BUILDING CERTIFIERS
DK Building Certifiers Pty Limited

Address: Suite 4 470 Sydney Road
Balgowlah NSW 2093
Tel: 02 9400 2335
Fax: 02 9400 2405
Email: info@dkbuilding.com.au
Web: www.dkbuildingcertifiers.com.au

3/09/2007

The General Manager
Pittwater Council
PO Box 882,
Mona Vale NSW 1660

Dear Sir / Madam,

353 Barrenjoey Road, Newport - Alterations & additions to shop top housing
Development application No. N0389/06
Construction certificate No. 07090-CC

DK Building Certifiers Pty Limited has issued a Construction Certificate under Part 4A of the Environmental Planning and Assessment Act 1979 for the above premises.

Please find enclosed the following documentation:

- Construction Certificate No. 07090-CC
- Copy of application for Construction Certificate.
- Documentation used to determine the application for the Construction Certificate as detailed in Schedule 1 of the certificate.
- Cheque for Council's registration fee.

Our client has been advised of the necessity to submit to Council the notice of commencement of building works 48 hours prior to the commencement of works.

Should you need to discuss any issues, please do not hesitate to contact the Project Building Surveyor Damian O'Shannassy.

Yours Sincerely

R 223712
$530.00 4/9/07

Damian O'Shannassy
Accredited Building Surveyor

encl

SCANNED
11 SEP 2007
PITTWATER COUNCIL

DK BUILDING CERTIFIERS
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CONSTRUCTION CERTIFICATE 07090-CC (COMMERCIAL)

Issued under Part 4A of the Environmental Planning and Assessment Act 1979 Sections 109C and 81A(5)

APPLICANT DETAILS

Applicant:	John David
Address:	353A BARRENJOEY ROAD NEWPORT NSW 1660
Contact Details:	**Phone:** 9997 4133 **Fax:** 9979 1283

OWNER DETAILS

Name of person having benefit of the development consent:	Antonuzza & Nancy Formica for Estate of V Formica
Address:	353 BARRENJOEY ROAD NEWPORT NSW 2107
Contact Details:	**Phone:** 9999 4221 **Fax:** 9979 1283

RELEVANT CONSENTS

Consent Authority/Local Government Area:	Pittwater Council
Development Consent No:	N0389/06 **Date issued:** 9/02/2007

PROPOSAL

Address of Development:	353 Barrenjoey Road Newport NSW 2107
Building Classification:	2,5
Type of Construction:	A
Scope of building works covered by this Notice:	Alterations & additions to the existing shop top housing building
Value of Construction Certificate (Incl GST):	$310,000.00
Plans and Specifications approved:	Schedule 1
Fire Safety Schedule:	Schedule 2
Exclusions:	
Critical stage Inspections;	See attached Notice
Conditions (Cls 187 or 188 of EPA Regs 2000):	

CERTIFYING AUTHORITY

Certifying Authority:	Damian O'Shannassy
Accreditation Body:	Building Professionals Board
	Registration No. BPB0306

I, Damian O'Shannassy as the certifying authority, certify that the work if completed in accordance with the plans and specifications identified in Schedule 1 (with such modifications verified by the certifying authority as may be shown on that documentation) will comply with the requirements of the Environmental Planning & Assessment Regulation 2000 as referred to in section 81A(5) of the Environmental Planning and Assessment Act 1979.

Dated: 3/09/2007

Damian O'Shannassy
Accredited Certifier No BPB0306
NB: Prior to the commencement of work S81A (2) (b) and (c) of the Environment Planning and Assessment Act 1979 must be satisfied.

