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CONSTRUCTION LTD



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appendix and 3D BIM models.  
[www.planworks.co.nz/cp06](http://www.planworks.co.nz/cp06)  
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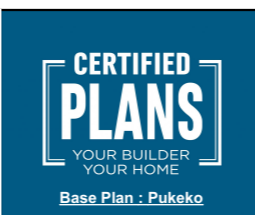
Project: **New Dwelling**

Client: **GM Construction**

Address: **Lot 53 Pinehurst Cresent,  
Morrinsville**



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Project:	<b>New Dwelling</b>
	<b>GM Construction</b>
	Lot 53 Pinehurst Cresent, Morrinsville

ID	Issue Name	Changes	Date	Job Number:	Sheet:	TITLE
01	Developed Concept		16/09/2020	<b>CP06</b>	<b>01</b>	<b>01</b>
02	Developed Concept 2		1/10/2020			
03	Structural Prelim		9/10/2020			



# or Construction



## SITE ZONE INFO

Lot 53 Pinehurst Cresent,  
Morrinsville

Exposure Zone = B

Earthquake Zone = 1

Climate Zone = 2

Rainfall Intensity = 100mm

Snow Loading = 1.0kPa

Altitude = 47m

Zone = N1

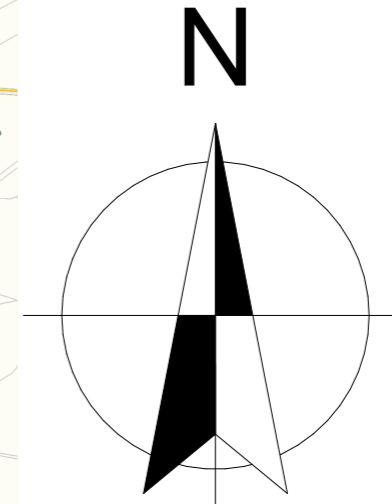
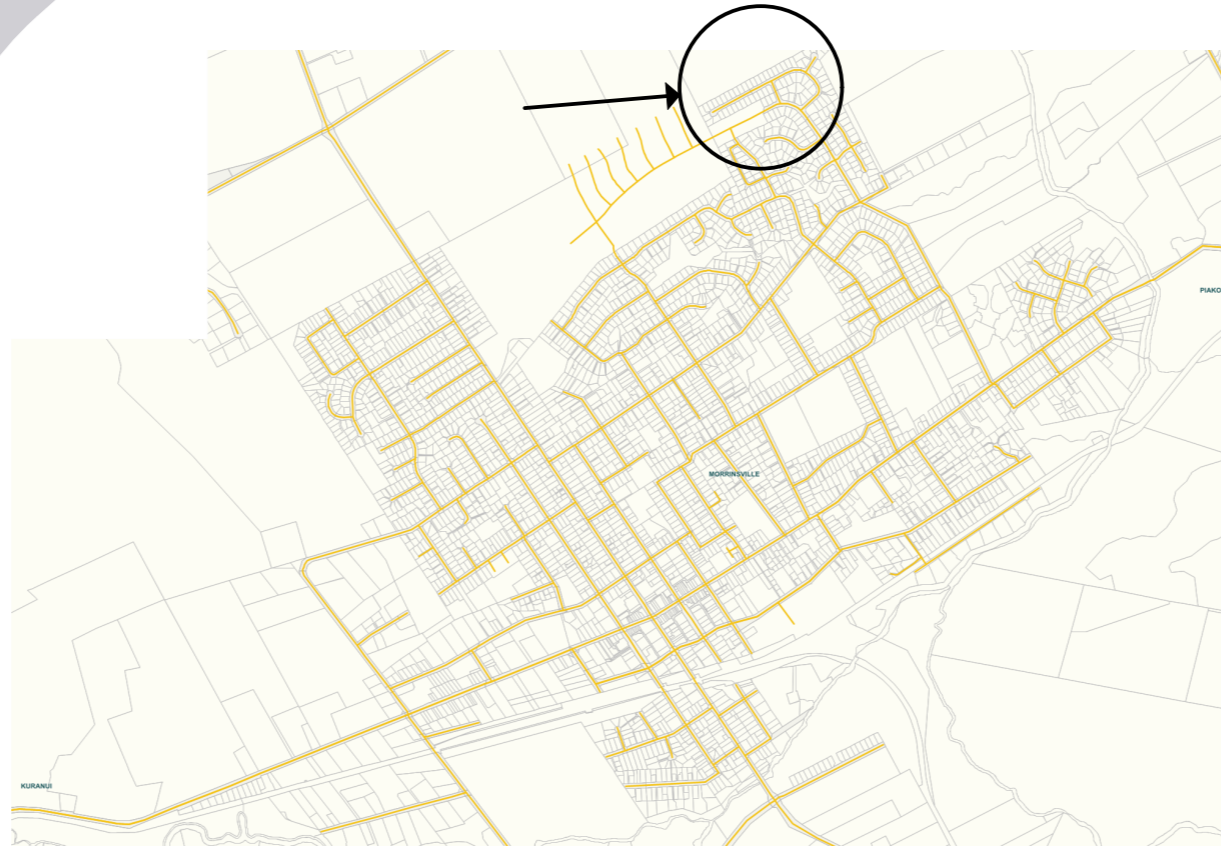
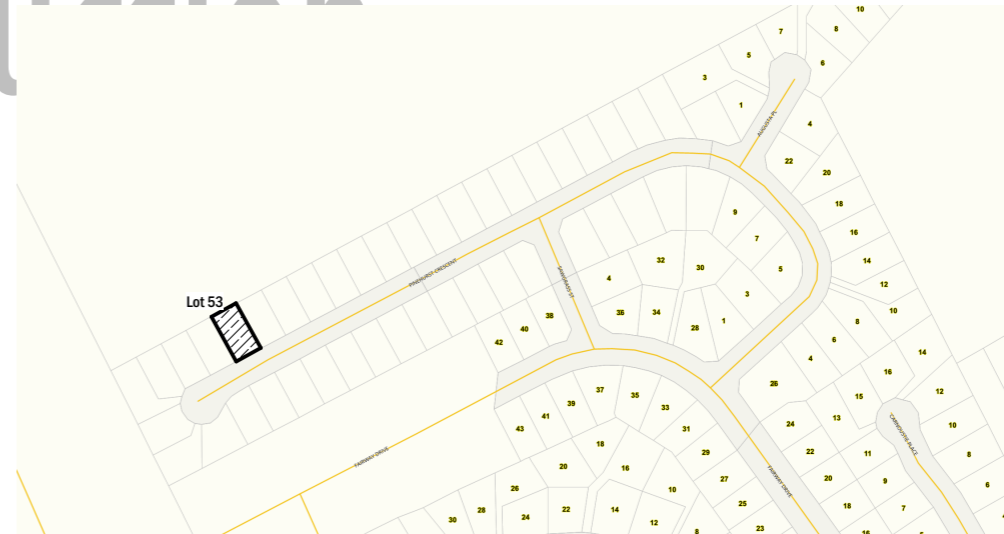
Wind Zone - High

Wind Region = A

Ground Roughness = Open

Site Exposure = Exposed

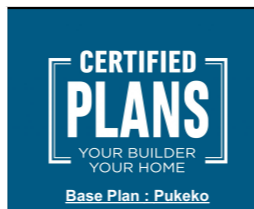
Topographic Class = T1



1

## LOCATION PLAN

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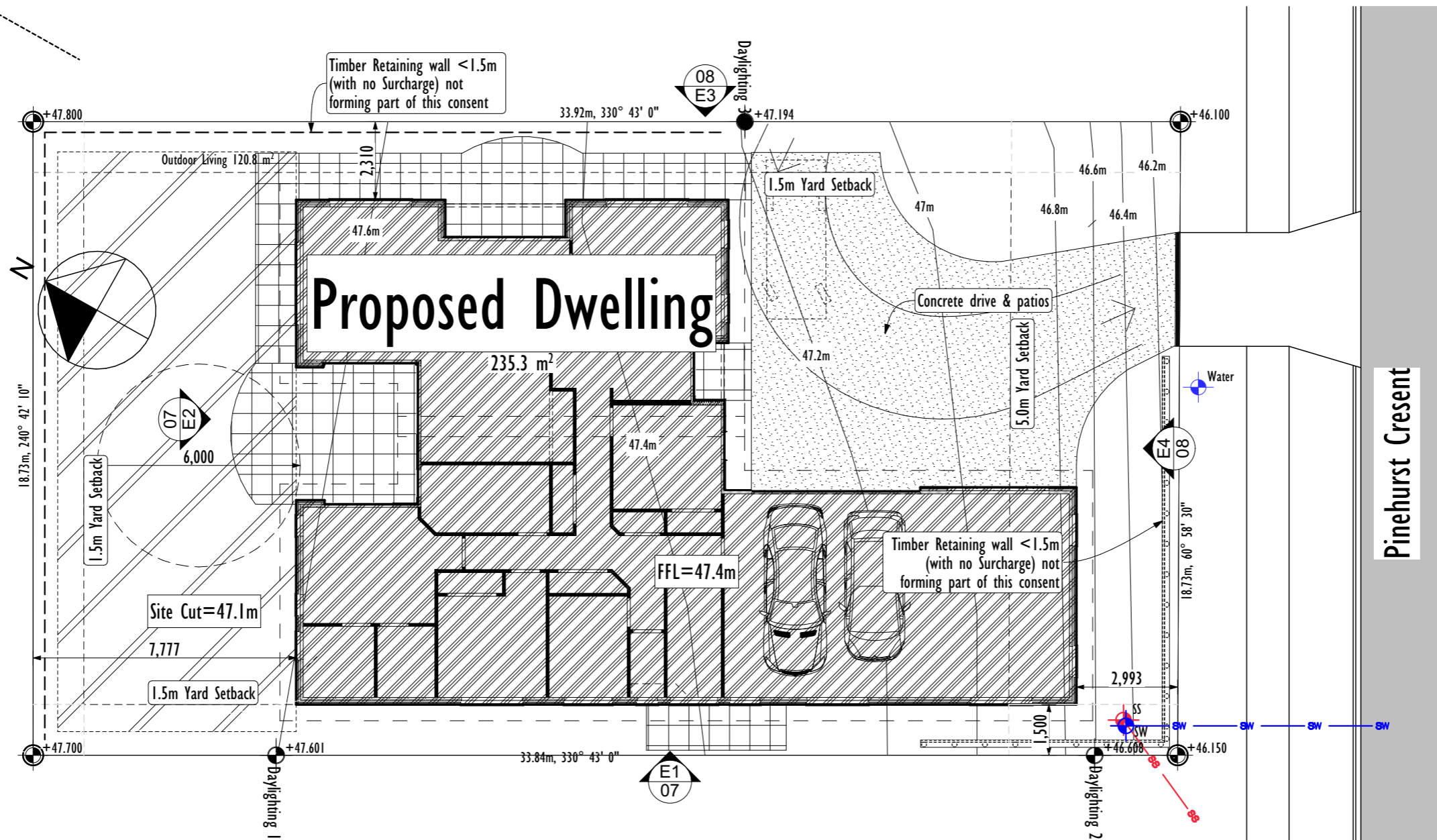
Project: **New Dwelling**  
**GM Construction**  
Lot 53 Pinehurst Cresent,  
Morrinsville

ID	Issue Name	Changes	Date
01	Developed Concept		16/09/2020
02	Developed Concept 2		1/10/2020
03	Structural Prelim		9/10/2020

Job Number:	Sheet:
<b>CP06</b>	<b>02</b>



# Not for Construction



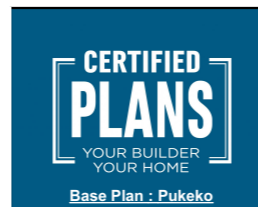
## SITE INFO

Lot 53 Pinehurst Crescent,  
Morrinsville  
Lot 53 DP536861  
Site Area = 635m<sup>2</sup>  
Building Footprint = 235.3m<sup>2</sup>  
Building Coverage = 37.0%  
(Development Contribution for Reserves and Recreational Facilities Req'd)

Impervious Area = 402m<sup>2</sup>  
Impervious Coverage = 63.0%

TA - Matamata Piako DC  
Planning Zone - Residential Zone

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GM Construction  
Lot 53 Pinehurst Crescent,  
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ID	Issue Name	Changes	Date
01	Developed Concept		16/09/2020
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03	Structural Prelim		9/10/2020

SITE PLAN  
Job Number: **CP06**  
Sheet: **03**



DRAWING INDEX			
Layout	ID	Drawing Name	Scale
<b>01 TITLE</b>			
		LOGO	
		LOGO	
		LOGO	
		LOGO	
		LOGO	
		PLAN INDEX	
		QR CODES	
		TITLE IMAGE	
		TITLE IMAGE	
		TITLE IMAGE	
		TITLE IMAGE	
<b>02 LOCATION</b>			
	1	LOCATION PLAN	
<b>03 SITE PLAN</b>			
		DAYLIGHTING ELEVATIONS	
		SITE INFORMATION	
	2	SITE PLAN	1:150
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		CHANGE LIST	
		DRAWING INDEX	
<b>05 PROJECT NOTES</b>			
		PROJECT NOTES	
<b>06 FLOOR PLAN</b>			
		PROJECT AREAS	
	3	FLOOR PLAN	1:100
<b>07 ELEVATIONS 1 &amp; 2</b>			
	4	ELEVATION 1	1:100
	5	ELEVATION 2	1:100
<b>08 ELEVATIONS 3 &amp; 4</b>			
	6	ELEVATION 3	1:100
	7	ELEVATION 4	1:100
<b>09 JOINERY SCHEDULE</b>			
	8	JOINERY SCHEDULE	1:50
<b>10 ENCLOSURE DETAILS</b>			
	9	CLADDING DETAILS 1	1:30
	10	CLADDING DETAILS 2	1:30
<b>11 FOUNDATION FIXING &amp; PLUMBING</b>			
	11	FOUNDATION FIXINGS & PLUMBING	1:100
<b>12 BOTTOM PLATE FIXING ANCHOR</b>			
	W5	BOTTOM PLATE FIXING ANCHOR	
<b>13 FOUNDATION SETOUT</b>			
	12	FOUNDATION SETOUT	1:100
<b>14 BASE RAFT DETAILS 1</b>			
	FR01	BRICK PERIMETER	1:10
	FR03	PERIMETER	1:10
	FR04	LOAD BEARING	1:10
	FR05	STANDARD RIB	1:10
<b>15 BASE RAFT DETAILS 2</b>			
	FR08	SERVICES	1:10

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Layout	ID	Drawing Name	Scale
	FR09	SERVICES - 100mm VERTICAL PIPE	1:20
<b>16 WALL STRUCTURE</b>			
	13	WALL STRUCTURE	1:100
<b>17 BEAMS &amp; LINTELS</b>			
	14	BEAMS & LINTELS	1:100
<b>18 BEAM FIXINGS</b>			
	BF12	ROOF BEAM FIXING I2	1:10
	SP4	4kN STUD FIXING TO SLAB	1:10
	SP12	12kN STUD FIXING TO SLAB	1:10
<b>19 LINTEL FIXINGS</b>			
	L1	LINTEL FIXING TYPE E	
	L2	LINTEL FIXING TYPE F	
	L3	LINTEL FIXING TYPE G	
	L4	LINTEL FIXING TYPE H	
<b>20 WALL NAILING &amp; BOTTOM PLATE FIXINGS</b>			
	W3	WALL NAILING	
	W7	INTERNAL LB BP FIXING	
	W8	INTERNAL BP FIXING	
<b>21 TOP PLATE FIXINGS</b>			
	W1	TOP PLATE STIFFENER	
	W2	TOP PLATE FIXING	
	W4	TOP PLATE JOINTING	
<b>22 ROOF FRAMING</b>			
	15	ROOF FRAMING	1:100
<b>23 ROOF STRUCTURAL DETAILS 1</b>			
	P3	PURLIN FIXING TYPE T	
	R1	ROOF CROSS BRACING	
<b>24 ROOF STRUCTURAL DETAILS 2</b>			
	R3	VERGE OUTRIGGERS	
	R4	GABLE BRACING	
	R5	DRAGON TIES	
<b>25 ROOF CLADDING</b>			
	16	ROOF CLADDING	1:100
<b>26 ROOFING DETAILS 1</b>			
	RR03	METAL FASCIA GUTTER	1:5
	RR05	TRANSVERSE APRON	1:5
	RR07	BARGE	1:5
	RR08	UPPER BARGE	1:5
<b>27 ROOFING DETAILS 2</b>			
	RR12	5 RIB FASTENING PATTERNS	
	RR13	PIPE PENETRATION LOW PITCH	
<b>28 LININGS &amp; FINISHES</b>			
	17	LININGS & FINISHES	1:100
<b>29 WALL BRACING</b>			
	18	WALL BRACING	1:100
<b>30 BRACING DETAILS</b>			
	BR3	BRACE LININGS	
	BR4	GIB EZYBRACE FASTENER PATTERNS	
	HR10	HOMERAB HP BRACE	
<b>31 HANDIBRAC INSTALLATION</b>			

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	BR1	HANDIBRAC INSTALLATION	
	BR2	BOTTOM PLATE FIXINGS	
<b>32 DIAPHRAGM CEILING</b>			
	DC01	DIAPHRAGM CEILING	
<b>33 WATERPROOFING</b>			
	WA1	WATERPROOFING	
<b>34 BATH &amp; VANITY WET DETAILS</b>			
	WA4	ACRYLIC BATH & VANITY	
<b>35 PROPRIETARY SHOWER DETAILS</b>			
	WA3	ACRYLIC SHOWER BASE WITH TILED WALLS	
<b>36 WALL &amp; FLOOR TILING</b>			
	19	WALL TILING	
	20	FLOOR TILING	
<b>37 HOT WATER SYSTEM</b>			
	S1	HWC RESTRAINTS	
	S3	HWC VALVING	
	S4	HWC MISC NOTES	
	S5	ACCEPTABLE FLOW RATES	
	S6	NOMINAL PIPE DIAMETERS	
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<b>39 SECTION B</b>			
	22	SECTION B-B	1:50
<b>40 SECTION C</b>			
	23	SECTION C-C	1:50
<b>41 SECTION D</b>			
	24	SECTION D-D	1:50
	25	SECTION D-D	1:50
<b>42 SECTION E</b>			
	26	SECTION E-E	1:50
<b>43 JH HOMERAB 1</b>			
	HR00	HOMERAB NOTES	1:10
	HR01	HOMERAB VERTICAL JOIN	1:10
	HR02	HOMERAB SETOUT	1:10
	HR03	HOMERAB BASE	1:10
	HR04	HOMERAB OPENINGS	1:10
<b>44 JH HOMERAB 2</b>			
	HR05	HOMERAB INT. CNR	1:10
	HR06	HOMERAB EXT. CNR	1:10
	HR07	HOMERAB PENETRATION	1:10
<b>45 BRICK DETAILS 1</b>			
	B01	BRICK REBATED FOUNDATION	1:5
	B06	JUNCTION TO WEATHERBOARD	1:5
	B07	OPENING HEAD	1:5
	B08	OPENING SILL	1:5
	B09	OPENING JAMB	1:5
	B16	DOOR SILL	1:5
<b>46 BRICK DETAILS 2</b>			
	B02	INTERNAL CORNER	1:5
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	B18	SOFFIT	1:5
<b>47 BRICK DETAILS 3</b>			
	B13	GARAGE JAMB	1:5
	B19	UPPER SOFFIT WITH METAL FLASHING	1:5
	B20	VENEER TIES	1:5
<b>48 LINEA DETAILS 1</b>			
	LW01	CONCRETE FOOTING	1:5
	LW04	EXTERNAL CORNER - MITRE	1:5
	LW10	OPENING SILL	1:5
	LW11	OPENING HEAD	1:5
	LW12	OPENING JAMB	1:5
	LW27	DOOR SILL	1:5
<b>49 LINEA DETAILS 2</b>			
	LW03	SOFFIT	1:5
	LW08	INTERNAL CORNER - PYC	1:5
	LW20	APRON	1:5
	LW22	INT. CNR TO BRICK	1:5
	LW26	BARGE TO WALL	1:20
	LW28	SOFFIT FLASHING	1:5
<b>50 LINEA DETAILS 3</b>			
	GC01	THRESHOLD & GROUND CLEARANCES	1:10
	LW16	GARAGE HEAD	1:5
	LW18	GARAGE JAMB	1:5

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GM Construction  
Lot 53 Pinehurst Crescent,  
Morrinsville

ID	Issue Name	Changes	Date
03	Structural Prelim		9/10/2020

DRAWING INDEX  
Job Number: **CP06**  
Sheet: **04**



# Project Notes

## SITE

- 2008 Area of daylighting encroachment. See affected persons approval form
- 2021 1.5m Yard Setback
- 2023 5.0m Yard Setback
- 2301 Concrete Patio (Owner to confirm extent)
- 2330 Timber Retaining wall <1.5m (with no Surcharge) not forming part of this consent
- 2391 Concrete driveway and patio areas. Patio size and location shown on presentation plan is indicative only and should be read in conjunction with specifications.

## STRUCTURE

- 3001 Baseraft Waffle Slab-on-ground floor system with 85mm thick 20MPa concrete slab with Seismic SE62 Super Ductile 500E - 2.294kg/m<sup>2</sup> mesh on 1100mm sq x 220mm thick polystyrene pods on 0.25mm polythene on compacted hard fill in accordance with NZS3604 3.3. Provide 720mm lap to all HD12 steel. : [B1/ALT](#)
- 3002 300x305mm deep perimeter edge beam with 1/HD12 to top & 2/HD12 to base tied to rib bars. : [B1/ALT](#)
- 3003 100x220mm deep concrete ribs between pods with 1/HD12 tied to perimeter bar : [B1/ALT](#)
- 3004 300mm wide load bearing beams with 2/HD12 rein bars in base : [B1/ALT](#)
- 3007 1100mm sq x 220mm thick polystyrene pods on 0.25mm polythene : [B1/ALT](#)
- 3008 Provide 2/D12's 1.2m long supplementary diagonal reinforcing bars at internal corner. : [B1/ALT](#)
- 3018 Compacted fill as required to meet engineers soil bearing requirements
- 3086 120w x 90d Brick rebate with 3 coats of rubber bitumen damp proof coating to exposed face of slab rebates and sills of full height joinery. : [E2/AS1](#)
- 3089 25mm deep Garage door rebate - shown shaded - confirm depth and setout to suit garage door manufacturers specification. Provide 50mm ground clearance
- 3307 270x90 GL8 H3.2 Glulam Beam Grade A : [B1/ALT](#)
- 3309 360x90mm H1.2 hy90 Beam : [B1/ALT](#)
- 3331 140x90 SG8 H3.2 Beam : [B1/ALT](#)
- 3501 90x45 SG8 Framed Wall - Studs @ 600mm c/c Nogs @ 800mm c/c : [B1/NZS3604](#)
- 3503 140x45 SG8 Framed Wall - Studs @ 600mm c/c Nogs @ 800mm c/c : [B1/NZS3604](#)
- 3505 140x45 SG8 Framed Wall - Studs @ 400mm c/c Nogs @ 800mm c/c : [B1/NZS3604](#)
- 3525 Bulkhead wall framing above kitchen units
- 3530 90x45 SG8 intermediate framing between trusses @ 450mm c/c to support wall cladding
- 3533 140x35mm Capping Plate : [B1/NZS3604](#)

- 3560 Double support studs with extended trimming stud for bolt fixing : [B1/NZS3604](#)
- 3601 10° Trussed roof structure. Specifically designed trusses @ 900c/c max. All fixings and connections to be designed & supplied by FTMA member : [B1/ALT](#)
- 3602 4° Trussed roof structure. Specifically designed trusses @ 900c/c max. All fixings and connections to be designed & supplied by FTMA Member : [B1/ALT](#)
- 3603 Parallel Chord Girder Truss : [B1/ALT](#)
- 3609 Gable truss with vertical webs @ 600mm c/c & dropped top chord for outriggers. Brace webs as shown
- 3619 70x45mm SG8 H1.2 Purlins fixed @ 900mm c/c with 1/10g self-drilling screw, 80mm long. : [B1/NZS3604](#)
- 3626 90x45 SG8 Outriggers @ 900mm c/c : [B1/NZS3604](#)
- 3629 90x45 SG8 Fly Rafters : [B1/NZS3604](#)
- 3635 90x45 SG8 Eaves Outriggers : [B1/NZS3604](#)
- 3637 90x45 SG6 Soffit Framing : [B1/NZS3604](#)
- 3649 Line of Roof Plane bracing with Lumberlok roof plane strip brace as per NZS 3604 10.4.2 and Lumberlok detail in specification. 1 pair per 50m<sup>2</sup> roof area. : [B1/NZS3604](#)
- 3749 Bomac StudLok Top plate to stud Screw fixing. Refer to detail W2. : [B1/NZS3604](#)
- 3771 Lumberlok Bottom plate anchor @ max 900c/c. See detail W5 : [B1/NZS3604](#)
- 3773 Internal Loadbearing wall anchors shall be Ramset 12mm AnkaScrew with 50x50x3mm Washers within 150 mm of each end of the plate & spaced at a maximum of 900 mm centres along loadbearing length of frame. : [B1/NZS3604](#)
- 3774 Gib HandiBrac stud anchor with Bomac Screwbolt. Install in accordance with HandiBrac manual July 2015 : [B1/ALT](#)
- 3782 Internal non-load bearing bottom plate fixing to concrete floor - 75x3.8mm Drive pin & 16mm washer, 150mm from wall ends and @ 600c/c thereafter : [B1/NZS3604](#)
- 3820 90x45mm Dragon Tie over truss bottom chord fixed in accordance with NZS3604:2011 Clause 8.3.3 : [B1/NZS3604](#)

## ENCLOSURE

- 4105 4.5mm James Hardies HomeRAB fixed in accordance with JH RAB manual dated March 2019. : [E2/AS1](#)
- 4220 70mm Bowers Masonry Brick Veneer (50mm Cavity) Over specified Building wrap & RAB. Refer to cladding details for all venting requirements : [E2/AS1](#)
- 4226 Spacings and embedment shall be in accordance with the requirements of NZS 4210 and E2/AS1 Tables 18A, 18B and 18C. Screw fixings shall be minimum 12 gauge, 35 mm long Type 17 Hex : [E2/AS1](#)
- 4227 Brick Veneer Control Joints as per manufacturers specifications. See appendix for details : [E2/AS1](#)
- 4228 Veneer lintels as per E2 / AS1 clause 9.2.9. Refer to floor plan or elevations for sizes. : [E2/AS1](#)

- 4231 180mm Linea Weatherboards On H3.2 50x20 Battens Over specified Building wrap : [E2/ALT](#)
- 4280 JH® 4.5mm Hardiflex lined soffits with PVC joiner strips. : [E2/AS1](#)
- 4289 Preformed PC aluminium angle flashing to soffit/wall junctions > 90°. Fix angle flashing behind soffit lining and lap directly over cladding. Provide 50mm cover to cladding and 50mm lap to soffit. : [E2/AS1](#)
- 4301 Colorsteel Endura® 5 Rib longrun roofing over Thermakraft 213 & netting. Screw fixed. Refer to roofing details for fixing requirements : [E2/AS1](#)
- 4302 Selected Colorsteel Fascia and Marley PVC spouting (Min 6500mm<sup>2</sup>) : [E1/AS1](#)
- 4303 Selected Colorsteel barge board with Colorsteel Endura® barge capping : [E2/AS1](#)
- 4304 Colorsteel Endura® Ridge & Hip flashings : [E2/AS1](#)
- 4308 Colorsteel Endura® Top Apron Flashing. Min 150mm over roofing with 110mm min upstand with 75mm min lap under cladding and 35mm min clearance below cladding. : [E2/AS1](#)
- 4391 Fall 4°
- 4392 Fall 10°
- 4501 PC aluminium residential exterior IGU (double glazed) with ex25 H3.1 paint quality pine jambs. Joinery installation to be in accordance with E2/AS1 or specified cladding system details. : [E2/AS1](#)
- 4503 Selected entry door within aluminium joinery unit and selected door hardware. Entry door & hardware design to later detail by others.
- 4506 Sectional Insulated (R0.7) Garage Door & Auto opener
- 4710 R2.6 (90mm) Pink®Batts® thermal building insulation to all exterior walls. : [H1/AS1](#)
- 4711 R3.2 (140mm) Pink Batts to 140mm exterior walls. : [H1/AS1](#)
- 4720 R3.6 (170mm) Pink®Batts® thermal building insulation to all ceilings (excluding garage). Ensure 25mm clearance to roof at all times. : [H1/AS1](#)

## INTERIOR

- 5101 10mm Gib Standard wall lining horizontally fixed to all walls where possible. Level 4 finish for painting throughout.
- 5102 10mm Gib Aqualine walls horizontally fixed to bathroom/ensuite walls where possible. Level 4 finish for painting throughout.
- 5111 9mm UT Plywood garage wall lining
- 5201 13mm Gib Standard ceiling linings fixed over specified ceiling battens.
- 5203 13mm Gib Aqualine ceiling linings fixed over specified ceiling battens
- 5210 70x35mm UT Ceiling battens @ 600c/c

- 5211 Selected 35mm Metal Ceiling battens @ 600c/c
- 5250 Ceiling lining fixed as diaphragm in accordance with Gib specifications. See 'diaphragm ceiling' sheet in this set. : [B1/NZS3604](#)
- 5301 75mm Gib Cove
- 5302 40x20mm Bevelled Scotia
- 5305 60x10 Beveled edge Skirting
- 5315 60x10 Architrave
- 5401 Kitchen design and drawings to later detail by others.
- 5550 Proprietary Acrylic shower installed in accordance with manufacturers specifications. Refer to appendix for installation details : [E3/AS1](#)
- 5551 Selected Laundry Tub. Min 35L : [G2/AS1](#)
- 5561 Selected 1800mm Acrylic bath. See 'Waterproofing' sheet for extent of waterproofing required. : [E3/AS1](#)
- 5570 Selected Vanity Unit. See 'Waterproofing' sheet for extent of waterproofing required. : [E3/AS1](#)
- 5580 150mm Extract fan with ducting to exterior. Min 25L/s flowrate required. : [G4/AS1](#)

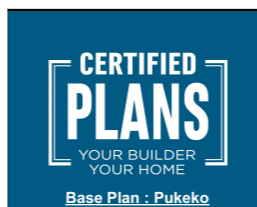
## FINISH

- 6202 Selected ceramic wall tiles installed to ARDEX Tiling system #8 "Wet Areas". Refer to 'Waterproofing' sheet for details : [E3/AS1](#)
- 6206 Selected ceramic floor tiles installed to ARDEX Tiling system #1 "Dry Area"
- 6210 Selected ceramic tile skirting with chrome trim
- 6301 Selected 15mm timber/composite overlay flooring
- 6405 Bare concrete to garage
- 6501 Selected carpet over underlay

## SERVICES

- 7102 250lt mains supply hot water cylinder system installed in strict accordance with manufacturers specifications. Refer to fixing & plumbing details shown on 'HOT WATER SYSTEM' sheet included in this plan set. : [G12/AS1](#)
- 7401 80Ø Colorsteel Downpipe : [E1/NRM COP V3](#)
- 7421 130mm Marley Basic Channel : [E1/AS1](#)
- 7705 SD - Smoke Detector installed to manufacturers specifications and in accordance with NZBC F7/AS1. : [F7/AS1](#)

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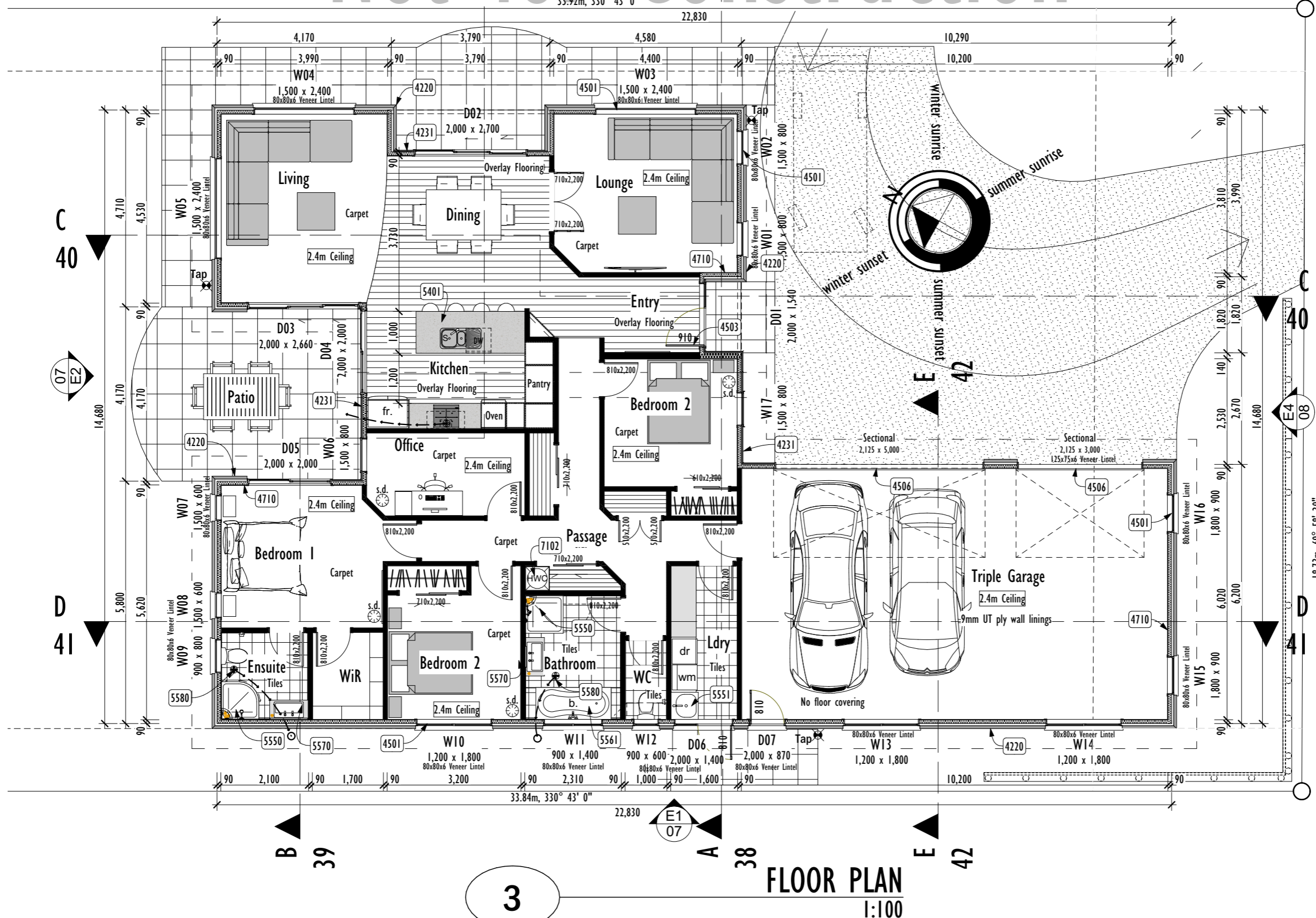
Project:	<b>New Dwelling</b>
	<b>GM Construction</b>
	Lot 53 Pinehurst Crescent, Morrinsville

ID	Issue Name	Changes	Date
02	Developed Concept 2		1/10/2020
03	Structural Prelim	1	9/10/2020

Job Number:	<b>CP06</b>
Sheet:	<b>05</b>



# Not for Construction

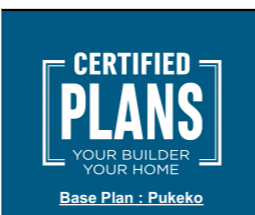


- ### Notes ENCLOSURE
- 4220 70mm Bowers Masonry Brick Veneer (50mm Cavity) Over specified Building wrap & RAB. Refer to cladding details for all venting requirements : E2/AS1
  - 4231 180mm Linea Weatherboards On H3.2 50x20 Battens Over specified Building wrap : E2/ALT
  - 4501 PC aluminium residential exterior IGU (double glazed) with ex25 H3.1 paint quality pine jambs . Joinery installation to be in accordance with E2/AS1 or specified cladding system details. : E2/AS1
  - 4503 Selected entry door within aluminium joinery unit and selected door hardware. Entry door & hardware design to later detail by others.
  - 4506 Sectional Insulated (R0.7) Garage Door & Auto opener
  - 4710 R2.6 (90mm) Pink@Batts® thermal building insulation to all exterior walls. : H1/AS1
- ### INTERIOR
- 5401 Kitchen design and drawings to later detail by others.
  - 5550 Proprietary Acrylic shower installed in accordance with manufacturers specifications. Refer to appendix for installation details : E3/AS1
  - 5551 Selected Laundry Tub. Min 35L : G2/AS1
  - 5561 Selected 1800mm Acrylic bath. See 'Waterproofing' sheet for extent of waterproofing required. : E3/AS1
  - 5570 Selected Vanity Unit. See 'Waterproofing' sheet for extent of waterproofing required. : E3/AS1
  - 5580 150mm Extract fan with ducting to exterior. Min 25L/s flowrate required. : G4/AS1
- ### SERVICES
- 7102 250lt mains supply hot water cylinder system installed in strict accordance with manufacturers specifications. Refer to fixing & plumbing details shown on 'HOT WATER SYSTEM' sheet included in this plan set. : G12/AS1

### PROJECT AREAS

Floor Areas		
10	Living	164.1
11	Garage	63.8
		<b>227.9 m<sup>2</sup></b>
Roof Areas		
20	Roof	283.8
		<b>283.8 m<sup>2</sup></b>

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Project: **New Dwelling**  
GM Construction  
Lot 53 Pinehurst Crescent,  
Morrinsville

ID	Issue Name	Changes	Date
01	Developed Concept		16/09/2020
02	Developed Concept 2		1/10/2020
03	Structural Prelim		9/10/2020

Job Number: **CP06**  
Sheet: **06**



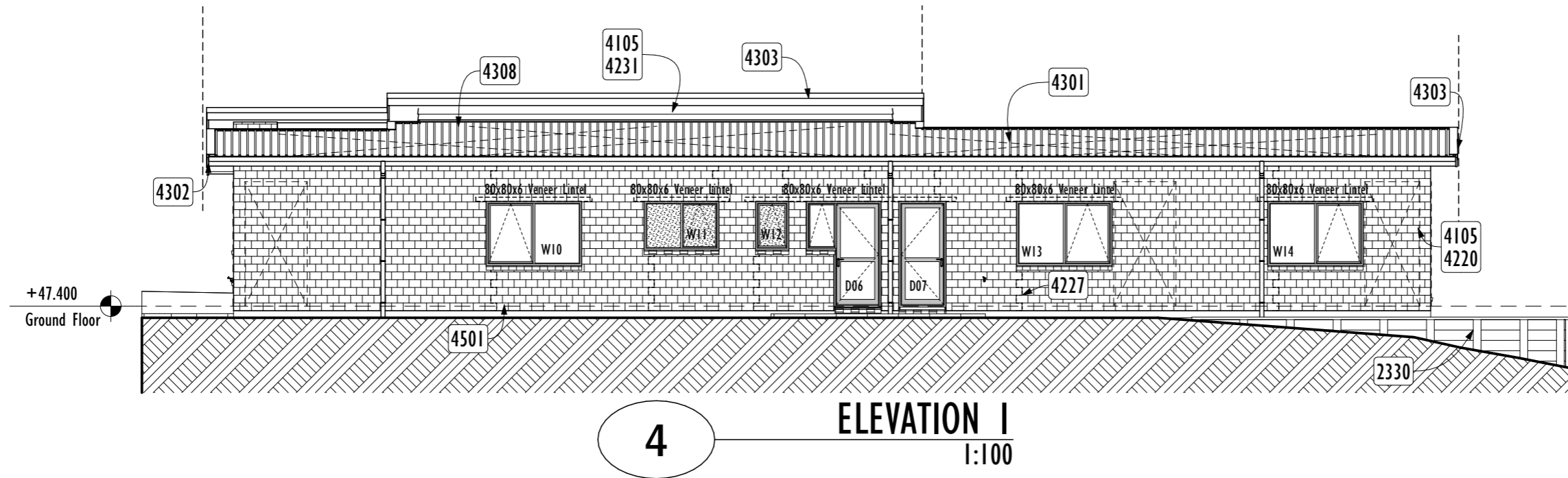
# Not for Construction

## Notes

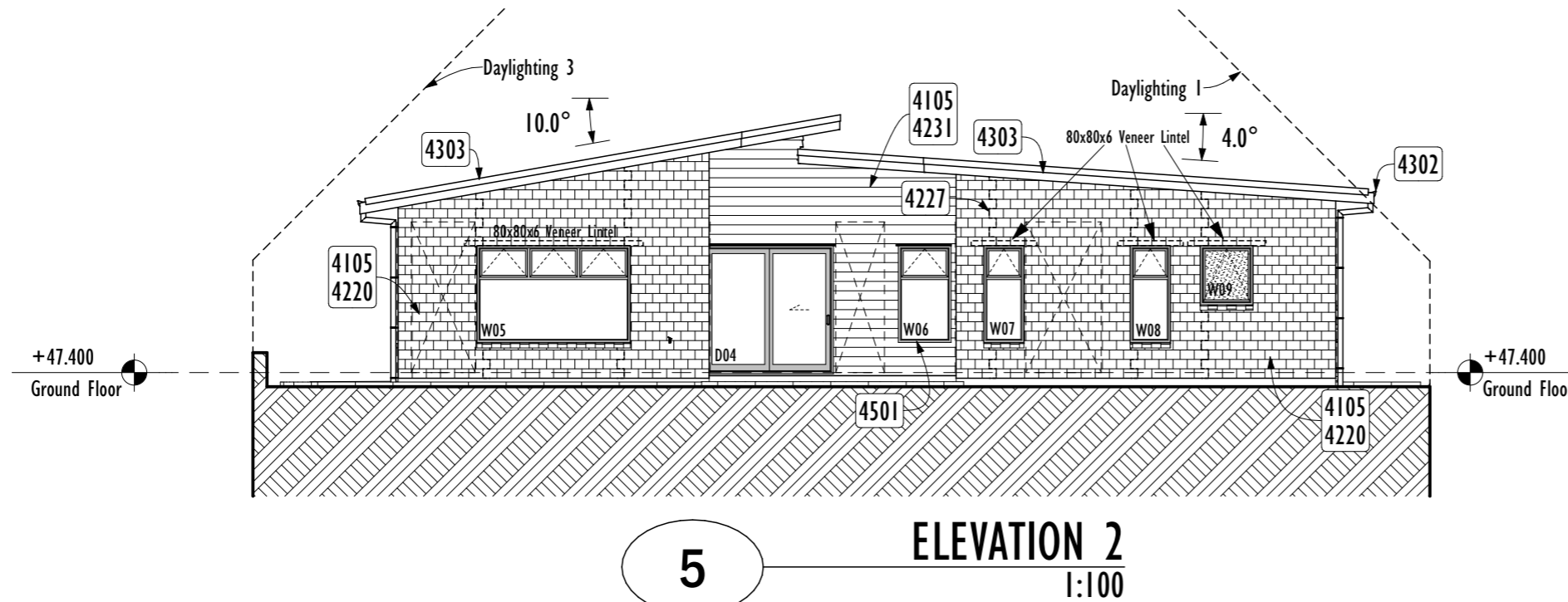
**SITE**  
2330 Timber Retaining wall <1.5m (with no Surcharge) not forming part of this consent

