COLSTON

UNFINISHED EASTERN WHITE PINE
WALL PANELING

NAIL UP - WALL APPLICATION

New England White Pine Unfinished
Solid Paneling

WALL INSTALLATION

Save time & avoid frustration! Please read these entire instructions before starting your installation, and A.I.M. for success!
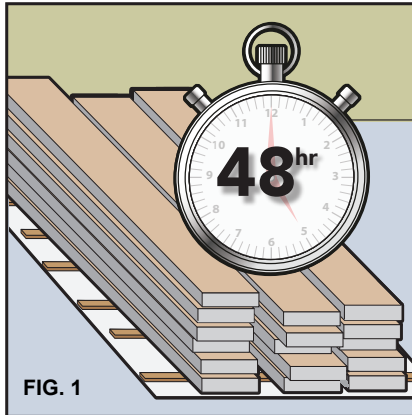
AIM | **AIM** | **AIM**

FIG. 1

Acclimate Completely
Acclimate your paneling to your home environment. Time for acclimation will vary. Always check using a meter.

Install Correctly
Take time to review LL Floorings' installation guidelines and follow the American National Standard ANSI/AWI 0620-2018 – Finish Carpentry/ Installation Guidelines to ensure that your installation goes well from beginning to end.
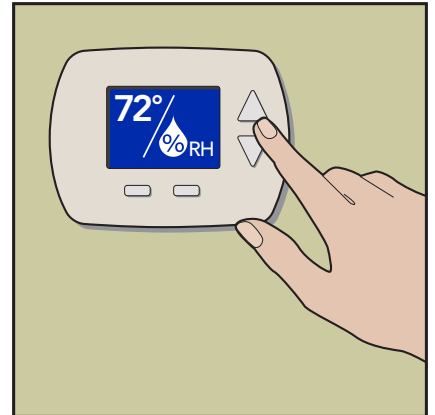
Maintain Environment
Indoor relative humidity should be maintained with no more than a 20% fluctuation (E.g. 40% -60%). Indoor Relative Humidity levels below 30% or above 70% will likely result in cupping, checking, gaps or bucking.*

*See Temperature and Relative Humidity for more details.

? Need Help? To obtain installation assistance or product information concerning this paneling, contact the store of original purchase, or call the LL Flooring's customer care at 800-366-4204.

⚠️ **WARNING! DO NOT SAND, DRY SWEEP, DRY SCRAPE, DRILL, SAW, BEADBLAST OR MECHANICALLY CHIP OR PULVERIZE EXISTING RESILIENT FLOORING, BACKING, LINING FELT, ASPHALTIC "CUTBACK" ADHESIVES OR OTHER ADHESIVES.** These products may contain asbestos fibers and/or crystalline silica. Avoid creating dust. Inhalation of such dust is a cancer and respiratory tract hazard. Smoking by individuals exposed to asbestos fibers greatly increases the risk of serious bodily harm. Unless positively certain that the product to be removed is a non-asbestos containing material, you must presume it contains asbestos. Regulations may require that the material be tested to determine asbestos content. See current edition of the Resilient Floor Covering Institute (RFCI) publication, "Recommended Work Practices for Removal of Resilient Floor Coverings" for detailed information and instructions on removing all resilient covering structures. For current information, go to www.rfci.com.

⚠️ **LEAD WARNING:** Some paints and finishes in homes built before 1978 may contain lead. Exposure to excessive amounts of lead dust presents a health hazard. Prior to removing or sanding, comply with all applicable federal, state, and local laws, and reference the publication "Lead-Based Paint: Guidelines for Hazard Identification and Abatement in Public and Indian Housing" available from the United States Department of Housing and Urban Development regarding (1) appropriate methods for identifying lead-based paint and removing such paint; and (2) any licensing, certification, and training requirements for persons performing lead abatement work.

⚠️ **MOLD AND MILDEW WARNING:** Prior to removing an existing resilient floor or when installing a new floor, if there are visible indications of mold or mildew or the presence of a strong musty odor in the installation area, the source of the problem should be identified and corrected before proceeding with the flooring work. Excessive moisture in the subfloor could promote mold, mildew, and other moisture related issues like the trapping of moisture emissions under the flooring, which may contribute to an unhealthy indoor environment. Mold has the potential to cause health problems and may produce allergens, irritants, and in some cases, potentially toxic substances. Before installing the new resilient flooring, ensure the underlayment and/or subfloor is allowed to thoroughly dry and that any residual effect of excessive moisture, mold, or structural damage has been corrected. Remediation measures may require structural repairs such as replacing the contaminated underlayment and/or subfloor, cleanup measures using appropriate protection and biocide, or hiring a professional mold and mildew remediation contractor. Consult EPA mold guidelines on EPA's website at https://www.epa.gov/mold

⚠️ **WARNING:**
Drilling, sawing, sanding or machining wood products can expose you to wood dust, a substance known to the State of California to cause cancer. Avoid inhaling wood dust or use a dust mask or other safeguards for personal protection. For more information go to www.P65Warnings.ca.gov/wood

| Rev. 11.15.2022 | COWD_SOLD_WALL

This document covers wall applications using **New England White Pine Unfinished Solid Paneling only**. Installation of your product should be in conformance with generally-accepted construction methods for interior wood-work per American National Standard ANSI/AWI 0620-2018 – *Finish Carpentry/Installation*.

RECOMMENDED USE:

- Install in good lighting.
- Do not install in exterior or wet areas. Do not install in boats, or other moving vehicles.
- Do not install directly to concrete or block walls.
- Walls need to be clean flat and dry.
- These guide-lines are for installation over conventional wood-framing with wall studs spaced no more than 24 inches on center.

GRADE:
On, above and below grade.

2nd Floor above ground level — YES

1st Floor at ground level — YES

Basement — YES
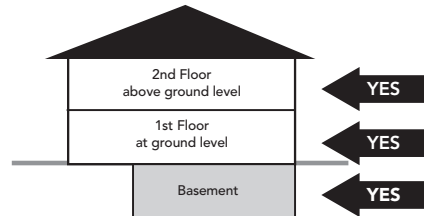
IMPORTANT CONSIDERATIONS FOR APPLICATIONS OVER SHEETROCK PRIOR TO STARTING YOUR WALL PROJECT:

When installing wood boards, planks or paneling over drywall, the surface of the wall moves out by an amount equal to the thickness of the wood. For tongue-and-groove boards, that distance is as much as 3/4 inches. Additionally when a 5/8" plywood nailing base is applied to the drywall, the total added thickness equals 1-3/8". You'll have to move all the electrical boxes out to the new surface, when installing around a door or window, / trim / casing / jamb will need to be adjusted for new thickness.

It is highly recommended to remove existing drywall when a plywood nailing base will be used.

Vertical Installation
You may install 1 x 4 (3/4" x 3-1/2" nominal) horizontal furring strips to the wall, fastened to the studs instead of 5/8" plywood. The total added thickness equals 1-1/2". Both options add to the thickness of the wall as well as to your materials and installation costs.

Fastening the Boards
The fasteners holding the boards must be long enough to penetrate the plywood or furring strips, but they shouldn't penetrate more than 1/2 inch into the drywall, or they could pierce an electrical wire or a pipe.

A Few More Tips
Decide how you are going to finish your paneling. Painting can be done after installation is complete. Finishing with a polyurethane is best done before installation. Since polyurethane is self-leveling, it is best to lay out the individual panels horizontally, (think saw horses), and spray or brush the polyurethane on before installation.
If you need to stain the trim, do it before you install it, and be sure its wide enough to cover the edges of the boards at outside corners

JOBSITE CONDITIONS:

- The building should be enclosed with all doors and windows in place.
- **Prior to delivery and install:** All wet works (e.g. drywall taping, texture, painting, stucco etc.) should be complete and allowed to dry.
- The rooms should be at normal "lived-in" conditions with HVAC operational for at least one week prior to the installation when home is so equipped.
- When installing in rooms over basements and garages, ensure they are dry and well ventilated.
- Crawlspaces must be dry with a minimum 18" from the bottom of the floor joist to the ground, Crawl space earth (or thin concrete slab) should be covered 100 percent by a vapor retarder of black polyethylene (minimum 6 mil) or any recommended puncture-resistant membrane, such as Class C, meeting ASTM D1745. Ventilation shall be per local building codes.
- All gutters should be in place and functioning properly. Yard grading should be sloped to run water away from the home foundation.
- The installer -not the manufacturer or retailer - is responsible for making sure that the site conditions are appropriate prior to installation of this product.

ACCLIMATION:

- Stack product no more than eight bundles high in areas to receive new wall planks (remove plastic from outside of bundles if present). Ensure each layer is evenly supported to prevent distortion. Elevate stack using 2 x 4's as illustrated in Fig. 1 above. **On concrete; place a layer of 6 mil poly down first during the acclimation process.**
- Extended acclimation time should be anticipated and may be required. Time is not the determining factor; moisture testing is required to confirm that product is acclimated. Use a meter that is species adjustable, E.g. Ligno-scanner SDM or mini-Ligno DX/C moisture meter. If using alternate meter check with manufacturer that meter can be used with the wood species that you are installing.
- Check the moisture content of multiple planks. It's recommended to randomly test 40 planks for every 1000 square feet of flooring, and average the results. The paneling's average moisture content must be within 2% of the wood-based products in the home (e.g. Base Board or Door Jambs) which must be dry and already within the anticipated equilibrium moisture content range for your geographical location..
- Keep a permanent record of all readings.

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For best product performance, ensure the temperature in the home is between 60º and 80º F before, during, and after installation and for the life of the paneling.
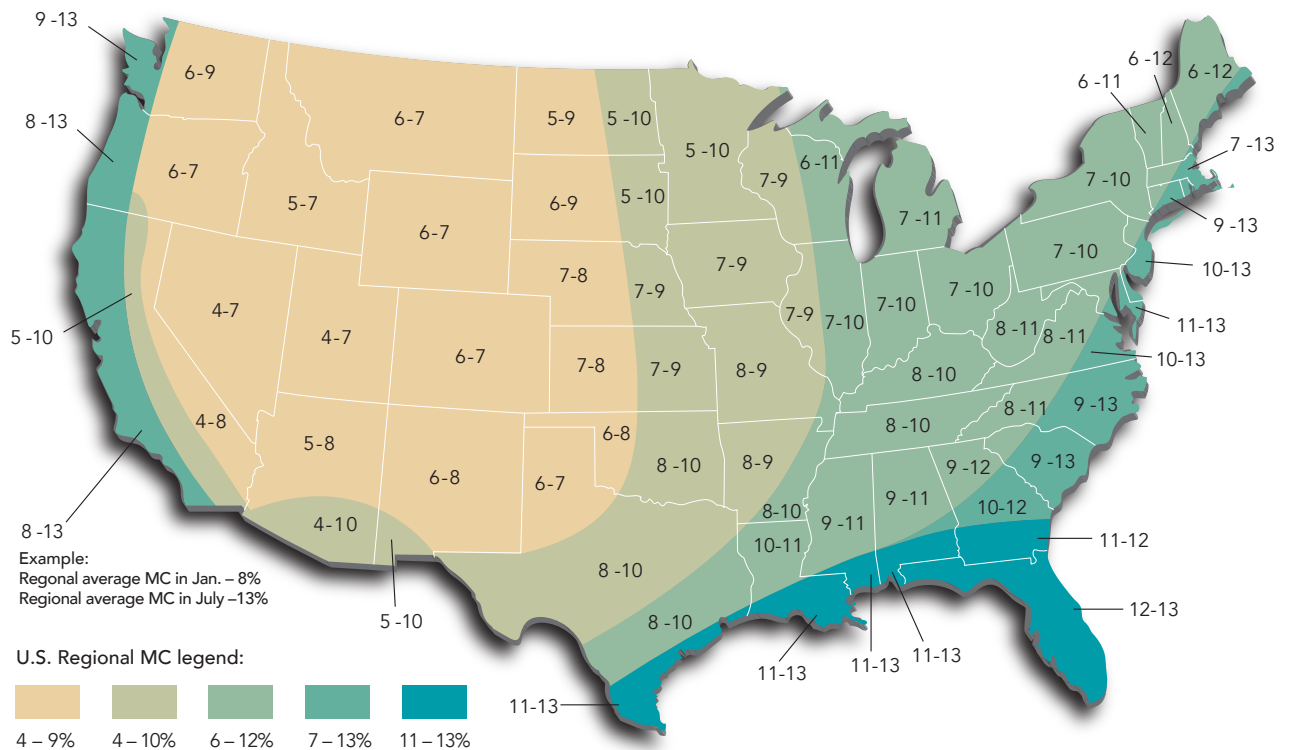
RELATIVE HUMIDITY:

For best performance, paneling should be ideally conditioned, installed and maintained to consistent indoor temperatures of 60°- 80° F and relative humidity of 30% or above to 70% or below with a maximum fluctuation of 20%, before, during and after the installation and for the life of the paneling). Ideal interior environmental conditions will vary from region to region and jobsite to jobsite, the relative humidity figures on your project maybe higher or lower. The key is to ensure that the change in relative humidity stays within a 20% range (e.g.30% to 50% or 35% to 55% etc…) and does not fluctuate beyond 20% for sustained periods, enough to affect the paneling. Home environments where the indoor Relative Humidity levels are below 30% or above 70% are not recommended.

Not following the written recommendations can negatively impact board performance and may result in excessive movement, squeaks, board gapping, board-edge cupping, cracks, twists, finish splits, flaking, chipping, fading and other related issues.

Any home that may have a sustained change in relative humidity greater than 20% fluctuation needs an HVAC system equipped with a humidifier or dehumidifier to regulate the interior environment within a 20% range of fluctuation. Installing hardwood in an environment that is not maintained can be detrimental to the paneling. The map below can be used to calculate what the optimum baseline or average moisture content of interior wood products should be prior to installation for each state and region. The first number indicates the average moisture content of wood during the wintertime (months having lower humidity), and the second number indicates the average moisture content during the summer time or (months having higher humidity). To calculate the optimal baseline or average wood moisture content in your state or region, add the high season number and low season number together then divide by two. Example: If your state or region has an expected low of 6% to a high of 12% moisture content, the average baseline moisture content of the wood before installation would be 9%. The goal is to acclimate the paneling to this average figure and then the installation can begin.

Very dry or humid regions of the country usually require extended conditioning to balance the new paneling to the environment it will service. The most reliable moisture-content numbers will be obtained using a species-specific moisture meter to determine the moisture content of the wood paneling.

The USDA moisture map is a helpful guide for installations. Without proper temperature, humidity and ventilation controls, actual moisture content in any location may differ significantly from these numbers. In all cases it is the installer or homeowner's responsibility to determine if the indoor environment, moisture content and jobsite conditions are suitable for wood panel installations.

Summer / Winter Moisture Map

Example:
Regional average MC in Jan. – 8%
Regional average MC in July –13%

U.S. Regional MC legend:

| 4 – 9% | 4 – 10% | 6 – 12% | 7 – 13% | 11 – 13% |

The effects of Temperatures and Humidity on wood paneling:

Wood products are sensitive to moisture, temperature and humidity. Refer to the chart below to better understand the best in-home environmental relationship between relative humidity (RH) and temperature and its effects on wood moisture content. Determine the current temperature and RH within your home with a hygrometer. Find the combination of temperature and RH in your area on the chart (temperature variations are listed on the left side of the chart, humidity variations are listed along the bottom).

Example: The target or ideal moisture content for wood products is shown in the shaded area to be within 6.1% to 9.4% Wood paneling will perform best when the interior environment is controlled to stay within a relative humidity range of 30% - 50% or 45% to 65%, for example, and a temperature range of 60° to 80° Fahrenheit. (In some geographical areas, the ideal humidity range might be higher or lower, 30% - 50% or 45% to 65% for example). It is critical to maintain the relative humidity in your home to not fluctuate more than 20% at any given time of the year. Wood paneling installed in areas with a wider variation in RH (fluctuation in RH of more than 20%) can negatively impact board performance and may result in excessive movement (expansion/contraction, squeaks, board gapping, board-edge cupping, finish splits and other related issues).

