Maibec CanExel™
Engineered siding

Installation Guide
Maibec CanExel™ Ridgewood D-5 / VStyle / UltraPlank Engineered Siding

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INTRODUCTION

These instructions are in accordance with the standards of the National Building Code of Canada, section 9.27 and are intended to cover the normal building practices encountered in Canada and the United States.

In QC and coastal provinces (NFLD, NS, NB, PEI, BC) CANEXEL SIDINGS MUST BE APPLIED ON FURRING STRIPS ("STRAPPING"). We also recommend the use of a humidistat-controlled mechanical ventilation system, as specified in the N.B.C., in conjunction with strapping. This represents good building practice. Strapping is also required by certain manufacturers of breathable water-resistive barrier.

In all cases, consult your national and local building codes to ensure appropriate installation.

Installation of the siding over furring strips allows ventilation behind the siding, thus reducing the damage that could occur should there be moisture accumulation in the walls due to exfiltration and infiltration. Automatically controlled mechanical ventilation also greatly reduces the risk of condensation moisture problems occurring in the walls.

Canadian Construction Materials Centre (CCMC) recommends that ALL types of horizontal, vertical, and panel sidings for use on NHA housing in the Atlantic Provinces be installed over furring strips.

IN NON-TRADITIONAL ICF AND SIP ASSEMBLIES, THE ICF OR SIP MANUFACTURER MUST PRESCRIBE THE FASTENING SPECIFICATIONS. NOTE: MAIBEC CANEXEL DOES NOT RECOMMEND CANEXEL FOR USE IN THESE NON-TRADITIONAL ASSEMBLIES. IF USED, MAIBEC CANEXEL WILL NOT WARRANT FOR BUCKLING AND SHRINKAGE. HOWEVER, BALANCE OF WARRANTY DOES REMAIN INTACT.

At the time of manufacture, CanExel siding meets or exceeds the performance standards set forth in Composite Panel Association ANSI 135.6-2006 and conform to "CAN/CGSB-11.5 M87."

BEFORE YOU BEGIN INSTALLATION

CHECK YOUR ORDER

- Make sure the product(s) delivered matches your order (colour, model, dimensions, quantity, nails, accessories, etc.).
- Have touch-up paint on hand.
- Inspect each piece prior to installing it. Never install a product that appears to be or that you think may be defective. Installing defective product is not covered by the warranty. Contact Maibec at 1 800 363-1930.

STORAGE

Do not store CanExel Siding in heated buildings. Storage in heated buildings will dry out the siding and make it susceptible to buckling.

The siding must be kept on Maibec CanExel supplied pallets or at least 152 mm (6 in) from the ground, must remain flat and must be covered with a water resistant shroud provided by Maibec CanExel.

Keep siding clean and dry at all times. Inspect prior to application.

Allow siding to adjust to atmospheric conditions before application.

STUD SPACING

CanExel Siding may be installed over sheathing or unsheathed walls (single-skin application) and NAILED INTO STUDS SPACED NOT MORE THAN 406 mm (16 in.) O.C. Use a code approved breathable water-resistive barrier between the siding and the studs or sheathing.

ALLOW AT LEAST 203 mm (8 in.) BETWEEN THE BOTTOM EDGE OF THE SIDING AND THE GROUND. SIDING SHOULD NOT COME IN DIRECT CONTACT WITH CONCRETE. These measures will reduce moisture absorption by the siding.

Siding may be applied over masonry construction as long as furring strips are utilized and securely attached to the masonry assembly on 406 mm (16 in.) centers.

Studs must be a minimum 38 mm x 89 mm (1.5 in. x 3.5 in.).

MOISTURE

Moisture control and moisture vapor control are critical elements of proper housing design. Check your local building codes for application procedures for handling moisture and moisture vapor in your area.

As with all wood products, do not apply engineered wood siding to a structure having excessive moisture conditions such as drying concrete or plaster. If such conditions exist, the building should be well ventilated to allow it to dry prior to the applications of the siding.

Siding must not be applied to green or crooked structural framing members. Do not apply siding over rain-soaked or buckled sheathing materials.

