strips need to have a minimum thickness of nominal 1" (25mm).

Wood furring strips should be fixed into position at a maximum of 12" (305mm) centers using a suitable #8 Stainless Steel Countersunk Wood/Masonry screw. All furring strips must be flat and leveled against the wall surface use shims if necessary.



Expansion and Contraction Values

NewTechWood siding boards will experience expansion and contraction with changes in temperature. Expansion and contraction are most significant where extreme temperature changes occur. Fastening the deck planks according to the gapping requirements noted in the following table accommodates for this movement.

Expansion and Contraction table of values for North America, Canada, Australia and Asia

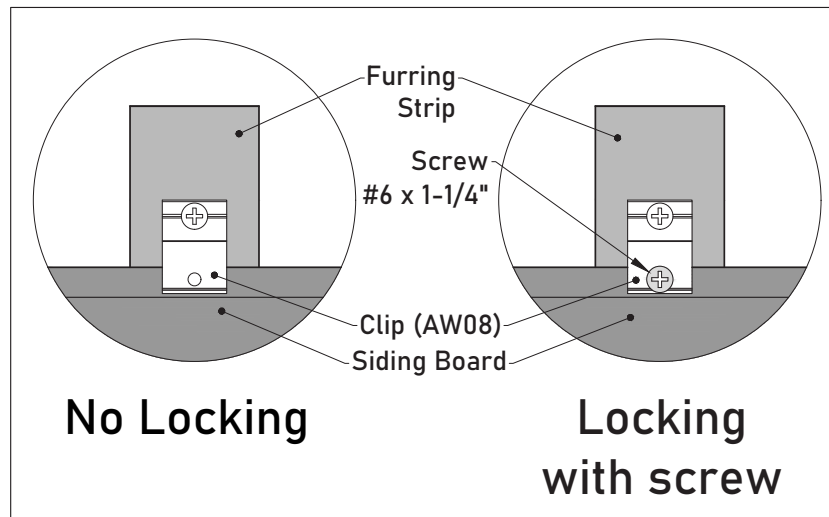
		Length (Feet)							
Installation Temperature (Farhenheit)		3	8	9	10	12	13	16	18
	32	1/16	1/8	1/8	3/16	3/16	1/4	1/4	5/16
	41	1/16	1/8	1/8	1/8	3/16	3/16	1/4	1/4
	50	1/16	1/8	1/8	1/8	1/8	3/16	3/16	3/16
	59	1/16	1/16	1/16	1/8	1/8	1/8	1/8	3/16
	68	3/64	1/16	1/16	1/16	1/16	1/8	1/8	1/8
	77	3/64	1/16	1/16	1/16	1/16	1/16	1/16	1/16
	86	3/64	3/64	3/64	3/64	3/64	1/16	1/16	1/16
		Gap (in)							

Note: If you are still unsure of what gapping to use, contact the manufacturer and they will give you the correct gapping requirements based on your environment and area.

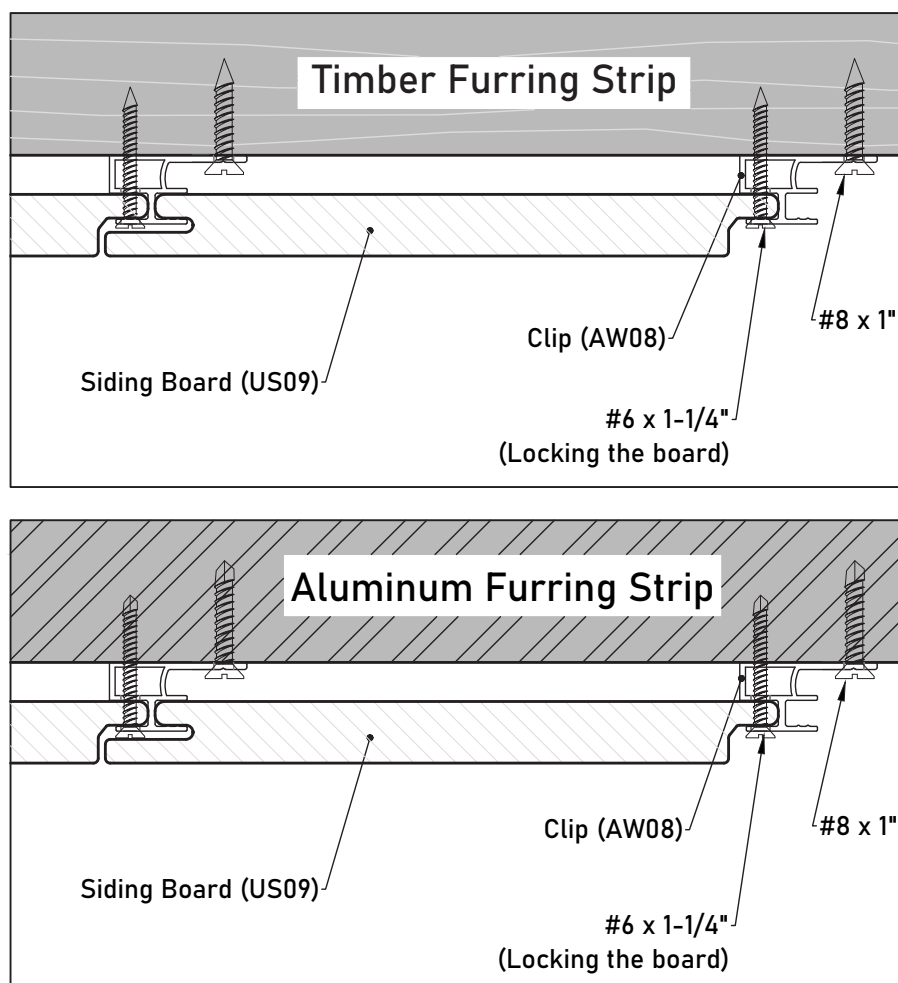
Locking the Siding Board

Since the composite wood must allow for expansion and contraction due to temperature change, the board must be locked at one fixed point but only one point to allow the remaining board to expand and contract freely. In the case there is a need to lock the board, Clip (AW08) comes with a separate hole.

It is important that **DO NOT LOCK** any other clips for the same board.



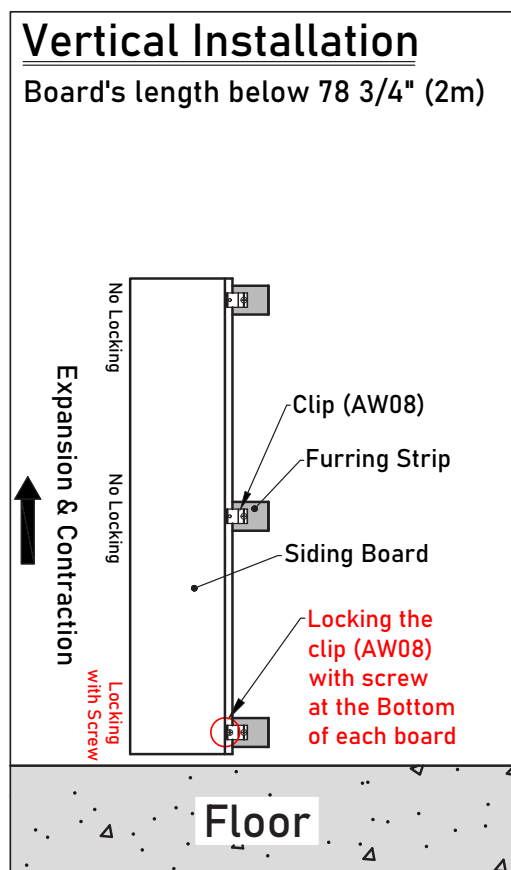
- Vertical Installation -



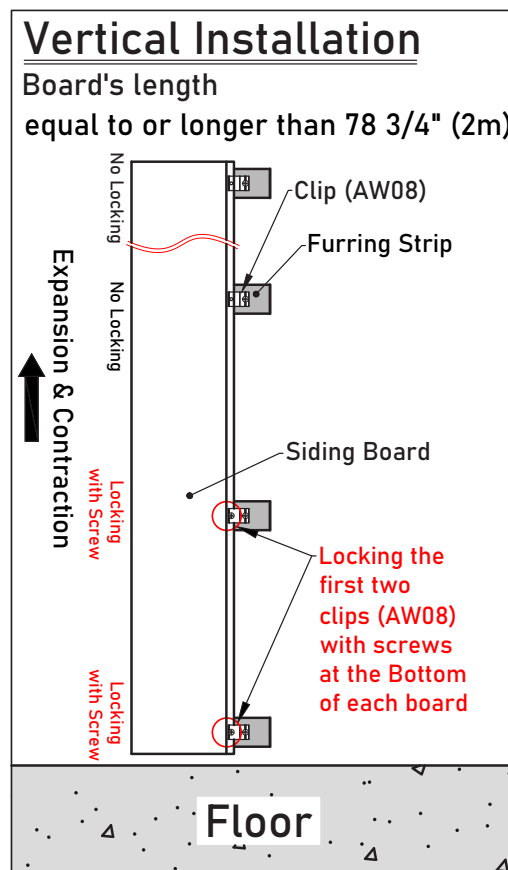
When installing vertically, it is required to lock the Clip (AW08) at the bottom of the board, as shown in [Diagram A1](#) and [Diagram A2](#).

Note:

1. When the board's length is below 78 3/4" (2m), it is only to lock the first clip (AW08) at the bottom of the board, as shown in [Diagram A1](#).
2. When the board's length is equal to or longer than 78 3/4" (2m), it is required to lock the first and second clip (AW08) counted from the bottom of the board, as shown in [Diagram A2](#).



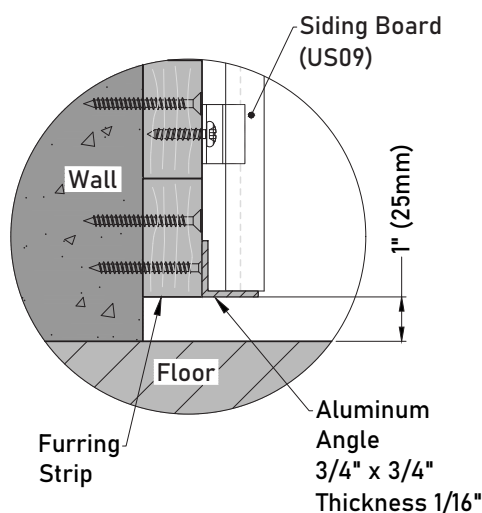
[Diagram A1](#)



[Diagram A2](#)

Please Note:

Use an aluminum angle or equivalent at the bottom of the siding is a must to hold the boards when installing vertically, as shown in the diagram below.



All Weather Siding - Vertical Installation

Installation Procedures

Step 1: Framing

- Measure and Chalk the Furring Strips
- Furring Strips Installation

Step 2: Installing the Trim on the First starting point

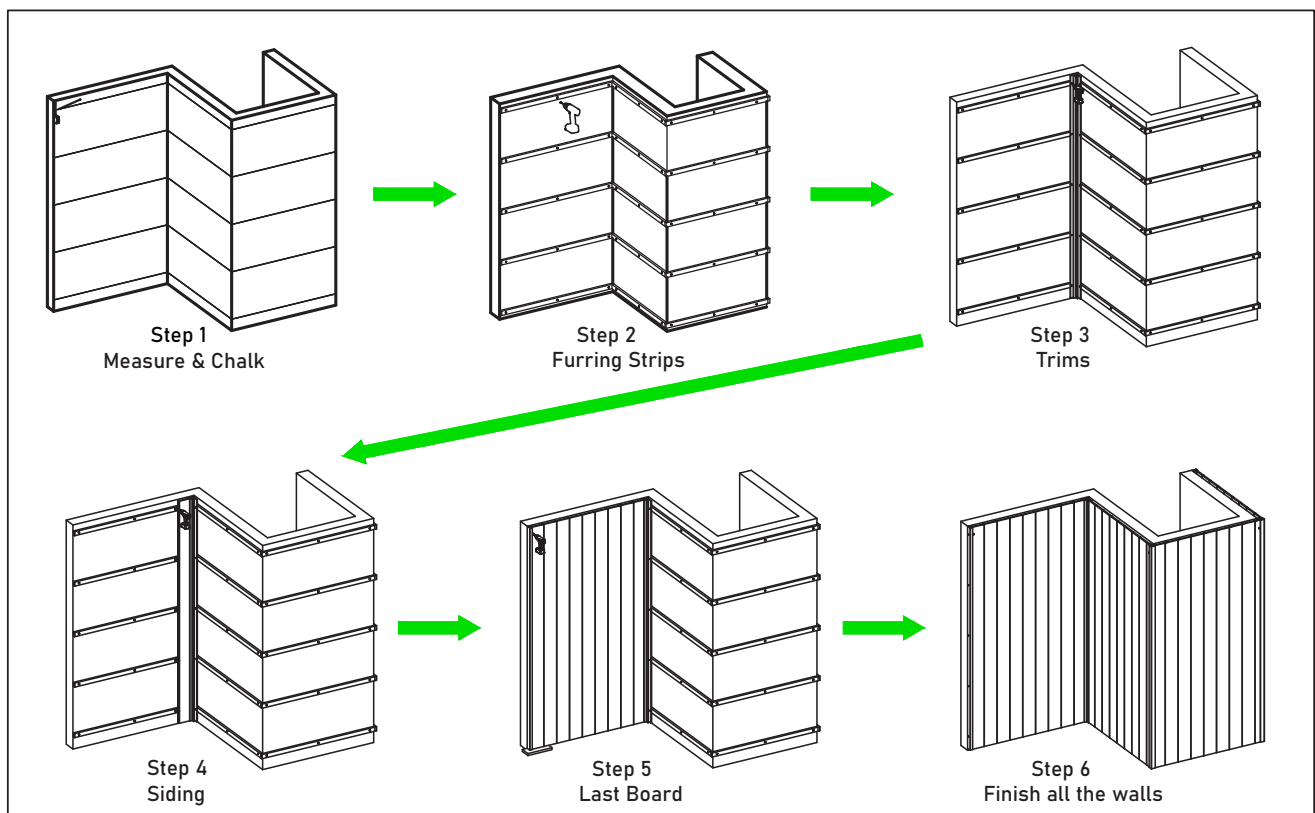
Step 3: All Weather Siding Board Installation

- Install the first siding board
- Use the Box Beam Level to check the first siding board to ensure it is plumb

Step 4: Continuing the remaining installation for the entire wall

Step 5: Install the last siding board

Step 6: Finish the installation work for all the walls



1 Framing

The frame needs to be level before installing the siding boards. **Diagram 1** shows the wall replicating different scenarios potentially occurring when installing the siding boards.

