



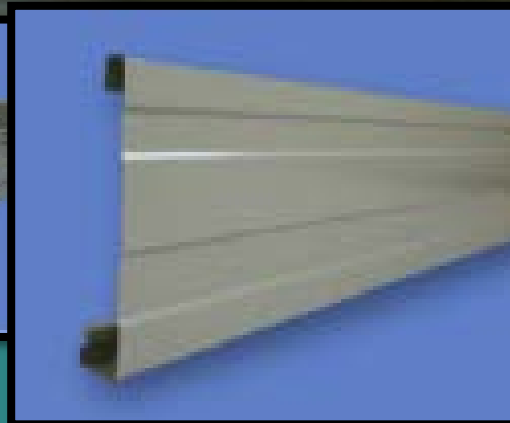
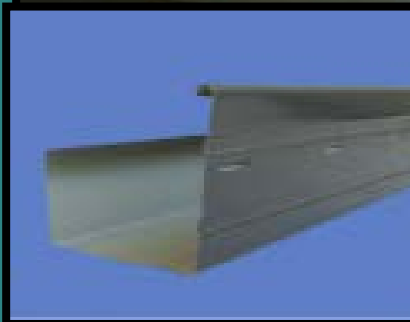
Metroll®

BETTER SERVICE • BETTER BUILDING SOLUTIONS

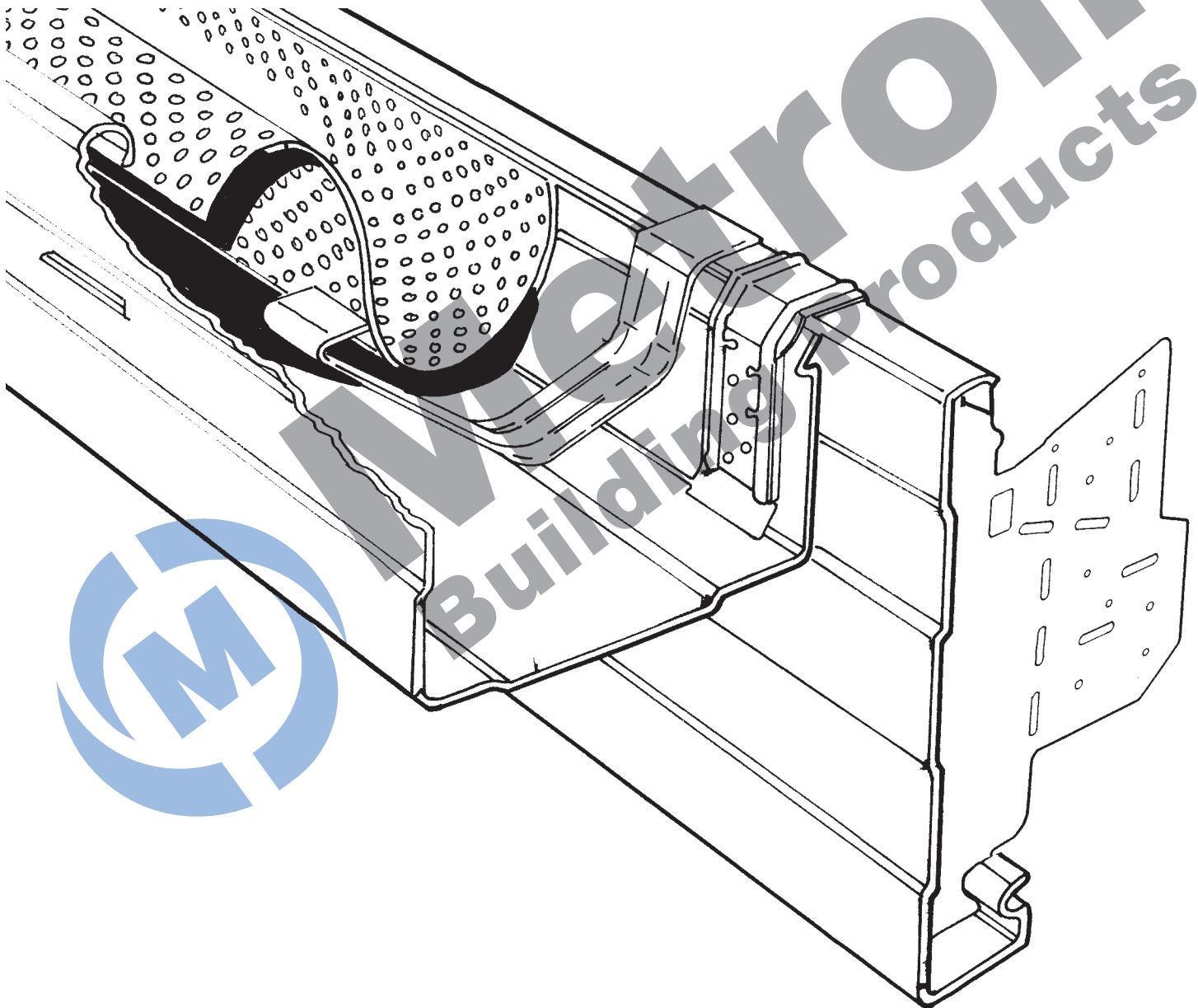
Effective from 1st October 2012

FASCIA AND GUTTER INSTALLATION MANUAL

- Components
- Installation

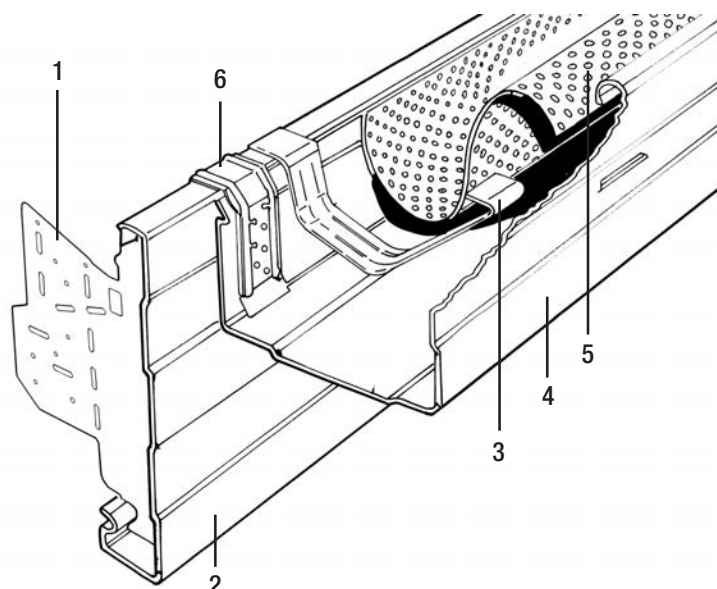


FASCIA AND GUTTER INSTALLATION MANUAL

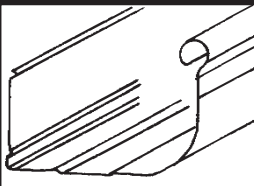
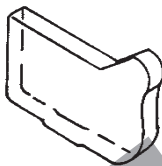
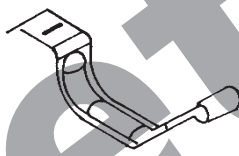


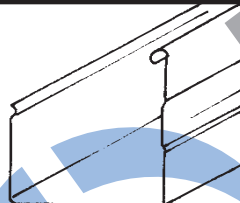
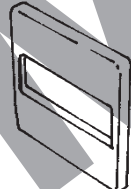

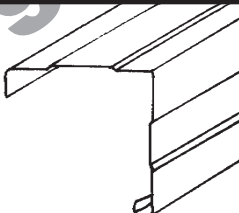
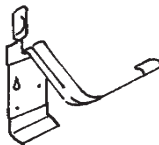

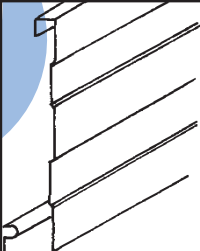
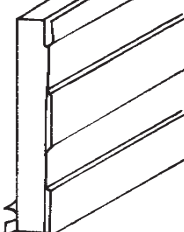
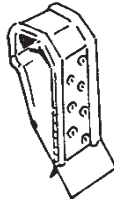
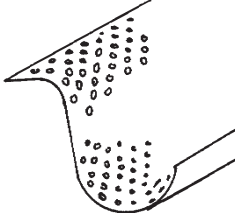
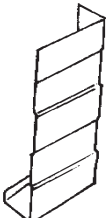
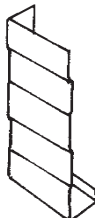
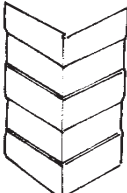

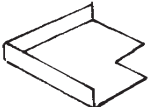


EQUIPMENT

COMPONENTRY



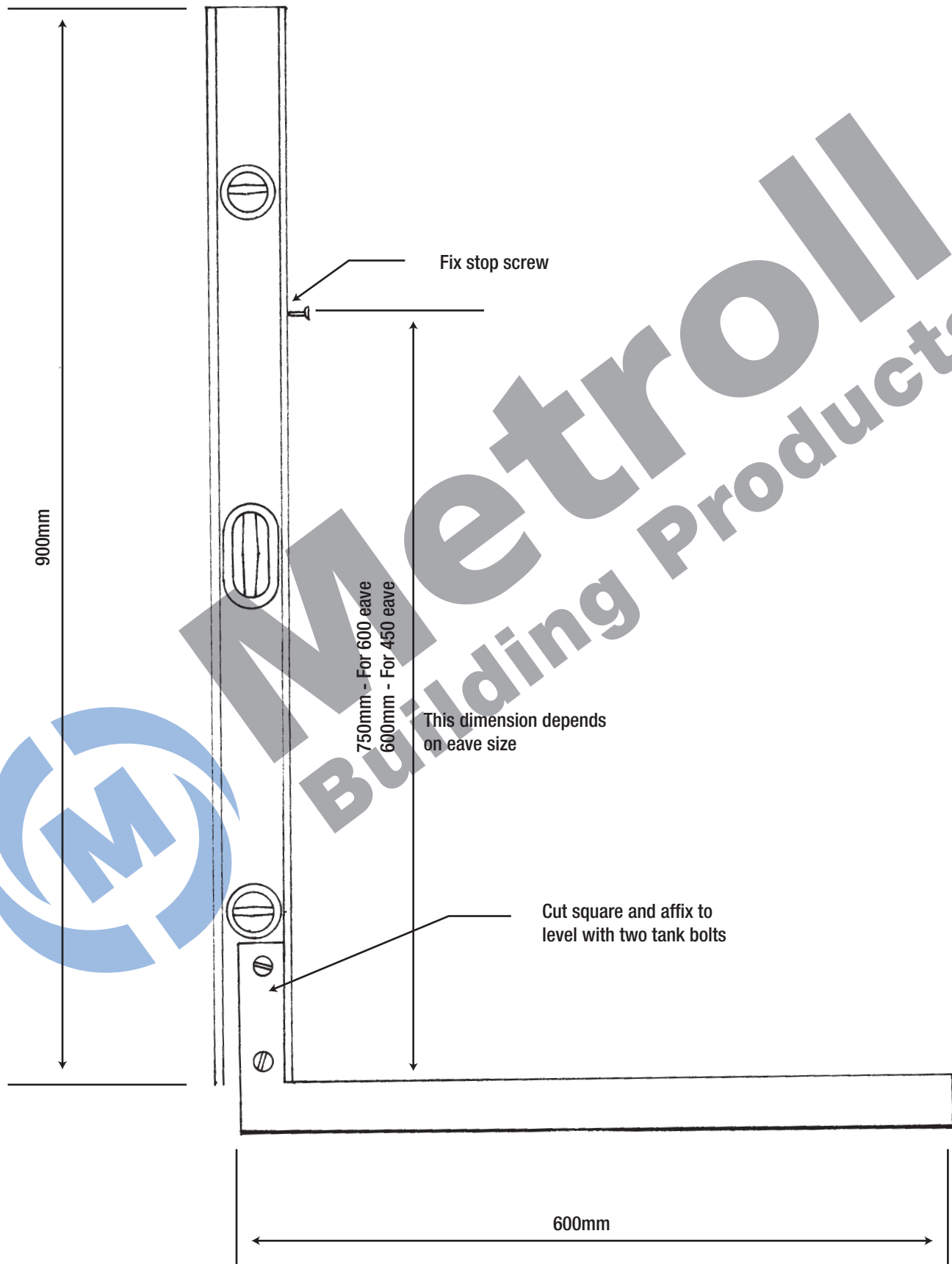
- 1 RAFTER BRACKET
- 2 METROLINE FASCIA
- 3 OVERSTRAP
- 4 METROLINE GUTTER
- 5 LEAF GUARD GUTTER PROTECTOR
- 6 SPRING CLIP

 Quad gutter	 Quad gutter stop end	 Quad gutter overstrap	 Quad gutter external mitre	 Quad gutter internal mitre
 Metroline square gutter	 Metroline square gutter stop end	 Metroline square gutter overstrap	 Barge Capping	 General purpose gutter bracket
 Rafter bracket	 Steel Fascia	 Fascia cover	 Spring clip	 Leaf guard
 Fascia RH barge mitre	 Fascia LH barge mitre	 Fascia external mitre	 Fascia internal joining sleeve	 Fascia internal mitre

