

NEW PLYMOUTH DISTRICT COUNCIL

APPLICATION FOR BUILDING CONSENT

Section 33 Building Act 1991

20 JAN 1993

59

APPLICANT # MUST BE OWNER OF PROPERTY

Full Name: MR & MRS L.F. TROON Y.D.

Mail Address: 45 GUAMIS AV

NP

Phone: Bus A/H 7586605 Fax:

Under Section 33 of the Building Act 1991, the applicant must be the owner of the land on which building work is contemplated or a person who or which has agreed in writing, whether conditionally or unconditionally, to purchase the land or any leasehold estate or interest in the land, or to take a lease of the land, while the agreement remains in force.

Signed by or for and on behalf of the applicant:

Full Name: Les Troon

Position: OWNER 100 CHIEFMAN 81 Date: 19/1/93

PROJECT LOCATION

Street: GUAMIS AV No: 45

Lot No: 88 DP/SO No: 12256 Val No:

Sec

PROJECT

THIS APPLICATION IS FOR:

BUILDING CONSENT ONLY, IN ACCORDANCE WITH

PROJECT INFORMATION MEMORANDUM No:

BOTH BUILDING CONSENT AND A PROJECT INFORMATION MEMORANDUM

NEW BUILDING



ALTERATIONS



RELOCATION



COMMERCIAL



DOMESTIC



DEMOLITION

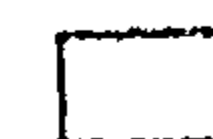


INTENDED LIFE

INDEFINITE BUT NOT LESS
THAN 50 YEARS



SPECIFIED AS YEARS



INTENDED USE

Dwelling

AREA OF NEW WORK 142 M²

BEING STAGE OF AN INTENDED ONE STAGES

ESTIMATED VALUE OF PROJECT \$ 127,000 G.S.T. Incl

APPLICANT TO SUPPLY PROJECT DETAILS

Cross each applicable box
duplicate):

[attach relevant information in

YES	NO
☒	☐

LOCATION, IN RELATION TO LEGAL BOUNDARIES, AND EXTERNAL DIMENSIONS OF
NEW, RELOCATED OR ALTERED BUILDINGS.

- e.g. A fully dimensional site Plan showing the position of the new
building work in relation to all boundaries and other buildings
on the same site.
An outline cross section showing the heights of the building
work in relation to the boundaries.

☒	☐
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NEW PROVISIONS TO BE MADE FOR VEHICULAR ACCESS, INCLUDING PARKING.

- e.g. Location of access, gradient, size and location of car parks.
Truck loading where applicable.
On-site provision for vehicle manoeuvring.

☐	☒
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PROVISIONS TO BE MADE IN BUILDING OVER OR ADJACENT TO ANY ROAD OR
PUBLIC PLACE.

- e.g. Verandahs, projecting signs or other use of air space - show
height above ground of the projection.
An encroachment licence is required to occupy street space.
Recreation Reserves, Paper Roads and Right-of-Ways can be
considered Public Places.

☐	☒
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NEW PROVISIONS TO BE MADE FOR DISPOSING OF STORMWATER AND WASTEWATER.

- e.g. Stormwater to soak holes or approved system.
All commercial buildings and yards to approved system.
Are new sewer/stormwater connections required.

☐	☒
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PRECAUTIONS TO BE TAKEN WHERE BUILDING WORK IS TO TAKE PLACE OVER
EXISTING DRAINS OR SEWERS OR IN CLOSE PROXIMITY TO WELLS OR
WATERMANS.

- e.g. The plans to show existing drains and relevant pipe systems in
relation to the new building work.
Any known easements.
Details of any bridging required over existing drains.

☐	☒
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ANY CULTURAL HERITAGE SIGNIFICANCE OF THE BUILDING OR BUILDING SITE,
INCLUDING WHETHER IT IS ON A MARAE.

- e.g. Any protected buildings, trees, or other notable items to be
shown.

A PIM WILL NOT INCLUDE INFORMATION SHOWN ON THE DISTRICT PLAN.

A BUILDING CONSENT CANNOT BE ACTED UPON UNLESS IT COMPLIES WITH THE
DISTRICT PLAN.

IF IN DOUBT PLEASE CONSULT THE DISTRICT PLANNING OFFICE.

BUILDING DETAILS

This application is accompanied by [Cross each applicable box, attach relevant documents in duplicate]:-

- ☐ THE DRAWINGS, SPECIFICATIONS, AND OTHER DOCUMENTS ACCORDING TO WHICH THE BUILDING IS PROPOSED TO BE CONSTRUCTED TO COMPLY WITH THE PROVISIONS OF THE BUILDING CODE, WITH SUPPORTING DOCUMENTS, IF ANY, INCLUDING -
- ☐ Building Certificates
 - ☐ Producer Statements
 - ☐ References to accreditation certificates issued by the Building Industry Authority
 - ☐ References to determinations issued by the Building Industry Authority
- ☒ PROPOSED PROCEDURES, IF ANY, FOR INSPECTION DURING CONSTRUCTION.

KEY PERSONNEL

[Complete as far as possible in all cases. Give names, addresses, and telephone numbers. Give relevant registration numbers if known]:

Designer(s):

..... P. Rougas
..... 4. Del Mar Place 758 7414

Building Certifier(s):

.....
.....

Builder(s):

..... Owner
.....

Registered Drainlayer:

..... Trevor Reid Ltd
.....

Registered Plumber:

..... Waitara
.....

Registered Gasfitter:

.....
.....

Registered Electrician:

.....
.....

Other:

.....
.....
.....
.....

COMPLIANCE SCHEDULE DETAILS

SYSTEMS NECESSITATING A COMPLIANCE SCHEDULE

Complete for all new buildings and alterations, except single residential dwellings

The building will contain the following [Cross each applicable box and attach proposed inspection, maintenance, and reporting procedures]:

- ☐ Automatic sprinkler systems or other systems of automatic fire protection.
- ☐ Automatic doors which form part of any fire wall and which are designed to close shut and remain shut on an alarm of fire.
- ☐ Emergency warning systems for fire or other dangers.
- ☐ Emergency lighting systems.
- ☐ Escape route pressurisation systems.
- ☐ Riser mains for fire service use.
- ☐ Any automatic back-flow preventer connected to a potable water supply.
- ☐ Lifts, escalators, or travelators or other similar systems.
- ☐ Mechanical ventilation or air conditioning system servicing all or a major part of the building.
- ☐ Any other mechanical, electrical, hydraulic, or electronic system whose proper operation is necessary for compliance with the building code.
- ☐ Building maintenance units for providing access to the exterior and interior walls of buildings.
- ☐ Such signs as are required by the building code in respect of the above-mentioned systems.
- ☒ None of the above.

OTHER SYSTEMS AND FEATURES TO BE INCLUDED IN THE COMPLIANCE SCHEDULE

Complete only if the building contains one or more of the systems listed above

[Cross each applicable box and attach proposed inspection, maintenance, and reporting procedures]:

- ☐ Means of escape from fire.
- ☐ Safety barriers.
- ☐ Means of access and facilities for use by persons with disabilities which meet the requirements of Section 25 of the Disabled Persons Community Welfare Act 1975.
- ☐ Hand-held hoses for fire fighting.
- ☐ Such signs as are required by the building code or Section 25 of the Disabled Persons Community Welfare Act 1975.

RECEIVED DATE: 20 JAN 1993

PIM ONLY

☐

CONSENT ONLY

☐

CONSENT & PIM

☒

SEWER SHEET NO: BB.69...

FILE NO 1-58-

Project: LEYD TROON
Owner: 45 GLAMIS AUBURN
Address: 28
Lot No: DP: 12253 Val No:
Sec:

	More Info Required	Applicant Phoned	Letter Sent	Amend Received	Application Correct	No. Encls (In Duplicate)
PLANNING					not 22/1/93	
PLOTTING					46 22.1.93	2
BUILDING	B/R calc's being checked				56 29.1.93	
P&D					46 28.1.93	
EHO					28-1	
SERVICES						
WATER					26-1	
STORMWATER						
SEWER					26-1	
CROSSING					25/1/93	

FEES CHECKED

DATE:

\$

FIM ISSUED

DATE:

\$

CONSENT ISSUED

DATE:

\$

TOTAL NO. ENCLOSURES:

☐

OFFICER'S SIGNATURE: Approved Cuthbert 2/2/93

Not Approved.....

PROJECT INFORMATION MEMORANDA

[Please mark appropriate box. If there is knowledge relating write comment below.]

LAND

- ☐ EROSION
- ☐ AVULSION
- ☐ FALLING DEBRIS
- ☐ SUBSIDENCE
- ☐ SLIPPAGE
- ☐ ALLUVION
- ☐ INUNDATION
- ☐ HAZARDOUS CONTAMINANTS
- ☐ FILL

UTILITIES

- ☐ WATER
- ☒ SEWER
- ☐ STORMWATER
- ☐ INTERNAL DRAINS
- ☐ GAS
- ☐ ELECTRICITY
- ☐ VEHICULAR ACCESS
- ☐ UTILITIES PROTECTION
- ☐

OTHER CONSENTS/AUTHORISATIONS:

[illegible]

PLANNING

ZONE: Res 1

DESIGNATION/NOTATIONS:

RESOURCE CONSENT (Incl subdiv)
NEIGHBOUR CONSENTS

REQUIRED

1

GRANTED

\$

RESERVE CONTRIBUTION

\$

[illegible]

BUILDING
CONTROL SERVICES

CERTIFIER

COUNCIL

NO.
OF
INSPECTIONS

5

DATE	LETTER/COMMENT
26/1/93	Cal's bag checked.
	Circulate and return

PLUMBING/DRAINAGE
CONTROL SERVICES

CERTIFIER

COUNCIL

NO.
OF
INSPECTIONS

[illegible]

EHO
CONTROL SERVICES

CERTIFIER

COUNCIL

NO.
OF
INSPECTIONS

[illegible]

BUILDING CONSENT FEES, CHARGES CODING SHEET.

RECEIPT NO:
DATE: 20.1.93

ITEM	CODING NUMBER	AMOUNT GST INCLUSIVE
PROJECT INFORMATION MEMORANDUM	04 P30 125 YB 70	.
PLAN CHECKING FEE	04 P30 125 YB 70	'
BUILDING CONSENT (Building Consent)	04 P30 125 YB 70	560-00
BUILDING CONSENT (P & D Content)	04 P30 125 YD 71	281-25
CODE COMPLETION CERTIFICATE	04 P30 125 YB 70	.
BUILDING RESEARCH LEVY	04 Z14 150 -	142-85
ENGINEERS REPORT	04 W21 125 DA 32	
RECORDS FIXED FEE	04 W21 165 BD 60	
RESERVE CONTRIBUTION	04 S10 150 S 670	
STREETWORKS DEPOSIT	04 Z11 165 ZA 31	
NEW VEHICLE CROSSING	04 W32 203 FW 30	995.00
WATER CONNECTION	04 W89 203 -	
STORMWATER CONNECTION	04 W79 203 -	
SEWER CONNECTION	04 W99 203 -	
	TOTAL:	\$

PAID BY: To Pay GST NO: 51-700-669

OTHER: THESE ARE PRELIMINARY TERMS AND MAY BE REASSESSED OR ADDED TO DURING PLAN CHUCKING

NEW PLYMOUTH DISTRICT COUNCIL

Ref

1/59/93

OWNER 5021BUILDERIssue 08/02/93
Date

L F & Y D Troon

L F Troon .