Moisture Content of Wood at Various Temperatures and Relative Humidity Readings

°F

	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	98
30	1.4	2.6	3.7	4.6	5.5	6.3	7.1	7.9	8.7	9.5	10.4	11.3	12.4	13.5	14.9	16.5	18.5	21.0	24.3	26.0
40	1.4	2.6	3.7	4.6	5.5	6.3	7.1	7.9	8.7	9.5	10.4	11.3	12.4	13.5	14.9	16.5	18.5	21.0	24.3	26.0
50	1.4	2.6	3.7	4.6	5.5	6.3	7.1	7.9	8.7	9.5	10.4	11.3	12.4	13.5	14.9	16.5	18.5	21.0	24.3	26.0
60	1.3	2.5	3.6	4.6	5.4	6.2	7.0	7.8	8.6	9.4	10.2	11.1	12.1	13.3	14.6	16.2	18.2	21.7	24.1	26.8
70	1.3	2.5	3.6	4.5	5.4	6.2	6.0	7.7	8.5	9.2	10.1	11.0	12.0	13.1	14.4	16.0	17.9	20.5	23.9	26.6
80	1.3	2.4	3.5	4.4	5.3	6.1	6.8	7.6	8.3	9.1	9.9	10.8	11.7	12.0	14.2	15.7	17.7	20.2	23.6	26.3
90	1.2	2.3	3.4	4.3	5.1	5.9	6.7	7.4	8.1	8.9	9.7	10.5	11.5	12.6	13.9	15.4	17.3	19.8	23.3	26.0
100	1.2	2.3	3.3	4.2	5.0	5.8	6.5	7.2	7.9	8.7	9.5	10.3	11.2	12.3	13.6	15.1	17.0	19.5	22.9	25.6

Relative Humidity (RH percent)

Chart taken from Wood Handbook: Wood as an engineering Material (Agriculture Handbook, 72).
Forest Products Laboratory, U.S. Department of Agriculture

CUTTING ALLOWANCE and MANUFACTURER TOLERANCE

CUTTING ALLOWANCE (cutting waste):

Net Area SqFt	Total with Cutting Allowance SqFt	% Applied
100	110	10
200	218	9
400	432	8
600	642	7
800	848	6
1000	1050	5
above 1000 SqFt add 5%		

Tip

Please note:

Consider carefully before returning boxes. Keeping extra boxes is a great idea and inexpensive insurance against damage, if a repair is needed the product and batch will be the same, and you have options even if the product has been discontinued. Diagonal installations may require 5% extra material over and above the cutting and manufacturer tolerance allowance.

MANUFACTURER TOLERANCE:

Natural wood products may have different manufacturer tolerances depending on grade/type of wood and manufacturer tolerance of 5 – 20% may be allowed.

Cutting allowance and manufacturing tolerance combined, is the waste factor.

Please refer to the Grade manufacture tolerance % below to help gauge how much extra material is required for your project.

EASTERN WHITE PINE:

NELMA GRADE: STANDARD
NELMA's Eastern White Pine grade rules define the limiting characteristics (knots, holes, splits, etc.) allowed in each grade (quality level). Standard grade is highly serviceable and used in a wide variety of applications that take advantage of the full range of Eastern White Pine characteristics. Recommended manufacturer tolerance 8%-10%.
EASTERN WHITE PINE (PINUS STROBUS)
Eastern White Pine is grown throughout the Northeastern region of the U.S. and manufactured in a wide range of grades and sizes. Favored for its desirable characteristics and manufacturing qualities, it has a fine grain and uniform texture, shapes easily for patterns and profiles, stays true to form, and holds finishes very well. This species is a favorite for siding, paneling, wainscoting, furniture, millwork, moulding, and a variety of trim. For centuries, Eastern White Pine has been the mainstay in quality construction and fine woodworking.

Please Note: The waste factors on this page are offered as a helpful guide and are not intended to take the place of an installer's visual inspection, expertise or informed judgment.

If defects are greater than the waste factor indicated for your paneling, please contact your local store or call Customer Care at 1-800-366-4204.

In all cases the amount of waste can be reduced by using unsatisfactory planks by:

1. Cutting out affected area to create a satisfactory piece and using as starter/end pieces for rows.
2. Placing in areas that appearance does not matter.
3. Using planks in the case of width issues as the last row.

USER / OWNER / INSTALLER RESPONSIBILITIES:

Install in good lighting.

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Checks, knots and other features:

EXPANSION SPACE:
1/4" is required top and bottom of the wall and both inside corners (sides).

RUN WIDTH AND HEIGHT:
Height - 10' maximum.
Width - No maximum when installed correctly (When installed as Vertical Wainscot Style, runs greater than 20 L. F. may require "Dime Rows".

SUNLIGHT:

Depending on the species, your paneling will naturally change color "patina" with prolonged exposure to sunlight. Use of window coverings, shades, or tinting your windows is recommended to slow this natural process.

CABINETS AND FIXTURES:

Paneling used as Wall Cladding is not a structural material. Do not fasten cabinets or fixtures to the paneling used as decorative wall covering.

SURFACE PREPARATION:

- All substrates must be structurally sound, dry, solid and stable.

- The substrate should be clean and free of dust, dirt, oil, grease, wax, soap, existing adhesives and adhesive residues, and any other substance that may prevent, reduce adhesion or affect product performance. Sponge wash with TSP (tri-sodium phosphate), to remove residues of greasy grime, mildew, chalked paint or anything that might affect the adhesive bond.

- Walls must be plumb and flat to 3/16" in 6' .

- Y @}Å}•œ||a * Ä∕äã^&ĉ^Áȷ́Á́ȿ|^¸ ȩ|Ä∕̃f the wall has a heavy drywall texture, it may need to be block sanded or skim coated and primed.ÁŒ|Á˘¦æ&˘•Á̧˘•o̊ᶓ^Á{ [[σ@‹ȿ‹ åÁ˘^^Á̧-Å‹ȿ^‹^&σ̌Åȿ[ã‹•Å̃ȿ^çã‹œã } •Å̃ȿ]]^¦‹^&œã } •Áȿȿ åÅ̌ȿ|^*˘|æã̃ã̃•È

- Countersink any protruding screws. Use an appropriate patching compound to cover screw heads and correct any holes, bumps, cracks, depressions, etc.

- Do not install over substrates that have water damage, visible water stains or leaking windows. Remove protruding nails.

HELPFUL TOOLS: (as needed)

- Tape Measure • Pencil • Chalk line • Stud Finder • 6' level • Miter saw • Table saw • 60 tooth carbide tip saw blade • Drill + Drill bits • 18 Gauge Brad Nailer • 1 1/2" - 1 3/4" Brad Nails • Compressor with regulator • Hammer • Flat Pry • Bar Rubber-Mallet • Hygrometer (to monitor in-home humidity) • Species adjustable Moisture meter (wood) • Caulk-Gun • Urethane-Construction Adhesive • Deck Screws • 2-1/2" 16 Gauge Finish Nails • Step Ladder • Screw Drivers • Eye protection
- Ear protection • Niosh Dust Mask • Gloves • Color Putty • Cloth rags • Color Putty • Touch up- markers • Chosen finish or Paint

Each project is unique and different. Installation advice or recommendations are given as a courtesy and not intended to take the place of an installer's visual inspection, expertise or informed judgment, the end user / contractor on-site is ultimately responsible for ensuring that selected products are appropriate for state or local building codes, ensuring a safe distance from heat sources such as wood stoves, fireplaces, space heaters and the final use of the product.

Availailable Panel Profiles

3/4 in. x 5 1/8 in. x 6' or 8'

3/4 in. x 6 7/8 in. x 6' Nickel Gap
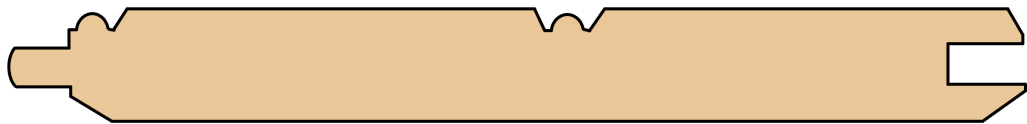
3/4 in. x 6 7/8 in. x 6' Edge/Center Bead

3/4 in. x 8 7/8 in. x 8'

GETTING STARTED:

Step 1: Preparation

- Turn off power while working around wall outlets and light switches.
- Remove existing wall base, trim, electrical cover plates, HVAC vent/return covers thermostats, etc., prior to installation.

If you will be removing the existing drywall, Click Here to skip to: INSTALLING PINE PANELING DIRECTLY TO WALL STUDS
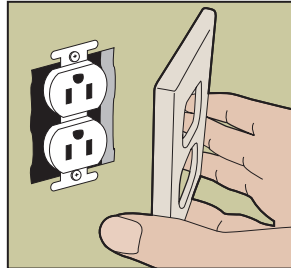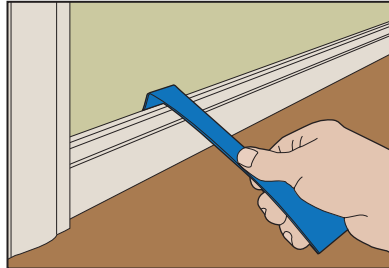
Installation over drywall:

- Use a 6' level or straight edge to insure the wall is flat in both directions.
- Walls need to be flat to within 3/16" in 6'.
- Make any repairs needed to achieve a flat surface.

Step 2: Identify and Mark Stud location

- Using a stud finder to identify studs, mark top and bottom of studs using a pencil.

ACCENT WALL
Existing Dry Wall – Typical

Wall Studs Marked
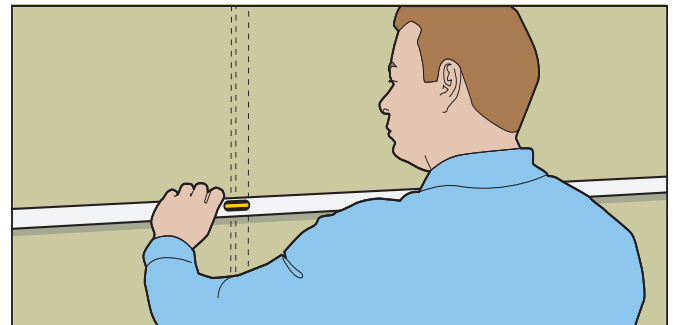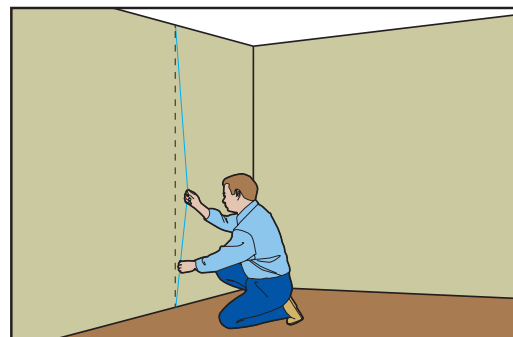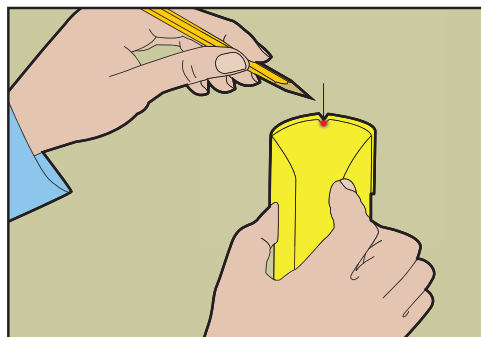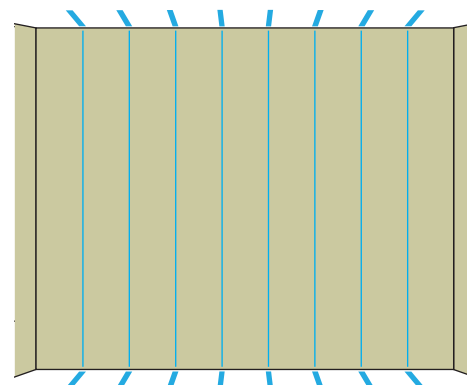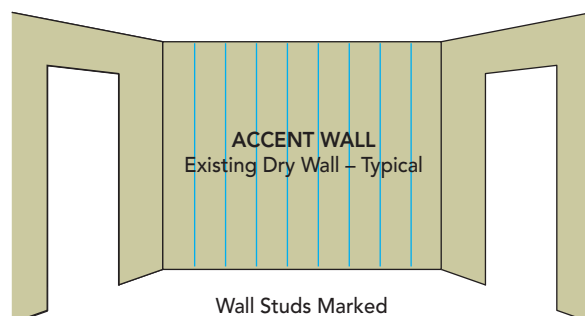
- Using a chalk line stretched between bottom and top mark, snap a line. Use painters tape at top & bottom of *each* stud on floor and ceiling to identify nailing points.

Step 3: Establishing your starting line

Establish a working line on your feature wall by **measuring up** from the floor and at equal distances (approx.12") from each corner of the wall. The distance from the floor to the line will be the width of the first row of planks used plus the minimum 1/4" expansion space.

- Mark these points on wall and snap a chalk line (as shown) parallel to the floor.
- Check that line is level in case of uneven floors.

- Use a level to double-check the levelness of the line between the two marks. Adjust line as needed with wedged spacers.

Preparation of planks for the starting row:
Rack Out. It is recommended that the planks are laid out on the floor prior to installing, this will give opportunity to remove unsatisfactory planks and ensure a pleasing layout prior to fixing in place.

To avoid very narrow pieces at the end of wall; measure the distance from floor to ceiling, then divide this number by the width of the panels being installed. The fraction is the width of the last plank.

E.g., for standard 8' wall:
Floor – Ceiling = 96" – 0.5" (1/4" expansion x 2) = 95.5"

Width of Plank = 6.88"
95.5 ÷ 6.88 = 13.88

Thirteen full planks are required and last will be fraction x plank width;
6.88" x 0.88 = 6.05"

If width of last row of planks is less than 2.5", balance by cutting (Rip) the starting row of planks accordingly.

Blind Nail and face nail this row as shown
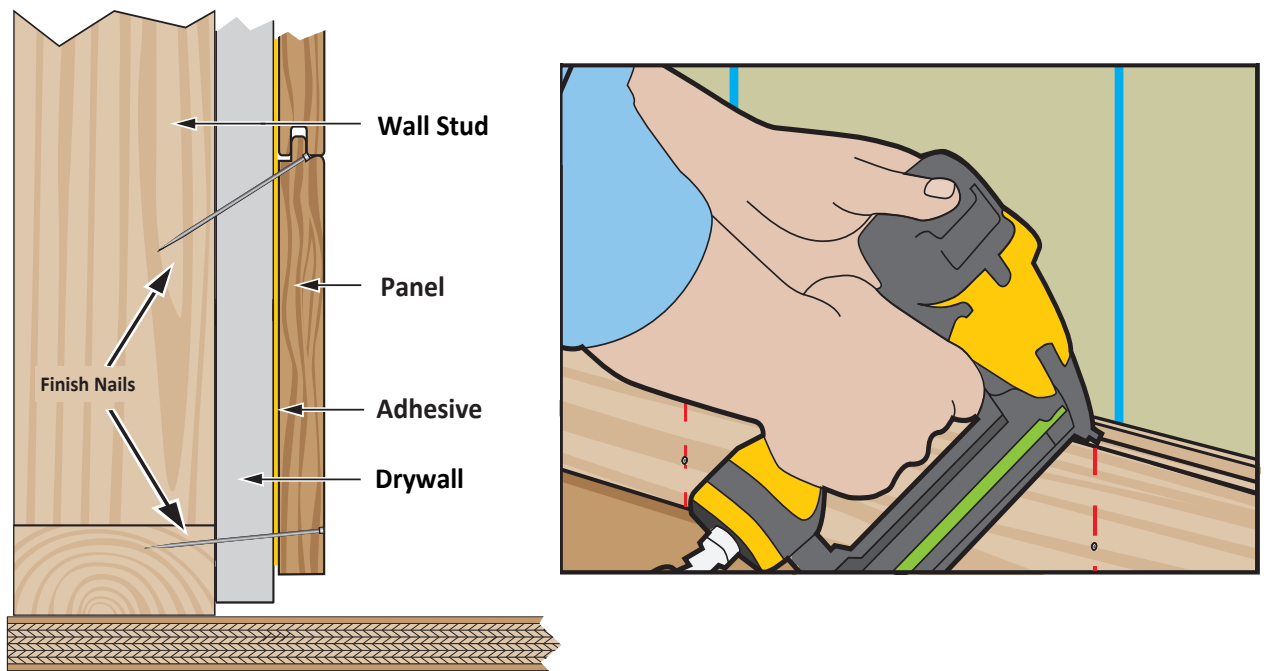
Be sure to align "end-of-planks" at wall studs and secure as shown.
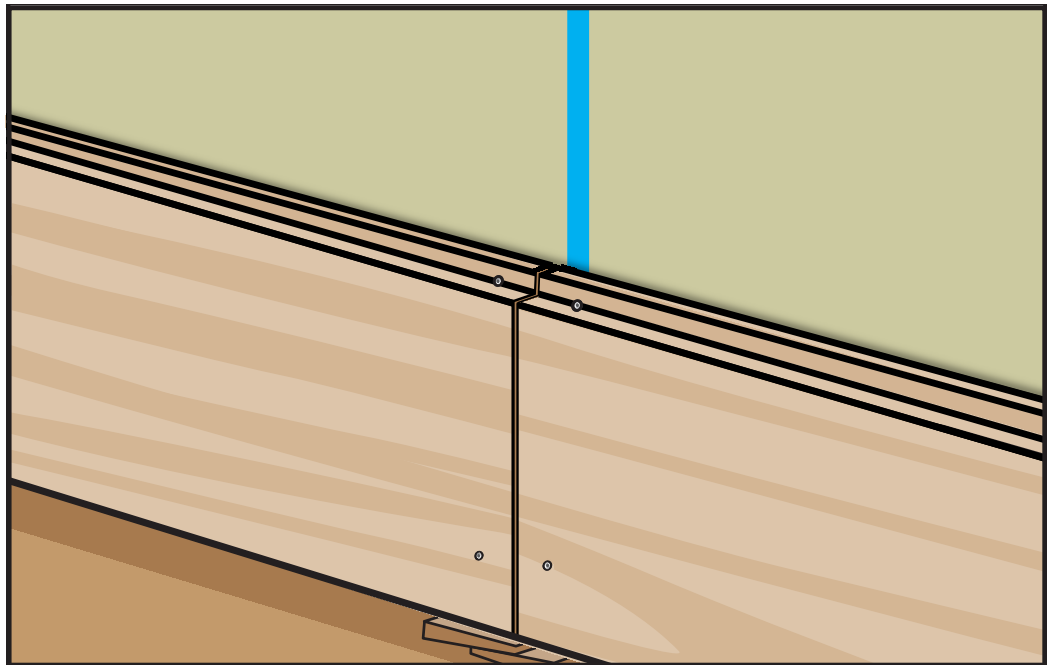
❖ **Note: To avoid "splitting at butt-joints" when nailing,** paneling may require predrilling and hand nailing using a 3/32" drill bit and 6d steel finish nails. Use a nail punch to set nails just below the surface.