Gutters and kick-out flashing are recommended for control of roof water run off. (See Figure 1).

Dirt or gravel floors in basements or crawl spaces are major sources of moisture. It is therefore essential that such floors be sealed (by a layer of concrete, asphalt, polyethylene, etc.) to minimize the risk of moisture damage to the structure and siding.

New construction produces a lot of moisture as the concrete, lumber and drywall dry out. In colder weather it is recommended that windows be left partially open to dissipate this surge of moisture.

A vapor barrier with a perm rating less than 1 (e.g. polyethylene or foil) must be installed on the WARM SIDE or interior surface of the wall, and extend behind partition walls to form continuous protection of exterior walls. This is necessary to prevent condensation from damaging the components of the wall system. (Note that exterior breathable water-resistive barrier is not a vapor barrier.)

PRIMARY WEATHER RESISTANT BARRIER

A properly installed breathable water-resistive barrier (Tyvek®, Typar, etc.) is required behind the siding. Special care must be taken to completely seal all openings for electrical boxes, conduits, pipes, wiring, and joints or tears in the water-resistive barrier to prevent moisture from entering the wall cavity.

Consult your local building code for details. Maibec CanExel will assume no responsibility for water penetration.

GAPS & SEALANTS

Seal all gaps with a high quality, non-hardening, paintable sealant. Follow the sealant manufacturer's instructions for application and maintenance.

FLASHING, WINDOWS, DOORS & OPENINGS

All openings must be properly sealed and flashed in a manner that prevents water intrusion or buildup. Several examples that accomplish this are shown on the following pages. (See Figures 1-3).

Siding applied adjacent to porches, patios, walks, etc. must have a clearance of at least 51 mm (2 in.) above any surface. The surface must be sloped or otherwise designed to provide proper drainage so the siding is at no time directly exposed to standing water.

Space nails 203 mm (8 in.) O.C. along edge of siding under windows: shim where necessary. DO NOT FORCE OR SPRING SIDING INTO PLACE as this will cause buckling.

ALWAYS LEAVE A 5 mm (3/16 in.) SPACE WHEREVER SIDING BUTTS AGAINST TRIM OR OTHER MATERIALS to allow for expansion. Use J-mould or sealant.

KICK-OUT FLASHING

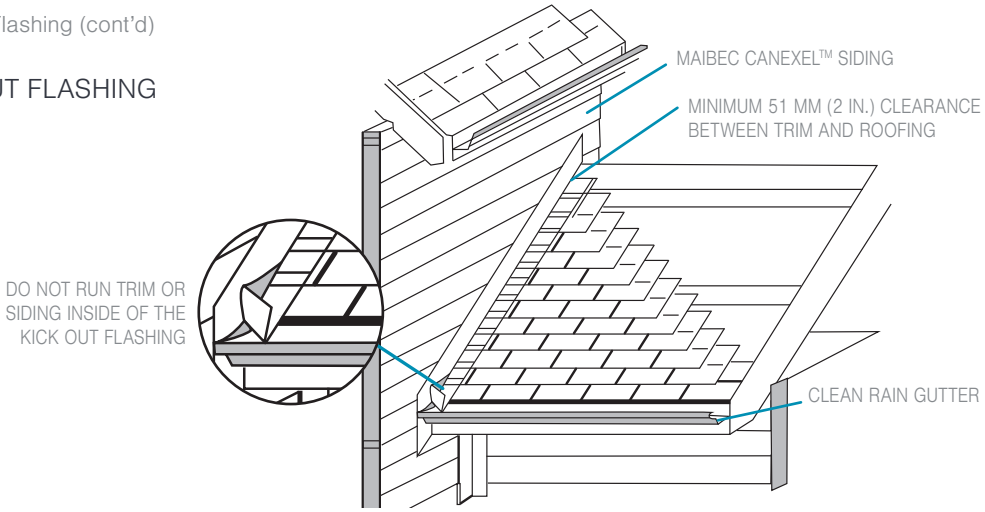
- Install kick-out flashing to direct the water into the gutter
- Install step flashing with minimum 102 mm (4 in.) upper leg
- Properly integrate flashing with the secondary water-resistive barrier. Use housewrap, flashing tape, z-flashing, or other items as needed to maintain the counterflashing principle.
- DO NOT extend the siding or trim into the kick-out flashing or gutter
- Maintain a clearance between the end of the gutter and the adjoining wall to allow for proper maintenance of the siding
- Paint ALL exposed cut edges

See Figure 1 on the next page for more details.