Equipment

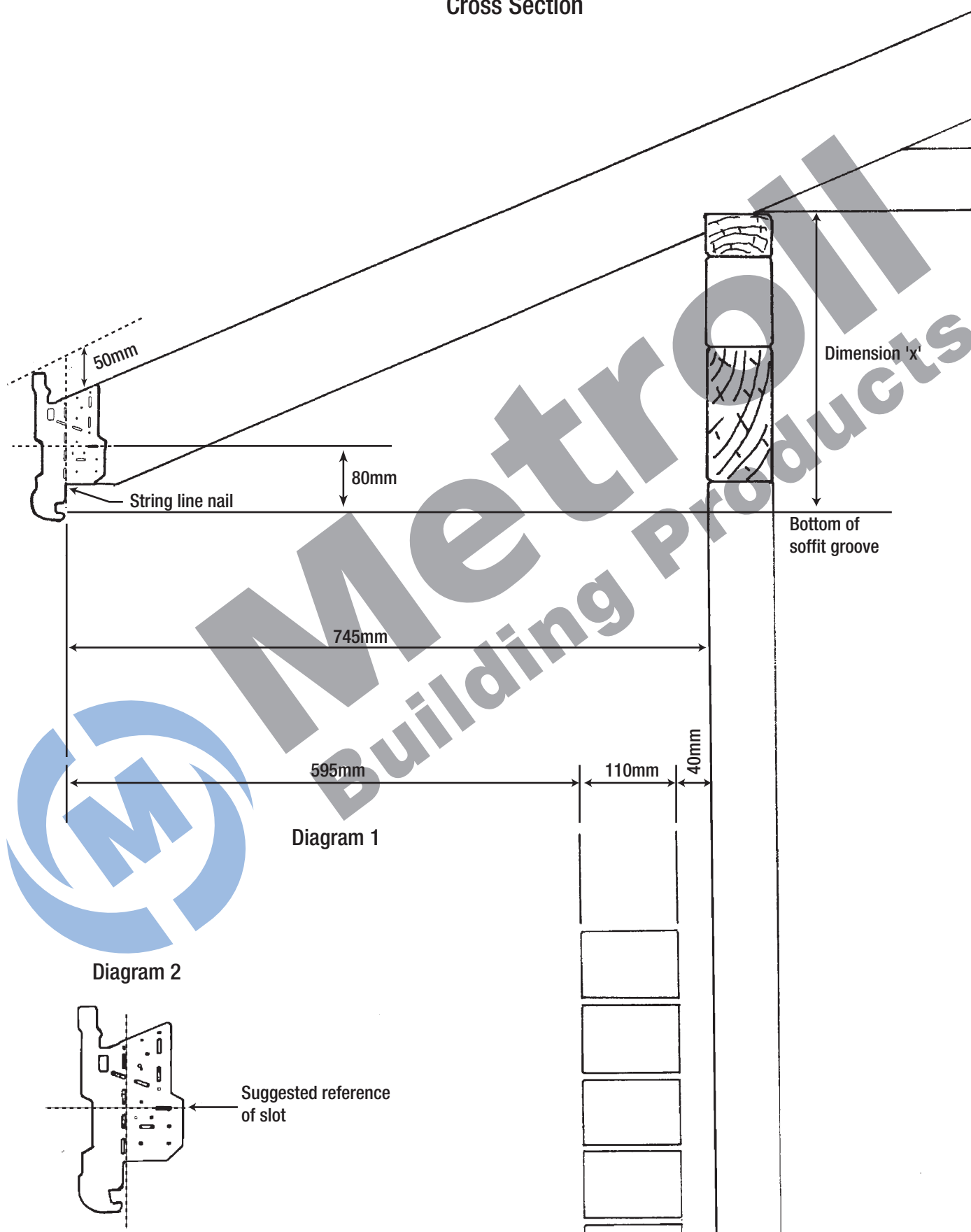
Square Level

1 off required



Typical Brick Veneer

Cross Section



Step 1

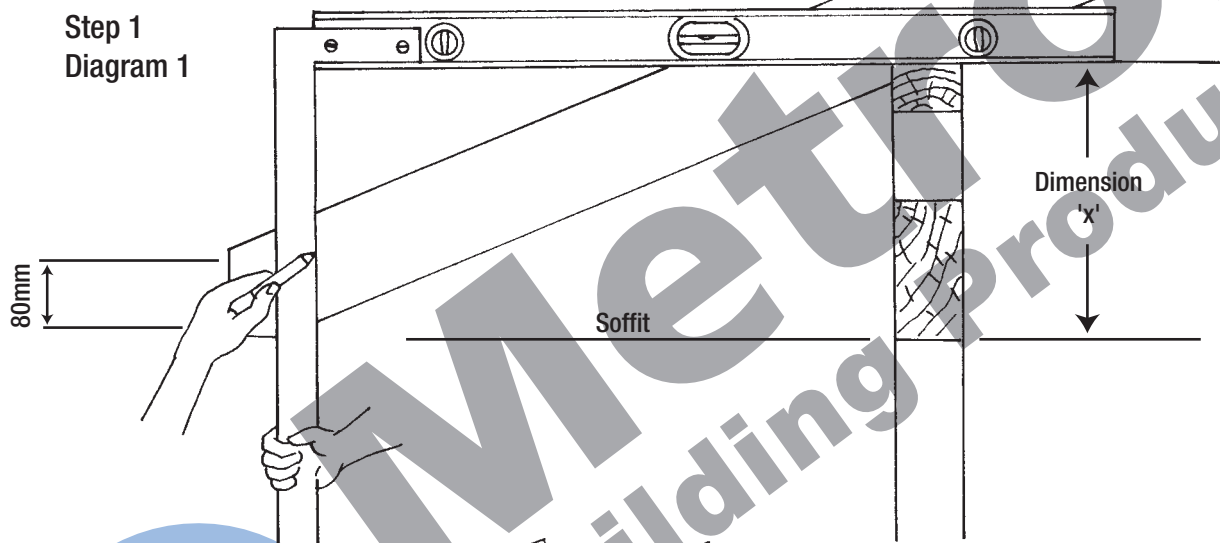
Establish Dimension 'x'

Most project builders have a standard Dimension 'x' which is the distance from the top of the top plate to the bottom of the soffit. It usually ranges from 305mm to 315mm for 22.5 degree roof pitches. (Many builders have the soffit sit on top of the window frame.)

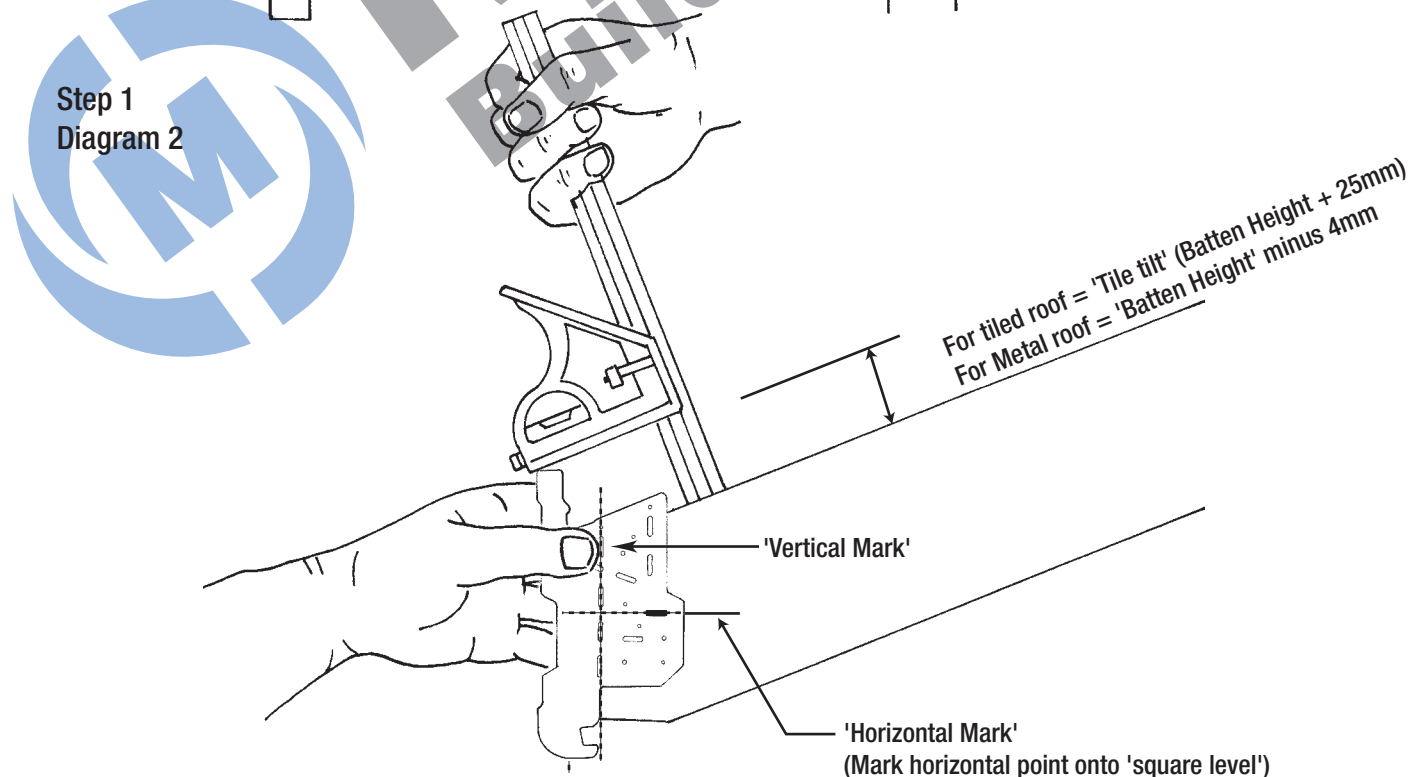
Your horizontal mark will be Dimension 'x' minus 80mm to the 'Suggested Reference' of the slot on the rafter bracket (i.e. horizontal mark is 80mm above soffit line).

If no standard "Dimension 'x'" is available, check with the builder for the tile tilt or batten height. Use an adjustable square as illustrated in step 1 Diagram 2 for setting of tile tilt or batten height for a metal roof. This can be undersized but not oversized for a metal roof.

Step 1
Diagram 1



Step 1
Diagram 2

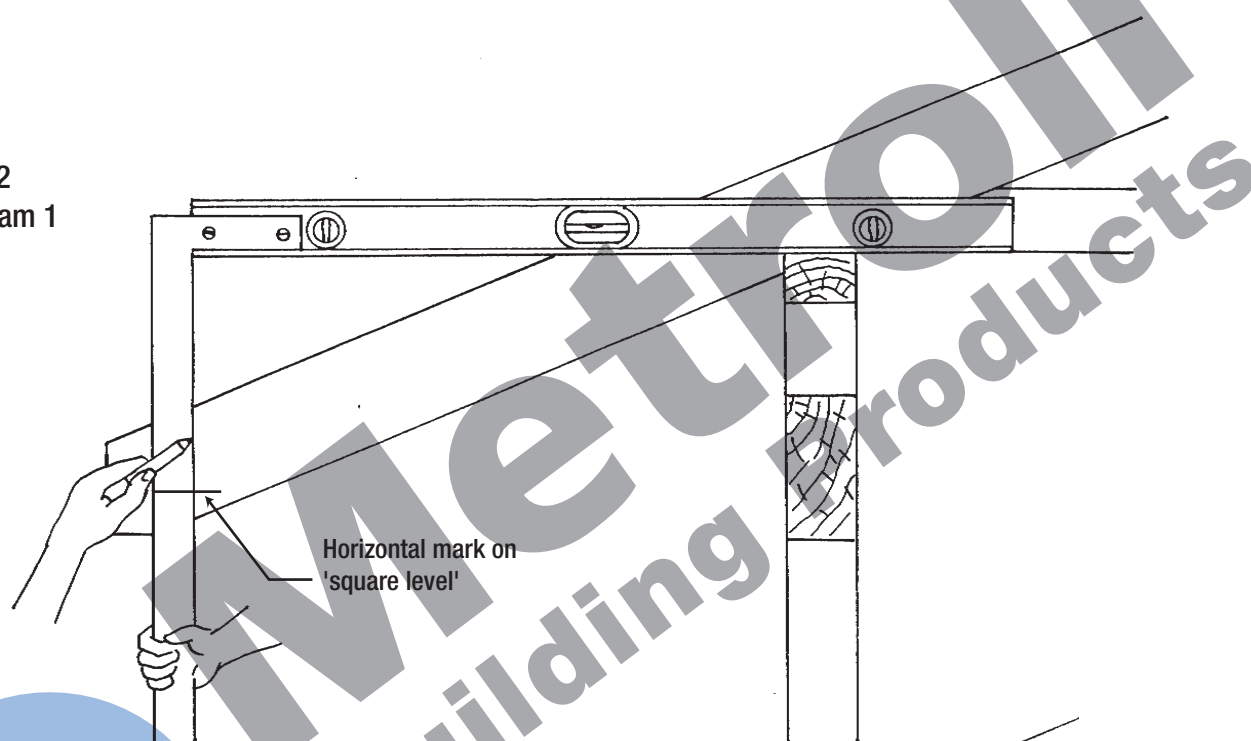


Step 2
Mark End Rafters

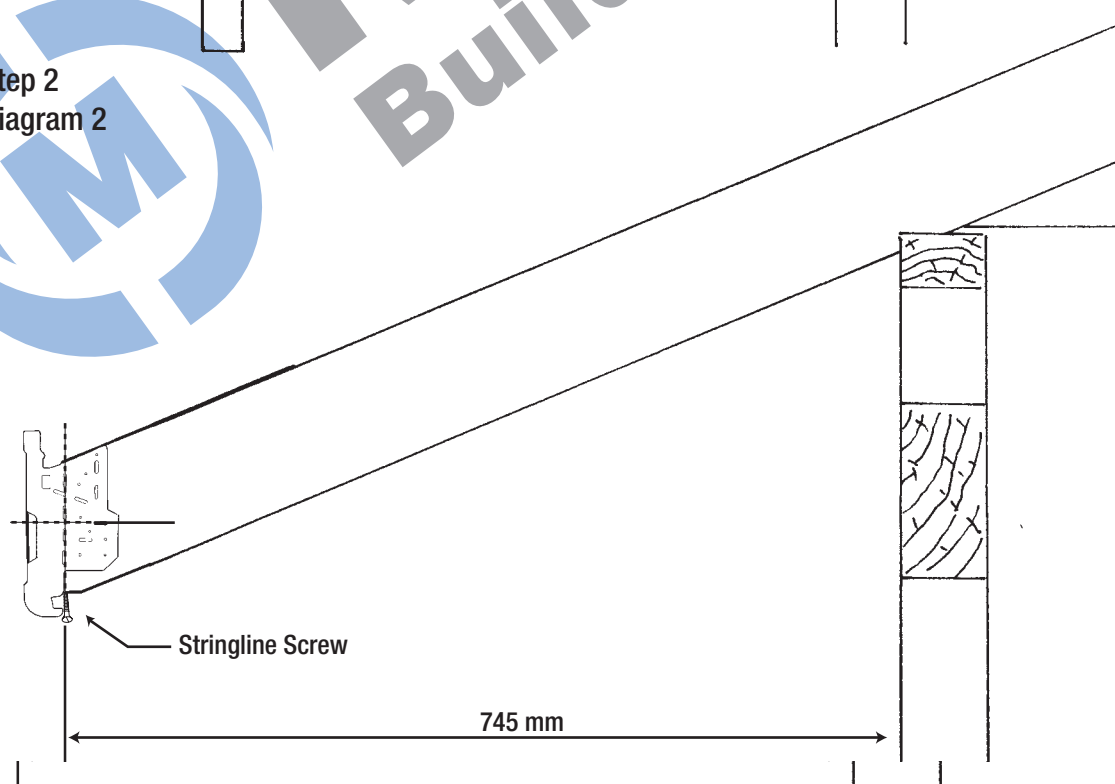
Pencil the 'Vertical Mark' and 'Horizontal Mark' on end rafters.
 NOTE: If fascia run is over 9 metres then place markings at 9 metre spacings.

This is done using the 'Square Level'. Push the level to the stop screw, watching the bubble glass for level and then mark vertical line. The horizontal mark would be marked on the square from step 1, so mark horizontal mark to the rafter.