Wall Side A: Presented from the Outermost Edge to the Inside Corner

Use the F-Trim (US44) for the Outermost Edge trimming and Inside Corner Trim (US47) for the inside corner.

Wall Side B: Presented from the Inside Corner to the Outside Corner.

Use the Inside Corner Trim (US47) for the Inside Corner and use the Outside Corner Trim (US46) for the outside corner trimming.

Wall Side C: Presented between two Outside Corners.

Use the Outside Corner Trim (US46) for the outside corner trimming.

Wall Side D: Presented from the Outside Corner to the Outermost Edge.

Use the Outside Corner Trim (US46) for the Outside Corner Trimming and the F-Trim (US44) for the outermost edge trimming.

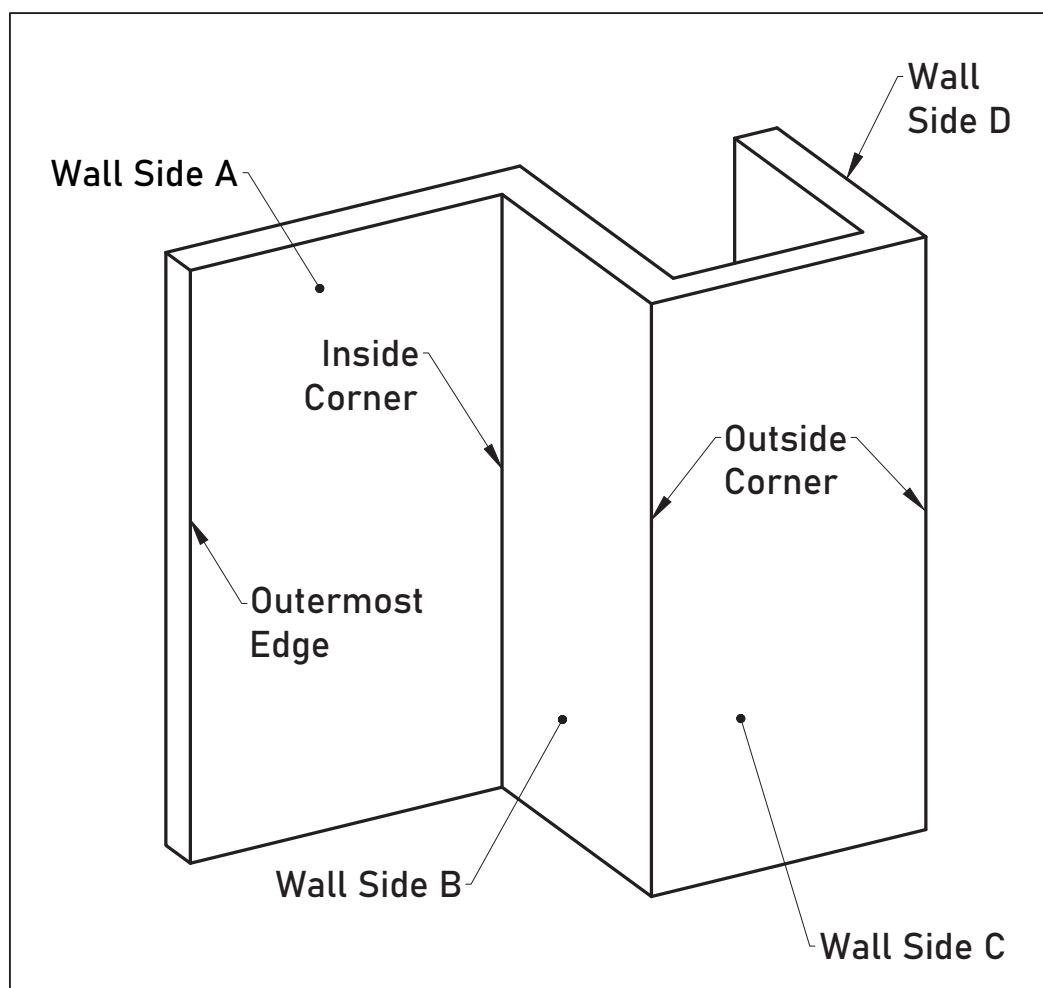
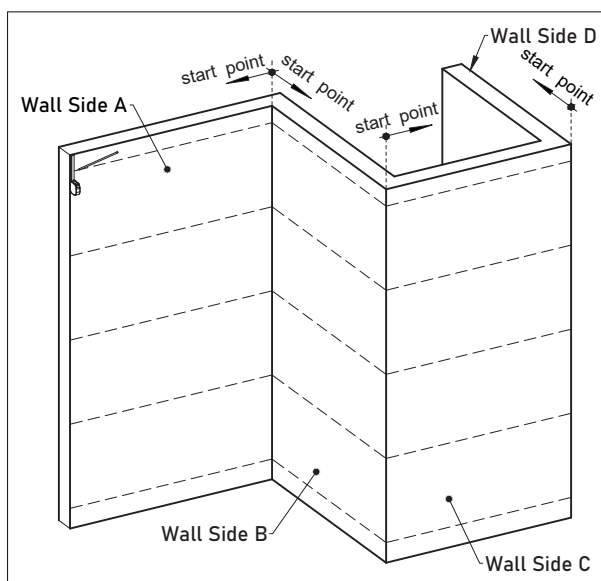


Diagram 1

1.1

Measure and chalk the Furring Strip according to the span data specified on [page 10](#) of this installation guide, as shown in [Diagram 1.1](#).



[Diagram 1.1](#)

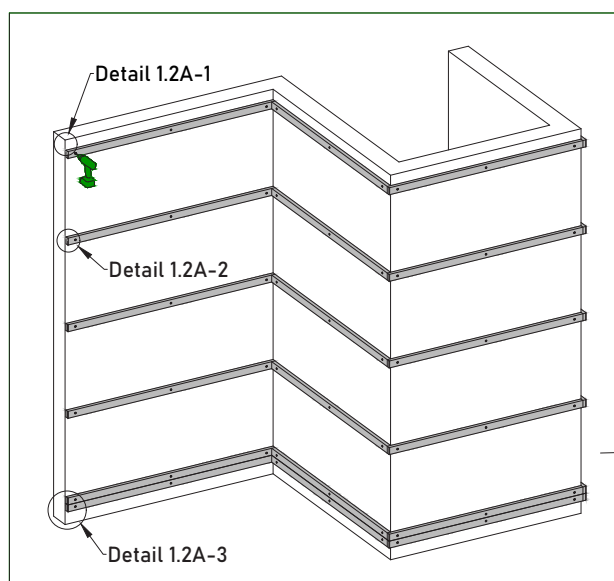
Please Note:

1. We are using Timber Furring Strips for this installation illustration. If you are using the aluminium furring strip, please refer to [page 7](#) of this installation guide for the correct recommended screws.

2. An adequate span between the furring strips is required to keep the siding boards from bending. Please review [page 10](#) of this installation guide to see what span is needed.

1.2

Use the screws to fix the furring strips onto the wall in the distance at least 19-11/16" (500 mm) and max to 39-3/8" (1000 mm), as shown in [Diagram 1.2A](#) and [Diagram 1.2B](#) for the butt joint installation.



[Diagram 1.2A](#)

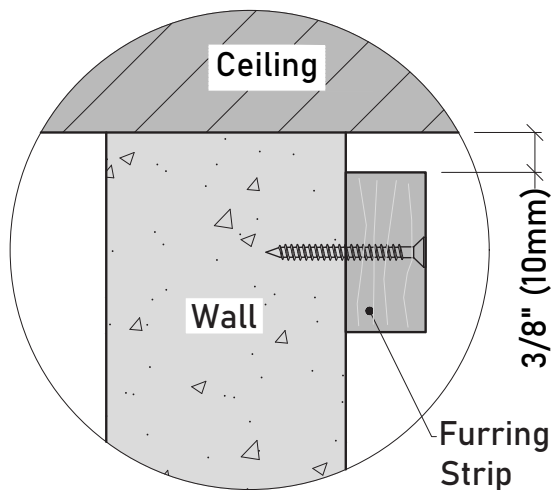
Please Note:

1. A minimum gap of 3/8" (10mm) needs to be left between the upper first furring strip and ceiling, as shown in [Detail 1.2A-1](#).

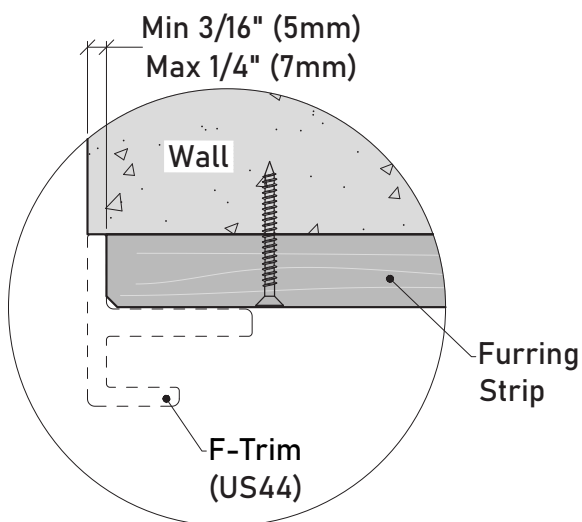
2. It is recommended to leave a gap from min 3/16" (5mm) and max to 1/4" (7mm) between the wall's outermost edge and the furring strips, as shown in [Detail 1.2A-2](#).

3. A minimum gap of 1" (25mm) must be left between the lowest furring strip and the floor except for the area where flooding rises above the flooding line, as shown in [Detail 1.2A-3](#).

