Installation Manual - Interior Wall and Ceiling



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Scan Code for Install Videos for both Soffits and Walls.

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1.0 BEFORE YOU BEGIN

- **®** Read the install instructions completely. These installation instructions illustrate the "Best Practices" to install ChamClad® cladding and trim.
 - ChamClad® does not accept any liability or responsibility under their written warranty for product failure caused by improper installation.
- To ensure you are up to date with the most recent install instructions, please visit our website https://chamClad.com and view manual in conjunction with the technical bulletin advisory.
- Our research and development team are committed to improving product durability and performance. As a result, specifications may change from time to time. Please check our website for updated technical information and profile drawings.
- While this Installation Manual provides typical methods, tools, and techniques based on standard industry practices, it may not address every question or condition that could arise during installation. We encourage designers and installers to review these guidelines thoroughly and identify any site-specific conditions not covered. In such cases, please contact ChamClad® at engineering@chamclad.com, and our team will assist in developing a mutually satisfactory solution. It is the responsibility of the design authority and installer to ensure proper layout and compliance with relevant codes.
- Occasionally, you may come across minor irregularities that happen naturally during the manufacturing process. This occurrence will not affect the aesthetics and performance of the product.
- Periodically, you may encounter aluminum accessories where the ends need trimming due to the film shrinking back during the curing process. This occurrence will not affect the performance of the product.





















2.0 FIRST STEPS FOR A SUCCESSFUL INSTALLATION

Inspect all material for any breakage, defects, damage, and colour before installing. Do not install product that is questionable. Contact ChamClad® customer service or your dealer for assistance. Installing defective material may void your product Warranty.

Before installing ChamClad® cladding it is very important that installers read and understand the installation recommendations and topics covered in this manual.

2.1 Transportation, Proper Handling & Storage

- When transporting ChamClad® products, keep bags flat. The boards must be supported along the full length. Whenever possible avoid using metal banding. Metal banding will cut into the boards if pulled too tight. Materials are required to be inspected for any damage within 7 days of receipt, recorded on the Bill of Lading, and forwarded to info@ChamClad.com. ChamClad® warranty may be voided if damaged product is installed without prior inspection.
- Always carry ChamClad® cladding by holding it by the narrow edge and pick boards up in the center. ChamClad® pallets should not be stacked more than 2 pallets high and always stored on a flat surface.





- Products must be on a flat surface which supports the entire length of the boards and should be kept dry and out of direct sunlight (when possible). Do not store or place on asphalt or in areas prone to excessive heat buildup. Cover with a tarp leaving ends open to allow for airflow. Store away from areas where there may be falling objects or construction debris that could cause damage. If stacking product, please ensure it is stable.
- © ChamClad® packaging is vented to limit the greenhouse effect. Do NOT store uninstalled panels in areas of excessive heat prior to installation; doing so may lead to product distortion.
- Note: It is important that product is not stored for long periods where temperatures could exceed 30 degrees Celsius (86 degrees Fahrenheit).

2.2 Tools, Materials and Cutting



- Always ensure you wear proper, appropriate and standard PPE when performing cutting and installation.
- **1** If using a circular saw, cut cladding face down on a clean surface.
- If using a cut-off saw, cut face up
- © Carbide-tipped blades with 84+ teeth are recommended. (Aluminum blades are optimal)
- **1** Do not score or snap ChamClad® exterior cladding
- Do not cut ChamClad® with coarse saw blade to avoid chipping or damaging the panel

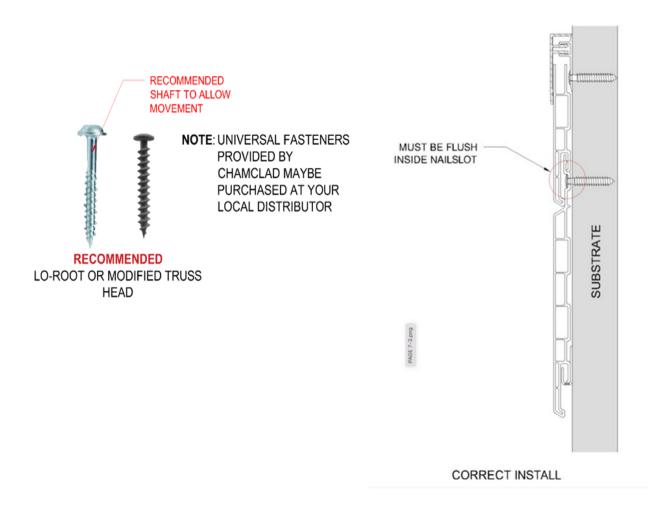
3.0 BEST PRACTICE GUIDE

These installation instructions illustrate the "Best Practices" to install ChamClad® cladding, and trim. ChamClad® does not accept any liability or responsibility under their written warranty for product failure caused by improper installation.

