

PERMIT APPLICATION FORM



Date 31-1-92

P.O. Box 645, NELSON. Phone 546 0200

OWNER

Name M. Pasley.

Mailing Address _____

APPLICANT - BUILDER OR OWNER

Name Foster-Barham + Assoc

Mailing Address 19 View Mount

Stoke

Signature [Signature] Contact Phone No. 5473153

PROPERTY ON WHICH WORK IS TO BE CARRIED OUT

SITE

Street No. 834 ~~Atawhai Drive~~

Street Name Atawhai Drive

Town/District Nelson.

LEGAL DESCRIPTION

Valuation Roll No. 19830 87600

Lot 1 D.P. 6155 15377F

Section _____ Block _____

DESCRIPTION OF PROPOSED WORK AND MAIN PURPOSE OF USE e.g. Commercial, Industrial, Town House, Flats, etc

apt Town House

Dispensation or conditional uses, Preliminary checks, specified departures previously granted.

Name of Applicant Foster-Barham + Assoc Approval Date _____

EXISTING FLOOR AREA Whole Sq. Metres •

PROPOSED FLOOR AREA Whole Sq. Metres 138

PERSON RESPONSIBLE FOR ACCESS, PARKING, RETAINING WALLS, STORMWATER CONTROL OTHERS

Name as above.

Address _____

Signature [Signature]

MATERIALS TO BE USED

Foundations concrete/wooden

Wall Cladding Insulad

Roof colour tile.

NAME	POSTAL ADDRESS	PHONE No.	SIGNATURE
Plumber _____			
Drainlayer _____			

Estimated Values	Building	Plumbing	Drainage	Total Costs (Incl. labour)	Labour Costs
\$				<u>60,000</u>	
				<u>4,000</u>	
				<u>2,000</u>	

OFFICE USE ONLY

Building Permit No. 17-3-92
21282

Plumbing Permit No. 70761

Drainage Permit No. 20762

FEES APPLICABLE

Building Permit \$ _____

Street Damage Deposit .. \$ _____

Building Research Levy .. \$ 76-25

Plumbing \$ 125 00

Drainage \$ 125 00

Sewer Connection \$ _____

Check Fee \$ 144 00

G.S.T. \$ _____

TOTAL \$ 650-25

Deposit 55349 - 31.1.92.

Invoice No. 11070 9-3-92

Receipt No. 40409

Date of Payment 13/3/92.

NELSON CITY COUNCIL BUILDING INSPECTION SHEET

Prelim. check No: _____ Date rec'd: 31-1 Notify by: _____
 2nd copy plans detached:

Application for: erect apartment
 Owner: M. Pasley Builder: Foster-Barham & Assoc.

Lot. 1 D.P. 1537F
 Locality: 834 Atahua Dr.

Special conditions on this site:

C-Use.
carports in front yard

DEPARTMENT	DATE	NOT APPR.	DATE	APPR.	X FEE
TOWN PLANNING. Withhold planning clearance i.e. until after Eng. clearance. ☐					
ACCESS & SUBDIVISIONS. C.P.D. require Eng. access check cleared: ☐ amendment required: ☐					
STRUCTURAL.			<u>18/2/92</u>	<u>AC</u>	
ENERGY DIVISION.					
HEALTH.					
DANGEROUS GOODS.					
PLUMBING & DRAINAGE. & WATER <u>drainage</u>	<u>13-2-92</u>	<u>BSD</u>	<u>3-3-92</u>	<u>BSD</u>	
SERVICES & FLOOR LEVELS.					
CHIEF FIRE OFFICER					
BUILDING & PLANNING	<u>20/2</u>	<u>pe</u>	<u>5/3</u>	<u>pe</u>	

Permit may be issued: 3/4/92

See reverse side for comments

SITE CHECK:**RESIDENTIAL**

Street number ☐ Boundaries ☐ Cornersplay ☐ Area ☐
 Compulsory 643 ☐ or Amalg titles ☐ Designations ☐ Subdivisions ☐
 Zone ☐ Conditions No ☐ B.L.R ☐ SWL ☐ ROW legal ☐

FILE CHECK:

Development number
 Dispensations/Controlled Use/Specified Departures applicable: date granted _____
 Conditions complied with ☐ No conditions ☐
 Minor dispensations reqd? _____ Approved under Delegated Auth: date _____
 Vehicle entrances/Reversing ☐ Fences ☐
 Non-conforming building ☐ Sec 91 ☐ Signature: _____
 Trivial infringements _____

BUILDING PERMIT CHECK:

- ☐ Use: Dwelling ☐ Apartment ☒ Tourist ☐ Accessory ☐ Other ☐
☐ Zone R B
☐ Designations _____
☐ Predominant ☐ Controlled ☐ Conditional ☐ Specified Departure ☐
☒ Building coverage _____
☒ Building height _____
☐ 4m front yard _____ side yards _____
 * ☒ Windows and Decks of habitable rooms - 2m.
 * ☒ Daylight: North point ☒ degrees North _____° South _____° East _____° West _____°
☒ Number of habitable rooms 5
 * ☒ Living courts: Location adjoining living/dining ☒ Area of living court _____ m² ☒
 Dimension and shape of court ☐ Access to court (900mm) ☐
 Obstruction to living court ☐ Conservatory area _____ m² ☐
☐ Separation distance 6m (4m for aged cottages) ☐
 or nominated side boundary ☐ - recheck if applicable *
☐ Joined units: Appearance/method of attachment _____
☐ No of units on rear sites _____ refer Ord.21:70 No shown _____ No permitted _____
☐ Accessory buildings in front yard: Area 40m² ☐ 1.5m from St. ☐ 6.3m width ☐
 1.5m access to residential building ☐ neighbours consent? ☐
☐ Access: from St. network ☐ No using entrance ☐
 common access No ☐ Widths ☐
 basecourse ☐ surfaces ☐
 grade ☐
 entrance location ☐ turning ☐
 non reversing St or S/H ☐ reversing more than 30m ☐
 * ☐ Parking: No reqd. 2 ☒ No shown 2 ☒
 location of parks ☒ size of parks ☒
☐ Fences, Hedges, retaining walls, supporting fill
☐ Signs
☐ Landscaping where reqd. (Tourist)
☐ Access for disabled - see attachment.

AREA: _____ } write on
 ZONE: _____ } B.P. Application.

PLUMBING & DRAINAGE: (Soil & S.W. Sewers 100 mm dia.):

- 1) Plumber & Drain by any name & signature is required.
- 2) That part of existing sewer drain to be used by new dwelling is required to be trenched right out to sewer main in Road.
- 3) Apply for a water replacement service. Received 26-2-92

SERVICES: (Soil & S.W. Sewers over 100 dia, & Waterways):

ACCESS & SUBDIVISIONS:

HEALTH:

WATER:

DANGEROUS GOODS:

ENERGY DIVISION:

ATAWHAI

DR

STREET
ROAD

834

HOUSE
No.

Permit No. 21282

LOT

D.P.

Date Approved 5-3-92

FRONTAGE

Date Issued 17-3-92

OWNER

BUILDER

WORK

M. Pasley

Foster - Barham

Erect apartment

Subject to

Designation of
Household UnitMaximum Number
of Occupants

apart

5 P

Value: \$10,000

Siting:

Foundations: Conc

Excavations:

Ext. Walls: Insulated

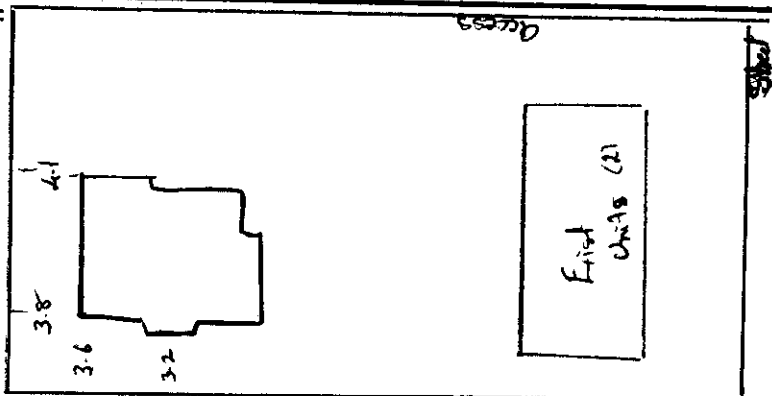
Foundation Steel:

Roofing: g/Tile

Frame Work:

Insulation:

Site Plan:



Inspection
Date:

5-3-92
31-3-92

Comments:

13-7-92

Excavated - steel in place for ret walls - founds
Started framing around basement - discussed
bracing:
Pore lining check o/k
Building completed. - drive requires more
fill

Damage deposit cleared Date:

Work completed Date: 13-7-92 Inspector: [Signature]

PROPERTY ON WHICH WORK IS TO BE CARRIED OUT

SITE

Street No. _____

Street Name _____

Town/District _____

LEGAL DESCRIPTION

Valuation Roll No. _____

Lot _____ D.P. _____

Section _____ Block _____

NAME

POSTAL ADDRESS

PHONE No.

SIGNATURE

Plumber	Dennis Allen	88 Green st.	5485528	<i>[Signature]</i>
Drainlayer	Larry Walker	189 Quebec Rd.	5489663	<i>[Signature]</i>

RESIDENTIAL CHECKLIST FOR BUILDING, PLUMBING AND DRAINAGE PERMITS

Please return this check sheet completed as follows:

- | | | | |
|---------------------------------------|---------------------------------------|--|---------------------------------|
| ☒ P | Information shown on the plans | ☐ | Information on loose sheet |
| ☒ S | Information detailed in specification | ☒ NA | Not applicable to this building |

1.0 INTRODUCTION

This checklist together with guidelines for making applications has been provided to assist you and the Council to issue your permit in the quickest possible time.

The checklist details all the relevant information your application, plans and specifications should contain and is to be returned with the application for a permit.

2.0 APPLICATION FORM:

Complete all details required on the application form. ☐

Plumbers and Drainlayers are to sign the form or provide some other form of acceptance of their being nominated as your contractor, i.e. letter or separate application form signed and posted direct to NCC office marked attention Plumbing and Drainage Inspectors. ☐

Payment of checking fee ☐
Apply for new water service ☐

3.1 PLANS GENERAL

Plans must be drawn to accurate metric scales with clear bold lines, words and dimensions to aid microfilming for permanent records. ☐

Supply 2 copies of:

Plans ☒ Specifications ☒ Detail sheets ☒

Brace calculations ☒ Heater installation instructions ☒

Supply 1 copy of:

The Title ☐ Engineering certificate and/or calculations ☒

Note: Engineering certificates apply to all structural elements outside the scope of NZS3604 and NZS4229

All structural plans are to be endorsed by a registered engineer for NCC conditions before application is lodged. ☒

4.0 SITE PLANS (Scales 1:100, 1:200)

Note: All heights should relate to NCC datum. (Datum Benchmarks and reference points may be obtained from the Council Draughting Office)

Show: -

Location and name of street, road or private way ☒ North point and/or bearings of boundaries ☒ Dimensions of boundaries ☒
Location of existing buildings and structures (including retaining walls) ☒ Location of proposed buildings structures including retaining walls ☒ Location, gradient dimensions and formation (i.e. material for) of proposed access, turning and parking spaces ☒
location and type of landscaping (where required) e.g. Controlled Use conditions ☒ Building dimensions ☒ Distances between buildings ☒ Distances between buildings and boundaries ☒ Show soffitt overhang ☒ Natural ground levels around buildings and boundaries or site contours ☒ Living court ☒ Daylight control (if using 110° system) ☒ Height points for daylight at (Point P) ☒
Nominated boundaries in conjunction with daylight and separation ☒
Notes containing: Legal description ☒ Site area ☒ Zone and coverage ☒ NCC condition numbers ☒ Building area ☒

Note: Building over boundaries of existing sites. Sites are to be tied by a section 643 of the Local Government Act (apply early). Titles will be required showing registration of the 643.

4.1 Drainage (new)

Show on site plan location of:

Location ☒ Gradients ☒ Size ☒ Invert and ground levels
Gully traps ☒ Terminal vents ☒ Soil stacks ☒ Backventing of fixtures ☒ Approved outfalls ☒ Sumps ☒ Downpipes ☒
Subsoil drains (drain through sump to s/w outfall) ☒ Retaining wall drains (drain through sump to s/w outfall) ☒

4.2 Drainage (existing)

Check existing records ☒

Show on site plan location of:

Stormwater drains ☒ Sewer drains ☒ Downpipes ☒ Gully traps ☒ Vents ☒

Note: Private sewer drains over 20 years old are to be tested. Drains which fail a test or which are over 50 years old are to be renewed to the public main connection.

4.3 WATER SUPPLY

Show:

Existing and proposed water supply ☒ Pipe sizes ☒ Isolating toby for each household outside each unit ☒

5.0 **FOUNDATION PLAN** (Scale 1:50, 1:100) Section details only (1:25)

5.1 **Complex layouts and sloping sites**

Show:

Plan of foundation wall layouts ☒ Position of piles ☒
Location of bearer lines ☒ Location of subfloor bracing elements ☒
Location of point loading from beam above etc ☒ Joist layout if complex ☒

5.2 **Simple layouts flat sites**

Show:

Foundation walls (include structural in general cross section)
Pile layout ☒ Bearer line ☒ Joist layout ☒ Subfloor brace elements ☒

5.3 **Pole foundation Structure (specific design)**

Show:

Plans to be signed by a Registered Engineer ☒ Pole layout ☐
Bearer line ☐ Position of bearer joints ☐ Position of brace elements ☐ Joist layout ☐ Location of lateral support blocking over brace lines ☐ Location of midspan blocking ☐
Note: Specific details of pile or post to bearer, bearer to joist and diagonal braces are required for all foundation layouts ☐

6.0 **FOUNDATION CROSS SECTIONS** (Scales 1:25, 1:50)

Show:

Section through foundation walls & footings ☒ Section through retaining walls ☒ Detail steel placement and size ☒ Section through pole footings and pile footings ☒ Location of bearer, joists and lateral support blocking ☒ Fixing of subfloor braces ☒ Point loadings (beams etc) ☒ Detail all jointing. ☒

7.0 **FLOOR PLANS** (Scales 1:50, 1:100)

Show:

All dimensions ☒ Use of all areas ☒ Doors with opening direction ☒ Location of windows ☒ Habitable room areas ☒ Lintel size (no longer required in specification if shown) ☒
Brace lines, brace number and brace type ☒ Cross section lines ☒ Joist layouts of 1st and 2nd floor include lateral support blocking ☒ brace line blocking ☒ Beam locations and sizes (detail supports) ☒ Location of all sanitary fixtures ☒
Location of hot water cylinders ☒ Location of supply tank by dotted circle or square showing overhead location ☒ Location of required heater or power point for heater ☒

8.0 **BUILDING ELEVATIONS** (Scales 1:50, 1:100) Section details 1:20, 1:25 only

Show:

External finishes wall and roof cladding ☒ Window sizes and opening sashes ☒ Building height ☒ Floor height above natural ground levels ☒ Existing ground levels and proposed finished ground levels ☒ Location size and type of subfloor ventilation ☒ Calculation to support ventilator areas ☒
Compliance with daylight and sunlight admission if not shown on site plan as 110° around. ☒

9.0 **BUILDING CROSS SECTION** (1:50 1:100)

Show:

Cross sections full width of main building ☒

9.1 **Concrete floor**

Show:

Foundation details steel description ☒ Slab details ☒
Compacted base course and sand topping ☒ Vapour barriers (show outer edge terminations) ☒ DPC under bottom plates and fixing system ☒ Anchoring systems required for sheet brace elements ☒

9.2 **Timber floors**

Show:

Foundation details (if not shown in foundation cross section) ☒
Pile pole details (if not shown in foundation cross section) ☒
Bearer to pile fixing details ☒ Bearer to foundation fixing for diaphragm floor ☒ Joist to bearer fixings over anchor and cantilever piles ☒ Boundary joists and joist blocking ☒ Joist layout loadbearing points and walls ☒ Floor layout in brick pattern across joists ☒ Fixing required for flooring (i.e. diaphragm) ☒ Insulation details ☒ Fixing details for sheet brace element ☒

9.3 **FRAMING AND CLADDING**

Show:

Stud sizes and spacing, dwang setout ☒ Special details of full height gable frames and where studs exceed 3m in height, pay particular attention where Trimmer studs are involved ☒
Top plates where trusses and joists land ☒ Insulation for walls and ceiling (material and R value) ☒ Breather paper ☒ Details of exterior cladding and fixing ☒ First floor joist size and spacing ☒ Lateral support and brace line blocking ☒ Floor

layout in brick pattern across the joists ☒ Ceiling details and height above floor level ☒

9.4 Roof Framing Truss

Show:

Show truss design numbers and spacing for simple gable and hip roof only ☒ Complex truss roof provide layout plan including specific fixings and design certificate ☒ Identify load bearing points for complex roof and detail support within wall framing and foundation ☒ Detail fixing to top plates ☒ Roof brace system ☒

9.5 Roof Framing (built in situ)

Show:

Rafter size and spacing ☐ Ceiling joists size and spacing ☐
Ceiling runners and strutting beams ☐ Underpurlins and collar ties ☐ Gable overhang details ☐ Roof brace system ☐
Unsupported full length rafters fixing details both top and bottom ☐
Ridge beam fixing details ☐ Ceiling diaphragm fixing details and fixing to external brace walls ☐ NA

9.6 INTERNAL PLUMBING

Show:

High or low pressure water cylinder ☒ Type of piping proposed ☒
Use of header tank and pressure reducing valve ☒

9.7 SEISMIC RESISTANCE (for internal fittings)

Show method of securing:

Hot water cylinder ☒ Supply tank ☒ Free standing heater ☒

9.8 Roof Overhangs Beyond 750mm

Show:

Beam and post support ☐ Fixing to prevent uplift ☐

Note: Any unsupported overhang in excess of 750mm requires specific design NA

10.0 STRUCTURAL CALCULATIONS

Supply as required ☐ NA

11.0 ENGINEER'S CERTIFICATES

Supply as required ☐ NA

12.0 BRACE CALCULATIONS

Calculation sheet subfloor ☒ Calculation sheet wall bracing ☒
Foundation plan layout showing brace elements, type and number code ☒
Floor plan layout showing brace elements type and number code ☒

10.0 SPECIFICATIONS

Specifications form part of the permit applications and permit approval.

Include in these specifications details on means of compliance with NZS 1900 and other relevant standards and requirements for excavation, foundations, footings, filling, damp-proof courses, concrete, timbers, cladding, roofing, exterior joinery, plumbing, drainage, electrical work, painting and glazing, mechanical ventilation, other site works including landscaping and parking where applicable.

Note: If site works are included or detailed in specification clearly state this on the site plan.

24/02/92

FOSTER-BARHAM & ASSO
19 VIEWMOUNT
NELSON

Dear Sir / Madam,

Your application for a Building Permit

to ERECT APARTMENT/S
for M. PASLEY
at 834. ATAWHAI DR

has been checked.

The proposal does not comply with the requirements of the Nelson City Bylaws and/or the District Planning Scheme in the following respects:

PLUMBING & DRAINAGE

- 1.Plumber and drainlayers names and signatures are required.
- 2.That part of existing sewer drain to be used by new dwelling is required to be tested right out to sewer main in road.
- 3.Apply for a water replacement service.

When your plans and/or specifications have been amended to conform with the above comments, approval of your application will again be considered.

Yours faithfully

PER BUILDING CLERK

PLANNING & REGULATION DIRECTORATE

4th February 1992

Foster-Barham & Associates
19 Viewmount
NELSON

Dear Sir/Madam

Re your Permit Application at 834 Atawhai Drive

As from the 1st October 1991 the Resource Management Act came into effect.

Under that Act Cross Leases, Unit Titles and Company Leases require Subdivisional consent.

The proposed buildings covered by the above application may not comply with Council requirements for such subdivisions.

If it is your intention to offer titles as listed above you should now consult Council Officers to avoid further complications.

Yours faithfully

P Eman
Senior Planner
per M. Hislop
SENIOR BUILDING INSPECTOR

NELSON CITY COUNCIL

KEVIN O'NEILL
5/14, GOLF ROAD

DESIGN DRAUGHTING
NELSON (054) 85 091

SPECIFICATION

Specification of work to be done and the materials to be used in the erection and completion of:-a two storey house, incorporating a double garage, clad 'Insulclad' and roofed Colortile.

AREA sq.m	GARAGE	GROUND FLOOR	FIRST FLOOR	DECK	COVER
	33.0	47.5	114.32	15.26	138

For the Owner

MR. M. PASLEY

At

834, ATAWHAI DRIVE

Lot 1

D.P. 6155 FP 15377

C/t 1B/596

Area 981 sq.m

Zone Res B

Local Authority

NELSON CITY COUNCIL

Owner's address

19, Viewmount, NELSON

Telephone

5473 153

This specification is to be read in conjunction with the accompanying drawings and any additional or amended drawings which may be issued during the duration of the contract. Any item included in the drawings and not in the specifications or vice versa shall be binding as if included in both.

The Owner will ensure that all boundary pegs are in place and exposed for inspection.

A form of contract will be completed by all parties before work starts on site.

DRAINLAYER

- 1 All work to be carried out in accordance with the Drainage and Plumbing Regulations, 1978 by registered tradesmen.
- 2 STORMWATER Roof water via 75dia downpipes to min 100dia uPVC pipes laid to an even fall of not less than 1 in 60. Yard sumps, where required and shewn in the drawings, connected to SW drain. 100dia Novadrain to uphill foundation walls and retaining walls connected to SW drain. The outfall to:-MH on site. See drawings-
- 3 FOUL WATER 100dia uPVC pipes laid to an even fall of not more than 1 in 40 nor less than 1 in 60 generally. Provide and fix gully traps, terminal vents, back vents, rodding eyes, inspection junctions, bends, etc. Outfall to:-Existing 100dia foul water drain.
- 4 FIELD TILE DRAINS (or Novadrain) to be located as shewn, laid to an even fall [1 in 150 min] and the excavation backfilled with drainage metal.
- 5 SEPTIC TANK See appendix.

PLUMBER

- 1 All work to be carried out in accordance with the Drainage and Plumbing Regulations 1978 by registered tradesmen.
- 2 Supply and fix all flashings, caps, cill trays, etc. to make a watertight job. Valleys to be galvanised sheet steel laid on building paper.
- 3 Supply and fix guttering:-

complete with mitred returns and stopends with brackets at max 900 c/c, screwed to gutter boards and laid to a fall to downpipes.
- 4 Provide cold water supply from street boundary. 20 and 12dia pipes as shewn. Connect hot and cold water services to the various fittings. Provide and connect two hose standards, one at the front and the other at the rear of each unit, or as shewn in the drawings.

ROOFER

TYPE OF ROOFING	Color tile
-----------------	------------

- 1 CORRUGATED OR PROFILED galvanised steel sheeting will be laid on breather type building paper on 18mm polypropylene straps, stretched taut and stapled to the purlins at 300c/c each way.

Roofing will be 0.5 galvanised steel sheeting with primed laps, 1 1/2 corrugations side lap (or equivalent for other profiles) and nailed with lead headed nails.

Ridges and hips to be covered with lead edged ridging, primed on the underside with the lead edge dressed into corrugations.

Barges to be covered with purpose made barge flashings.

Supply and fix all flashings, caps, etc. to make the roof watertight and birdproof.

2 PRESSED COATED GALVANISED STEEL TILES to be fitted by an approved contractor at a minimum pitch of 12deg and provided with a two year guarantee.

3 FLAT ROOFING Supply and fix to a minimum pitch of 1deg over building paper and straps to manufacturer's instructions, complete with matching gutters, downspouts, barge flashings and other flashings as required.

4 CONCRETE TILES - see appendix.

INSULATION

1 ROOF	R1.6 fibreglass insulation batts or equiv.
2 WALLS	R1.6 fibreglass insulation batts or equiv.
3 FLOORS	Perforated foil suspended between joists.
	Max. sag of insulation 100mm.

ELECTRICIAN

1 Electrical work to be carried out in accordance with the Electrical Wiring Regulations and with the local Supply Authority's requirements.

2 Arrange for mains supply to the building and fix meter board, fuses, switches and main switches.

3 Supply and fix lighting and power outlets to the number and in the locations shewn in the drawings.

4 Provide and install:-

	MAKE	PC	SUM
Cooker	Owner to select		
Refrigerator	do.		
Deep freeze	do.		
Washing machine	do.		
Dryer	do.		

Space heaters	Owner to select
Lighting fittings	Ceiling mounted BCBH
Other equipment	-

PAINTER & DECORATOR

1 EXTERNAL WOODWORK Prime, stop and paint one undercoat and one finish coat high gloss

Stained work - one coat of stain before fixing, stop nail holes with coloured stopping followed by final coat.

Metal work - primer for galvanised steel, one undercoat and one finish coat.

Fibre cement - two coats of acrylic paint.

2 INTERNAL SURFACES All walls to be wallpapered except that:- Service areas will have vinyl wall paper.

Allow PC sum of \$40.00 per roll of wallpaper.

Doors to be sealed and given two coats of polyurethane varnish. Service area doors to be primed, stopped, undercoated and finish coated with semi gloss paint.

Ceilings to be given two coats of matt ceiling paint.

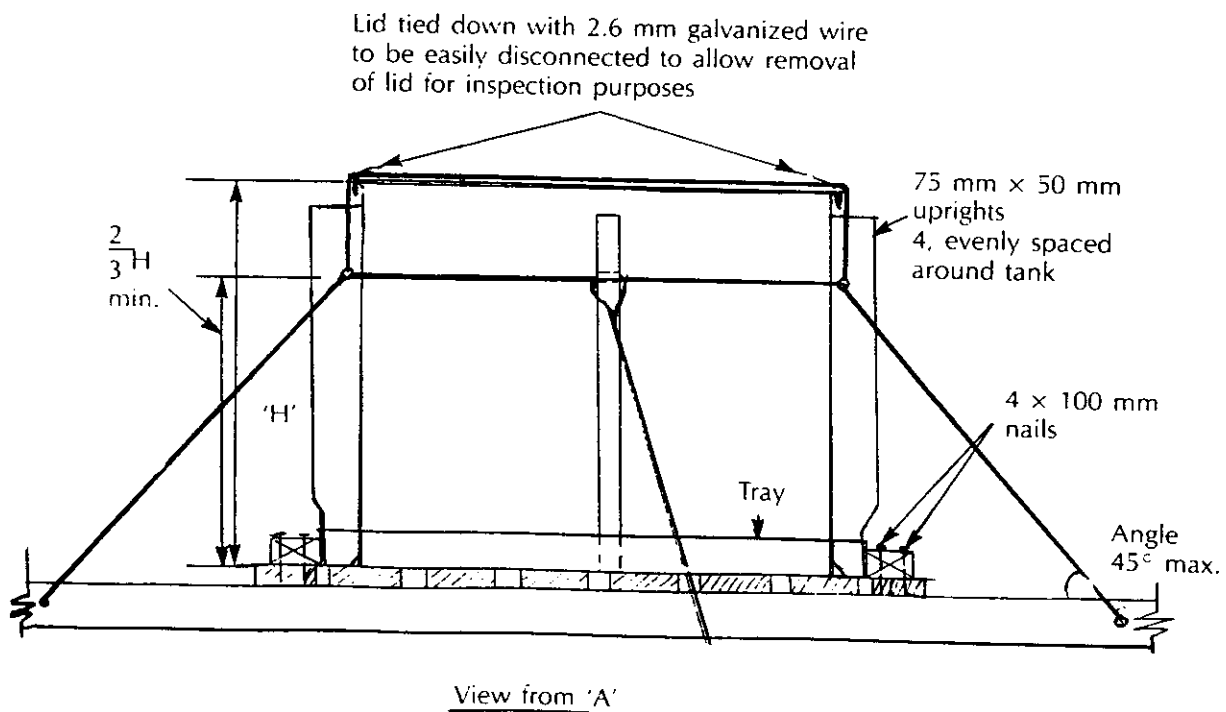
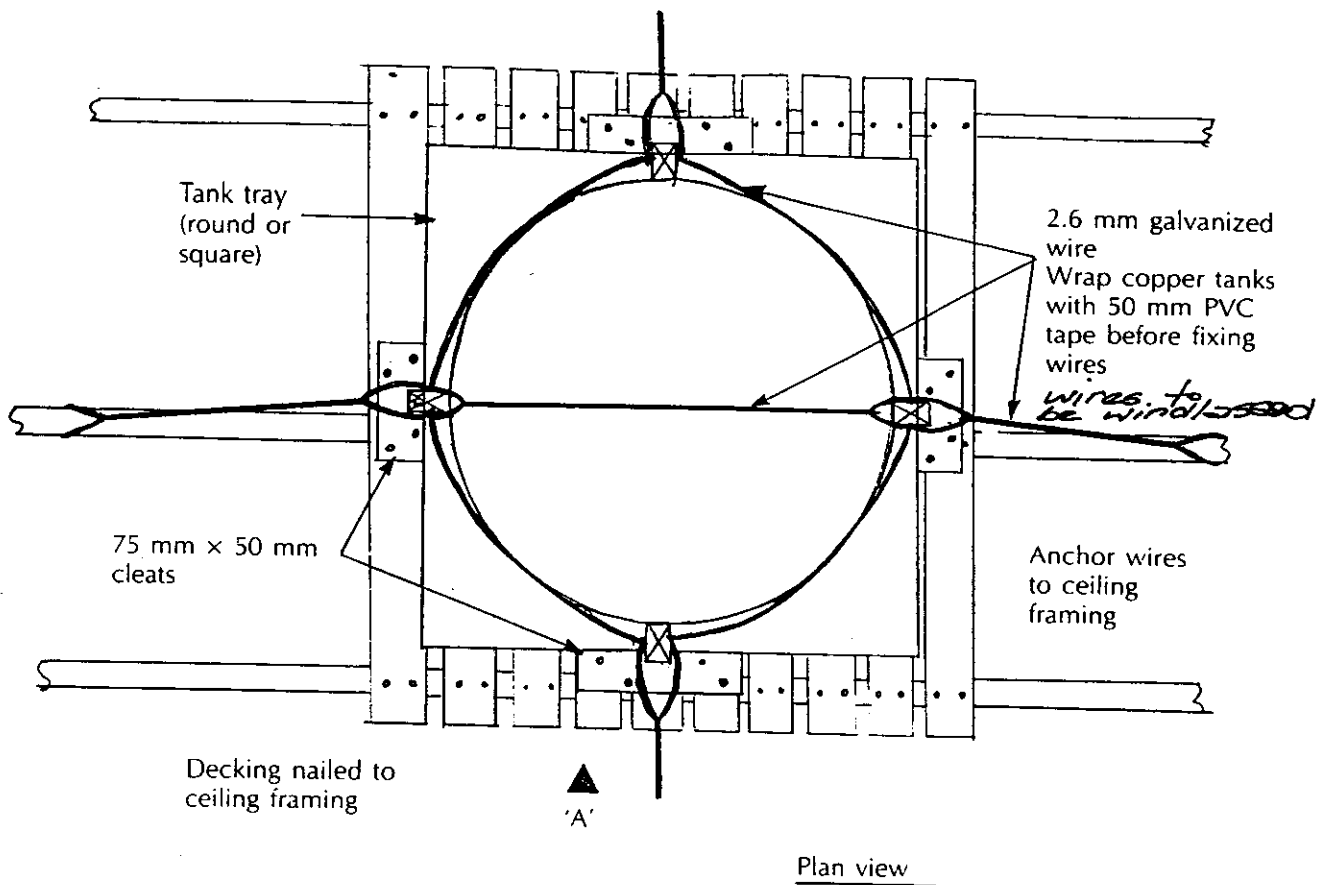
Floors to be sanded, sealed and given two coats of polyurethane varnish.

SITE WORKS

1 DETACHED OUTBUILDINGS will be as shewn in the drawings.

2 ACCESS Access for a single unit dwelling will have a minimum width of 2.6m. The maximum gradient for all weather surface will be 1 in 5. Where the gradient exceeds 1 in 8, stormwater control requires Local Authority Engineer's approval. Minimum standard of pavement will be basecourse gravel generally all passing a 40mm sieve, 150mm thick and mechanically compacted. Turning areas will be provided where required by Local Authority.

3 FENCING &c of size and type selected by Owner.



METHOD FOR SECURING COLD WATER SUPPLY TANKS AGAINST SEISMIC FORCES

BRACING CALCULATION SHEET

NAME MR M PASLEY ADDRESS 834, ATAWHAI DRIVE,
 DWG. NO. 19/762 NELSON

STOREY	Foundations Lower of two Single or uppermost	*	
ROOF	Light Heavy	*	
AVERAGE PITCH		<60	
CLADDING	Light Heavy	*	
EARTHQUAKE		E	8
WIND ZONE	Building height Roof height Storey height Design wind speed BU longer side BU shorter side		7.5 3.3 2.4
		M	
		W1	100
		W2	91

BUILDING LENGTH	BL=	13.1
BUILDING WIDTH	BW=	9.5
BUILDING AREA	GPA=	124.5

EARTHQUAKE BUs along and across	GPAxE=	996

WIND BUs along	BWxW2=	864

BUs across	BLxW1=	1310

LOWER FLOOR

TOTAL BUS REQUIRED	WALL LINE		Wall bracing elements provided					
	Label	Min. BUs	label	Type	BUs/m	Len. m	BUs/ label	BUs/ line
1310	101	131	a	4	100	3.0	300	600
			b	7	200	1.5	300	
	102	70	c	BR5	87	2.4	208	578
			d	BR5	87	2.4	209	
			e	4	67	1.2	80	
			f	4	67	1.2	80	
	103	70	g	BR4	85	1.2	102	178
			h	BR5	85	0.9	76	
	104	131	i	BR5	87	2.4	209	382
			j	BR5	87	1.3	113	
			k	4	67	0.9	60	

								1738
1310	201	100	l	4	89	1.6	142	409
			m	BR5	87	2.0	174	
			n	BR4	85	1.1	93	
	202	70	o	BR6	112	1.8	201	201
	203	70	p	BR5	87	2.4	209	418
			q	BR5	87	2.4	209	
	204	70	r	BR5	87	2.4	209	311
			s	BR4	85	1.2	102	
	205	100	t	7	42	2.7	113	334
			u	4	67	1.2	80	
			v	4	67	1.2	80	
			w	4	67	0.9	60	

								1673

BRACING CALCULATION SHEET

NAME MR M PASLEY ADDRESS 834, ATAWHAI DRIVE,
 DWG. NO. 19/762 NELSON

STOREY	Foundations Lower of two Single or uppermost	*	
ROOF	Light Heavy	*	
AVERAGE PITCH		<60	
CLADDING	Light Heavy	*	
EARTHQUAKE		E	4
WIND ZONE	Building height Roof height Storey height Design wind speed BU longer side BU shorter side		7.5 3.3 2.4 M W1 W2
			68 59

BUILDING LENGTH	BL=	13.1
BUILDING WIDTH	BW=	9.5
BUILDING AREA	GPA=	124.5

EARTHQUAKE BUs along and across	GPAxE=	498
---------------------------------	--------	-----

WIND BUs along	BWxW2=	560
BUs across	BLxW1=	891

GENERAL

- 1 SITE Before submitting a price the Contractor should visit the site to verify levels, check the quality of the soil, etc. as no extras will be paid for foundation work, drainage and grading not specified.
- 2 MATERIALS shewn and not particularly specified will conform to the relevant New Zealand Standard. Where specified materials are not available, substitutes acceptable to the Owner and Local Authority may be used. Price adjustments must be agreed with the Owner before such materials are used.
- 3 IDENTIFICATION OF LAND On pointing out to the Contractor the boundaries of the Owner's land, the Owner warrants that he holds good title to the land.
- 4 INSURANCE Before commencing the contract, the Contractor will effect an insurance to indemnify himself and the Owner against all claims and losses which may arise in connexion with the contract. The Contractor will insure the work against loss or damage by fire and/or earthquake and maintain the insurance until the Owner formally takes possession.
- 5 BYELAWS The Contractor will comply in all respects with the byelaws of all Local Authorities having jurisdiction over the work.

Attention is particularly directed to:-

NZSS 3604:1990
NZSS 1900
NZSS 4229:1986
Standards referred to in the above documents
The Local Authority's Town Planning District Scheme

- 6 PERMITS The Contractor or appropriate sub-contractor will obtain and pay for all permits to build, carry out drainage works, electrical works and so on and pay such performance bonds as may be required by the Local Authority.
- 7 SUB-CONTRACTORS This specification is divided into trade sections for ease of reference and in no way implies that the Owner is involved in separate contracts with such sub-contractors as may be appointed by the Contractor. The Contractor will be responsible for his sub-contractors workmanship and coordination.
- 8 PROVISIONAL COST SUMS The Owner reserves the right to select or purchase items having a value different from the PC allowance and an adjustment will be made in the final account.
- 9 MAINTENANCE The Contractor will maintain the work for a period of 180 days and any defect of material or workmanship arising during that period will be made good at the Contractor's expense.

10 COMPLETION Throughout the work the Contractor will remove accumulated debris to maintain the site in as tidy a condition as possible. On completion the Contractor will leave the whole site tidy and fit for gardening. The entire building, including accessory buildings, steps, paths and so on will be left clean and ready for use, with all services in working order.