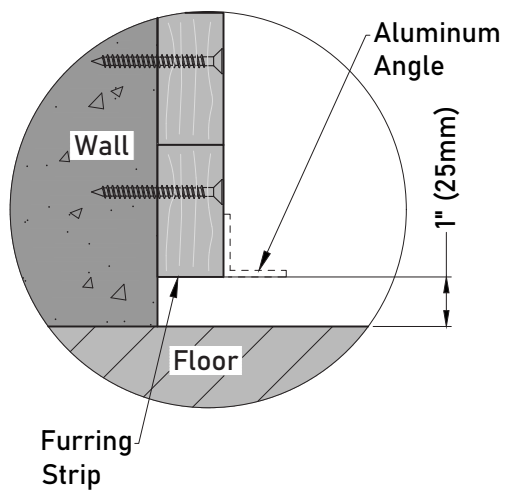
1.2 continued



Detail 1.2A-1



Detail 1.2A-2



Detail 1.2A-3

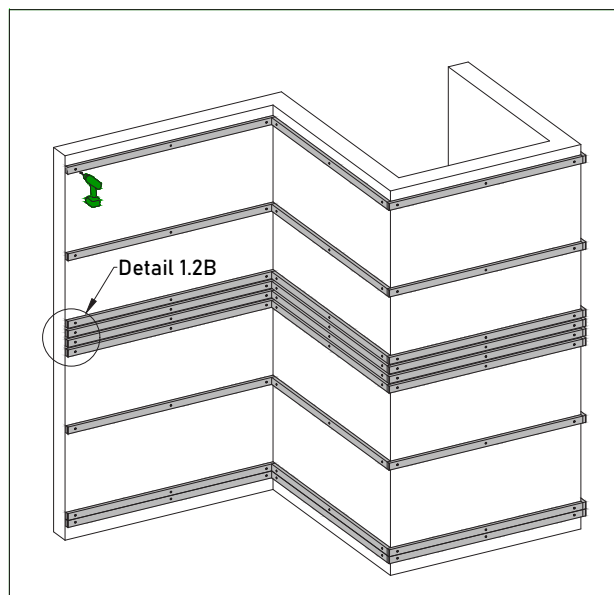
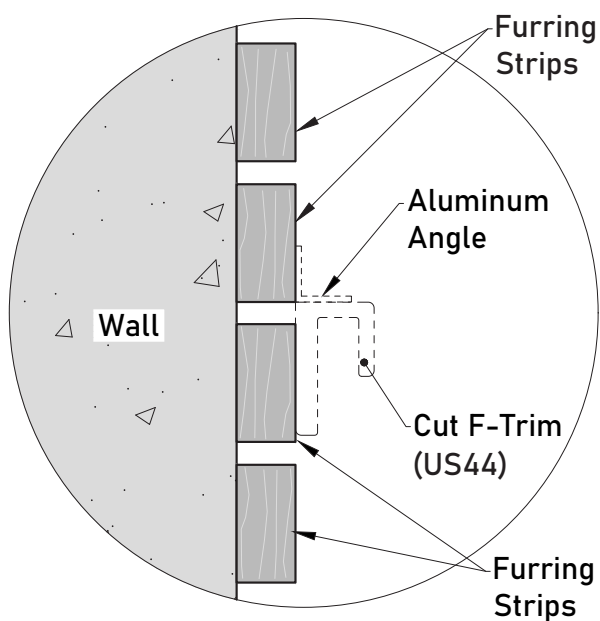


Diagram 1.2B



Detail 1.2B

2 Install the First Siding Board

- 2.0 Start the siding board installation from the starting points, as shown in Diagram 2.0A.

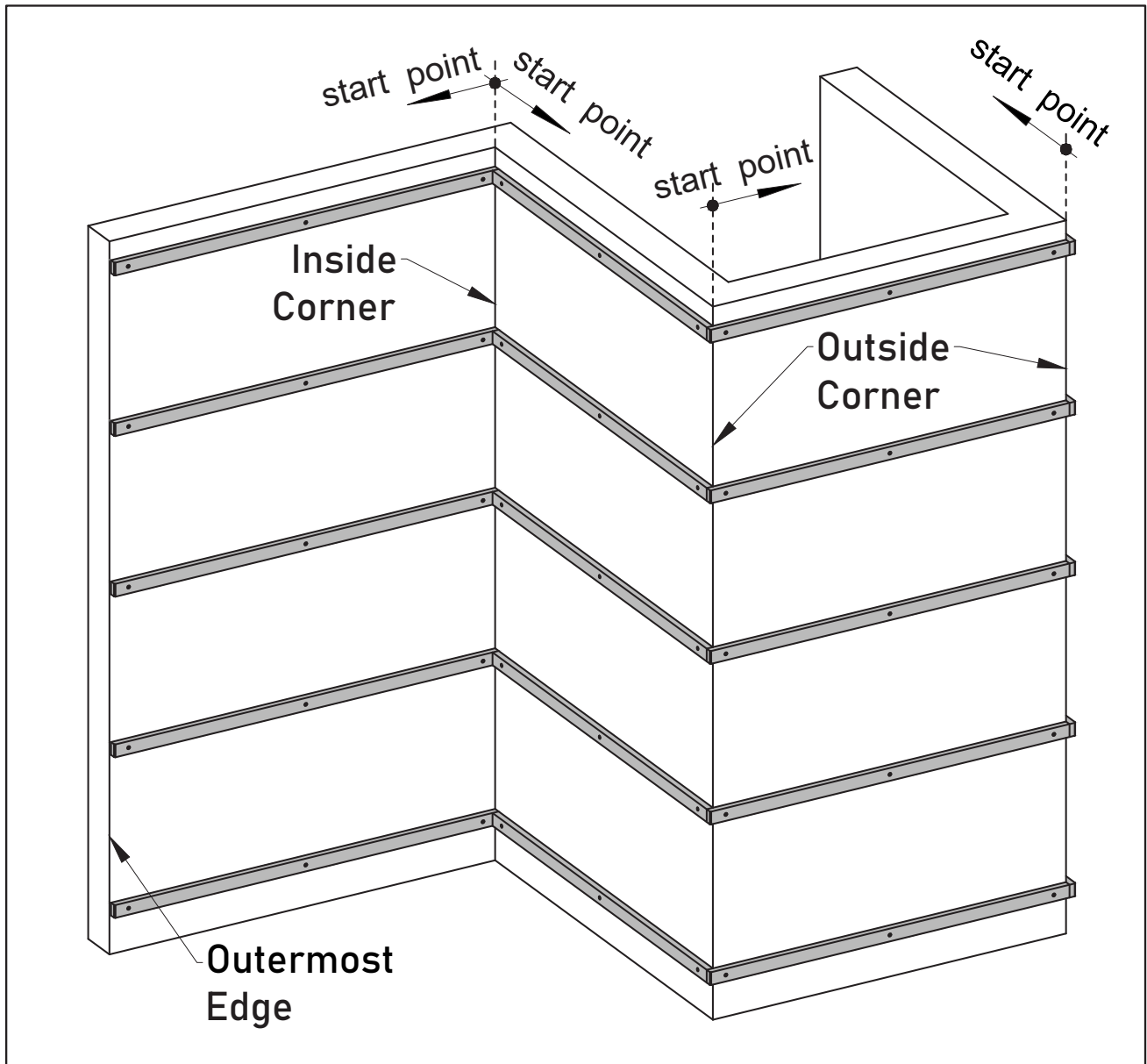


Diagram 2.0A

2.0 continued

Please Note:

1. A minimum space of 1" (25mm) must be left between the bottom of the trims and the floor, as shown in [Detail 2.0B-1](#).
2. A minimum space of 1" (25mm) must be left between the bottom of the siding boards and the floor, as shown in [Detail 2.0B-2](#).
3. It's except for the area where flooding rises above the flooding line.

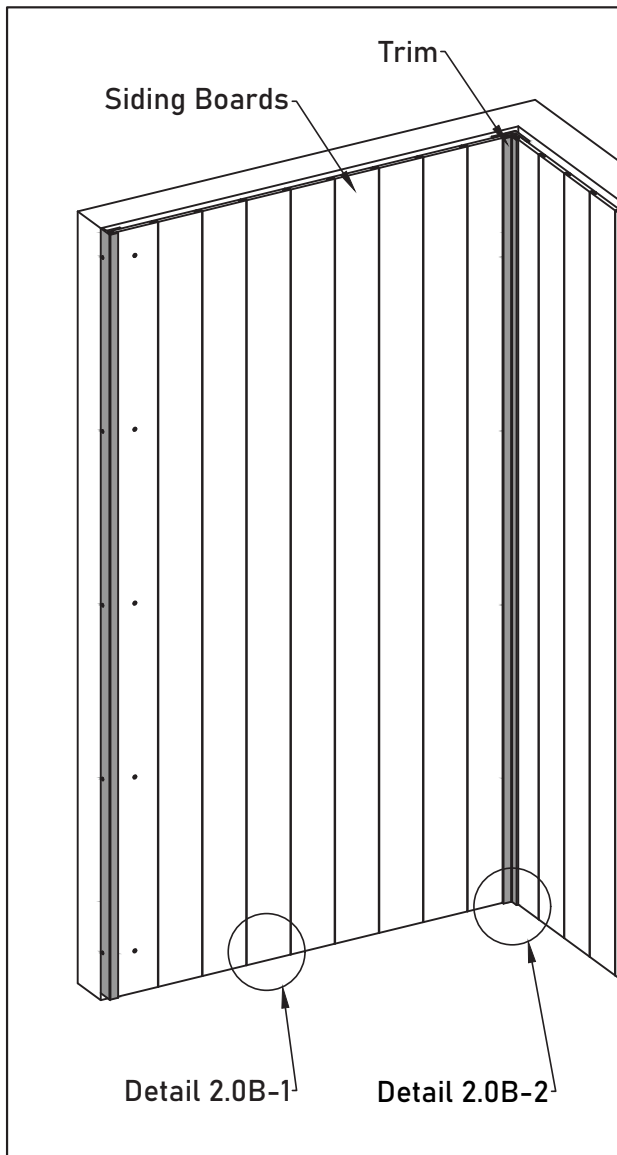


Diagram 2.0B

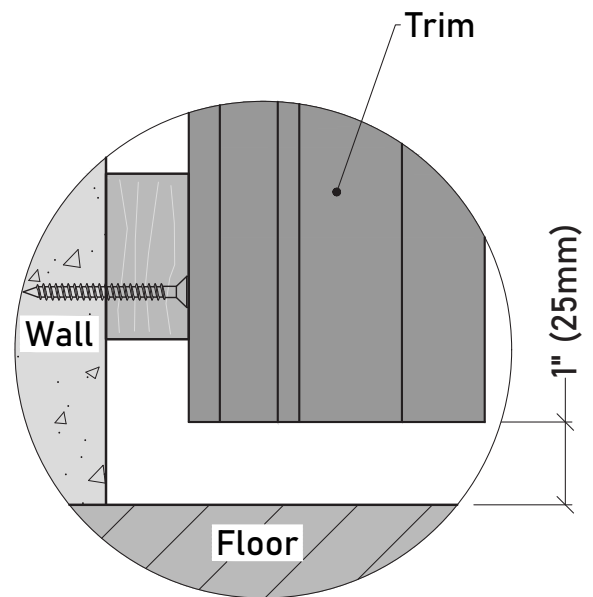


Diagram 2.0B-1

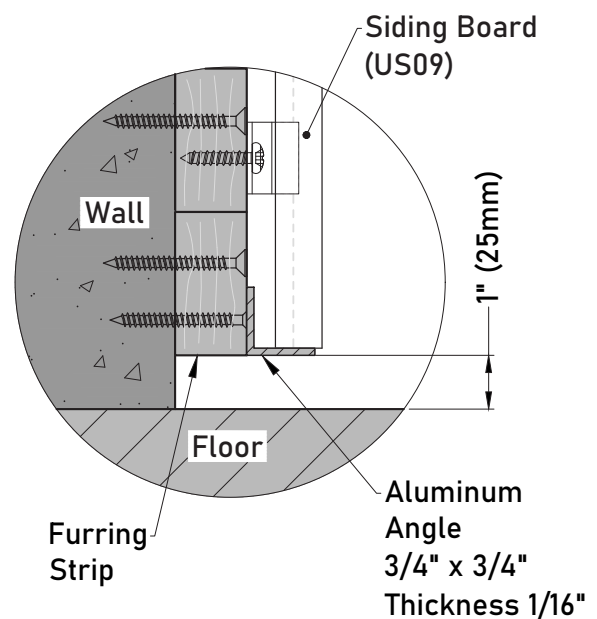


Diagram 2.0B-2

2.1A Install the First Siding Board at the Inside Corner toward the Outermost Edge

Fasten the Inside Corner Trim (US47) with screws onto the furring strips. It is recommended to begin the installation from the inside corner, as shown in **Diagram 2.1A** and **Detail 2.1A**.