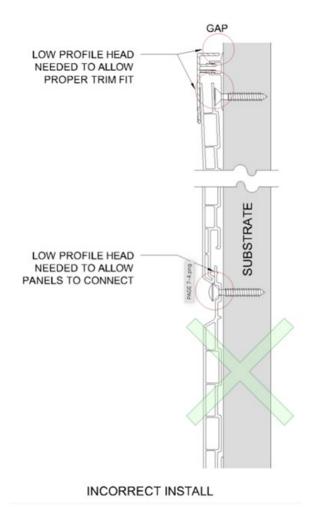
It is the responsibility of the installer to observe the requirements of the local Building Code as they relate to installation in any given area. Most Building Codes are derived from National Building Codes. In Canada, the primary model is the National Building Code (NBC), which is published by the National Research Council of Canada (www.nrc-cnrc.gc.ca). In the United States, the primary model is based on the International Building Code (IBC), which produces the International Residential Building Code (IRC).

It is the responsibility of the builder or contractor, to understand the local code and how it pertains to the location where ChamClad® is being installed.

3.1 Fasteners







Fastener Size is critical to a successful ChamClad® installation. We recommend the following:

- Screws: It is strongly recommended to use ChamClad® universal self-tapping screws which are available from your local distributor or directly from ChamClad®.
- The fasteners must penetrate the wall to a minimum depth of 1 ½" (32mm) and allow for the expansion and contraction of the ChamClad® products. If using metal furring strips, use of self-drilling screw is recommended (Modified truss quadrex coarse thread self-drilling screw #8-18 X 1 ½" (38mm)). You must pre-drill pilot holes when using ChamClad's universal self-tapping screws, when screwing into metal.
- If ChamClad® fasteners unavailable, use low profile, corrosion resistant or stainless-steel screws long enough to fasten through the pre-punched flange. Do not use electroplated fasteners. It is important that the fastener head can fit inside the nailing slot. Fastener heads that protrude outside of the nailing slot will hinder ChamClad® tongue and groove locking mechanism.
- When placing fasteners in the center of the designated nail slots, always leave a 1/32" (.8mm) gap between the fastener head and nail flange to allow ChamClad® panels expand/contract as needed.

Recommended Screw	
	#8-10 ChamClad Universal Self Tapping 1 ½" Screw #8 quad-drive 1 ½" (38mm)
	#8-10 ChamClad Universal Self Tapping 2 ¾" Screw #8 quad-drive 2 ¾" (70mm)
	#8- 18 ChamClad Universal Self Drilling 1 ½"
Examples of Alternate Screws:	
De la constitución de la constit	#8 1 ½" (38mm) 17 Self tapping Round Washer Lo-root
	Modified Truss Quadrex Coarse Thread Screw Self- Drilling #8 – 18 X 1 ½" (38mm)

Note: DO NOT USE a stapler, or nail gun for exterior cladding and soffit panel installation. GLUE IS NOT to be used to fasten strapping or ChamClad® exterior wall boards.

3.2 Essential Details

Random ChamClad® Panel Pattern

ChamClad® wall panels are laminated with a repeating pattern (48" or 1.2m). ChamClad® makes every effort to ensure the patterns are mixed in each bag to minimize repeat patterns. It is suggested to randomly check panels at the job site for repeat patterns and adjust as required. To avoid excessive repetition when cutting boards 4' (1.2m) or less, use 2 boards with different patterns.

Classic Panel (1 Panel, 2 Looks)

ChamClad® offers a simple tongue and groove system with the product stacking from the bottom up. For a U-Channel profile, insert to the first stop. For a V-Groove profile, take a non-marking rubber mallet and tap to the next stop. Does not apply for Shadowline Panel.

Vented Cavity

ChamClad® exterior wall panels should be installed over a vented wall cavity assembly with furring strips/ strapping, galvanized steel Z-girts (min. 20 ga.), or a continuous 3-dimensional membrane, in accordance with local Building Code requirements. All panels must be fastened every 16–24" (400–600mm) on center. To ensure proper installation and meet warranty requirements, refer to CCMC/ICCES evaluations for assembly requirements. For alternate cavity solutions, contact engineering@chamclad.com.

