



# INSTALLATION GUIDELINES



## 1.0. GENERAL

### 1.1. Product Description

Longboard® Intrepid Grill is an extruded aluminum baffle ceiling system, installed directly to conventionally framed ceiling & wall structures or approved suspended ceiling structures, suitable for all seismic categories. Available in standard lengths of 24' (7.3m) and depths of 4" (101.6mm), 6" (152.4mm) & 8" (203mm). End Caps with a matching finish are used to close off exposed ends.

### 1.2. Installation Considerations

Depth of system (measured from substrate to finished face):

Baffles (on edge) = 4" (101.6mm), 6" (152.4mm) or 8" (203.2mm)

Battens (flat on ceiling)= 1-5/8" (41.3mm)

*(See Appendix to access profile drawings)*

### 1.3. Cutting

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

Use standard wood-cutting tools such as a Miter Saw with a carbide blade (60-80 tooth) for non-ferrous metals (aluminum).

Trim the taped/punched ends of all stock length material by 1/2" (12mm) each end and discard (see 1.5.).

### 1.4. Fastening

Longboard Intrepid Grill consists of two (2) matching L-shaped extrusions, snapped together to make a complete set. The back "L" is mechanically fastened to the substrate, using #12 (preferred) or #10 (min.) sharp-point (for wood substrates) or self-drilling (for metal substrates) zinc-plated screws (not included) every 5'4" (1.63m) o.c. (typical) up to 6' (1.83m) o.c. (max.). Fastener types such as Pan Head, Hex Head or Truss Head are recommended.

⚠ All fasteners should be compatible with the substrate type.

Although interior applications likely will not experience temperature change, it is good practice to follow the standard attachment procedure described in this section.

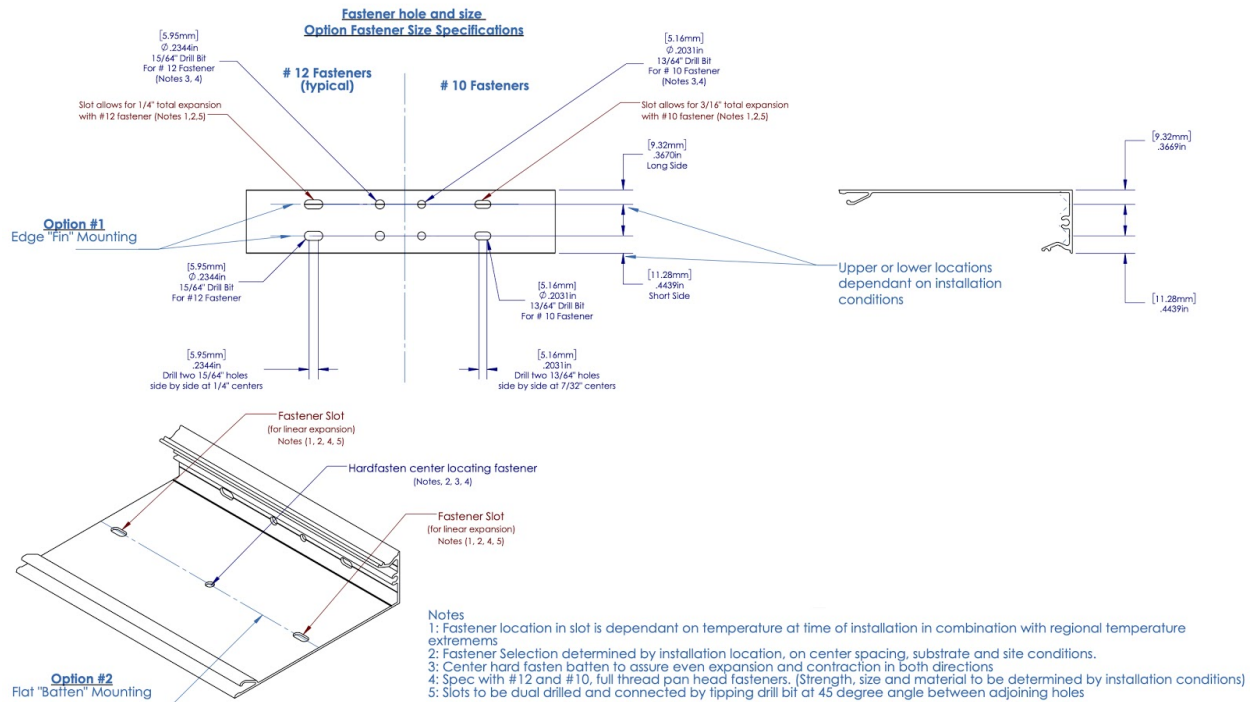
Layout and predrill\* the back "L" at all fastener locations: a single hole at or near the center length of each section & double drilled/slotted holes at each location either side of center.

