

Approved Building Consent Documents

Please Note: A copy of the stamped approved documents must be available on site for all inspections.

Inspection booking timeframes

Call received	before 3pm inspection will be done	after 3pm inspection will be done
Monday	Wednesday	Thursday
Tuesday	Thursday	Friday
Wednesday	Friday	Monday
Thursday	Monday	Tuesday
Friday	Tuesday	Wednesday

Building inspections and enquiries phone: 03 347 2839

Please ensure all work for inspection is ready the day before. Incomplete work requiring re-inspection will incur an additional inspection fee.

GENERAL

- Do not scale from drawings. These drawings are to be read in conjunction with the architectural drawings and all other related documents. Refer to architectural drawings for dimensions, rebates & recesses.
- Contact the architect/engineer if any discrepancies are found.
- Under no circumstances shall polystyrene spacers be used. Use recommended spacers as per details provided.
- DPM shall be in accordance with NZS3604 (polyethylene sheet, min. 0.25mm). Do not use multiple layers. All penetrations through the DPM shall be sealed.
- A layer of sand blinding or granular fines (GAP7) shall be placed, screeded and compacted over the building platform. The maximum thickness of this layer shall be no more than 50mm.
- All service trenches shall be properly backfilled and compacted.
- Where underfloor heating is installed, floor topping shall be increased to 110mm.
- Where concrete polishing and/or architectural cuts are made to the floor, the floor thickness shall be increased such that the final topping depth is no less than that specified on the plans after all polishing/cuts.
- Polystyrene pods shall be 1100 x 1100 x 220mm or 1200 x 1200 x 220mm.

CONCRETE

- All concrete work and materials shall conform to NZS3109 and applicable building consent authority regulations.
- No cuts shall be made to the floor other than those shown on the drawings.
- Unless otherwise noted, concrete shall be:
Raftfloor: Raftmix 20MPa minimum or 25MPa minimum within 'exposure zone D' (if in doubt, confirm with local BCA)
Other concrete: 20MPa minimum or 25MPa minimum within 'exposure zone D'

REINFORCEMENT

- Unless otherwise specified, all reinforcement shall be Ductility Class E, in accordance with NZS 4671.
- All bend diameters shall comply with NZS 3109. Re-bending of reinforcement is not permitted. 'Spot' welding of reinforcement is not permitted.
- All mesh reinforcement shall be Ductility Class E as per NZS4671
- Unless otherwise specified by proprietary product specifications, mesh shall be lapped a minimum of 250mm or by a grid plus 50mm, whichever is greater.
- Unless otherwise specified on plans, minimum covers are:
exposed to earth: 75mm
exposed to edge: 50mm
protected by damp proofing: 50mm
- Unless otherwise specified, reinforcement laps are:

Reinforcement Grade	Nomination	min. lap (whichever is greater)	concrete strength (MPa)
300	'D'	40Ø or min. 600mm	all blockfill, 20 and 25
500	'HD'	70Ø	all blockfill
500	'HD'	56Ø	20
500	'HD'	50Ø	25

SITE CONDITIONS

- Design based on soils report/assessment
By: Soil & Rock Consultants
Ref: C18140
Dated: 15 March 2019
Specifically:
A) Design based on all unsuitable material removed (to approximate depth of 0.15 to 0.35m) and uniform soils across building platform with a minimal ultimate bearing capacity of: 300 kPa.
B) Subgrade should be adequately watered & rolled by vibrating roller, inspected by engineer before granular fill is placed.
C) For filled ground, minimum ultimate bearing capacity of 300kPa for hardfill such as GAP40 etc, subject to engineers confirmation.
- Building platform, where filled above CGL/FGL, shall be extended min. 1.0m beyond the building footprint.
- Confirm position & depth of soakpit on the site, prior to any works. If different to the site plan then Wilton Joubert Ltd. shall be contacted.
- Where compacted fill (to replace excavated material) is required to form building platform, the fill/excavation shall be extended past the building edge by at least the same depth that is being excavated.
- Building foundation shall be outside of 3m influence line from the edge of soakpit.

INSPECTIONS

- Check the BUILDING CONSENT CONDITIONS for any inspections that are required by the Building Consent Authority (BCA).
- It is increasingly common for building consent authorities to require a "PS4" for specifically designed structures. For Wilton Joubert Ltd. to issue this, we need to carry out inspections as per the building consent requirements. Ring Wilton Joubert Ltd. local office to arrange a booking.
NO INSPECTION EQUALS NO PS4 ISSUED.
- Recommended Inspections:
- Site cut to suitable subgrade (This may be carried out by Wilton Joubert Ltd. or by the author of the geotechnical report).
- Compaction of fill (This may be carried out by Wilton Joubert Ltd. or by the author of the geotechnical report).
- Concrete pre-pour of foundations (& any other structural elements).

It is the building consent applicant's (or authorised agent) responsibility to ensure that Wilton Joubert Ltd. is notified in advance of the required inspection. We cannot issue PS4 for items we did not inspect. Bookings should be made 48 hours prior to the desired time of inspection.

Designed for:



North Island: Simon
027 205 9118 simon@rfl.co.nz
South Island: Dayle
027 692 1624 southisland@rfl.co.nz

NOTES:

Do not scale from Drawings. Refer Architectural Drawings for overall dimensions. To be read in conjunction with all other related documents.

Revision	Description	Date



Consulting Engineers
Northland: 09 945 4188
Auckland-Waikato: 09 527 0196
Canterbury: 021 824 063
Southern Lakes: 03 443 6209
www.wiltonjoubert.co.nz

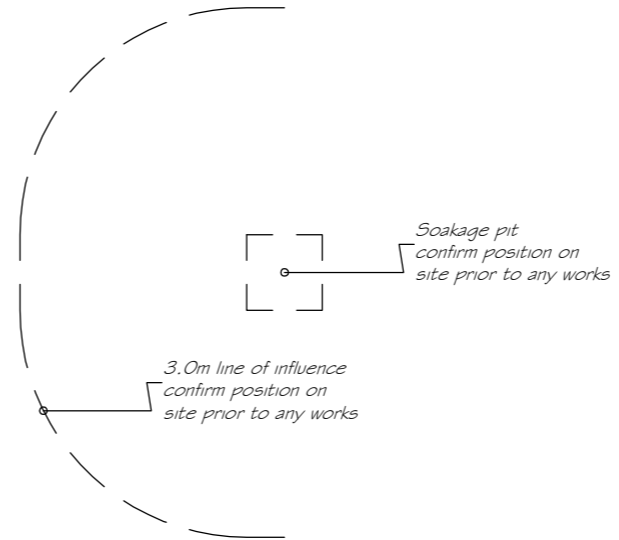
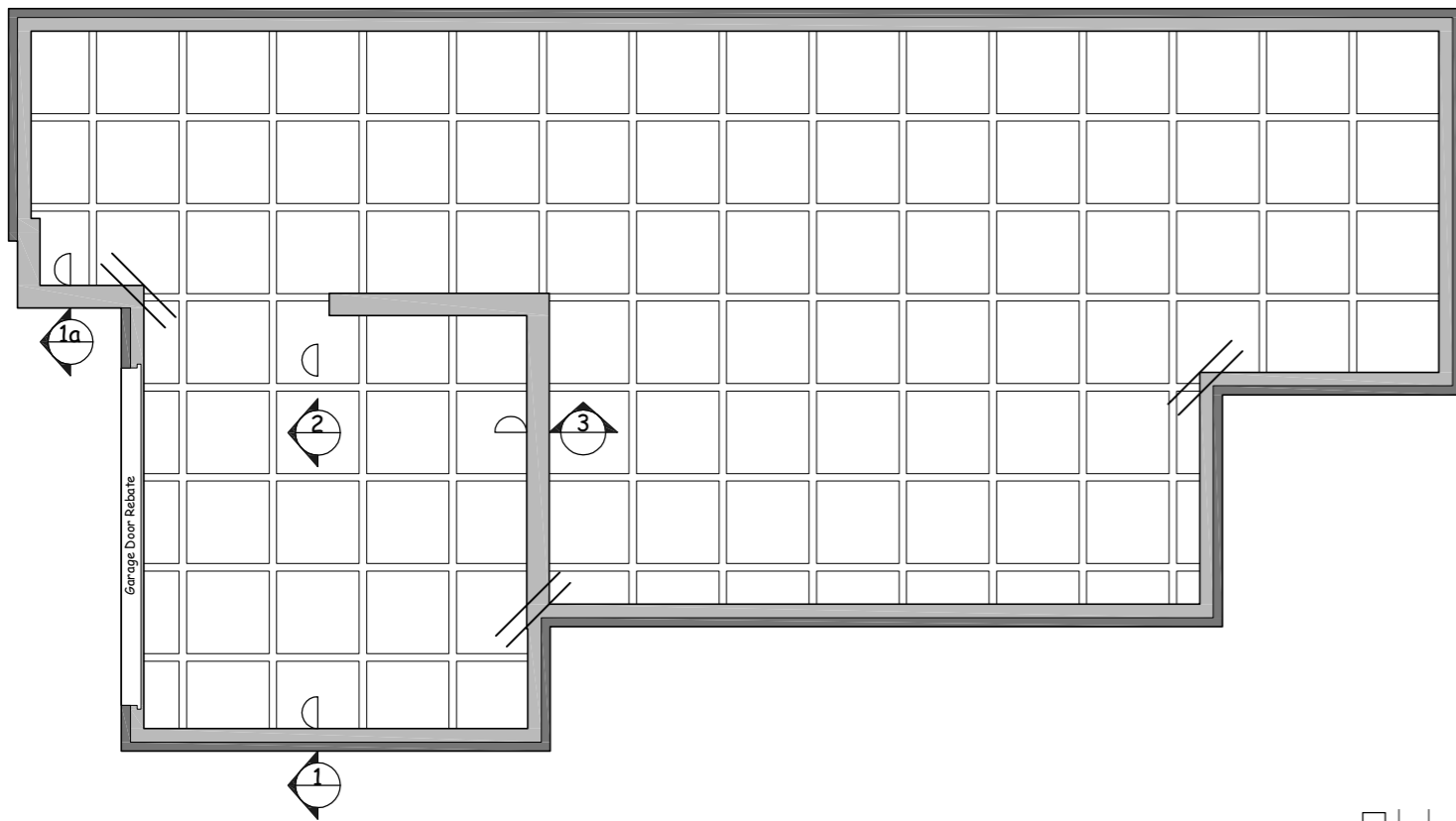
Job Title:

Proposed Residence
Lot 72,
Acland Park,
Rolleston

Sheet Title:

General Notes

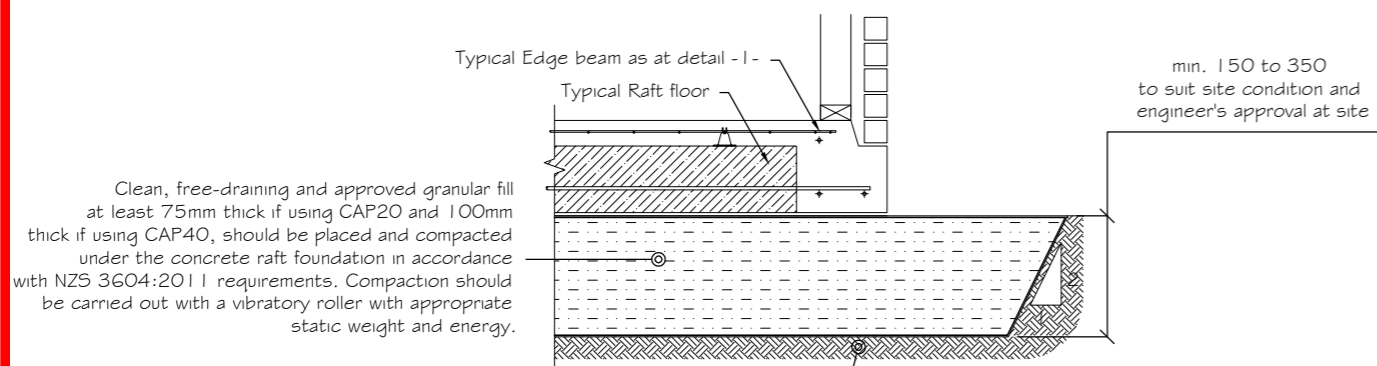
Prepared: YL	Drawn: MH
Checked: DL	Reviewed: ...
Scale:	Date: 5-9-2019
Job # 89699	50



Raft Floor Plan
Scale 1:100

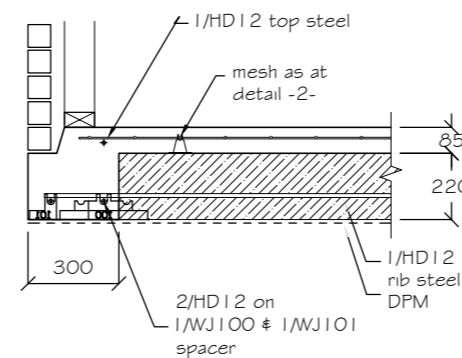
Legend:

 Re Entrant corner steel
 2/HD 12 x 1200mm
 at 200 crs

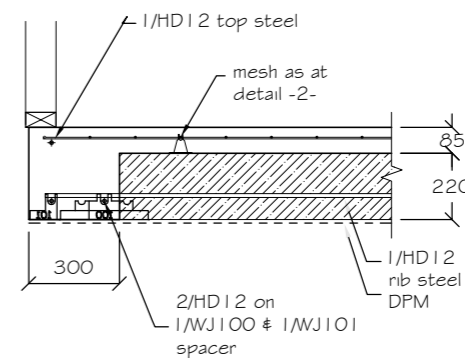


1. Remove any surficial topsoil ('turf'), fill material and loose/weak soils to certified fill or natural dense gravelly soils
 2. Exposed subgrade should be adequately watered & compacted by vibrating roller before inspected by geotechnical engineer
- Subgrade: Uniform soils with minimum ultimate bearing capacity of 300kPa or greater, subject to geotechnical engineers inspection

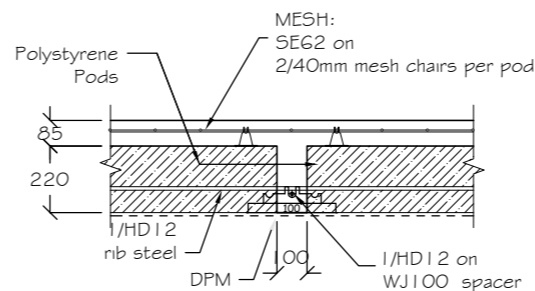
1b
Detail
Raftfloor Edge Beam - 300
on Gravel Raft
Scale 1:25



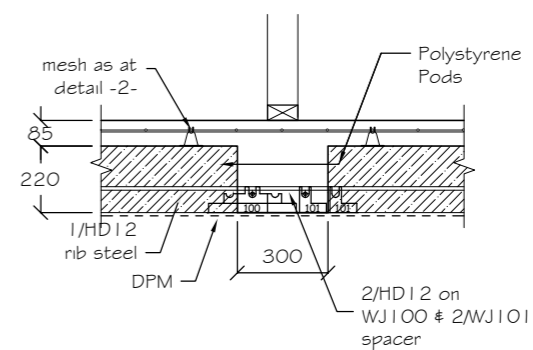
1
Detail
Raftfloor Edge Beam - 300
Scale 1:25



1a
Detail
Raftfloor Edge Beam - 300
Scale 1:25



2
Detail
Raftfloor Internal Rib - 100
Scale 1:25



3
Detail
Raftfloor Internal Rib - 300
Scale 1:25

Designed for:

North Island: 027 205 9118
South Island: 027 692 1624

Simon simon@rfl.co.nz
Dayle southisland@rfl.co.nz

Quantities of Spacers
 (Quantities are approximate and to be used as a guide only)

Item	Qty.
WJ100 Centre Spacer	160
WJ101 Clip-on Spacer	73

NOTES:
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Revision	Description	Date

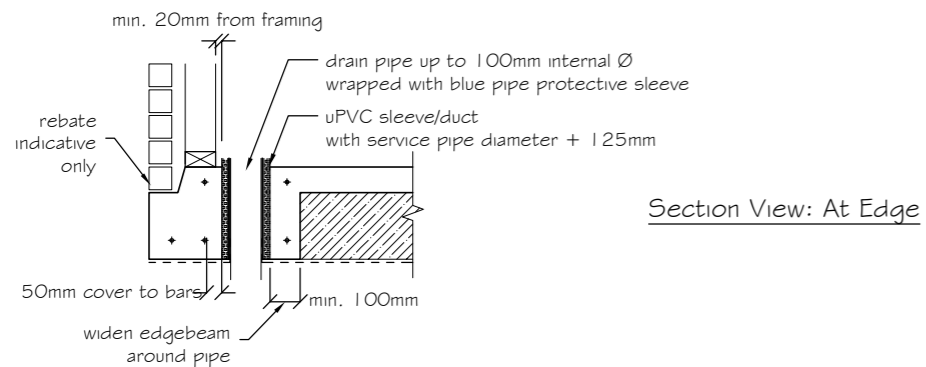
WILTON JOUBERT
 Consulting Engineers

Northland: 09 945 4188
 Auckland-Waikato: 09 527 0196
 Canterbury: 021 824 063
 Southern Lakes: 03 443 6209
 www.wiltonjoubert.co.nz

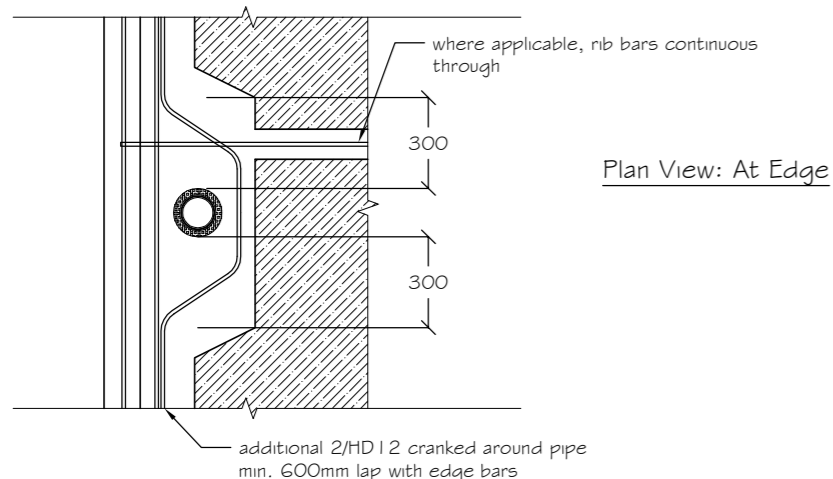
Job Title:
Proposed Residence
 Lot 72,
 Acland Park,
 Rolleston

Sheet Title:
Raft Floor
Plan & Details

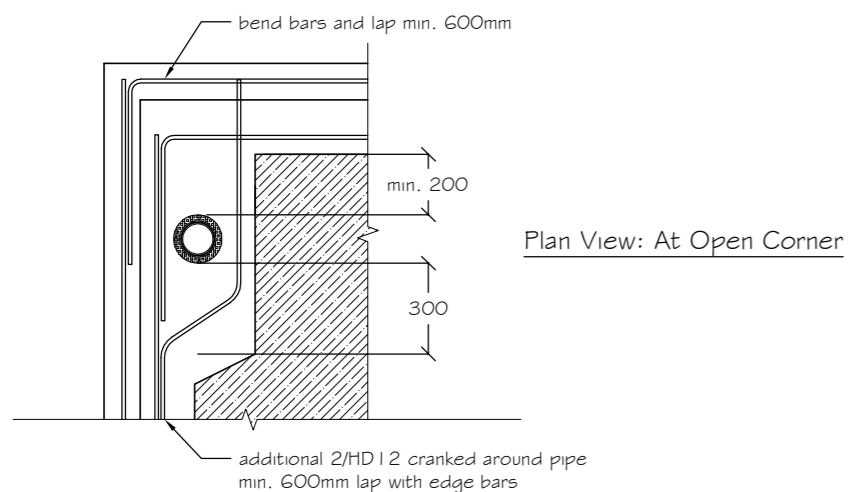
Designed: YL	Drawn: MH
Checked: DL	Revised: ...
Scale: 1:100 & 1:25	Date: 5-9-2019
Job # 89699	
S1	



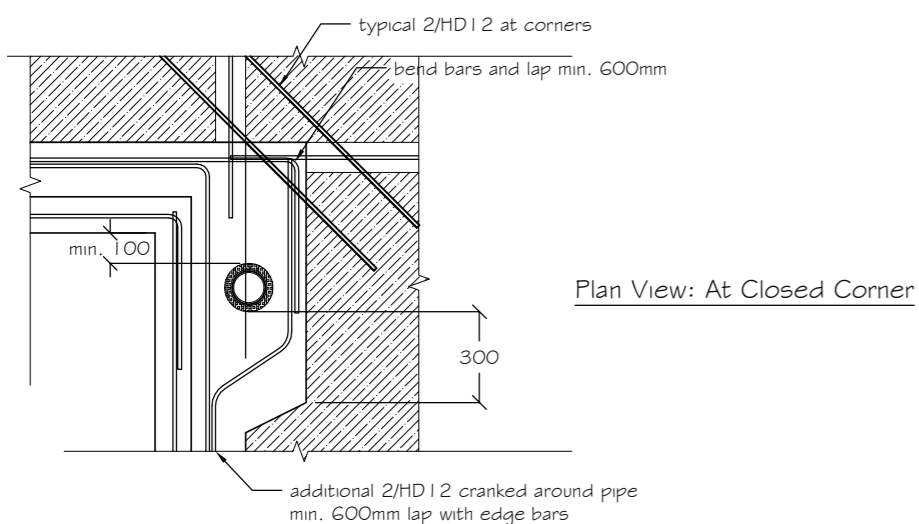
Section View: At Edge



Plan View: At Edge

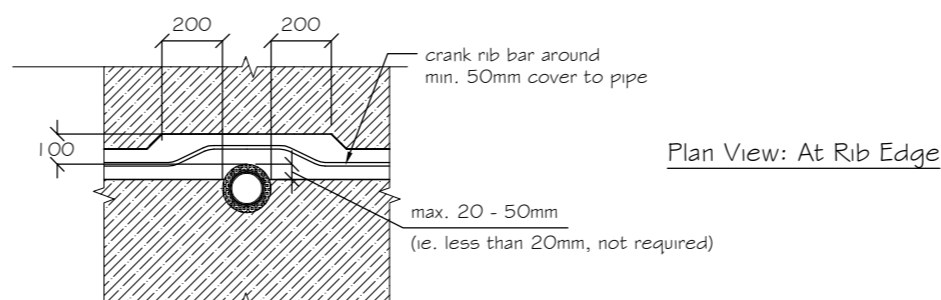


Plan View: At Open Corner

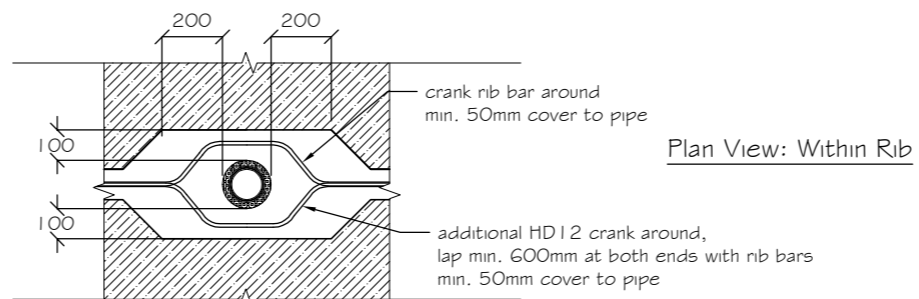


Plan View: At Closed Corner

○ Typical Detail Around Pipes
Raftfloor Edge Beam

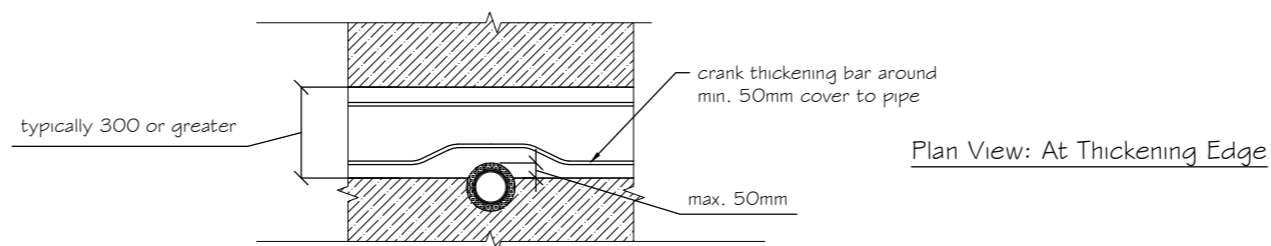


Plan View: At Rib Edge

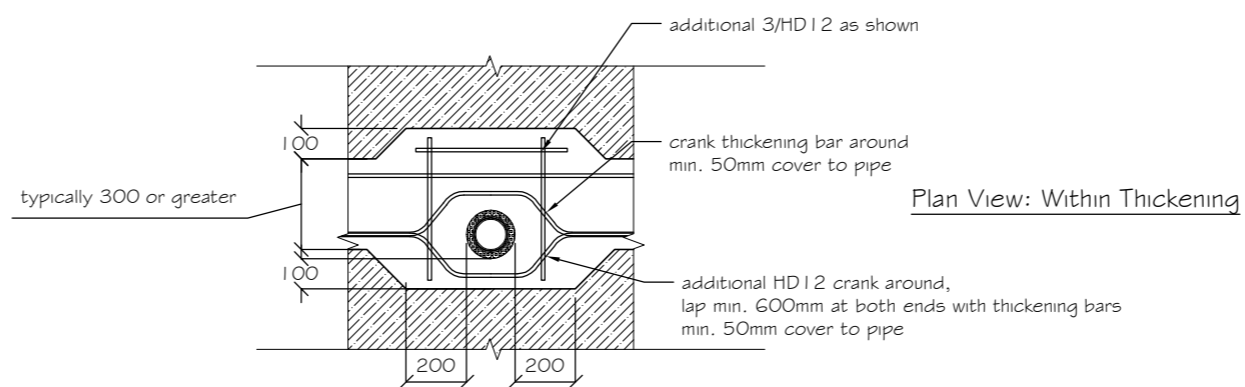


Plan View: Within Rib

○ Typical Detail Around Pipes
Raftfloor Internal Ribs



Plan View: At Thickening Edge



Plan View: Within Thickening

○ Typical Detail Around Pipes
Raftfloor Internal Thickenings

NOTES:

These details are applicable where plumbing/services are conveyed underground. Services are to be taken through polystyrene pods as much as possible. If this is unavoidable, it may be taken through ribs/thickenings, provided the details (or similar in principle) on this sheet are used.

All service trench backfill shall be properly compacted.

Member sizes and reinforcing shown are indicative only, details shown on raftslab plan & details shall take precedence over the details shown here.

NOTES:

Revision	Description	Date

WILTON JOUBERT
Consulting Engineers

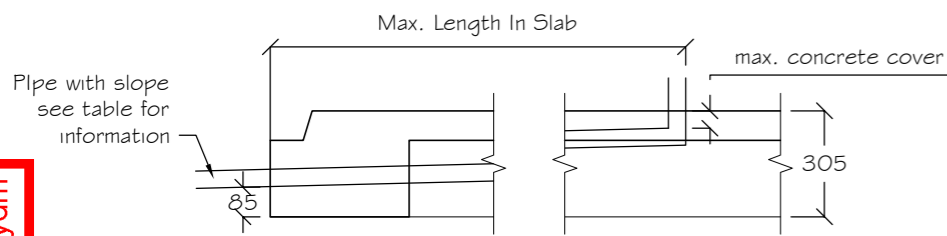
Northland: 09 945 4188
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Southern Lakes: 03 443 6209
www.wiltonjoubert.co.nz

Job Title:

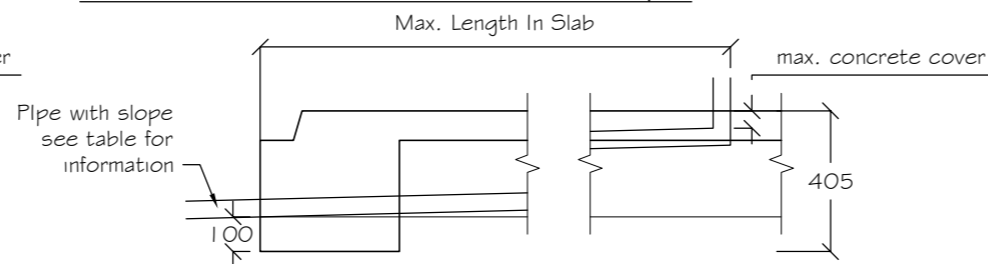
Sheet Title:
Typical Pipe Details

Revised: --	Drawn: DL
Checked: DL	Checked: --
Scale: 1:25	Date: 2015
Job No:	Revision No:
D1	

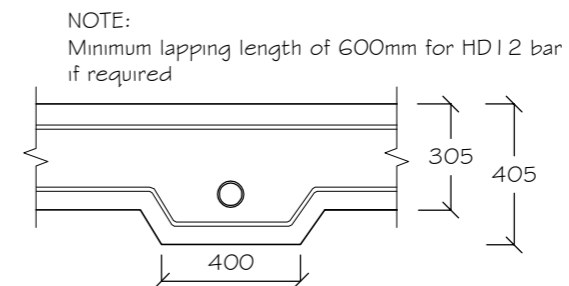
Maximum Horizontal Travel of Pipe



Detail 01: Pipe Within Floor Depth



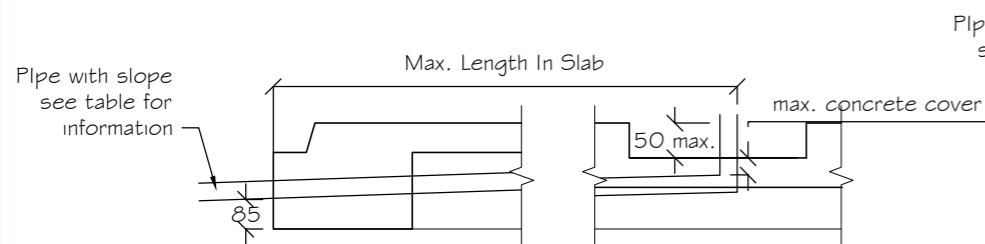
Detail 02: Pipe Within Floor Depth - With Local Deepening Of Edge Beam



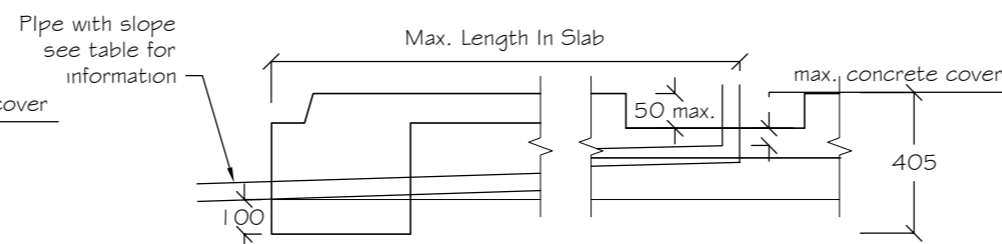
Cross-Section For Detail 02:
Pipe Within Floor Depth - With Local Deepening Of Edge Beam

NOTE:
Minimum lapping length of 600mm for HD12 bar if required

Maximum horizontal travel of pipe from shower recess (if required)

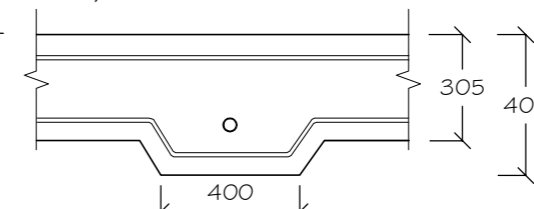


Detail 03: Pipe within floor depth



Detail 04: Pipe within floor depth - with local deepening of edge beam

NOTE:
Minimum lapping length of 600mm for HD12 bar if required



Cross-section:
Within floor depth - with local deepening of edge beam

NOTES:

Optional details for pipes within the depth of floor slab

Revision	Description	Date



WILTON JOUBERT
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Job Title:

Proposed Residence
Lot 72,
Acland Park, Rolleston

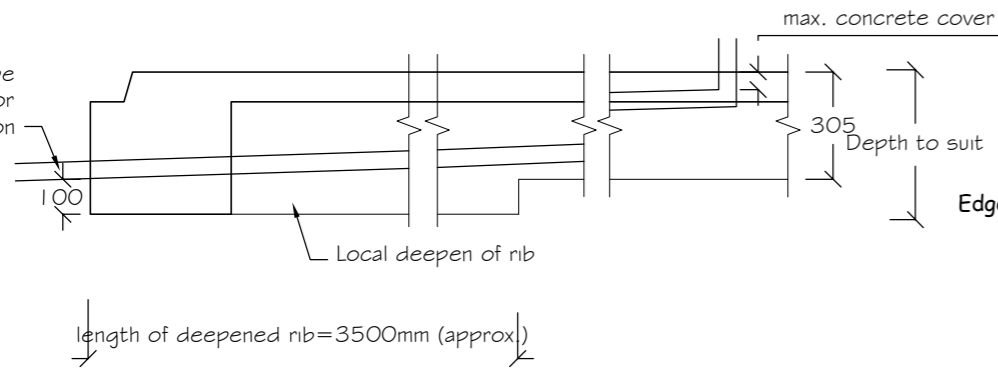
Sheet Title:

In-floor Drainage
Pipe - 1

Designed YL	Drawn YL
Checked DL	Checked ---
Scale: 1:25	Date: 5 Sep 2019
Job # 89699	
Revision No. D2	

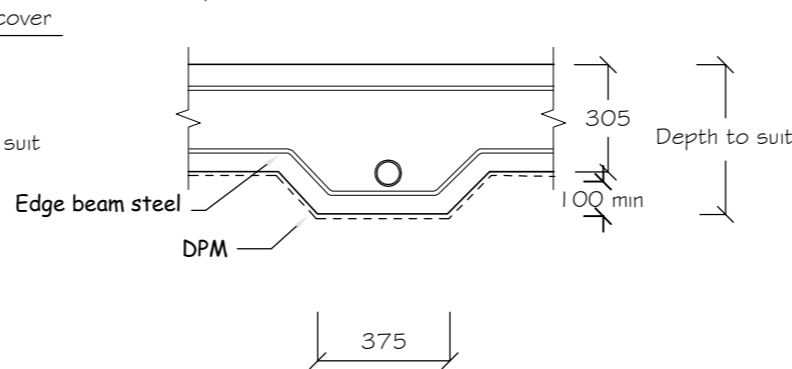
Option	Pipe Diameter		Slope	Max. Concrete Cover	Max. Length in Slab (mm)				
	Internal Ø	Approx. External Ø			Detail 01	Detail 02	Detail 03	Detail 04	Detail 05
	(mm)	(mm)		(mm)	(mm)	(mm)	(mm)	(mm)	---
A1	40	50	1:40	50	4800	8200	---	---	Depth to suite length of pipe
A2	100	115	1:60	100	300	5400	---	---	

