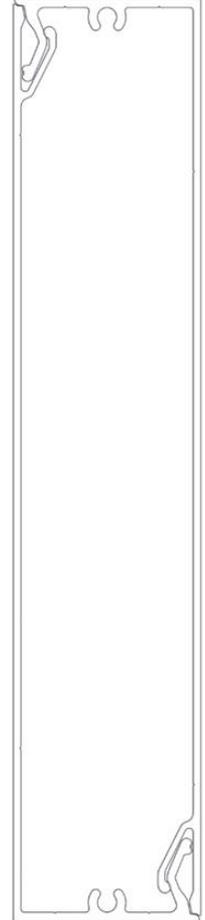
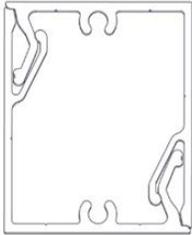




LONGBOARD[®]
ARCHITECTURAL PRODUCTS



Link & Lock Intrepid

Installation Guidelines

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Material Specifications

Finishes

- Longboard Products are available in a wide range of powder coated finishes
- Custom solid colors are available upon request

All Longboard Products are produced 1" (25mm) oversized, as one end is drilled for the coating process and both ends have 1/2" (12mm) of masking tape (woodgrains only) which must be cut off for best results.

Expansion & Contraction

Although interior applications likely will not experience temperature change, it is good practice to follow the standard attachment procedure described in this guide. See **Appendix for Tables 1 & 2, expansion/contraction calculations per foot/meter of material.**

Material Ordering & Delivery

- | | |
|--------------|---|
| • Packaging: | Link & Lock is sold by the set (pair) and in widths of 2", 4", 6", 8"
End caps are sold by the box: 20 caps/bx
End Mounts are sold by the box: 20 mounts/bx
Stiffener is sold in 24' lengths (includes Double-sided Tape) |
| • Shipping: | Lead time is 3-6 business days* + shipping (<i>*subject to change</i>), delivered on 24' (7.3m) long skids weighing up to 2000 lbs. A mechanical lift with forks is required on site to receive the order. |
| • QC: | Always inspect the delivery for damage and contact LB ASAP if there are any issues: info@longboardproducts.com or 1-800-604-0343 and include your PO# and any pictures if possible. Mark the delivery receipt as "damaged" and accept the delivery as-is. Longboard is not responsible for the installation of blemished or damaged material. |

Storage & Handling

Be sure to store the material flat, keep it dry, safe & secure and remain in unopened cartons until ready to be installed. See **Appendix for proper handling and care instructions.**

Cleaning Recommendations

- Initial and periodic cleaning for best looking product
- Basic methods use a combination of moderate water pressure, soft sponge/brush and a mild detergent (Safe for your hands, safe for the product)

⚠ NEVER use aggressive acid or alkaline cleaners on Longboard finishes. Do not use cleaners containing Trisodium Phosphate, Phosphoric Acid, Hydrochloric Acid, Hydrofluoric Acid, Fluorides, or any other compound that is known to react with metal.

See *Cleaning Guide for full requirements & cleaning schedule:
longboardproducts/resources/care-maintenance.com

Warranty

Upon substantial completion of the project, register for warranty online here: longboardproducts.com/warranty

⚠ Registration is required for the warranty to be in effect.

Graffiti Removal

Standard Woodgrain
 Use Standard soap & water only

D2000 Solid Color

	Prosoco Cleaner	MEK Solvent
Permanent Marker	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Oil Based Spray Paint	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Water Based Spray Paint	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Adhesive Tape	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

MEK Solvent

Prosoco Anti-Graffiti Cleaner

SPECIAL ORDER - EXT. LEAD TIMES CONTACT LB

Anti-Graffiti High Gloss Woodgrain

	MEK Solvent
Permanent Marker	<input checked="" type="checkbox"/>
Oil Based Spray Paint	<input checked="" type="checkbox"/>
Water Based Spray Paint	<input checked="" type="checkbox"/>
Adhesive Tape	<input checked="" type="checkbox"/>

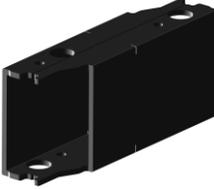
MEK Solvent

Note: Cleaning the surface with a cleanser that is not diluted as per instructions, may result in damage to the coating.

Components

Components (Typical)

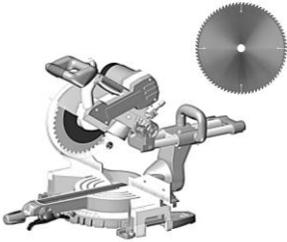
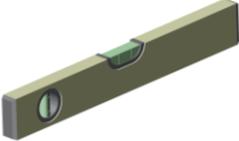
The Link & Lock system consists of two (2) matching L-shaped extrusions, snapped together to make a complete set. For all LB components go to longboardproducts.com.

 <p>2" Link & Lock (1 5/8" width) 2X2LL.289</p>	 <p>4" Link & Lock (1 5/8" width) 2X4LL.289</p>	 <p>6" Link & Lock (1 5/8" width) 2X6LL.289</p>	 <p>8" Link & Lock (1 5/8" width) 2X8LL.289</p>
 <p>1/2" Pilot Point Drill Bit DRILLBT.05</p>	 <p>Paint Pen TUP</p>	 <p>End Cap 2LLEC.2,4,6,8</p>	 <p>Mounting Clip Included with order for 6" O.C. attachment. Additional Clips purchased separately (48 pcs/box) LLMC</p>
 <p>2" L&L End Mount 2LLEM.2</p>	 <p>4" L&L End Mount 2LLEM.4</p>	 <p>6" L&L End Mount 2LLEM.6</p>	 <p>8" L&L End Mount 2LLEM.8</p>
 <p>Double-sided Tape LLTAPE.1296</p>	 <p>Internal Stiffener -Comes Powder Coated Black -Stiffener not available for 2" L&L LLSTIFF.289</p>		

Tools/Cutting/Fastening

Tools

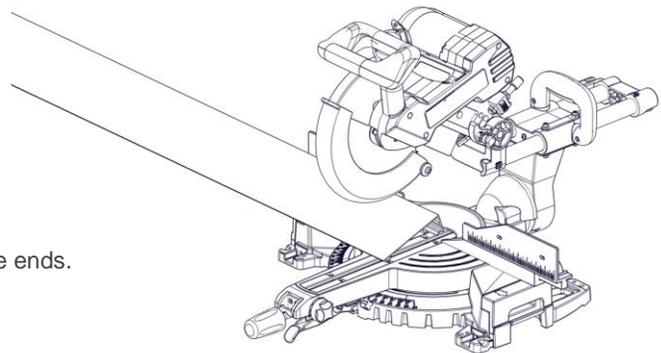
Commonly used tools for Link & Lock install.

			
Table Saw with Carbide Metal Blade Non-ferrous 60-80T (for cutting aluminum)	Miter Saw with Carbide Metal Blade Non-ferrous 60-80T (for cutting aluminum)	Cordless Drill with clutch	Jig Saw (for protrusions)
			
Rubber Mallet (or Hammer)	Level	Hole Saw (for lighting fixtures)	Quick Grip Bar Clamp

Cutting

⚠ Always be sure to wear appropriate PPE: eye & hearing protection.

Cut battens using a Miter Saw and Table Saw always allowing for expansion & contraction. Trim the taped/drilled ends of all stock length material by at least **1/2" (12mm) each end** and discard.