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Balgowlah NSW 2093
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Email: info@dkbuilding.com.au
Web: www.dkbuildingcertifiers.com.au

SCHEDULE 1: APPROVED PLANS AND SPECIFICATIONS

1. Endorsed Architectural plans

PREPARED BY	DOCUMENT	DRAWING NO	REV	DATE
Perera Design Pty Ltd	Floor plans, sections	CC06/02/101	D	10/08/2007
Perera Design Pty Ltd	Elevations - details	CC06/02/102	C	10/08/2007
Perera Design Pty Ltd	Wall, roof, amenities details, door/window schedul	CC06/02/103	B	9/08/2007

2. Endorsed Structural plans

PREPARED BY	DOCUMENT	DRAWING NO	REV	DATE
Donovan Designs Pty Ltd	Structural Certificate	E71342		9/08/2007
Donovan Designs Pty Ltd	Drawings & Notes	71342-00 - 71342-10	B	26/04/2007

3. Endorsed Other documents

PREPARED BY	DOCUMENT	DRAWING NO	REV	DATE
Perera Design Pty Ltd	Specification of Building works			20/07/2007
Pittwater Council	Builders deposit	220870	$1085.00	10/08/2007
Sydney Water	Stamped approved	3400436		10/08/2007
Perera Design Pty Ltd	DA Conditions Compliance letter			
Application Solutions	BCA Compliance report			1/08/2007
Accessibility Solutions (NSW) Pty Ltd	Assess & adaptability report			7/07/2006
Perera Design Pty Ltd	Materials colours			5/07/2006
Adair Fire & Emergency Consultants	Existing & proposed Fire Safety Measures			29/08/2007
Construction Certificate application				8/08/2007
Owners Authorisation &	Appointment of Principal Certifying Authority			8/08/2007

Pittwater Council

OFFICIAL RECEIPT

10/08/2007 Receipt No 220870

To V FORMICA ESTATE

353A BARRENJOEY RD
NEWPORT

Applic	Reference	Amount
GL Re	QLSL-Buil 1 X N0389/06	$1,085.00

Total:	$1,085.00
Amounts Tendered	
Cash	$0.00
Cheque	$1,085.00
Db/Cr Card	$0.00
Money Order	$0.00
Agency Rec	$0.00
Total	$1,085.00
Rounding	$0.00
Change	$0.00
Nett	$1,085.00

Printed 10/08/2007 4:09:56
Cashier NCulli

LONG SERVICE BUILDING & CONSTRUCTION

See reverse side for instructions

LEVY PAYMENT FORM

FORM NO.

OFFICE USE ONLY

PLEASE PRINT ALL DETAILS USING CAPITALS

Surname (if person) or Company/Organisation name: VFORMICA ESTATE

Given names (if person):

ABN (if applicable):

POSTAL ADDRESS
No. and street or PO Box: ~~PO BOX 3~~ 353A BARRENJOEY RD

Town/suburb: NEWPORT

State: NSW Postcode: 2106 Bus. hours phone: 0299974133

Number and street: 353 BARRENJOEY RD

Town/suburb: NEWPORT

State: NSW Postcode: 2106

Estimated start date: D 01 M 11 Y 2007 Estimated finish date: D 30 M 08 Y 2008

Local Council Area: PITTWATER

[1] DA/CC/CDC No.: N0389/06

Estimated value of work (see note on back): $ 3,100,000.00 Levy payable $ 1,085.00

[1] If you have provided a CC above, please provide DA number here:

Signature of Officer/Private Certifier _____ Date D M Y

Name of Officer/Private Certifier _____ Business hours phone

Department/Authority:

Contract/DA No (circle which): Contract amount $

Levy payable $

Contact person (Print) _____ Phone number

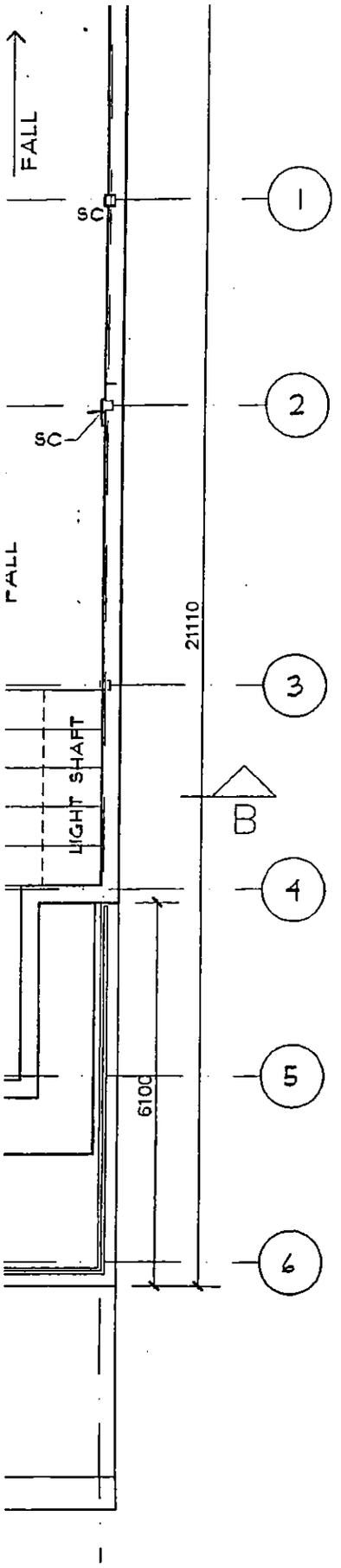
Contact person (Signature) _____ Date D M Y

Any false or misleading information provided on this form may result in prosecution under Section 58A.
I hereby declare that the information provided on this form is true and correct to the best of my knowledge

Name JOHN DAVIS Signature _____ Date D ~~25~~ 10 M 08 Y 2007

Exemption Approval Certificate No.

Building and Construction Industry Long Service Payments Corporation, Locked Bag 3000, Central Coast MC NSW 2252
Tel: 13 14 41 Fax: (02) 9287 5685 Email: levy@lspc.nsw.gov.au www.lspc.nsw.gov.au ABN 93 646 090 808



SYDNEY WATER
APPROVED

1. Position of structure in relation to Sydney Water's assets is satisfactory.
2. Connections to Sydney Water sewer/water services may only be made following the issue of a permit to a licensed plumber/drainer.
3. It is the owner's responsibility to ensure that all proposed fittings will drain to Sydney Water's sewer.
4. Any Plumbing and/or Drainage Work to be carried out in accordance with the Sydney Water Act 1994, AS 3500 and the NSW Code of Practice.
5. Gullies, Inspection Shafts and Boundary Traps shall not be placed under any Roof, Balcony, Verandah, Floor or other cover unless otherwise approved by Sydney Water.

Property No. 3400436

Reece, Mona Vale
Quick Check Agent on behalf of
SYDNEY WATER

reece 10/8/07

PITTWATER COUNCIL
APPROVED DEVELOPMENT CONSENT PLANS

AMENDED FOR COUNCIL

DATE	AMENDMENT	NO
11/10/06	AMENDED TO COUNCIL REQUIRMENTS LETTER 5/10/06	A

NOTE: THESE PLANS MUST BE READ IN CONJUNCTION WITH THE CONDITIONS OF DEVELOPMENT CONSENT

NOTE
ALL DIMENSIONS MUST BE VERIFIED ON SITE PRIOR TO FABRICATION OF ANY ITEM OR CONSTRUCTION OF ANY WORK DO NOT SCALE OFF DRAWING

PROJECT
PROPOSED ALTERATIONS AND ADDITIONS AT:
353 BARRENJOEY RD. NEWPORT

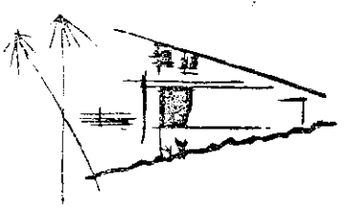
DRAWING TITLE
FLOOR PLANS, SECTIONS

CLIENT
N. AND A. FORMICA
AS TRUSTEES FOR THE ESTATE OF THE LATE V. FORMICA
PO BOX 1423 MONA VALE NSW 2103

PROJECT CONSULTANTS
PERERA DESIGN P.L
39 wallumatta rd newport 2106
ph 02 9999 0196 fax 02 9979 5707 m 0407 017 228
email pdesign@ozemail.com.au