11 PROTECTION OF WORK All parts of the work, existing work and adjoining public property liable to damage will be protected until the completion of the contract.

12 TEMPORARY SERVICES The Contractor will arrange for all temporary services, pay all fees and remove on completion of contract.

13 ACCESS The Owner or his representative shall have access to any part of the site during working hours.

14 ARBITRATION Any dispute arising between the Owner and the Contractor regarding interpretation of the drawings or specifications or any other matter will be referred to the Body named in the contract.

15 EXISTING BUILDINGS The Contractor will demolish and remove, leaving the site tidy, those buildings shewn for demolition in the drawings.

EXCAVATOR

1 REMOVE all turf and vegetation from the building area.

2 GRADE the site to levels given in the drawings.

3 EXCAVATE for wall footings, pile footings, steps, terraces, etc. as shewn in the drawings. Footing excavations in all cases to be taken down to solid bearing, but not less than 300mm below cleared ground level. Where required excavations will be stepped to suit the slope of the ground. The bottom will be kept level and free from spoil. Excavations will be timbered as required for safety.

4 RETURN fill and ram soil round foundations after concrete has set. Surplus spoil to be placed on site as directed by Owner.

CONCRETOR

1 MATERIALS Concrete to be premixed with a crushing test strength of 17MPa after 28 days. Reinforcement to be mild steel rods or mesh as shewn in the drawings, free from loose rust, scale, paint, grease, etc.

2 THE WORK Construct and reinforce the foundations as shewn in the drawings.

Concrete piles and footings to be of the dimensions given in the drawings. Where the overall height of piles exceeds 750, the pile will be centrally reinforced with one R10 rod.

Senton piles will be 125x125 with footings for ordinary, braced or anchor piles as shewn and detailed.

FLOORS Hardcore base will a minimum 100 thick, blinded with sand and overlaid with a polythene damp proof membrane turned up to FFL all round, mitred at corners and with all joints taped

All floor slabs to be laid true and level, screeded, floated and finished with a power float to a fine finish.

Build in all HD bolts and allow for pipes, wires, etc. as shewn in the drawings. HD bolts to be max 300 from corners and max 1 200c/c thereafter.

All exposed foundations, steps, terraces, etc. to be roughened for plastering.

Fit approved ventilators (150x300) at 300 below FFL max 750 from corners and at max 1 800 thereafter. Concrete terraces to be through ventilated by ducts or 250dia pipes.

All timber in contact with concrete to be protected by a 3-ply bituminous fabric damp proof course, lapped 75 at joints. Vertical faces of retaining walls to have three coats of Flintcote.

	WIDTH	REINFORCING
Footing	See drawings	
Foundn. wall	See drawings	

	THICKNESS	REINFORCING
Floors	See drawings	

CARPENTER

1 CLADDING	Insulclad
	2

2 MATERIALS All materials will be the best of their kind. Timber will be treated in accordance with the commodity specifications of the Timber Specification Authority. All timber abutting or resting on concrete, masonry or brickwork will be protected by a damp proof course.

sub floor jack studs and bearers will be fixed as provided in NZSS 3604:1984. Bracing to be provided as NZSS 3604:1984

Floor joists to be on edge and at 600c/c or as detailed in the drawings and to suit flooring sheets, trimmed to accomodate openings.

Floor joists will be doubled under external walls and load bearing walls. Non load bearing walls will be on joists or solid blocking.

Floor joists to have solid blocking cut between at max 2 400c/c.

Plates will be in long continuous lengths, jointed over supports. Wall plates will be fixed with M10 bolts or R10 dowels.

Studs to accomodate 2 400mm sheets will be at 600c/c, with 100x75 noggins at 800c/c.

Walls will be braced with 22x22x1.2 galv.m.s. angle in conjunction with 9 plasterboard or, alternatively, 9 particle board min 900 wide.

Top plates to be a combination of 100x50 plus 150x35.

Top plates to basement framing to be 100x75.

Ceiling battens to be 65x35 at 300c/c.

Ceiling joists to be fixed on edge, spiked to wall plates and, where applicable, spiked to rafters. At gable ends, ceilings to be braced with 150x25 diagonal bracing 1 800mm from corners.

Lintels will be checked 15 into solid trimmer studs. Built up trimmer studs will be cut round lintel.

All exterior joinery, timber cladding, trim and all end grain will be primed or stained before fixing. Gutter and barge boards will be fixed straight and level and mitred at joints.

Soffits, verges and porch ceilings to be lined with fibre cement sheet with PVC jointers.

Build in external joinery as supplied. Fit cill trays, capping and flashing as required. External doors to be fitted with 1 1/2 pairs of galvanised loose pin butts. Provide and fix sub-floor access door and frame.

Weather boards will have scribed internal corners and mitred external corners.

Breather type building paper lapped 100 to be fitted behind all fibre cement and vertical board cladding.

Hardiplank cladding to be joined using PVC soakers and internal mouldings. Openings with their associated heads, trim, facings, flashings, trays, etc. are fitted as in weatherboard cladding.

For all other claddings and veneer - see Appendices.

3 FLOORING to be of 20 dense particle board laid in sheets. All joints to be supported by floor joists or noggins cut between joists.

MATERIALS	SIZE	REMARKS
Plates on foundation wall	100x50	
Bearers	100x75	
Jack studs		
Sub floor bracing		
Floor joists	First floor Other Solid bridging	300x50-600 125x50-600 300x50
Studs		100x50-600
Trimmer studs and lintels		as NZSS 3604:1984 - and as shewn in drawings
Top plates	Single or upper lower floor	100x50 plus 150x40 100x75
Ceiling battens		65x40 300c/c
Ridges and hips		-
Valleys		-
Roof struts		-
Purlins (tile battens)		ex50x50
Eaves framing		
Gutter boards		ex 25
Barge boards		250x35
Architraves		40x13 Bevelled two edges
Skirtings		65x13 Bevelled one edge

NAIL PLATE TRUSSES	SPAN	TRUSS	NO	REMARKS
--------------------	------	-------	----	---------

See drawings.
Design Certificate to be supplied by Manufacturer

All other truncated trusses, girder trusses, saddle trusses, jack trusses, etc. in accordance with manufacturer's manual.

CANTILEVER TRUSSES	SPAN	O'HANG	REMARKS
--------------------	------	--------	---------

Interior wall linings to be 9 plasterboard sheets with vertical joints. Shower linings to be Seratone sheets with PVC jointers and mouldings. Ceilings to be lined with 12mm insulation board sheets or ornamental tiles. Use ins. board cornice mouldings profile PMC7.

Architraves to be fitted in single lengths with mitred and glued joints. Skirtings to be scribed to the floor and to internal corners. Mitre at external corners.

Cill boards to be housed to jambs and mullions and bevel scribed to sashes. Finish with a returned architrave.

Wardrobes to be fitted with a shelf 1 750 above floor with 19id galv. pipe rail beneath.

Cut for, attend on and make good after all trades.

All nails in exposed internal and external work to be punched and stopped.

4 NAILING SCHEDULE:- table A1 NZSS 3604:1990

PLASTERER

All visible foundation walls, chimneys, porches, terraces, etc. will be plastered with a 12 coat of plaster consisting of one part of cement to three parts of sand plus 10% hydrated lime or other approved additive, used according to manufacturer's instructions. Floors and steps to have 18 coat with adequate fall away from building and coved to upstands.

JOINER

1 WINDOWS Aluminium framed windows will be of the sizes shewn in the drawings with fixed and opening glazing to the dimensions given in the manufacturer's literature. Aluminium windows will be delivered on site, stored and protected from damage in accordance with the manufacturer's literature. Timber windows will be of the sizes and types shewn in the drawings, with all members of standard profile. Windows to be glazed with standard quality glass. W.C. and bathroom windows to have obscured glass.

2 DOORS External doors to be of the sizes and types shewn in the drawings. Internal doors to be hollow core flush panel of the sizes shewn. Wardrobe doors, where shewn as sliding, to be Alvista or similar type on double track.

3 FITTINGS Fittings will be constructed as shewn in the drawings. Joiner should check equipment sizes and room dimensions before commencing work. Cupboards to be of standard construction and divided into cupboard and drawer units as directed. Cupboard doors to be of framed hardboard or veneer faced particle board. Supply and fix a standard bathroom cabinet with mirror, set into wall between studs.

INTERIOR FINISHES

ROOM	WALLS	FINISH	DOORS
HALL	9 plasterb'd	Wallpaper	F & panelled
LIVING	do	do	Al glazed
DINING	do	do	-
BEDROOM 1	do	do	HCFP
BEDROOM 2	do	do	do
BEDROOM 3	do	do	do
BATHROOM 1	do	vynil	do
BATHROOM 2	do	do	do
W.C.	do	do	do
KITCHEN	do	do	do
GAMES ROOM	do	Wallpaper	do
STORE	do	do	do
ROOM	CEILING		FINISH
HALL	9mm plasterb'd		Paint
LIVING	do		do
DINING	do		do
BEDROOM 1	do		do
BEDROOM 2	do		do
BEDROOM 3	do		do
BATHROOM 1	do		do
BATHROOM 2	do		do
W.C.	do		do
KITCHEN	do		do
GAMES ROOM	do		do
STORE	do		do

MATERIALS AND EQUIPMENT

Wastepipes	50dia PVC
Ventpipes	100dia PVC
Water supply pipes	20dia and/or 12dia copper
Cold water tank	Plastic 90 litre
Hot water tank	Insulated 180 litre
Sink	Stainless steel
Sink bench	laminated plastic top with cupboards and drawers
Tub	stainless steel with cupboard under
WHB/Vanity	Pedestal 650x500 Aakronite with cupboard under
Bath	1 750x750 plastic
Shower tray	Stainless steel (762x762)
Shower control	Topliss mixer control
W.C. cistern	White, plastic
W.C. pan	White, ceramic
W.C. seat	White, plastic
Taps - interior	12 CP on brass
Taps - exterior	12 brass c/w hose screw
Stop cocks	12 brass
Water heating unit	180 litre hot water cylinder with 1 500W immersion heater and thermostat control.

REQUIRED

Wall bracing elements provided

REQUIRED	Wall bracing elements provided									
	Label	Min. BUs	label	Type	BUs/m	Len. m	BUs/ label	BUs/ line		
891	301	100	a	BR5	87	2.2	191	313 157 496 448 336 487 ----- 2237		
			b	BR5	87	1.4	122			
	302	70	c	BR5	87	1.8	157			
			303	70	d	BR5	87		1.2	104
	e	BR6			112	3.5	392			
	304	70	f	BR6	112	2.0	224			
			g	BR6	112	2.0	224			
	305	70	j	GIB2	70	2.4	168			
			k	GIB2	70	2.4	168			
	306	100	l	BR5	87	1.6	139			
			m	BR5	87	2.0	174			
			n	BR5	87	2.0	174			
	891	401	131	o	BR4	85	1.2		102	267 289 538 529 ----- 1623
				p	BR5	87	1.9		165	
402		70	h	BR4	85	1.7	144			
			i	BR4	85	1.7	144			
403		70	q	BR6	112	2.4	269			
			v	BR6	112	2.4	269			
404		131	r	BR5	87	1.2	104			
			u	BR5	87	1.5	130			
			s	BR5	87	2.4	209			
			t	BR4	85	1.0	85			

joints offset 600 either
side of framing

100 x 75 top plate

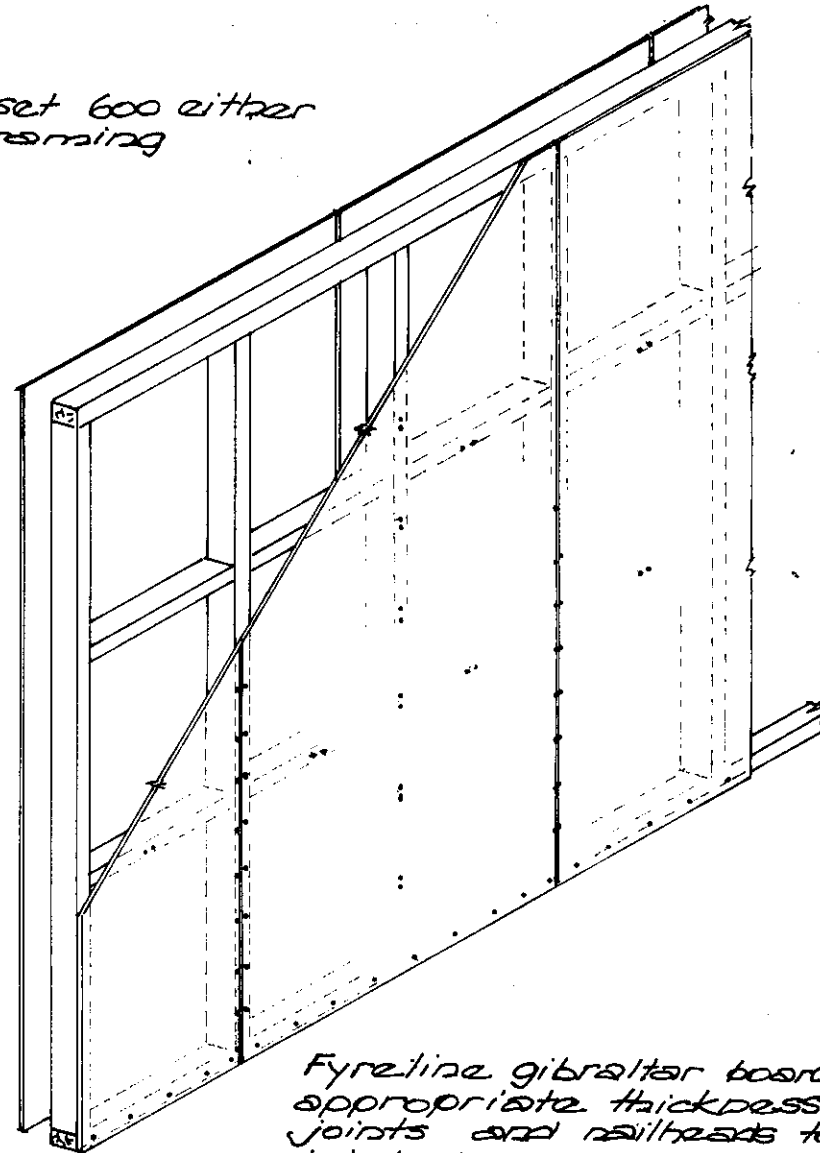
100 x 50 - 600
studs

100 x 50 - 800
nogginngs

double nailed
at nog captures

double nailed
at 300k at
intermediate
studs

nailed at 150k
at sheet edges



Fyreline gibraltar board of
appropriate thickness
joints and nailheads to be
jointed and taped

nailing with galvanised
gib clouts 2.5φ x appropriate
length for fyreline thickness

drawn

K. O'Leary

scales

date

92 04 24

tr

K. O'Leary

ref

20/02D

METHOD OF FIXING FYRELINE
GIBALTAR BOARD TO TIMBER
FRAMING

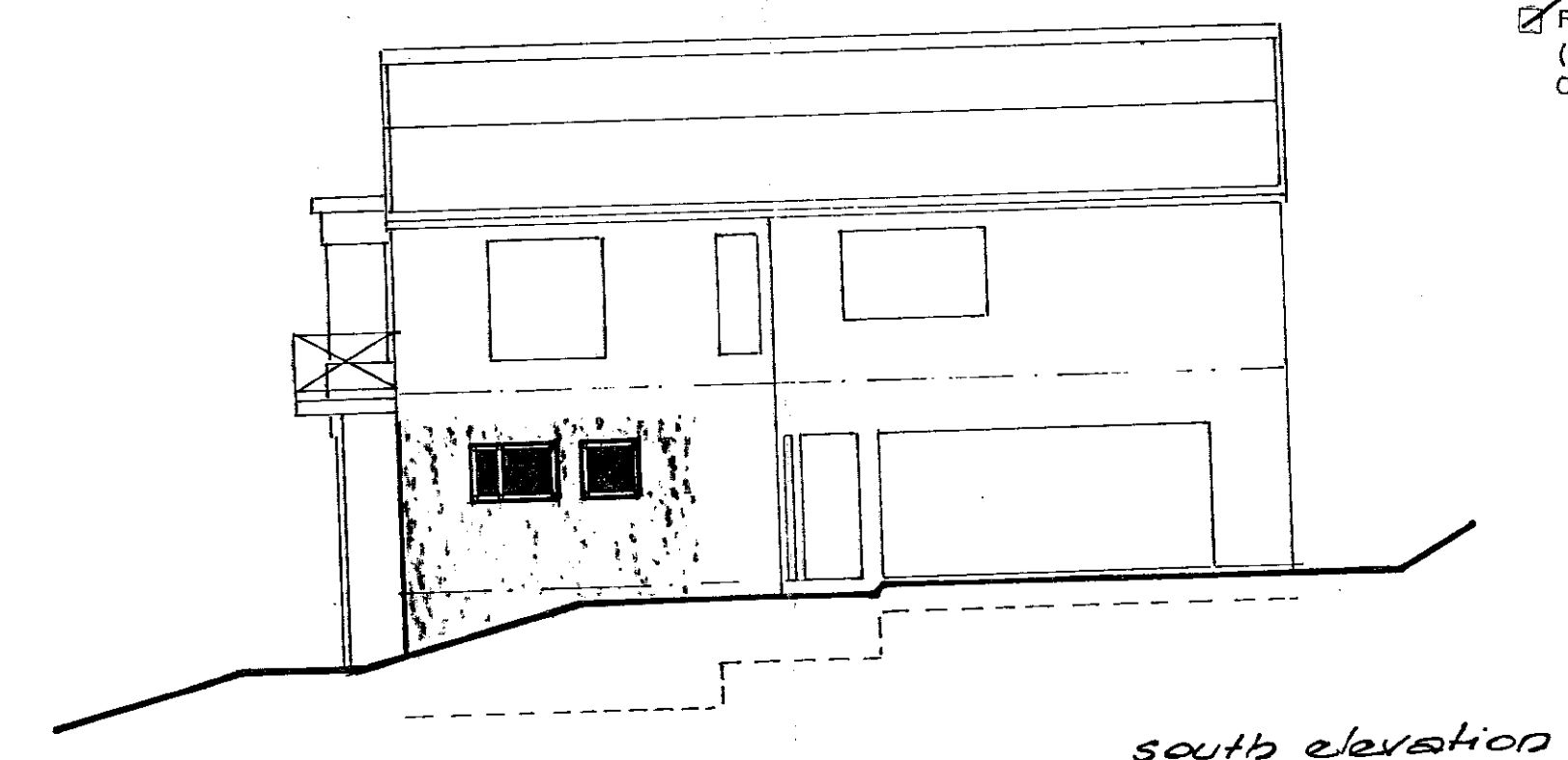
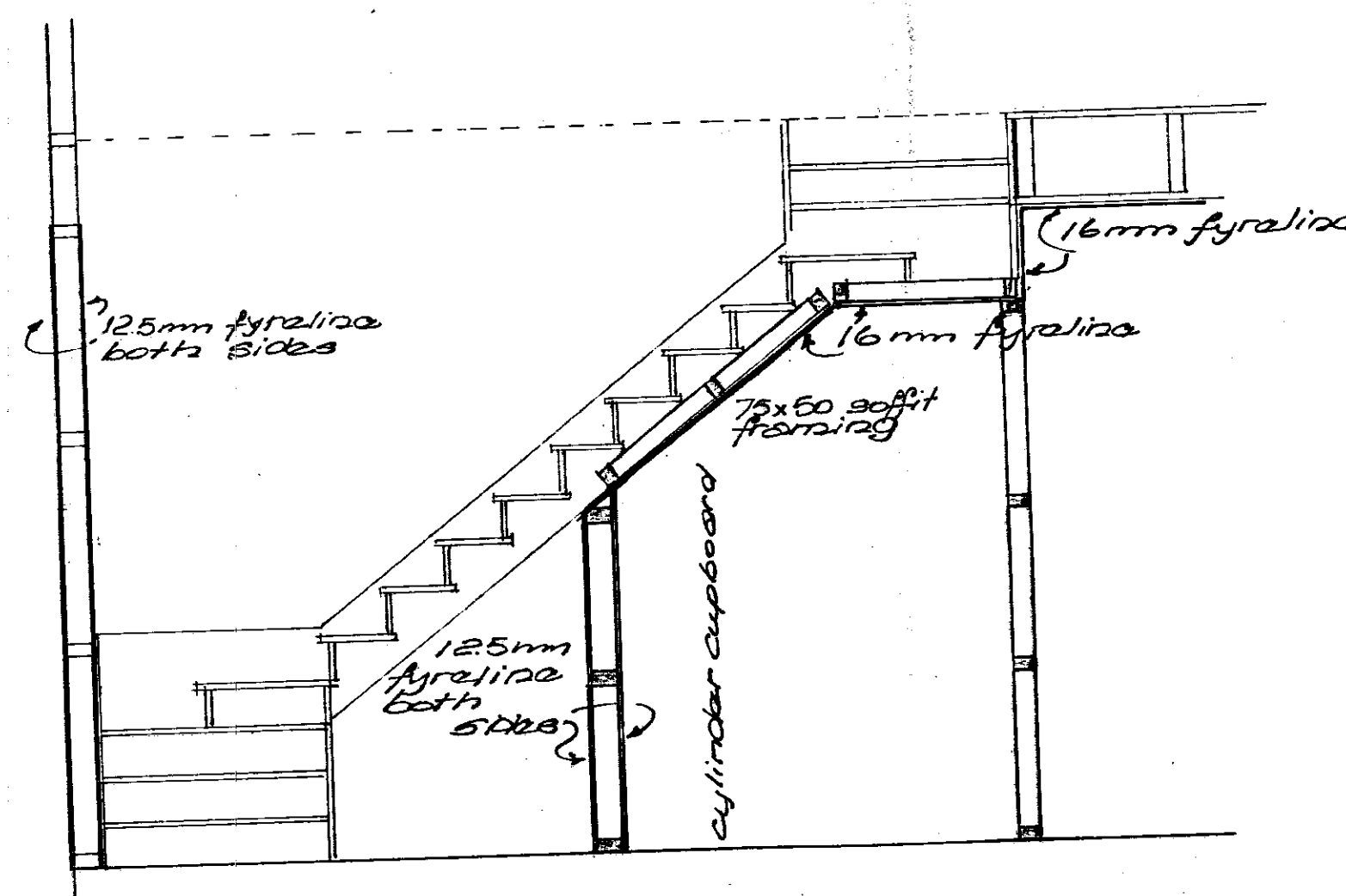
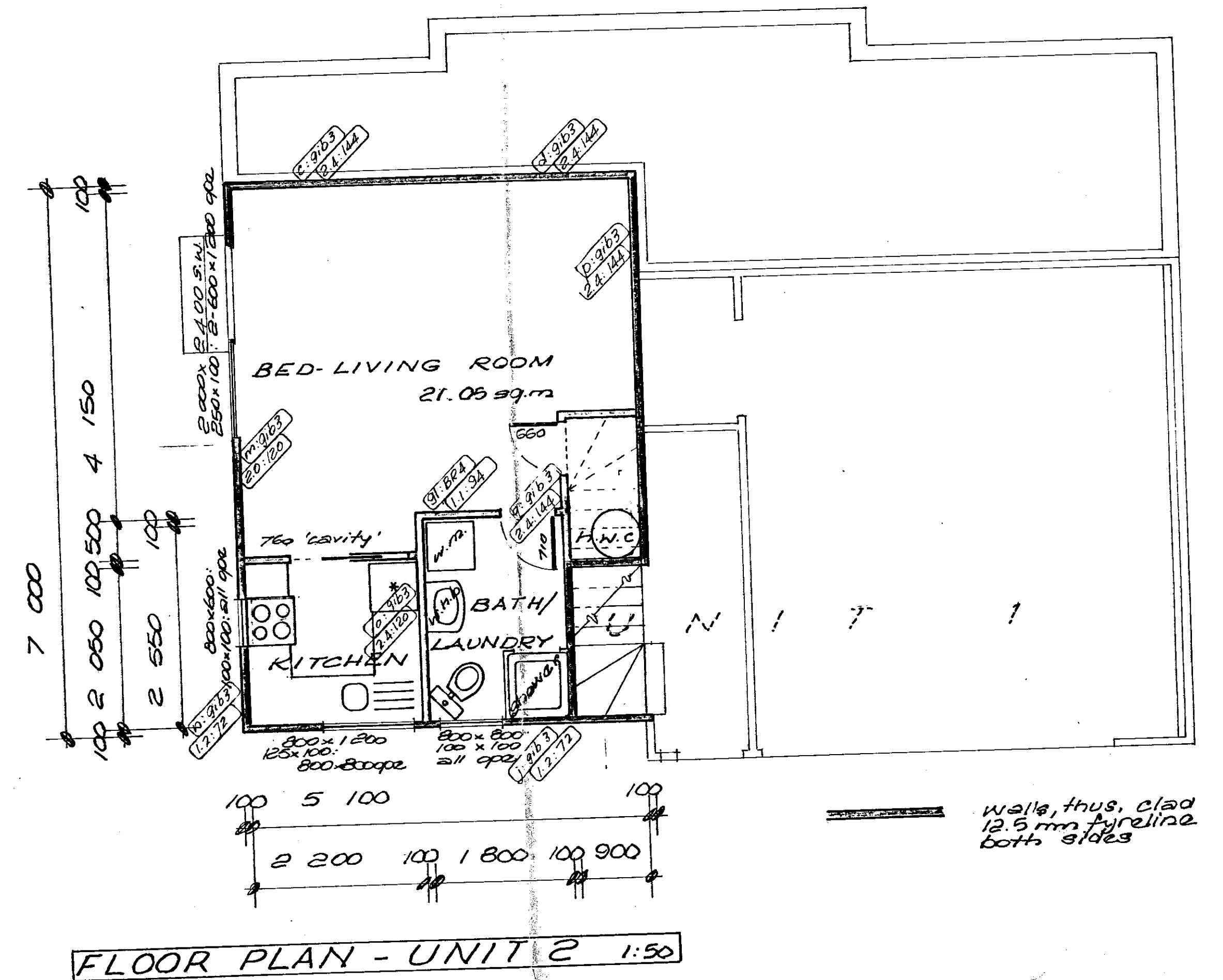
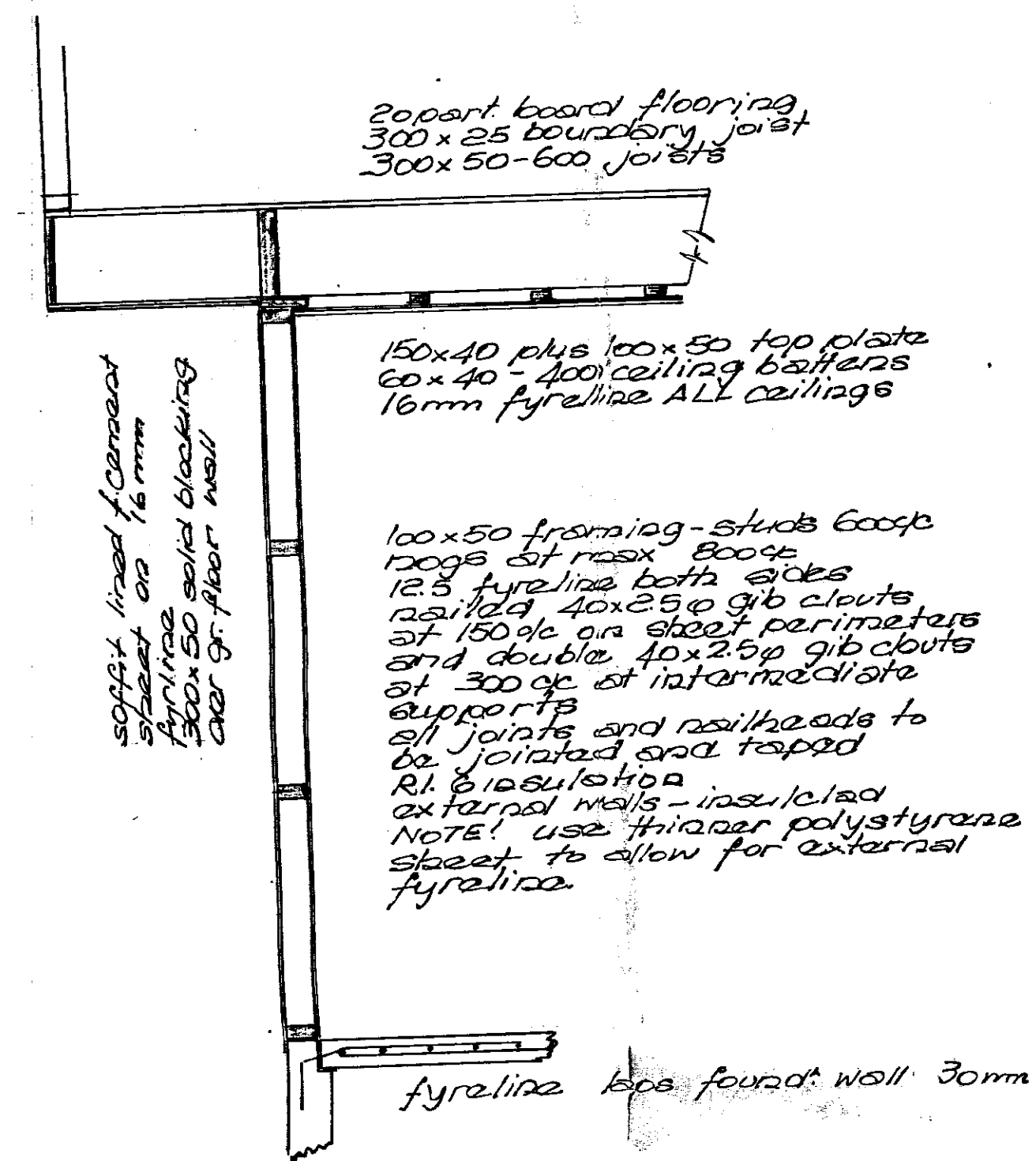
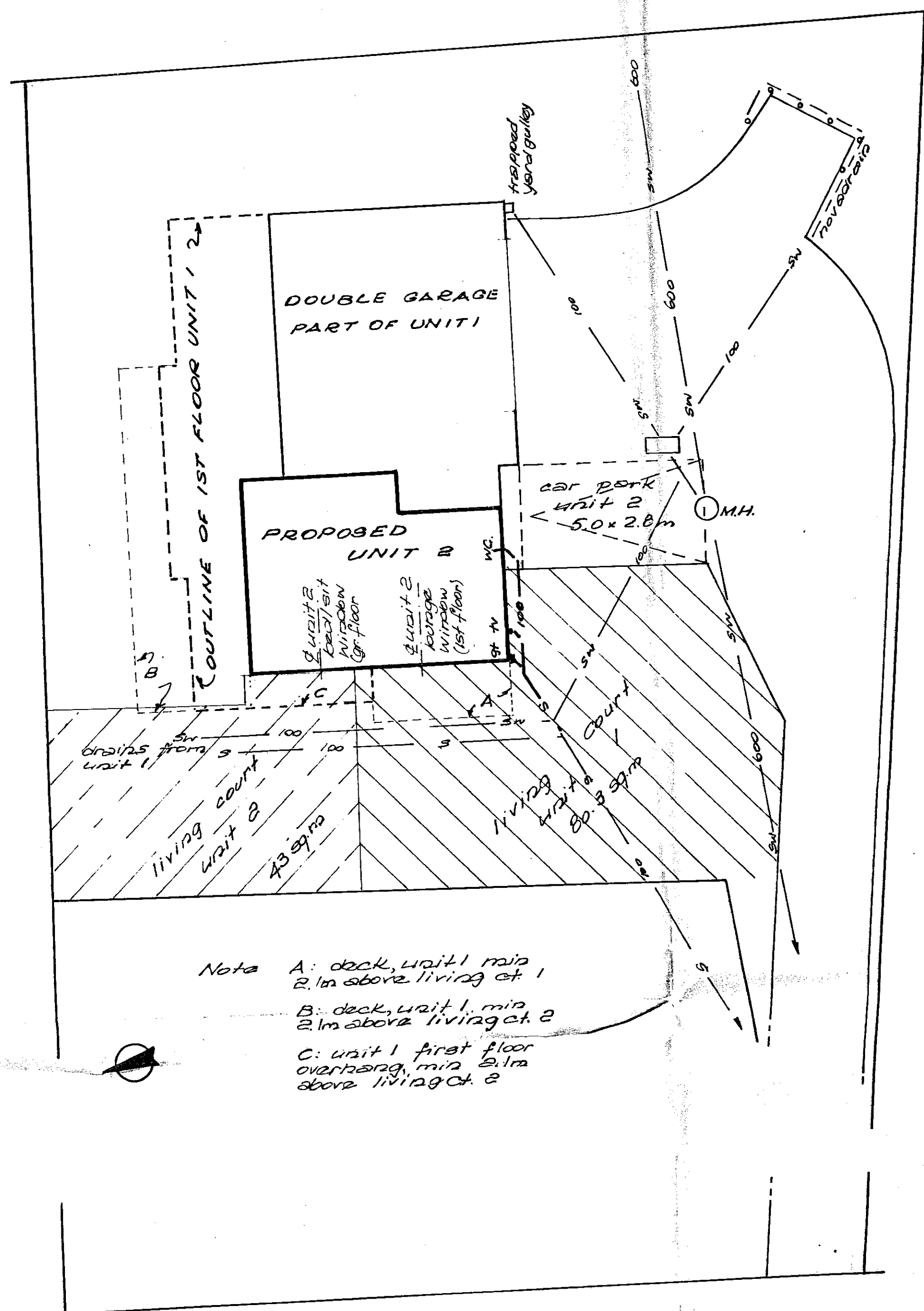
LOWER FLOOR

Revised 92 05 12

TOTAL BUs REQUIRED	WALL LINE		Wall bracing elements provided					
	Label	Min. BUs	label	Type	BUs/m	Len. m	BUs/ label	BUs/ line
1310	101	131	a	4	100	3.0	300	600
			b	7	200	1.5	300	
	102	70	c	gib2	60	2.4	143	448
			d	gib2	60	2.4	144	
			e	4	67	1.2	80	
			f	4	67	1.2	80	
	103	70	g	BR6	112	1.2	134	211
			g1	BR4	85	0.9	76	
	104	131	j	gib3	60	1.2	72	132
			k	4	67	0.9	60	

								1391
1310	201	100	l	4	89	1.6	142	334
			m	gib3	60	2.0	120	
			n	gib3	60	1.2	72	
	202	70	o	gib3	60	2.4	144	144
	203	70	p	gib3	60	2.4	144	288
			q	gib3	60	2.4	144	
	204	70	r	BR5	87	2.4	209	311
			s	BR4	85	1.2	102	
	205	100	t	7	42	2.7	113	334
			u	4	67	1.2	80	
			v	4	67	1.2	80	
			w	4	67	0.9	60	

								1411



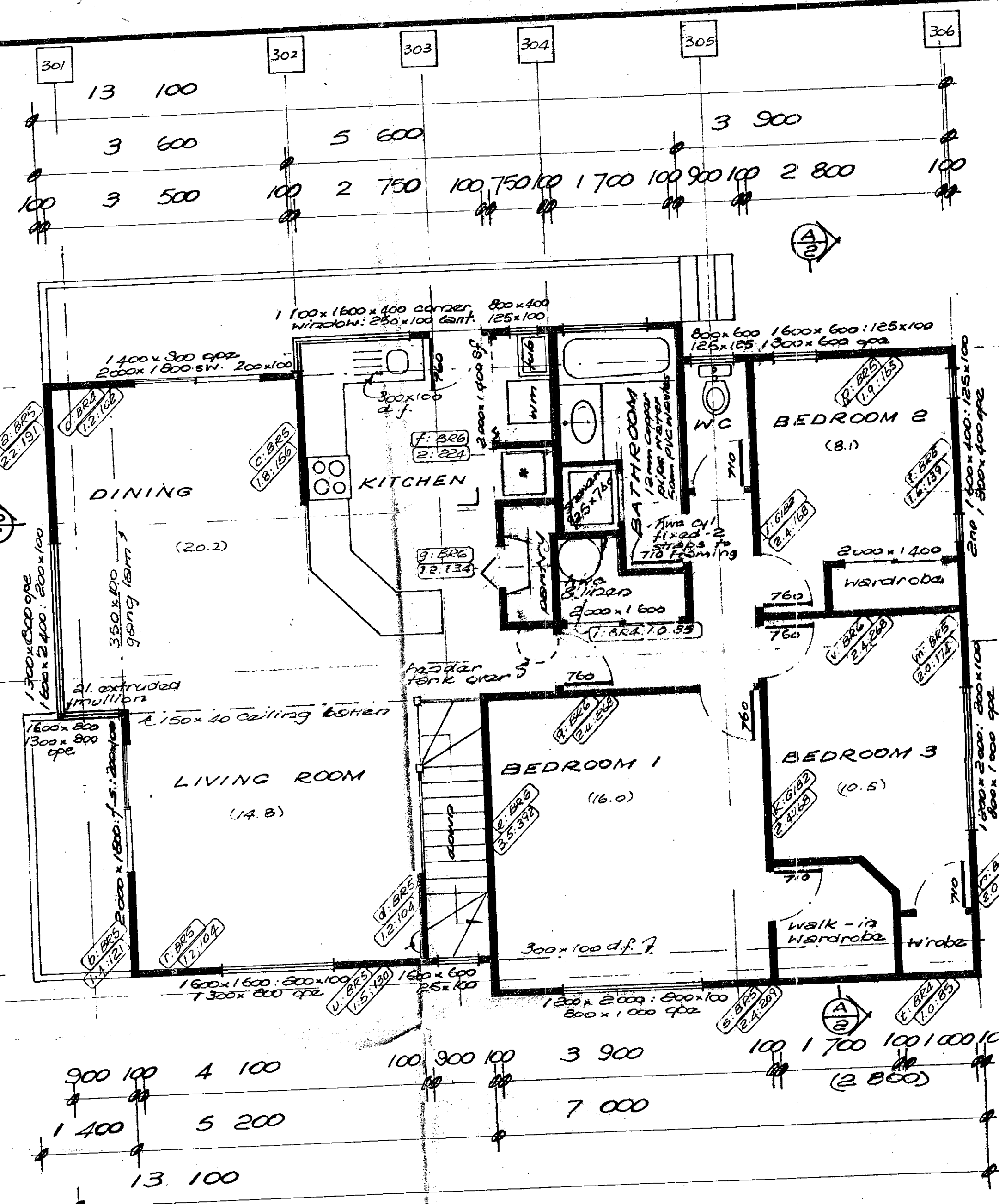
- 24 HOURS' NOTICE TO BE GIVEN TO BUILDING INSPECTOR WHEN READY TO
- ☐ SECURE FOUNDATION REINFORCEMENT IN POSITION (i.e. EXCAVATIONS ONLY COMPLETED)
 - ☐ POUR REINFORCED CONCRETE AREAS (i.e. STEEL SECURED IN POSITION)
 - ☒ FIX INTERNAL LININGS (i.e. STRUCTURAL FRAMEWORK COMPLETE)