⚠ DO NOT Install Link & Lock without trimming the ends.

Framing requirements

Always consult your local building authority and follow local building code requirements. See Typical dimensions for sizes and weights of the L&L system.

Wood Framing

- Size: 2x4 minimum

Metal Framing

- Gauge: 18 ga. minimum

Concrete/CMU

Wood or metal furring is recommended over concrete and CMU.

Wood Furring:

- Size: 2x2 minimum
- Type: Pressure treated lumber

Metal Furring:

- Size: 18 ga. minimum
- Type: Hat channel, Stud, or Z-Girt.

System Install

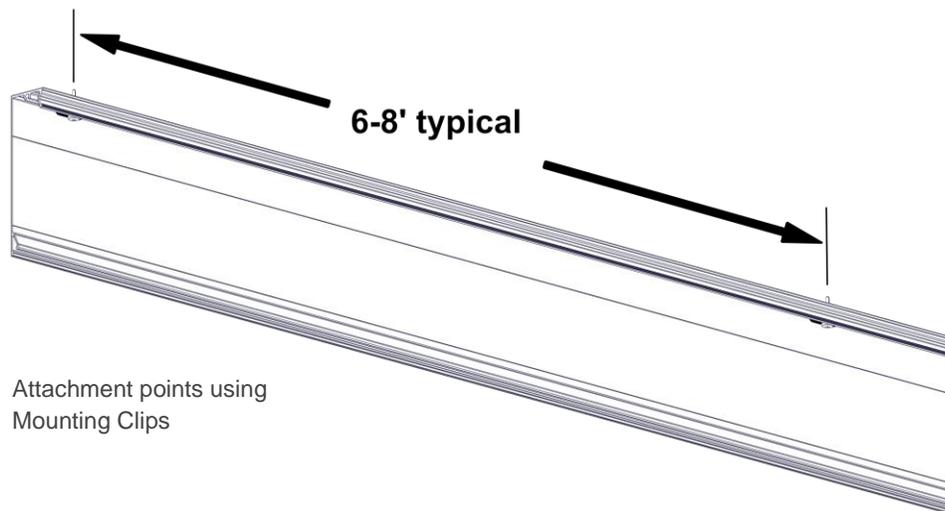
Install details

Typical dimensions

- Longboard Link & Lock system typical dimensions:

L&L	Width	Depth	Length	Weight(lbs/ft) *per set
2"	2" (50.8mm)	1 5/8" (41.3mm)	24'	0.93
4"	4" (101.6mm)	1 5/8" (41.3mm)	24'	1.3
6"	6" (152.4mm)	1 5/8" (41.3mm)	24'	1.6
8"	8" (203mm)	1 5/8" (41.3mm)	24'	1.9

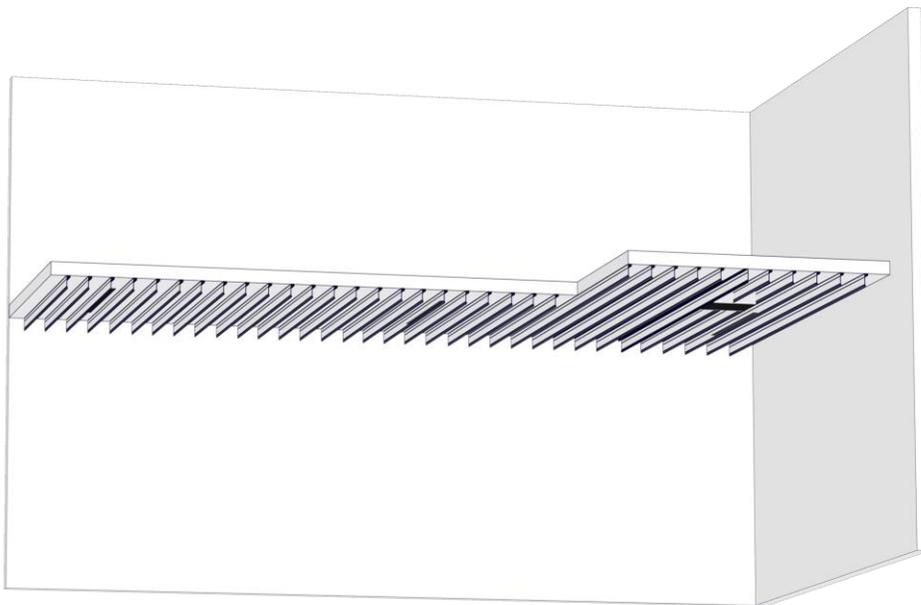
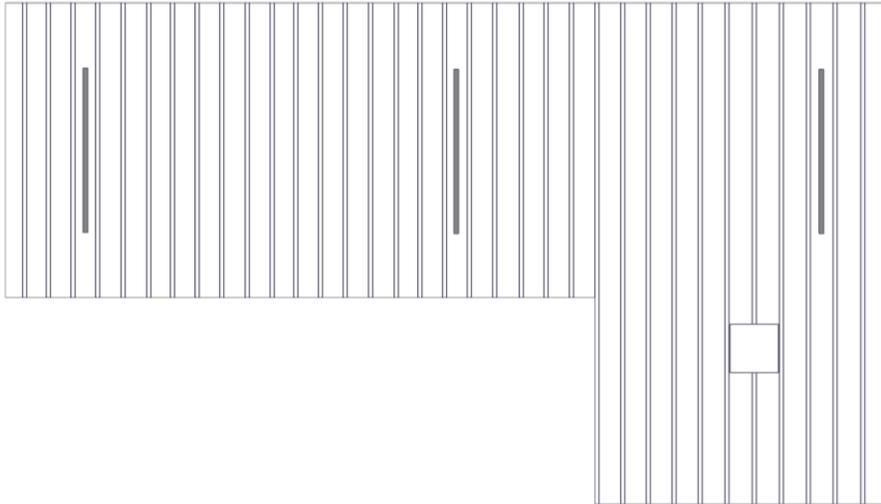
- It is good practice to leave a 1/4" (6mm) gap between every component joint or 24' (7.3m) to allow for expansion & contraction. Consider the joints where components meet each other to dictate which component is installed first (eg: right angle butt joints, mitered joints etc.).
- Mounting Clips allow for movement of the battens, to expand & contract during thermal changes.
- Fasten Mounting Clips every 6-8' typical (based on load requirements), alternating from top to bottom for battens using die lines for guides.



System layout and Install steps

Perimeter and field area limitations

Measure and layout your wall area to consider Link & Lock alignment with fixtures, penetrations, and adjacent walls, for desired appearance. The same methodology applies for vertical installations.



Preparation drilling for Install

To prepare Link & Lock for install, layout and predrill the back "L" with 1/2" holes every 6-8' O.C. typical, with the first hole 2" in from the end to allow space for the End Cap.

For the Batten orientation, alternate the holes from top to bottom using the Dielines for guides.