Refer to the fastener installation guide diagram for hole dimensions and details.

*\*See table 1 & 2 to calculate the thermal movement (if any) for your project, to ensure adequate allowances have been made.*

⚠ Fasten the center location at the single drilled hole, to prevent migration of the material over time. Fasten at the slotted locations to allow for expansion & contraction at each side of center.

## Link & Lock - Fastener Installation Guide



At the time of installation, consider the current temperature as it relates to the expected annual high and low range, to place the fasteners at the slotted holes at either the:

- + center of the slot (at average annual)
- + toward end of plank (colder than average annual)
- + toward center of plank (warmer than average annual)

Example: winter typically experiences lows of -20°C (-4°F), summer typically experiences highs of +30°C (86°F) and it is +5°C (41°F) at the time of installation: Place fasteners at the center of the slotted holes.

Ensure all fasteners are anchored into solid-secure framing, blocking or furring strips. Snap the second "L" onto the first using a rubber mallet/hammer & block or clamp, then press end-caps in place at each end. Be sure to protect the finish during this process. Consider your application sequence of end caps before installing adjacent Intrepid Grill members, as they may limit the space needed to insert caps. All pieces are friction fit: If preferred, place a single small pea-sized spot of a structural grade silicone (not included) inside the connecting surface to prevent slippage (front "L") or ease of removal (end caps).

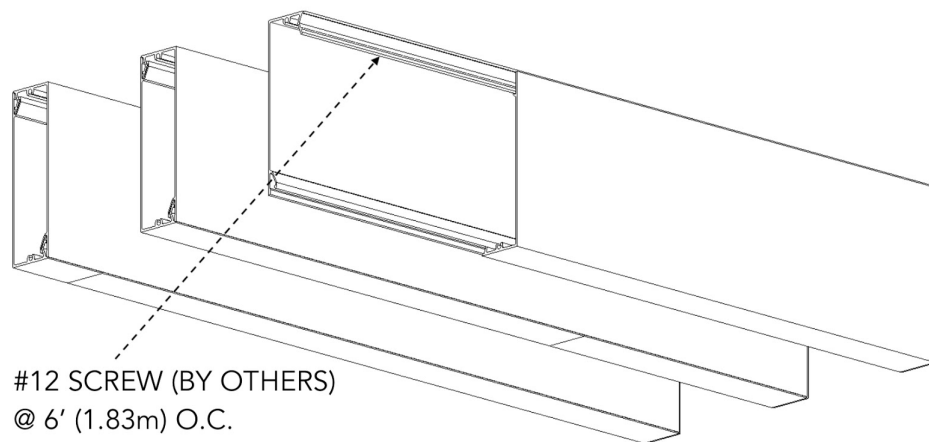
### 1.4.1. Expansion & Contraction

When installed in applications where temperatures will vary, Intrepid Grill will expand & contract 1/4" (6mm) over 24' (7.3m) measured over a 30°C (54°F) temperature range\*. Be sure to leave a 1/4" (6mm)(min.) gap between the ends of each set every 24' (7.3m) or less, when temperatures will vary.