AMENDED PLAN

RECEIVED
APPROVED BY: Date: 15/92

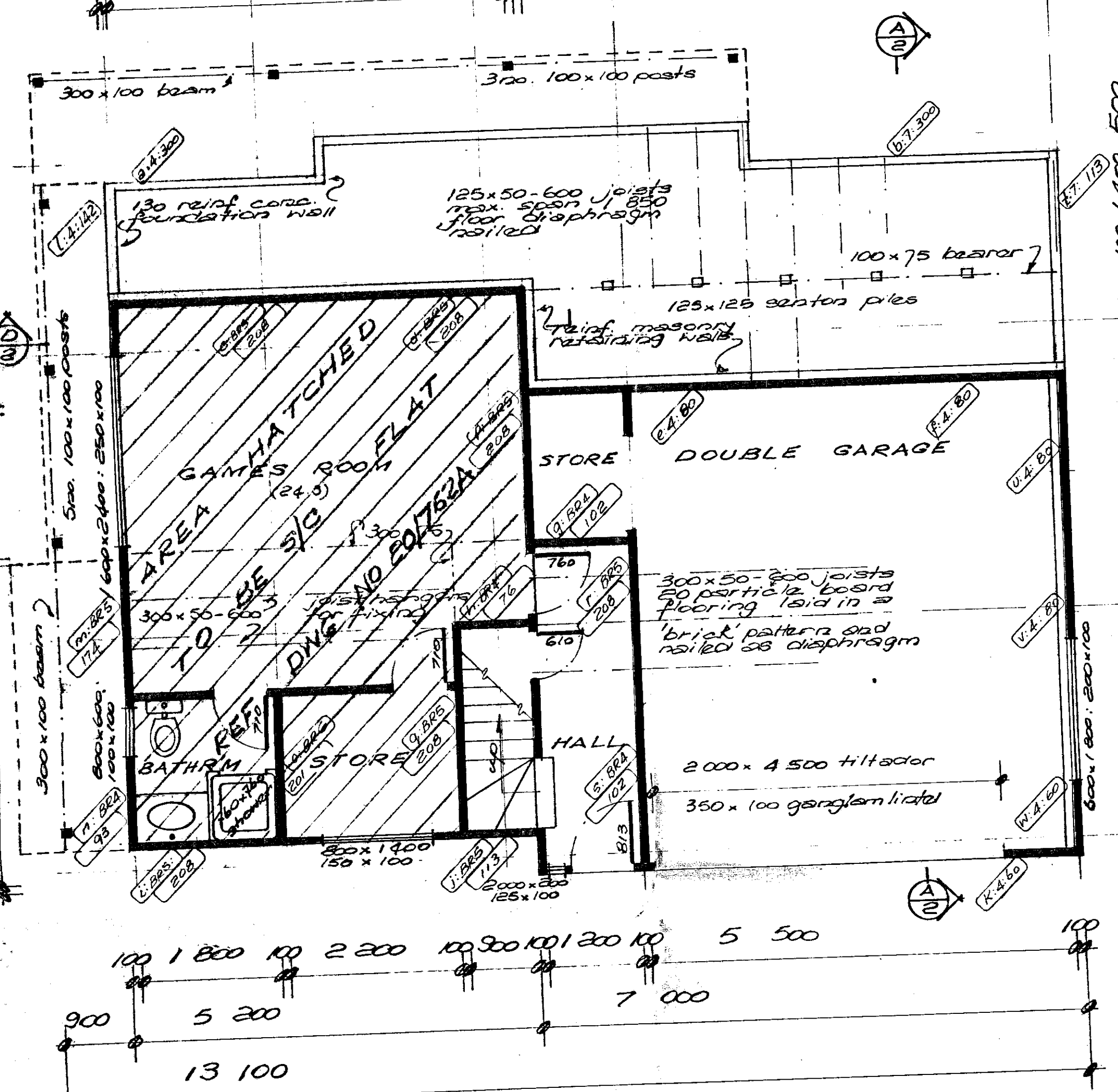
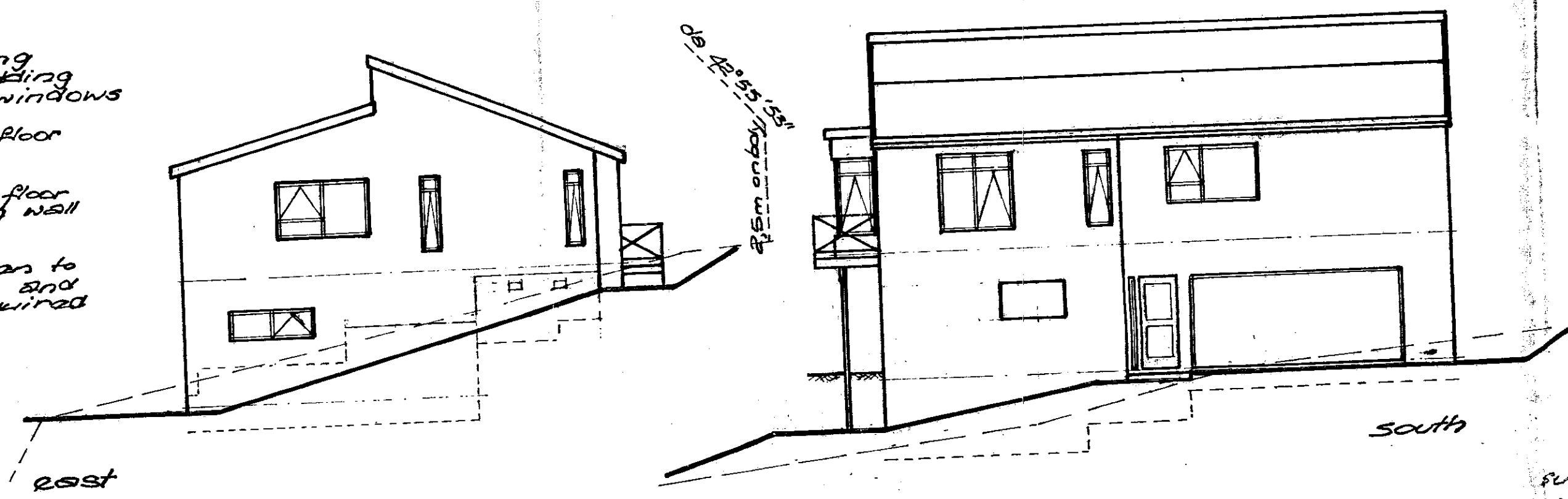
AMENDED DATE:

DWG. NO. 19/762 REF. REVISED SHEET 1 ATTACHED	Sheet 1
drawn R. O'Leary	date 92 05 12
tr. R. O'Leary	ref 20/762A
PROPOSED DIVISION OF HOUSE AT 834, ATAWHAI DRIVE, NELSON INTO TWO S/C FLATS FOR MR. M. PASLEY	
O'NEILL & CO. 5/14, GOLF ROAD NELSON	

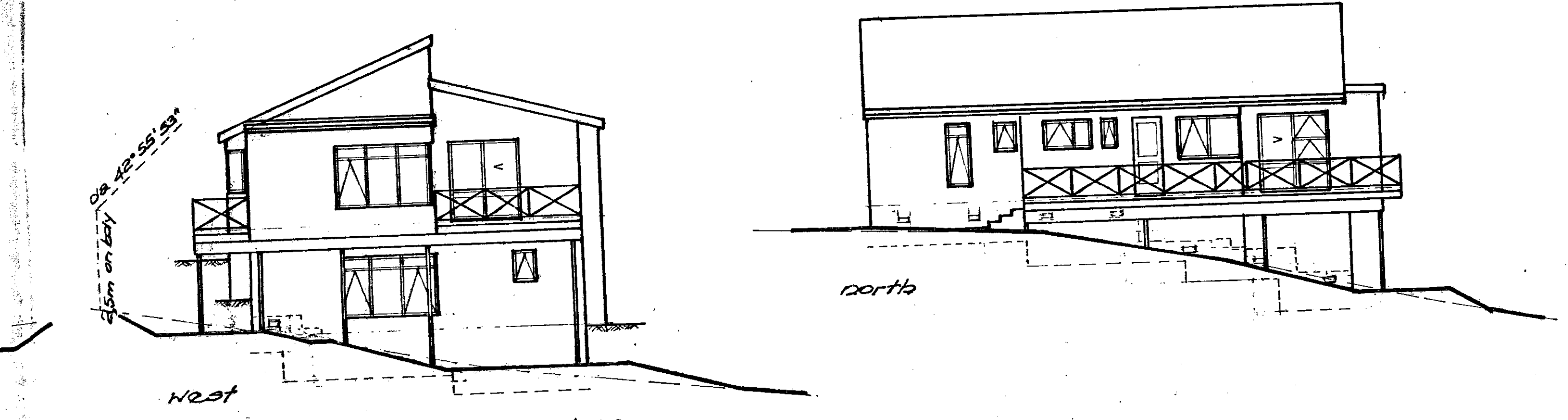


UPPER FLOOR PLAN 1:50

colortile roofing
insulated cladding
aluminium fr. windows
timber upper floor
concrete lower floor
block retaining wall
all footings taken to
solid basing and
stepped as required



LOWER FLOOR PLAN 1:50

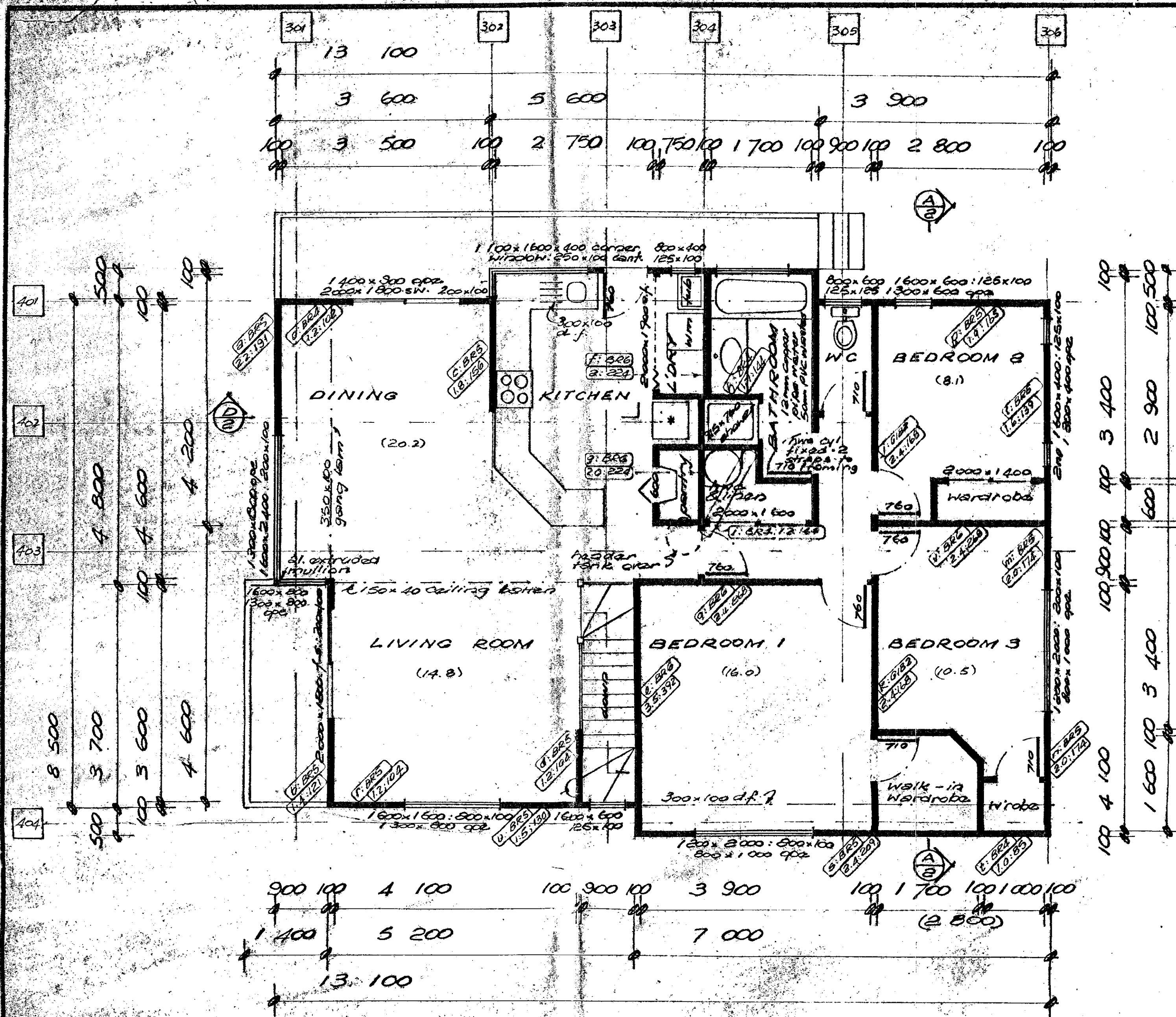


ELEVATIONS 1:100

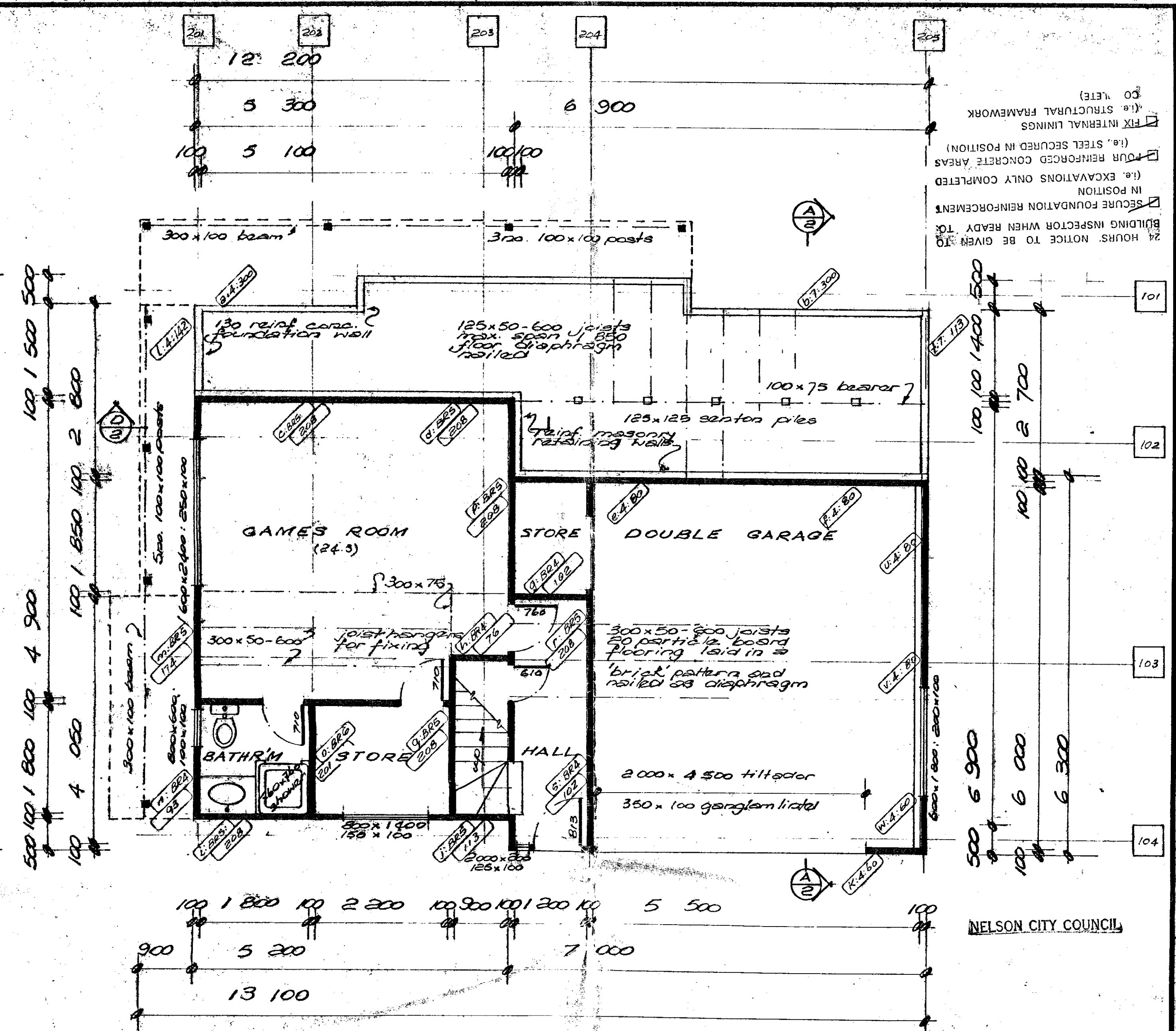
sub floor area 29.4 sqm
vent 5120
vent size 10 28303mm
vent provided 10

PROPOSED HOUSE AT 834, ATAWHAI DRIVE, NELSON.
FOR MR. M. PASLEY.

DWG. NO. 201762A REF ATTACHED					SHEET	
					1	
	1	Divides into 2 floors	9205/12	ROL		
	No.	Revision	Date	Drawn		
DRAWN	ROL	CHECKED	SCALES		SERIES OF REF 191762	
TRACED	ROL	DATE	9201/31	as noted		

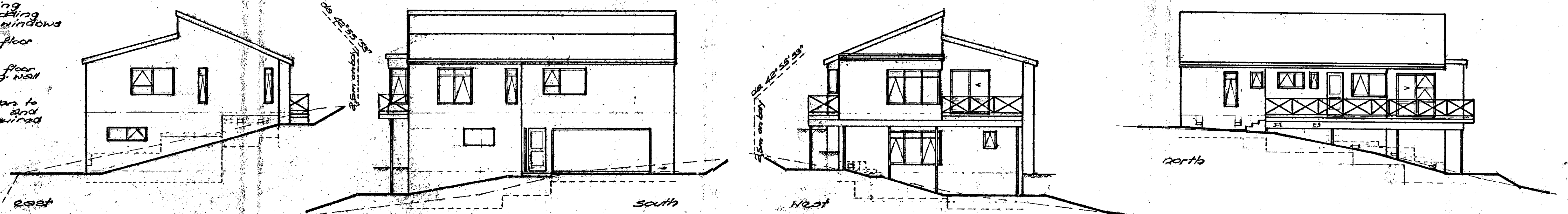


UPPER FLOOR PLAN 1:50



LOWER FLOOR PLAN 1:50

calentite roofing
insulate & packing
alum. nitr. fr. windows
timber decks
timber upper floor
concrete lower floor
block retaining wall
all footings refer to
solid footing and
steps as required



ELEVATIONS 1:100

#ub floor area 29.4 sqm ventilators reqd 1.7
ext 5120 10 25303mm vents provided 10
ext 5120 300x200 mm

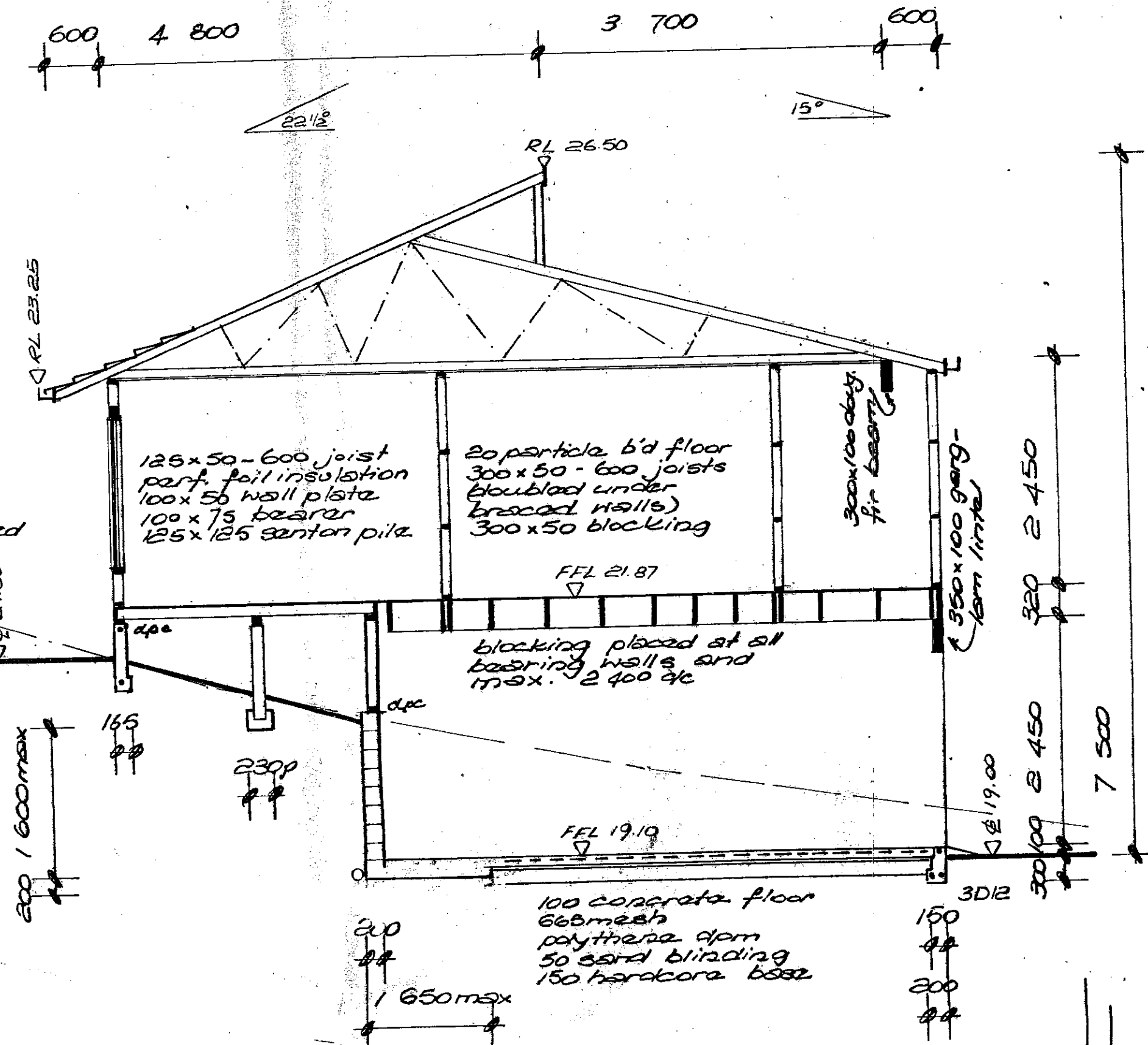
PROPOSED HOUSE AT 834, ATAWHAI DRIVE, NELSON.
FOR MR. M. PASLEY.

DRAWN <i>ROL</i>	CHECKED	SCALES	SHEET
TRACED <i>ROL</i>	DATE 920131	as noted	1
			SERIES OF
			REF 191762

colortile roofing
2x 50x50 tile battens
building paper on strapping
gang nail trusses at 900c 8500 span
garden sheet to be
provided by supplier
galv. gutters and downspouts
fibre cement roof lining
2x 25 gutter board

R.I.G insulation
50x40-600 ceiling battens
12 insulating board ceilings
top plate 100x50 plus 150x40

100x50 framing studs 600c
walls lined 9.5 plasterboard
or 'brocalina' as required
for bracing
building paper
insulated cladding to be
supplied, fixed and finished
by approved operator



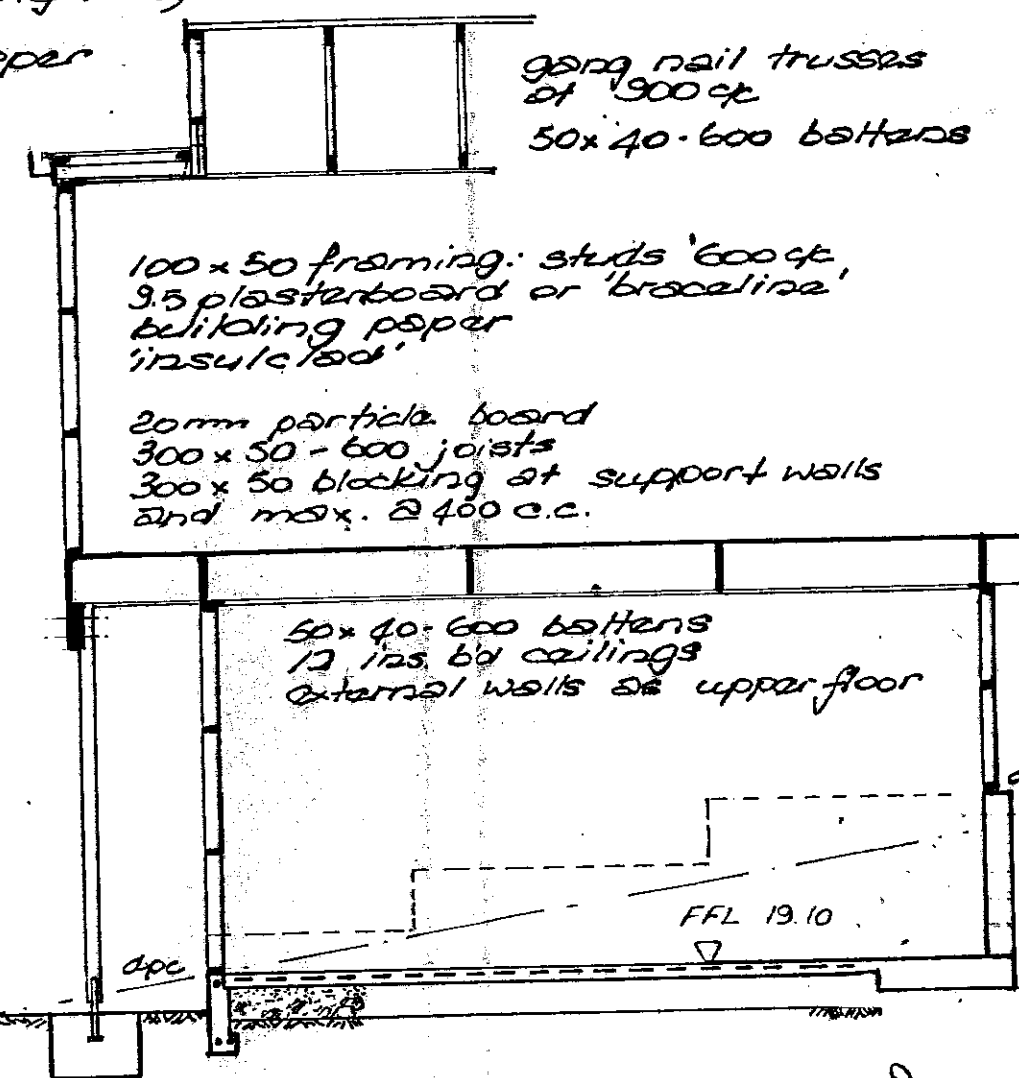
SECTION A 1:50

100x50 gable framing
350x100 beam spans 4 600 (gang lam)
flat roof
diamond tile roofing: building paper
75x50-900 (nom) purlins
100x50-900 rafters
fixed using joist bangers
R.I.G insulation

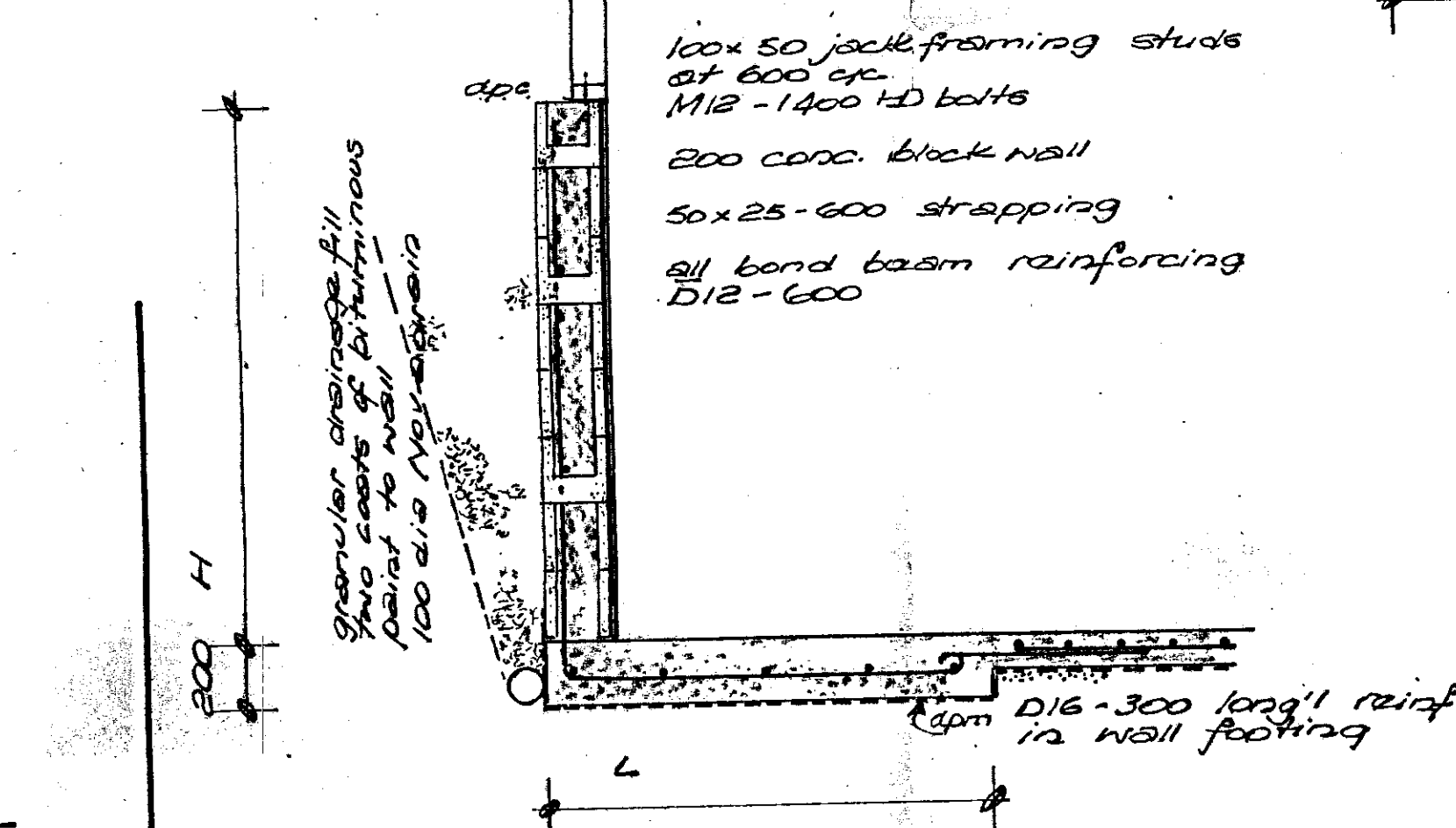
2x 25 boundary joist
part. foil insulation at
siding
f.c. sheet roof lining
300x100 beam
2M12 galv. bolts to
100x100 post with
300x25 rebars

proprietary post bracket

concrete pad

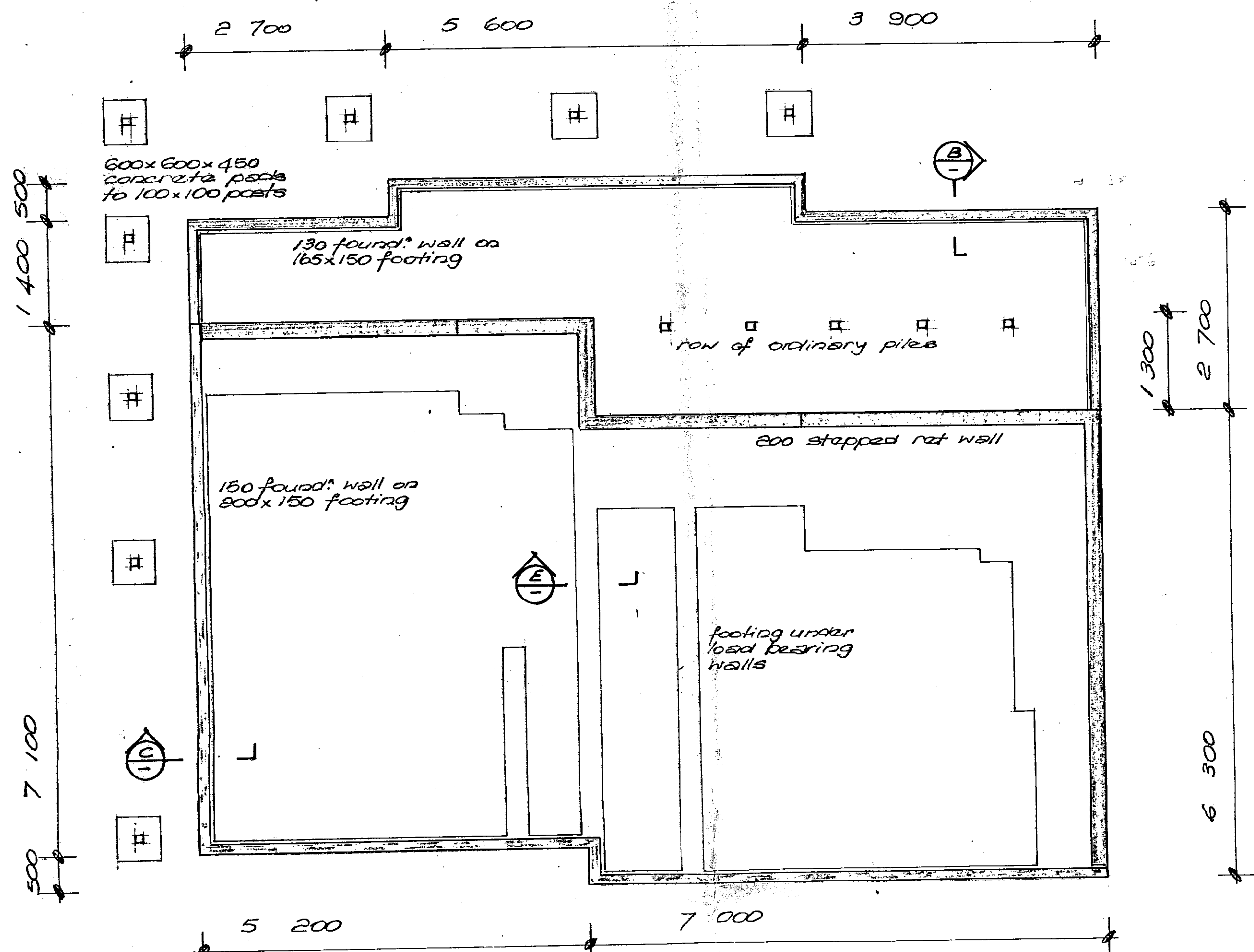


SECTION B 1:50

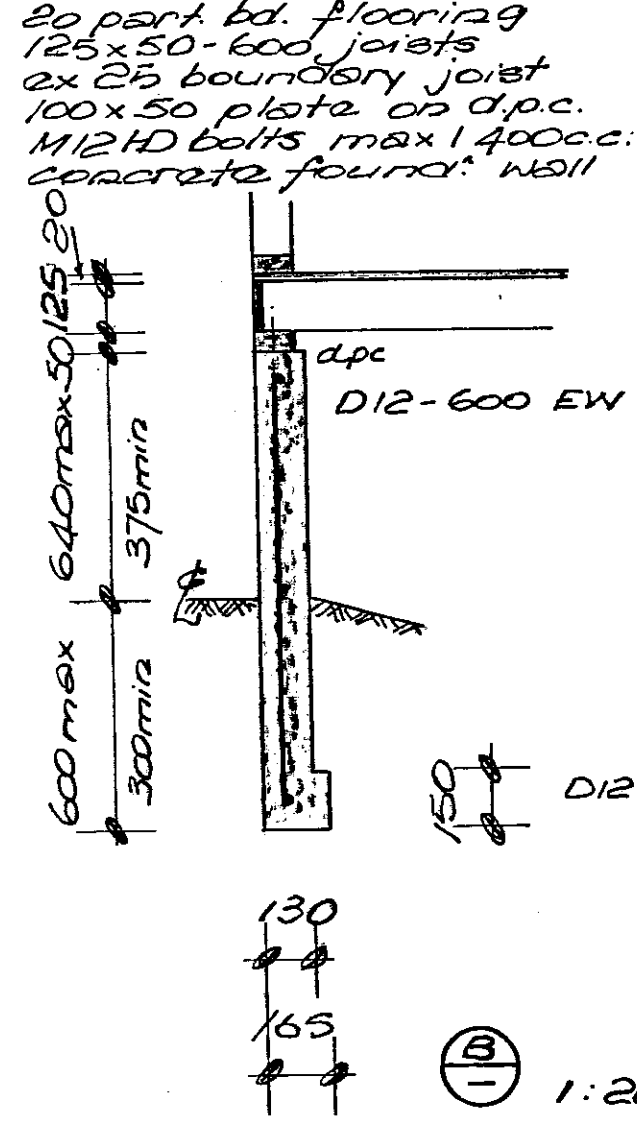
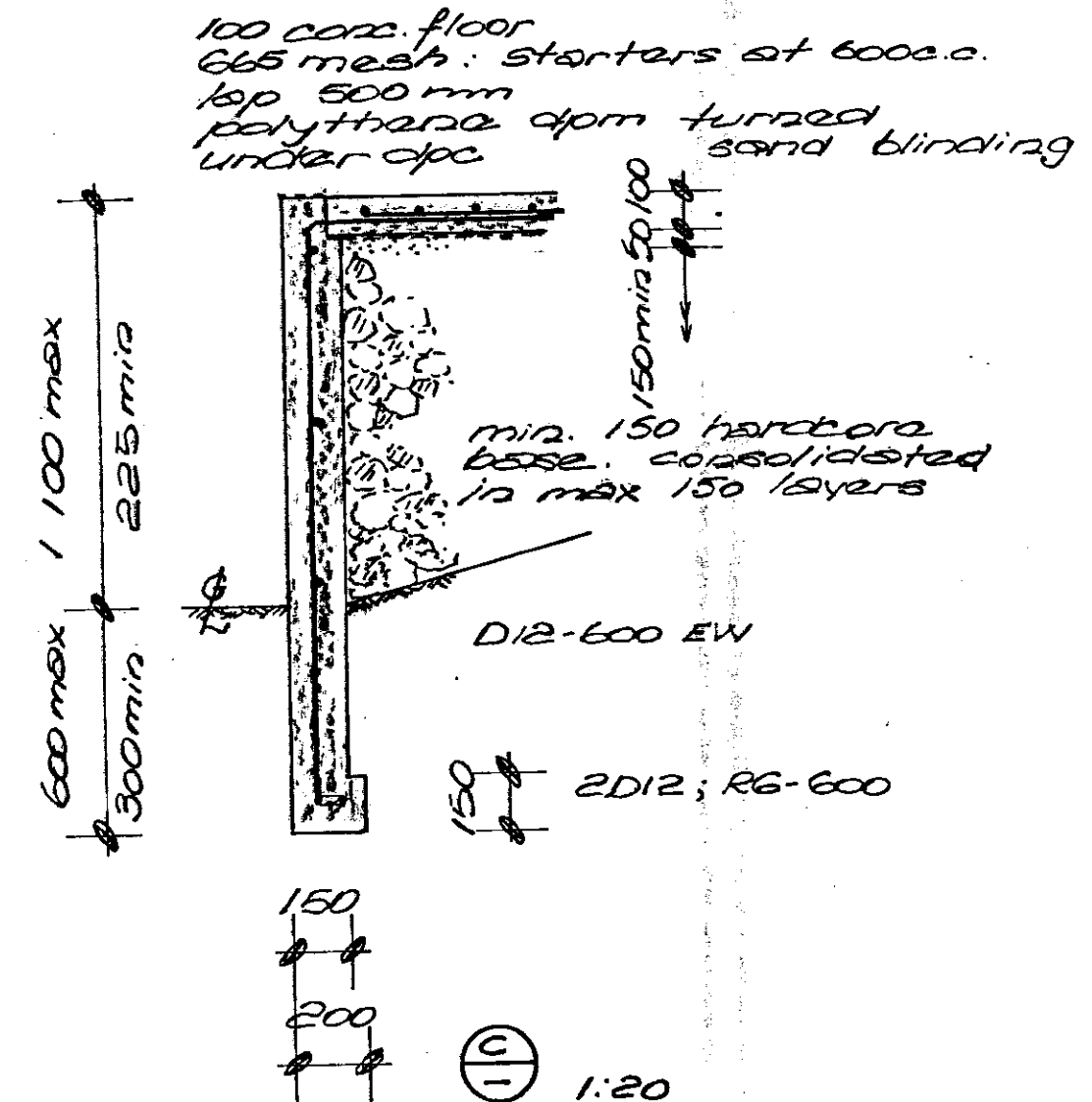