Step 4. FIRST ROW:

Glue and Fasten: Use 2-1/2" 16 Gauge finish nails to secure to wall studs. Nails shall penetrate a minimum of 3/4 inch into the wall studs.

- Board Orientation: Begin the first row with the tongue facing up. **Install Left to Right** (may install Right to Left)**.**
- Secure this first row fully using adhesive and 2 1/2" finish nails or wood screws into the wall studs plywood nailing base, placed approximately 2" above subfloor (these will be covered by your baseboard trim).
- Using a finish nailer*, nail at an angle into the tongue of the plank to secure the plank to the wall studs.
- All nails should be counter-sunk so it does not interfere with the next plank. Continue this method until you have completed the row.

- Use spacers for a 1/4" expansion gap between the subflooring and the first row.
  Place spacers adjacent to each plank joint.
  IMPORTANT: adjust to keep line perfectly straight to your starting line!
  Apply a 1/4" bead of Urethane -Based construction adhesive in a serpentine pattern on the back of each plank as installed.
- Place the plank on top of the spacers making sure top of plank is on the chalk line, leaving a minimum 1/4" expansion space at starting end wall.
- Be sure that there is an adequate transfer of adhesive to the wall using a slight back and forth motion and firmly pressing the entire plank against the wall.

← **Back of plank**
— **Adhesive**

Air compressor tips

Adjust the regulator to ensure proper air pressure and setting of fasteners. Set air compressor to 70-80 PSI or at the low-est air pressure needed to set the fastener flush into the wood, adjust as needed. Do not exceed the nailer or air hose limitations. Air hose over 25' can cause a poor response, loss of proper PSI, jamming and miss-fire. To prevent air leaks, apply white Teflon tape to all threaded connections.

Air Pressure Too Low   Air Pressure Too High   Correct Air Pressure
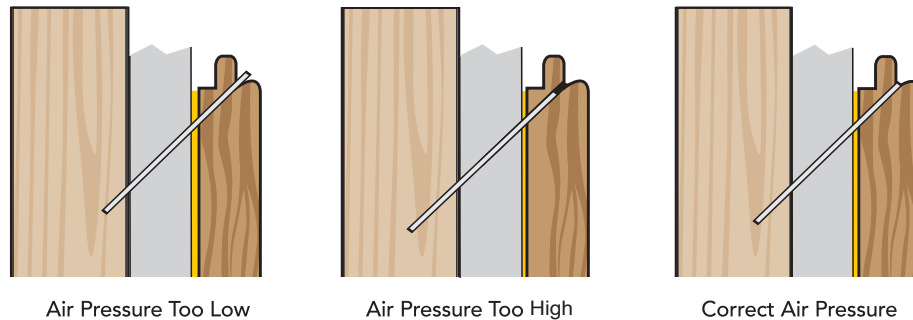
Wood Thickness	Nailer Gun	Fastener Type	Fastener Length
3/4"	Pneumatic Finish Nailer	16 gauge finish nail	2-1/2"

When face or top nailing, pick areas of the grain or pattern that would best hide touch-up fillers. Do not use significantly bowed, crooked or twisted boards. Use a wood spline or slip tongue whenever a change in board direction is needed. Splines should be glued with PVA wood glue and nailed into place.

The last board in each row must be cut to fit, while still maintaining a 1/4" expansion gap at the walls.
Here's how:

1. Measure distance from last installed plank to end of wall.
2. Transfer this measurement (less 1/4") to plank you will cutting and mark it on the face.
3. Cut the plank at the mark.
4. Install as normal.
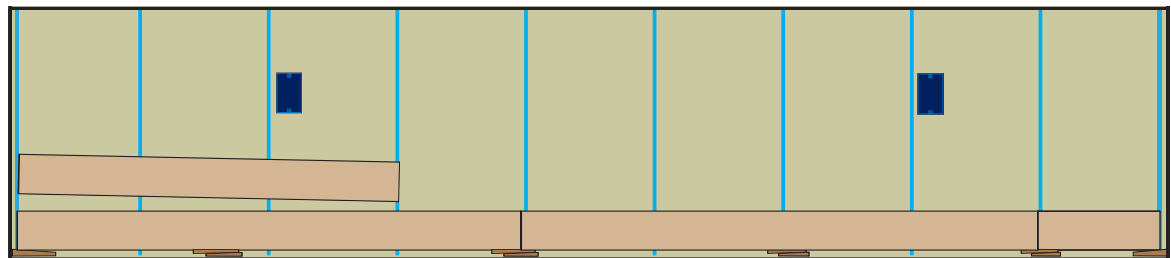
Use a rubber mallet or dead-blow hammer to help close any gaps between rows. **Use caution as to not damage the tongues.**
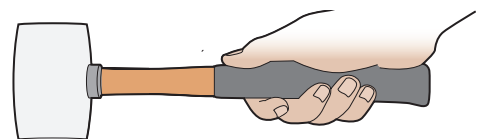
Step 5: SECOND & CONSECUTIVE ROWS:

Continue to use adhesive, blind nailing each plank as detailed in Step 4. Above.When laying planks, stagger the end joints from row to row by at least one "wall-stud on center measurement" to ensure a pleasing appearance.

- Working left to right, place the planks on top of previous row leaving a minimum 1/4" expansion space at starting and end walls.
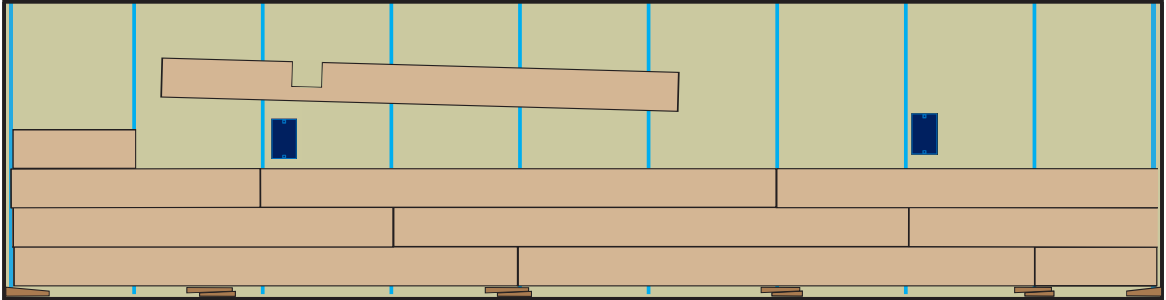
CUTTING AROUND FIXTURES:

Measure and mark planks to fit around any existing outlets, switches, vents, etc.

Outlet "Box Extenders"

An electrical box extension shall be used as required by local building codes, to bring the switches and receptacles flush with the panel.

Do not cover receptacle retaining screw/surrounding fixture, to allow for bringing receptacle forward to accommodate for the thickness of new panels.
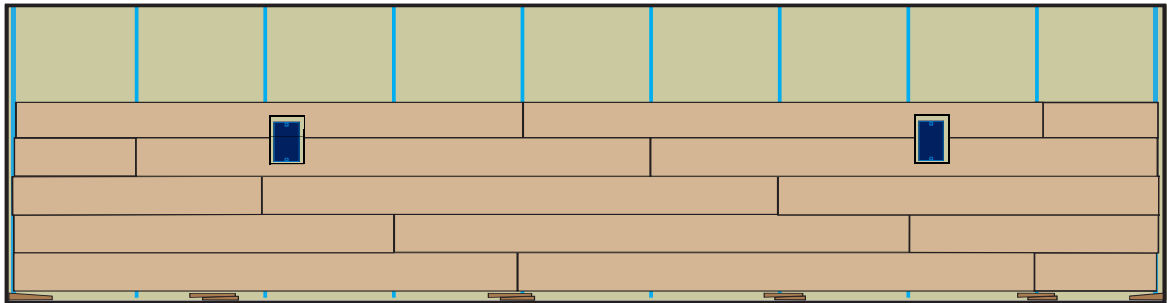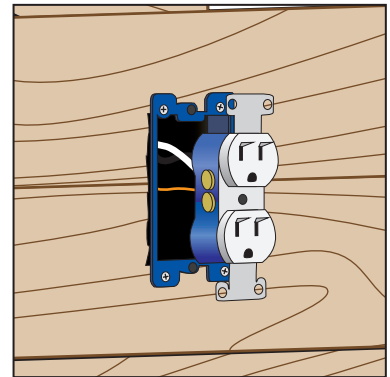
- The last row will need to be cut lengthwise (ripped down) to fit properly to the ceiling, leaving a minimum 1/4" for expansion.
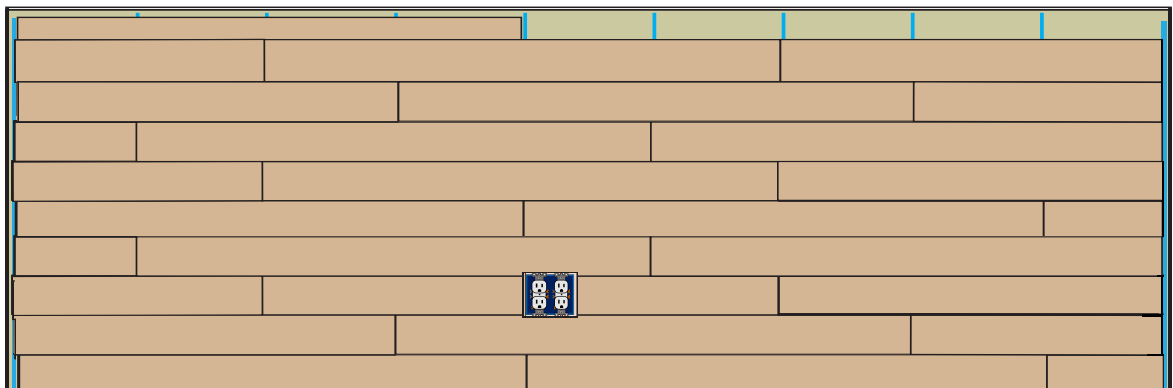
Finishing Up:

- Remove all spacers.
- Trim out walls and ceiling using Reducer (avoid nailing into planks).
- Install baseboard to cover gap along floor.
- Install receptical cover plates.

Reducer

Baseboard
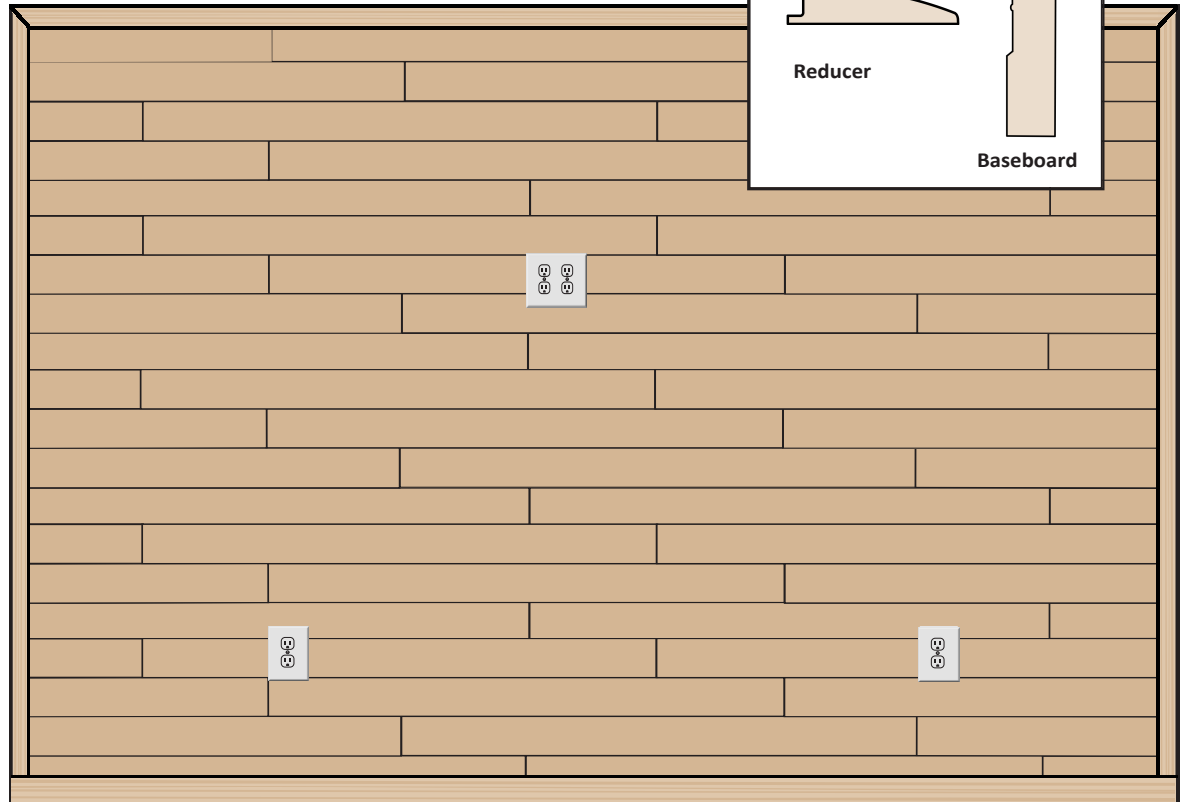
VERTICLE PANEL INSTALLATION
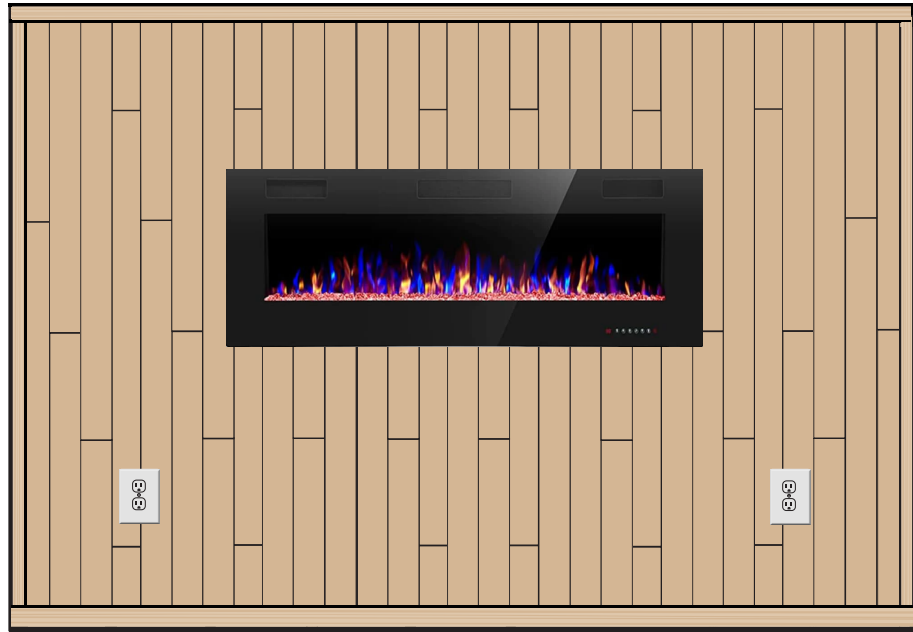
GETTING STARTED:

Step 1: Preparation

- Turn off power while working around wall outlets and light switches.
- Remove existing wall base, trim, electrical cover plates, HVAC vent/return covers thermostats, etc., prior to installation.

Installation over drywall

- Use a 6' level or straight edge to insure the wall is flat in both directions.
- Walls need to be flat to within 3/16" in 6'.
- Make any repairs needed to achieve a flat surface.

Step 2: Identify and Mark Stud location

- Using a stud finder to identify studs, mark top and bottom of studs using a pencil.

ACCENT WALL
Existing Dry Wall – Typical

Wall Studs Marked
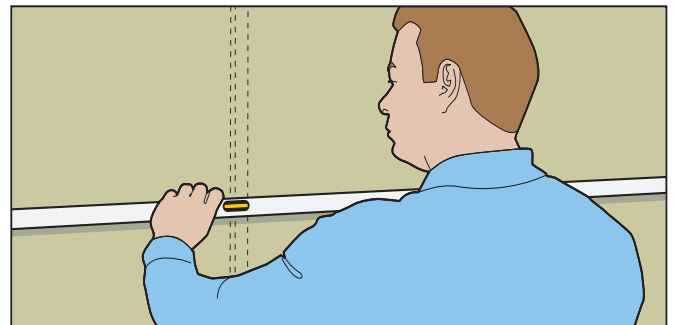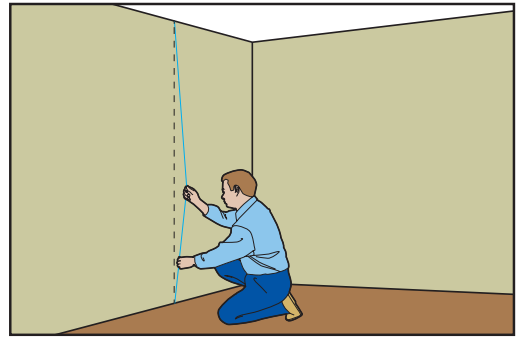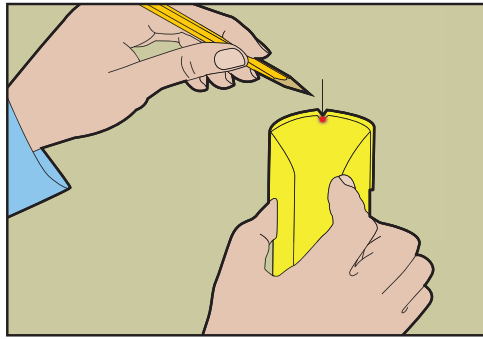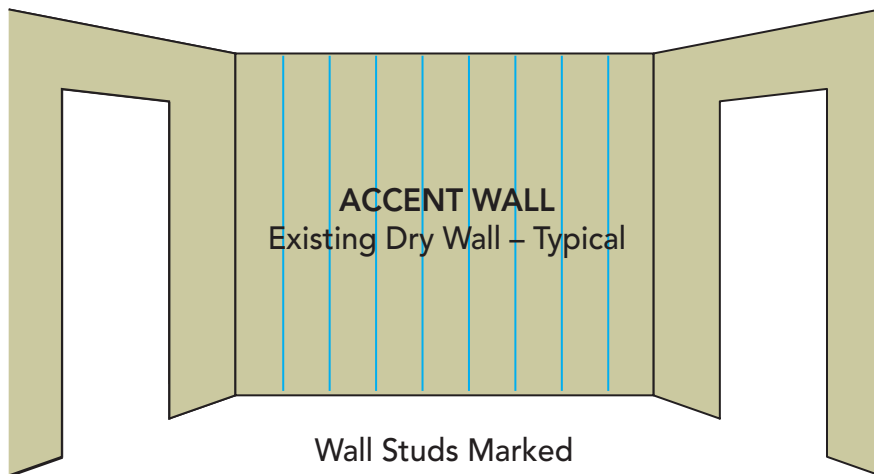
- Using a chalk line stretched between bottom and top mark, snap a line. Use painters tape at top & bottom of *each* stud on floor and ceiling to identify nailing points.
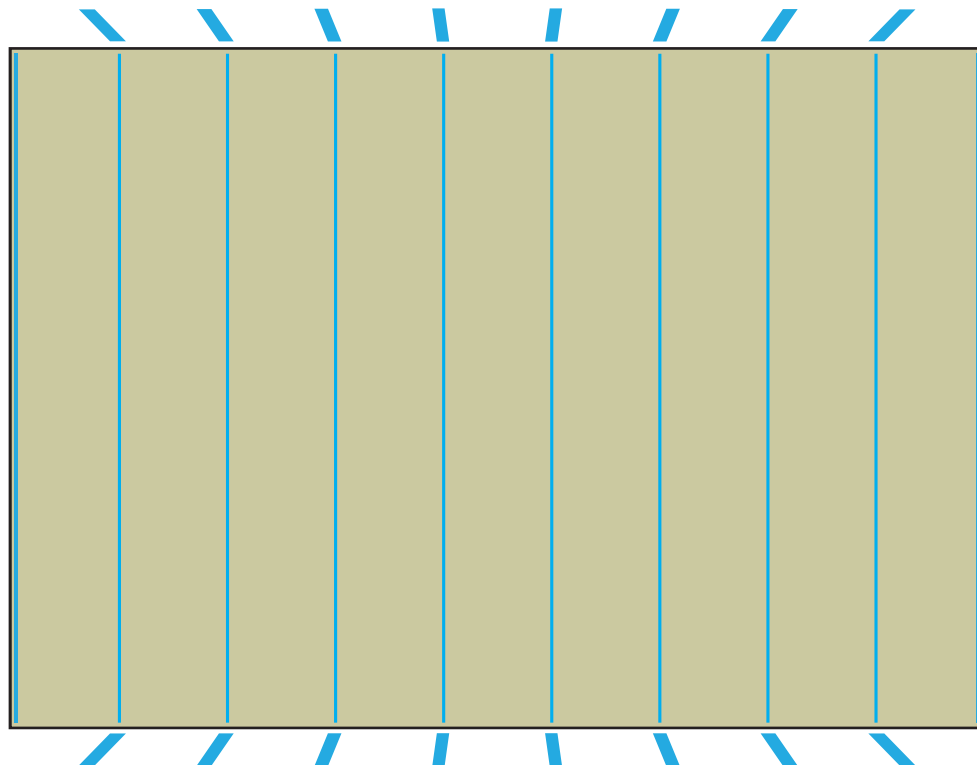
Installation of horizontal furring strips:

Measure up from the 1/4" spacers and mark both corners of wall 2' on center as shown. Strike a horizontal chalk line between two marks and check for "level", make any adjustments needed then complete remaining chalk lines.

1/4" Spacers
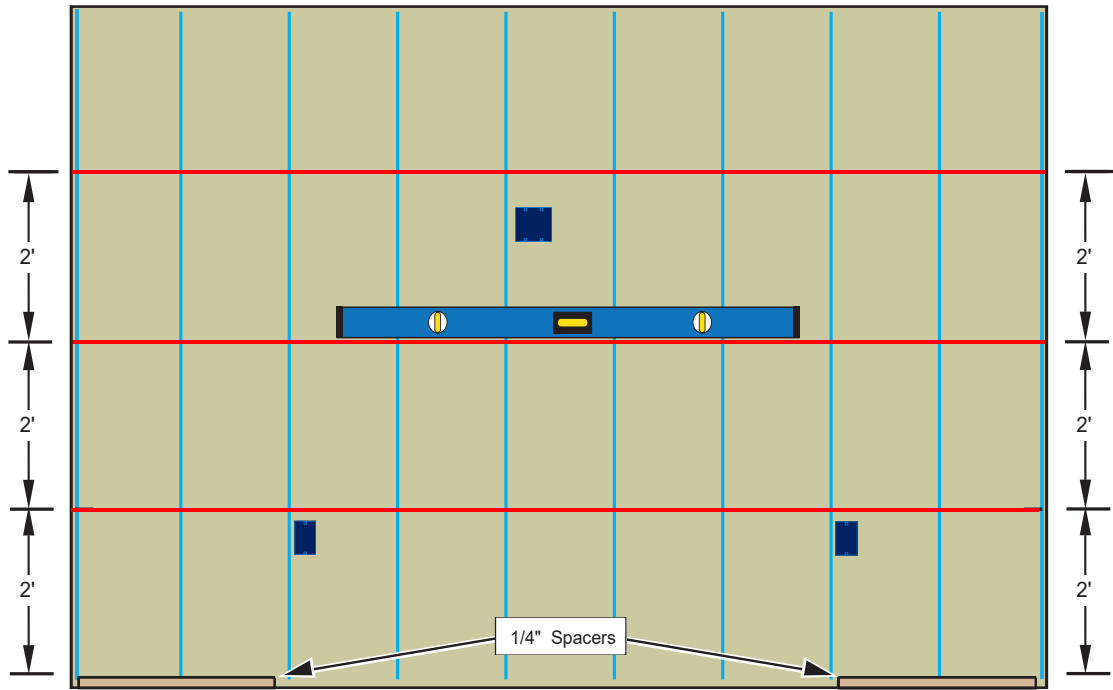
Please Note: Vertical paneling installations over wall studs (No Drywall) will follow the same basic steps that follow.

Install 1" x 4" furring strips so they are centered on the horizontal chalk lines.
Install furring strips along top and bottom of wall maintaining 1/4" expansion gap.
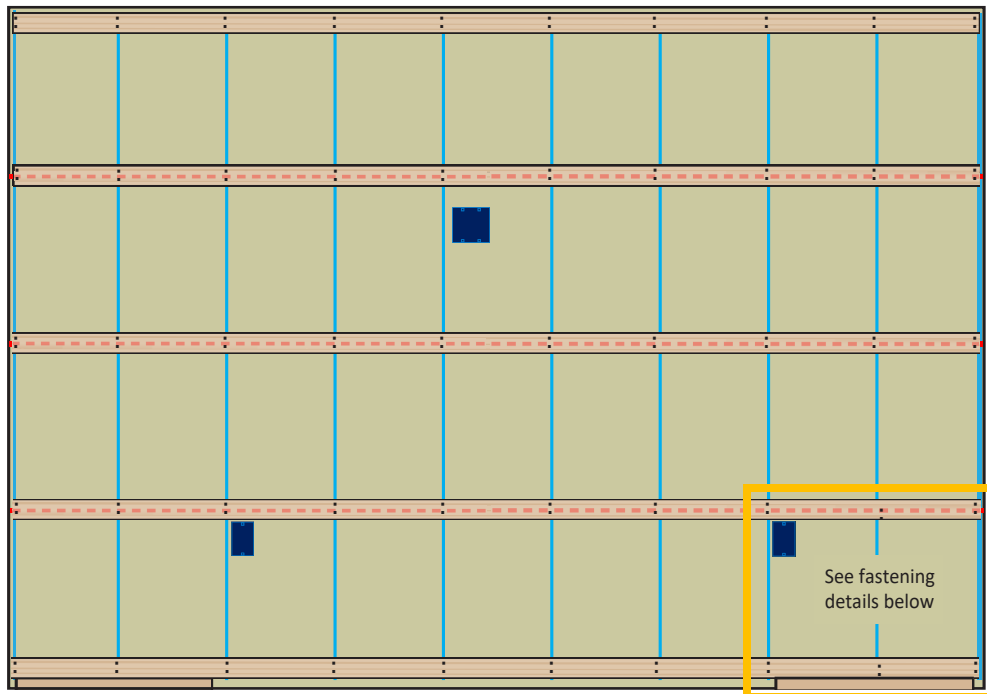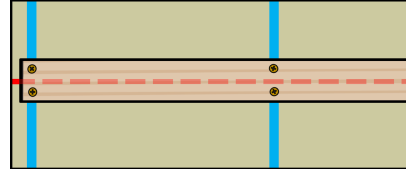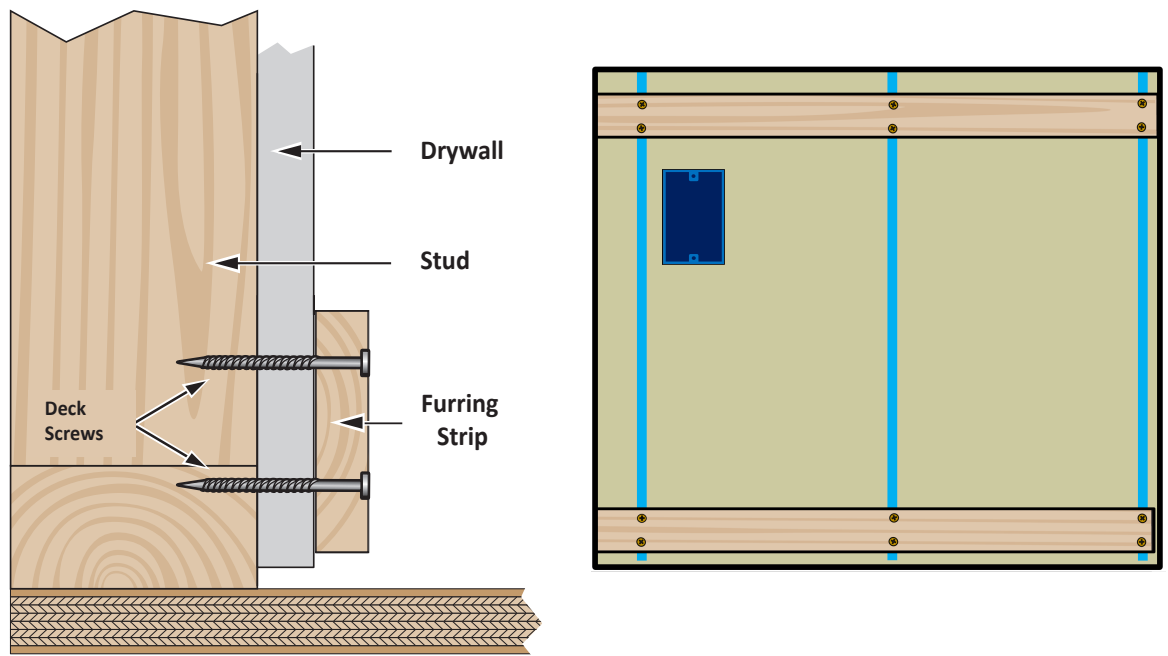
See fastening details below

Drywall

Stud

Deck Screws

Furring Strip

Step 3: Establishing your starting line

Establish a working line on your feature wall by **measuring** from the left wall and at equal distances (approx.12") from the ceiling and the floor. The distance from the wall to the line will be the width of the first row of planks used plus the 1/4" expansion space.

- Mark these points on wall and snap a chalk line (as shown) prarallel to the wall.
- Check that line is plumb in case of out-of-square walls.

Ceiling

Width of first plank including tongue used for first row + 1/4" expansion space

Chalk Line

Floor

DfYdUfUh]cb cZ d`Ub g"]cf ']\ Y ghUfh]b[fck .

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Ideally for Vertical panel applications, the side planks (starting and ending panels) should be the same width. M^æˇ¦^¢@Á
åã¢æ¿}&Á¿¦[{Á¿æ¦§¿¿æ¦Ẽ¢@}Áãã¢ã^¢@¢Áˇ{à^¦§ã^¢@¢Áã¿¢@¿¢@Á|æ¿^|ã*Á§å^ã*Á§§•æ¿|^åÈ

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F¿GẼˇ¢ÂˇÁ¿ÌˇÁ§§ẼˇF¿Á
V¸^}¢¢ˇÁˇ¦|Á|æ}\•Áæ¿^Á^¿¿ã^åÁæ¿Áå¿ǿ¢ǿÁ§|¿å^¿Á¿æ&¢[}ÁˇÁ|æ}\Á㢢@¿ÌˇÁ§§¿ÁˇẼˇF¿ÁˇÁ¿Ìˇ¿Ä

For a "balanced & centered" look, calculate cut panels for both sides 6.88 – 4.88 = 2"

2" ÷ 2 = 1" cut 1" off both starting and ending panels. 6.88 - 1 = 5.88

Preffered method: Nineteen full planks are required and first and last panels will be 5.88" wide.

6 c UfX 'cf ']\ YbhUh]cb

- Begin the first row with the tongue facing Right.

- **Install Left to Right.**

- Secure this first row fully using 2" finish nails or wood screws into furring strips as shown:

Blind Nail and face nail this row as shown

Floor

- **Using a finish nailer , nail at an angle into the groove of the plank to secure the plank to the wall studs. All nails should be counter-sunk so it does not interfere with the next plank. Continue with this method until you have completed the row.**

- ❖ **Note: To avoid "splitting at butt-joints" when nailing,** paneling may require pre-drilling and hand nailing using a 3/32" drill bit and 6d steel finish nails.

When face or top nailing, pre-drilling is recommended. Pick areas of the grain or pattern that would best hide touch-up fillers. Do not use significantly bowed, crooked or twisted boards. Use a wood spline or slip tongue whenever a change in board direction is needed. Splines should be glued with PVA wood glue and nailed into place.

Air compressor tips
Adjust the regulator to ensure proper air pressure and setting of fasteners. Set air compressor to 70-80 PSI or at the low-est air pressure needed to set the fastener flush into the wood, adjust as needed. Do not exceed the nailer or air hose limitations. Air hose over 25' can cause a poor response, loss of proper PSI, jamming and miss-fire. To prevent air leaks, apply white Teflon tape to all threaded connections.

| Air Pressure Too Low | Air Pressure Too High | Correct Air Pressure |

Wood Thickness	Recommended Nailer	Fastener Type	Fastener Length
3/4"	Norge 4 in1 nailer	18 gauge finish nail	1-1/2" to 2"

Continue installing additional rows left to right until wall is covered

Rev. 11.15.2022

COWD_SOLD_WALL
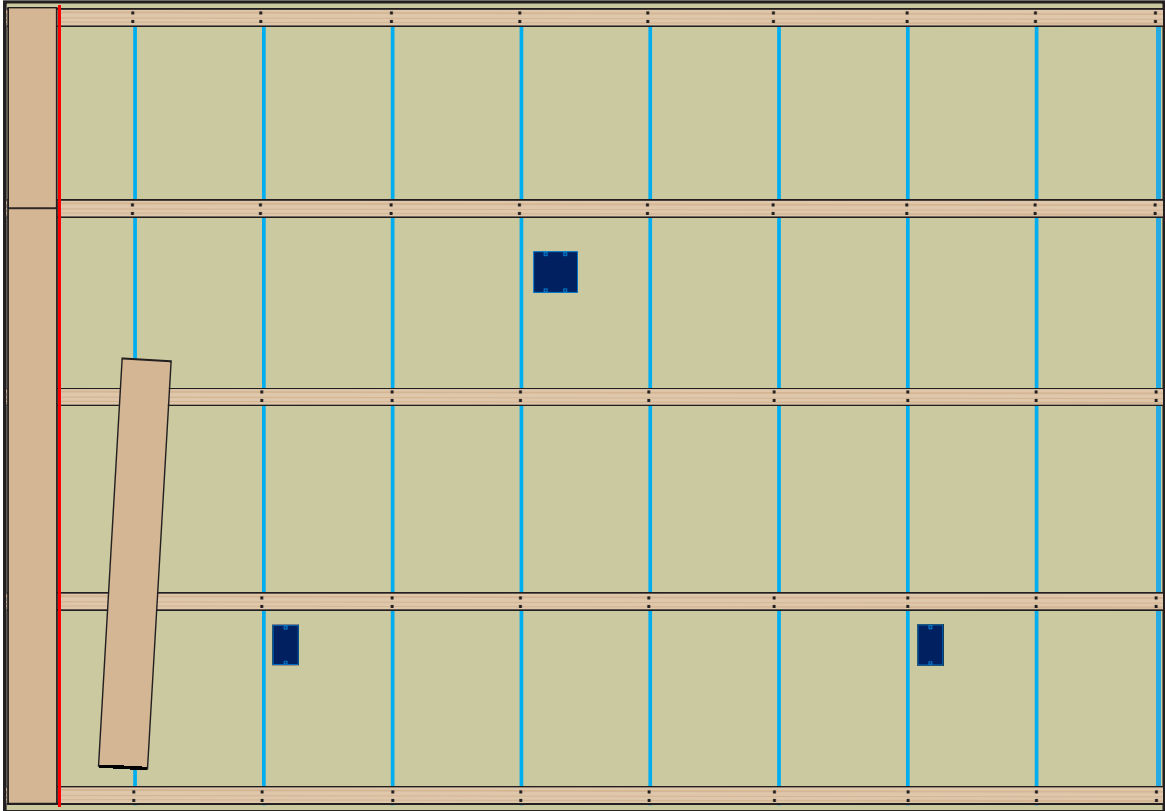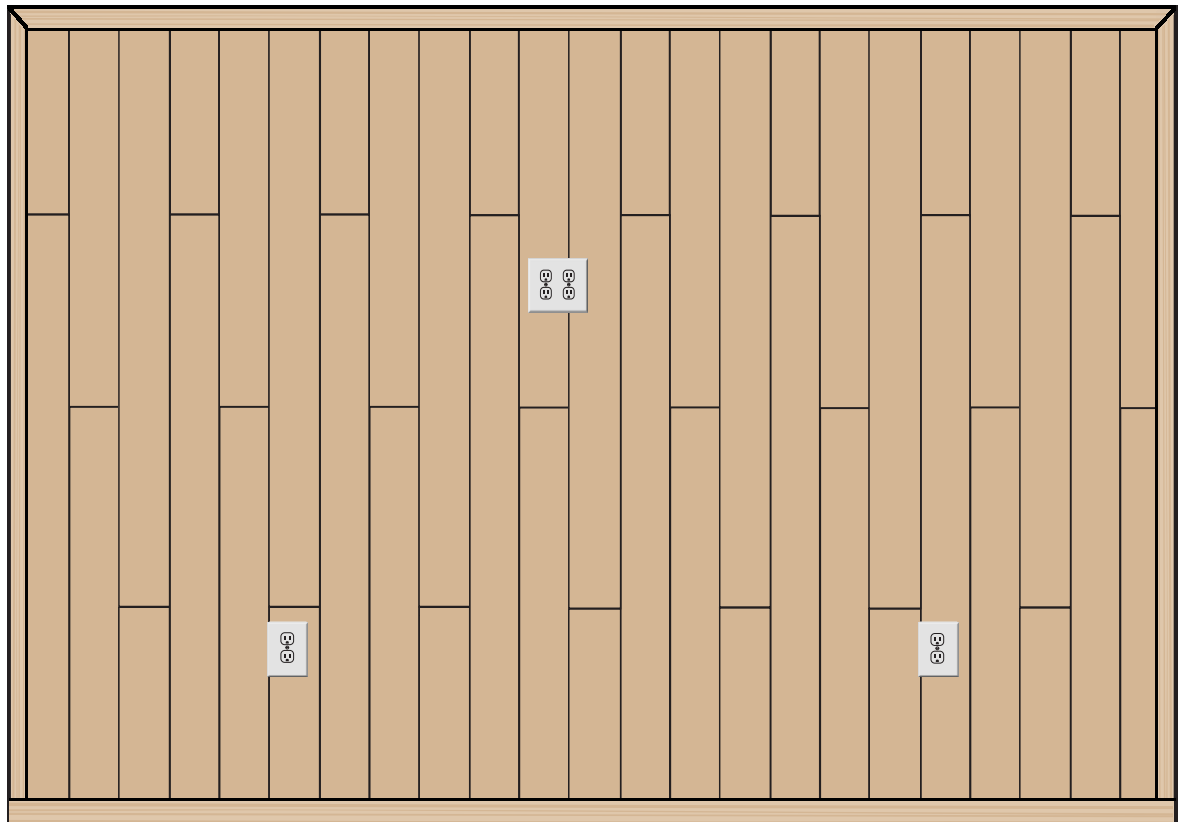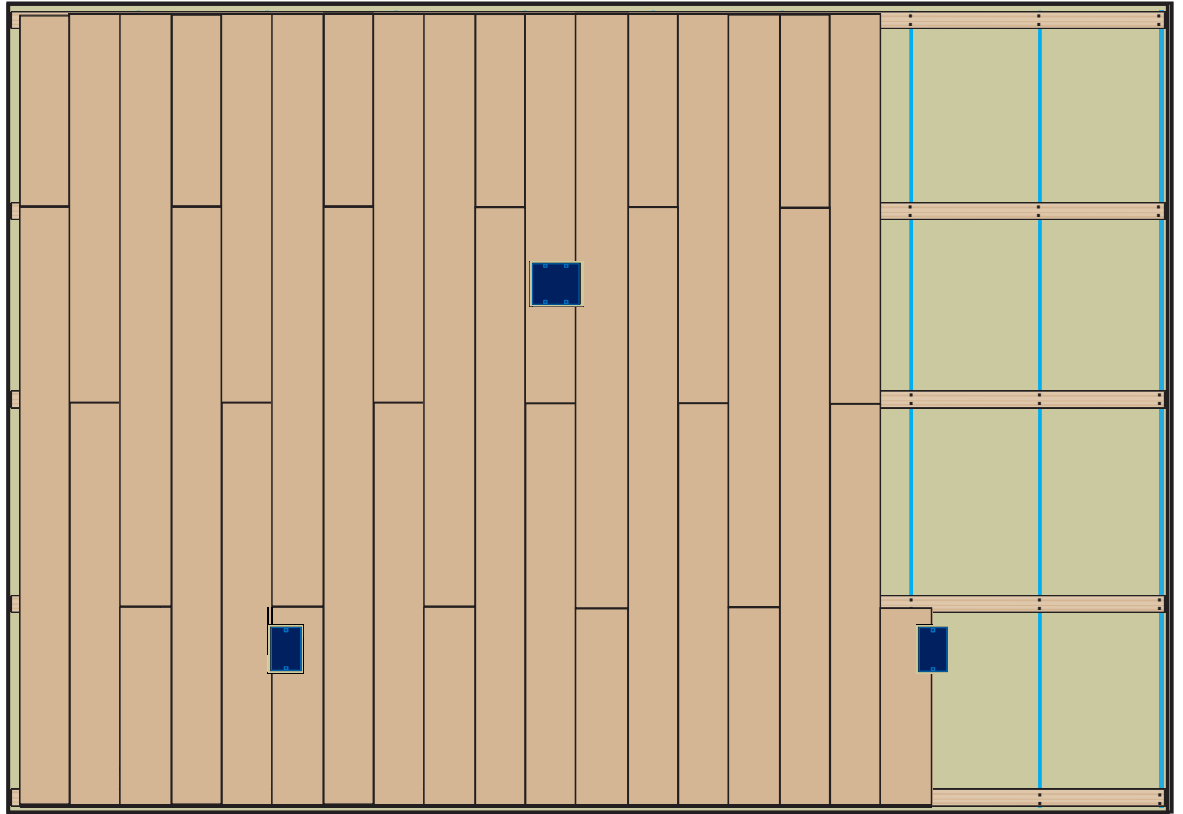
Surface preperation:

For best results, removal of existing dry wall is recommended. Locate wall studs and mark on drywall and on subfloor as shown below.
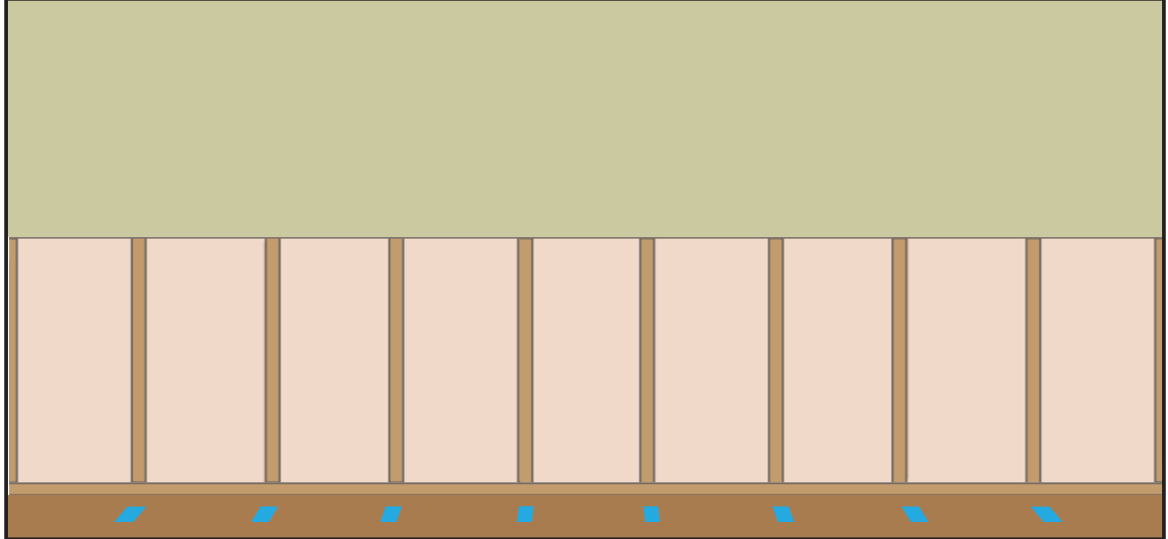
PLYWOOD NAILING BASE

- A 5/8" plywood nailing base <u>must</u> be attached securely to wall studs before installation of the paneling in order to provide an appropriate and stable surface.

- Use 1 -1/2" deck screws or ring-shank nails to secure plywood to the wall studs with an 8 -10" fastening pattern.

- Check manufacturer instructions to confirm installation details and spacing for the particular units you are using.

- Mark stud locations on surface of plywood as shown.
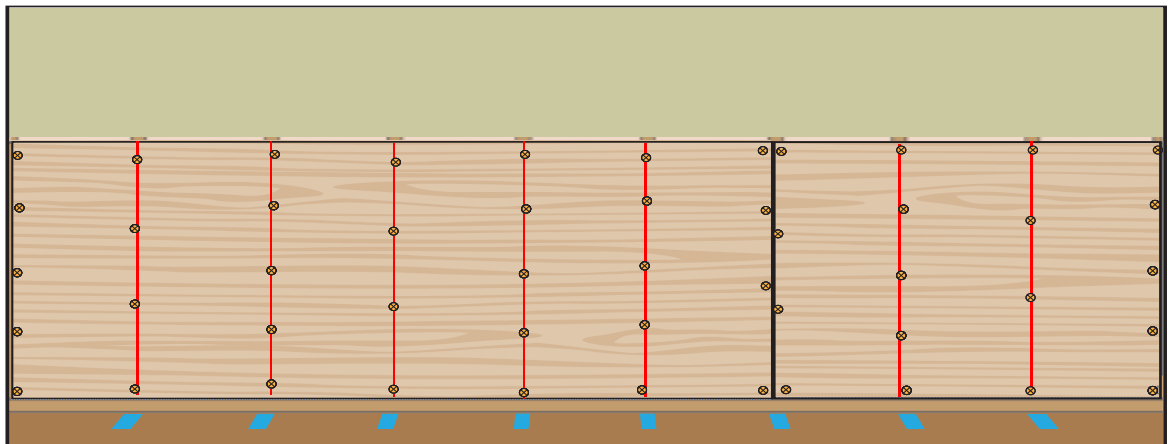
EXPANSION SPACE:

1/4" is required top and bottom of the wall and both inside corners (sides).

RUN WIDTH:
Width - No maximum when installed correctly: Vertical Wainscot Style, runs greater than 20 L. F. may require "Dime Rows" (Tongue and groove side only).

- Determine how many planks will be needed to fill the wall. For the best overall appearance, the first and last planks should be the same width.
- Measure to the appropriate height where you would like to stop the wainscot, plus 1/4" expansion space. Chalk a line between the two walls.
  Glue and Fasten: Nails shall penetrate a minimum of 3/4 inch into nailing substrate. Each plank shall be fastened with at least three fasteners.
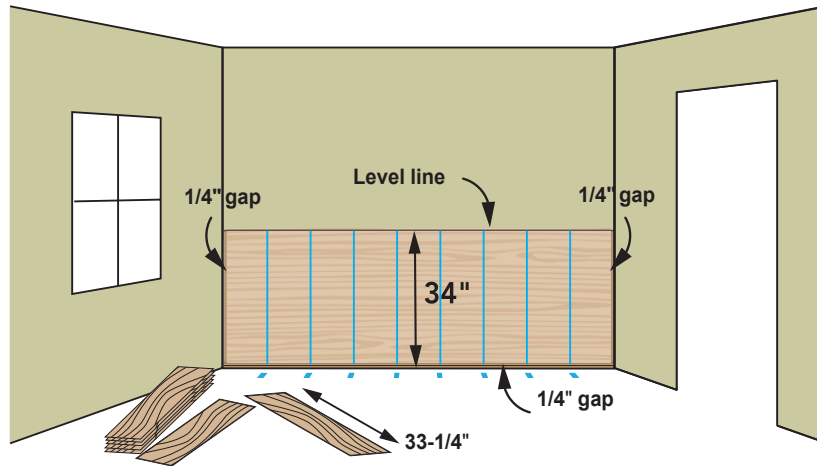
Place spacers adjacent to each plank joint.

IMPORTANT: adjust to keep line perfectly straight to your starting line!

Apply a 1/4" bead of Bostik Tread-Lock adhesive in a serpentine pattern on the back of each plank as installed.

- Place the first plank vertically on top of the spacers and check it is plumb using a level, leaving a minimum 3/4" expansion space at starting end wall.
- Be sure that there is an adequate transfer of adhesive transfer to the wall using a slight back and forth motion and firmly pressing the entire plank against the wall.

- Cut planks to fit to top chalk line.
- Apply a 1/4" bead of adhesive in a serpentine pattern on the back of the plank.
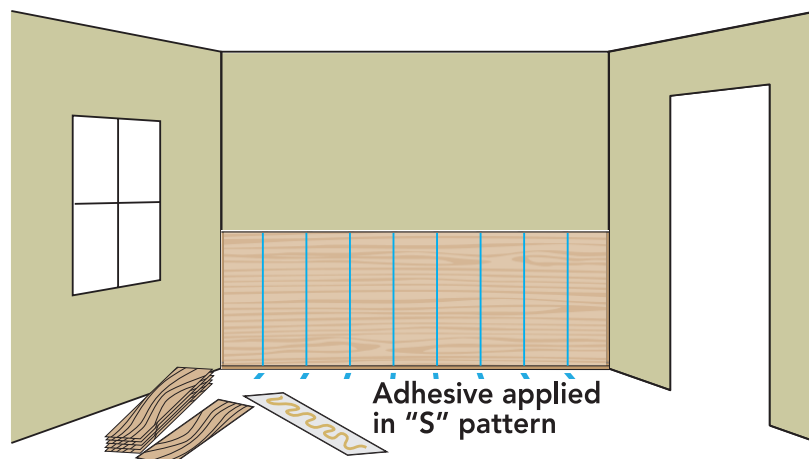
- Set plank in place with the top of the plank on the chalk line leaving a minimum 1/4" at bottom of wall.
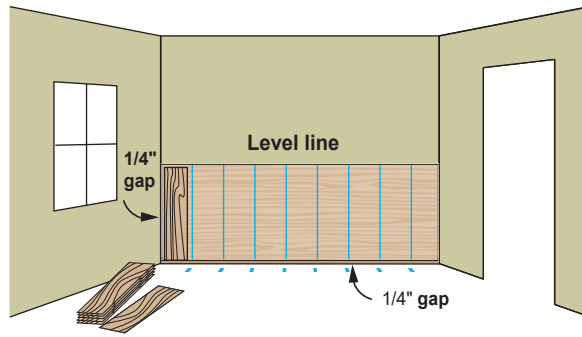
- Continue installation of the following rows using the same method as above.
- Fasten planks using adhesive and nail schedule described above.
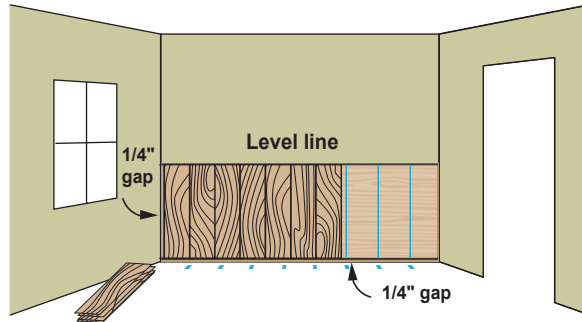
- The last row will need to be cut lengthwise to fit properly, leaving a 1/4" for expansion.
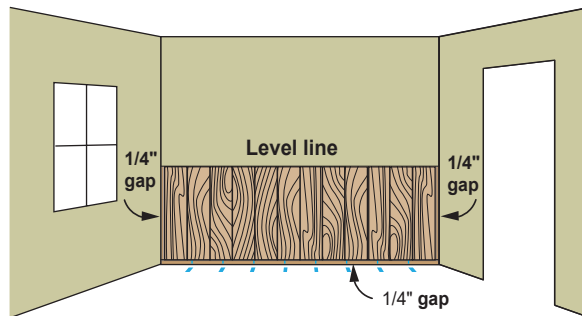
Trim out walls using 3/4" round (avoid nailing into planks).
Install baseboard to cover gap along floor and Install threshold along top edge to finish wainscot wall.
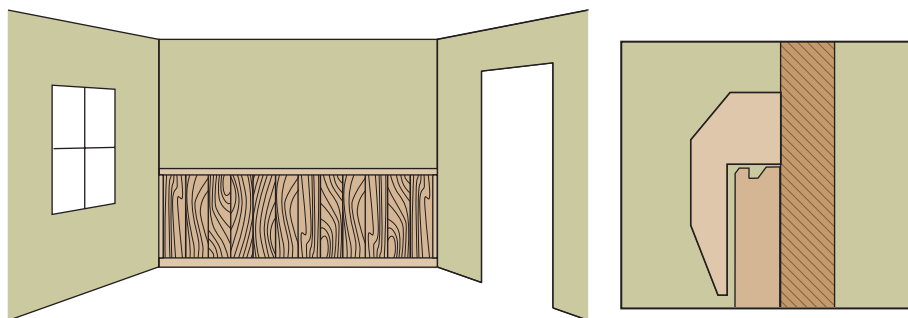
INSTALLING SOLID PINE PANELING DIRECTLY TO WALL STUDS
HORIZONTAL APPLICATION
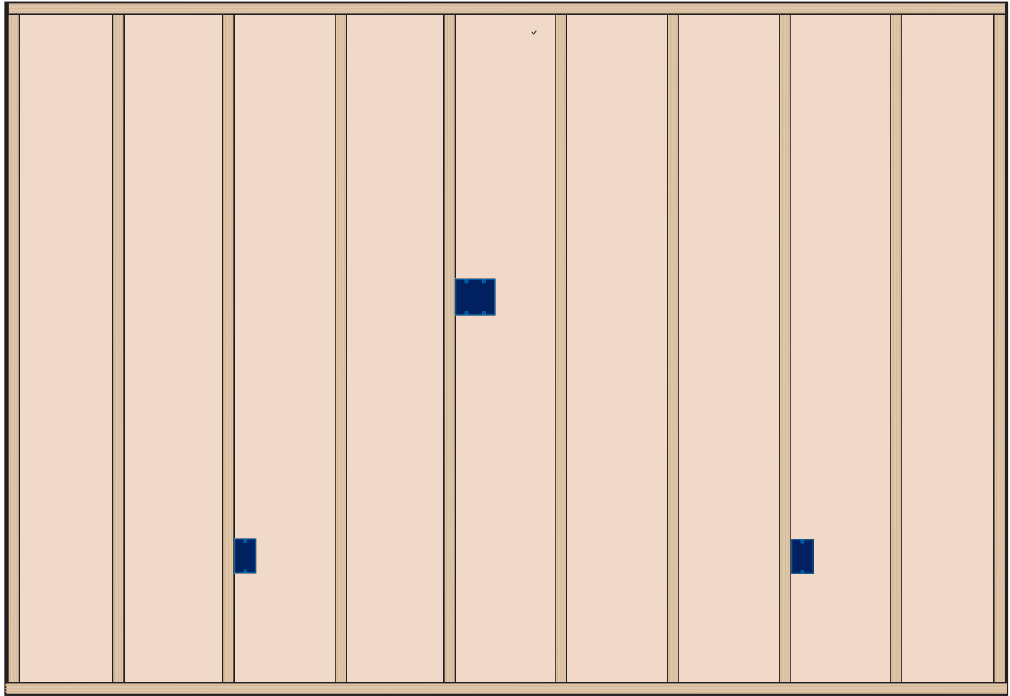
For installations on exterior walls, complete the nescessary insulation and vapor barrier steps, to provide better retention of warm and cool air and to prevent moisture damage as per local building codes.

Step 1: Establishing your starting line

Establish a working line on your feature wall by **measuring up** from the floor and at equal distances (approx.12") from each corner of the wall. The distance from the floor to the line will be the width of the first row of planks used plus the minimum 1/4" expansion space.

- Mark these points on wall and snap a chalk line (as shown) parallel to the floor.
- Check that line is level in case of uneven floors.

Ceiling

Chalk Line

Width of plank used for first row
+ 1/4" expansion space

Floor

- Use a level to double-check the levelness of the line between the two marks. Adjust line as needed with wedged spacers.

Preparation of planks for the starting row:

Rack Out. It is recommended that the planks are laid out on the floor prior to installing, this will give opportunity to remove unsatisfactory planks and ensure a pleasing layout prior to fixing in place.

To avoid very narrow pieces at the end of wall; measure the distance from floor to ceiling, then divide this number by the width of the panels being installed. The fraction is the width of the last plank.

E.g., for standard 8' wall:
Floor – Ceiling = 96" – 0.5" (1/4" expansion x 2) = 95.5"
Width of Plank = 6.88"
95.5 ÷ 6.88 = 13.88

Thirteen full planks are required and last will be fraction x plank width;
6.88" x 0.88 = 6.05"

If width of last row of planks is less than 2.5", balance by cutting (Rip) the starting row of planks accordingly.

Board orientation: Horizontal

- Begin the first row with the tongue facing up. **Installs in either direction Eg; Left to Right.**
- Secure this first row fully 2' finish nails or wood screws into wall stud and bottom plate, placed approximately 2" above subfloor (these will be covered by your baseboard trim).
- Depending the length of planks being installed (72" or 96"), planks will need to be cut in order to fasten both butt-ends of planks securely to wall studs. (See detail below).
- Using a finish nailer*, nail at an angle into the groove of the plank to secure the plank to the wall studs. All nails should be counter-sunk so it does not interfere with the next plank. Continue with this method until you have completed the row.

Blind Nail and face nail this row as shown
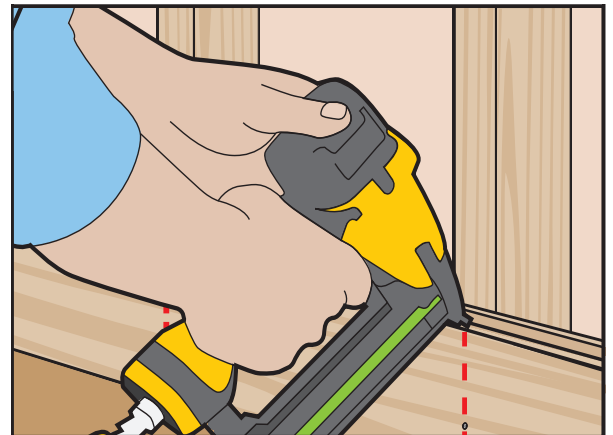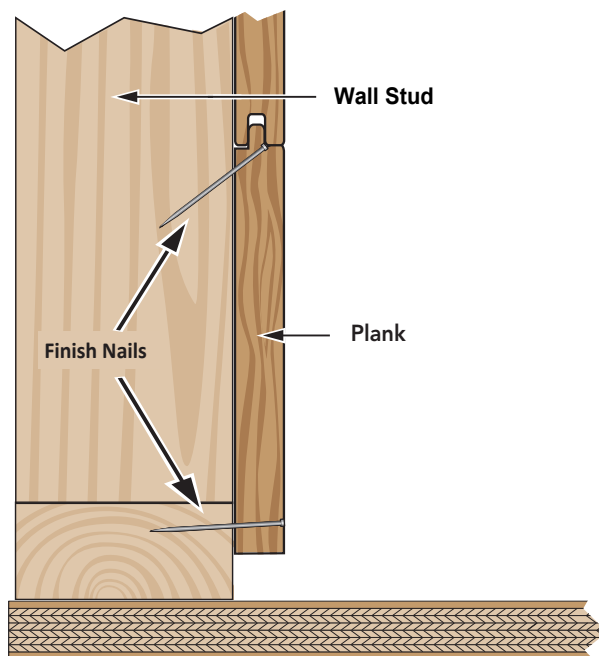
Wall Stud

Finish Nails

Plank

Be sure to align "end-of-planks" at wall studs and secure as shown.
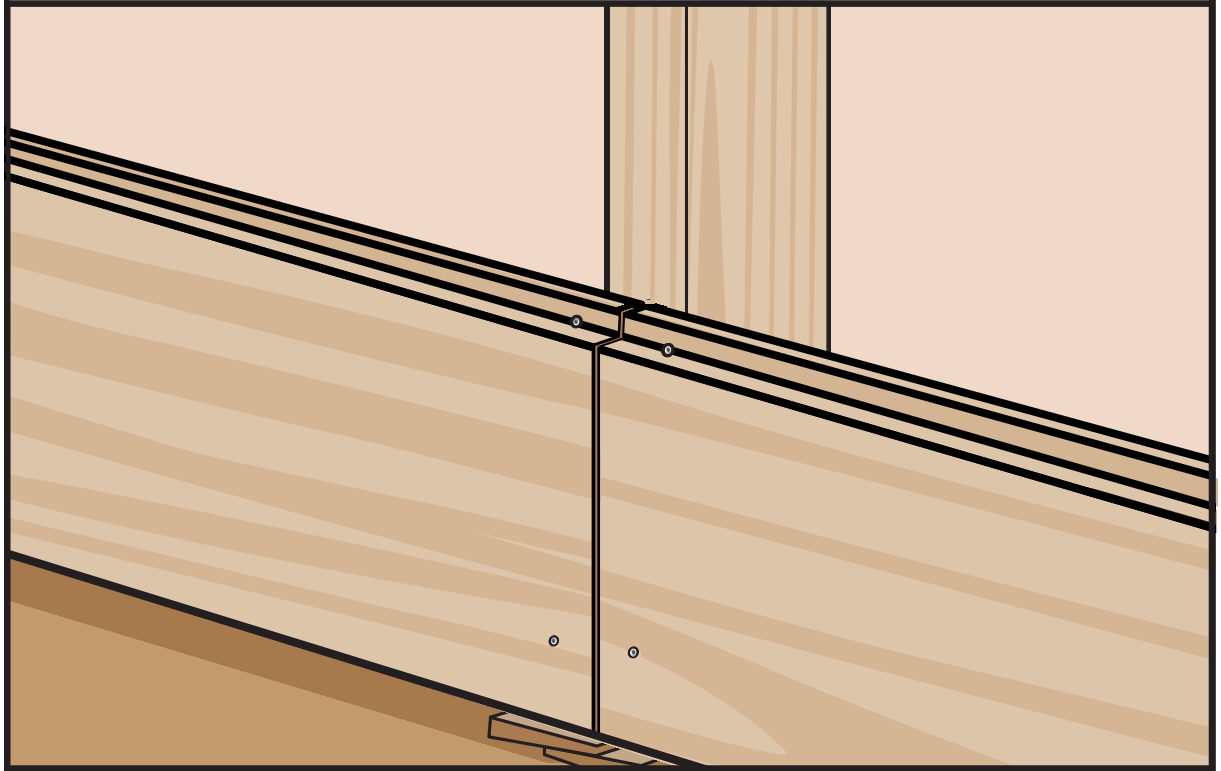
❖ **Note: To avoid "splitting at but-joints" when nailing,** paneling may require pre-drilling and hand nailing using a 3/32" drill bit and 6d steel finish nails.

Step 4. FIRST ROW:

Fasten: Use 1-1/4"– 1-3/4" 18 – 20 Gauge finish nails to secure panels to wall studs. Nails shall penetrate a minimum of 3/4 inch into studs.

- Use spacers for a 1/4" minimum expansion gap between the subflooring and the first row.
  Place spacers adjacent to each plank joint.
  IMPORTANT: adjust to keep line perfectly straight to your starting line!
  Place the plank on top of the spacers making sure top of plank is on the chalk line, leaving a minimum 1/4" expansion space at starting end wall.
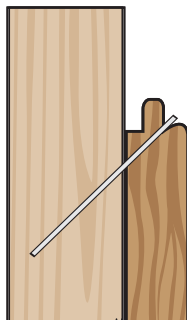
| Air Pressure Too Low | Air Pressure Too High | Correct Air Pressure |
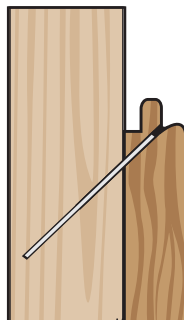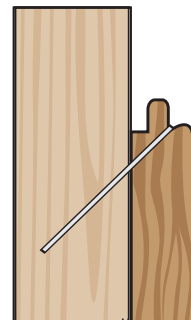
Wood Thickness	Recommended Nailer	Fastener Type	Fastener Length
3/4"	Norge 4 in1 nailer	18 gauge finish nail	1-1/4" to 1-3/4"
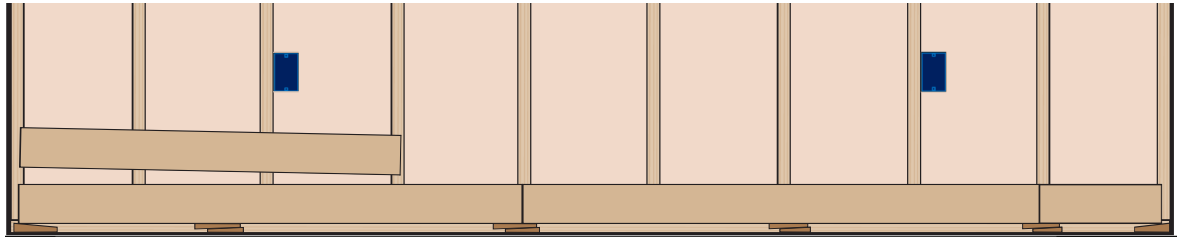
Use a rubber mallet or dead-blow hammer to help close any gaps between rows. use caution as to not damage the tongues.
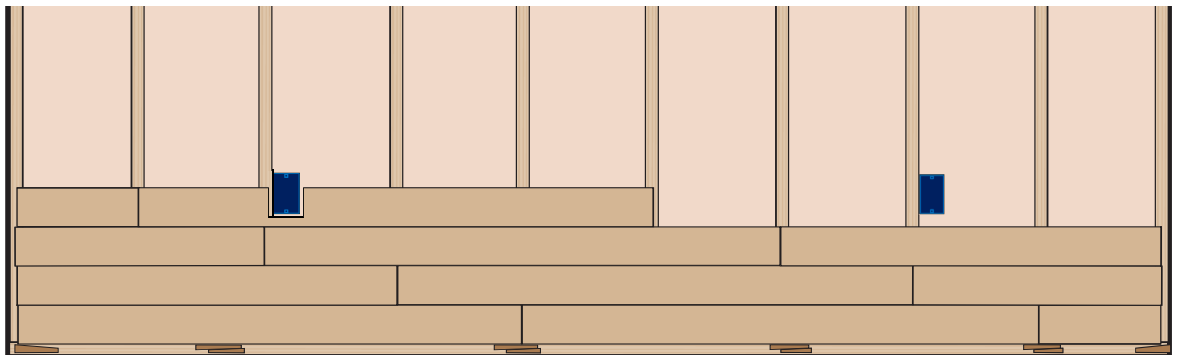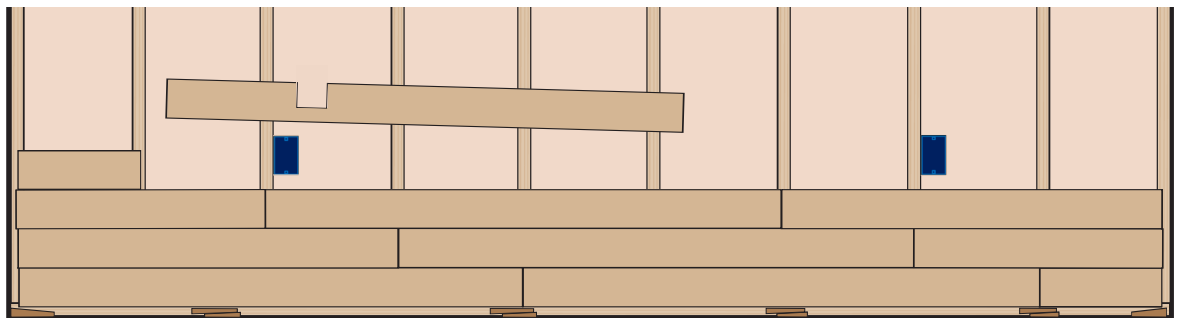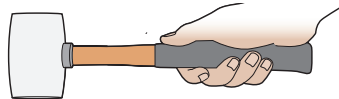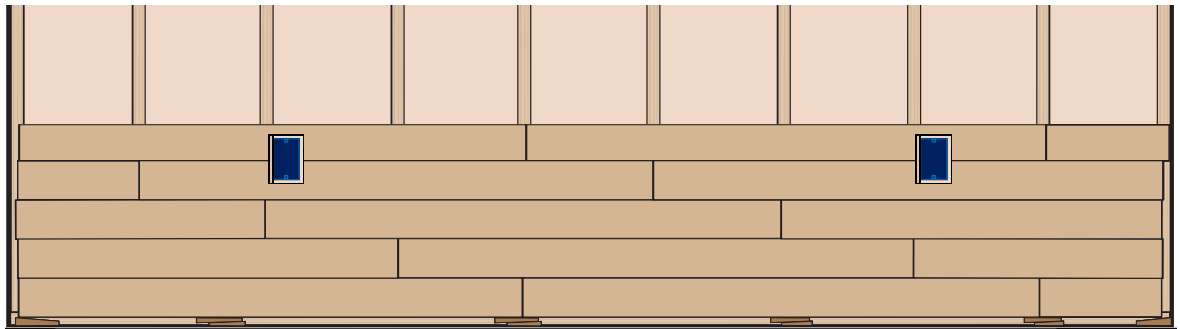
CUTTING AROUND FIXTURES:

Measure and mark planks to fit around any existing outlets, switches, vents, etc.
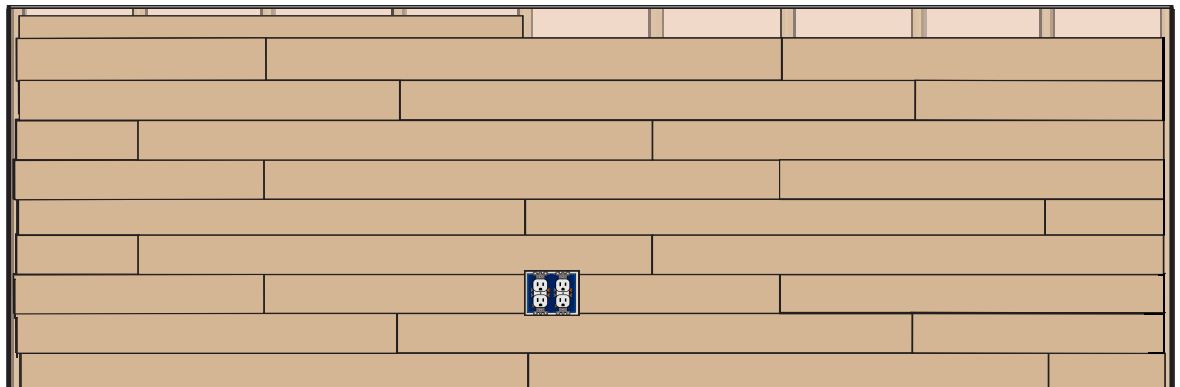
Outlet "Box Extenders"

An electrical box extension shall be used as required by local building codes, to bring the switches and receptacles flush with the laminate.
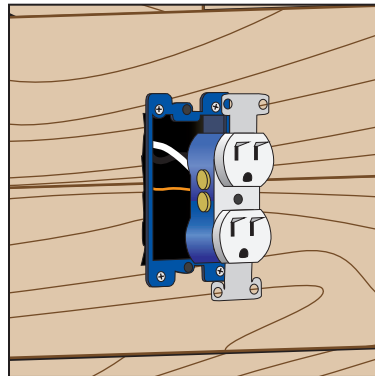
.
Do not cover receptacle retaining screw /surrounding fixture, to allow for bringing receptacle forward to accommodate for the thickness of new planks.
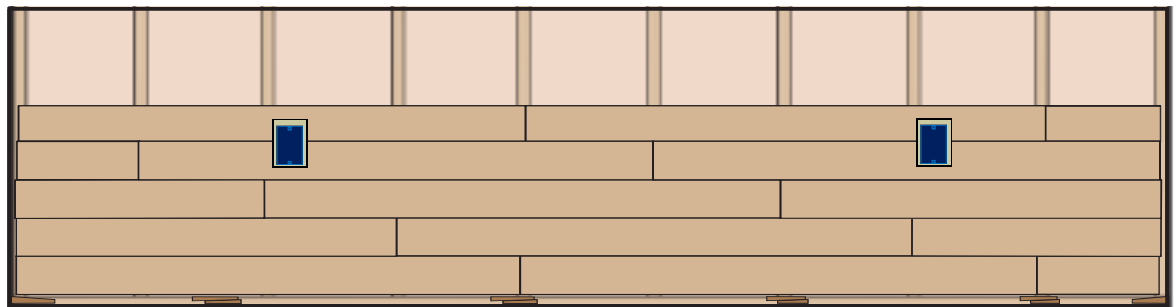
- The last row will need to be cut lengthwise (ripped down) to fit properly to the ceiling, leaving a minimum 1/4" for expansion.

Finishing Up:

- Remove all spacers.
- Trim out walls and ceiling using Reducer (avoid nailing into planks).
- Install baseboard to cover gap along floor.
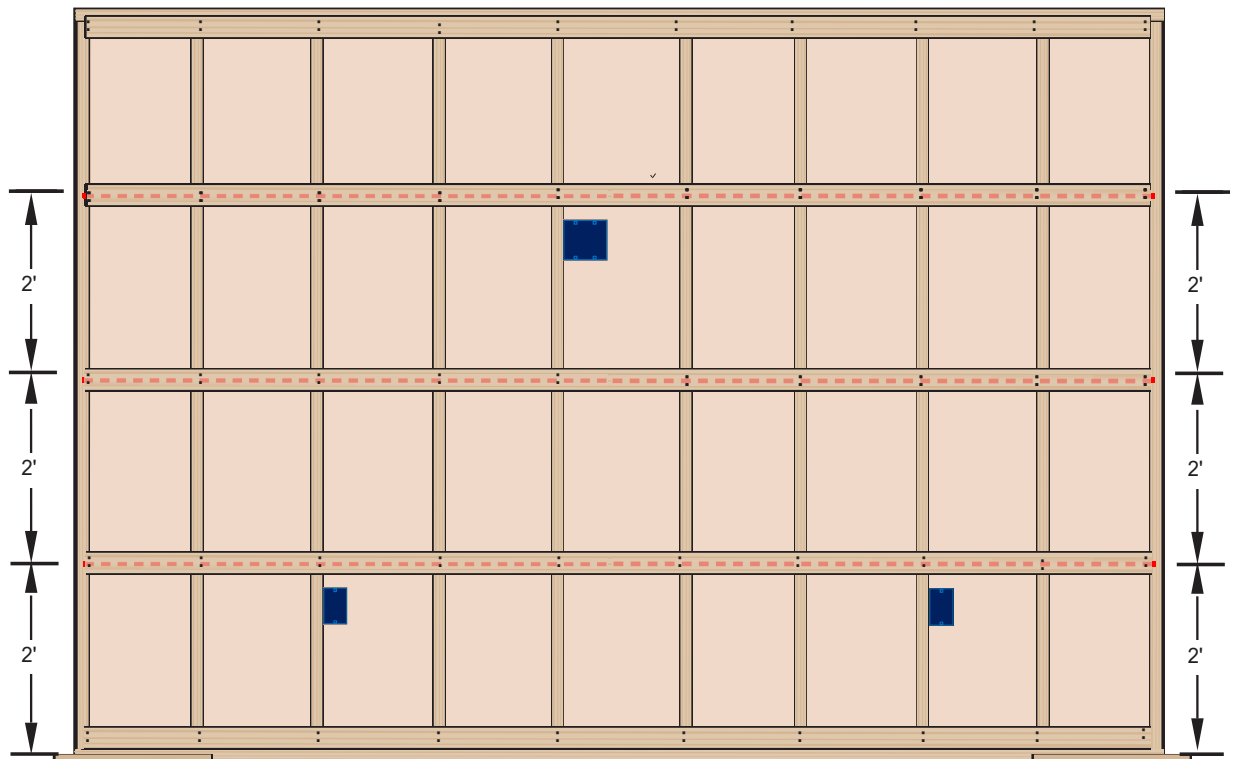- Install receptical cover plates.

Reducer

Baseboard

Rev. 11.15.2022   COWD_SOLD_WALL
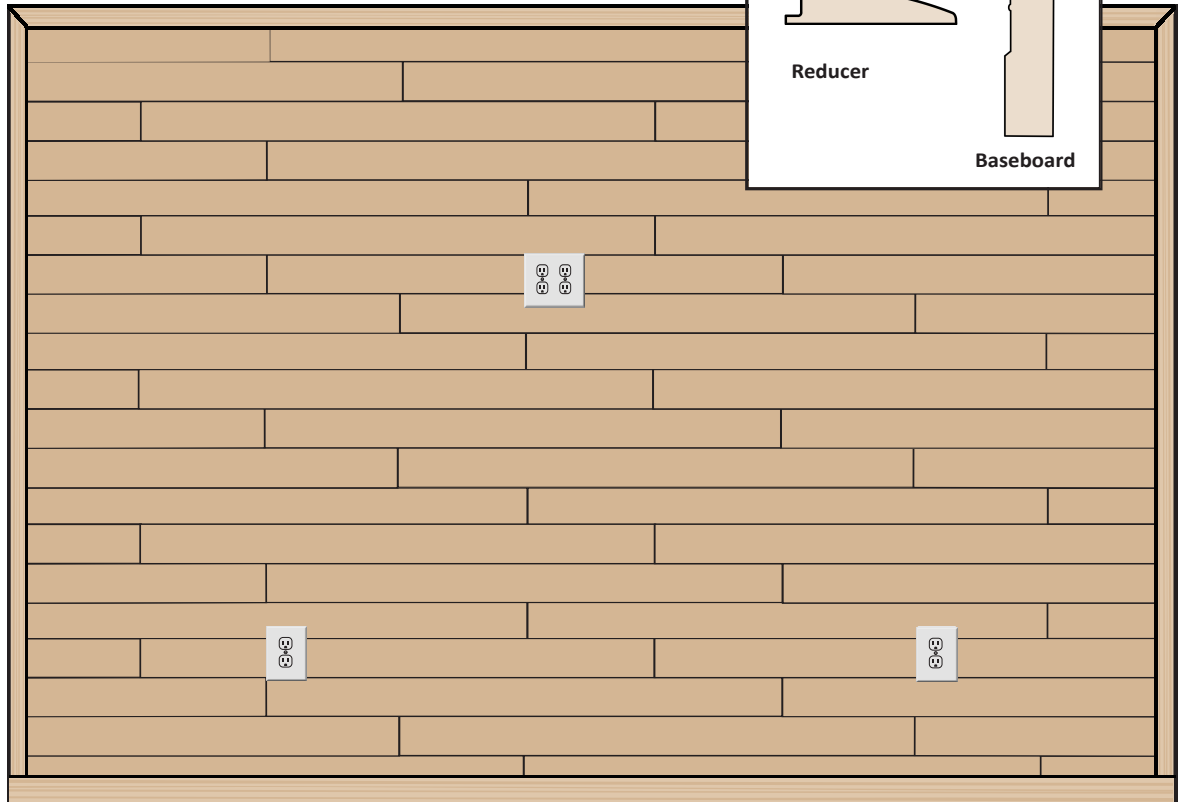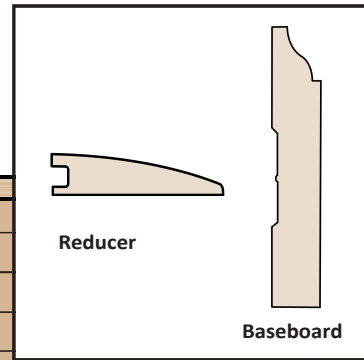
INSTALLING SOLID PINE PANELING DIRECTLY TO WALL STUDS
VERTICAL APPLICATION

When installing paneling "Vertically", there are a few different options to create a nailing base.