## ENCLOSURE

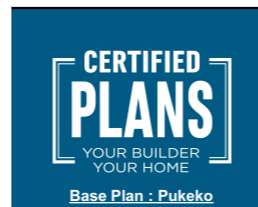
- 4105 4.5mm James Hardies HomeRAB fixed in accordance with JH RAB manual dated March 2019. : E2/AS1
- 4220 70mm Bowers Masonry Brick Veneer (50mm Cavity) Over specified Building wrap & RAB. Refer to cladding details for all venting requirements : E2/AS1
- 4227 Brick Veneer Control Joints as per manufacturers specifications. See appendix for details : E2/AS1
- 4231 180mm Linea Weatherboards On H3.2 50x20 Battens Over specified Building wrap : E2/ALT
- 4301 Colorsteel Endura® 5 Rib longrun roofing over Thermakraft 213 & netting. Screw fixed. Refer to roofing details for fixing requirements : E2/AS1
- 4302 Selected Colorsteel Fascia and Marley PVC spouting (Min 6500mm2) : E1/AS1
- 4303 Selected Colorsteel barge board with Colorsteel Endura® barge capping : E2/AS1
- 4308 Colorsteel Endura® Top Apron Flashing. Min 150mm over roofing with 110mm min upstand with 75mm min lap under cladding and 35mm min clearance below cladding. : E2/AS1
- 4501 PC aluminium residential exterior IGU (double glazed) with ex25 H3.1 paint quality pine jambs . Joinery installation to be in accordance with E2/AS1 or specified cladding system details. : E2/AS1



BUILDING ENVELOPE RISK MATRIX		
Worst Case		
Risk Factor	Risk Severity	Risk Score
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	Very high risk	5
Eaves width	Low risk	0
Envelope complexity	Medium risk	1
Deck design	Low risk	0
<b>Total Risk Score:</b>		<b>7</b>



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GM Construction  
Lot 53 Pinehurst Crescent,  
Morrinsville

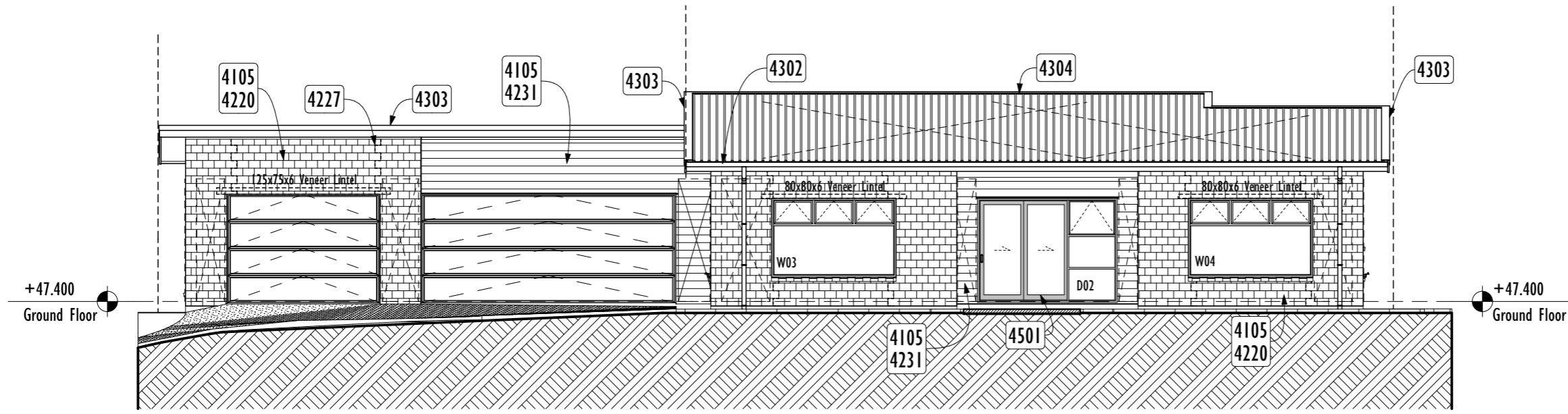
ID	Issue Name	Changes	Date
01	Developed Concept		16/09/2020
02	Developed Concept 2		1/10/2020
03	Structural Prelim		9/10/2020

**ELEVATIONS 1 & 2**

Job Number: **CP06** Sheet: **07**



# Not for Construction



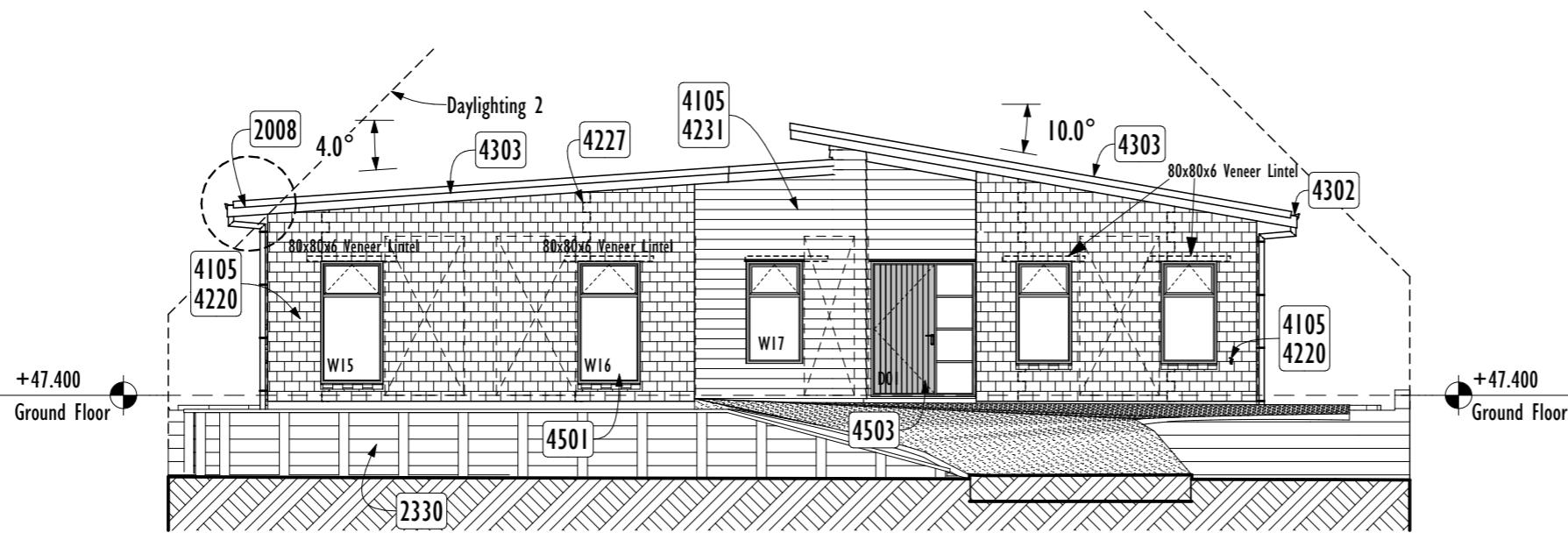
6 ELEVATION 3  
1:100

## Notes

- SITE**
- 2008 Area of daylighting encroachment. See affected persons approval form
  - 2330 Timber Retaining wall <1.5m (with no Surcharge) not forming part of this consent

## ENCLOSURE

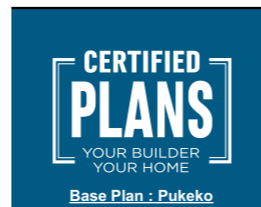
- 4105 4.5mm James Hardies HomeRAB fixed in accordance with JH RAB manual dated March 2019. : E2/AS1
- 4220 70mm Bowers Masonry Brick Veneer (50mm Cavity) Over specified Building wrap & RAB. Refer to cladding details for all venting requirements : E2/AS1
- 4227 Brick Veneer Control Joints as per manufacturers specifications. See appendix for details : E2/AS1
- 4231 180mm Linea Weatherboards On H3.2 50x20 Battens Over specified Building wrap : E2/ALT
- 4302 Selected Colorsteel Fascia and Marley PVC spouting (Min 6500mm2) : E1/AS1
- 4303 Selected Colorsteel barge board with Colorsteel Endura® barge capping : E2/AS1
- 4304 Colorsteel Endura® Ridge & Hip flashings : E2/AS1
- 4501 PC aluminium residential exterior IGU (double glazed) with ex25 H3.1 paint quality pine jambs . Joinery installation to be in accordance with E2/AS1 or specified cladding system details. : E2/AS1
- 4503 Selected entry door within aluminium joinery unit and selected door hardware. Entry door & hardware design to later detail by others.



7 ELEVATION 4  
1:100

BUILDING ENVELOPE RISK MATRIX		
Worst Case		
Risk Factor	Risk Severity	Risk Score
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall interseptions design	Very high risk	5
Eaves width	Low risk	0
Envelope complexity	Medium risk	1
Deck design	Low risk	0
<b>Total Risk Score:</b>		<b>7</b>

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Project: **New Dwelling**  
GM Construction  
Lot 53 Pinehurst Crescent,  
Morrinsville

ID	Issue Name	Changes	Date
01	Developed Concept		16/09/2020
02	Developed Concept 2		1/10/2020
03	Structural Prelim		9/10/2020

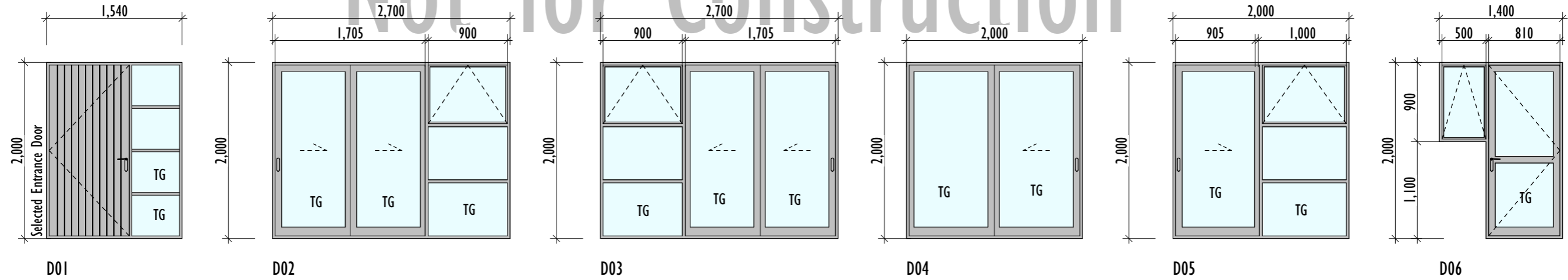
ELEVATIONS 3 & 4

Job Number: **CP06** Sheet: **08**

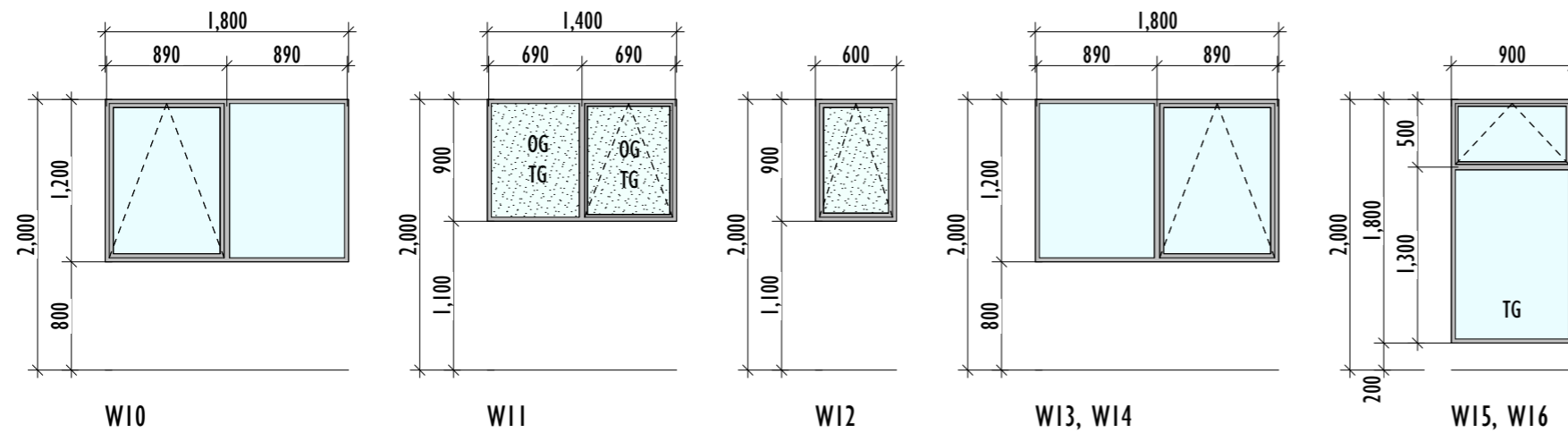
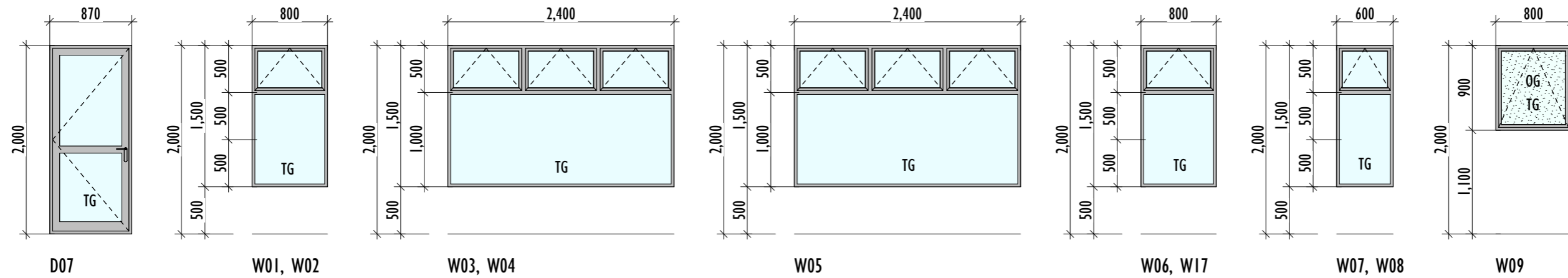




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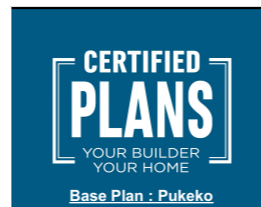


ALL JOINERY HEIGHTS TO BE CONFIRMED WITH FRAME & TRUSS SUPPLIER AND JOINERY SUPPLIER



## 8 JOINERY SCHEDULE 1:50

All plans & building work is subject to council approval. DO NOT build using plans that are not displaying a council approval stamp. All dimensions & underground service locations to be checked prior to commencement of all works or ordering of materials. DO NOT scale off drawings. Cross reference all drawings, confirm site levels, floor heights & restrictions prior to earthworks. If any discrepancies occur, ask the designer or contractor immediately before commencing works or ordering. Quantities provided are preliminary values only and are to be confirmed by associated supplier and builder.  
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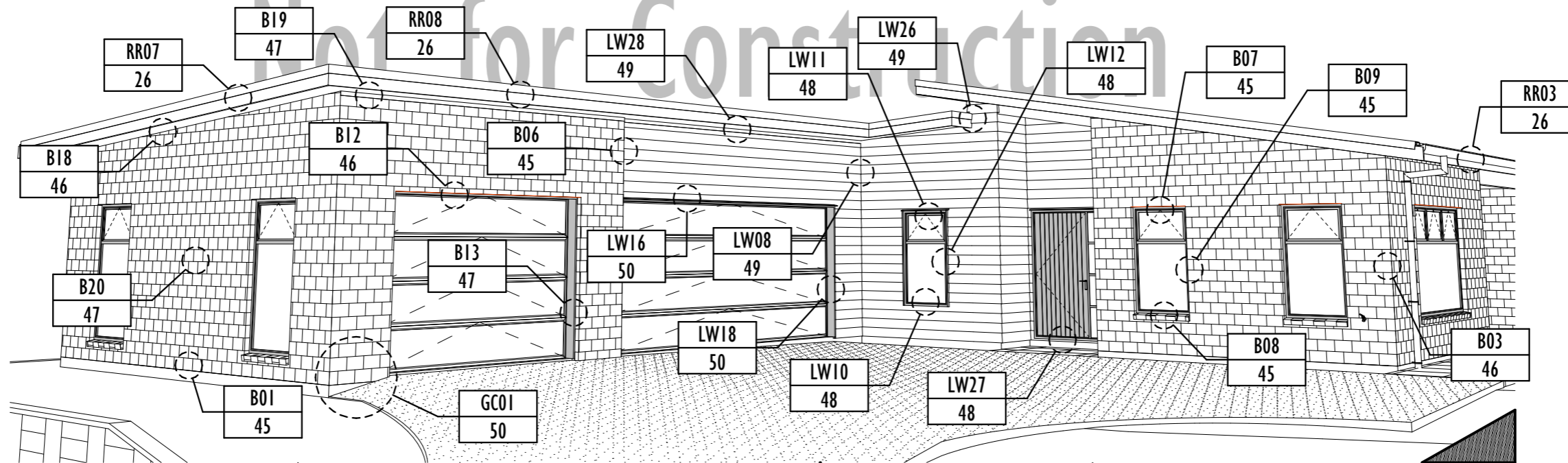


Project: **New Dwelling**  
**GM Construction**  
 Lot 53 Pinehurst Crescent,  
 Morrinsville

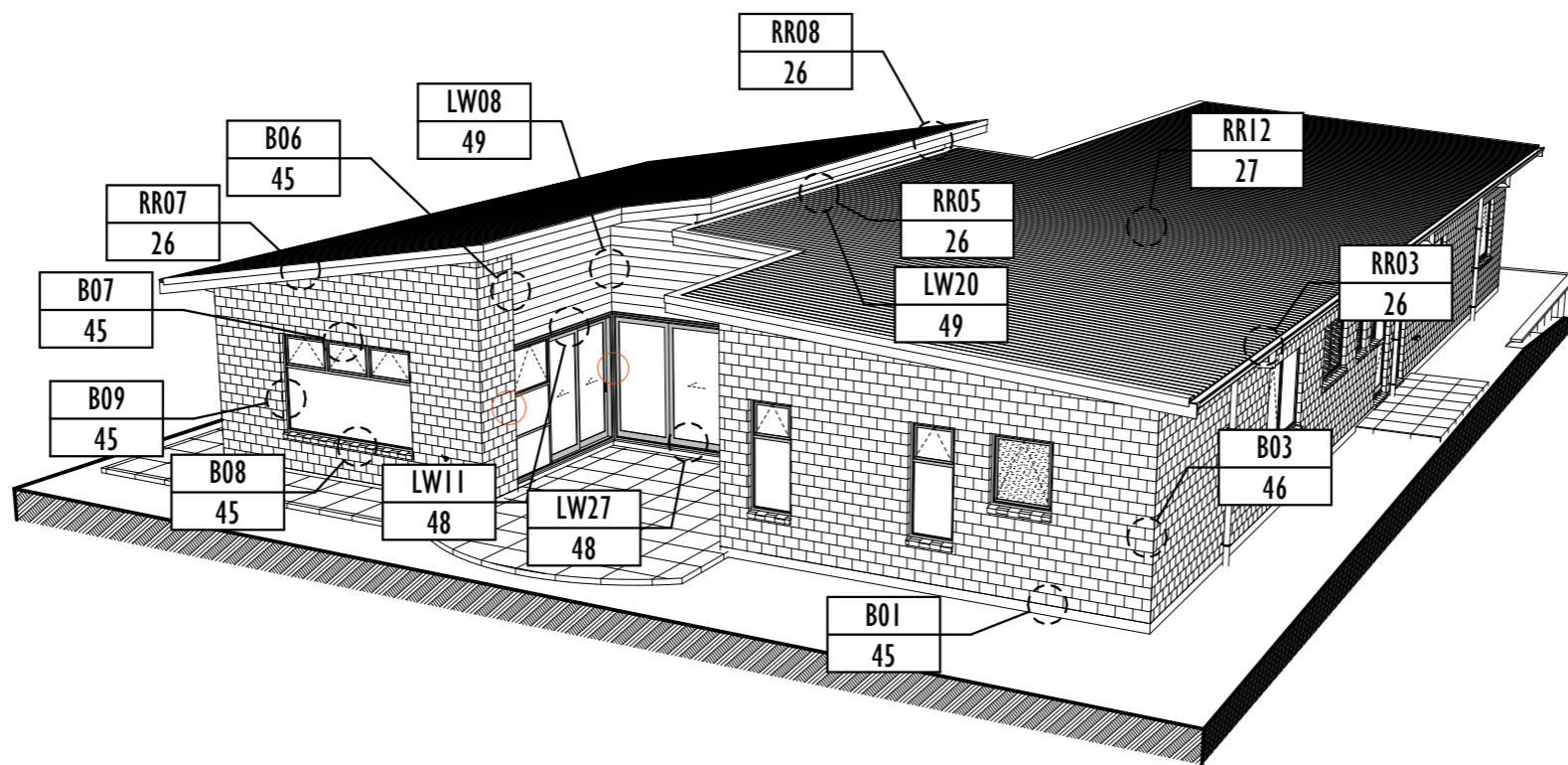
ID	Issue Name	Changes	Date
01	Developed Concept		16/09/2020
02	Developed Concept 2		1/10/2020
03	Structural Prelim		9/10/2020

JOINERY SCHEDULE  
 Job Number: **CP06** Sheet: **09**



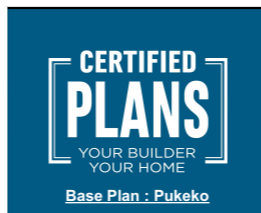


9 **CLADDING DETAILS 1** 1:30



10 **CLADDING DETAILS 2** 1:30

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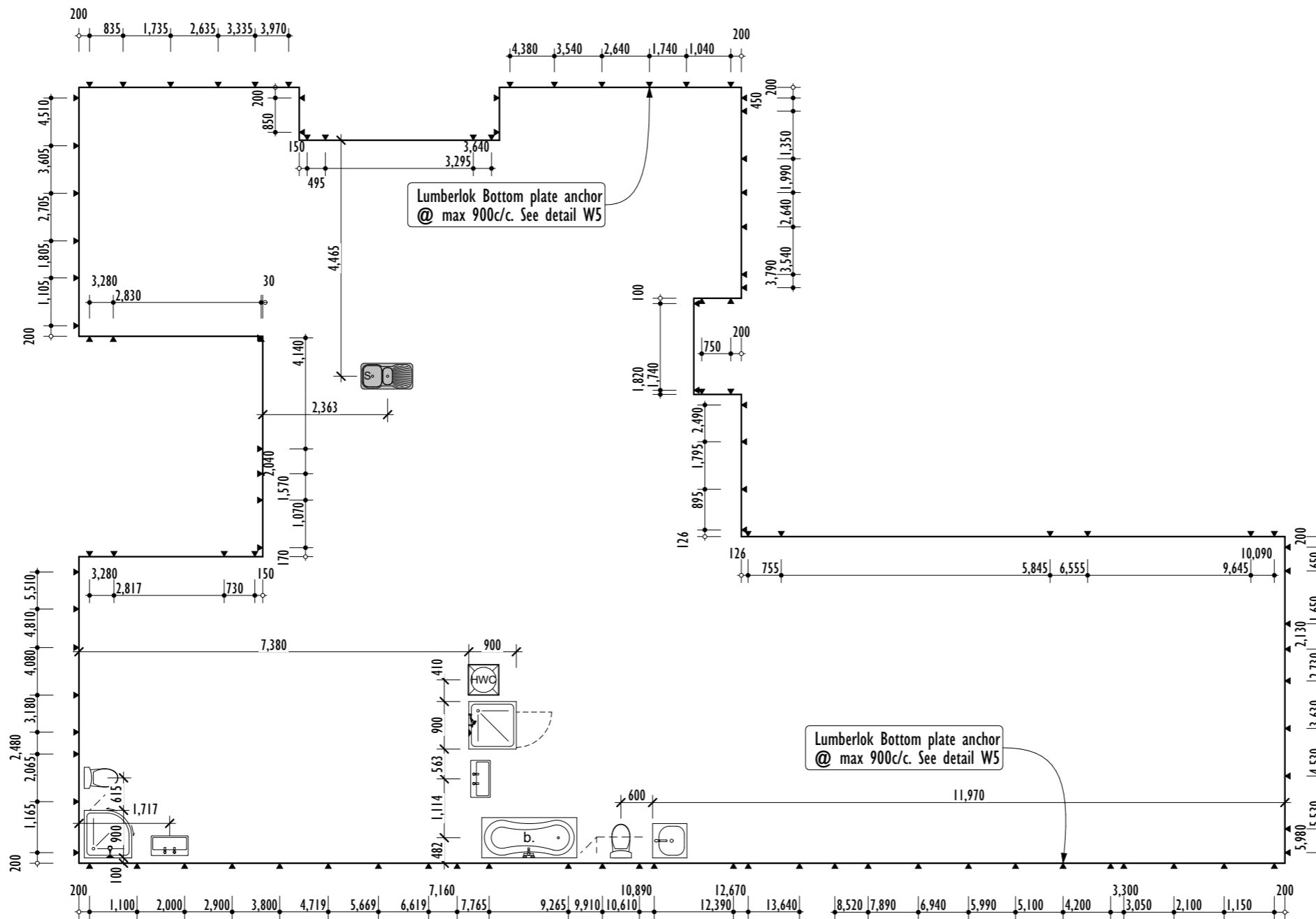


Project: **New Dwelling**  
**GM Construction**  
 Lot 53 Pinehurst Crescent,  
 Morrinsville

ENCLOSURE DETAILS			
ID	Issue Name	Changes	Date
03	Structural Prelim		9/10/2020
			Job Number: <b>CP06</b> Sheet: <b>10</b>



# Not for Construction



11

## FOUNDATION FIXINGS & PLUMBING

1:100

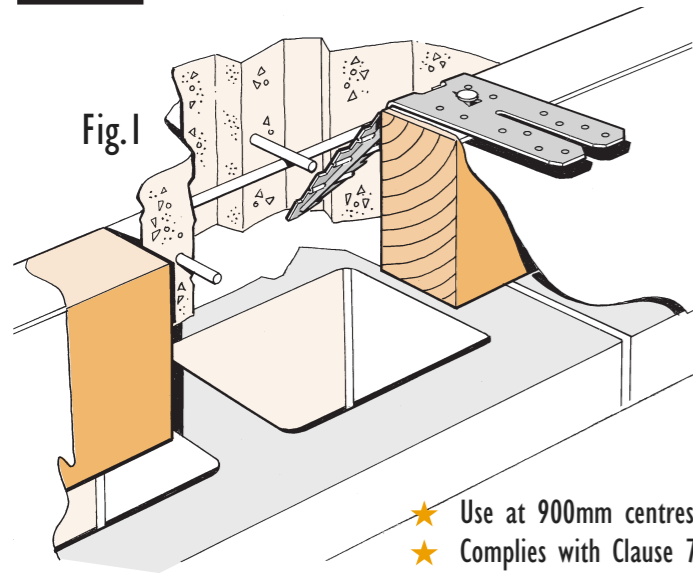
All plans & building work is subject to council approval. DO NOT build using plans that are not displaying a council approval stamp. All dimensions & underground service locations to be checked prior to commencement of all works or ordering of materials. DO NOT scale off drawings. Cross reference all drawings, confirm site levels, floor heights & restrictions prior to earthworks. If any discrepancies occur, ask the designer or contractor immediately before commencing works or ordering. Quantities provided are preliminary values only and are to be confirmed by associated supplier and builder.  
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**GM Construction**  
 Lot 53 Pinehurst Crescent,  
 Morrinsville

FOUNDATION FIXING & PLUMBING			
ID	Issue Name	Changes	Date
03	Structural Prelim		9/10/2020
			Job Number: <b>CP06</b>
			Sheet: <b>11</b>





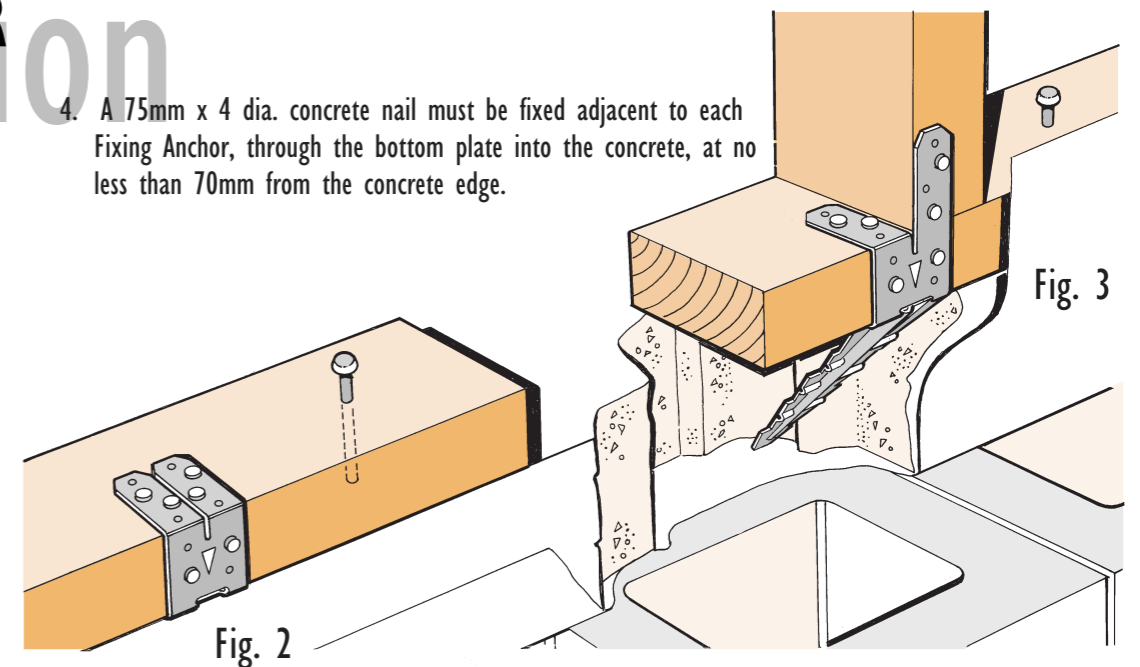
1. Bottom Plate Fixing Anchors shall be fixed at 900mm centres max. to the boxing for concrete floor slabs, over a continuous vapour barrier. Each Fixing Anchor is nailed prior to concrete pour, and shall be left undisturbed until concrete has hardened ready for timber frames to be installed. (Fig.1).

2. When timber framing is in place, the Fixing Anchors are folded up and over the bottom plate. (Fig. 2).

- ★ Use at 900mm centres max.
- ★ Complies with Clause 7.5.12.2 NZS 3604:2011

3. Two LUMBERLOK Product Nails 30mm x 3.15 dia. shall then be driven into the side of the bottom plate and two additional nails applied through each of the lugs. Should a stud coincide with the position of a Fixing Anchor, nail as shown in Fig. 3.

4. A 75mm x 4 dia. concrete nail must be fixed adjacent to each Fixing Anchor, through the bottom plate into the concrete, at no less than 70mm from the concrete edge.



W5

### BOTTOM PLATE FIXING ANCHOR

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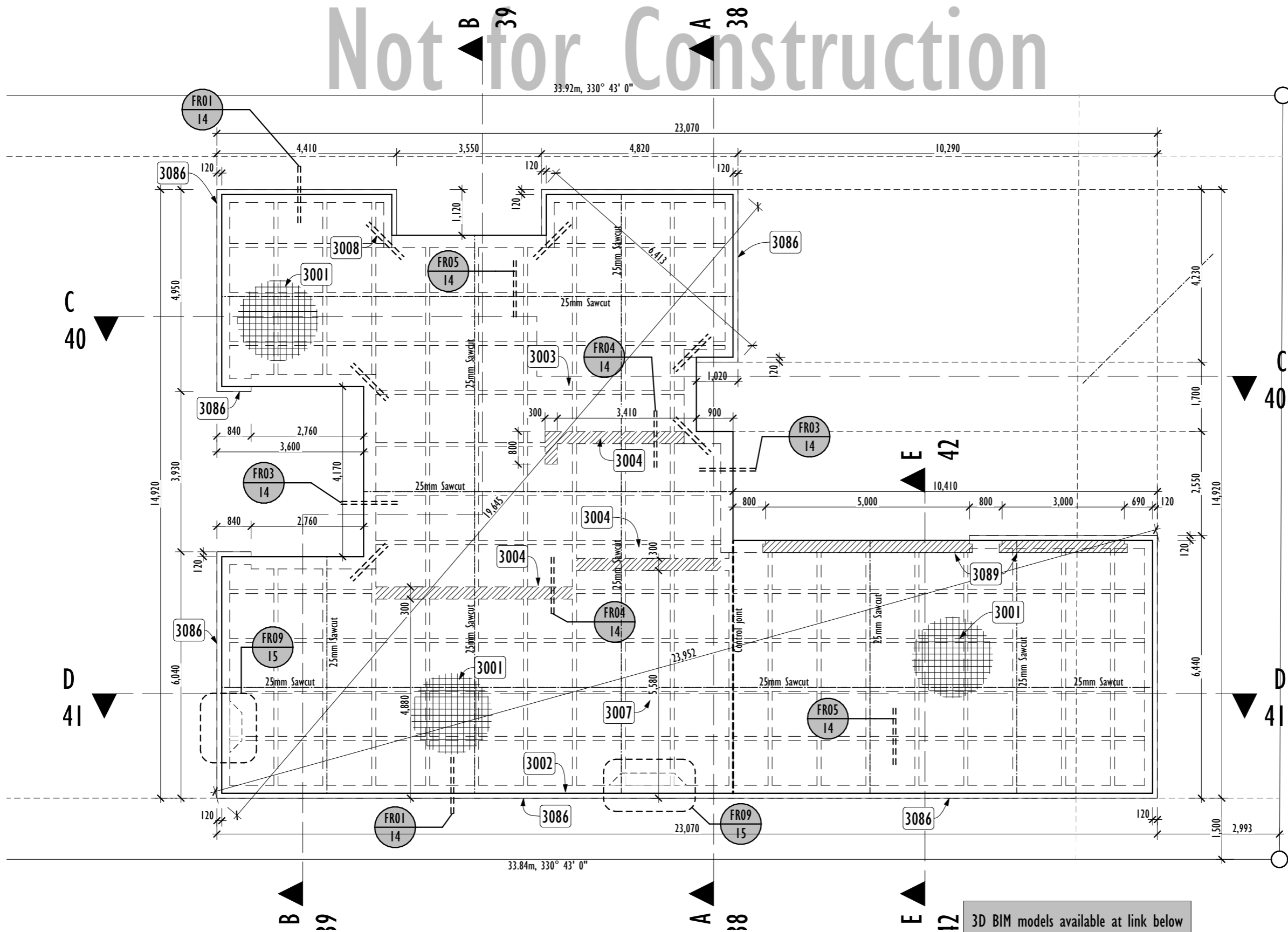
Project:	New Dwelling
	GM Construction
	Lot 53 Pinehurst Crescent, Morrinsville

BOTTOM PLATE FIXING ANCHOR			
ID	Issue Name	Changes	Date
03	Structural Prelim		9/10/2020

Job Number:	CP06
Sheet:	12



# Not for Construction



## Notes STRUCTURE

- 3001 Baseraft Waffle Slab-on-ground floor system with 85mm thick 20MPa concrete slab with Seismic SE62 Super Ductile 500E - 2.294kg/m<sup>2</sup> mesh on 1100mm sq x 220mm thick polystyrene pods on 0.25mm polythene on compacted hard fill in accordance with NZS3604 3.3. Provide 720mm lap to all HD12 steel. : B1/ALT
- 3002 300x305mm deep perimeter edge beam with 1/HD12 to top & 2/HD12 to base tied to rib bars. : B1/ALT
- 3003 100x220mm deep concrete ribs between pods with 1/HD12 tied to perimeter bar : B1/ALT
- 3004 300mm wide load bearing beams with 2/HD12 rein bars in base : B1/ALT
- 3007 1100mm sq x 220mm thick polystyrene pods on 0.25mm polythene : B1/ALT
- 3008 Provide 2/D12's 1.2m long supplementary diagonal reinforcing bars at internal corner. : B1/ALT
- 3086 120w x 90d Brick rebate with 3 coats of rubber bitumen damp proof coating to exposed face of slab rebates and sills of full height joinery. : E2/AS1
- 3089 25mm deep Garage door rebate - shown shaded - confirm depth and setout to suit garage door manufacturers specification. Provide 50mm ground clearance



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Structural BIM Model

3D BIM models available at link below  
[www.planworks.co.nz/cp06](http://www.planworks.co.nz/cp06)

12

## FOUNDATION SETOUT

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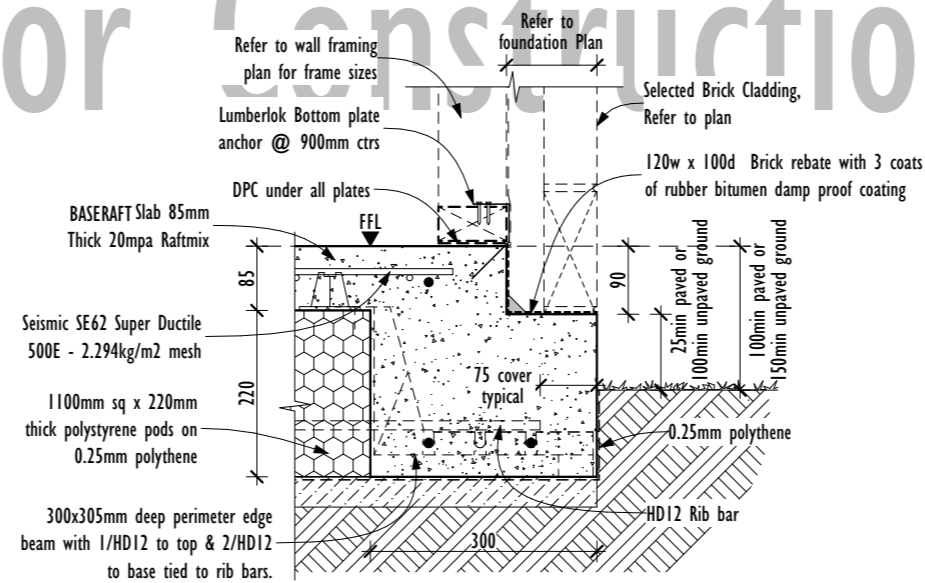
Project: **New Dwelling**  
 GM Construction  
 Lot 53 Pinehurst Crescent,  
 Morrinsville

ID	Issue Name	Changes	Date
03	Structural Prelim		9/10/2020

FOUNDATION SETOUT  
 Job Number: **CP06**  
 Sheet: **13**

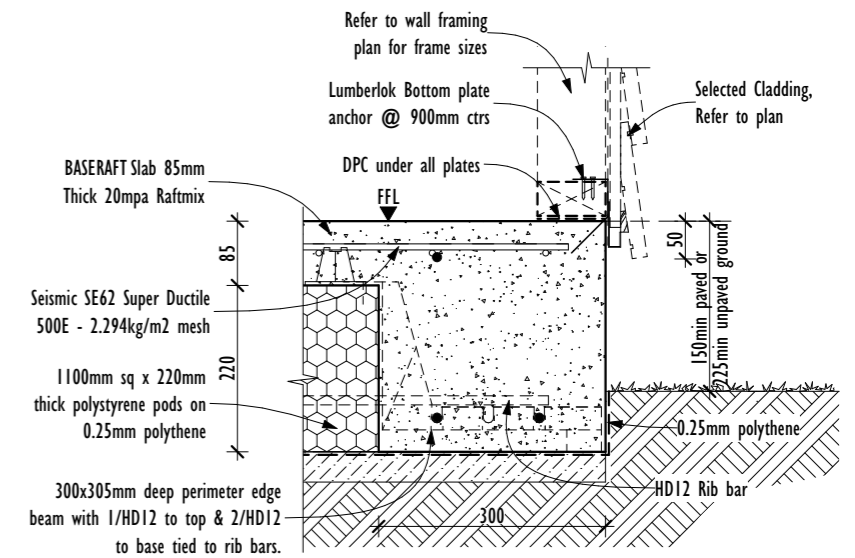


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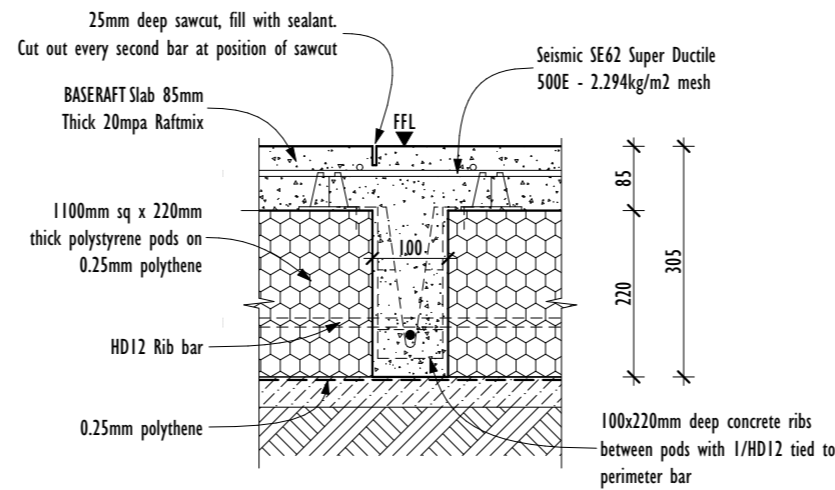
FR01