10D Chilman Street
New Plymouth15D Chilman Street
New PlymouthADDRESS OF PROPERTYLEGAL DESCRIPTION45
Glamis Avenue

New Plymouth88
12256DESCRIPTION

Dwelling

142

1

1

VALUESBuilding \$124500
P & D \$2500

\$127000SPECIAL CONDITIONS.....
Authorised OfficerInspection
Date

REMARKS (e.g. stage reached)

9/2/93	Start as to plan.
14/2/93	APC discussed with builder told to either run polythene under foundations or under floor through to the outside of block and pour over APC then start laying blocks. malsed. to back of blocks when finished.
24/2/93	Floor ok to pour APC mesh but square files put in no inspection asked for.

Inspection
Date

REMARKS (e.g. stage reached)

- 9/4/93 FRAMING TIMBER READY FOR ROOF
PILES NEED TO BE BRACED & PILES
PUT ON OWNERS TOWN.
- 28/5/92 FRAMING INSPECTION MEASUREMENT 17% - 20% OK
REINSURANCE EXTERIOR INSURANCE
- 2/7/93 AT CAMP STAGES.
- 25/8/93 Camp
- 20/12/93. No batts in ceiling, down pipes to fix. Owner
expects this work to be finished by the
end of January 1994.
- 04.2.94 Batts still to install in ceiling. Could be a while
because Mr. Tison recently had a heart attack. W.P.
- 29.3.94 All work is now completed. FORM CCC.



NEW PLYMOUTH DISTRICT COUNCIL

BUILDING CONSENT No.: 1/59/93

Section 35 Building Act 1991

PROJECT INFORMATION MEMORANDUM No.: 1/59/93

APPLICANT

Full Name:

L F Y D TROON

Mail Address:

100 CHILMAN Street
NEW PLYMOUTH

Phone: Bus

A/H

7586605

Fax:

PROJECT LOCATION

Street:

GLAMIS Avenue

No.:

45

Lot No.:

88

DP/SO No.:

12252

Vol No.:

Sec.:

PROJECT

NEW BUILDING

☒

ALTERATIONS

☐

RELOCATION

☐

COMMERCIAL

☐

DOMESTIC

☐

DEMOLITION

☐

BEING STAGE

OF AN INTENDED

STAGES

INTENDED USE

Dwelling

INTENDED LIFE

INDEFINITE BUT NOT
LESS THAN 50 YEARS

☒

SPECIFIED AS . . . YEARS

☐

ESTIMATED VALUE OF PROJECT \$ 127000 G.S.T. Incl.

COUNCIL CHARGES

The Council's total charges payable on uplifting of the building consent in accordance with the attached details are:

N.P.D.C.

\$

1836.25

BUILDING RESEARCH LEVY

\$

142.85

TOTAL PAYABLE

\$

1979.10

RECEIPT No.

45021

This Building Consent is a consent under the building act 1991 to undertake buildingwork in accordance with the attached plans and specifications so as to comply with the provisions of the building code. It does not affect any duty or responsibility under any other act nor permit any breach of any other act. The Building Consent is issued subject to the conditions specified in the attached . . . pages headed "Conditions of Building Consent No. . . ."

Signed for and on behalf of the New Plymouth District Council

Name:

Position:

Date

8/2/93



NEW PLYMOUTH DISTRICT COUNCIL

PROJECT INFORMATION MEMORANDUM No.: 1/59/9

Section 31 Building Act 1991

APPLICANT

Full Name:

LF- YD TROON

Mail Address:

10 D CHILMAN STREET

NEW PLYMOUTH

Phone: Bus

A/H

7586605

Fax:

Application received

20/1/93

PROJECT LOCATION

Street:

GLAMIS AVENUE

No:

45

Lot No:

88

DP/SO No:

12256

Val No:

Sec

PROJECT

NEW BUILDING



ALTERATIONS



RELOCATION



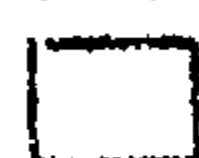
COMMERCIAL



DOMESTIC



DEMOLITION



INTENDED LIFE

INDEFINITE BUT NOT LESS
THAN 50 YEARS



SPECIFIED AS YEARS



INTENDED USE

DWELLING

COUNCIL CHARGES

The Council's total charges payable on the uplifting of this Project Information Memorandum in accordance with the attached details are

1979: 10

RECEIPT No

95021

THIS PROJECT INFORMATION MEMORANDUM SHALL LAPSE IF A BUILDING CONSENT FOR THE BUILDING WORK CONCERNED HAS NOT BEEN ISSUED WITHIN 24 MONTHS OF THE ABOVE DATE.

THIS PROJECT INFORMATION MEMORANDUM IS:

- ☒ Confirmation that the proposed building work may be undertaken, subject to the provisions of the Building Act 1991 and any requirements of the Building Consent.

Not yet applied for: ☐

No. 8-2-93 attached: ☒

- ☐ Notification that other authorisations must be obtained before a building consent will be issued.
- ☐ Notification that the proposed building work may not be undertaken because a necessary authorisation has been refused.

THIS PROJECT INFORMATION MEMORANDUM INCLUDES:

- ☒ Information identifying relevant special features of the land concerned.
- ☐ Information about the land or buildings concerned notified to the Council by any statutory organisation having the power to classify land or buildings.
- ☐ Details of relevant utility systems.
- ☐ Details of authorisations which have been granted.
- ☐ Details of authorisations which must be obtained before a Building consent will be issued.
- ☐ Details of authorisations which have been refused.

SIGNED FOR AND ON BEHALF OF THE NEW PLYMOUTH DISTRICT COUNCIL.

Name:

Position: Date: / /

TOTAL NO. ENCLOSURES: ☐



NEW PLYMOUTH DISTRICT COUNCIL

PLUMBING COMPLETION FORM

Building Consent No: 1/59.....

OWNER DETAILS	PROJECT LOCATION
Name: <u>L.F. & Y.D. Teo</u>	Street Address: <u>45 Gains Ave</u>
Mailing Address: <u>45 Gains Ave</u>	<u>Brick Block</u>
<u>Brick Block</u>	Legal Description: (as shown on Certificate of Title)
Contact: <u>AS ABOVE</u>	Valuation Roll Number:
Phone: Fax:	Lot: <u>88</u> DP: <u>12254</u> Section:

PROJECT INFORMATION	
New Building ☒	Alteration ☐ Demolition ☐
Being stage <u>1</u> of an intended <u>1</u> stages	
Intended Use/s (in detail): <u>Dwelling</u>	
.....	
.....	
Intended Life:	
Indefinite but not less than 50 years ☒	Specified as year

- THIS IS
- ☒ Notification that all plumbing work has been completed and complies in all respects to the above consent.
- ☐ Notification that part only plumbing work has been completed as specified in the attached particulars of the building work under the above consent.
- ☐ Notification that all plumbing work has been completed and complies with the above building consent subject to the conditions specified in the attached pages headed "CONDITIONS OF CODE COMPLIANCE CERT. NO".

Signed for and on behalf of the Council:

Name: Position:
Signature: Issue Date: / /

L F & Y D TROON

DWELLING - 45 GLAMIS AVENUE

P I M SUMMARY

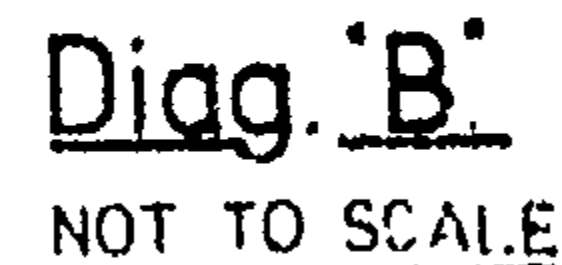
PUBLIC HEALTH

THIS SECTION IS SERVICED BY WATER AND SEWER.

THIS IS NOT A BUILDING CONSENT/PERMIT

MEMORANDUM OF
EASEMENTS IN GROSS

TARANAKI COUNTY COUNCIL

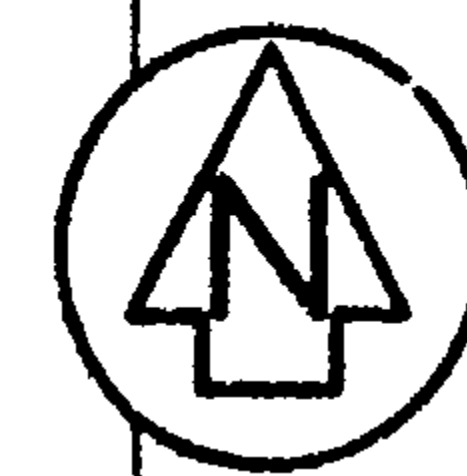


Printed by Lithograph Inc. Wellington New Zealand

If Strling, Surveyor General, Department of Land and Survey, Wellington:

Scale 1:800

Date *November '76*



Approved

117

5-19-77

MEMORANDUM OF EASEMENTS

SHOWN	SERVIENT TENET	DOMINANT TENET
O,Y	LOT 109	LOTS 108,109,110,111,112,113,114
P,Z	LOT 110	LOTS 108,109,110,111,112,113,114
Q,AA	LOT 111	LOTS 108,109,110,111,112,113,114
R,BB	LOT 112	LOTS 108,109,110,111,112,113,114
S,CC	LOT 113	LOTS 108,109,110,111,112,114
T,EE	LOT 118	LOTS 118,120,121,122,123,129
U,FF	LOT 119	LOTS 118,120,121,122,123,129
V,GG	LOT 120	LOTS 118,119,121,122,123,129
W,HH	LOT 121	LOTS 118,119,120,122,123,129
X,II	LOT 129	LOTS 118,119,120,121,122,123

Comprised in C.T. D4/692 (PT)

Dated at New Plymouth this 5th day
of April 1977 Signature *Edmund K. L. ...*

Reference Plans

Approved as to Survey

Deposited this 17th day of June 1900

File
Received 221 12/7/77
Instructions
DP 12256

SHEET 2 of 2

CITY ENGINEER'S DEPARTMENT

ASSESSED REQUIREMENTS

File No. 1059

Project DWG Check Sheet No. _____
Owner TROON Sewer Sheet No. BB69 Plotted _____
Address 45 GLAMIS AVE Zone _____
Lot No. 88 DP 12256 Sec No. _____ Area of Site _____

BUILDING

Remarks: Structural

Check cal's plan

Structural Engineer _____

Approved [Signature]