Section Exterior Rigid Insulation

When installing ChamClad® exterior cladding over rigid insulation, it is critical that all fasteners penetrate through the insulation and securely anchor into the structural substrate (e.g., wood or steel framing). The preferred method is installing furring (strapping) over the face of the rigid insulation and attaching cladding directly to the furring, which provides both a vented cavity and the necessary structural support.

Installers are responsible for ensuring that the wall assembly, fasteners, and anchoring methods are compatible with the project requirements and comply with local Building Codes. Failure to properly secure the cladding to a structural substrate may compromise the performance and safety of the system. For alternate application, contact engineering@chamclad.com

Wall Flashings and Penetrations

Windows, doors, and utility penetrations must be flashed and trimmed properly. It is the responsibility of the installer/designer/builder to ensure it is done to local codes and best industry practice. If sealants are required, ChamClad® recommends ASTM 920 Elastomeric Joint Sealants (e.g., Tremco Spectrum 2).

② 2PC Trim - Vertical Installation

When installing 2pc trims vertically (2PC Outside Corner, 2PC J-Trim, 2PC H-Trim), in order to prevent downward migration, it is recommended to fasten the base trim at the highest point of the nail slot with all other fasteners located in the centre of the remaining slots (every 8-12" (200-300mm)). Before applying the top cap, it is recommended to add a small dab of sealant (1" or 25mm) between the teeth at the top and bottom of the base trim. This is especially important around doors and windows where you are not completing a full perimeter wrap.

Aluminum Trim - Film Shrink Back

Occasionally, you may encounter aluminum accessories where the ends need trimming due to the film shrinking back during the curing process. This occurrence will not affect the performance of the product.

Compatibility

ChamClad® products should not be stored in bags on asphalt surfaces, such as driveways or roads, before installation or left on asphalt for extended periods. Prolonged exposure to asphalt can cause it to leach into the panels, potentially weakening or discoloring them. If ChamClad® products are exposed to asphalt, clean them immediately using a non-solvent cleaning product. Instead, opt for storage on grass, in a garage, or in a shaded area.

4.0 TEMPERATURE CHANGES & EXPANSION/CONTRACTION

It is important to remember that ChamClad® materials will expand and contract with regular temperature changes. ChamClad® trims allow for any variance in panel lengths due to expansion/contraction.

When placing fasteners in the center of the designated nail slots, always leave a 1/32" (.8mm) gap between the fastener head and nail flange to allow ChamClad® panels expand/contract as needed.

The below guide provides expansion/contraction examples based on different panel lengths and temperature fluctuations.

4.1 Expansion Guide (by temperature shift)

Tempera Change in °		Length of panels (feet)			Length of panels (meters)				
°F	°C	12'	20'	30'	35'	3.7m	6m	9m	10.7m
50	10	0.10"	0.17"	0.25"	0.29"	2.5mm	4.3mm	6.3mm	7.4mm
68	20	0.20"	0.34"	0.50"	0.59"	5mm	8.6mm	13mm	15mm
86	30	0.30"	0.50"	0.75"	0.88"	7.6mm	13mm	19mm	22.3mm
104	40	0.40"	0.67"	1.01"	1.17"	10.2mm	17mm	25.6mm	29.7mm
122	50	0.50"	0.84"	1.26"	1.47"	13mm	21.3mm	32mm	37.3mm
140 (optimal gap)	60	0.60"	1.01"	1.51"	1.76"	15.2mm	25.6mm	38.3mm	44.7mm
158	70	0.70"	1.17"	1.76"	2.05"	17.8mm	29.7mm	44.7mm	52mm
176	80	0.80"	1.34"	2.01"	2.35"	20.3mm	34mm	51mm	60mm
Coefficient expansion	ChamClad®'s Coefficient of linear Total Expansion/ contraction per expansion (CLE): panel (inches) 0.0000698			Total Exp	oansion/ co (millim	•	er panel		

4.2 Temperature Shift Example using ChamClad® products.

The change in length of ChamClad® panels due to temperature fluctuations is influenced by three key factors.

1. The Coefficient of Linear Expansion (CLE):

For ChamClad® Panels, the CLE is 0.0000698 in/in/°C.