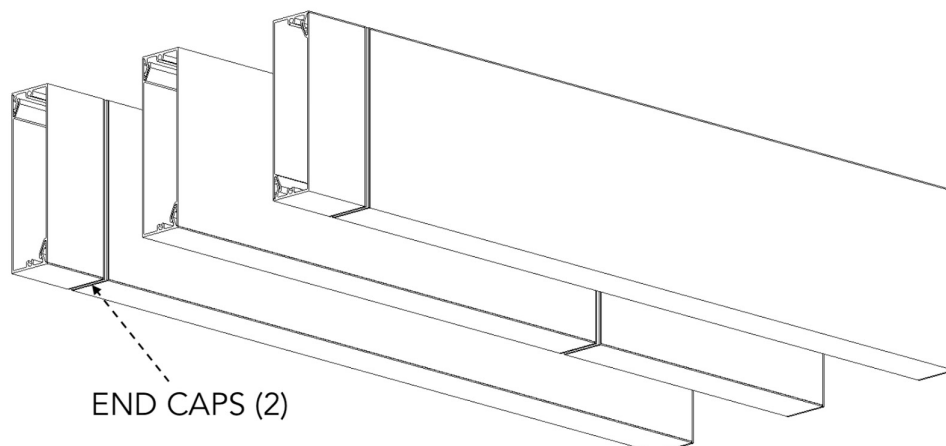
*\*See table 1 & 2 to calculate the thermal movement for your project.*

Baffles can be installed with staggered lap-joints for a continuous aesthetic of longer installations (see Detail A), or staggered butt-joints (see Detail B). Be sure to lap joints by 2' (610mm) minimum over the back "L" when using the lap-joint method.

#### Detail A: LAP JOINTS



#### Detail B: BUTT-JOINTS





**TABLE 1 & 2: MATERIAL THERMAL MOVEMENT RELATING TO AMBIENT TEMPERATURE**

| 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  |

### 1.5. Surface Finish

The Longboard Intrepid Grill system is available in a range of Woodgrain, Solid & Specialty Finishes with custom\* solid colors available upon request. \*Additional lead times apply.

Longboard Woodgrains have a repeat pattern, shipped in sets. Install these as they come out of the box, as an A&B pattern staggering each set approx. 1-2' (305-610mm) from the previous set to achieve a random pattern aesthetic.

💡 Light reflectance (LRV): Up to 73.2% (Ultra White)

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



### 1.6. NRC Acoustic Performance

Visit [longboardproducts.com/testing](https://longboardproducts.com/testing) for full NRC Test Reports.

Table 3

| NRC ACOUSTICAL PERFORMANCE SUMMARY   |                                   |       |        |        |                  |      |
|--|-----------------------------------|-------|--------|--------|------------------|------|
| BAFFLE PRODUCT:  | ABSORPTION PER UNIT (SABINS/UNIT) |       |        |        | SOUND ABSORPTION |      |
|  | 250Hz                             | 500Hz | 1000Hz | 2000Hz | NRC              | SAA  |
| 6" LINK & LOCK   | 0.40                              | 0.76  | 0.35   | 0.31   | 0.10             | 0.12 |
| 6" LINK & LOCK with insulation   | 1.98                              | 3.59  | 3.69   | 4.00   | 0.80             | 0.81 |
| <p>- 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."</p> <p>- The specimen mounting was performed according to ASTM E795-16: "Standard Practices for Mounting Test Specimens During Sound Absorption Tests."</p> <p>- Insulation refers to Fiberglass backer @ 2.92 lbs/ft<sup>3</sup> (46.7 kg/m<sup>3</sup>) with a thickness of 1" (25.4 mm)</p> <p>- The sound absorption average (SAA) is defined in ASTM C423-17 Section 3.1.1 as the arithmetic average of the sound absorption coefficients of a material for the twelve one-third octave bands from 200 Hz through 2500 Hz, inclusive, rounded to the nearest integer multiple of 0.01.</p> <p>- The noise reduction coefficient (NRC) is defined from previous versions of ASTM C423 as the arithmetic average of the sound absorption coefficients at 250 Hz, 500 Hz, 1000 Hz, and 2000 Hz, rounded to the nearest integer multiple of 0.05.</p> |                                   |       |        |        |                  |      |

### **1.7. Material Ordering & Delivery**

Intrepid Grill Baffles are sold by the set (pair), end caps are sold by the box: 20 caps/bx. Lead time is 3-4 weeks\* (*\*subject to change*), 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.