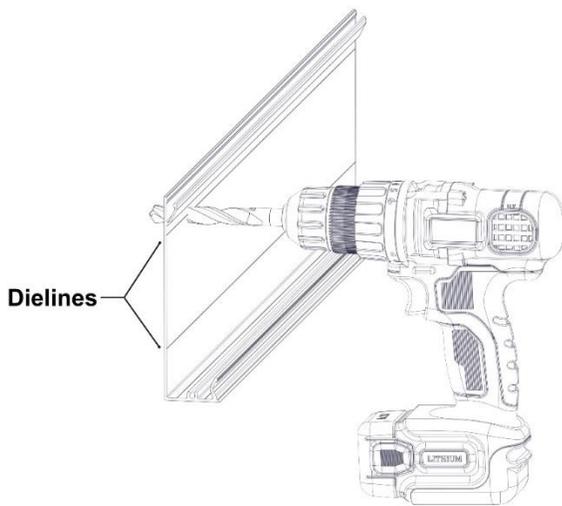
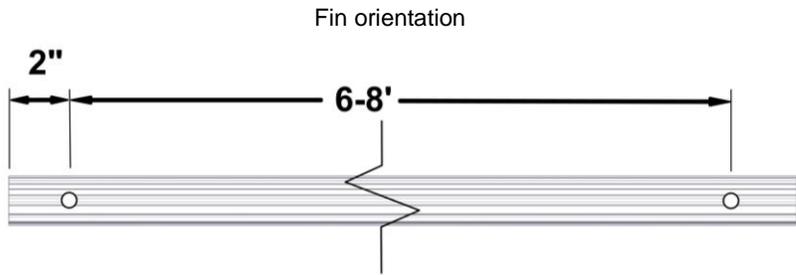
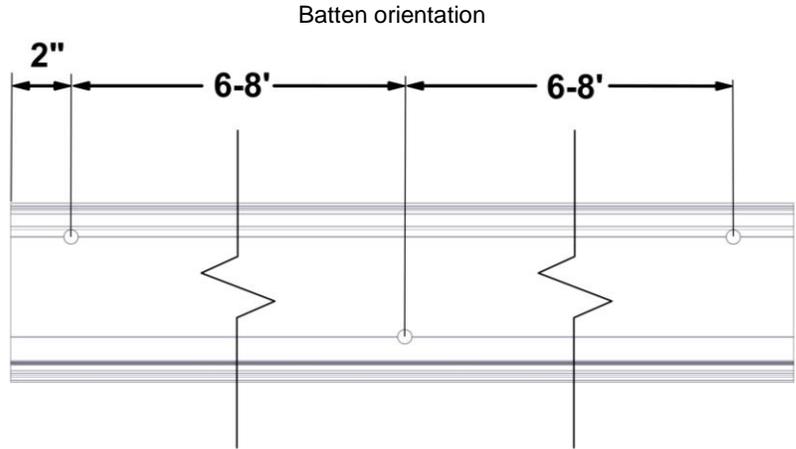
For Fin orientation, use Pilot Point Drill Bit (see below) as recommended for ease of drilling.

Note: To hard fasten 1 location per length, omit the drilled hole at that location and use for hard fastening.

See **Appendix for project specific fastener spacing:**

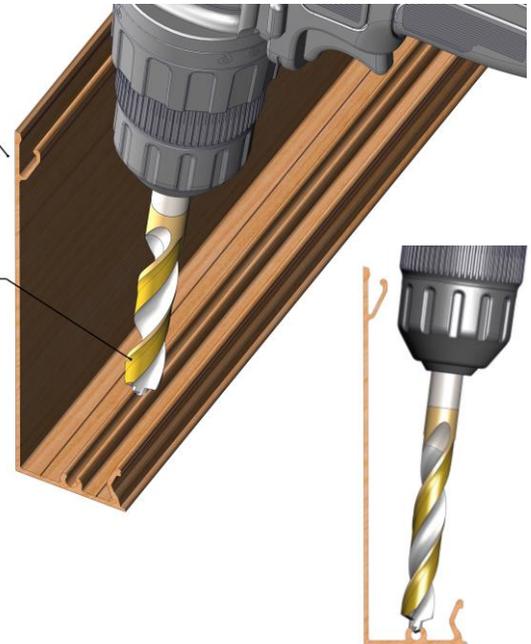
Allowable Span - Tables 3-4

⚠ Tip: Add weep holes as good practice to allow any potential moisture to escape.



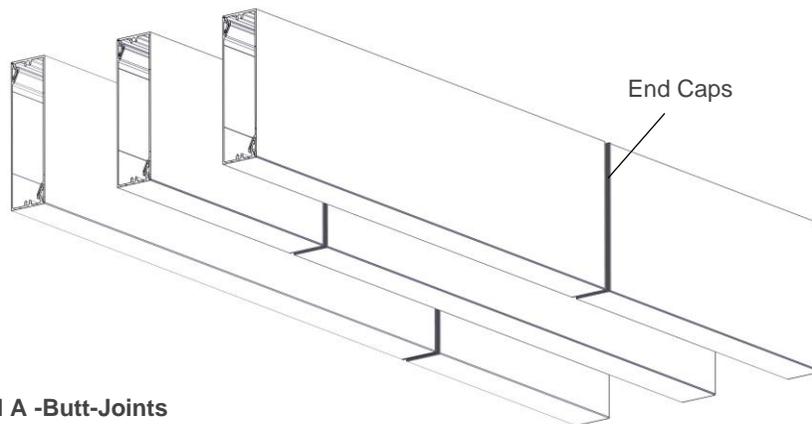
Back "L"

1/2" Pilot Point Drill Bit

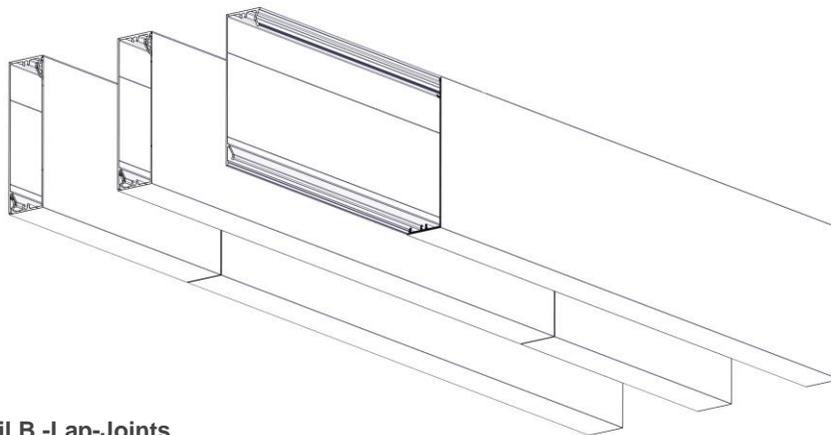


Butt-Joints & Lap Joints

- **⚠ BUTT-JOINTS.** When installing butt-joints, ensure to leave a 1/4" (6mm) min. gap. every 24' (7.3m) min. (**See Detail A**). Fasteners should be anchored into a solid secure framing member, blocking, furring strip, or backer plate, etc.
- **⚠ LAP-JOINTS.** When installing lap-joints, ensure to leave a 1/4" (6mm) min. gap. every 24' (7.3m) min. (**See Detail B**). Fasteners should be anchored into a solid secure framing member, blocking, furring strip, or backer plate, etc.
- Use touch-up paint pens (purchased separately) to finish the ends at the butt-joint or lap-joint.
- It is good practice to hard-fasten each back "L" at one point per length typically near the center, to keep the battens from migrating.
- DO NOT hard-fasten more than one (1) location per batten.