Step 2
Diagram 1



Step 2
Diagram 2



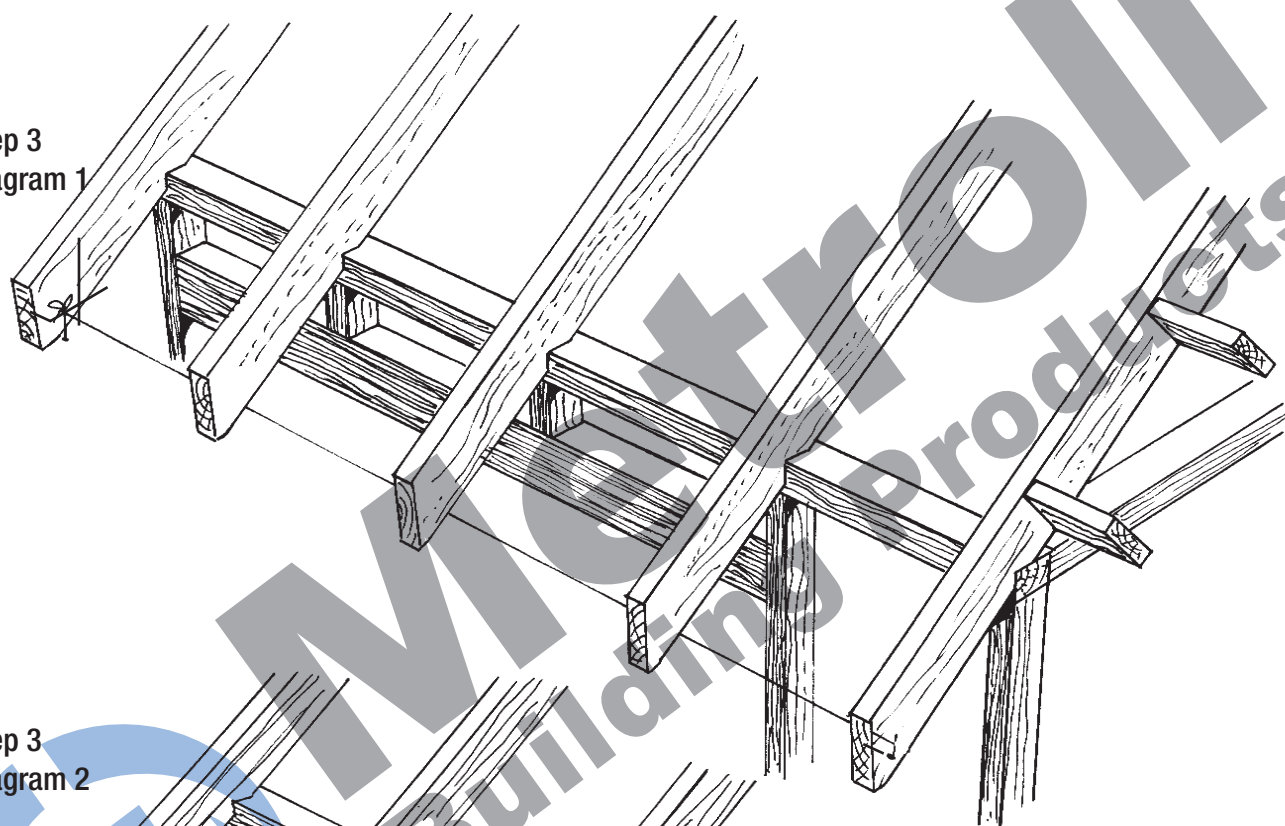
Step 3

Set stringline and merk mid raf

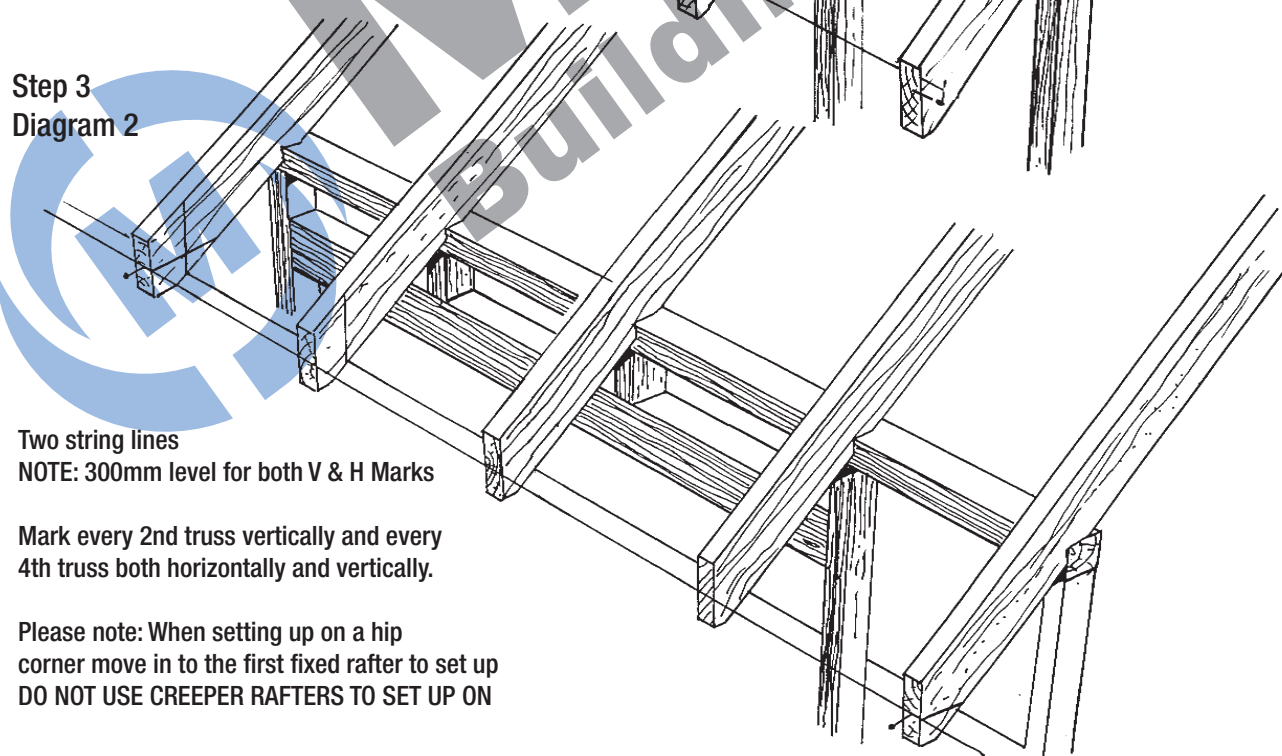
For Fascia runs under 9 metres one string line is required spanning across the bottoms of the rafters between nails, at the 'Vertical Mark', as shown by Step 3 Diagram 1.

For Fascia runs over 9 metres two string lines will be required, as shown by Step 3 Diagram 2. One string line is to be set up as illustrated with the addition of a mid nail to limit sag. The other string line will be set up across the front of the rafters at the 'Horizontal Mark'. Nails should support this string line at regular intervals to prevent sagging.

**Step 3
Diagram 1**



**Step 3
Diagram 2**



Two string lines

NOTE: 300mm level for both V & H Marks

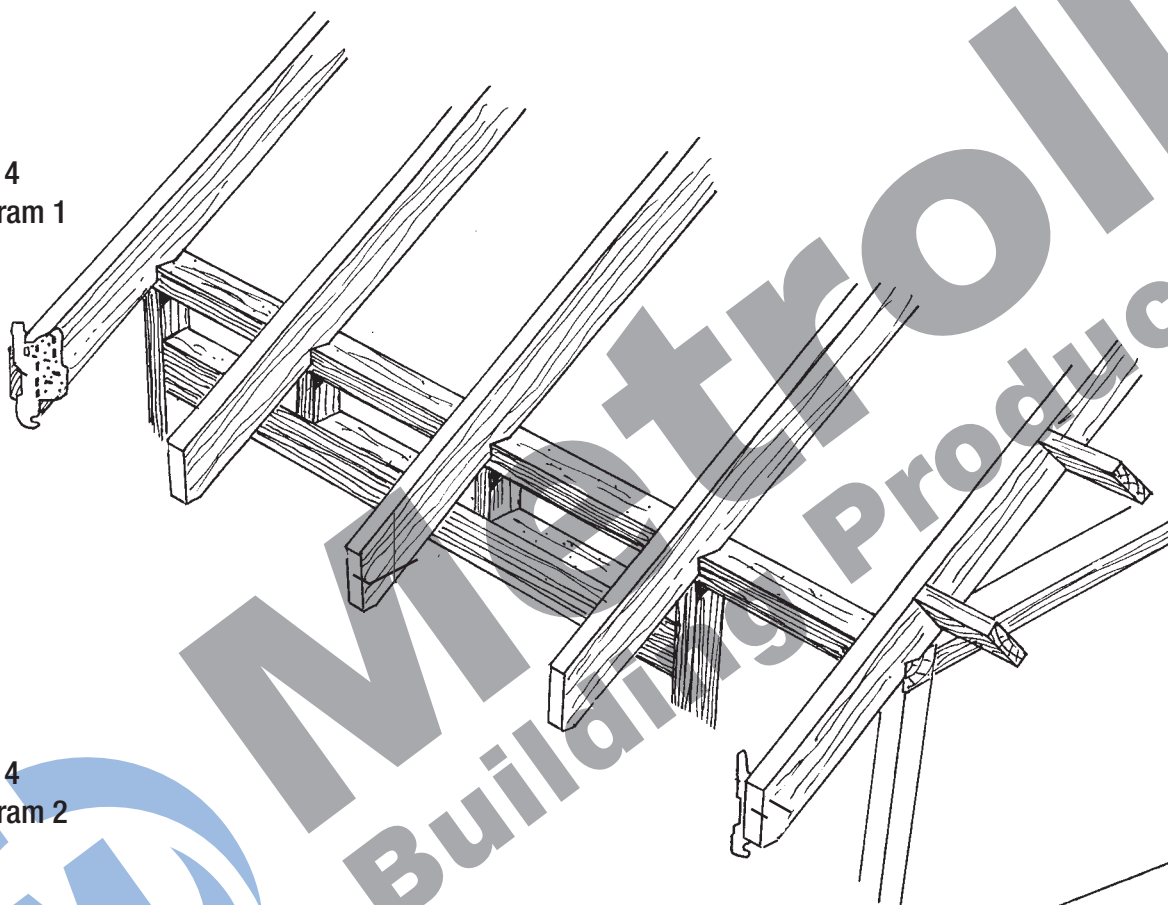
Mark every 2nd truss vertically and every 4th truss both horizontally and vertically.

Please note: When setting up on a hip corner move in to the first fixed rafter to set up
 DO NOT USE CREEPER RAFTERS TO SET UP ON

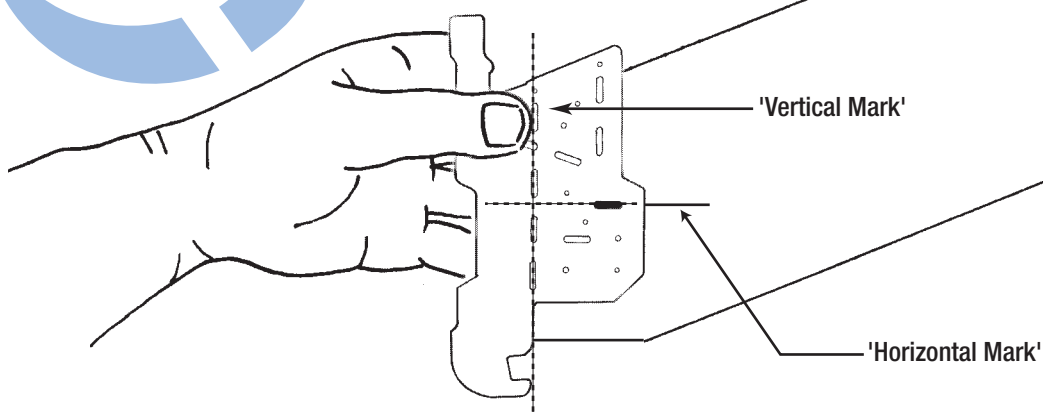
Step 4
Install end rafter brackets

Line brackets up so reference slots are on the 'Vertical Mark' and the 'Suggested Reference' slot is in line with the 'Horizontal Mark'. Fix brackets at this position using a minimum of 3 fixings. These brackets can be fixed by pneumatic nailing or screwed with approved fasteners.

Step 4
Diagram 1



Step 4
Diagram 2

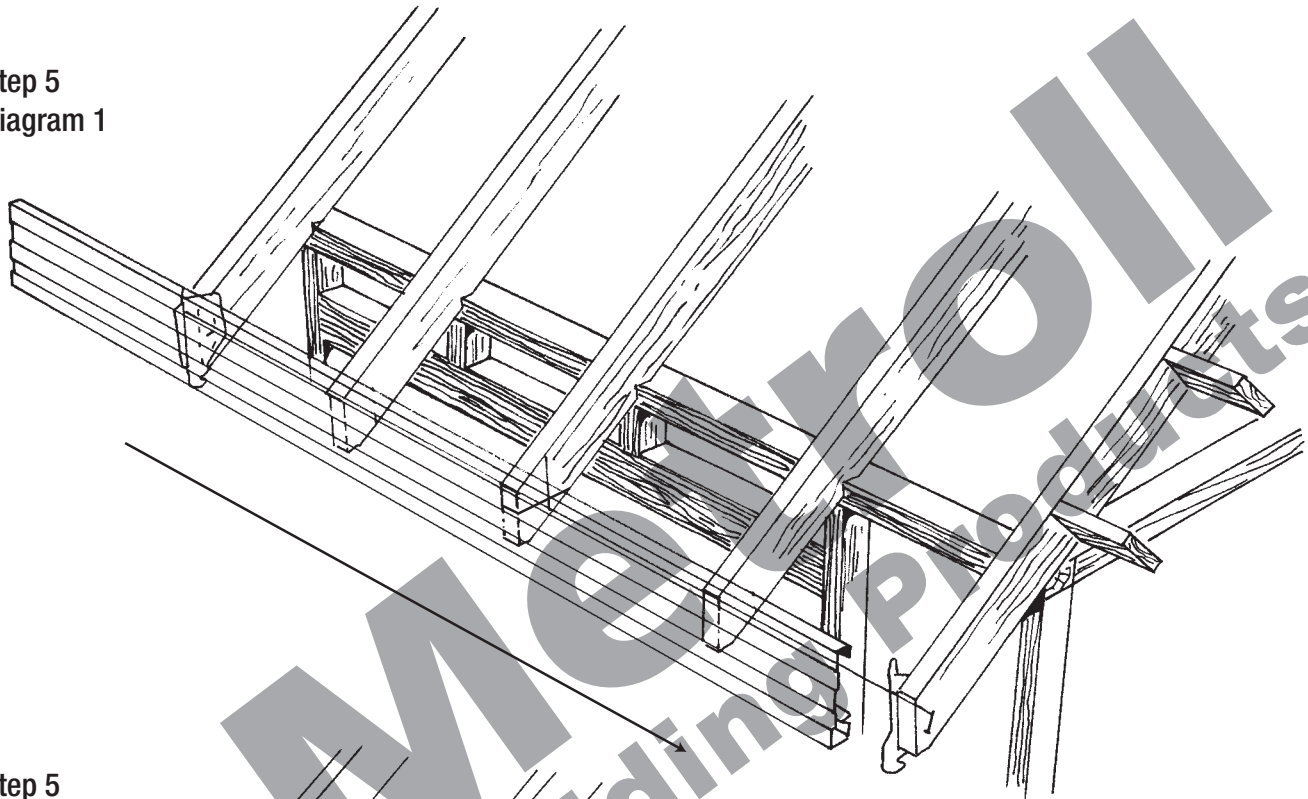


Step 5

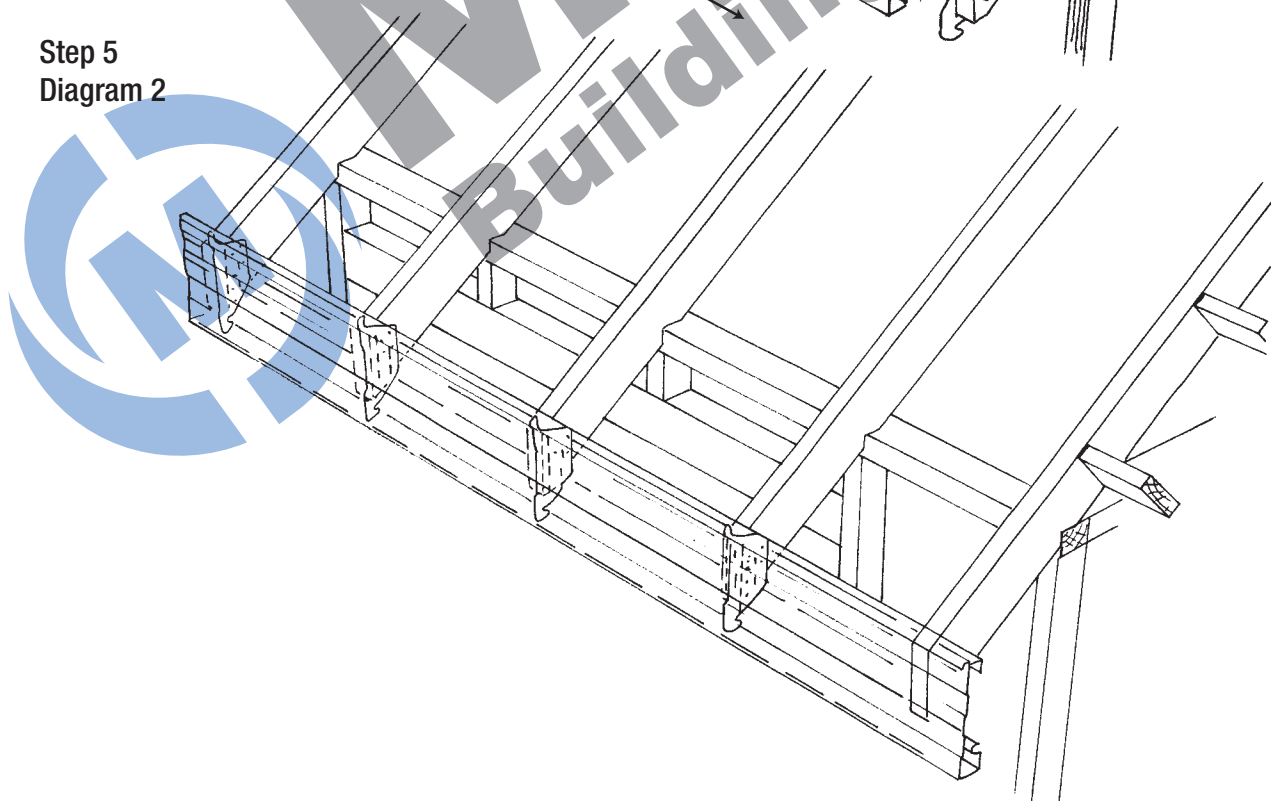
Slide fascia into position

Slide fascia on over rafter brackets and attach rafter brackets onto all "marked" trusses. This allows for easy sliding of fascia for mitreing etc. After corners have been completed fit rafter bracket to all trusses.