Kick-Out Flashing (cont'd)

FIGURE 1

KICK-OUT FLASHING



FURRING STRIPS (STRAPPING) - Where required with building code

See detailed installation Instructions (See Page 6). Furring strip use will vary with the various orientations of the siding (horizontal, vertical or diagonal). New 25 mm x 76 mm (1 in. x 3 in.) kiln-dried furring strips, straight and undamaged (no rot, not splits), must be used for a new building. For renovation, see below best practice.

RE-SIDING OF EXISTING BUILDINGS

The new siding MUST be installed on new furring strips (strapping), straight and undamaged after the water resistive barrier is replaced. For renovation it is best practice to replace all existing furring strips and water resistive barrier with new compliant elements. The old siding must be removed.

INSULATED SHEATHINGS

Maibec CanExel™ Sidings may be installed over low-compression rigid foam or fiberglass sheathings. The following precautions must be followed:

a) Adequate bracing of the wall in accordance with the National Building Code or other ruling building code is required.

b) For rigid foam sheathing up to 25 mm (1 in.) thick, siding may be nailed directly to the foam sheathing unless a drainage plane is required by the local building code. Nail length must be in-creased to ensure a minimum 32 mm (1-1/4 in.) fastener penetration into the structural framing.

c) For rigid foam sheathing greater than 25 mm (1 in.) or for fiberglass sheathings, a minimum 32 mm (1-1/4 in.) thick by 102 mm (4 in.) wide strapping must be installed over the sheathing to provide a solid, level nailing base for the siding. The strapping must be securely fastened to structural framing spaced no greater than 406 mm (16 in.) OC with a minimum nail penetration of 32 mm (1-1/4 in.) and a maximum nail spacing no greater than the width of the siding.

Maibec CanExel will assume no responsibility for any damage or negative impact arising from the use of foam sheathing.

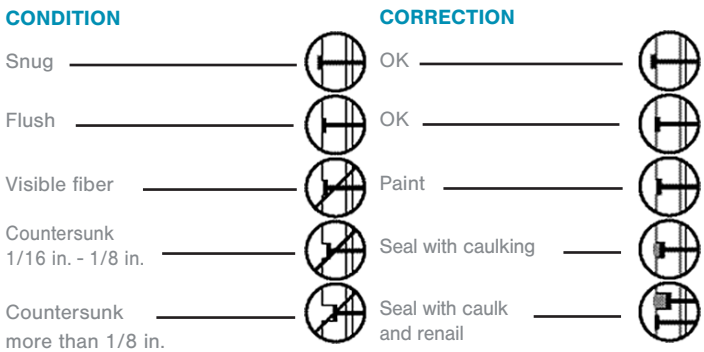
NAILS/FASTENING

Maintain a minimum 32 mm (1-1/4 in.) fastener penetration into the stud, strapping, or combination thereof

- Nailable sheathing may be included in the penetration requirement
- 29 mm (1-1/8 in.) minimum stud penetration for spiral shank

Increase nail penetration if code requires.

Blind nailing is required except around windows and other wall openings.



COMPLIANCE WITH MAIBEC CANEXEL'S INSTALLATION, STORAGE AND MAINTENANCE REQUIREMENTS, AND WITH ALL APPLICABLE BUILDING CODES IS MANDATORY. PROBLEMS CAUSED BY FAILURE TO COMPLY WITH THESE REQUIREMENTS AND CODES MAY NOT BE COVERED BY THE APPLICABLE WARRANTIES.

Nails/Fastening (cont'd)

Use corrosion-resistant nails with a minimum 0.113 in. diameter shank and a 0.240 in. head

Fasten along the nail-line no greater than 406 mm (16 in.) OC

DO NOT USE STAPLES!