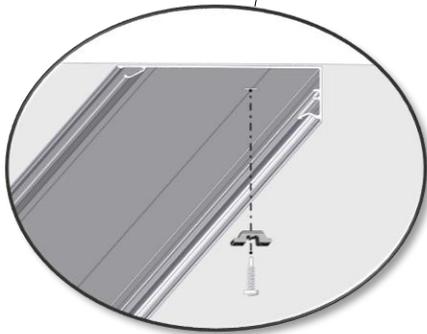
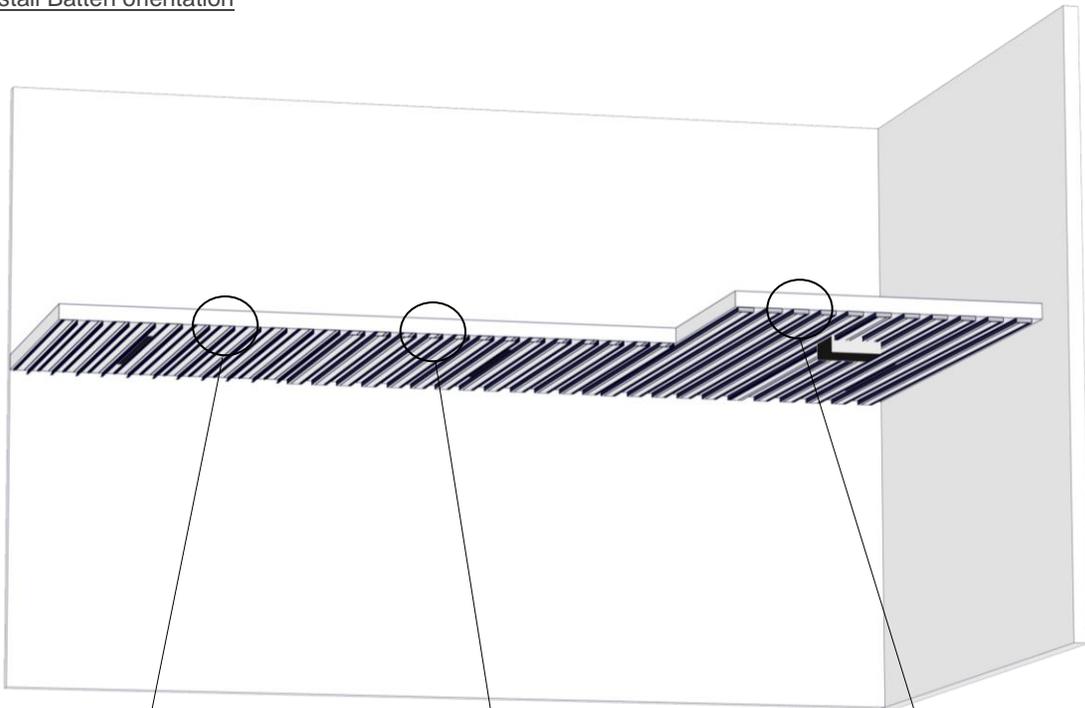


Detail A -Butt-Joints



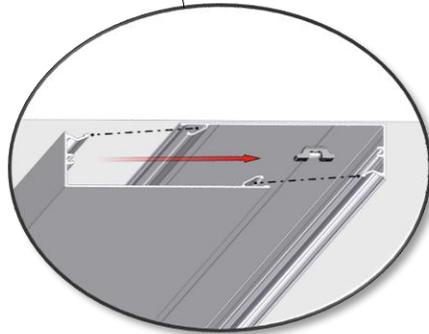
Detail B -Lap-Joints

Install Batten orientation



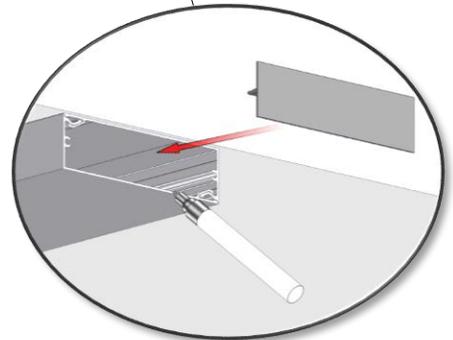
Step 1
Install back “L” using #12 Fasteners and Mounting Clips every 6-8’ O.C. typical.

Note: Be sure to fasten in the center of the 1/2” holes to allow for movement each way. Hard fasten near the center of each length to prevent migration of the material over time.



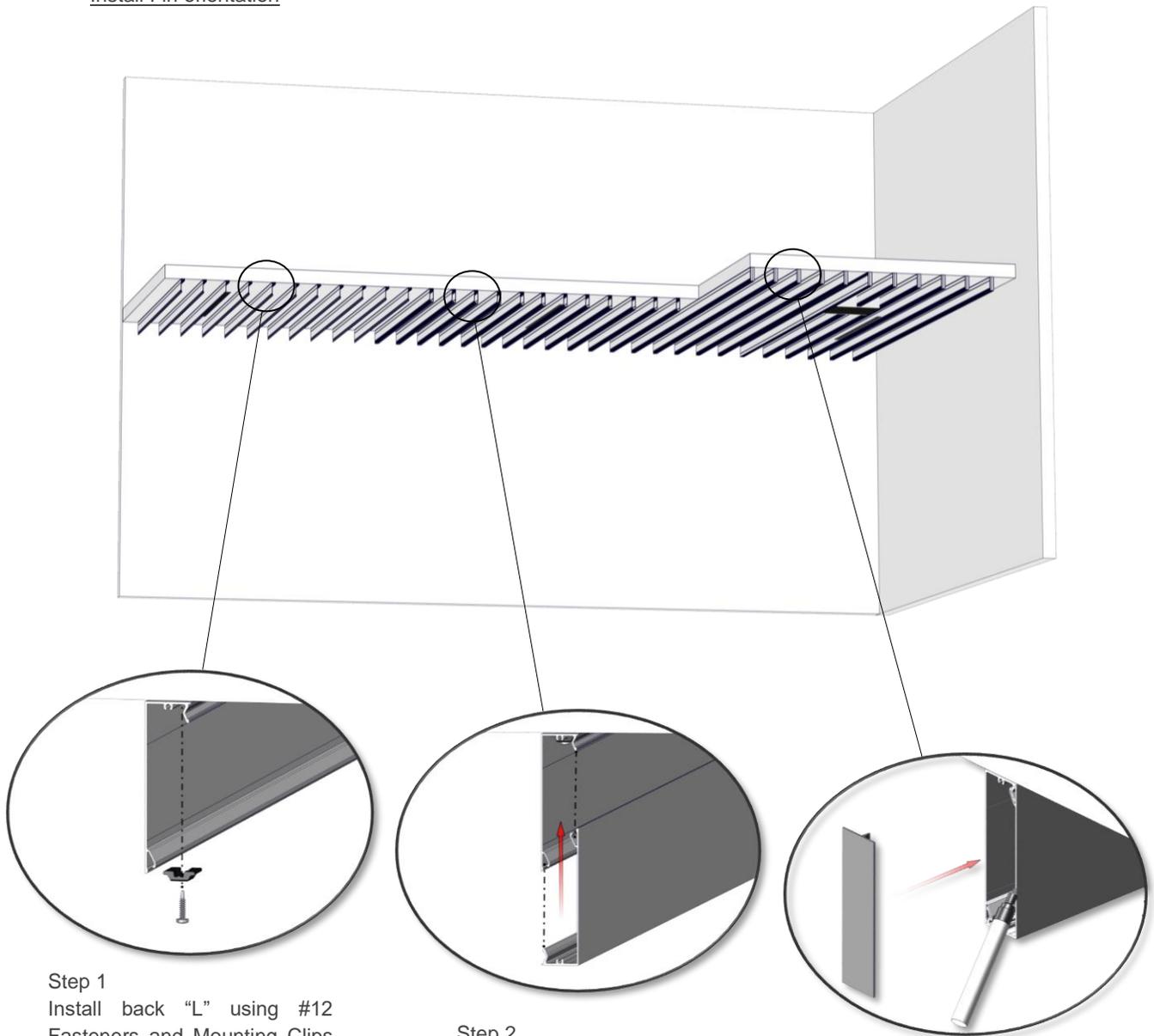
Step 2
Install front “L” and snap it into place, aligning it with ends and joints.