Step 5
Diagram 1



Step 5
Diagram 2



Rafter bracket fixing

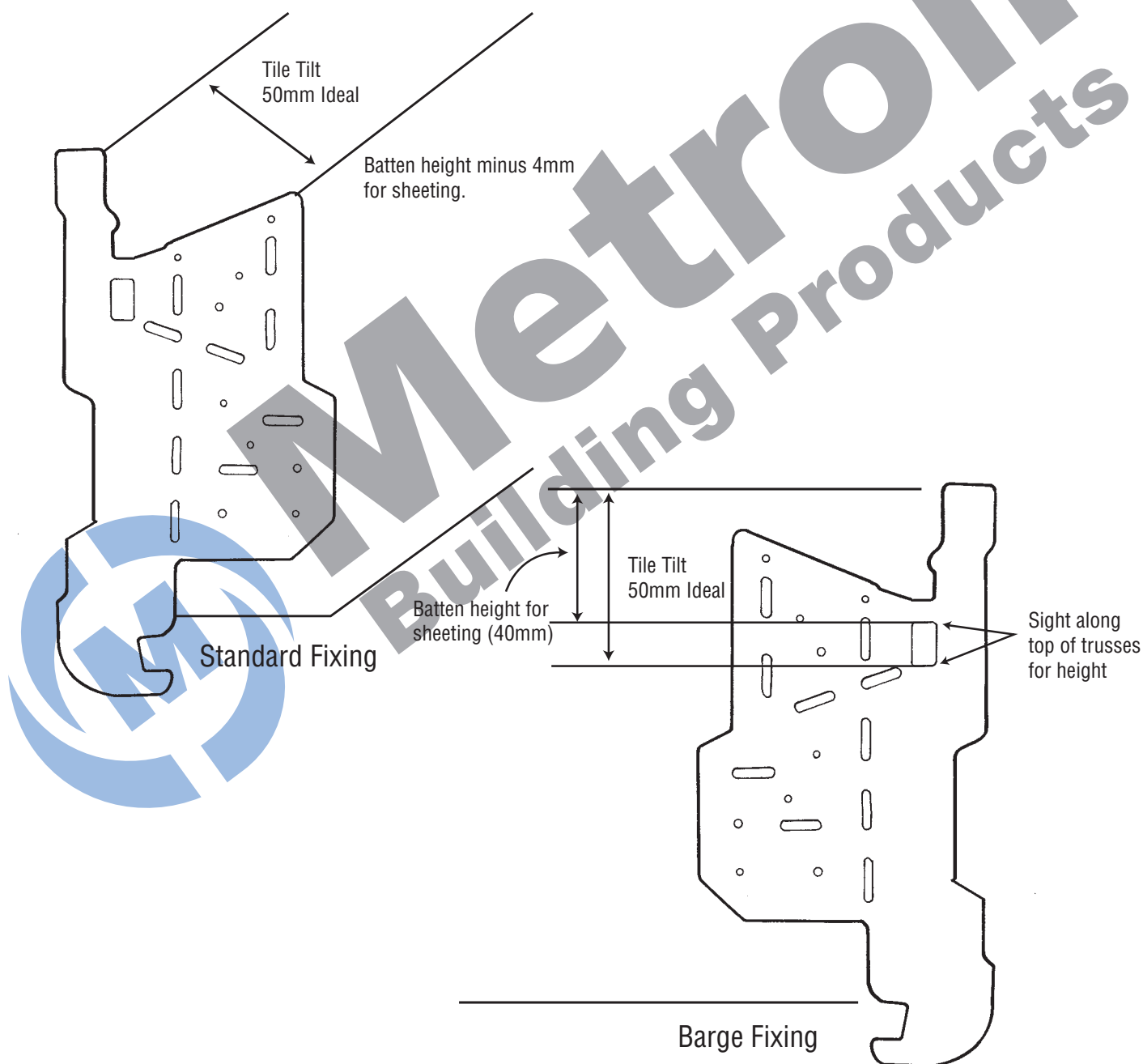
A. All rafter brackets must have a minimum of three (3) fixings. This applies for both tile and metal roofs and whether fixed as fascia or barge

B. On Barges with outriggers, fixing to the end grain is **not acceptable**. Brackets must be fixed to the side of outriggers. (Step 6 diagram 3/4.)

C. Fixings at hips and valleys are very important. There must be a minimum of one (1) rafter bracket (bent at 45°) in these

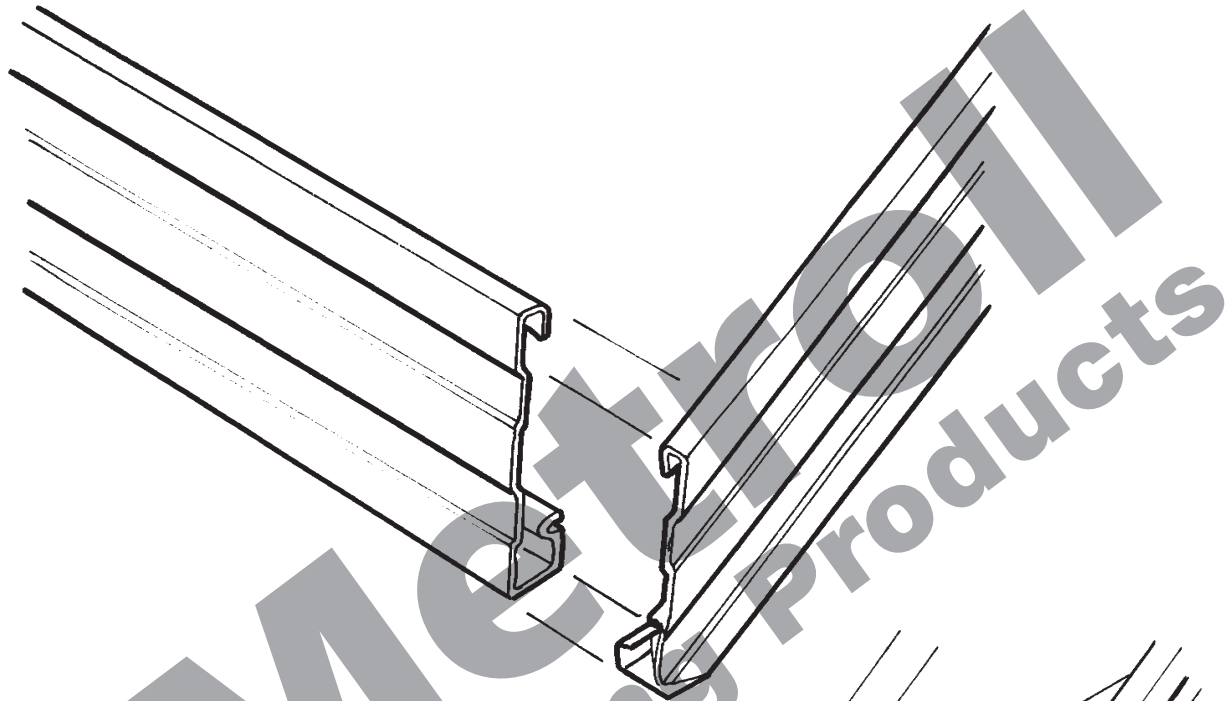
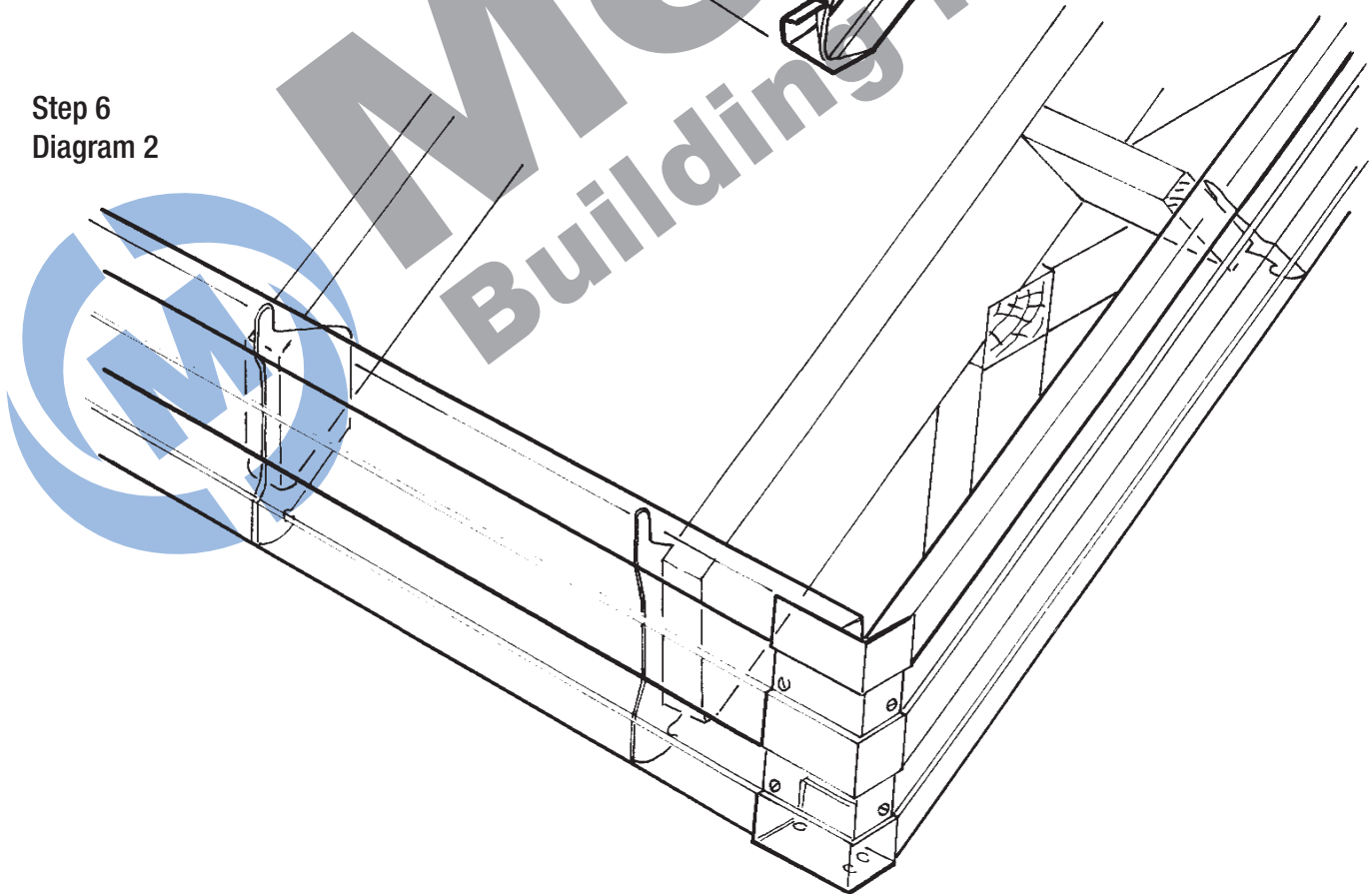
areas, otherwise damage can occur when roof is installed. Where only one rafter bracket is used fix on same side on all hips.

D. Rafter brackets must be fixed at every rafter/truss for maximum performance, with three (3) fixings per bracket separated as far as possible. The same applies for barge fixing.



Step 6

Connect adjoining fascia

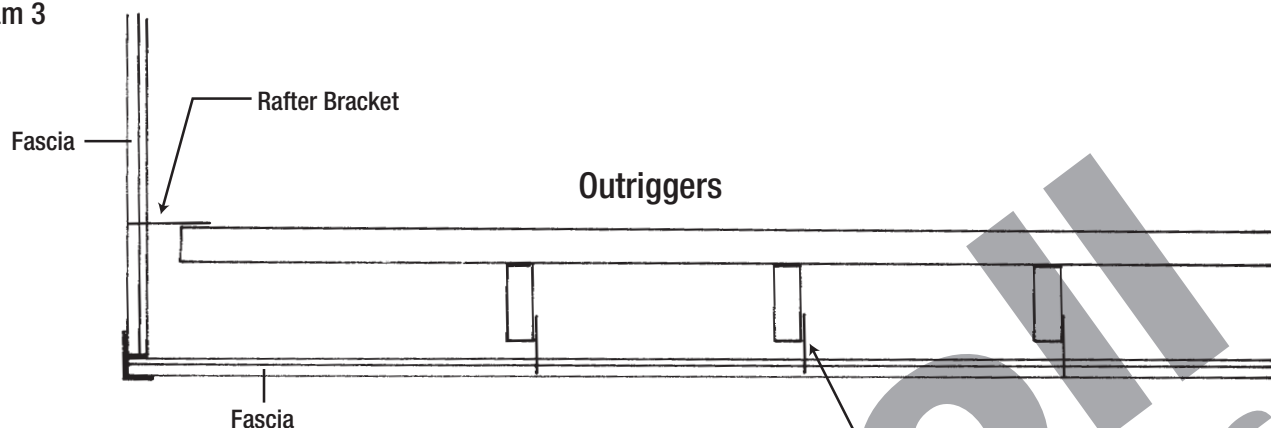
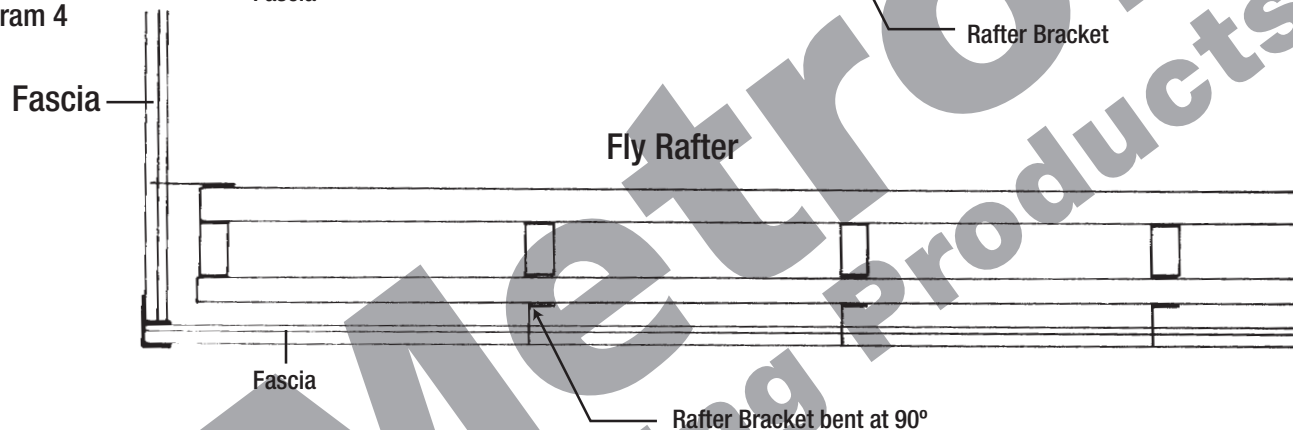
Outrigger Barge Illustrated**Step 6**
Diagram 1**Step 6**
Diagram 2