RETAINING WALL
DETAIL 1:20

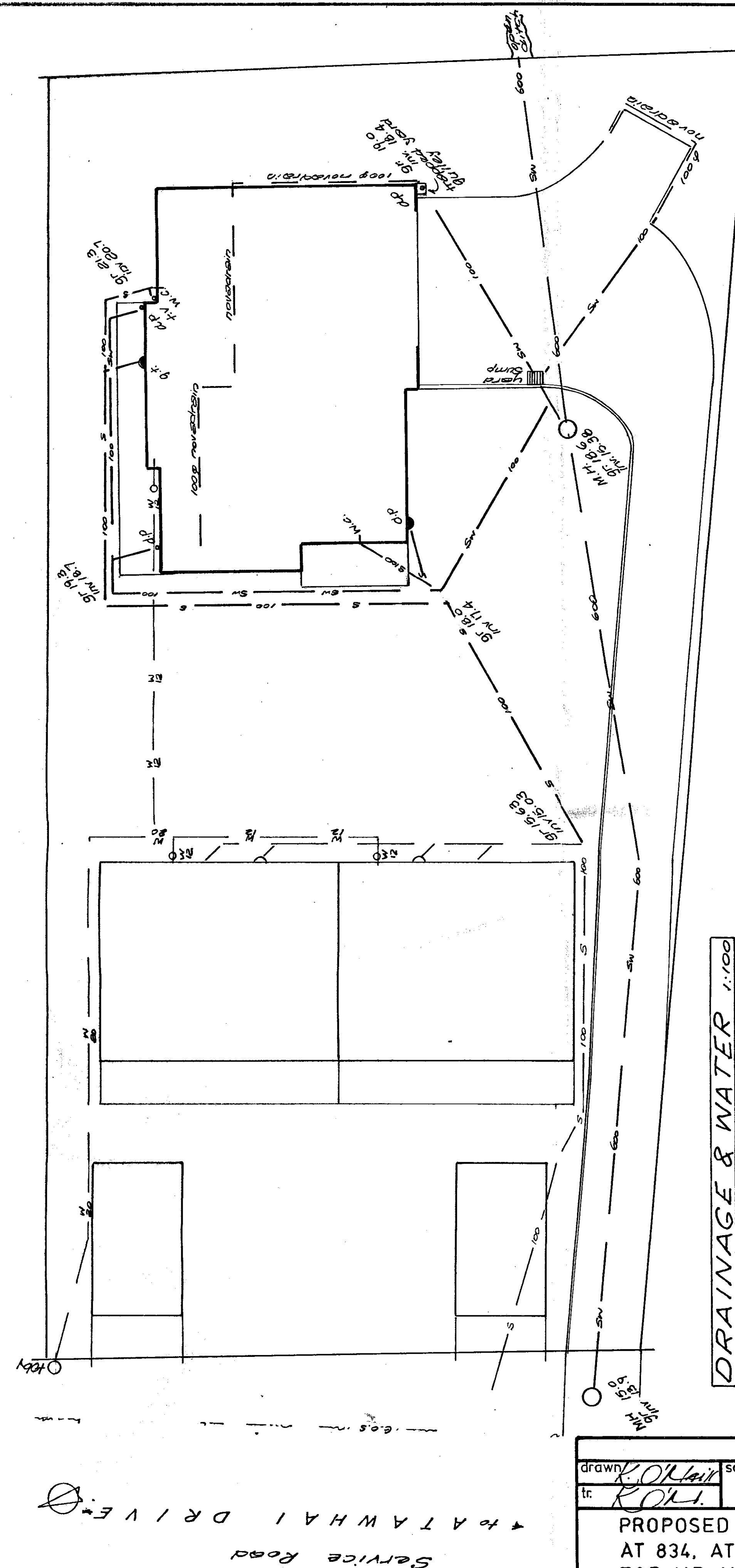
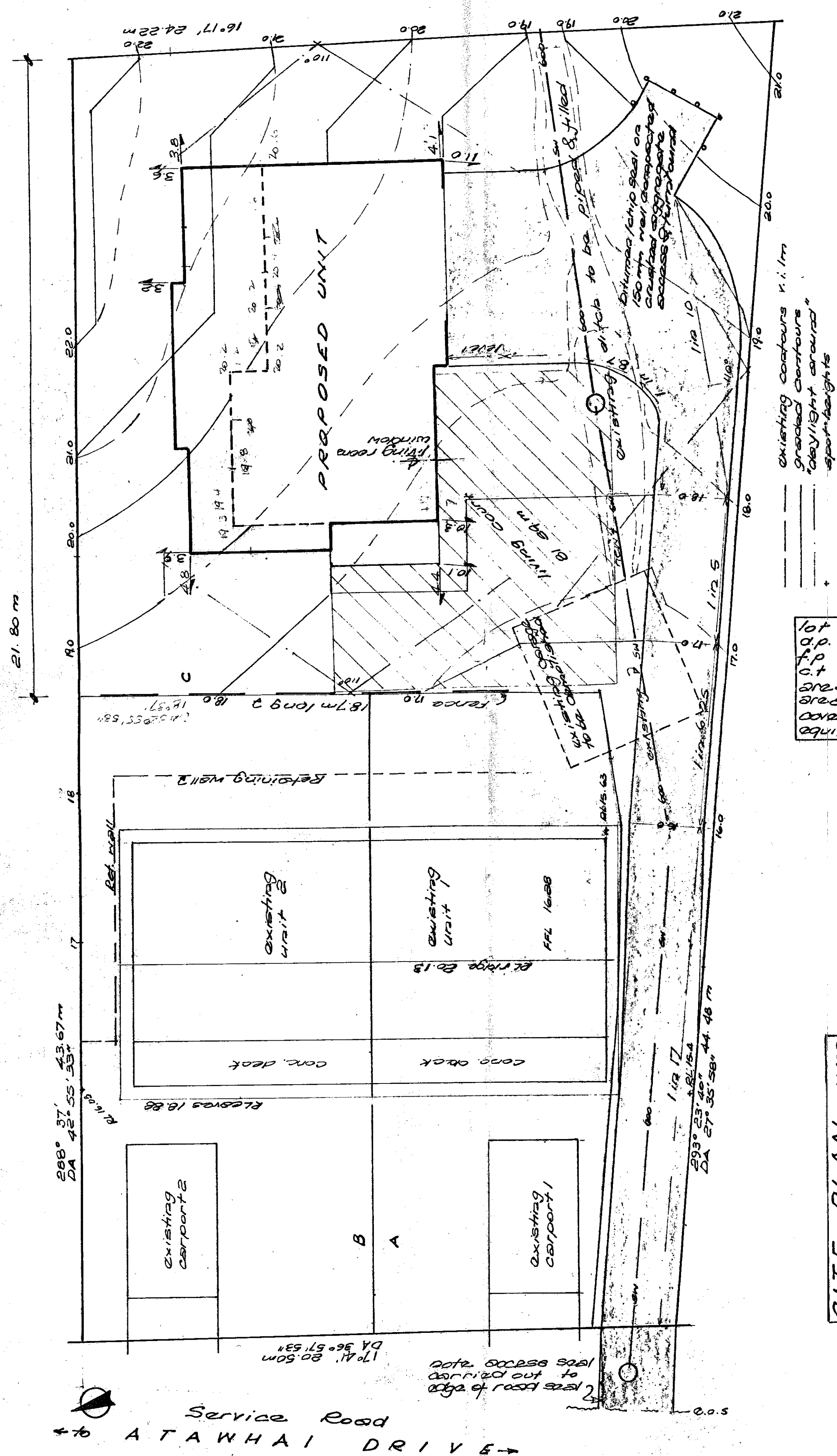
H	L	Reinf.
1 600	1 650	D16-400
1 200	1 250	D12-400
6 800	950	D10-600

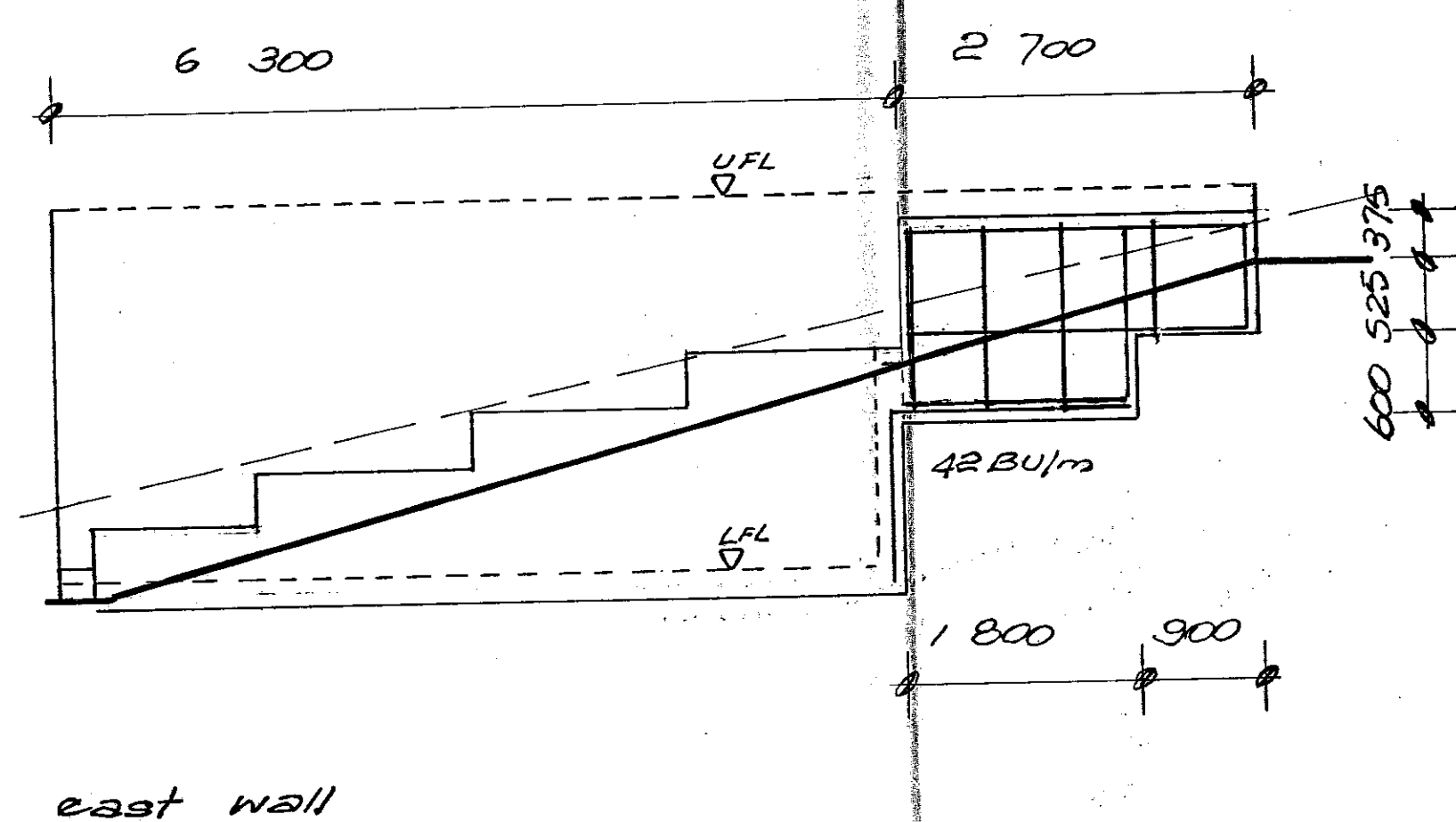


FOUNDATION PLAN 1:50

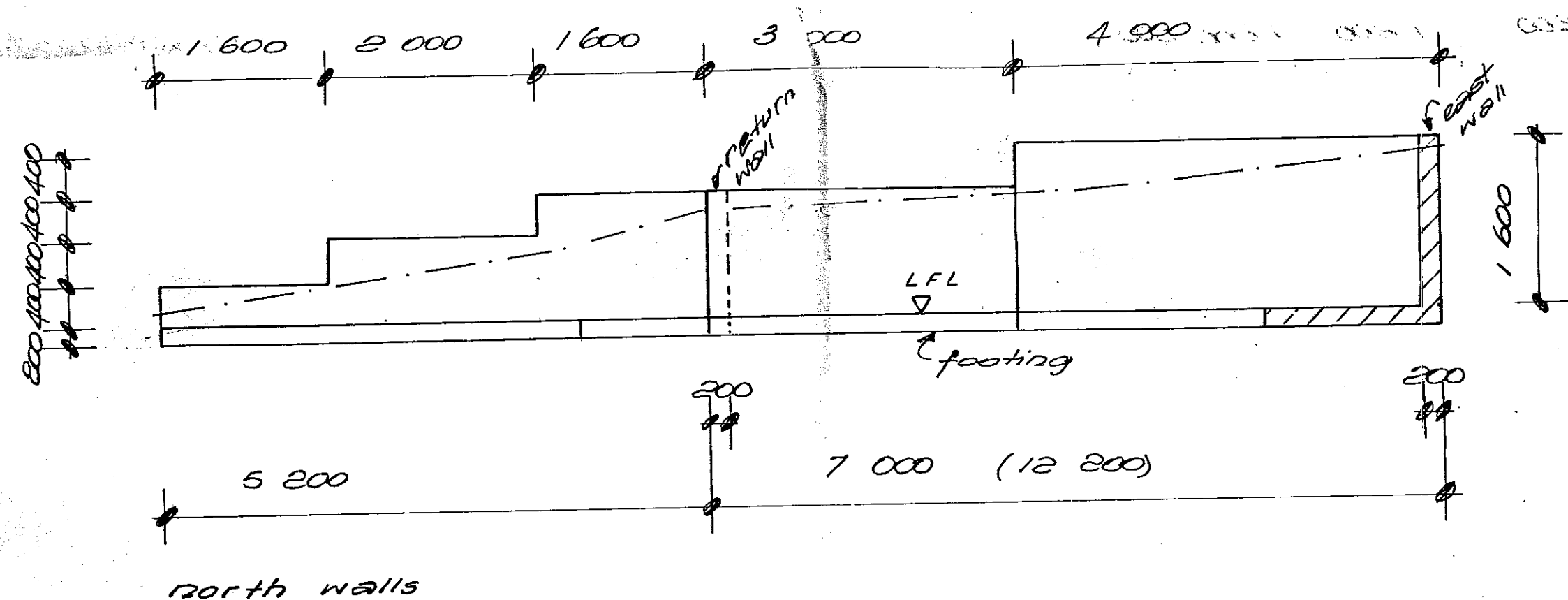
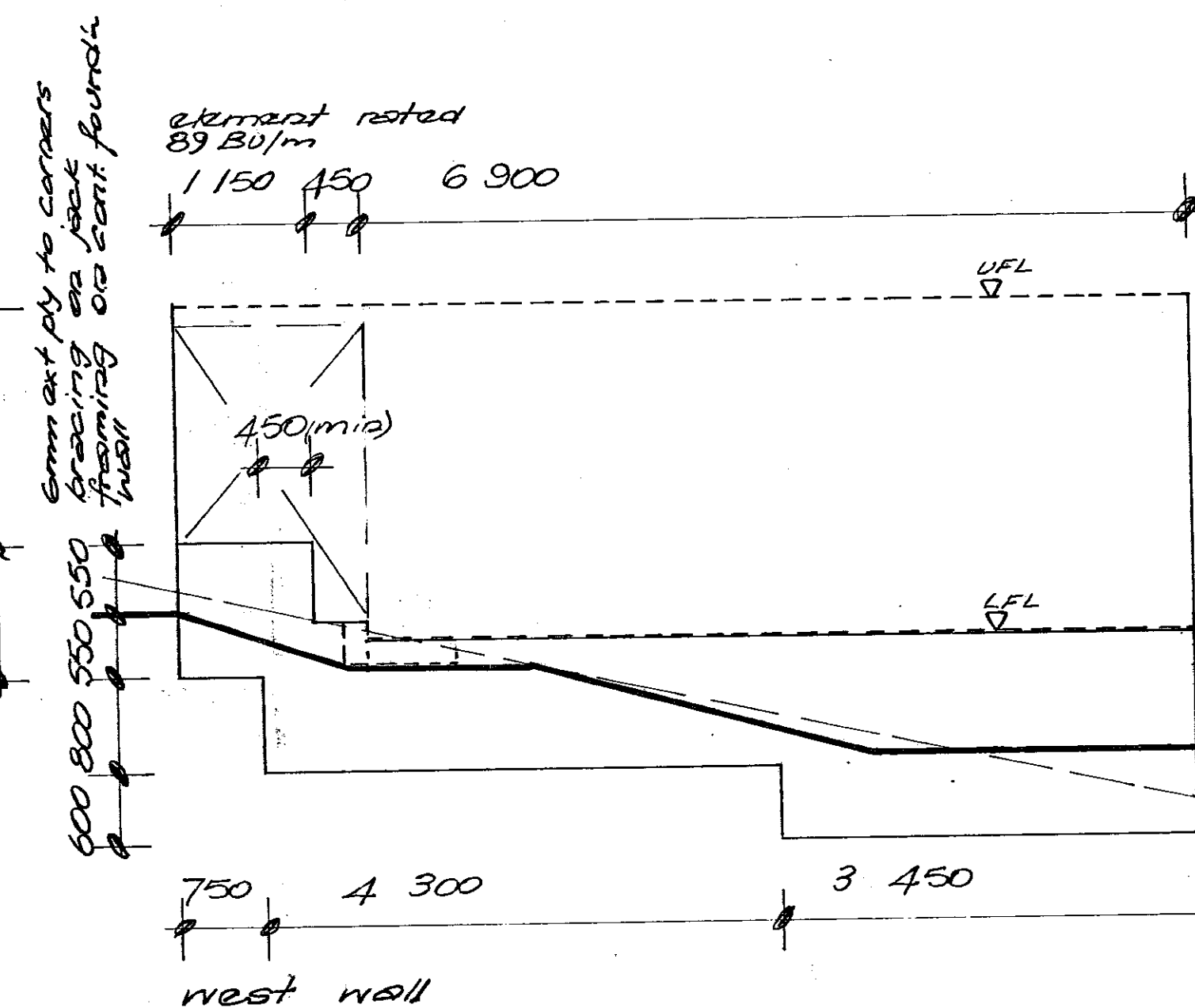
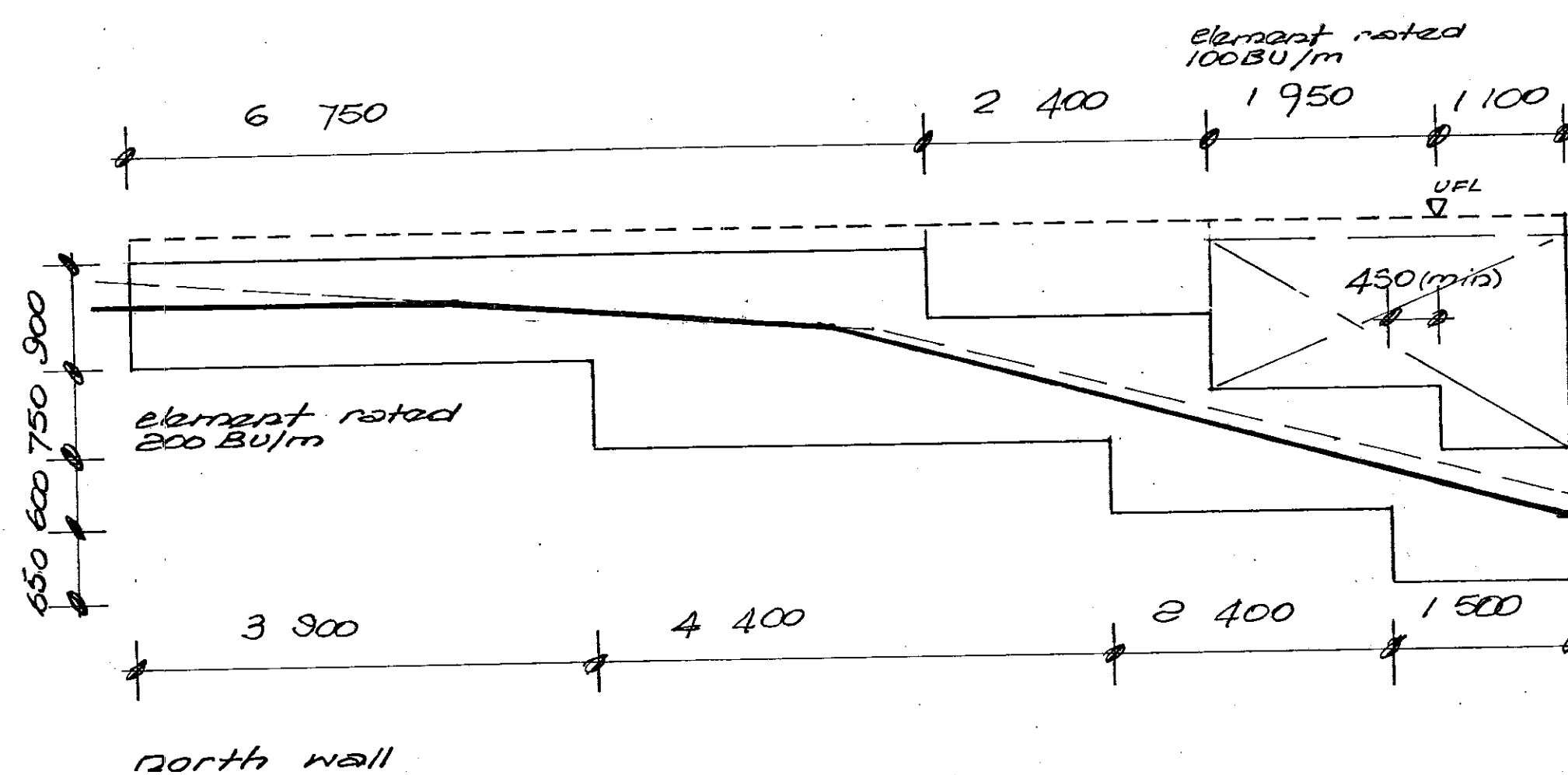


drawn K. O'Neill	scales as noted	date 92.01.30	sheet 2
tr. K.O.N.		ref. 19/762	
PROPOSED HOUSE AT 834, ATAWHAI DRIVE, NELSON FOR MR. M. PASLEY			
KEVIN O'NEILL 5/14, GOLF ROAD NELSON			