If necessary, use a rubber mallet or hammer and block to protect the finish.



Step 3
Install End Caps, which are friction fit, by pressing them into place using the palm of your hand. If necessary, use a rubber mallet to snap them into place. If required, touch up the cut ends with matching paint pen.

Install Fin orientation



Step 1

Install back “L” using #12 Fasteners and Mounting Clips every 6-8’ O.C. typical.

Note: Be sure to fasten in the center of the 1/2” holes to allow for movement each way. Hard fasten near the center of each length to prevent migration of the material over time.

Step 2

Install front “L” and snap it into place, aligning it with ends and joints.

If necessary, use a rubber mallet or hammer and block to protect the finish.

Step 3

Install End Caps, which are friction fit, by pressing them into place using the palm of your hand. If necessary, use a rubber mallet to snap them into place. If required, touch up the cut ends with matching paint pen.

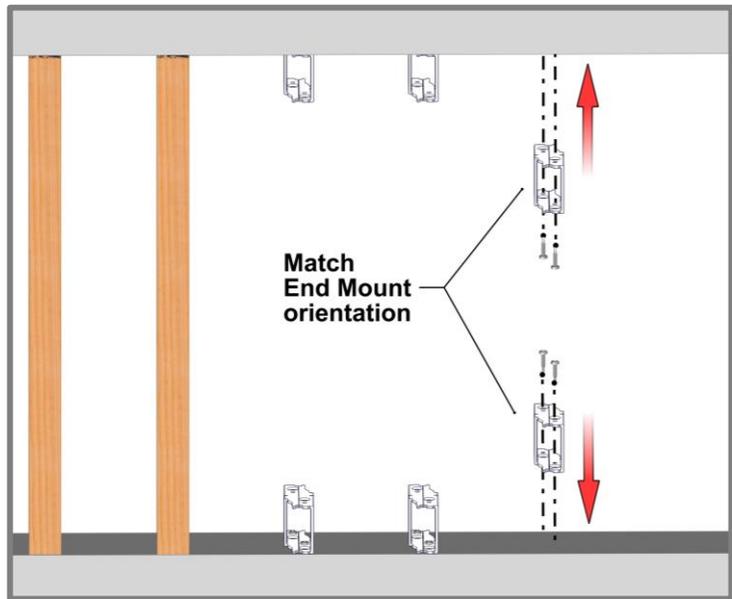
Install End to End orientation

Note: Use Tables 3-4 in Appendix for Allowable Span for loading.

Step 1

Place End Mounts into position at the top and bottom of the install. It is good practice to check your installation every 2-3 rows for level/plumb and flat/straight, for best results.

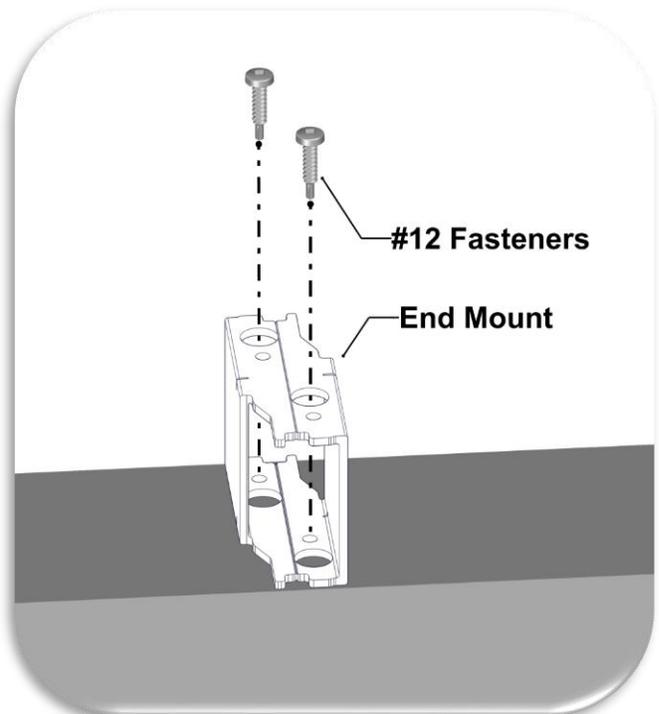
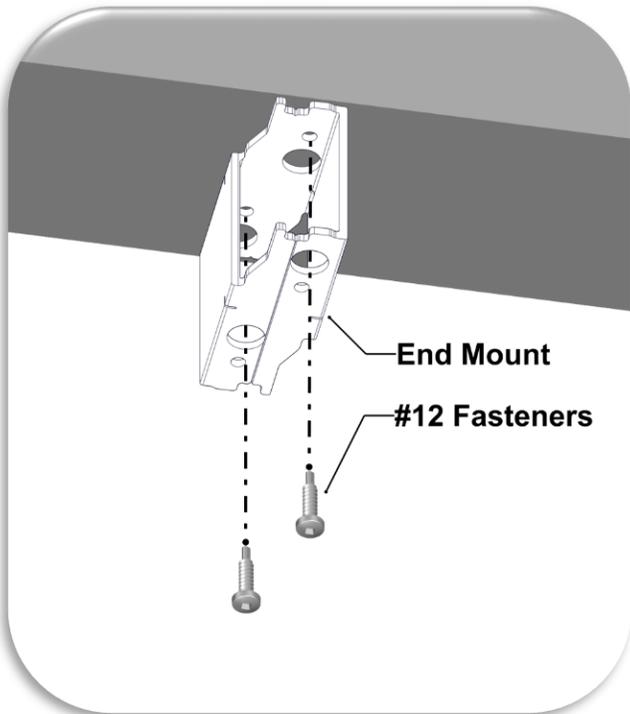
Fastener Types for End Mounts		
End Mount	Pan Head	Hex Head
2"	#10	
4"	#12	#12
6"	#12	#12
8"	#12	#12



Step 2

Install the End Mounts using #12 Fasteners (#10 for 2" End Mount). Make sure to match the orientation of the End Mounts so the Link & Lock set matches on the top and the bottom. See above for **Fastener Types for End Mounts**.