Not Approved 26/1/93

Remarks: Fire

Fire Service _____

Recommended _____

29 Carrington Street
P.O. Box 585
New Plymouth
New Zealand
Phone (06) 758-7273
Fax (06) 758-4528

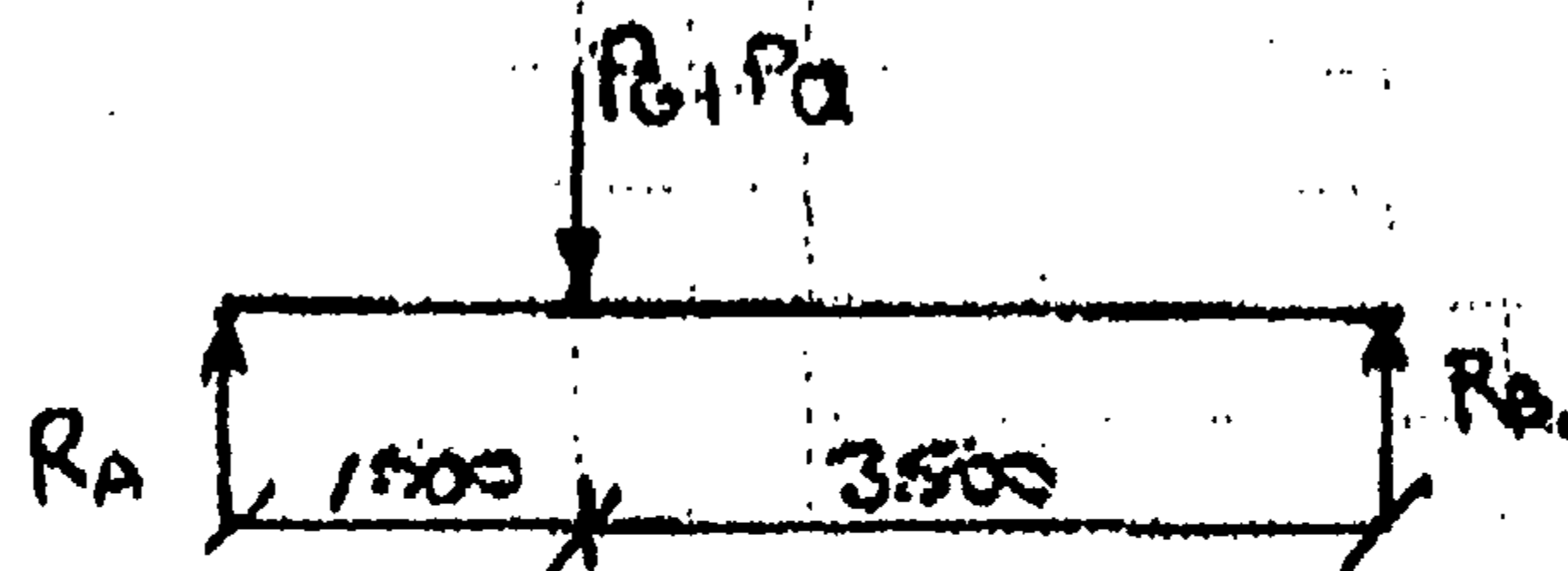
Chapman Oulsnam and Associates Ltd

Civil and Structural Engineers
Architects and Interior Designers

Job No 1750/01
Date 15/1/93
Client BOUGHAN DESIGN
GLAMIS AVENUE

From JTC calcs, look at changing 500x100 Gunglam to steel.

$$P_G = 10.7 \text{ kN} \quad P_Q = 13.3 \text{ kN}$$



$$R_{A \text{ DEAD}} = 7.5 \text{ kN} \quad R_{B \text{ LIVE}} = 9.3 \text{ kN}$$

$$R_{A \text{ DEAD}} = 3.2 \text{ kN} \quad R_{B \text{ LIVE}} = 4 \text{ kN}$$

Wall Load $G = 0.35 \text{ kPa} \times 2.4 = 0.84 \text{ kN/m} \quad \therefore R_{A \text{ DW}} = 2.1 \text{ kN}$

$$\therefore R_{A \text{ total}} = 7.5 + 2.1 + 0.7 \times 2.3 = 16.1 \text{ kN}$$

$$P_{\text{total}} = 10.7 + 0.7 \times 13.3 = 20 \text{ kN}$$

$$(P_L = 10.7 + 0.4 \times 13.3 = 16 \text{ kN})$$

$$M(1.5) = 16.1 \times 1.5 - 0.84 \times \frac{1.5^2}{2} = 23 \text{ kNm}$$

$$Z \geq \frac{23 \times 10^3}{165 \times 10^6} = 139 \times 10^{-6} \text{ m}^3 \quad \begin{matrix} 200UB25 \\ 180UB22 \end{matrix}$$

Check deflection: $d = \frac{PL^3}{48EI} \left[3\frac{a}{L} - 4\left(\frac{a}{L}\right)^3 \right]$

$a = 1.5 \text{ m}$
Try 200UB25 $I = 23.6 \times 10^{-6} \text{ m}^4$

$$\delta = \frac{20 \times 5^3}{48 \times 200 \times 23.6} \left[3 \times \frac{1.5}{5} - 4 \left(\frac{1.5}{5} \right)^3 \right] = 0.009 \text{ m}$$

$$5000/9 = 555 \text{ O.K.}$$

$$\frac{16}{2.6} \times 0.0087 = 0.007 \quad 5000/7 = 714 \text{ O.K.}$$

If a roller door on this, then go to a 250UB31.

$$\delta = 0.0087 \times \frac{23.6}{714} = 3 \text{ mm O.K.}$$

NEW PLYMOUTH DISTRICT COUNCIL

PLANS AND SPECIFICATIONS APPROVED FOR TYPE, USE, SITING, COVERAGE
AND CONSTRUCTION AS IN ACCORDANCE WITH RELEVANT ACTS
REGULATIONS AND BY-LAWS ADMINISTERED BY THE NEW PLYMOUTH
DISTRICT COUNCIL.

DATE

PLANNING

PUBLIC HEALTH

BUILDING

THESE PLANS AND SPECIFICATIONS ARE THE PROPERTY OF
THE NEW PLYMOUTH DISTRICT COUNCIL AND MUST BE KEPT
ON SITE.



29 Carrington Street
P.O. Box 585
New Plymouth
New Zealand
Phone (06) 758-7273
Fax (06) 758-4528

Chapman Oulsnam and Associates Ltd

Civil and Structural Engineers
Architects and Interior Designers

Job No 1750-01
Date 11-1-93
Client Praxair
Design

TROON - Glass Wall

Ret. Wall

$$H = 2.2m \quad K_a = 0.25 \quad \delta = 16^\circ$$

$$M_{\text{ret}} = \frac{1}{6} \times 0.25 \times 16 \times 2.2^3$$

$$A_s = \frac{7.1 \text{ kNm}}{7.1 \text{ E6} \times 1.7 / 0.85^2} = 300 \times 120$$

$$= 464 \text{ mm}^2 \quad \text{D16 @ 400 } 500$$

$$\text{H.D. steel } 464 \times 300 = 300 \text{ mm}^2$$

$$= 1151 \text{ mm}^2 @ 600 \times 1000 \text{ starter}$$

$$\text{bal. vert. } D12 @ 600$$

Footings are 1000 by 1000 mm

Loads

$$\text{Droo/ } 6.5/2 \times 0.45 = 1.46$$

$$\text{floor } 2.4/2 \times 0.5 = 1.1$$

$$\text{wall } 0.3 \times 2.4 = 0.7$$

$$3.3 \text{ kN/m}$$

$$LL = \frac{6.5 \times 0.25}{2}$$

$$0.8$$

$$1.5 \times 4.4/2$$

$$3.3$$

$$4.1$$



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New Zealand
Phone (06) 758-7273
Fax (06) 758-4528

Chapman Oulsnam and Associates Ltd

Civil and Structural Engineers
Architects and Interior Designers

Job No _____

Date _____

Client _____

note!

10 local

↑ 1500

3500 ↑

$$P_c = 3.3 \times \frac{6.5}{2} = 10.7$$

$$P_Q = 1.1 \times 32.5 = 13.3$$

$$\Delta_c \& Q = \frac{(10.7 + 0.7 \times 13.3) \times 5000^3}{48EI} \left[\frac{1.5}{3.5} - 3 \left(\frac{1.5}{3.5} \right)^3 \right]$$

$$= 14.6 \text{ mm}$$

Long term $\Rightarrow 14.6 \times 17.8 = 23 \text{ mm}$

0.0046

1/217
M36

$$\rightarrow 500 \times 100 \rightarrow 70\% \rightarrow 16 \text{ mm}$$

provide 15mm reinforcement

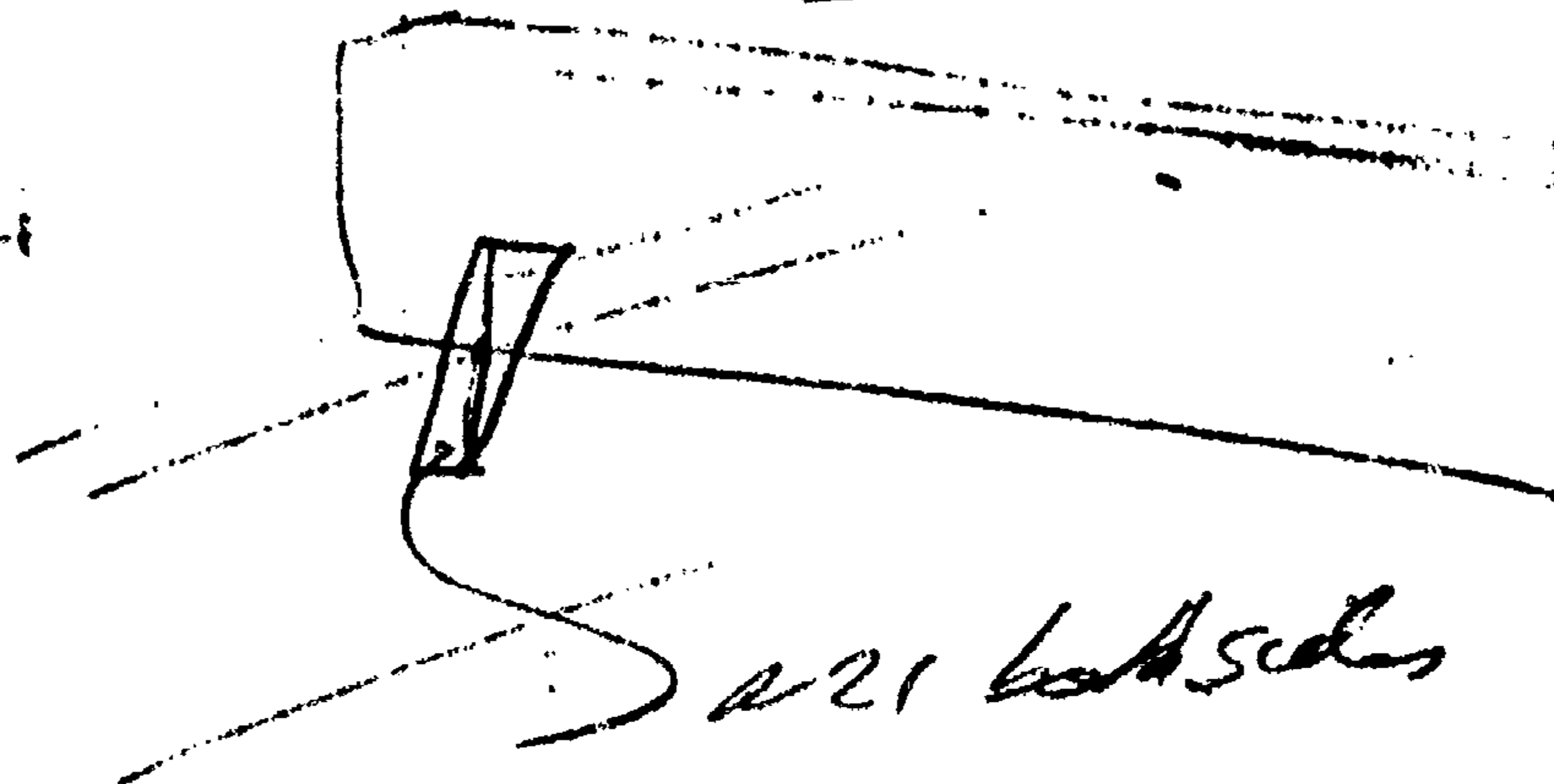
$$M_{max} = (1.2 \times 10.7 + 1.6 \times 13.3) \times \frac{1.5 \times 3}{5}$$

$$= 30.7 \text{ kNm}$$

$$f'_{cu} = 8.23 \text{ MPa}$$

500x100

Connection



221 both sides



ECNZ

29 Carrington Street
P.O. Box 585
New Plymouth
New Zealand
Phone (06) 758-7273
Fax (06) 758-4528

Chapman Oulsnam and Associates Ltd

Civil and Structural Engineers
Architects and Interior Designers

Job No _____
Date _____
Client _____

Plating - long term charts

- 6.5m span / Am Her / 1m ref.

