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5/04/2022

HUTT CITY COUNCIL



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9.6 Profiled Metal Wall Cladding

Horizontal profiled metal wall *cladding* shall be fixed over a *drained cavity* as described in Paragraph 9.1.8.

Vertical profiled metal wall *cladding* shall be *direct fixed* to *framing* over a *roof underlay*.

Refer to Table 3: Suitable *wall claddings*.

9.6.1 Limitations

This Acceptable Solution is limited to corrugated or *trapezoidal* metal wall *cladding* with the profiles, as shown in Figure 38, and applied as outlined in Table 3.

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9.6.2 General

COMMENT:

Refer to Paragraph 1.5 for qualification of installers.

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9.6.3 Materials

9.6.3.1 Choice of metal

The metal *cladding* shall be selected according to the exposure conditions in Table 20 as defined in:

- a) NZS 3604, or
- b) AS/NZS 2728.

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COMMENT:

The exposure zone in which a *building* is located can affect the *durability* of *flashings*.

Exposure zones are defined in NZS 3604, based on the likely exposure to wind-driven sea-salt. Corrosion due to geothermal or corrosive industrial atmospheres, as defined in NZS 3604, requires *specific design*.

Exposure zones are based on AS/NZS 2728. AS/NZS 2728 lists atmospheric classes derived from ISO 9223 for Australia and New Zealand.

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9.6.3.2 Steel

Materials for the manufacture of profiled steel *cladding* shall:

- a) Have a *BMT* of 0.4 mm minimum,
- b) Be grade G550, or G300 for curved and crimped cladding
- c) Be selected for corrosion protection according to the intended exposure zone as shown in Table 20.

9.6.3.3 Aluminium

Aluminium for the manufacture of profiled aluminium wall *cladding* shall comply with AS/NZS 1734, and be:

- a) A *base metal thickness (BMT)* of a minimum of 0.7 mm,
- b) Minimum 5000 series.

For pre-painted aluminium, a factory-applied finish complying with AS/NZS 2728 shall be applied.

9.6.4 Maintenance

Refer to Paragraph 2.5.

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9.6.5 Profiles

Profiles covered in this Acceptable Solution are:

- a) Corrugated – curved with a minimum crest height of 16.5 mm minimum, and
- b) *Trapezoidal* – symmetrical and asymmetrical with a minimum crest height of 19 mm.

For details of these profiles, refer to Figure 38.

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9.6.6 Fixing

The *cladding* shall be screw-fixed through the troughs and battens, where applicable, into the *framing*. Fixings shall:

- a) Be minimum 12-gauge hexagonal head, self-drilling wood screws,
- b) Penetrate the *framing* by a minimum of 30 mm,
- c) Be minimum Class 4 to AS 3566: Part 2, selected from Table 20,
- e) Include neoprene (having a carbon black content of 15% or less by weight) or EPDM sealing washers as shown in Figure 39, and
- f) Be used on the *cladding* at side laps and every second trough or, ~~for trapezoidal where the rib centres exceed 150 mm, at side laps and every trough:~~
 - i) to *framing*, and
 - ii) at all external and internal corners.

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9.6.7 Flashings

Flashings used with metal *wall cladding* shall be in accordance with Paragraph 4.0, and with the following requirements:

- a) *Hooks* and *hems* shall be as shown in Figure 5,
- b) Have joints formed with laps and sealant as shown in Figure 6,

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- c) Where shown, sealant shall be neutral cure, complying with:
 - i) Type F, Class 20LM or 25LM of ISO 11600, or
 - ii) low modulus Type II Class A of Federal Specification TT-S-00230C,

- d) *Under-flashings* shall be fixed to *framing* at 600 mm maximum centres.

- e) *Flashings* shall be fixed together at junctions at 50 mm maximum centres or to *cladding* at 900 mm centres with:

- i) for galvanized steel, 4 mm diameter monel metal or stainless steel rivets, where compatible as per Table 21, or
- ii) for aluminium-zinc coated steel, 4 mm diameter aluminium rivets, or
- iii) for aluminium, 4 mm diameter aluminium rivets.