BRICK PERIMETER  
1:10



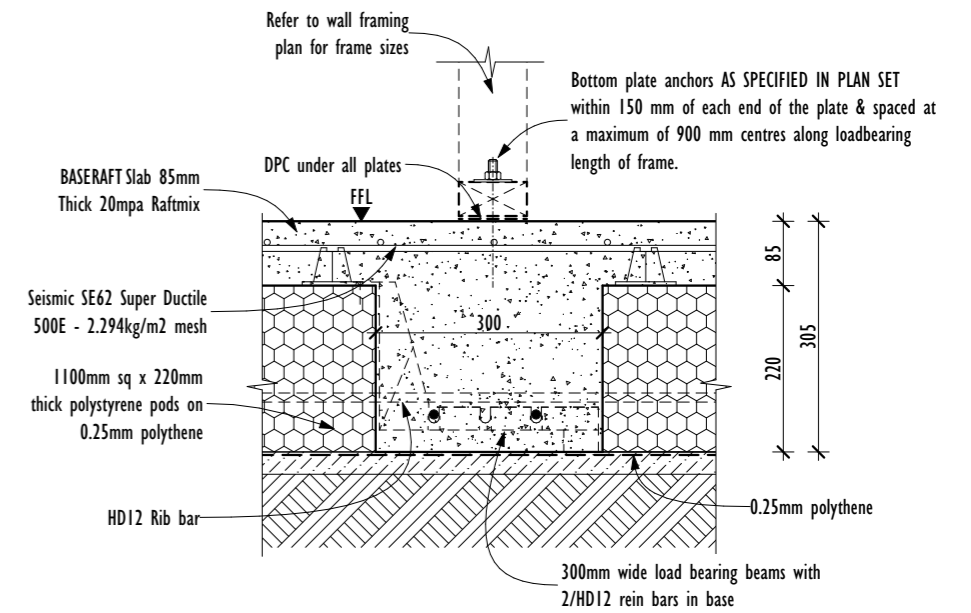
FR03

PERIMETER  
1:10



FR05

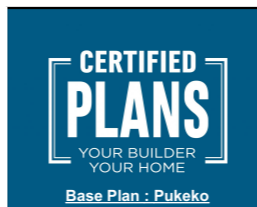
STANDARD RIB  
1:10



FR04

LOAD BEARING  
1:10

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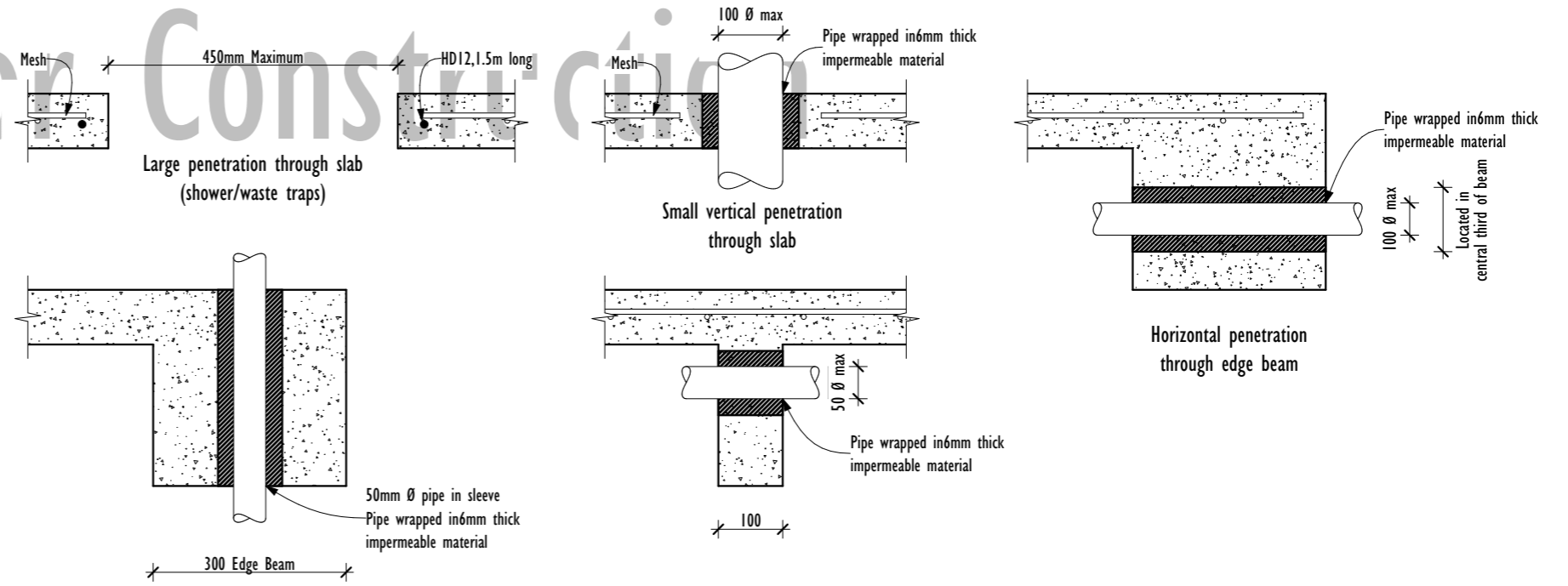
ID	Issue Name	Changes	Date
03	Structural Prelim		9/10/2020

BASE RAFT DETAILS I

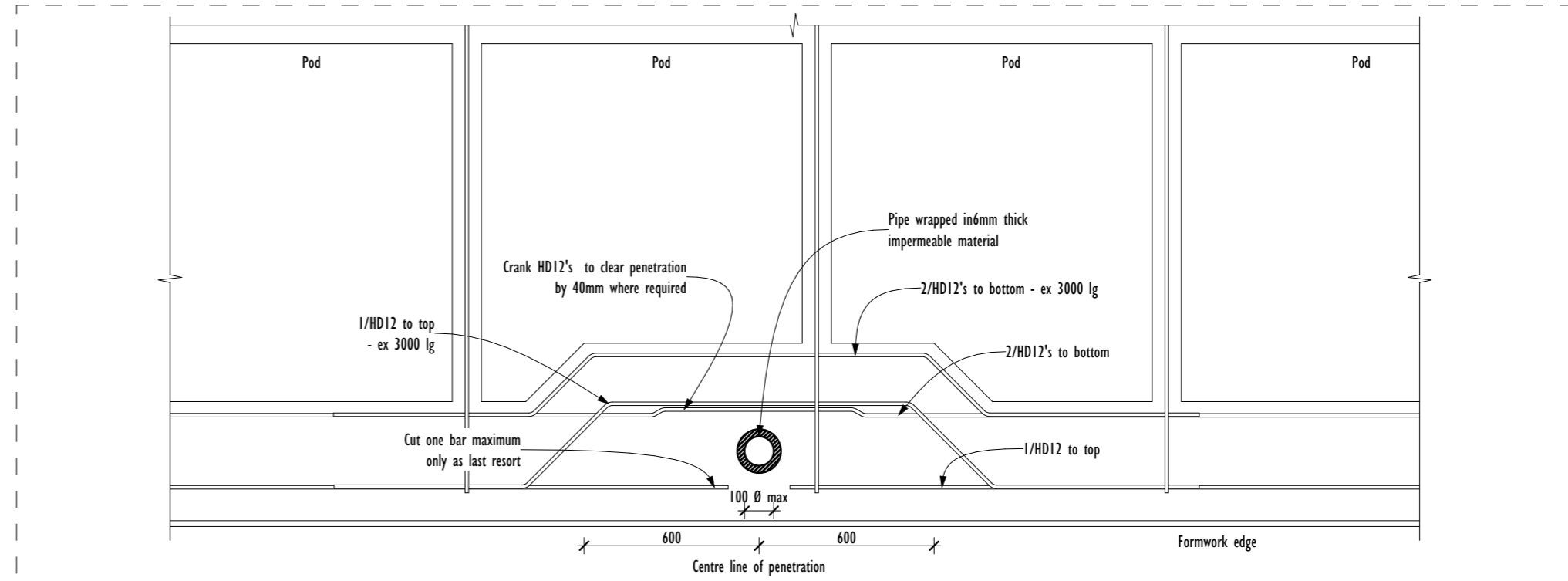
Job Number: **CP06**  
Sheet: **14**



# Not for Construction



**FR08 SERVICES 1:10**



**FR09 SERVICES - 100mm VERTICAL PIPE 1:20**

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Project: **New Dwelling**  
**GM Construction**  
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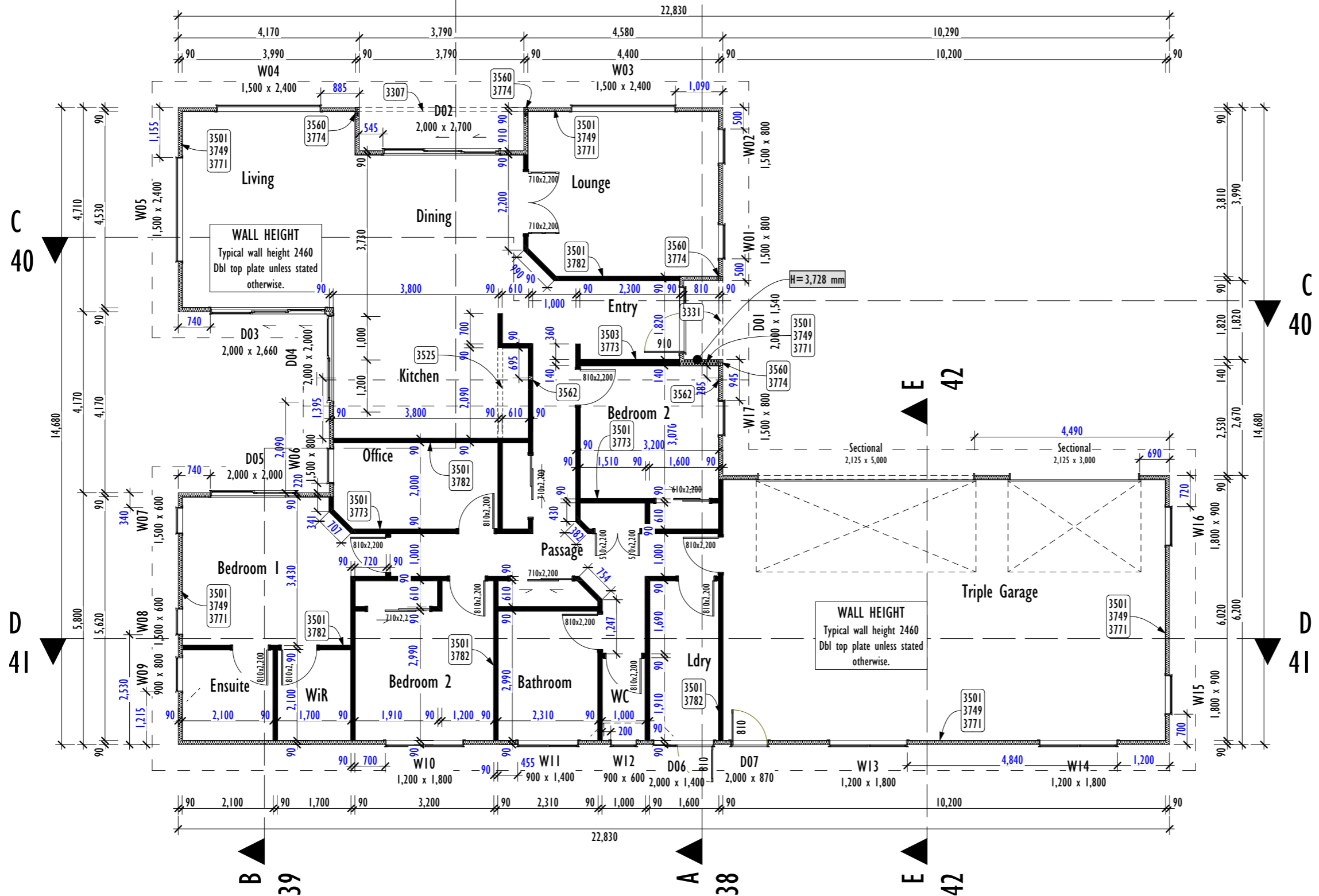
ID	Issue Name	Changes	Date
03	Structural Prelim		9/10/2020

**BASE RAFT DETAILS 2**  
 Job Number: **CP06** Sheet: **15**



**NOTE: All lintel tie down details & wall nailing/fixing requirements on following pages**

# Not for Construction



### Wall Framing Notes

- \* Structural wall framing items to be SG8 Min grade
- \* Studs @ 600mm ctrs unless noted otherwise
- \* Nogs @ 800mm ctrs or 480 ctrs for vert. shiplap clad walls
- \* Wall framing timbers to be H1.2 treated unless noted otherwise
- \* All elements & fixings designed for High wind zone.
- \* Provide fixings to all elements not specifically designed in accordance with NZS 3604:2011.
- \* Provide Lumberlok bottom plate anchor in accordance with manufacturers specification
- \* All HY90 & hySPAN LVL lintels & beams to be fixed in accordance with NZS3604:2011 & CHH Futurebuild specifications
- \* Joinery sizes shown. Allow clearances to all openings.
- \* Ensure all lintel and top plate tie downs are applied.
- \* Plans to be read in conjunction with Truss & Frame designs

### Notes STRUCTURE

- 3307 270x90 GL8 H3.2 Glulam Beam Grade A : B1/ALT
- 3331 140x90 SG8 H3.2 Beam : B1/ALT
- 3501 90x45 SG8 Framed Wall - Studs @ 600mm c/c Nogs @ 800mm c/c : B1/NZS3604
- 3503 140x45 SG8 Framed Wall - Studs @ 600mm c/c Nogs @ 800mm c/c : B1/NZS3604
- 3525 Bulkhead wall framing above kitchen units
- 3560 Double support studs with extended trimming stud for bolt fixing : B1/NZS3604
- 3749 Bomac StudLok Top plate to stud Screw fixing. Refer to detail W2 : B1/NZS3604
- 3771 Lumberlok Bottom plate anchor @ max 900c/c. See detail W5 : B1/NZS3604
- 3773 Internal Loadbearing wall anchors shall be Ramset 12mm AnkaScrew with 50x50x3mm Washers within 150 mm of each end of the plate & spaced at a maximum of 900 mm centres along loadbearing length of frame. : B1/NZS3604
- 3774 Gib HandiBrac stud anchor with Bomac Screwbolt. Install in accordance with HandiBrac manual July 2015 : B1/ALT
- 3782 Internal non-load bearing bottom plate fixing to concrete floor - 75x3.8mm Drive pin & 16mm washer, 150mm from wall ends and @ 600c/c thereafter : B1/NZS3604

**WALL STRUCTURE**  
1:100

13

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hy90 Substitutions can be made in accordance with CHH FutureBuild-LVL-hy90Lintel-TechNote-August-2016  
<https://futurebuild.co.nz/assets/Uploads/FutureBuild-LVL-hy90Lintel-TechNote-August-2016.pdf>

3D BIM models available at link below  
[www.planworks.co.nz/cp06](http://www.planworks.co.nz/cp06)



BASE PLAN : PUKEKO



Project: **New Dwelling**  
GM Construction  
Lot 53 Pinehurst Crescent, Morrinsville

ID	Issue Name	Changes	Date
03	Structural Prelim		9/10/2020

WALL STRUCTURE  
Job Number: **CP06**  
Sheet: **16**

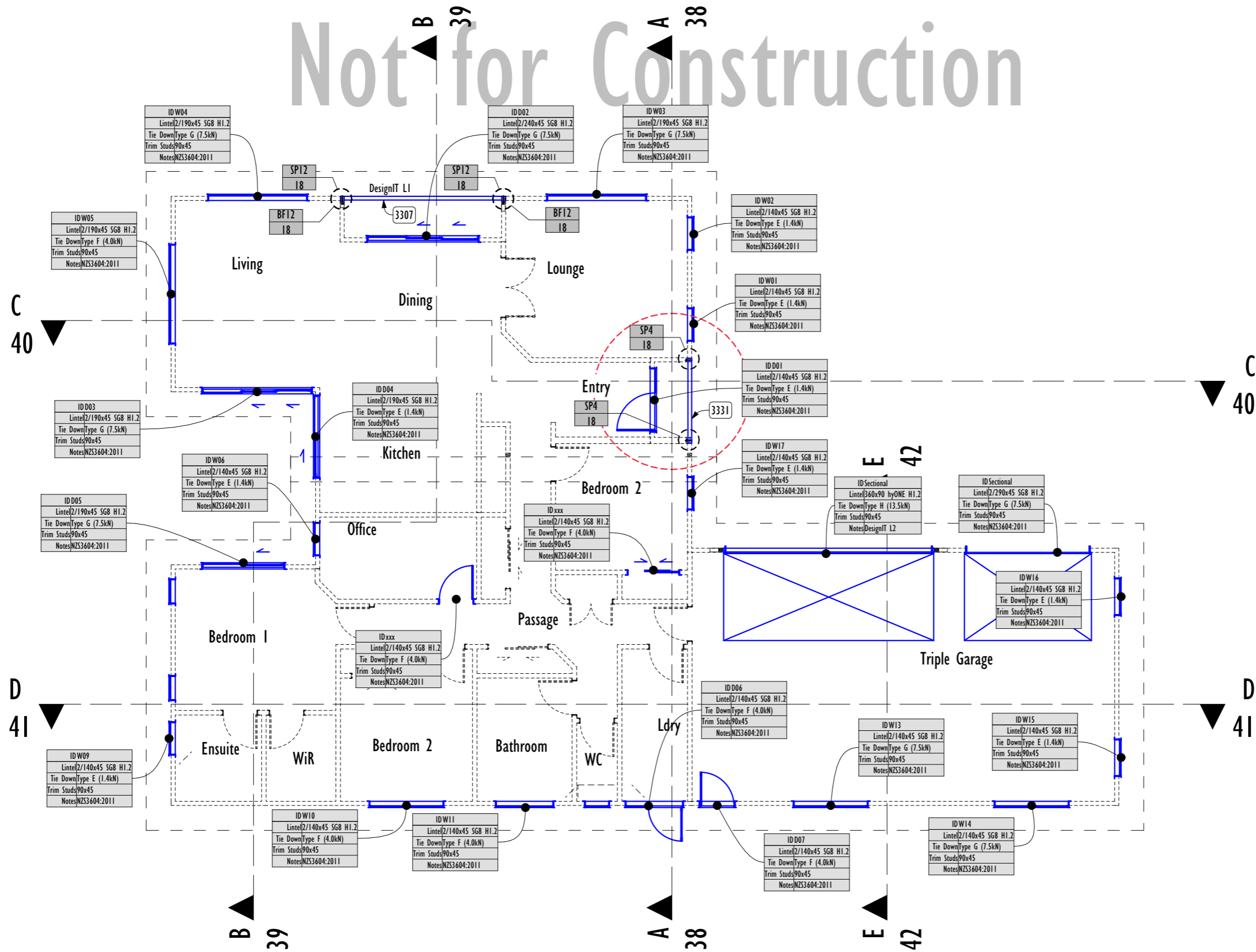




# Not for Construction

## Notes STRUCTURE

3307 270x90 GL8 H3.2 Glulam Beam Grade A : B1/ALT  
3331 140x90 SG8 H3.2 Beam : B1/ALT



### 14 BEAMS & LINTELS 1:100

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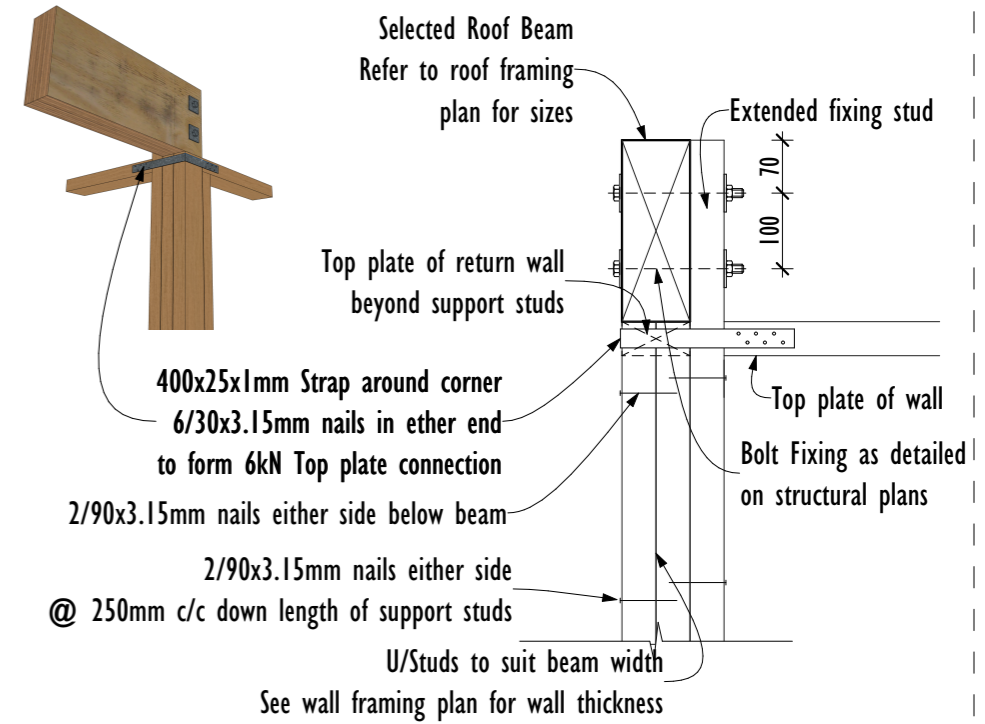
Project: **New Dwelling**  
GM Construction  
Lot 53 Pinehurst Crescent,  
Morrinsville

ID	Issue Name	Changes	Date
03	Structural Prelim		9/10/2020

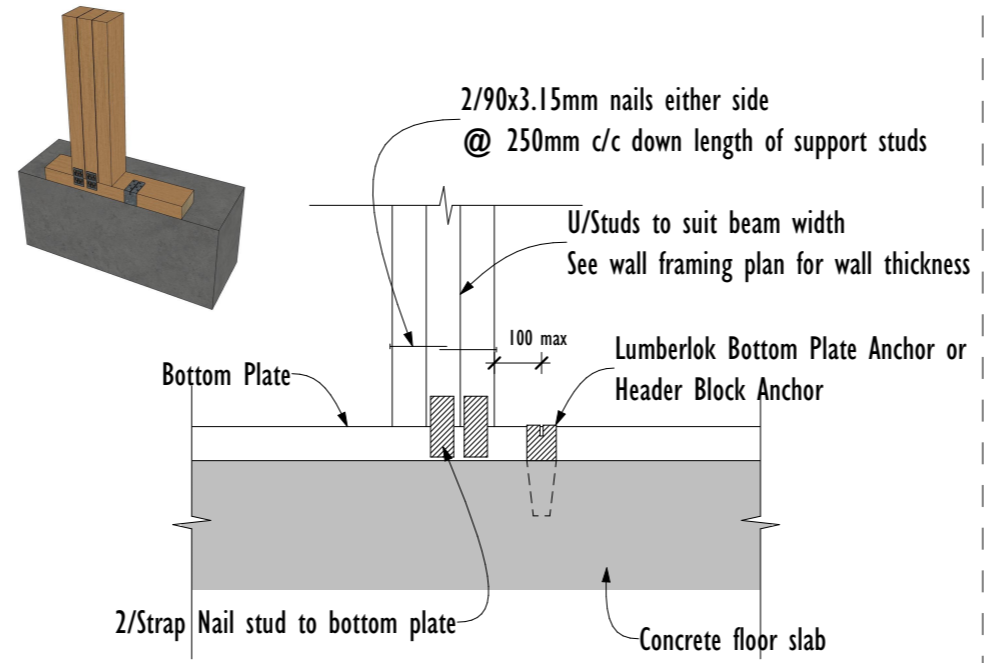
BEAMS & LINTELS  
Job Number: **CP06**  
Sheet: **17**



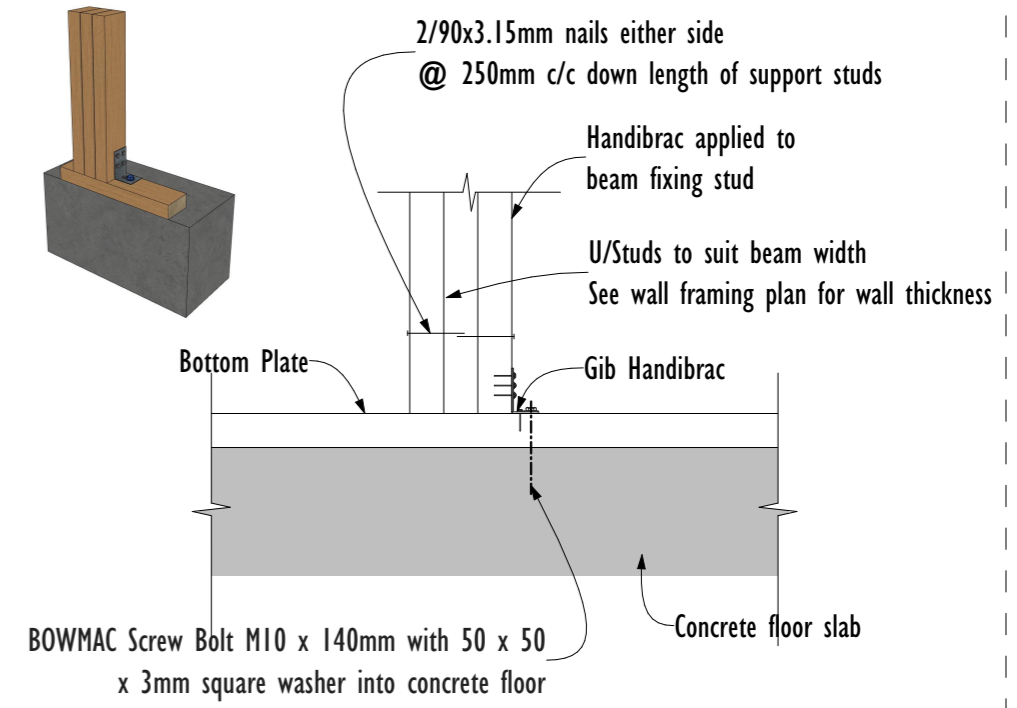
# Not for Construction



**BF12** ROOF BEAM FIXING 12  
1:10



**SP4** 4kN STUD FIXING TO SLAB  
1:10



**SP12** 12kN STUD FIXING TO SLAB  
1:10

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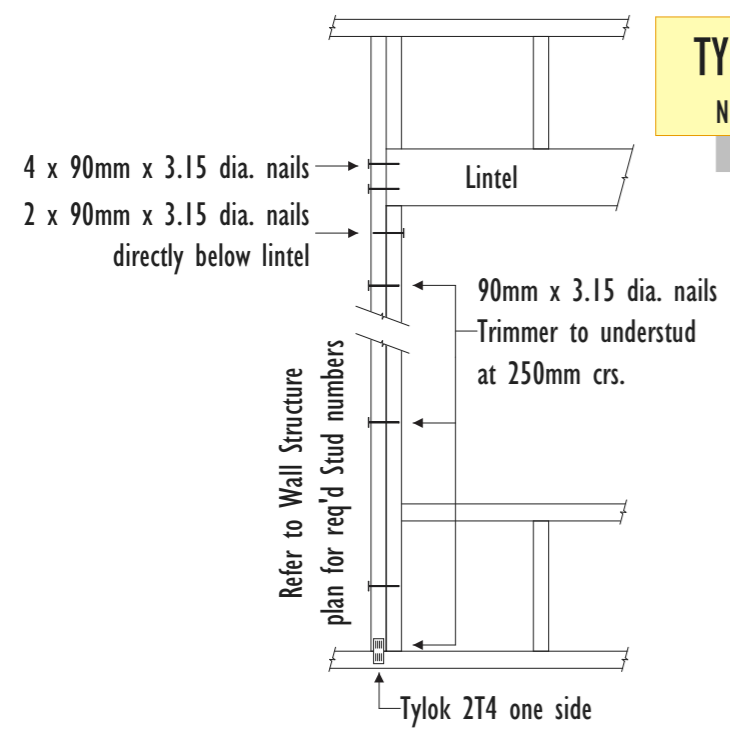
Project: **New Dwelling**  
GM Construction  
Lot 53 Pinehurst Crescent,  
Morrinsville

ID	Issue Name	Changes	Date
03	Structural Prelim		9/10/2020

BEAM FIXINGS  
Job Number: **CP06** Sheet: **18**

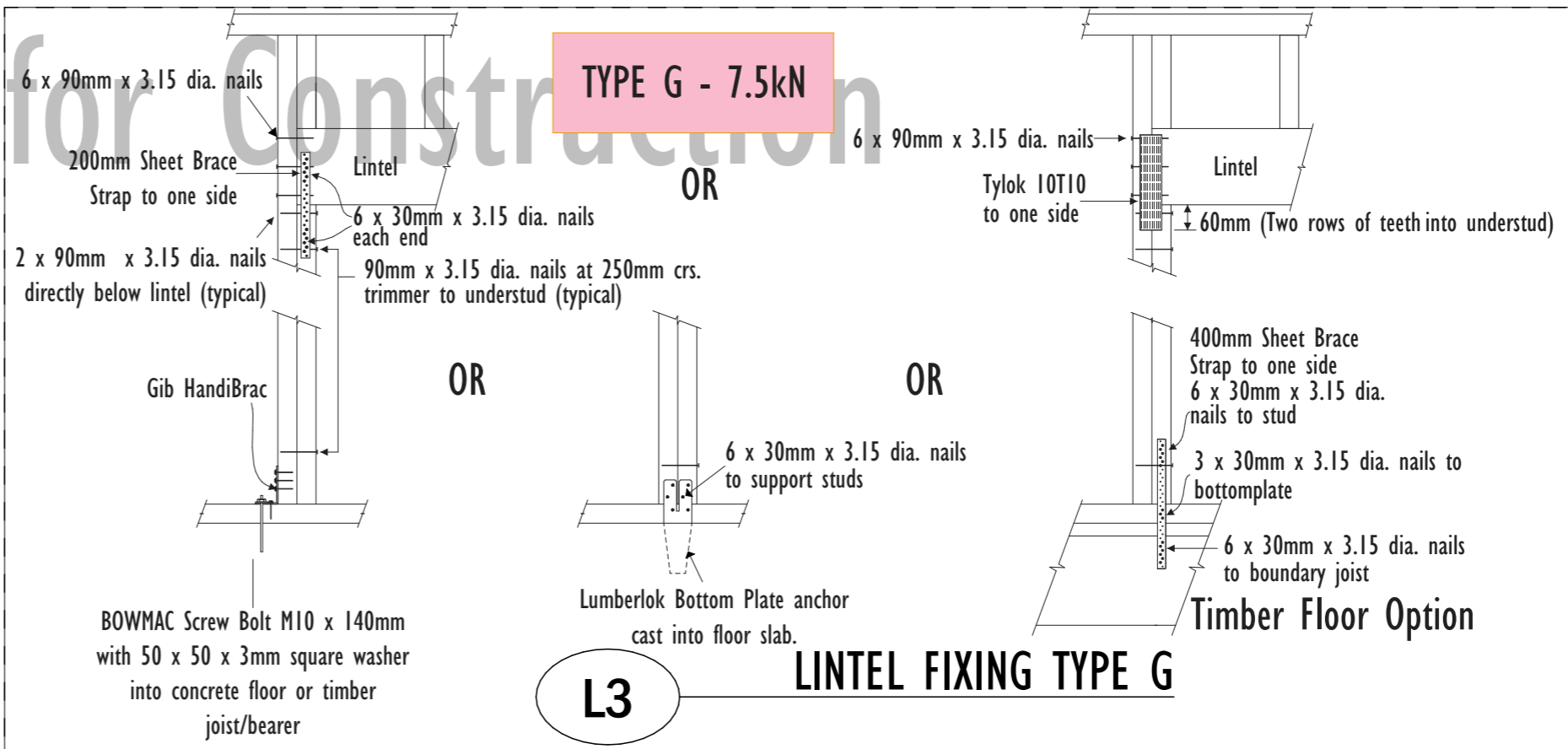


**TYPE E - 1.4kN**  
No Hold Downs req'd



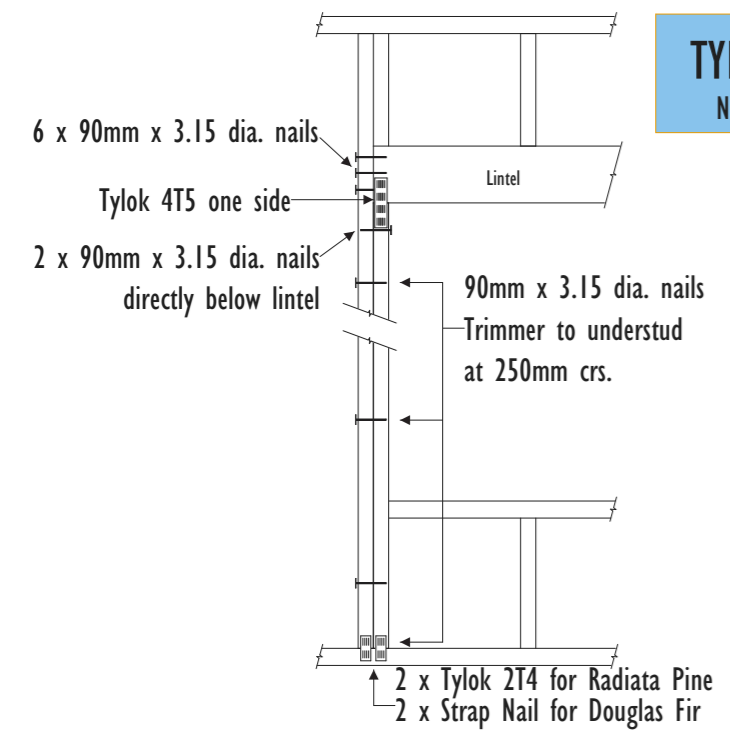
**L1** LINTEL FIXING TYPE E

**TYPE G - 7.5kN**



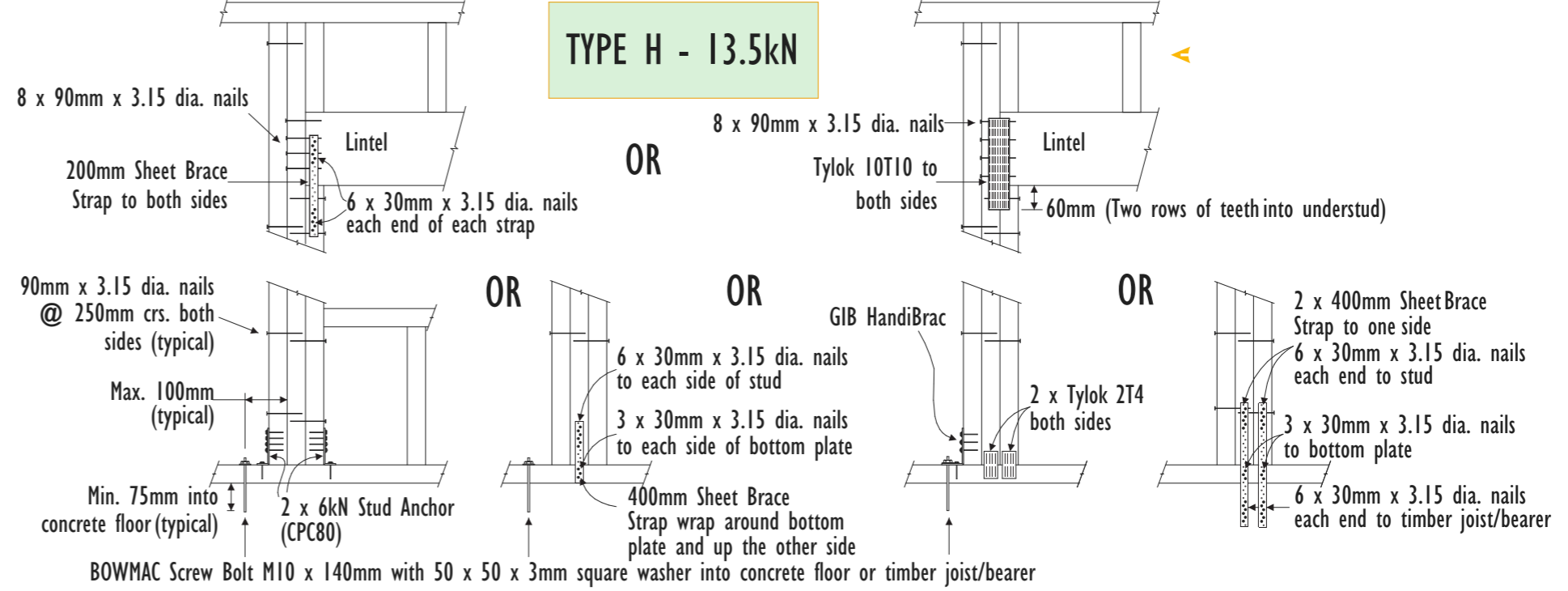
**L3** LINTEL FIXING TYPE G

**TYPE F - 4.0kN**  
No Hold Downs req'd



**L2** LINTEL FIXING TYPE F

**TYPE H - 13.5kN**



**L4** LINTEL FIXING TYPE H

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ID	Issue Name	Changes	Date
03	Structural Prelim		9/10/2020

LINTEL FIXINGS  
Job Number: **CP06**  
Sheet: **19**

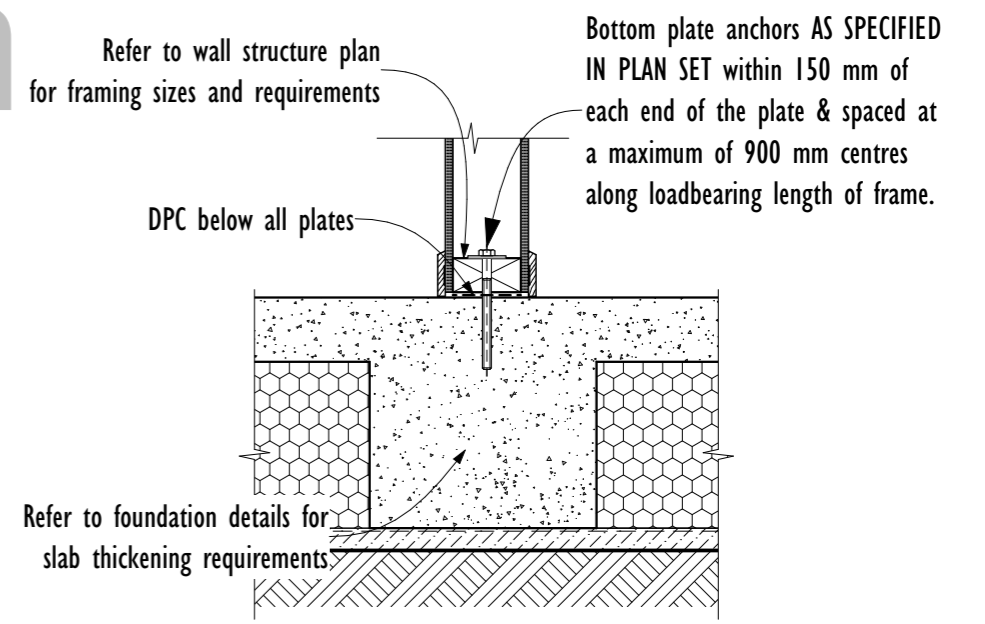


NZS 3604:2011 SECTION 8 — WALLS

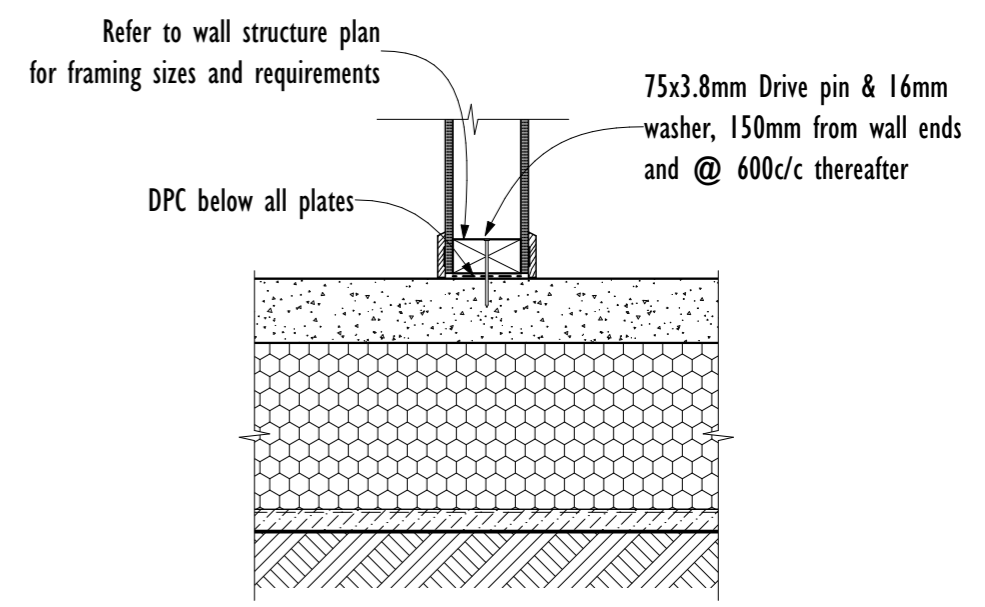
Table 8.19 — Nailing schedule for hand-driven and power-driven nails