Heav.

$$q \text{ max. shear} = 7.4 \times \frac{6.5}{2} = \underline{24.1 \text{ kN}}$$

$$J_{max} = \frac{24000 \times 1.5}{588 \times 94} = \underline{61 \text{ N/mm}}$$

2 layers only @ 300 61 x 300 $\Rightarrow$ 18.3 kN/plate per

= 20 tech // $245 \text{ N/500} \times 14 = \underline{343 \text{ N}}$
537.

steel shear
 $\frac{91 \text{ N/mm} \times 220}{20 \text{ kN}}$

GB10 (GB10 2x22 16x6 96T) will OK.

- ex. Lateral .. $24 \times \frac{3.5}{5} = \underline{16.8 \text{ kN}}$

$$V = \frac{16800}{488} \times 1.5 = 52 \text{ N/mm}$$

- use GB10 300
2 layers



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Civil and Structural Engineers
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Job No _____
Date _____
Client _____

Ty 600x100

Short. term. $G + 4/5 Q$

$$= 3.3 + 0.7 \times 4.1 = \underline{6.21 \text{ kN/m}}$$

$$\Delta = \frac{5 \times 6.2 \times 6500^2}{284 \times 80000} = \frac{5883 \times 96}{12}$$

$$= \underline{11.3 \text{ mm}} \quad \underline{1:574} \quad \checkmark$$

$$G + V_1 Q = 3.3 + 0.4 \times 4.1 = \underline{4.94}$$

use $E = \frac{Es}{K=2} = 4000 \text{ MPa.} \Rightarrow$

$$\Delta = \frac{11.3 \times 4.9}{6.2} \times \frac{8000}{4000}$$

$$= \underline{17.8 \text{ mm}}$$

10027

2/303

+ plate shear.

use 15mm plate shear.

Check ult. shear

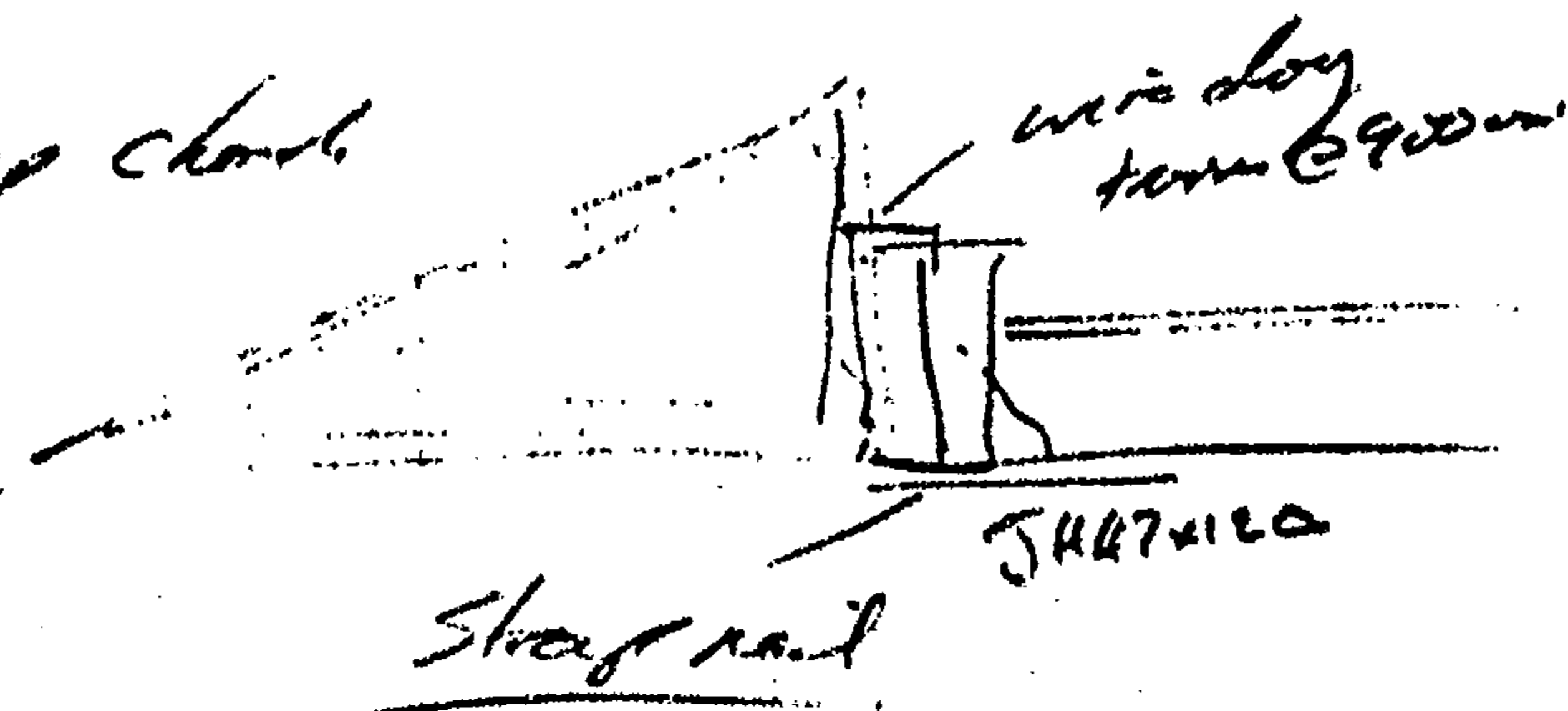
$$1.2 G + 1.6 Q = 1.2 \times 3.3 + 1.6 \times 4.1 = \underline{10.5 \text{ kN/m}}$$

$$M_{22} = \frac{10.5 \times 6.5^2}{8} = \underline{56.1 \text{ kNm}}$$

$$P_{60} = \frac{56.1}{6} \times \frac{96}{80} = \underline{10.3 \text{ MPa}}$$

OK ult

Stabilise Top chord



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600x100 stability

- NZS603 1990.

$$D + L = 3.3 + 4.1 = 7.4$$

$$M_s = \frac{7.4 \times 6.5^2}{8} = 39 \text{ kNm}$$

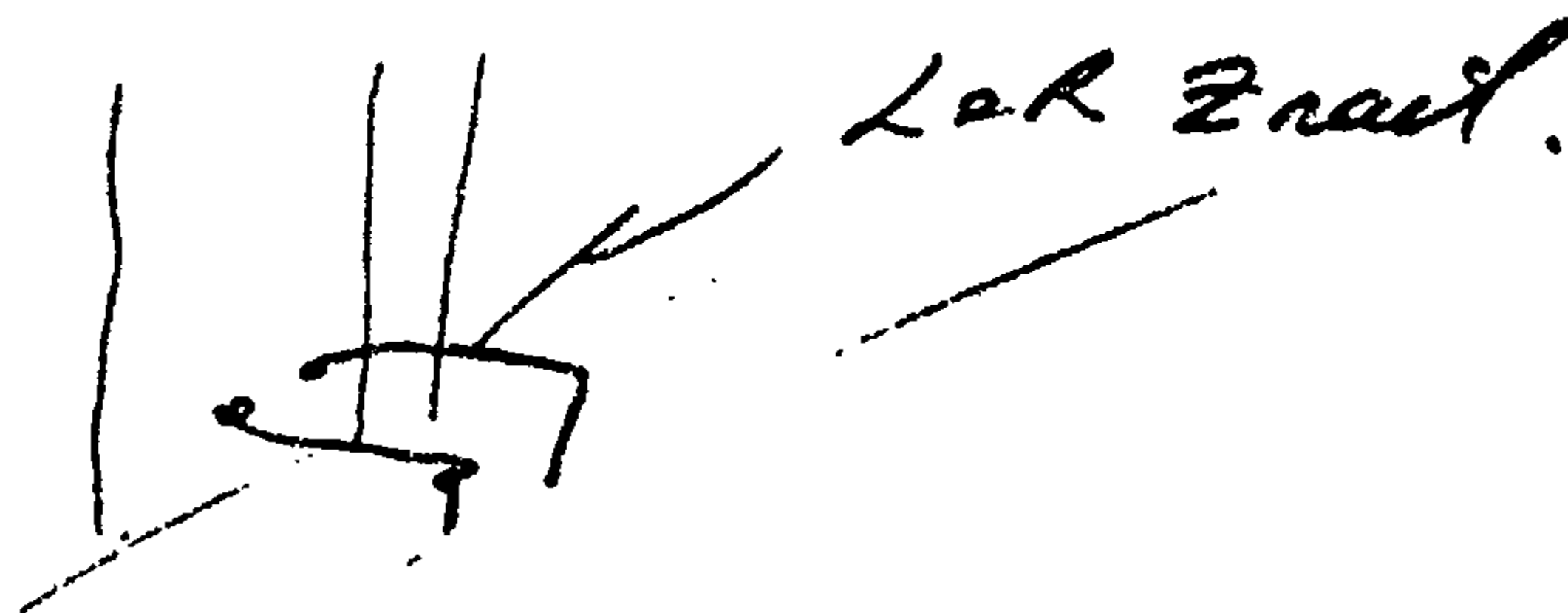
$$f'_b = \frac{39 \text{ kNm}}{528 \times 10^6} = 7.2 \text{ MPa}$$

fully supported tension edge $\rightarrow S_1 = 3D/B$
 $= 3 \times 600/100$
 $= 18$

$K_e = 0.8$

$$f'_b = 6 \times 1.41 \times 0.8 = 6.72$$

close - provide lateral restraints
at all bases (700mm)



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Chapman Oulsnam and Associates Ltd

Civil and Structural Engineers
Architects and Interior Designers

Job No 1750/01
Date 12/1/23
Client ROUGHAN DESIGN
TROON / GUMS CLOSE

DECK BEAM

$L = 4m$

Try 300x100 $Z = 1354 \times 10^{-6} m^3$ $I = 199 \times 10^{-6} m^4$

$$Floor = 0.5 kPa \times \frac{2}{2} = 0.5 kN/m$$

$$Live = 2 kPa \times \frac{2}{2} = 1 kN/m$$

$$G + \frac{1}{2} Q = 0.5 + 0.7 \times 1 = 1.2 kN/m \text{ (Strength)}$$

$$G + \frac{1}{2} Q = 0.5 + 0.4 \times 1 = 0.9 kN/m \text{ (Serviceability)}$$

$$R_{max} = 0.9 \times \frac{4}{2} = 1.8 kN$$

Assume Timber is wet.

$$M = \frac{wL^2}{8} = 1.2 \times \frac{4^2}{8} = 2.4 kNm \quad f_b = \frac{2.4 \times 10^{-3}}{1354 \times 10^{-6}} = 1.8 MPa$$

$$F_b = 1.4 \times 5 = 7 MPa \quad O.K.$$

$$\text{Deflection } \delta = \frac{5wL^4}{384EI} = \frac{5 \times 0.9 \times 4^4}{384 \times 6.5 \times 10^8 \times 199 \times 10^{-6}} (3 \times 0.5 + 0.4)$$

$$= 0.005m$$

$$\frac{4000}{5} = 800 \quad O.K.$$

$$\text{(If } 300 \times 50, \quad f_b = 3.6 MPa \quad \& \quad \delta = 10mm \quad (\frac{L}{400}))$$

$$\text{(If } 250 \times 100, \quad f_b = 2.6 MPa \quad \& \quad \delta = 9mm \quad (\frac{L}{444}))$$

Working to NZS4203 "BEAMS" Deflection Criterion,

Use 300x100.

COLUMNS UNDER

$$\text{IF } 250 \text{ } \phi \text{ Conc} \quad \text{Min } A_s = 0.008 \times \pi \frac{250^2}{4} = 400 mm^2$$

$$\text{Use } 6D12 = 660 mm^2$$

$$\begin{aligned} \text{Stirrups - Max Spacing} &= D \\ &= 16d_b = 196mm \\ &= 48t_b = 48 \times 6 = 288mm \end{aligned}$$

Use 6D16 with R6-200 Spiral or hoops.