HORIZONTAL SIDING FASTENING SPECIFICATION OVER INSULATED CONCRETE FORM (ICF) ASSEMBLIES

THE FOLLOWING FASTENING SPECIFICATIONS ARE STRICTLY LIMITED TO HORIZONTAL APPLICATIONS.

- Use a minimum #8 corrosion resistant screw with minimum penetration of 10 mm (3/8 in.) past the nailing flange
- Larger screws may be required by the ICF manufacturer based on the following minimum withdrawal requirements
  - Minimum withdrawal value of the ICF nailing flange must be 50.0 lbs with maximum 305 mm (12 in.) OC screw spacing
  - Minimum withdrawal value of the ICF flange may be 31.0 lbs with maximum 152 mm (6 in.) OC screw spacing
- The minimum head diameter of screw shall be 0.297 in.
- When strapping or furring strips are required, they must be installed VERTICALLY and fastened securely over the full height of the wall. The strapping must be a minimum 6 mm (1/4 in.) thick by 76 mm (3 in.) wide.
  - TO ENSURE VENTILATION IN HORIZONTAL INSTALLATION, BOTH THE TOP AND BOTTOM OF THE SPACE BETWEEN THE STRAPPING MUST BE LEFT OPEN. NO HORIZONTAL FURRING STRIPS WILL BE TOLERATED. The opening at the bottom should be open to the outside and protected with mesh screen. Locations above and below windows and above doors must maintain a 51 mm (2 in.) space between the furring strips and horizontal framework, trim or moulding.
  - The strapping must be parallel with and attached to the nailing flange and may be spaced up to 305 mm (12 in.) OC if the minimum with-drawal value of the nailing flange is 50.0 lbs using a #8 screw.
  - The strapping must be parallel with and attached to the nailing flange and may be spaced up to 152 mm (6 in.) OC if the minimum with-drawal value of the nailing flange is 31.0 lbs using a #8 screw.
  - Fasten the strapping to the nailing flange such that the strapping will remain centrally located over the nailing flange while the siding is installed.
  - Increase the length of the screw by the thickness of the strapping such that the screw pentrates the siding, strapping, and 10 mm (3/8 in.) beyond the center of nailing flange.
- Space the strapping at the bottom of all ICF walls no greater than 152 mm (6 in.) OC so the first two courses of siding are supported over strapping no greater than 152 mm (6 in.) OC apart. This will require shorter strapping inserted between the primary strapping if the primary strapping is spaced 305 mm (12 in.) OC. This narrower spacing at the bottom of the wall provides uniform support to the siding and the mesh screen.

TRIM

Trim should be thick enough so the siding does not extend beyond the face of the trim.

Trim and fascia must be applied in a manner that will not allow moisture intrusion or water buildup.

ACCESSORIES

A complete range of accessories are available to complement your siding including:

a) Metal starter strips

b) Color-matched mouldings for joints, inside and outside corners, J-mouldings, drip caps and Z flashings

c) Color-matched touch-up paint or stain

d) High quality, non-hardening, paintable sealant colour-coordinated caulk/sealant available through most retailers.

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SIDING APPLICATOR INSTRUCTIONS

Ridgewood D-5 may be applied horizontally or diagonally. VStyle may be installed horizontally, vertically or diagonally. UltraPlank may be applied vertically or diagonally. UltraPlank must not be installed horizontally. Slightly different techniques for proper application are required for each type of use. Be sure to note the correct method for each type of installation.

1. HORIZONTAL APPLICATION: RIDGEWOOD D-5 AND VSTYLE

Level and install metal starter strips along bottom edge of sheathing or sill plate, or up to 25 mm (1 in.) below these, as required by course layout. Install first course of siding so that the machined groove on the lower back of the siding fits over the edge of the starter strip. Fasten the siding by nailing into the nailing line (about 13 mm (1/2 in.) from the top edge of siding) at each stud or furring strip located over the stud, leave no more than 406 mm (16 in.) between nails.

Install subsequent courses of siding so that the machined lower edge on the back of the siding fits over the top edge of the previously installed piece of siding.

When furring strips are required they must be installed vertically and must be nailed into wall studs, 406 mm (16 in.) O.C. over the full height of the wall. Furring strips must not be less than 6 mm (1/4 in.) thick and nail penetration into the stud a minimum of 32 mm (1-14 in.).

To ensure ventilation, both the top and bottom of the space between furring strips must be left open. The opening at the bottom should be open to the outside and protected by a mesh screen or ventilated starter strip, and ventilated J strips for top of wall. Under and above windows and above doors maintain spacing of 51 mm (2 in.) between furring strip and horizontal framing (See Figure 5). At the bottom, a short furring strip about 305 mm (12 in.) long should be installed vertically centered between each main furring strip. This will provide better support and will ensure that the mesh screen or the ventilated strip fills the opening.

2. VERTICAL APPLICATION: ULTRAPLANK AND VSTYLE

For Ontario, vertical application allow for horizontal furring strips spaced not more than 406 mm (16 in.) O.C.

In Québec and Maritimes double-furring or diagonal furring is mandatory. Double furring is strongly recommended as it allows for continuous ventilation and water drainage. For horizontal and diagonal installations, furring strips must be a minimum of 25 mm actual (1 in.) thick and nailed directly into the framing or combined structural wood sheathing and framing.

To ensure ventilation and drainage, leave periodic spacing of 25 mm to 102 mm (1 to 4 in.) for horizontal and diagonal furring strips. (see Figure 6). If double strapping is used, to ensure ventilation and drainage, both top and bottom of the furring strips must be left open and protected by a mesh screen or ventilated starter strip and ventilated J Strip for top of wall.

When siding is installed vertically the lower end of the laps must be protected from the elements.This can be done by coating the exposed ends with the appropriate CanExel touch-up paint or stain. (see steps 4 & 5 for more details).

3. DIAGONAL APPLICATION: RIDGEWOOD D-5, VSTYLE AND ULTRAPLANK

Diagonal application allow for horizontal furring strips (for Ontario) or diagonal furring strips. Nail spacing should not exceed 406 mm (16 in.). Furring should be spaced 305 mm O.C. (12 in.) and securely nailed into the structural framing. For horizontal and diagonal installations, furring strips must be a minimum of 25 mm actual (1 in.) thick and nailed securely into the combined structural wood sheathing and framing. To ensure ventilation and drainage when applying siding vertically, leave periodic spacing of 25 mm to 102 mm (1 to 4 in.) for horizontal and diagonal furring strips. (See Figure 5).

When siding is installed diagonally the lower end of the laps must be protected from the elements. This must be done by coating the exposed ends with the appropriate CanExel touch-up paint or stain. (see steps 4 & 5 for more details)

4. JOINT TREATMENT

The vertical joint between adjacent siding pieces must be located over the middle of a stud or furring strip that is also located over a stud. Leave a 5 mm (3/16 in.) gap for joints with sealant and 6 mm (1/4 in.) for joint-mouldings between two boards. Nail on each side at the nailing line. For Ridgewood D-5 and VStyle installed horizontally, insert a joint moulding into the 6 mm (1/4 in.) gap or seal the 5 mm (3/16 in.) gap. For Ridgewood D-5 or VStyle installed diagonnaly use a sealant in the 5 mm (3/16 in.) gap. All UltraPlank or VStyle joints in vertical installations must be sealed with a high quality paintable non-hardening sealant. Use special care to not overlap sealant onto the painted surface. Stagger joints from one course to the next. **Do not use the VStyle aluminum joint moulding betwen VStyle vertical or diagonal boards.**

See Figures 2 and 3 on the next page for more details.