Joint	Hand-driven nails		Power-driven nails	
	Length (mm) x diameter (mm) and type	Number/Location	Length (mm) x diameter (mm) and type	Number/Location
Bottom plate to floor framing at:				
(a) External walls and internal wall bracing elements	100 x 3.75	2 at 600 mm centres	90 x 3.15	3 at 600 mm centres
(b) Internal walls (may be nailed to floor decking)	100 x 3.75	1 at 600 mm centres	90 x 3.15	1 at 600 mm centres
(c) Trimmer not exceeding 4.2 m long	100 x 3.75	4 (end nailed)	90 x 3.15	6 (end nailed)
Dwang to stud	75 x 3.15 or 100 x 3.75	2 (skewed) 2 (end nailed)	75 x 3.06 90 x 3.15	2 (skewed) 2 (end nailed)
Fishplate to straightened stud	60 x 2.8	4 each side of cut	60 x 2.8	4 (each side of cut)
Half joint in top plate	75 x 3.15	3	75 x 3.06	4
Lintel to trimming stud	75 x 3.15 or 100 x 3.75	4 (skewed) 2 (end nailed)	90 x 3.15	3 (end nailed)
Ribbon board to stud	100 x 3.75	2	90 x 3.15	3
Sill or header trimmer to trimming stud for:				
(a) Trimmer not exceeding 2.4 m long	100 x 3.75	2 (end nailed)	90 x 3.15	3 (end nailed)
(b) Trimmer not exceeding 3.0 m long	100 x 3.75	3 (end nailed)	90 x 3.15	5 (end nailed)
(c) Trimmers not exceeding 3.6 m long	100 x 3.75	4 (end nailed)	90 x 3.15	6 (end nailed)
Solid plaster batten to stud	60 x 2.8 (galv.)	500 mm centres	60 x 2.8 (galv.)	500 mm centres
Stud to plate	75 x 3.15 or 100 x 3.75	4 (skewed) 2 (end nailed)	75 x 3.06 90 x 3.15	4 (skewed) 3 (end nailed)
Top plate 140 mm x 35mm to 90 mm x 45mm and top plate to lintel	100 x 3.75	2 at 500 mm centres	90 x 3.15	3 at 500 mm centres
Trimming studs at openings, blocking and studs at wall intersections	100 x 3.75	600 mm centres	90 x 3.15	600 mm centres
Trimming stud to doubled stud immediately under lintel	100 x 3.75	2	90 x 3.15	2
Waling to stud	60 x 2.8	2	60 x 2.8	2

**W3** WALL NAILING



**W7** INTERNAL LB BP FIXING



**W8** INTERNAL BP FIXING

WALL NAILING & BOTTOM PLATE

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**GM Construction**  
 Lot 53 Pinehurst Crescent,  
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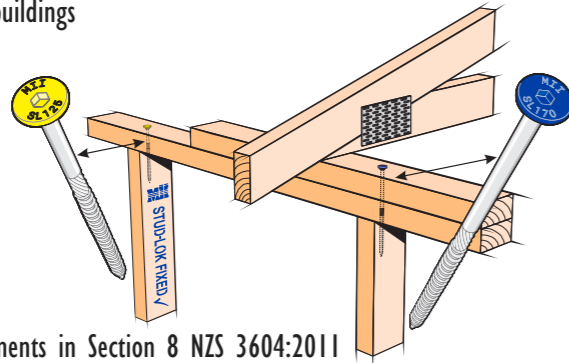
ID	Issue Name	Changes	Date
03	Structural Prelim		9/10/2020

FIXINGS  
 Job Number: **CP06**  
 Sheet: **20**



# B BOWMAC<sup>®</sup> STUD-LOK

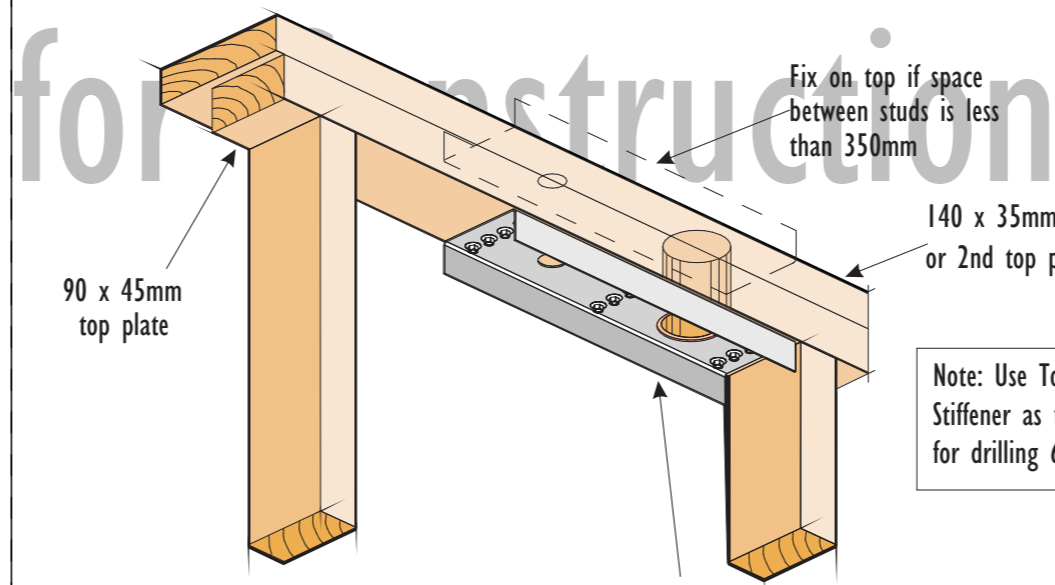
Provides a solution for top plate to stud fixings for residential timber frame buildings



- ★ Complies with fixing requirements in Section 8 NZS 3604:2011
- ★ The BOWMAC STUD-LOK forms an integral part of the MiTek Truss & Frame design and layout
- ★ Available in 2 lengths allowing for connections from stud to single top plate (SL125) and stud to double top plates (SL170)
- ★ Applied in the factory
- ★ Is a completely internal connection avoiding any clashes with wall linings

W2

## TOP PLATE FIXING



Note: For single top plate fix with Type 17-14g x 35mm Hex Head Screws (not supplied)

Fix up into top plate and into packer with 3 rows of 4 x Type 17-14g x 75mm Hex Head Screws (supplied). It may be advisable to drill pilot hole for each screw to assist installation

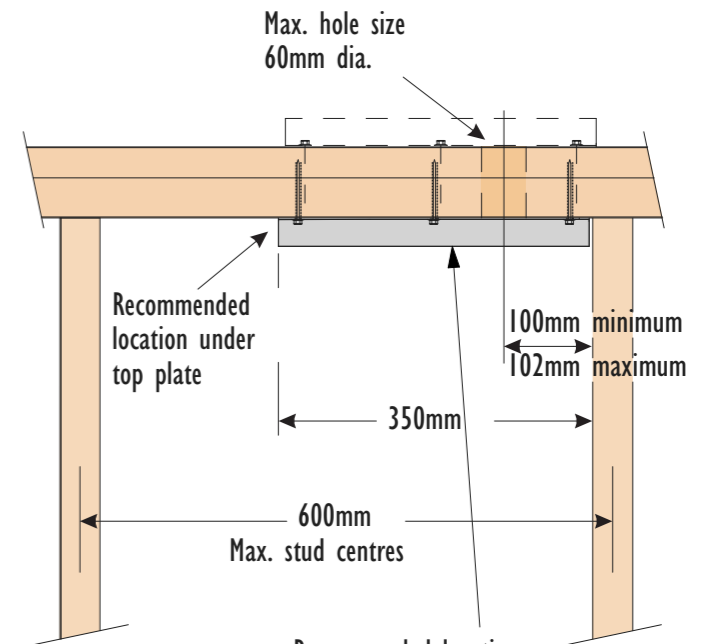
# LUMBERLOK<sup>®</sup>

## TOP PLATE STIFFENER

NZ Reg. Design  
App. 408133 © 2006  
MiTek New Zealand Ltd.



SCAN FOR  
INSTALLATION  
VIDEO



W1

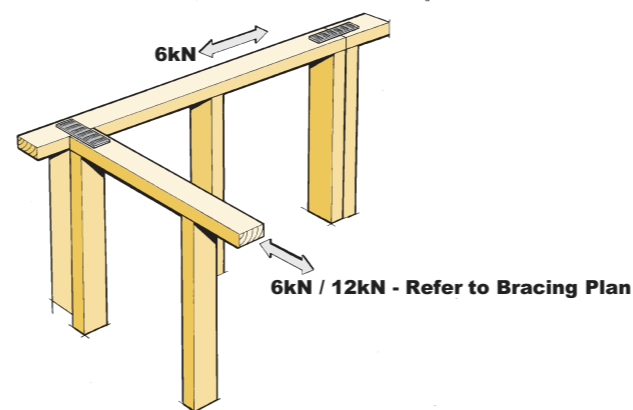
## TOP PLATE STIFFENER

### Top Plates at Right Angles

Connection capacity	LUMBERLOK Connector
6 kN	Tylok 6T10 OR 2 x Strap Nails OR Lumberlok PlateLok
12 kN	2 x Sheet Brace Straps fixed with 6 x LUMBERLOK Product Nails 30mm x 3.15 dia. per end per strap (24 nails total)

### Top Plates in Line

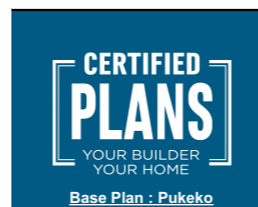
Connection capacity	LUMBERLOK Connector
6 kN	Tylok 6T10 OR 2 x Strap Nails OR Lumberlok PlateLok



W4

## TOP PLATE JOINTING

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TOP PLATE FIXINGS			
ID	Issue Name	Changes	Date
03	Structural Prelim		9/10/2020
			Job Number: CP06
			Sheet: 21



# Not for Construction

## Roof Framing Notes

- Structural roof framing items to be SG8 Min grade.
- Roof framing timbers to be H1.2 unless noted otherwise.
- Fixings designed for High wind zone.
- Refer to all specific framing details within plan set
- All prefabricated items to be built by FTMA Member
- Refer to Project Appendix for Truss Design Certificate & Layout

## Notes STRUCTURE

- 3307 270x90 GL8 H3.2 Glulam Beam Grade A : B1/ALT
- 3331 140x90 SG8 H3.2 Beam : B1/ALT
- 3530 90x45 SG8 intermediate framing between trusses @ 450mm c/c to support wall cladding
- 3601 10° Trussed roof structure. Specifically designed trusses @ 900c/c max. All fixings and connections to be designed & supplied by FTMA member : B1/ALT
- 3602 4° Trussed roof structure. Specifically designed trusses @ 900c/c max. All fixings and connections to be designed & supplied by FTMA Member : B1/ALT
- 3603 Parallel Chord Girder Truss : B1/ALT
- 3609 Gable truss with vertical webs @ 600mm c/c & dropped top chord for outriggers. Brace webs as shown
- 3626 90x45 SG8 Outriggers @ 900mm c/c : B1/NZS3604
- 3629 90x45 SG8 Fly Rafters : B1/NZS3604
- 3635 90x45 SG8 Eaves Outriggers : B1/NZS3604
- 3649 Line of Roof Plane bracing with Lumberlok roof plane strip brace as per NZS 3604 10.4.2 and Lumberlok detail in specification. 1 pair per 50m2 roof area. : B1/NZS3604

## ENCLOSURE

- 4391 Fall 4°
- 4392 Fall 10°

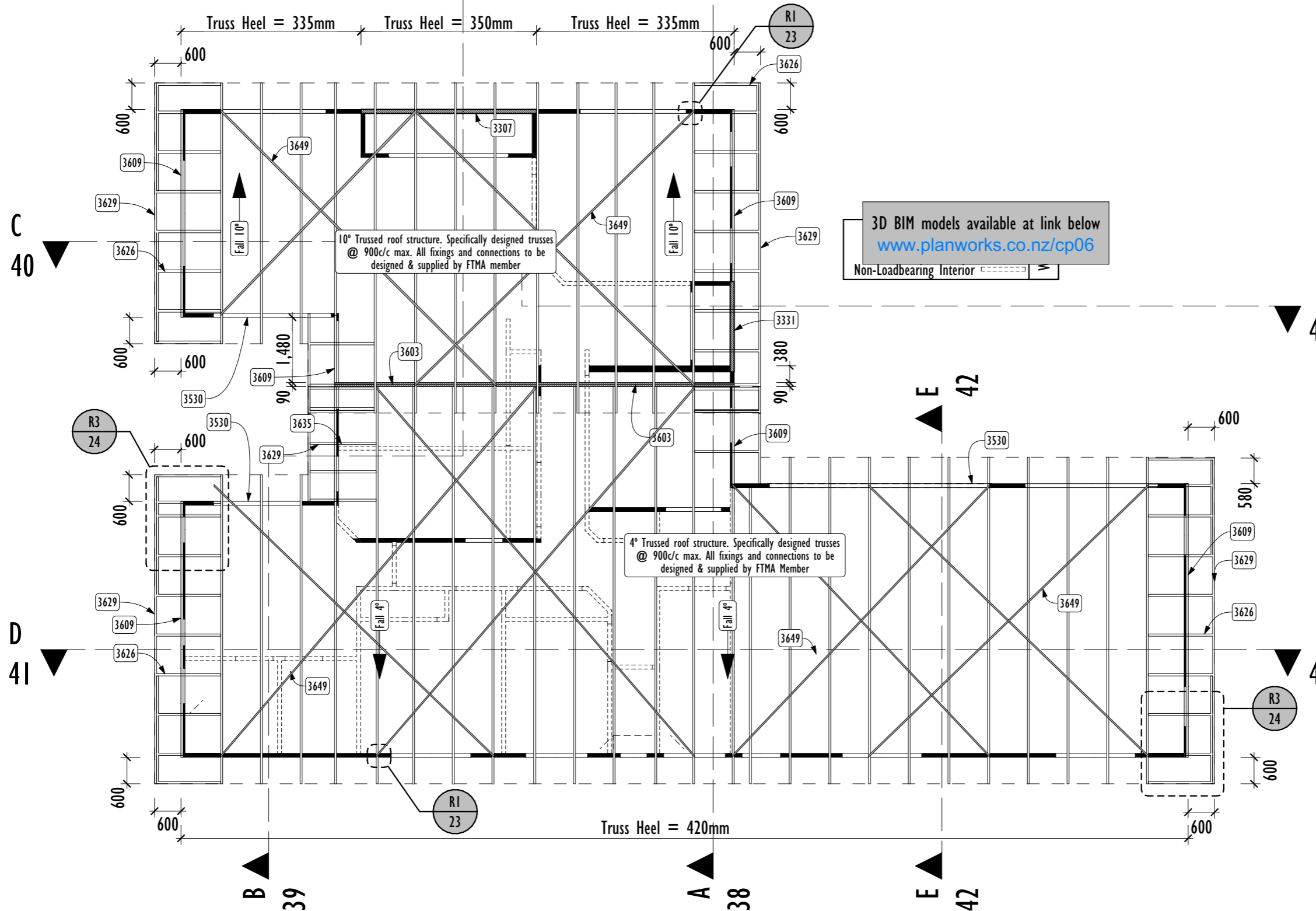
Scan this with your Kubby app



Don't have the app? Get it for free:



Structural BIM Model

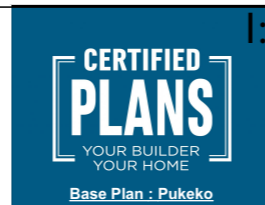


3D BIM models available at link below  
[www.planworks.co.nz/cp06](http://www.planworks.co.nz/cp06)  
 Non-Loadbearing Interior

15

## ROOF FRAMING

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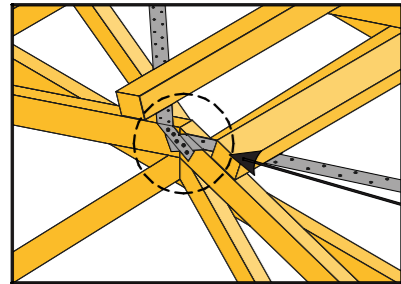
ID	Issue Name	Changes	Date
03	Structural Prelim		9/10/2020

Job Number: **CP06**  
 Sheet: **22**

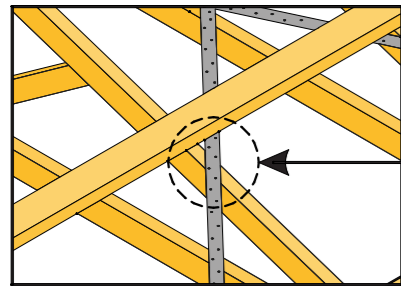


# Not for Construction

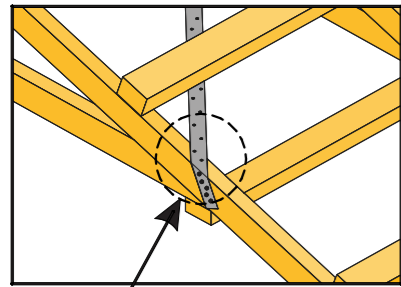
A pair of tensioned and crossed LUMBERLOK Strip Brace running continuously from ridge to top plate installed as detailed below.



5 x 30mm x 3.15 dia. nails each end

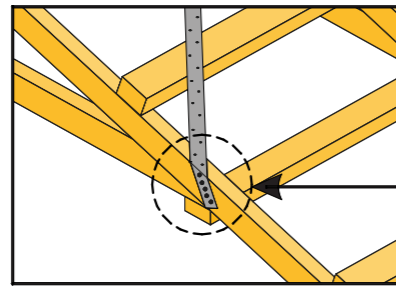
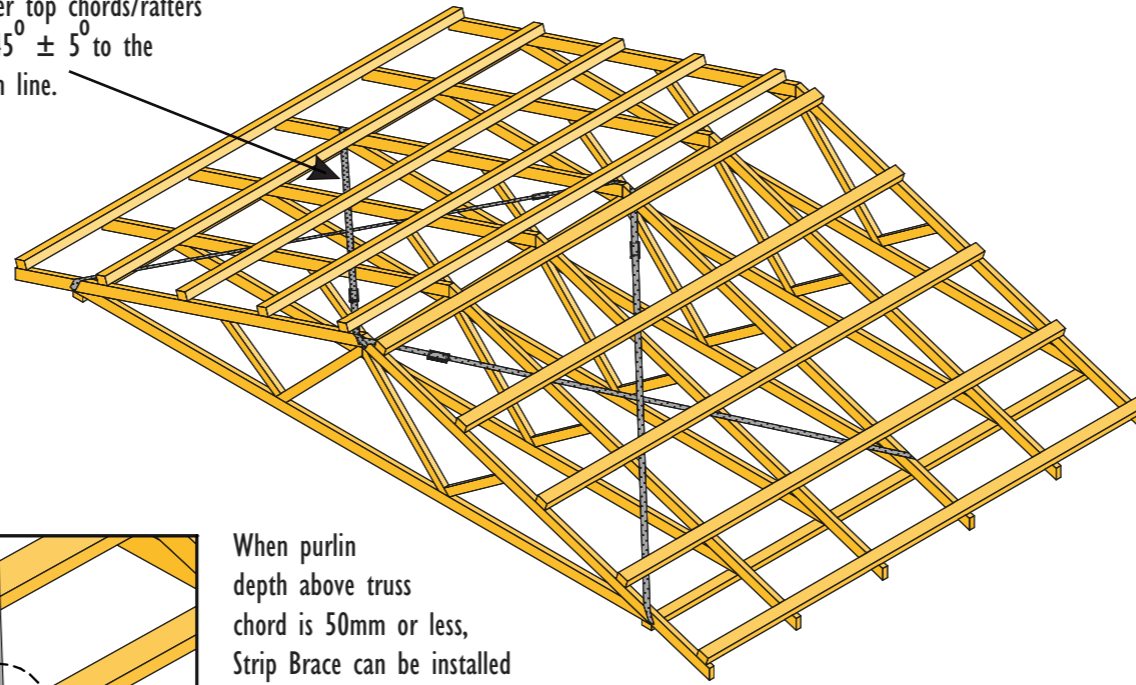


1 x 30mm x 3.15 dia. nail at crossing (after tensioning)



5 x 30mm x 3.15 dia. nails each end

A pair of tensioned and crossed LUMBERLOK Strip Brace over top chords/rafters installed @  $45^{\circ} \pm 5^{\circ}$  to the rafter or purlin line.

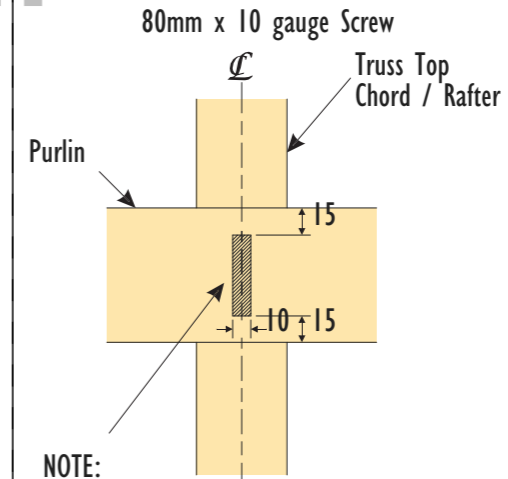


When purlin depth above truss chord is 50mm or less, Strip Brace can be installed over top of purlins. Fix with 1 x 30mm x 3.15 dia. nail at the purlin closest to the rafter/truss crossing.

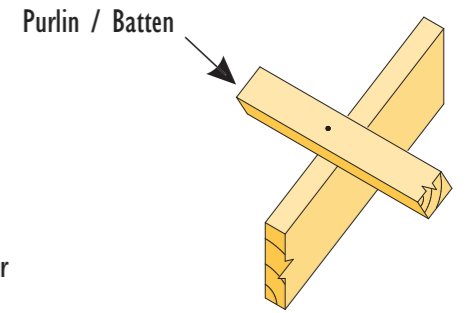
R1

## ROOF CROSS BRACING

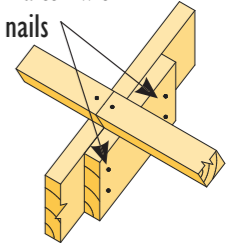
### PURLIN FIXING TYPE T 2.4kN - 1x10g Screw



NOTE: Locate fixings within the shaded area. Care to be taken to avoid over tightening of screws.



90 x 35mm block fixed to chord or rafter with 4 x 75mm nails



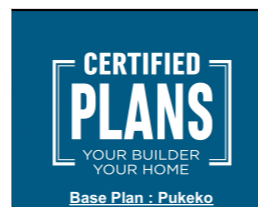
Butt Join over rafter

One SCREW to each purlin

### PURLIN FIXING TYPE T

P3

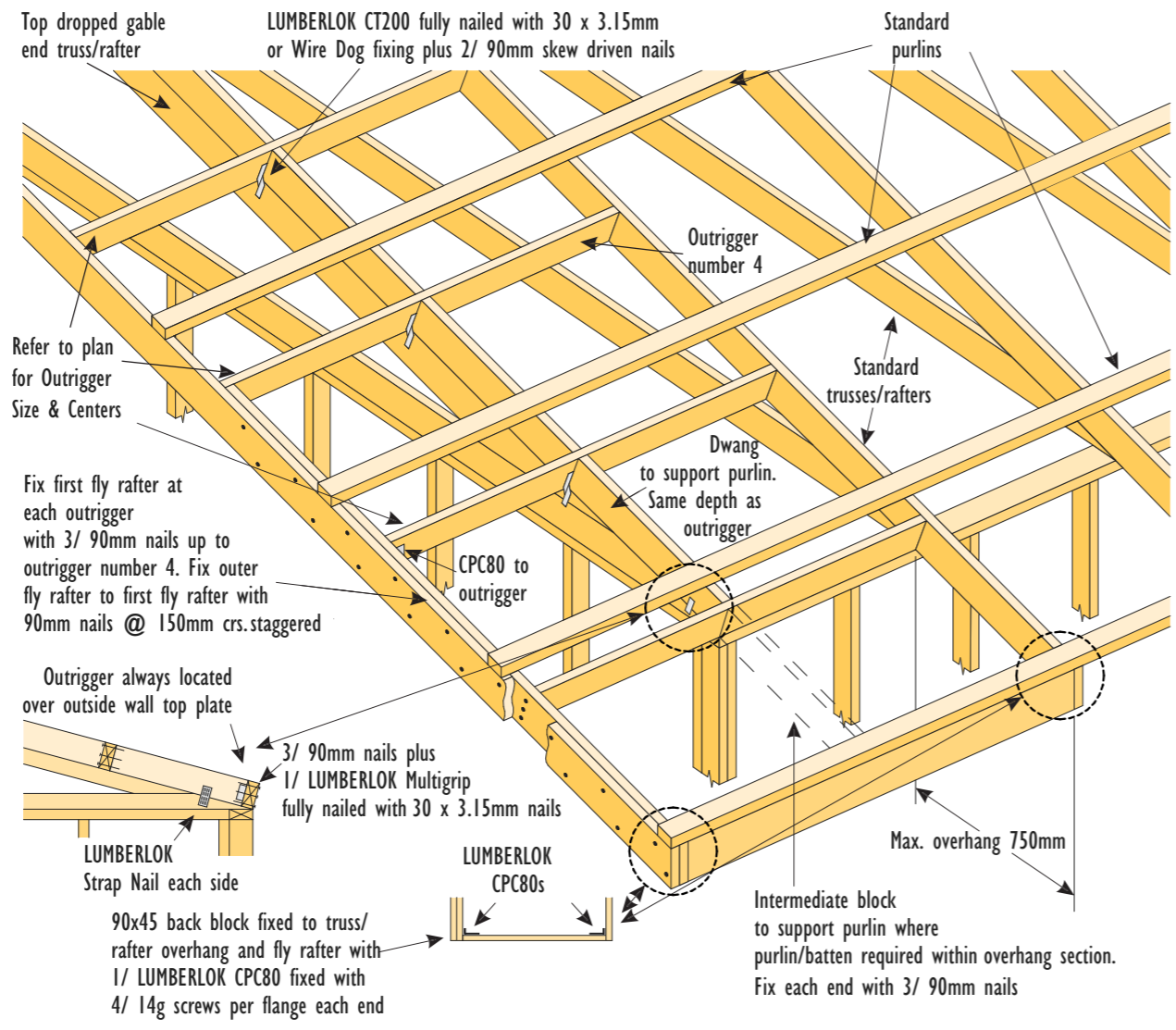
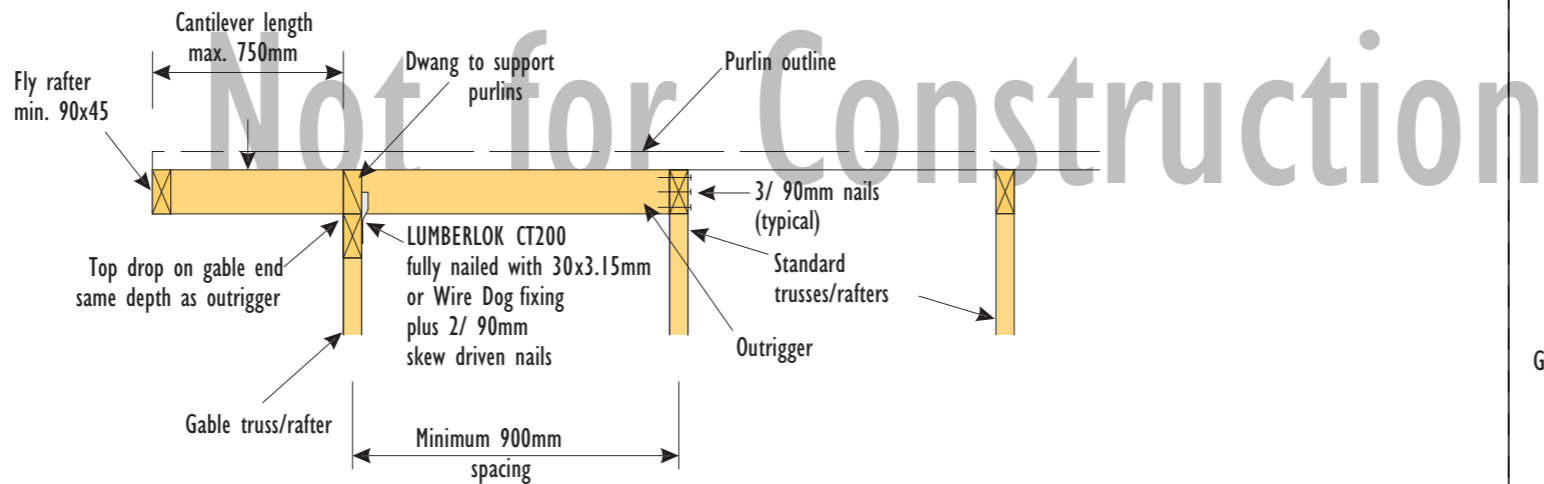
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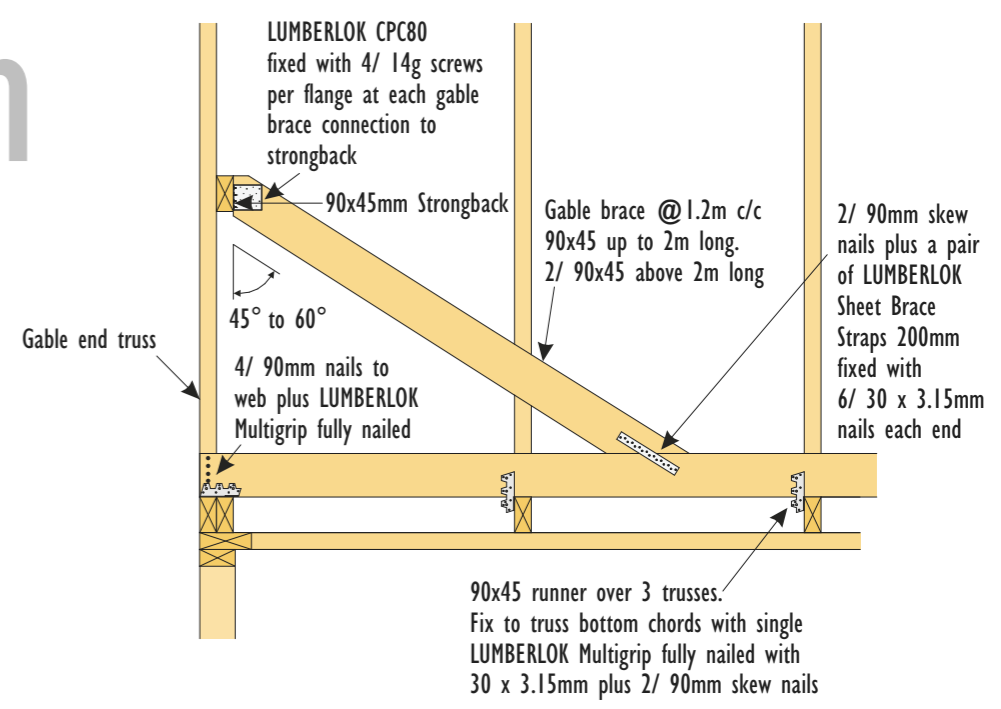
Project: **New Dwelling**  
GM Construction  
Lot 53 Pinehurst Crescent,  
Morrinsville

ROOF STRUCTURAL DETAILS I			
ID	Issue Name	Changes	Date
03	Structural Prelim		9/10/2020
			Job Number: <b>CP06</b>
			Sheet: <b>23</b>

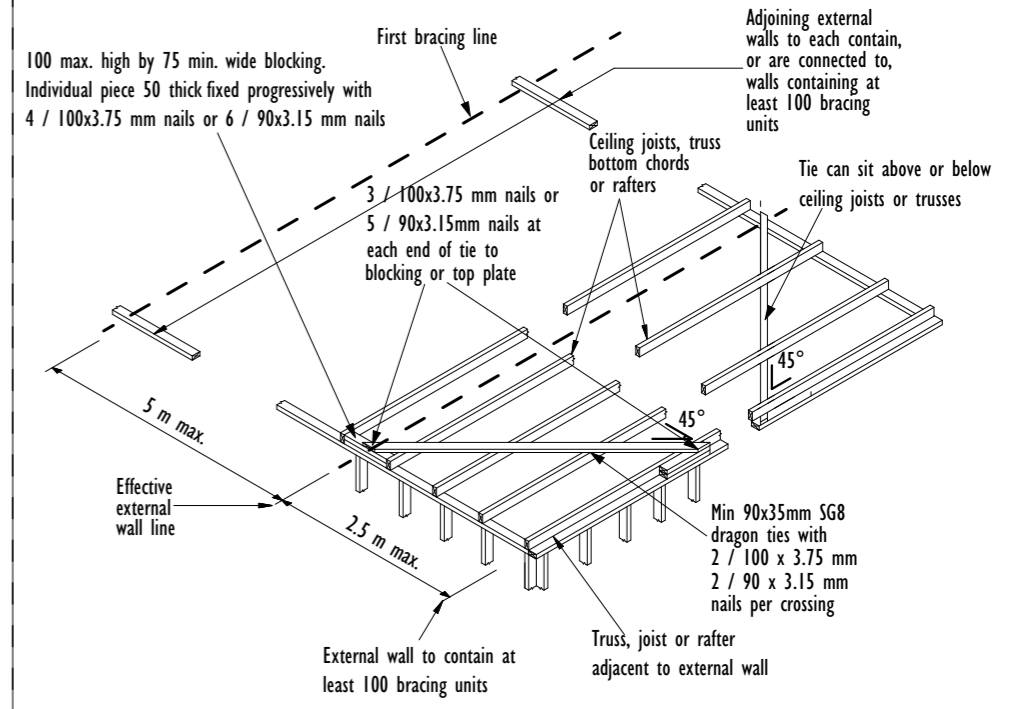




**R3** VERGE OUTRIGGERS



**R4** GABLE BRACING



**R5** DRAGON TIES

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ROOF STRUCTURAL DETAILS 2			
ID	Issue Name	Changes	Date
03	Structural Prelim		9/10/2020
			Job Number: <b>CP06</b>
			Sheet: <b>24</b>





# Not for Construction

## Expansion Allowance

Allowance shall be made for expansion on all roof planes longer than 8m by:

- a) Fixing the top 50% (closest to the ridge) with conventional fixings, and
  - b) Fixing the lower 50% with sealing washers fixed over profiled washers as shown in E2/AS1 - Figure 39, and:
- i) using oversized holes, and
  - ii) positioning fixing in centre of hole.

## ROOF CLADDINGS

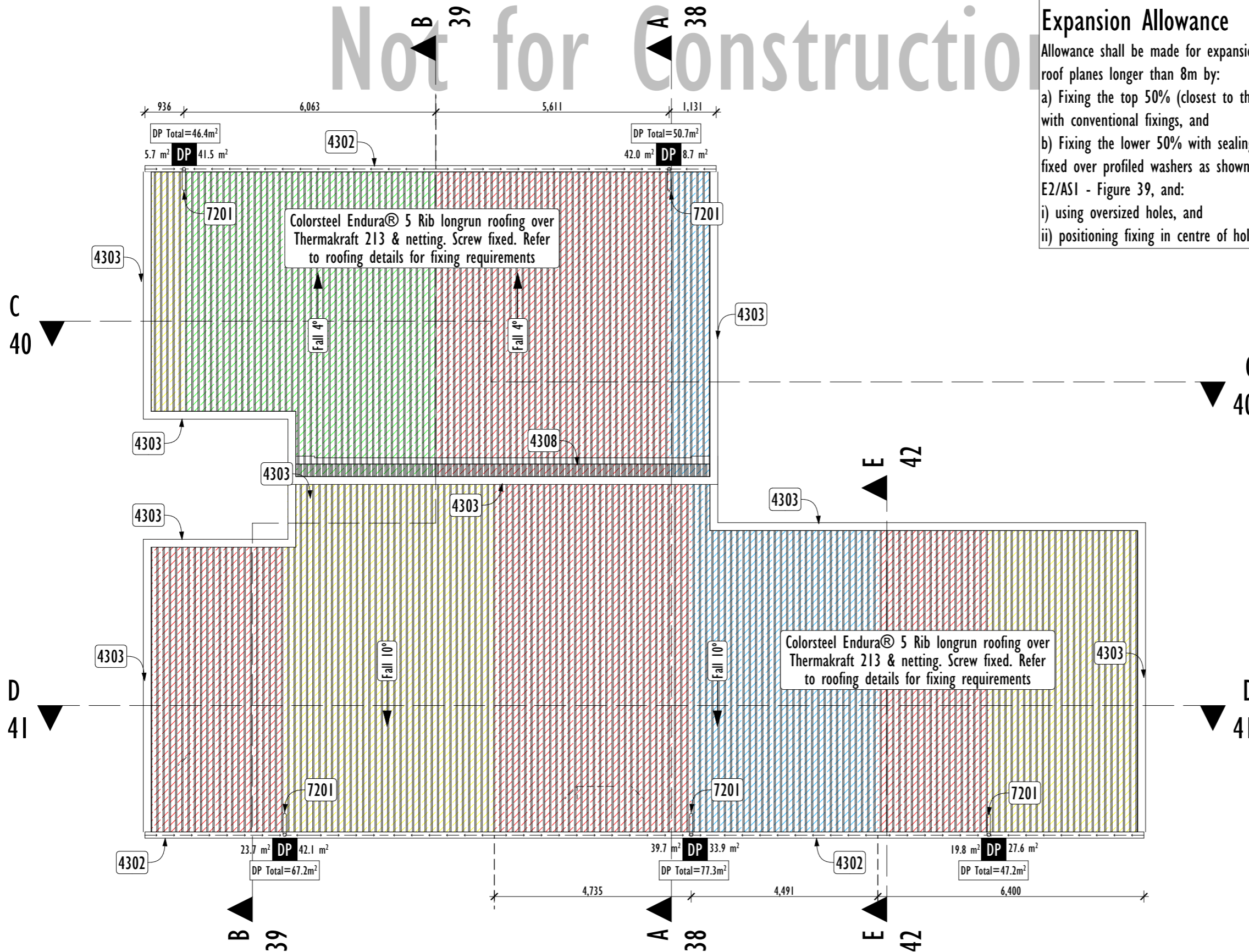
All roof claddings and associated flashings including all barge and apron flashings are to be undertaken by a licensed applicator in strict accordance with the NZBC E2/AS1 and NZ Metal Roof and Wall Cladding Code of Practice. Provide producer statements to cover the whole design and application of the cladding system including all flashings & penetration flashing kits.