Step 6 Continued

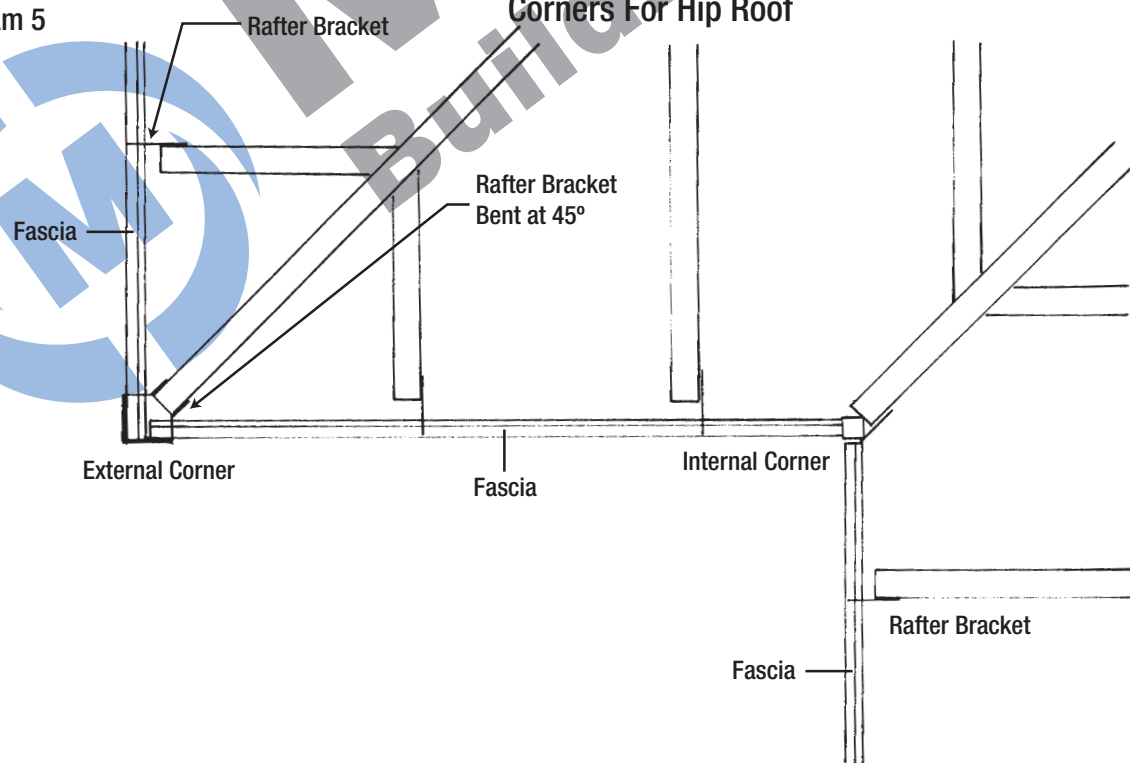
Connecting adjoining fascia

 Step 6
 Diagram 3

Plan views


 Step 6
 Diagram 4

 Step 6
 Diagram 5

Corners For Hip Roof

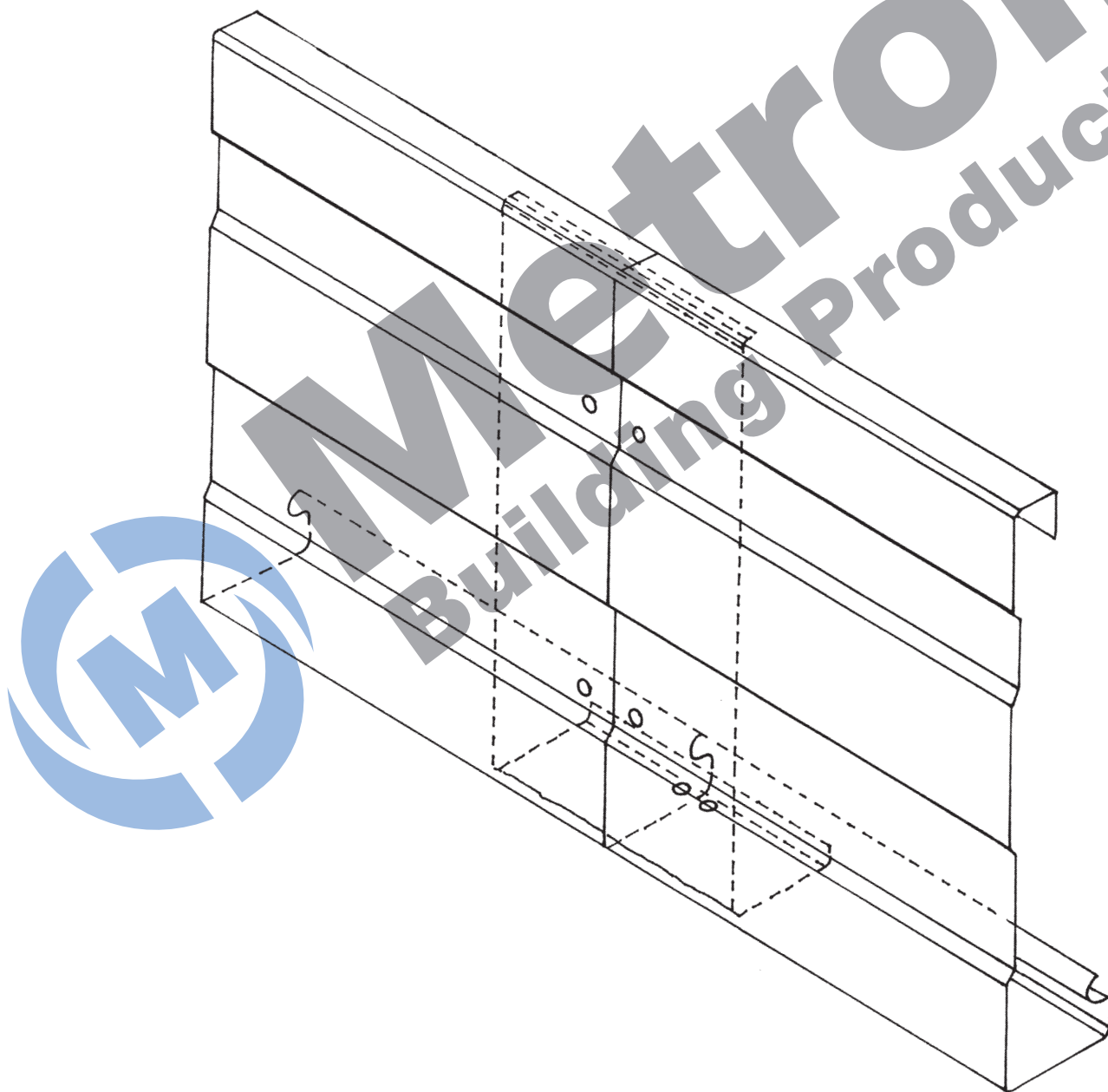


Joining of fascia

A internal joining sleeve is the best method for butt joining of fascia.

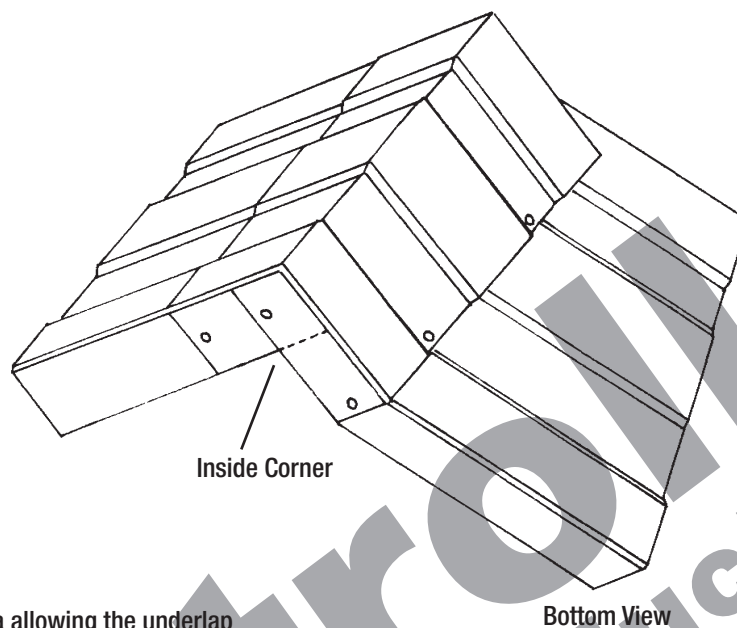
You must rivet the fascia joiner at three (3) points on each side.

1. At bottom towards the back of fascia.
2. On top of 1st rib up from bottom.
3. On top of 3rd rib up from bottom.

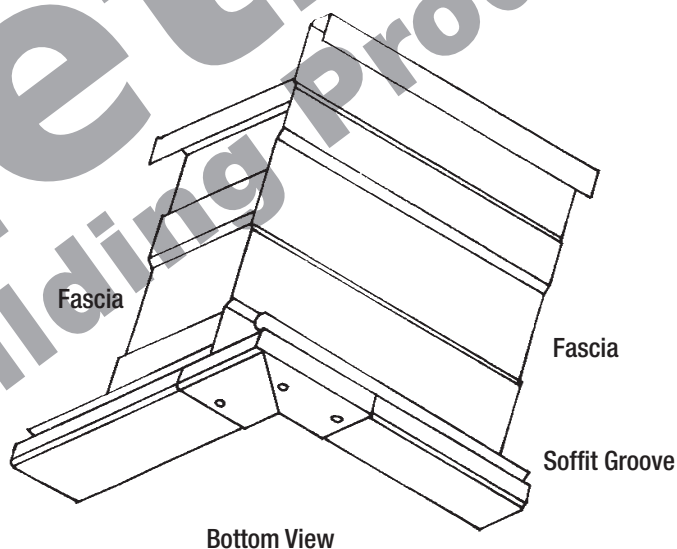
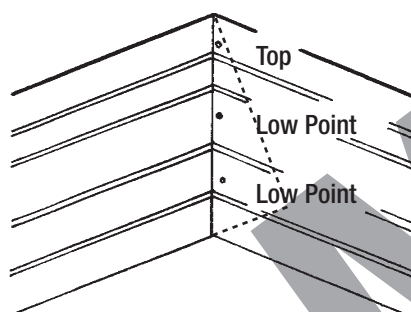


Fixings
Barges, Internal Corners & Stop Ends
A. External Barge Mitres

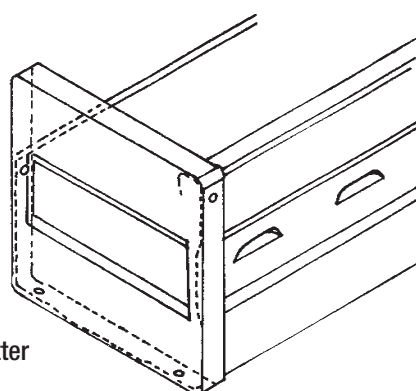
- Three (3) rivets on bottom
- Two (2) rivets each side of face
- Total seven (7) rivets


B. Apex of Barge

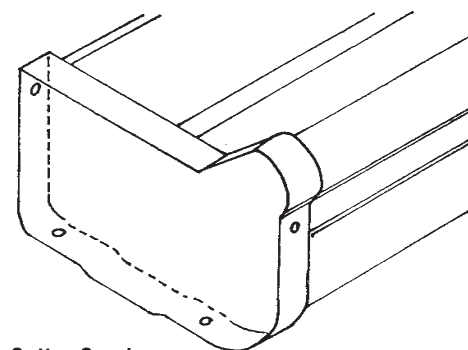
- Plumb cut vertically overlapping fascia allowing the underlap fascia to pass under enough to rivet at three (3) points


C. Internal Corners

- Three (3) rivets on bottom



Metroline Square Gutter



Gutter Quad

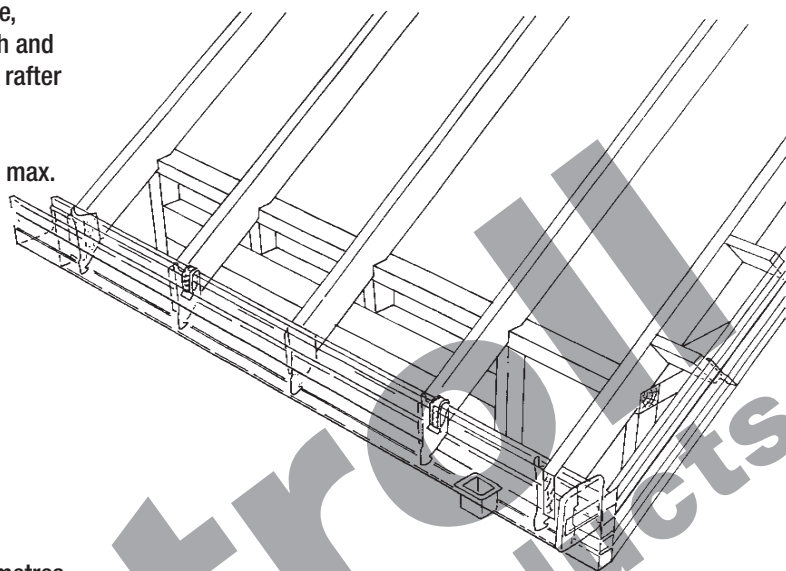
D. Stop End of Gutters

- Four (4) rivets

Step 8
Place gutter and set fall

Install downpipe drop (nozzles) and stop ends of gutter before fixing gutter in place. Position gutter in appropriate place, install two springs clips in the centre of the gutter length and set the fall. Install spring clips adjacent to every second rafter bracket.

NOTE: Not to exceed recommended spacings - 1200mm max.