Siding Applicator Instructions (cont'd)

FIGURE 2
BOARD-TO-BOARD

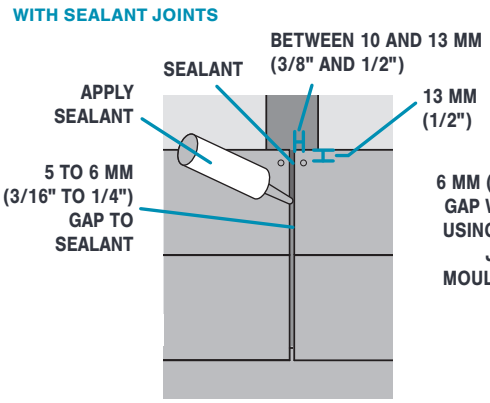
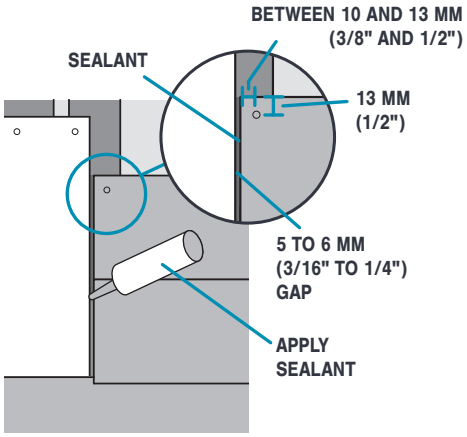


FIGURE 3
BOARD-TO-TRIM



USE SEALANT ONLY WHERE NEEDED.
IMPROPER USE OF SEALANT MAY PREVENT WATER DRAINAGE.

5. TWO STORY OR MORE WALLS (NEW CONSTRUCTION ONLY)

Where siding is applied vertically or diagonally on walls two stories or more, cut the siding at each floor line leaving a 5 mm (3/16 in.) gap between the bottom and top pieces. Finish the gap by sealing the gap with a high quality paintable non-hardening sealant. If a horizontal band or trim separates the siding between floors, install a Z flashing and seal the end of the siding with the Canexel touch up paint.

If the siding is installed vertically on a wall that exceeds 3 m (approx. 10') in height, the code's fire safety requirements may require a fire-blocking barrier.

6. CORNER TREATMENT

Siding should be butted to inside and outside corners leaving a 5 mm (3/16 in.) gap. When CanExel aluminum inside and outside corners are used they should be installed BEFORE the siding; if not, wood trim may be applied over the siding after its installation. (See Figures 5G-5H).

7. TOUCH-UPS

Color-matched touch-up paint can be used to repair small scratches and chips that may occur during installation. Dab the touch-up with a Q-tip or point of a cloth to soak in to the raw surface, do not brush or rub.

See the touch-up requirements at maibec.com for more details.

CARE OF CANEXEL PREFINISHED SIDING

All Canexel Siding finishes are long wearing and require little maintenance. For best results, siding must be washed annually using non-abrasive household cleaners according to the manufacturer's recommendations. Test cleaners on a small area to ensure they do not damage the finish. Rinse siding surface thoroughly after cleaning. DO NOT USE PRESSURE WASHER.

For further product information in the US and Canada, please call 1 800 363-1930 or write to: Maibec CanExel™, 202 - 1984, 5e Rue, Lévis, Québec G6W 5M6, Canada.

See the maintenance guide at maibec.com for more details.

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FIGURE 4

ROOF FLASHING DETAIL

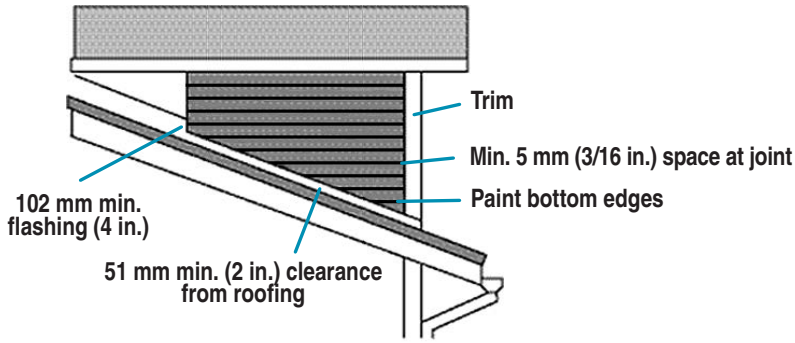


FIGURE 5

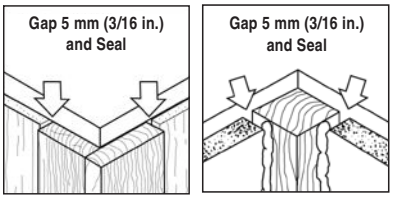
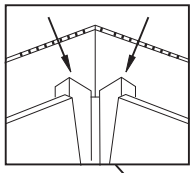