## Notes ENCLOSURE

- 4301 Colorsteel Endura® 5 Rib longrun roofing over Thermakraft 213 & netting. Screw fixed. Refer to roofing details for fixing requirements : E2/AS1
- 4302 Selected Colorsteel Fascia and Marley PVC spouting (Min 6500mm2) : E1/AS1
- 4303 Selected Colorsteel barge board with Colorsteel Endura® barge capping : E2/AS1
- 4308 Colorsteel Endura® Top Apron Flashing. Min 150mm over roofing with 110mm min upstand with 75mm min lap under cladding and 35mm min clearance below cladding. : E2/AS1
- 4391 Fall 4°
- 4392 Fall 10°

## SERVICES

- 7401 80Ø Colorsteel Downpipe : E1/NRM COP V3



16 ROOF CLADDING 1:100

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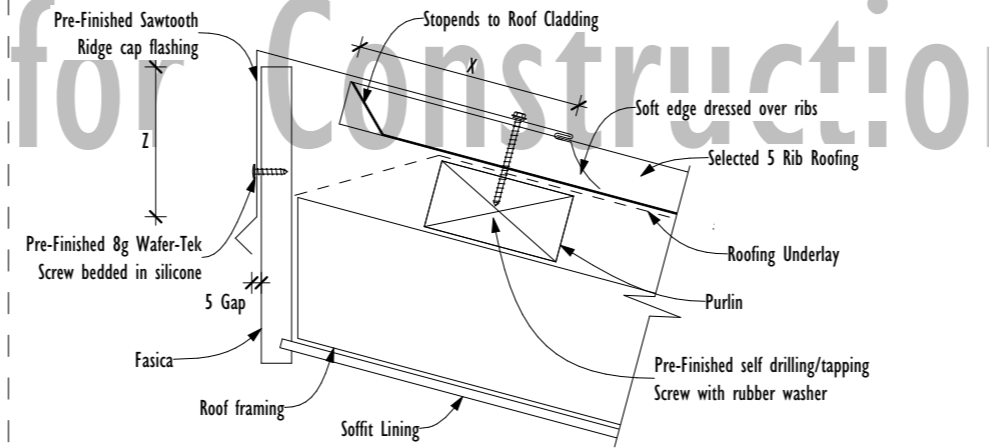
Project: New Dwelling  
 GM Construction  
 Lot 53 Pinehurst Crescent,  
 Morrinsville

ID	Issue Name	Changes	Date
03	Structural Prelim		9/10/2020

ROOF CLADDING  
 Job Number: CP06  
 Sheet: 25



# Not for Construction

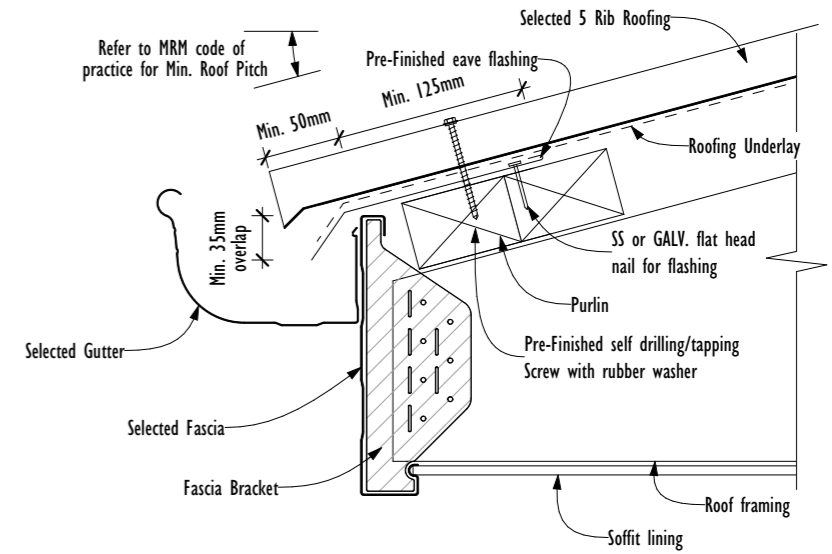


CATEGORY A	CATEGORY B
- LOW, MEDIUM, HIGH WIND ZONES and - WHERE ROOF PITCH $\geq 10^\circ$	- VERY HIGH AND EXTRA HIGH WIND ZONES, OR - WHERE ROOF PITCH $< 10^\circ$
X MIN. 130mm	MIN. 200mm
Z MIN. 50mm	MIN. 75mm

EXCLUDING DRIP EDGE  
PLEASE REFER TO MRM CODE OF PRACTICE AND E2 FOR FURTHER INFORMATION

RR08

UPPER BARGE  
1:5

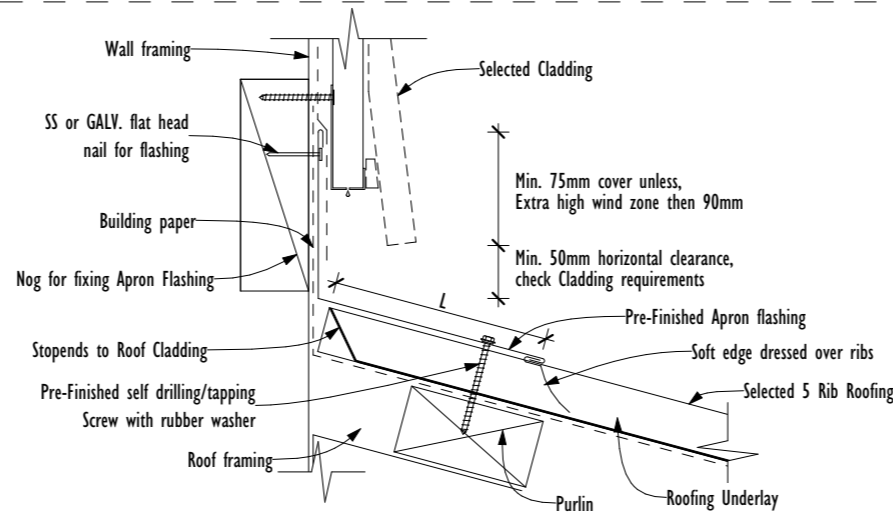


EAVE FLASHING REQUIRED WHEN ALL OF THE FOLLOWING CONDITIONS APPLY:

- ROOF PITCH  $\leq 10^\circ$
- SOFFIT WIDTH  $\leq 100$ mm
- WIND ZONES = VERY HIGH OR EXTRA HIGH

RR03

METAL FASCIA GUTTER  
1:5

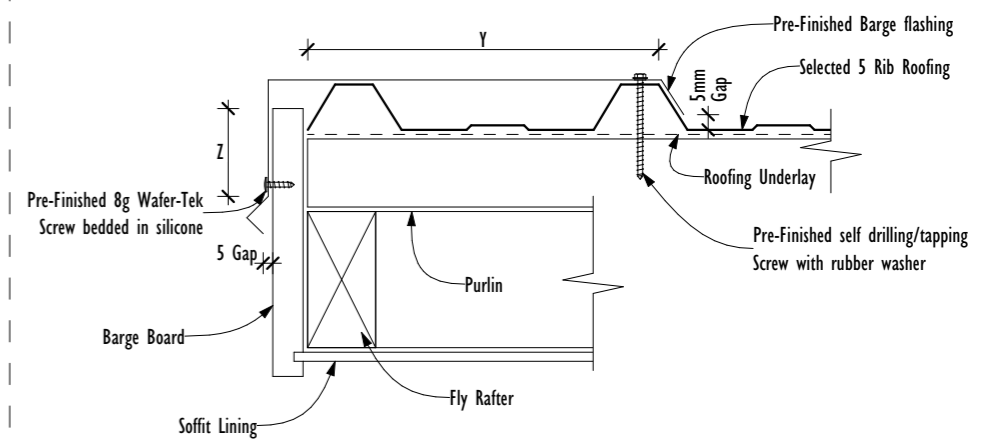


CATEGORY A	CATEGORY B
- LOW, MEDIUM, HIGH WIND ZONES and - WHERE ROOF PITCH $\geq 10^\circ$	- VERY HIGH AND EXTRA HIGH WIND ZONES, OR - WHERE ROOF PITCH $< 10^\circ$
L MIN. 130mm	MIN. 200mm

EXCLUDING ANY SOFT EDGE OR TURN-DOWN TO ROOFING  
PLEASE REFER TO MRM CODE OF PRACTICE AND E2 FOR FURTHER INFORMATION

RR05

TRANSVERSE APRON  
1:5



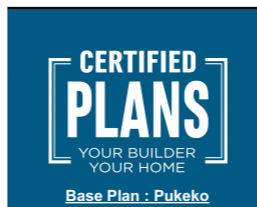
CATEGORY A	CATEGORY B
- LOW, MEDIUM, HIGH WIND ZONES and - WHERE ROOF PITCH $\geq 10^\circ$	- VERY HIGH AND EXTRA HIGH WIND ZONES, OR - WHERE ROOF PITCH $< 10^\circ$
Y TWO RIBS	TWO RIBS
Z MIN. 50mm	MIN. 75mm

EXCLUDING DRIP EDGE  
PLEASE REFER TO MRM CODE OF PRACTICE AND E2 FOR FURTHER INFORMATION

RR07

BARGE  
1:5

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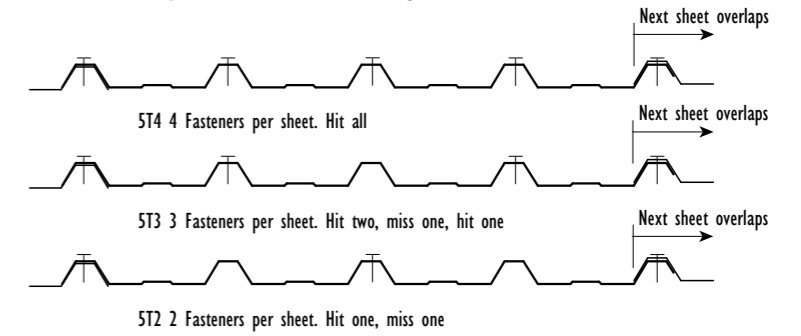
ID	Issue Name	Changes	Date
03	Structural Prelim		9/10/2020

ROOFING DETAILS I  
Job Number: **CP06** Sheet: **26**



# Not for Construction

## Trapezoidal 5 Rib Fastening Pattens

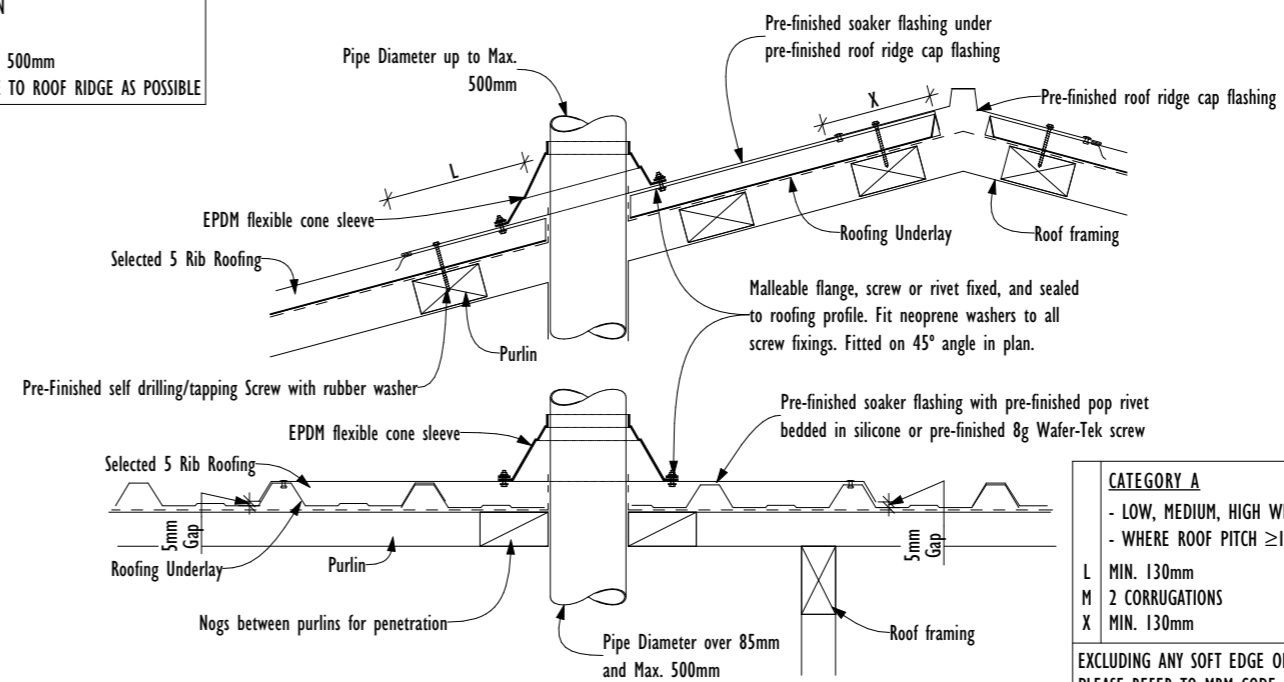


Material Thickness (BMT)	Internal Span	Wind Zone to NZS3604:2011				
		Low	Med	High	V High	E High
0.40	0.6	ST2	ST2	ST2	ST2	ST2
	0.9	ST2	ST2	ST2	ST3	ST3
	1.2	ST2	ST2	ST3	ST4	ST4
0.55	0.6	ST2	ST2	ST2	ST2	ST2
	0.9	ST2	ST2	ST2	ST2	ST3
	1.2	ST2	ST2	ST2	ST3	ST3

RR12

## 5 RIB FASTENING PATTERNS

THIS DETAIL IS APPLIED ONLY WHEN  
 - ROOF PITCH MIN. 3°  
 - PIPE DIAMETER OVER UP TO MAX. 500mm  
 - PIPE TO BE POSITIONED AS CLOSE TO ROOF RIDGE AS POSSIBLE



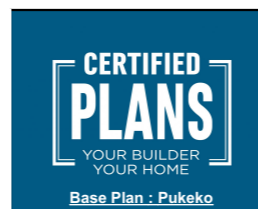
CATEGORY A	CATEGORY B
- LOW, MEDIUM, HIGH WIND ZONES AND - WHERE ROOF PITCH ≥ 10°	- VERY HIGH AND EXTRA HIGH WIND ZONES, OR - WHERE ROOF PITCH < 10°
L MIN. 130mm	MIN. 200mm
M 2 CORRUGATIONS	3 CORRUGATIONS
X MIN. 130mm	MIN. 200mm

EXCLUDING ANY SOFT EDGE OR TURN-DOWN TO ROOFING  
 PLEASE REFER TO MRM CODE OF PRACTICE AND E2 FOR FURTHER INFORMATION

RR13

## PIPE PENETRATION LOW PITCH

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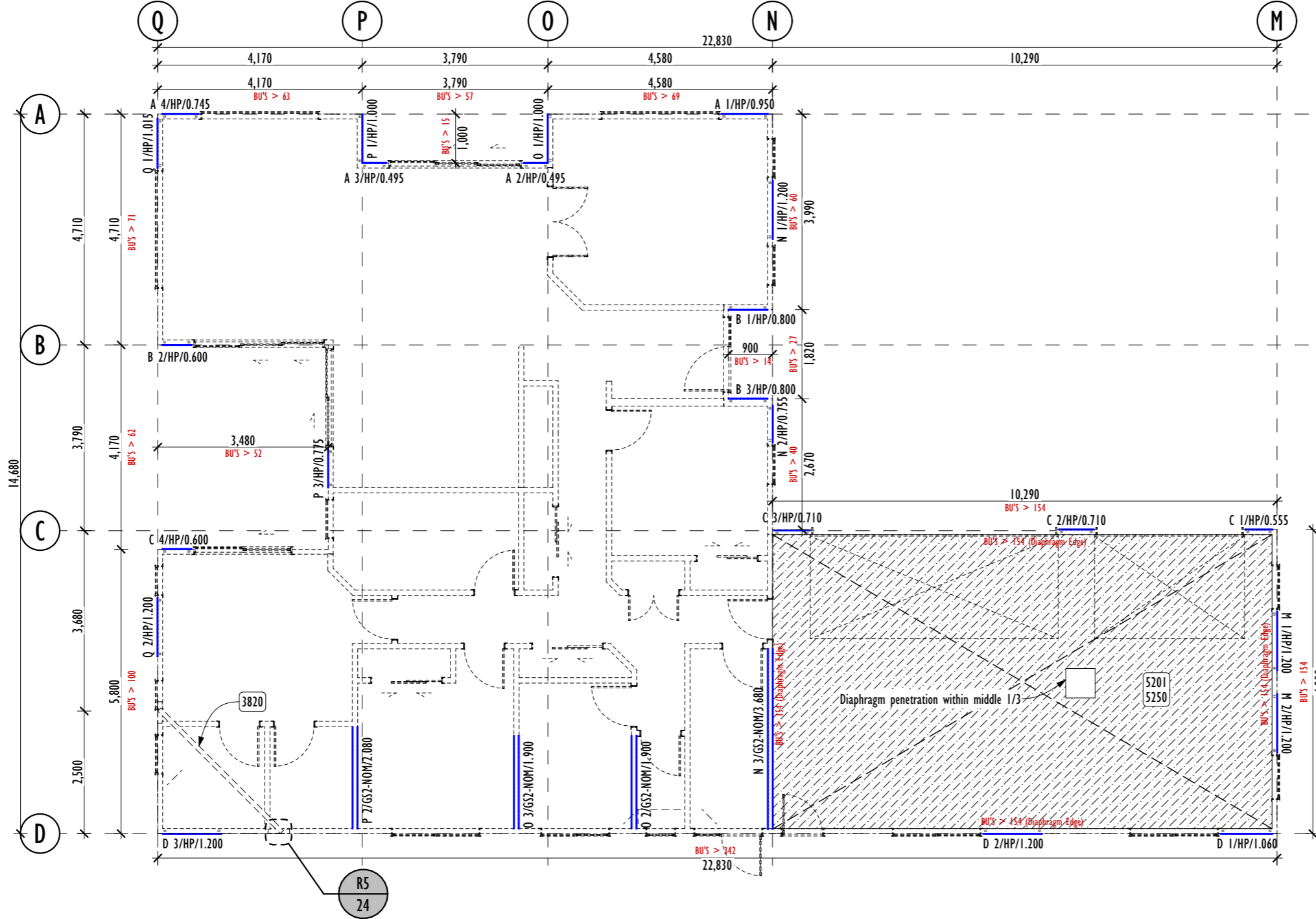
ID	Issue Name	Changes	Date
03	Structural Prelim		9/10/2020

ROOFING DETAILS 2  
 Job Number: **CP06** Sheet: **27**





# Not for Construction



## 18 WALL BRACING 1:100

### Notes

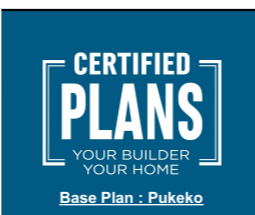
- STRUCTURE**
- 3820 90x45mm Dragon Tie over truss bottom chord fixed in accordance with NZS3604:2011 Clause 8.3.3 : B1/NZS3604
- INTERIOR**
- 5201 13mm Gib Standard ceiling linings fixed over specified ceiling battens.
  - 5250 Ceiling lining fixed as diaphragm in accordance with Gib specifications. See 'diaphragm ceiling' sheet in this set. : B1/NZS3604

**Top Plate Connections** (See Detail W4)

All top plate connection along the line of a wall to be 6kN  
 All top plate connections from internal to external walls to be 6kN  
 Refer to plan for any special connections that may need a 12kN fixing

- ### Wall Bracing Notes
- Bracing calculations as per Gib EzyBrace (Version 8/16)
  - Bracing designed for High wind zone
  - Refer to specific brace fixing details on following pages
  - All gib braces to be fixed in accordance with the Gib Ezybrace systems manual - August 2016
  - All ply braces to be fixed in accordance with the Ecopyly bracing specification - September 2015
  - Provide hold down straps as per brace details
  - All ply braces to be 7mm DD Min Grade H3.2 Treated
  - All ply brace clouts to be S/Steel.
  - All horizontal brace joints to be nogged and nailed at 150mm ctrs
  - Check ply into frame if not brick veneer cladding
  - Gib Aqualine can be used in place of Gib Standard plasterboard in Gib bracing elements.
  - Gib Aqualine can be used in place of Gib Braceline in Gib bracing elements 900mm or longer, provided the perimeter of the element is fixed with Gib Braceline Nails or Gib Braceline screws at 100mm centres, using the Gib Braceline corner fixing pattern.

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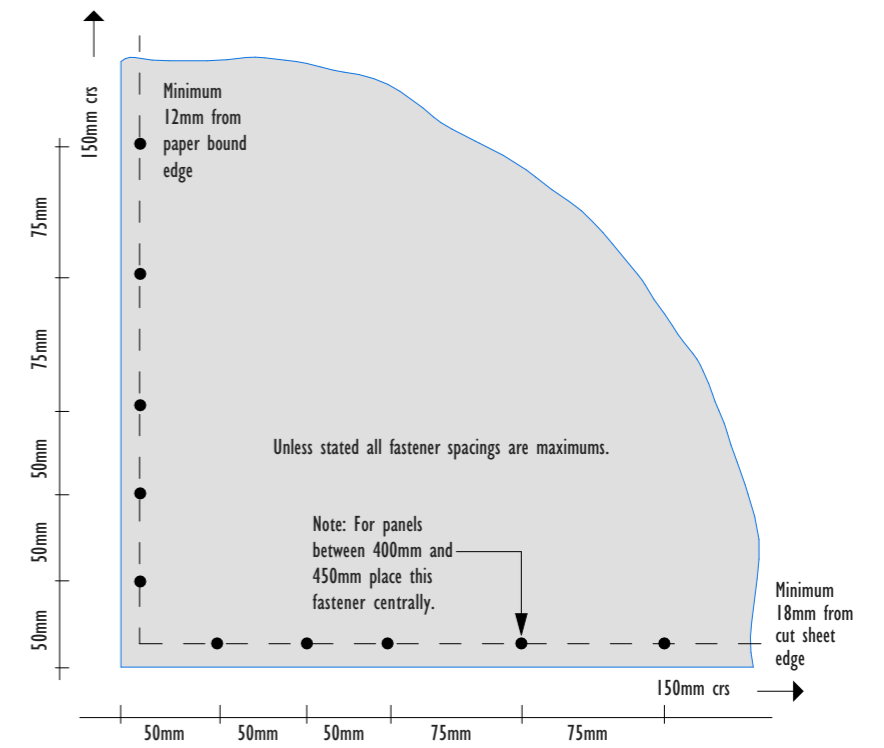
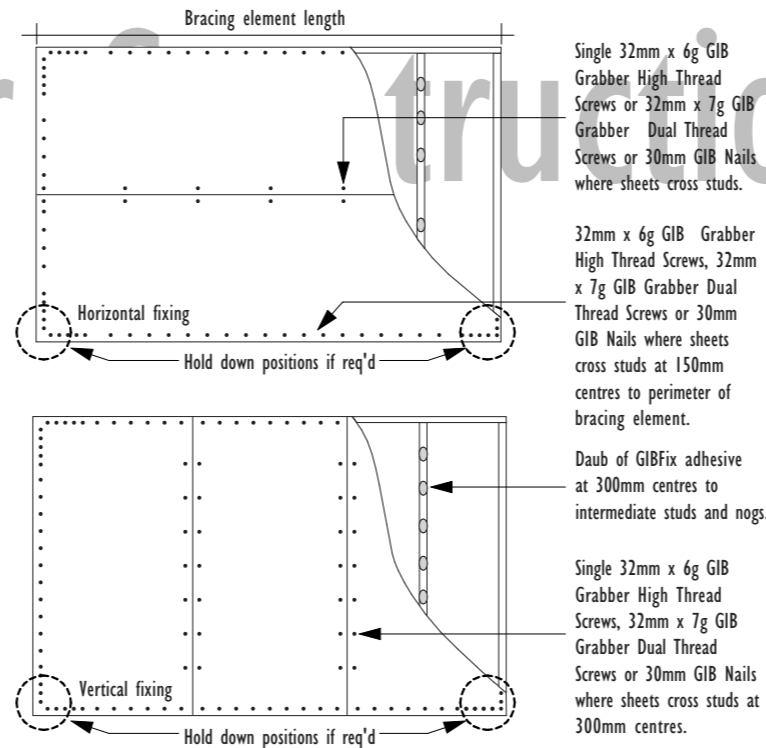
Project: **New Dwelling**  
**GM Construction**  
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 Morrinsville

ID	Issue Name	Changes	Date	Job Number
03	Structural Prelim		9/10/2020	<b>CP06</b>

**WALL BRACING**

Sheet: **29**

# Not for construction



**BR4**

## GIB EZYBRACE FASTENER PATTERNS

Brace Code	Minimum length (m)	Lining requirement	Extra Fixings
GSI-N	0.4	Any 10mm or 13mm GIB® Standard plasterboard to one side only	
GS2-N	0.4	Any 10mm or 13mm GIB® Standard plasterboard fixed to each side of the wall framing	
GSP-H	0.4	Any 10mm or 13mm GIB® plasterboard lining to one side of framing and minimum 7mm structural plywood manufactured to AS/NZ 2269.0 :2012 to the other side	Handibrac
BLI-H	0.4	10mm or 13mm GIB Braceline® to one side only	Handibrac
BLG-H	0.4	10mm or 13mm GIB Braceline® to one side of the frame plus any 10mm or 13mm GIB® plasterboard to the other side	Handibrac
BLP-H	0.4	10mm or 13mm GIB Braceline® to one side of the frame plus minimum 7mm structural plywood manufactured to AS/NZ 2269.0 :2012 to the other side	Handibrac

Specified GIB® plasterboard	Acceptable alternative GIB® plasterboards								
	GIB® Standard	GIB UltraLine®	GIB Braceline/Noiseline®	GIB Aqualine®	GIB Toughline®	GIB Fyreline®			
						10mm	13mm	16mm	19mm
GIB® Standard	OK	OK	OK	OK	OK	Notes 1 and 3			
GIB Braceline®	X	X	Note 2	OK	X	Notes 1, 2 and 3			

Note 1 The fastener type and length must be as required for the relevant FRR system using the perimeter fixing pattern illustrated for the relevant bracing specification.

Note 2 The element must be 900mm or longer. Decrease perimeter fastener centres to 100mm. The bracing corner fastening pattern, as illustrated for the relevant specification applies to all four corners of the element. Panel hold-down fixings are required.

Note 3 Specify traditional wall framing layout (see figure 1) where a Fire Resistance Rating (FRR) is required.

**BR3**

## BRACE LININGS

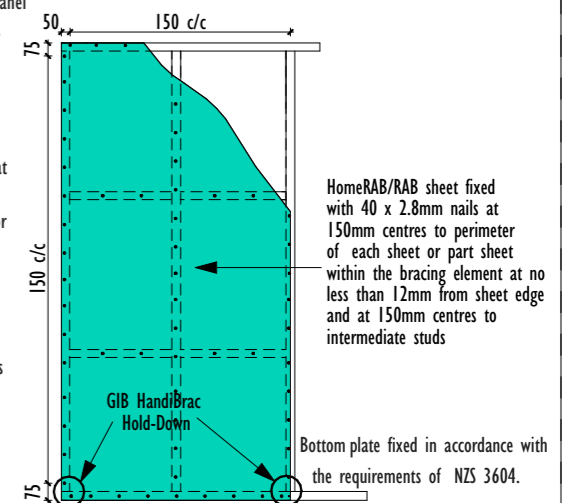
### Fasteners

Nails can be hand driven or gun nailed at a minimum edge distance as shown in the bracing details. This also applies to dimensions from corners, vertically and horizontally. The sheets must be held hard against the framing during nailing to minimise sheet break-out at the back of sheet. Always drive all nails flush with the sheet surface. For sheet/panel systems do not punch the nail below the surface as it reduces the nail's holding power. Fix all sheets from the centre working towards outer edges to avoid drumminess. Fixings at 150mm maximum centres when hand nailing. Gun nails can be used on some bracing systems with fixings at 100mm maximum centres. Must use a 6.85mm O round head coil nail with a pneumatic nail gun. Refer to bracing tables for hand or gun nail options available.

### Lining

For the bracing systems specified in this manual, all flat sheets must be fixed vertically. Full-height sheets must be used for walls up to 3000mm in height. When bracing walls height exceed 3000mm, sheet jointing is acceptable.

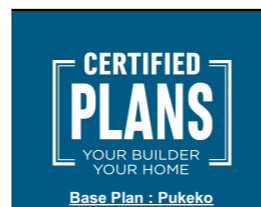
Only one horizontal sheet joint is permitted within the element height. The maximum height of bracing wall is limited to 4800mm. A site cut bracing sheet must be minimum 300mm wide when used in a bracing element. Always ensure that the sheet joint is on the centre line of the stud or nog to achieve sufficient cover of fixings.



**HR10**

## HOMERAB HP BRACE

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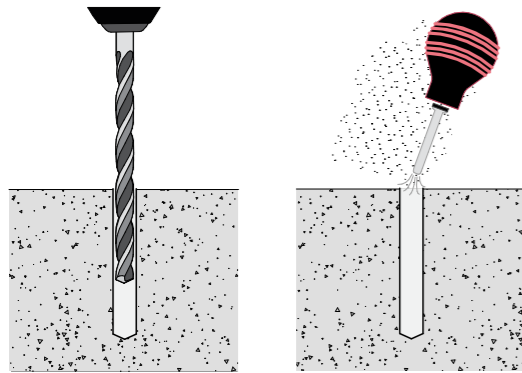
Project: **New Dwelling**  
**GM Construction**  
 Lot 53 Pinehurst Crescent,  
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ID	Issue Name	Changes	Date
03	Structural Prelim		9/10/2020

BRACING DETAILS  
 Job Number: **CP06**  
 Sheet: **30**

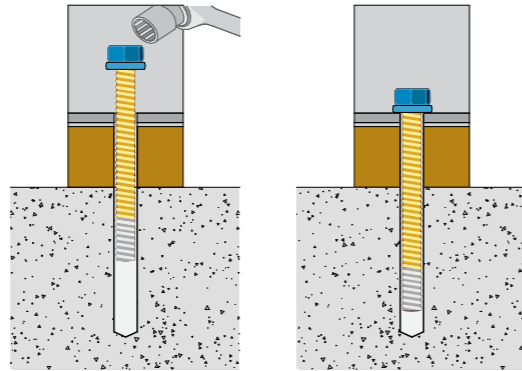


1. Install the screw located in the bracket base
2. Install the BOWMAC® screw bolt as per instructions below
3. Install remaining four screws into the face of the timber stud



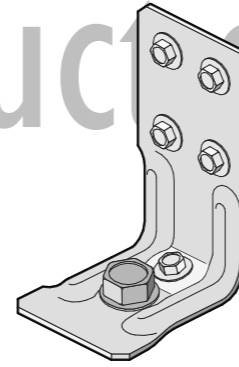
#### Installation Tips

- Use quality hexagonal socket with a ratchet spanner
- During installation debris or dust created by the thread cutting action may cause some resistance to be experienced. This is easily overcome by unscrewing the BOWMAC® screw bolt for one turn or more and then continuing to fix to the full embedment.



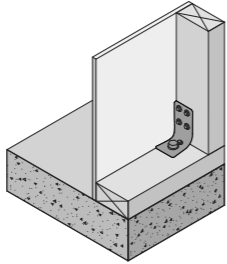
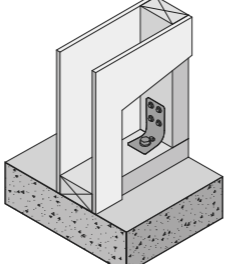
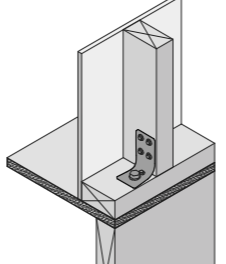
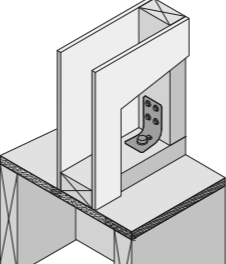
#### FIXING THE BRACKET

- Insert the bolt through the GIB HandiBrac® plate and bracket and into the hole.
- Begin tightening the bolt by applying forward pressure when engaging the first thread.
- Additional forward pressure may be required for installation in high strength, dense base materials.
- Continue tightening the anchor until the head is firmly seated against the GIB HandiBrac® base.
- In extremely dense material, use of an impact wrench is recommended.
- Be sure the bolt is at the required embedment depth.
- The installation is now complete.



#### PREPARATION

- Use a 10mm diameter masonry bit for a solid concrete substrate and an 8mm diameter bit for fixing to a timber sub-floor.
- Drill a hole into the base material to depth 8 mm deeper than the required embedment and clean out the hole of dust and debris prior to installation of BOWMAC® screw bolt.

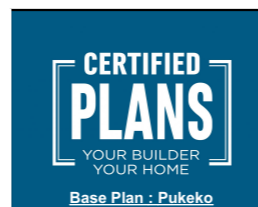
Concrete floor		Timber floor	
External walls	Internal walls	External walls	Internal walls
			
GE009	GE010	GE011	GE012
Position GIB HandiBrac® as close as practicable to the internal edge of the bottom plate.		Position GIB HandiBrac® flush with the outside stud face, as close as practicable to the centre of the boundary joist.	
Position GIB HandiBrac® at the stud/plate junction and at mid-width of plate.		Position GIB HandiBrac® in the centre of floor joist or full depth solid block.	
Hold-down fastener requirements			
A mechanical fastening with a minimum characteristic uplift capacity of 15kN or use supplied BT10/140 screwbolt in GIB HandiBrac® pack.		12 x 150mm galvanised coach screw or use supplied BT10/140 screwbolt in GIB HandiBrac® pack.	

Brace type	Concrete slabs		Timber floors
	External wall	Internal wall	External and Internal walls
GS1-N	As per NZS 3604:2011. No specific additional fastening required.	As per NZS 3604:2011. Alternatively use 75 x 3.8mm shot-fired fasteners with 16mm discs, 150mm and 300mm from each end of the bracing element and at 600mm thereafter.	Pairs of 100 x 3.75mm flat head hand driven nails or 3/90 x 3.15mm power driven nails at 600mm centres in accordance with NZS 3604:2011.
GS2-N	Not applicable.		
GS2-NOM			
GSP-H BLI-H BLP-H	Intermediate fastenings to comply with NZS 3604:2011  In addition: GIB HandiBrac® fixings		Pairs of 100 x 3.75mm flat head hand driven nails or 3/90 x 3.15mm power driven nails at 600mm centres in accordance with NZS 3604:2011.  In addition: GIB HandiBrac® fixings
BLG-H	Not applicable	As for GSP-H, BLI-H, BLP-H on concrete slab	

## BR2 BOTTOM PLATE FIXINGS

## BR1 HANDIBRAC INSTALLATION

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HANDIBRAC INSTALLATION				Job Number:	Sheet:
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## General fixing requirements for GIB® Ceiling Diaphragms:

Ceiling diaphragms may be constructed using any GIB® plasterboard provided perimeter fixing is at:

- \*150mm centres for: Diaphragms up to 7.5m in length, no steeper than 15°.
- \*100mm centres for: Diaphragms up to 7.5m in length, no steeper than 45°.
- \*100mm centres for: Diaphragms up to 12m in length, no steeper than 25°.

\*Linings must be installed over the entire area of the diaphragm.

\*Fastening must be no less than 12mm from sheet edges and not less than 18mm from sheet ends.

\*Sheets must be supported by framing members (e.g. ceiling battens) spaced at no more than 500mm centres for 10mm GIB® plasterboard and at no more than 600mm centres for 13mm GIB® plasterboard.

\*Sheets within the diaphragm area may be fastened and finished conventionally in accordance with the publication entitled, "GIB® Site Guide". All joints shall be GIB® Joint

\*Tape reinforced and stopped. It is recommended that sheet butt joints are formed off framing and back-blocked (see "GIB® Site Guide").

\*Use full width sheets where possible. At least 900mm wide sheets with a length not less than 1800mm shall be used.

Sheets less than 900mm wide but no less than 600mm may be used provided all joints with adjacent sheets are back-blocked (see "GIB® Site Guide" and figure 22).

\*Fasteners are placed at the specified centres around the ceiling diaphragm with the corners fastened using the GIB EzyBrace® fastener pattern.

## Ceiling battens in ceiling diaphragms

Ceiling diaphragms may be constructed using steel or timber ceiling battens.

Battens shall be spaced at a maximum of:

- \*500mm for 10mm GIB® plasterboard.
- \*600mm for 13mm GIB® plasterboard.

\*Timber battens shall be fixed in accordance with the requirements of NZS 3604:2011.

\*Metal battens shall be GIB® Rondo® battens with two external flanges of 8mm to allow direct screw fixing to roof framing.

\*GIB® Rondo® metal battens shall be fixed with 2/32mm x 8g GIB® Grabber® Wafer Head Self Tapping screws to supporting framing.

\*GIB® Rondo® metal battens must be fixed directly to the roof framing.

If a clip system has been used, a timber block (min 300mm) or a continuous timber member can be fixed alongside the bottom chord to permit a direct connection to the batten, see figure 26.

\*For GIB® Rondo® metal battens, a GIB® Rondo® metal channel or metal angle is required at the perimeter of the diaphragm.

\*The perimeter channel shall be fastened to the top plate with 32mm x 8g GIB® Grabber® Wafer Head Self Tapping screws or 32mm x 7g GIB® Grabber® Dual Thread screw at 300mm centres maximum.

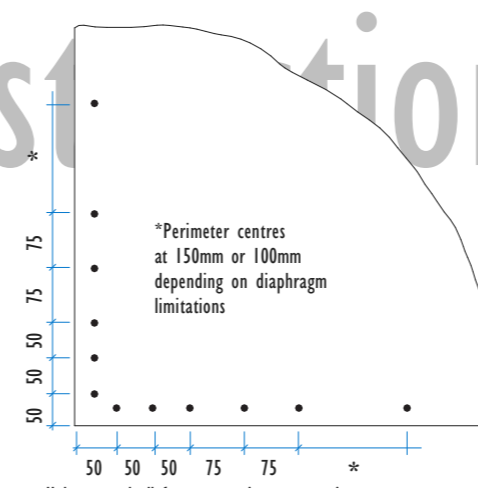
\*Linings are fastened to metal using 25mm x 6g GIB® Grabber® Self Tapping screws and to timber framing using 32mm x 6g GIB® Grabber® High Thread screws.

\*Alternatively 32mm x 7g GIB® Grabber® Dual Thread screws can be used in both cases. Fastener centres are specified on p.18.

\*Coved ceiling diaphragms can be achieved by using nominally 32 x 32 x 0.55mm proprietary galvanised metal angles ("backflashing") at the changes in direction. These angles shall be:

\*Fastened at 300mm on each edge to metal battens using 32mm x 8g GIB® Grabber® Wafer Head Self Tapping screws or 32mm x 7g GIB® Grabber® Dual Thread screws.

\*Fastened to timber framing using 32mm x 7g GIB® Grabber® Dual Thread screws when linings are installed.



GIB EZYBRACE FASTENER PATTERN

## Openings in ceiling diaphragms

### SMALL OPENINGS

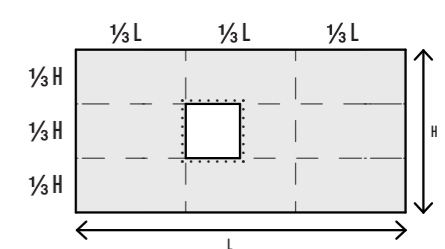
Small opening (e.g. down lights) of 90 x 90mm or less may be placed no closer than 90mm to the edge of the ceiling diaphragm.

### LARGE OPENINGS

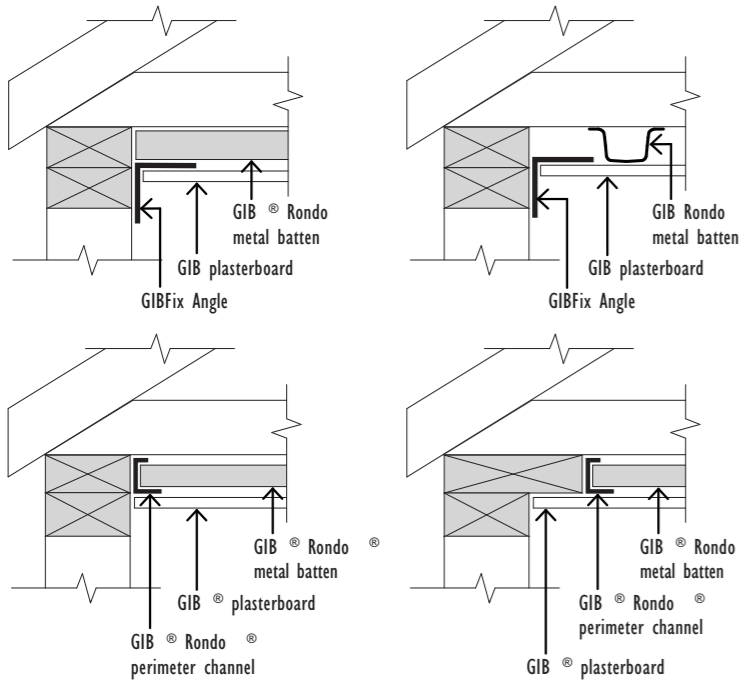
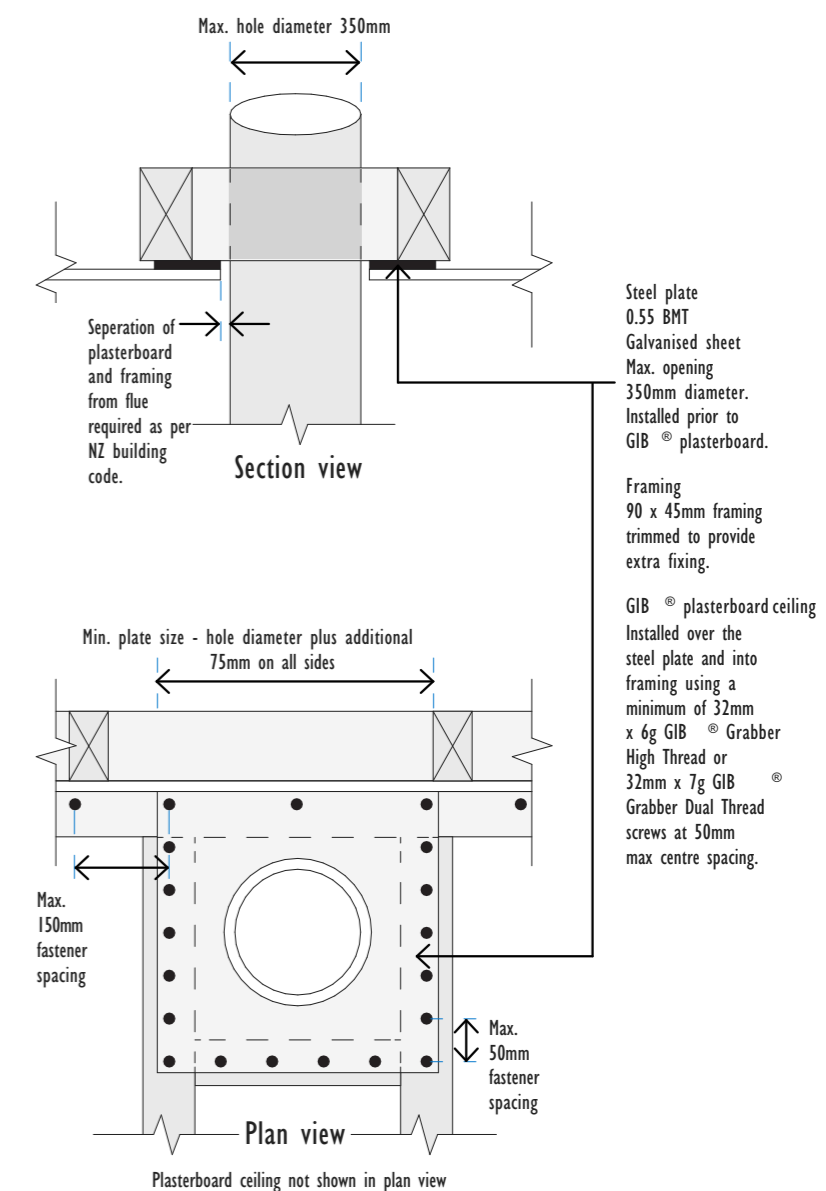
Openings are allowed within the middle third of the diaphragms length and width. Fixing of sheet material to opening trimmers shall be at 150mm centres. Neither opening dimension shall exceed a third of the diaphragm width. Larger openings or openings in other locations require specific engineering design.