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Job No 1750/01
Date 13/1/93
Client ROUGHAN DESIGN
TRON/GUMIS COSE

WORK OUT HOUSE WT. Look only at front half.

^{Roof}
 $A = 3.5 \times 13.$

$\therefore \Sigma D = 0.45 \times 3.5 \times 13 = 20.5 \text{ kN}$

Floor $A = 3.4 \times 13 + 7 \times 2 = 58.2 \text{ m}^2$
(Floor) (Deck)

$\Sigma D = 0.5 \times 58.2 \text{ m}^2 = 29.1 \text{ kN}$

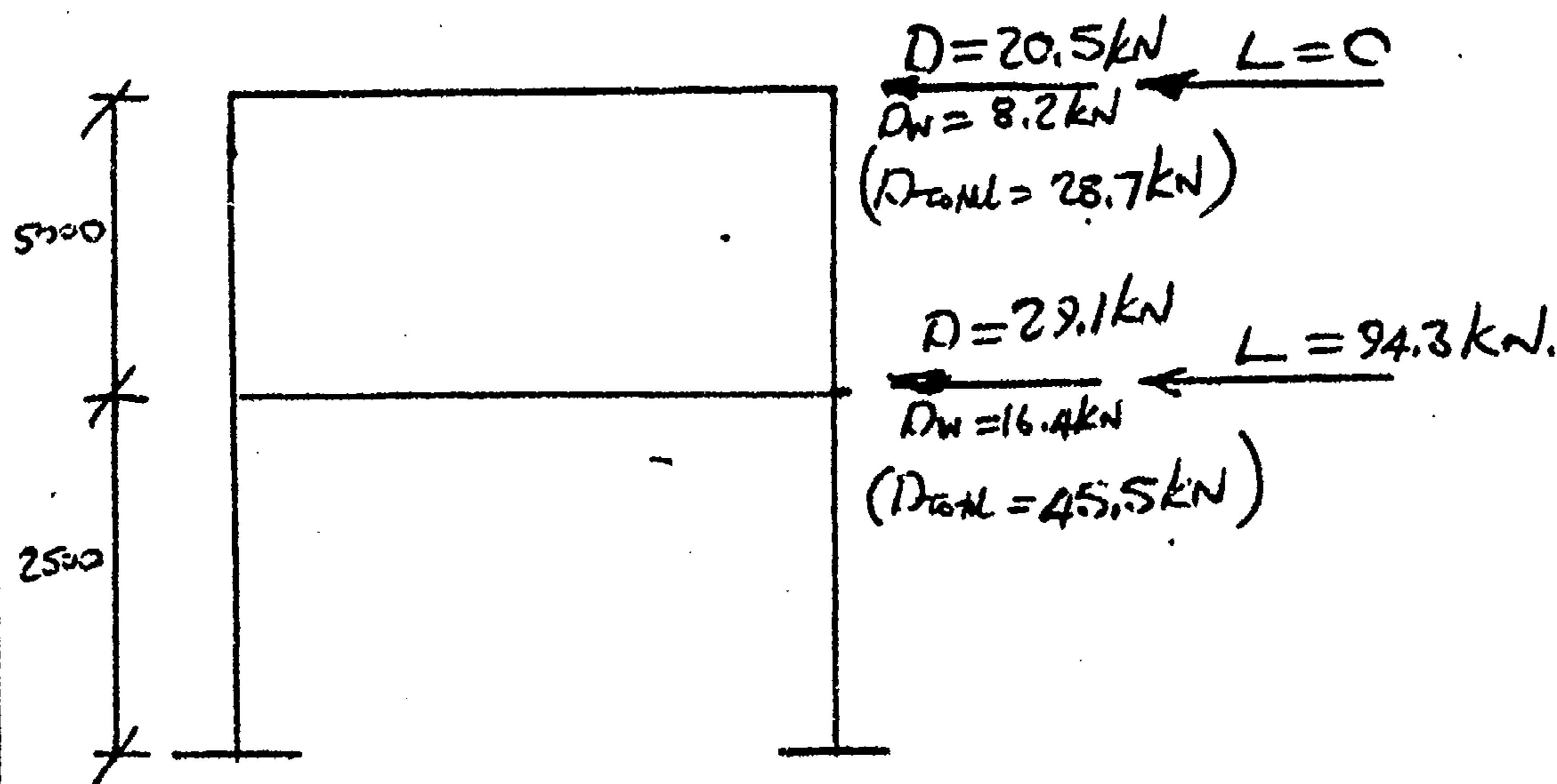
WALLS 1ST FLOOR = $2.4 \times 0.3 \text{ kPa} \times (2 \times 3.4 + 12 + 4) = 16.4 \text{ kN}$
Sides Front Interior

Roof LIVE = $0.25 \times 3.5 \times 13 = 11.4 \text{ kN}$ (IGNORE)

FLOOR LIVE + DECK LIVE = $1.5 \text{ kPa} \times 3.4 \times 13 + 2 \times 14 = 94.3 \text{ kN}$

At Ground Floor Level There is no retaining structure.
Take Wall Weight only.

Dead = $0.3 \text{ kPa} \times (2 \times 3.4 + 13) = 6 \text{ kN}$



$\psi_L = 0.4 \quad \psi_U = 0.4.$

$\therefore W_R = 28.7 \text{ kN}$

$W_{1st} = 45.5 + 0.4 \times 94.3 = 83.2 \text{ kN}$

Roof $W_{hi} = 5 \times 28.7 = 143.5 \text{ m}$

1st $W_{hi} = 2.5 \times 83.2 = 208 \text{ kNm}$

$\Sigma (W_{hi}) = 352 \text{ kNm}.$



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Job No 1750/01
Date 13/1/93
Client ROUGHAN DESIGN
TROON / GLAMIS AVENUE

Zone Factor $Z = 1.0$ $L_s = 1/6$ $L_u = 1.0$
CAT IV BUILDING. $\therefore R = 1.0$ $S_p = 0.67$

$$C = C_n(T, 1) S_p R Z L_s \quad \text{Assume } T = 0.15.$$

$$C_s = 0.8 \times 0.67 \times 1 \times 1 \times \frac{1}{6} = 0.09$$

$$C = C_n(T, \mu) S_p R Z L_u \quad \mu = 1.0$$

$$= 0.8 \times 0.67 \times 1 \times 1 \times 1 = 0.54$$

$$V_{ux} = 0.54 \times 28.7 = 15.5 \text{ kN} \quad V_{u1st} = 0.54 \times 83.2 = 45 \text{ kN.}$$

$$V_{TOTAL} = 60.5 \text{ kN}$$

$$F_R = 0.92 \times 60.5 \times \frac{143.5}{352} + 0.08 \times 60.5$$

$$= 22.7 + 4.8 = 26.5 \text{ kN} \quad (13.2 \text{ kN Each Part})$$

$$F_{1st} = 0.92 \times 60.5 \times \frac{208}{352} = 33 \text{ kN.} \quad (16.5 \text{ kN Each Part})$$

$$\text{WIND TBL Area} = 5 \times 3.5 = 17.5 \text{ m}^2$$

$$\text{or } A_{roof} = \frac{2.5}{2} \times 3.5 = 4.4 \text{ m}^2$$

$$A_{1st} = 2.5 \times 3.5 = 8.8 \text{ m}^2$$

$$V_z = V M_{1s} M_{zUT} M_s M_t M_r$$

CAT 3

$$V = 48 \text{ m/s}$$

$$M_{1s} = 0.93$$

$$M_{zUT} = 0.75$$

$$M_s = 1.0$$

$$M_t = 1.35$$

$$M_r = 2.0$$

$$V_z = 48 \times 0.93 \times 0.75 \times 1 \times 1.35 \times 1$$

$$= 45.2 \text{ m/s} \quad q_{zu} = 0.6 \times 45.2^2 \times 10^{-3} = 1.2 \text{ kPa.}$$

$$C_{pe} = 0.8 \quad C_{pi} = -0.3 \quad \therefore C_{pe} = 1.1$$

ROOF $1.1 \times 1.2 \times 4.4 = 5.8 \text{ kN}$

1ST $1.1 \times 1.2 \times 8.8 = 11.6 \text{ kN.}$

} ULTIMATE.

EARTHQUAKE DOMINATES.

Can We reduce EQ Load?

$$\text{ROOF } \Sigma D = 20.5 \text{ kN}$$

$$\text{1ST FLOOR } A = 3.4 \times 13 + 7 \times 1 = 51.2 \text{ m}^2$$

FLOOR DAK

$$\Sigma D = 0.5 \times 51.2 = 25.6 \text{ kN}$$



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Job No 1750/01
Date 13/1/93
Client ROUGHAN DESIGN
TRON / GLAMIS AVENUE

Walls 1st Floor = 16.4 kN

$$\text{Floor Live} = 1.5 \text{ kPa} \times 3.4 \times 13 + 2 \times 7 = 80.3 \text{ kN.} = Q_b$$

$$\psi_a = 0.4 + \frac{2.7}{\sqrt{51.2}} = 0.4 + \frac{2.7}{7.15} = 0.78$$

$$Q = \psi_a Q_b = 0.78 \times 80.3 = 62.6 \text{ kN.}$$

$$G + \psi_L Q = 28.7 \text{ kN} \quad G + \psi_U Q = W_U \quad \psi_L = \psi_U = 0.4.$$

W_U interests us

$$W_{RU} = 28.7 \text{ kN}$$

$$W_{1ST} = 25.6 + 16.4 + 0.4 \times 62.6 = 67 \text{ kN}$$

$$\text{Roof } W_{hi} = 28.7 \times 5 = 144 \text{ kNm}$$

$$\text{Floor } W_{hi} = 67 \times 2.5 = 168 \text{ kNm}$$

$$\Sigma W_{hi} = 312$$

$$V_U = 0.54 (28.7 + 67) = 52 \text{ kN}$$

$$F_{RU} = 0.92 \times 52 \times \frac{144}{312} + 0.08 \times 52 = 22 + 4 = 26 \text{ kN}$$

$$F_{RWU} = 0.92 \times 52 \times \frac{168}{312} = 26 \text{ kN}$$

$\therefore 13 \text{ kN}$ at each part to level

$$\therefore M_{OT} = 13 \times 5 + 13 \times 2.5 = 98 \text{ kNm.}$$

Recalculate V_U .