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9.6.8 Vertical profile – direct fixed

9.6.8.1 Installation

For *direct fixed* vertical profile, the *wall underlay* shall be in accordance with the properties listed for *roof underlay* in Table 23.

For copper-based treated *framing* or *underlay* refer to Paragraph 9.6.9.2.

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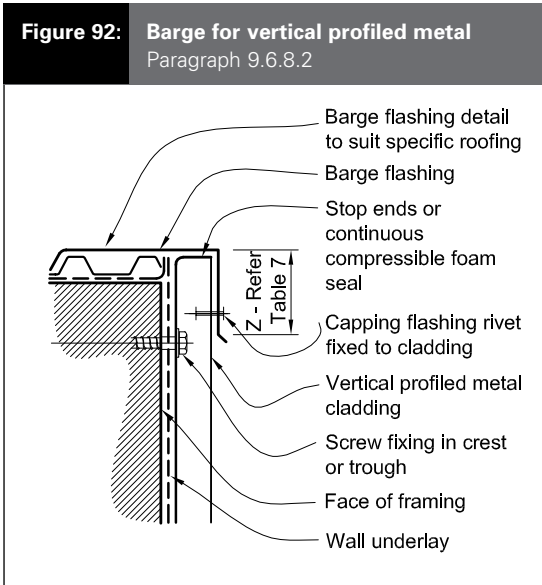
COMMENT:

In *direct fixed* metal *cladding*, the *wall underlay* will be in contact with the back of the vertical profiled metal *cladding*. *Underlay* is needed to separate treated timber from the back of the metal to minimise the risk of *electrolytic corrosion*.

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9.6.8.2 Barges

Barge flashings shall be as shown in Figure 92.



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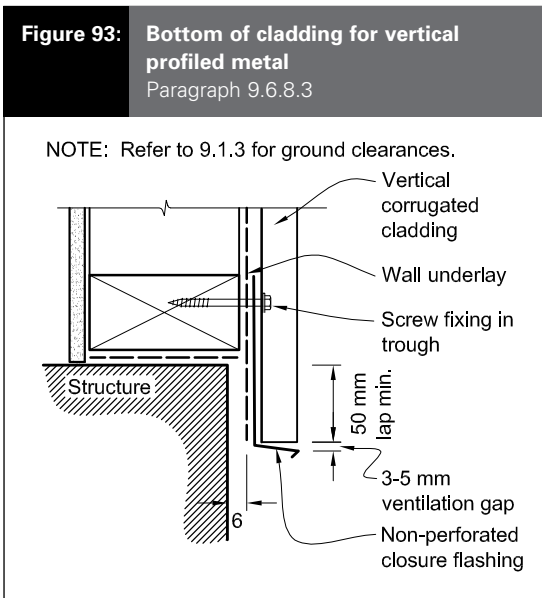
9.6.8.4 Corners

Direct fixed vertical profiled metal wall cladding shall be over-flashed at external and internal corners as shown in Figure 94. The cover of the flashings shall:

- a) Be dimensioned to suit the metal wall cladding profile,
- b) Cover at least two crests for corrugated and single crests for other profiles, and
- c) Terminate as shown in Figure 93.