SCALE	DRAWING NUMBER	SHEET NO	SET OF	ISSUE
1:100 AS SHOWN	DA 06/02/101	01	02	A
PLOT DATE 11/10/06	CAD FILE 06 02 101.DC5	DRAWN AEB	CHECKED NP	

pereira design
residential commercial interiors



ACTIVITY REPORT 01

Re: PROPOSED ADDITIONS AND ALTERATIONS AT 353 BARRENJOEY RD NEWPORT NSW
DA No N0389/06
YOUR REF 07090

To	Copy	Company	Fax
☐	☐ Mr. Damian O Shannassy	DK Building Certifiers Pty Ltd	02

From: Nalin Perera Date: Ref: 0602 Pages include this sheet:

COMPLIANCE WITH THE FOLLOWING DA CONDITIONS DA No 0389/06

1. √Completed and attached
2. √Supplied including copy for you file
3. √Attached
4. Refer item (10) Supplied and lodged
5. Supplied and lodged
6. Supplied and lodged
7. Supplied and lodged
8. Supplied and lodged
9. Supplied and lodged
10. Documentation to be let for competitive tender and will advise before commencement of any works on site inclusive of application to commence work

B1
Condition is satisfied as there will be no building construction work carried out to the ground floor structure
B2
Condition is satisfied as there will be no building construction/structural work carried out below the flood level
b) Condition is satisfied as there will be no building construction/structural work carried out below the flood level
c) Condition is satisfied as there will be no building construction/structural work carried out below the flood level
d) Condition is satisfied as there will be no building construction/structural work carried out below the flood level
e) Condition is satisfied as there will be no building construction/structural work carried out below the flood level

B3
Detail noted on drawing storm water shall be connected to existing system
B4
Agreed

p: 02 9999 0196 m: 0407 017 228 f: 02 9979 5797 e: pereradesign@bigpond.com
w: www.pereradesign.com a: 39 wallumatta road newport nsw 2106

B5
Noted in specifications
B6
Refer to drawing where noted and described
B7
Noted in specifications
B8
Noted and agreed refer schedule of finishes
C4
Noted on drawing smoke detectors and heat detectors noted on drawing
C5
Attached certification from engineer
C6
Attached certification
C7
Attached schedule of finishes

Yours sincerely
PERERA DESIGN PTY LTD

Nalin Perera
file ref: fax/memo.act01.doc

Proposed
Extension to Residential Unit above Shop

535 Barrenjoey Road
NEWPORT NSW

Compliance Report

Building Code of Australia
Section J Energy Efficiency

August 2007

Application Solutions
Level Two – 41 Rawson Street
EPPING NSW 2121

Telephone 02 9868 4339 Facsimile 02 9868 2655

Building Code of Australia Section J – Energy Efficiency
Compliance Report

This report has been prepared by:
Application Solutions
Suite 21, 41 Rawson Street
EPPING NSW 2121
Telephone: 9868 4339
Facsimile: 9868 2655

The reader's attention is drawn to the following important information:

Disclaimer

Scope Limitations: This report is to assess the proposed development (named above), with reference to the documents listed in the report, with respect to compliance with the Building Code of Australia Section J – Energy Efficiency provisions and report the results of the assessment to the client.

Exclusive Use: This report has been prepared for the exclusive use of Application Solutions' client to meet their particular objectives and by its nature is limited in scope. The material contained in this report should not be used for any other purpose or by other persons or entities without contacting Application Solutions. No warrantee is given in relation to the material in this report used for other purposes or by other persons or entities without the consent of Application Solutions.

TABLE OF CONTENTS:

1 Introduction

Application Solutions has been engaged to provide a compliance assessment of the proposed development with respect to the Building Code of Australia (BCA), Section J – Energy Efficiency.

The assessment is based on the Deemed-to-Satisfy (DTS) provisions of the BCA (NSW Appendix).

1.1 Proposed Development

The proposed development comprises an extension to an existing residential unit located above a shop. The extension will create a new floor level above the existing unit.

The proposed development has been classified a Class 2 building.