2. Original Length of the Panel:

The length of the panel at the time of installation.

3. Net Temperature Change

The difference between the installation temperature and the ambient temperature during use.

Expansion/Contraction Formula

To calculate the change in length of a ChamClad® panel, use the following formula:

Change in Length (in inches) =

(Original Length in inches) \times (Temperature Change in °C) \times (CLE)

<u>Example</u>

A 12 ft (144") ChamClad® panel is installed at 20°C (68°F) and later exposed to 0°C (32°F).

Calculation:

 $144 \times 20 \times 0.0000698 = 0.20$ inches (approximately 7/32")

The panel will contract by 0.20 inches, resulting in a new length of 143.80 inches. When the temperature returns to 20°C (68°F), the panel is expected to expand back to its original length of 144 inches.

4.3 General Rules

Based on a temperature change of 40°C (104°F), for example: 0°C (32°F) in cooler months and reaching 40°C (104°F) in warmer months:

- General rule of thumb, in summer and winter months.
 - For panels up to 16' (4.9m) leave a gap on each side of 1/2" (13mm)
 - o For panels up to 24' (7.3m) leave a gap on each side of 5/8" (16mm)
 - For panels 25' (7.6 m) and longer, always pin at the midpoint by fastening directly through the nail rail (not the slot center). To determine the gap, use the distance from the pin to the panel end (half the total panel length) and refer to the gap chart below (page 14)
 - Gaps 5/8" or greater, we recommend using larger faced trims to allow for expansion and contraction (3.5" 2pc Finish Trim, 3.5" 2pc Outside Corner, larger faced H-Trim).

It is imperative that ChamClad® panels are cut to fit the coverage of trim pieces.

The temperature the day of installation factors into the expansion and contraction gap you leave. If installing on a cooler day allow for more expansion and a larger gap, if installing on a warmer day allow for less expansion and a smaller gap. The below guide provides recommended spacing based on temperature and panel length.

4.4 Recommended Gap Allowance Temperature Guide

OUTSIDE	TEMP.	GAP PER SIDE (inches)					GAP PER SIDE (Millimeters)				rs)
°F	°C	≤ 12'	16'	20'	25'	30'	≤ 3.6m	4.9m	6.1m	7.6m	9.1m
14	-10	3/8	1/2	5/8	3/8	1/2	9	13	16	19	22
32	0	3/8	7/16	1/2	3/8	7/16	9	11	13	16	19
50	10	5/16	3/8	7/16	5/16	3/8	8	9	11	13	16
68	20	1/4	5/16	3/8	1/4	5/16	6	8	9	11	13
86	30	3/16	1/4	1/4	3/16	1/4	5	6	6	8	9
104	40	1/8	3/16	3/16	1/8	3/16	3	5	5	5	6

4.5 Guidelines

- Take into consideration the temperature on date of installation and season you are installing in.
- Installation in weather colder than -10°C (14°F) is not recommended due to potential chipping or cracking of the panels. Should that occur warranty may be voided.

It is important to acclimate panels and accessories for a minimum of 24 hours prior to installation.

5.0 CARE AND MAINTENANCE OF CHAMCLAD® PRODUCTS

ChamClad® products are designed to be low maintenance, and our laminate films have exceptional properties that ensure ease of cleaning and surface longevity. They are highly ultra-violet, scratch, and salt air resistant. The film's low surface tension makes it inherently dirt-repellent and therefore easy to clean. ChamClad® finishes include anti-graffiti properties and, in most cases can be easily removed using a garden hose and mild kitchen detergent and warm water.

To preserve the lifespan of your ChamClad® product and maintain its warranty, regular cleaning and inspection are essential.

- Minimum Cleaning Frequency: In normal or urban environments, we recommend cleaning your ChamClad® product every 12-18 months.
- <u>High-Exposure Areas:</u> In areas subject to high pollutants, such as industrial or coastal environments, we recommend cleaning your ChamClad® product every 8-12 months.
- Regular Inspections: Inspect the product frequently and promptly remove any debris or contaminants such as bird droppings. Prolonged contact with such materials may lead to staining, uneven wear, or surface damage.

Refer to the recommended maintenance guidelines below to ensure optimal care for your ChamClad® product.

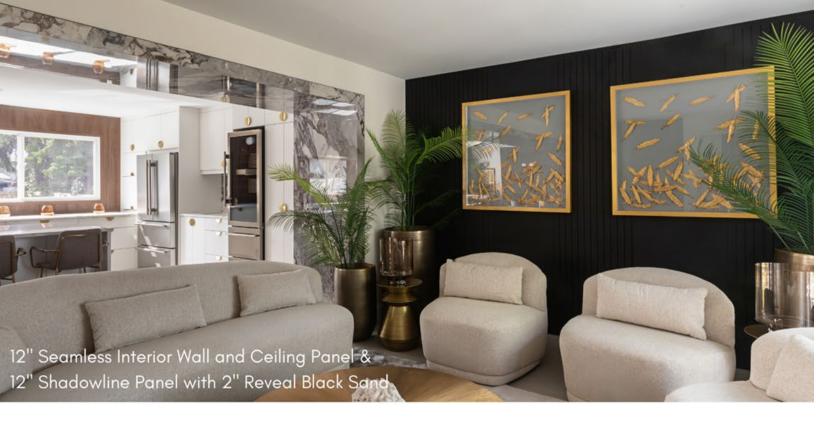
General Cleaning:

- You may clean the surface with a soft cloth, sponge or soft bristle brush and a neutral detergent. It is recommended to use ChamClad® Product Cleaner (supplied by ChamClad®) and/or a soap, or liquid cleaner (in non-concentrated form) such as Simple Green. Follow with a thorough rinsing of fresh water to ensure all cleaner has been removed.
- If marking has occurred from board-to-board friction, you may clean it with a soft cloth soaked in water and soap. Allow the cloth to sit on the area for 60 seconds. Panels should be rinsed thoroughly with clean water.
- To avoid streaking start at the top of the wall working your way to the bottom.
- You may pressure wash ChamClad® panels with a low PSI pressure washer. DO NOT exceed 1500 PSI.

DO NOT:

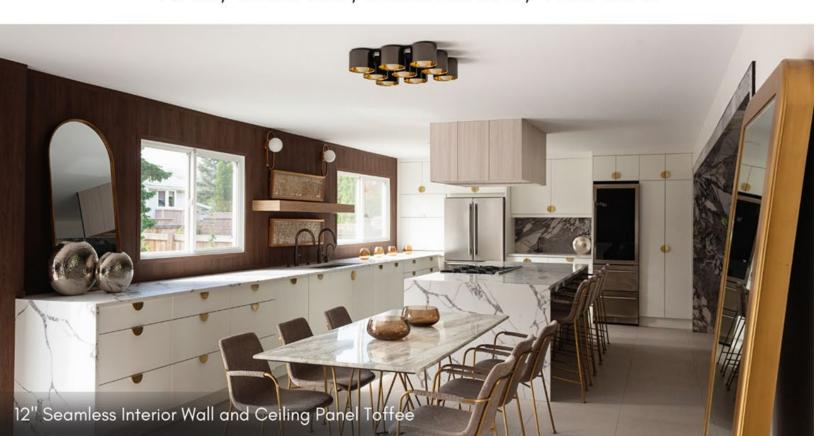
- Do not use solvents when cleaning panels. Solvents may damage the protective layers in the film.
- **o** Do not wash panels with a pressure washer at close range.
- Do not use abrasive, erosive, or caustic solvents to clean ChamClad® panels as they can dull and/or damage the panel finish and will void the warranty.

Should you experience removal difficulties, please contact us via email at info@ChamClad.com



CHAMCLAD® INTERIOR

WALL, CEILINGS, HORIZONTAL, VERTICAL



6.0 INTERIOR WALL AND CEILING

6.1 PRODUCTS- 4", 6" & 12" Interior Wall and Ceiling Panels 3/8"



4" Interior Wall & Ceiling Panels 12' & 20' Lengths 100mm x 10mm



6" Interior Wall & Ceiling Panels 12', 16' & 20' Lengths 150mm x 10mm



12" Interior Wall & Ceiling Panels Seamless Panel 12' & 20' Lengths 300mm x 10mm

NOTE: 4" & 6" panels available in V-Groove and U-Channel profiles 6" Classic and Shadowline may be used in interior wall and ceiling applications

6.2 Interior Wall and Ceiling Trims



1PC Soffit/ Interior Inside Corner Trim 4" (PVC) 10', 12', & 20'



*2PC Soffit/ Interior Outside Corner Trim1.5" 12' & 20'



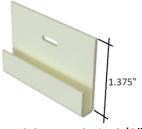
*2PC Soffit/ Interior J-Trim 1.5" 12' & 20'