⚠ Always inspect the delivery for damage and contact LB ASAP if there are any issues: [info@longboardproducts.com](mailto: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.

### **1.8. Storage & Handling**

Be sure to store the material flat, keep it dry, safe & secure and remain in unopened cartons until ready to be installed. Ensure proper care when handling, to avoid damage on site.

## **2.0. FRAMING REQUIREMENTS**

### **2.1. General**

Always consult the local building authority and follow local building code requirements.

### **2.2. Load Capacity**

The Longboard Intrepid Grill system weighs approx. 1.3 up to 1.9 lbs/LF\*.

*\*see profile drawings for individual item weights.*

#### **2.3.1. Wood-Framing**

Traditional ceiling framing at 16" (406mm) o.c. with or without solid secure blocking running perpendicular to the Intrepid Grill orientation.

#### **2.3.2. Metal Framing**

16ga. (minimum) galvanized steel framing at 16" (406mm) O.C.

#### **2.3.3. Concrete**

Wood or metal furring strips (see 2.3.1. and 2.3.2. for standard requirements).

#### **2.3.4. Ceiling Grid & Other Structures**

Solid, secure structure of material designed to support loading (see 2.2.), spaced at 6' (1.83m) o.c. max.

### **2.4. Framing Layout**

Provide solid secure framing and/or blocking at 16" (406mm) o.c. for material support and fasten at 5'4" (1.63m) o.c.