Step 8
Diagram 1


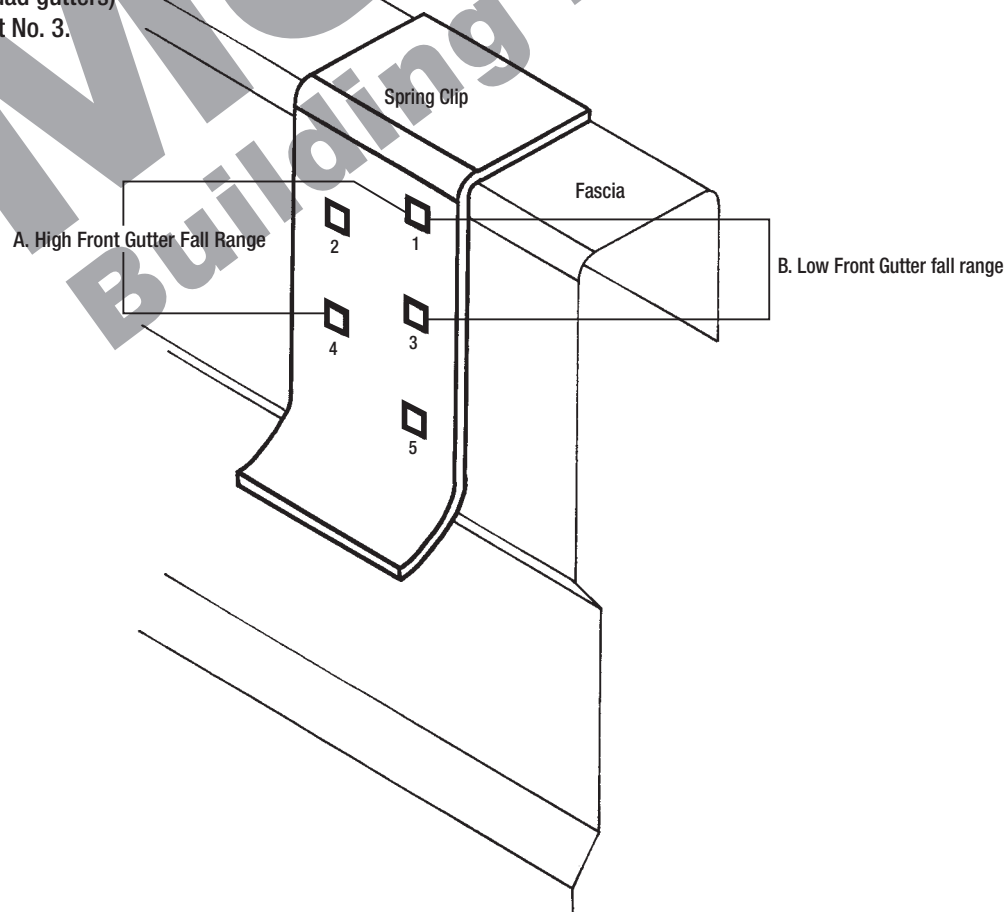
The recommended fall of gutters is 10mm for 10 lineal metres of gutter (= 1mm in 1 lin m)

A. High Front Gutters (Square line, Colonial Quad and Ogee gutters)

Start at point No. 1 and fall to point No. 4.

B. Low Front Gutters (Low Front Quad gutters)

Start at point No. 1 and fall to point No. 3.

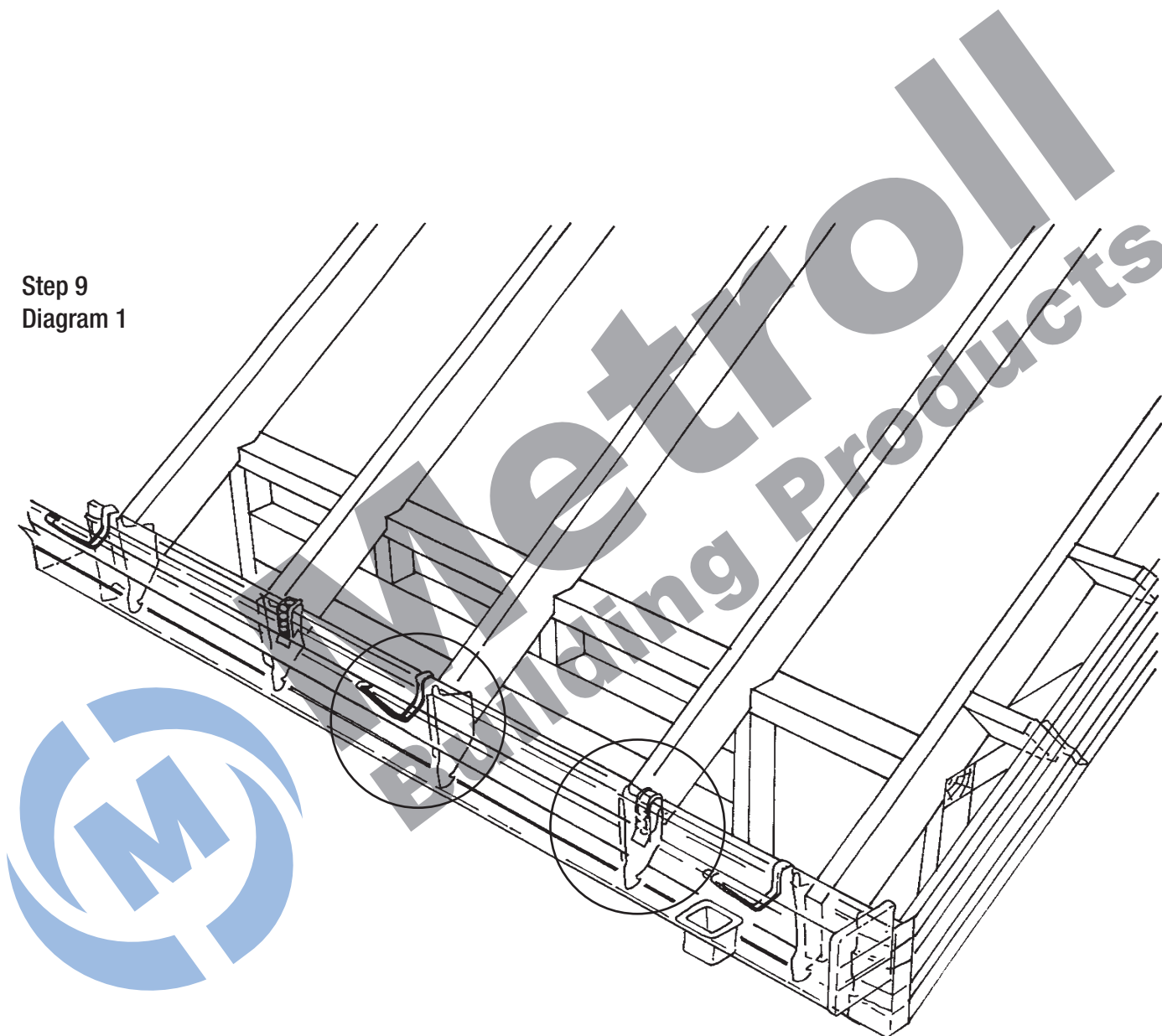
Step 8
Diagram 2


Step 9
Install Gutter Overstraps & Spring Clips

The overstraps and spring clips are to be installed to maximum spacing of 1200mm centres in non-cyclonic areas or 900mm centres in cyclonic areas.

The overstrap and spring clip should be installed in an alternate pattern adjacent to each rafter for maximum strength (see diagram 1).

Step 9
Diagram 1



Details

Fall of Gutters

A. All gutter joints should be lapped a minimum of 50mm in the opposite direction to the water flow.

B. You should have four (4) rivets per joint (1 @ face, 2 @ bottom, 1 @ top roll). Before riveting top, sight along line of gutter for straightness. Where possible put a spring clip on the joint.

C. Avoid joints at front of house (e.g. joint at hip or valley if possible).

D. When sealing joints place silicone under laps then spread evenly over lap when riveted.

E. Ideal distance for downpipe drops, measured from back of gutter, are:

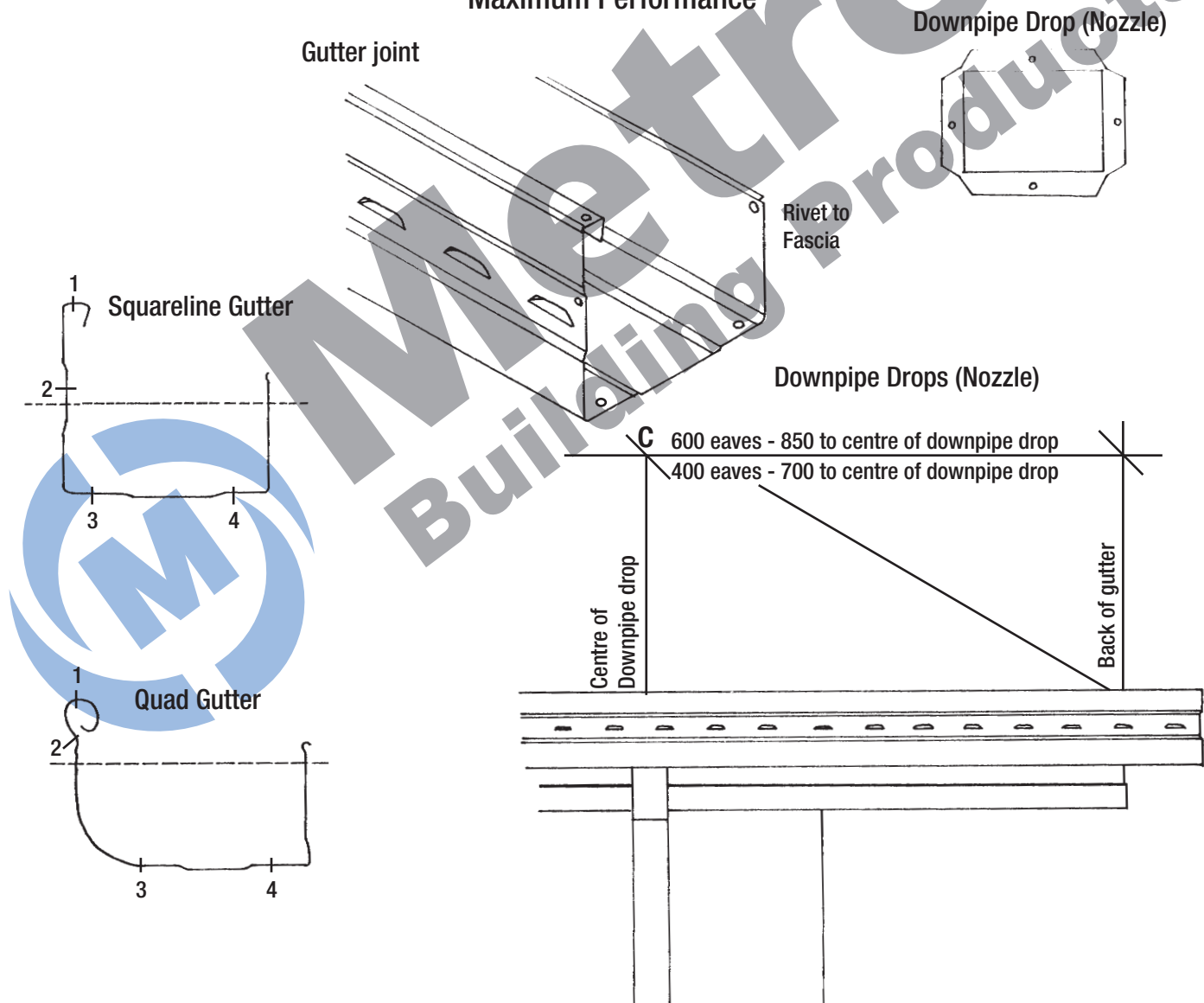
for 600 eaves - 850 to centre of downpipe drop.

for 450 eaves - 700 to centre of downpipe drop.

F. A rivet on the back of gutter (height of rivet must be above front overflow) should be fixed to fascia at all downpipe positions, at gutter joins, at hips or valleys, at the end of run on gables and at any change of direction of the gutter.

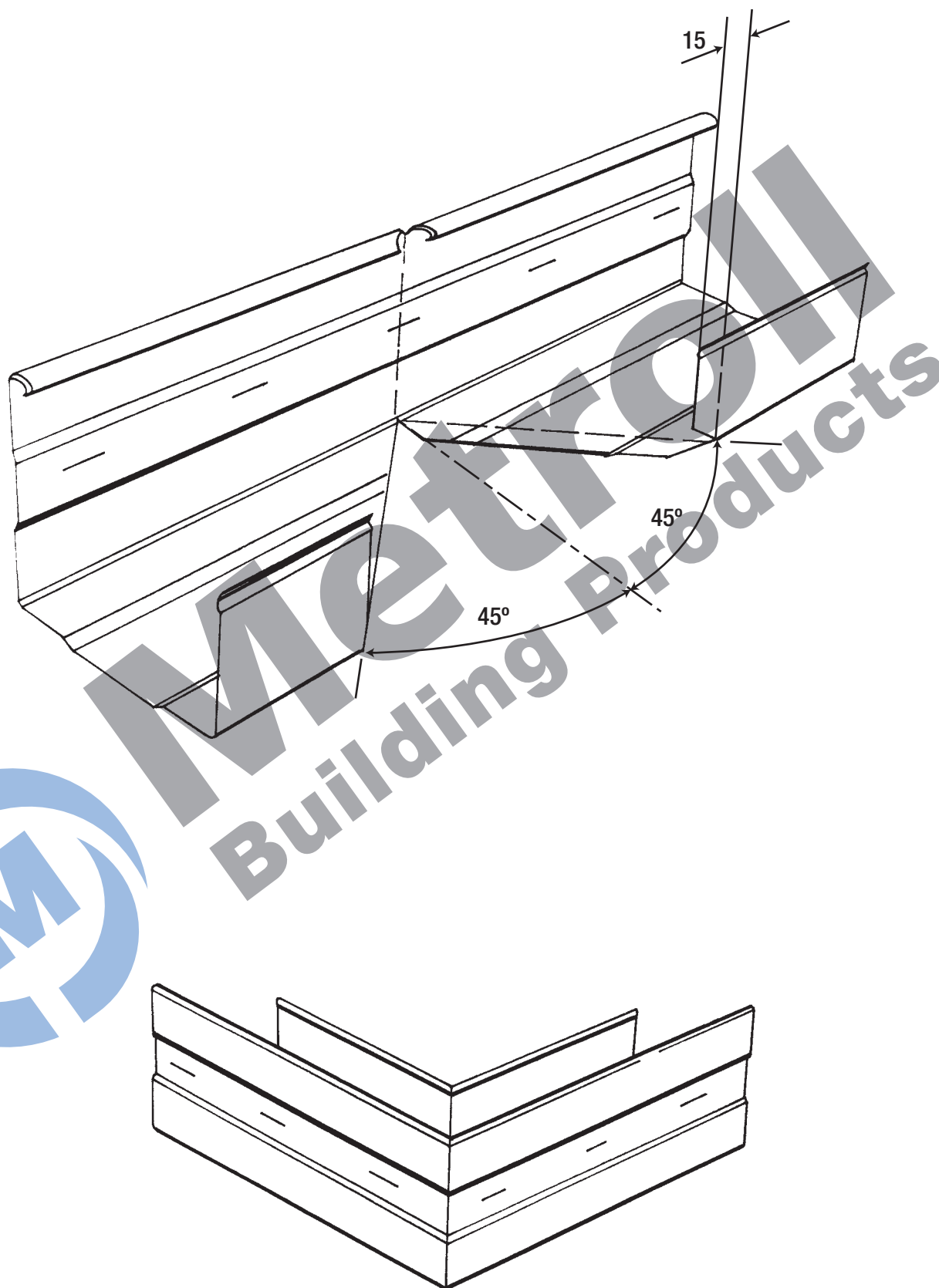
G. All face rivets to be colour matched (NO touch up) and installed from the outside.