The relevant climate zone is Zone 5

The designer for the proposed development is:

Perera Design Pty Ltd
Newport

1.2 Assessment Outline

In NSW the National provisions of the BCA Section J have been replace with the NSW Appendix. Class 2 buildings in NSW require a Basix assessment at DA stage. The BCA provisions are designed to support this assessment and therefore exempt Class 2 buildings from many of the National Section J provisions.

This Assessment examines each Part of the relevant NSW Section J provisions in turn. and provides an opinion on whether the Part applies in this case and if so whether the Deemed–to-Satisfy provisions have been met. In some cases further clarification is specified in the form of notes to be included on the plans and/or specifications.

A summary of building elements that do not meet the Deemed-to-Satisfy provisions is provided at the conclusion of this report. These matters will need to be addressed and rectified before a Construction Certificate is granted.

In the preparation of this assessment, reference was made to the following plans provided by the designer:

Floor Plans, Sections	CC 06/02/101 C
Elevations, Details	CC 06/02/102 B
Details	CC 06/02/103 A

2 Assessment

2.1 NSW Part J(A)1 – Building Fabric

NSWJ(A)1.1 Application of Part

This part only applies to thermal insulation where the DA specifies that the insulation is to be provided as part of the development. The provisions for thermal breaks also applies.

NSWJ(A)1.2 Thermal Construction General

(a) This clauses references the National provisions J1.2 as modified for NSW. In areas that are required (ie required by the DA-Basix) to be insulated, the insulation must be installed in accordance with AS/NZS4859.1 which should be noted on the plans and specifications.

The relevant note to include on plans is as follows:

Insulation must comply with AS/NZS 4859.1 so that it-

(i) abuts or overlaps adjoining insulation; and

(ii) forms continuous barrier....and

(iii) does not effect the safe or effective operation of a service or fitting

Reflective Insulation must be installed with—

(i) the necessary airspace to achieve the required R-Value between a reflective side of the reflective insulation and a building lining or cladding; and

(ii) the reflective insulation closely fitted against any penetration, door or window opening; and

(iii) the reflective insulation adequately supported by framing members; and

(iv) each adjoining sheet of roll membrane being—
(A) overlapped not less than 50 mm; or
(B) taped together.

Bulk insulation must be installed so that—

(i) it maintains its position and thickness, other than where it crosses roof battens, water pipes, electrical cabling or the like; and

(ii) in a ceiling, where there is no bulk insulation or reflective insulation in the wall beneath, it overlaps the wall by not less than 50 mm.

NSWJ(A)1.2(a) Action: If insulation was required in DA (Basix) Add note to plans/specifications as shown.

(b) A thermal break must be provided between external cladding and framing

(i) for metal deck roof with metal purlins to which the ceiling lining is fixed directly underneath in accordance with the National BCA provisions of J1.3(d). This clause requires a thermal break between the metal cladding and metal framing (where the ceiling is fixed directly beneath) of at least R0.2.

(ii) for a metal framed wall that is required to achieve a total R-value and has external cladding of weather boards, fibre cement sheeting or similar minimum thickness and R-value in asccordnace with national BCA provisions of J1.5(e) This clause requires a thermal break between the cladding and metal framing of at least R0.2.

NSWJ(A)1.2(b) Action: In situations where thermal breaks are required, show on plans/specifications.

2.2 NSW Part J(A)2 – Building Sealing

NSW J(A)2.1 Application of Part

This Part applies to a Class 2, building.

NSW J(A)2.2 Compliance with BCA provisions

Class 2 buildings must comply with J3.2 to J3.6 inclusive, of the National BCA provisions.

J3.2 Chimneys and Flues

No chimneys or flues are planned in the proposed development therefore this clause is not applicable.

J3.3 Roof lights

(a) As the proposed development not being air-conditioned and is in Climate Zone 5, this clause is not applicable.

(b) This clause applies only if (a) above applies in which case it is not applicable to the proposed development.

J3.4 External windows and doors

J3.4(a) As the proposed development is not being air-conditioned, this clause is not applicable.