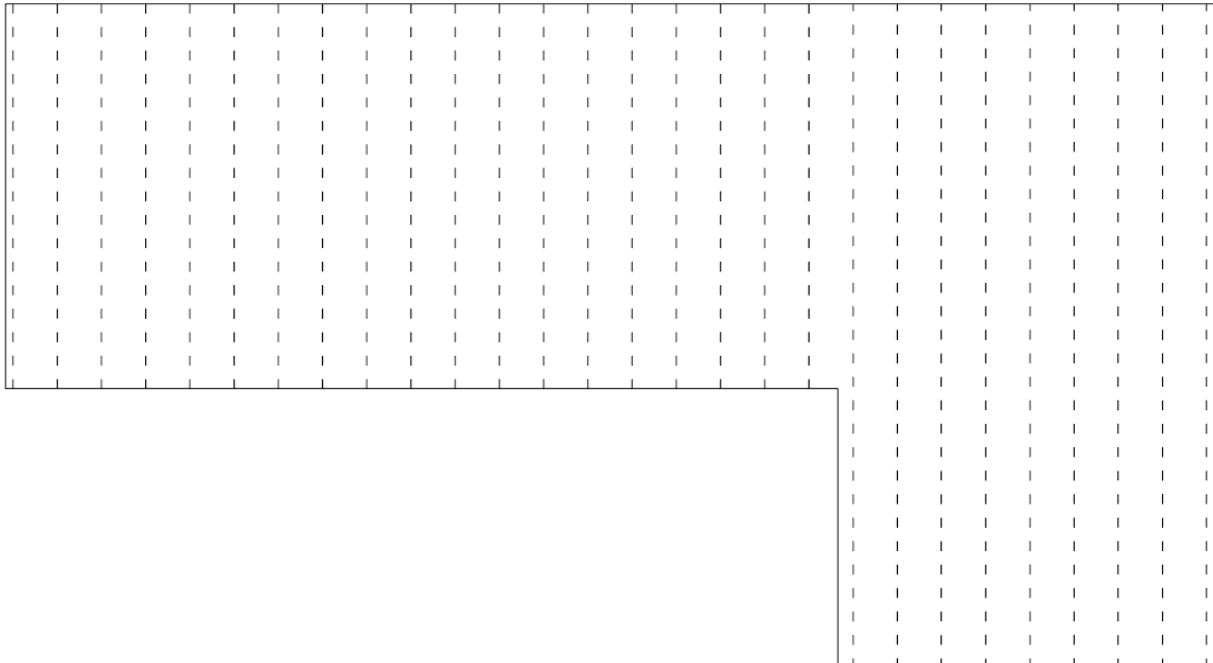


### 3.0. SYSTEM INSTALLATION

#### 3.1. Layout

Measure and layout your ceiling area to consider baffle/batten alignment with lighting fixtures, penetrations and adjacent walls, for the desired appearance.

(drawing shown as reflected ceiling plan)



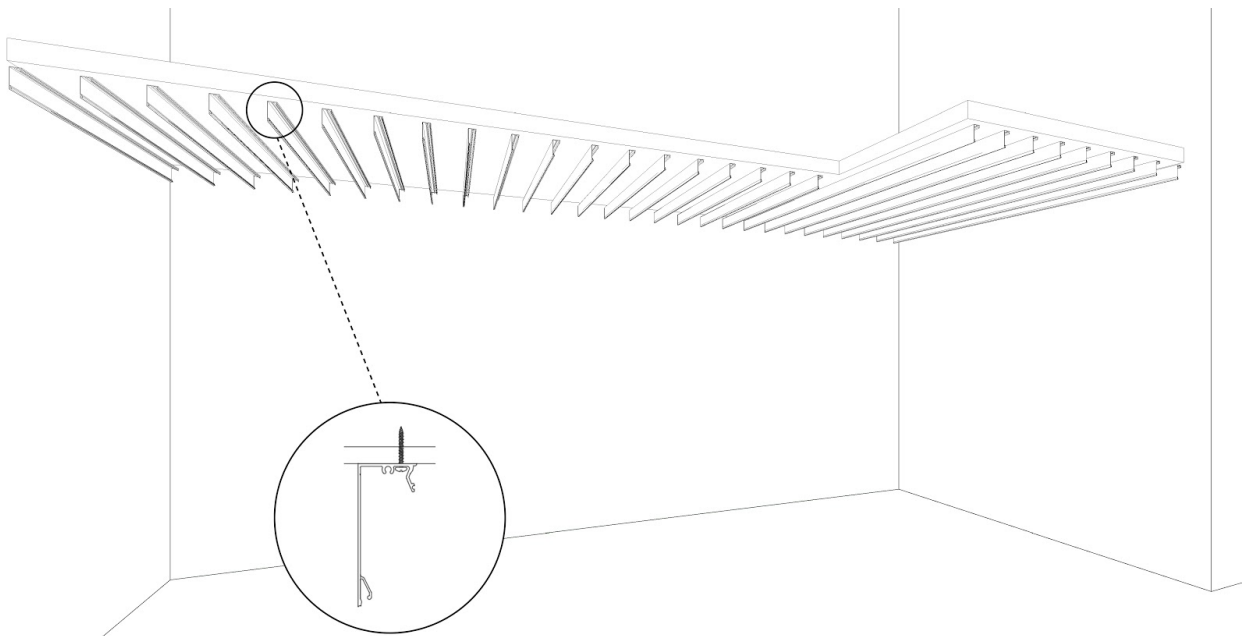
### 3.2. Installation

If the area to be installed will experience temperature change, it is good practice to leave a 1/4" (6mm)(min.) gap between each member to allow for expansion & contraction (see 1.4.1. Expansion & Contraction)

#### 3.2.①. BACK "L"

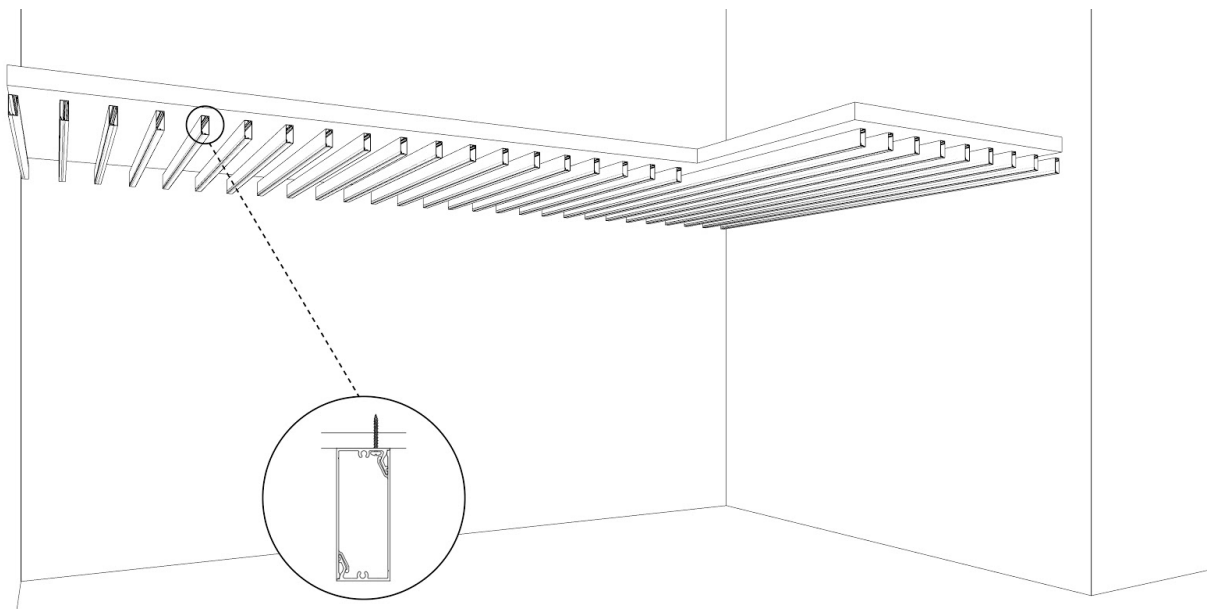
Install the back "L" throughout (see 1.4. Fastening). Install end caps (see: 3.3.③.) where access will be restricted upon installation.

**TIP!** It is good practice to check your installation every 2-3 rows for alignment and flat/straight, for best results.



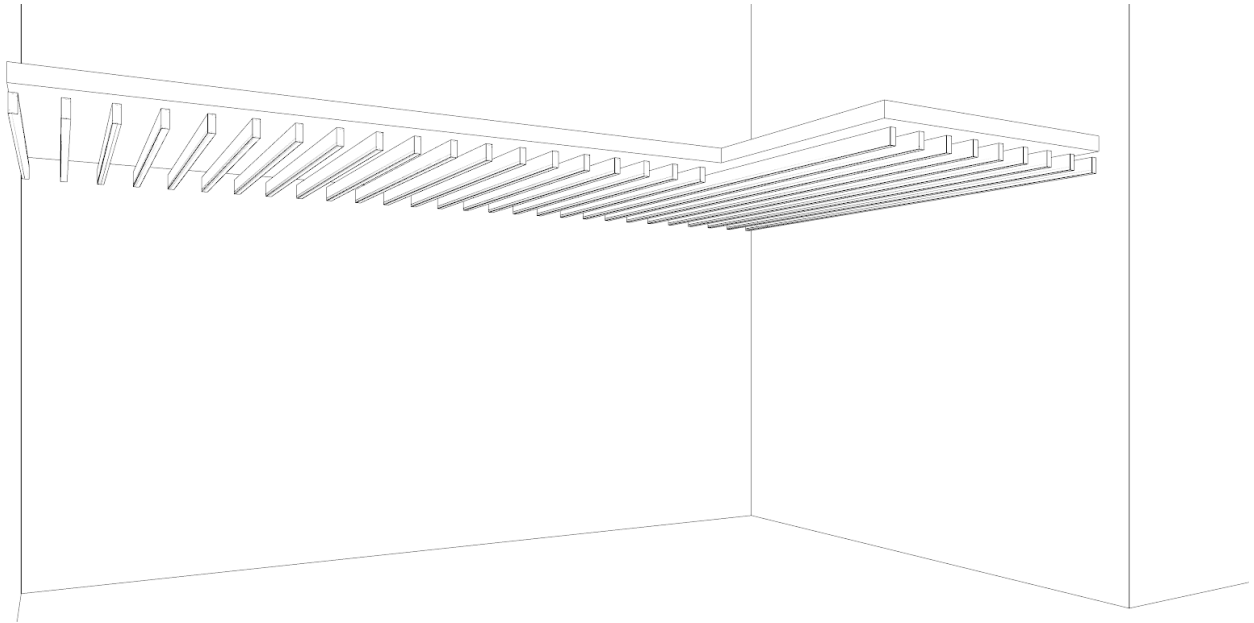
### 3.2.②. FRONT "L"