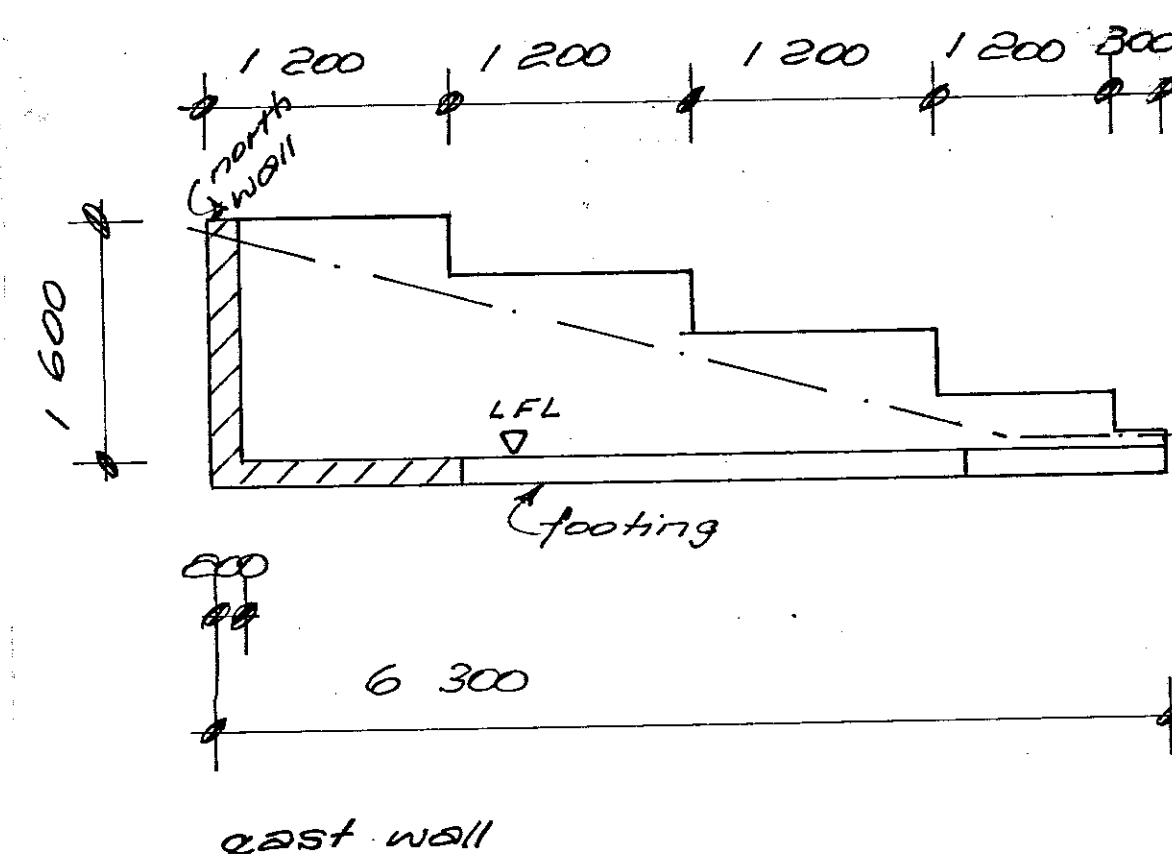




FOUNDATION WALLS 1:50

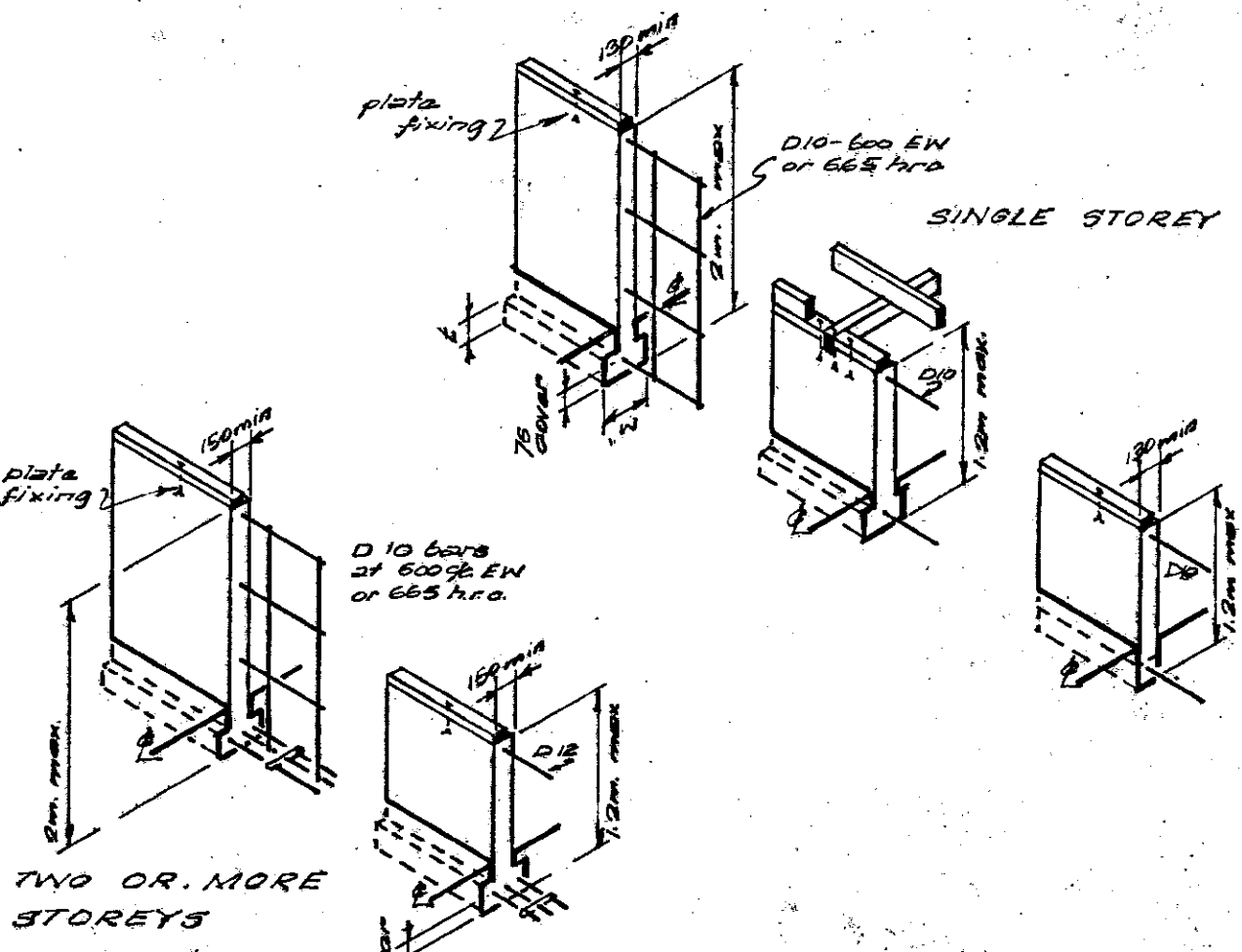
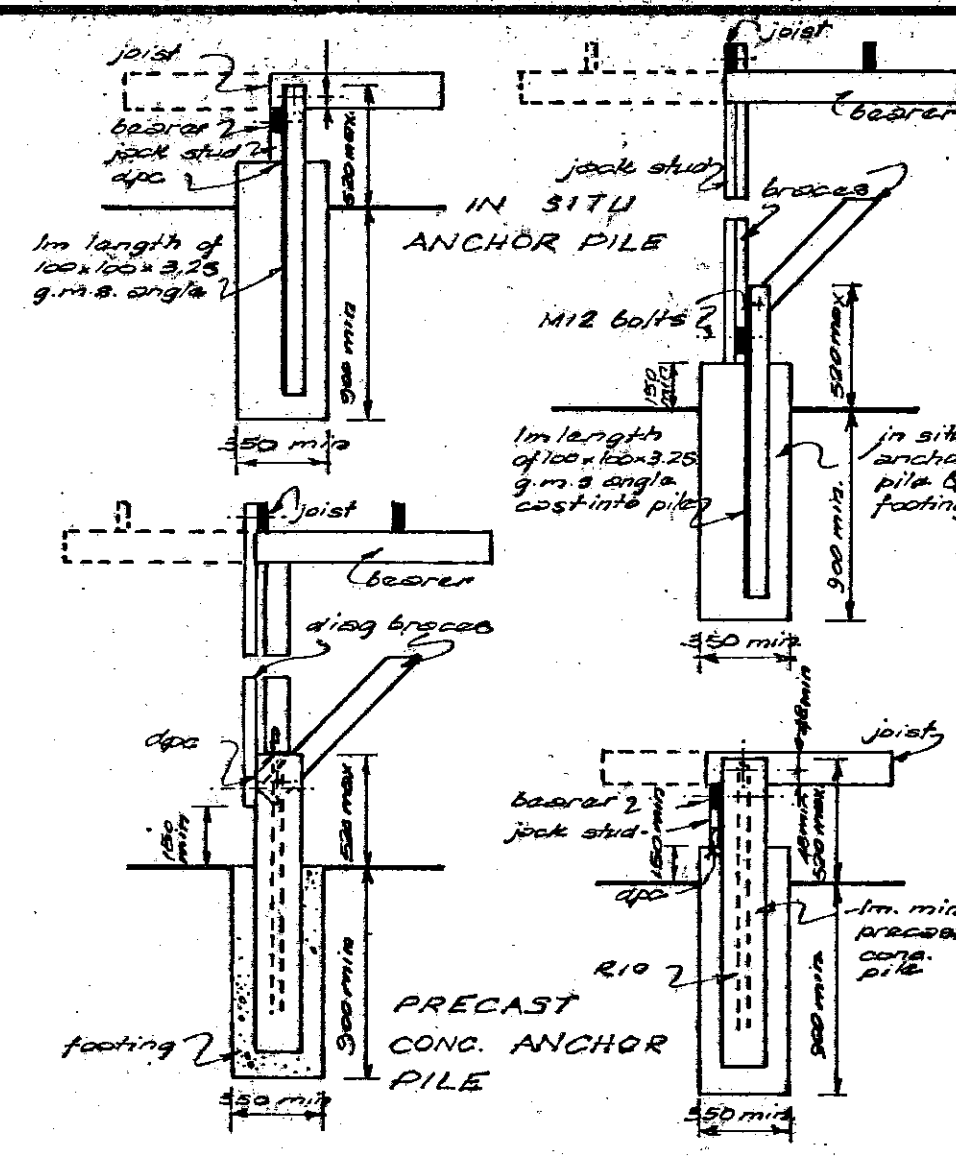
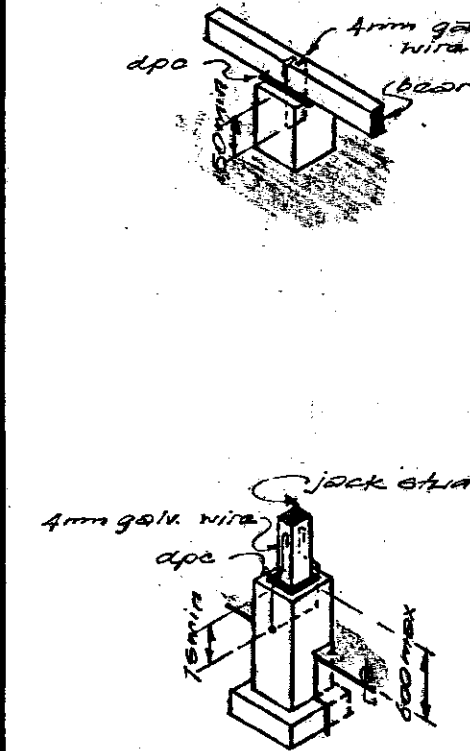
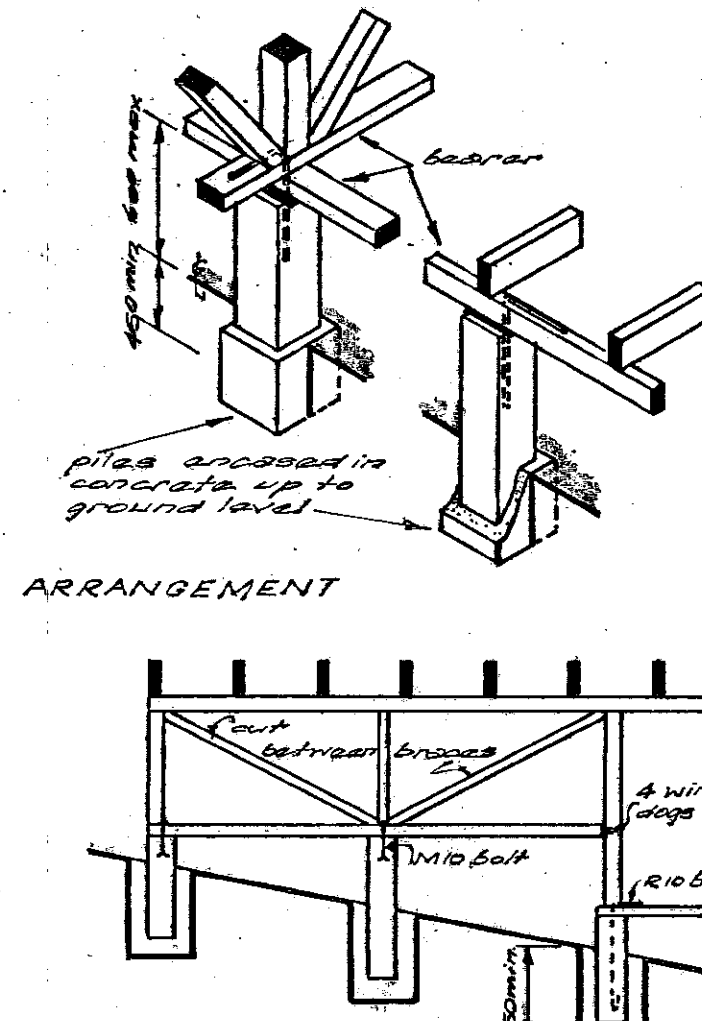
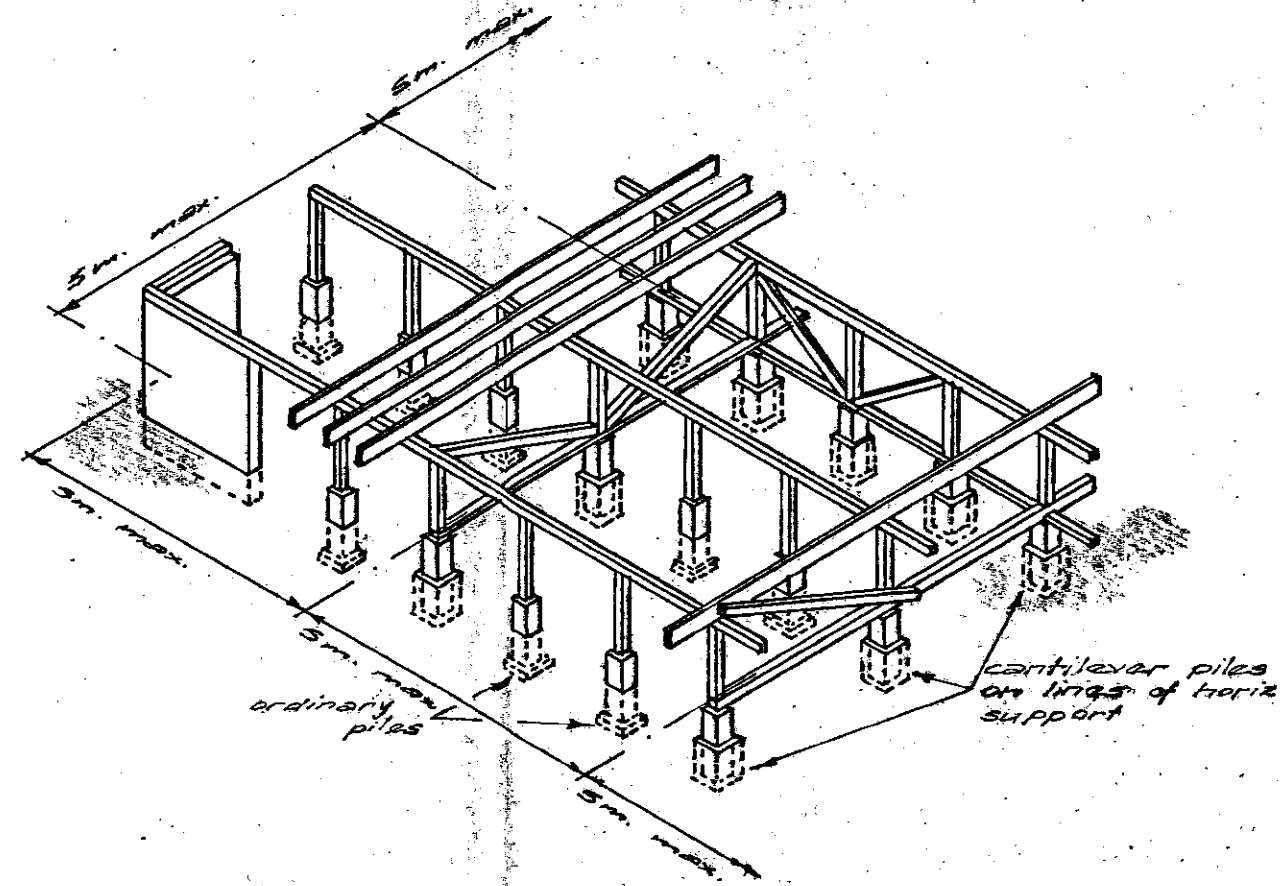
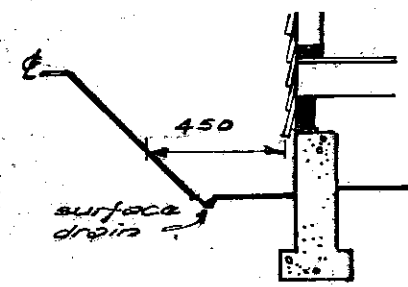


RET. WALLS - ELEVATIONS 1:50



note: all other details and reinf. in sheet 3

drawn	K. O'Neill	scales	as noted	date	92.01.31	sheet	4
tr.	K. O'Neill			ref.	19/762		
PROPOSED HOUSE AT 834, ATAWHAI DRIVE, NELSON FOR MR. M. PASLEY							
KEVIN O'NEILL 5/14, GOLF ROAD NELSON							



1 CLEARANCE GROUND/CLADDING

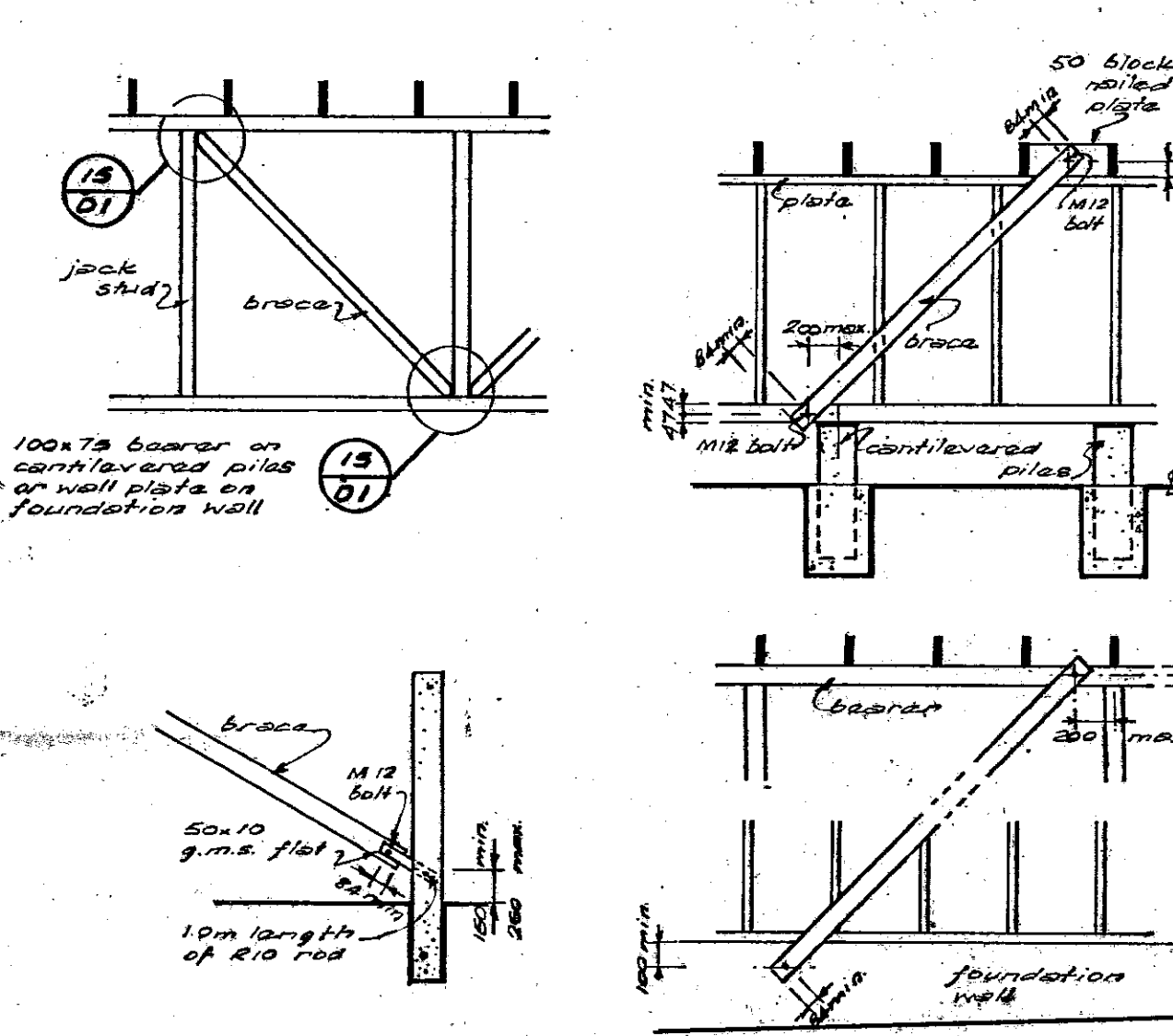
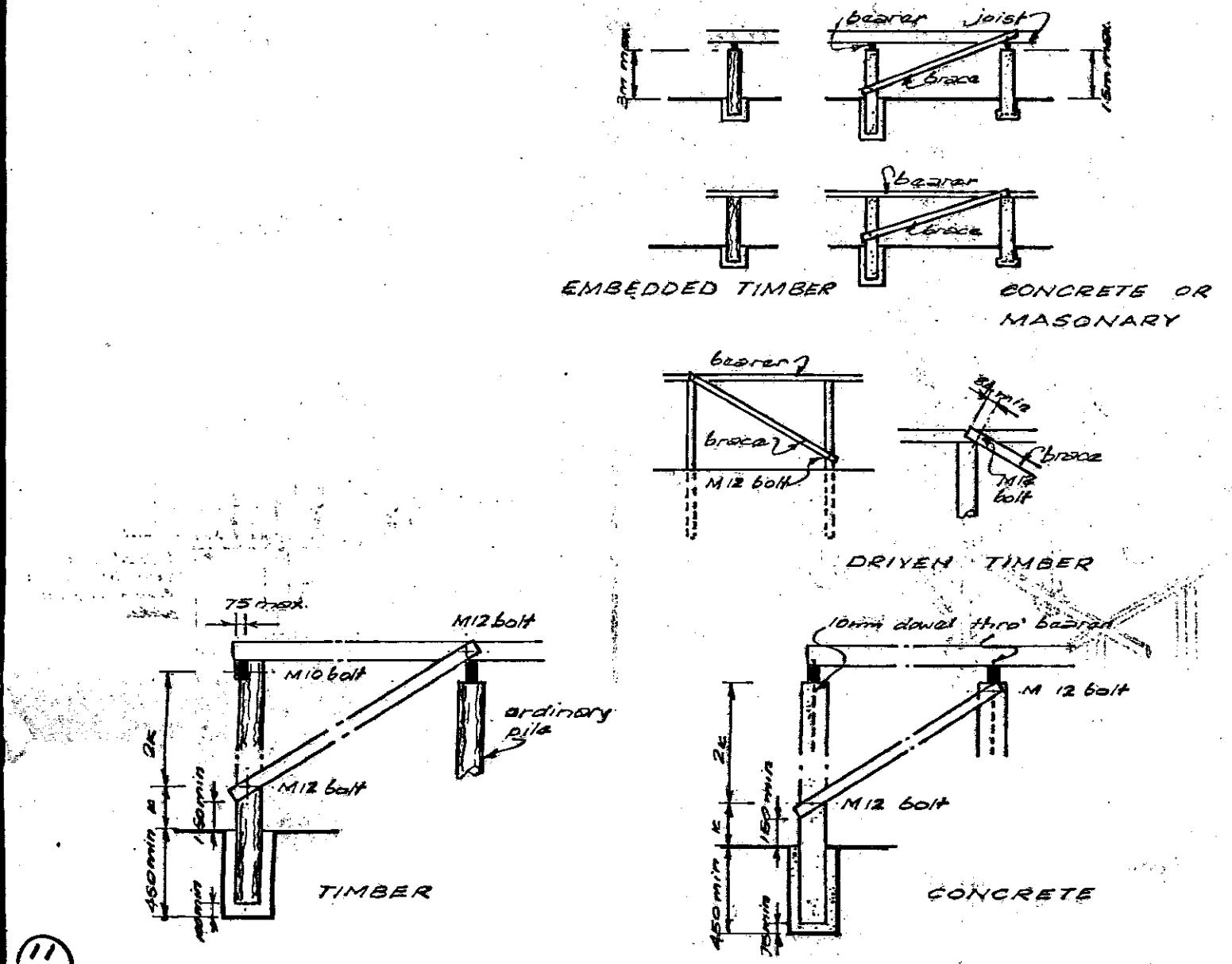
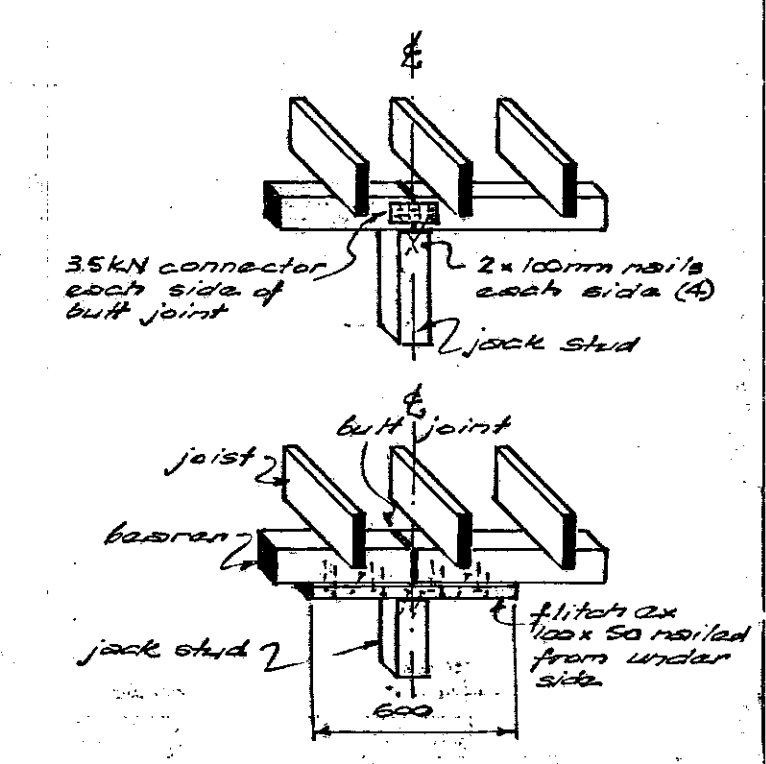
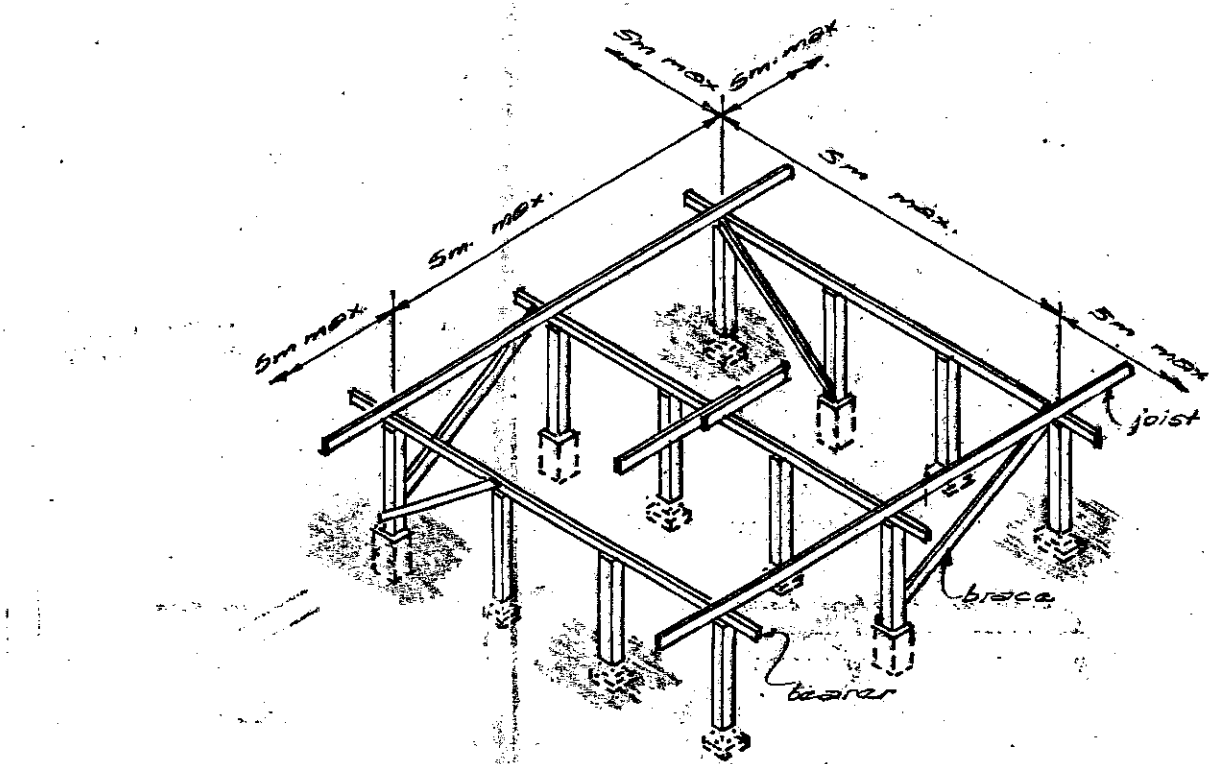
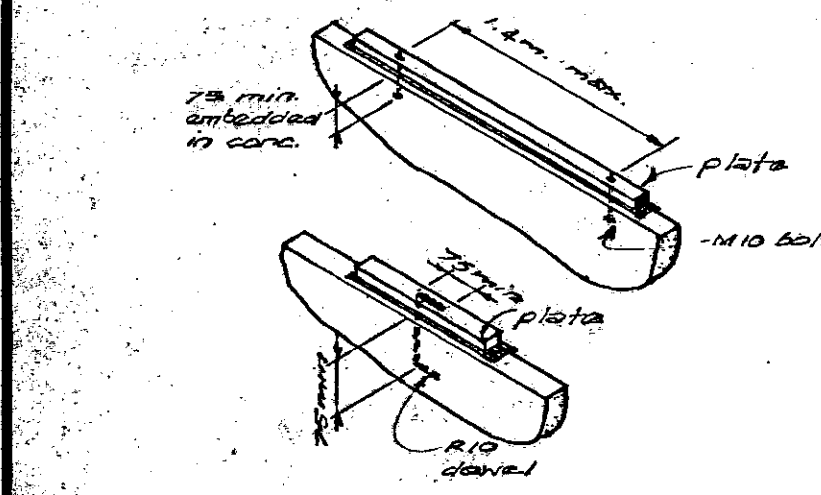
2 LINES OF HORIZONTAL SUPPORT

3 FIXING OF BEARERS TO CANTILEVERED PILES

4 BEARER & JACK STUD FIXING TO PILES

5 ANCHOR PILE DETAILS

6 R.C. NON-CANTILEVERED FOUNDATION WALLS



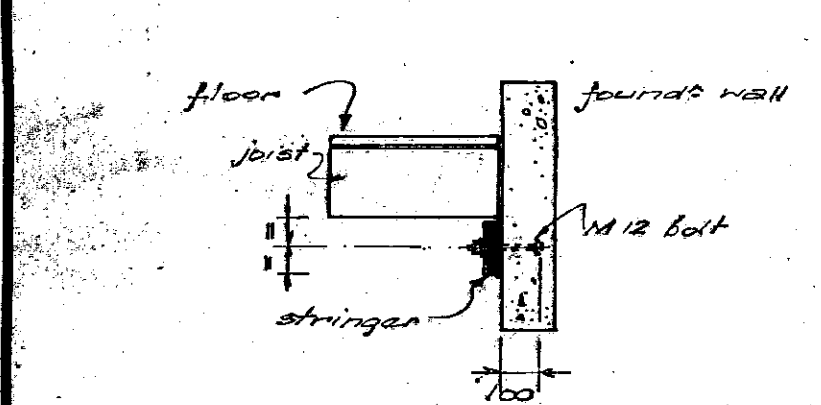
7 FIXING WALL PLATES TO FOUNDATION WALLS

8 LINES OF HORIZONTAL SUPPORT INCLUDING DIAGONAL TIMBER BRACES

9 JOINTS IN BEARERS

10 BRACED PILES

11 FIXING OF DIAGONAL TIMBER SUB-FLOOR BRACES

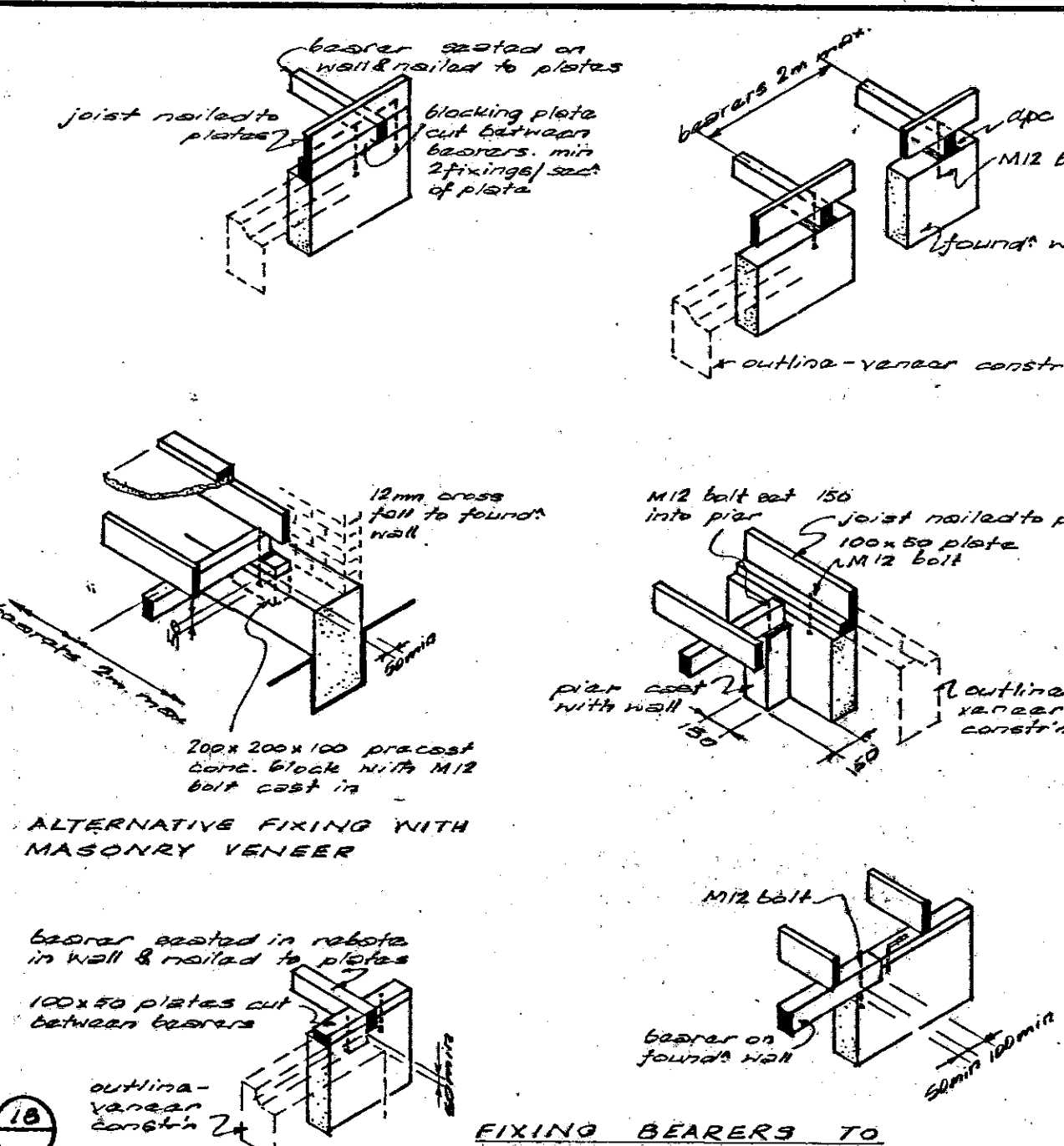
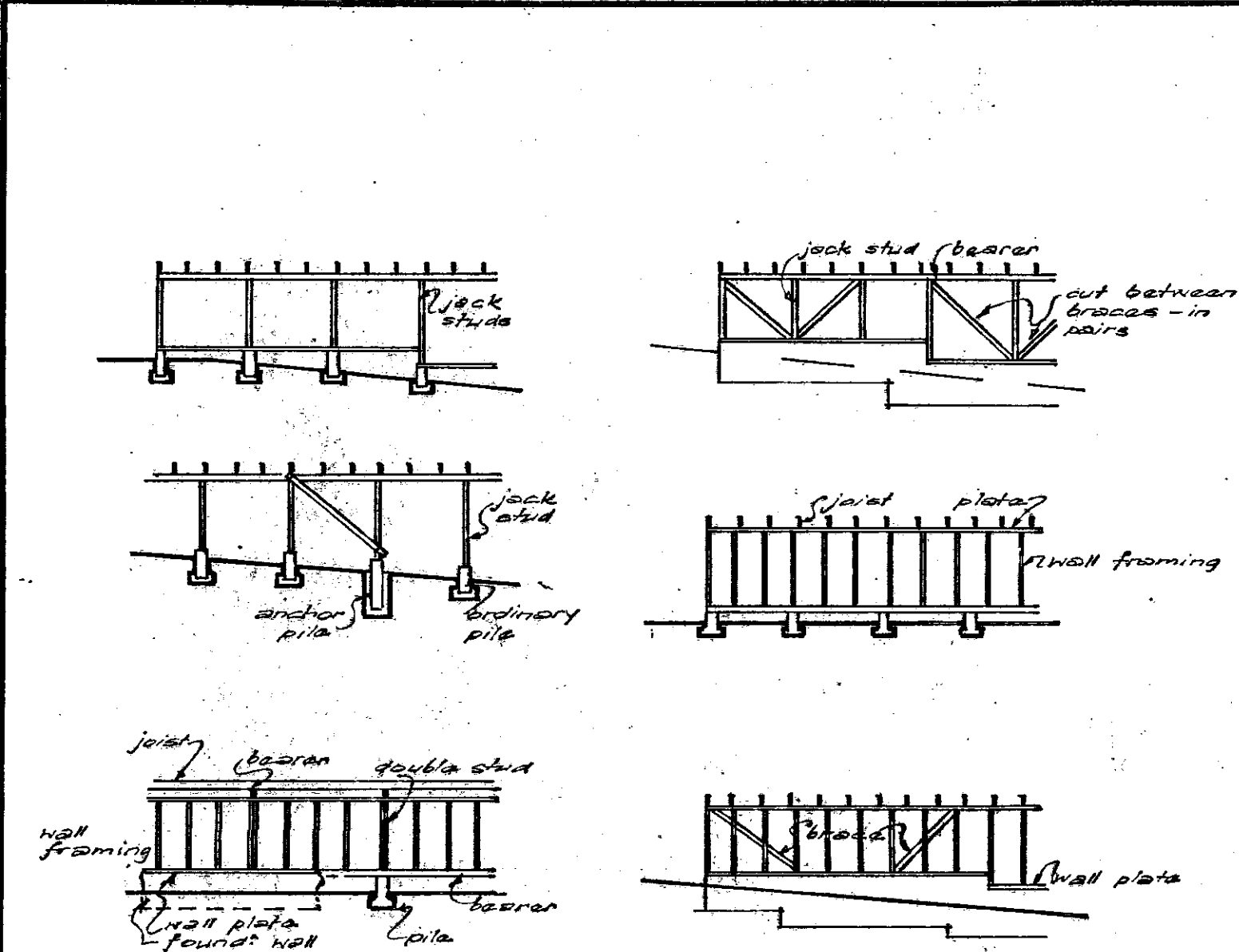
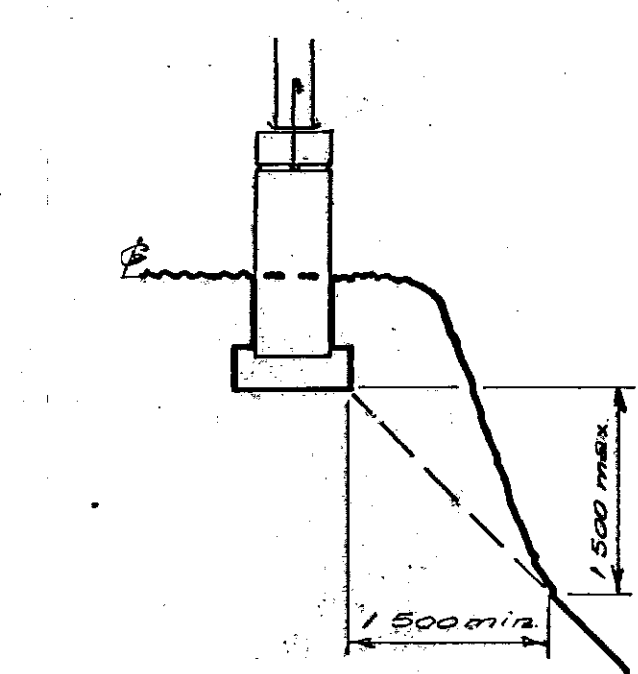
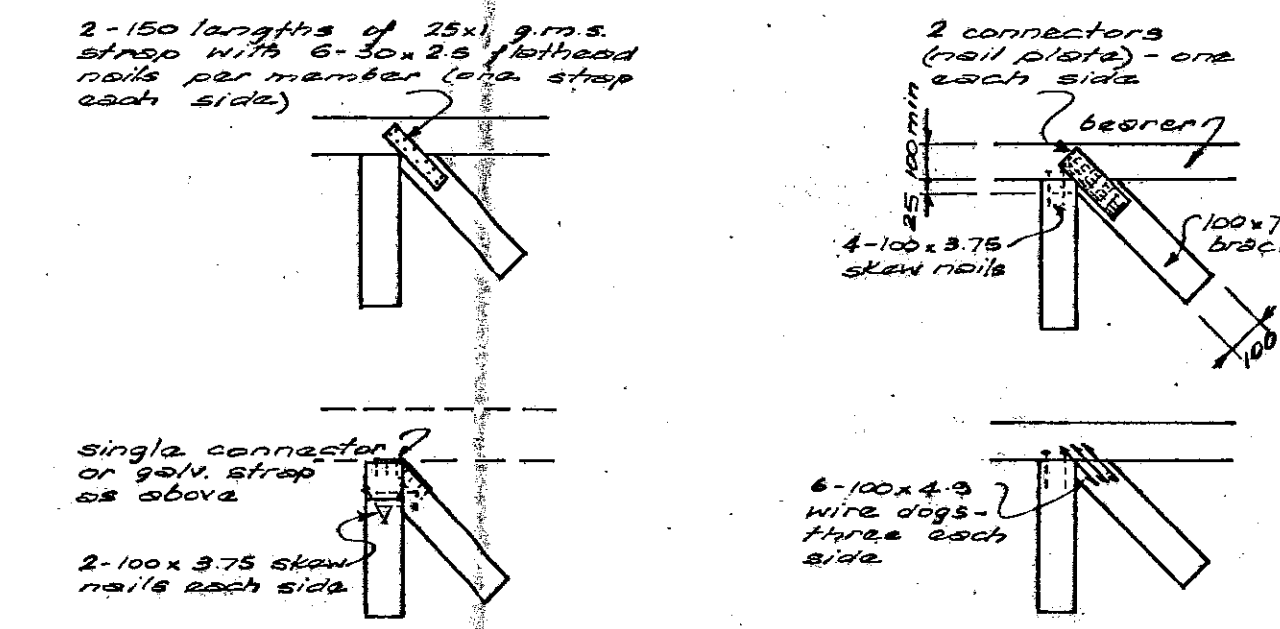
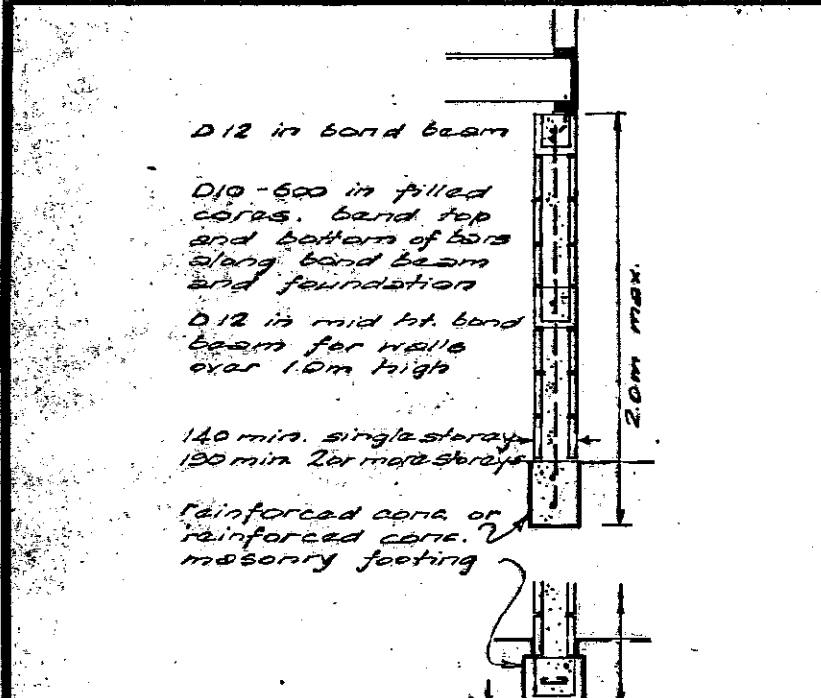


12 LINES OF HORIZONTAL SUPPORT INCLUDING DIAGONAL TIMBER BRACES

13 JOINTS IN BEARERS

14 BRACED PILES

15 FIXING OF DIAGONAL TIMBER SUB-FLOOR BRACES



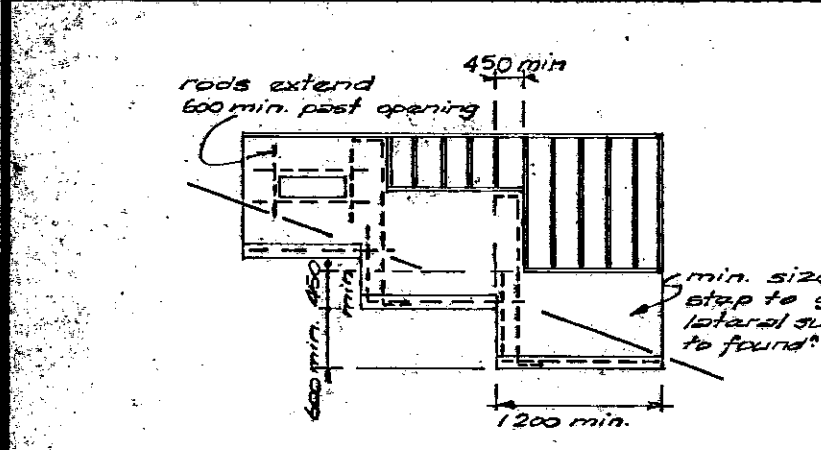
13 REINF. MASONRY FOUNDN WALL NOT CANTILEVERED

14 FIXING DETAILS FOR CUT BETWEEN DIAGONAL TIMBER SUB-FLOOR BRACES

15 FOUNDATION AT SLOPING GROUND SURFACE

16 FOUNDATION AND SUB-FLOOR FRAMING SYSTEMS

17 FIXING BEARERS TO FOUNDATION WALLS

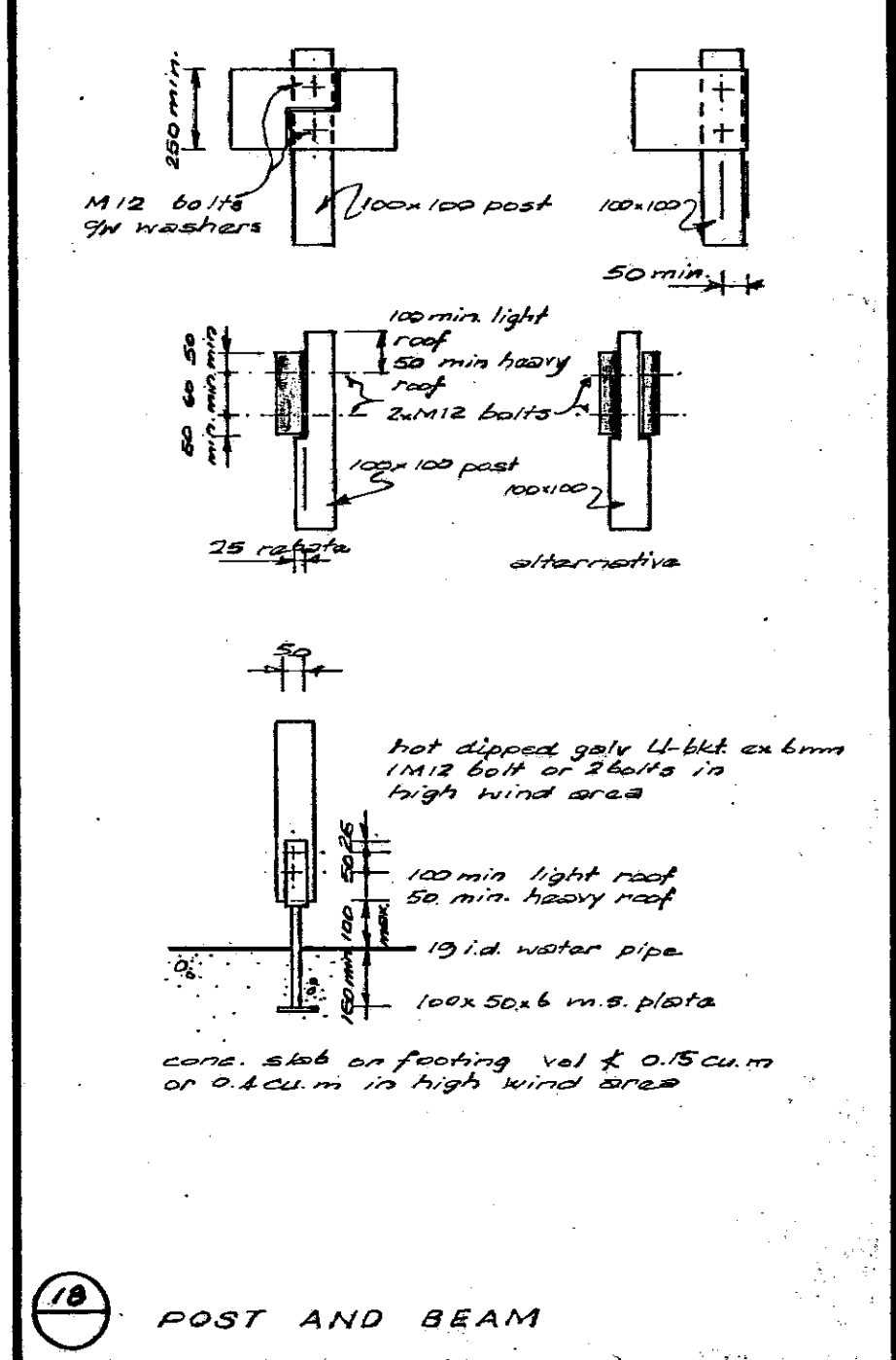
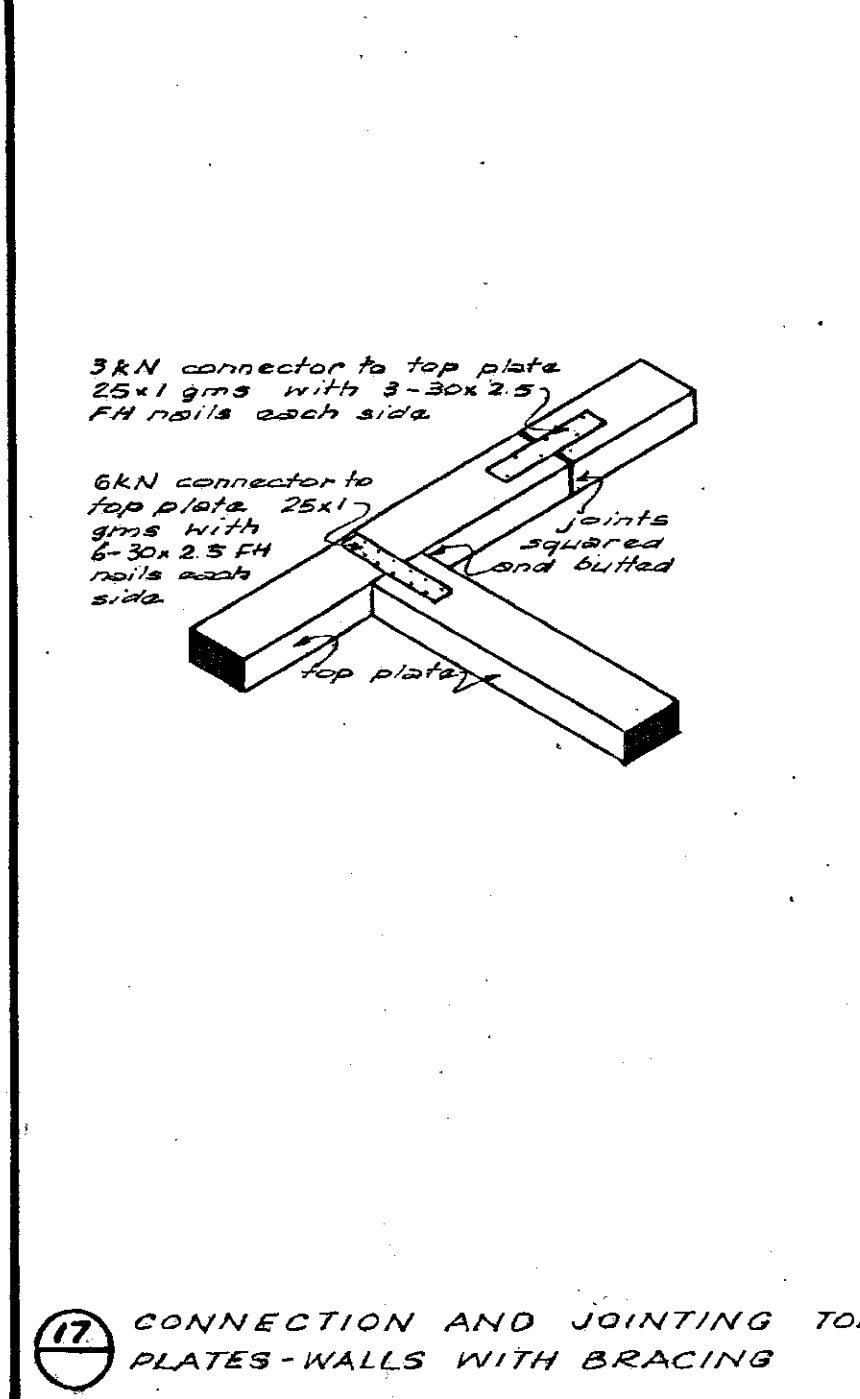