Where fireplace flue or range hood openings are required in a ceiling diaphragm use a galvanised metal backing plate as shown in figure 25, with a maximum hole diameter of 350mm.

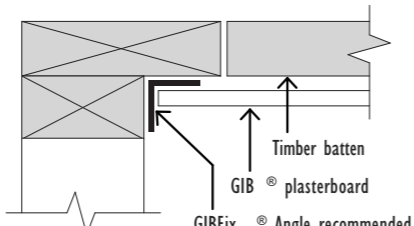
### LARGE OPENINGS IN CEILING DIAPHRAGMS



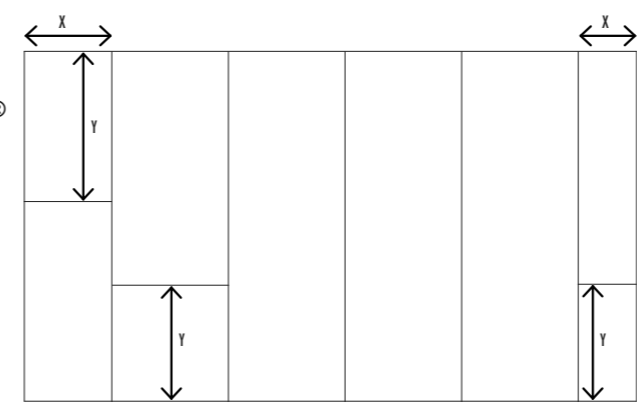
### FIREPLACE FLUES AND RANGE HOOD OPENINGS



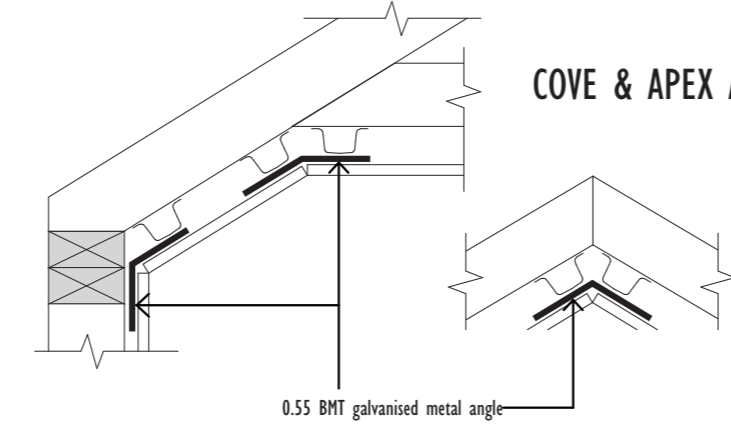
GIB RONDO METAL CEILING BATTENS WITH CORNER ANGLES



TIMBER CEILING BATTENS



GIB CEILING DIAPHRAGM SHEET WIDTHS AND LENGTHS



COVE & APEX ANGLES

DC01

## DIAPHRAGM CEILING



Project: **New Dwelling**  
**GM Construction**  
 Lot 53 Pinehurst Crescent,  
 Morrinsville

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DIAPHRAGM CEILING

Job Number: **CP06** Sheet: **32**

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# NEW ZEALAND BUILDING CODE

E3.3.4 requires impervious and easily cleaned surfaces to all surfaces adjacent to sanitary fixtures or laundering facilities.  
 E3.3.5 requires that surfaces of building elements likely to be splashed or contaminated in the course of the intended use of the building must also be impervious and easily cleaned.  
 E3.3.6 requires that surfaces of building elements likely to be splashed must be constructed in a way that prevents water from penetrating behind linings or into concealed spaces (e.g. wall cavities).  
 Walls in wet areas therefore need to be addressed according to whether they fall within the scope of one of the following descriptions:

1. Wall surface likely to be splashed
2. Shower walls. Although not a requirement of NZBC it is highly recommended that the wall surfaces within 150mm of the top edge of a bath, and the vertical faces immediately under the edge of a bath, are treated in the same way as for a shower wall.

## WALL SURFACES IN AREAS LIKELY TO BE SPLASHED

Suitable linings include:

- a. Integrally waterproof sheet material (e.g. polyvinylchloride) with sealed joints
- b. Ceramic or stone tiles having 6% maximum water absorption, waterproof grouted joints, and bedded with an adhesive specified by the tile manufacturer as being suitable for the tiles, substrate material and the environment of use
- c. Cement based solid plaster or concrete having a steel trowel or polished finish (semi-gloss or gloss paint must be used if a paint finish is required)
- d. Cork tile or sheet sealed with waterproof applied coatings
- e. Monolithic applied coatings having a polished, non-absorbent finish (e.g. terrazzo)
- f. Sheet linings finished with vinyl coated wallpaper, or semi-gloss or gloss coating
- g. Water resistant sheet linings finished with decorative high pressure laminate or factory applied polyurethane or resin
- h. Modular or multiple lining units which are themselves impervious and easily cleaned, and are installed with impervious joints
- i. Timber or timber-based products such as particleboard sealed with waterproof applied coatings.

NB: Floor surfaces and floor/wall junctions are required by E3 to be impervious.

## SURFACES IN SHOWERS AND AROUND BATHS

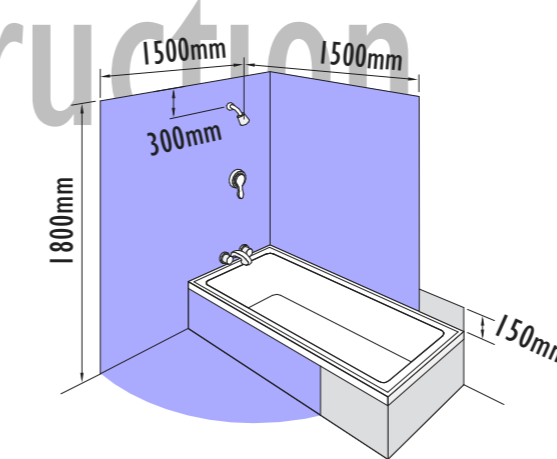
Suitable linings include all of the above, but NOT including items (d) and (f) from the above list.

Note that a waterproof membrane complying with AS/NZS 4858: 2004 MUST be applied to all lining materials used under ceramic tiles in these areas.

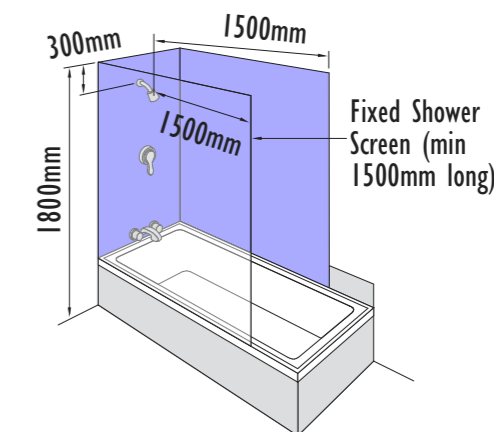
The waterproof membrane must extend to a 1500mm horizontal radius from a shower rose unless the shower is contained within a fixed enclosure. A shower curtain does not constitute a fixed enclosure.

Particleboard manufacturers recommend that in wet areas, panels should be protected with a suitable wet area membrane or an integrally waterproof sheet material. Some local authorities call for this treatment on all timber based floors.

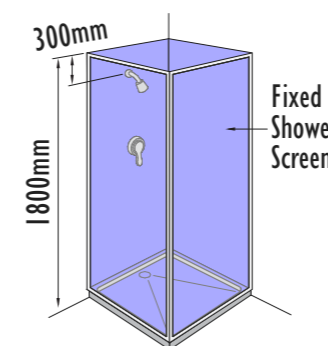
Blue shaded areas in the diagrams below represent the minimum extent of wall surfaces requiring impervious sheet materials or waterproof membranes prior to tiling. Light grey shaded areas represent good practice.



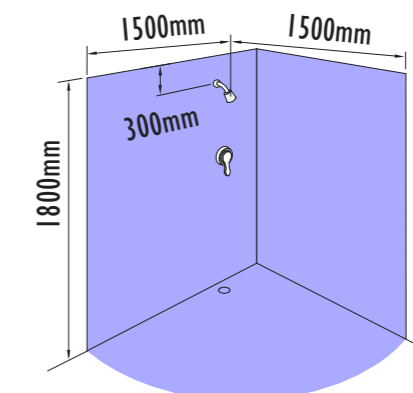
Unenclosed shower over bath



Enclosed shower over bath



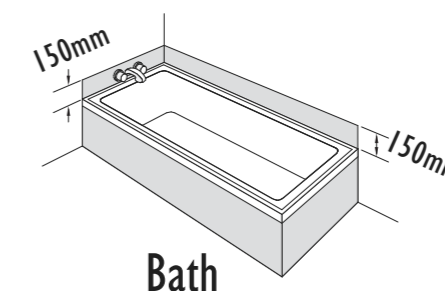
Enclosed shower



Unenclosed shower

Legend:

- Blue shaded area: Code Requirement
- Light grey shaded area: Good Practice

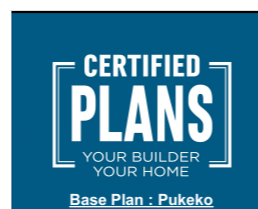


Bath

**WA1**

## WATERPROOFING

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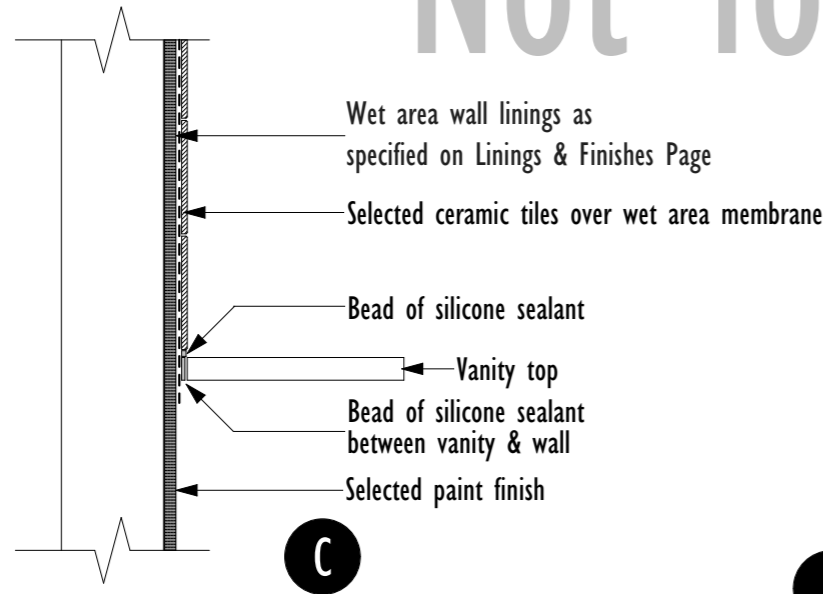
ID	Issue Name	Changes	Date
03	Structural Prelim		9/10/2020

**WATERPROOFING**

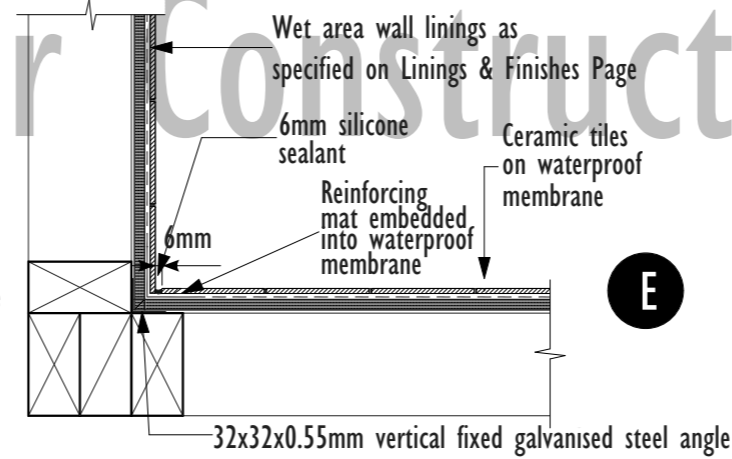
Job Number: **CP06** Sheet: **33**



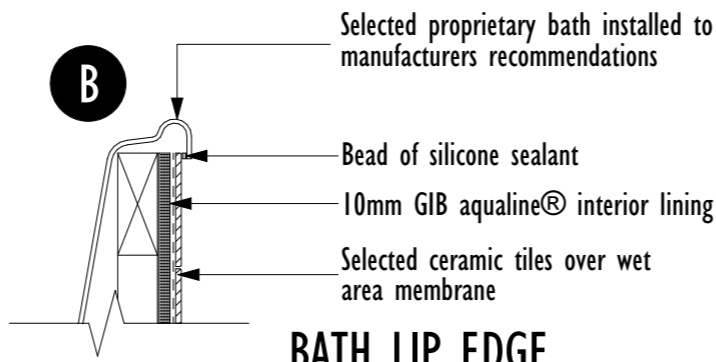
Not for Construction



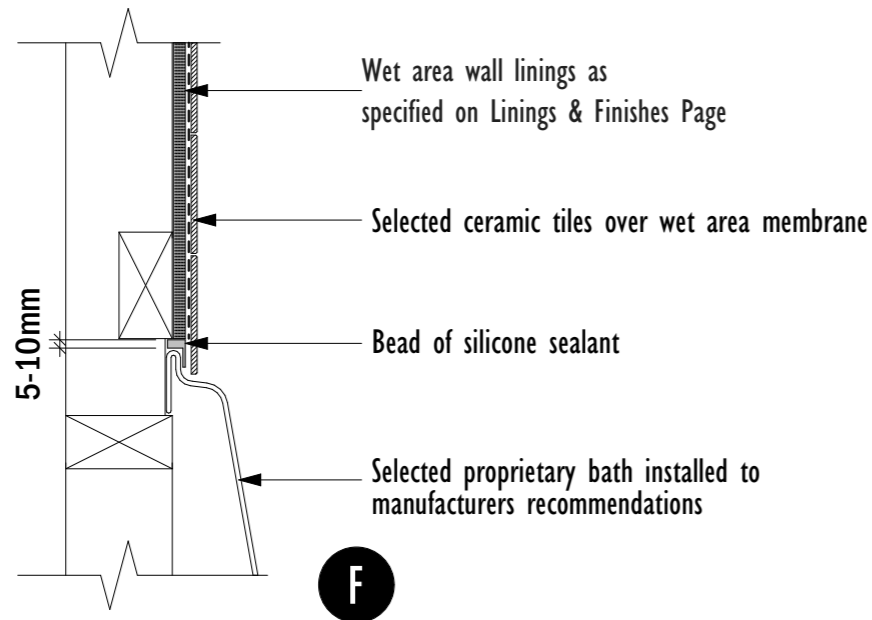
VANITY TO TILED WALL



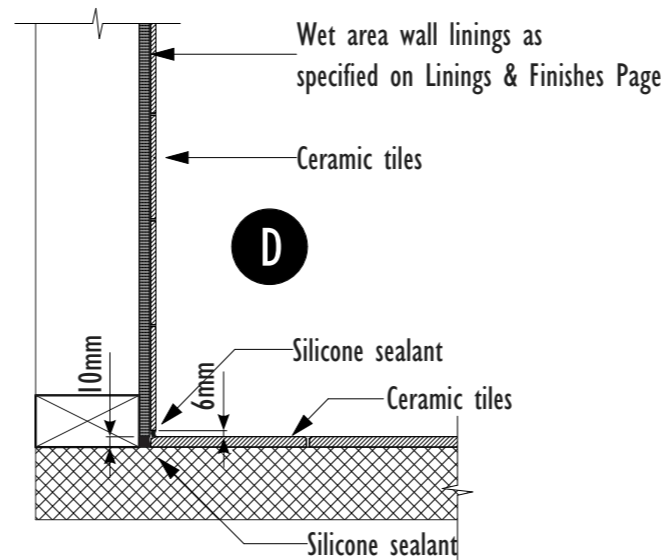
WET AREA - TILED WALL CORNER



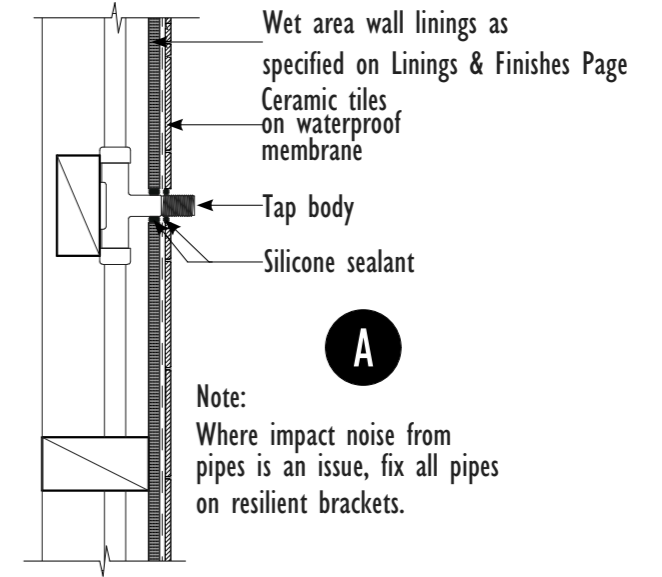
BATH LIP EDGE



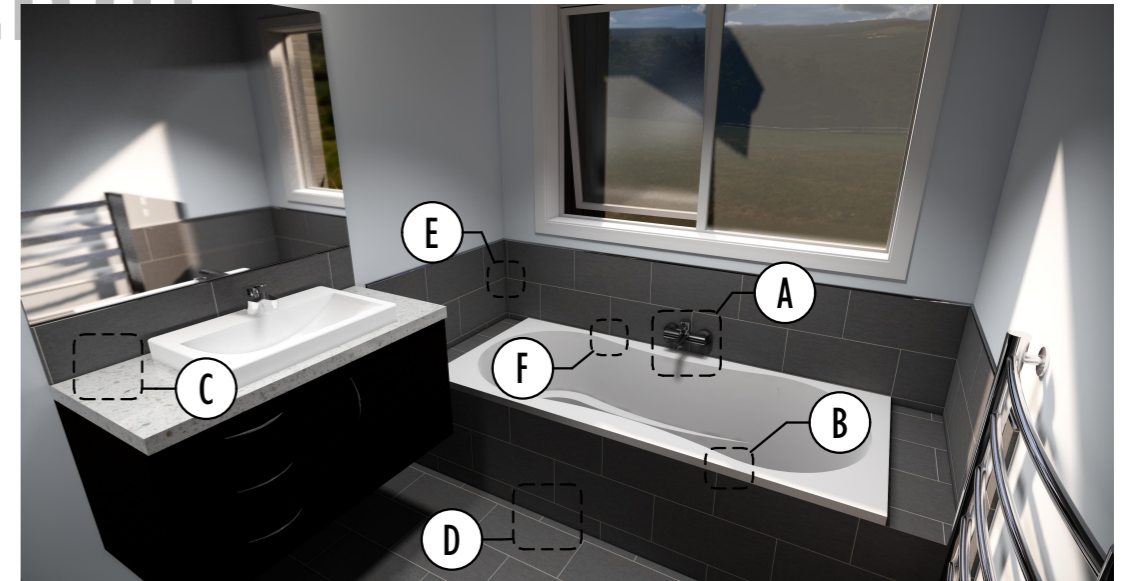
BATH TO TILED WALL



TILED WALL TO FLOOR



WET AREA - PIPE PENETRATION



**WA4** ACRYLIC BATH & VANITY

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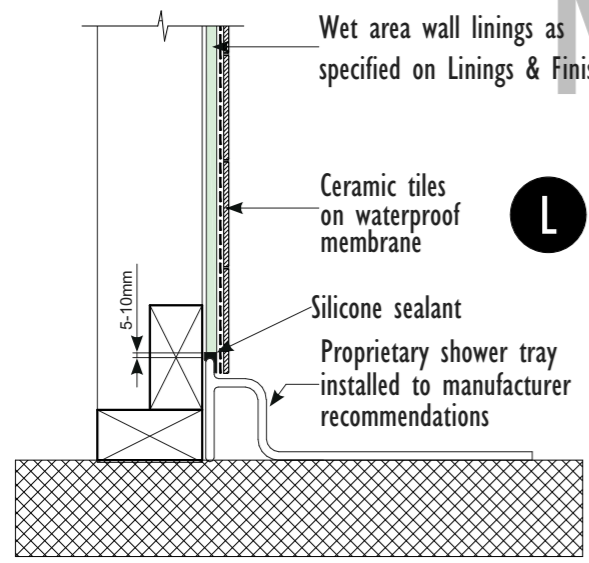


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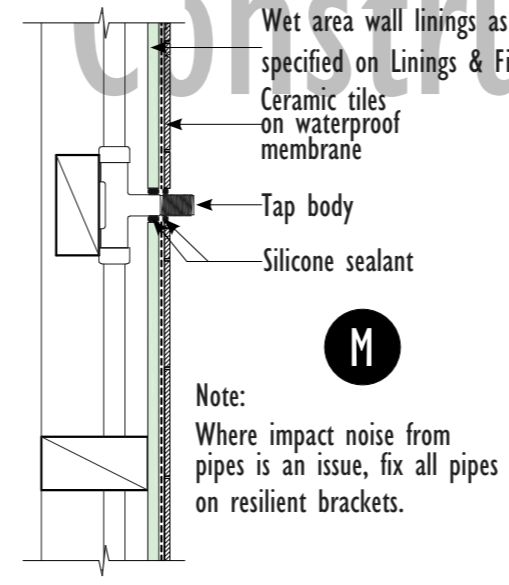
BATH & VANITY WET DETAILS			
ID	Issue Name	Changes	Date
03	Structural Prelim		9/10/2020
			Job Number: <b>CP06</b> Sheet: <b>34</b>



Not for Construction

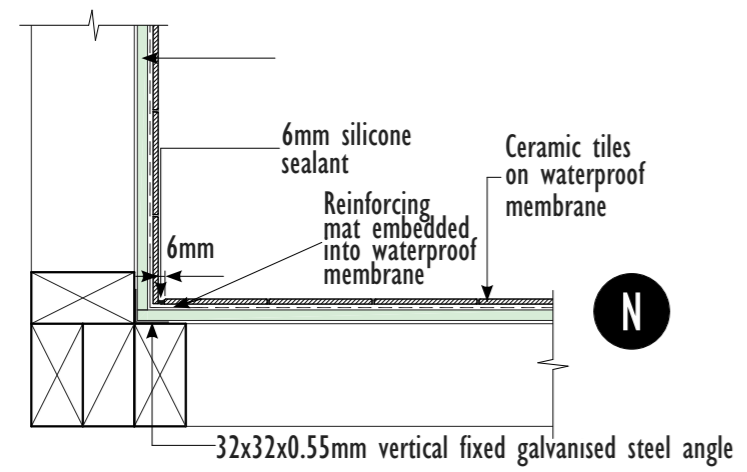


TILED WALL TO ARCYLIC TRAY

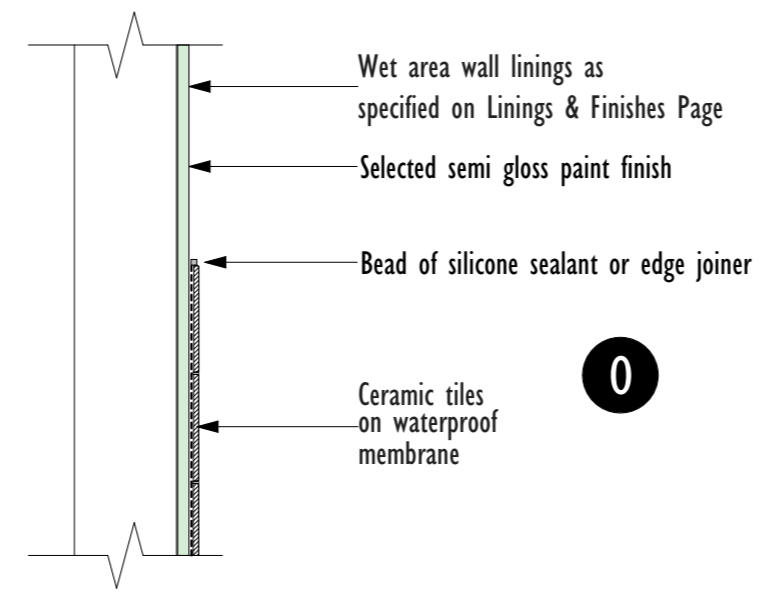


PIPE PENETRATION

All waterproofing details to be read in conjunction with shower installation and waterproofing membrane details  
See project appendix for manufacturers documentation.



TILED WALL CORNER



TILE TOP EDGE



**WA3** ARCYLIC SHOWER BASE WITH TILED WALLS

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PROPRIETARY SHOWER DETAILS				
ID	Issue Name	Changes	Date	Job Number: Sheet
03	Structural Prelim		9/10/2020	<b>CP06</b> <b>35</b>



# TILING SYSTEM 8

Internal Wall Tiling to Concrete, Cement/Sand Renders, Plasterboard and Moisture Resistant Plasterboard

1

## ARDEX D 2

Premium Non-Slump Wall Tile Adhesive (only suitable over waterproofing for porous tiles).

## ARDEX X 52

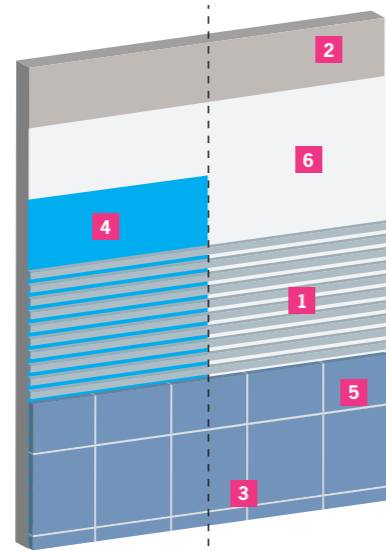
Economical Flexible Rubber Modified Tile Adhesive.

## ARDEX X 18

Fibre Reinforced Flexible Non Slump Wall and Floor Tile Adhesive.

## ARDEX X 77

Microtec Flexible Wall and Floor Tile Adhesive.



WET AREA

DRY AREA



## ARCHITECTS, SPECIFIERS AND DESIGNERS

For specification support and project assistance, please contact ARDEX on 0800 2 ARDEX, speak to your local ARDEX representative or visit [www.ardex.co.nz](http://www.ardex.co.nz)

**NOTE:** For natural stone tiling, please refer to the 'ARDEX Natural Stone Tiling Guide'.

**NOTE:** The use of ARDEX waterproof coatings will only prevent moisture ingress from the tiled side of the background.

2

Cement/Sand Render or Plasterboard/Moisture Resistant Plasterboard.

3

ARDEX SE Silicone.

4

ARDEX WPM 002 OR ARDEX WPM 155 Rapid  
Two Part Bathroom and Balcony Liquid Waterproofing Membrane. Modified Polyurethane Membrane.

5

Narrow joints: ARDEX FS-DD  
Standard joints: ARDEX FG 8

OR

ARDEX EG 15  
Easy Clean High Performance Epoxy Grout.

6

ARDEX Multiprime Water-based primer.

S

# TILING SYSTEM 1

Internal Floor Tiling to Concrete or Cement/Sand Screeds

1

## ARDEX X 52

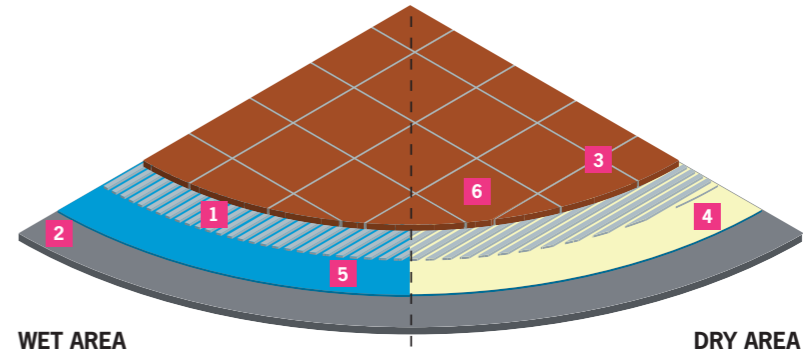
Economical Flexible Rubber Modified Tile Adhesive.

## ARDEX X 18

Fibre Reinforced Flexible Non-Slump Wall and Floor Tile Adhesive.

## ARDEX X 78

Premium Microtec Floor Tile Adhesive.



WET AREA

DRY AREA



## ARCHITECTS, SPECIFIERS AND DESIGNERS

For specification support and project assistance, please contact ARDEX on 0800 2 ARDEX, speak to your local ARDEX representative or visit [www.ardex.co.nz](http://www.ardex.co.nz)

**NOTE:** For natural stone tiling, please refer to the 'ARDEX Natural Stone Tiling Guide'.

If smoothing or levelling of the sub-floor is required prior to tiling the use of the appropriate ARDEX smoothing or levelling compound should be considered.

2

Cement/Sand Screed

3

ARDEX SE Silicone.

4

ARDEX Multiprime Water-based primer.

5

ARDEX WPM 002 OR ARDEX WPM 155 Rapid  
Two Part Bathroom and Balcony Liquid Waterproofing Membrane. Modified Polyurethane Membrane.

6

Narrow joints: ARDEX FS-DD  
Standard joints: ARDEX FG 8

OR

ARDEX EG 15  
Easy Clean High Performance Epoxy Grout.

19

## WALL TILING

20

## FLOOR TILING

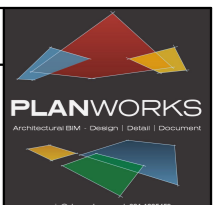
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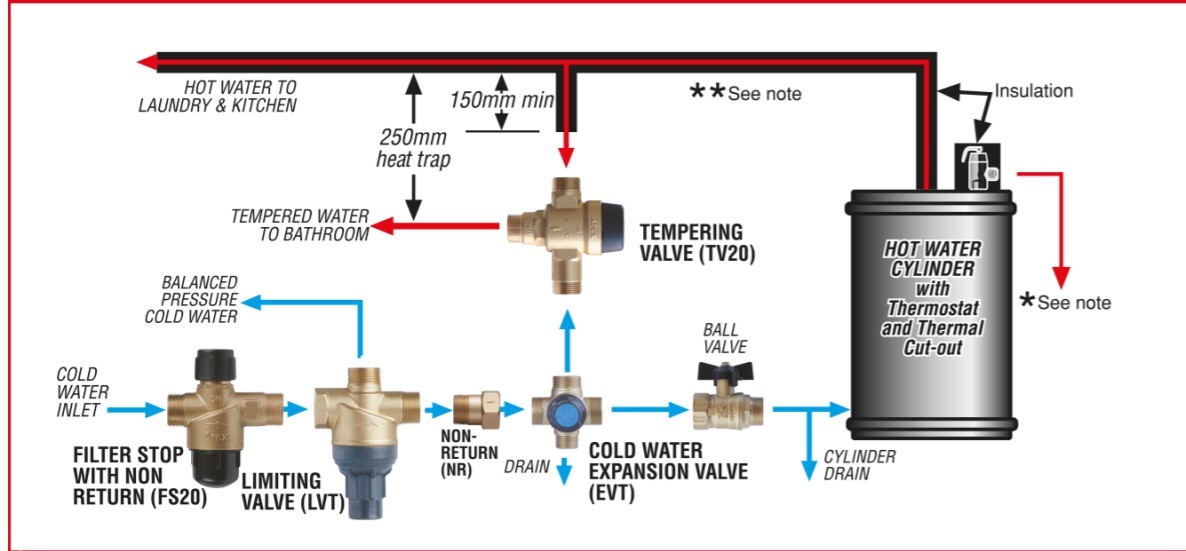
ID	Issue Name	Changes	Date
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WALL & FLOOR TILING	
Job Number:	Sheet:
CP06	36



## HIGH PRESSURE - Valve Vented

VP20 500



## Installation to comply with NZBC Clause G12 (2001) or NZS 4607:1989

- \* Valves must NOT be installed in ground.
- \* Valves must be installed in a position where reasonable access is provided for maintenance and/or replacement.
- \* Caution: do not apply heat near valves during installation.

### Drain Lines

- \* IMPORTANT: TAPS, VALVES OR OTHER SHUT-OFF DEVICES MUST NOT BE INSTALLED IN THE RELIEF OR EXPANSION DRAIN LINES.
- \* Drain line should be copper, they should fall continuously from the valve outlet and be of the shortest possible length.
- \* The discharge end of the drain line must be positioned so as any discharge will be visible, but not cause damage or a nuisance.
- \* Drain lines must not be smaller than the outlet of the valve to which they are connected.
- \* If relief valve drains are combined, a 25mm air gap must be maintained.\*\*RECOMMENDED
- \* In frost areas fitting an EVT7.6 can protect cylinders in the event of exhaust pipe freezing

### Distribution Pipes

- \* Hotwater distribution pipes shall be thermally insulated between the storage water heater and one or more of the following points.
  - For horizontal pipe, to not less than 2m
  - To the end of the first 2m horizontal length
  - To the first pipe drop of at least 250mm. The insulation to extend down drop min 150mm
- The kitchen sink distribution pipe shall be insulated
- All pipes outside of the building shall be insulated
- All pipes embedded in concrete or buried underground shall be insulated and installed in a duct.
- All distribution pipes to comply with NZS4305 Clause 3.7

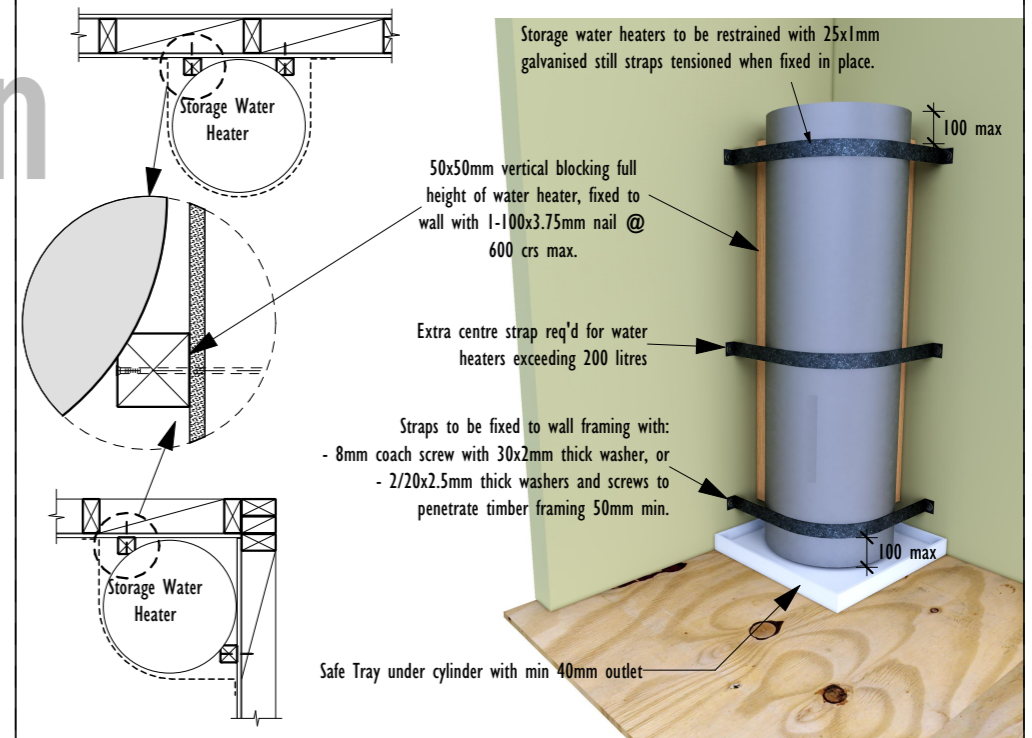
\*R.V and E.V drains may be combined provided discharge is via a minimum airbreak of 25mm. Drain must have a minimum size of 20mm diameter and be one size larger than the largest relief valve outlet. (Refer diagrams)

\*\* 1.0m minimum copper pipe length from cylinder to Tempering Valve and 250mm minimum vertical heat trap to Tempering valve (as per G12).

Note: If the drain exceeds a factor of 12 as a combination of length in metres and number of bends (e.g. 7 metres & 5 bends = 12) a SVB vacuum break must be fitted as per G12.

S3

## HWC VALVING



S1

## HWC RESTRAINTS

### Pressure Relief Valves

Pressure relief valves and temperature and pressure relief valves (TPR) shall be thermally insulated. Where a pressure relief valve is not fitted directly to the water heater the connecting pipework shall not exceed 1m and must be thermally insulated. Thermal insulation shall be fitted around valves without preventing the free operation or obstruction of the valve mechanism and inflow of air. The thermal insulation must be easily removed for maintenance of the valve. Refer to NZS4305 Clause 3.3

### Electrical Connection

The electrical installation must be completed in accordance with AS/NZS 3000. All water heaters are designed for 230 VAC, 50 Hz mains operation and a means of disconnection from the power supply must be incorporated in the fixed wiring during installation.

A flexible 20 mm conduit is required for the electrical cable to the water heater. The conduit is to be connected to the unit with a 20 mm plain to screw adaptor. Connect the power supply wires directly to the terminal block and earth tab connection, ensuring there are no excess wire loops inside the front cover. For details, refer to the wiring diagram on the inside of the element cover. A separate heating element earth wire is not required because the element earths by the thread of the element boss or the flange being in contact with the element socket.

S4

## HWC MISC NOTES

Sanitary fixture	Flow rate and temperature litres per second and °C	How measured
Bath	0.3 at 45°C	Mix hot and cold water to achieve 45°C
Sink	0.2 at 60°C* (hot) and 0.2 (cold)	Flow rates required at both hot and cold taps but not simultaneously
Laundry tub	0.2 at 60°C* (hot) and 0.2 (cold)	Flow rates required at both hot and cold taps but not simultaneously
Basin	0.1 at 45°C	Mix hot and cold water to achieve 45°C
Shower	0.1 at 42°C	Mix hot and cold water to achieve 42°C

\* The temperatures in this table relate to the temperature of the water used by people in the daily use of the fixture

NOTE: The flow rates required by Table 3 shall be capable of being delivered simultaneously to the kitchen sink and one other fixture

S5

## ACCEPTABLE FLOW RATES

	Mains pressure
Pressure of water at tempering valve (kPa)	over 300
Metres head (m)	over 30
Minimum tempering valve size	15 mm
Pipes to tempering valve	20 mm
Pipes to shower	20 mm
Pipes to sink/laundry	15 mm
Pipes to bath	15 mm
Pipes to basins	10 mm

Notes:

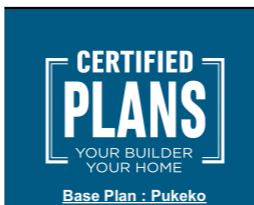
This table is based on maximum pipe lengths of 20 metres.