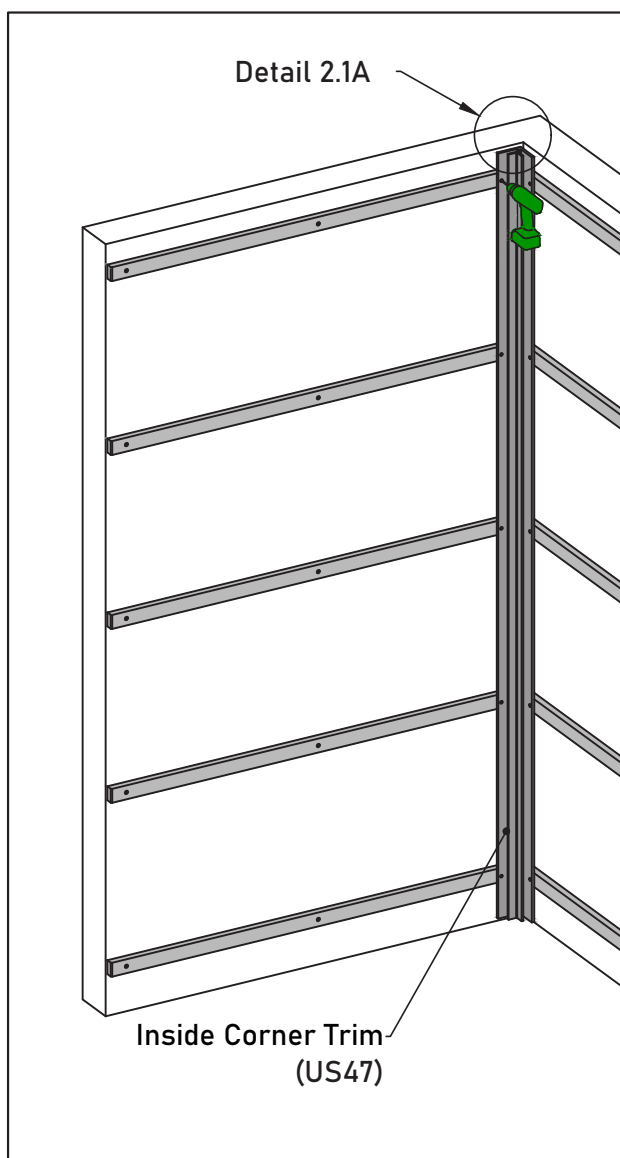
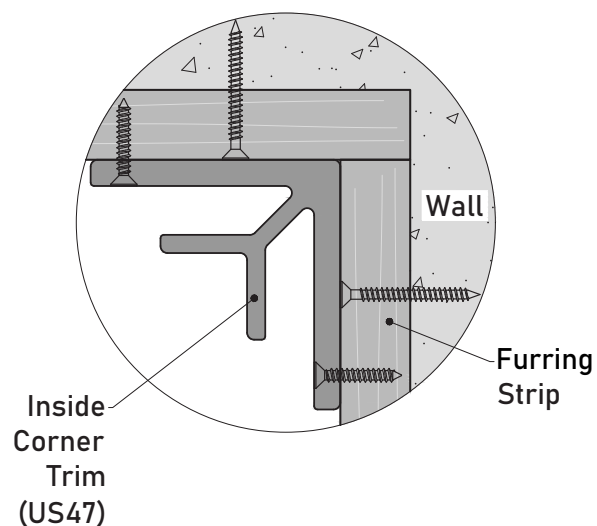


Diagram 2.1A



Detail 2.1A

Please Note:

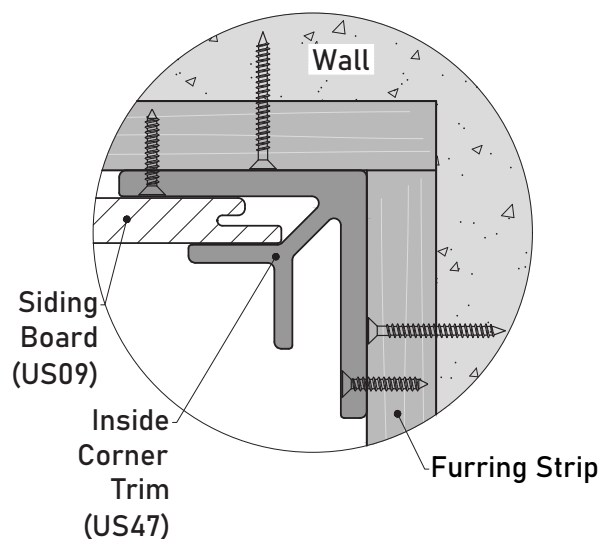
1. Pre-drill the screw holes for the Inside Corner Trim (US47) before fastening with the screws.

- 2.1B** Insert the first Siding Board (US09) into the Inside Corner Trim (US47) and fasten it to the furring strips using Clip (AW08), as shown in **Diagram 2.1B** and **Detail 2.1B**.

Please Note:

1. Since the composite wood must allow for expansion and contraction due to temperature change, the board must be **locked at one fixed point but only one point** to allow the remaining board to move freely. When installing vertically, it is required to **lock the Clip (AW08) at the bottom of each board**, as shown in **Diagram 2.1B**. **DO NOT LOCK** any other Clip (AW08) for the same board.

Please review [page 12](#), “Locking the Siding Board” for further information.



Detail 2.1B

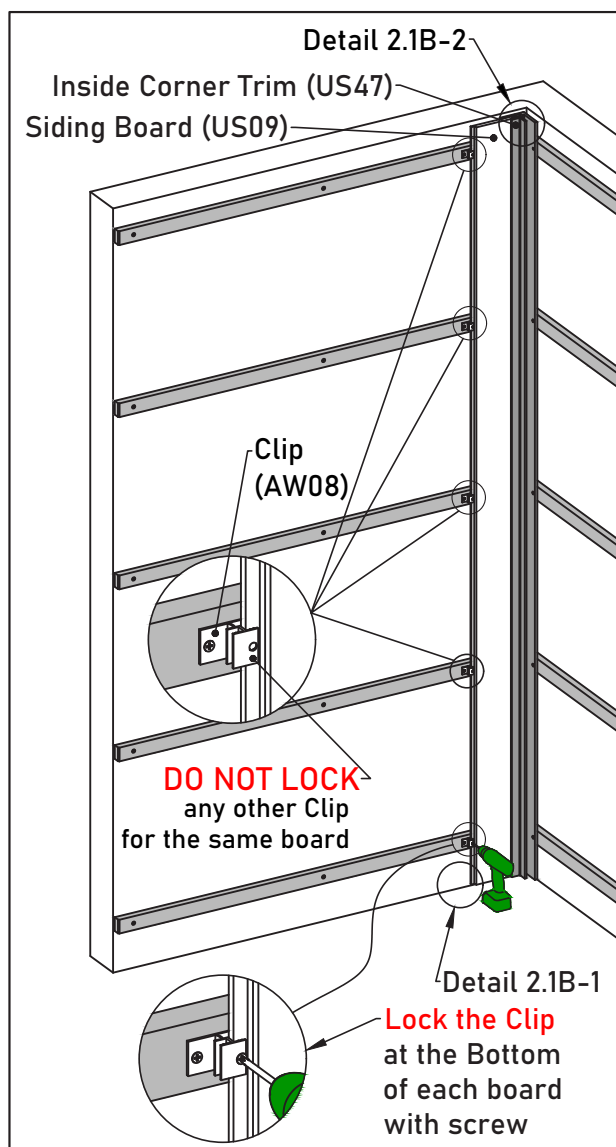
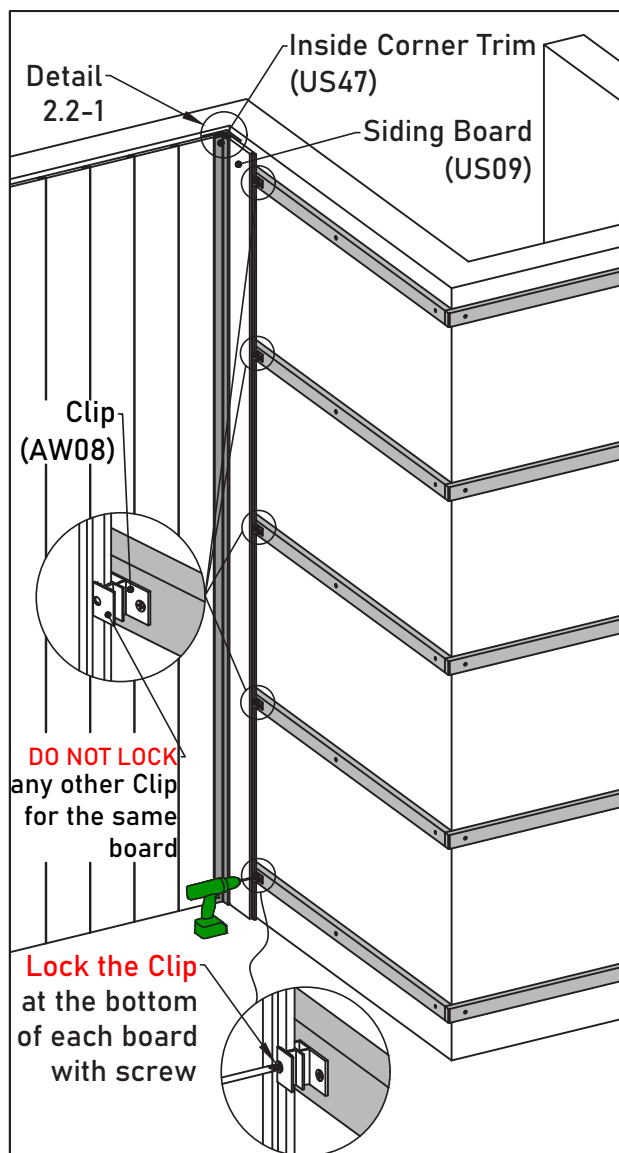


Diagram 2.1B

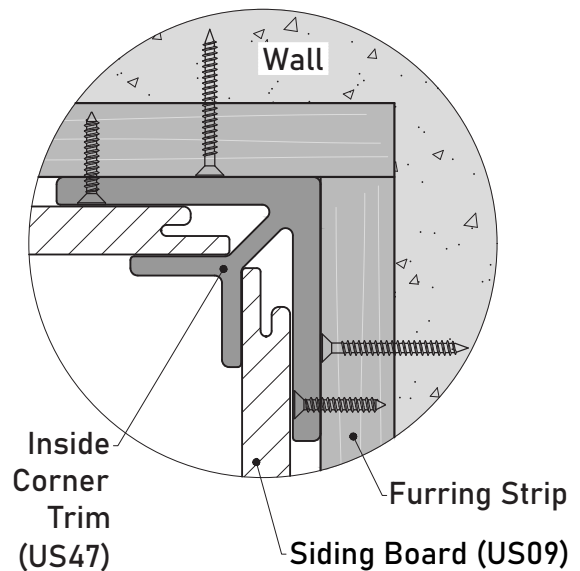
2.2 Install the First Siding Board at the Inside Corner toward the Outside Corner

Fasten the Inside Corner Trim (US47) with screws onto the furring strips, same as the [Step 2.1A](#). It is recommended to begin the installation from the inside corner.

Insert the first Siding Board (US09) into the Inside Corner Trim (US47) and fasten it to the furring strips using Clip (AW08), and **lock the clip at the bottom of the board**, as shown in [Diagram 2.2](#) and [Detail 2.2](#).



[Diagram 2.2](#)

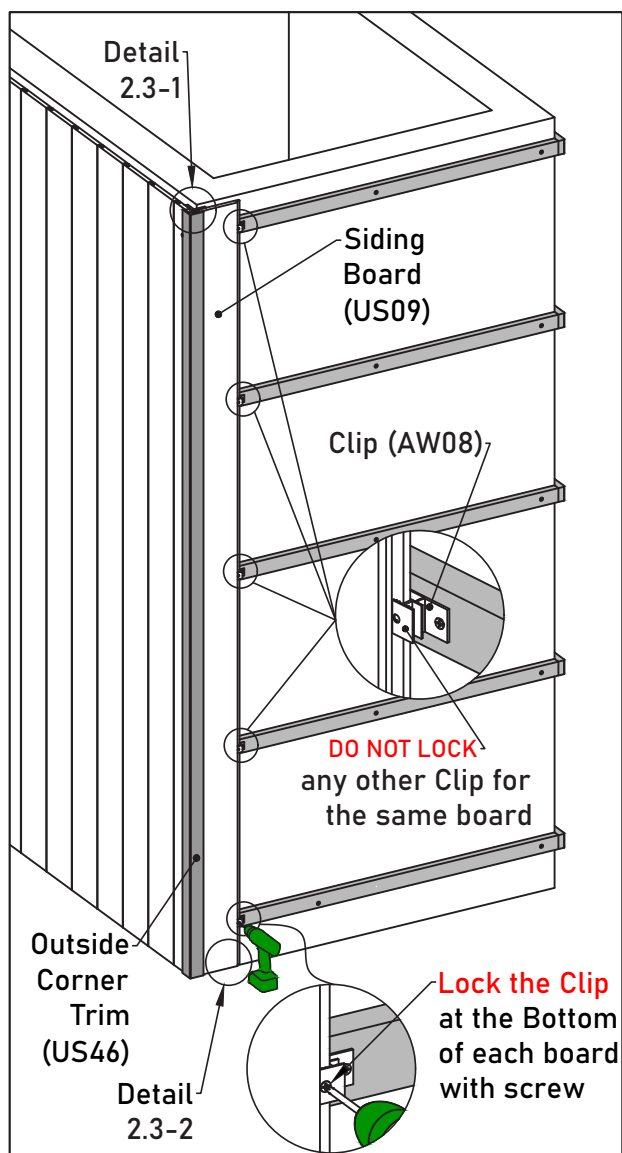


[Detail 2.2](#)

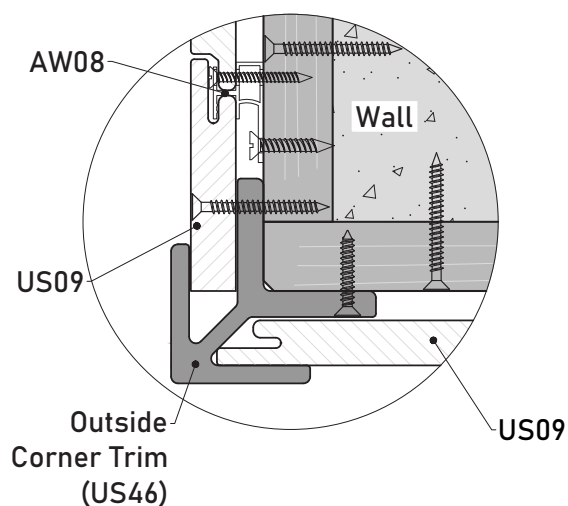
2.3 Install the First Siding Board at the Outside Corner toward the Opposite Outside Corner or Outermost Edge.