Ideal rivet points for Maximum Performance



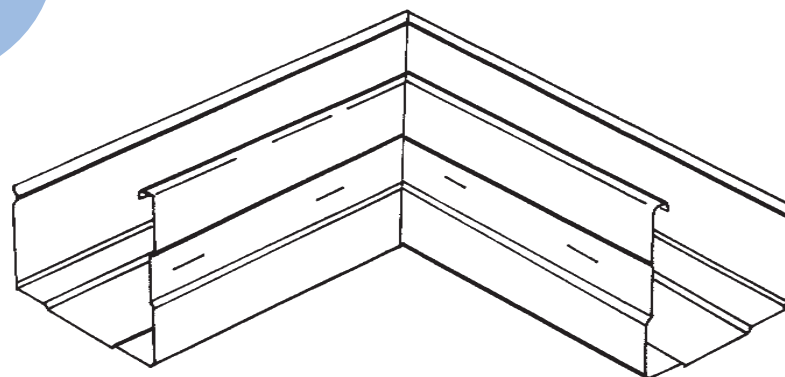
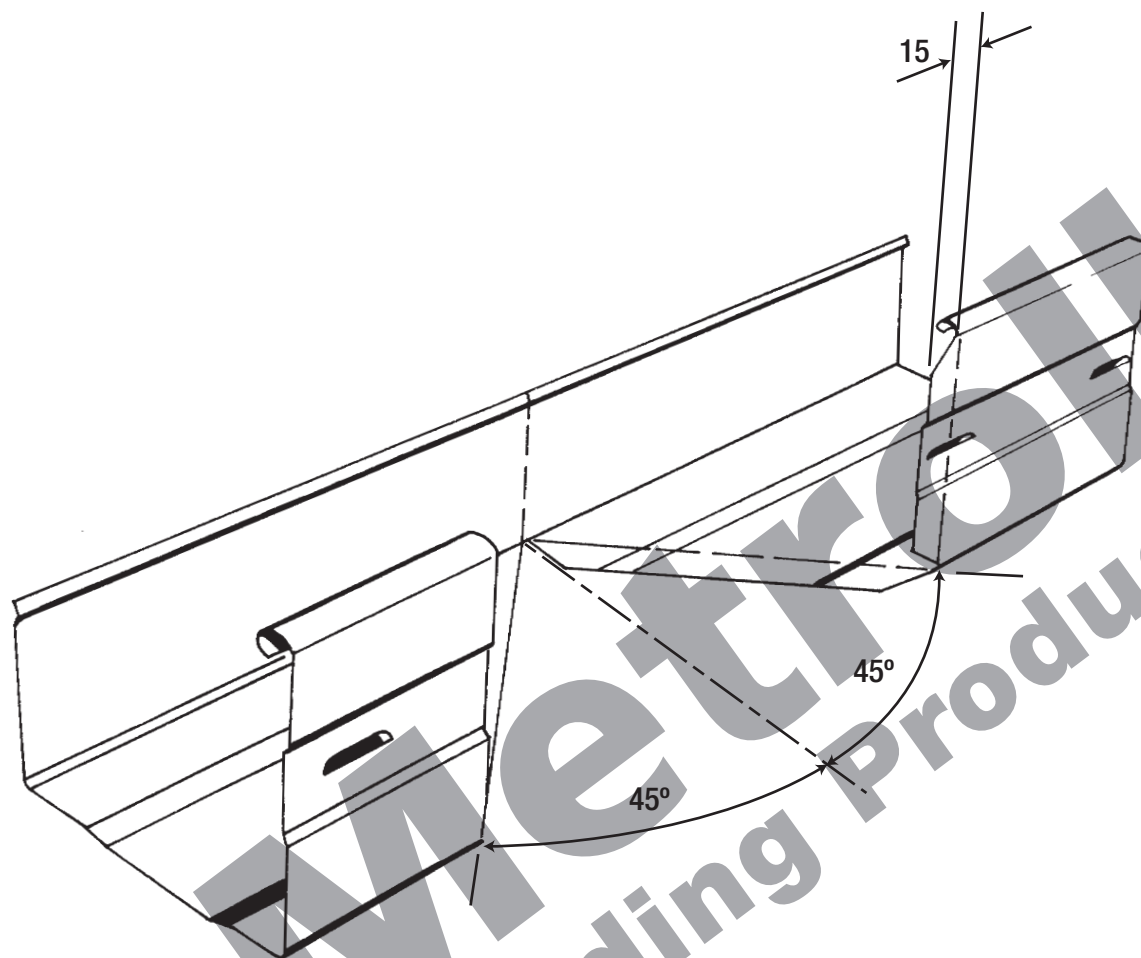
Details

Metroline Square Gutter - External Mitre



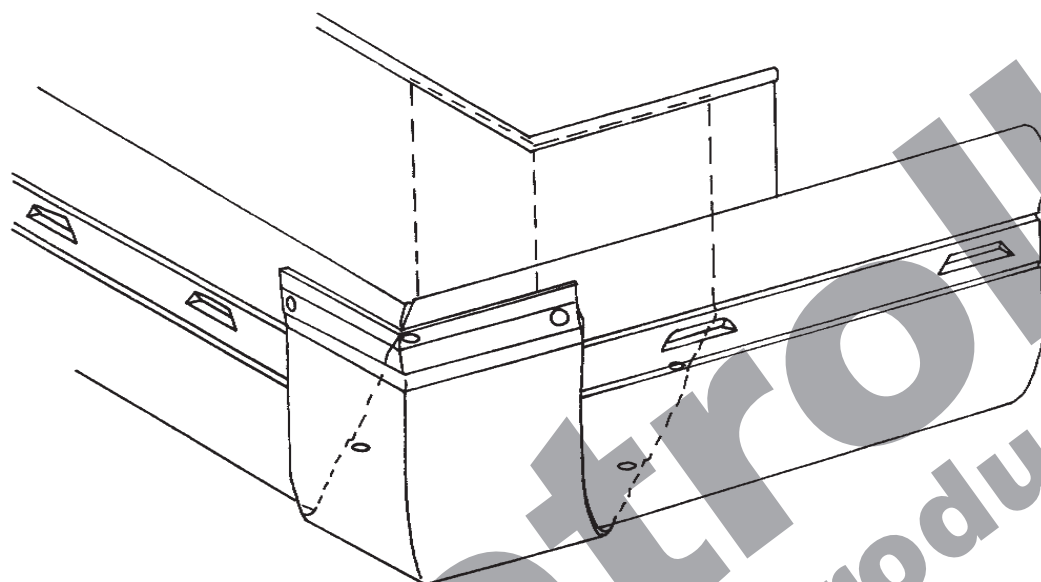
Details

Metroline Square Gutter - Internal Mitre

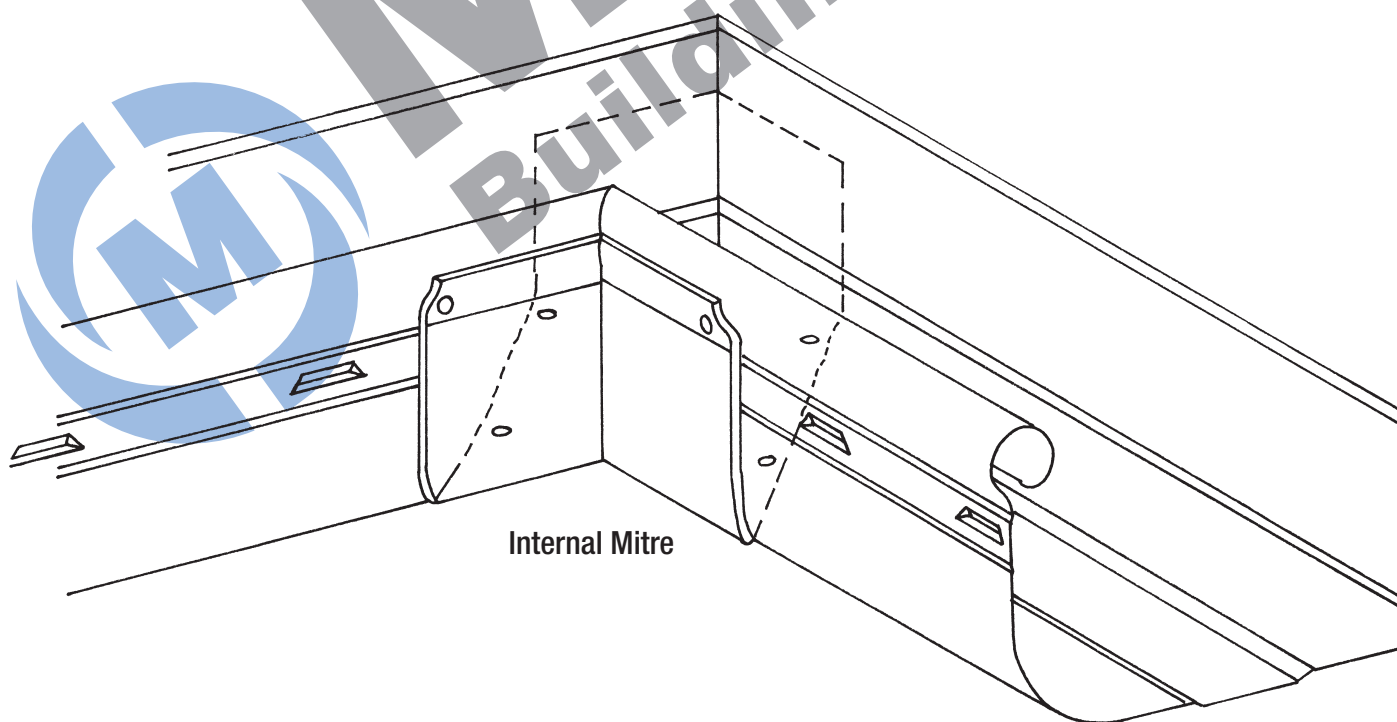


Details

Quad Gutter Mitre



External Mitre

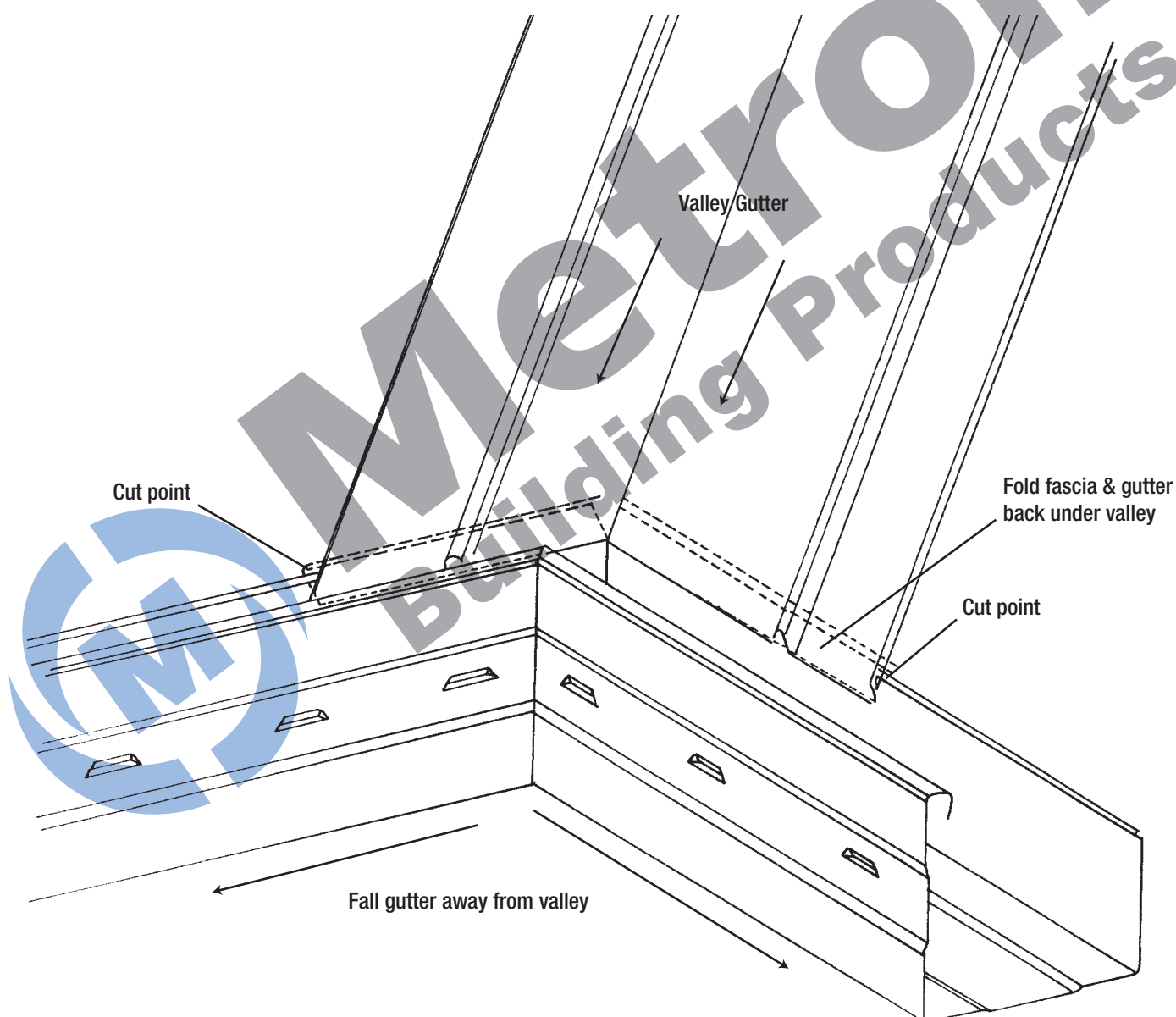


Internal Mitre

Details
Cutting of F & G at Valley point

Metroll recommends that the rear edge of the fascia and gutter should be cut down to allow the valley gutter to project through when the tile exceeds 40mm in height as this can cause problems for tilers and create leaks into the roof area.

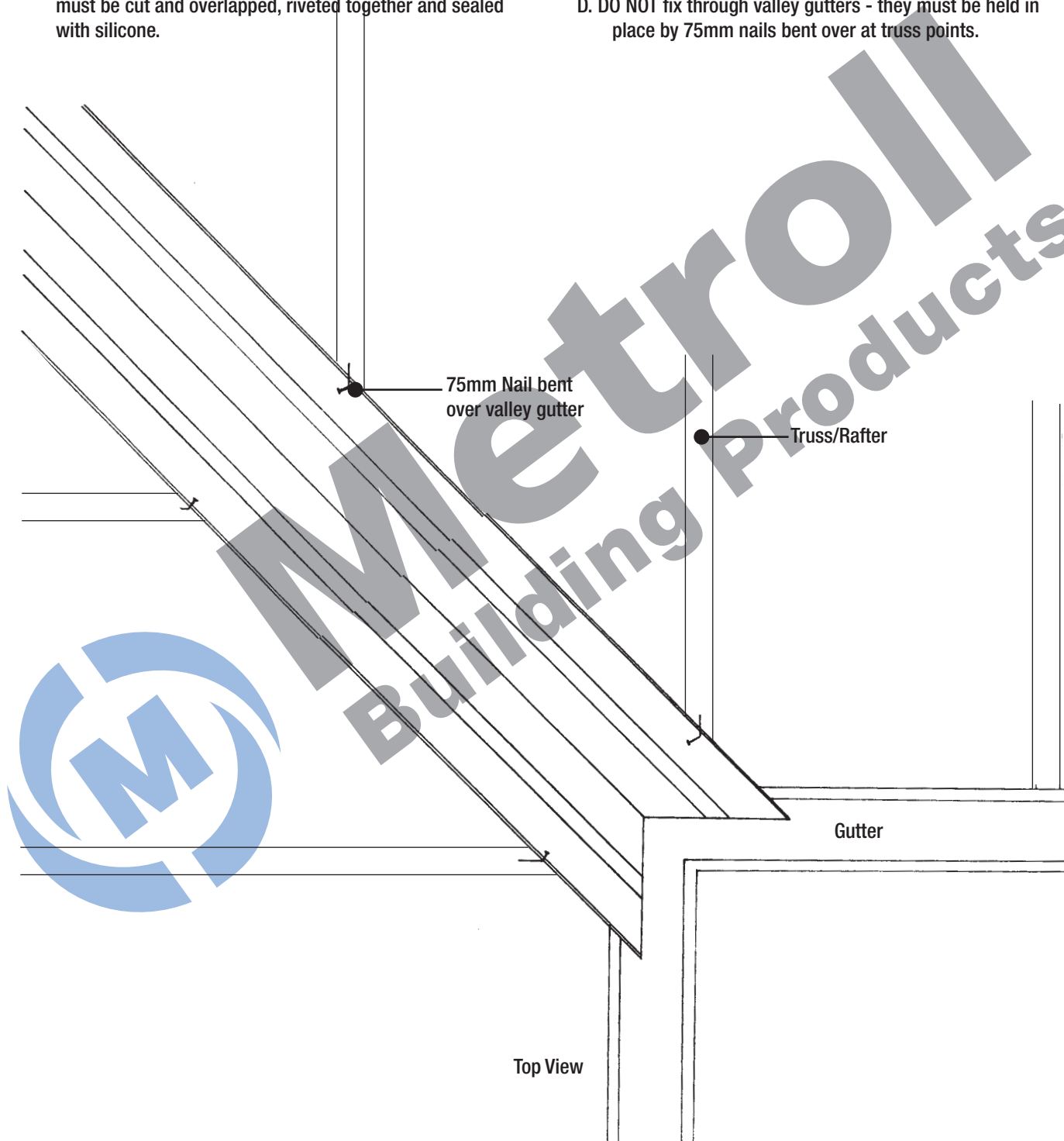
If it is necessary to cut down a section, ensure that fascia and gutter is only cut down to receive valley width, and fold back under valley gutter into roof area. Seal gutters and adjust fall on gutters i.e. ensure gutters are at the highest possible level, then fall away from valleys not into them.