For Pipe Travels Exceed Max. Length



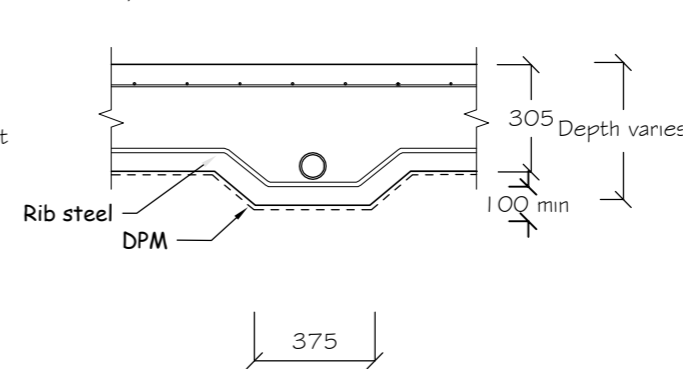
Detail O5: Pipe within floor depth - with local deepening of edge beam

NOTE:
Minimum lapping length of 600mm for HD12 bar if required



Cross-section for detail O5:
Pipe within floor depth - with local deepening of edge beam

NOTE:
Minimum lapping length of 600mm for HD12 bar if required



Cross-section for detail O5:
Pipe within floor depth - with local deepening of slab and ribs

NOTES:

Optional details for pipes within the depth of floor slab

Revision	Description	Date



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Job Title:
Proposed Residence
Lot 72,
Acland Park, Rolleston

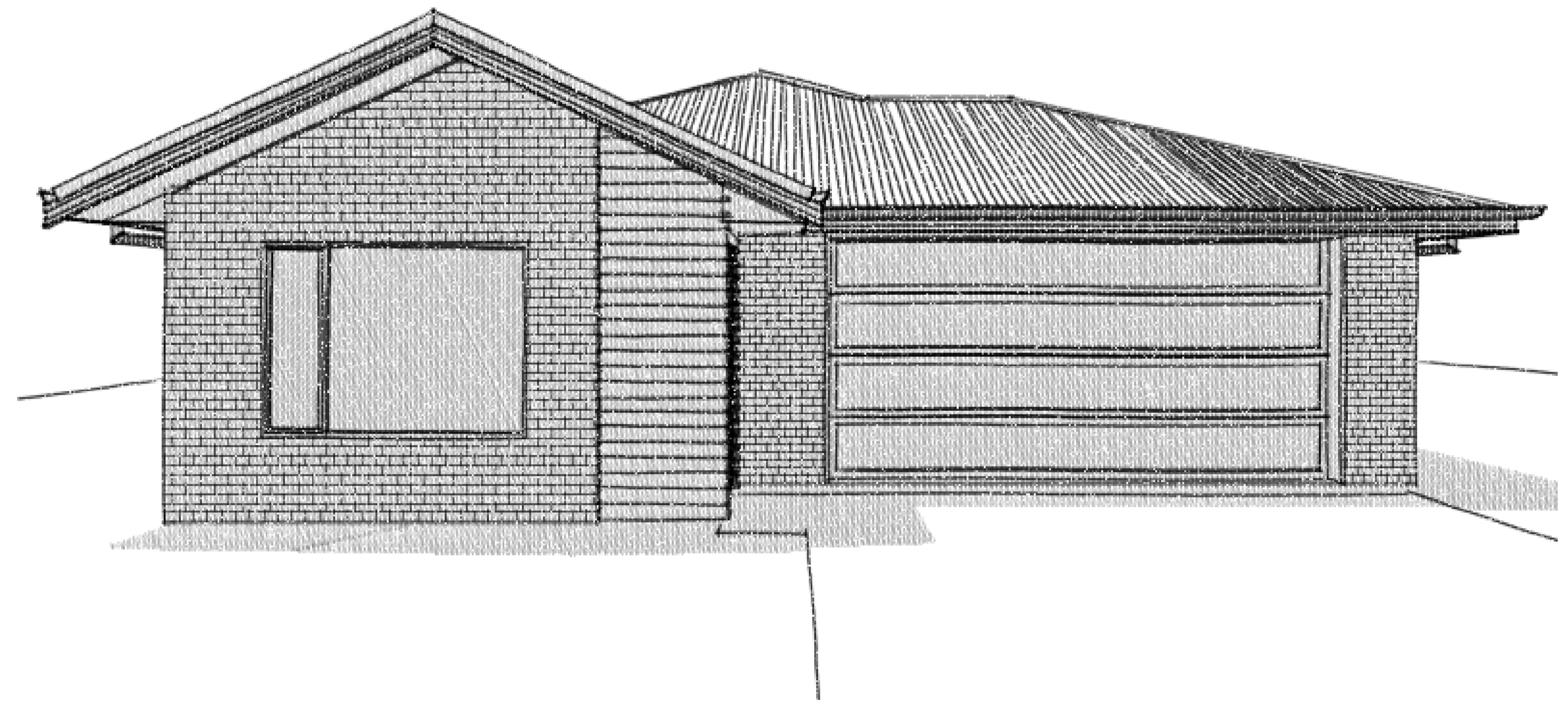
Sheet Title:
In-floor Drainage
Pipe - 2

Designed YL	Drawn YL
Checked DL	Checked
Scale: 1:25	Date: 5 Sep 2019
Job # 89699	
Revision No. D3	

PE152

LOT 72 ACLAND PARK

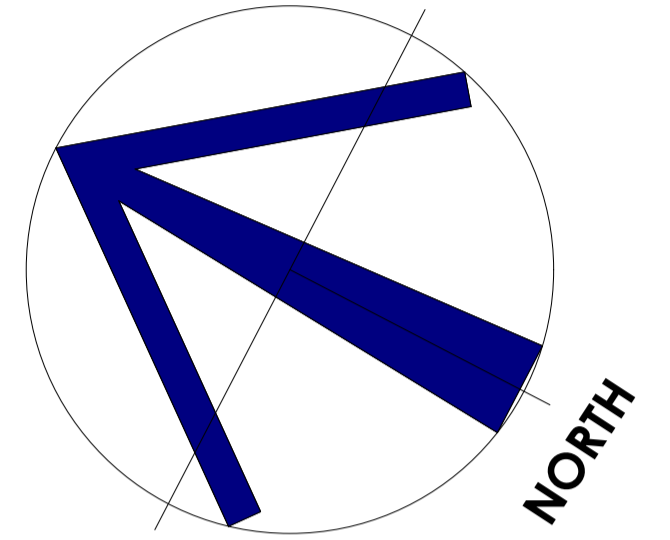
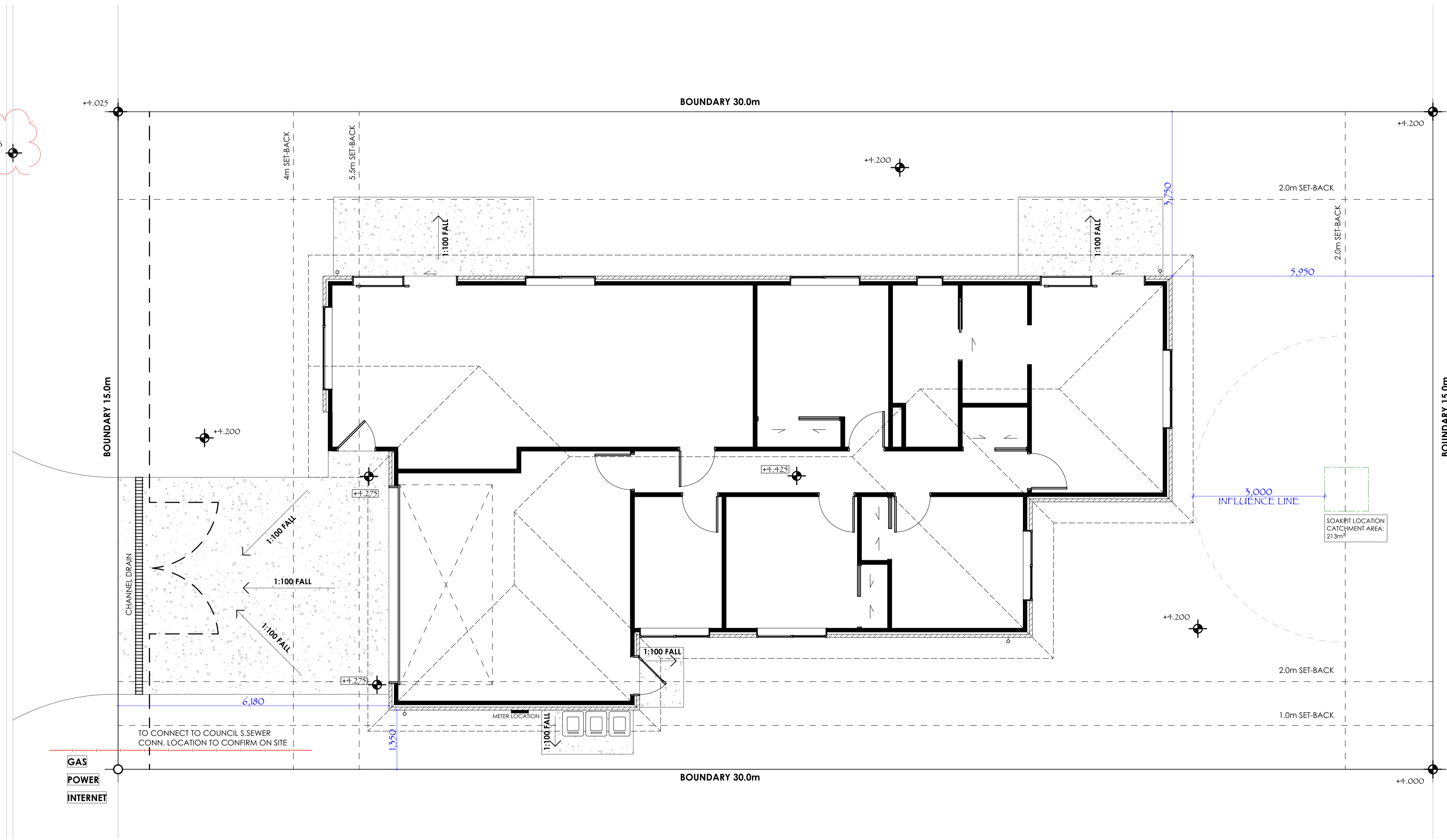
SHEET	DRAWING
A01	PROPOSED SITE PLAN
A02	PROPOSED FLOOR PLAN
A03	FOUNDATION & PLUMBING PLAN
A04	ROOF PLAN
A05	ELEVATIONS
A06	CROSS SECTIONS
A07	BASE OF CLADDING DETAIL
A08	CLADDING DETAILS
A09	CLADDING JUNCTION DETAILS
A10	JOINERY DETAILS
A11	CONSTRUCTION DETAILS
A12	CONSTRUCTION DETAILS
A13	CONSTRUCTION DETAILS
A14	CONSTRUCTION DETAILS
A15	WET AREA DETAILS
A16	SITE SILT MANAGEMENT DETAIL
A17	BRACING/LIGHTING PLAN
A18	JOINERY SCHEDULE
A19	TRUSS DESIGN



Planning Approved
24/09/2019 brown

SDC - Approved Building Consent Document - BC-191676 - Pg 6 of 26 - 4/10/2019 - lloyd

DATUM
NAIL IN KERB
+1.025



LOT 72 DP -
ZONE: RES Z
SITE AREA: 450m²
WIND ZONE: HIGH
EARTHQUAKE ZONE: 2
CORROSION ZONE: B
BUILDING COVERAGE: 152.79m² @ 33%
ROOF AREA: 181.35m²

⊕ +1.000 SPOT HEIGHT LEVEL EXISTING
⊕ +1.000 SPOT HEIGHT LEVEL PROPOSED

--- TEMPORARY CONSTRUCTION BARRIERS:--
-SHALL BE FENCES THAT EXTEND AT LEAST 2.0m IN HEIGHT FROM GROUND LEVEL
-BE GALVANISED CHAINLINK NETTING HAVING A MAXIMUM SIZED GRID OF 50 X 50mm.
-POST SPACING SHALL BE A MAXIMUM OF 2.5m, AND THE GAP BETWEEN THE BOTTOM OF THE FENCE AND GROUND NO GREATER THAN 100mm
-HAVE LOCKABLE GATES

SPOT HEIGHTS AND COUNCIL CONNECTIONS PRELIMINARY ONLY. LOCATIONS TO BE CONFIRMED ON SITE

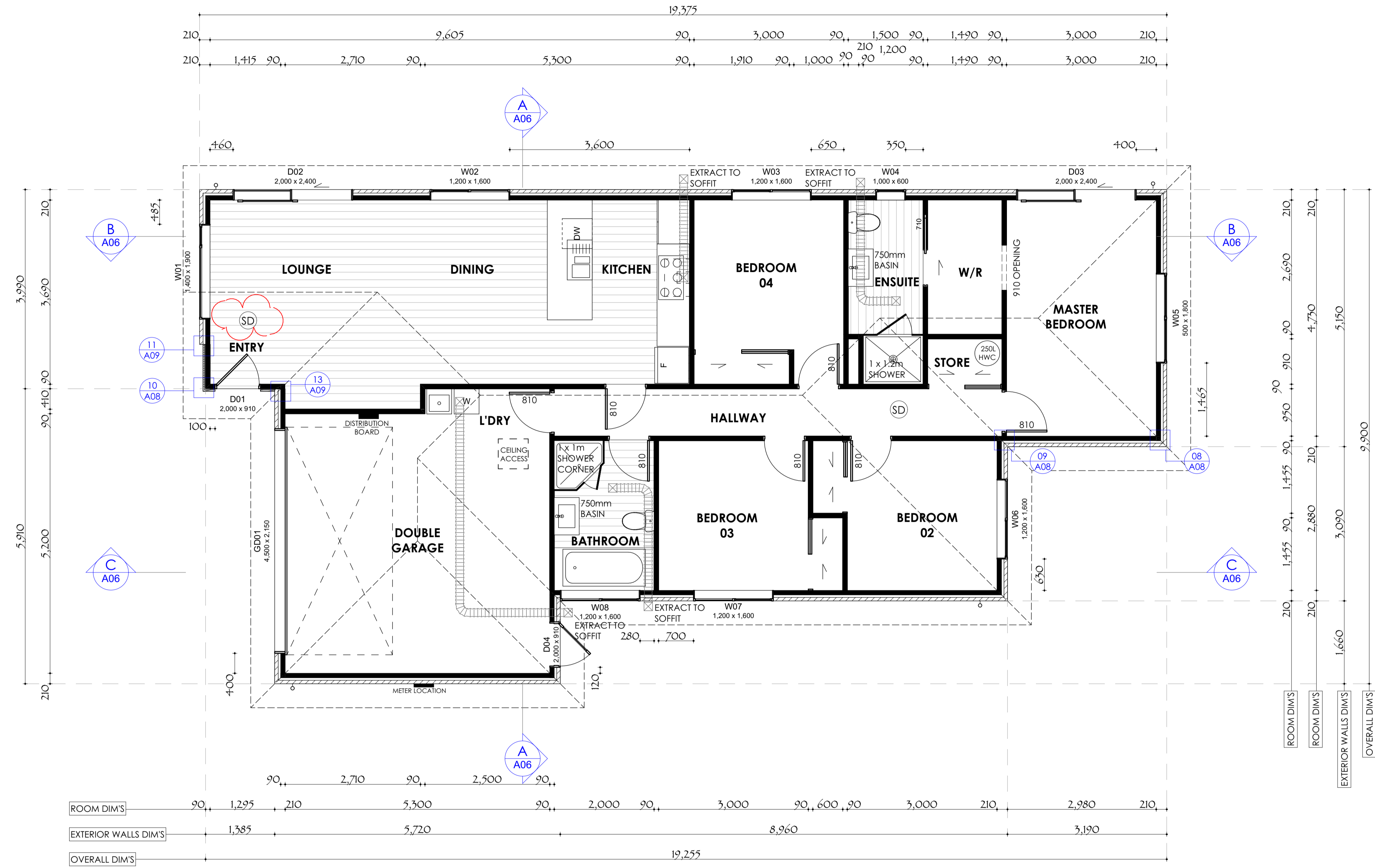


job	PRIDE ENTERPRISES LTD P150 Lot 72	drawing	PROPOSED SITE PLAN	date	3/10/19	revision	0	scale at A1	1:50	sheet	A01
					BC			scale 50% at A3			
								drawn	TS/MW		

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Gravitas Consulting Limited P.O Box 69018 Lincoln 7640 ph :- 03-3181555 mob :- 021-413747 email :- info@gravitas.net.nz

SDC - Approved Building Consent Document - BC1916176 - Pg 9 of 26 - 4/10/2019 - lloyd.m



ROOM DIMS	90	1,295	210	5,300	90	2,000	90	3,000	90	600	90	3,000	210	2,980	210
EXTERIOR WALLS DIMS	1,385		5,720		8,960		3,190								
OVERALL DIMS				19,255											

H1 COMPLIANCE: SCHEDULE METHOD
 TOTAL AREA OF GLAZING WALLS (<30%) = 17% OF TOTAL EXTERIOR WALLS
 ESW AREA OF GLAZING WALLS (<30%) = 18% OF ESW WALLS

Note:
 GARAGE 'NOT TO BE INSULATED'

SCHEDULED METHOD USED:
 MINIMUM R VALUE FROM NZS4218 TABLE 1 ZONE 3 =
 ROOF R3.5 = R3.2 PINKBATTIS REQUIRED
 WALL R2.4 = R2.2 PINKBATTIS REQUIRED
 FLOOR R1.9 = GLAZING R0.26(VERTICAL) = DOUBLE GLAZING REQUIRED

ELEVATION	WALL WITH WINDOWS	WALL WITHOUT WINDOWS	DIFFERENCE
SOUTH	24.18m ²	21.06m ²	3.12m ²
NORTH	24.18m ²	21.52m ²	2.66m ²
EAST	47.12m ²	32.01m ²	15.11m ²
WEST	47.12m ²	43.28m ²	3.84m ²
ALL WALL TOTAL	142.6m ²	117.87m ²	24.73m ² 17%
E.S.W TOTAL	118.42m ²	96.35m ²	22.07m ² 18%

GENERAL NOTES:
 READ THESE DRAWINGS TOGETHER WITH THE BRACING PLAN AND ENGINEERS PLANS AND DETAILS.

CONSTRUCTION REQUIREMENTS
 THE PROPOSED WORK HAS BEEN DESIGNED IN ACCORDANCE WITH NZS 3604:2011, OR TP SPECIFIC DESIGN, AND MUST BE CONSTRUCTED ACCORDINGLY.

DURABILITY
 ALL MATERIALS SHALL BE IN ACCORDANCE WITH NZBC CLAUSE B2 DURABILITY B2.3.1 ALL FIXINGS (CONNECTIONS) WITHIN 600mm OF THE GROUND TO BE TYPE 304 STAINLESS STEEL.

TIMBER FRAMING
 ALL WALLS AND ROOF SHALL BE SG8 UNLESS STATED OTHERWISE AND IN ACCORDANCE WITH NZS3602:2003, B2, NZS3604 & E2.
 ENCLOSED TIMBER TO BE H1.2 TREATED.
 EXTERNAL EXPOSED TIMBERS TO BE H3.2 TREATED.
 FOUNDATION PILES TO BE H5 TREATED AND ALL OTHER GROUND CONTACT TIMBERS TO BE H4 TREATED.
 90x45 STUDS @ 400 CRS AS REQUIRED TO ALL NEW WALLS. NOGS TO BE STAGGERED 150mm EITHER SIDE OF GIBBOARD HORIZONTAL JOINTS.
 WHERE A VENTILATED CAVITY WALL SYSTEM IS USED CAVITY BATTENS SHALL BE 20x45 H3.2 IN ACCORDANCE WITH E2 AND THE CLADDING MANUFACTURER'S REQUIREMENTS.

ALLOWABLE MOISTURE CONTENT AT TIME OF INSTALLATION OR IN THE CASE OF FRAMING TIMBER AT TIME OF ENCLOSURE SHALL BE IN ACCORDANCE WITH NZS3602:2003 TABLE 4.

FIX ALL BRACING LINING, FIXTURES, JOINERY, FITTING AND SPECIALIST EQUIPMENT ETC. IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

REFER TO FRAMING PLANS FOR BEAM SIZES. PROVIDE 6KN CONNECTIONS TOP AND BOTTOM FOR LINTEL AGAINST WIND UPLIFT AS PER NZS 3604:2011 SECTION 8 AND FIGURE 8.12. - REFER ALSO TO DURABILITY ABOVE.

FLOORING
 ALL WALLS AND FLOORS OF SERVE ROOMS ARE TO BE FINISHED WITH AN IMPERVIOUS, EASILY CLEANED MATERIAL TO COMPLY WITH NZBC E3 CARPET TO BE INSTALL THROUGH OUT THE HOUSE. EXCLUDING THE GARAGE AND AREAS WHERE VINYL PLANKING IS SHOWN. ALL FLOORING SURFACES TO COMPLY WITH D1/AS1 TABLE 2

LININGS
 CEILING LINING TO BE 13mm STANDARD GIB BOARD. WALL LININGS TO BE 10mm STANDARD GIB BOARD AND BRACELINE WHERE REQUIRED FOR BRACING. REFER TO BRACING PLAN.

WET AREAS WILL BE LINED IN GIB AQUALINE AND FIXED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND STOPPED AND SEALED TO A LEVEL 4 FINISH WITH RESENE SPACECOTE KITCHEN AND BATHROOM.

INSULATION
 INSULATION TO WALLS AND CEILING SHALL BE AS FOLLOWS:
 PINKBATTIS' FIBREGLASS OR SIMILAR APPROVED. WALLS- R2.6 MIN. CEILING R3.6
 ENSURE THAT ALL INSULATION IS INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND COMPLY WITH B2 DURABILITY, E3 INTERNAL MOISTURE, F2 HAZARDOUS BUILDING MATERIALS, H1 ENERGY EFFICIENCY AND NZS4218.

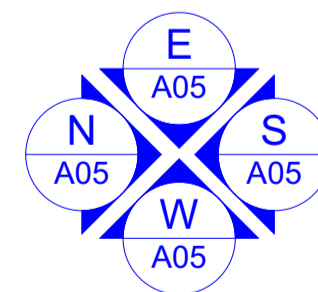
ALL GLAZING SHALL COMPLY WITH NZBC F2/AS1 AND NZS 4223 PART 3:1999. A CERTIFICATE OF COMPLIANCE FROM THE INSTALLER IS TO BE SUBMITTED ONCE THE GLASS IS INSTALLED.

DURABILITY ZONE: 1 (NOT SEA SPRAY)
 ALL FIXINGS TO COMPLY WITH SECTION 4 NZS 3604:2011 REFER TO TABLE 4.1 ALL SUBFLOOR CONNECTIONS WITH 600mm OF THE GROUND TO BE SS.

GROUND FLOOR AREA: 152.79m²

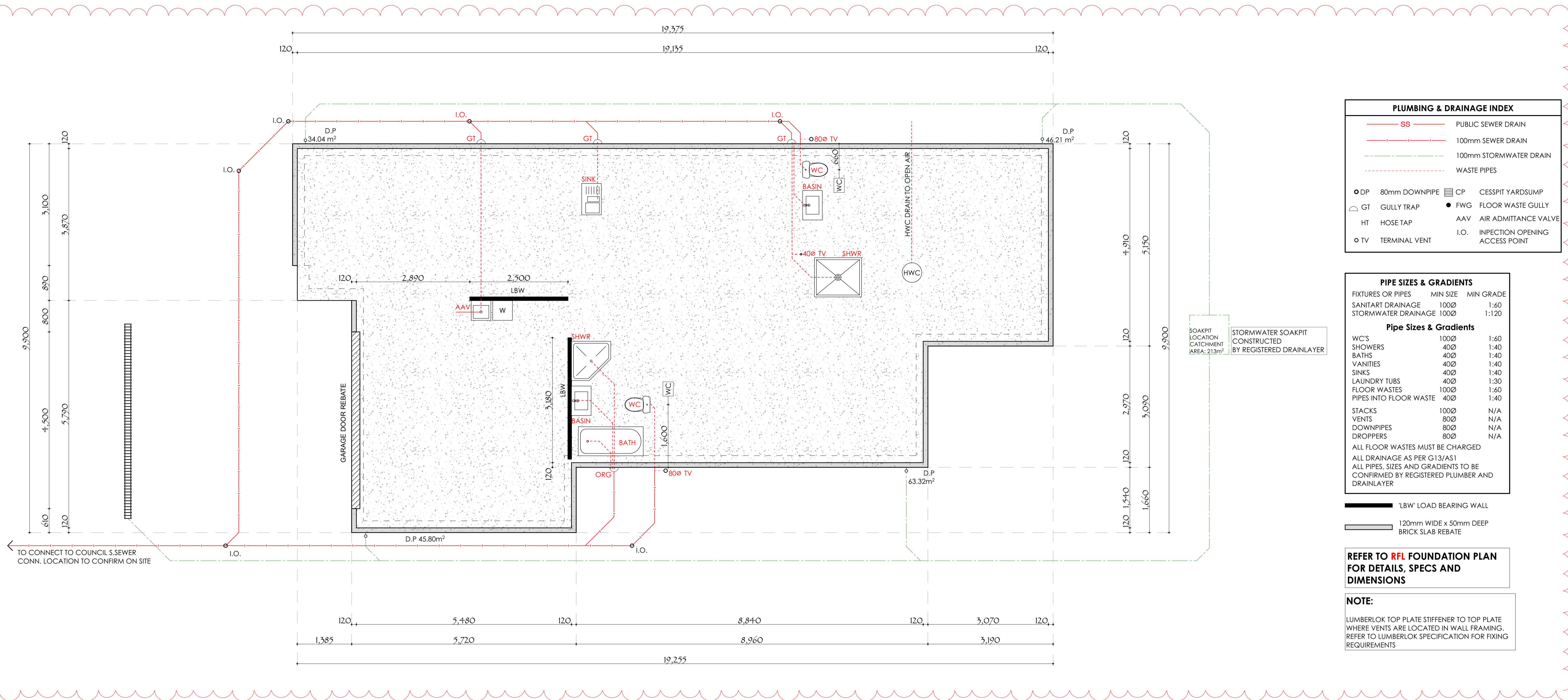
SMOKE DETECTOR SHALL BE FITTED IN ACCORDANCE WITH F7/AS1 IN EVER SLEEPING SPACE OR WITHIN 3 METERS OF EVERY SLEEPING SPACE DOOR

FLOORING KEY:-
 VINYL PLANKING



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	job PRIDE ENTERPRISES LTD P150 Lot 72	drawing PROPOSED FLOOR PLAN
date 3/10/19 BC	revision 0	scale at A1 1:50 scale 50% at A3 drawn TS/MW
		sheet A02

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PLUMBING & DRAINAGE INDEX	
—	SS PUBLIC SEWER DRAIN
---	100mm SEWER DRAIN
---	100mm STORMWATER DRAIN
---	WASTE PIPES
○ DP	80mm DOWNPIPE
△ GT	GULLY TRAP
HT	HOSE TAP
○ TV	TERMINAL VENT
■ CP	CESSPIT YARDSUMP
● FWG	FLOOR WASTE GULLY
AAV	AIR ADMITTANCE VALVE
I.O.	INSPECTION OPENING ACCESS POINT

PIPE SIZES & GRADIENTS		
FIXTURES OR PIPES	MIN SIZE	MIN GRADE
SANITARY DRAINAGE	100Ø	1:60
STORMWATER DRAINAGE	100Ø	1:120
Pipe Sizes & Gradients		
WC'S	100Ø	1:60
SHOWERS	40Ø	1:40
BATHS	40Ø	1:40
VANITIES	40Ø	1:40
SINKS	40Ø	1:40
LAUNDRY TUBS	40Ø	1:30
FLOOR WASTES	100Ø	1:60
PIPES INTO FLOOR WASTE	40Ø	1:40
STACKS	100Ø	N/A
VENTS	80Ø	N/A
DOWNPIPES	80Ø	N/A
DROPPERS	80Ø	N/A

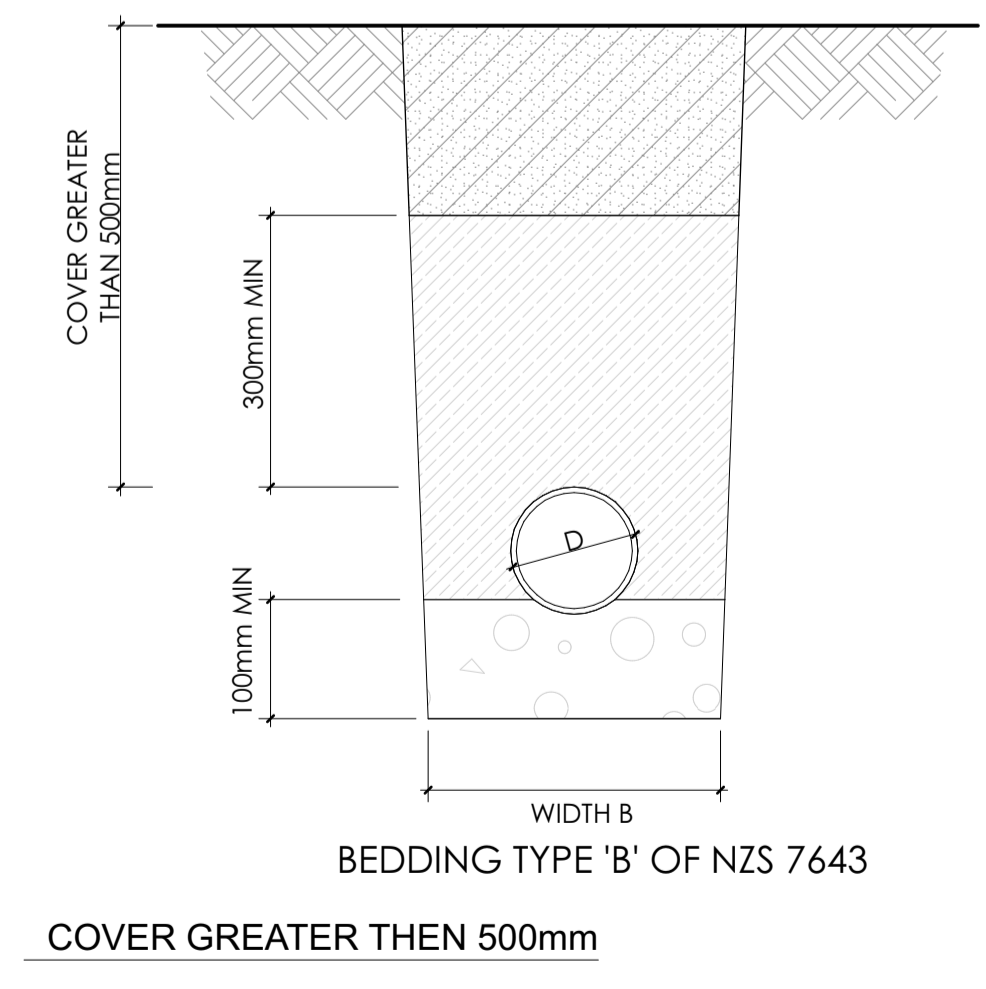
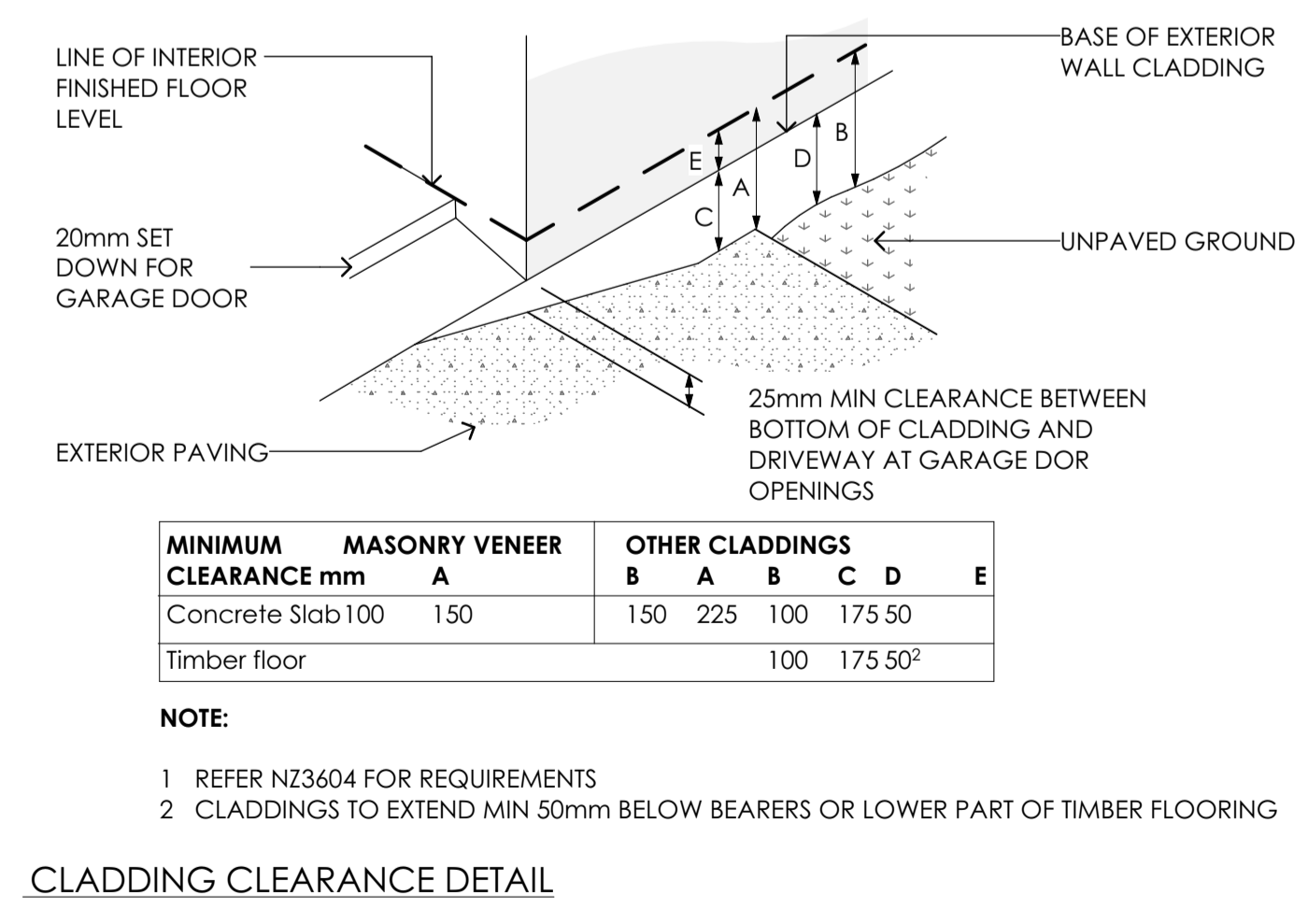
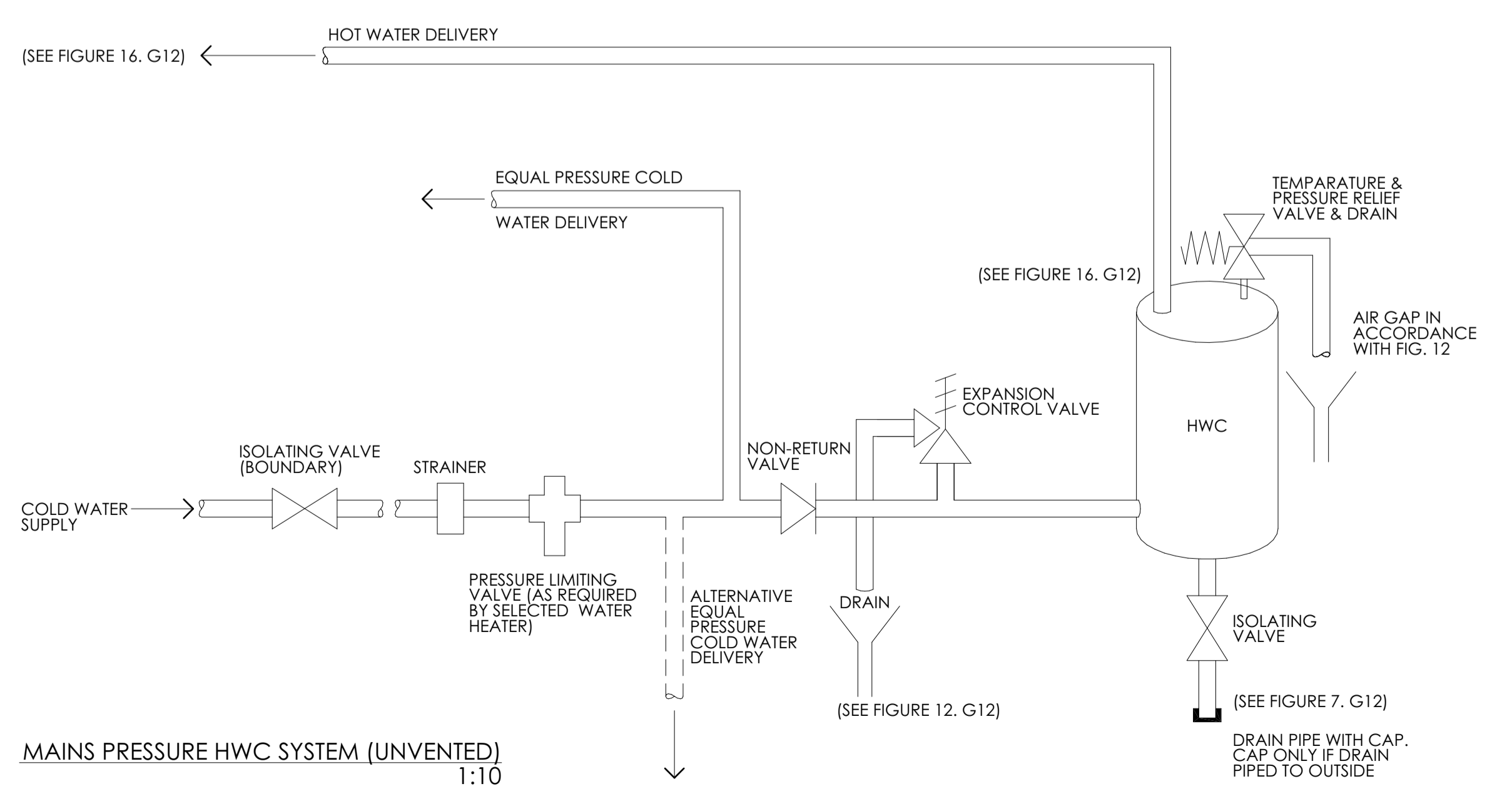
ALL FLOOR WASTES MUST BE CHARGED
 ALL DRAINAGE AS PER G13/AS1
 ALL PIPES, SIZES AND GRADIENTS TO BE CONFIRMED BY REGISTERED PLUMBER AND DRAINLAYER