1PC Soffit/ Interior J-Trim 1.5" 12' & 20'



*2PC Soffit/ Interior H-Trim 2" 12' & 20'



*PVC Starter Strip 3/8" 12', 16' & 20'

*THESE TRIMS ARE AVAILABLE IN ALL ALUMINUM OR HYBRID COMBINATIONS FOR COMMERCIAL APPLICATIONS

Metric Conversion Chart

IVICTIC CO	IIVCI SIOII C
Feet	Meters
10'	3m
12'	3.6m
16'	4.9m
20'	6.1m

Inches	Millimeters
1.5"	38mm
2"	50mm
2.75"	70mm

7.0 INSTALLATION

7.1 General Information

- Always allow ChamClad® panels and accessories to acclimatize to current temperature conditions before starting the installation. Temperature variations are less on an interior installation.
- Verify that the walls and ceiling substrates are even and level across all surfaces. Furring may be required to acquire a consistent surface to attach ChamClad® panels.
- © ChamClad® versatile 4",6" & 12" interior wall and ceiling panels are designed for all types and sizes of decorative (non-load bearing) beam and column wrap applications. In addition, we offer a 2PC Faux Beam 5.5" x 3.35" which is lightweight and easy to install. Refer to Columns, Beams and Privacy Wall / Screen Installation Manual for additional information.

Our 4", 6", and 12" interior wall and ceiling 3/8" panels should be used for soffit applications, interior covered deck areas, barrel ceilings, sun porches, interior walls, and ceilings. The use of these panels on an exterior WALL will void the warranty.

7.2 Horizontal Interior Installation

Refer to drawings WS-10A & WS-10B

- Interior wall and ceiling panels are installed similarly to exterior wall cladding. Refer to Exterior Cladding Installation Manual – Section 7.2 Horizontal Installation on pages 24 – 25.
- Establish a level guideline using a chalk line on all wall areas to be covered with interior wall and ceiling panels, where the bottom of the lowest panel is to be installed. Depending on the look or finish that is desired, the installer may use a PVC starter strip or a J-Trim. Since this is an interior wall, no drain holes need be drilled into the bottom of the J-Trim.
- Install 1PC J-Trim or 2PC J-Trim in areas where panels meet other finishes. Also install 1PC J-Trim or 2PC J-Trim at all windows, doors, and other penetrations. It is common practice to fasten interior wall panels at 16- 24" O.C. <u>After a few courses of wall panels, the installer should check for horizontal alignment and level.</u>
- Where the interior wall meets the ceiling, and depending on design requirements, use the 2PC J-Trim. Install all J-Trim bases first, and once wall panels are installed to the top course, finish off by installing the J-Trim top caps.
- When joining interior wall and ceiling panels, use 2PC H-Trim to connect panels. It is recommended to align the 2PC H-Trim with other trim elements on the wall.
- On Interior applications, fasten trims (12-16" O.C.) and panels (16–24" O.C.) using ChamClad® universal fasteners. Panels must be attached to structural framing members.

7.3 Vertical Interior Installation

Refer to drawings WS-10A & WS-10B

- Interior wall and ceiling panels (Vertical Installation) are installed similarly to Exterior Wall Cladding. Refer to Exterior Cladding Installation Manual Section 7.3 Vertical Installation on pages 25 -26.
- Establish a level guideline using a chalk line on all wall areas to be covered with interior wall and ceiling panels, where the bottom of the lowest panel is to be installed. As in the Exterior Vertical Installation, use a J-Trim to start application. As this is an interior wall, no drain holes are required to be drilled into the bottom of the J-Trim.
- © Commence application with installation of all trims at 12-16" O.C.
- When covering entire wall area, install starter at mid-point of wall and align V-Groove or U-Channel to the centre of the wall and work outwards from either side. Install balance of trim bases as per exterior vertical installation and finish wall application with installation of 2PC trim caps. It is good practice to fasten at the highest point of nail slot at the top of each panel to limit downward migration.
- If applying interior vertical panels as a feature on a portion of a wall area, use full panels (cut to height) to maximize overall appearance. Begin with installation of component pieces and base trims; followed by installation of all wall panels (working left to right) and complete with application of component top caps. Attach panels to structural framing members.