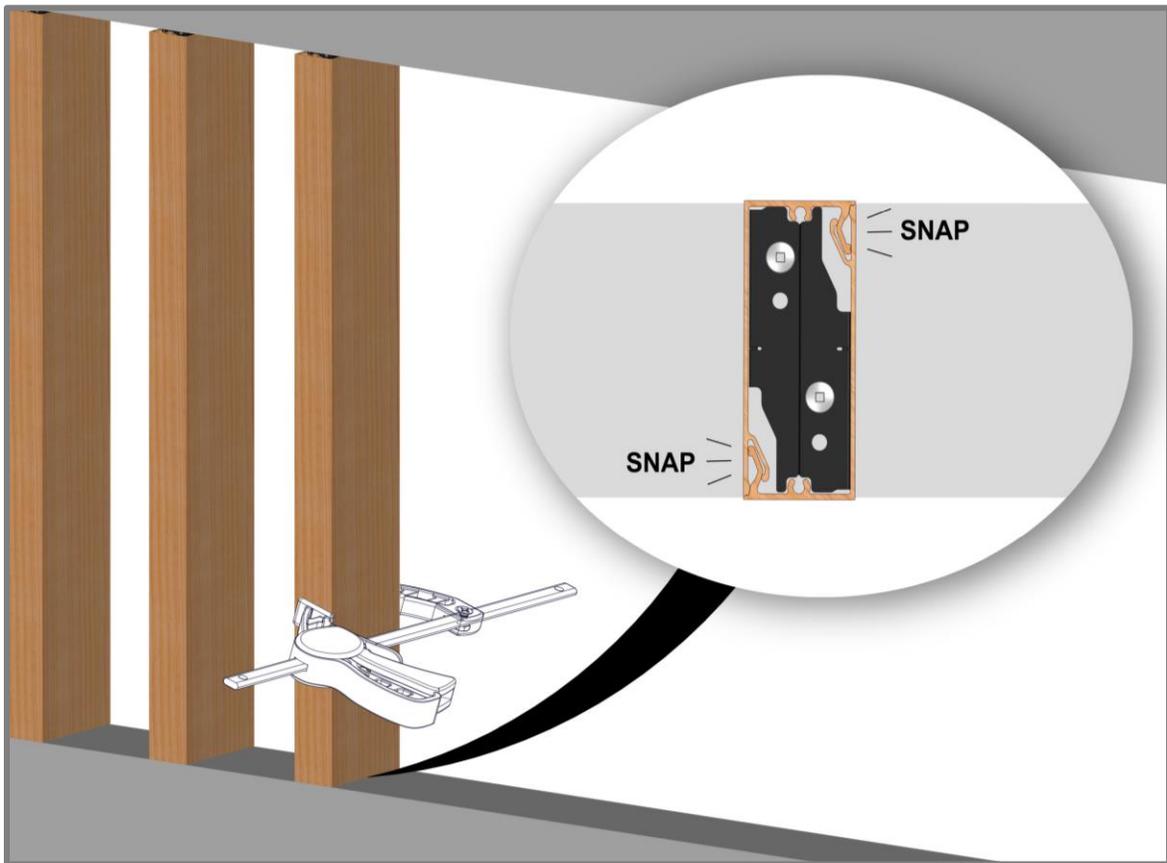
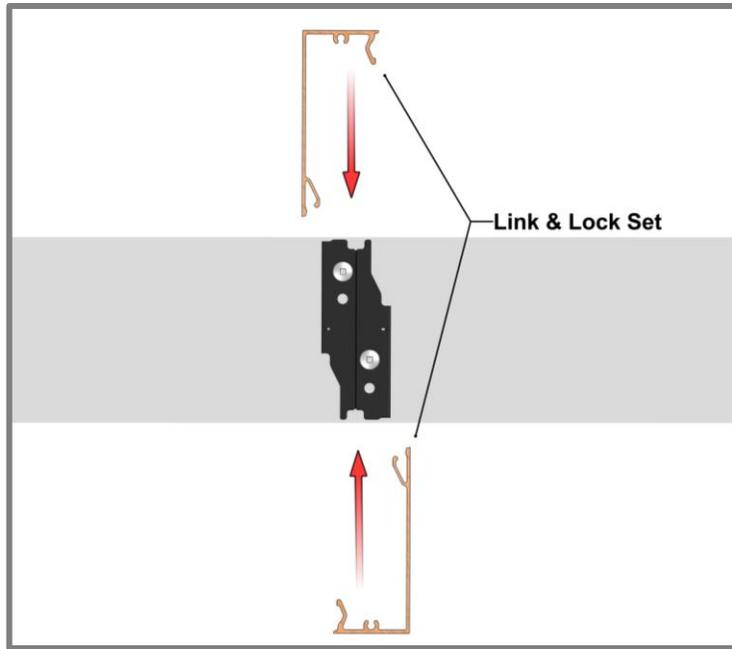
▲ TIP: Check the position of the End Mounts once installed to allow a plumb and straight look.



Step 3

Measure, cut and install Link & Lock Set and snap it into place onto the End Mounts. Use clamps with rubber pads as common practice to securely snap the front “L” onto the back “L”. If necessary, use a rubber mallet or hammer and block to protect the finish.

⚠ TIP: When measuring the Link & Lock, make sure to leave a gap (~1/4”) for expansion and building movement.



Large spans with Internal Stiffener

Requirements for large spans:

- Two Mounting Clips with #12 fasteners are used at both ends with a minimum distance apart of 5" O.C.
- An Internal Stiffener is added to reinforce the Link & Lock set for spans up to 12' max @30psf.
- Stiffener must be one continuous member from attachment to attachment.
- Double-sided Tape is used to place the Stiffener onto the Link & Lock. The tape is placed on the center of the Stiffener and then pressed onto far end of the back "L" as shown on page 18.



See **Appendix** for allowable spans for project specific load.

Allowable Span - Tables 3-4

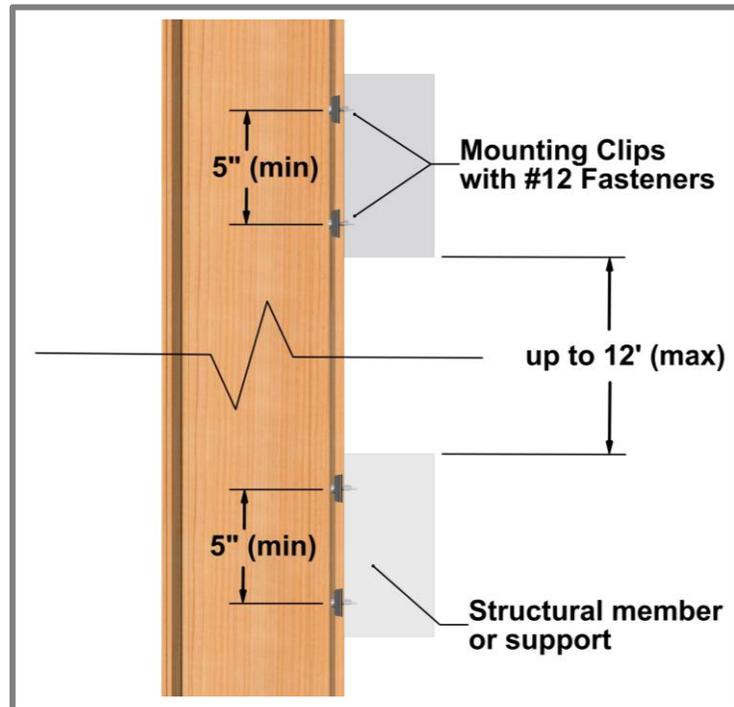
Step 1

Place predrilled Link & Lock back "L" into position (Drilling page 11). It is good practice to check your installation every 2-3 rows for level/plumb and flat/straight, for best results.