9.6.8.3 Bottom of cladding

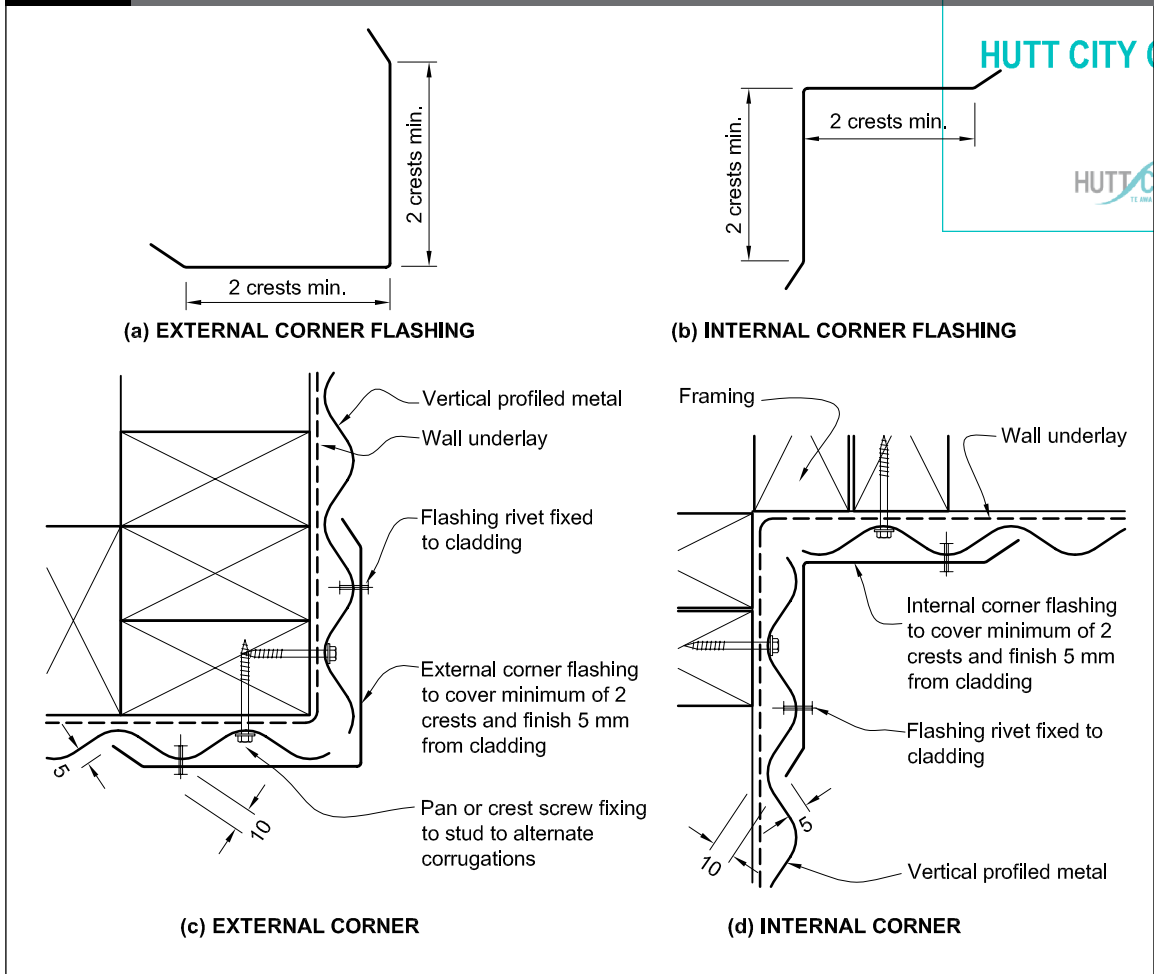
The bottom edge of the cladding shall overlap the foundation wall as described in Paragraph 9.1.3 and as shown in Figure 93.



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Figure 94: Corners for vertical profiled metal
Paragraph 9.6.8.4



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9.6.8.5 Vertical profile: penetrations

Pipe penetrations shall be as per Figure 53.

The heads of larger penetrations shall be flashed in similar fashion to Figure 69, with head flashings adjusted to suit the profile and other flashings as per window and door details in relevant paragraphs.

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9.6.8.6 Vertical profile: windows and doors

Windows and doors in vertical profiled metal claddings shall be flashed as shown in Figure 95 and Figure 100.