Install the front "L" onto the base "L" (see 1.4.1. Expansion & Contraction).



### **3.2.③. End Caps**

Upon completion of installed area(s), install end caps at open ends (see: 3.3.③.).



### **3.3.③. END CAPS**





## 4.0. Cleaning Recommendations

*\*see Cleaning Guide for full requirements*

[longboardproducts.com](http://longboardproducts.com)

While Longboard finishes require zero maintenance, we do recommend periodic cleaning to keep the product looking its best. Our finish is tested to withstand corrosion, fading and normal wear, however, neglect and rough conditions could have negative effects on the surface finish. These effects will not negate the structural performance of the product, but prolonged exposure to these conditions may result in permanent markings or surface damage.

Cleaning should be done in mild weather, and never in direct sunlight. Always complete a test patch on an inconspicuous area to ensure your detergent is suitable for the surface.

Your Longboard products should be cleaned immediately after installation. This is to remove any construction soils such as oils or dust. How to complete this initial cleaning depends on the level of dirt and the nature of the soil. See the cleaning guide for our suggestions based on soil level. Basic methods use a combination of moderate water pressure, soft sponge/brush and a mild detergent.

⚠ 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.

Always follow the product instructions for dilution. Cleaning the surface with a cleanser that is not diluted may result in damage to the coating.













## 5.0. WARRANTY

Upon substantial completion of the project, register for warranty online here:

[longboardproducts.com/warranty](http://longboardproducts.com/warranty)

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

# APPENDIX

| INSTRUCTION<br>STEP # | IMAGE   | DESCRIPTION   | TYPICAL USE    | SECTION DETAIL<br>(scan or click)   |
|-----------------------|---|---|----------------|---|
| ① ②                   |    | 4" LINK & LOCK, 24'<br>(7.3m) LENGTHS,<br>WOODGRAIN, SOLID,<br>SPECIALTY, CUSTOM<br>SOLID | CEILING BAFFLE |    |
| ① ②                   |    | 6" LINK & LOCK, 24'<br>(7.3m) LENGTHS,<br>WOODGRAIN, SOLID,<br>SPECIALTY, CUSTOM<br>SOLID | CEILING BAFFLE |    |
| ① ②                   |   | 8" LINK & LOCK, 24'<br>(7.3m) LENGTHS,<br>WOODGRAIN, SOLID,<br>SPECIALTY, CUSTOM<br>SOLID | CEILING BAFFLE |   |
| ③                     |  | 4" END CAP,<br>WOODGRAIN, SOLID,<br>SPECIALTY, CUSTOM<br>SOLID                            | BAFFLE END CAP |  |
| ③                     |  | 6" END CAP,<br>WOODGRAIN, SOLID,<br>SPECIALTY, CUSTOM<br>SOLID                            | BAFFLE END CAP |  |
| ③                     |  | 8" END CAP,<br>WOODGRAIN, SOLID,<br>SPECIALTY, CUSTOM<br>SOLID                            | BAFFLE END CAP |  |

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