Step 2

Install back "L" using #12 Fasteners and Mounting Clips at end attachment points with a minimum distance apart of 5" O.C.

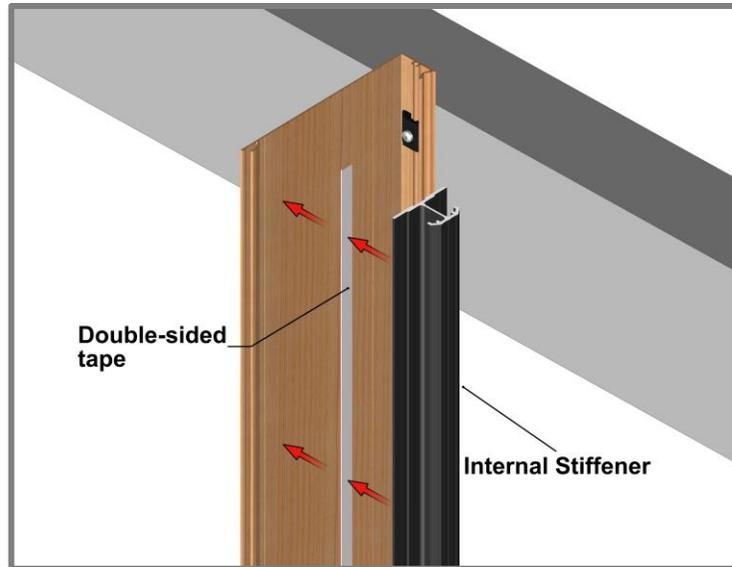
Note: Be sure to fasten in the center of the 1/2" holes to allow for movement each way. Hard fasten one end of each length to prevent migration of the material over time.



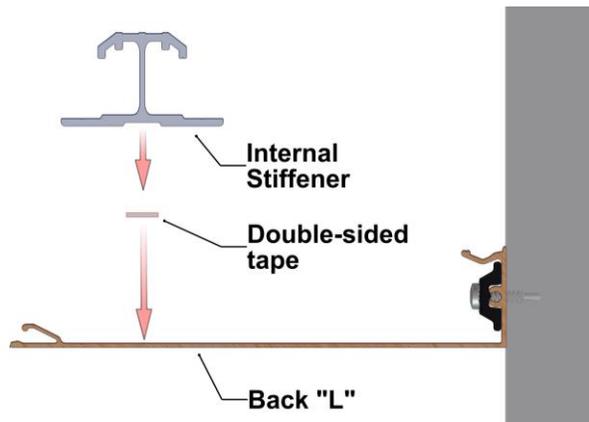
Step 3

Peel and place the Double-sided tape onto the back of the Stiffener O.C. Peel the second side and install the Stiffener as shown in the image pressing down to adhere to the tape.

Note: Install Stiffener 1" (min) from the end of the L&L to allow space for the End Cap as seen below.



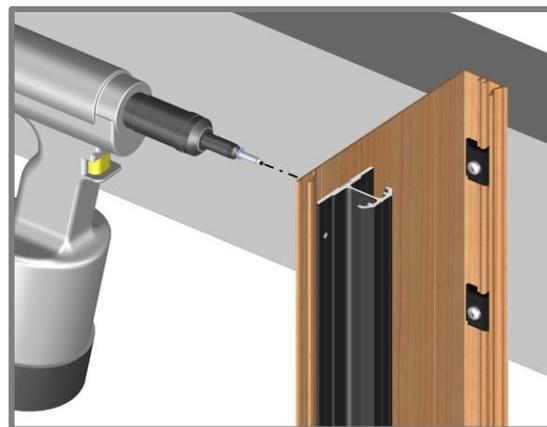
Make sure the Stiffener is located at the end of the back "L" and the tape is in the center of the stiffener.



Step 4

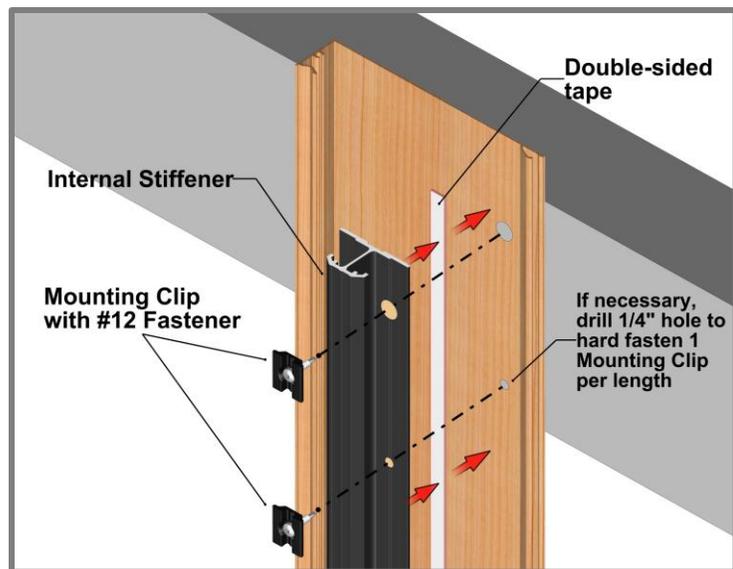
-Fastening Stiffener in Fin orientation

Mechanically fasten the Stiffener to the back "L" using 1/8" Dome Head Rivets (Aluminum). Drill the flange of the Stiffener using a 1/8" Drill bit and fasten two Rivets at the top or one end to mitigate movement of the stiffener over time.



Step 4.1

-Fastening Stiffener Batten orientation
Mechanically fasten the Stiffener to the back "L" using the Mounting Clips and #12 Fasteners. Refer to Step 1, Page 13 for mounting.



Step 5

Refer to Page 13-14 for Front "L" and End Cap install and details.



Appendix

Expansion and Contraction Tables

TABLE 1 - IMPERIAL

		AVERAGE TEMPERATURE AT TIME OF CUTTING & INSTALLATION											
°C		-50	-40	-30	-20	-10	0	10	20	30	40	50	
°F		-58	-40	-22	-4	14	32	50	68	86	104	122	
MIN/MAX POST CONSTRUCTION TEMP.	°C	°F	EXPANSION OR CONTRACTION (INCH/FOOT)										
	-50	-58	0.000	-0.003	-0.005	-0.008	-0.011	-0.014	-0.016	-0.019	-0.022	-0.024	-0.027
	-40	-40	0.003	0.000	-0.003	-0.005	-0.008	-0.011	-0.014	-0.016	-0.019	-0.022	-0.024
	-30	-22	0.005	0.003	0.000	-0.003	-0.005	-0.008	-0.011	-0.014	-0.016	-0.019	-0.022
	-20	-4	0.008	0.005	0.003	0.000	-0.003	-0.005	-0.008	-0.011	-0.014	-0.016	-0.019
	-10	14	0.011	0.008	0.005	0.003	0.000	-0.003	-0.005	-0.008	-0.011	-0.014	-0.016
	0	32	0.014	0.011	0.008	0.005	0.003	0.000	-0.003	-0.005	-0.008	-0.011	-0.014
	10	50	0.016	0.014	0.011	0.008	0.005	0.003	0.000	-0.003	-0.005	-0.008	-0.011
	20	68	0.019	0.016	0.014	0.011	0.008	0.005	0.003	0.000	-0.003	-0.005	-0.008
	30	86	0.022	0.019	0.016	0.014	0.011	0.008	0.005	0.003	0.000	-0.003	-0.005
	40	104	0.024	0.022	0.019	0.016	0.014	0.011	0.008	0.005	0.003	0.000	-0.003
	50	122	0.027	0.024	0.022	0.019	0.016	0.014	0.011	0.008	0.005	0.003	0.000