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6 Rib Specification

Description:

6 Rib is manufactured as roofing and is available in NZ Steel Endura and Zinalume colours.

6 Rib is cold roll formed using prime grade G550 steel (550 Mpa minimum yield stress) with a base metal thickness of 0.35mm for IL1 & 0.40mm for IL2. The coverage is 760mm and each rib has a height of 23mm.

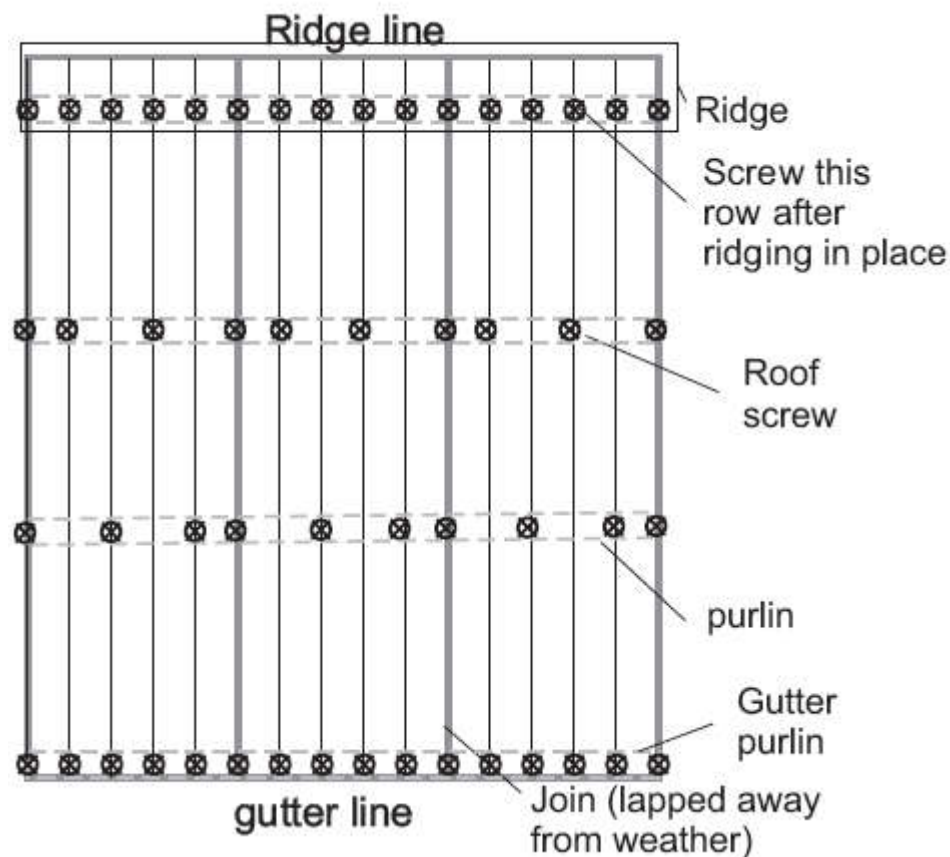
Fixing is to purlins at 1000mm maximum centres with 65mm tek screws with colour matched heads with neoprene seals.

Installation:

Lay sheets with laps away from the prevailing weather. Lap bottom edge of sheet 50mm over gutter.

Fix roofing through every rib to gutter purlin & ridge purlin. For intermediate purlins fix the sheet lap, miss one, hit, miss one, hit (see below). All cutting of roofing shall be by shears or nibblers.

ROOFING SCREWING PATTERN



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Installers should wear clean soft soled shoes when walking on roof and should take all reasonable care to ensure the surface film of the roofing is not scratched. After completion of the roof wash down the entire surface with hose and soft bristled broom to remove all fixing debris and swarf. Ensure all fixing debris and swarf is washed out of gutters.

Limitations and Maintenance:

6 Rib colorsteel roofing will perform to the requirements of New Zealand Building Code, Clause B2 Durability if installed and maintained in accordance with NZ Steels recommendations.

Profile Dimensions:

