

Project Information:

Lot 2
DP519375
Area: 8080 m²
Val'n No. 00221-04300

Wind Zone: VERY HIGH
A/Open/Exposed/T2
as per NZS3604:2011 Section 5.2



Exposure Zone: D

District Plan Zone:
Coastal Living

Earthworks: for foundations only

STORMWATER MANAGEMENT

Impermeable Surfaces:

Proposed building roof area: 64.3m²

Proposed driveway: 100.0m²

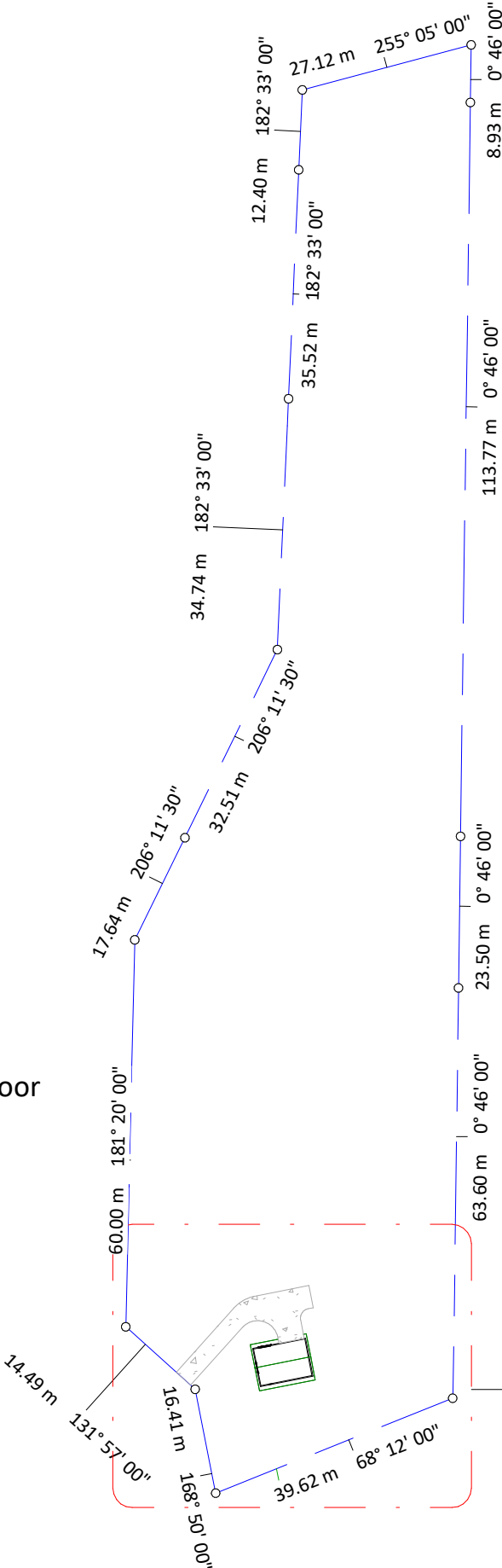
Total Impermeable Area: 164.3m²

Permitted Activity maximum:
the lesser of 10% or 600m²
therefore 600m² for this Lot

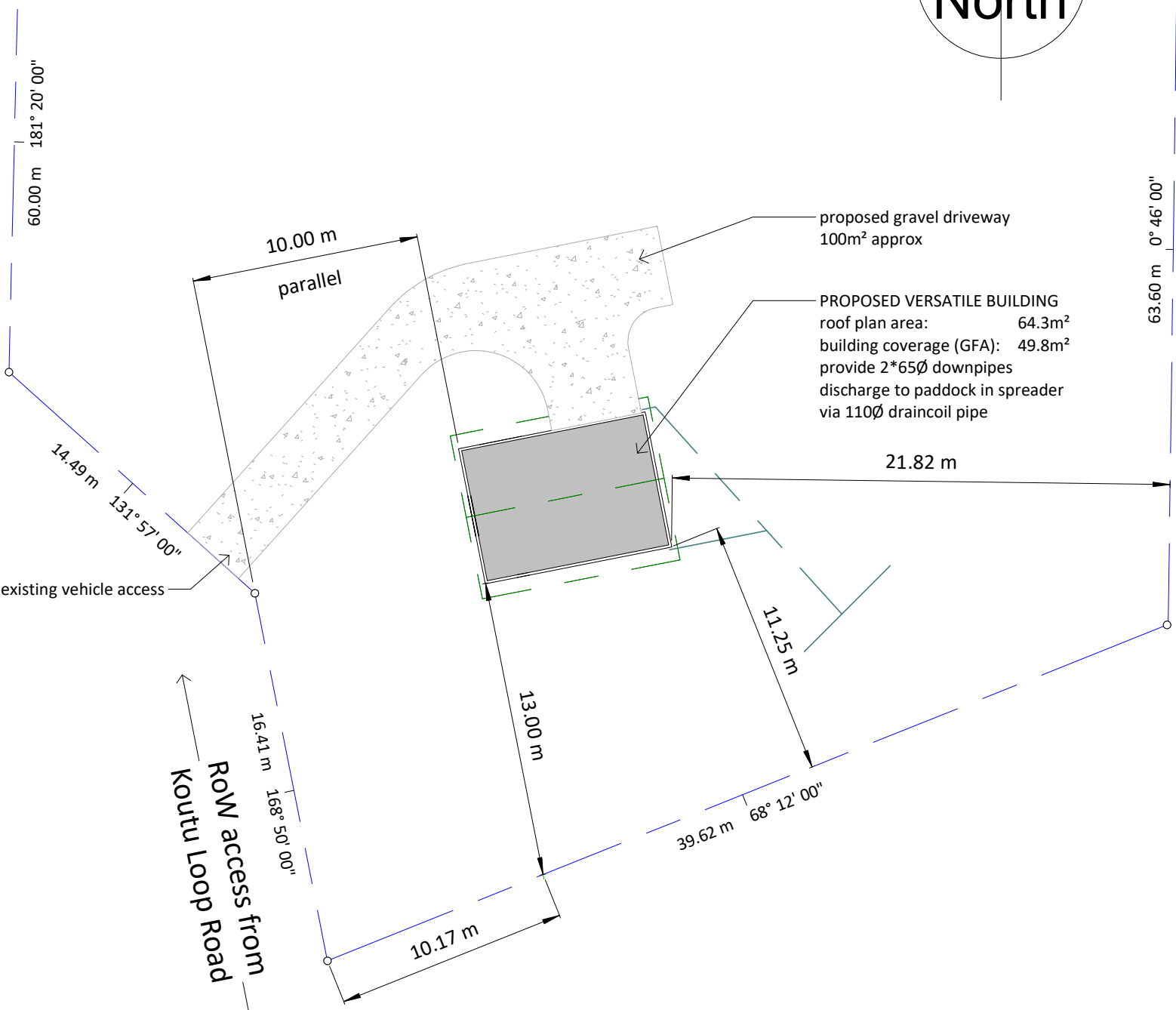
10.7.5.1.1 VISUAL AMENITY

permits any new building with a gross floor
area of no greater than 50m²

CONTRACTOR TO VERIFY ALL DIMENSIONS ON SITE PRIOR TO STARTING . ALL DIMENSIONS IN MM UNLESS STATED
Note: Construction to comply with NZS3604:2011 and the New Zealand Building Code



1 Site Plan
1 : 1000



2 Part Site Plan
1 : 250



PROPOSED VERSATILE BUILDING FOR:
ROUSE
594 KOUTU LOOP ROAD, OPONONI

DRAWING TITLE:
SITE PLAN

REVISIONS:
A 08.04.20 Amend to very high wind zone
SCALE @ A3
As indicated
DATE:
APRIL 2020
C.A.D. PROJECT #: V20500

SHEET No.
01
OF
1



ENGINEERED BY:



PRODUCER STATEMENT
AND
STRUCTURAL DETAILS

CLIENT:

Tony Rouse
594 Koutu Loop road
Opononi
0473

BUILDING:

VRS Project Ref: 2089129
Model: Versatile 600 Series
Size: 8.300m long x 6.000m wide, 2.420m stud height
Wind Zone: Very High
Snow Loading: None region, $S_g = 0.0\text{kPa}$
Earthquake Zone: 1
Soil Class: D&E Deep to very soft
Roof Details: 15 degree pitch, 6 Rib 0.35mm roofing
Trusses: 90x45mm kiln dried H1.2, stress graded timber as per floor plan
Wall Framing: 90x45mm kiln dried H1.2, stress graded timber
Cladding: Superclad rollformed profile, Board And Batten pressed steel profile, Colorsteel Endura
Downpipe Size: Round PVC 65mm Diameter PVC
Floor Type: Concrete

INDEX

1	Contents
2	Producer Statement
3	Durability Statement
4	Concrete Floor Plan
5	Foundation Details
6	Floor Plan General
7	Elevations
8-9	Unlined Cross Section
10-11	Opening Details
12	Roof Framing
13	Truss Design
14-15	Truss Fixing Details
16	Roof Bracing
17	Wall Bracing Demand
18-19	Wall Bracing Achieved
20	Bracing Elements
21-23	Flashing Details

BUILDING CONSENT AUTHORITY:

Far North District Council

COPYRIGHT: These drawings must not be reproduced without express permission from MiTek New Zealand Limited and Spanbild New Zealand Limited.

VB2000 - Design

Sheet 1 of 23



PRODUCER STATEMENT - PS1 - DESIGN

(Guidance on use of Producer Statements (formerly page 2) is available at www.engineeringnz.org)

Building Code Clause(s) B1 and B2

ISSUED BY: MiTek New Zealand Limited (Design Firm)

TO: Spanbild New Zealand Limited (Owner/Developer)

TO BE SUPPLIED TO: Far North District Council (Building Consent Authority)

IN RESPECT OF: Proposed Building (Garage) (Description of Building Work)

AT: 594 Koutu Loop road, Opononi, 0473, New Zealand (Address)

LOT DP SO

We have been engaged by the owner/developer referred to above to provide Engineering Design services in respect of the requirements of clauses B1 and B2 of the Building Code for All or Part only (as specified in the attachment to this statement), of the proposed building work.

The design carried out by us has been prepared in accordance with:

Compliance Documents issued by the Ministry of Business, Innovation & Employment

B1/VM1, B2/AS1, AS/NZS 1170 (Parts 0, 1, 2 & 3), NZS 3603:1993, NZS 3604:2011

The proposed building work covered by this producer statement is described on the drawings titled

VB2000 - Design and numbered Sheets 1-3, 6-20 together with the specification, and other documents set out in the schedule attached to this statement.

On behalf of the Design Firm, and subject to:

(i) Site verification of the following design assumptions: Building IL1, Light roof, Max. height 4.2m

(ii) All proprietary products meeting their performance specification requirements;

and are selected in accordance with NZS3604:2011 Section 4 Durability

(iii) Timber treatment shall be selected in accordance with B2/AS1 Table 1A and relevant sections of NZS3602:2003

I believe on reasonable grounds that a) the building, if constructed in accordance with the drawings, specifications, and other documents provided or listed in the attached schedule, will comply with the relevant provisions of the Building Code and that b), the persons who have undertaken the design have the necessary competency to do so. I also recommend the following level of construction monitoring/observation:

CM1 CM2 CM3 CM4 CM5 (Engineering Categories) or as per agreement with owner/developer (Architectural)

I, Claude Antony Carter Cook, am: CPEng 240891 #

Reg Arch #

I am a Member of: Engineering New Zealand NZIA and hold the following qualifications: CP Eng, IntPE, BE(Hons) The Design Firm issuing this statement holds a current policy of Professional Indemnity Insurance no less than \$200,000*.

The Design Firm is a member of ACENZ:

SIGNED BY Claude Antony Carter Cook ON BEHALF OF MiTek New Zealand Limited (Design Firm)

Date 3 April 2020 (signature)

Note: This statement shall only be relied upon by the Building Consent Authority named above. Liability under this statement accrues to the Design Firm only. The total maximum amount of damages payable arising from this statement and all other statements provided to the Building Consent Authority in relation to this building work, whether in contract, tort or otherwise (including negligence), is limited to the sum of \$200,000*.

This form is to accompany Form 2 of the Building (Forms) Regulations 2004 for the application of a Building Consent.

PRODUCER STATEMENT PS1 THIS FORM AND ITS CONDITIONS ARE COPYRIGHT TO ACENZ, ENGINEERING NEW ZEALAND AND NZIA October 2013

EXPLANATION

This design covers the structural aspects of a Versatile 600 Series building. The sequence of design information is broken down into the following categories:

- Wall Framing.
- Truss Design.
- All Structural Fixings.
- Building Bracing Design for both Roof and Walls.

All other aspects of the structure are constructed in accordance with the standard Versatile Buildings details.

These buildings have been designed for a Building Importance Level 1, with a 50 year working life. Refer to AS/NZS 1170.0:2002

Copyright: These drawing must not be used without express prior permission from MiTek New Zealand Limited and Spanbild New Zealand Limited.

DESIGN LOADS

Dead Loads for Light Roof:

Truss Top Chord= 0.15kPa (includes weight of trusses, purlins, associated framing and zincalume roof). Truss Bottom Chord=0.15kPa (no ceiling) or 0.20kPa if there is a ceiling for trusses @ 1200crs.

Live Loads:

Truss Top Chord= 1.1kN concentrated load, 0.25kPa uniform load. Truss Bottom Chord=0.9kN concentrated load below 1200mm head height and 1.4kN concentrated load above 1200mm head height.

Wind Loads:

Building designed for Very High wind conditions.

Seismic loads:

Building designed for Seismic Zone 1.

Snow loads:

Buildings designed for None, Sg = 0.0kPa

Refer to MiTek New Zealand Limited for any design modifications required for increase in snow loads or wind loads above those stated on the drawings.

DESIGN REFERENCES

- NZS3603:1993
- NZS3604:2011
- AS/NZS1170 Part 0:2002
- AS/NZS1170 Part 1:2002
- AS/NZS1170 Part 2:2011
- AS/NZS1170 Part 3:2003
- ANSI/TPI1 - 2002

For: Tony Rouse
594 Koutu Loop road
Opononi
0473



VB2000 - Design

Producer Statement

Sheet 2 of 23

MANUFACTURERS DURABILITY STATEMENT

INTRODUCTION.

To satisfy the requirements of Clause B2:'Durability' of the New Zealand Building Code, the following provisions must apply to the metal cladding.

RANGE OF PRODUCT AND USE.

- Specification: AS1397:2001
- Coating Type: Zinc/Aluminium & Painted
- Steel Thickness Range: 0.35mm - 0.95mm BMT
- Steel Grade Range: G300 - G550
- Application: Cladding for Building Importance Level 1, with a 50 year working life. Refer AS/NZS 1170.0:2002
- Fasteners: Galvanised clouts. Aluminium rivets for all steel components. IFI114:1986

REQUIREMENTS, LIMITATIONS AND EXCLUSIONS.

- Applicable to buildings in sea-spray Zone D and exposure Zones B and C in accordance with Section 4, Durability, NZS 3604:2011 which is an acceptable solution under Clause B2 of the NZBC.
- Fixing and installation of the cladding must be done exactly in accordance with Versatile Buildings Specifications.
- Normal and regular maintenance must be carried out on the exterior surface of the cladding, and the following guide must be followed to ensure the durability requirements are met.

REGULAR MAINTENANCE.

- Exposure Zones B and C. (All areas other than sea-spray zones - see below)
- Rain washing only required on the exposed sections. Sheltered or protected areas such as under spouting , top cladding boards and tops of doors require washing every three months.
- Sea-spray Zone D (Within 500m from the sea or 100m from sheltered harbours or inlets) and areas of geothermal activity.
- Rain washing only required on exposed areas. Sheltered and protected areas such as under spouting, top cladding boards and tops of doors require washing down every month and when corrosive salts are present.

EXTENDED MAINTENANCE, PAINTING OR REPAINTING.

Extended Durability

- Once the metallic coating or the paint system has weathered away, signs of red rust for bare material or signs of the metallic coating for painted material painting of the entire surface is required to extend the life of the cladding product. Paint manufacturer's recommendations are to be followed for the surface preparation and paint type to be used.

Evident Corrosion

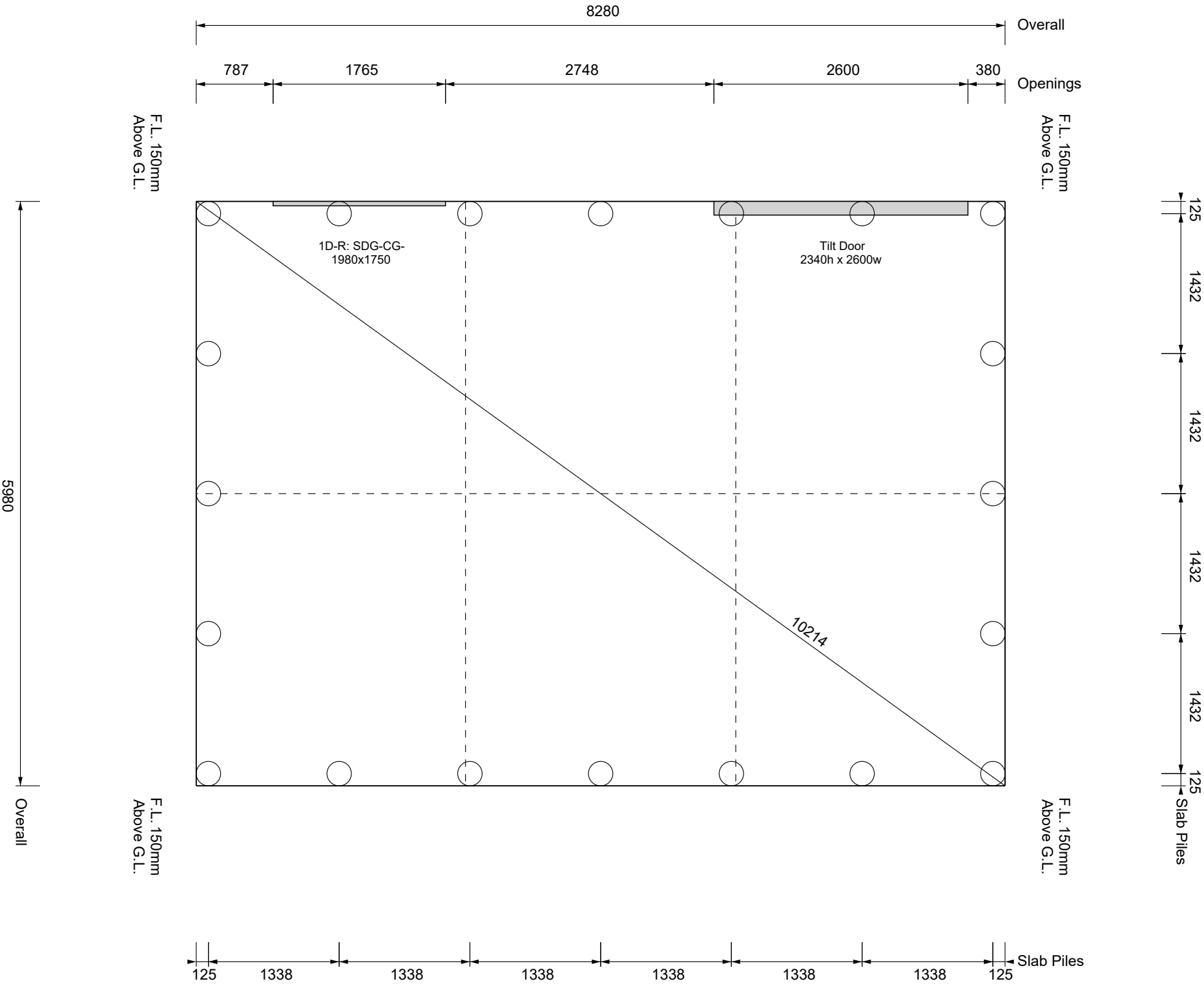
- Areas that show signs of white or red rust/corrosion (typically in unwashed areas) require cleaning back with a stiff brush and cleaner to remove all dust, surface contaminants and corrosion products. Present a sound substrate for painting. Priming of the surface and application of two coats of paint as per the paint manufacturer's recommendations is then required. Particular attention needs to be paid to laps (side, end, flashing etc) where earlier corrosion may have started, due to moisture and dirt entrapment. If evident corrosion is not treated quickly, rapid deterioration of the sheet may occur which could result in perforation. At this stage replacement of the affected sheet is the best option.

REFERENCES.

1. NZBC - Compliance Document - Clause B2 - Durability.
2. NZS 3604:2011, Section 4, Durability*

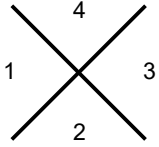
*NZS3604 has been used as a reference only to identify Corrosion zones, Sea-spray zones.

DIMENSIONS IN mm UNLESS OTHERWISE STATED THIS IS A C.A.D. DRAWING AND MUST NOT BE ALTERED BY MANUAL METHODS



LEGEND	
	Diagonal: 10214
	Expansion Cut
	250mm dia pile

SCALE A3-1:50



COPYRIGHT: THESE DRAWINGS MUST NOT BE REPRODUCED WITHOUT THE EXPRESS PERMISSION OF SPANBILD NEW ZEALAND LIMITED.



For: Tony Rouse
594 Koutu Loop road
Opononi
0473

VB2000

Concrete Floor Plan

Sheet 4 of 23



PRODUCER STATEMENT - PS1 - DESIGN

(Guidance on use of Producer Statements (formerly page 2) is available at www.engineeringnz.org)

Building Code Clause(s) B1.....

ISSUED BY: Calibre Consulting Limited (Project Ref: 707370)
(Design Firm)

TO: Spanbild New Zealand Limited
(Owner/Developer)

TO BE SUPPLIED TO: Far North District Council
(Building Consent Authority)

IN RESPECT OF: Stand alone, non-habitable importance level 1 (IL1 - 50 year design life), building slab and foundation
(Description of Building Work)

AT: 594 Koutu Loop road, Opononi, 0473
(Address)

LOT DP SO

We have been engaged by the owner/developer referred to above to provide Structural Engineering Design
..... services in respect of the requirements of

Clause(s) B1 (Refer to Note 1 re: durability) of the Building Code for
All ☐ or Part only ☒ (as specified in the attachment to this statement), of the proposed building work.

The design carried out by us has been prepared in accordance with:

☒ Compliance Documents issued by the Ministry of Business, Innovation & Employment B1/VM1, B1/VM4
(verification method / acceptable solution)

The proposed building work covered by this producer statement is described on the drawings titled

..... VB2000 IL1 Foundation and numbered Sheets 4-5
together with the specification, and other documents set out in the schedule attached to this statement.

On behalf of the Design Firm, and subject to:

(i) Site verification of the following design assumptions Subsoil is good ground except that the ultimate bearing
capacity is 100kPa for Footing Type A, where less than 100kPa refer to Footing Type B as noted

(ii) All proprietary products meeting their performance specification requirements;

I believe on reasonable grounds that a) the building, if constructed in accordance with the drawings, specifications, and
other documents provided or listed in the attached schedule, will comply with the relevant provisions of the Building Code
and that b), the persons who have undertaken the design have the necessary competency to do so. I also recommend
the following level of construction monitoring/observation:

☐ CM1 ☐ CM2 ☐ CM3 ☐ CM4 ☐ CM5 (Engineering Categories) or ☐ as per agreement with owner/developer (Architectural)

I, John McCurran am: ☒ CPEng 48451 #
(Name of Design Professional)

☐ Reg Arch #

I am a Member of: ☒ Engineering New Zealand ☐ NZIA and hold the following qualifications: BE (Civil)
The Design Firm issuing this statement holds a current policy of Professional Indemnity Insurance no less than
\$200,000*.

The Design Firm is a member of ACENZ: ☒

SIGNED BY John McCurran ON BEHALF OF Calibre Consulting Limited
(Design Firm)

Date 3 April 2020 (signature) Building Consent lodgement must be prior to 15 April 2021

Note: This statement shall only be relied upon by the Building Consent Authority named above. Liability under this statement accrues to the
Design Firm only. The total maximum amount of damages payable arising from this statement and all other statements provided to the Building
Consent Authority in relation to this building work, whether in contract, tort or otherwise (including negligence), is limited to the sum of
\$200,000*.

This form is to accompany Form 2 of the Building (Forms) Regulations 2004 for the application of a Building Consent.

PRODUCER STATEMENT PS1

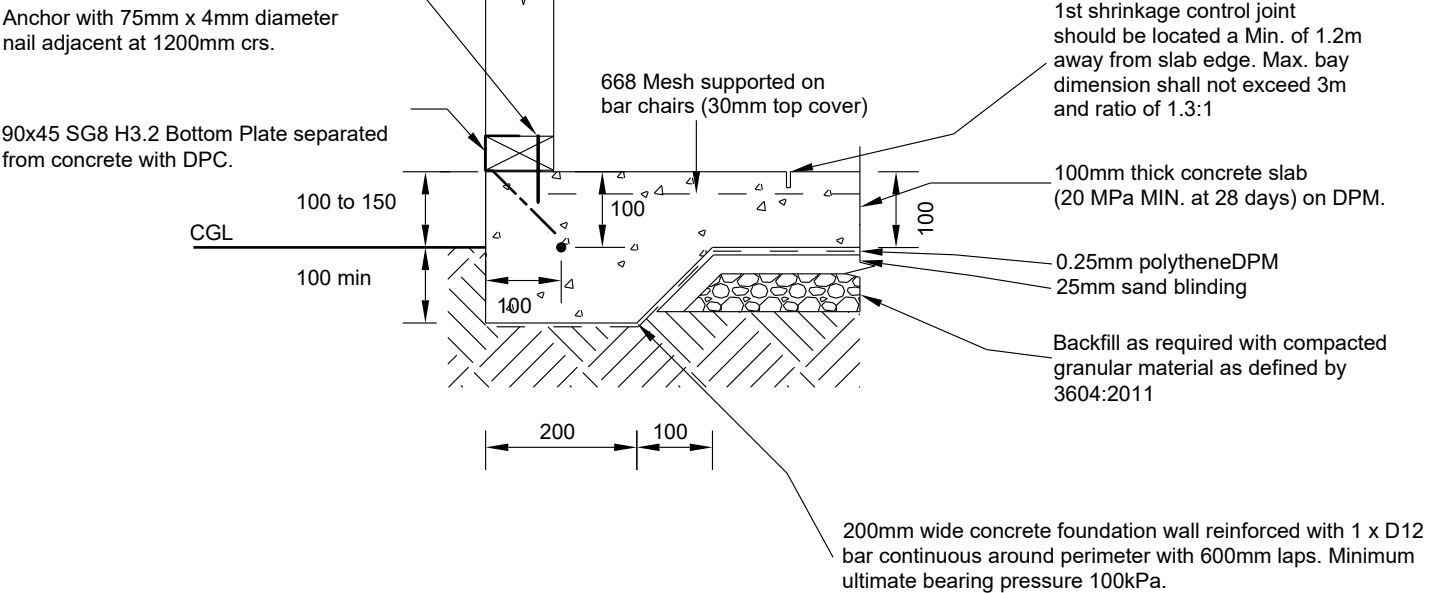
THIS FORM AND ITS CONDITIONS ARE COPYRIGHT TO ACENZ, IPENZ AND NZIA

October 2013

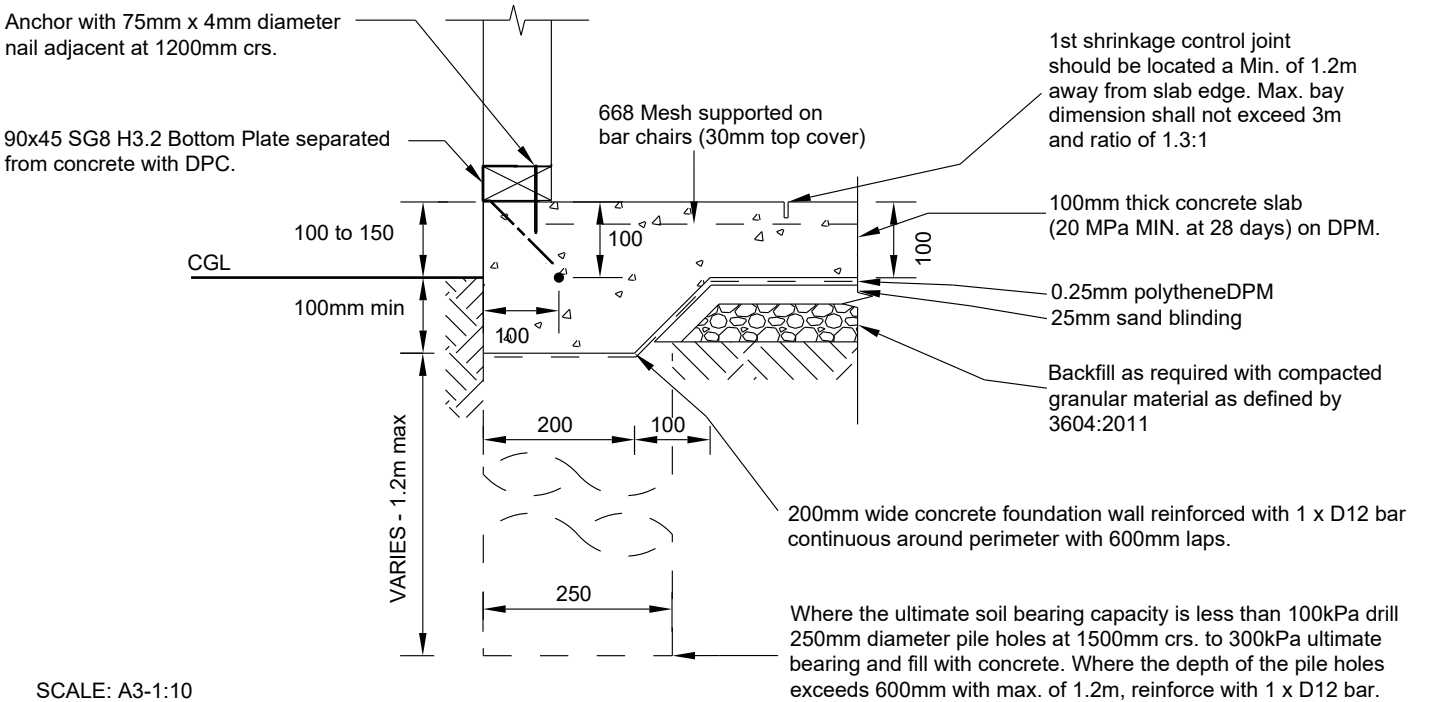
GARAGE FOUNDATION DETAIL

- Notes:
1. Concrete Covers have been selected in accordance with NZS 3101, Part 1 Section 3.
 2. Strip the site, removing vegetation, turf, soils containing organic matter and any loose or soft material, trim to a firm subgrade. Backfill as required with compacted granular material as defined by 3604:2011.
 3. Footing Type A shall be found in good ground defined by NZS 3604 but having a minimum ultimate bearing capacity of 100kPa.
 4. Where the ultimate bearing capacity is less than 100kPa use Footing Type B.
 5. For Type M and H Expansive Soils, use Footing Type B with 1200 deep pile reinforced with 1 vertical D12 400 mm return into slab.
 6. 28-Day concrete strength to be 25 MPa for zone D as per figure 4 in NZS 3604

FOOTING TYPE A



FOOTING TYPE B



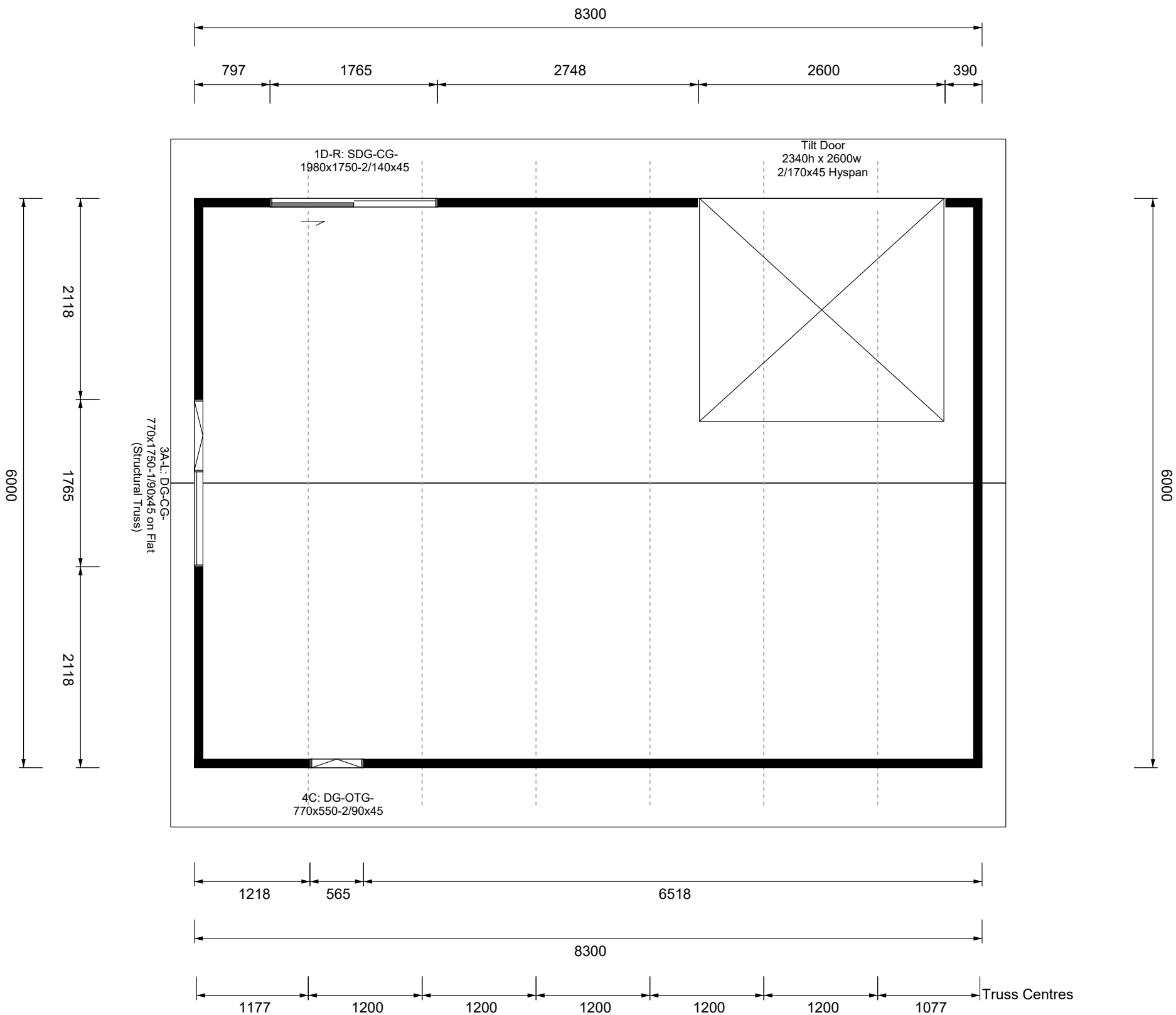
For: Tony Rouse
594 Koutu Loop road
Opononi
0473

VB2000 - IL1 Foundation

Foundation Details

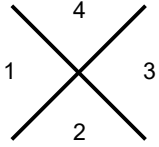
Sheet 5 of 23

DIMENSIONS IN mm UNLESS OTHERWISE STATED THIS IS A C.A.D. DRAWING AND MUST NOT BE ALTERED BY MANUAL METHODS



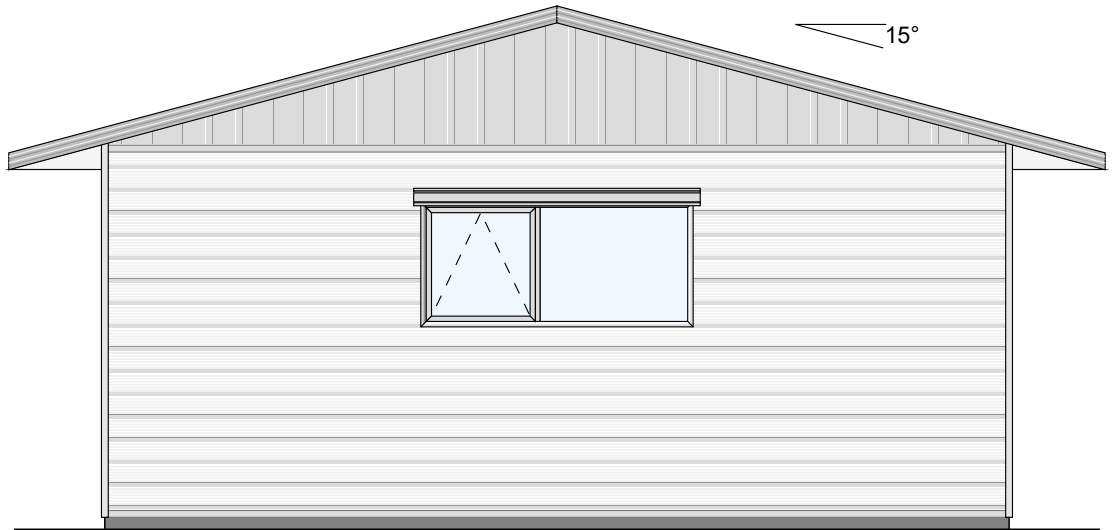
LEGEND	
Aluminium Joinery	
DG	Double Glazing
CG	Clear

SCALE A3-1:50



COPYRIGHT: THESE DRAWINGS MUST NOT BE REPRODUCED WITHOUT THE EXPRESS PERMISSION OF SPANBILD NEW ZEALAND LIMITED.

DIMENSIONS IN mm UNLESS OTHERWISE STATED THIS IS A C.A.D. DRAWING AND MUST NOT BE ALTERED BY MANUAL METHODS



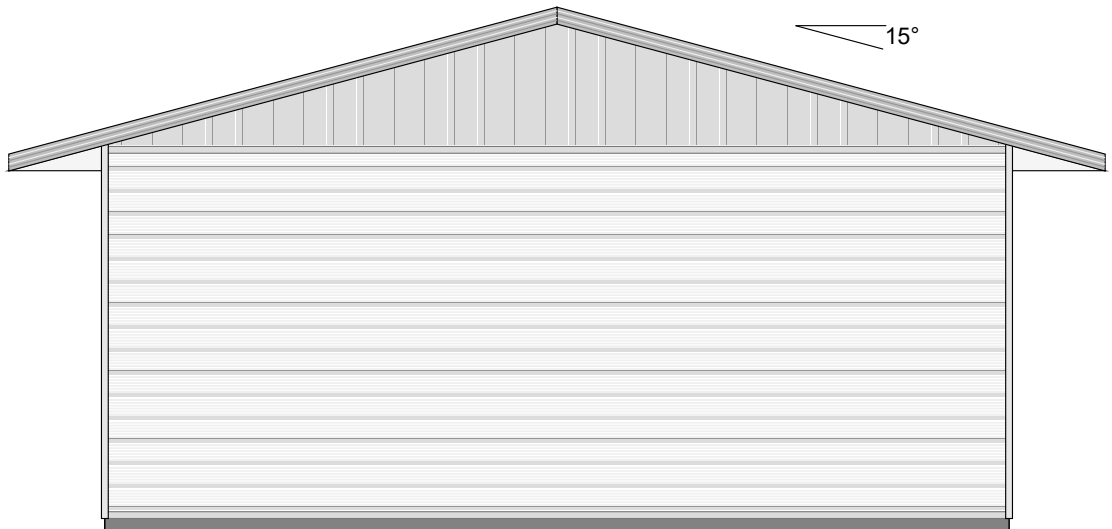
3A-L: DG-CG-
770x1750

ELEVATION VIEW 1



4C: DG-OTG-
770x550

ELEVATION VIEW 2



ELEVATION VIEW 3



Tilt Door
2340h x 2600w

1D-R: SDG-CG-
1980x1750

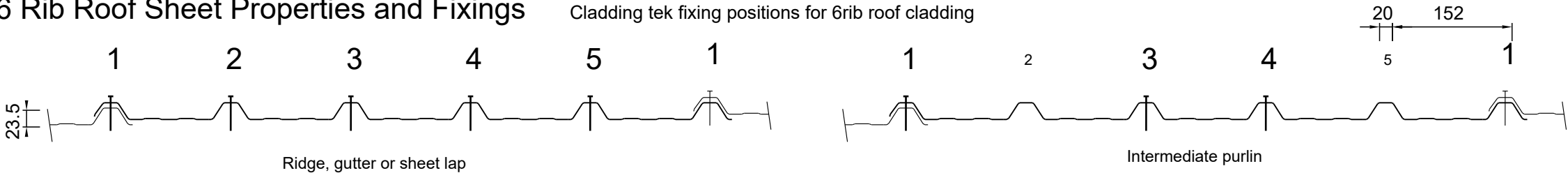
ELEVATION VIEW 4

SCALE A3-1:50

DIMENSIONS IN mm UNLESS OTHERWISE STATED THIS IS A C.A.D. DRAWING AND MUST NOT BE ALTERED BY MANUAL METHODS

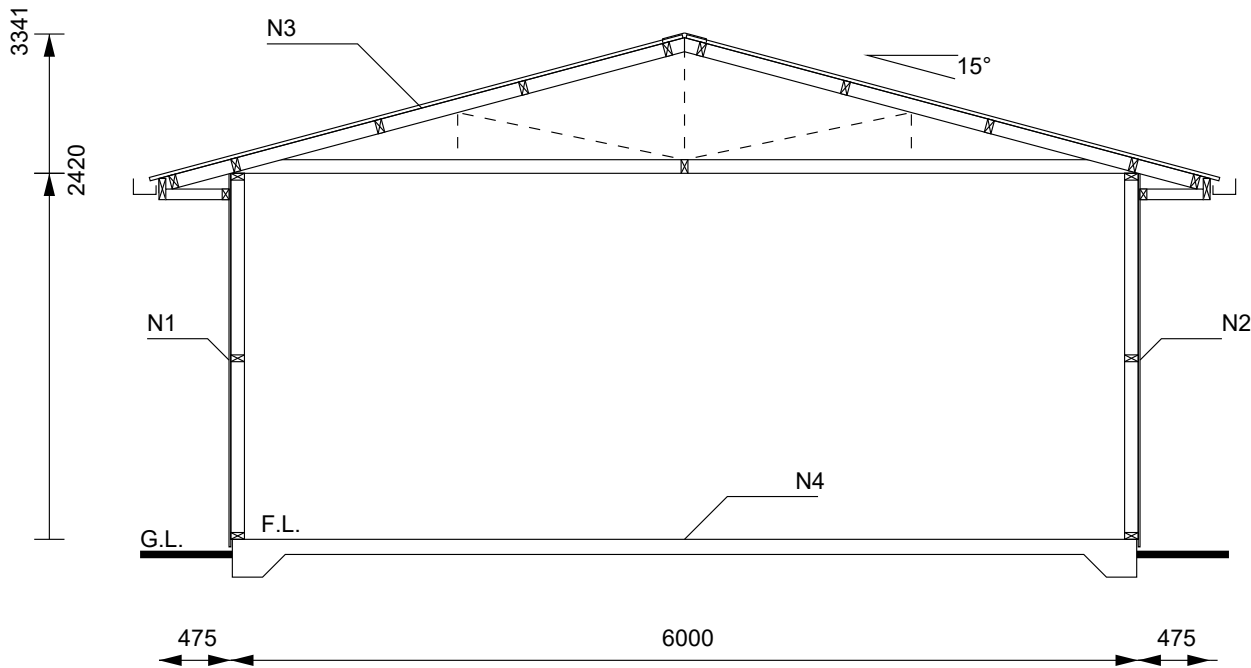
6 Rib Roof Sheet Properties and Fixings

Cladding tek fixing positions for 6rib roof cladding



NOTES

- N1 : WALLS
- Colorsteel Endura Superclad cladding over 90x45 SG8 H1.2 studs @ 600mm centres max with 1 row of 90x45 NLB H1.2 dwangs.
- N2 : WALLS
- Colorsteel Endura Superclad cladding over 90x45 SG8 H1.2 studs @ 600mm centres max with 1 row of 90x45 NLB H1.2 dwangs.
- N3 : ROOF
- 6 Rib 0.35mm roofing over over 90x45 SG8 H1.2 purlins @ 1000mm centres max, fixed between trusses.
 - For purlin fixings and bottom chord truss stiffeners refer to 'Roof Framing' sheet 12 of 23.
 - For truss centres refer to 'Floor Plan General' sheet 6 of 23.
 - For truss design and fixings refer to 'Truss Design' sheet 13 of 23 and 'Truss Fixing Details' sheets 14-15 of 23.
 - For soffit details refer to 'Flashing Details' sheet 23 of 23.
- N4 : FLOOR
- For foundation details refer to 'Foundation Details' sheet 5 of 23.
 - H3.2 Bottom plate to be fixed to the foundation with Lumberlok Bottom Plate Fixing Anchor with 75mm x 4mm diameter nail adjacent at 1200mm crs.



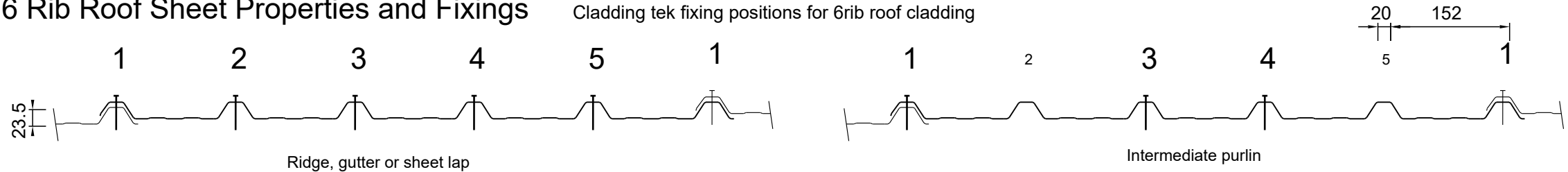
SCALE A3-1:50

COPYRIGHT: THESE DRAWINGS MUST NOT BE REPRODUCED WITHOUT THE EXPRESS PERMISSION OF SPANBILD NEW ZEALAND LIMITED.

DIMENSIONS IN mm UNLESS OTHERWISE STATED THIS IS A C.A.D. DRAWING AND MUST NOT BE ALTERED BY MANUAL METHODS

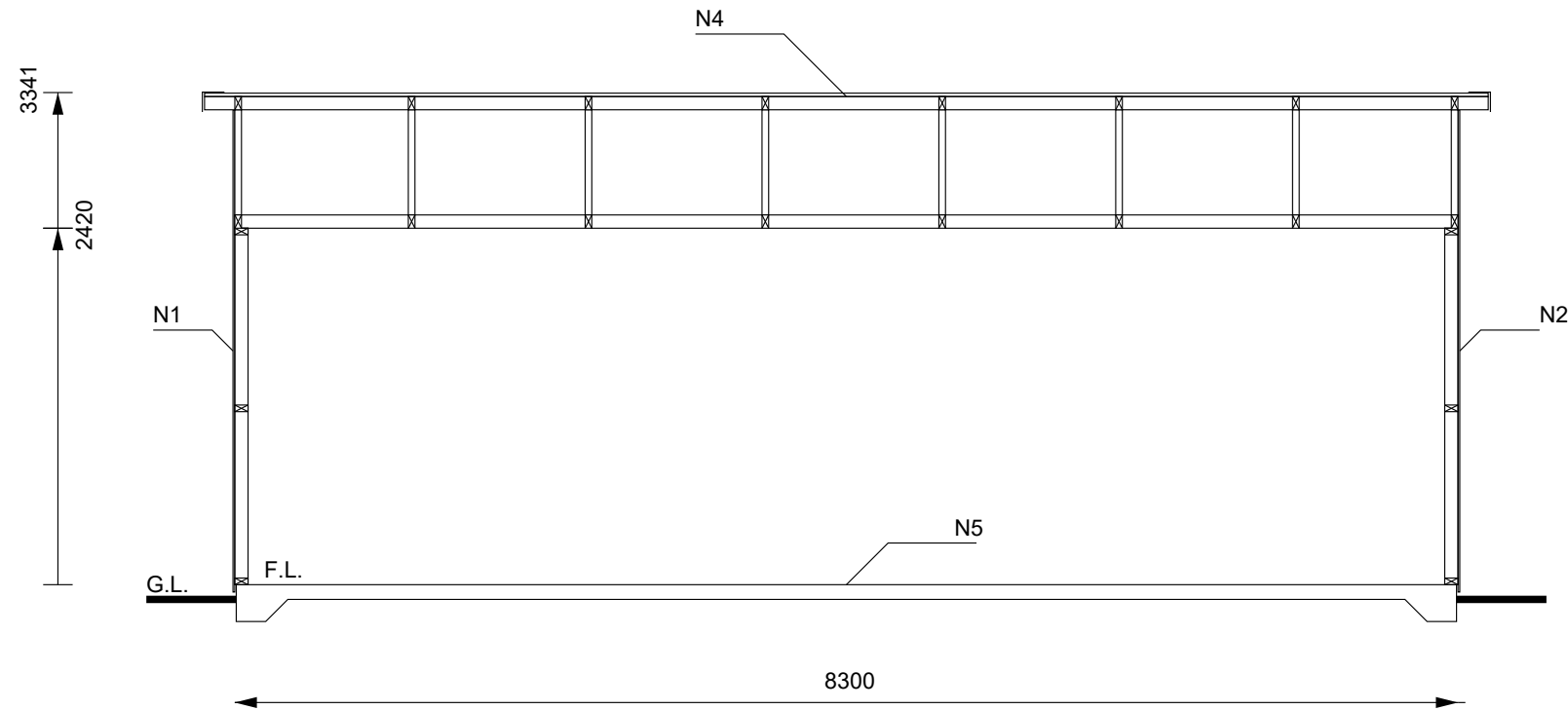
6 Rib Roof Sheet Properties and Fixings

Cladding tek fixing positions for 6rib roof cladding



NOTES

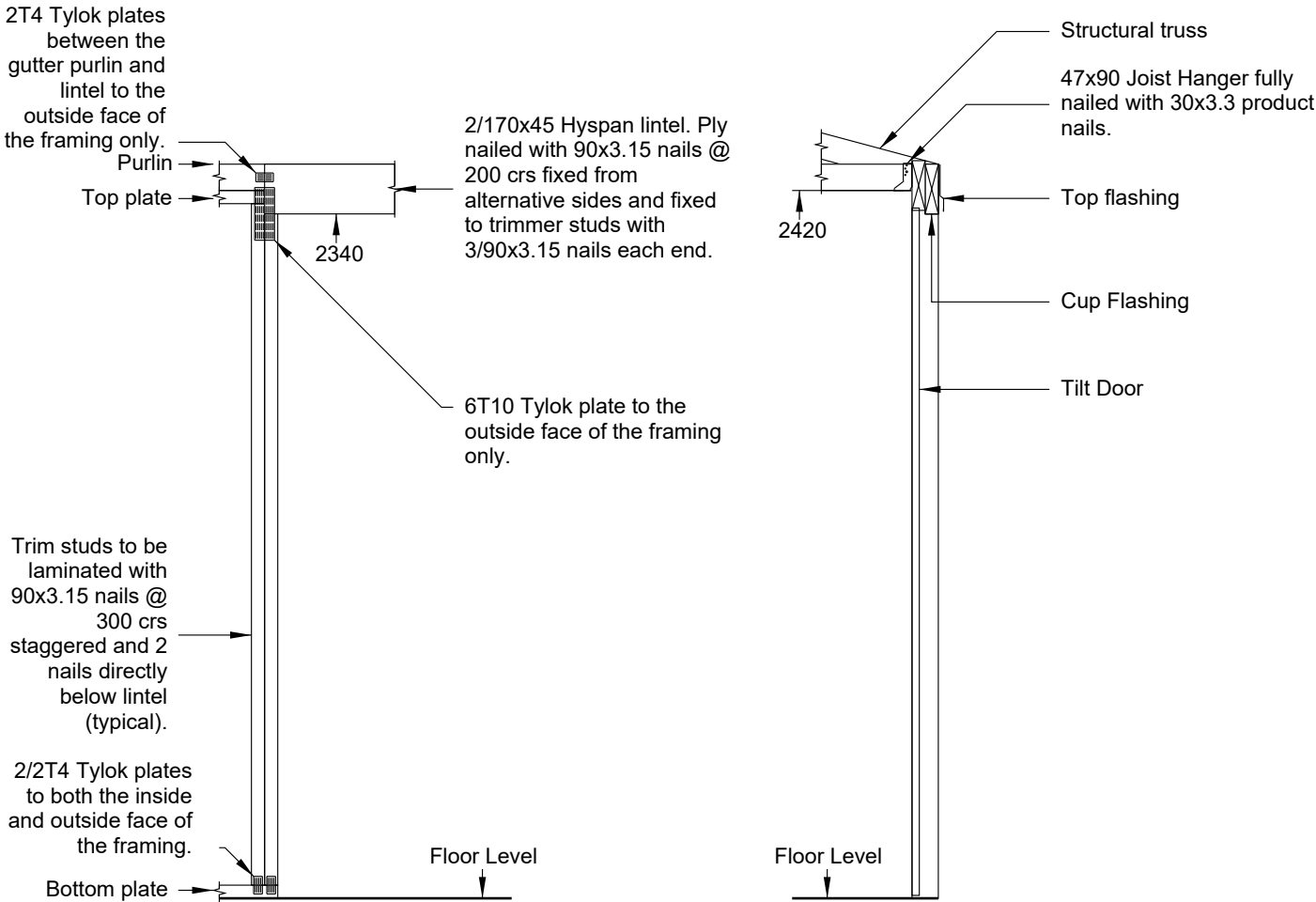
- N1 : WALLS
- Colorsteel Endura Superclad cladding over 90x45 SG8 H1.2 studs @ 600mm centres max with 1 row of 90x45 NLB H1.2 dwangs.
- N2 : WALLS
- Colorsteel Endura Superclad cladding over 90x45 SG8 H1.2 studs @ 600mm centres max with 1 row of 90x45 NLB H1.2 dwangs.
- N4 : ROOF
- 6 Rib 0.35mm roofing over over 90x45 SG8 H1.2 purlins @ 1000mm centres max, fixed between trusses.
 - For purlin fixings and bottom chord truss stiffeners refer to 'Roof Framing' sheet 12 of 23.
 - For truss centres refer to 'Floor Plan General' sheet 6 of 23.
 - For truss design and fixings refer to 'Truss Design' sheet 13 of 23 and 'Truss Fixing Details' sheets 14-15 of 23.
 - For soffit details refer to 'Flashing Details' sheet 23 of 23.
- N5 : FLOOR
- For foundation details refer to 'Foundation Details' sheet 5 of 23.
 - H3.2 Bottom plate to be fixed to the foundation with Lumberlok Bottom Plate Fixing Anchor with 75mm x 4mm diameter nail adjacent at 1200mm crs.



SCALE A3-1:50

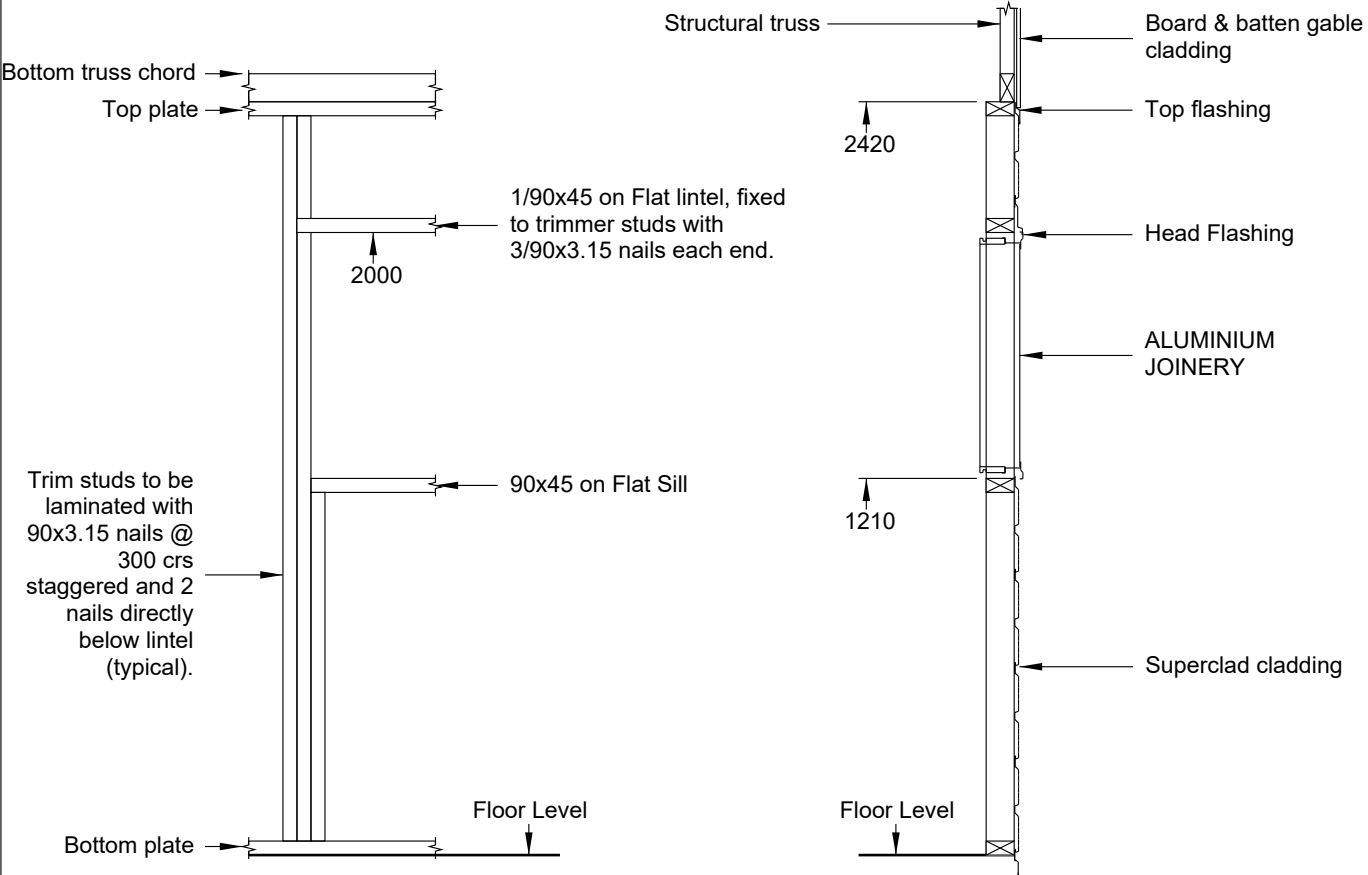
COPYRIGHT: THESE DRAWINGS MUST NOT BE REPRODUCED WITHOUT THE EXPRESS PERMISSION OF SPANBILD NEW ZEALAND LIMITED.

TILT DOOR



SCALE A3-1:25

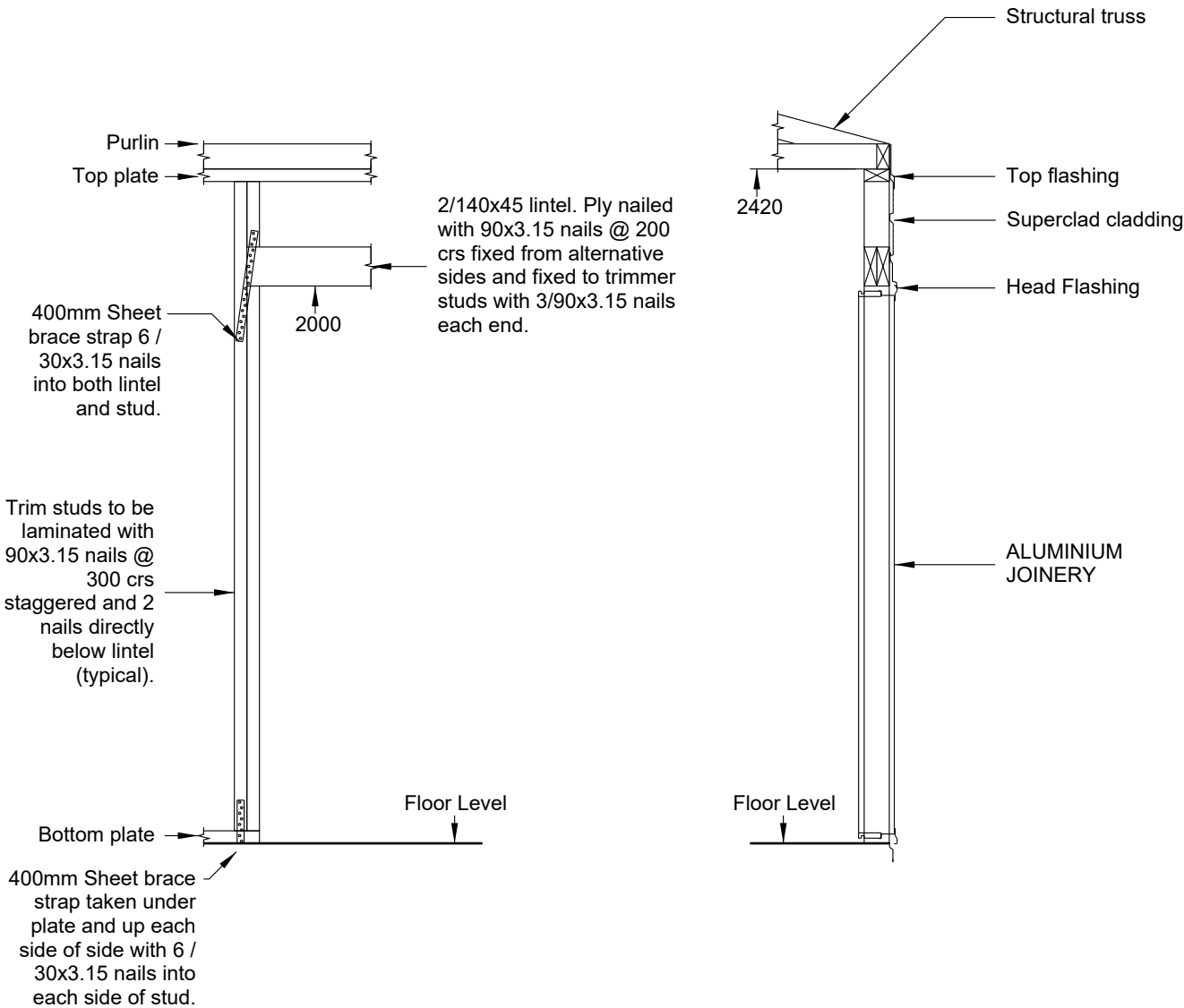
Aluminium Joinery



SCALE A3-1:25

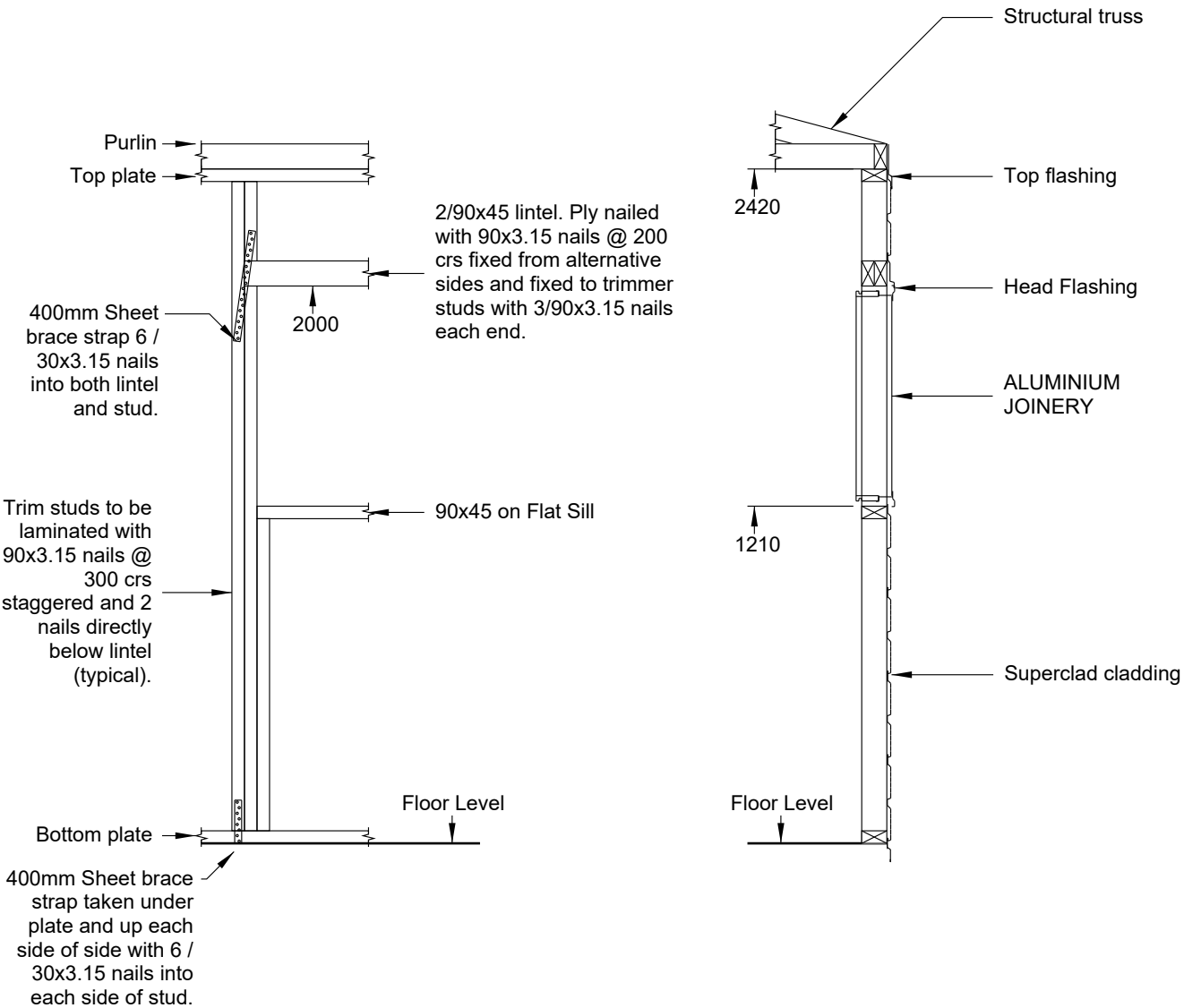
COPYRIGHT: THESE DRAWINGS MUST NOT BE REPRODUCED WITHOUT THE EXPRESS PERMISSION OF SPANBILD NEW ZEALAND LIMITED.

Aluminium Joinery



SCALE A3-1:25

Aluminium Joinery



SCALE A3-1:25

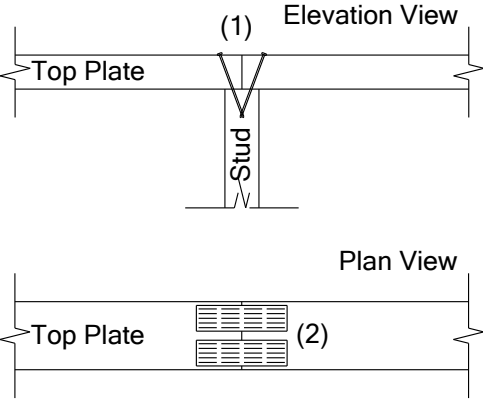
COPYRIGHT: THESE DRAWINGS MUST NOT BE REPRODUCED WITHOUT THE EXPRESS PERMISSION OF SPANBILD NEW ZEALAND LIMITED.

TOP PLATE AND ROOF FRAMING

TOP PLATE DETAILS

All top plates to be 90x45 SG8 H1.2.

Load Bearing Walls - Butt Joint Fixing Details

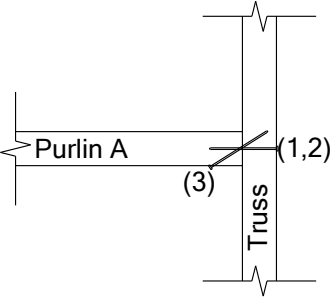


- 1. Skew nail top plates to stud with 4/90x3.15mm nails
- 2. Fix 2/4T5 Tylok plates over the joint.

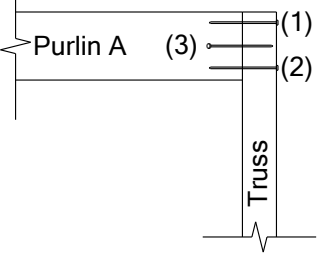
PURLIN DETAILS

All purlins 90x45 (on edge) SG8 H1.2 at 1000mm centres max fixed between trusses.

Plan View

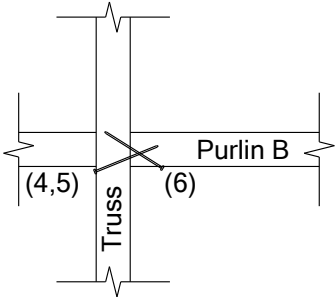


Elevation View

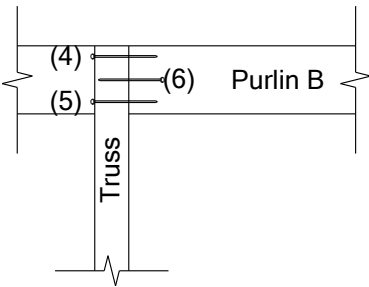


- 1. Nail 2/90x3.15mm nails (1,2) through the truss chord into the end of purlin A.
- 2. Skew nail 1/90x3.15mm nail (3) from purlin A into the truss chord.

Plan View



Elevation View

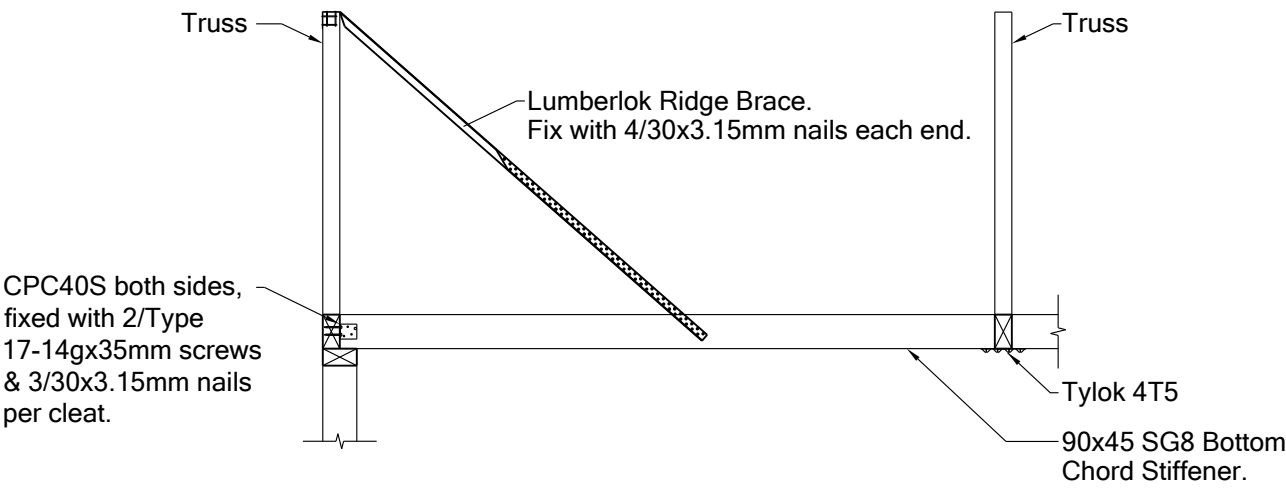


- 1. Skew nail 2/90x3.15mm nails (4,5) through the truss chord into the end of purlin B.
- 2. Skew nail 1/90x3.15mm nail (6) from purlin B into the truss chord.

SCALE: A3-1:10

STANDARD TRUSS STIFFENER

All truss stiffeners 90x45 SG8 H1.2. Refer to Truss Design (sheet 13 of 23) for centres



TRUSS DESIGN

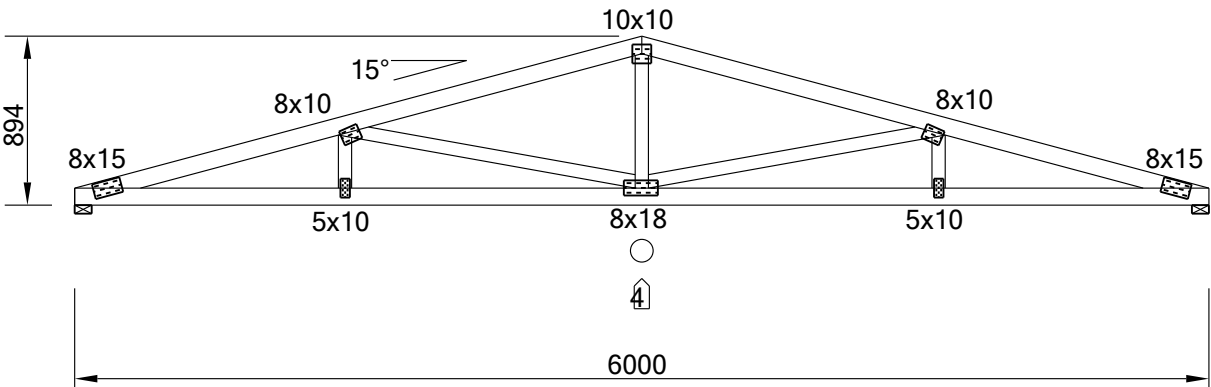
DESIGN LOADS

Dead Loads for Light Roof:
Truss Top Chord= 0.15kPa (includes weight of trusses, purlins , associated framing and zincalume roof).
Truss Bottom Chord=0.20kPa for trusses @ 1200crs with ceiling.

Live Loads:
Truss Top Chord= 1.1kN concentrated load, 0.25kPa uniform load.
Truss Bottom Chord=0.9kN concentrated load below 1200mm head height and
1.4kN concentrated load above 1200mm head height.

Wind Loads:
Roof= Cfig = -1.1

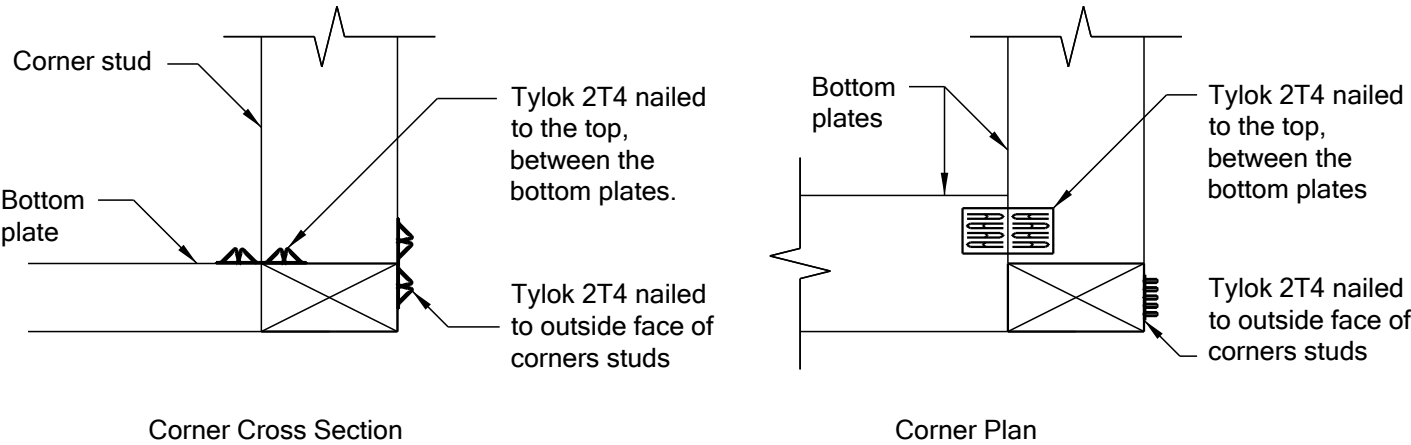
TRUSS DESIGN



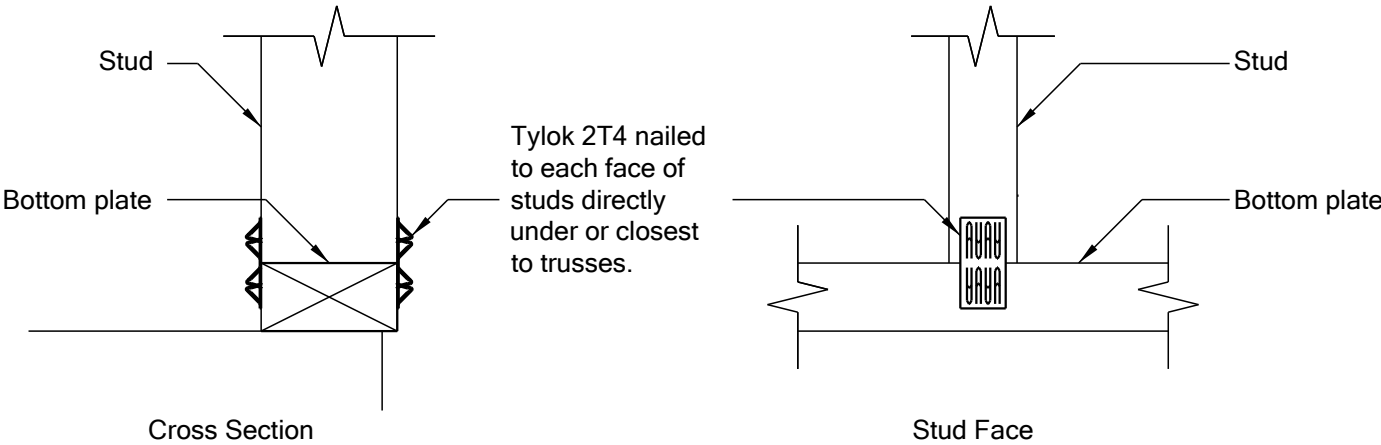
NOTE:

1. ○ Indicates location of Bottom chord brace (truss stiffener).
2. ② Indicates the truss camber (typical).
3. All truss plates are Gang-Nail GNQ type.
4. Nail plates are to be fully pressed home on both sides of joints.
5. The nail plate axis must be located in the specified or indicated direction.
6. Top and Bottom chords to be 90x45 SG10 H1.2 Radiata pine.
7. All webs to be 70x45 SG8 H1.2 Radiata pine.

GABLE TRUSS CORNER STUD / BOTTOM PLATE FIXING



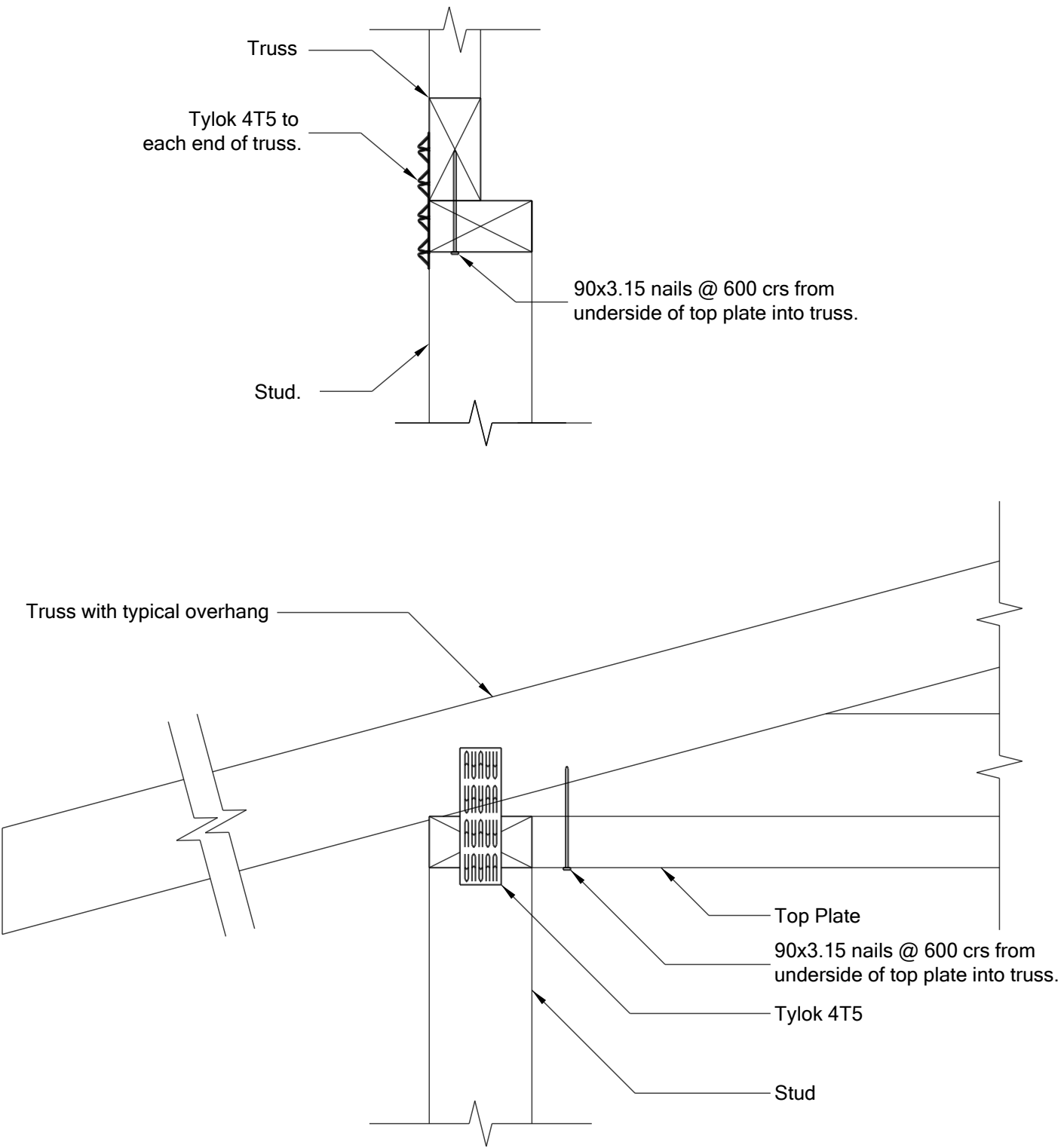
TRUSS STUD / BOTTOM PLATE FIXING



For: Tony Rouse
594 Koutu Loop road
Opononi
0473

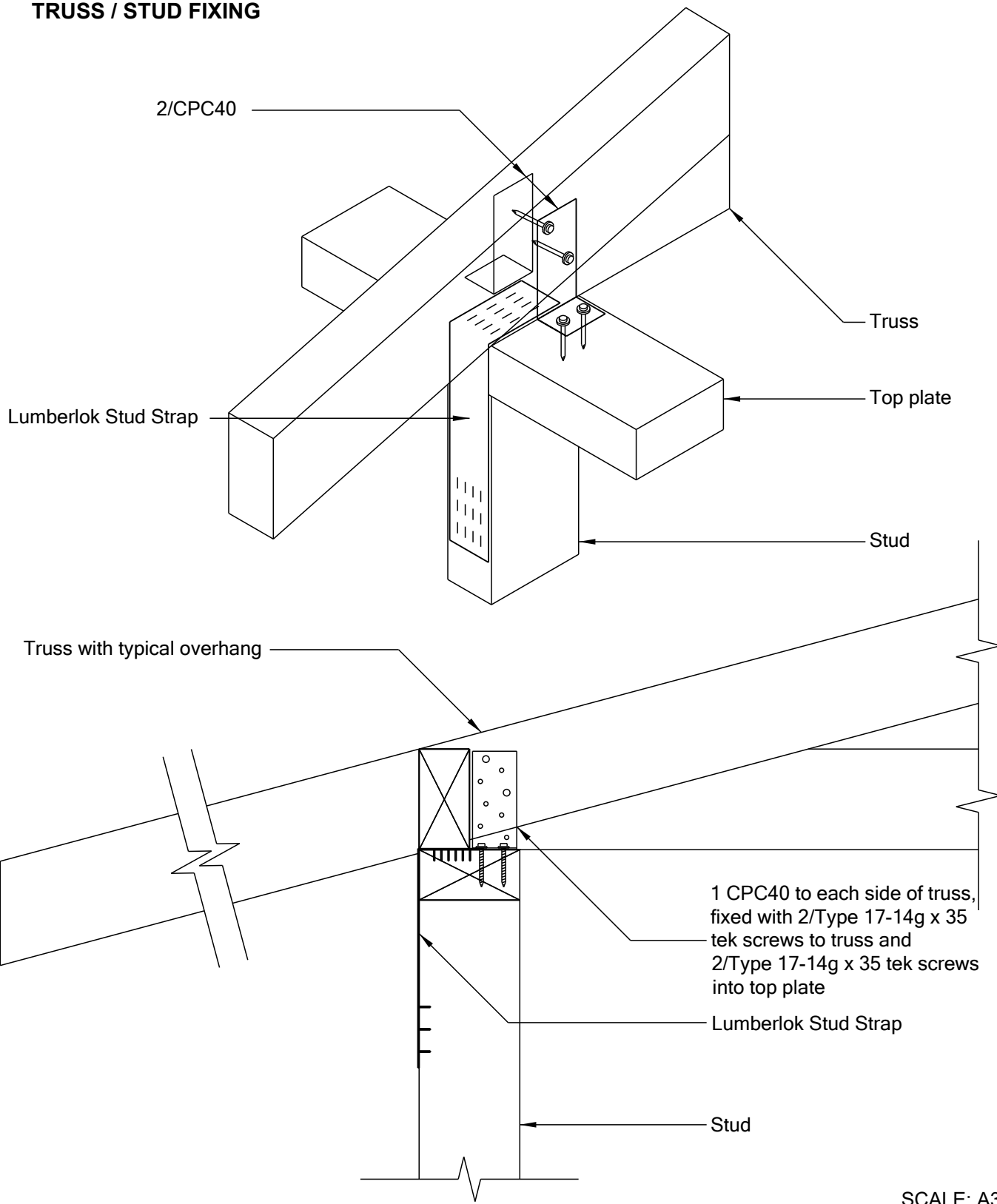
TRUSS FIXING DETAILS

GABLE TRUSS / CORNER STUD FIXING



SCALE: A3-1:5

TRUSS / STUD FIXING



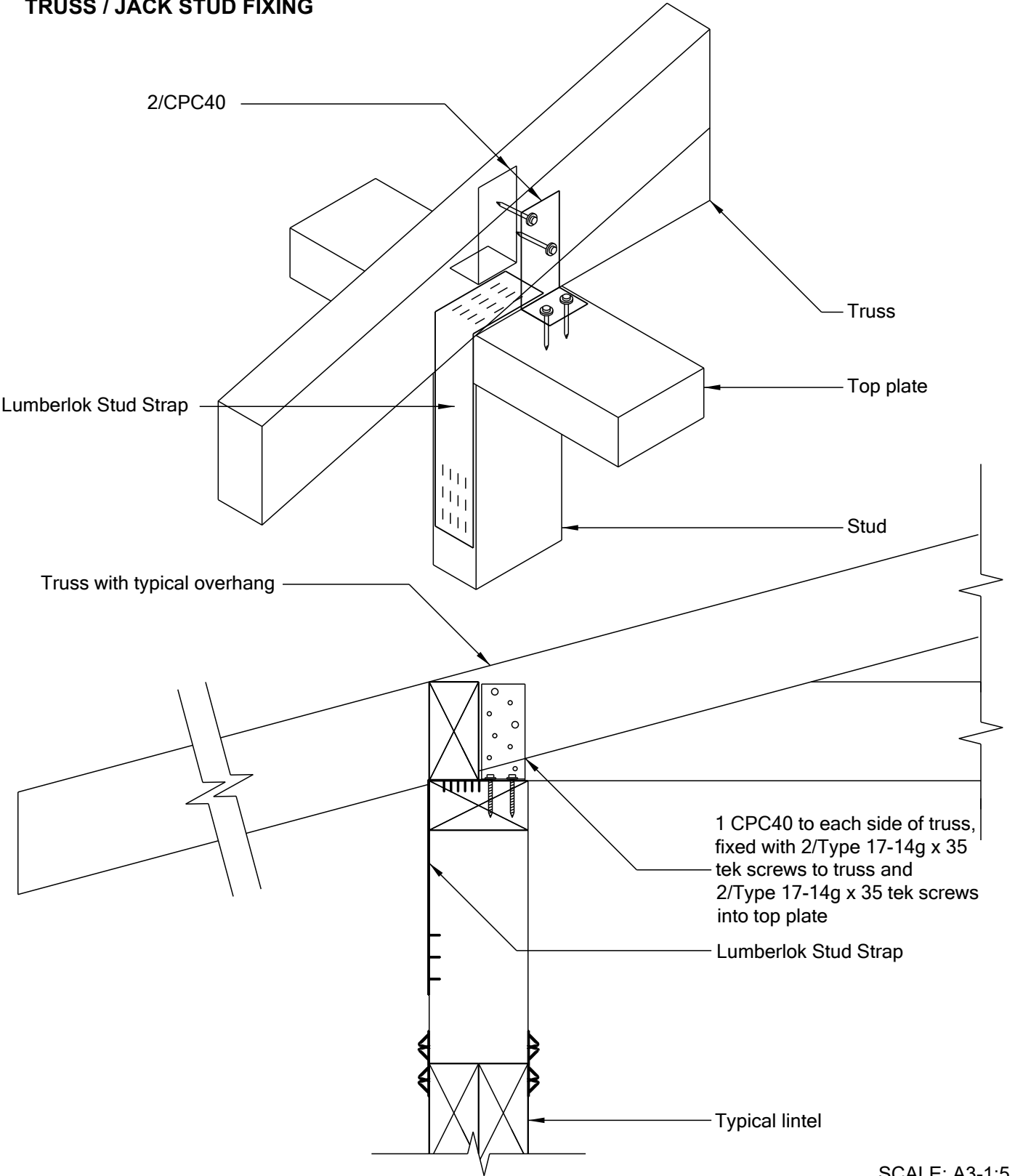
SCALE: A3-1:5

COPYRIGHT: THESE DRAWINGS MUST NOT BE REPRODUCED WITHOUT THE EXPRESS PERMISSION OF SPANBILD NEW ZEALAND LIMITED.

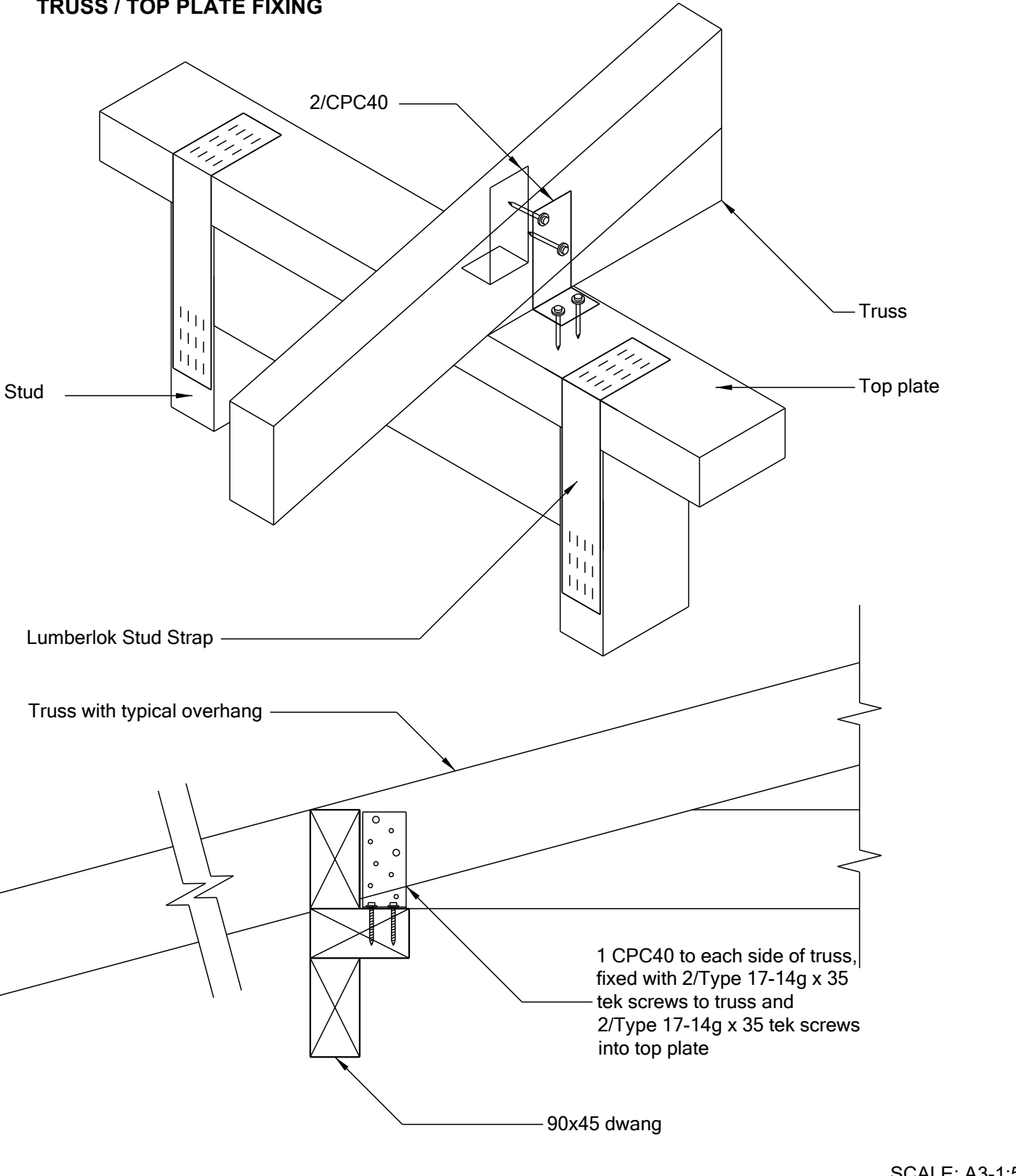
DIMENSIONS IN mm UNLESS OTHERWISE STATED THIS IS A C.A.D. DRAWING AND MUST NOT BE ALTERED BY MANUAL METHODS

TRUSS FIXING DETAILS

TRUSS / JACK STUD FIXING



TRUSS / TOP PLATE FIXING



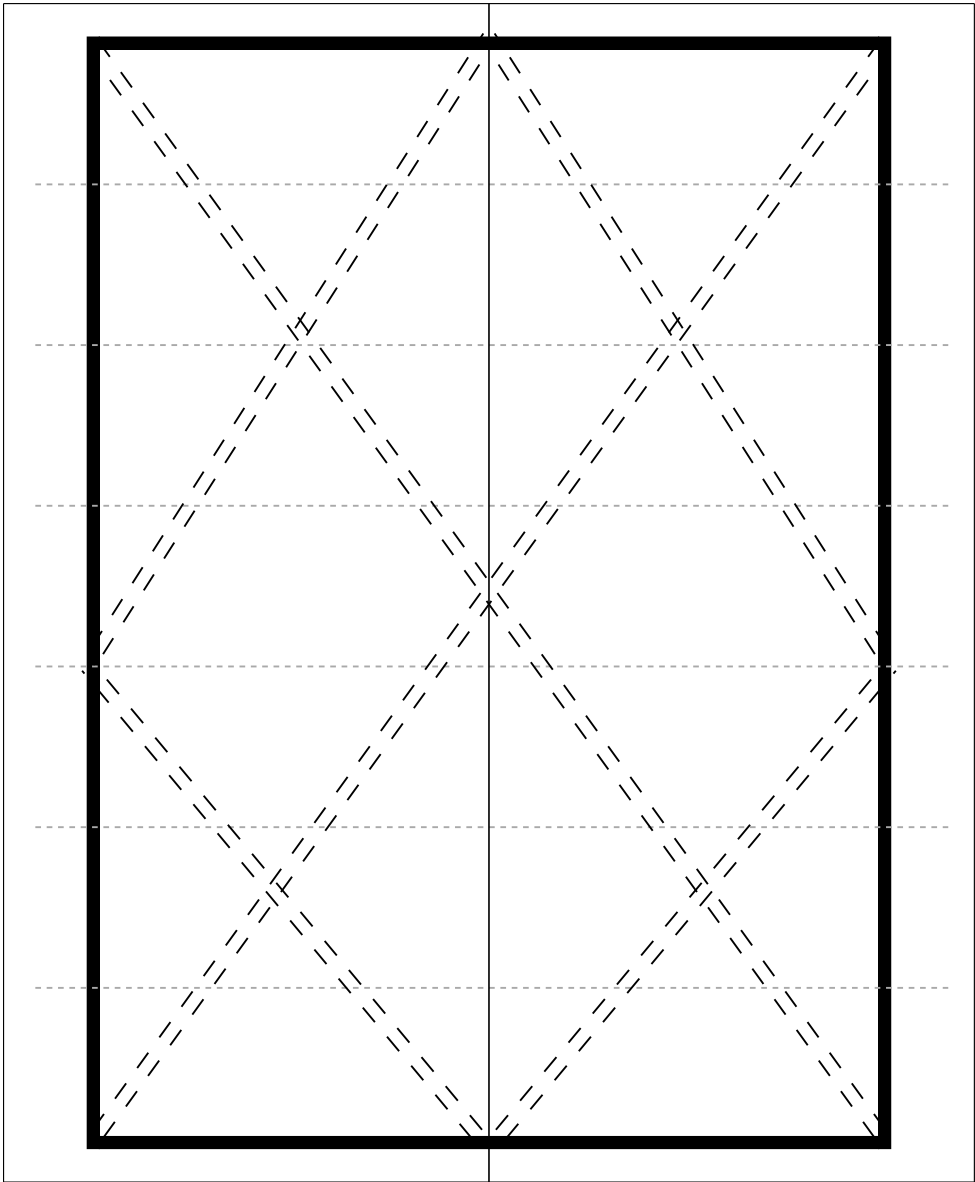
COPYRIGHT: THESE DRAWINGS MUST NOT BE REPRODUCED WITHOUT THE EXPRESS PERMISSION OF SPANBILD NEW ZEALAND LIMITED.

ROOF BRACING

EXPLANATION

Using a diaphragm approach, the roof is braced using a series of Lumberlok Strip Brace patterns in the plane of the truss top chords to transfer the bracing demand to the top plates. The loads at the top plate level are then transferred to the foundation through the wall bracing system.

ROOF BRACING PATTERN LAYOUT



Scale: NTS

FIXINGS

Each single row of Lumberlok Strip Brace to be tensioned up and laid over the top of the purlins. Fix each end with 5/30x3.15 nails and fix crossings with 2/30x3.15 nails.

For: Tony Rouse
594 Koutu Loop road
Opononi
0473

WALL BRACING DEMAND

EARTHQUAKE BRACING DEMAND

Using NZS 3604:2011, Section 5 Bracing Design, Table 5.10 - Bracing demand for various combinations of cladding for single and two-storey buildings on concrete slab-on-ground (2 kPa floor load, soil type D/E, earthquake zone 3)

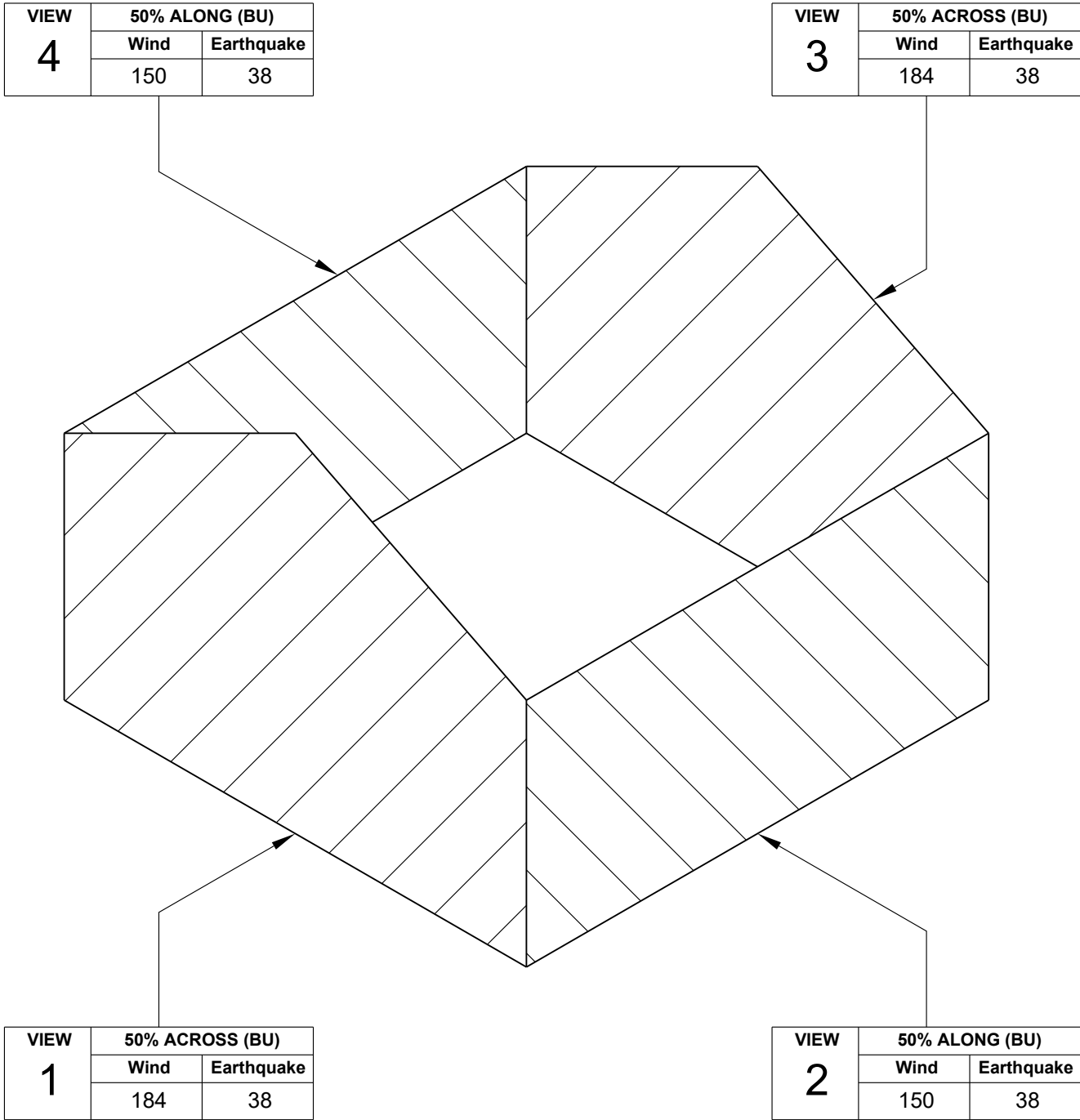
Roof cladding	Single storey cladding	Roof pitch degrees	Single storey walls
Light roof	Light	15°	6 BU/m2
Multiplication factors	EQ zone = 1 Soil class = D&E Deep to very soft		0.5
Earthquake demand			3 BU/m2
Using factors based on ratios in AS/NZS1170.0:2002, part 5 from BIL2 - 50 years working life to BIL1 - 50 years working life.			
Building Importance Level 1 modification factor.			0.5
EARTHQUAKE DEMAND REQUIRED (Along and Across)			1.5 BU/m2
BL 8.300m x BW 6.000m = 49.8m2			49.8m2 x 1.5 BU/m2 75 BU

WIND BRACING DEMAND

Using NZS 3604:2011, Section 5 Bracing Design, Table 5.6 - Wind bracing demand for single or upper storey wall (BU/m).

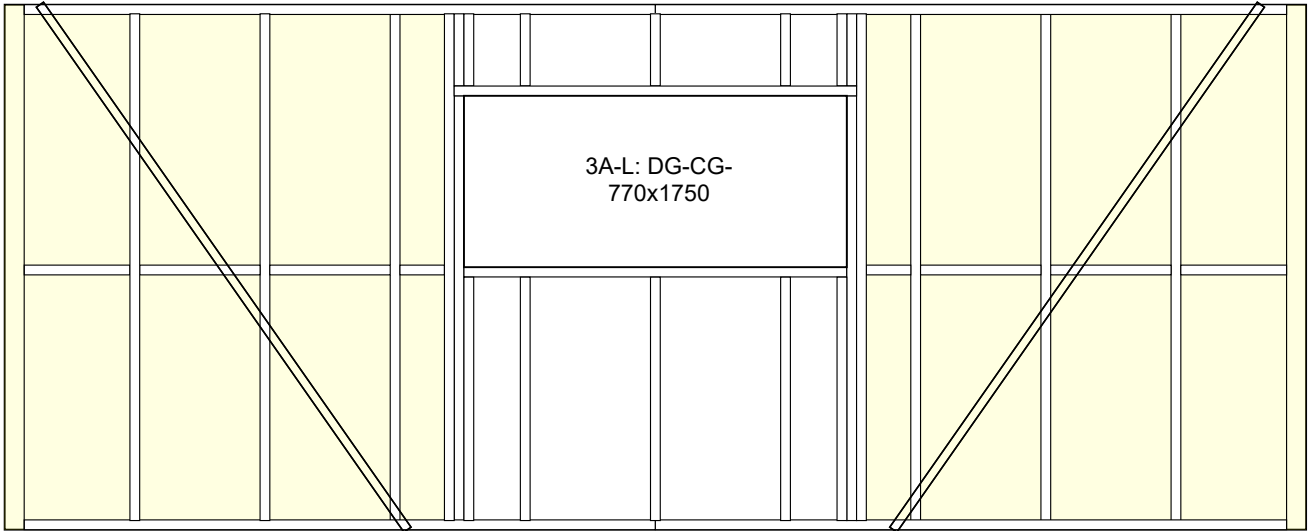
Single or Upper Floor level to apex (H)	Roof height above eaves (H)	High Wind Zone Across	High Wind Zone Along
4 m	2 m	40 BU/m	45 BU/m
In wind zones other than High, multiply the figure above by the appropriate factor given opposite.		Very High = 1.3	
Wind demand with wind zone factor applied.		Across 52 BU/m	Along 58.5 BU/m
Using factors based on ratios in AS/NZS1170.0:2002, part 2 from BIL2 - 50 years working life to BIL1 - 50 years working life.			
Building Importance Level 1 modification factor.	0.849		
WIND DEMAND REQUIRED	Across 44.1 BU/m	Along 49.7 BU/m	
	BL 8.300m x 44.1 BU/m 367 BU	BW 6.000m x 49.7 BU/m 299 BU	

BRACING UNITS DISTRIBUTION



DIMENSIONS IN mm UNLESS OTHERWISE STATED THIS IS A C.A.D. DRAWING AND MUST NOT BE ALTERED BY MANUAL METHODS

BU ACHIEVED - VIEW 1

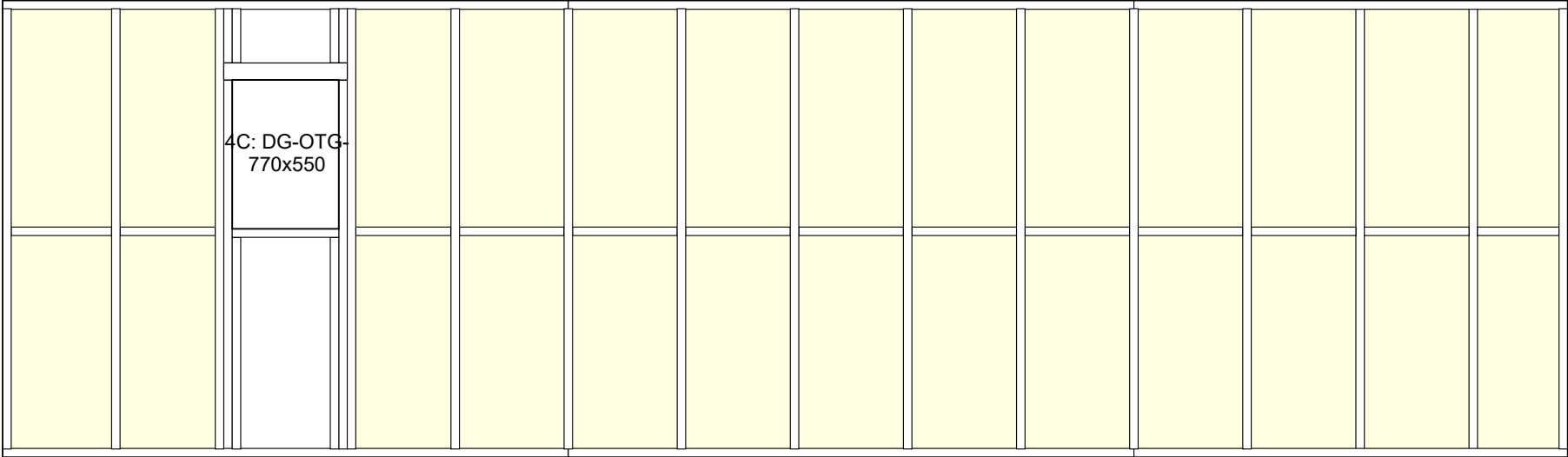


Cladding	SC6-24 x 2.1m		SC6-24 x 2.1m
Wind BU	80		80
EQ BU	63		63
Hardware	AB6-55-24		AB6-55-24
Wind BU	60		60
EQ BU	20		20

SUMMARY - ACROSS (BU)		
	Wind	EQ
Required	184	38
Achieved	280	166

Scale NTS

BU ACHIEVED - VIEW 2



Cladding	SC6-24 x 1.2m		SC6-24 x 6.5m
Wind BU	46		247
EQ BU	36		195
Hardware			
Wind BU			
EQ BU			

SUMMARY - ALONG (BU)		
	Wind	EQ
Required	150	38
Achieved	293	231

Scale NTS

COPYRIGHT: THESE DRAWINGS MUST NOT BE REPRODUCED WITHOUT THE EXPRESS PERMISSION OF SPANBILD NEW ZEALAND LIMITED.

[illegible]Scale NTS

The floor plan shows a rectangular container layout. On the left side, there is a large rectangular area labeled "Tilt Door 2340h x 2600w". To the right of the door is a large rectangular area marked with a large "X", indicating a window or a section to be removed. Further to the right, there is a smaller rectangular area labeled "1D-R: SDG-CG-1980x1750". The entire layout is enclosed within a rectangular boundary.

Scale NTS

	Wind	EQ
Required	184	38
Achieved	228	180

	Wind	EQ
Required	150	38
Achieved	177	105

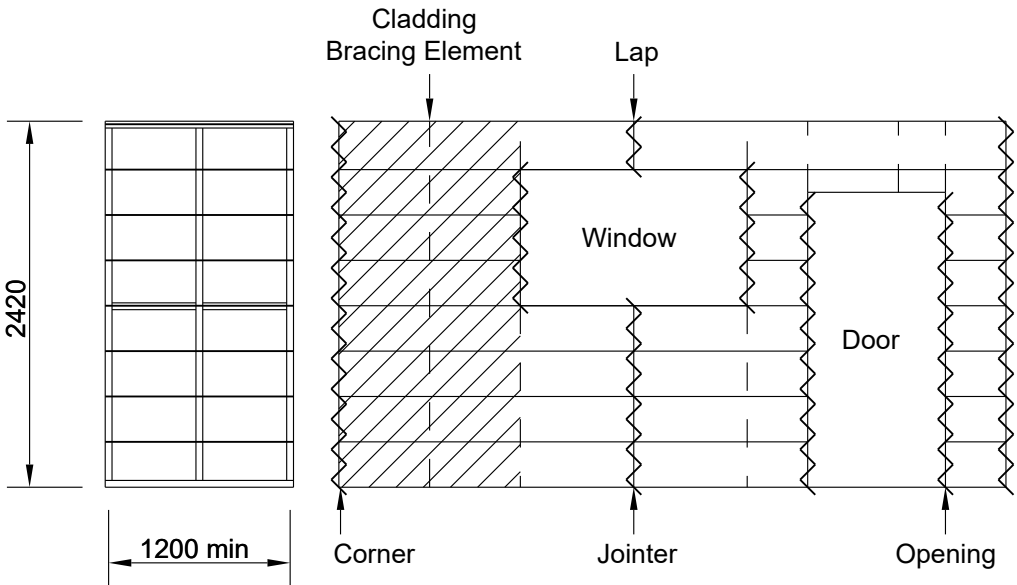


VB2000 - Design

Wall Bracing Achieved

BRACING ELEMENT: SC6-24
Superclad Cladding

Total BU/m	Wind	38
	Earthquake	30



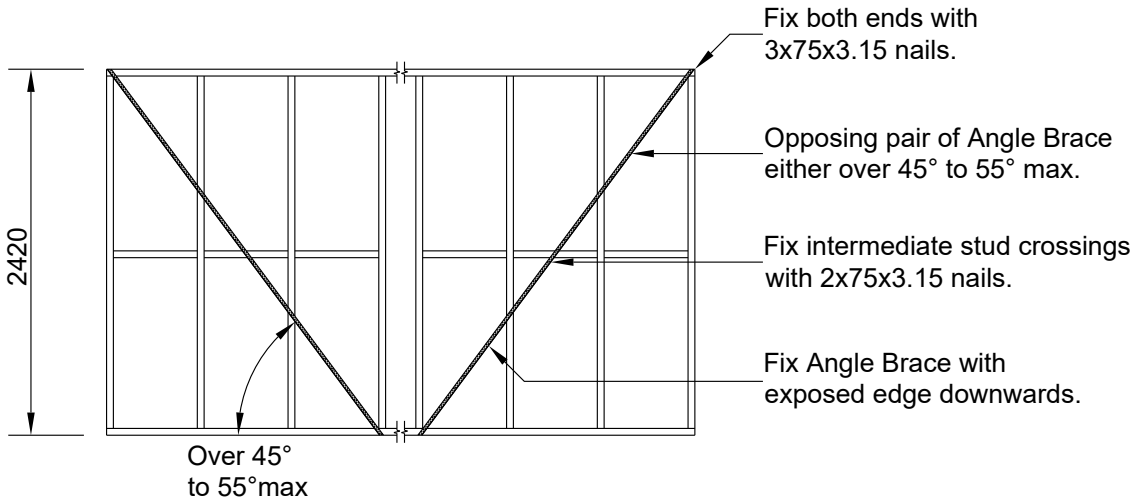
Corners, openings, jointers and laps must be nailed through all cladding layers with 32x2.8 flat head twist shank galv nails at 150mm crs.

All other internal studs to be nailed through the inner cladding layer only at 300mm crs.

NTS

BRACING ELEMENT: AB6-55-24

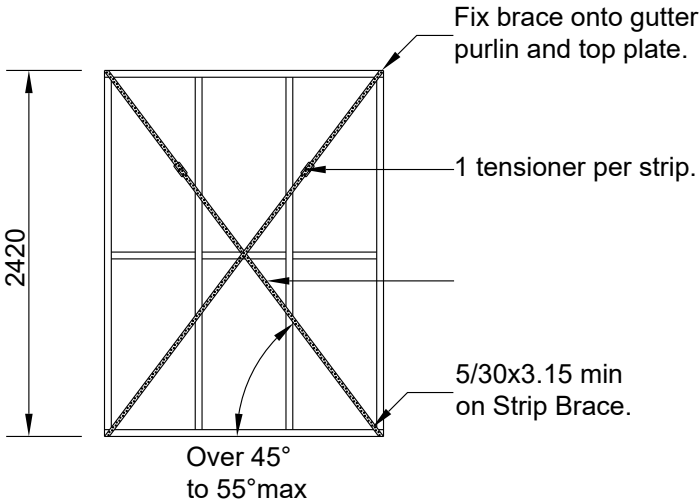
Total BU/m per Pair	Wind	120
	Earthquake	40



Scale A3-1:50

BRACING ELEMENT: SBX6-55-24

Total BU/m per Cross	Wind	74
	Earthquake	24

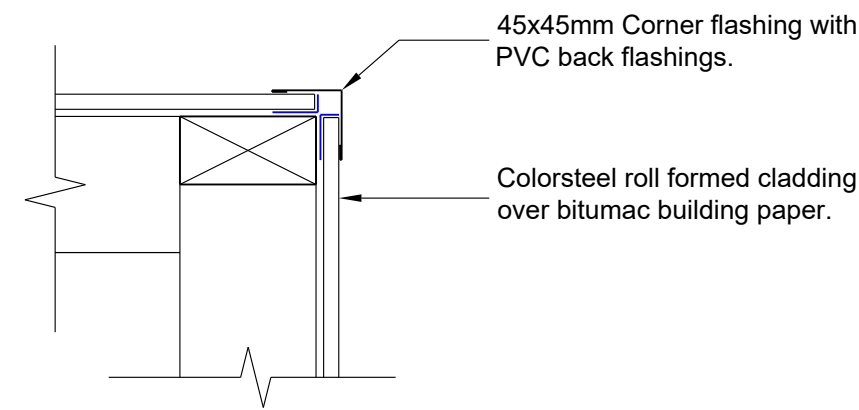


Scale A3-1:50

For: Tony Rouse
594 Koutu Loop road
Opononi
0473

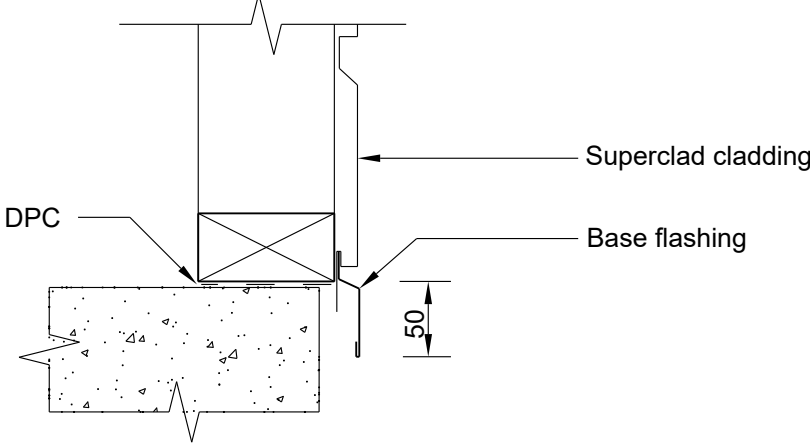
DIMENSIONS IN mm UNLESS OTHERWISE STATED THIS IS A C.A.D. DRAWING AND MUST NOT BE ALTERED BY MANUAL METHODS

CORNER FLASHING DETAIL (NON HABITABLE)