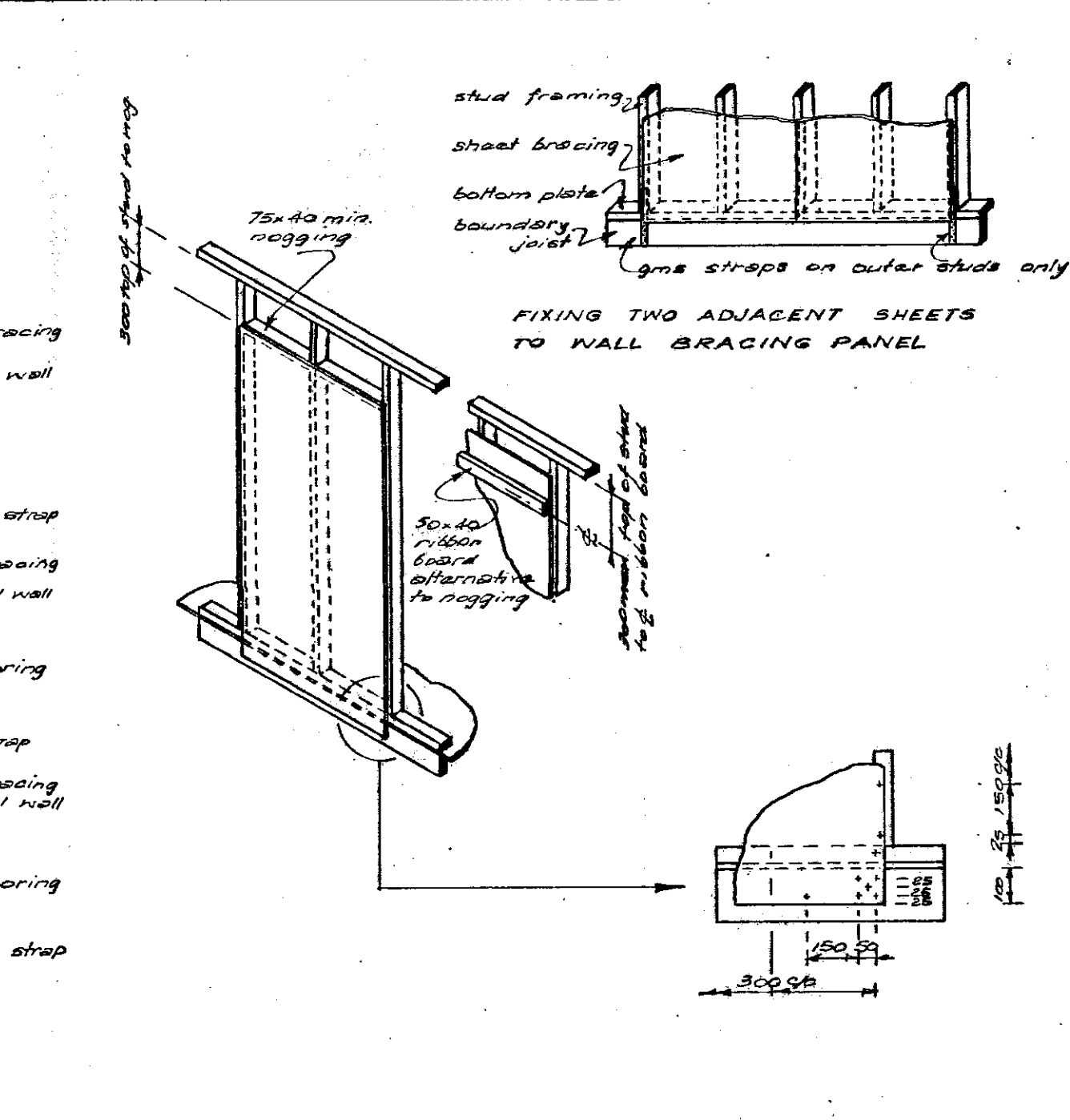
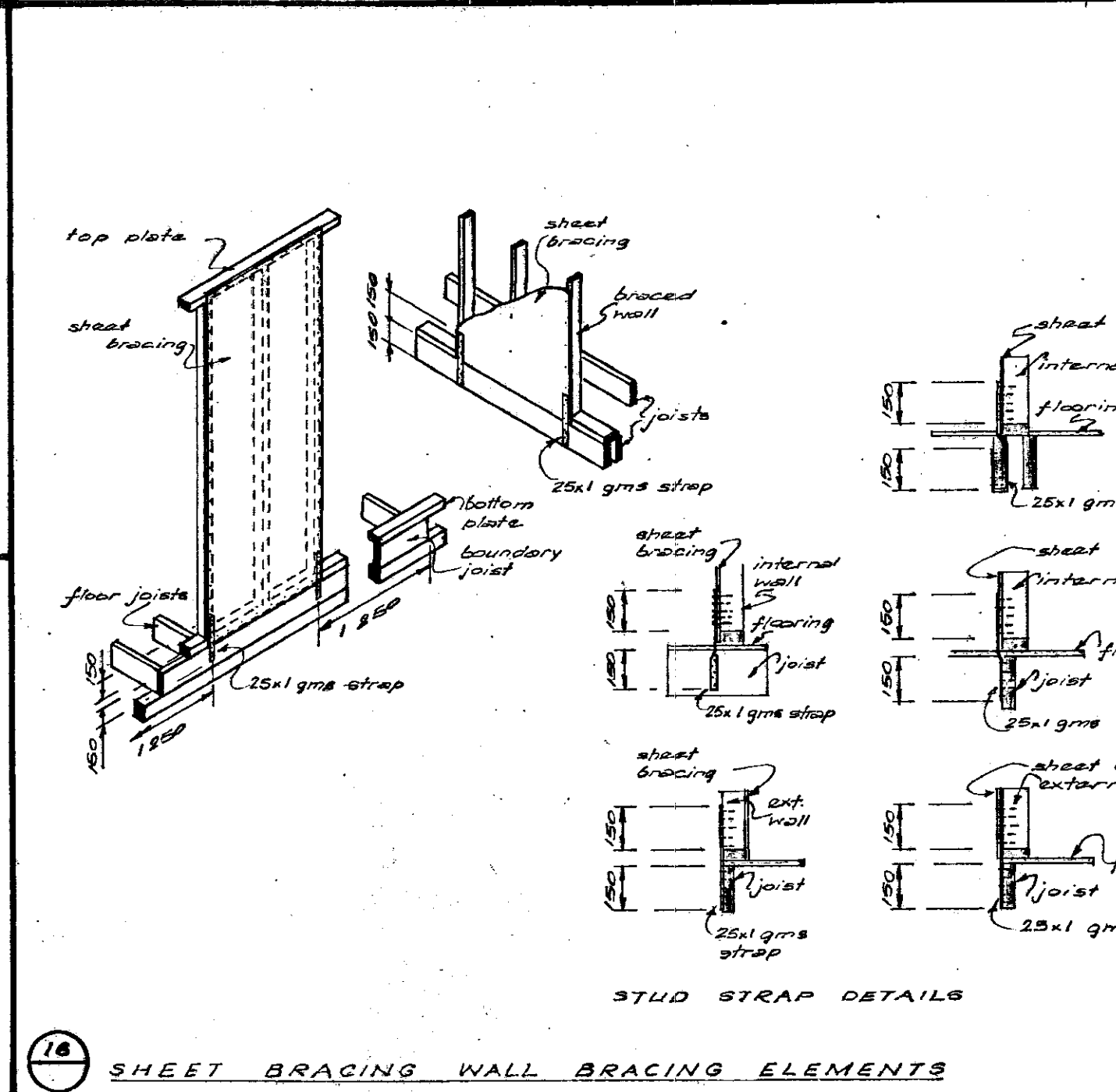
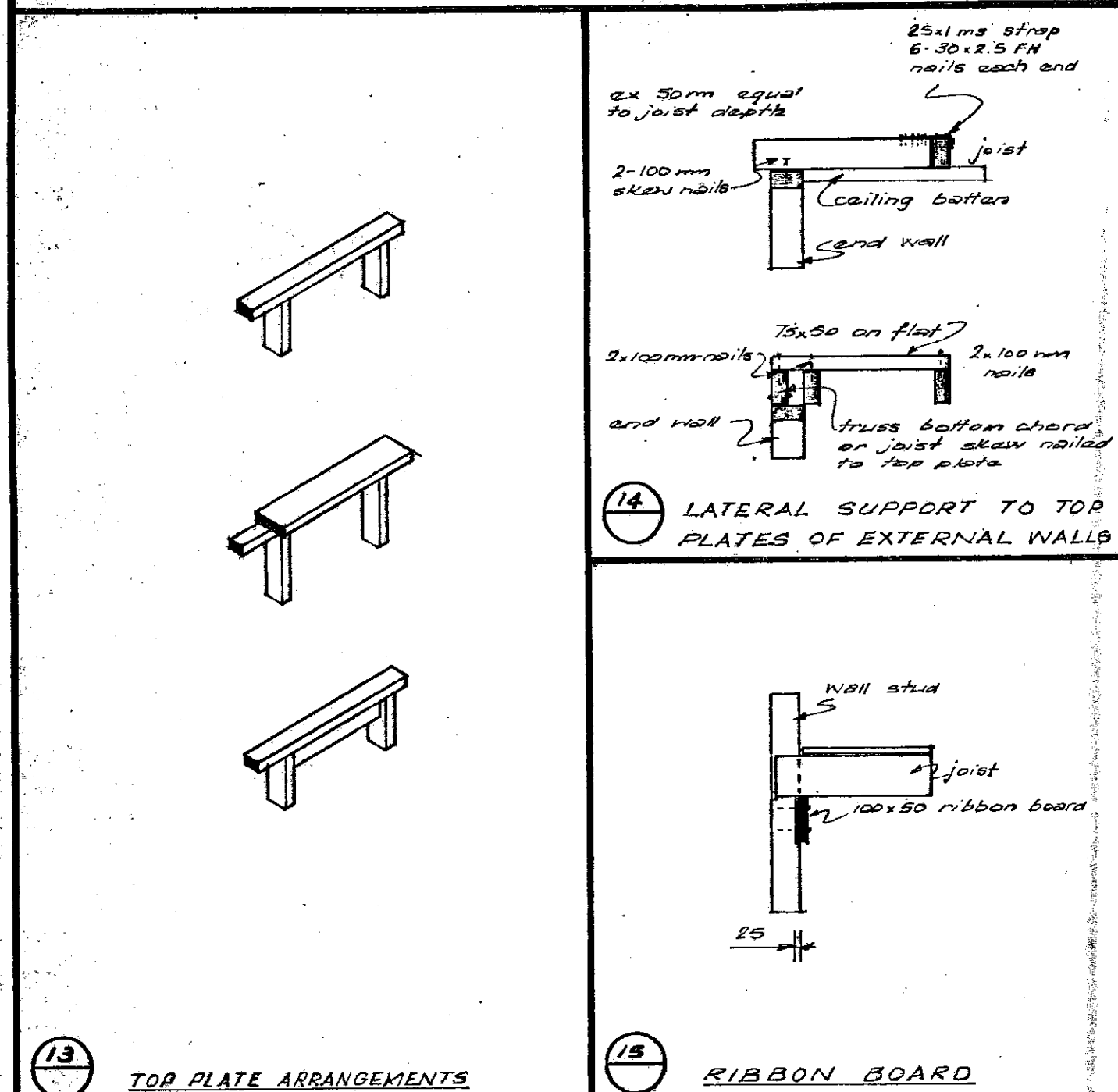
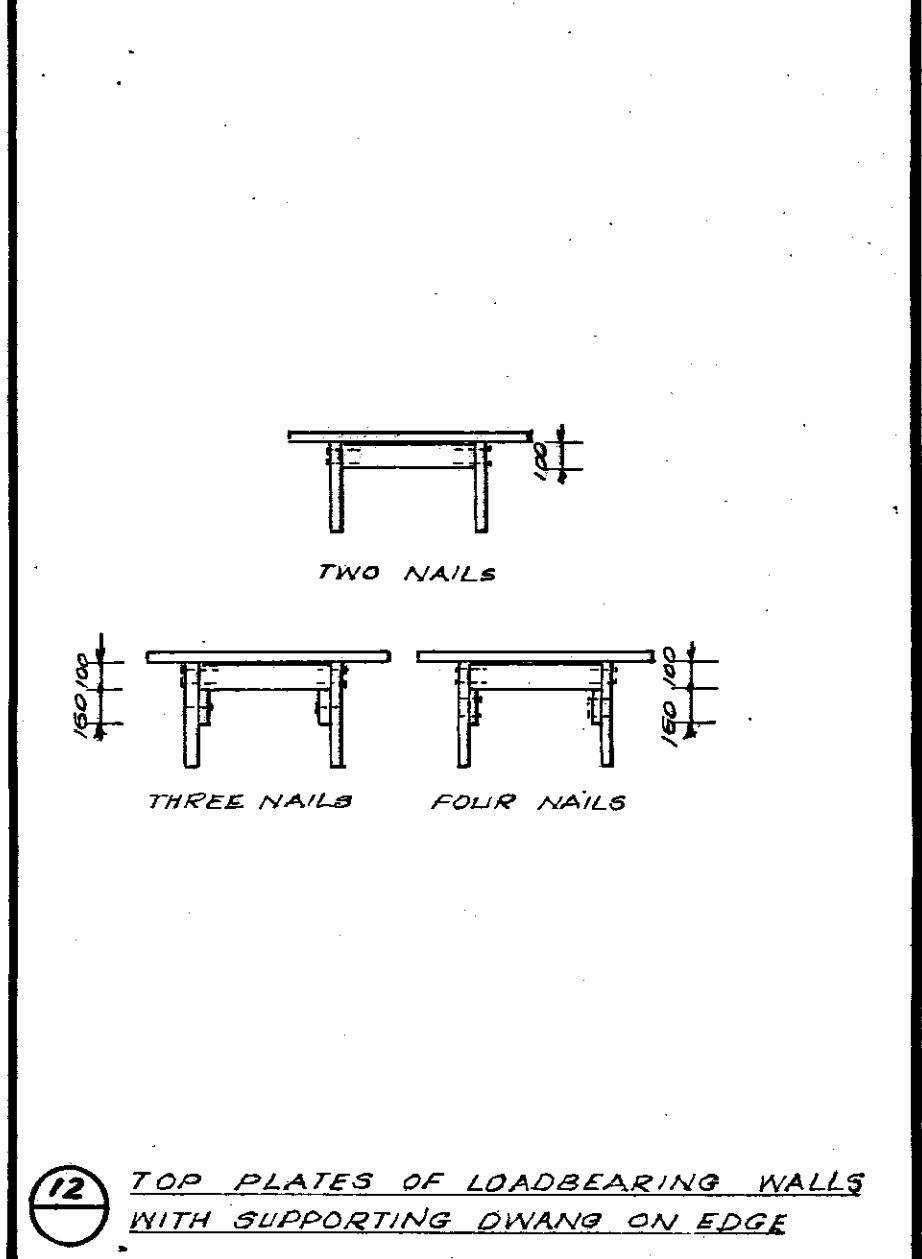
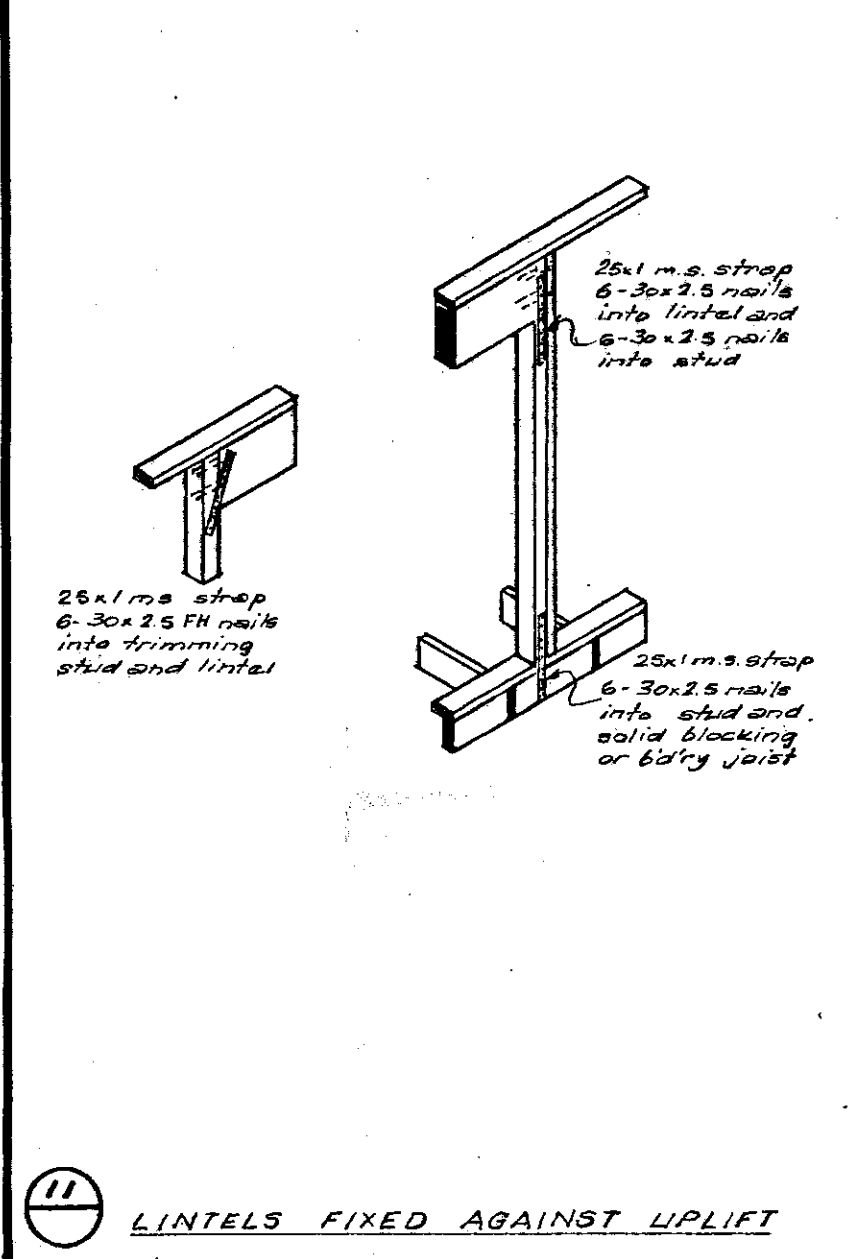
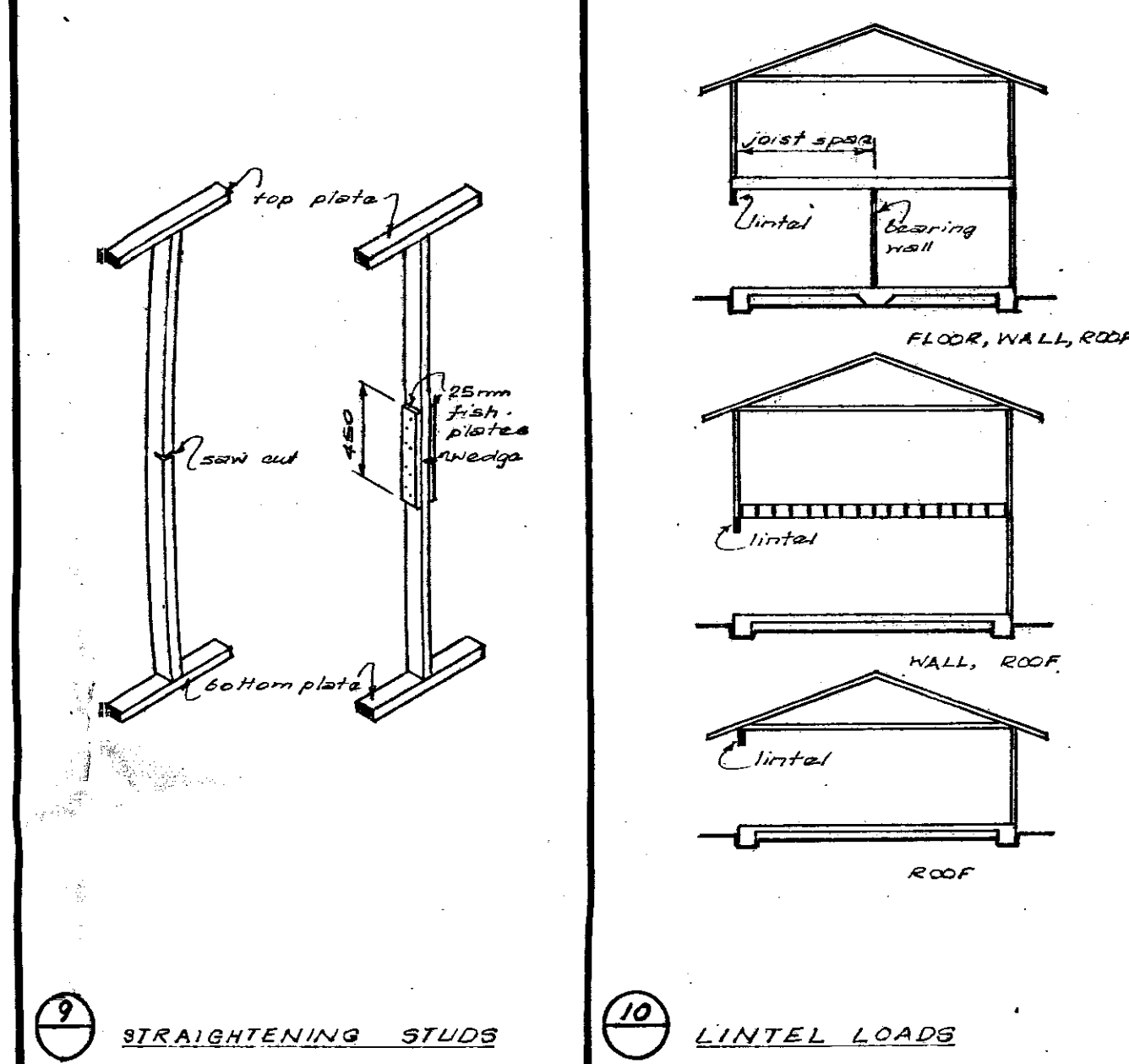
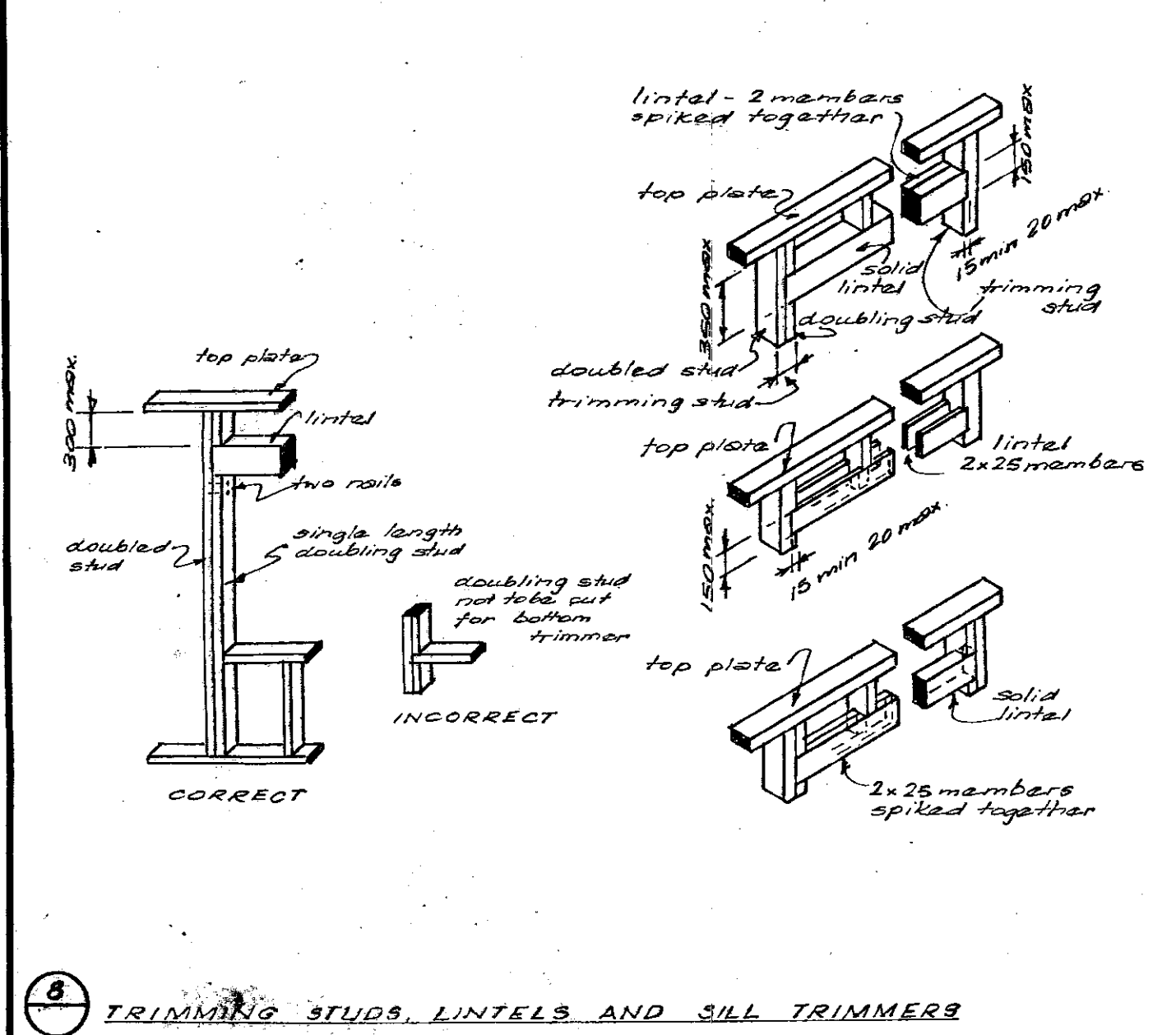
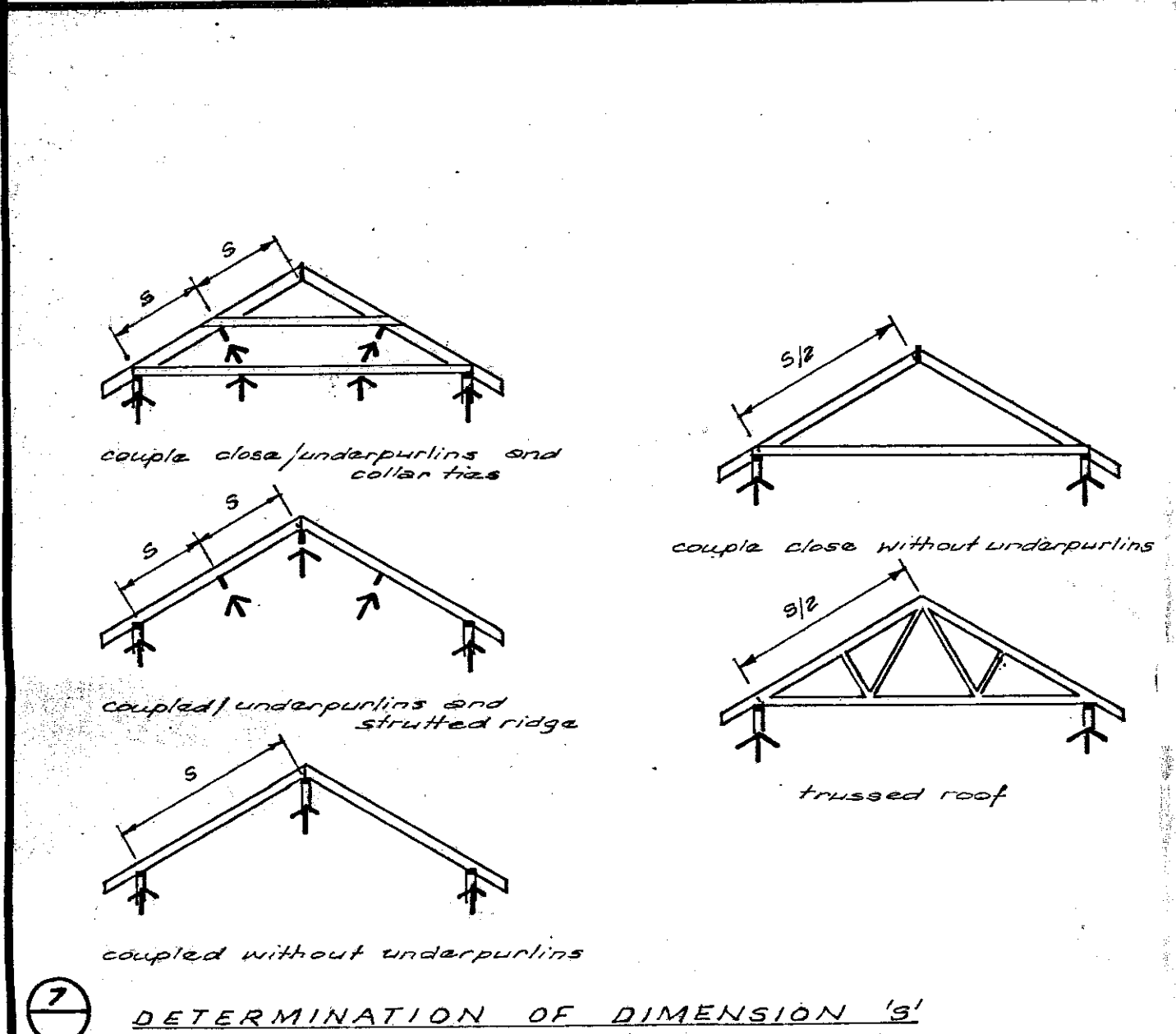
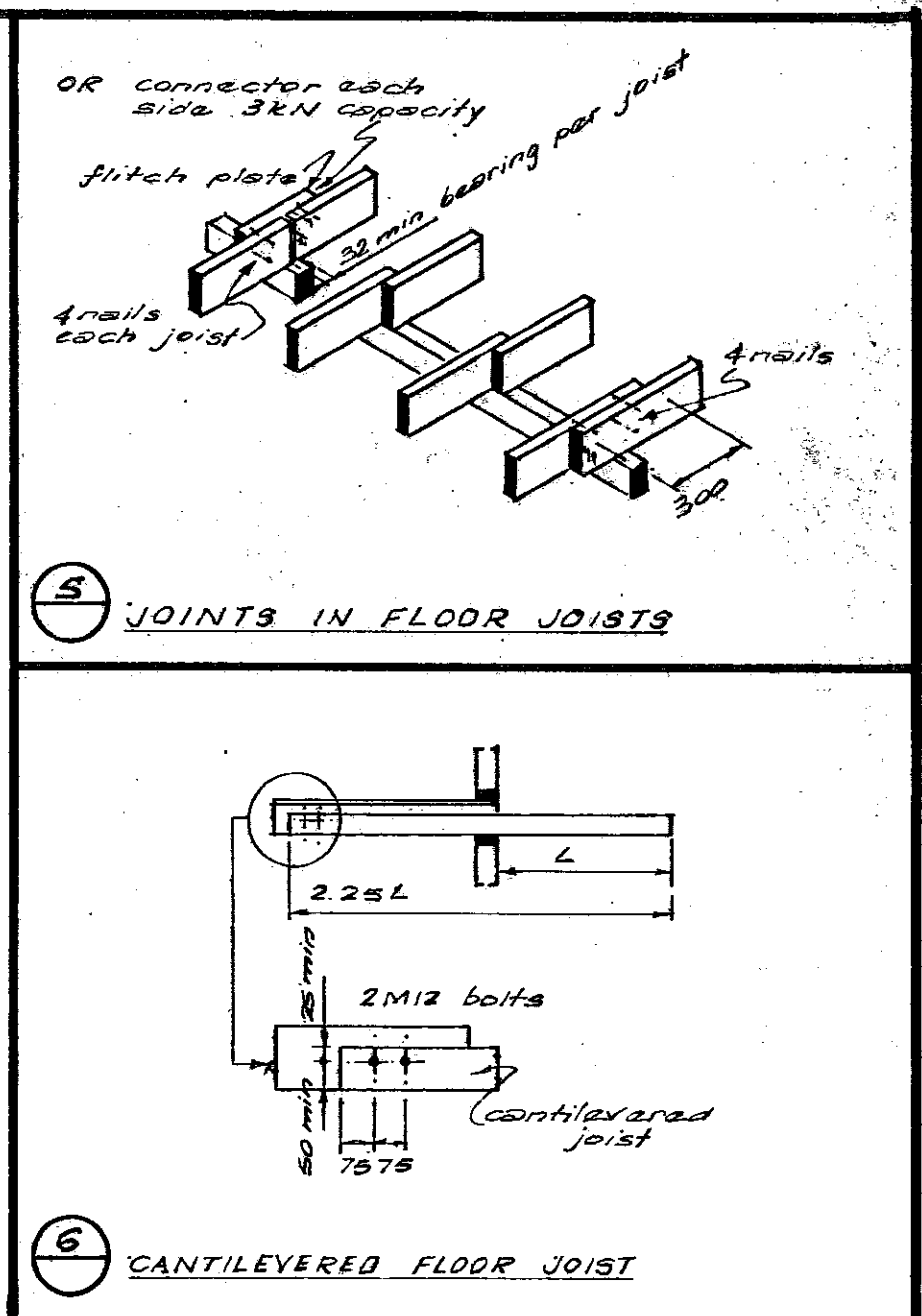
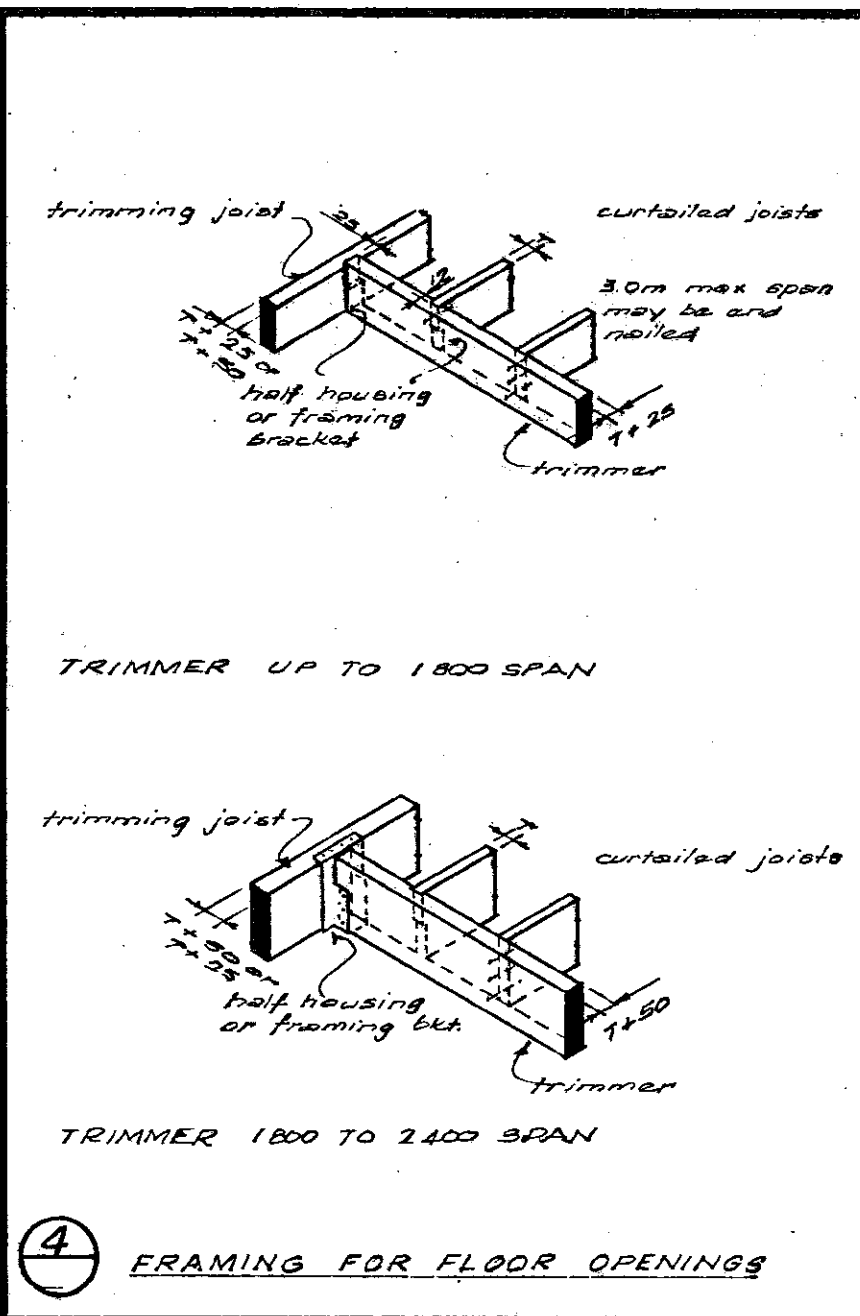
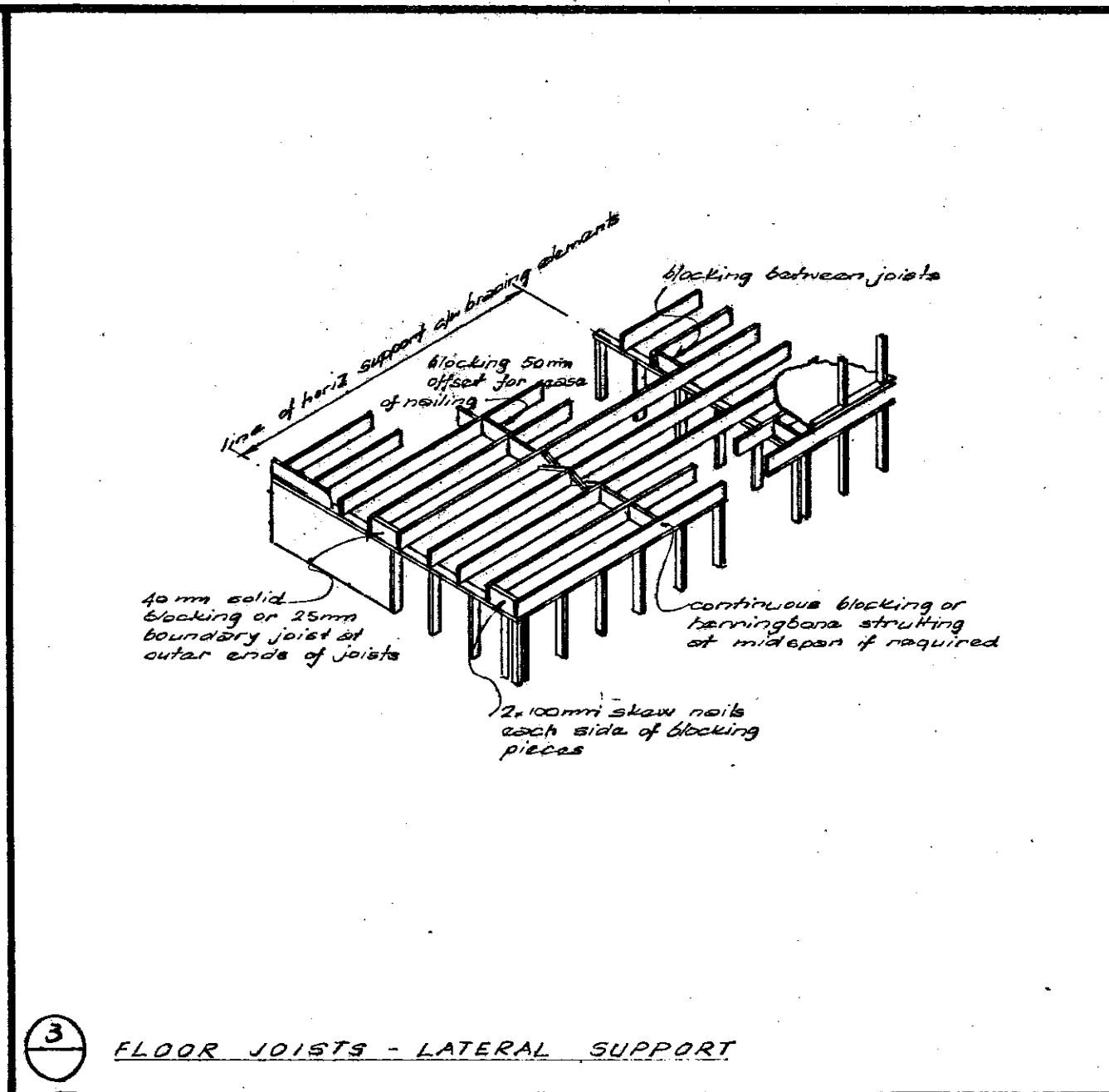
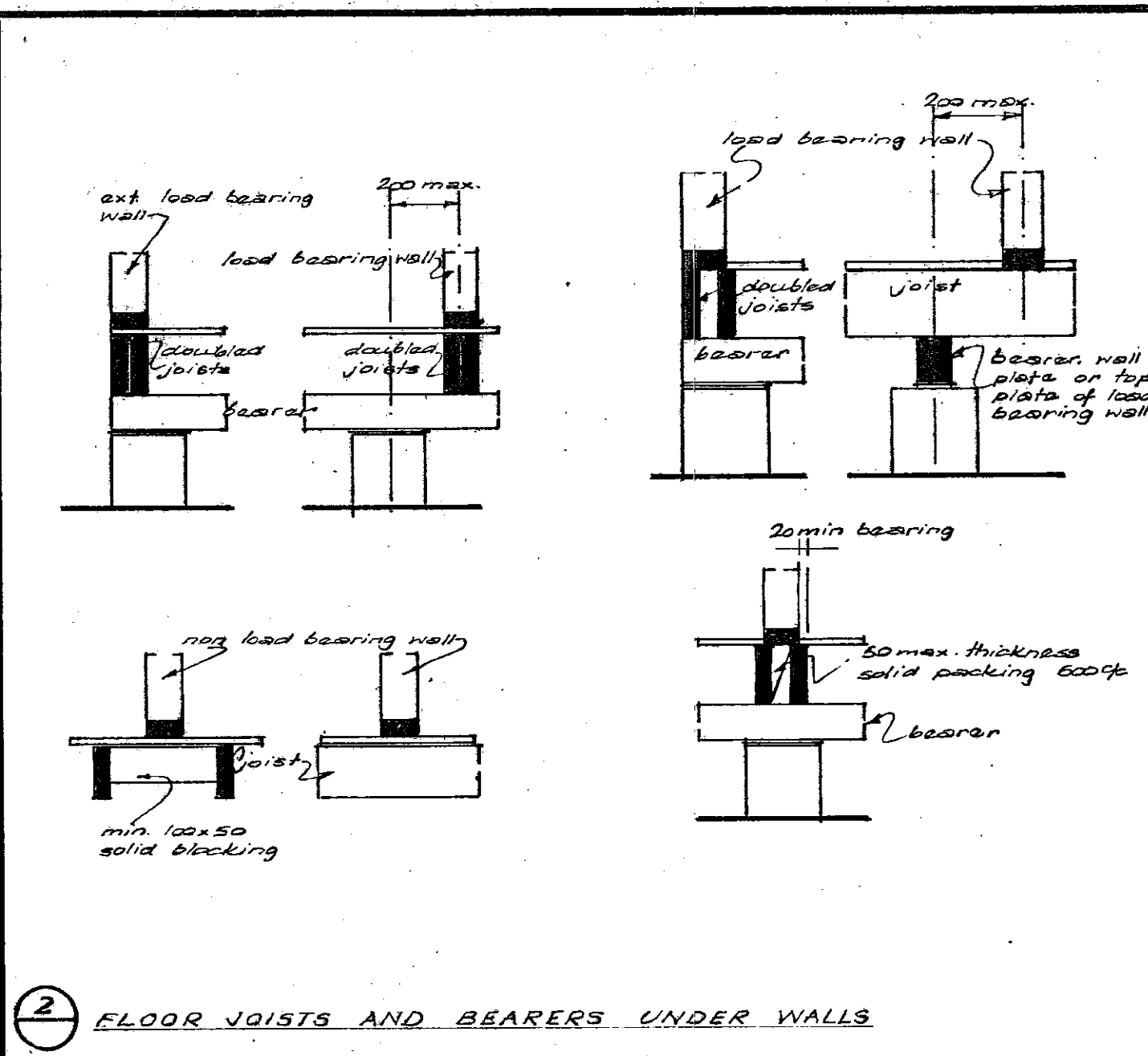
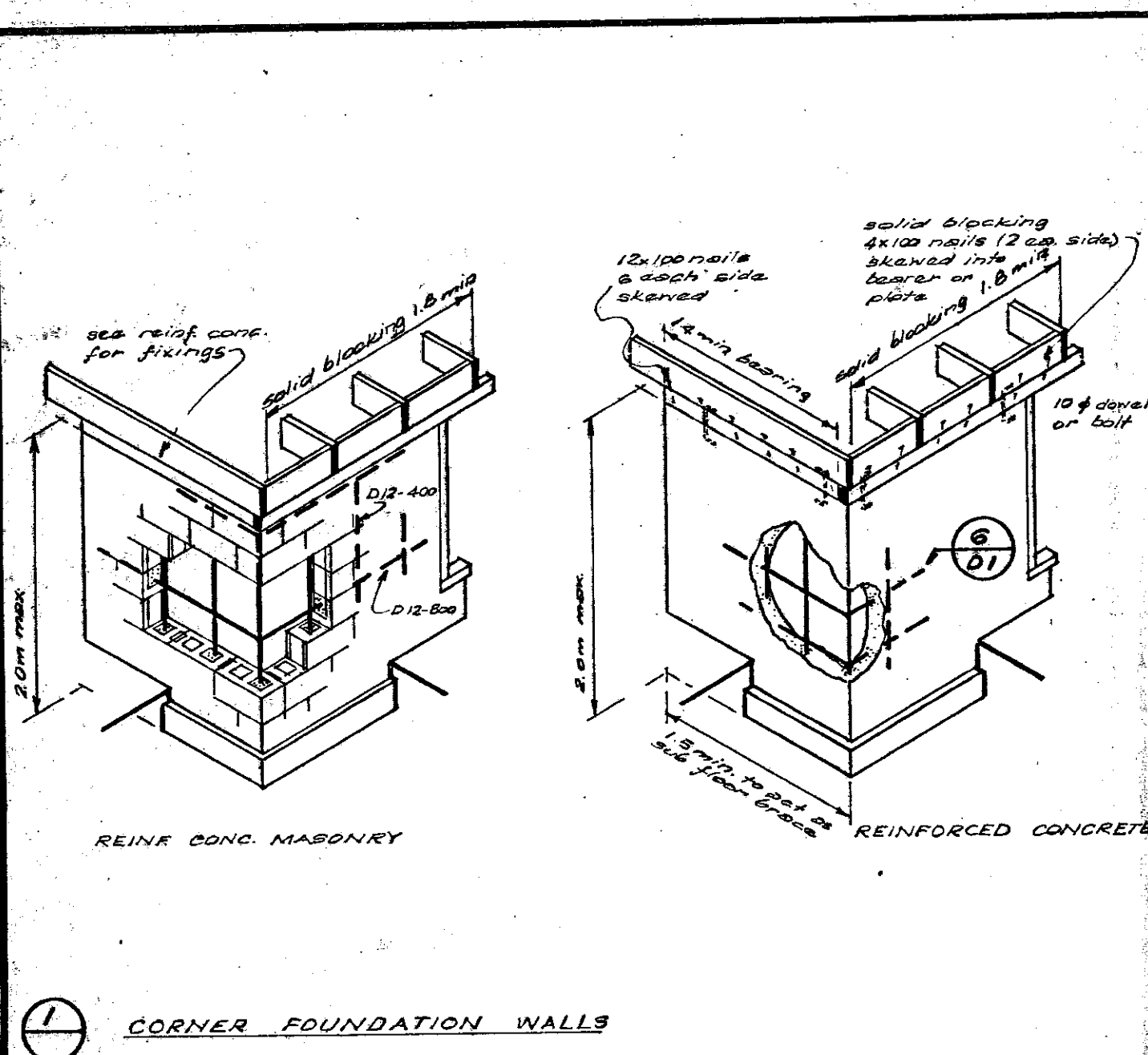