Fasten the Outside Corner Trim (US46) with screws onto the furring strips.

Insert the first Siding Board (US09) into the Outside Corner Trim (US46) and fasten it to the furring strips using Clip (AW08), and **lock the clip at the bottom of the board**, as shown in [Diagram 2.3](#) and [Detail 2.3](#).



[Diagram 2.3](#)



[Detail 2.3](#)

3 Install the Second Siding Board

3.1 Install the Second Siding Board for the Inside Corner Trim (US47)

Put the second Siding Board (US09) in place. Fasten it onto the furring strip with clip (AW-08), and **lock the clip at the bottom of the board**, as shown in [Diagram 3.1](#) and [Detail 3.1](#).

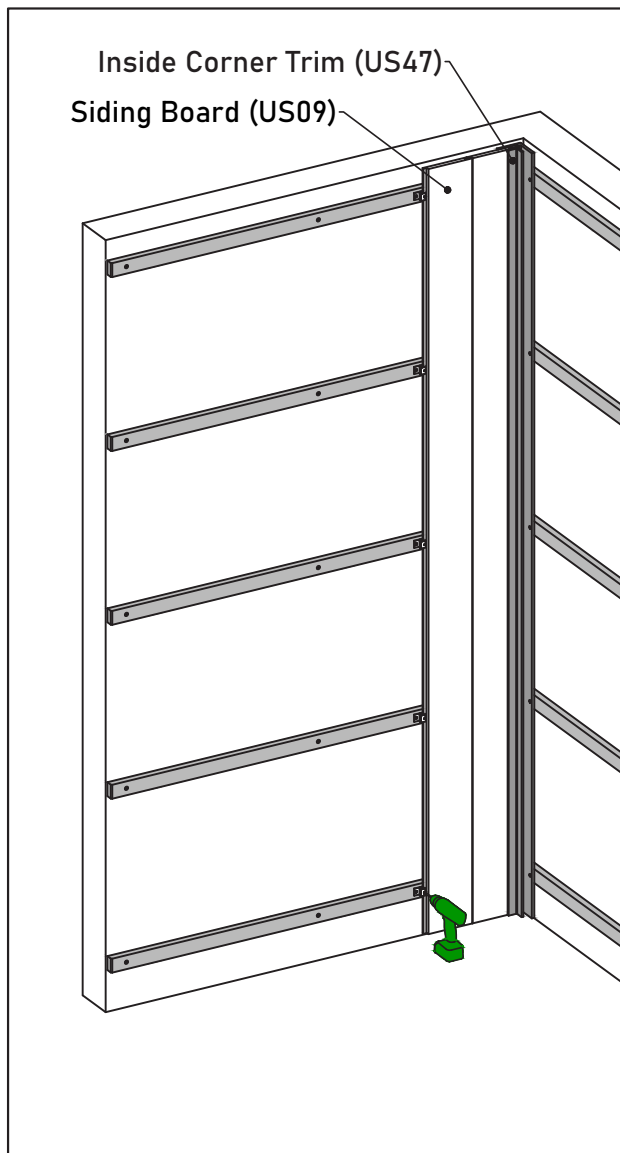
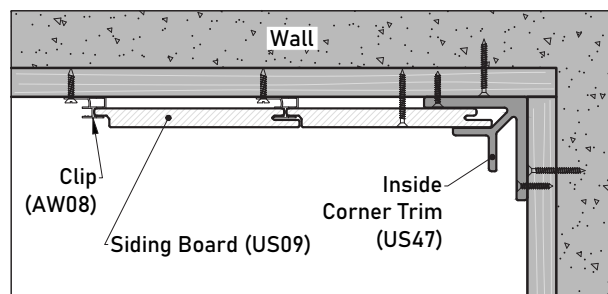
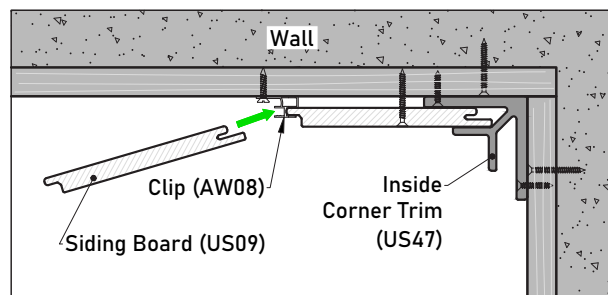


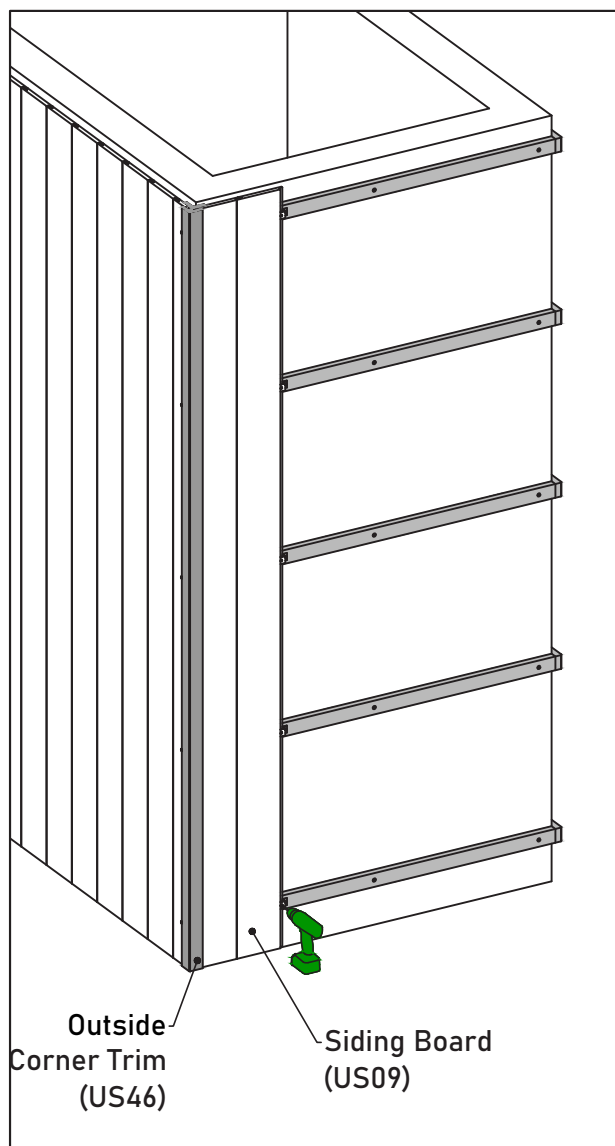
Diagram 3.1



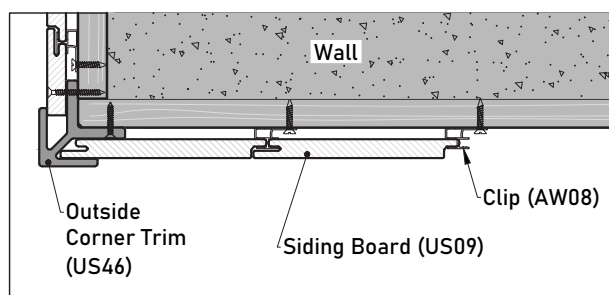
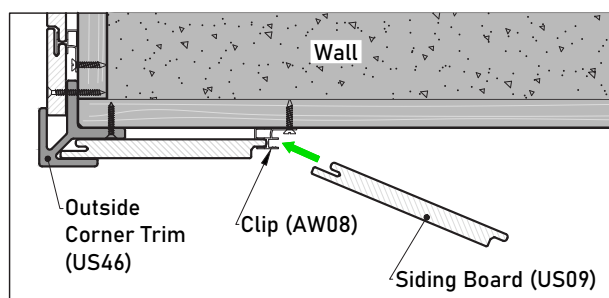
Detail 3.1

3.2 Install the Second Siding Board for the Outside Corner Trim (US46)

Put the second Siding Board (US09) in place. Fasten it onto the furring strip with clip (AW-08), and **lock the clip at the bottom of the board**, as shown in [Diagram 3.2](#) and [Detail 3.2](#).



[Diagram 3.2](#)

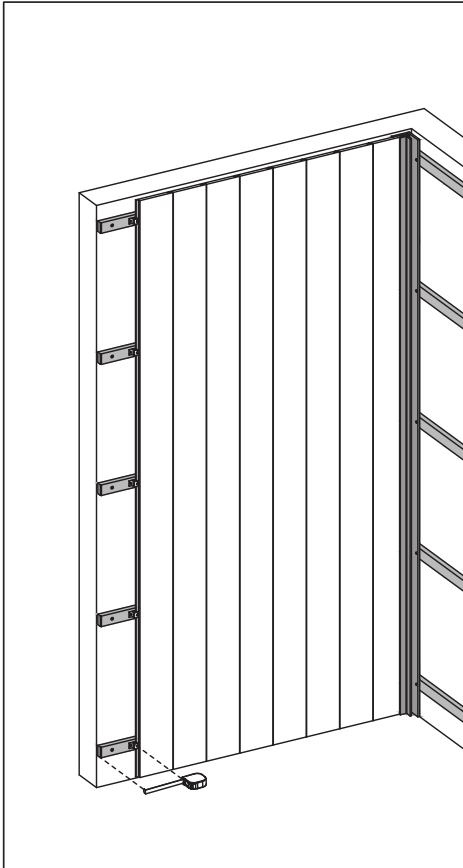


[Detail 3.2](#)

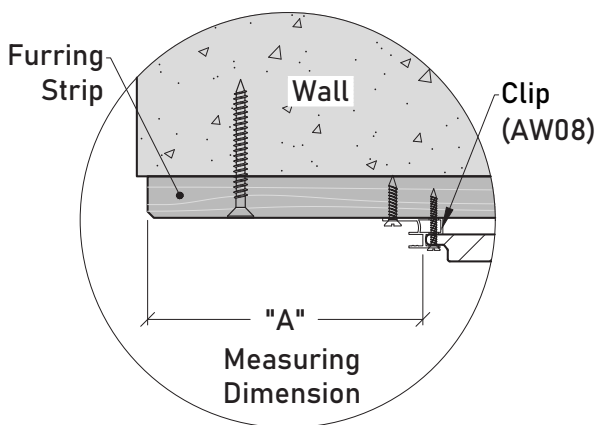
4 Install the Last Siding Board

4.1A Install the Last Siding Board for the Outermost Edge

When you are at the last board at the outermost edge, measure the distance to obtain the appropriate last board's ripping dimension, as shown in [Diagram 4.1A](#) and [Detail 4.1A](#).

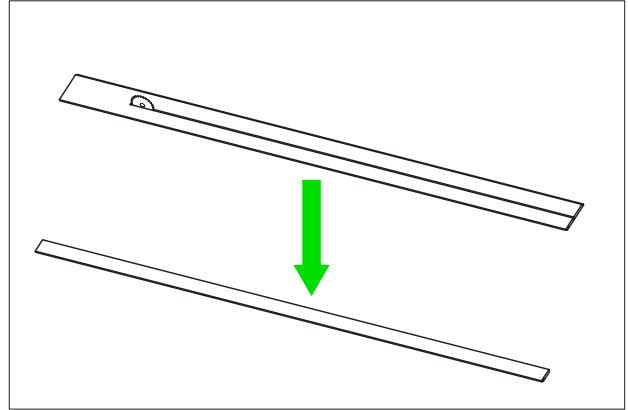


[Diagram 4.1A](#)

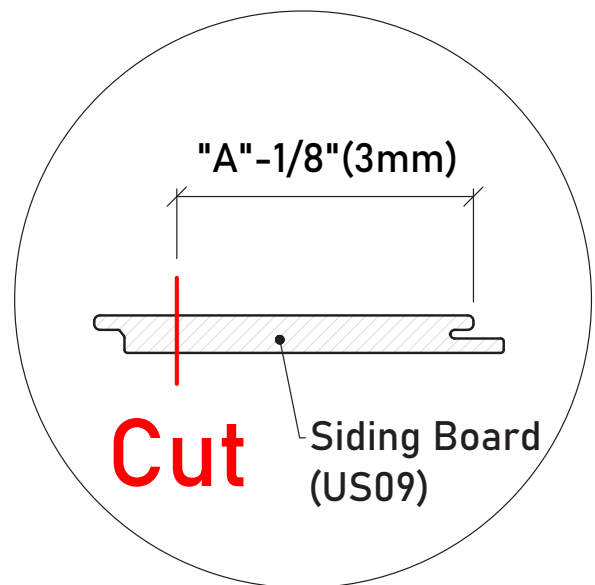


[Detail 4.1A](#)

4.1B Rip the board according to the measured dimension, as shown in [Diagram 4.1B](#) and [Detail 4.1B](#).