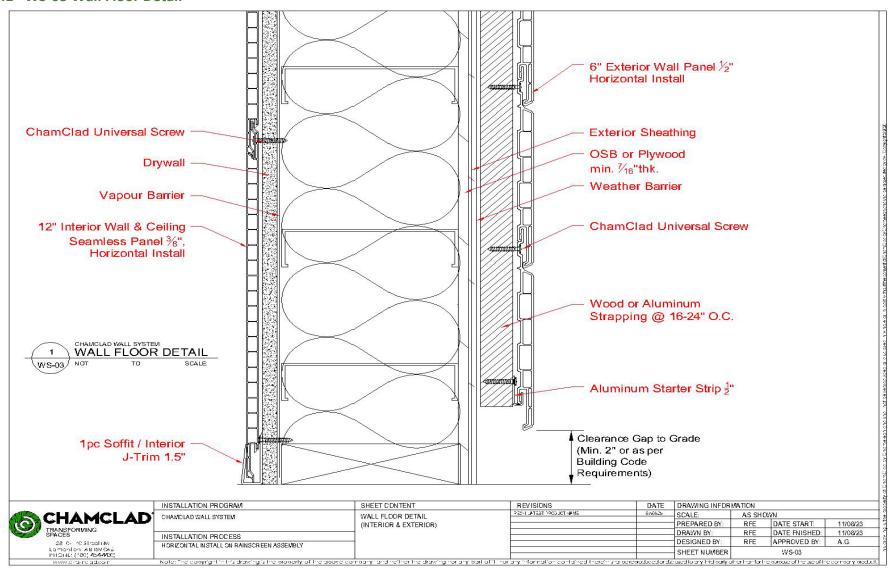
7.4 Interior Ceiling Installation

Refer to drawing WS-13

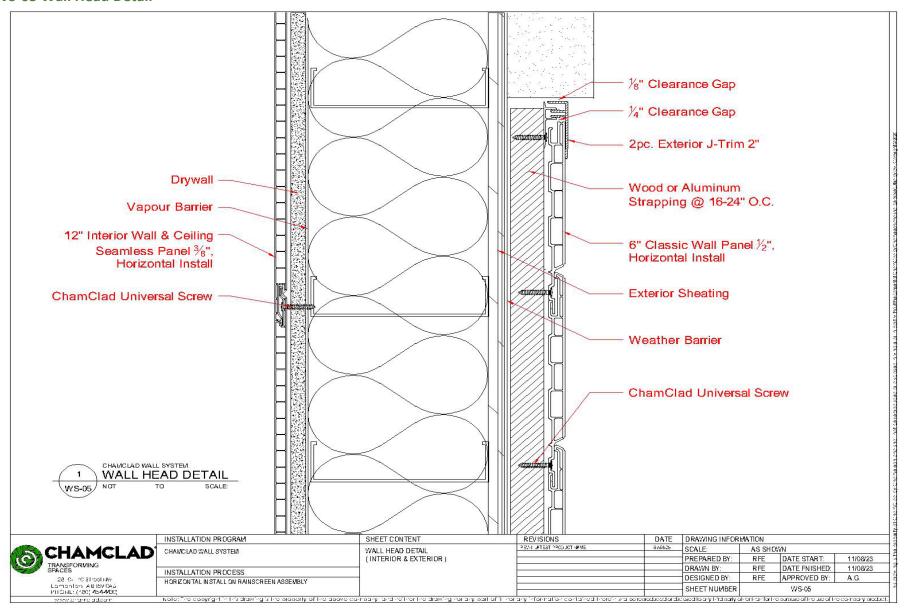
- ⑤ Interior wall and ceiling panels are installed similarly to Traditional Exterior Soffits. Refer to Soffits Installation Manual – Section 8.0 Installation on pages 19 − 20.
- If required to level, install furring strips at 12-16" O.C. perpendicular to the joist.
- We recommend all ChamClad® accessories be fastened every 12-16"
- Second Fasten at each furring strip, which should be 12-16" O.C. Once you have installed a few courses of ChamClad® ceiling panels, check for alignment of the perpendicular or parallel adjacent vertical wall. Where you are placing panels end to end, use H-Trim to finish the joint.
- Install the remaining ChamClad® panels and check for alignment. When using the 2PC J-Trim install the top cap onto the base to complete the installation.

8.0 ASSEMBLY DRAWINGS

8.1 WS-03 Wall Floor Detail



WS-05 Wall Head Detail



WS-13 - Interior Wall & Ceiling Detail