TABLE 2 - METRIC

		AVERAGE TEMPERATURE AT TIME OF CUTTING & INSTALLATION											
°C		-50	-40	-30	-20	-10	0	10	20	30	40	50	
°F		-58	-40	-22	-4	14	32	50	68	86	104	122	
MIN/MAX POST CONSTRUCTION TEMP.	°C	°F	EXPANSION OR CONTRACTION (MM/METER)										
	-50	-58	0.000	-0.230	-0.460	-0.690	-0.920	-1.150	-1.380	-1.610	-1.840	-2.070	-2.300
	-40	-40	0.230	0.000	-0.230	-0.460	-0.690	-0.920	-1.150	-1.380	-1.610	-1.840	-2.070
	-30	-22	0.460	0.230	0.000	-0.230	-0.460	-0.690	-0.920	-1.150	-1.380	-1.610	-1.840
	-20	-4	0.690	0.460	0.230	0.000	-0.230	-0.460	-0.690	-0.920	-1.150	-1.380	-1.610
	-10	14	0.920	0.690	0.460	0.230	0.000	-0.230	-0.460	-0.690	-0.920	-1.150	-1.380
	0	32	1.150	0.920	0.690	0.460	0.230	0.000	-0.230	-0.460	-0.690	-0.920	-1.150
	10	50	1.380	1.150	0.920	0.690	0.460	0.230	0.000	-0.230	-0.460	-0.690	-0.920
	20	68	1.610	1.380	1.150	0.920	0.690	0.460	0.230	0.000	-0.230	-0.460	-0.690
	30	86	1.840	1.610	1.380	1.150	0.920	0.690	0.460	0.230	0.000	-0.230	-0.460
	40	104	2.070	1.840	1.610	1.380	1.150	0.920	0.690	0.460	0.230	0.000	-0.230
	50	122	2.300	2.070	1.840	1.610	1.380	1.150	0.920	0.690	0.460	0.230	0.000

TABLE 3

		PSF (FACTORED/ULITIMATE)		
		10	20	30
ALLOWABLE SPAN (ft)	2", 4", 6" LINK & LOCK			
	6'			
	8'			
	12'			

All testing has been performed using L/180 deflection limits

TABLE 4

		PSF (FACTORED/ULITIMATE)		
		10	20	30
ALLOWABLE SPAN (ft)	8" LINK & LOCK			
	6'			
	8'			

All testing has been performed using L/180 deflection limits

Sound Absorption (NRC & SAA)



LINEAR METAL CEILINGS:	SOUND ABSORPTION	
	NRC	SAA
6" LINK & LOCK BAFFLES @ 6" O.C. w. insulation ¹	0.80	0.81
6" LINK & LOCK BAFFLES @ 6" O.C	0.10	0.12

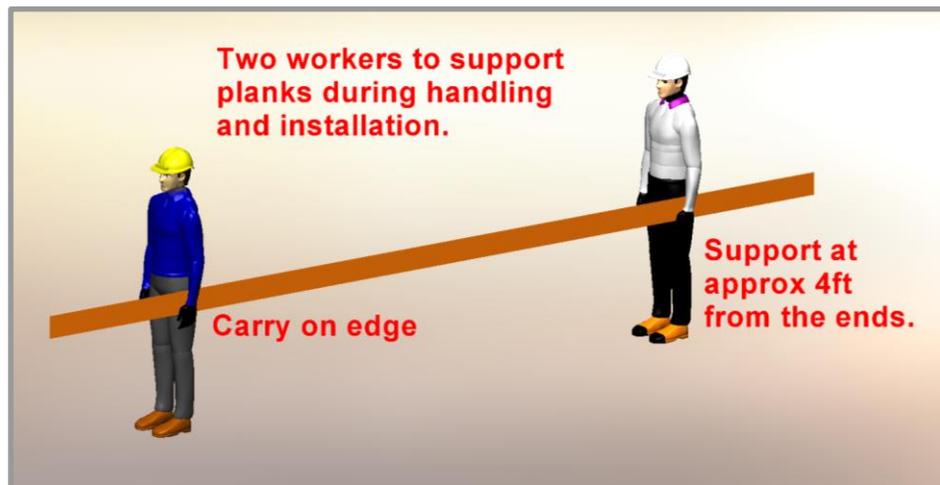
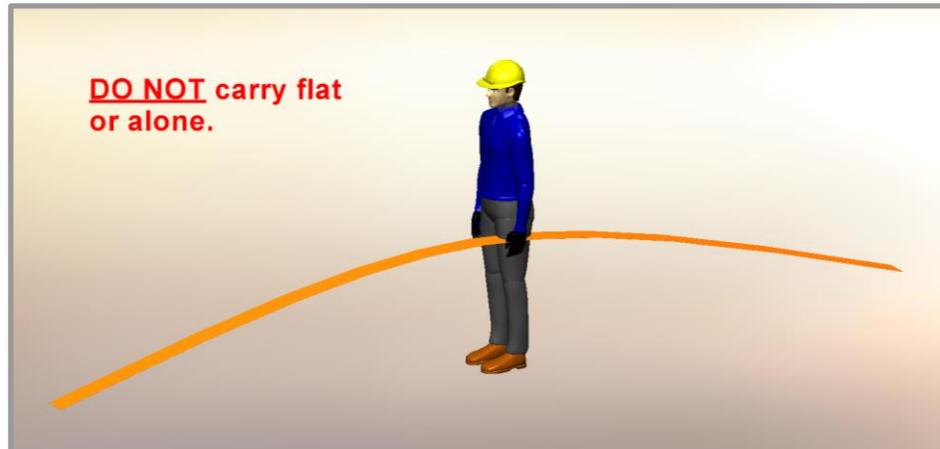
The test reported in this document conformed explicitly with ASTM C423-17: "Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method."

¹Insulation = 1" Fiberglass backer, 3lbs/ft³ density

Proper Handling of Longboard Products



To help avoid injury and product damage, Longboard products require proper handling to and from storage areas during installation. When carrying or installing any products it is recommended that they be moved or carried by at least two people with each support point approximately 4ft from the ends. **Carrying products without proper support can cause excessive bending which may damage the appearance or finish of the product.** Any short cut lengths should also be carried on edge while supporting the material. See below for details.



⚠️ Delivery, Storage & Handling ⚠️

- Always inspect the delivery for damage and contact LB ASAP if there are any issues: info@longboardproducts.com or 1-800-604-0343 and include your PO# and any pictures if possible. Longboard is not responsible for the installation of blemished or damaged material.
- Be sure to store the material flat, keep it dry, safe & secure and remain in unopened cartons until ready to be installed.
- Always wear appropriate PPE when handling products.



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Every effort has been made to ensure that the information in these installation guidelines is accurate. Longboard is not responsible for printing or clerical errors.

For more information, contact client care at info@longboardproducts.com or call toll free 1-800-604-0343.