Ductility Factor $\mu = 2$ (Block Pilaster assume diaphragm gets Load to this level).

$$T_1 = 0.55$$

$$\therefore C_{dv} = 0.45.$$

$$C_{is} = 0.77.$$

$$C_s = 0.77 \times 0.67 \times 1 \times 1 \times \frac{1}{6} = 0.09$$

$$C_u = 0.45 \times 0.67 \times 1 \times 1 \times 1 = 0.3 \quad \text{GOVERNS.}$$

$$V_U = 0.3 (28.7 + 67) = 28.7 \text{ kN}$$

$$F_{RU} = 0.92 \times 28.7 = 26 \text{ kN}$$



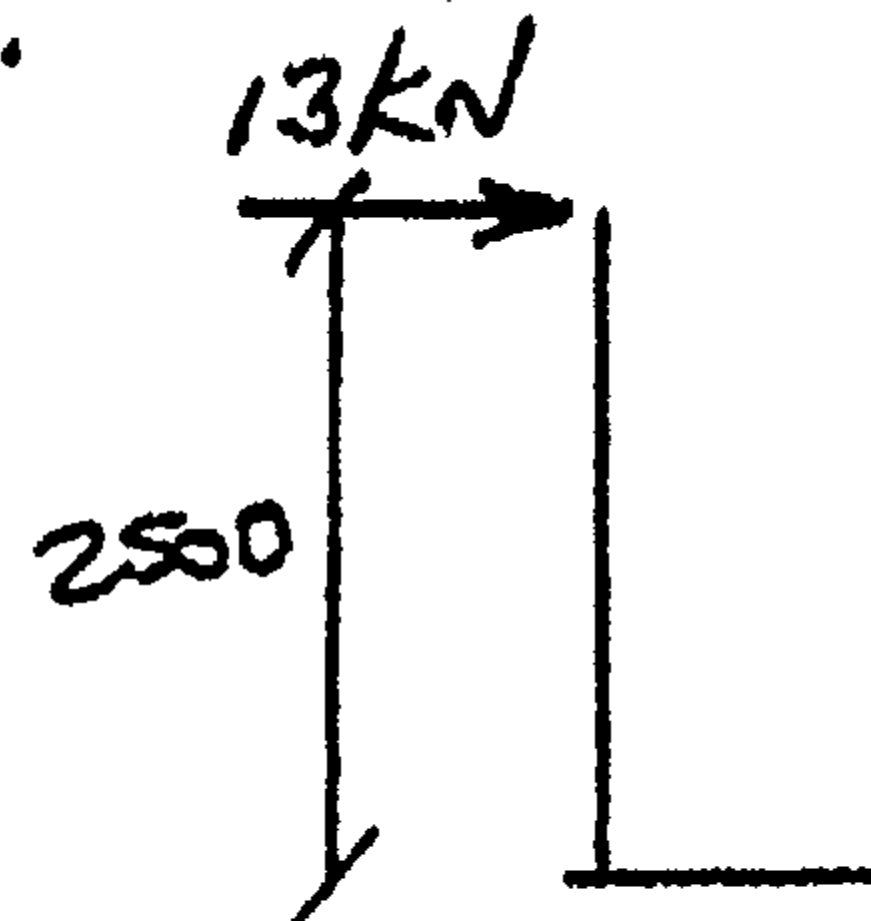
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Job No 1750/01
Date 13/1/93
Client ROUGHAN DESIGN
TROON / GLAMIS AVENUE

(9)

$$M_u = 13 \times 2.5 = 33 \text{ kNm.}$$



Try a pilaster, $d = 310 \text{ mm}$, $b = 400$ $f'_c = 8 \text{ MPa}$ $f_y = 300 \text{ MPa}$.

$$A_{s\text{reqd}} = 455 \text{ mm}^2 \quad \phi = 0.85$$

$$A_{s\text{min}} = \frac{1.4}{300} \times 310 \times 400 = 580 \text{ mm}^2.$$

$$3 \text{ D16} = 600 \text{ mm}^2 \quad \text{O.K.}$$

$$\phi = 0.85 \therefore \text{Spacing of hoops} = 400 \text{ mm} \\ = 16 \times 16 = 256 \text{ mm} \\ = 48 \times 6 = 288 \text{ mm.}$$

Use R10 or R6 @ 250 c/s, say 200 c/s.



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Job No 1750/01
Date 13/1/93
Client 45 GLAMIS AVENUE

DECK BEAM 300x100
(4.0m SPAN)

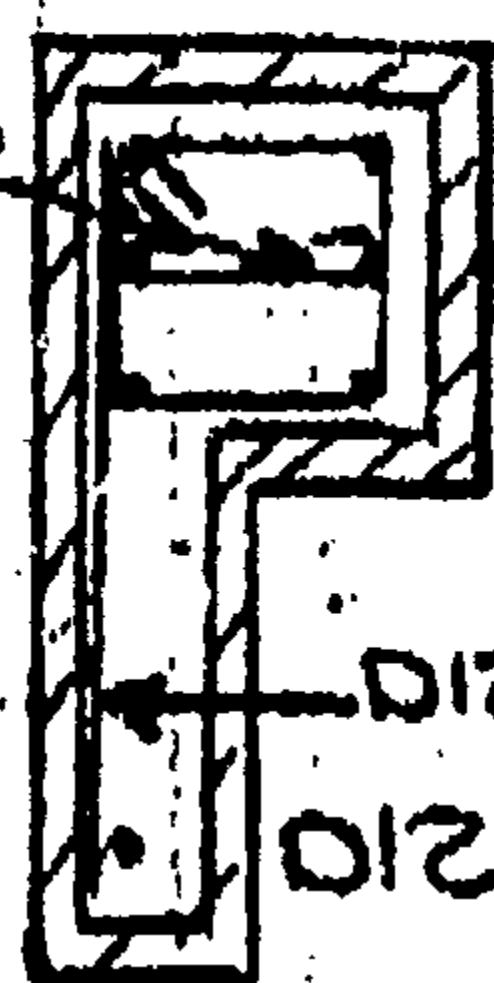
COLUMNS UNDER - IF 250 Ø CONCRETE
6D12 LONGITUDINAL
R6-200 (SPIRAL OR HOOPS)

Continue column & reinforcing into ground for 600mm.
Alternatively use a 500x500x250 PAD.

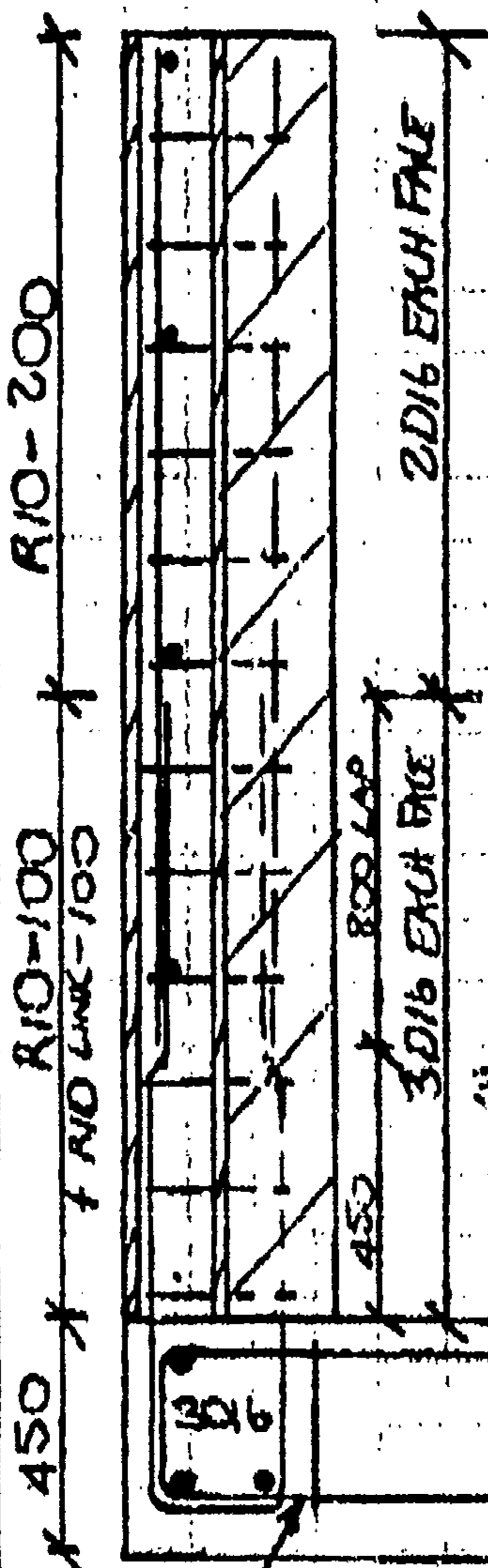
PILASTERS AT FRONT OF HOUSE (GARAGE & RUMPUS)

3D16 3D16

R10-100
+ R10-100
@ 100



PLAN AT BASE



3D16 U-BARS AT BASE

2D16 U-BARS

1 D16 U-BAR

3D16 U-BARS
2R10-200 STIRRUPS.