[Diagram 4.1B](#)



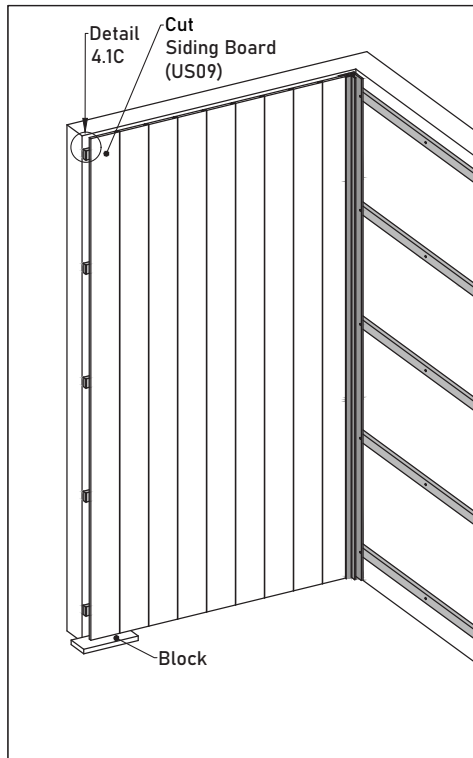
[Detail 4.1B](#)

4.1C

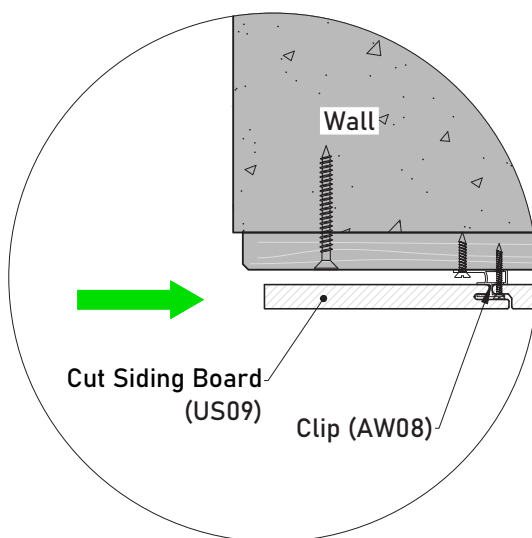
Put the cut siding board in place, as shown in [Diagram 4.1C](#) and [Detail 4.1C](#).

Please Note:

1. Predrill the screw holes for the cut Siding Board to allow it to expand and contract. Please review [page 5](#), section "Pre-drill" of this installation guide for further information.
2. Put a block under the cut Siding Board to keep the board in the same height, as shown in [Diagram 4.1C](#)



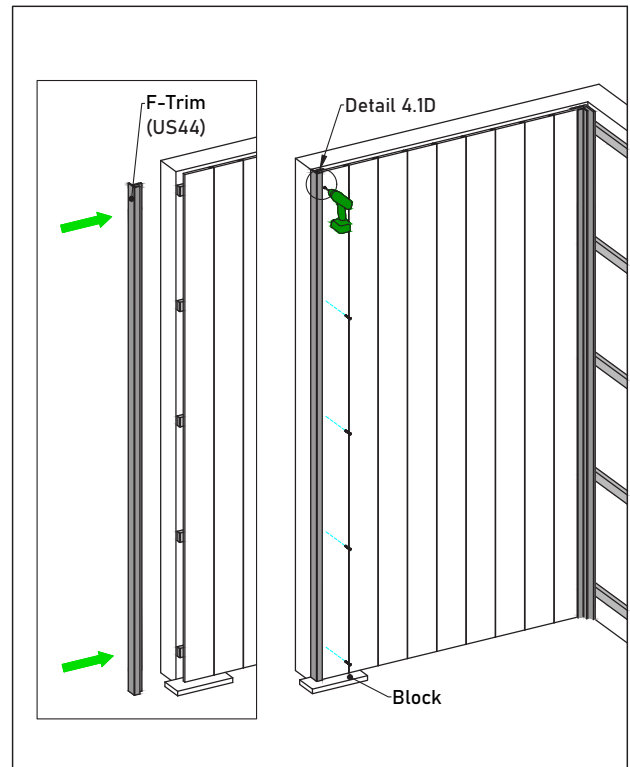
[Diagram 4.1C](#)



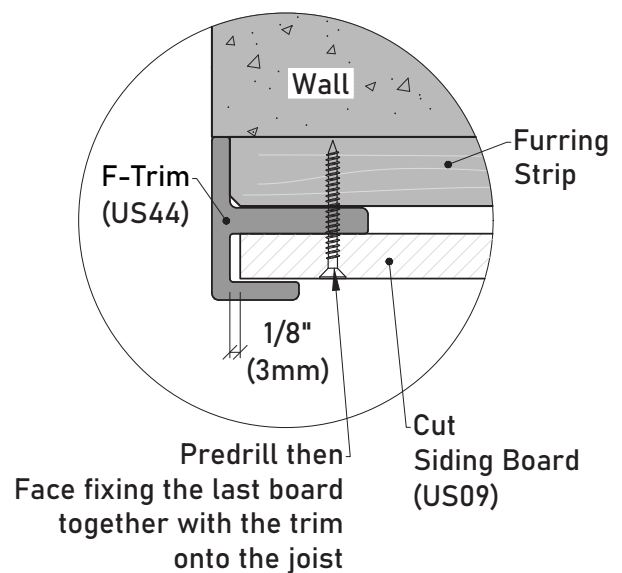
[Detail 4.1C](#)

4.1D

Insert the F-Trim (US44) in place. On the top of the cut siding board, face fixing it together with the F-Trim (US44) onto the furring strip, as shown in [Diagram 4.1D](#) and [Detail 4.1D](#).



[Diagram 4.1D](#)



[Detail 4.1D](#)

4.1E

Fix the F-Trim (US44) onto the furring strip with screws, as shown in **Diagram 4.1E** and **Detail 4.1E**.

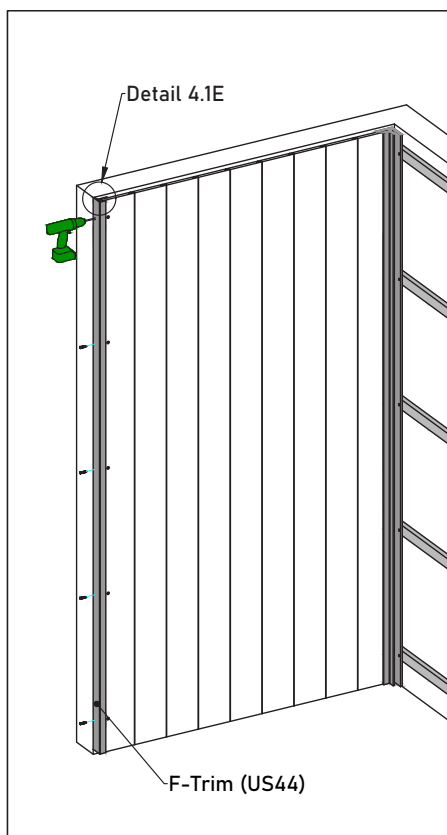
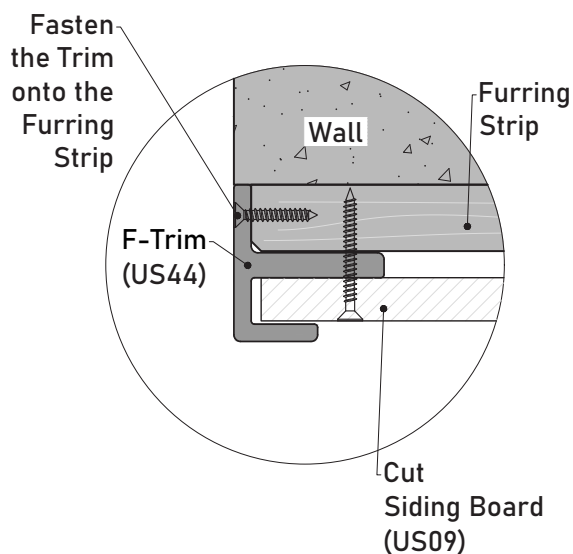


Diagram 4.1E



Detail 4.1E

4.2A

Install the Last Siding Board for the Outside Corner

When you are at the last board at the outside corner, measure the distance to obtain the appropriate last board's ripping dimension, as shown in **Diagram 4.2A** and **Detail 4.2A**.

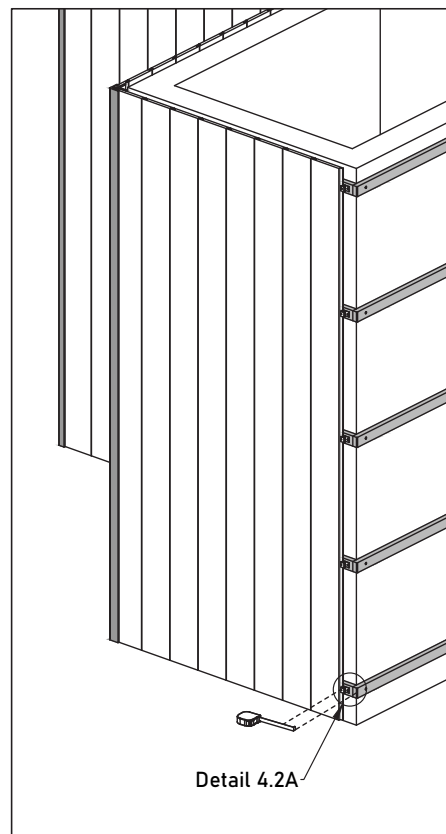
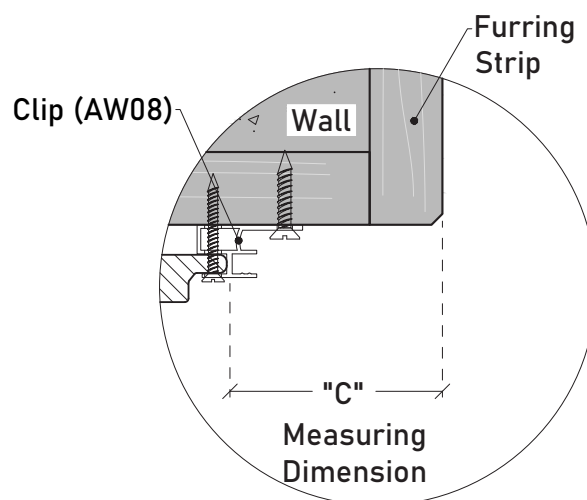


Diagram 4.2A



Detail 4.2A

4.2B

Rip the board according to the measured dimension, as shown in **Diagram 4.2B** and **Detail 4.2B**.

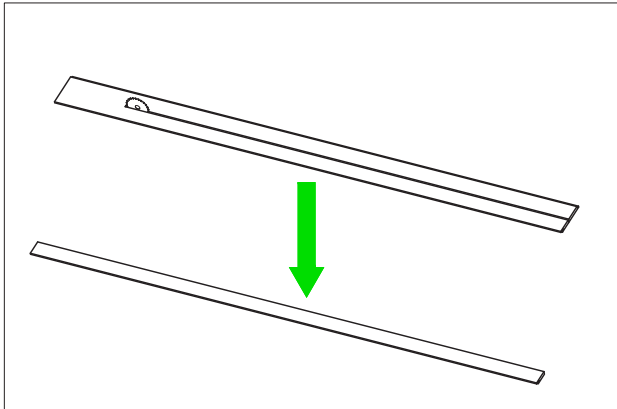
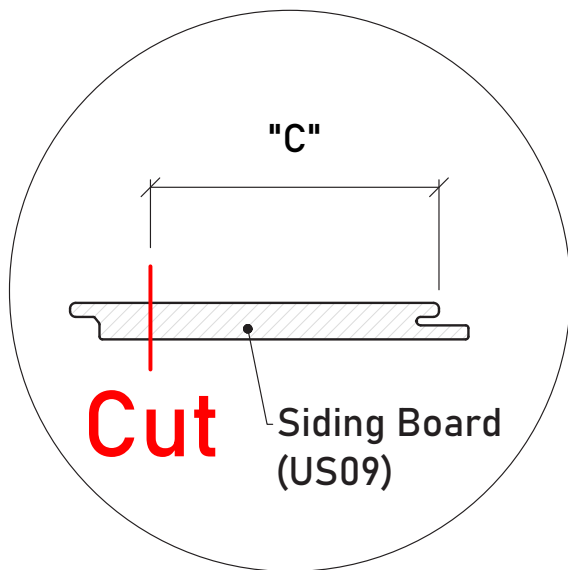


Diagram 4.2B



Detail 4.2B

4.2C

Put the cut siding board in place, as shown in **Diagram 4.2C** and **Detail 4.2C**.