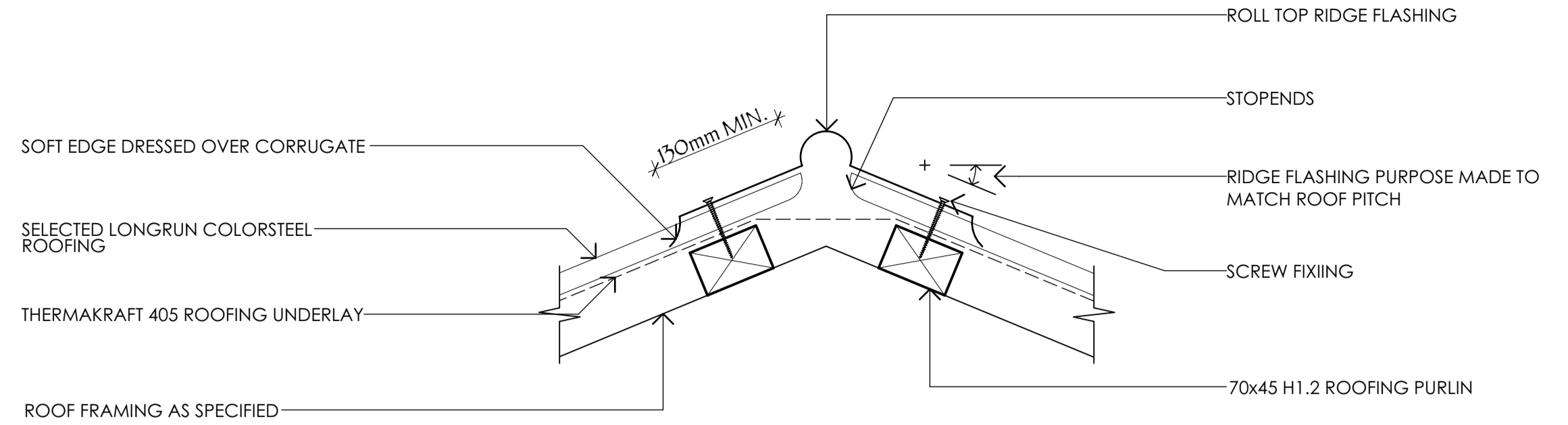
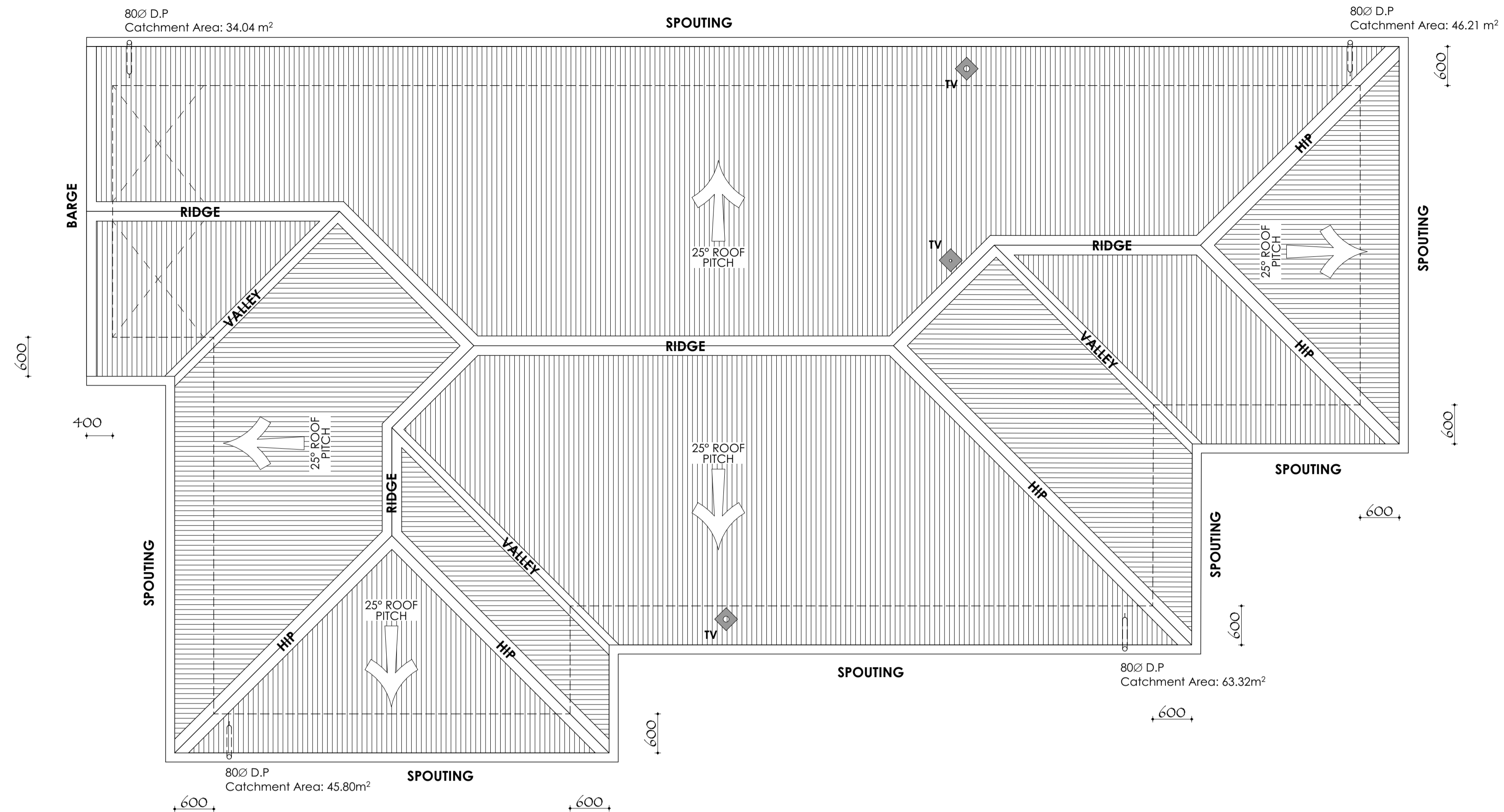
SOAKPIT LOCATION CATCHMENT AREA: 213m²
 STORMWATER SOAKPIT CONSTRUCTED BY REGISTERED DRAINLAYER

— 'LBW' LOAD BEARING WALL
 120mm WIDE x 50mm DEEP BRICK SLAB REBATE

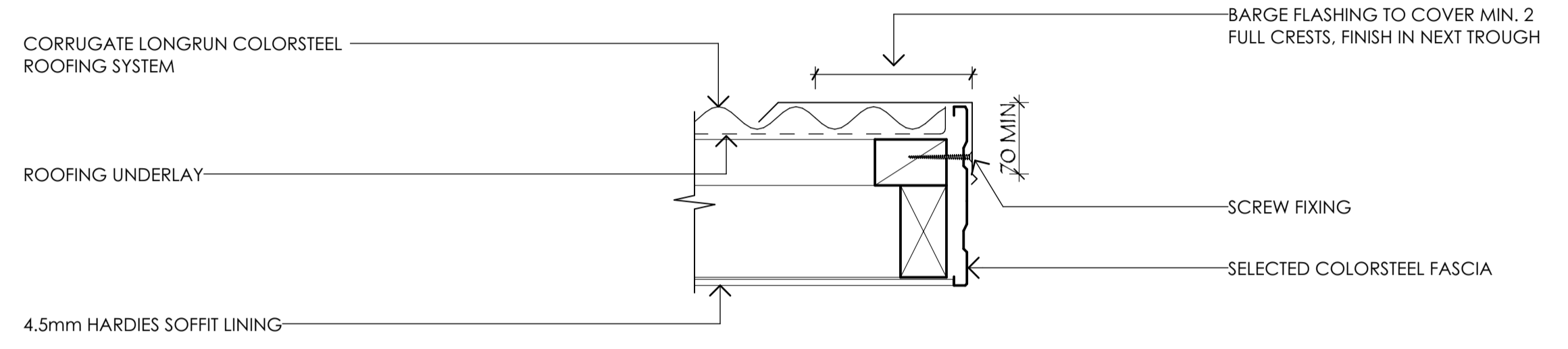
REFER TO RFL FOUNDATION PLAN FOR DETAILS, SPECS AND DIMENSIONS

NOTE:
 LUMBERLOK TOP PLATE STIFFENER TO TOP PLATE WHERE VENTS ARE LOCATED IN WALL FRAMING. REFER TO LUMBERLOK SPECIFICATION FOR FIXING REQUIREMENTS

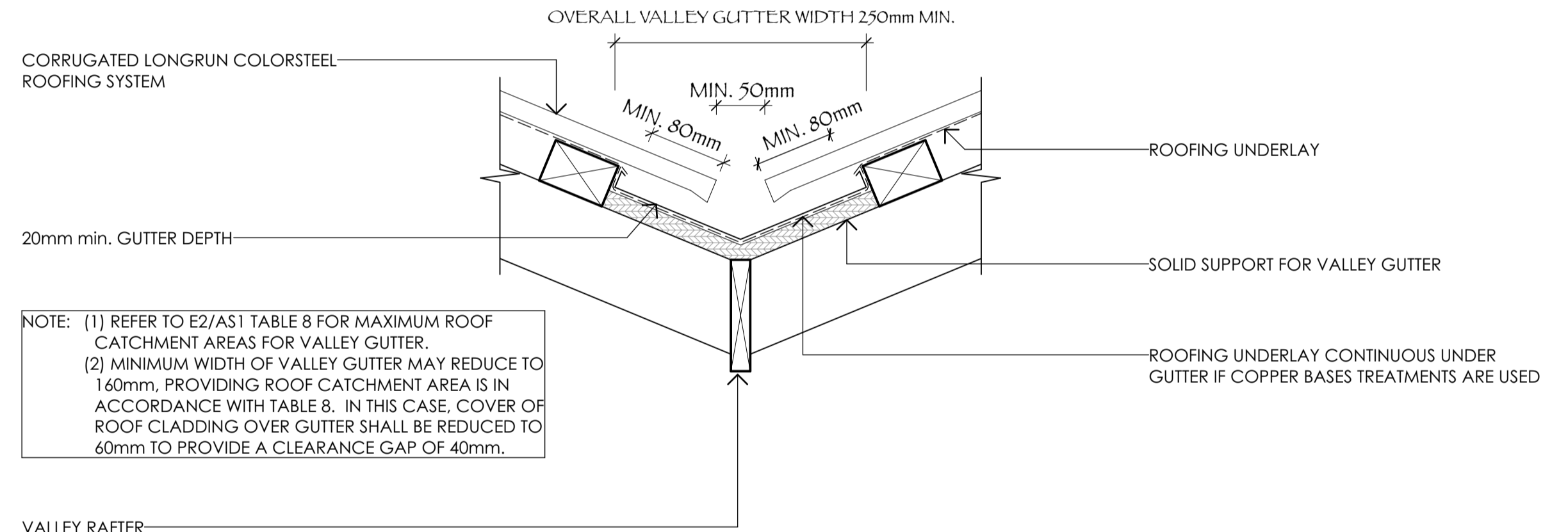




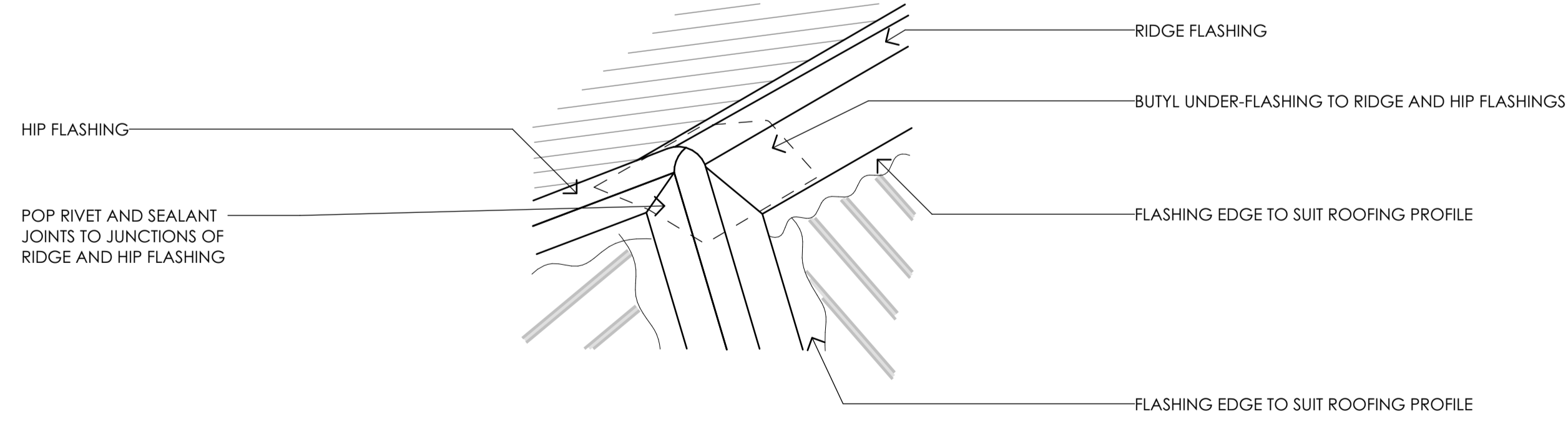
01 RIDGE DETAIL
A06 1:5



02 TYPICAL BARGE FLASHING DETAIL
- 1:5

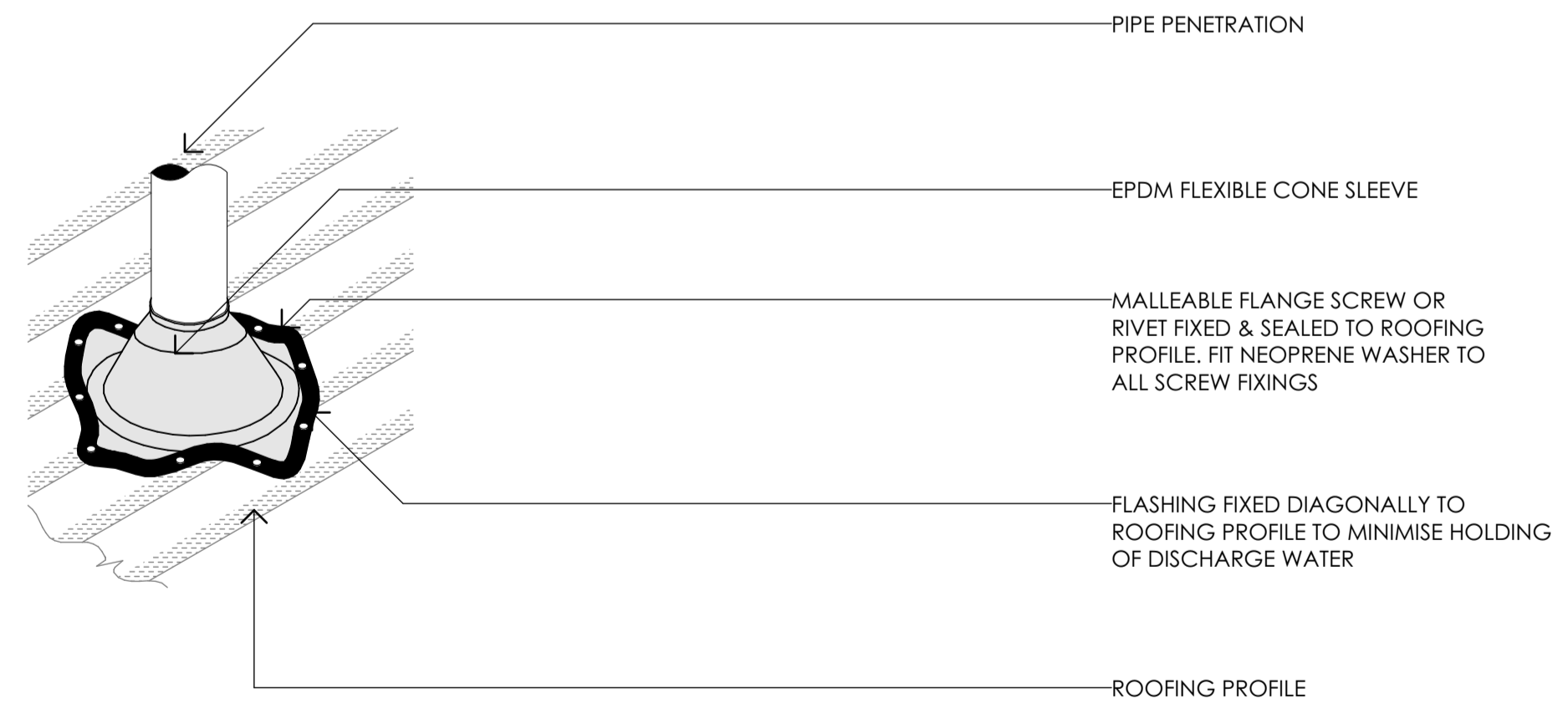


03 TYPICAL VALLEY DETAIL
- 1:5

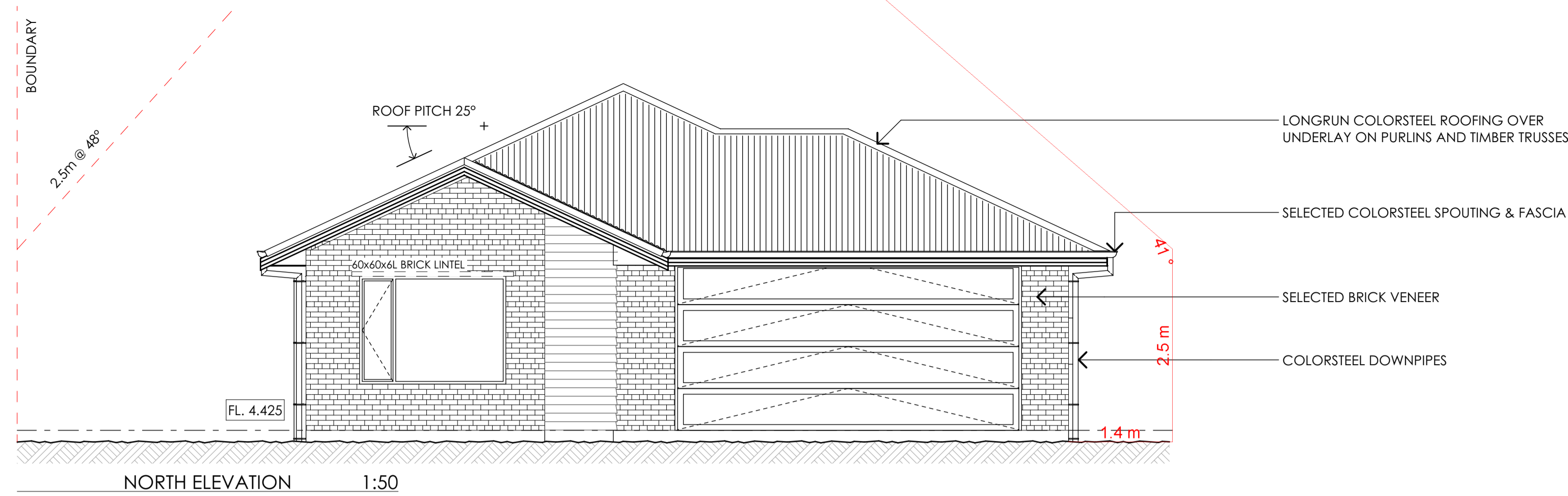


04 HIP FLASHING DETAIL
- 1:5

- Roofing Type:ROOFNIG TYPE:**
0.48MT CORRUGATE
- Roof Flashings:**
0.55BMT COLORSTEEL
- ROOFING UNDERLAY**
THERMAKRAFT 405
- PURLINS**
70x45mm @ 900mm CRS
- ROOF STRUCTURE**
TIMBER TRUSS SPECIFIED BY TRUSS MANUFACTURE
- BRACING**
LUMBERLOK ROOF STRAPS
- DOWNPIPES**
COLORSTEEL 80mm DIA

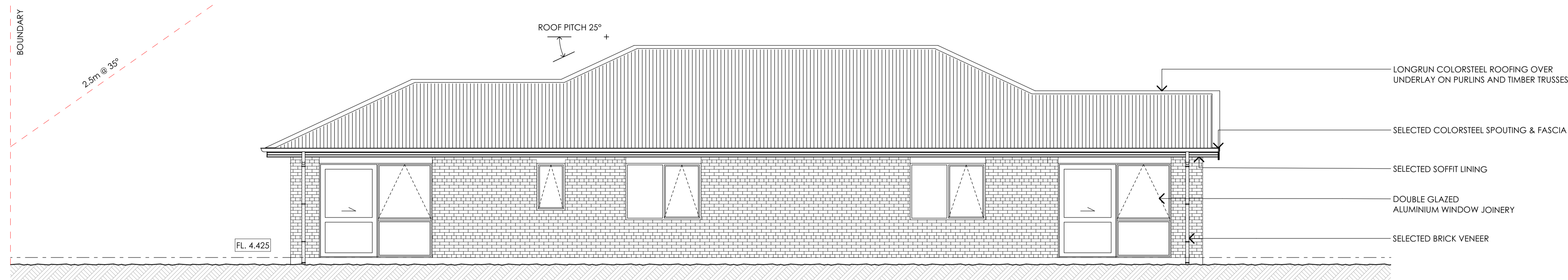


05 PIPE PENETRATION DETAIL
- 1:5



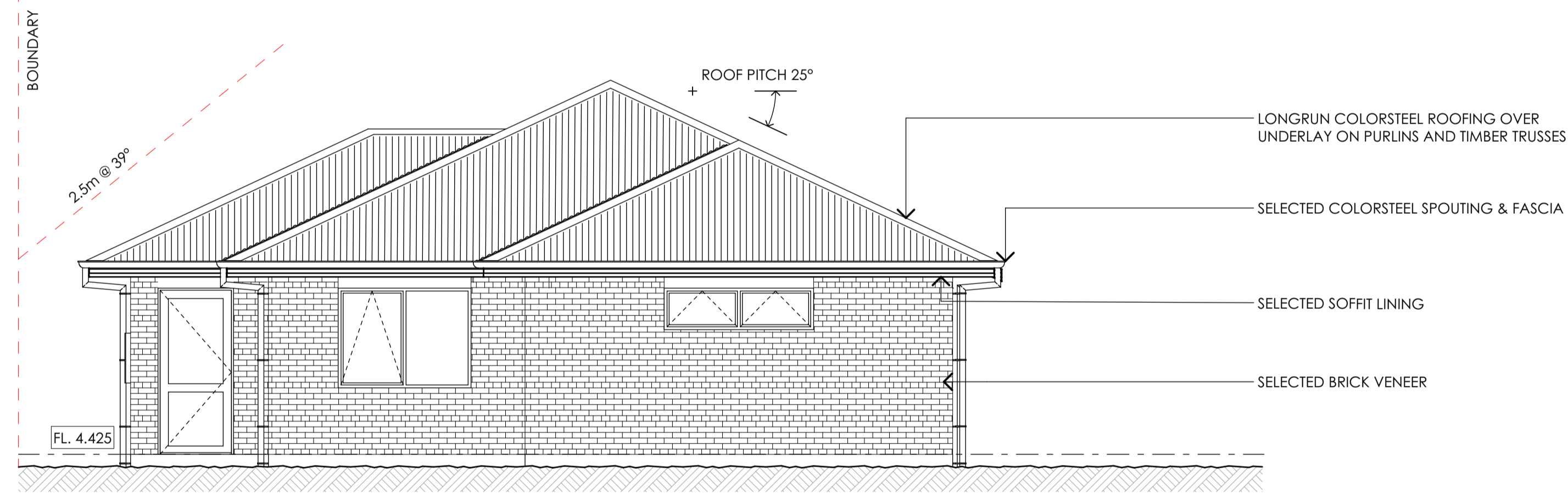
NORTH ELEVATION 1:50

BUILDING ENVELOPE RISK MATRIX		
ELEVATION 01		
Risk Factor	Risk Severity	Risk Score
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	Low risk	0
Eaves width	High risk	2
Envelope complexity	Medium risk	1
Deck design	Low risk	0
Total Risk Score:		4



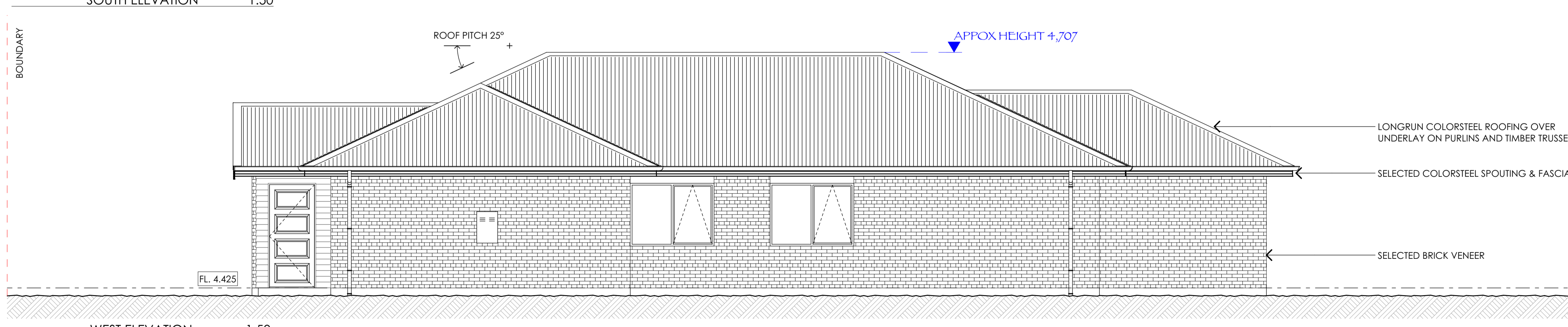
EAST ELEVATION 1:50

BUILDING ENVELOPE RISK MATRIX		
ELEVATION 02		
Risk Factor	Risk Severity	Risk Score
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	Low risk	0
Eaves width	High risk	2
Envelope complexity	Medium risk	1
Deck design	Low risk	0
Total Risk Score:		4



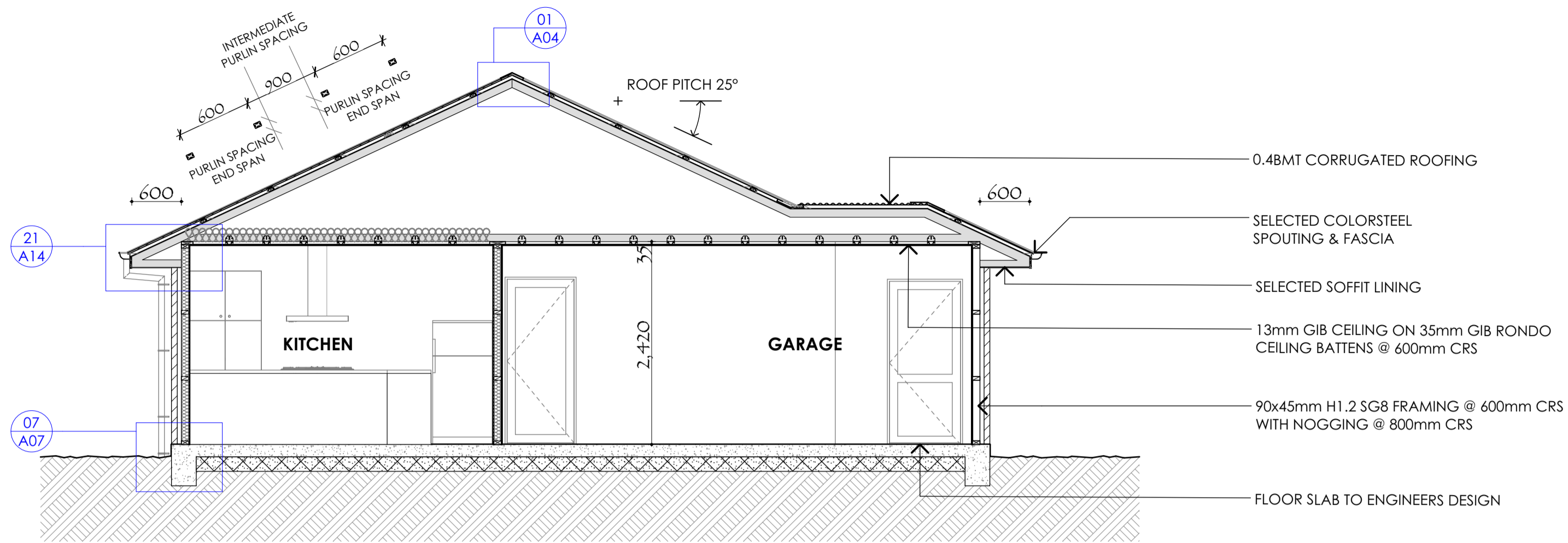
SOUTH ELEVATION 1:50

BUILDING ENVELOPE RISK MATRIX		
ELEVATION 03		
Risk Factor	Risk Severity	Risk Score
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	Low risk	0
Eaves width	High risk	2
Envelope complexity	Low risk	0
Deck design	Low risk	0
Total Risk Score:		3



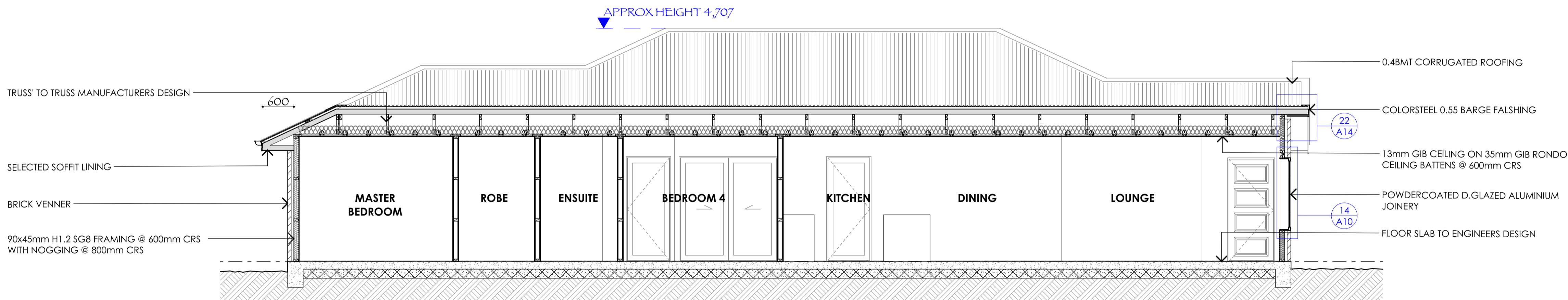
WEST ELEVATION 1:50

BUILDING ENVELOPE RISK MATRIX		
ELEVATION 04		
Risk Factor	Risk Severity	Risk Score
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	Low risk	0
Eaves width	High risk	2
Envelope complexity	Low risk	0
Deck design	Low risk	0
Total Risk Score:		3

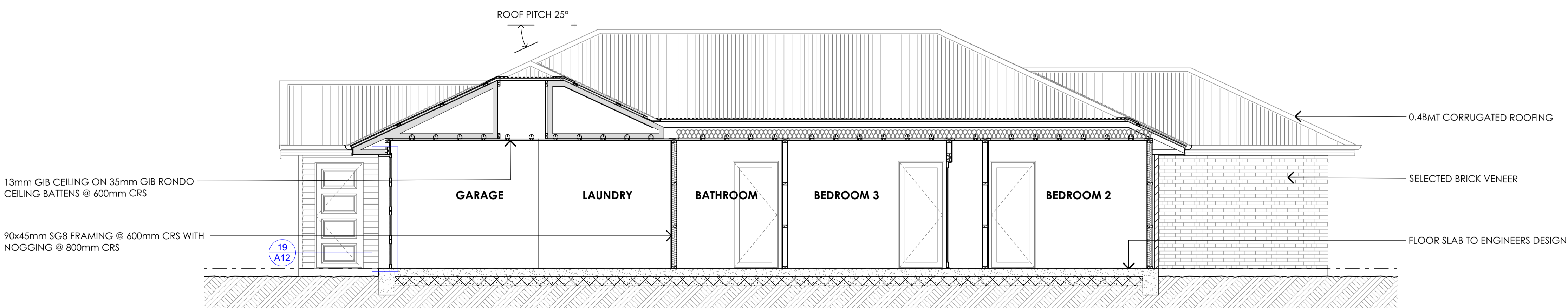


CROSS SECTION A - A
1:50

TIMBER GRADE / TREATMENT		
EXTERIOR WALL FRAMING MEMBER	TIMBER SPECIES AND GRADE	TREATMENT
EXTERIOR WALLS:	LASERFRAME SG8	H1.2
EXTERIOR GABLE WALLS:	LASERFRAME SG8	H1.2
CAVITY BATTENS:	PIN EX FINGER JOINTED	H3.2 CCA
ROOF FRAMING MEMBER	TIMBER GRADE	TREATMENT
TRUSSES:	LASERFRAME SG8	H1.2
TRUSSES: (COVED ANG GABLES)	LASERFRAME SG8	H1.2
PURLINS:	LASERFRAME SG8	H1.2
CEILING JOISTS:	LASERFRAME SG8	H1.2
VALLEY BOARDS:	LASERFRAME SG8	H3.2
INTERIOR FRAMING MEMBER	TIMBER SPECIES AND GRADE	TIMBER SPECIES AND GRADE
NON STRUCTURAL WALLS:	LASERFRAME SG8	H1.2
STRUCTURAL AND BRACED WALLS:	LASERFRAME SG8	H1.2
SURROUNDING WET AREAS:	LASERFRAME SG8	H1.2
BOTTOM PLATES:	LASERFRAME SG8	H1.2
EXTERIOR FINISHING TIMBERS MEMBER	TIMBER SPECIES AND GRADE	TIMBER SPECIES AND GRADE
EXTERIOR MOULDINGS:	PIN EX FINGER JOINTED	H3.2 CCA
INTERIOR FINISHING TIMBERS MEMBER	TIMBER SPECIES	TIMBER SPECIES
ARCHITRAVES:	PINEX PINE OR MUF	NONE
SKIRTING:	PINEX PINE OR MUF	NONE
CORNICES:	PINEX PINE OR MUF	NONE
WINDOW/ DOOR JAMBS:	RADIATA PINE	H3.2



CROSS SECTION B - B
1:50

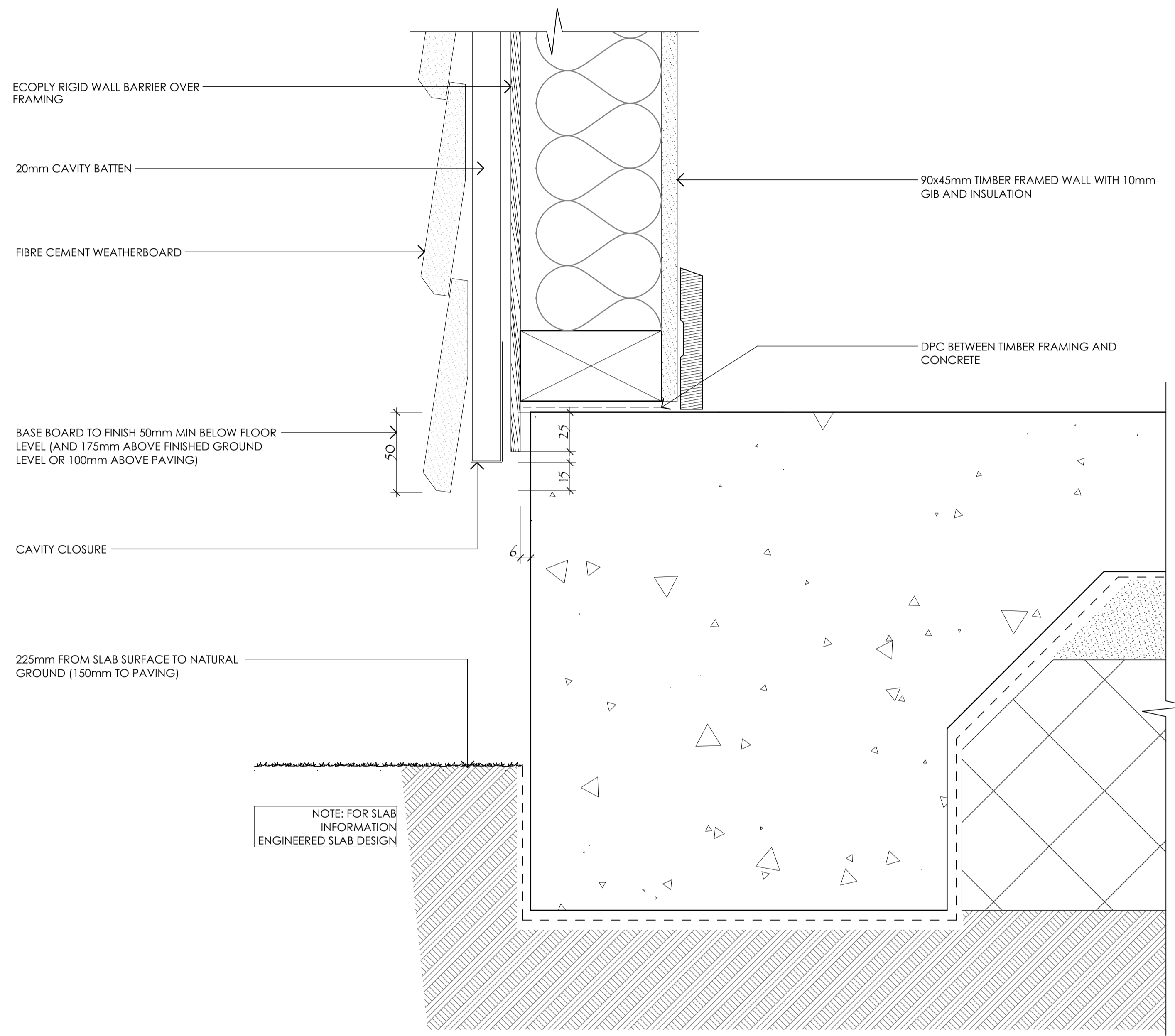


CROSS SECTION C - C
1:50

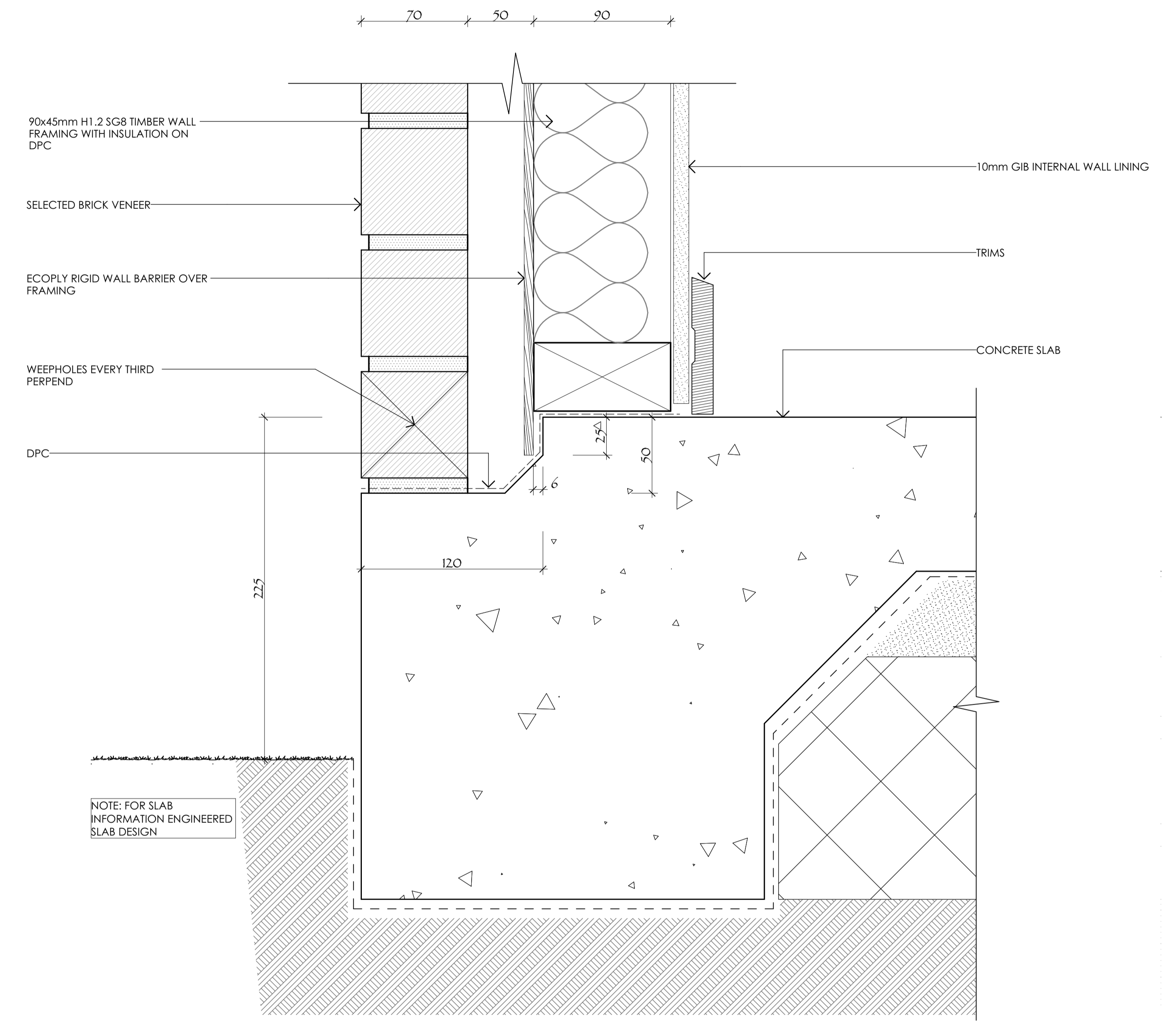


PRIDE ENTERPRISES LTD P150 Lot 72	CROSS SECTIONS	date 5/09/19	revision 0	scale at A1 1:50	sheet
		BC	drawn TS/MW	scale 50% at A3	A06

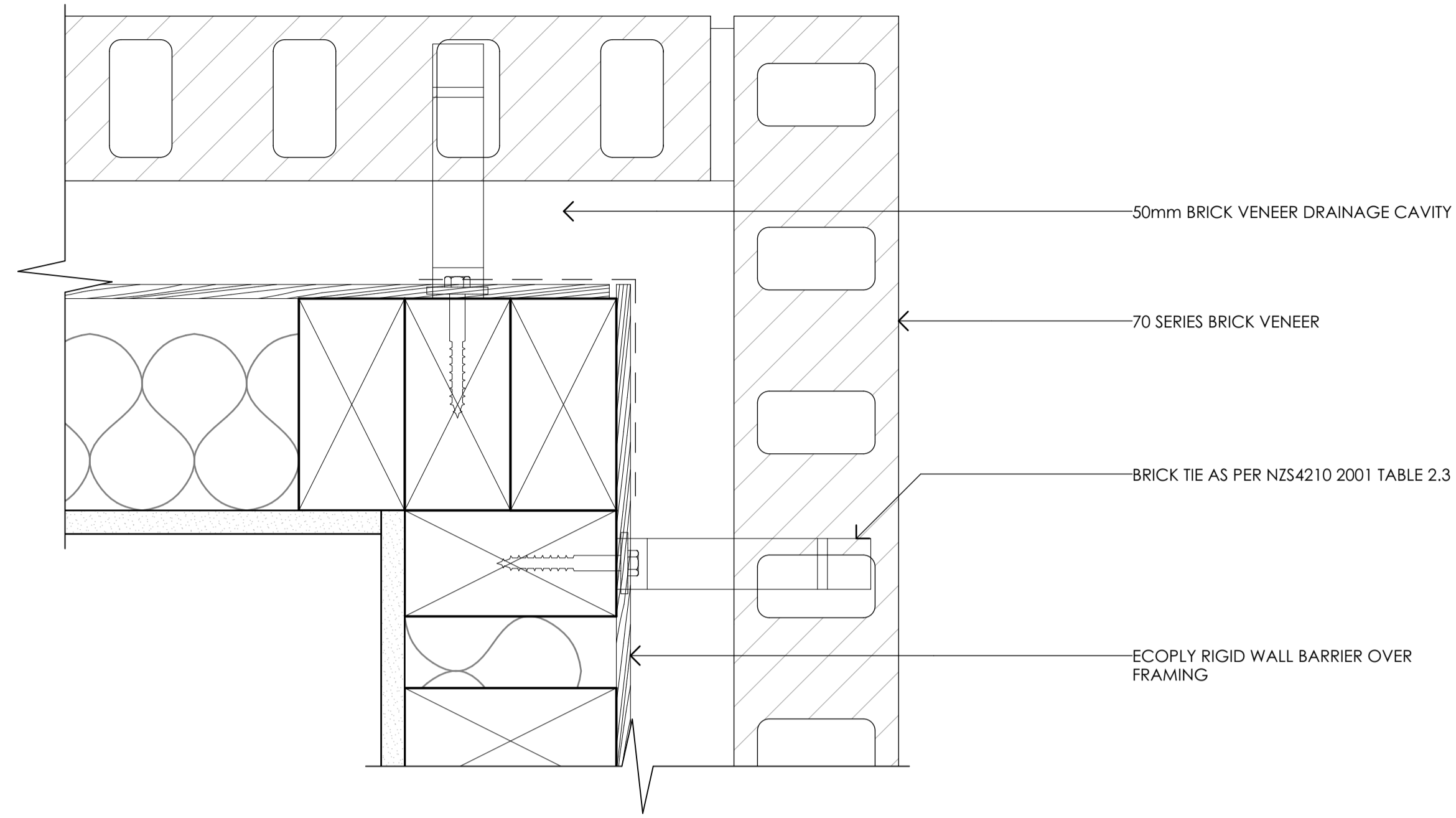
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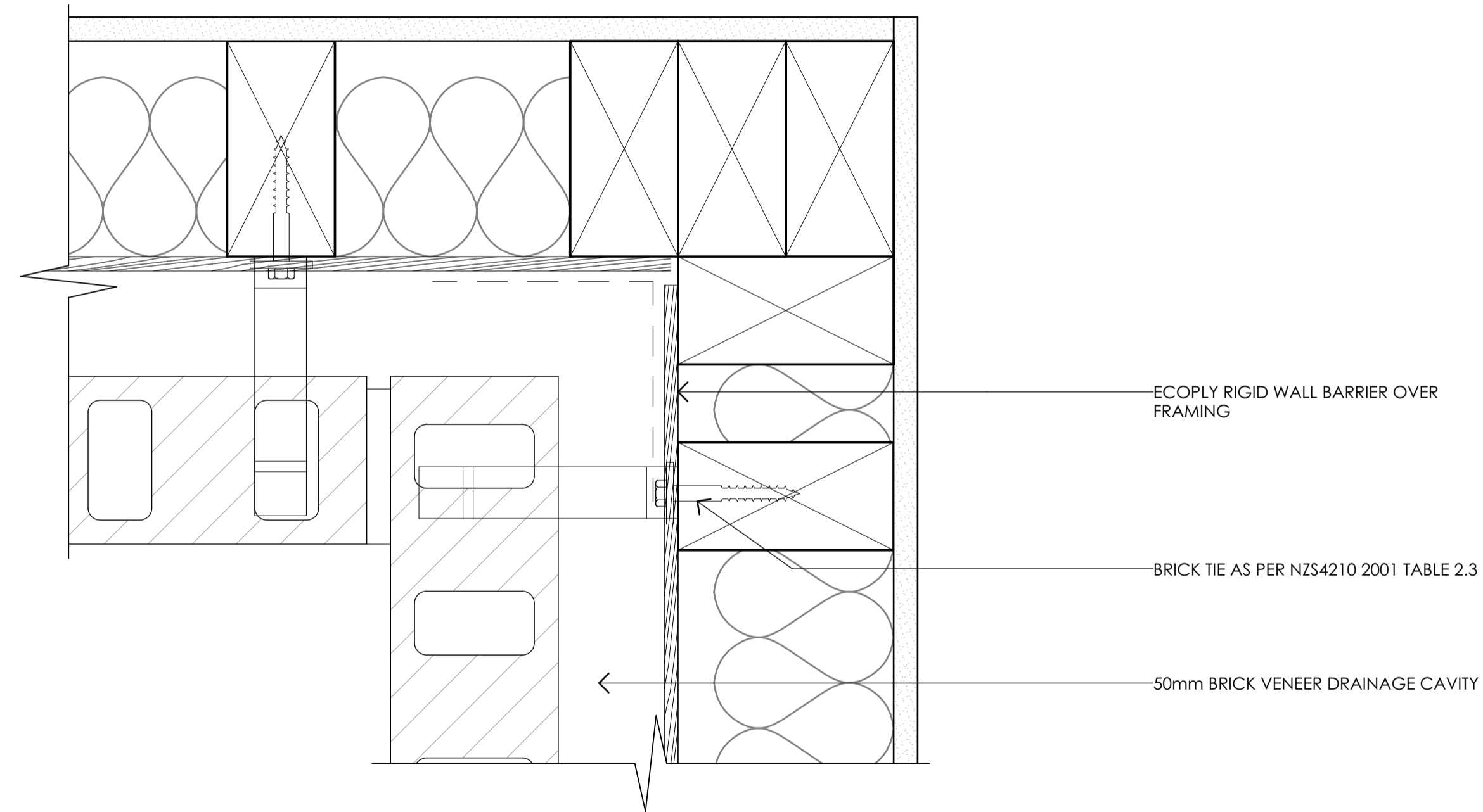
06 TYPICAL WEATHERBOARD BASE DETAIL
1:2