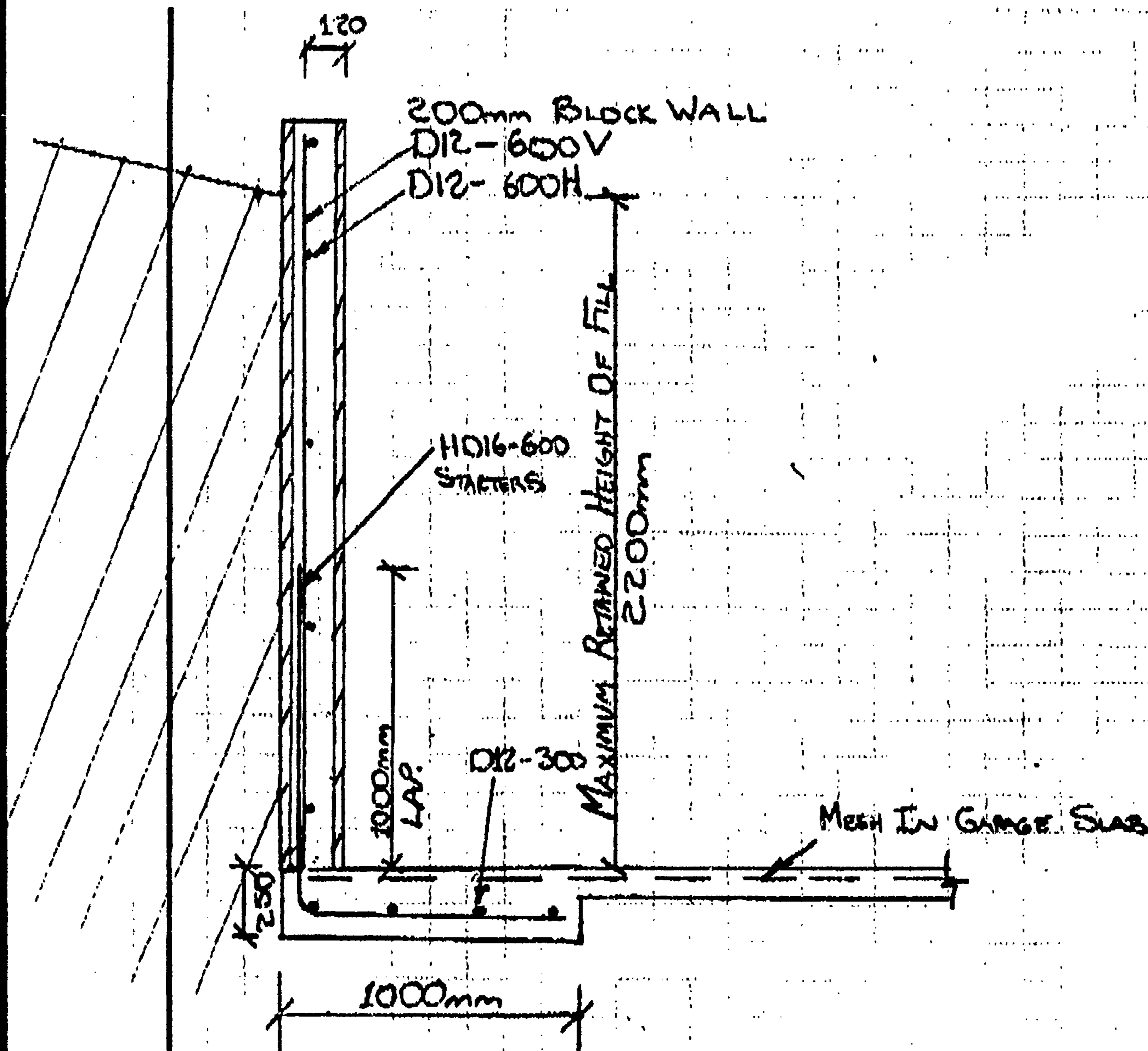
SECTION THROUGH PILASTER



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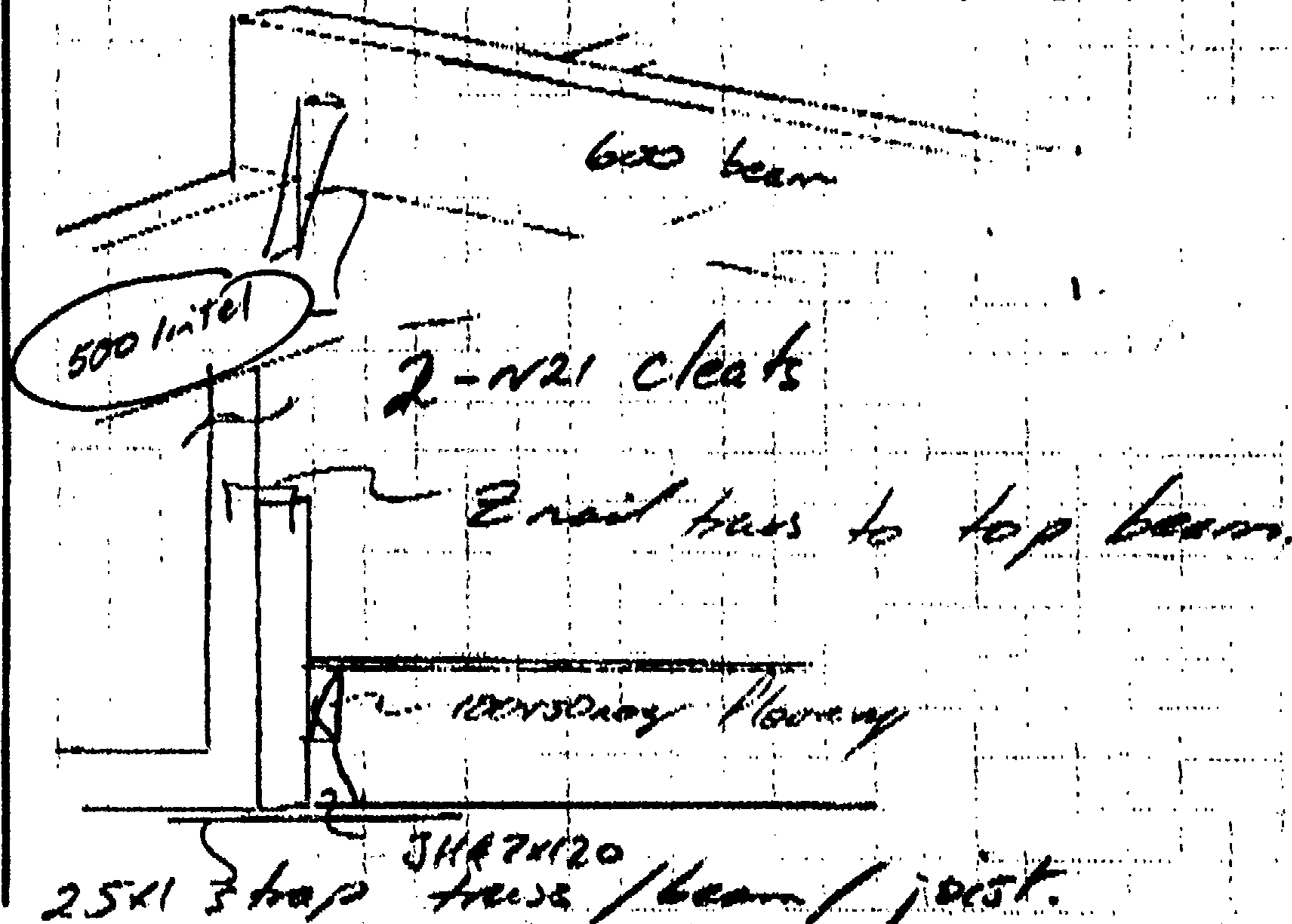
Job No 1750/01
Date 11/1/83
Client BOUGHAN DESIGN
45 GLAMIS AVENUE



FLOOR BEAMS.

6.5m SPAN - 600x100 GANGLAM (HEAVY DUTY PLATING) / 5mm camber

5.0m SPAN - 500x100 GANGLAM (HEAVY DUTY PLATING) / 5mm camber



Name: LES TROON

1

Location of STOREY	foundation <u>single</u> upper of two lower of two
SITE WIND ZONE: (Table 2.4)	low / medium <u>high</u> / very high
EARTHQUAKE ZONE: (Fig 2.2, Table 2.3)	A <u>B</u> C

SITE ADDRESS

City/Town
or District:

NEW PLYMOUTH

Street and Number:
or

45 GLAMIS AV

LOT and D.P. Number:

88

2

FOR EARTHQUAKE	
Roof weight : <u>light</u> / heavy Average Roof Pitch: <u>12.5°</u> Type of Cladding: <u>light</u> / heavy Earthquake zone: <u>B</u> Storey in Roof space: <u>yes</u> / no	E = <u>3.0</u> B.U.'s/m²

3

FOR WIND	
Building Height: : <u>5.5</u> m Roof Height : : <u>5</u> m Storey Height : : <u>2.4</u> m Design Wind Speed : : <u>44</u>	W along = <u>64</u> B.U.'s/m W across = <u>54</u> B.U.'s/m

4

ROOF or BUILDING LENGTH	BL = <u>14.2</u> m
ROOF or BUILDING WIDTH	BW = <u>12.2</u> m
GROSS ROOF or BUILDING PLAN AREA	GPA = <u>142</u> m²

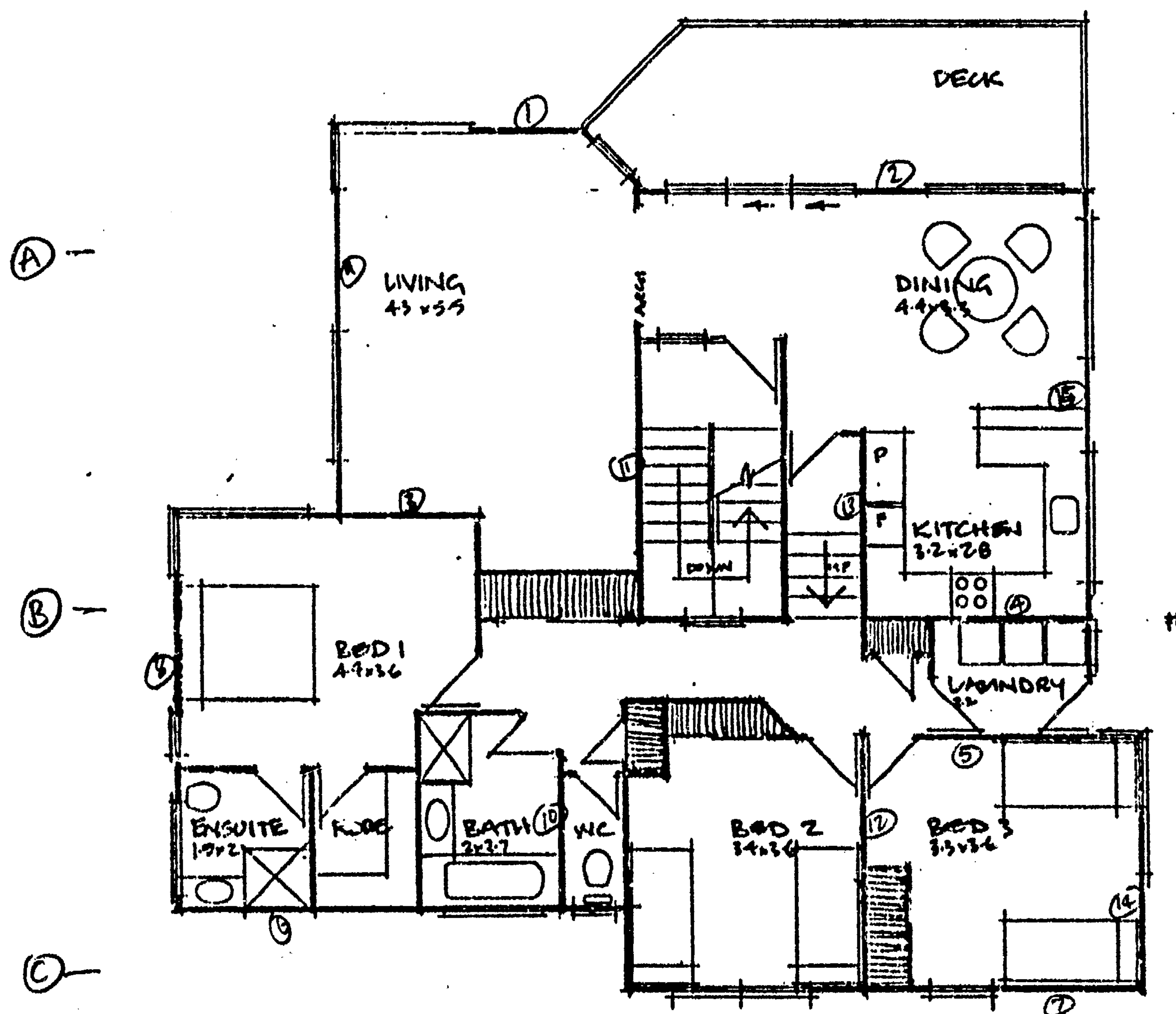
5

EARTHQUAKE LOAD (ACROSS and ALONG)	E x GPA = <u>3</u> x <u>142</u> = <u>426</u> B.U.'s
WIND LOAD: ACROSS	W x BL = <u>54</u> x <u>14.2</u> = <u>766</u> B.U.'s
WIND LOAD: ALONG	W x BW = <u>64</u> x <u>12.2</u> = <u>780</u> B.U.'s

ALONG									
1	2	3	4	5	6	7	8	9	10
						WIND		EARTHQUAKE	
LOCATION OF STOREY	Wall or Bracing Line	Minimum Required	Bracing Element Identification	Bracing Type	Length of Element (m)	Rating /m	B.U.'s Achieved	Rating /m	B.U.'s Achieved
FOUND	A	110	1	BR4	1.2	91	109	85	102
			2	BR4	1.0	91	91	85	85
SINGLE STOREY	B	70	3	G1B2	2.4	80	192	70	168
			4	G1B2	2.4	80	192	70	168
UPPER STOREY	C	140	5	G1B2	2.4	80	192	70	168
			6	G1B1	2.4	75	180	50	120
LOWER STOREY	D		7	G1B1	2.4	75	180	50	120
	E								
(Use one sheet for each storey)						Total Achieved	1136	Total Achieved	931
						Total Required	780	Total Required	426

ACROSS										
1	2	3	4	5	6	7	8	9	10	
LOCATION OF STOREY	Wall or Bracing Line	Minimum Required	Bracing Element Identification	Bracing Type	Length of Element (m)	WIND		EARTHQUAKE		
						Rating /m	B.U.'s Achieved	Rating /m	B.U.'s Achieved	
FOUND	M	110	8	G1B1	2.1	55	115	50	105	
			9	G1B1	2.1	55	115	50	105	
SINGLE STOREY	N		10	G1B2	2.2	75	165	60	132	
			11	G1B2	2.4	80	192	70	168	
UPPER STOREY	O		12	G1B2	2.4	80	192	70	168	
			13	G1B2	2.4	80	192	70	168	
LOWER STOREY	P		14	BR4	1.2	91	109	85	102	
			15	BR4	1.2	91	109	85	102	
(Use one sheet for each storey)	Q									
						Total Achieved	1189	Total Achieved	1050	
						Total Required	766	Total Required	426	

sketch design



upper level 142m²



Roughan
design

4 Del Mar Pl, New Plymouth PH/Fax 7587616

proposed new dwelling
45 GLAMIS AV.

1

59

20 JAN 1993

specification

project

proposed new dwelling

client

MR & MRS LES TROON
45 GLAMIS AV. BELL BLOCK

NEW PLYMOUTH DISTRICT COUNCIL
PLANS AND SPECIFICATIONS APPROVED FOR EXISTING SITING, COVERAGE
AND CONSTRUCTION, AS IN ACCORDANCE WITH ALL RELEVANT ACTS
REGULATIONS AND BY-LAWS ADMINISTERED BY THE NEW PLYMOUTH
DISTRICT COUNCIL.