Please Note:

1. Predrill the screw holes for the cut Siding Board to allow it to expand and contract. Please review [page 5](#), section "Pre-drill" of this installation guide for further information.
2. Put a block under the cut Siding Board to keep the board in the same height, as shown in [Diagram 4.2C](#)

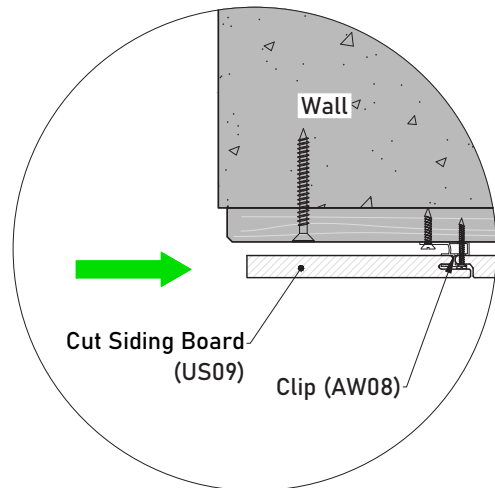
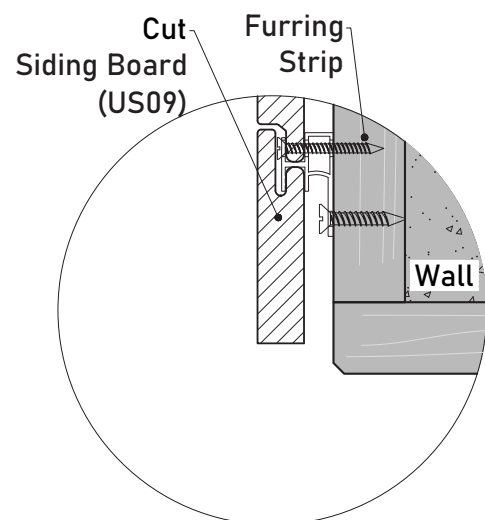


Diagram 4.2C



Detail 4.2C

4.2D

Insert the Outside Corner Trim (US46) in place. On the top of the cut siding board, face fixing it together with the Outside Corner Trim (US46) onto the furring strip, as shown in **Diagram 4.2D** and **Detail 4.2D**.

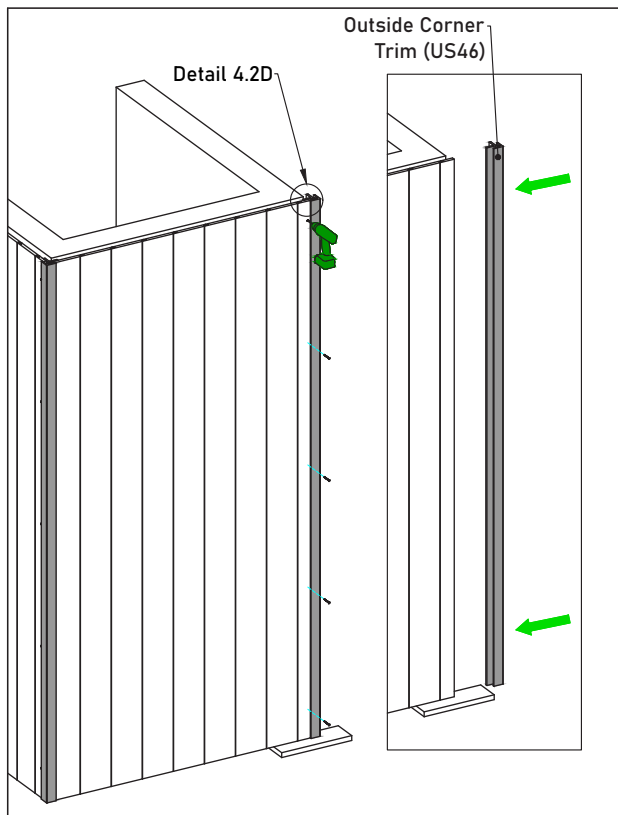
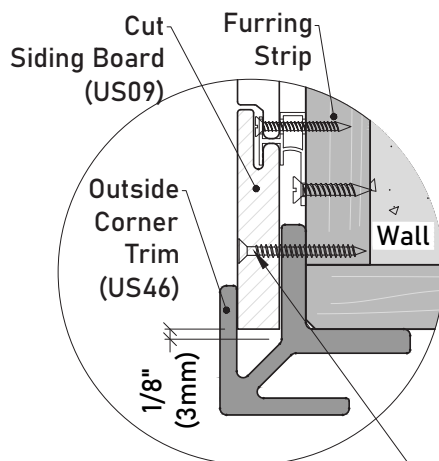


Diagram 4.2D



Predrill then Face fixing the last board with the trim together onto the furring strip

Detail 4.2D

4.2E

Fix the Outside Corner Trim (US46) onto the furring strip with screws, as shown in **Diagram 4.2E** and **Detail 4.2E**.

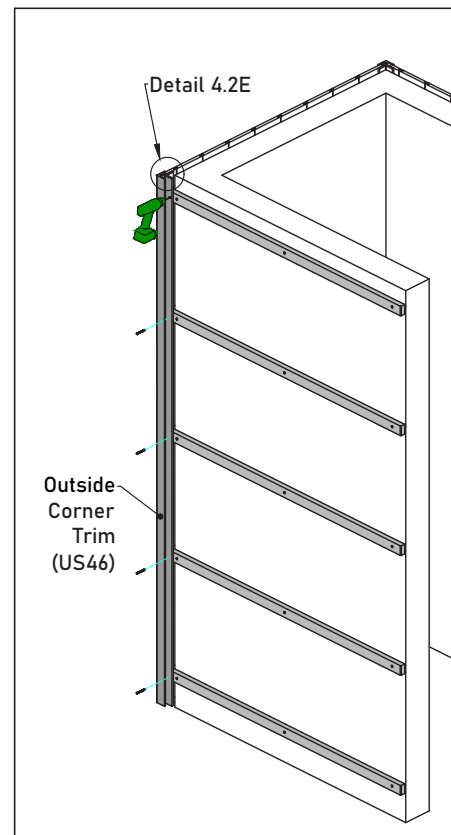
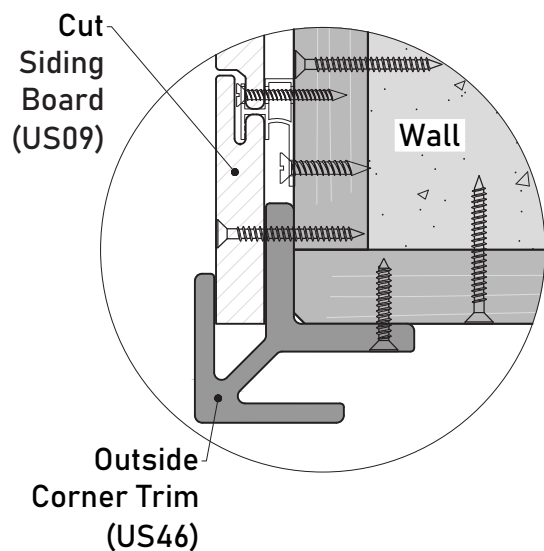