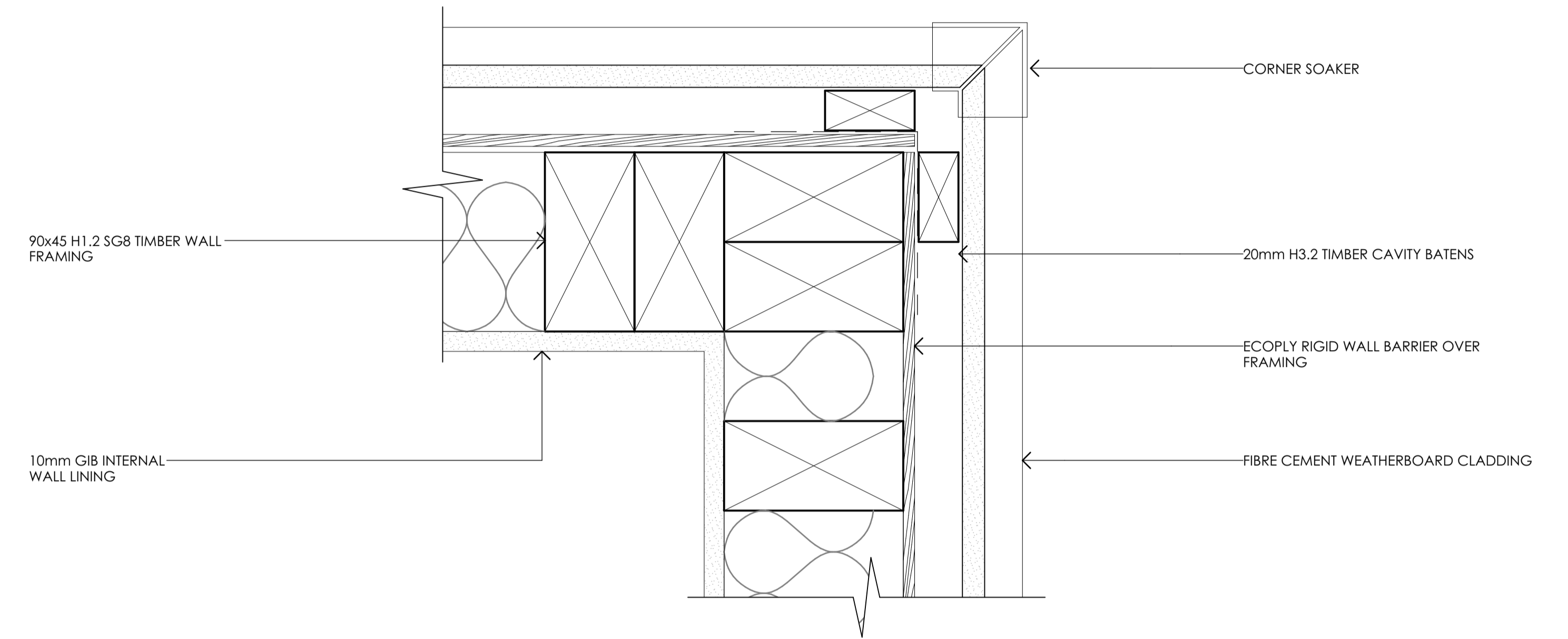
07 TYPICAL BRICK BASE DETAIL
1:2



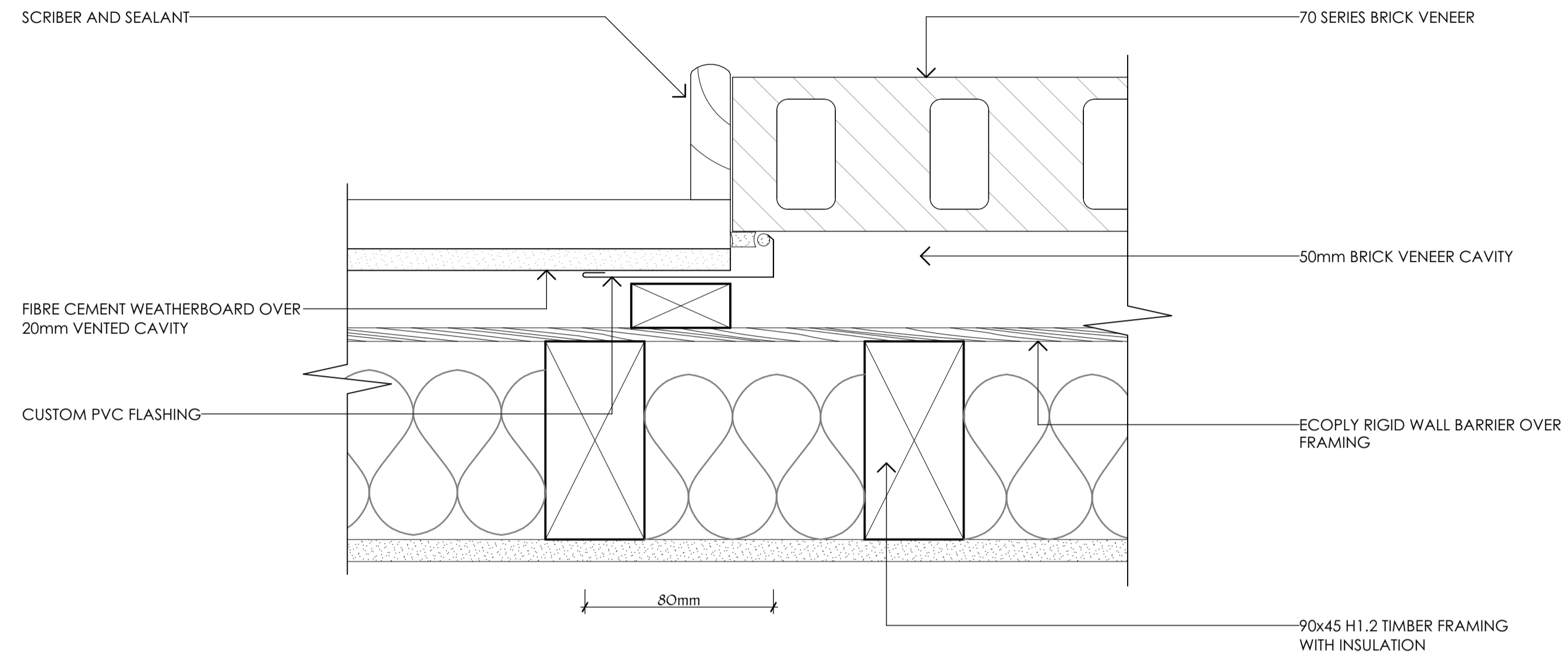
08 BRICK EXTERNAL CORNER DETAIL
A02 1:2



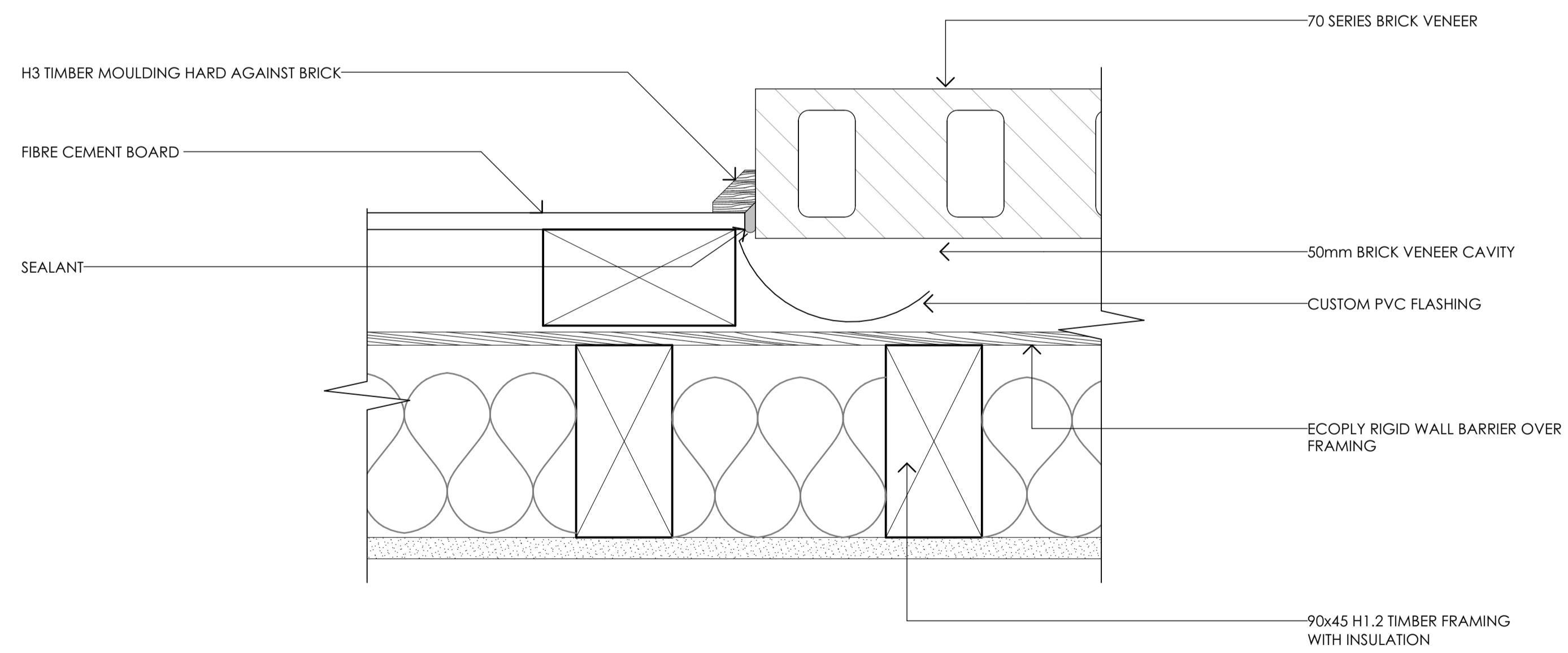
09 BRICK INTERNAL CORNER DETAIL
A02 1:2



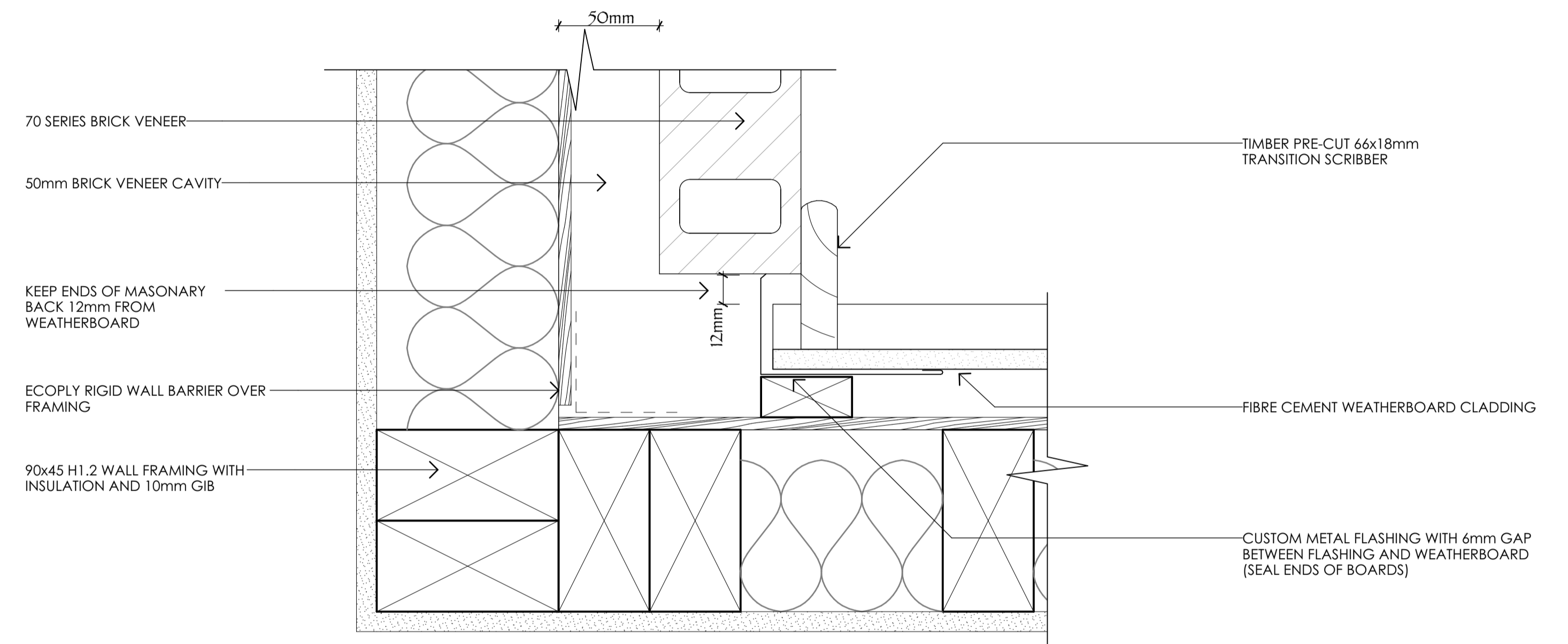
10 WEATHERBOARD EXTERNAL CORNER DETAIL
A02 1:2



11 BRICK TO WEATHERBOARD JUNCTION
A02 1:2

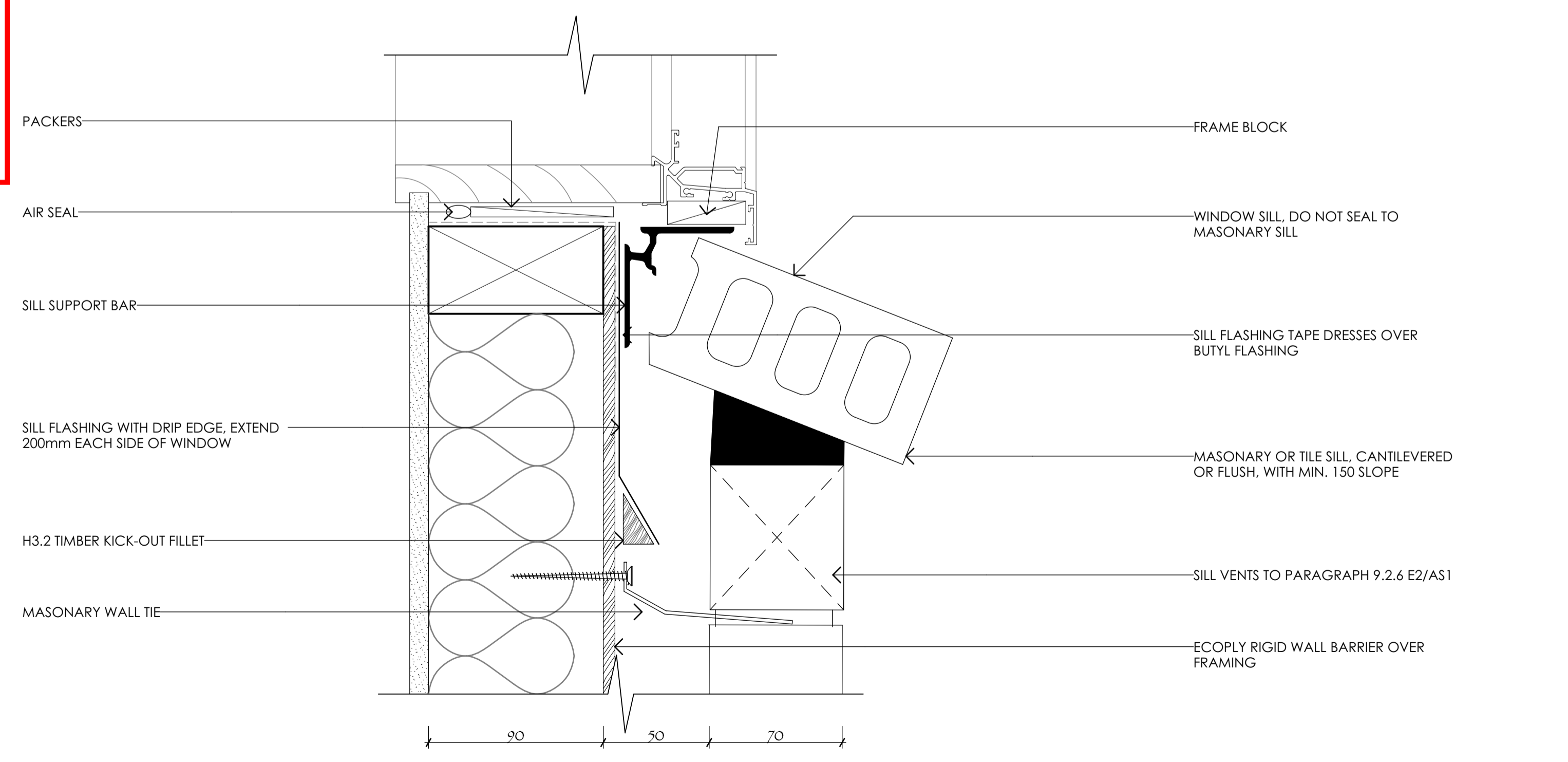
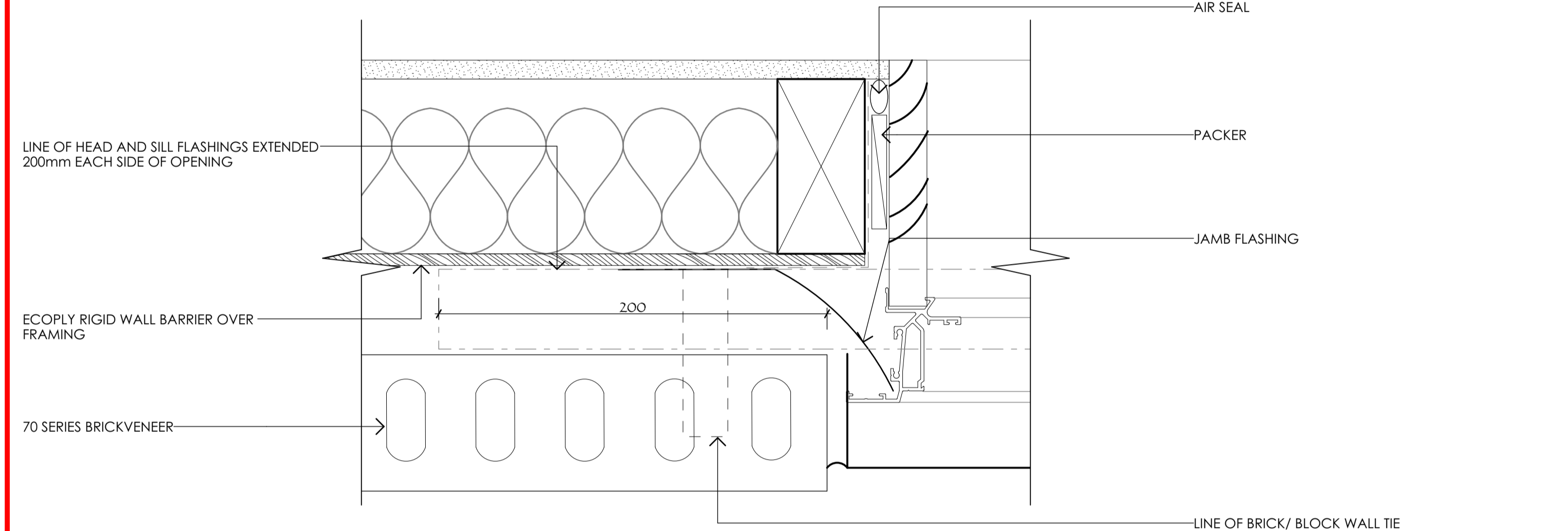
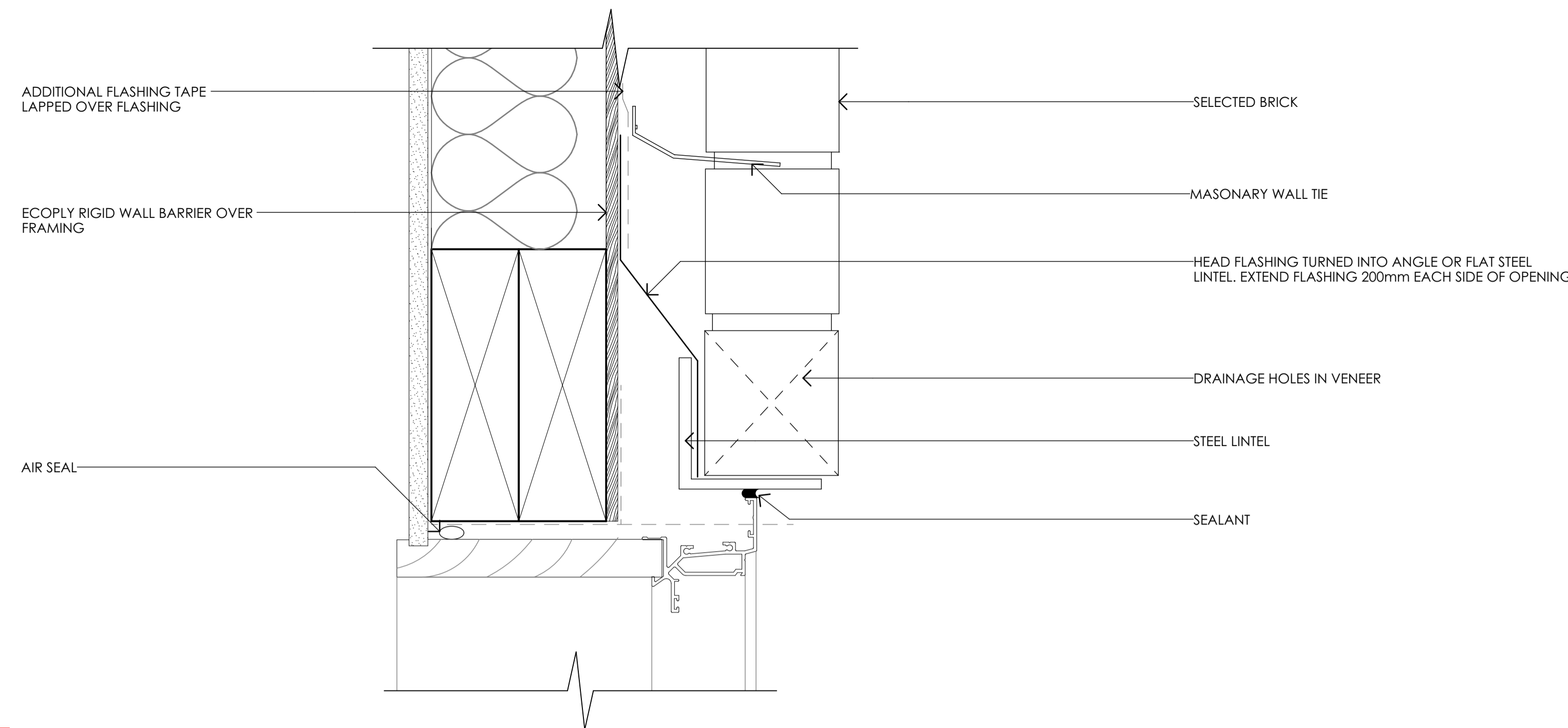


12 BRICK TO FIBRE CEMENT CLADDING JUNCTION
- 1:2

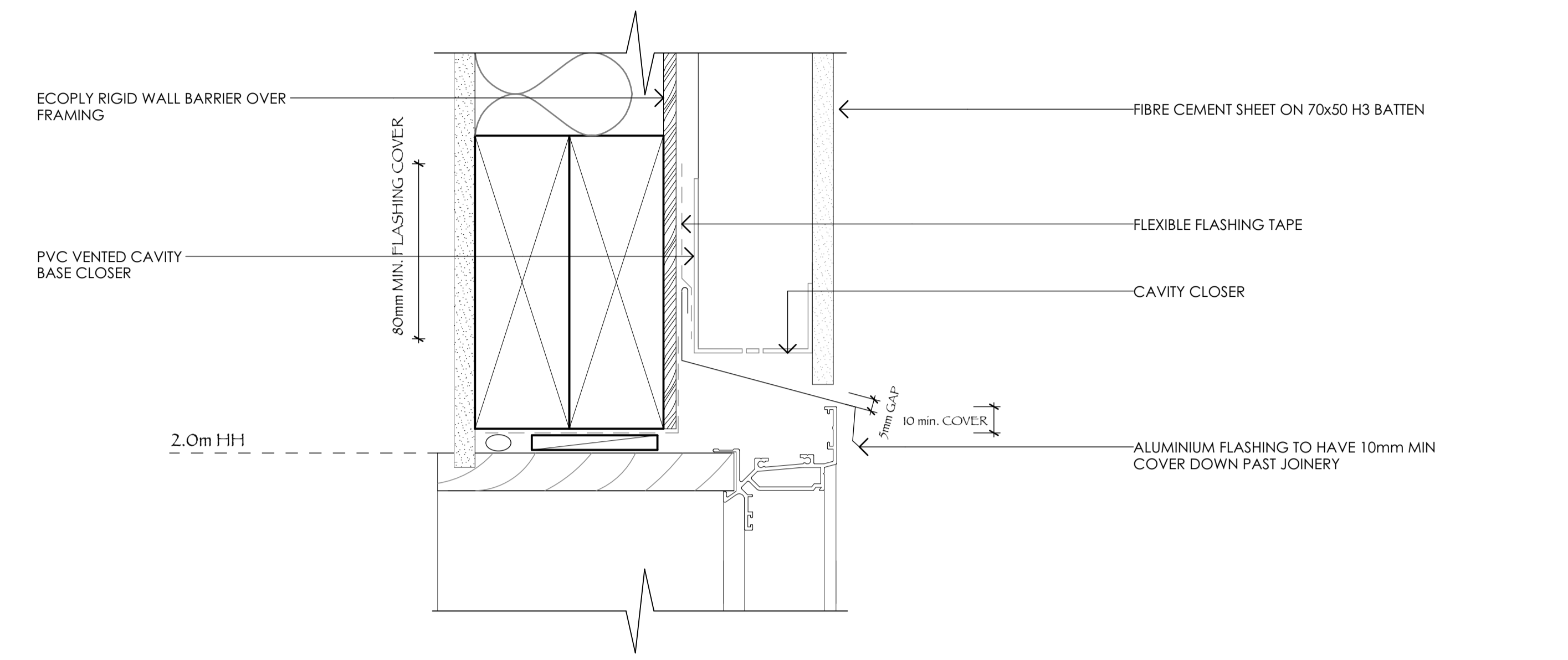


13 BRICK TO WEATHERBOARD INTERNAL CORNER JUNCTION
A02 1:2

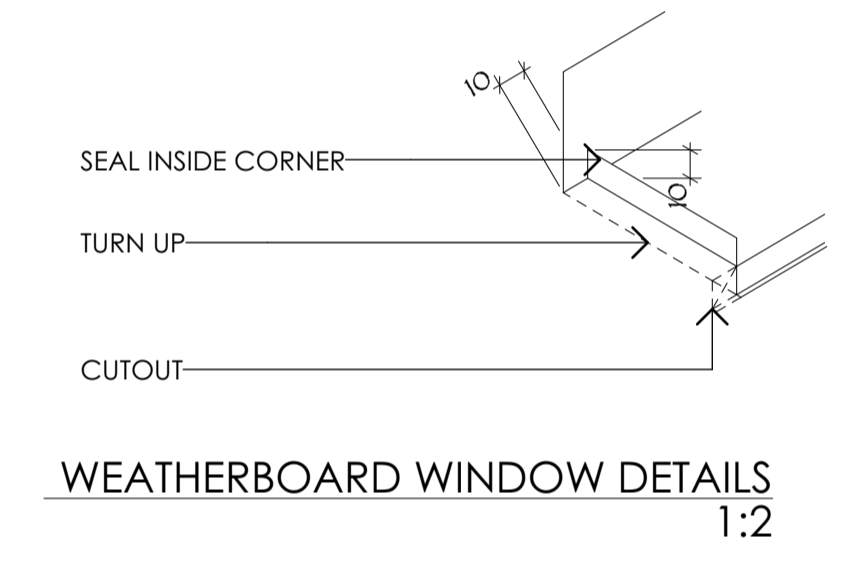
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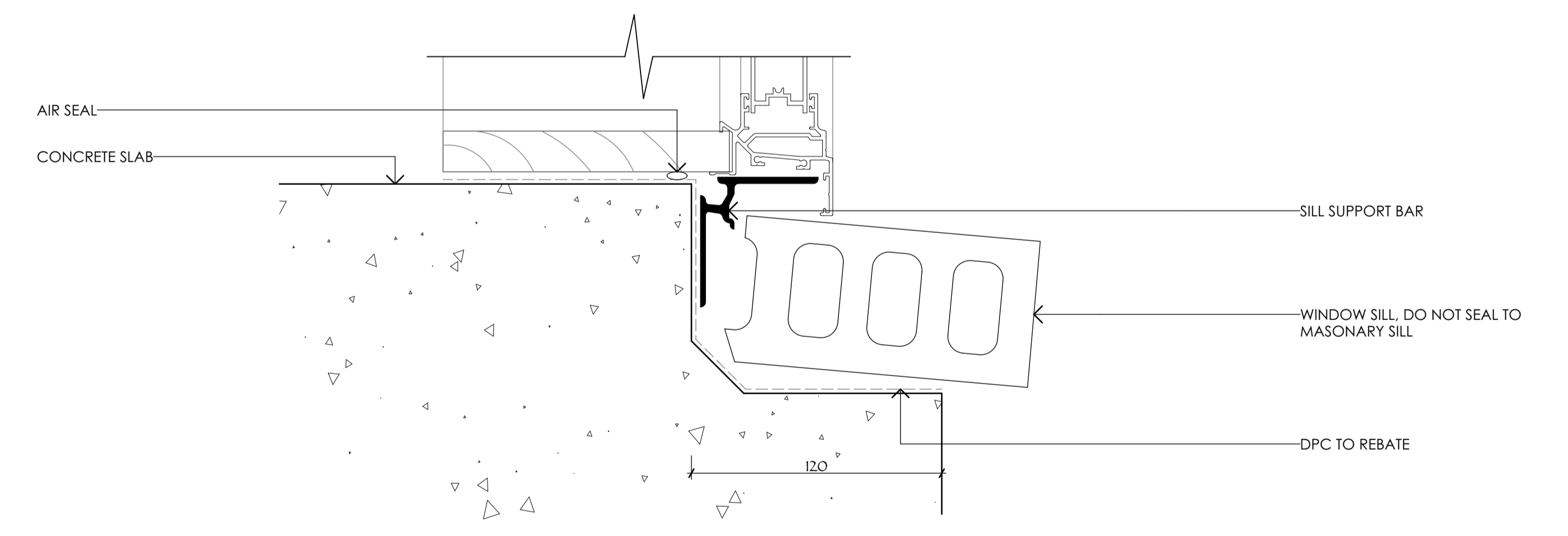
14 BRICK JOINERY DETAILS
#LayID 1:2



15 FIBRE CEMENT HEAD DETAIL
1:2

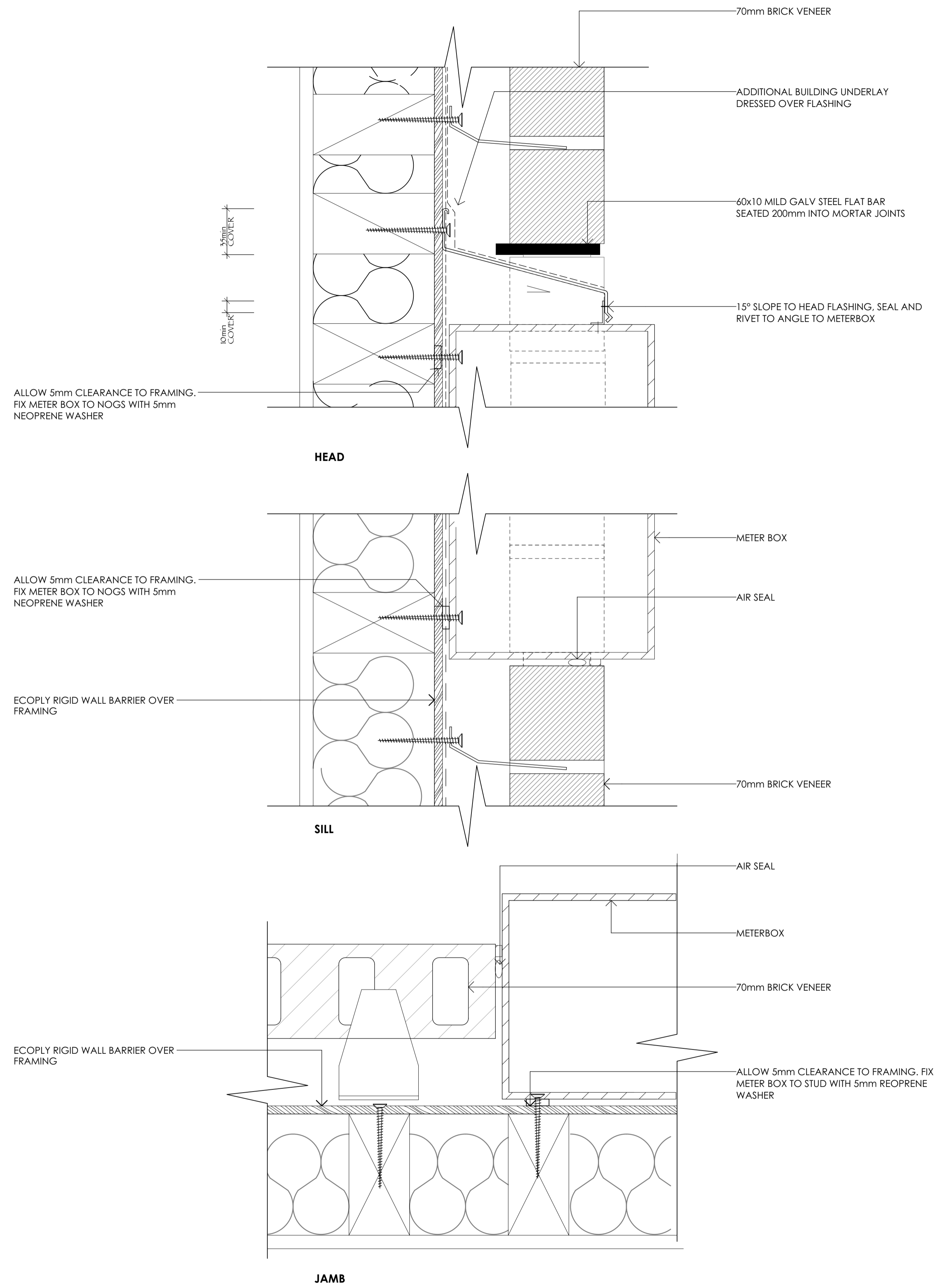


WEATHERBOARD WINDOW DETAILS
1:2

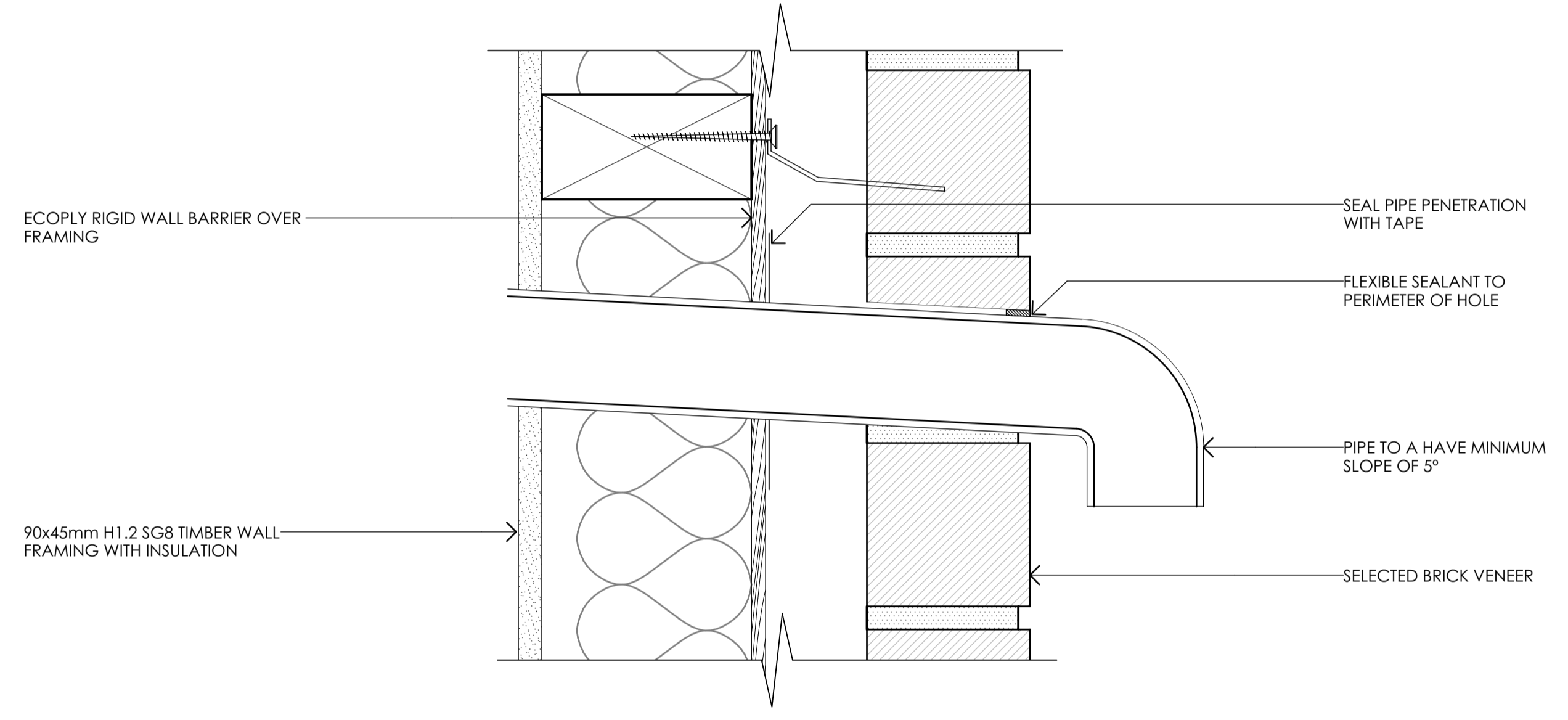


16 BRICK DOOR SILL DETAIL
1:2

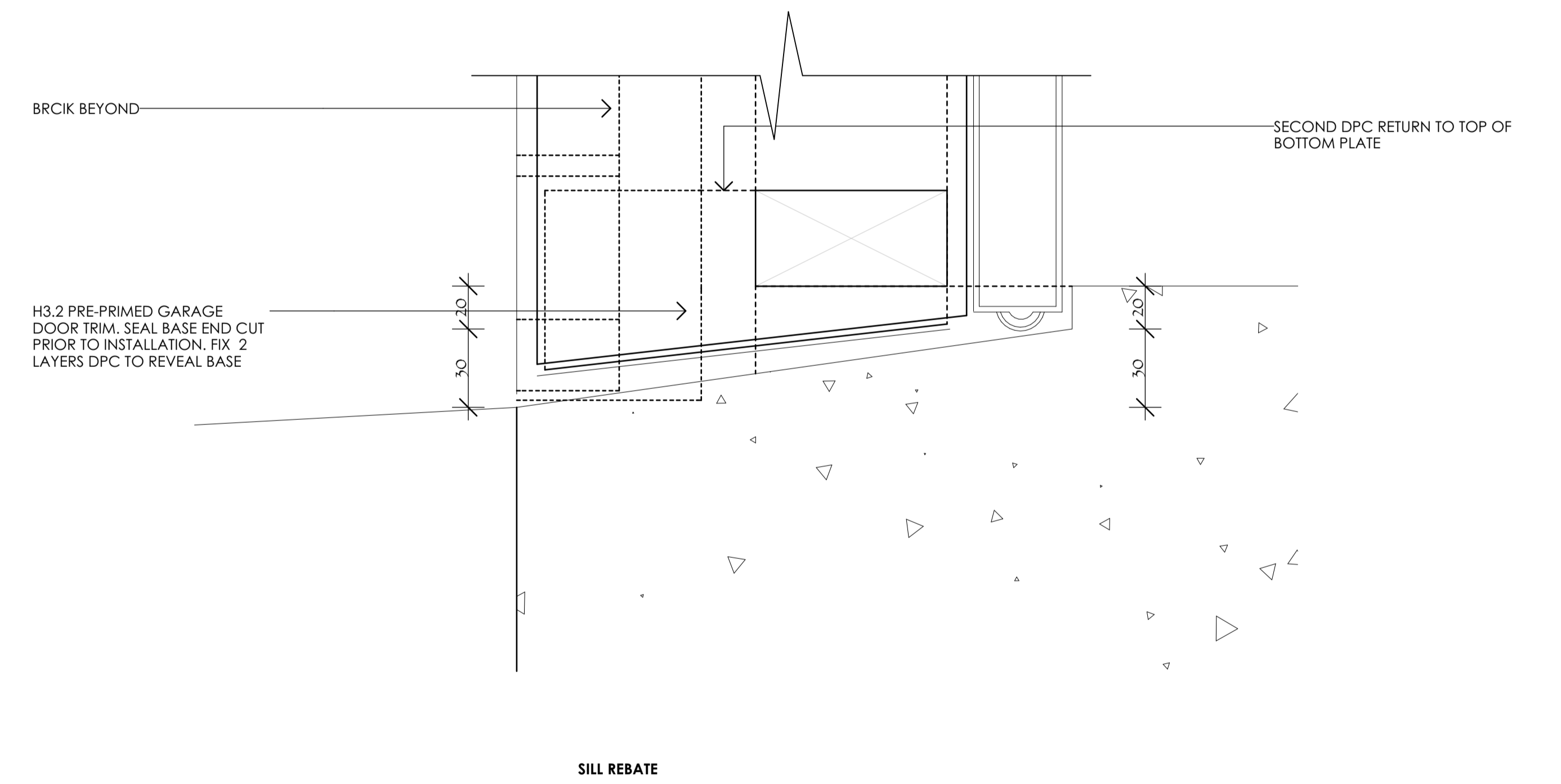
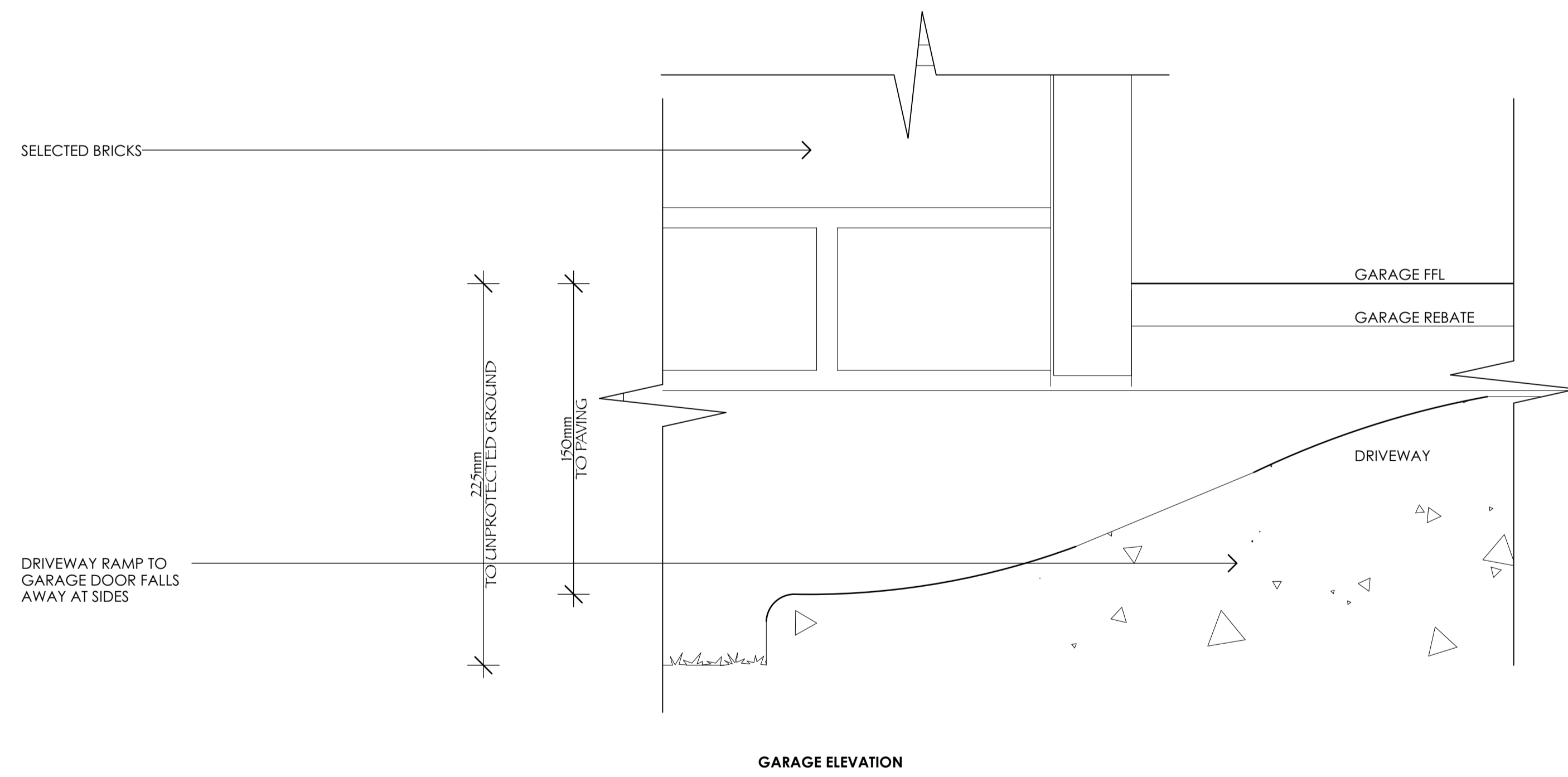
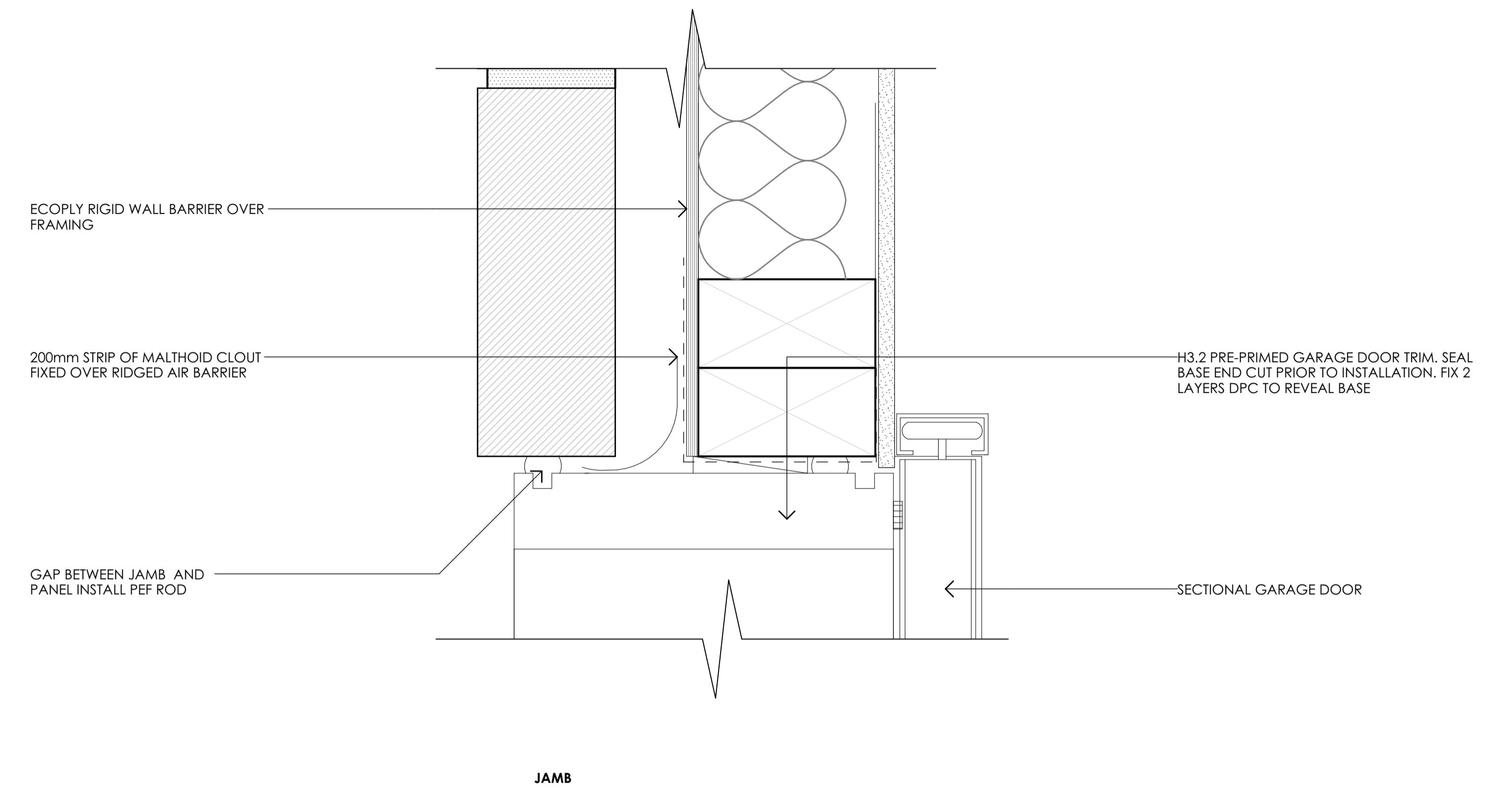
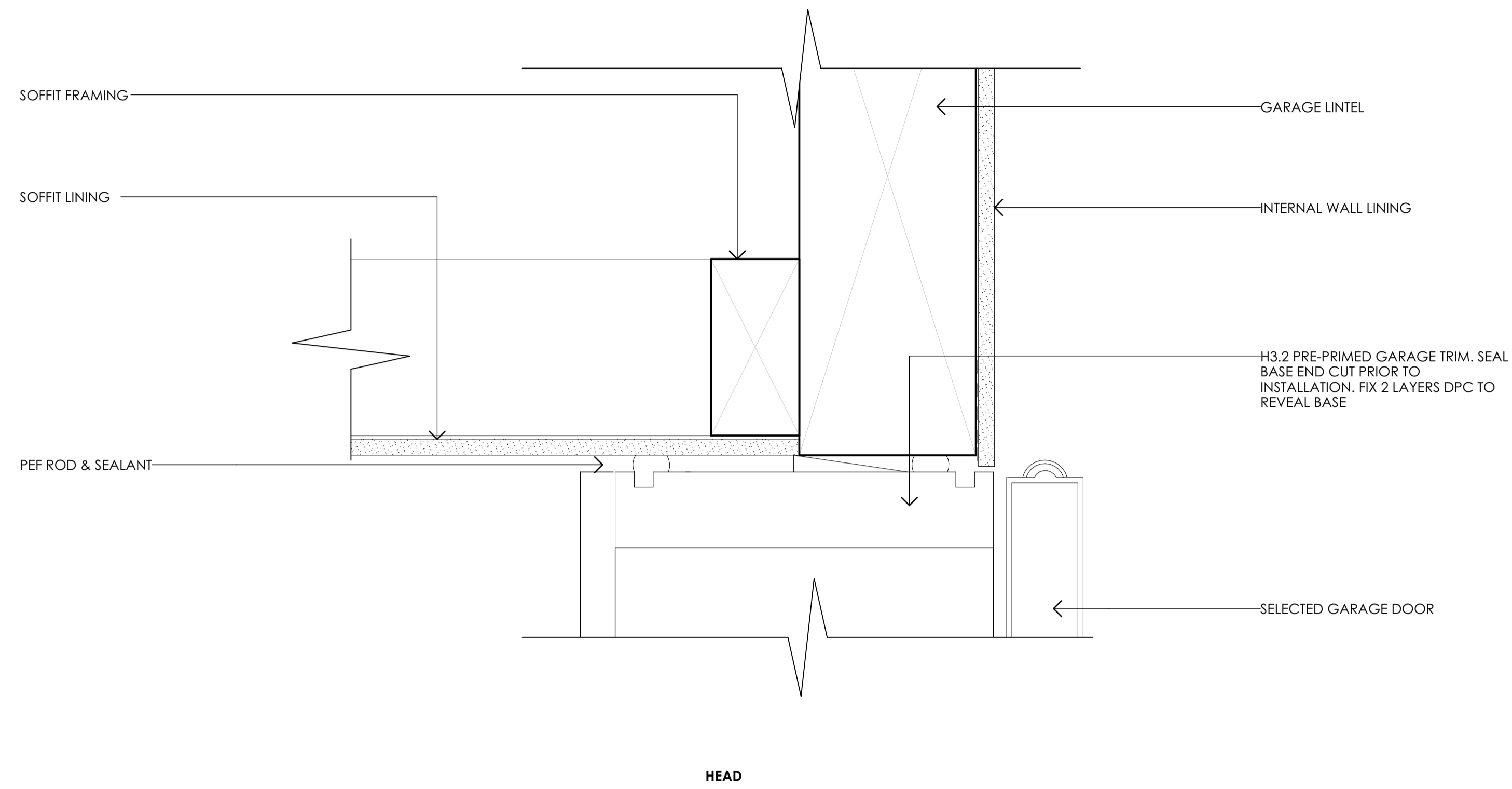
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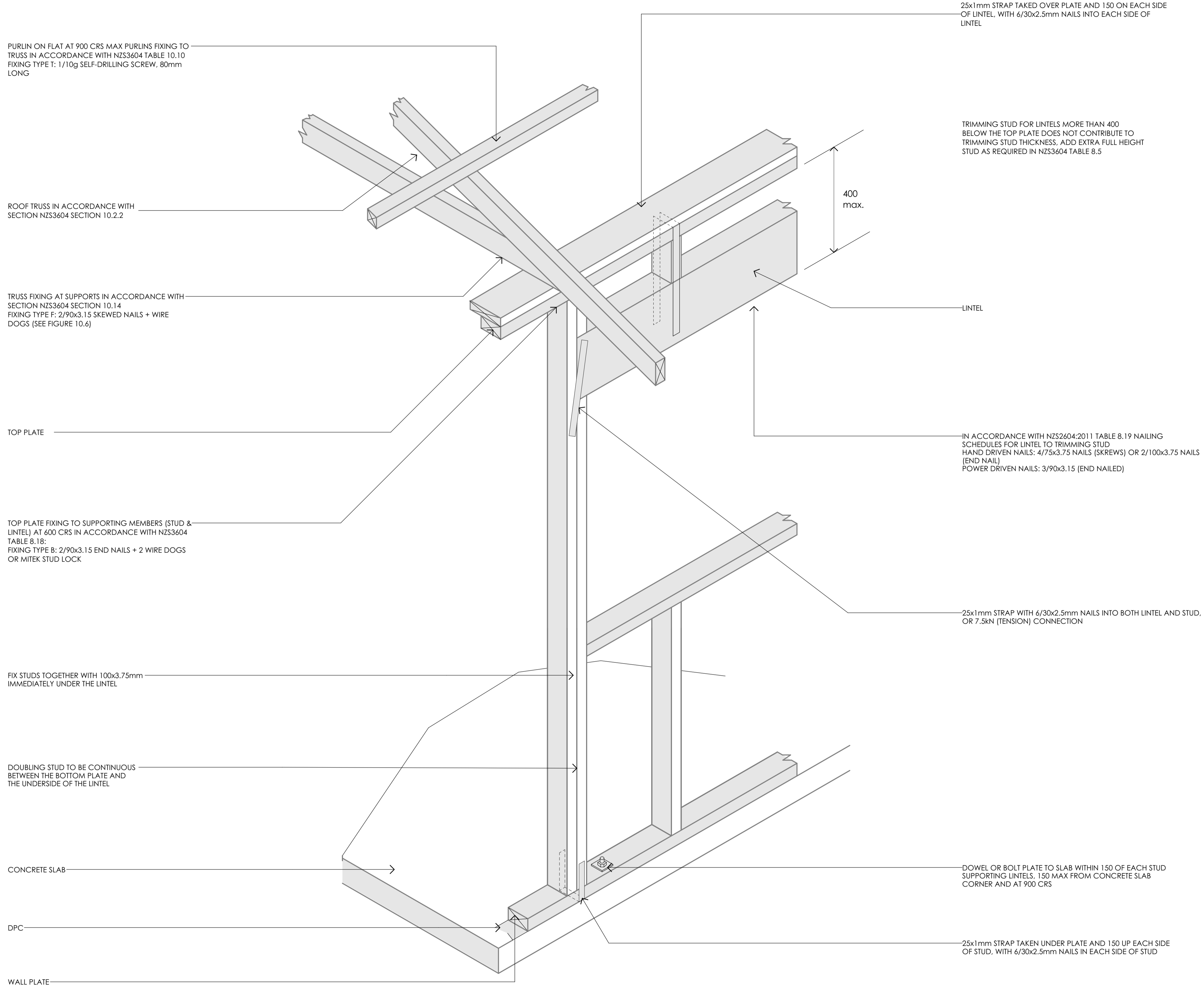
17 METERBOX DETAILS
1:2