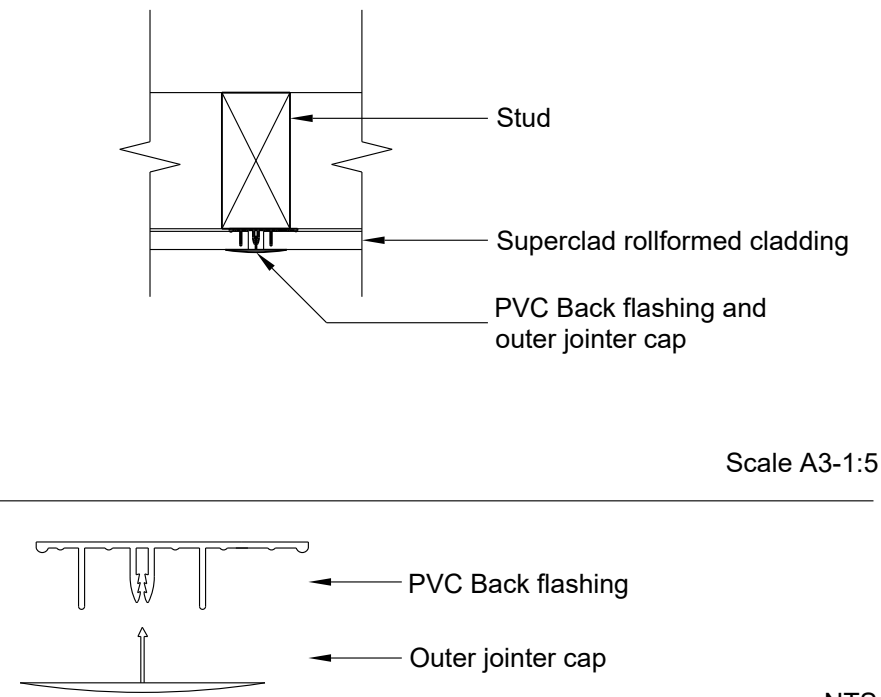
Scale A3-1:5

BASE FLASHING DETAIL

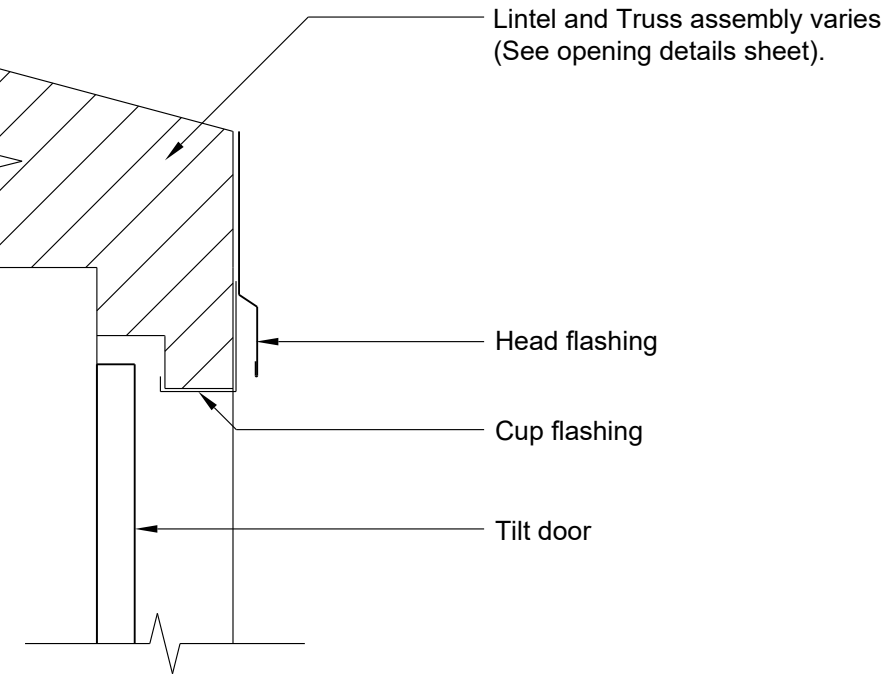


Scale A3-1:5

SUPERCLAD JOINTER DETAIL

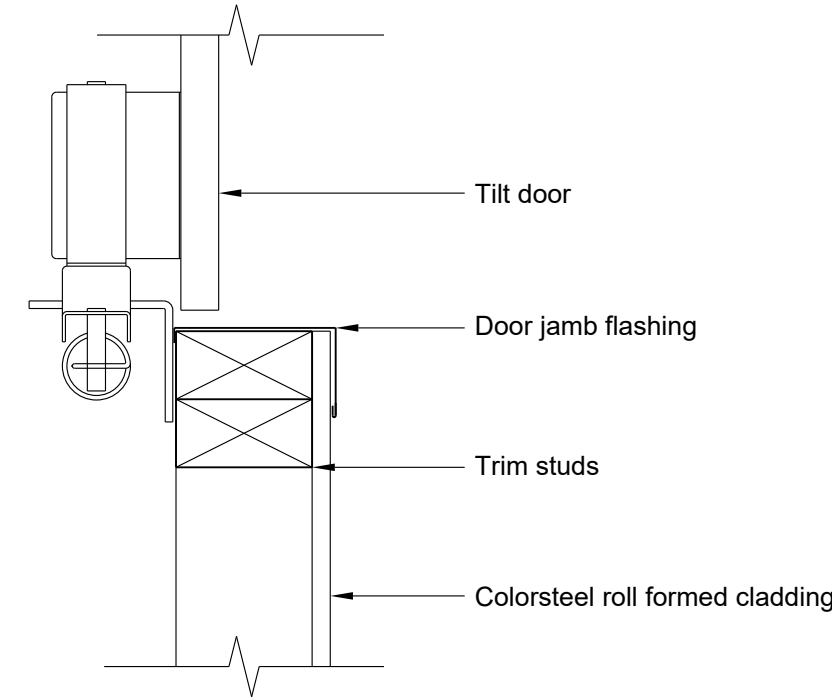


TILT DOOR HEAD DETAIL



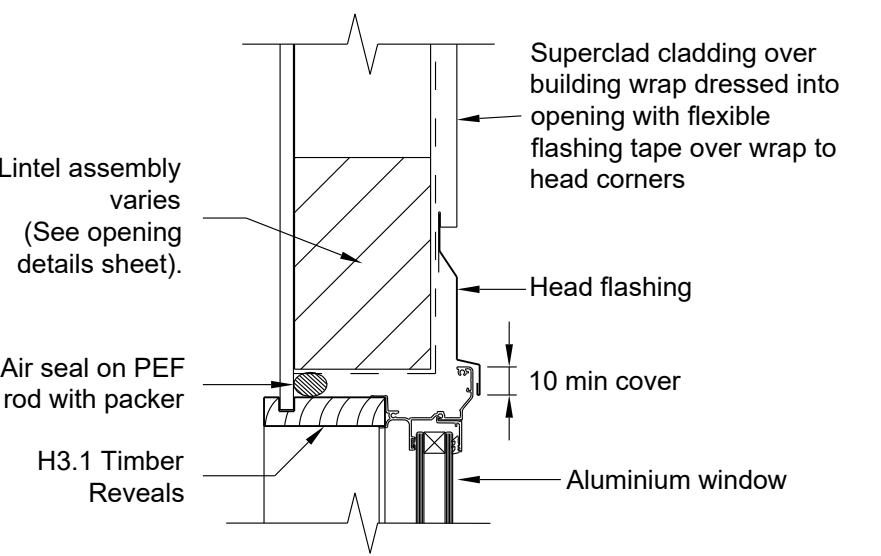
Scale A3-1:5

TILT DOOR JAMB DETAIL



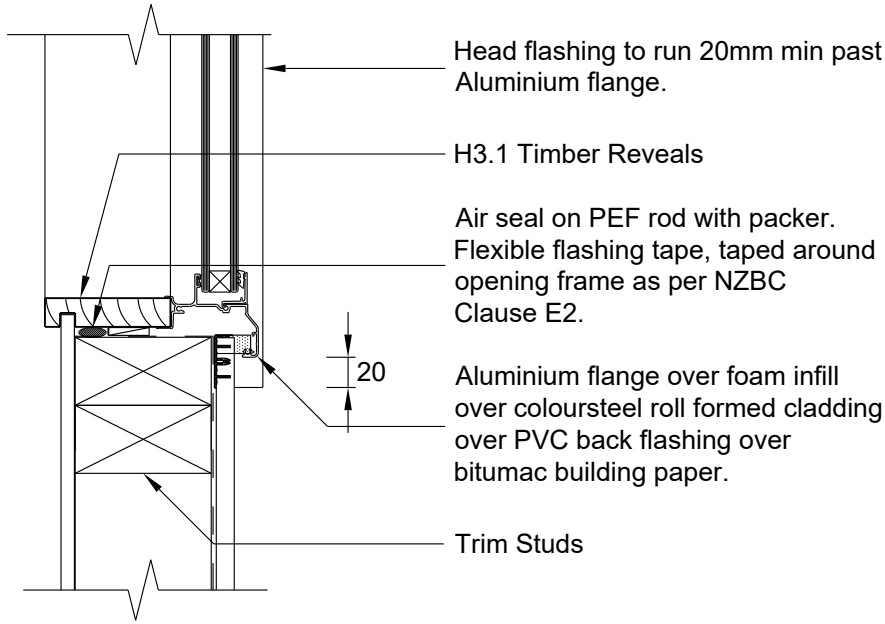
Scale A3-1:5

ALUMINIUM WINDOW HEAD DETAIL



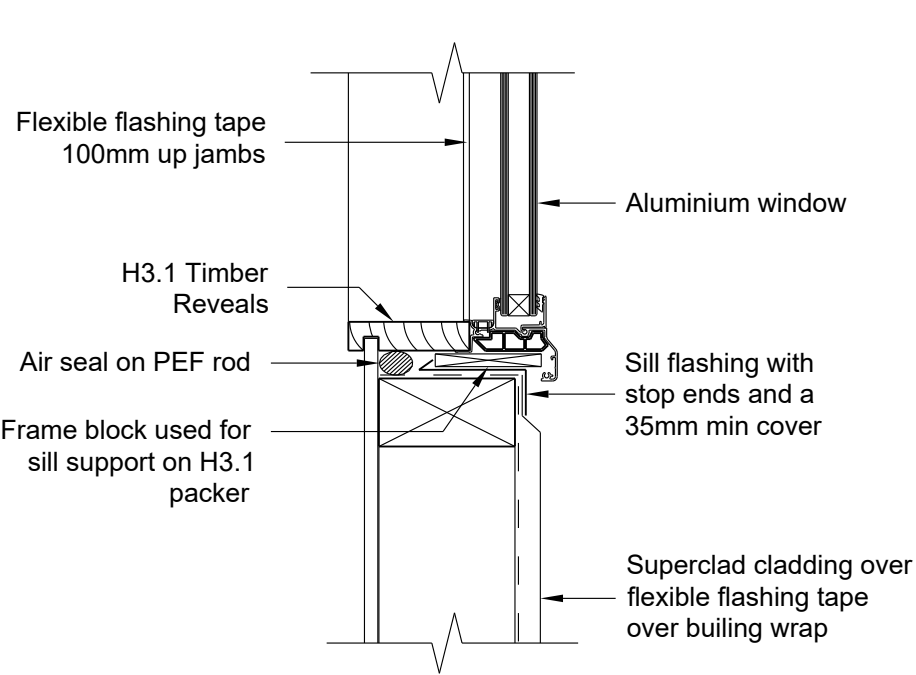
Scale A3-1:5

ALUMINIUM WINDOW JAMB DETAIL



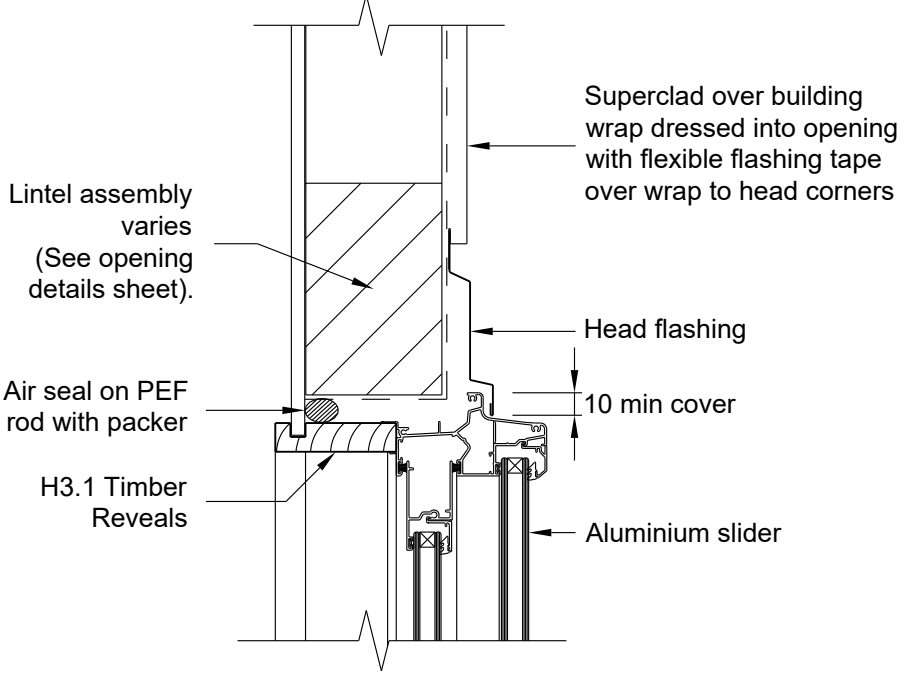
Scale A3-1:5

ALUMINIUM WINDOW SILL DETAIL



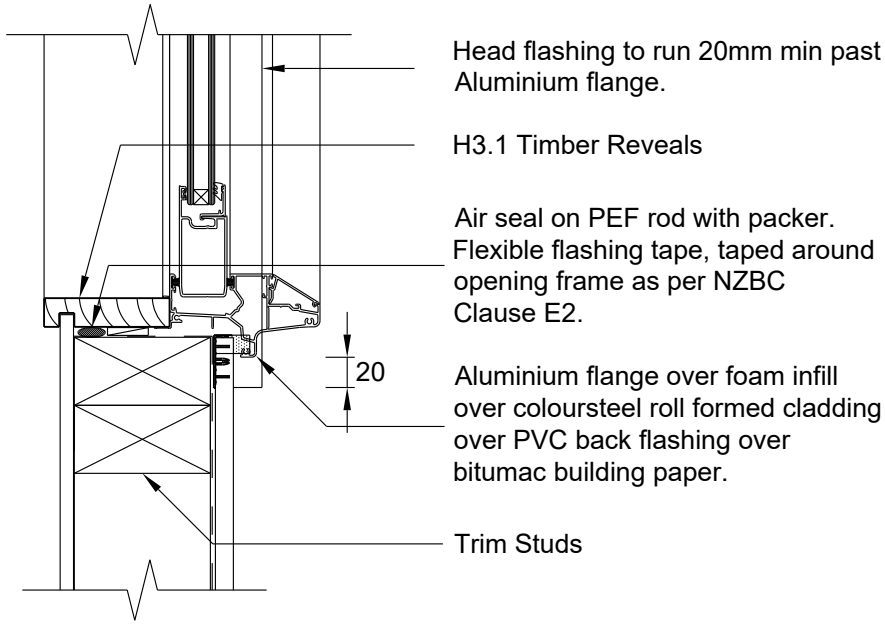
Scale A3-1:5

ALUMINIUM SLIDER DOOR HEAD DETAIL



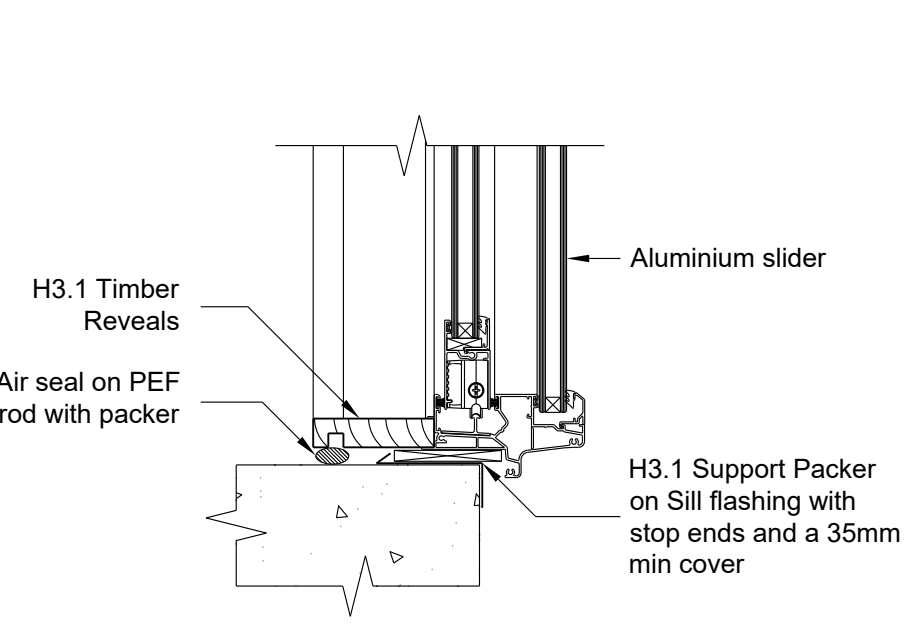
Scale A3-1:5

ALUMINIUM SLIDER DOOR JAMB DETAIL



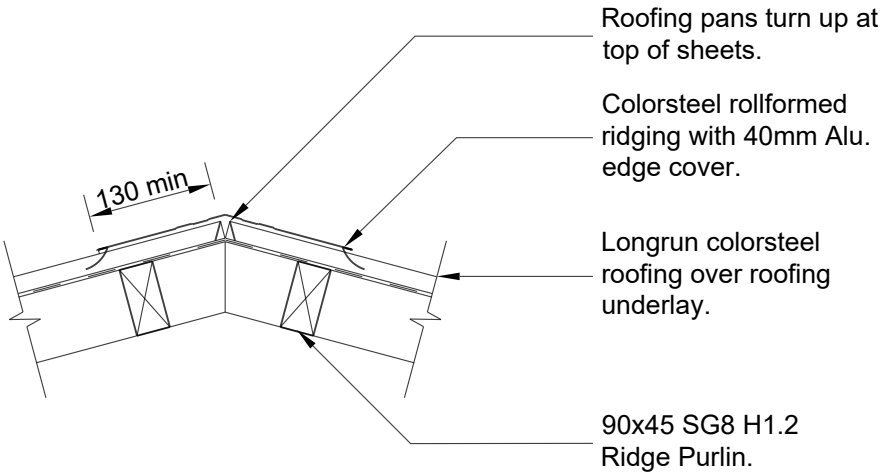
Scale A3-1:5

ALUMINIUM SLIDER DOOR SILL DETAIL



Scale A3-1:5

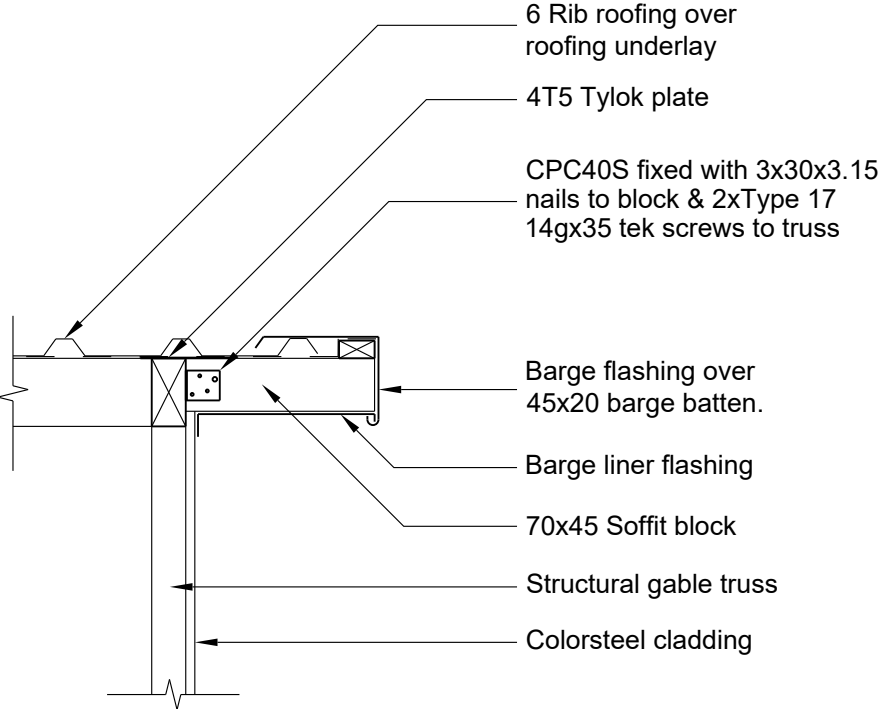
RIDGING DETAIL



Scale A3-1:10

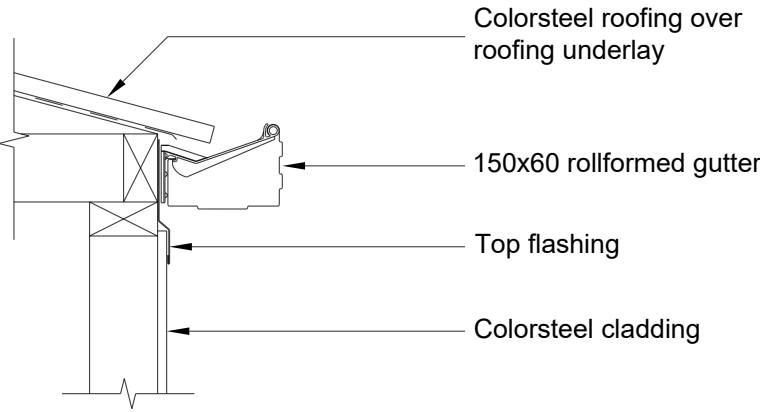
DIMENSIONS IN mm UNLESS OTHERWISE STATED THIS IS A C.A.D. DRAWING AND MUST NOT BE ALTERED BY MANUAL METHODS

SOFFIT BARGE DETAIL



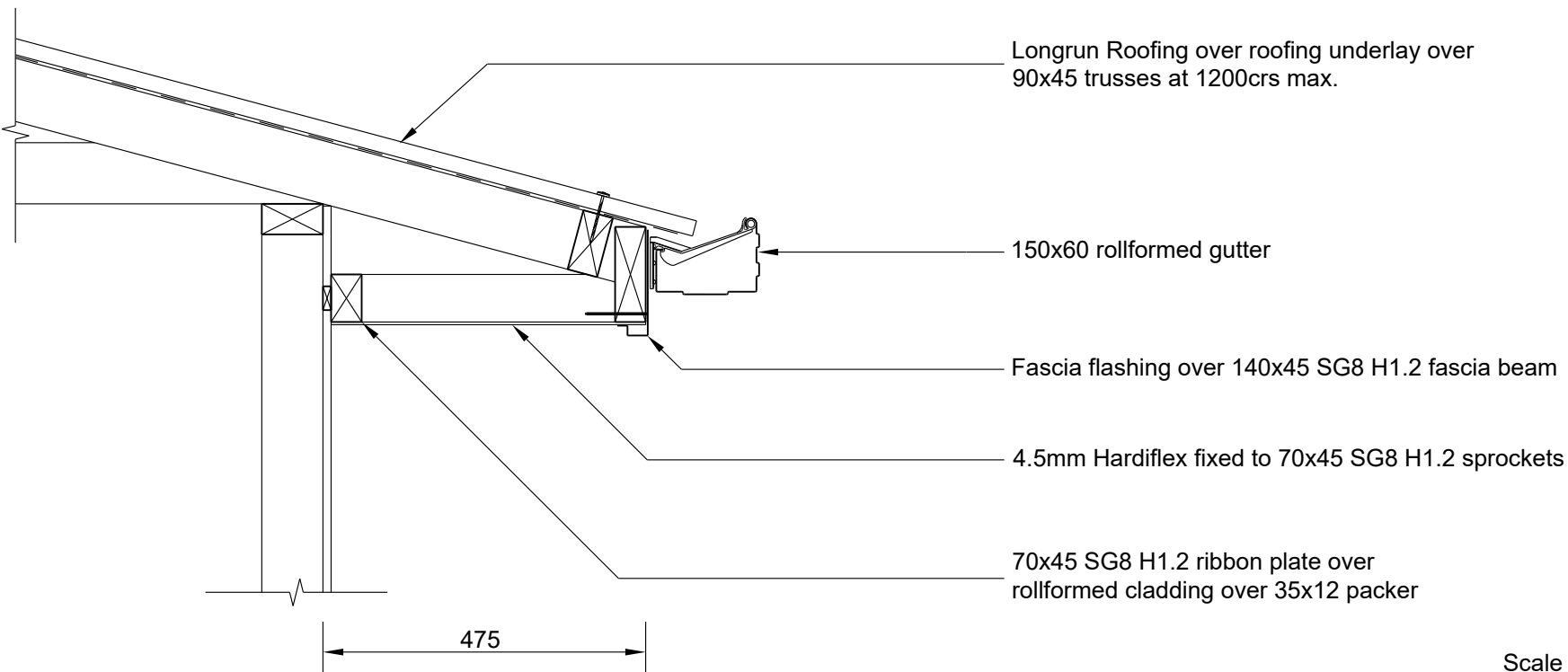
Scale A3-1:10

GUTTER DETAIL



Scale A3-1:10

475mm SIDE SOFFIT DETAIL



Scale A3-1:10

COPYRIGHT: THESE DRAWINGS MUST NOT BE REPRODUCED WITHOUT THE EXPRESS PERMISSION OF SPANBILD NEW ZEALAND LIMITED.