PLANNING

PUBLIC HEALTH

BUILDING

THESE PLANS AND SPECIFICATIONS ARE THE PROPERTY OF
THE NEW PLYMOUTH DISTRICT COUNCIL AND MUST BE KEPT
ON SITE.

DATE



Roughan
design

1 Del Mar Pl, New Plymouth Ph/Fax 758-7414

Preliminary and general

The contractor shall provide all labour and materials - supply and maintain the required tools, plant, scaffolding etc. and generally complete the residence in the best trade manner in accordance with the true intent and meaning of the accompanying drawings and this specification taken separately or jointly.

Sub-contractors

This specification is subdivided into trade sections for the convenience of reference only and it shall not be construed that each trade section is an entire and separate contract. Every trade jointly and separately shall collaborate, wait on, assist and render all necessary assistance to complementary trades.

Insurance

Before commencing this contract, the contractor will effect an insurance with an approved company to cover any liability of the Owner for accidents or Workman's compensation for any accidental injury to any worker or death of same in the course of his employment, and the contractor will maintain such insurance until the completion of the job. The contractor will also insure the works and keep them similarly insured until they are delivered up, against loss or damage by fire in the joint names of the Owner and Contractor for the insurable value of the works executed.

Cost Increases

The building contract shall be on a fixed cost basis unless negotiated with client on acceptance of quotation.

Progress Payments

Progress payments shall be as written in the Agreement between the Builders, and the Owner.

By-Laws, Permits etc.

The contractor shall give all usual notices to the local authority, arrange for the inspection and testing of all work, and comply with the requirements of all local body by-laws; and NZS 3604 (1984). The cost of all buildings and other permits shall be included in the contract price. Where a road crossing is called for by the Local Authority, then any fees arising shall be the responsibility of the owner, and do not form part of the building contract. This also applies to sewer and water main connections.

Should any of the materials specified for this contract be unprocurable at the time of purchase, negotiations shall be made for the provision of substitutes to allow for work to proceed without delay. Before any such substitutes are included in the contract the approval of the Owner will be obtained. Any price differential resulting from the inclusion of the substitute must be agreed upon before the respective work is commenced. All materials placed by the Contractor upon the site of the proposed dwelling house and works and not included in the dwelling, including waste materials shall be the property of the Contractor and shall be removed by him within fourteen days after the completion.

Setting Out

The Owner will be responsible for showing the boundary pegs to the contractor to assist him in siting the building. Siting will be approved by the Owner before work commences.

Extra Work

No work may be carried out without the authority of the Owner in writing.

Site Access

Creating and metalling of site access suitable for heavy vehicles shall be the responsibility of the Owner if required by the Contractor.

P.C. (Prime Cost) Amounts

The Owner is reserved the right to select or purchase some items under a P.C. (Prime Cost) sum and the account will be adjusted accordingly on completion. Items thus affected in this contract are as follows: **GST INCLUSIVE**

wallpaper	PC	\$35.00 per roll
permit	PC	\$1500.00

Clearing of the Site

The site shall be cleared as required for the building work by the Contractor.

Ground Conditions

This contract and quotation is based on solid, satisfactory ground conditions, giving adequate bearing conditions exposed down to a depth of 450mm at lowest ground level of given house siting. Any extra foundations required shall be charged as an extra to the contract.

Excavation of Site

The site shall be excavated as required for the building work by the contractor

Back filling as required, scoria, and/or topsoil shall be the responsibility of the Owner. Scoria and field tile drains shall be the responsibility of the Owner. Any material required for backfilling, and not available on site, shall be supplied by the Owner.

Concretor

Concrete

Concrete shall be ordinary grade as specified in N.Z.S. 1900 Chap.6.2 i.e. concrete shall have a compressive strength of 17.5 mpa @ 28 days.

Concrete Floor Slab

Concrete floors shall comply with appendix E N.Z.S. 3604, but shall generally be 100 mm thick set on 668 steel mesh on 0.025 polythene on a max of 300 compacted hardfill. Finish to concrete floor to be suitable for laying of carpet and vinyl to traditional carpet and vinyl areas.

Foundations

Footings to house shall rest upon satisfactory ground conditions but a maximum of 300 below cleared ground level and shall consist of 2-D12 steel rods tied @ 600 CRS with 6mm stirrups incased in 250mm continuous poured concrete footing.

Carpenter

Protect and Clean

Throughout the works allow to protect all new work from damage from other trades, or inclement weather. Upon completion of work, allow to leave the entirety of the new work clean and ready for occupation. Leave site clean and free from all building rubbish. Co-operate with sub-trades, plumbing and electrical to build in specialist services and keep these concealed wherever possible.

Framing

Frame as shown, using 100 x 50 and 75 x 50 H1 framing @ 600 crs. All bracing and fixings to comply with NZS 3604.

DPC

Place a strip of 3 ply malthoid between all timber and concrete bearing surfaces.

Hardware

Items such as towel rails, soap holders, toilet roll holdres, mirrors etc., are allowed for by way of a PC sum of .

Stopping

Gib stop all interior gib walls using approved gib stopping methods and materials to a standard suitable for a ~~good~~ finish.

Shelving

Laundry Cupboards: One full depth solid fixed shelf 1700 off floor.

Linen cupboards and Store Cupboards: Bottom shelf 500 mm from floor level, and intermediate shelves at 450crs.

Wardrobe: Ex 200 x 25 loose laid shelf boards at 1.700 from floor level. Build one Pryda bronze finished hanging rail to bedroom wardrobe.

Skirting Board/Scotia

All skirting boards to be 60 x 10 single level customwood with 50mm gib cove scotia.

Soffit / Fascia

150 x 25 FASCIA, 600 wide 4.5mm Hardiflex soffits.

Internal Wall Lining

All walls to be lined with 9.5mm gib board. Fixed horizontally to manufacturers specification.

Shower Linings

Line walls to shower to height of 2.400 with Formica Aquapanel wallboard. Colour to owners choice.

Exterior Cladding

Clad total exterior with insulated

Insulation

To exterior walls: R1.4 batt insulation

To ceiling area: R1.8 batts

Ceilings

9.5mm Gib board on 75 x 40 ceiling battens @ 400 CRS to underside of trusses.

Roof Structure

Supply and fit gangnail trusses @ 900 crs in accordance with Manufacturers details. Bracing to roof as required by NZS 3604.

Garage Doors

Supply and fit Automatic Coloursteel Tiltadour to dimensions shown. Ex 25mm door jamb to suit.

Joiner

Interior Doors

All interior and wardrobe doors to be hollow core suitable for a paint finish.
Size 1980 x 760 or sizes shown. doors prehung complete with sylvan rimu traditional door furniture.
All jambs to be 25mm grooved borie pine.

Aluminium Joinery

Extent: Includes all windows, exterior doors complete with all hardware, locks, head flashings and the like for a first quality weather proofing.

Materials: Aluminium: Selected powdercoat finish. Clear glass throughout except if stated otherwise on plans.
Reveals: ~~pine liners~~ Refer window numbers and dimensions on plans.

Kitchen, Bathroom, Laundry etc - Joinery Fittings

Install and fit to schedule below:

- 1 - Dresser unit, corner cupboard, formica top
- 1 - Sink unit 3.500 long, formica top
- 1 - sink return unit, corner cupboard, formica top
- 1 - Tray cupboard unit 300 wide formica top
- 1 - Tub unit, 1 door 600 wide
- 2 - Vanity unit, 900 long, 3 doors, formica top
- 1 - Over cupboard 2.200 long

REFER DRAWINGS

Electrician

General

All installations shall be made in sound, safe, practical and workmanlike manner in conformity with practice, in accordance with the Wiring Regulations, 1980, and to the satisfaction of the local authority.

Mains

Allow P.C sum \$250 for underground mains cable.

Switchboard

Fix meter board where shown, complete with all necessary fittings. Enclose in metal cabinet.

Fuse Board

Shall be fitted where required by Local Power Authority.

Lights

Provide light points complete with lamps and shades at positions as shown on electrical plan.
PDL 500 SERIES

Power Points

Provide power points at positions as shown on plan.
PDL 500 SERIES

Electrical Range

Install range to instructions with control switch within easy reach of range.

Hot water

Wire and connect hot water cylinder, element and thermostat supplied and fitted by plumber where appropriate.

Light Fittings

Are not included in the contract price.

Electrical Heating

Where listed on fitting schedule, provide and connect.

Extra Points

When a Client so desires, extra light and power outlets included above the number quoted for, shall be charged at current rates.

Fitting Schedule

- 19 Light Outlets
- 1 Single Power Outlet
- 13 Double Power Outlet
- 1 Shaver Outlets
- 3 2 Way Switch Sets
- ~~Exterior Watertight Ball Fittings~~
- 1 T.V Outlets
- 1 Range Circuit
- ~~HWC Circuit~~
- ~~900mm Fluorescent Wall Lights~~
- 1 Waste Disposer, Range Hood Plugs,
- 2 Phone Outlets

CONFIRM OFF PLANS

Roofing

To all roof areas complete with all necessary accessories to manufacturers specifications.

Type: *ARE MEMBERS & DRAIN 195*

Plumbing and Drainage

Plumber

All work shall be carried out in accordance with the drawings, specifications, Local Authority and Public Health Regulations. All materials shall be best of their respective kinds. Water pipes and tubes shall be set out in straight runs of even gradients, avoiding all places where air locks are likely to occur.

Downpipes

Fix P.V.C Marley downpipes

Wastes

Join W.C pan to drain above the level of the floor with a spun yarn ring sealed with mastic or other approved material which will provide a non-rigid gas tight joint. Fit all basins with 31mm P.V.C traps and waste pipe to floor level. All traps and wastes shall be P.V.C

Cold Water Supply

Lay cold water supply from the point in P.V.C pipe buried in ground with cemented joints.

Hot Water

Provide and fix ^{VULCAN EXTERIOR GAS HWC} 180 litre mains pressure hot water cylinder, complete with lagging use copper supply

Stormwater

Stormwater drainage shall be disposed of in soak holes. Drainage pipe shall be 100mm Novaflo or similar and shall be buried to a minimum depth of 300mm below natural ground level.

Drainage

The whole of the drainage work shall be carried out in accordance with the by-laws of the local authority and to the satisfaction of the inspectors. Provide all fittings necessary to complete the work and lay all drains.

Plumbing Schedule

HMC 493 taps to sink with champagne tops
LP2 stainless steel tub with separate waste
Automatic Washing machine taps
180L mains pressure electric HWC
Coloured Clearlite VB10 basins and Pacific bath
HMC 623 basin taps with champagne tops
HMC 493 bath taps with champagne tops
Topliss shower mixer with adjustable rose
2 soakholes connected to downpipes
White McSkimmings WC pan with white Dux Twinline cistern and seat
Water and Sewer main allowance: 20m each total

CONFIRM WITH OWNER

Painting and Paperhanging

All painting and paperhanging, interior and exterior including labour, materials etc has been included and shall be carried out in good tradesman like manner using top quality materials to ensure first class finish.

Pre-Primed Fascia Board: Apply 1 coat undercoat, 1 top coat, colour to owners choice
Verandah Posts: Apply 1 coat primer, 1 undercoat, 1 top coat
Interior Gib: Apply 1 coat sealer, 2 top coats
Finishing Timbers: Apply 1 coat primer, 1 undercoat, 1 top coat, colour to owners choice
Interior Hardboard Doors: Apply 1 coat sealer, 1 undercoat, 1 top coat, colour to owners choice
Interior of Wardrobes and shelves: Apply 2 coats acrylic
Exterior Cladding: Apply 2 top coats, as required for materials specified

PL SUM \$35 / ROLL WALL PAPER