Diagram 4.2E



Detail 4.2E

5 Final appearance after completing the installation

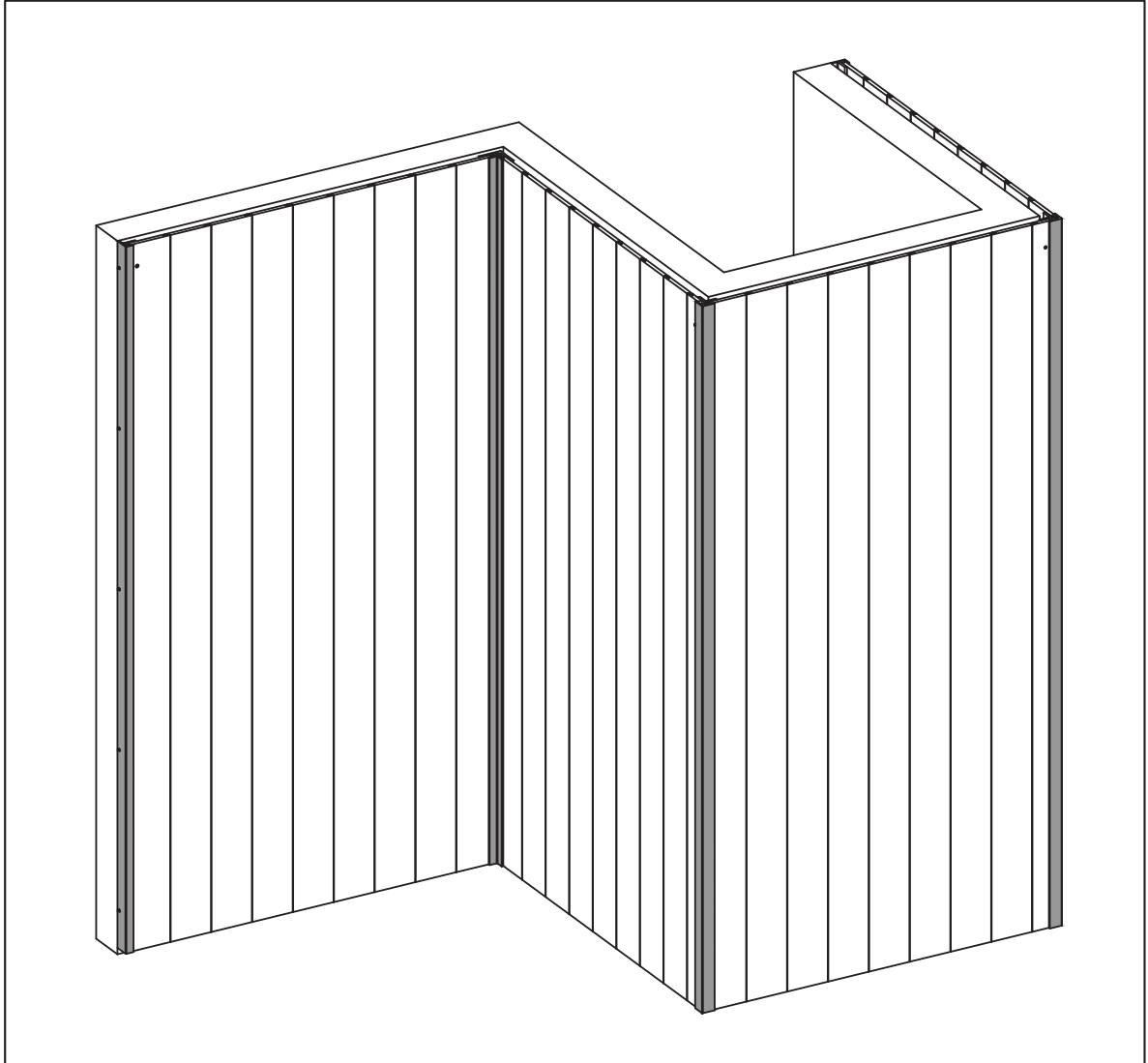


Diagram 5

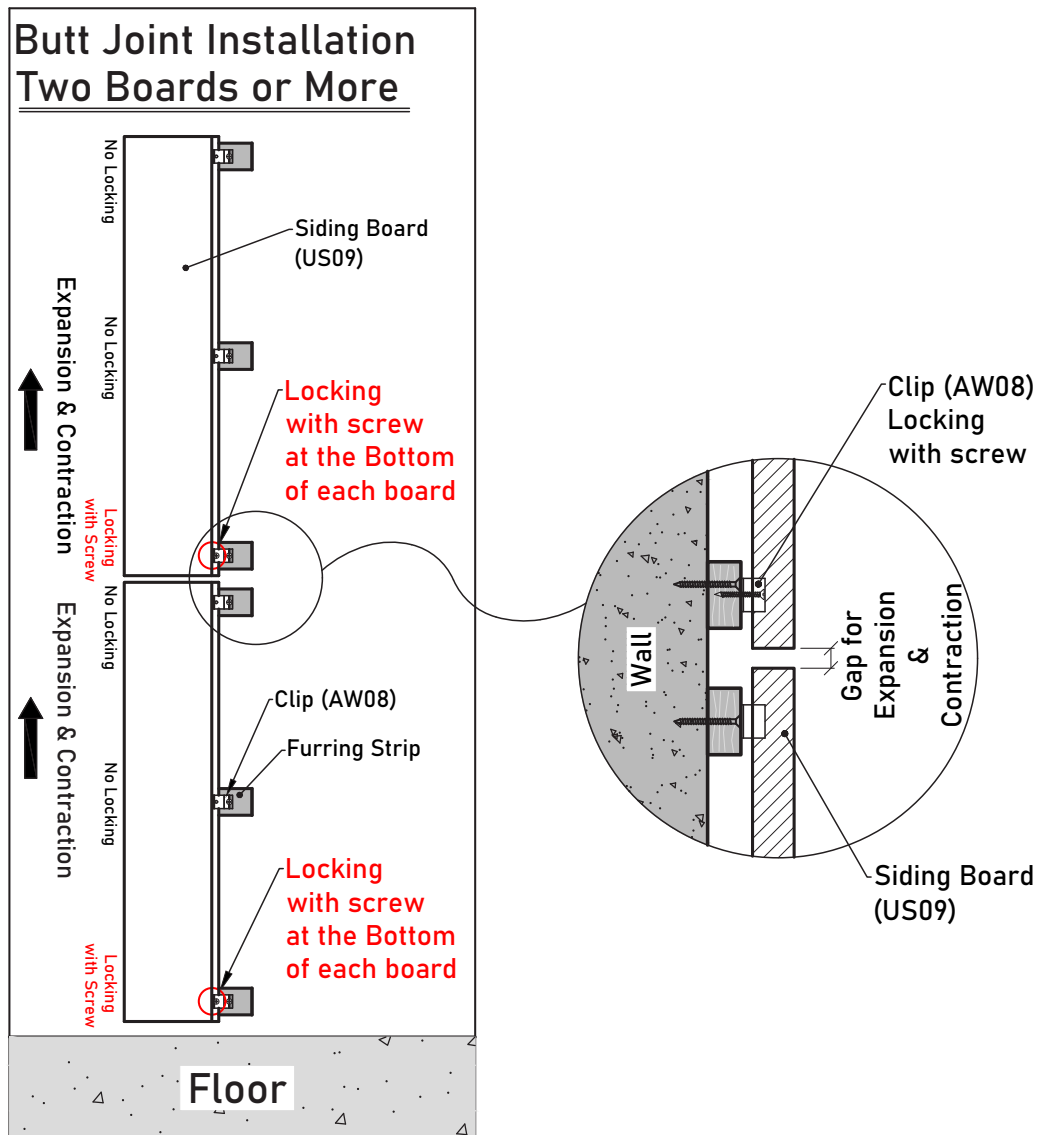
6 Butt Joint Installation

Option 1: No Butt Joint trimming

It is required to lock the Clip (AW08) at the bottom of each board, and have a gap inbetween the boards to allow the board to expand and contract, as shown in [Diagram 6A](#).

Please Note:

Refer to page 13 to determine the number of locking clips required.



[Diagram 6A](#)

Option 2: Install with Butt Joint trimming

It is recommended to utilize the cut F-Trim (US73) and aluminum angle for the butt joint installation. It is also required to lock the Clip (AW08) at the bottom of each board, as shown in [Diagram 6B](#) and [Detail 6B](#).

Please Note:

Refer to page 13 to determine the number of locking clips required.

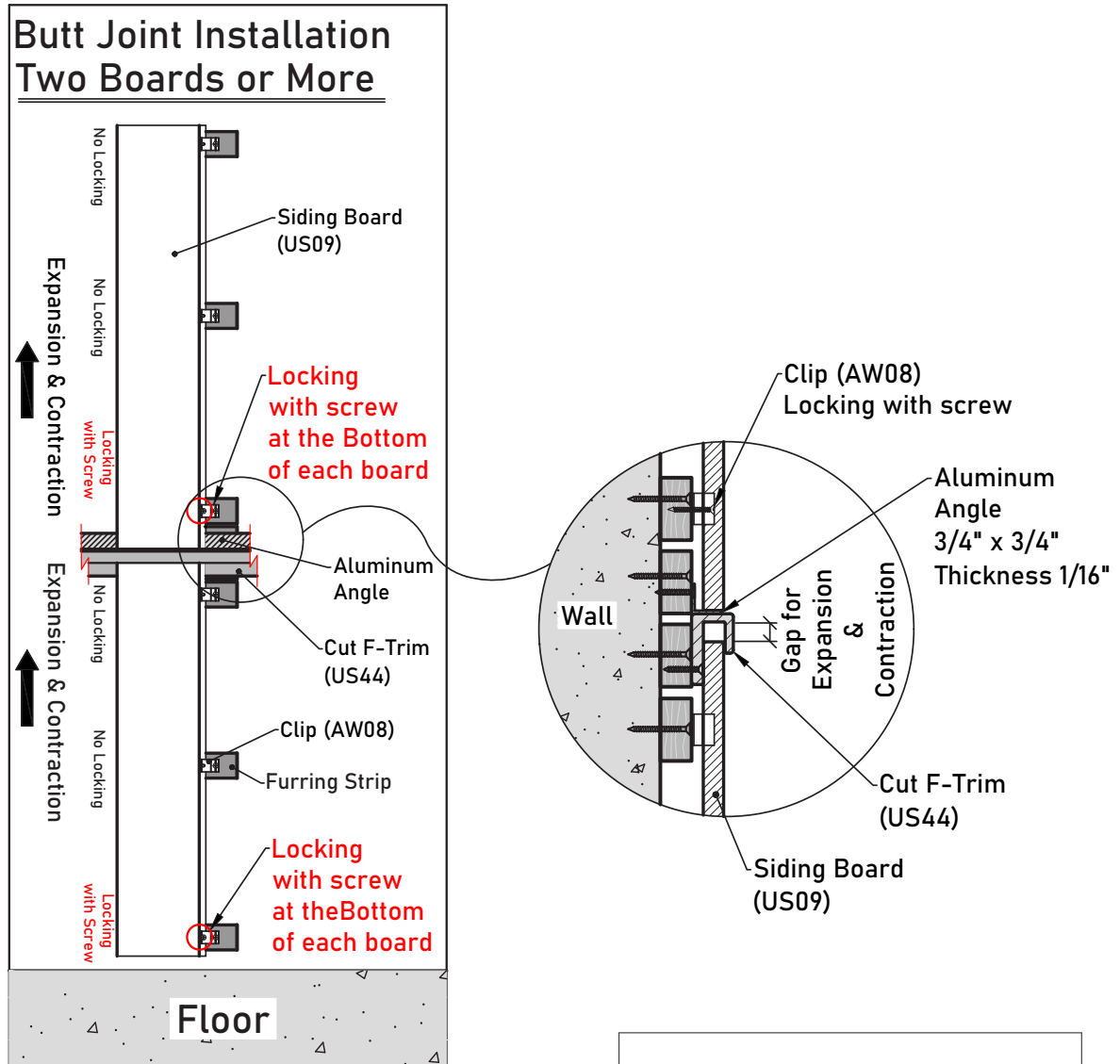
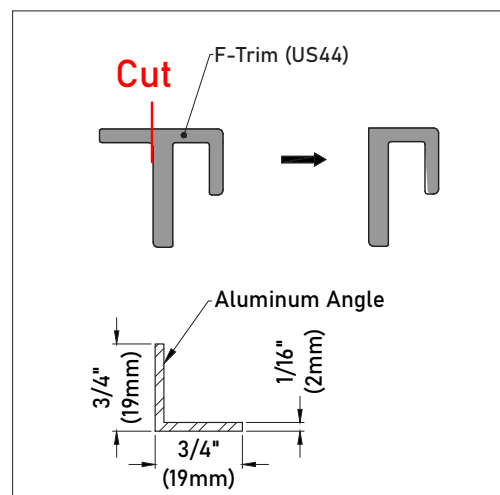


Diagram 6B



Detail 6B

7 Finish the top

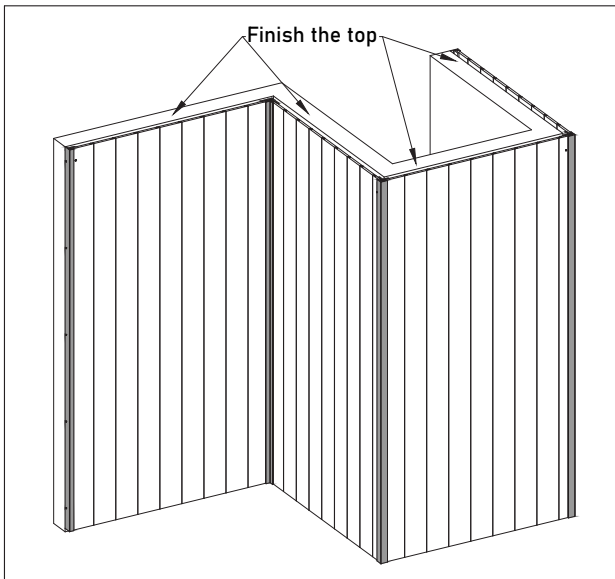


Diagram 7

There are two options recommended to finish the top of the siding.

7.1

Option 1

Put a metal flashing over the siding top and fix it onto the furring strip with screws, as shown in **Diagram 93**.

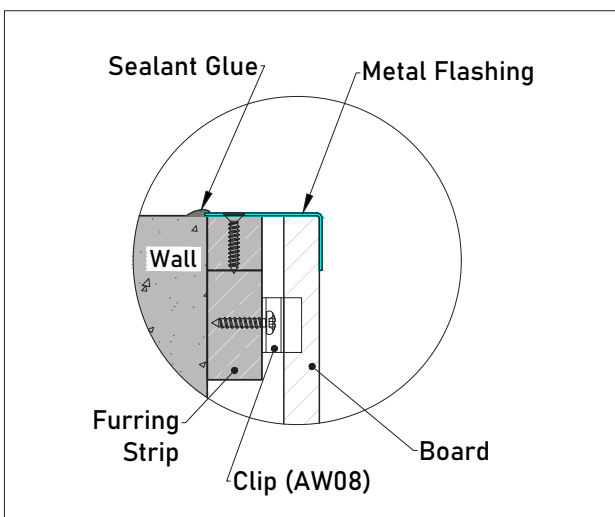


Diagram 7.1

7.2A

Option 2

Cut the F-Trim (US44) centerpiece shorter to avoid interfering with the Clip (AW08), as shown in **Diagram 7.2A**.

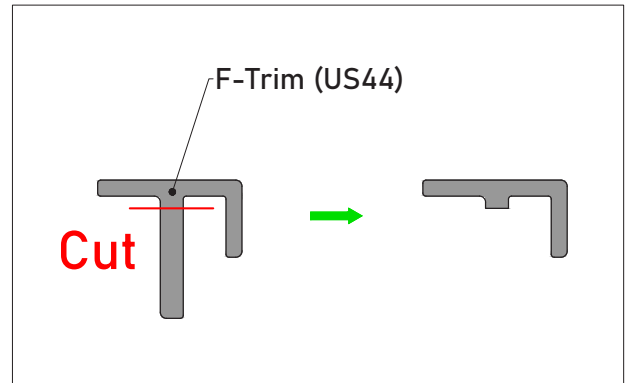


Diagram 7.2A

7.2B

Put the cut F-Trim (US44) in place and attached it onto the furring strip with screws. Apply the sealant glue to seal the joint edge, as shown in **Diagram 7.2B**.

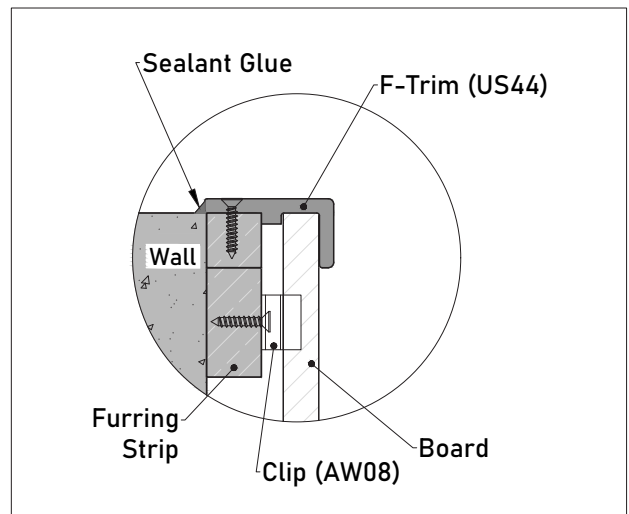


Diagram 7.2B



All Weather Siding Vertical Installation Guide

v12 US

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