J3.4(b) Is only applicable if (a) above is applicable

J3.4(c) Is only applicable if (a) above is applicable

J3.5(d) As the proposed development is not being air-conditioned, this clause is not applicable.

J3.5 Exhaust fans

J3.5 does not apply to this development as the only exhaust fans in the proposed development serve non air-conditioned spaces.

J3.6 Construction of roofs, walls and floors

J3.6(a) As the proposed development not being air-conditioned and is in Climate Zone 5, this clause is not applicable.

J3.6(b) This clause applies only if (a) above applies in which case it is not applicable to the proposed development.

J3.6(c) Is only applicable if (a) above is applicable.

2.3 NSW Part J(A)3 – Air-conditioning and Ventilation Systems

NSW J(A)3.1 Application of Part

Applies to a Class 2 building. No air-conditioning, mechanical ventilation, heating or cooling system or ancillary exhaust system is planned as part of the proposed development therefore this clause is not applicable.

2.4 NSW Part J(A)4 – Hot Water Supply

NSW J(A)4.1 Application of Part

Applies to Class 2 buildings.

NSW J(A)4.2 Compliance with BCA provisions

Class 2 building must comply with the National BCA provisions of J7.2

J7.2 Hot water supply

This clause relates to *hot water supply for food preparation and sanitary purposes which must be designed and installed in accordance with Section 8 of AS/NZS 3500.4.*

J7.2 Action: Add note to plans/specifications as shown.

2.5 NSW Part J(A)5 – Access for Maintenance

NSW J(A)5.1 Application of Part

This part applies to Class 2 buildings except within a sole occupancy.

J(A)5.2 Access for Maintenance

The following clause applies where relevant. However, the proposed development does not include serviceable items as listed.

Access for maintenance must be provided to—
(a) all *services* and their components, including—
(i) time switches and motion detectors; and
(ii) room temperature thermostats; and
(iii) plant thermostats such as on boilers or refrigeration units; and
(iv) outside air dampers; and
(v) reflectors, lenses and diffusers of light fittings; and
(vi) heat transfer equipment; and
(b) adjustable or motorised shading devices.

3 Outstanding Items Check List

A suggested action sheet is included on the following page.

4 Suggested Action Sheet

Notes to add to Specification:

Insulation must comply with AS/NZS 4859.1 so that it-
(i) abuts or overlaps adjoining insulation; and
(ii) forms continuous barrier....and
(iii) does not effect the safe or effective operation of a service or fitting

Reflective insulation must be installed with—
(i) the necessary airspace to achieve the required R-Value between a reflective side of the reflective insulation and a building lining or cladding; and
(ii) the reflective insulation closely fitted against any penetration, door or window opening; and
(iii) the reflective insulation adequately supported by framing members; and
(iv) each adjoining sheet of roll membrane being—
(A) overlapped not less than 50 mm; or
(B) taped together.

Bulk insulation must be installed so that—
(i) it maintains its position and thickness, other than where it crosses roof battens, water pipes, electrical cabling or the like; and
(ii) in a ceiling, where there is no bulk insulation or reflective insulation in the wall beneath, it overlaps the wall by not less than 50 mm.

Thermal Breaks
A thermal break must be provided between external cladding and framing
Roof
for metal deck roof with metal purlins to which the ceiling lining is fixed directly underneath in accordance with the National BCA provisions of J1.3(d). This clause requires a thermal break between the metal cladding and metal framing (where the ceiling is fixed directly beneath) of at least R0.2.
Walls
for a metal framed wall that is required to achieve a total R-value and has external cladding of weather boards, fibre cement sheeting or similar minimum thickness and R-value in asccordnace with national BCA provisions of J1.5(e) This clause requires a thermal break between the cladding and metal framing of at least R0.2.