18 BRICK PIPE PENETRATION DETAIL
1:2

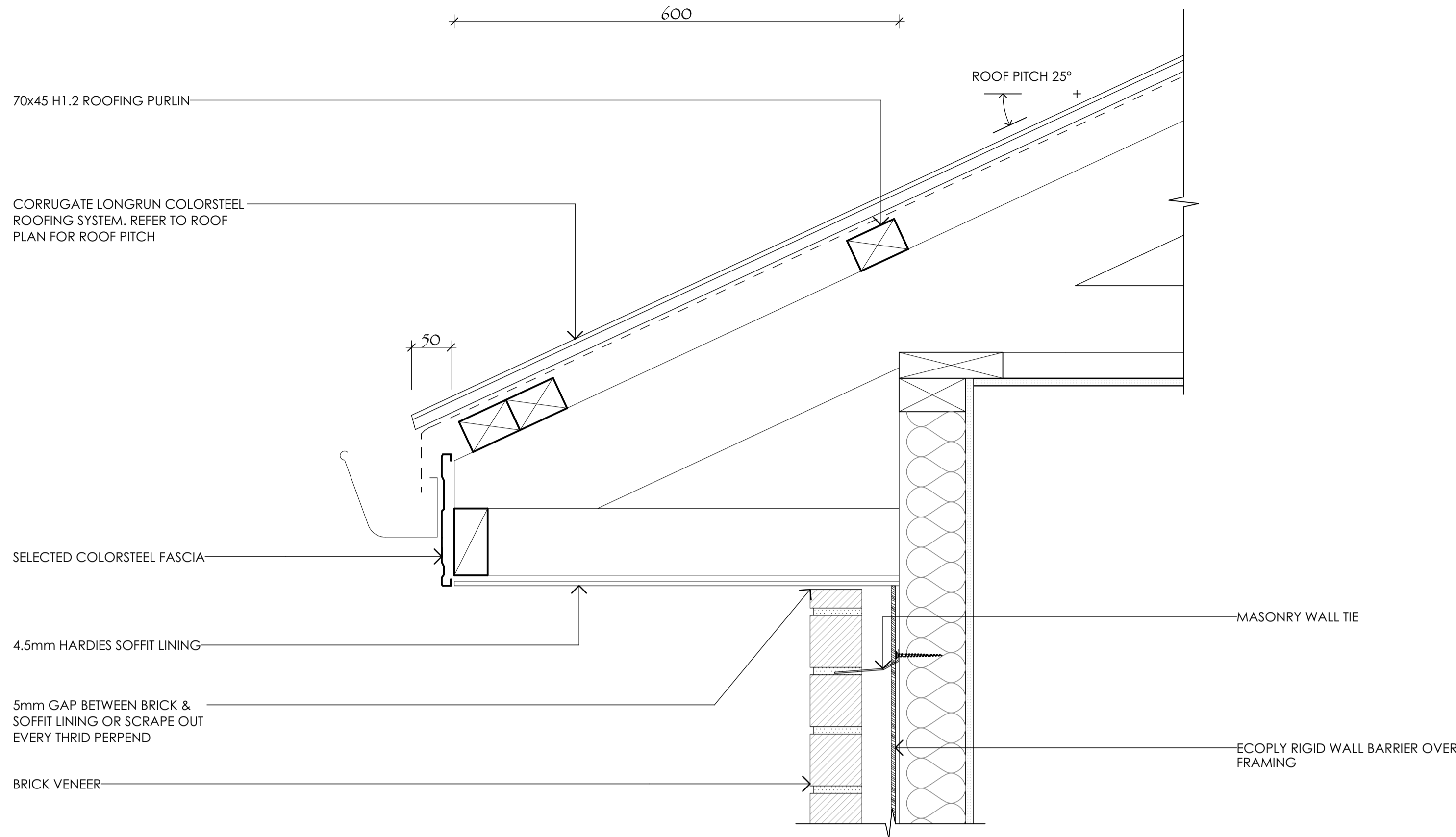


19 GARAGE DOOR DETAILS
1:2

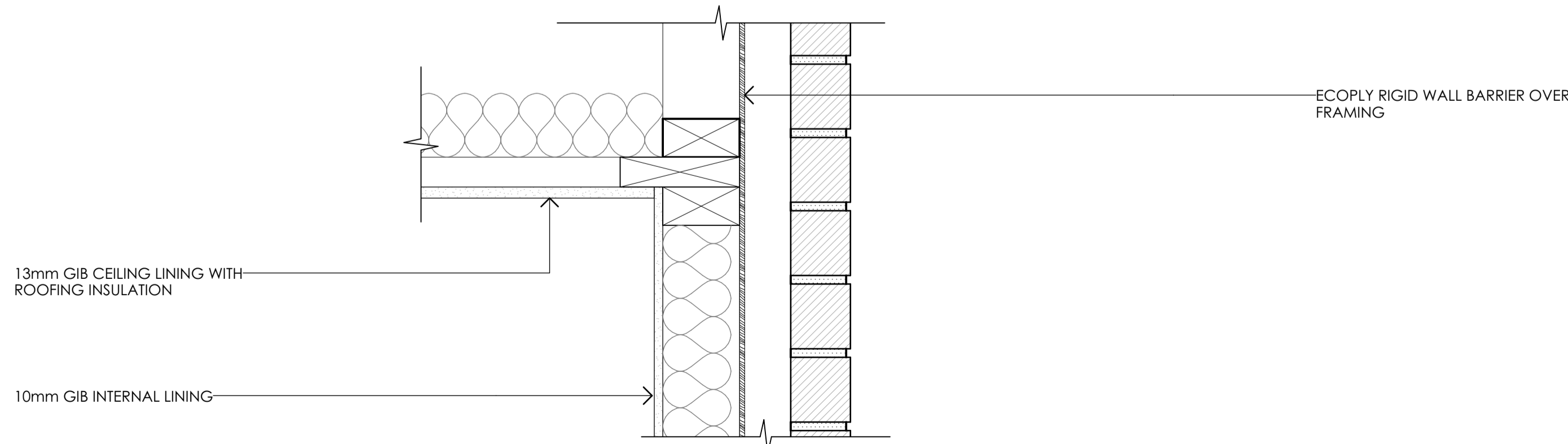
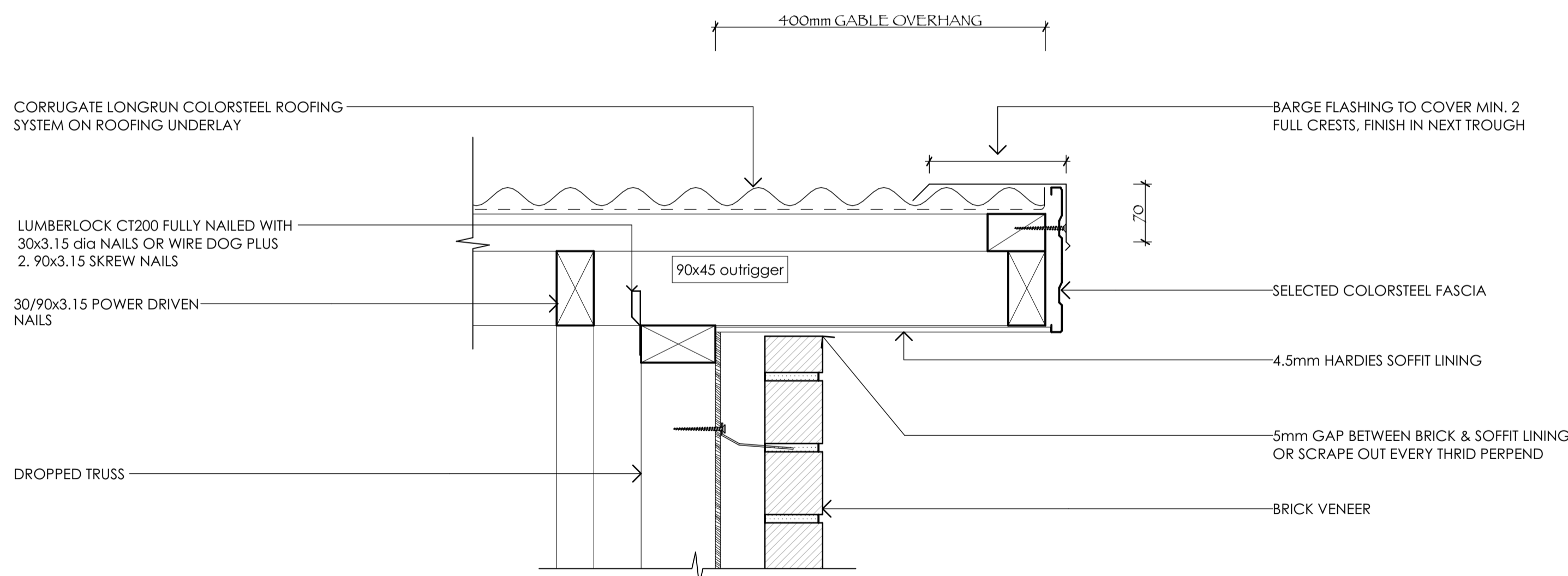


20 TIMBER FIXING DETAIL
1:10

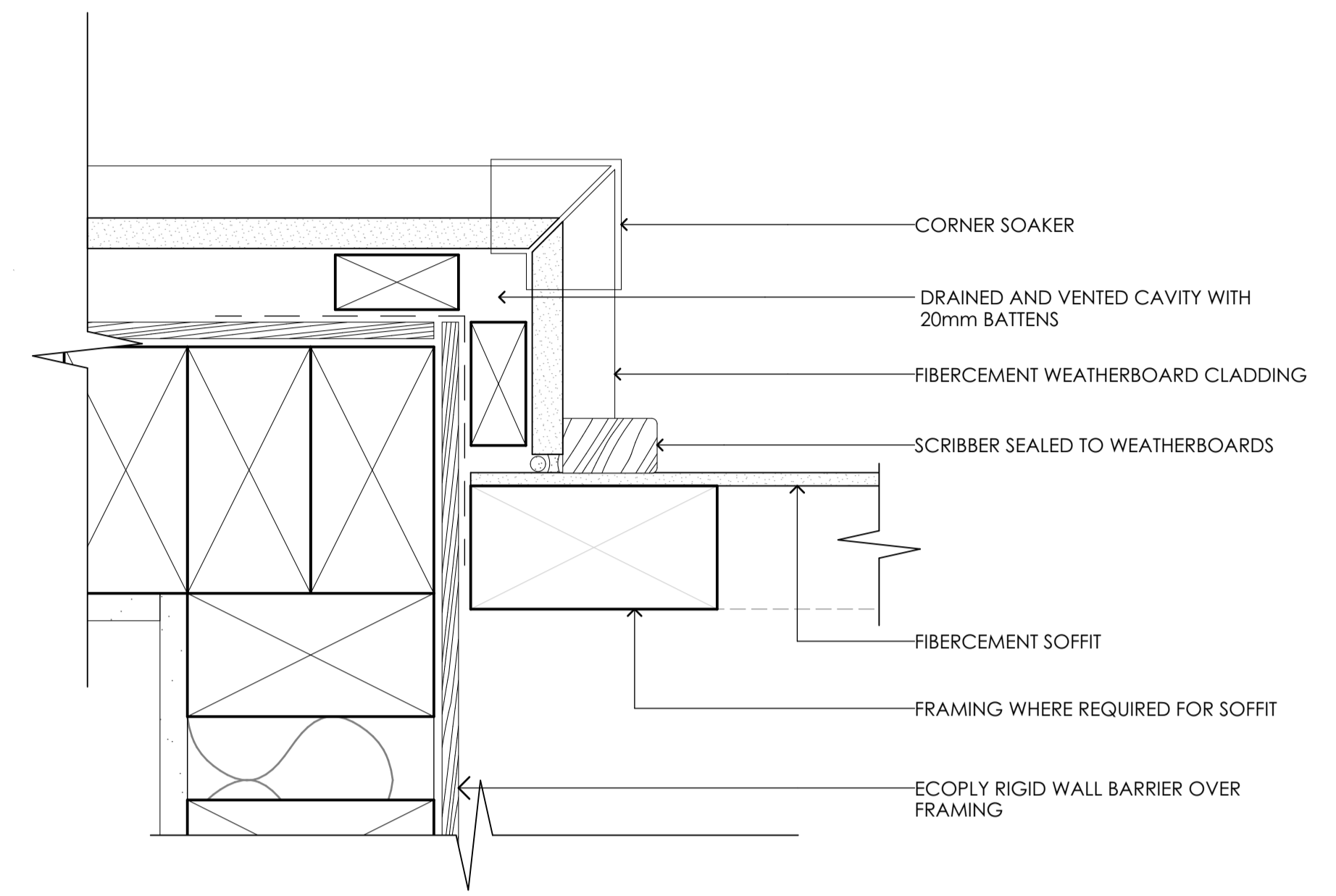
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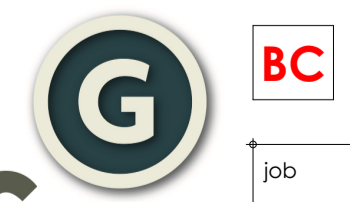
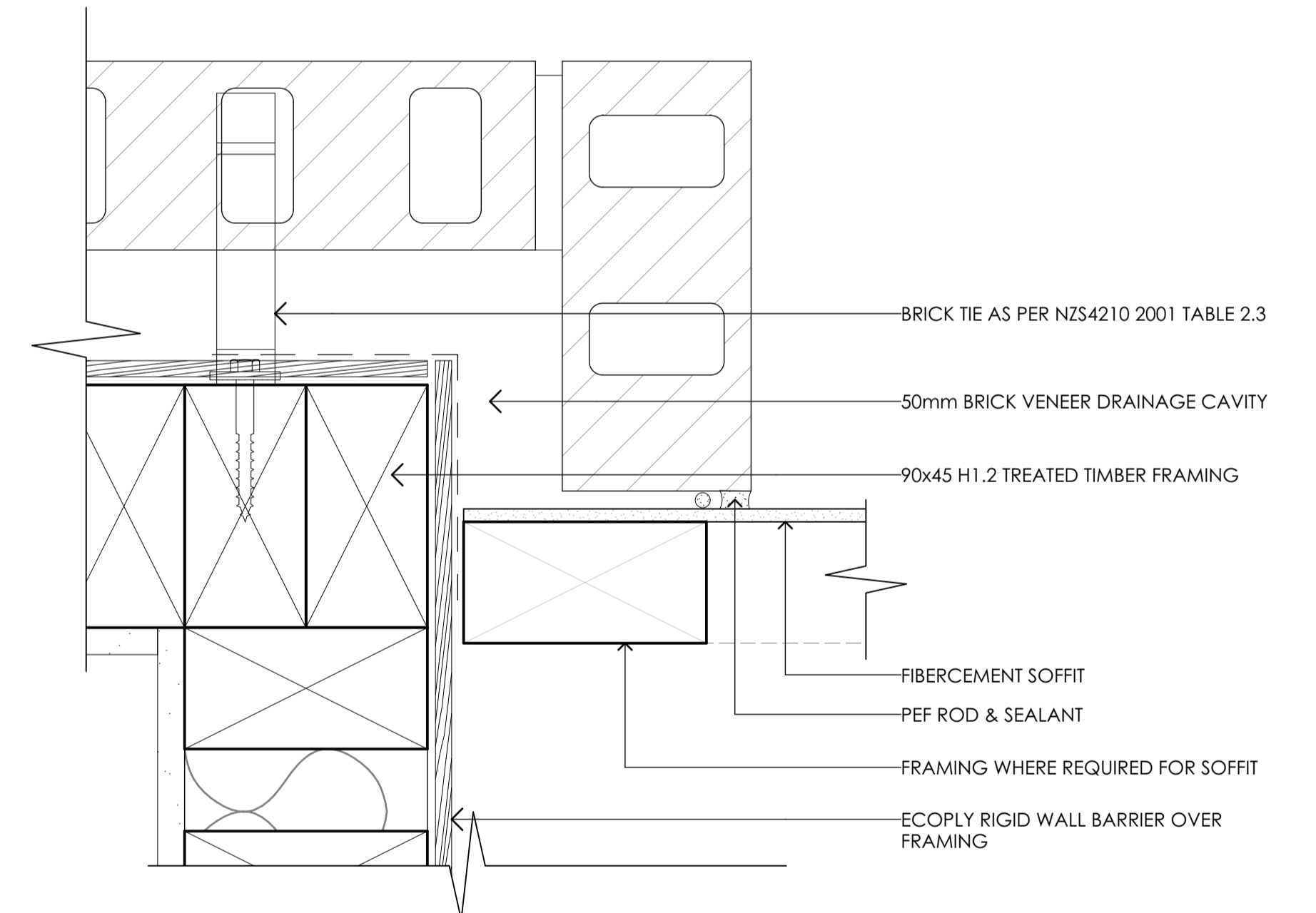
21 TYPICAL SOFFIT DETAIL
A06 1:5



22 BRICK BARGE DETAIL
#LayID 1:5



23 GABLE END SOFFIT JUNCTION DETAIL
1:2

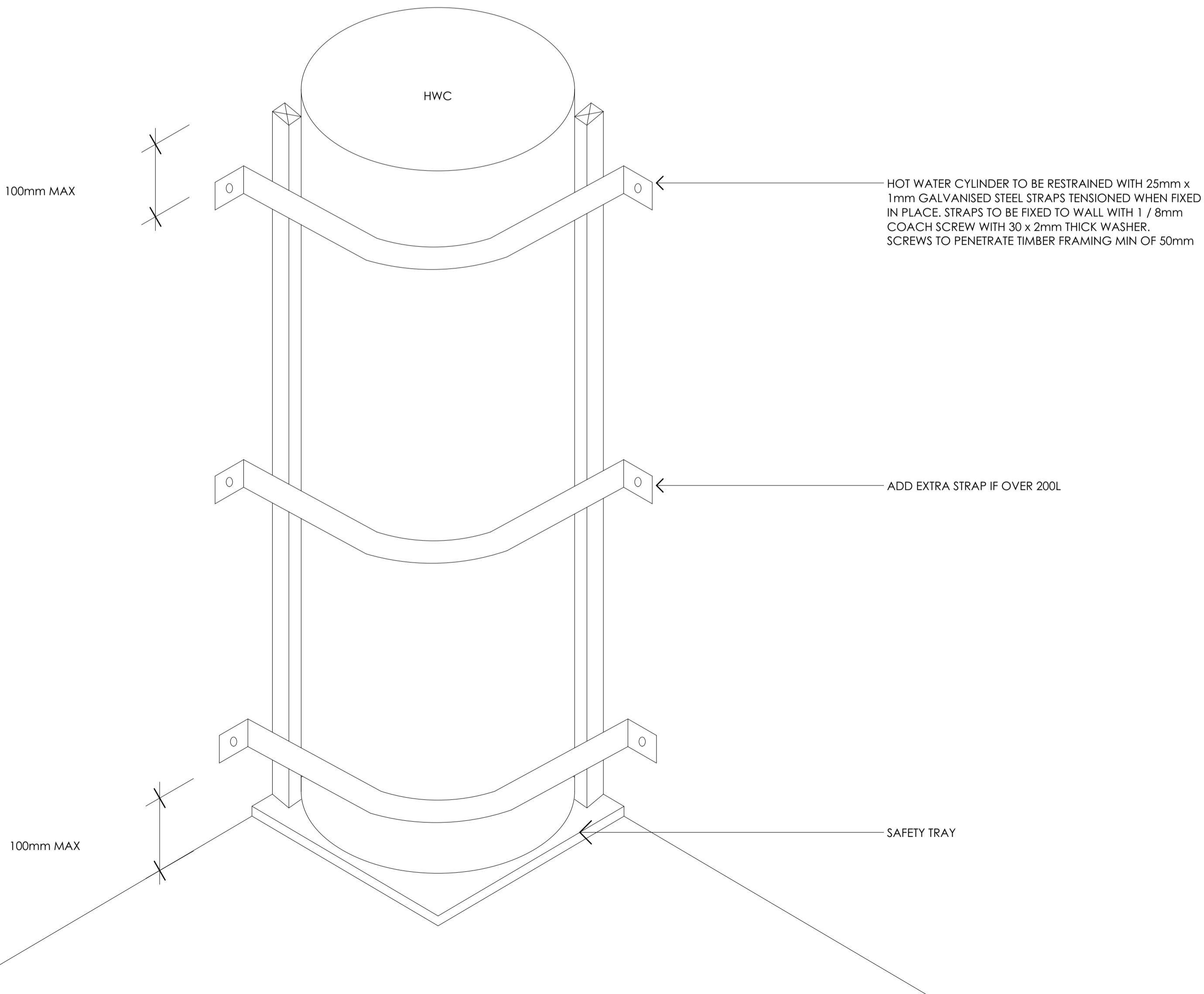
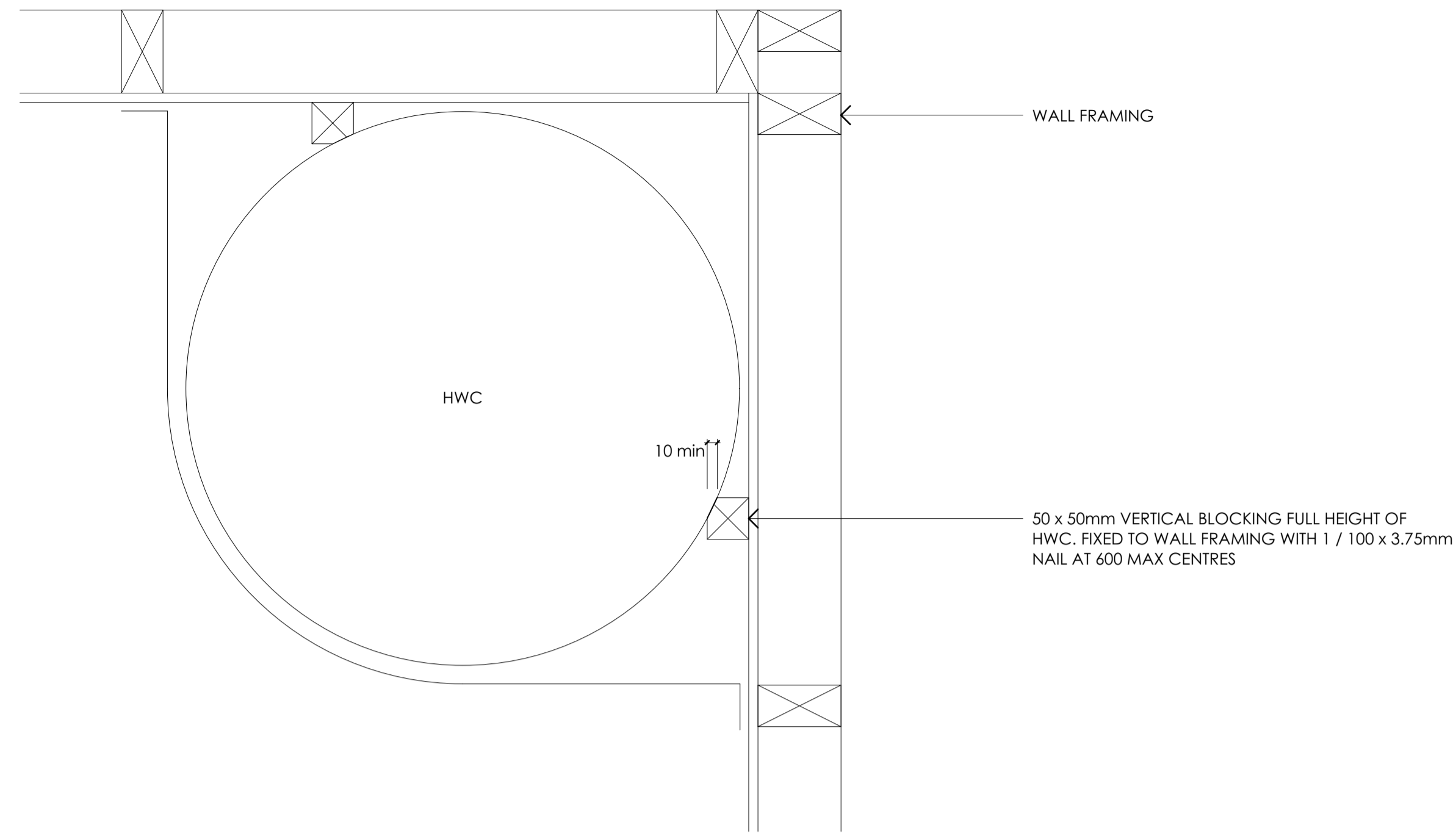