Details

Fixing of Valley Gutters

- A. Always ensure that valley overhangs a minimum of 50mm into gutter. Valley must be turned up at top (minimum 25mm).
- B. If two or more valleys intersect or change direction they must be cut and overlapped, riveted together and sealed with silicone.
- C. Full length valley should be used whenever possible. When joining lengths is unavoidable, ensure a minimum lap of 300mm is achieved, especially in a high wind/low pitch situation.
- D. DO NOT fix through valley gutters - they must be held in place by 75mm nails bent over at truss points.





Metroll

Better Building Solutions

The Goods and Services Tax (GST) is an addition to the prices in this Price List and will be charged on Net Invoiced Price of Goods & Services supplied.

Effective from XX XXXX 200X

Ordering

Calculations

PF

Plumb Fix Roofing Services Pty Ltd.

Work Order

Builder

Drop Off:

Site Address

Fixing Date:

.....

U.B.D. No:

Material Layout

WASHCOAT					GUTTER				DOWN PIPE				
COLORBOND					BARGE GUTTER				ASTRAGAL/ STRAPS				
ZINCALUME					BARGE				NOZZLES/ DROPS/ POPS				
COLOUR					DOWN PIPE				LABOUR	QTY.	RATE	TOTAL	
FASCIA AND BARGE					SQUARE LINE	6500	8000	LM	FASCIA ONLY				
					QUAD	8000	7500	LM	FASCIA & GUTTER				
					VALLEY	SPECIAL	STAND	LM	GUTTER ONLY				
					SUSP CLIP				BARGE ONLY				
					OVERSTRAPS				BARGE & BARGE GUTTER				
TOTAL L.M.					QUAD CORNERS	EXT.	INT.	135°	HEIGHT				
135° EM					GUTTER STOP ENDS	L.H.	R.H.		TRAVEL				
EM					BARGE GUTTER				DOWN PIPES				
IM					B.RB				VALLEYS				
SRB					B.APEX								
HRB					B. MOULDS	L.H.	R.H.						

TOTAL MATERIAL \$

TOTAL COST \$

INVOICE PRICE \$

On acceptance of Work Order these conditions apply.

I have completed the above job in a tradesman's like manner and have taken and used only those materials listed above. I therefore claim payment for the contract at the amount stated and agree to carry out any warranty work required on the above job for a period of 4 months, should I fail to carry out such warranty work within 48 hours, the work shall be carried out by others and my account charged.

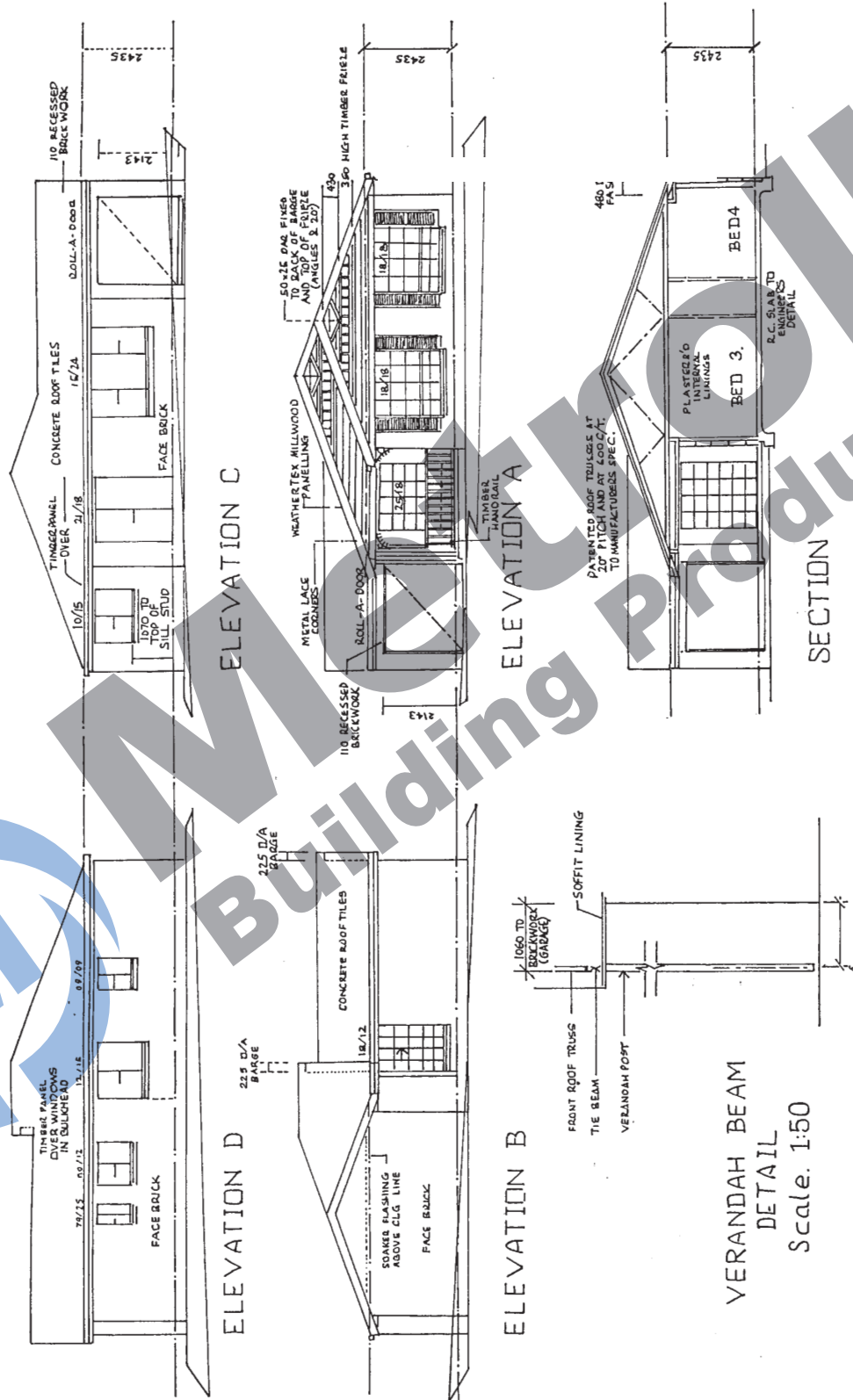
(1) ASSIGNMENT OF WORKS

The sub-contractor shall have the right to engage any suitably qualified person to perform the works as specified in this agreement.

SIGNED:

DATE / /

Plan Evaluations



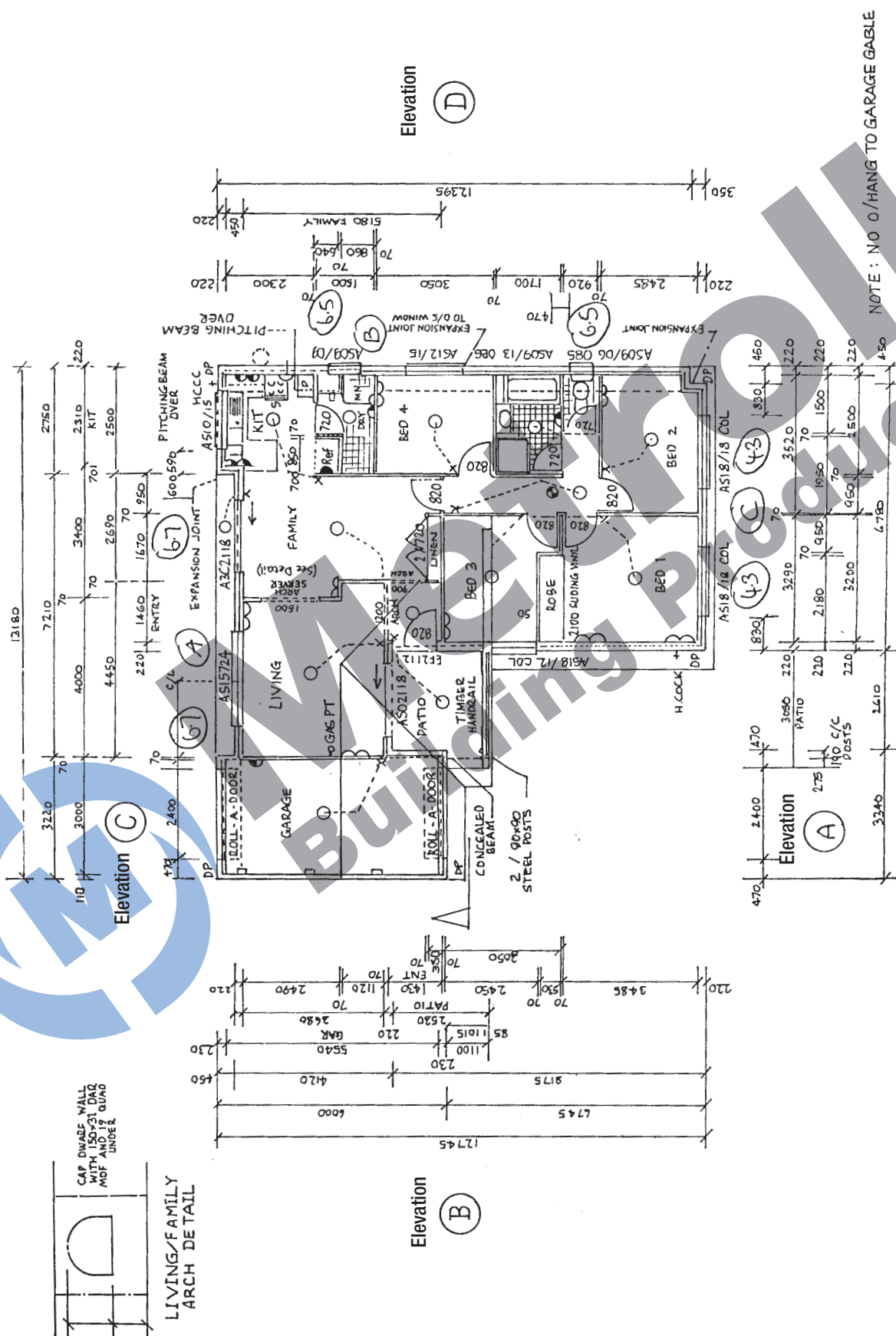


Metroll

Better Building Solutions

The Goods and Services Tax (GST) is an addition to the prices in this Price List and will be charged on Net Invoiced Price of Goods & Services supplied.

Floor Plan



NOTE: NO O/HANG TO GARAGE GABLE

Fascia & Gutter Take-Off

The key to an accurate and efficient fascia and gutter take off is to plan before you start.

It is good practice to start with a "Product Check list" to prevent missing anything. Firstly establish the following:-

- Eaves Dimension
- Roof Pitch
- Downpipe size and proportions
- Truss centres and any other relevant information
- Gables and dutch gables (Barges)
- Valleys
- Componentry

Start the take off in the top left hand corner of your working sheet, or at least in the same position each time. Routine promotes accuracy.

Refer to the floor plan and use the dimensions shown where possible before scale rule.

Look at the floor plan and calculate fascia length by adding the overall brickwork width, the eaves overhang and any wastage allowance:-

$$\text{e.g. A} = 13.180 + (2 \times \text{Brick Width}) + 200 = 13.380$$

∴ allow 2 x 6.700 flat fascia.

$$\text{e.g. B} = 12.395 + .350 + (1 \times 225 \text{ Eave O'hang}) + 200 = 12.970$$

∴ allow 2 x 6.500 flat fascia

$$\text{e.g. C} = \text{Calculate fascia length as per Roof take off procedure -}$$

$$\text{Barge C} = [6780 + (2 \times 450 \text{ Eave O'hang})] \times 0.532 \text{ Pitch factor to suit } 20^\circ$$

$$\text{Roof Pitch} = 4.085 + .200 = 4.300$$

∴ allow 2 x 4.300

Once all required fascia lengths have been established and noted on the work sheet, calculate fascia accessories by working down your product checklist and marking product number needed next to each product (Refer to works order).

Tile roof calculation
Calculations

- Standard Rafter brackets = total Lm of fascia + 10% waste ÷ 600mm centres

$$\frac{\therefore 63 + 10\%}{0.6} = 117 \text{ Brackets (Tile)}$$

OR

Metal roof calculation

- Standard Rafter BRACKETS = total L/m of fascia + 10% waste ÷ 900mm centres

$$\frac{\therefore 63 + 10\%}{0.9} = 77 \text{ Brackets (Sheeting)}$$

- Hip Rafter brackets = one per external mitre = 1
- External Mitre = one per external join of fascia = 1
- Internal Mitre = one per internal join of fascia = 1
- Barge Mitre = one per fascia return from a barge = 6 (3 pair)
- Check if valleys are required, If so, calculate the length by using the valley/hip factor plus 600mm for trimming (as per a standard Roof take-off) Then select a 6.000m stock length.

Gutter Calculations

Look at the floor plan and add up all dimensions where gutter is to be fitted. Add 300mm for every "external" corner and add 5% wastage to total. Divide answer by 8.000 and round up to next even figure

e.g. $13.180 + 12.395 + 0.350 + 5.900 + 0.650 + 2.420 = 34.900 \text{ Lm}$
 Add 1 External Corner 0.300
 $= 35.200 \text{ Lm}$
 Add 5% Wastage 1.760
 $= 36.960 \text{ Lm}$
 Divide by 8.000 $= 4.62 \text{ Lengths}$
 ∴ Order will be 5 x 8.000

Spring clips and over straps

Total linear Metres of gutter divided by 1 and rounded up to nearest 5 or 0.

e.g. $36.960 = 40 \text{ Spring clips}$
 $= 40 \text{ Overstraps}$

Stop ends

As per elevations

Downpipe Drops

As per plan

- On completion of the Fascia and Gutter take-off double check to ensure all fascia, gutter, barge gutter and componentry has been allowed in material list.
- *The final step in completing a fascia and gutter take-off is to examine whether barge capping or soaker is required. In the test case a barge gutter/soaker product was selected and stock lengths were ordered from the supplier. The correct method is:

= Fascia length + 200mm for gables

and

= Fascia length + 400 for dutch gables

*** Not required where sheeting or barge tiles are to be used.**