Install bracing between wall studs
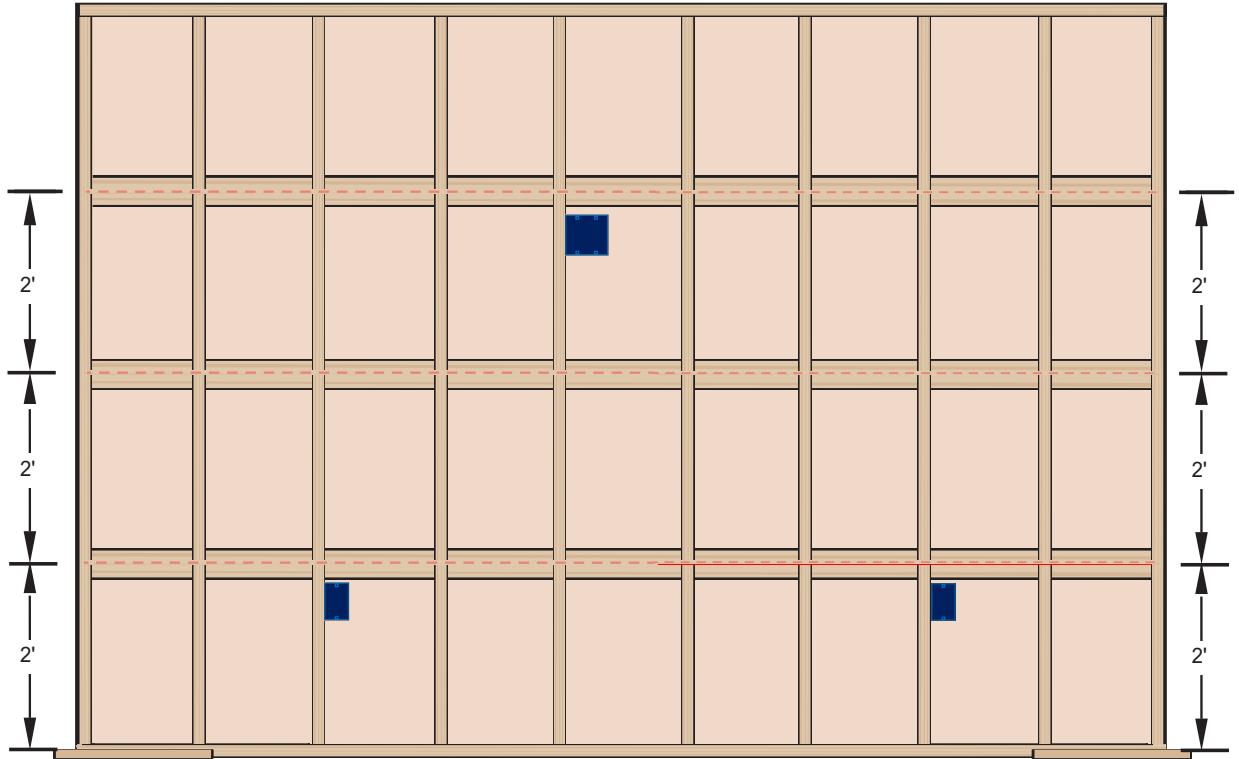

Install 1" x 4" furring strips over wall studs

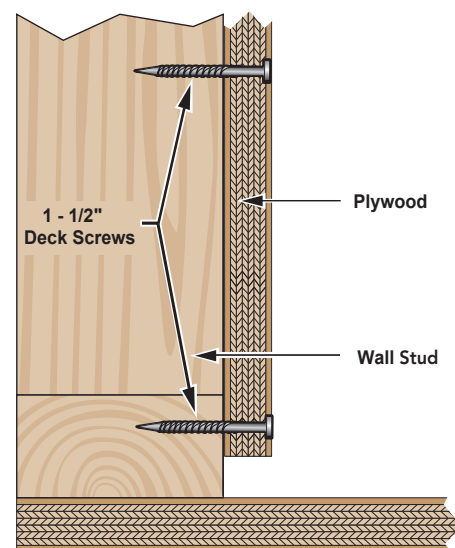Please Note: Click Here for detailed installation steps of Vertical paneling (No Drywall).

- must be installed over existing drywall before installation of the paneling in order to provide an appropriate and stable surface for patterned applications.
- Use 2 -1/2"* deck screws or ring-shank nails to secure plywood to the wall studs with an 8 -10" fastening pattern.
- Check manufacturer instructions to confirm installation details and spacing for the particular units you are using.
- Square-edged plywood panels should be placed with 1/8" gaps between sheets and a 1/8" to 1/4" minimum expansion space at all obstructions (floor, ceiling and inside corner wall.
- Plywood panels should be installed with ends/edges centered on framing. Units should be staggered so vertical joints do not align (as shown below).
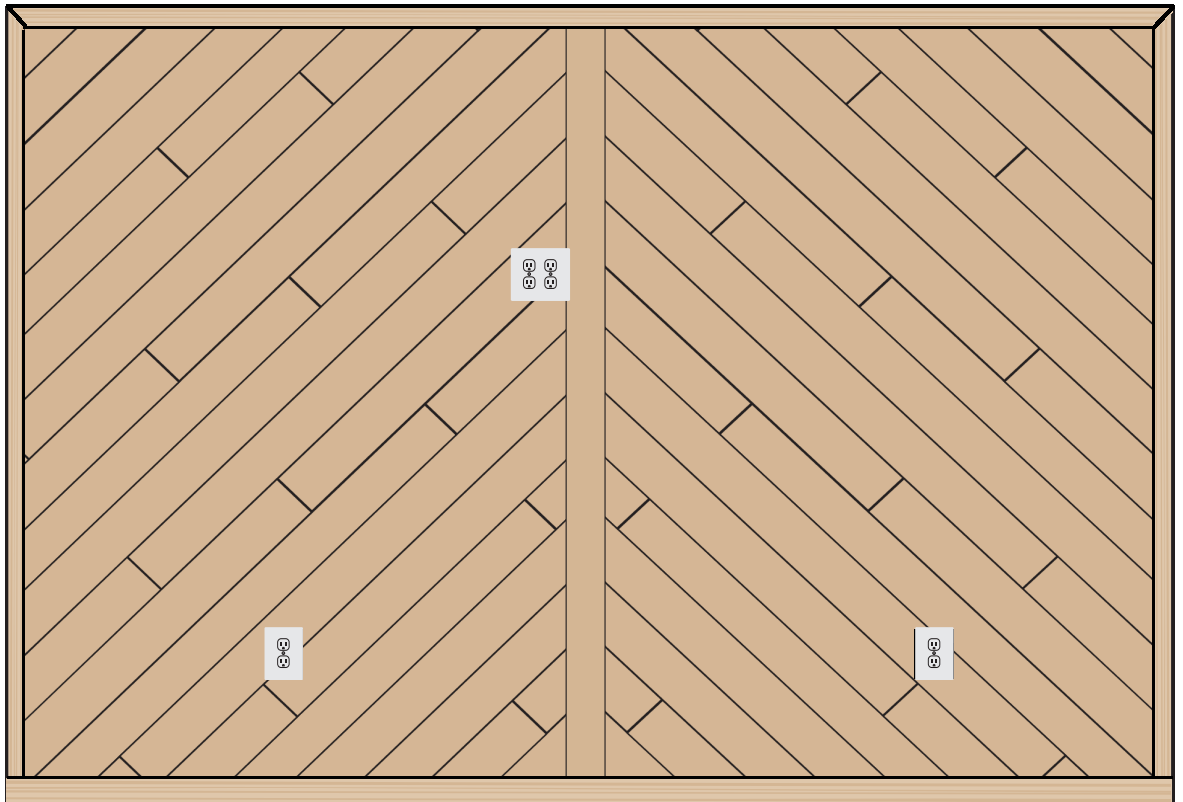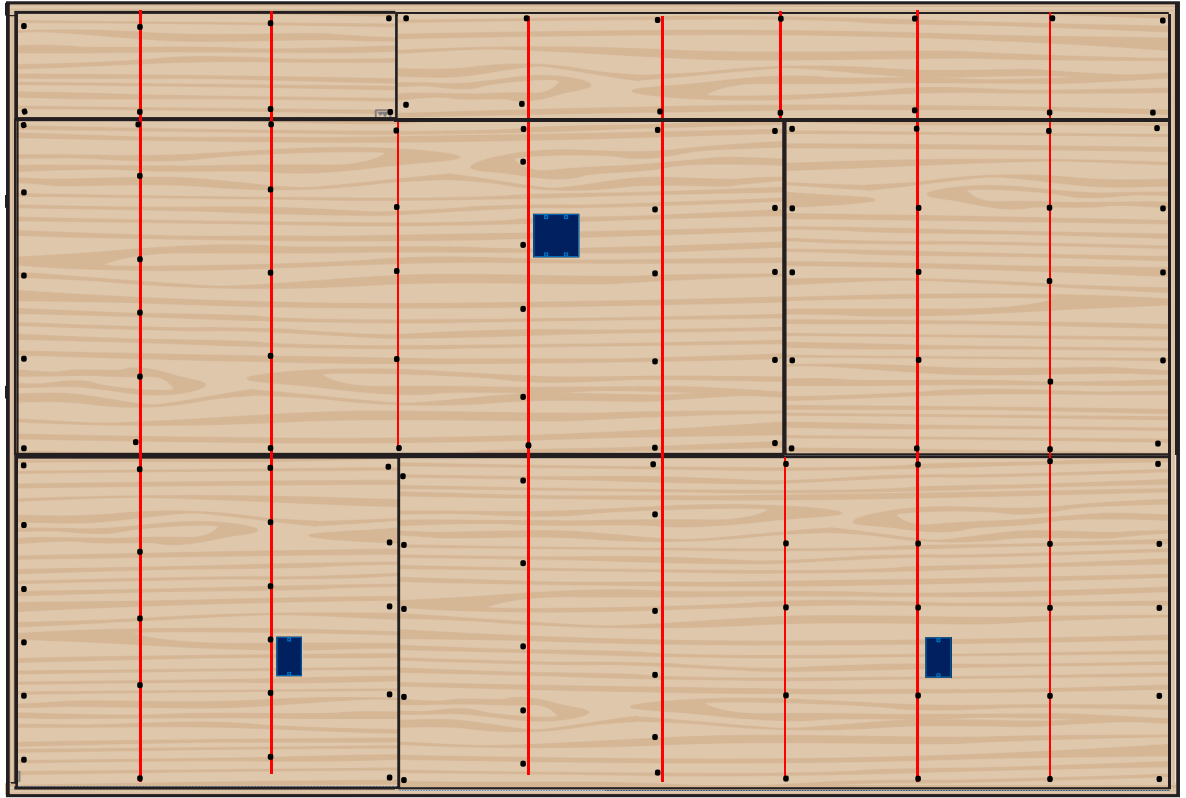- Mark stud locations on surface with chalk lines of plywood as shown.
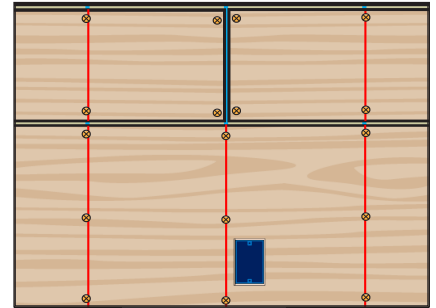
Installation of 5/8" plywood "nailing base" drywall or to wall studs.

2 - 1/2"
Deck Screws

Plywood

Drywall

Wall Stud

1 - 1/2"
Deck Screws
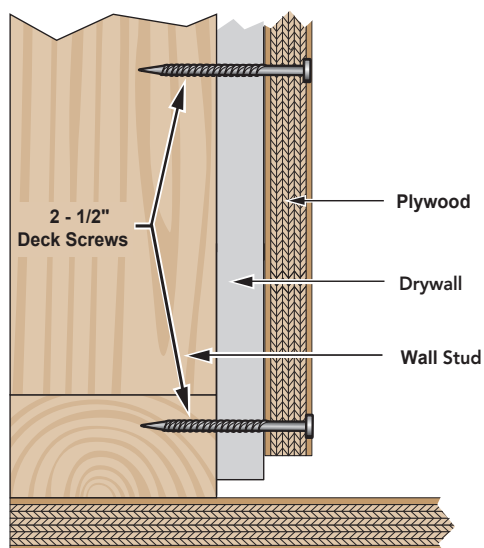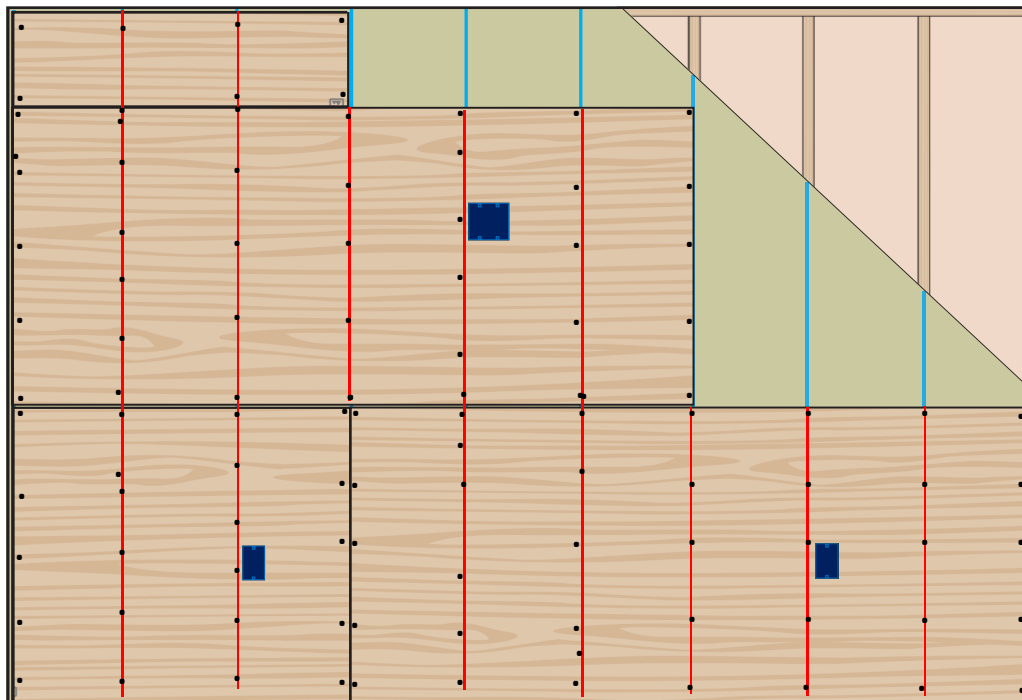
Plywood

Wall Stud

Plywood installed over Drywall

* Plywood attached directly to wall studs

Special Notes:
When 5/8" plywood is properly installed (either directly to the wall studs or over drywall), wall paneling may be installed vertically, horizontally, diagonally or in any pattern imagined.

Installation of Pine Paneling over Plywood nailing base:

- Secure panels using 1-1/2 - 1-3/4" finish nails into plywood as shown.
- Using a finish nailer*, nail at an angle into the groove of the plank to secure the plank to the wall studs. All nails should be counter-sunk so it does not interfere with the next plank.
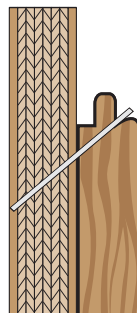
Refer to "Horizontal or Vertical" applications above, for basic layout recommendations dependent on the direction of your pattern chosen for your feature wall.
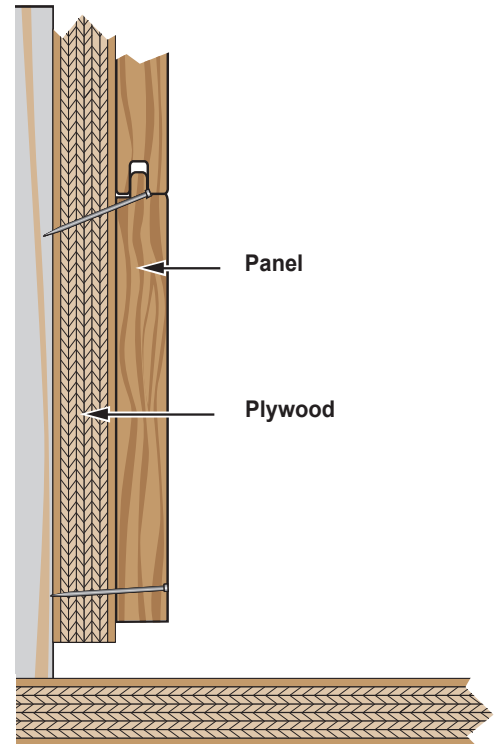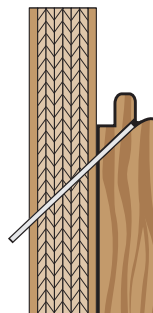
◄ Panel

◄ Plywood

When face or top nailing, pre-drilling is recommended. Pick areas of the grain or pattern that would best hide touch-up fillers. Do not use significantly bowed, crooked or twisted boards. Use a wood spline or slip tongue whenever a change in board direction is needed. Splines should be glued with PVA wood glue and nailed into place. *Excessive force* or pounding boards together during assembly can damage board edges.
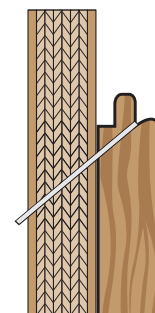
Air compressor tips
Adjust the regulator to ensure proper air pressure and setting of fasteners. Set air compressor to 70-80 PSI or at the low-est air pressure needed to set the fastener flush into the wood, adjust as needed. Do not exceed the nailer or air hose limitations. Air hose over 25' can cause a poor response, loss of proper PSI, jamming and miss-fire. To prevent air leaks, apply white Teflon tape to all threaded connections.

| Air Pressure Too Low | Air Pressure Too High | Correct Air Pressure |

Wood Thickness	Recommended Nailer	Fastener Type	Fastener Length
3/4"	Norge 4 in1 nailer	18 gauge finish nail	1-1/4"– 1-3/4"

FASTENER SPACING

Board Thickness / Width	Fastener Spacing Minimum 2 fasteners per board
3/4" x 3" wide or wider	Place fasteners 1" to 3" from ends and every 6" to 8" apart

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