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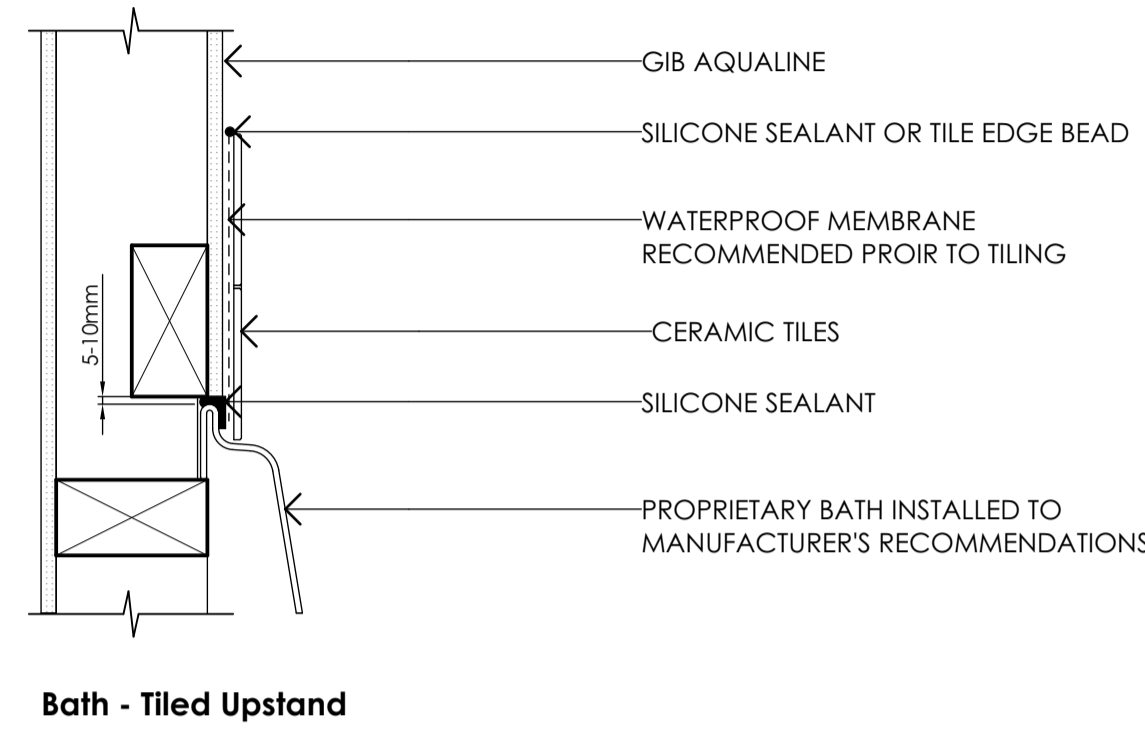
job PRIDE ENTERPRISES LTD P150 Lot 72	drawing CONSTRUCTION DETAILS	date 5/09/19	revision 0	scale at A1 1:5, 1:2	sheet A14
		BC	drawn TS/MW	This drawing and design is subject to COPYRIGHT and may not be reproduced without consent from GRAVITAS CONSULTING LIMITED Gravitas Consulting Limited, P.O. Box 69018 Lincoln 7640 ph: 03-3181555 mob: 021-413747 email: info@gravitas.net.nz	

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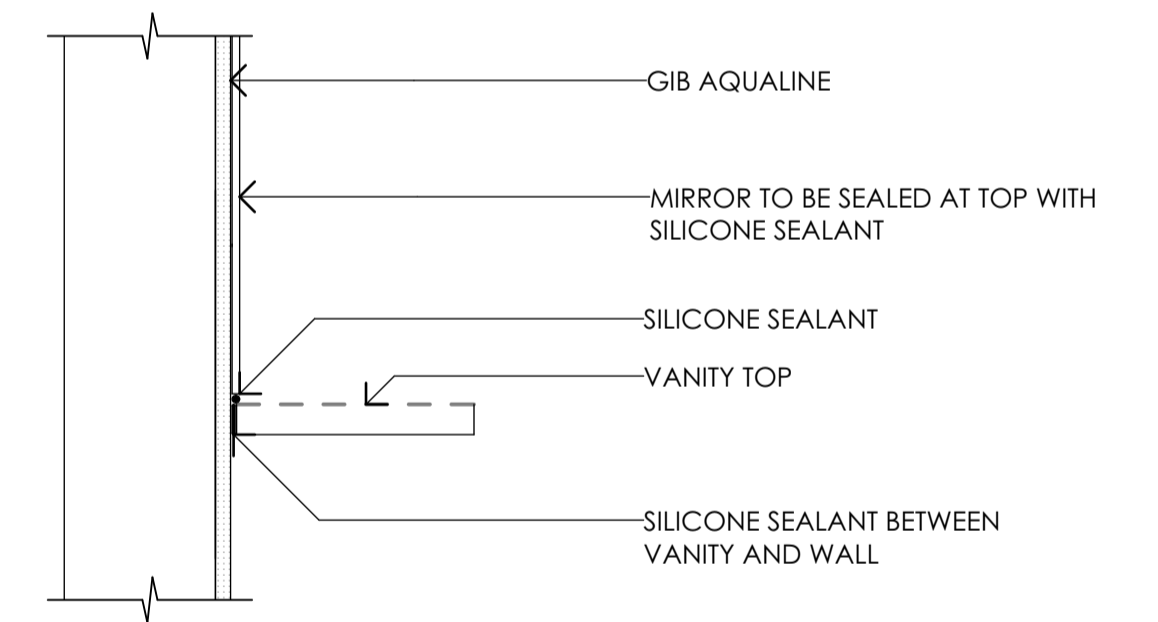
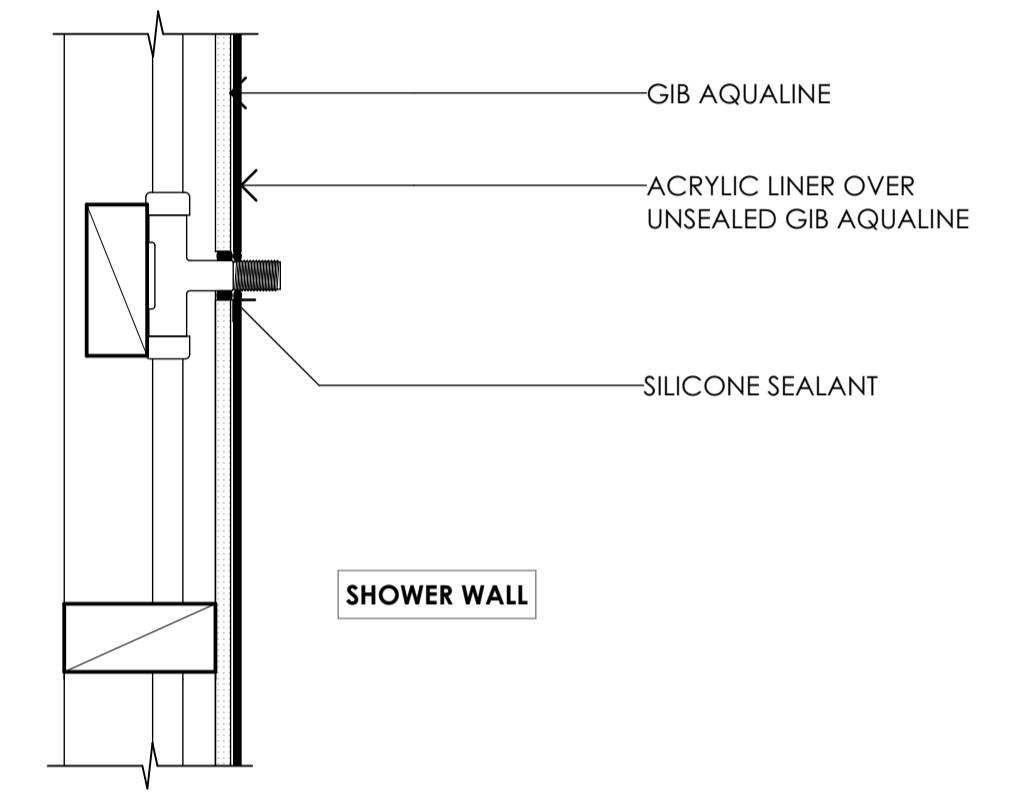
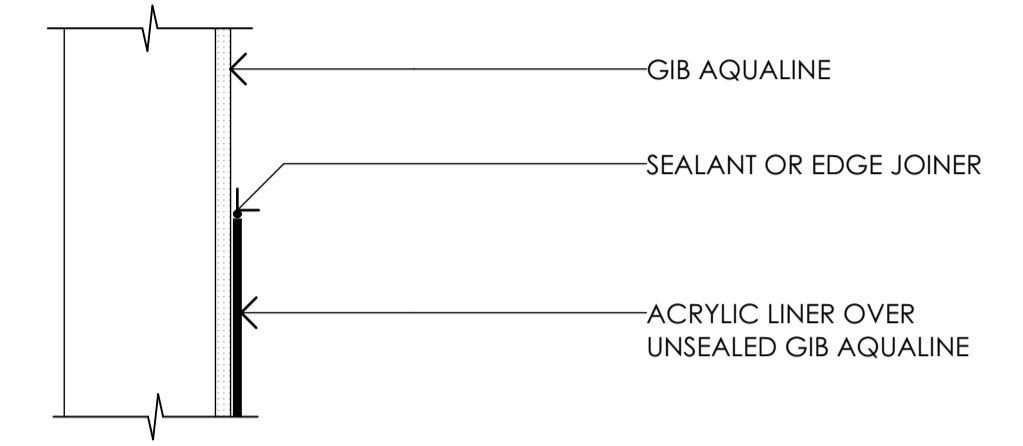
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24 HOT WATER CYLINDER DETAIL
1:5

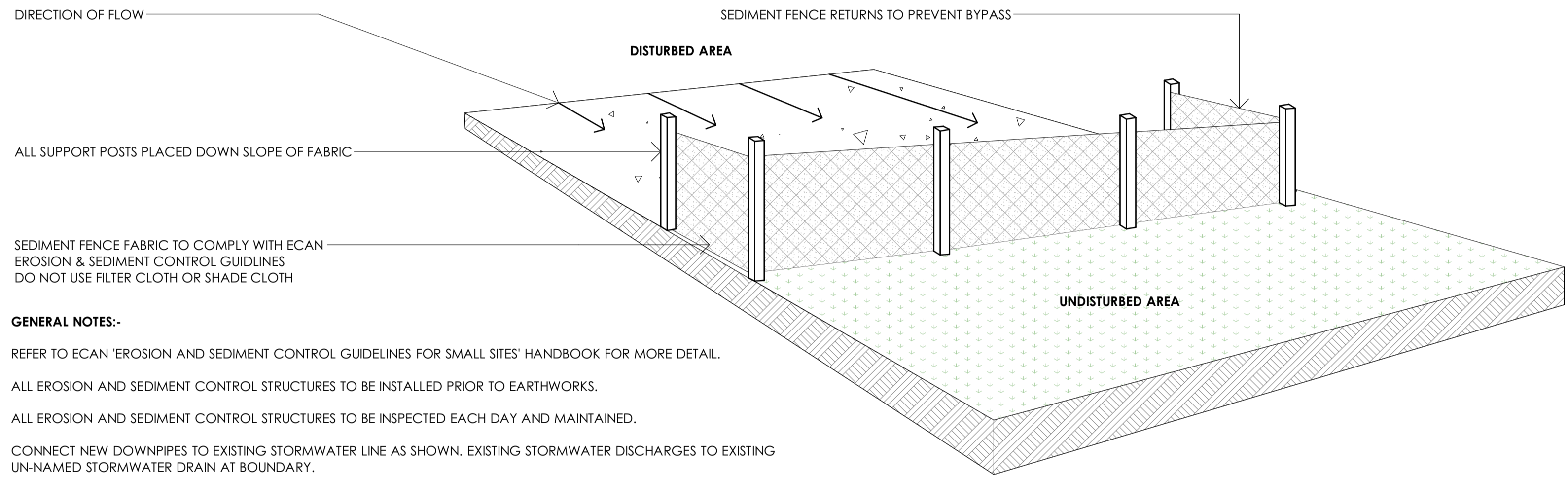


NOTE:
WHERE IMPACT NOISE FROM PIPES IS AN ISSUE, FIX ALL PIPES ON RESILIENT BRACKETS



VANITY TOP DETAIL

25 WET AREA DETAILS
1:5



SEDIMENT FENCE FABRIC TO COMPLY WITH ECAN EROSION & SEDIMENT CONTROL GUIDELINES DO NOT USE FILTER CLOTH OR SHADE CLOTH

GENERAL NOTES:-

- REFER TO ECAN 'EROSION AND SEDIMENT CONTROL GUIDELINES FOR SMALL SITES' HANDBOOK FOR MORE DETAIL.
- ALL EROSION AND SEDIMENT CONTROL STRUCTURES TO BE INSTALLED PRIOR TO EARTHWORKS.
- ALL EROSION AND SEDIMENT CONTROL STRUCTURES TO BE INSPECTED EACH DAY AND MAINTAINED.
- CONNECT NEW DOWNPIPES TO EXISTING STORMWATER LINE AS SHOWN. EXISTING STORMWATER DISCHARGES TO EXISTING UN-NAMED STORMWATER DRAIN AT BOUNDARY.
- CONNECT NEW SEWER TO EXISTING SEWER LINE AS SHOWN. CHECK ON SITE THE CONDITION OF EXISTING SEWER AND REMEDIATE AS REQUIRED.

TEMPOARY CONSTRUCTION BARRIERS:-

- A. SHALL BE FENCES THAT EXTEND AT LEAST 2.0m IN HEIGHT FROM GROUND LEVEL
- B. BE GALVANISED CHAINLINK NETTING HAVING A MAXIMUM SIZED GRID OF 50 x 50mm.
- C. POST SPACING SHALL BE A MAXIMUM OF 2.5m, AND THE GAP BETWEEN THE BOTTOM OF THE FENCE AND GROUND NO GREATER THAN 100mm
- D. HAVE LOCKABLE GATES

GIB EzyBrace® Bracing Software

Demand Calculation Sheet

Job Details
 Name: Pride Enterprises
 Street and Number: Lot 72
 Lot and D.P. Number: TBA
 City/Town/District: Selwyn
 Designer: M. Woodward
 Company: Gravitas Consulting Ltd
 Date: 16/08/2019

Building Specification
 Number of Storeys: 1
 Floor Loading: 2 kPa
 Foundation Type: Slab

Cladding
 Single
 Heavy
 Light

Roof
 Roof Weight: No
 Room in Roof Space: No
 Roof Pitch: 25
 Roof Height above Eaves (m): 2.4
 Building Height to Apex (m): 4.6
 Ground to Lower Floor (m): 0.2

Stud Height (m): 2.4
Building Length (m): 19.3
Building Width (m): 9.9
Build Plan Area (m²): 152.79

Building Location
 Wind Zone = High
 Earthquake Zone 2
 Soil Type: D & E (Deep to Very Soft)
 Annual Probability of Exceedance: 1 in 500 (NZS3604:2011 Default)

Bracing Units required for Wind		Bracing Units required for Earthquake	
Along	Across	Along and Across	
Single Level	486	927	Single Level 893

GIB EzyBrace® Version 1.0.1

GIB EzyBrace® Bracing Software

Single Level Along Resistance Sheet

Line	Element	Length (m)	Angle (degrees)	Stud Ht. (m)	Type	Supplier	Wind (BU/s)	EQ (BU/s)	Resistance	
									Wind	EQ
A	1	2.4		2.4	EPB1 1.2	EcoPLY CHH	288	324	288 OK	324 OK
	2	2.4		2.4	EPB1 1.2	EcoPLY CHH	144	162	144 OK	162 OK
B	1	1.2		2.4	EPB1 1.2	EcoPLY CHH	288	324	288 OK	324 OK
	2	2.4		2.4	EPB1 1.2	EcoPLY CHH	144	162	144 OK	162 OK
C	1	1.2		2.4	GS1-N	GIB®	83	72	83 OK	72 OK
	2	1.2		2.4	GS1-N	GIB®	83	72	83 OK	72 OK
	3	1.2		2.4	GS1-N	GIB®	83	72	83 OK	72 OK
	4	1.2		2.4	EPB1 1.2	EcoPLY CHH	144	162	144 OK	162 OK
D	1	0.4		2.4	EPB1 0.4	EcoPLY CHH	32	36	32 OK	36 OK
	2	1.5		2.4	EPB1 1.2	EcoPLY CHH	180	202	180 OK	202 OK
	3	1.8		2.4	EPB1 1.2	EcoPLY CHH	216	243	216 OK	243 OK
	4	1.2		2.4	EPB1 1.2	EcoPLY CHH	144	162	144 OK	162 OK
	5	2.2		2.4	EPB1 1.2	EcoPLY CHH	264	297	264 OK	297 OK
									836 OK	942 OK

GIB EzyBrace® Bracing Software

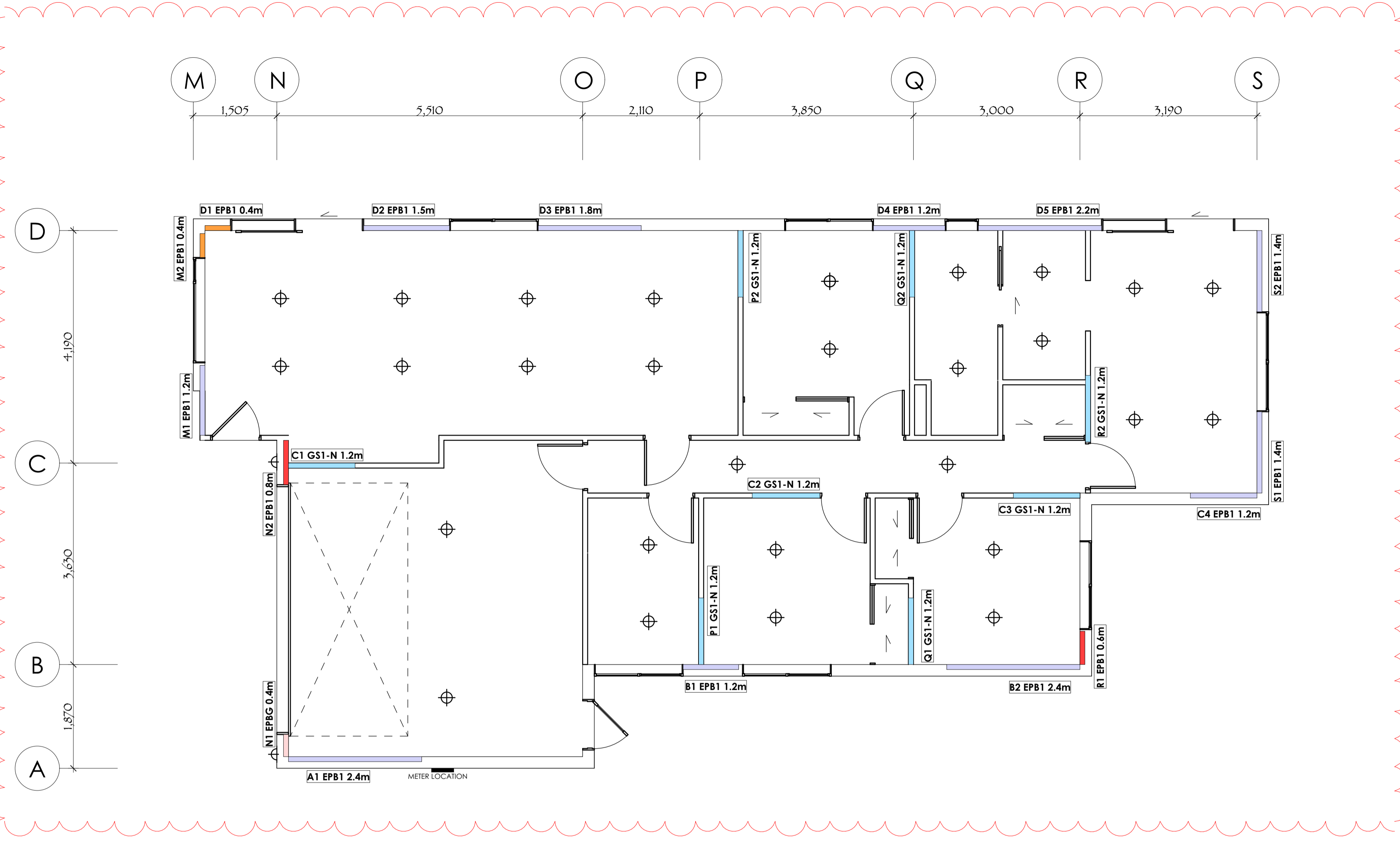
Single Level Across Resistance Sheet

Line	Element	Length (m)	Angle (degrees)	Stud Ht. (m)	Type	Supplier	Wind (BU/s)	EQ (BU/s)	Resistance	
									Wind	EQ
M	1	1.2		2.4	EPB1 1.2	EcoPLY CHH	144	162	144 OK	162 OK
	2	0.4		2.4	EPB1 0.4	EcoPLY CHH	32	36	32 OK	36 OK
N	1	0.4		2.4	EPB1 0.4	EcoPLY CHH	40	46	40 OK	46 OK
	2	0.8		2.4	EPB1 0.4	EcoPLY CHH	76	86	76 OK	86 OK
O	1	3		2.4	GS1-N	GIB®	207	180	207 OK	180 OK
	2	1.2		2.4	GS1-N	GIB®	83	72	83 OK	72 OK
P	1	1.2		2.4	GS1-N	GIB®	83	72	83 OK	72 OK
	2	1.2		2.4	GS1-N	GIB®	83	72	83 OK	72 OK
Q	1	1.2		2.4	GS1-N	GIB®	83	72	83 OK	72 OK
	2	1.2		2.4	GS1-N	GIB®	83	72	83 OK	72 OK
R	1	0.6		2.4	EPB1 0.6	EcoPLY CHH	57	63	57 OK	63 OK
	2	1.2		2.4	GS1-N	GIB®	83	72	83 OK	72 OK
S	1	1.4		2.4	EPB1 1.2	EcoPLY CHH	168	189	168 OK	189 OK
	2	1.4		2.4	EPB1 1.2	EcoPLY CHH	168	189	168 OK	189 OK
									336 OK	378 OK

GIB EzyBrace® Bracing Software

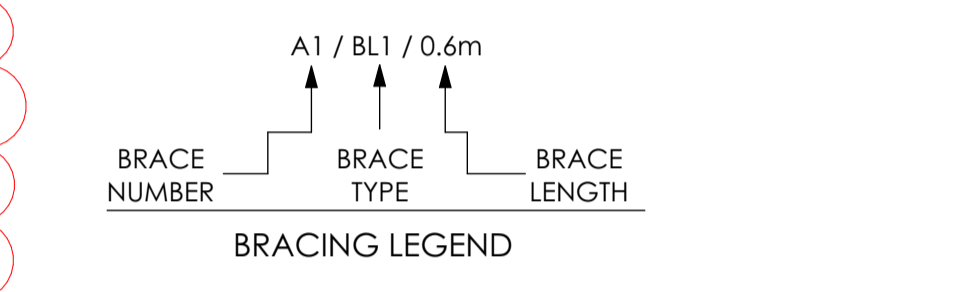
Custom Wall Elements

Supplier	System	Min. Length (m)	Wind (BU/s/m)	EQ (BU/s/m)
EcoPLY CHH	EPB1 0.4	0.4	80	95
EcoPLY CHH	EPB1 0.6	0.6	95	105
EcoPLY CHH	EPB1 1.2	1.2	120	135
EcoPLY CHH	EPB1 0.4	0.4	100	115

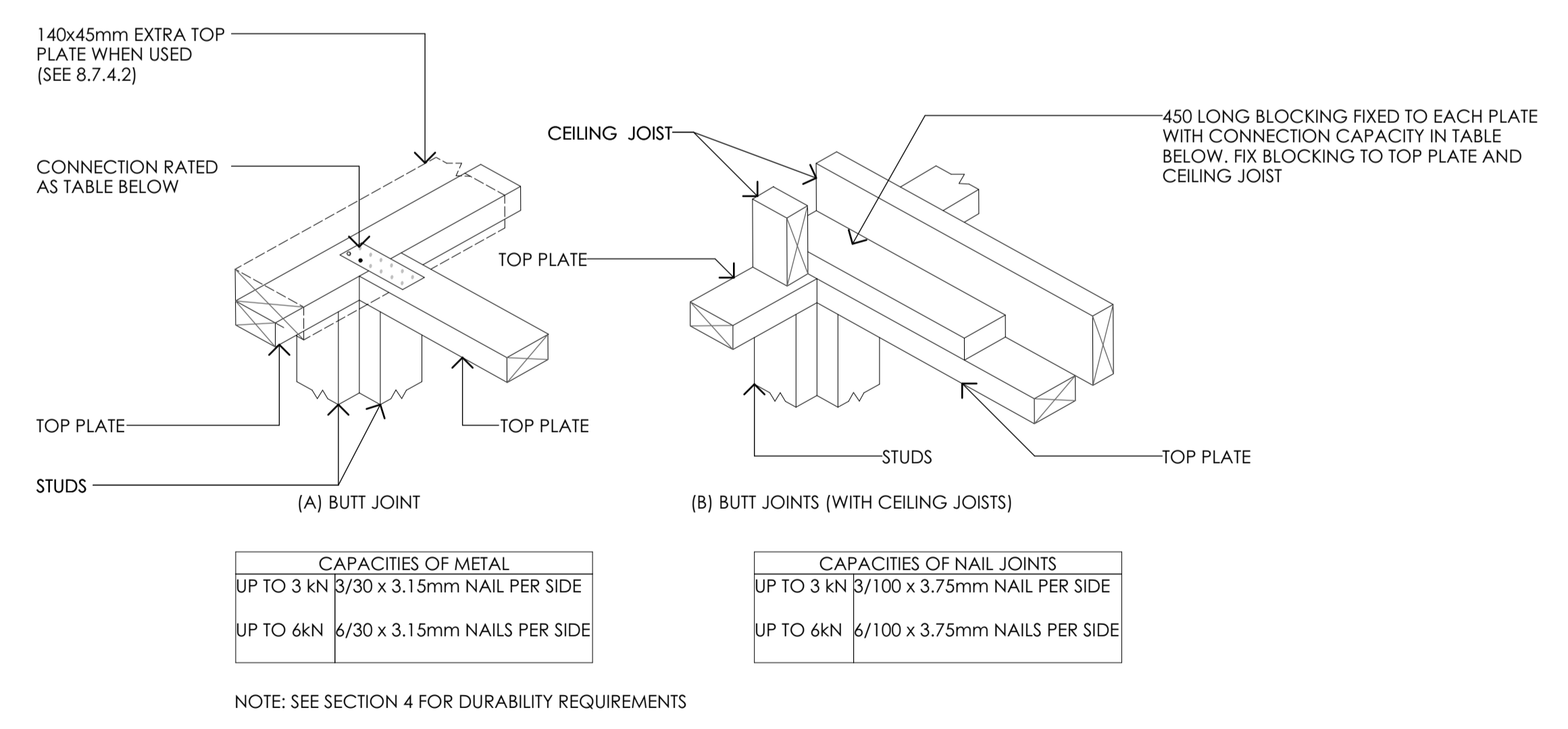


- #### TYPICAL LIGHTING LAYOUT
- CA80/ CA135 RATED RECESSED DOWNLIGHT WITH COMPACT FLUORESCENT LAMP
 - SUSPENDED LED LIGHT
 - SUSPENDED PENDENT
 - INTERNAL WALL LED LIGHT
 - EXTERNAL WALL LED LIGHT

NOTE:
LIGHTING TO BE CONFIRMED ON SITE WITH REGISTERED ELECTRICIAN



- #### BRACING ELEMENTS
- GIB GS1-N
 - ECOPLY EPB1 1.2 (min)
 - ECOPLY EPB1 0.6 (min)
 - ECOPLY EPB1 0.4 (min)
 - ECOPLY EPBG 0.4 (min)
- ALL BRACING TO BE INSTALLED AND FIXED AS PER MANUFACTURERS INSTRUCTIONS



CONNECTING TOP PLATE STRAPS TO EXTERNAL WALLS AT RIGHT ANGLES
1:2

NZ 3604

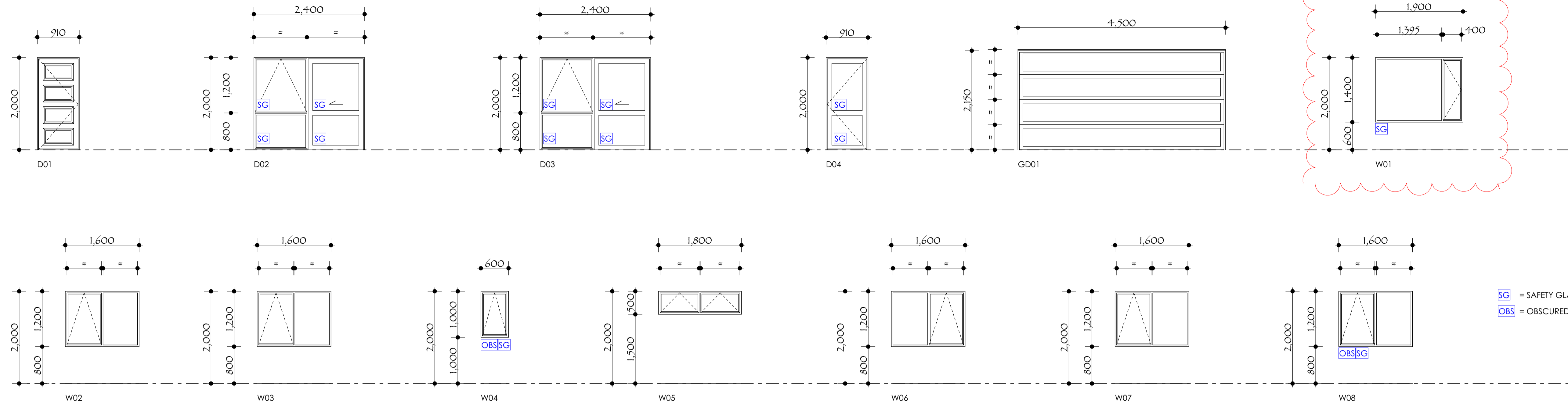
Each wall that contains one or more wall bracing elements shall be connected at the top plate level, either directly, or through a framing member in the line of the wall, to external walls at right angles to it. Top plate fixing(s) of the capacity in tension or compression along the line of the wall bracing element are given as follows:

(a) For each wall containing wall bracing elements with a total bracing capacity of not more than 125 bracing units: to at least one such external wall by a fixing as shown in figure 8.16 of 6 kN capacity;

(b) For each wall containing wall bracing elements with a total bracing capacity of not more than 250 bracing units: to at least 2 external walls by fixings as shown in figure 8.16 each of 6 kN capacity;

(c) For each wall containing wall bracing elements with a total bracing capacity of more than 250 bracing units: to at least 2 external walls by fixings as shown in figure 8.16 each having a rating of not less than 2.4 kN per 100 bracing units

SDC - Approved Building Consent Document - BC191676 - Pg 24 of 26 - 4/10/2019 - lloydh



GENERAL NOTES:

NOTE: INSTALL ALL PROPRIETARY PRODUCTS IN ACCORDANCE WITH THEIR MANUFACTURERS INSTRUCTIONS, UNLESS SPECIFIED OTHERWISE

ALL INTERIOR DOORS TO BE PAINT FINISHED FLUSH PANEL MDF HOLLOW CORE DOORS WITH SELECTED HARDWARE (810 X 1980 NOMINAL SIZE)

ALL CAVITY SLIDERS TO BE CS BRAND

ALL WINDOW AND DOOR DIMENSIONS SHOWN ARE ROUGH OPENING, SITE VERIFY PRIOR TO FABRICATION

WINDOW JOINERY:

SELECTED POWDERCOATED ALUMINIUM FRAMED WINDOWS

ALL WINDOWS SHALL BE CONSTRUCTED IN ACCORDANCE WITH NZBC F2/AS1 & NZS 4211 TO SUIT LOCATION.

ALL GLAZING SHALL BE TO NZS 4223 PT. 3 Human impact safety requirements (i.e. GRADE A SAFETY GLAZING MATERIAL TO BATHROOM WINDOWS AND FULL HEIGHT GLAZING) A CERTIFICATE OF COMPLIANCE FROM THE INSTALLER IS TO BE SUBMITTED ONCE THE GLASS IS INSTALLED

EXTERNAL DOORS:

ENTRY DOOR: SELECTED POWDERCOATED ALUMINIUM DOOR ALL OTHERS TO BE POWDERCOATED ALUMINIUM FRAMED DOOR JOINERY (SELECTED SERIES)

WANZ BAR TO SUPPORT ALL JOINERY UNITS WITH SPANS EXCEEDING 1500mm IN OPENING WIDTHS

GIB SYSTEM SPECIFICATIONS

GIB EzyBrace® Systems specification GS1-N

Specification code	Minimum length (m)	Lining requirement
GS1-N	0.4	Any 10mm or 13mm GIB® Standard plasterboard to one side only

WALL FRAMING

- Wall framing to comply with:
 - NZBC B1 - Structure B1/AS1 Clause 3 Timber (NZS 3604:2011).
 - NZBC B2 - Durability B2/AS1 Clause 3.2 Timber (NZS 3602).

Framing dimensions and height as determined by NZS 3604:2011 stud and top plate tables for load bearing and non-bearing walls. The use of kiln dried stress graded timber is recommended.

BOTTOM PLATE FIXING

Timber floor
Plats of hand driven 100 x 3.75mm nails at 600mm centres; or three power driven 90 x 3.15mm nails at 600mm centres.

Concrete floor

Internal Wall Bracing Lines: In accordance with the requirements of NZS 3604:2011 for internal wall plate fixing or 75 x 3.8mm shot fired fasteners with 16mm discs spaced at 150mm and 300mm from end studs and 600mm centres thereafter.

External Wall Bracing Lines: In accordance with the requirements of NZS 3604:2011 for external wall bottom plate fixing.

WALL LINING

- Any 10mm or 13mm GIB® plasterboard lining.
- Sheets can be fixed vertically or horizontally.
- Sheet joints shall be touch fitted.
- Use full length sheets where possible.

PERMITTED ALTERNATIVES

For permitted GIB® plasterboard alternatives refer to p. 5 in GIB EzyBrace® Systems literature.