Table 3 pipe sizes have been calculated to deliver water simultaneously to the kitchen sink and one other fixture

S6

## NOMINAL PIPE DIAMETERS

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## HOT WATER SYSTEM

Job Number: CP06

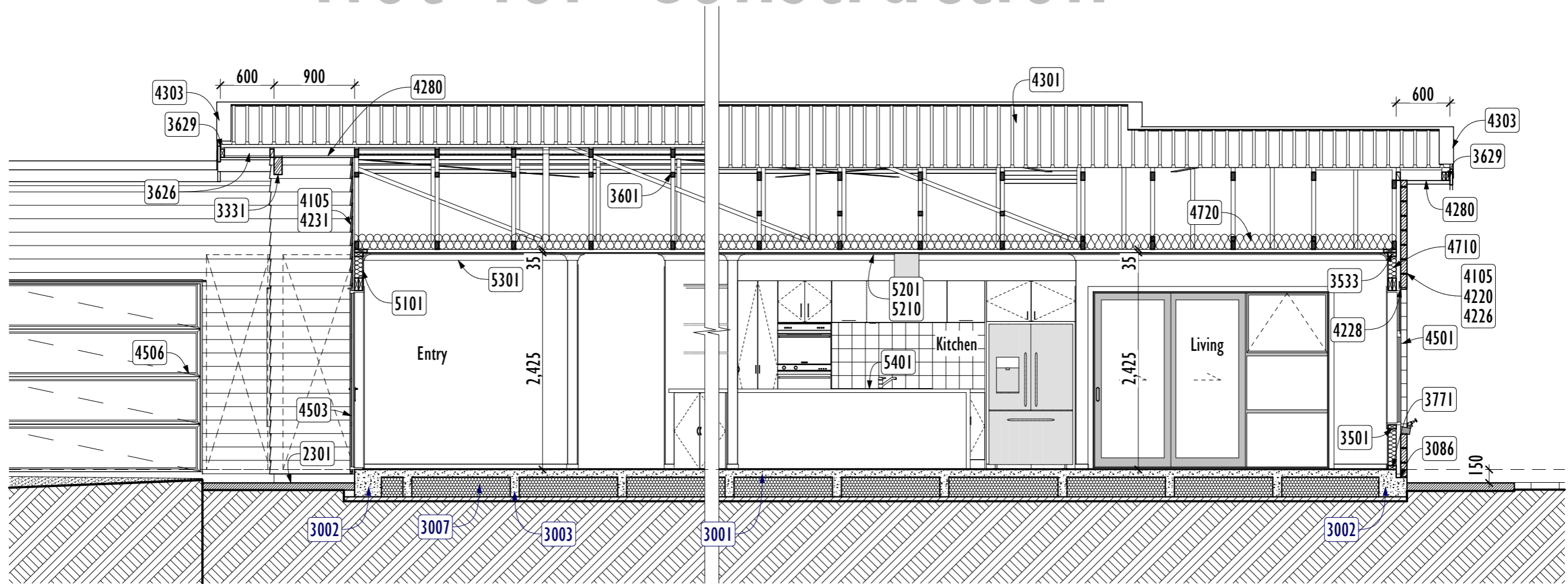
Sheet: 37







# Not for Construction



**23** SECTION C-C  
1:50

## Notes

- SITE**
- 2301 Concrete Patio (Owner to confirm extent)
- STRUCTURE**
- 3001 Baseraft Waffle Slab-on-ground floor system with 85mm thick 20MPa concrete slab with Seismic SE62 Super Ductile 500E - 2.294kg/m<sup>2</sup> mesh on 1100mm sq x 220mm thick polystyrene pods on 0.25mm polythene on compacted hard fill in accordance with NZS3604 3.3. Provide 720mm lap to all HD12 steel. : B1/ALT
- 3002 300x305mm deep perimeter edge beam : B1/ALT

- with 1/HD12 to top & 2/HD12 to base tied to rib bars. : B1/ALT
- 3003 100x220mm deep concrete ribs between pods with 1/HD12 tied to perimeter bar : B1/ALT
- 3007 1100mm sq x 220mm thick polystyrene pods on 0.25mm polythene : B1/ALT
- 3086 120w x 90d Brick rebate with 3 coats of rubber bitumen damp proof coating to exposed face of slab rebates and sills of full height joinery. : E2/AS1
- 3331 140x90 SG8 H3.2 Beam : B1/ALT
- 3501 90x45 SG8 Framed Wall - Studs @ 600mm c/c Nogs @ 800mm c/c : B1/NZS3604
- 3533 140x35mm Capping Plate : B1/NZS3604
- 3601 10° Trussed roof structure. Specifically designed trusses @ 900c/c max. All fixings and connections to be designed & supplied by FTMA : B1/ALT

- ENCLOSURE**
- 4105 4.5mm James Hardies HomeRAB fixed in accordance with JH RAB manual dated March 2019. : E2/AS1
- 4220 70mm Bowers Masonry Brick Veneer (50mm Cavity) Over specified Building wrap & RAB. Refer to cladding details for all venting requirements : E2/AS1
- 4226 Spacings and embedment shall be in accordance with the requirements of NZS 4210 and : E2/AS1
- member : B1/ALT
- 3626 90x45 SG8 Outriggers @ 900mm c/c : B1/NZS3604
- 3629 90x45 SG8 Fly Rafters : B1/NZS3604
- 3771 Lumberlok Bottom plate anchor @ max 900c/c. See detail W5 : B1/NZS3604

- E2/AS1 Tables 18A, 18B and 18C. Screw fixings shall be minimum 12 gauge, 35 mm long Type 17 Hex : E2/AS1
- 4228 Veneer lintels as per E2 / AS1 clause 9.2.9. Refer to floor plan or elevations for sizes. : E2/AS1
- 4231 180mm Linea Weatherboards On H3.2 50x20 Battens Over specified Building wrap : E2/ALT
- 4280 JH® 4.5mm Hardiflex lined soffits with PVC joiner strips. : E2/AS1
- 4301 Colorsteel Endura® 5 Rib longrun roofing over Thermakraft 213 & netting. Screw fixed. Refer to roofing details for fixing requirements : E2/AS1
- 4303 Selected Colorsteel barge board with Colorsteel Endura® barge capping : E2/AS1
- 4501 PC aluminium residential exterior IGU (double glazed) with ex25 H3.1 paint quality pine : E2/AS1

- 4503 Selected entry door within aluminium joinery unit and selected door hardware. Entry door & hardware design to later detail by others.
- 4506 Sectional Insulated (R0.7) Garage Door & Auto opener
- 4710 R2.6 (90mm) Pink®Batts® thermal building insulation to all exterior walls. : H1/AS1
- 4720 R3.6 (170mm) Pink®Batts® thermal building insulation to all ceilings (excluding garage). Ensure 25mm clearance to roof at all times. : H1/AS1
- INTERIOR**
- 5101 10mm Gib Standard wall lining horizontally fixed to

- all walls where possible. Level 4 finish for painting throughout.
- 5201 13mm Gib Standard ceiling linings fixed over specified ceiling battens.
- 5210 70x35mm UT Ceiling battens @ 600c/c
- 5301 75mm Gib Cove
- 5401 Kitchen design and drawings to later detail by others.

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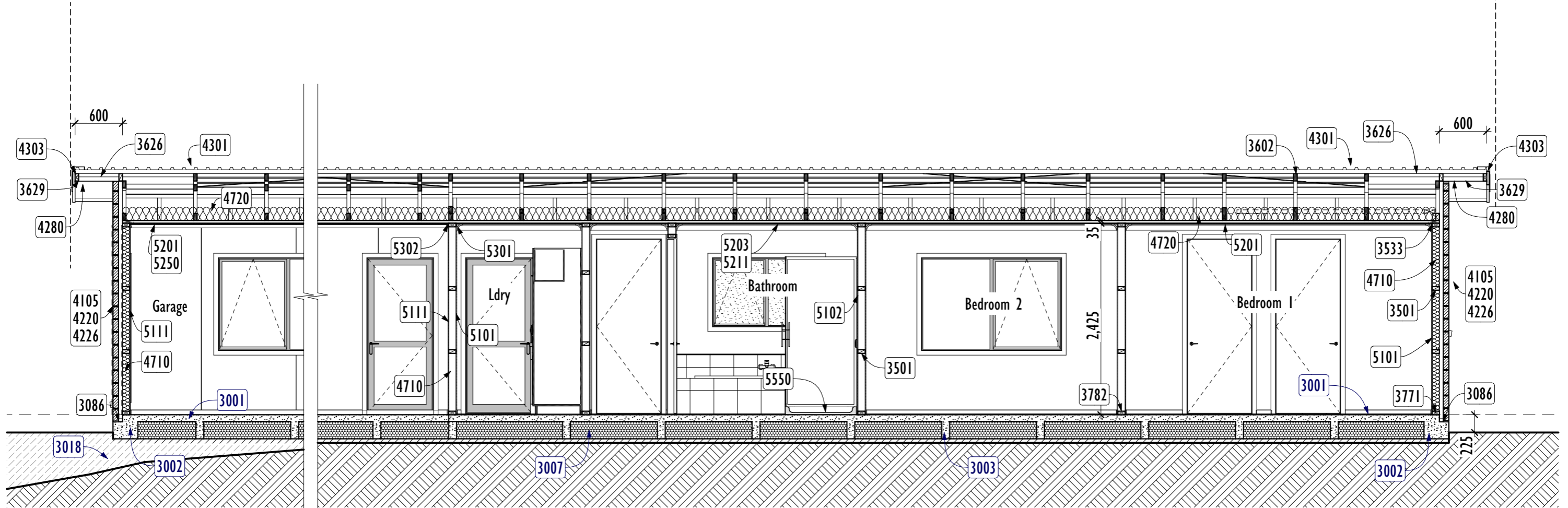
ID	Issue Name	Changes	Date
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Sheet: **40**





# Not for Construction



24

## SECTION D-D 1:50

### Notes STRUCTURE

- 3001 Baseraft Waffle Slab-on-ground floor system with 85mm thick 20MPa concrete slab with Seismic SE62 Super Ductile 500E - 2.294kg/m<sup>2</sup> mesh on 1100mm sq x 220mm thick polystyrene pods on 0.25mm polythene on compacted hard fill in accordance with NZS3604 3.3. Provide 720mm lap to all HD12 steel. : B1/ALT
- 3002 300x305mm deep perimeter edge beam with 1/HD12 to top & 2/HD12 to base tied to rib bars. : B1/ALT
- 3003 100x220mm deep concrete ribs between : B1/ALT

- 3007 1100mm sq x 220mm thick polystyrene pods on 0.25mm polythene : B1/ALT
- 3018 Compacted fill as required to meet engineers soil bearing requirements
- 3086 120w x 90d Brick rebate with 3 coats of rubber bitumen damp proof coating to exposed face of slab rebates and sills of full height joinery. : E2/AS1
- 3501 90x45 SGB Framed Wall - Studs @ 600mm c/c Nogs @ 800mm c/c : B1/NZS3604
- 3533 140x35mm Capping Plate : B1/NZS3604
- 3602 4° Trussed roof structure. Specifically designed trusses @ 900/c max. All fixings and connections to be designed & supplied by FTMA Member : B1/ALT
- 3626 90x45 SGB Outriggers @ 900mm c/c : B1/NZS3604

### ENCLOSURE

- 3629 90x45 SGB Fly Rafters : B1/NZS3604
- 3771 Lumberlok Bottom plate anchor @ max 900/c. See detail W5 : B1/NZS3604
- 3782 Internal non-load bearing bottom plate fixing to concrete floor - 75x3.8mm Drive pin & 16mm washer, 150mm from wall ends and @ 600/c thereafter : B1/NZS3604
- 4105 4.5mm James Hardies HomeRAB fixed in accordance with JH RAB manual dated March 2019. : E2/AS1
- 4220 70mm Bowers Masonry Brick Veneer (50mm Cavity) Over specified Building wrap & RAB. Refer to cladding details for all venting requirements : E2/AS1

- 4226 Spacings and embedment shall be in accordance with the requirements of NZS 4210 and E2/AS1 Tables 18A, 18B and 18C. Screw fixings shall be minimum 12 gauge, 35 mm long Type 17 Hex : E2/AS1
- 4280 JH® 4.5mm Hardiflex lined soffits with PVC joiner strips. : E2/AS1
- 4301 Colorsteel Endura® 5 Rib longrun roofing over Thermakraft 213 & netting. Screw fixed. Refer to roofing details for fixing requirements : E2/AS1
- 4303 Selected Colorsteel barge board with Colorsteel Endura® barge capping : E2/AS1
- 4710 R2.6 (90mm) Pink®Batts® thermal building insulation to all exterior walls. : H1/AS1
- 4720 R3.6 (170mm) Pink®Batts® thermal building insulation to all ceilings (excluding garage). : H1/AS1

### INTERIOR

- 5101 10mm Gib Standard wall lining horizontally fixed to all walls where possible. Level 4 finish for painting throughout.
- 5102 10mm Gib Aqualine walls horizontally fixed to bathroom/ensuite walls where possible. Level 4 finish for painting throughout.
- 5111 9mm UT Plywood garage wall lining
- 5201 13mm Gib Standard ceiling linings fixed over specified ceiling battens.
- 5203 13mm Gib Aqualine ceiling linings fixed over specified ceiling battens

- 5211 Selected 35mm Metal Ceiling battens @ 600/c
- 5250 Ceiling lining fixed as diaphragm in accordance with Gib specifications. See 'diaphragm ceiling' sheet in this set. : B1/NZS3604
- 5301 75mm Gib Cove
- 5302 40x20mm Bevelled Scotia
- 5550 Proprietary Acrylic shower installed in accordance with manufacturers specifications. Refer to appendix for installation details : E3/AS1

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## Fixings

- Nails must finish flush with board surface
- The HomeRAB Pre-Cladding and RAB Board are fixed as in adjacent table.
- HomeRAB Pre-Cladding and RAB Board can either be gun nailed or hand nailed. It is recommended to use gun nails to cut down installation time. When gun nailing, follow nail gun manufacturer's instructions for correct operation of tool and site safety requirements.
- Nails must have a minimum clearance of 12mm from the sheet edges and a minimum of 50mm horizontally and 75mm vertically from the sheet corners
- When using a nail gun the gun nails must have a full round head to provide the required holding power, and minimum length of the hand nail
- Nails must finish flush with board surface
- Nails must have minimum clearance of 12mm from the sheet edges and a minimum of 50mm horizontally and 75mm vertically from the sheet corners
- Do not use D-head nails
- Fasteners must have the appropriate level of durability required for the intended project to comply with the NZBC
- Fasteners must be fully compatible with all other materials that they are in contact with to ensure the durability and integrity of the assembly

HomeRAB Pre-Cladding/RAB Board 6mm			
Application	Type of nail	Nailing centres to all framing	Nailing option
General	40 x 2.8mm HardieFlex nail	200mm	Gun nail or hand nail
Fire rating	40 x 2.8mm HardieFlex nail	150mm	Gun nail or hand nail
Bracing	40 x 2.8mm HardieFlex nail	100mm 150mm	Gun nail or hand nail
Stucco plaster (over cavity)	60 x 3.15mm HardieFlex nail	200mm	Gun nail or hand nail

Exposure conditions and nail selection		
Zone	Application	Nail material
D (Sea Spray) * and Geothermal hot spots	General	Stainless steel 304/316
	Fire	
	Bracing	
C and B	General	Hot dip galvanised**
	Fire	
	Bracing	

\*Where local knowledge dictates that increased durability is required use stainless steel nails

\*\* Hot dip galvanised must comply with AS/NZS 4680

## Installation

- James Hardie rigid air barriers must be installed with its sealed face towards the external cladding and unsealed face towards the framing. The sealer applied on the face helps the board to drain the moisture freely over the face and keeps it dry.
- James Hardie rigid air barriers must extend below the bottom plate by 15mm minimum over concrete foundation and 15mm past floor joist of timber foundation. James Hardie rigid air barriers must maintain a 100mm minimum clearance between the bottom edge of the sheet and the finished ground.
- Do not install James Hardie rigid air barriers in such a way that it may remain in contact with standing water.
- The sheets are jointed keeping a gap of 2-4mm maximum between the sheet edges. The board must be cleaned of any dust before fixing the jointing tape over the joint.
- Cut edges where exposed must be primed prior to installation with Dulux® 1 Step, Resene Quick Dry or similar.
- The bottom edge of James Hardie rigid air barriers must overhang below the bottom plate by 15mm minimum, refer to Figures 4 and 5.
- Vertical joints must be sealed to stop the moisture ingress into the framing behind James Hardie rigid air barrier. The vertical joints are sealed over by running a 75mm wide sealing tape e.g. SUPERSTICK Building Tape/3M All Weather Flashing Tape 8067.
- The sealing tapes must be pressed hard over the James Hardie rigid air barriers surface while fixing so that they achieve the required bond. The sealing tapes must not be exposed to elements for more than 180 days. The claddings must be installed within 180 days.

- The horizontal joint of James Hardie rigid air barriers must be flashed using a uPVC horizontal flashing or alternatively aluminium or colour steel Z flashings can also be used. Refer to Figures 8, 9 and 10. Leave a gap of 15mm minimum at the solid timber floor joist or as specified by the project engineer. The flashing must be lapped by a 35mm minimum on both sides of the joint.
  - For walls longer than 3m, horizontal uPVC flashing must be lapped by 50mm minimum and silicone sealed.
  - Rigid air barriers must not be fixed into floor joists.
- ### 5.1.3 Internal/external corners
- James Hardie rigid air barrier corner joints must be sealed using a 75mm minimum wide sealing tape.
  - When using a uPVC horizontal flashing in horizontal joints, the internal and external corner flashing joints must be sealed using a 75mm minimum wide joint sealing tape.
  - When using James Hardie rigid air barrier as a backing board for stucco plaster, the vertical joints of James Hardie rigid air barrier are not required to be sealed using flashing tapes. The horizontal joints at floor level and in tall walls must be flashed to satisfy the requirements of clause E2 of the NZBC.
  - The exposed timber framing around the window jamb can be covered with a 150mm minimum wide flashing tape or a sealing tape. The window sill must be dressed with a 150mm minimum wide flashing tape. The tape is sealed over the face of the James Hardie rigid air barrier.
  - The James Hardie rigid air barrier surface must be clean, free of grime and dry before the tapes are applied.

HR00

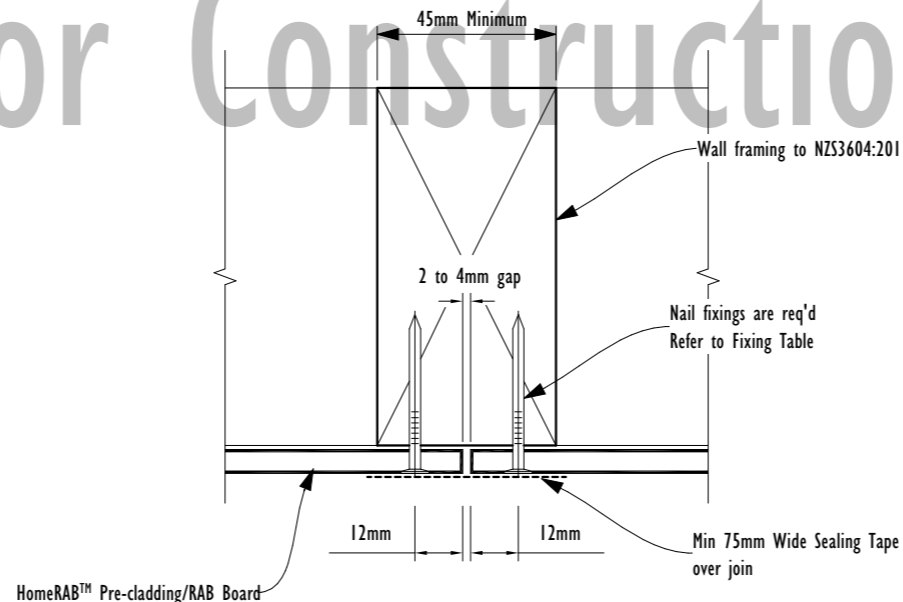
HOMERAB NOTES  
1:10

HR03

HOMERAB BASE  
1:10

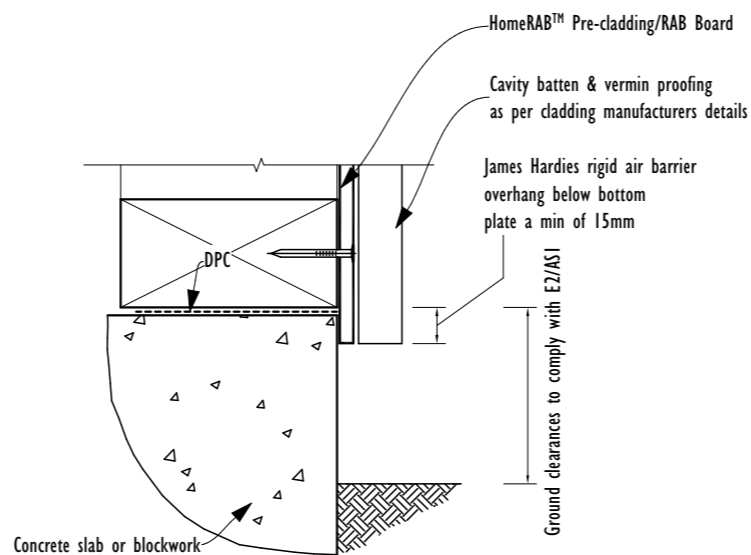
HR04

HOMERAB OPENINGS  
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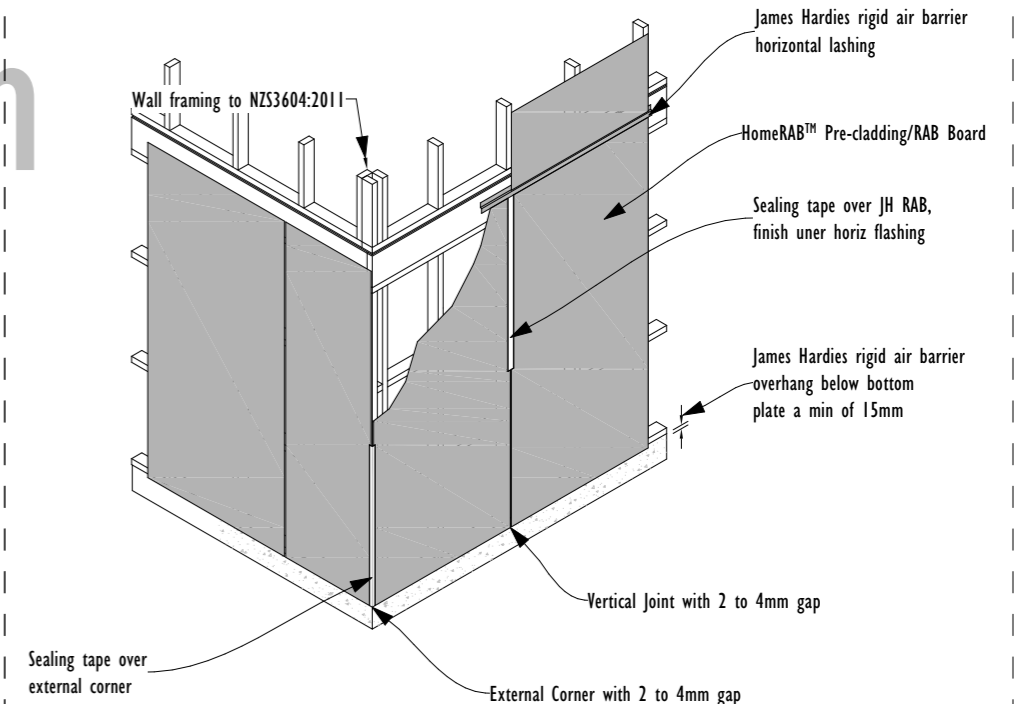
HR01

HOMERAB VERTICAL JOIN  
1:10



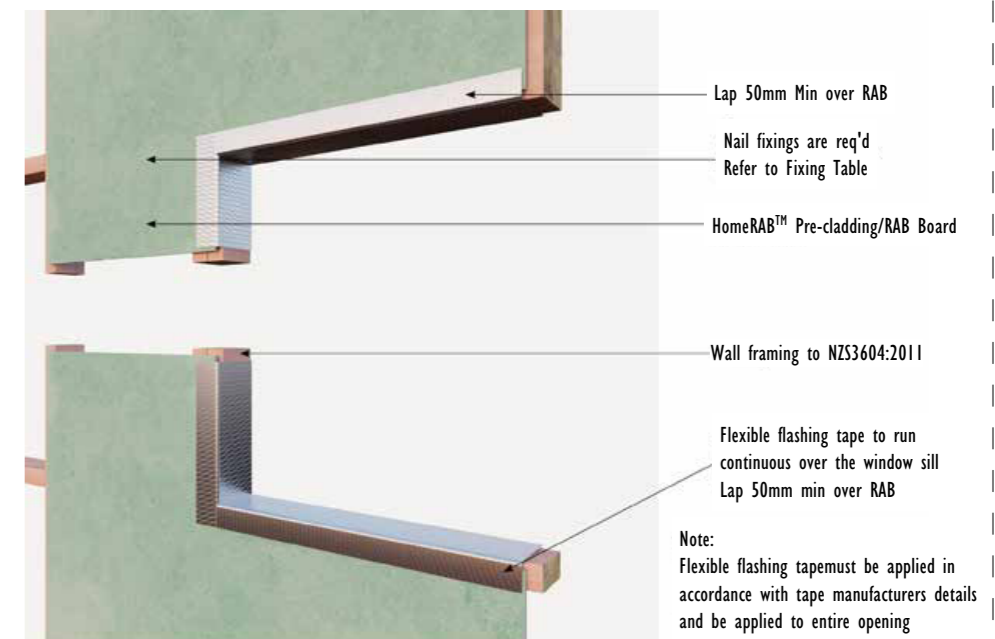
HR03

HOMERAB BASE  
1:10



HR02

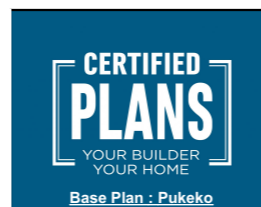
HOMERAB SETOUT  
1:10



HR04

HOMERAB OPENINGS  
1:10

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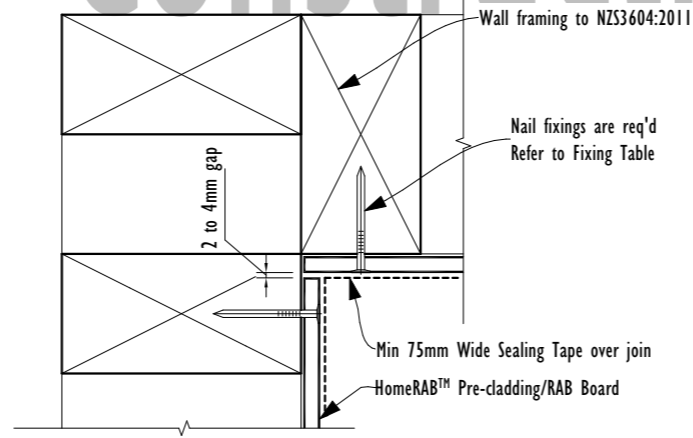
Project: New Dwelling  
GM Construction  
Lot 53 Pinehurst Crescent,  
Morrinsville

ID	Issue Name	Changes	Date
03	Structural Prelim		9/10/2020

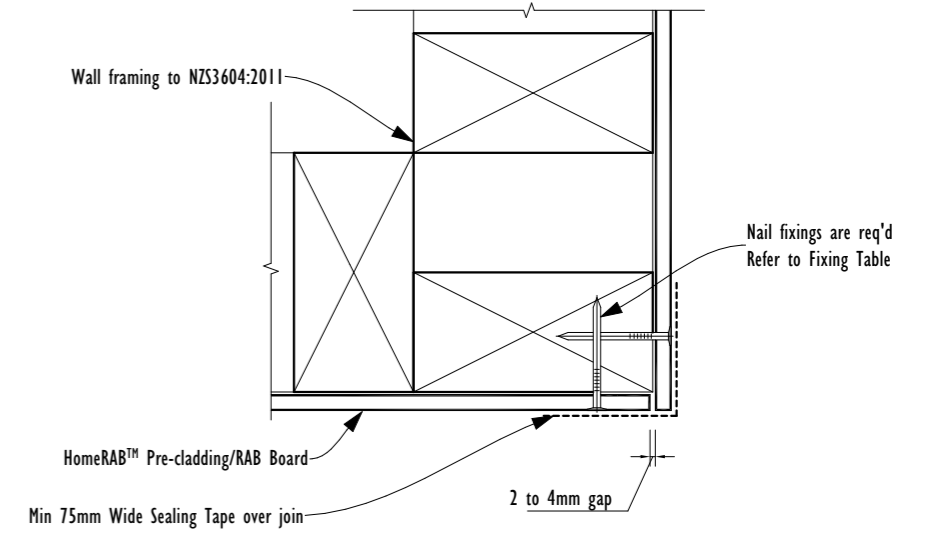
JH HOMERAB I  
Job Number: CP06  
Sheet: 43



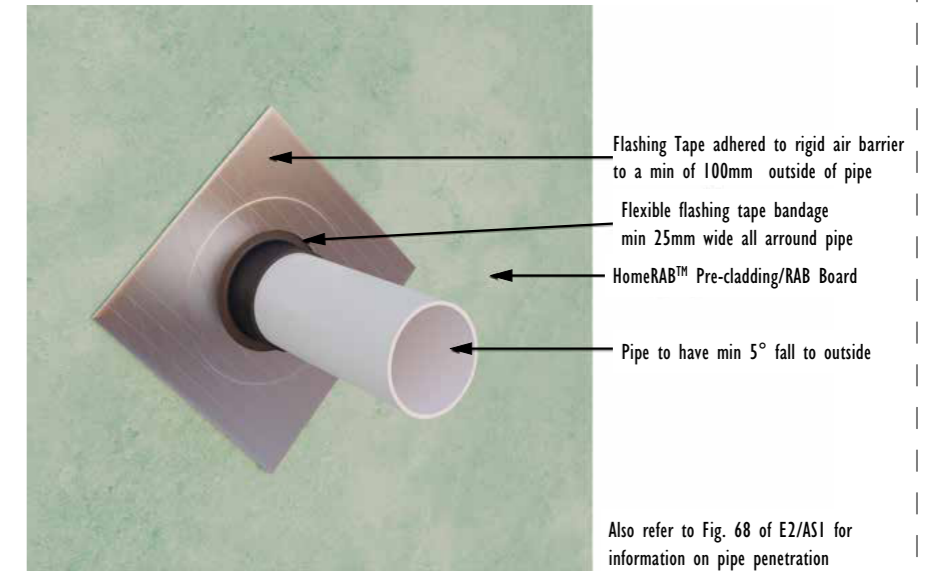
# Not for Construction



**HR05** HOMERAB INT. CNR  
1:10

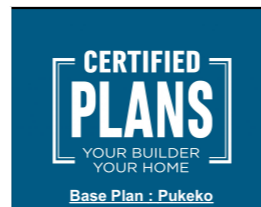


**HR06** HOMERAB EXT. CNR  
1:10



**HR07** HOMERAB PENETRATION  
1:10

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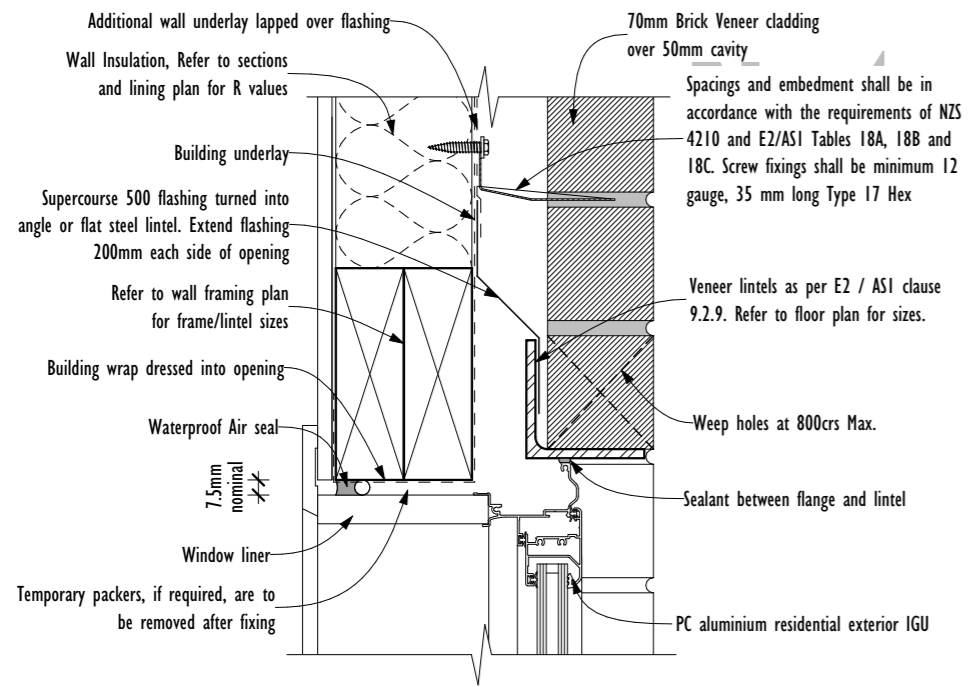


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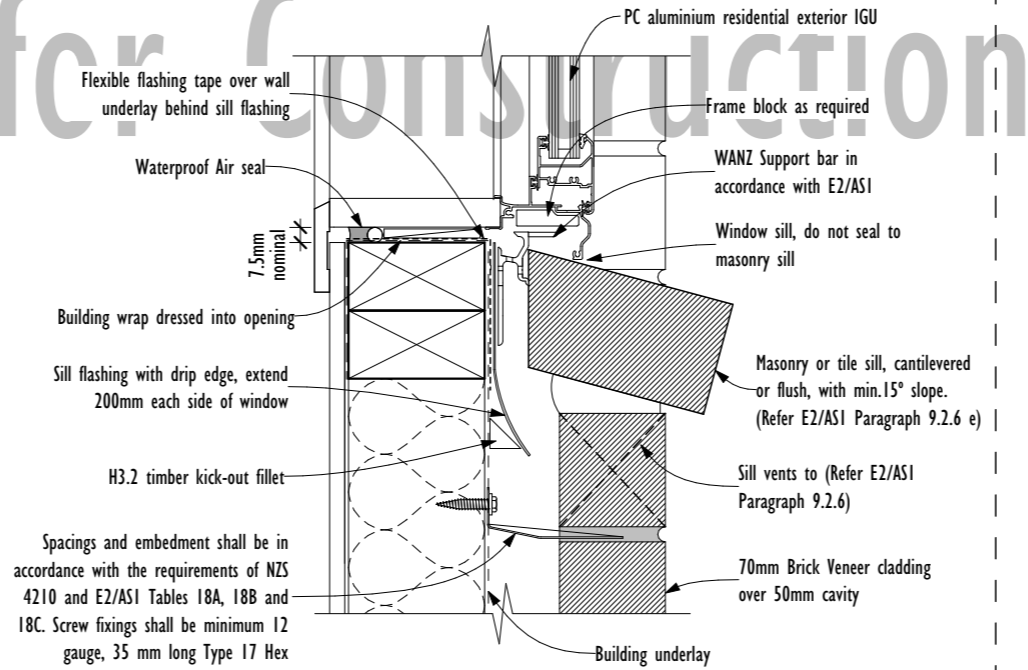
ID	Issue Name	Changes	Date
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Job Number: **CP06** Sheet: **44**

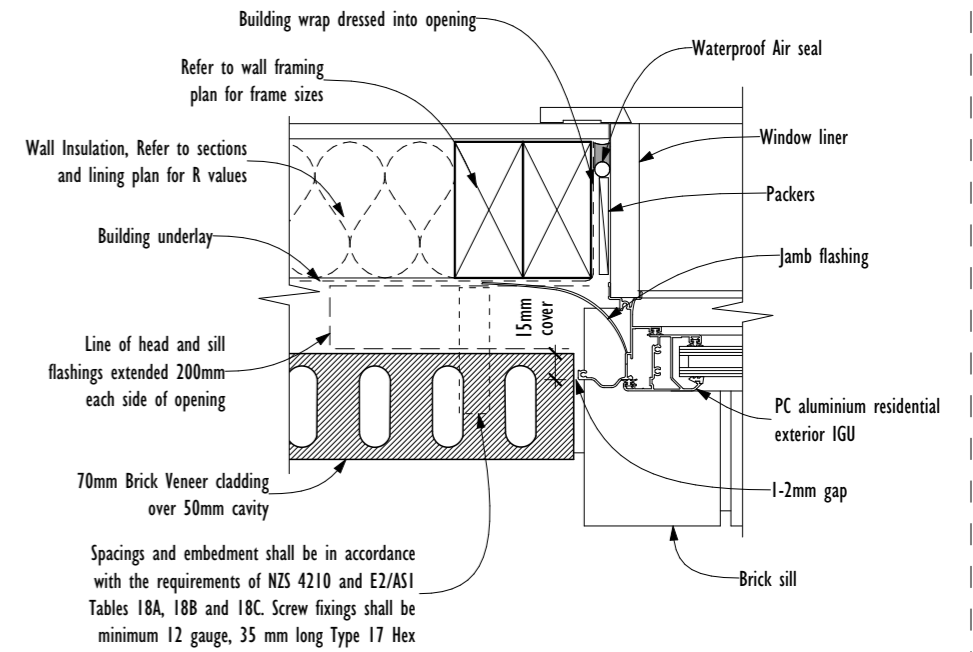
JH HOMERAB 2



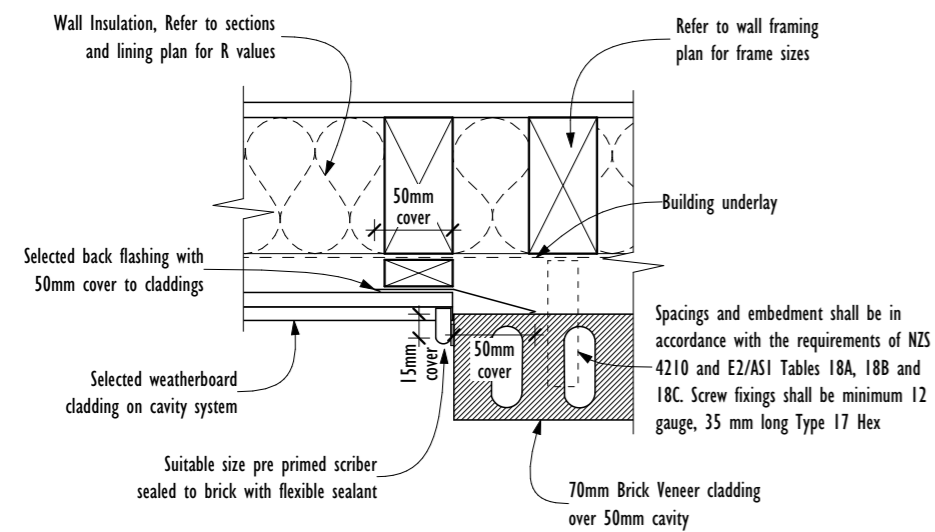
**B07** **OPENING HEAD**  
1:5



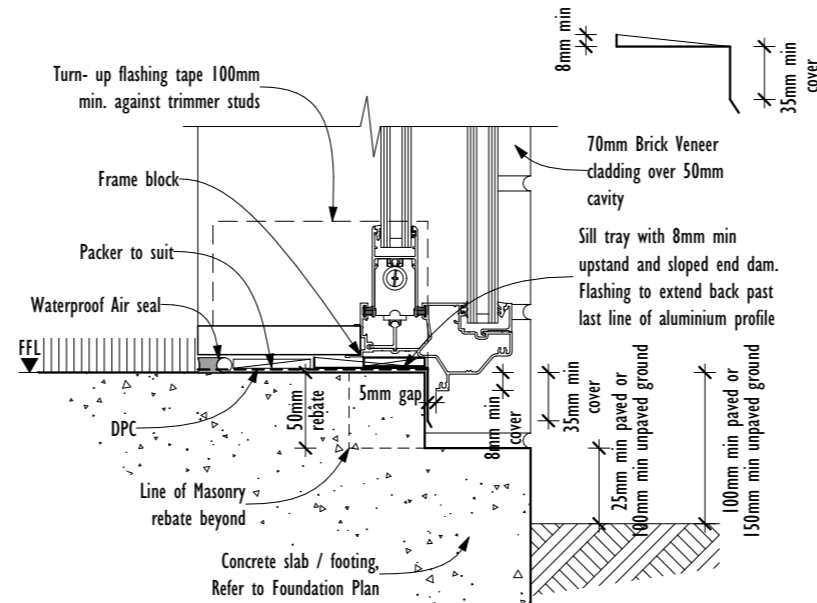
**B08** **OPENING SILL**  
1:5



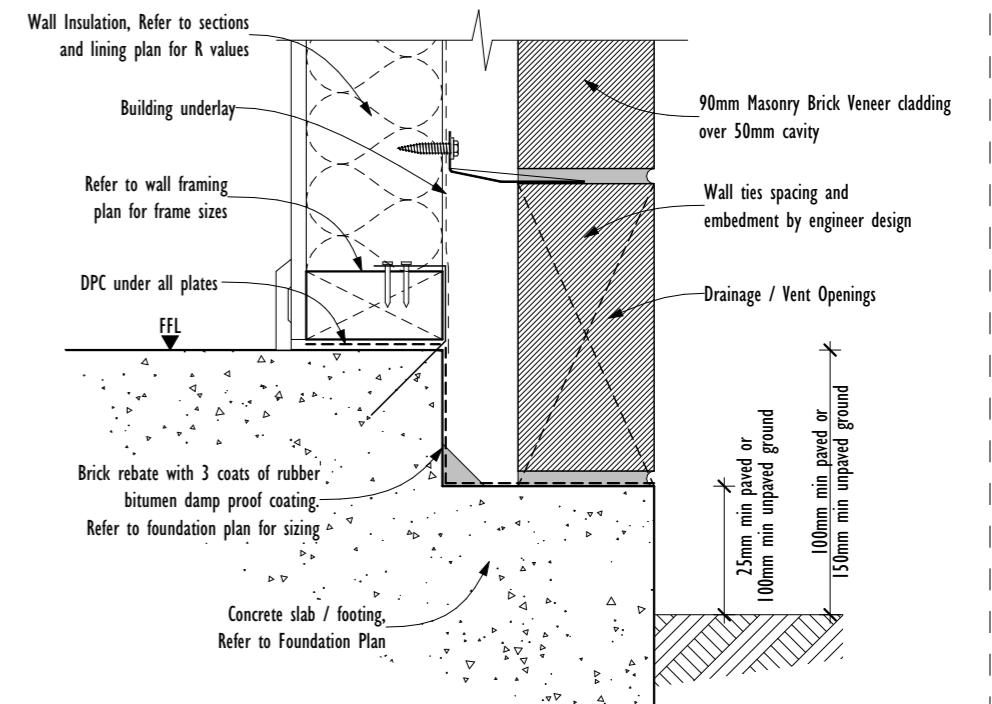
**B09** **OPENING JAMB**  
1:5



**B06** **JUNCTION TO WEATHERBOARD**  
1:5

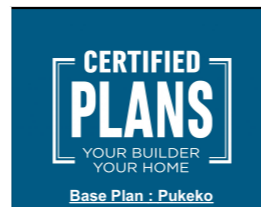


**B16** **DOOR SILL**  
1:5



**B01** **BRICK REBATED FOUNDATION**  
1:5

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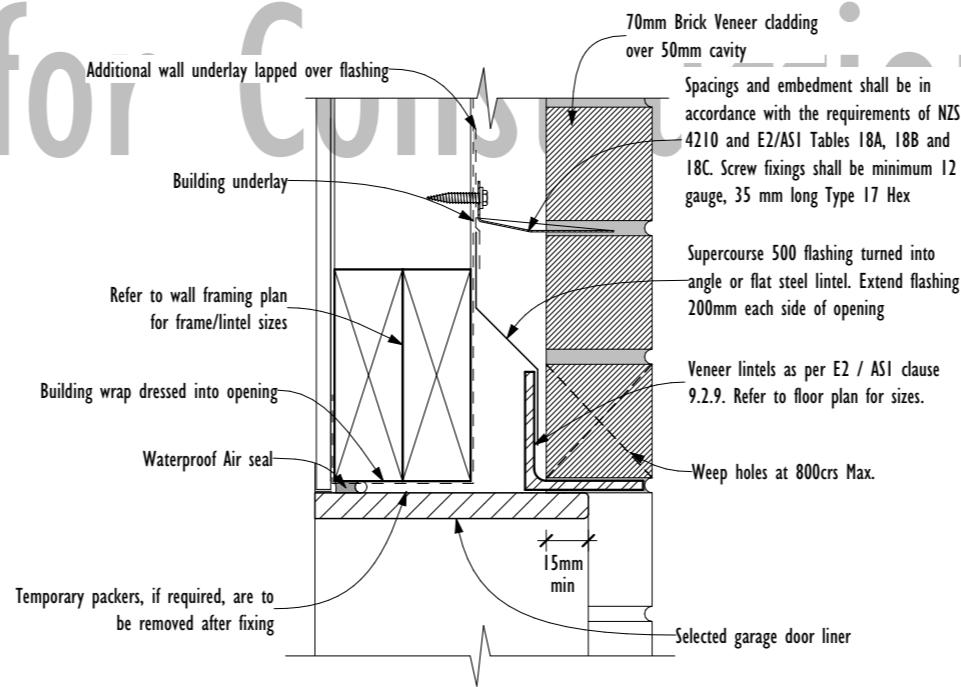
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BRICK DETAILS I  
 Job Number: **CP06** Sheet: **45**