FIGURE 5G FIGURE 5H

FIGURE 5A



OUTSIDE CORNER POST
3 MM (1/8 IN.) GAP

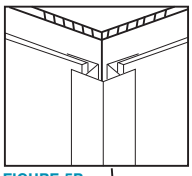
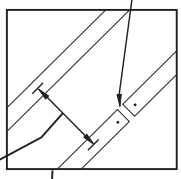


FIGURE 5B

FIGURE 5J



305 MM (12 IN.) BETWEEN DIAGONAL FURRING STRIPS

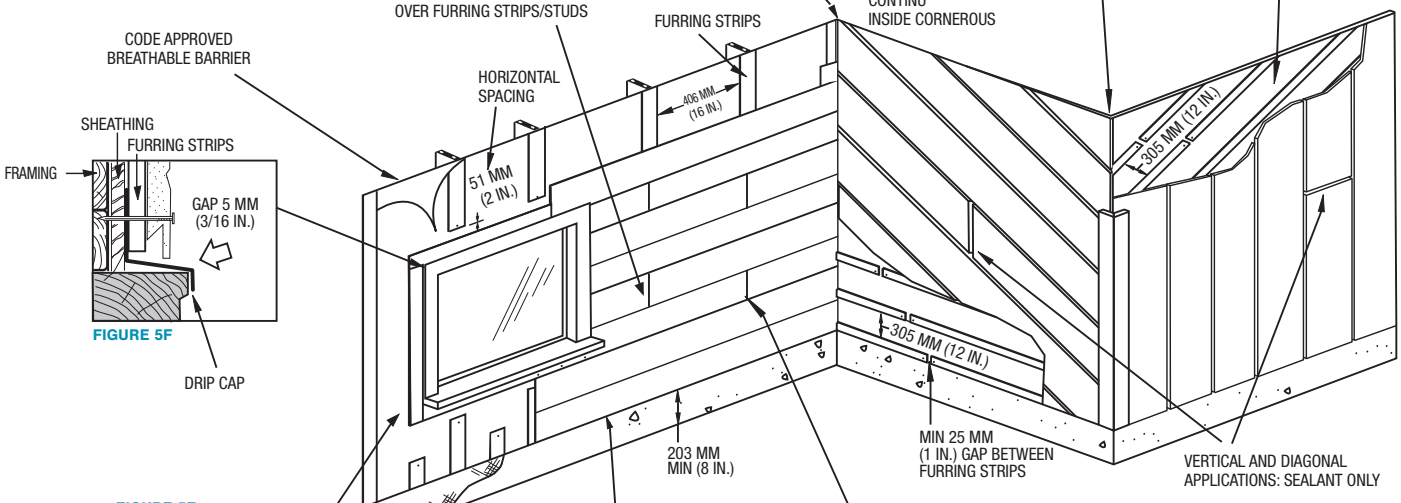
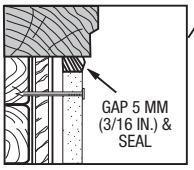


FIGURE 5F

FIGURE 5E



MESH SCREEN

SURFACE NAILS – 203 MM (8 IN.) MAX.

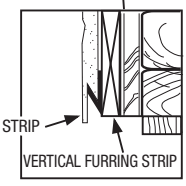


FIGURE 5D

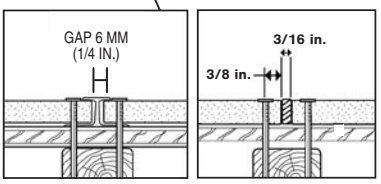
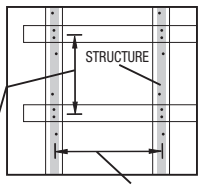


FIGURE 5C

FIGURE 5i



305 MM (12 IN.) BETWEEN HORIZONTAL FURRING STRIPS

406 MM (16 IN.) BETWEEN VERTICAL FURRING STRIPS

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