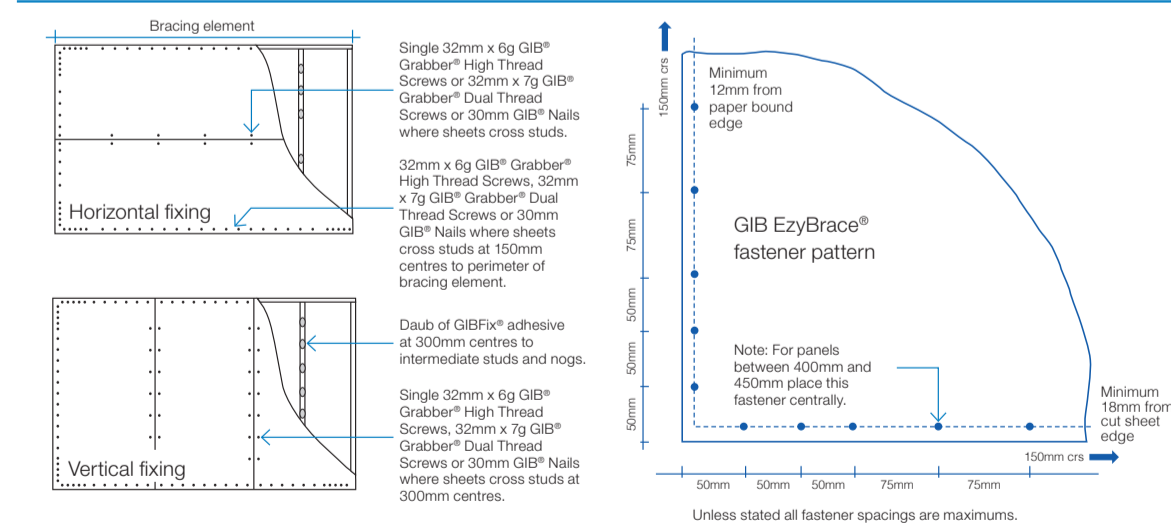
FASTENING THE LINING

Fasteners
32mm x 6g GIB® Grabber® High Thread Screws, 32mm x 7g GIB® Grabber® Dual Thread Screws or 30mm GIB® Nails. If using the GIBFix® Angle use only 32mm x 7g GIB® Grabber® Dual Thread Screws.

Fastener centres
50,100,150, 225, 300mm maximum from each corner and 150mm thereafter around the perimeter of the bracing element. For vertically fixed sheets place fasteners at 300mm maximum centres to intermediate stud joints. For horizontally fixed sheets place single fasteners to the sheet edge where it crosses the stud. Use claus of GIBFix® adhesive at 300mm maximum centres to intermediate studs. Place fasteners no closer than 12mm from paper bound sheet edges and 18mm from any sheet end or cut edge.

JOINTING

Joint strength is important in delivering bracing system performance. All fastener heads stopped and all sheet joints GIB® Joint Tape reinforced and stopped in accordance with the GIB® Site Guide.



In order for GIB® systems to perform as tested, all components must be installed exactly as prescribed. Substituting components produces an entirely different system and may seriously compromise performance. Follow the specifications. This specification sheet is issued in conjunction with the publication GIB EzyBrace® Systems

7.7 ECOPLY® BARRIER BRACING SPECIFICATION – EPB1

Table 5: Sided Structural Plywood Brace

Specification No.	Minimum Wall Length	Lining Requirements	Hold-Down	B/U/m Wind	B/U/m Earthquake
EPB1	0.4m		Yes	80	95
	0.6m	Ecoply® Barrier one side	Yes GIB HandBrac®	95	105
	1.2m			120	135

Framing

Wall framing must comply with:

- NZBC B1 - Structure: AS1 Clause 3 Timber (NZS 3604).
- NZBC B2 - Durability: AS1 Clause 3.2 Timber (NZS 3602).

Framing dimensions and height are as determined by the NZS 3604 stud and top plate tables for load bearing and non load bearing walls. Kiln dried verified structural grade timber must be used. Machine stress graded timber of minimum SGR, such as LaserFrame®, is recommended.

Bottom Plate Fixing

Use GIB HandBrac® hold-down connections at each end of the bracing element. Refer to manufacturer installation instructions supplied with the connectors for correct installation instructions and bolt types to be used for either concrete or timber floors. Within the length of the bracing element, bottom plates are fixed in accordance with the requirements of NZS 3604.

Lining

One layer of 7mm Ecoply® Barrier vertically fixed directly to framing. If part sheets are used, ensure nailing at required centres is carried out around the perimeter of each sheet or part sheet. A 2.3mm expansion gap should be left between sheets.

Fastening Ecoply® Barrier Panels

Fasteners

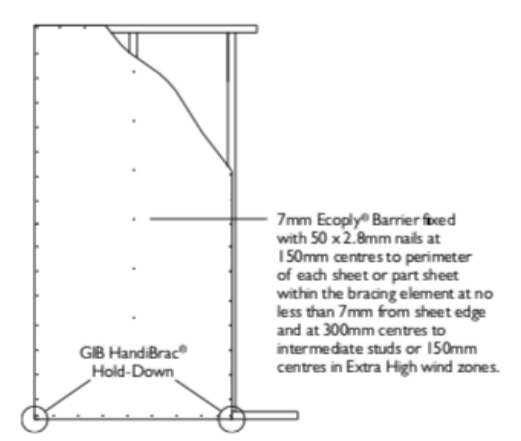
Fasten with 50 x 2.8mm galvanised or stainless steel flat head nails direct fix. Place fasteners no less than 7mm from sheet edges. Screws cannot be used. Power driven nails are suitable. Do not overdrive, nails must be full round head.

In certain circumstances stainless steel fasteners may be required. Refer to section 7.1 in the Ecoply Barrier Specification and Installation Guide for these circumstances and further fastener selection advice. Where stainless steel nails are required, annular grooved nails must be used.

Ecoply® Bracing Systems are designed to meet the requirements of the New Zealand Building Code and have been tested and analysed using the F21 method referenced in NZS 3604:2011. Tested in accordance with AS/NZS 4380:2007. Testing was carried out using Ecoply Barrier manufactured by CHH Woodproducts and GIB timber framing and GIB products manufactured by Winstone Wallboards Ltd. Substituting materials may compromise performance of the system. GIB® and GIB HandBrac® are registered trade marks of Fletcher Building Holdings Ltd.

Fastening Centres

Fasteners are placed at 150mm centres around the perimeter of each sheet and 300mm centres to intermediate stud or 150mm centres in Extra High wind zones. Where more than one sheet forms the brace element each sheet must be nailed off independently.



7.10 ECOPLY® BARRIER BRACING SPECIFICATION – EPBG

Table 8: Ecoply® Barrier Structural Brace To One Side with 10mm GIB® To The Other

Specification No.	Minimum Wall Length	Lining Requirements	Hold-Down	B/U/m Wind	B/U/m Earthquake
EPBG	0.4m		Yes	100	115
	1.2m	Ecoply® Barrier one side and 10mm GIB® Standard plasterboard other side	Yes GIB HandBrac®	150	150

Framing

Wall framing must comply with:

- NZBC B1 - Structure: AS1 Clause 3 Timber (NZS 3604).
- NZBC B2 - Durability: AS1 Clause 3.2 Timber (NZS 3602).

Framing dimensions and height are as determined by the NZS 3604 stud and top plate tables for load bearing and non load bearing walls. Kiln dried verified structural grade timber must be used. Machine stress graded timber, such as LaserFrame®, is recommended.

Bottom Plate Fixing

Use GIB HandBrac® hold-down connections at each end of the bracing element. Refer to manufacturer installation instructions supplied with the connectors for correct installation instructions and bolt types to be used for either concrete or timber floors. Within the length of the bracing element, bottom plates are fixed in accordance with the requirements of NZS 3604.

Lining

Side 1: One layer of 7mm Ecoply® Barrier vertically fixed directly to framing. If part sheets are used, ensure nailing at required centres is carried out around the perimeter of each sheet or part sheet. A 2.3mm expansion gap should be left between sheets.

Side 2: One layer of 10 or 13mm GIB® Standard plasterboard vertically or horizontally fixed. Sheet joints are touch fitted and fastener heads and joints stopped in accordance with the GIB® Site Guide.

Fastening the Ecoply® Barrier

Fasteners

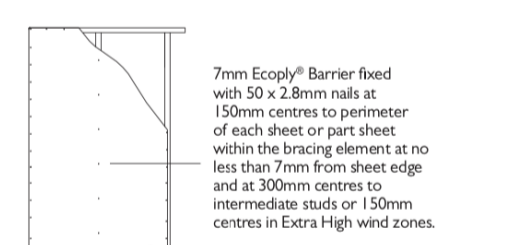
Fasten with 50 x 2.8mm galvanised or stainless steel flat head nails direct fix. Place fasteners no less than 7mm from sheet edges. Screws cannot be used. Power driven nails are suitable. Do not overdrive, nails must be full round head.

In certain circumstances stainless steel fasteners may be required. Refer to section 7.1 of the Ecoply Barrier Specification and Installation Guide for these circumstances and further fastener selection advice. Where stainless steel nails are required, annular grooved nails must be used.

Ecoply® Bracing Systems are designed to meet the requirements of the New Zealand Building Code and have been tested and analysed using the F21 method referenced in NZS 3604:2011. Tested in accordance with AS/NZS 4380:2007. Testing was carried out using Ecoply Barrier manufactured by CHH Woodproducts and GIB timber framing and GIB products manufactured by Winstone Wallboards Ltd. Substituting materials may compromise performance of the system. GIB® and GIB HandBrac® are registered trade marks of Fletcher Building Holdings Ltd.

Fastening Centres

Fasteners are placed at 150mm centres around the perimeter of each sheet and 300mm centres to intermediate or 150mm centres in Extra High wind zones. Where more than one sheet forms the brace element each sheet must be nailed off independently.



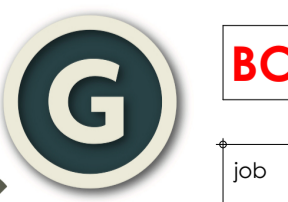
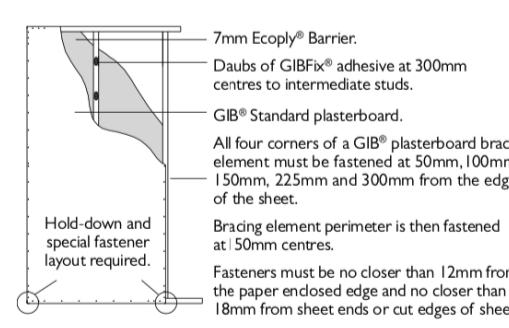
Fastening the GIB® Plasterboard

Fasteners

32mm x 6g GIB Grabber® Screws or 35mm GIB® Nails

Fastener centres
Fasten 50, 100, 150, 225 and 300mm from each corner and 150mm thereafter around the perimeter of the bracing element. For vertical fixing place fasteners at 300mm centres at intermediate stud joints. For horizontal fixing place single fasteners in the tapered edge where sheets cross stud.

Place fasteners 12mm from paper bound edges and 18mm from cut sheet edges. GIB® plasterboard must be treated in every respect in accordance with relevant GIB® literature.



job	PRIDE ENTERPRISES LTD P150 Lot 72	drawing	JOINERY SCHEDULE	date	3/10/19	revision	0	scale at A1	1:50	sheet	A18
					BC			scale 50% at A3			
								drawn	TS/MW		

This drawing and design is subject to COPYRIGHT and may not be reproduced without consent from GRAVITAS CONSULTING LIMITED

PRODUCER STATEMENT for MiTek 20/20[®] TRUSS DESIGN - Version 4.7

ISSUED BY: **MiTek New Zealand Limited**
 TO: **PlaceMakers - Frame & Truss**
 IN RESPECT OF: **MiTek[®] Truss Designs**

This producer statement covers the MiTek 20/20[®] truss design and the structural performance of the GANG-NAIL[®] connector plate for the job reference Lot 72 and may be used by a Building Consent Authority to assist in determining compliance with the New Zealand Building Code.

The MiTek 20/20[®] truss design program has been developed by MiTek New Zealand Limited for the design of MiTek[®] timber roof, floor and attic trusses in New Zealand. The truss designs computed by MiTek 20/20[®] are prepared using sound and widely accepted engineering principles, and in accordance with compliance documents of the New Zealand Building Code and Verification Method B1/VM1; and internationally accepted standard ANSI/TPI 1 - 2002 as an alternative solution, to satisfy the requirements of Clause B1 of the New Zealand Building Code.

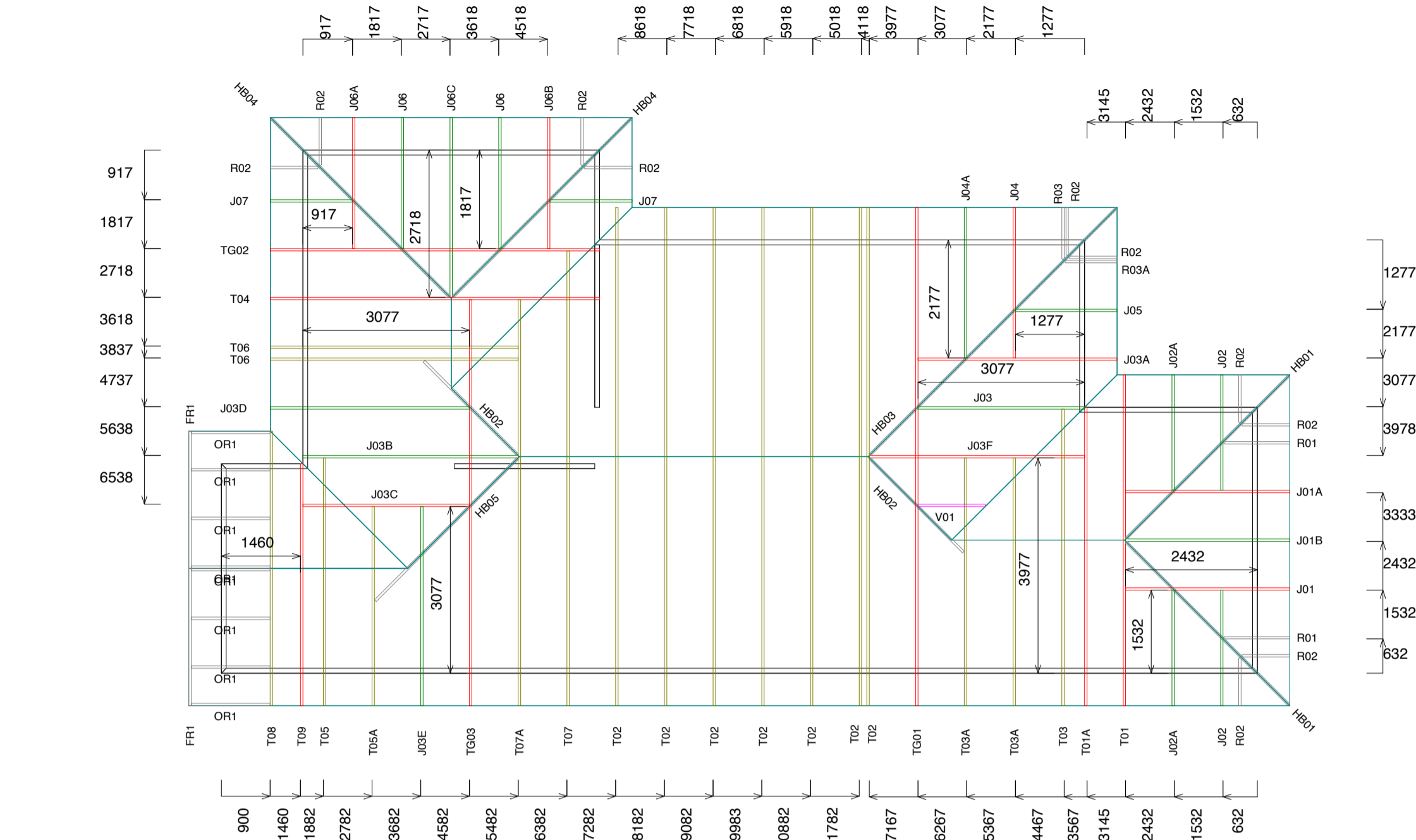
- On behalf of **MiTek New Zealand Limited**, and subject to:
- All proprietary products meeting their performance specification requirements
 - The provision of adequate roof bracing and overall building stability
 - Correct selection and placement of GANG-NAIL connector plates
 - Correct input of Truss Design Data as shown in the Fabricator Design Statement for this job
 - The design being undertaken by the accredited fabricator under the terms of the software licence
 - Timber is graded to the requirements of NZS 3603:1993
 - Minimum timber treatment for these MiTek[®] trusses shall be in accordance with B2/AS1 Table 1A and the relevant sections of NZS 3602:2003

I believe on reasonable grounds that the trusses, if constructed in accordance with the MiTek 20/20[®] truss design and shop drawings, will comply with the relevant provisions of the New Zealand Building Code.

MiTek New Zealand Limited holds a current policy of Professional Indemnity Insurance no less than \$500,000.

On behalf of **MiTek New Zealand Limited**, Date: **Thursday, 29 August 2019**

Signature
 In Ling Ng, BE (Hons), CPEng, IntPE, MIPENZ (ID: 146585)
TECHNICAL SERVICES MANAGER, MiTek New Zealand Limited



Ground Floor		Consent Number :	
PlaceMakers Know how. Can do.	FRAME & TRUSS PM Frame & Truss 1 Koru Place Harewood Christchurch Ph: 03-359-9560 Cell: 021-780-638 cft.info@placemakers.co.nz	Pride Enterprises	Truss Dimension Layout
Drawn by: Simon Jackman	CPT Ref: 1	Date: 29 Aug.2019	Branch Ref: 1

PlaceMakers Know how. Can do. **FRAME & TRUSS**

Asbuilt Layout

Roof Pitch: 25.000
 Roof Material: Galv Iron 5mm
 TC Restraints: 900
 Overhang: 600
 Wind Zone: High
 Roof Snow: 0.441
 BC Restraints: 600
 Ceiling Material: Metal battens fixed to BC Trusses And Rafter's At 900 Centres Unless Stated Otherwise

Fixings

- = CT200 (LH & RH) Pair
- ⊕ = 9kN TTP
- ⊗ = 16kN TTP
- = 47x90 JH
- = 47x120 JH
- = 47x190 JH
- = 95x165 JH
- = Multigrrips
- = Split Hanger SP180
- = Nail On Plate

Welding Fixing Per Drawing Note Below

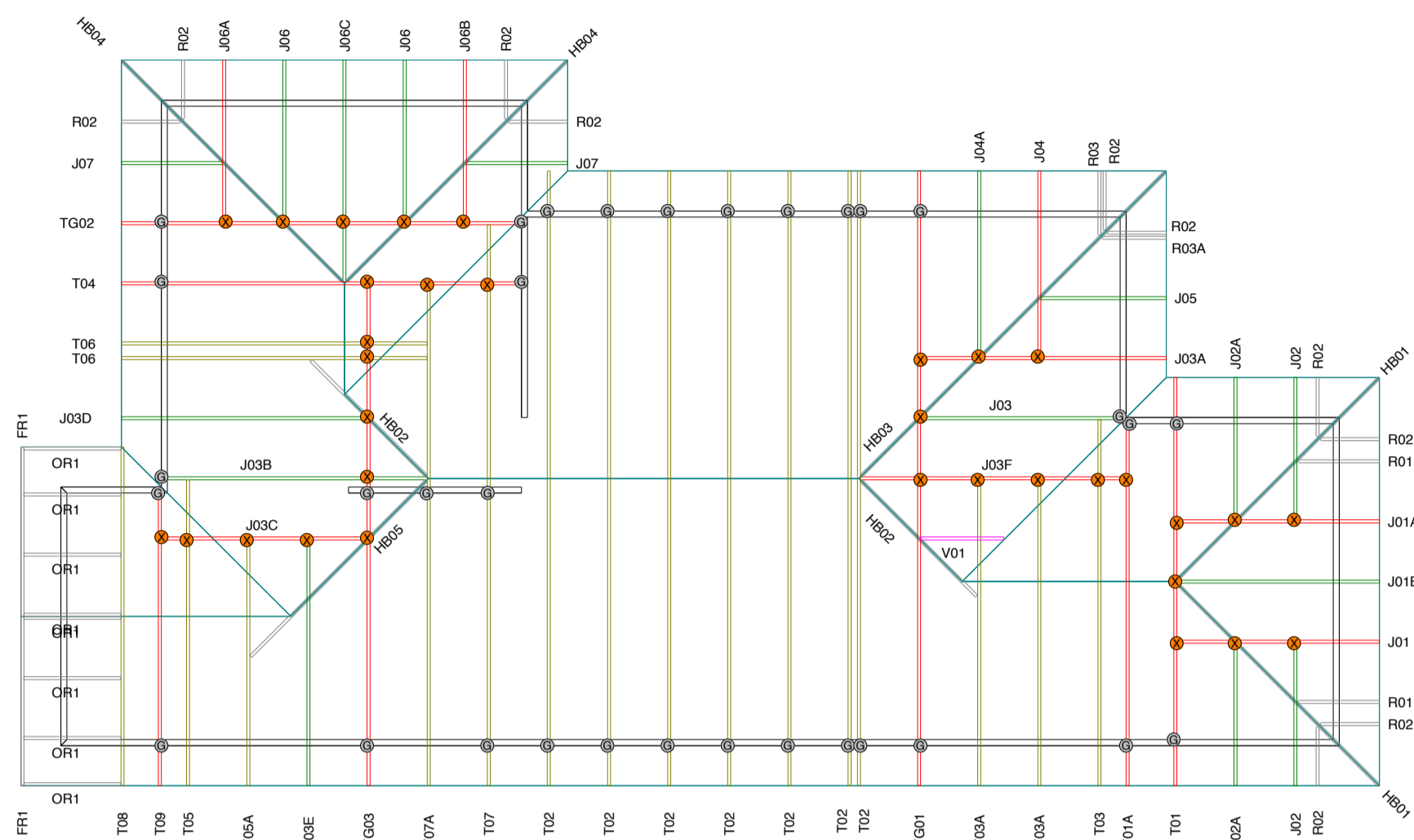
Please contact PlaceMakers Frame & Truss Manufacturing if any on site remedial work is required. There will be no compensation for work done without PlaceMakers Frame & Truss Manufacturing written authority.

Job No: P150L
 Job Name: Pride Enterprises
 Address: P150 Left

Consent #
 Drawn: Simon Jackman
 Date: 29 Aug.2019
 Main Ph: 03-359-9560
 Cell Ph: 021-780-638
 Email: cft.info@placemakers.co.nz

ITMA

All Jack Truss to Truss Fixings not indicated on the truss are to be fixed with a pair of 9kN nails.
 All truss to top plate fixings not indicated on the truss are to be fixed with a pair of 9kN nails.
 Trusses need bottom chord Restraints at 1800 Centres.
 If Rondo Metal Batten Cap System used (Not Directly Fixed).



MiTek Fabricator Design Statement

This statement is issued by MiTek, accredited fabricator **PlaceMakers - Frame & Truss**, being licensed to use the MiTek 20/20[®] software, to the client listed above and may be used by the Building Consent Authority to assist in determining compliance with the New Zealand Building Code.

MiTek 20/20[®] TRUSS DESIGN DATA

The MiTek 20/20[®] computer design for this job is based on the following design parameters entered into the program. The Fabricator shall ensure that these job details are current and relevant to the project for the design of the MiTek[®] trusses.

Job Details

Roof Truss	CTF Pine	Importance Level :	2	Design Working Life :	50 years
Factor Group	CTF Pine	Pitch:	25.000 deg	Nominal Overhang:	600 mm
Material:	Galv Iron 5mm	Material:	Metal battens fixed to BC	Wind Area:	High (44.0 m/s)
Dead Load:	0.210 kPa	Dead Load:	0.200 kPa	Pressure Coeff:	Cpe = varies, Cpf = -0.30, 0.20
Restraints:	900 mm centres	Restraints:	600 mm centres	Location:	Christchurch (N4) at 100 m
Live Load:	0.250 kPa	Live Load:	0.400 kN	Basic Roof Load:	0.441 kPa
	1.100 kN				

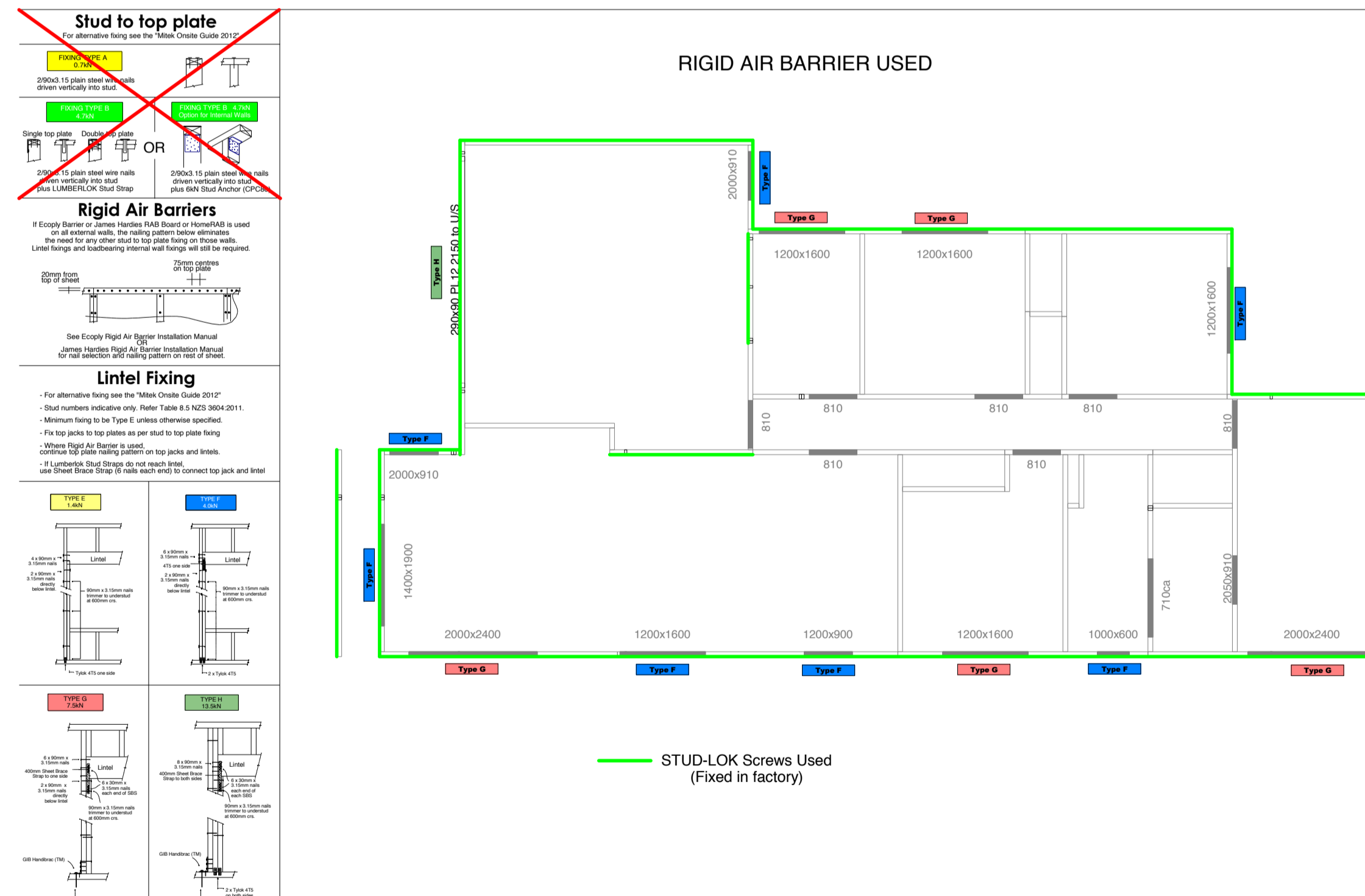
The minimum timber treatment for these MiTek[®] trusses shall be in accordance with B2/AS1 Table 1A and the relevant sections of NZS 3602:2003. The timber for these MiTek[®] trusses shall be graded to the requirements of NZS 3603:1993. Proprietary fixings and timber connectors shall be selected in accordance with NZS3604:2011 Section 4 - Durability.

MiTek[®] Truss List

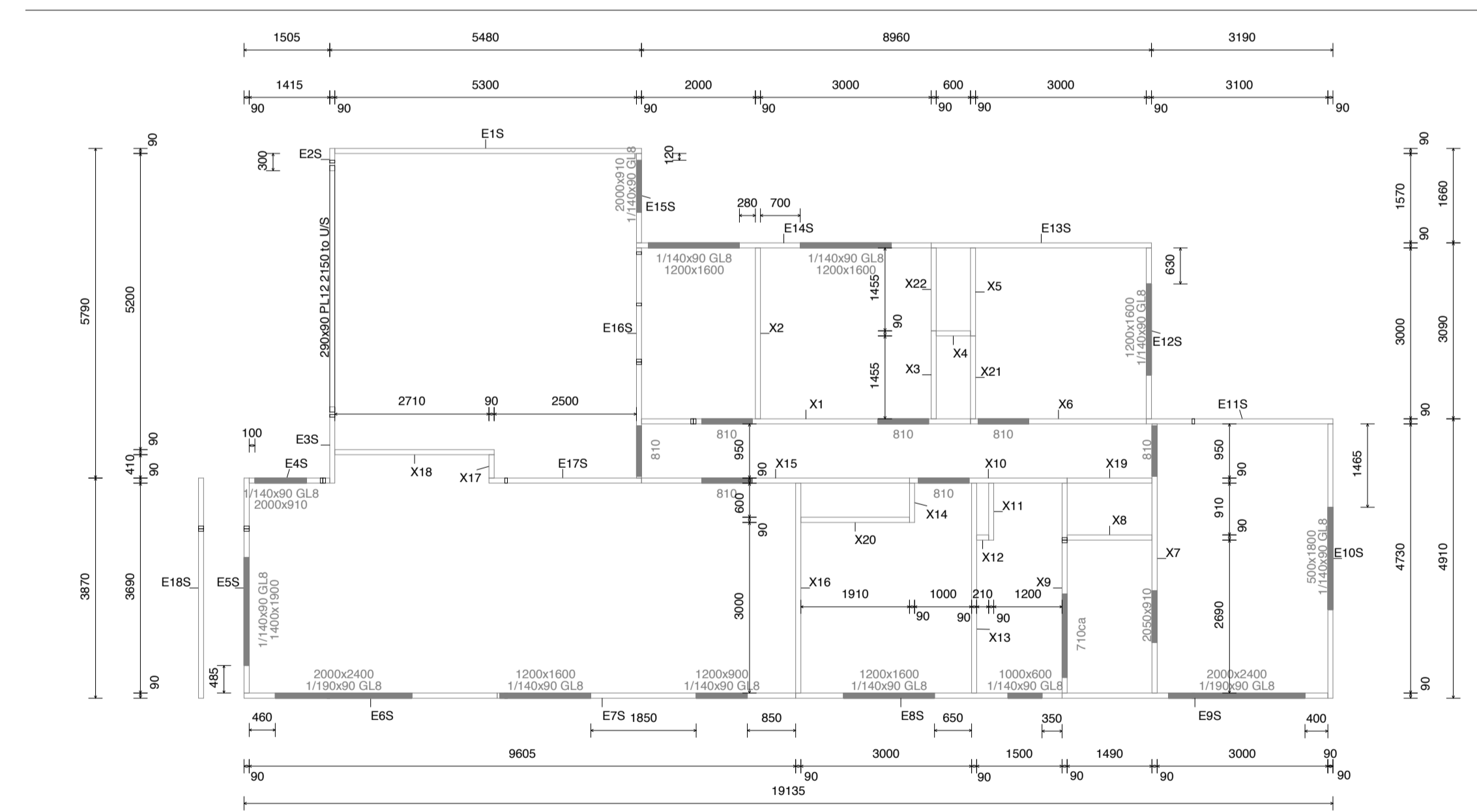
Legend: * = detail only, ? = input only, ✖ = failed design, ○ = not certified, Unmarked trusses = designed successfully, LB = lateral bracing required, CB = gable brace required, CF = Chemical Free Treatment

Roof Truss	Treatment:	Top Chords - H1.2	Bottom Chords - H1.2	Webs - H1.2	Truss	Qty	Span (mm)	Pitch (deg)	Spacing (mm)	Truss	Qty	Span (mm)	Pitch (deg)	Spacing (mm)
*FR1	2	2535	25,000	900	J05E	1	3077	25,000	900	T01A	1	4910	25,000	900
*H01	2	4266	18,249	900	J05F	1	3077	25,000	900	T02	7	8000	25,000	900
*H02	2	2460	18,249	900	J04	1	2177	25,000	900	T03	1	3978	25,000	900
*H03	1	4651	18,249	900	J04A	1	2177	25,000	900	T03A	2	3978	25,000	900
*H04	2	4689	18,249	900	J05	1	1277	25,000	900	T04	1	5490	25,000	900
J01	1	3733	18,249	900	J06	2	1817	25,000	900	T05	1	3077	25,000	900
J01A	1	2432	25,000	900	J06A	1	1817	25,000	900	T05A	1	3077	25,000	900
J02	2	1532	25,000	900	J06B	2	1817	25,000	900	T06	2	3077	25,000	900
J02A	2	1532	25,000	900	*CR1	8	1455	0,000	900	T07	1	6898	25,000	900
J03	1	3077	25,000	900	*R01	1	1817	25,000	900	T08	1	3870	25,000	900
J03A	1	3077	25,000	900	*R02	10	1817	25,000	900	T09	1	3870	25,000	900
J03B	1	3077	25,000	900	*R03	1	968	25,000	900	T10	1	8000	25,000	900
J03C	1	3077	25,000	900	*R03A	1	968	25,000	900	T10A	1	6968	25,000	900
J03D	1	3077	25,000	900	T01	1	4910	25,000	900	V01	1	1244	25,000	900

Roof Truss quantity : 81
 Total quantity : 81



Ground Floor		Consent Number :	
PlaceMakers Know how. Can do.	FRAME & TRUSS PM Frame & Truss 1 Koru Place Harewood Christchurch Ph: 03-359-9560 Cell: 021-780-638 cft.info@placemakers.co.nz	Pride Enterprises	Stud To Top Plate And Lintel Fixings
Drawn by: Simon Jackman	CPT Ref: 1	Date: 29 Aug.2019	Branch Ref: 1



Ground Floor		Consent Number :	
PlaceMakers Know how. Can do.	FRAME & TRUSS PM Frame & Truss 1 Koru Place Harewood Christchurch Ph: 03-359-9560 Cell: 021-780-638 cft.info@placemakers.co.nz	Pride Enterprises	Frame Dimension Layout
Drawn by: Simon Jackman	CPT Ref: 1	Date: 29 Aug.2019	Branch Ref: 1

The computer design input has been carried out by:
 Signed: *Simon Jackman*
 Name of Detaler: Simon Jackman
 On behalf of: **PlaceMakers - Frame & Truss**

Date: Thursday, 29 August 2019
 Qualifications and Title: Detaler
PlaceMakers Know how. Can do. **FRAME & TRUSS**



job: **PRIDE ENTERPRISES LTD** P150 Lot 72
 drawing: **TRUSS DESIGN**
 date: 3/10/19
 revision: 0
 scale at A1: BC
 scale 50% at A3: TS/MW
 sheet: **A19**

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