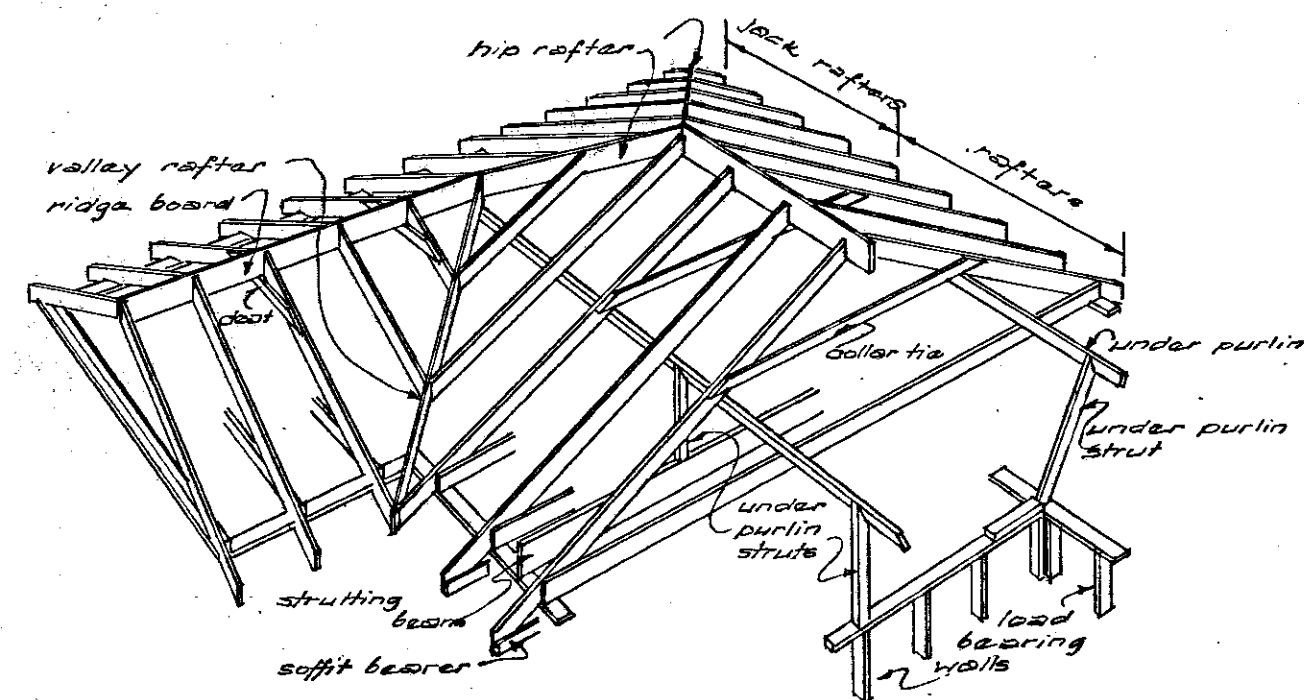
18 STEPS AND OPENINGS IN FOUNDATION WALLS

19 FOUNDATION AT SLOPING GROUND SURFACE

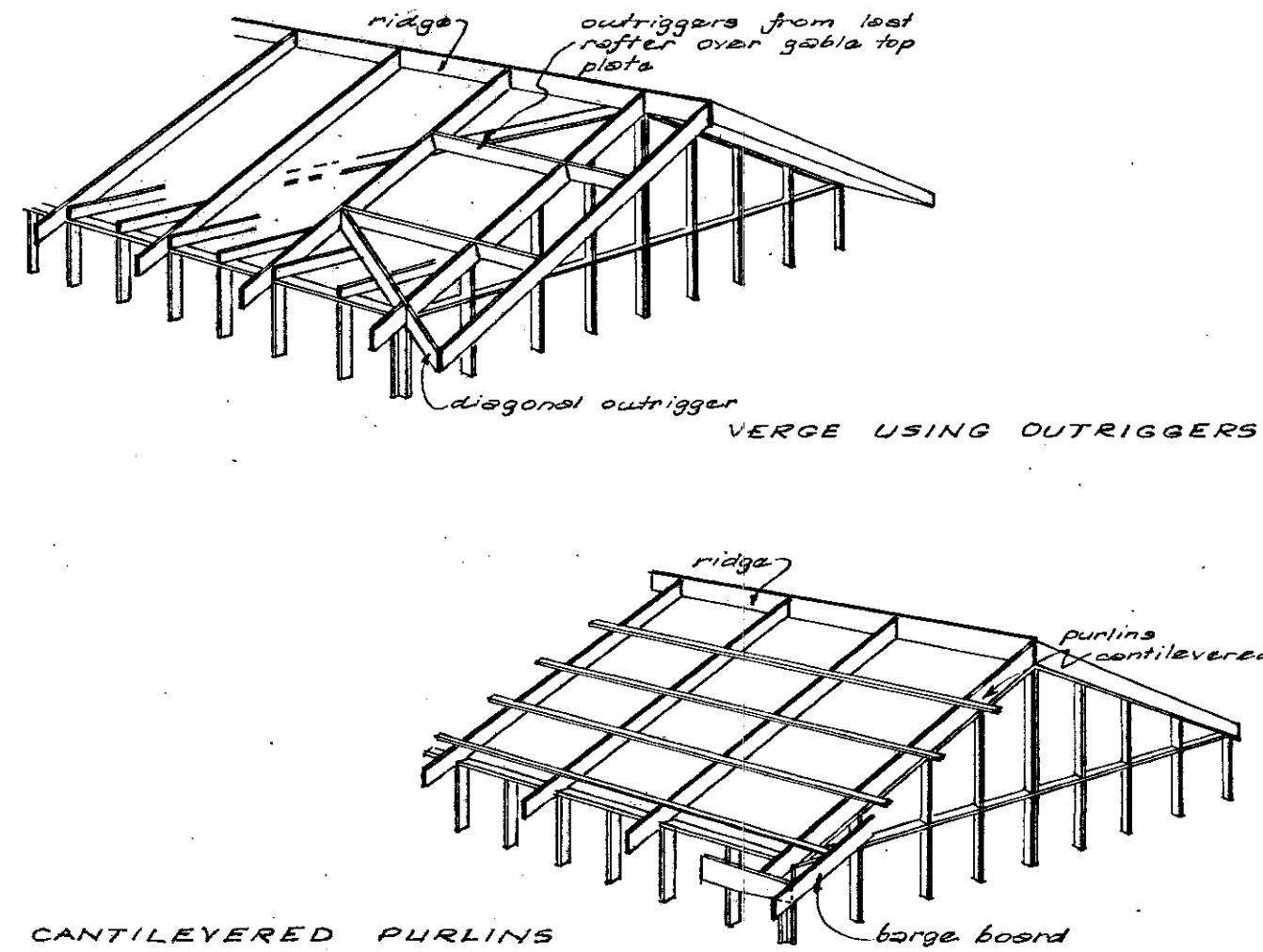
20 FOUNDATION AND SUB-FLOOR FRAMING SYSTEMS

21 FIXING BEARERS TO FOUNDATION WALLS

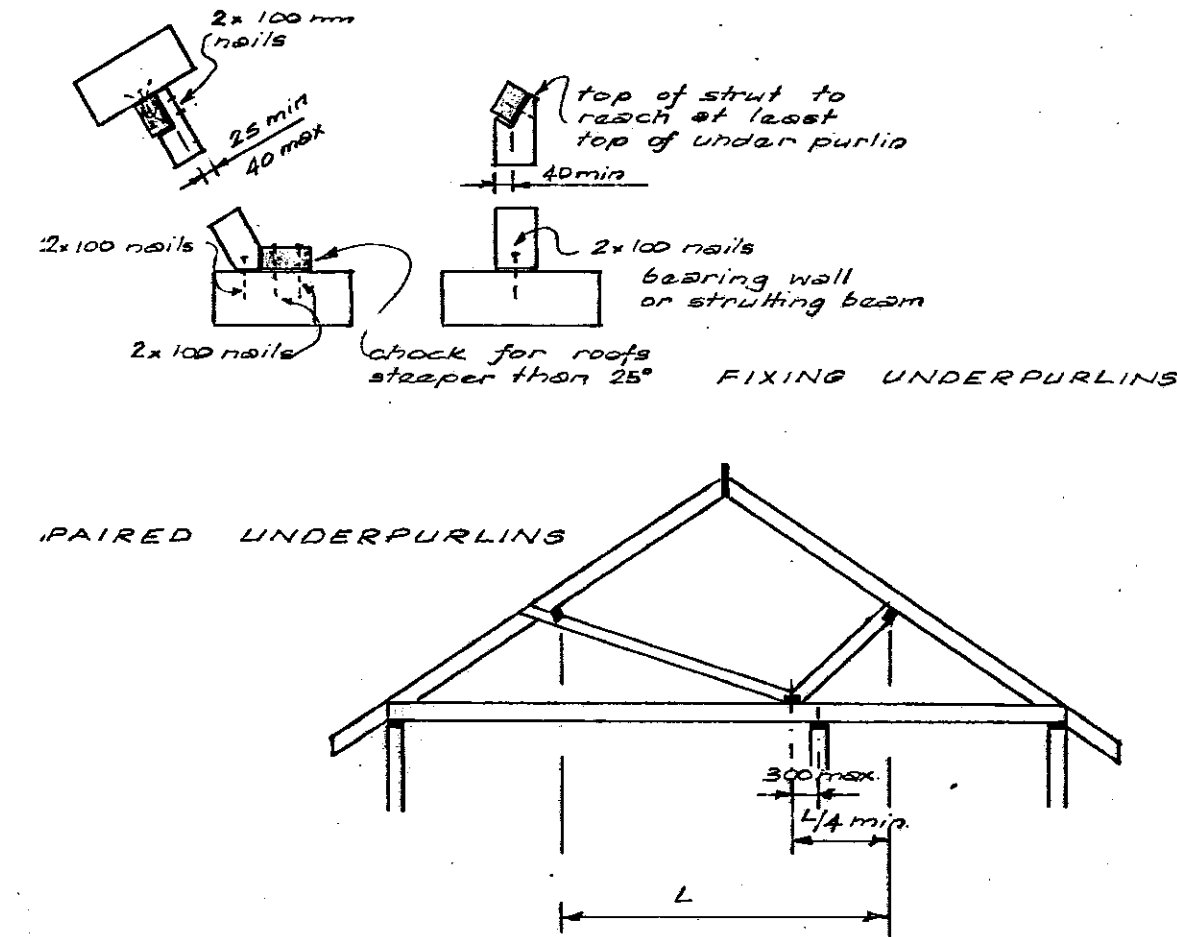




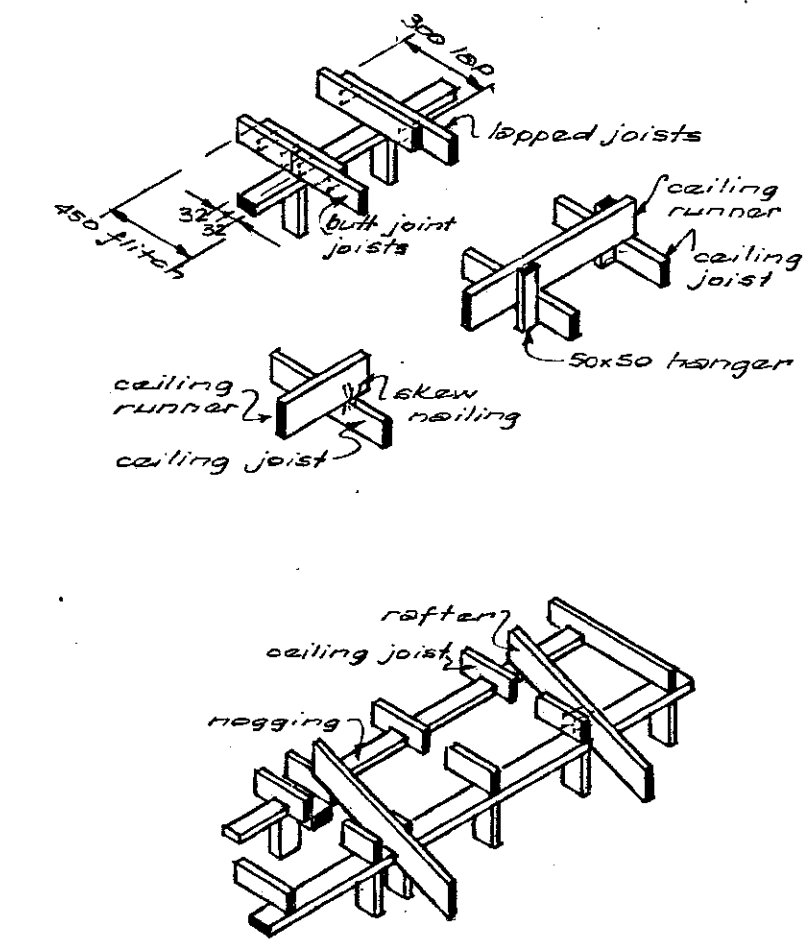
1 ROOF FRAMING MEMBERS



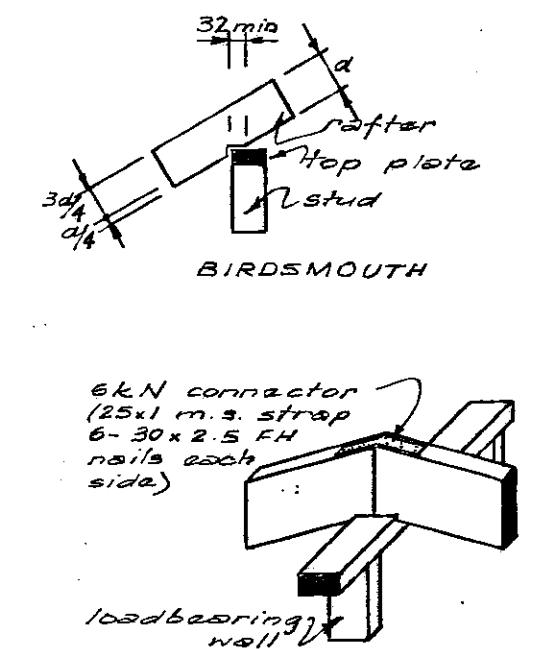
2 GABLE VERGE FRAMING



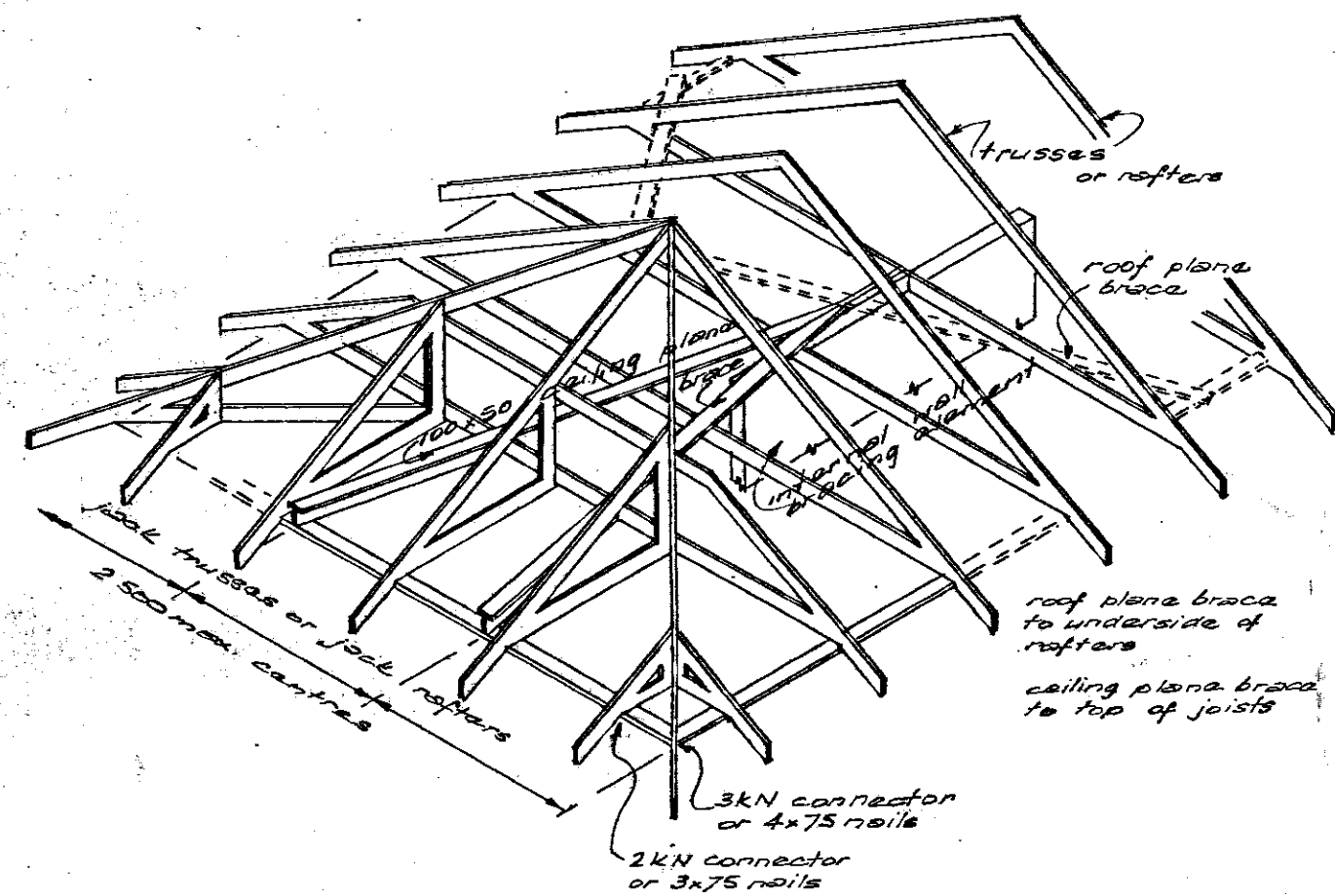
3 UNDERPURLINS



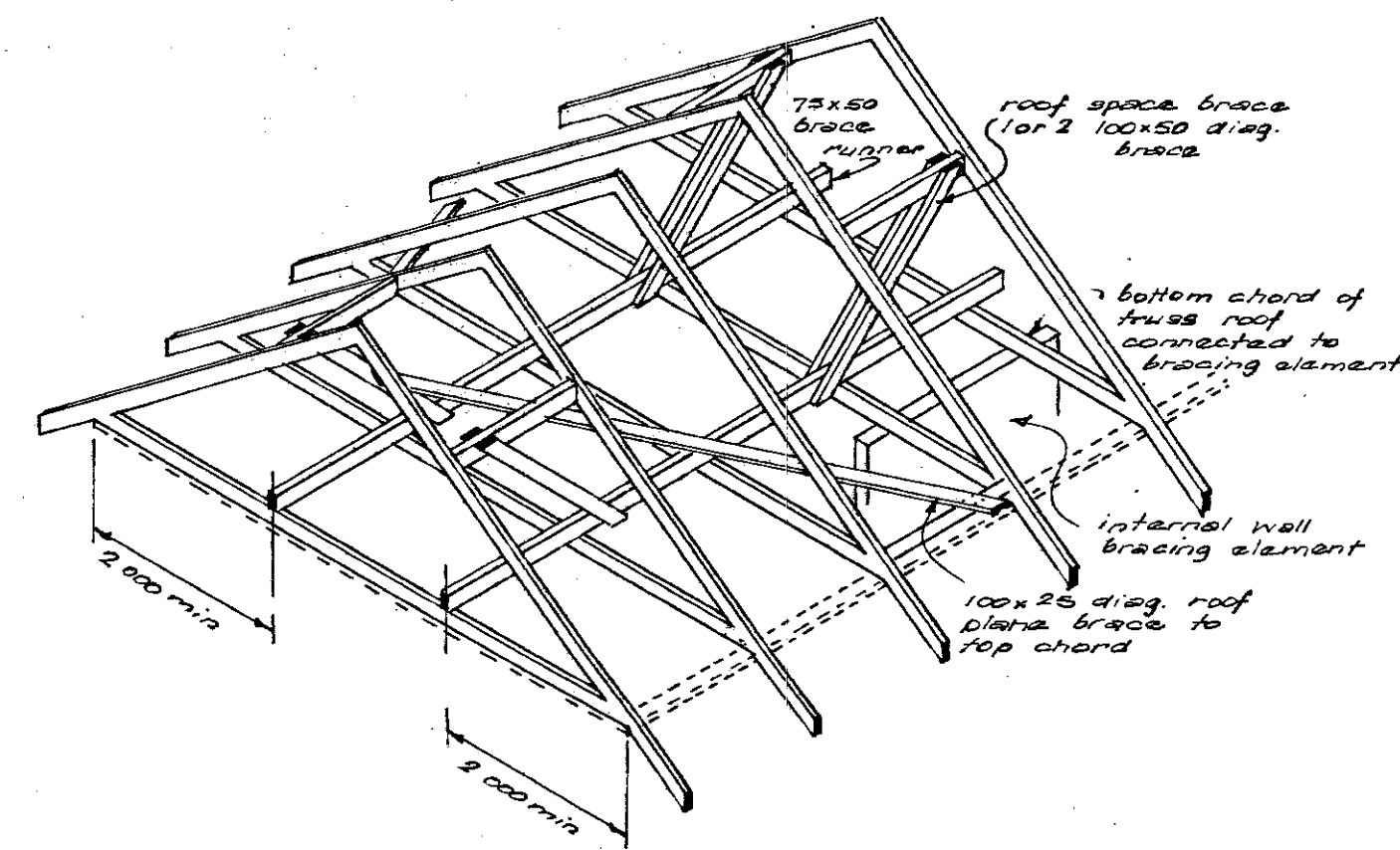
4 FIXING CEILING FRAMING



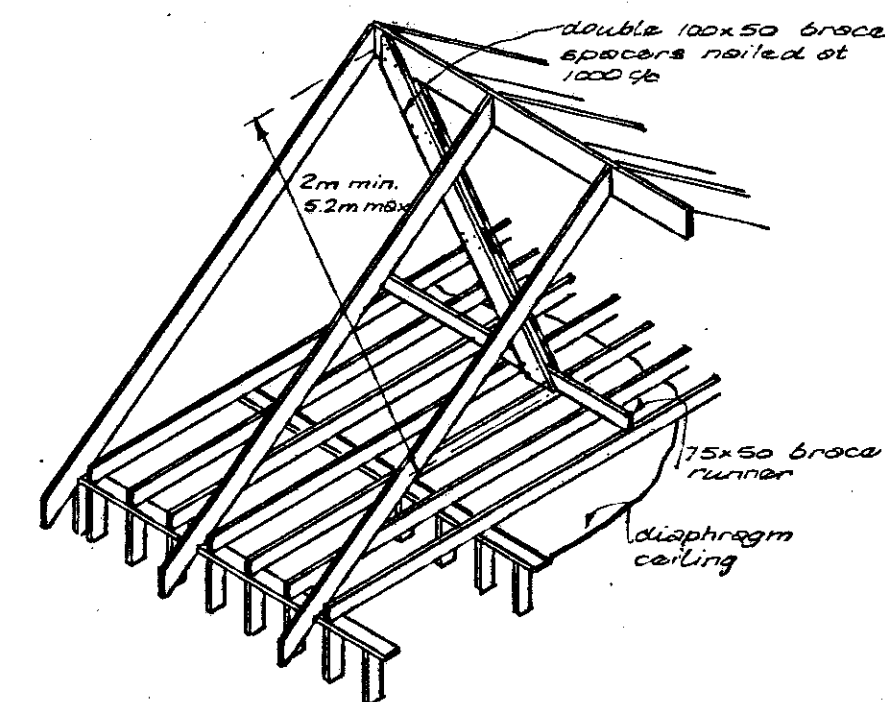
5 FIXING RAFTERS



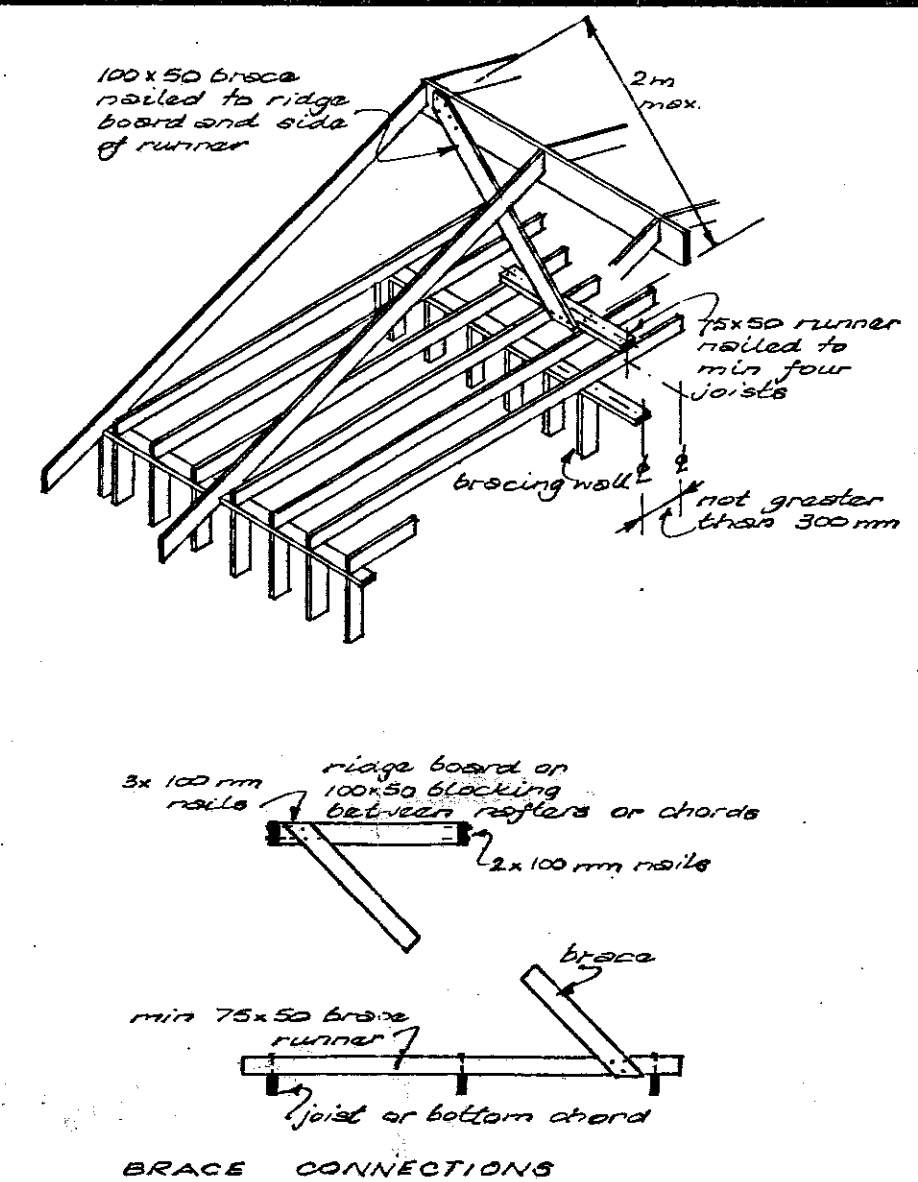
6 HEAVY HIP ROOF BRACING



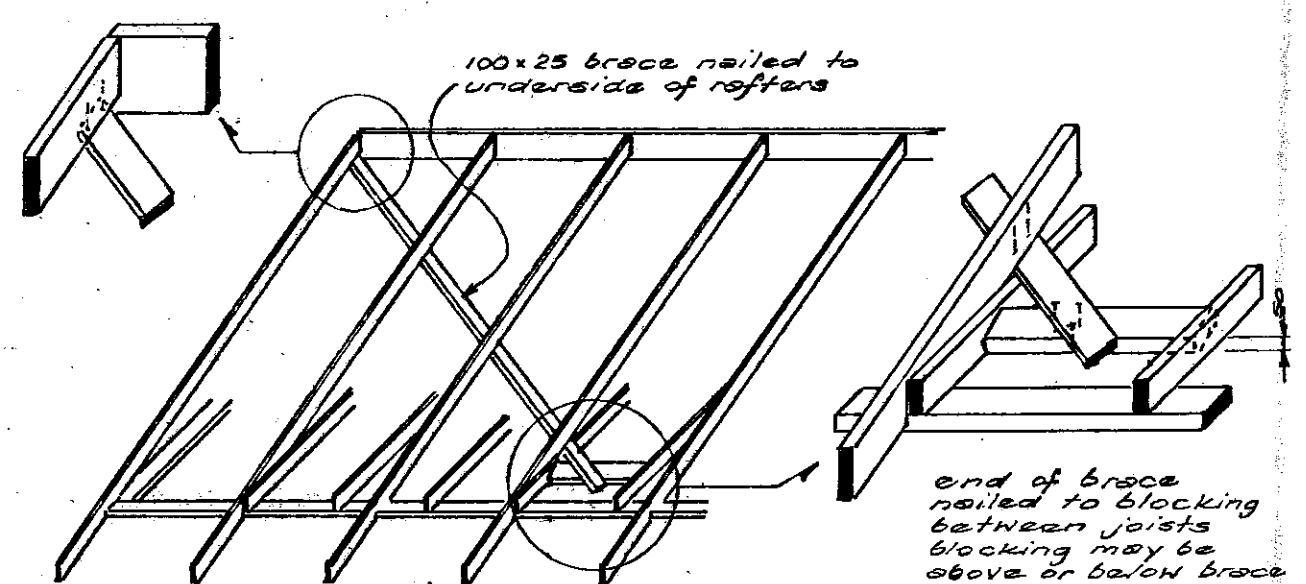
7 HEAVY GABLE ROOF BRACING



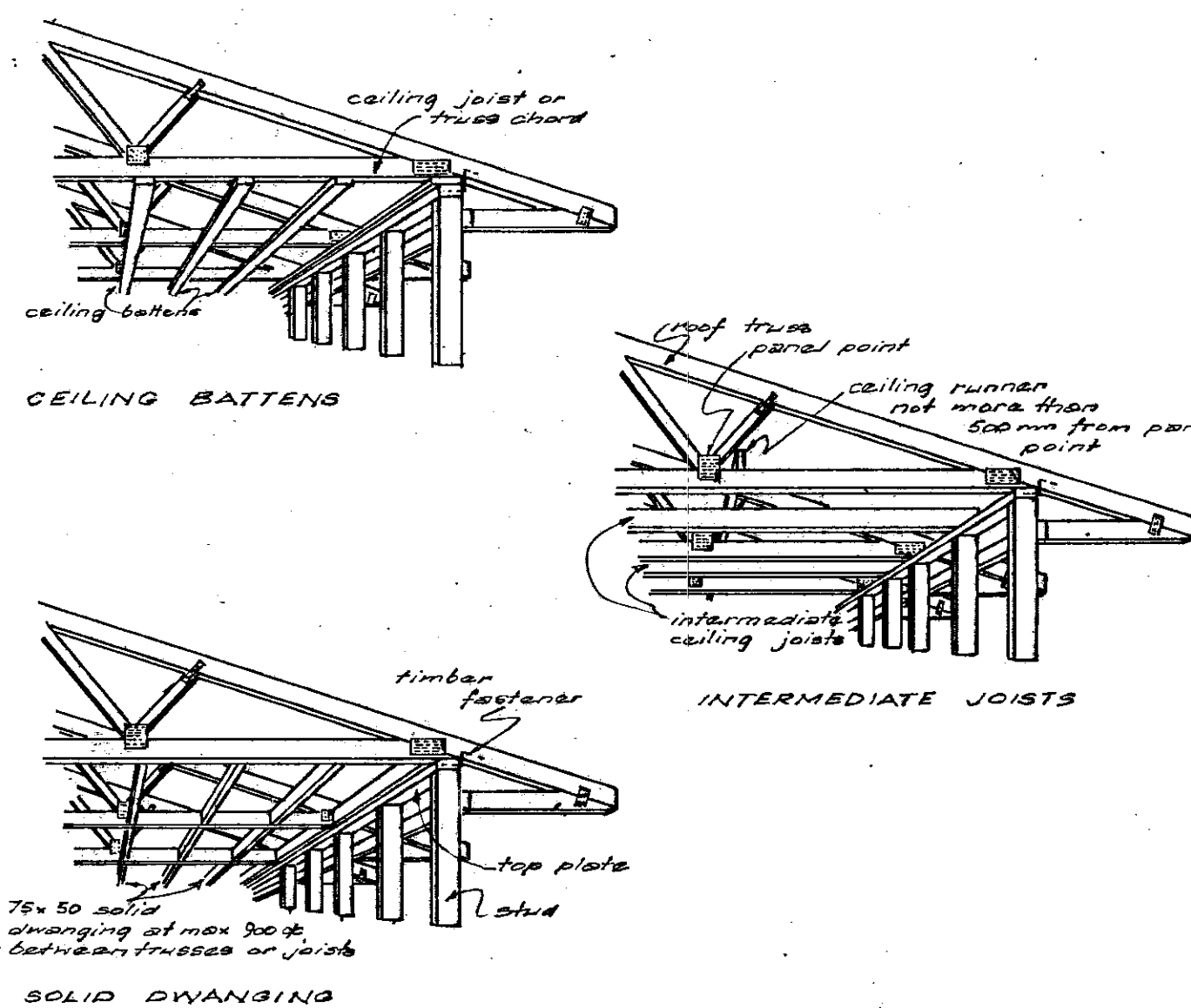
8 ROOF SPACE DIAGONAL BRACING



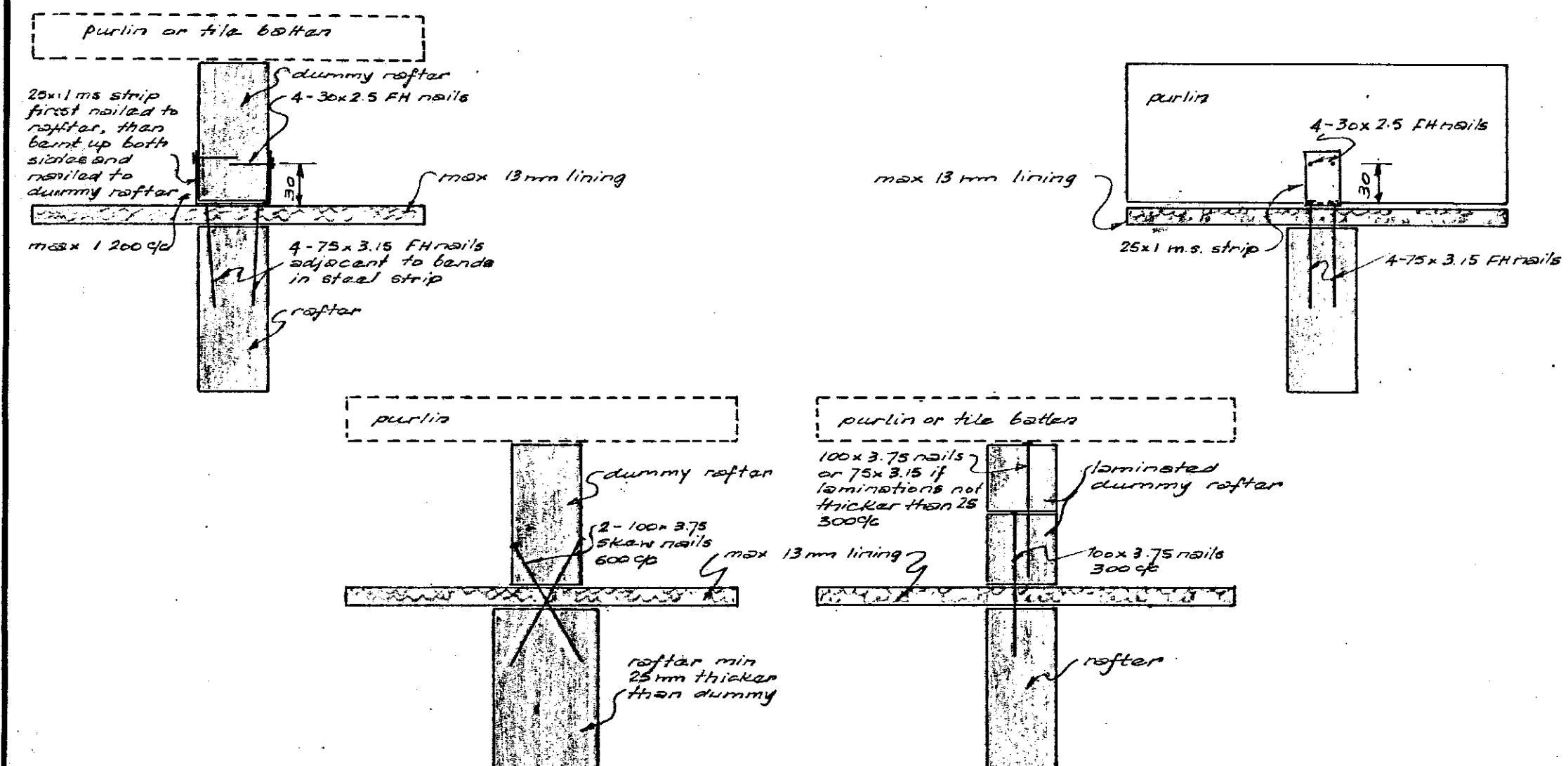
9 CEILING BRACES - HIP END TOP PLATE TO WALL BRACING ELEMENT



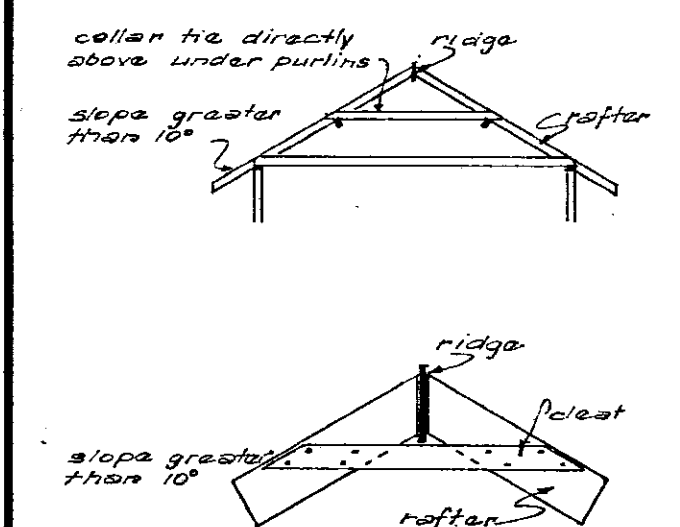
10 ROOF PLANE DIAGONAL BRACE



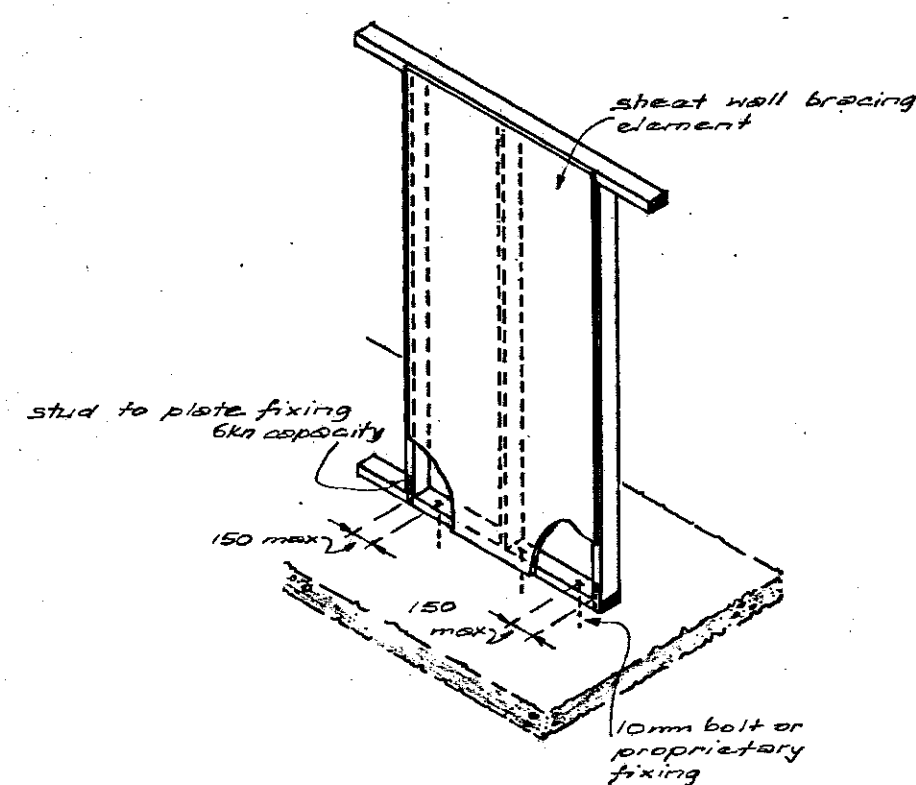
11 CEILING LINING SUPPORTS



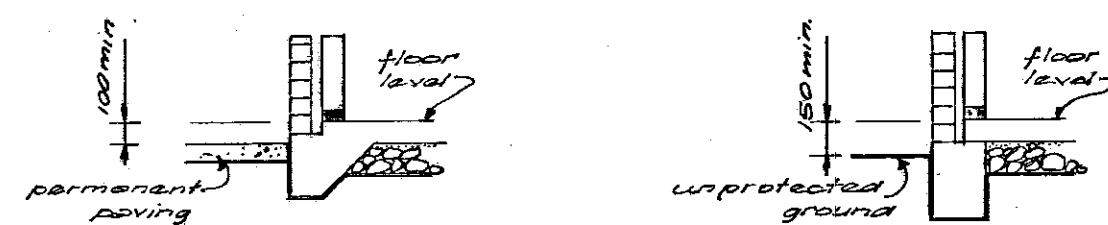
12 PURLIN FIXING FOR LINED ROOFS (EXPOSED RAFTERS)



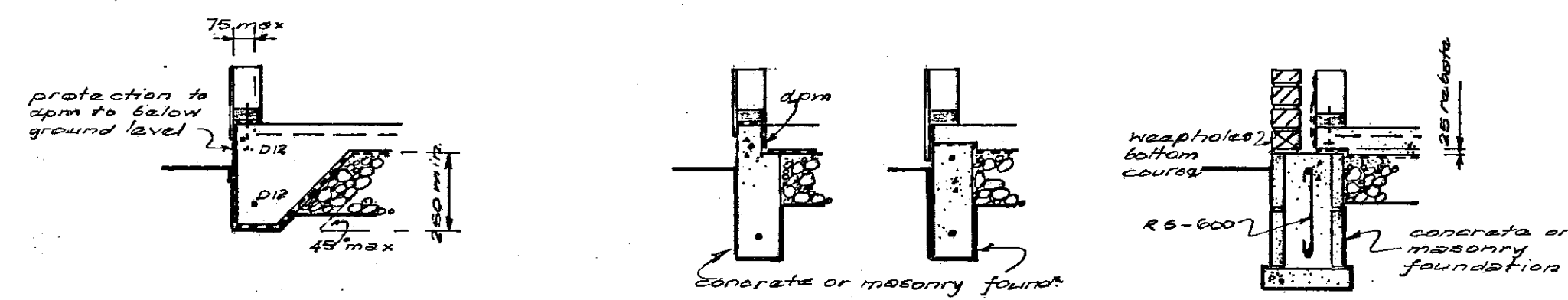
13 COLLAR TIES AND CLEATS



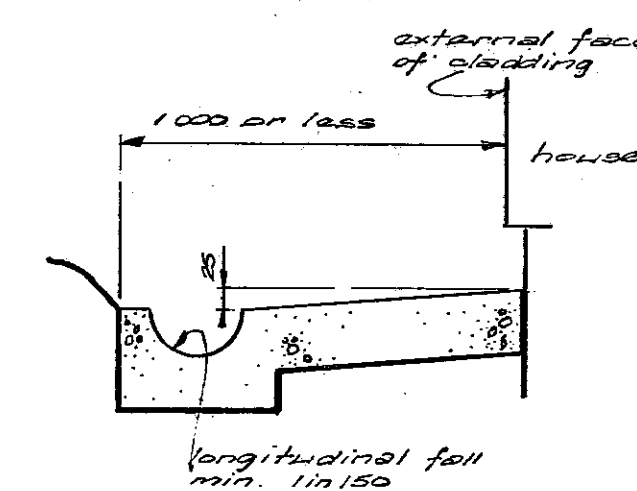
1 FIXING SHEET WALL BRACING TO CONCRETE SLAB



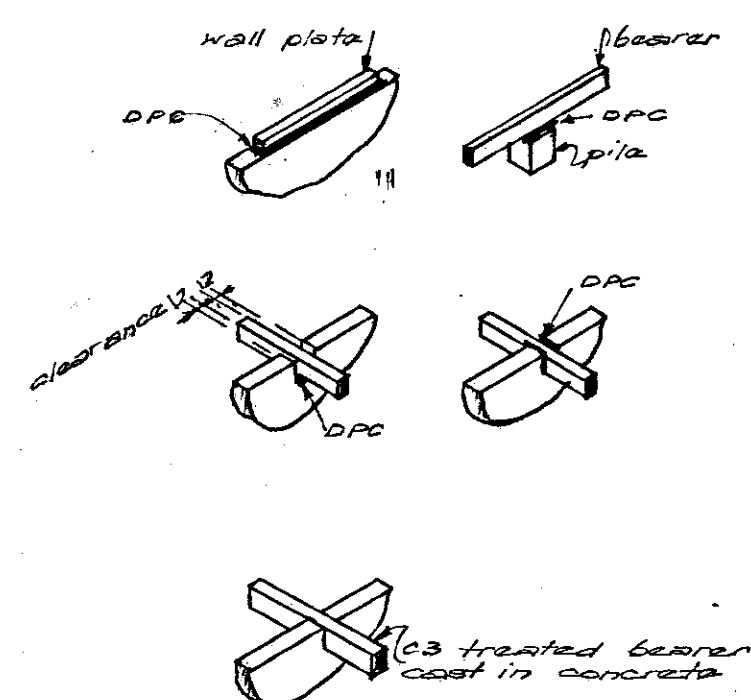
2 MINIMUM HEIGHTS OF FINISHED CONC SLAB-ON-GROUND FLOORS ABOVE ADJOINING FINISHED GROUND LEVEL



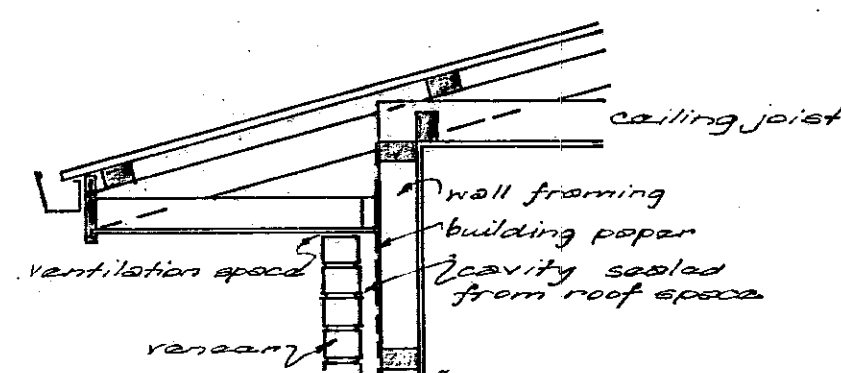
3 TYPICAL FOUNDATION WALLS - CONCRETE SLAB-ON-GROUND FLOORS



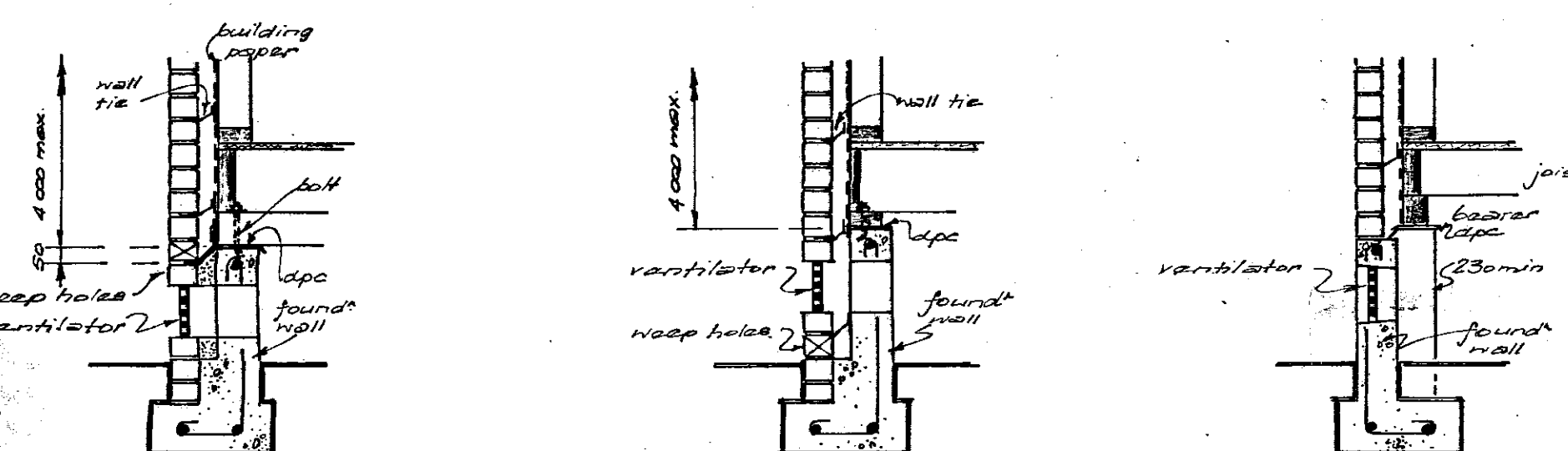
4 CONC SLAB FLOOR - PROTECTION OF ADJOINING FINISHED GROUND



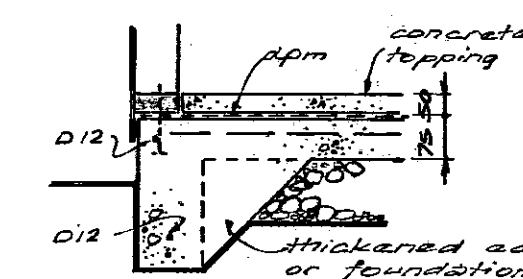
5 FRAMING TIMBERS - PROTECTION



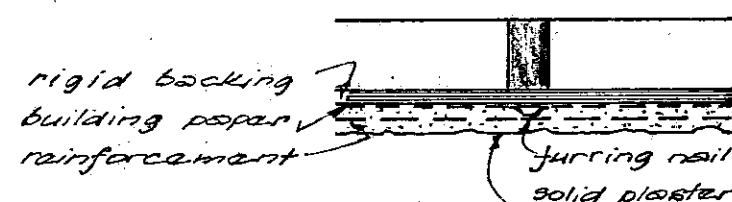
6 MASONRY VENEER - VENTING AND SEALING CAVITY



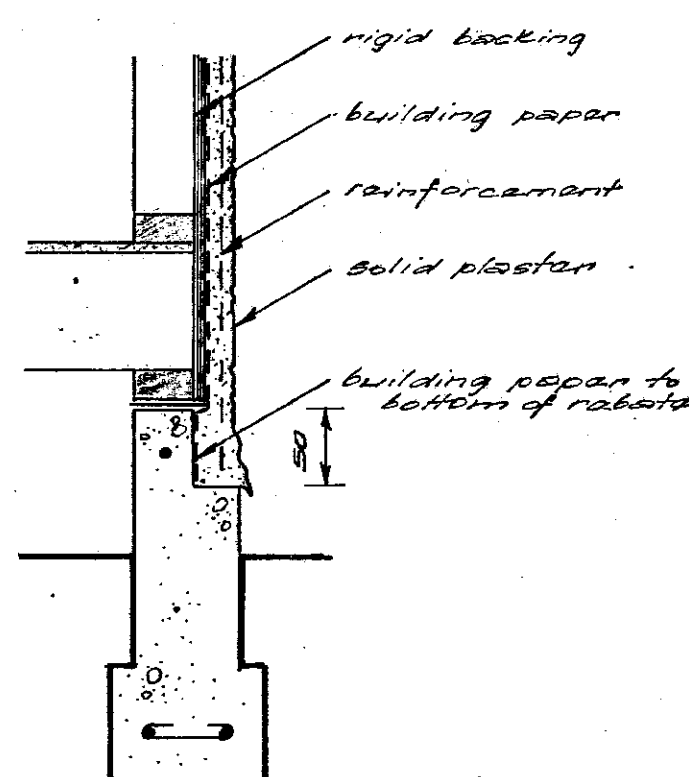
7 FOUNDATION WALLS - MASONRY VENEER



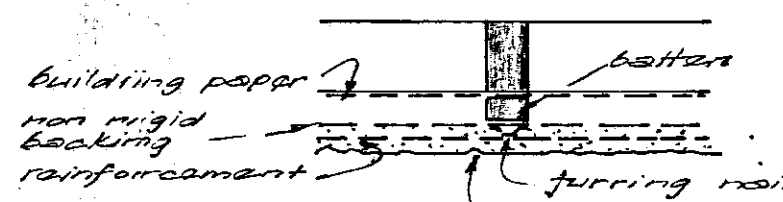
8 DPM LAID ON GROUND SLAB PROTECTED BY CONC TOPPING



9 EXTERNAL SOLID PLASTER - RIGID BACKING



10 EXTERNAL SOLID PLASTER - NON RIGID BACKING



11 GROUND SLAB UNDER INTERNAL LOAD BEARING WALL