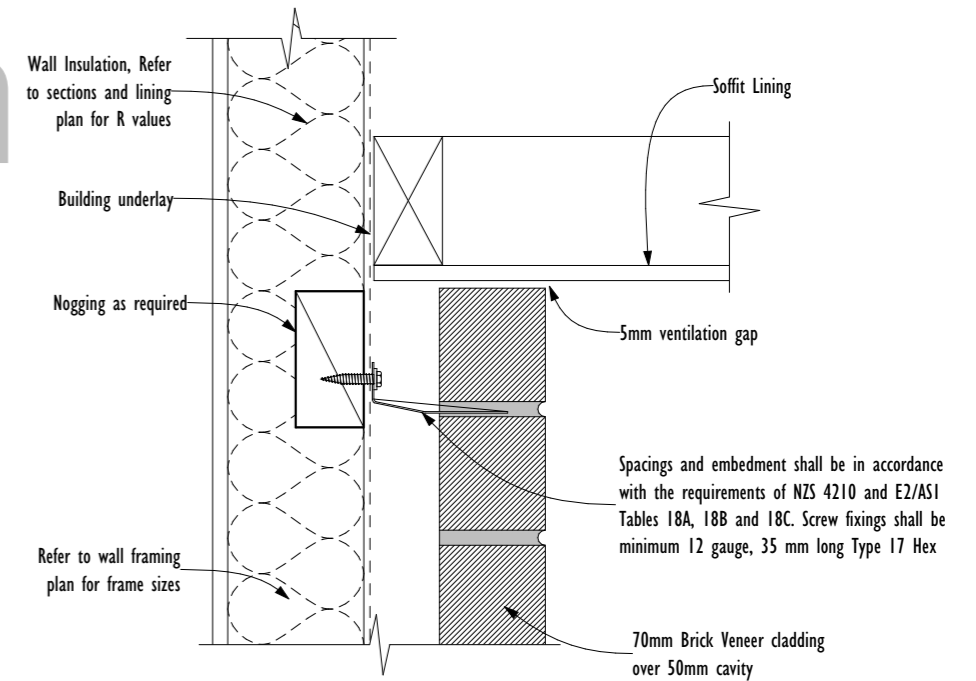


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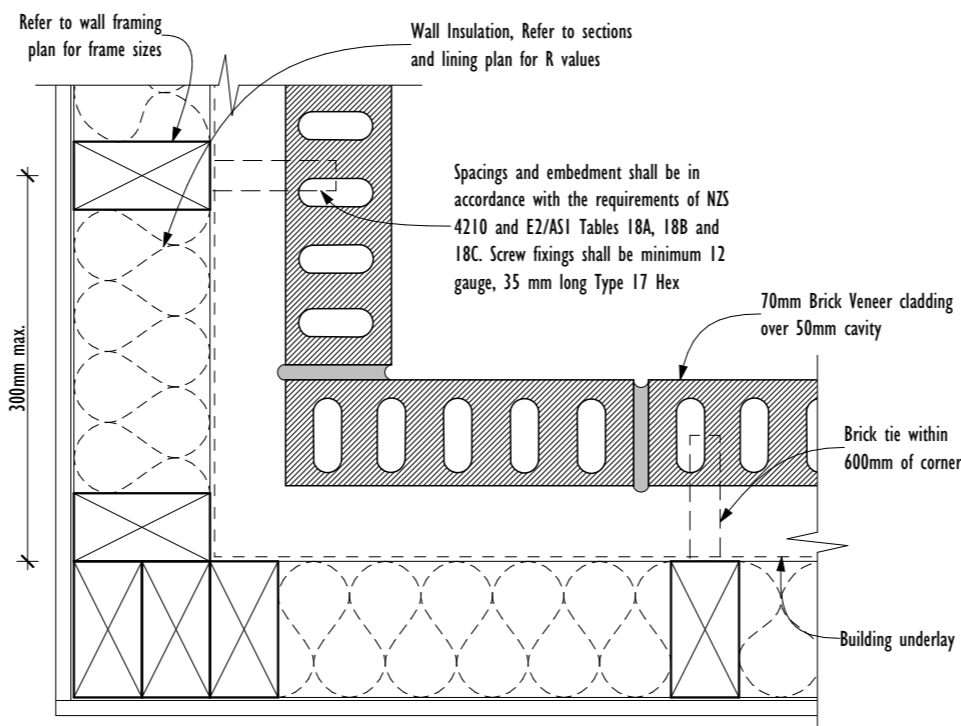
**B12**

**GARAGE HEAD-BRICK**  
1:5



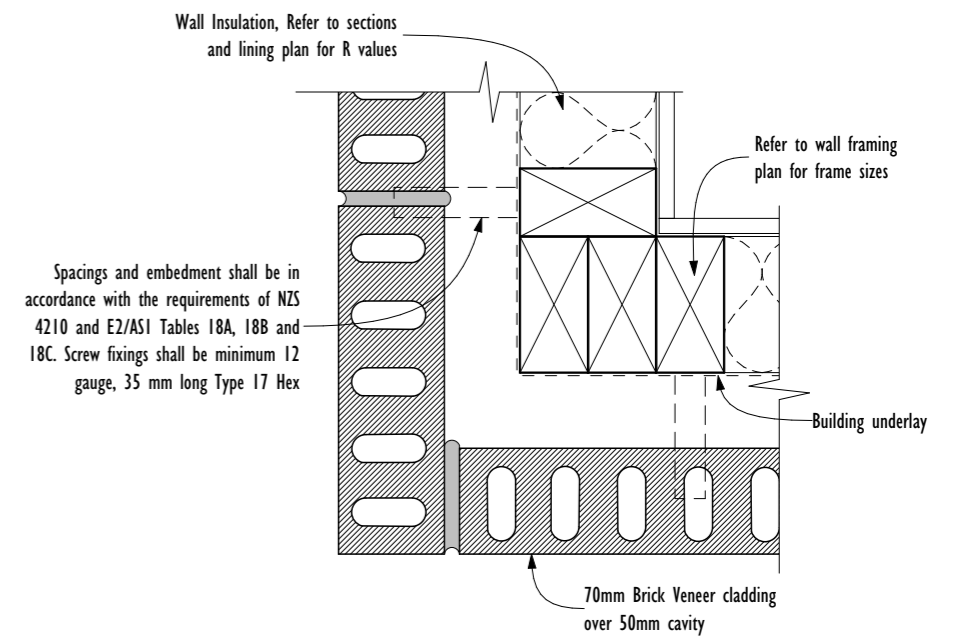
**B18**

**SOFFIT**  
1:5



**B02**

**INTERNAL CORNER**  
1:5



**B03**

**EXTERNAL CORNER**  
1:5

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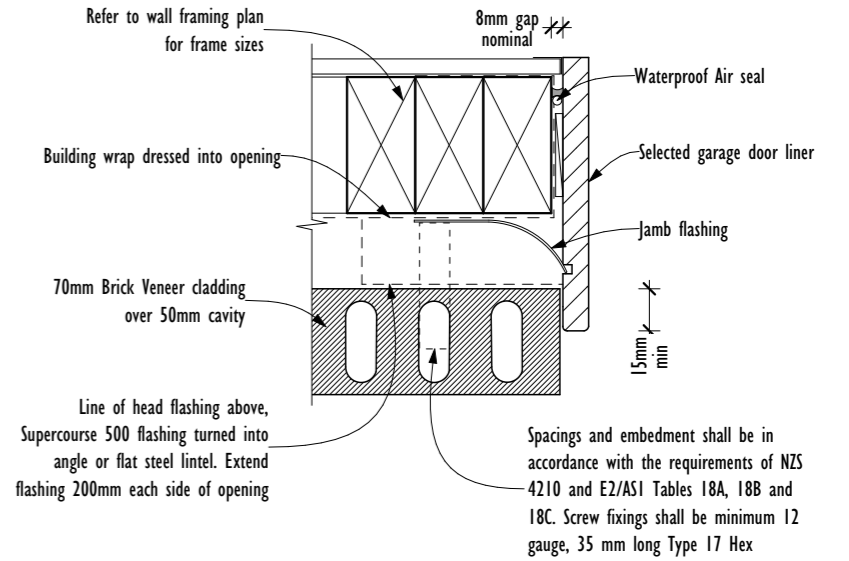
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ID	Issue Name	Changes	Date
03	Structural Prelim		9/10/2020

BRICK DETAILS 2  
Job Number: **CP06** Sheet: **46**

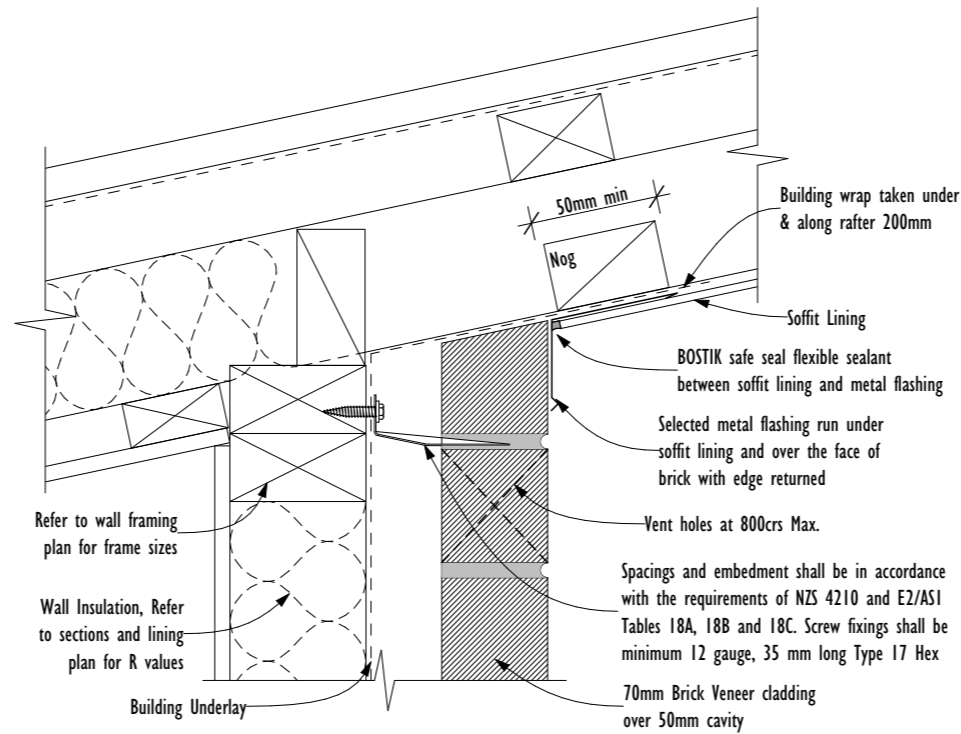


# Not for Construction



**B13**

**GARAGE JAMB**  
1:5



**B19**

**UPPER SOFFIT WITH METAL FLASHING**  
1:5

### Specification of maximum tie spacings for type B (4) veneer ties

Seismic zone	Masonry veneer Less than 180 kg/m			Masonry veneer 180 – 220 kg /m		
	Refer NZS 3604	Tie type (4)(5)	Maximum spacings Horizontal Vertical	Tie type (4)(5)	Maximum spacings Horizontal Vertical	
1		E-L	600 400	E-M	600 400	
2 <sup>(6)</sup>		E-M	600 400	E-H <sub>(3)</sub>	600 400	
3		E-H <sub>(1)</sub>	600 400	E-H <sub>(3)</sub>	600 400	
4		SED <sub>(2)</sub>	SED <sub>(2)</sub>	SED <sub>(2)</sub>	SED <sub>(2)</sub>	

### NOTES

- (1) Maximum masonry tie spacings of 600 mm horizontally and 400 mm vertically
- (2) Spacing of ties to be determined by specific engineering design
- (3) EM may be used if the horizontal spacings do not exceed 400 mm and the vertical spacings do not exceed 300 mm
- (4) Type B and Prefix E indicate masonry ties manufactured to AS/NZS 2699.1
- (5) L (Light), M (Medium), H (High) indicate strength capability of ties in AS/NZS 2699.1
- (6) Use seismic zone 2 (minimum) for Christchurch region comprising Christchurch City, Waimakariri District and Selwyn District
- (7) Variations in cavity width will require compensating adjustments to the length of tie
- (8) Screw fixings shall be minimum 12 gauge, 35 mm long hex washer face, Galvanised or stainless steel to suit the ties
- (9) All fixings for veneers over 220kg/m<sup>2</sup> require specific engineer design (SED)

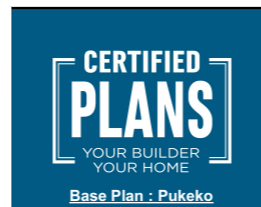
### Placement of wall ties

Location	Placement of masonry ties
Unsupported panel sides & edges of openings	Within 300 mm of panel side or edge.
Top of veneer panels and top of panels under openings	Within 300 mm or two courses (whichever is the smaller) of top of veneer
Bottom of veneer panel in masonry rebate sealed with liquid applied DPC	Within 300 mm or two courses (whichever is the smaller) of bottom of veneer
Bottom of veneer panel supported on steel angle lintel	
Bottom of veneer panel in masonry rebate with membrane DPC	In each of the first two courses

**B20**

**VENEER TIES**  
1:5

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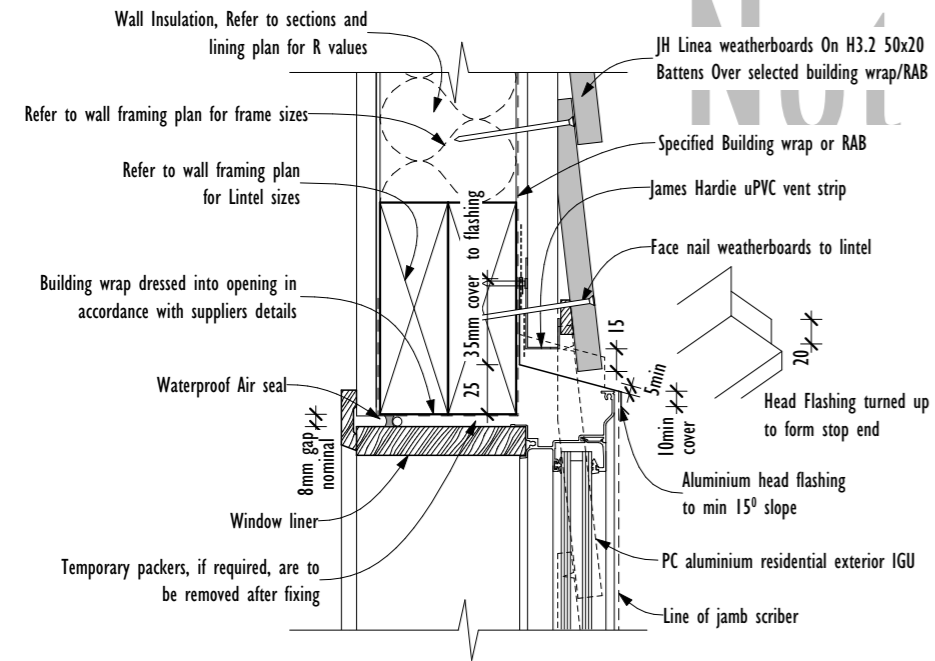


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ID	Issue Name	Changes	Date
03	Structural Prelim		9/10/2020

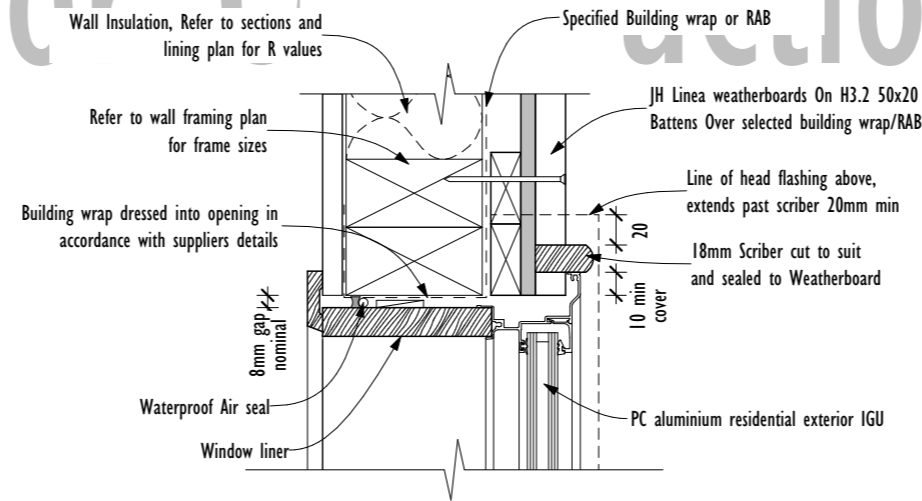
BRICK DETAILS 3  
Job Number: **CP06** Sheet: **47**





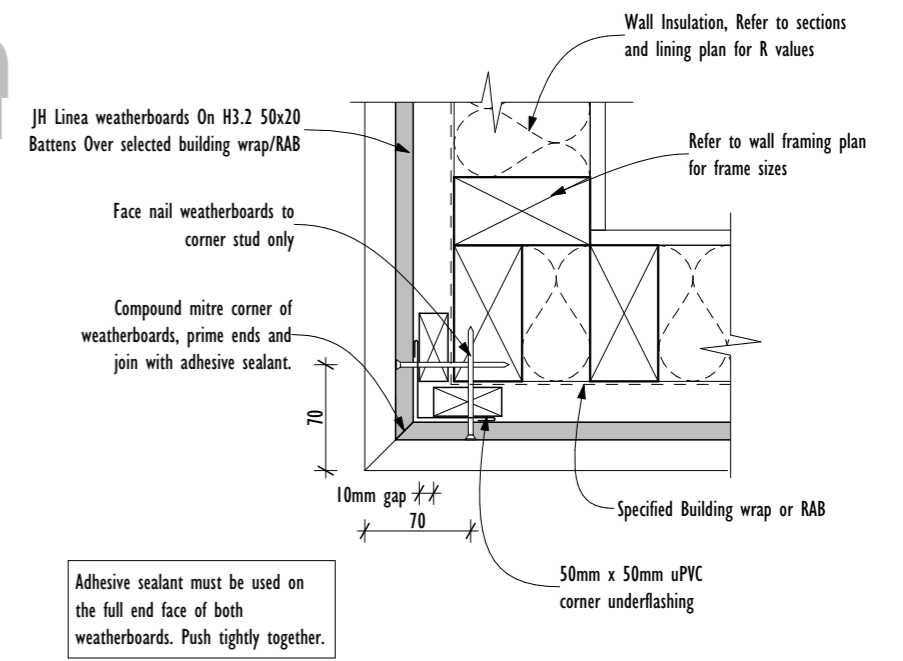
LW11

**OPENING HEAD**  
1:5



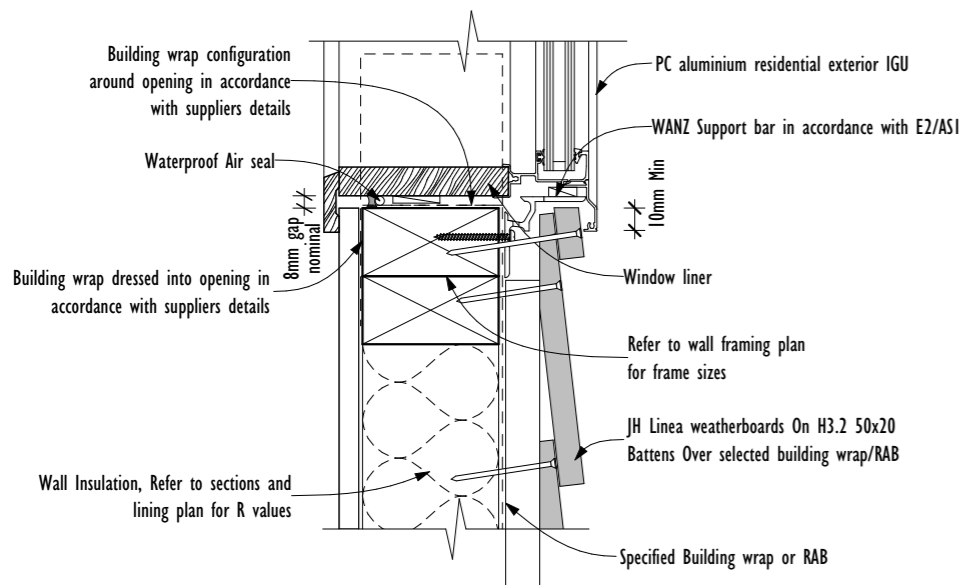
LW12

**OPENING JAMB**  
1:5



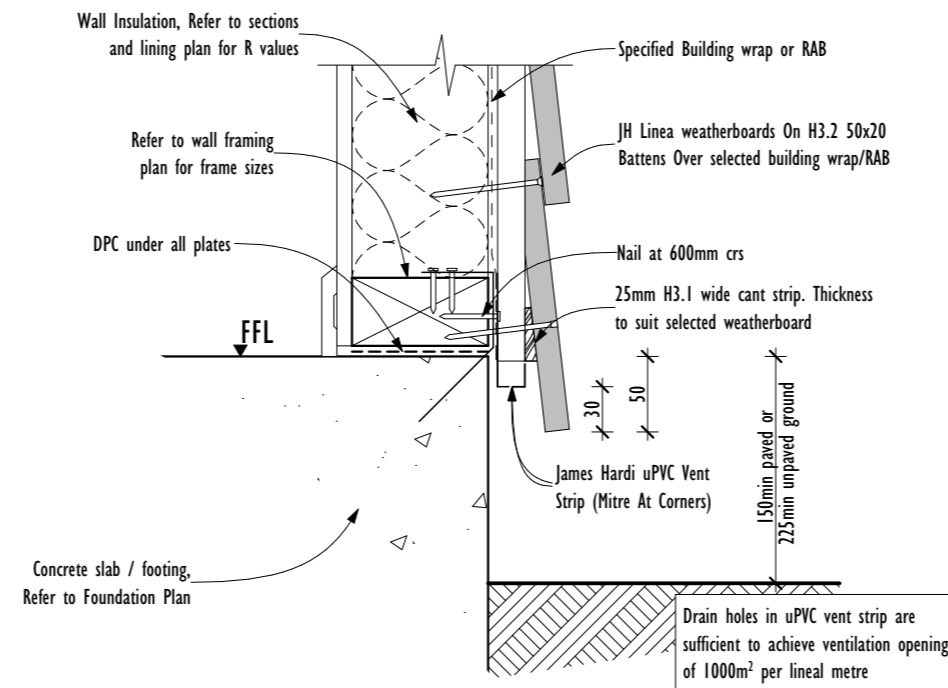
LW04

**EXTERNAL CORNER - MITRE**  
1:5



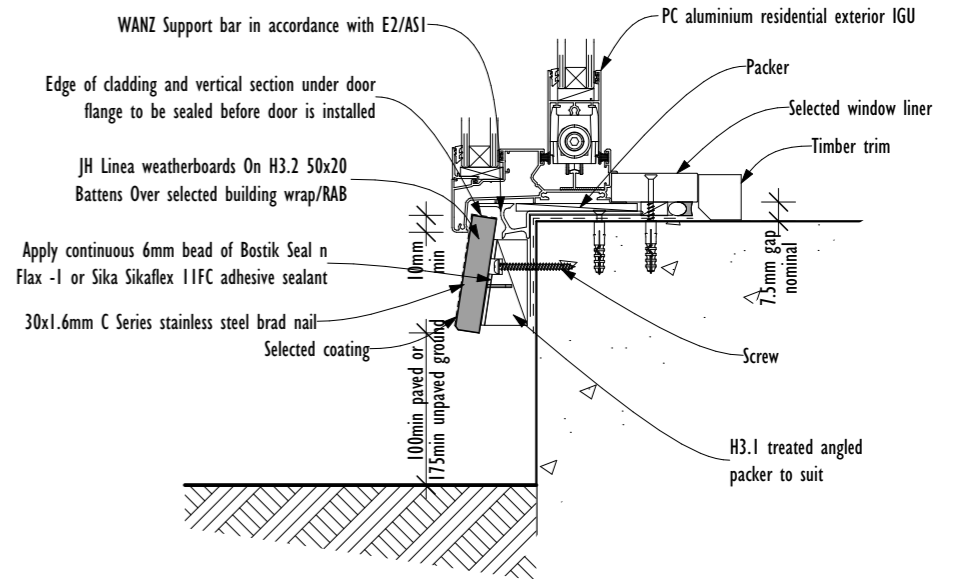
LW10

**OPENING SILL**  
1:5



LW01

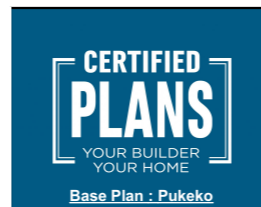
**CONCRETE FOOTING**  
1:5



LW27

**DOOR SILL**  
1:5

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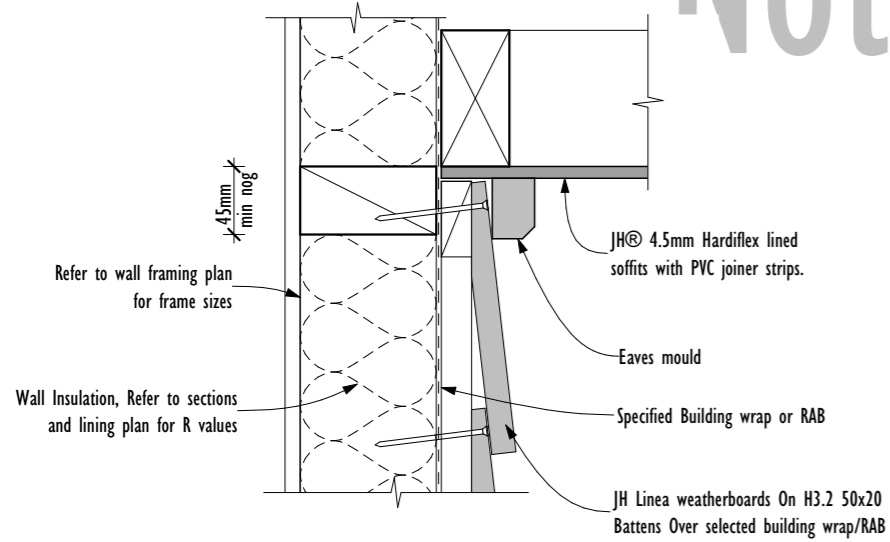
ID	Issue Name	Changes	Date
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LINEA DETAILS I  
Job Number: **CP06** Sheet: **48**



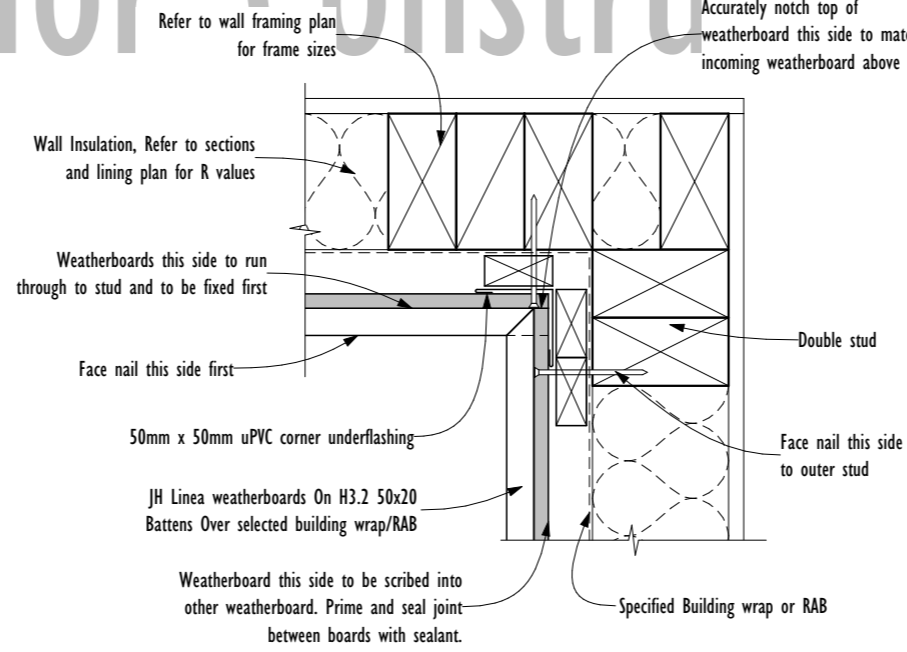


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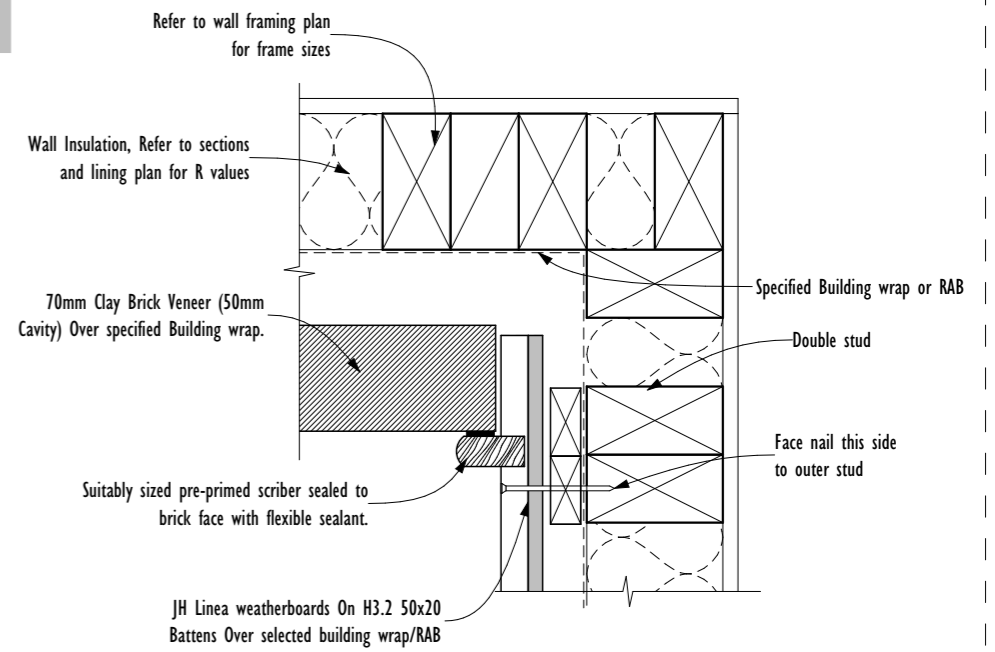
LW03

SOFFIT  
1:5



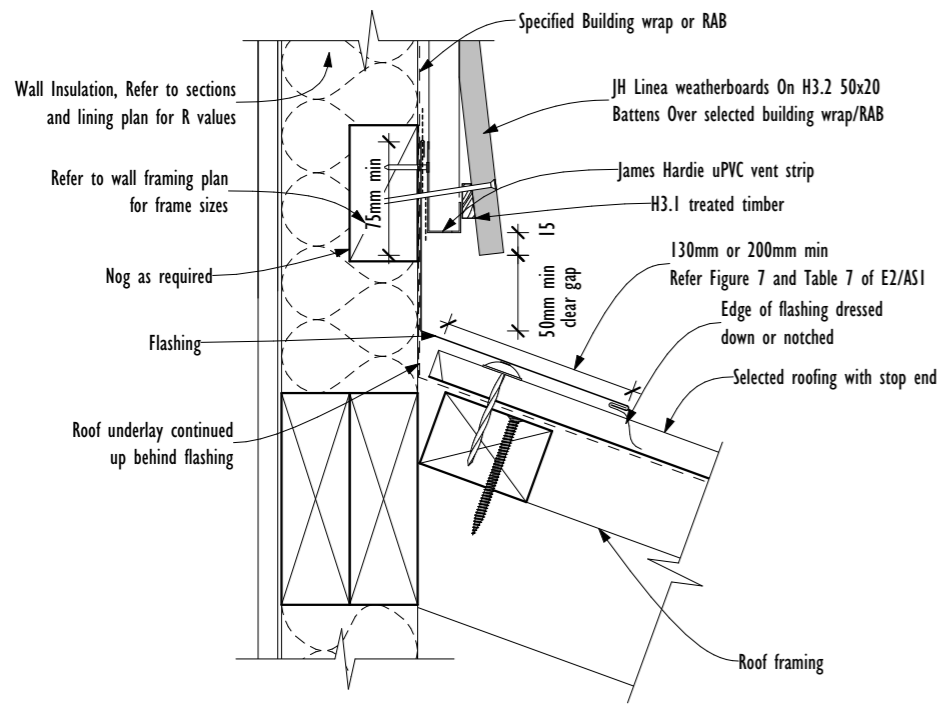
LW08

INTERNAL CORNER - PVC  
1:5



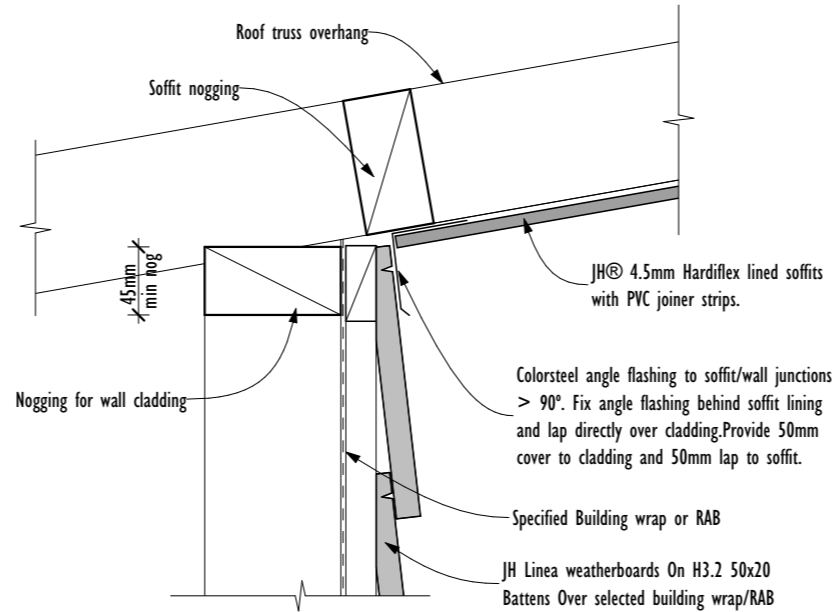
LW22

INT. CNR TO BRICK  
1:5



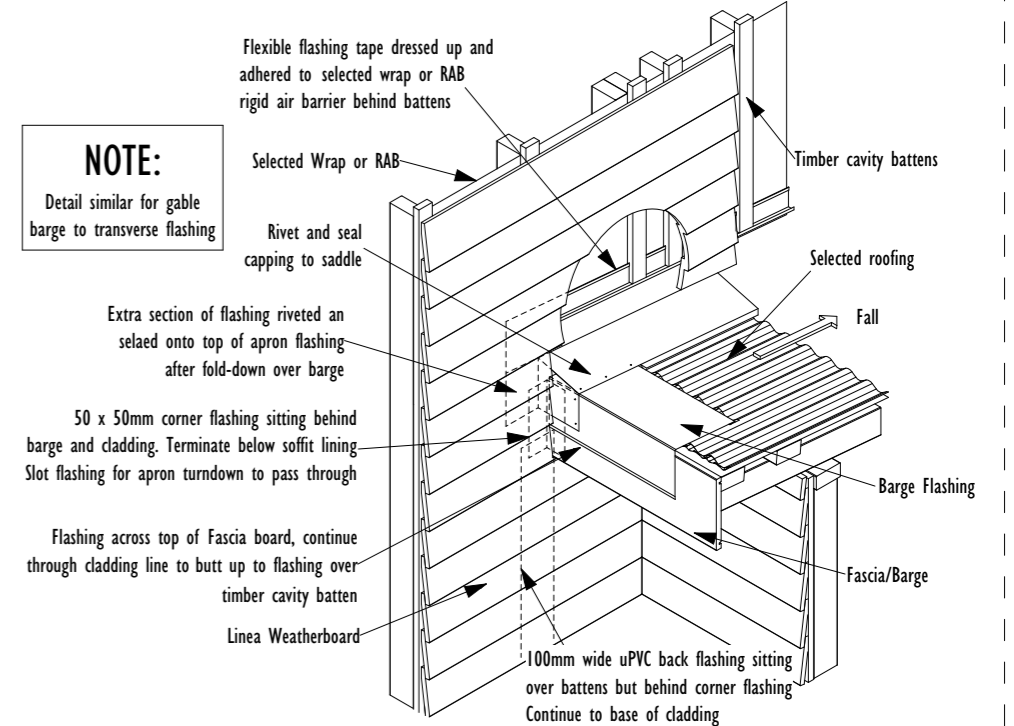
LW20

APRON  
1:5



LW28

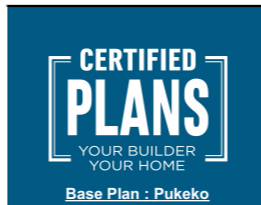
SOFFIT FLASHING  
1:5



LW26

BARGE TO WALL  
1:20

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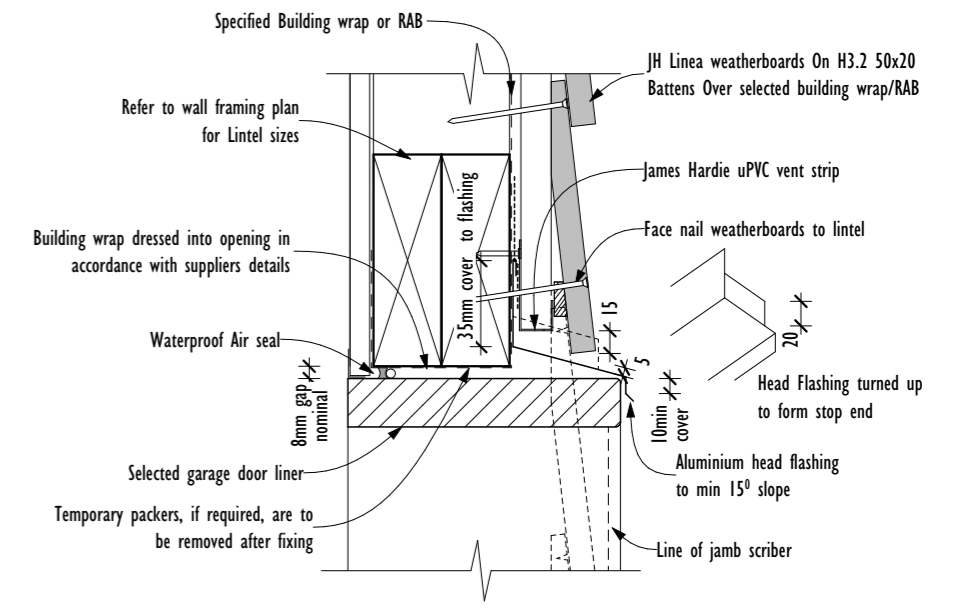
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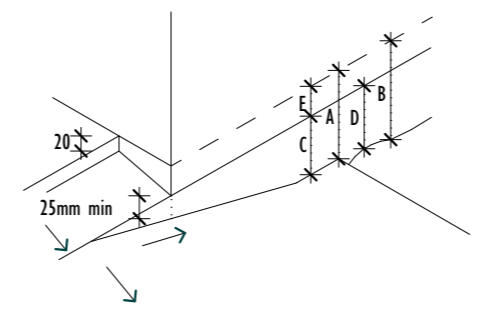
LINEA DETAILS 2  
Job Number: **CP06**  
Sheet: **49**



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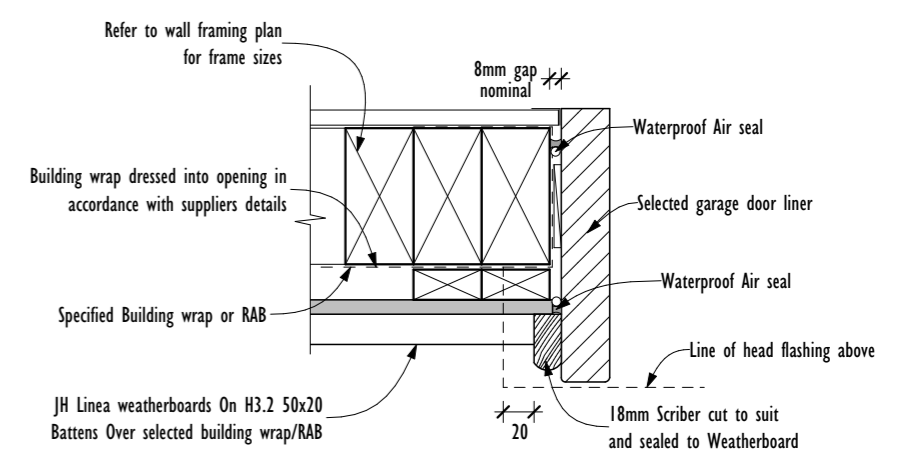
**LW16** GARAGE HEAD 1:5



Minimum Clearances (mm)	Masonry Veneer		Other Claddings				
	A	B	A	B	C	D	E
Concrete Slab	100	150	150	225	100	175	50
Timber Floor (refer note1)					100	175	50 (2)

NOTE: 1). Refer to NZS3604 for requirements.  
2). Cladding to extend minimum 50mm below bearer or lowest part of timber floor framing

**GC01** THRESHOLD & GROUND CLEARANCES 1:10



**LW18** GARAGE JAMB 1:5

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LINEA DETAILS 3  
Job Number: **CP06** Sheet: **50**