Hot Water Supply
A hot water supply for food preparation and sanitary purposes which must be designed and installed in accordance with Section 8 of AS/NZS 3500.4.

accessibility solutions (NSW) PTY LTD

RESIDENTIAL SHOPTOP DEVELOPMENT
SECOND FLOOR ADDITION
359 BARRENJOEY ROAD
NEWPORT
7TH JULY 2006

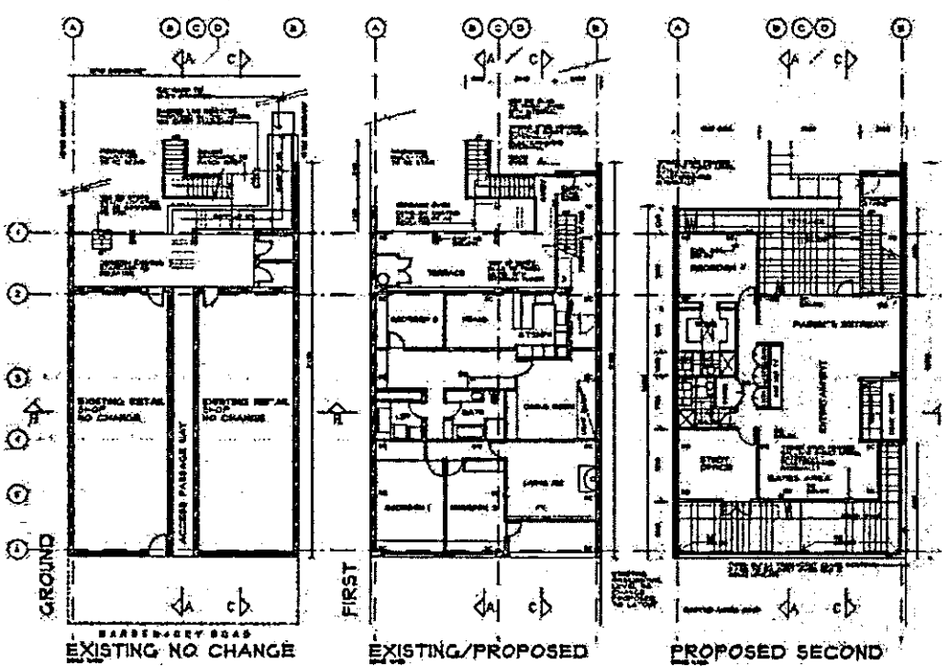
This report has been prepared in consideration of the Pittwater 21 DCP pertaining to the accessibility and adaptability requirements for shoptop housing. In particular, Section C1.9 of the DCP which requires 25% of dual occupancy units to comply with AS4299 to class B.

However, the development is a second floor addition to a single occupancy dwelling which indicates that Section C1.9 does not apply to this development application.

It is also noted that the Variations clause of Section C1.9 does not mandate compulsory access and adaptability requirements to single occupancy dwellings.

Nonetheless the proposed works include;

- A 1:14 ramp from the ground floor entry level off Barrenjoey Road accessway to the rear yard area; and
- A new stairway with a chair lift installed to accommodate enhanced access for residents with mobility restrictions.



Accessibility Solutions (NSW) PTY LTD ABN 20 105 200 128 | 467 Beauchamp Road MAROUBRA NSW 2035
Tel: 9661-1945 | Fax: 9661-1982 | Mob: 0417-467-007 | Email: markrelf@bigpond.com

With regard to the internal design of the first and second floor areas the plans show enhanced circulation space at the first floor foyer and corridor to the main living, bedroom and bathroom areas of the premises to suit people with mobility restrictions.

The second floor addition consists of an additional bedroom, study and living areas, which is intended for family carer's accommodation.

Therefore, in my opinion the development is consistent with the intent of P21 DCP - C1.9 in terms of enabling enhanced accessibility to residential development.

Part – C1.9 Accessibility

- *The community's lifecycle housing needs are met within Pittwater through well designed adaptable housing.*
- *All members of the community enjoy equitable access to buildings to which the general public have access.*
- *Housing for older people and people with a disability are accessible, adaptable and safe.*
- *Equitable access in the public domain. (S)*

Development to which this control applies

Specified Residential Development

- *Dwelling house (new) Detached dual occupancy*
- *Dwelling house (alterations & additions) Multi-unit housing*
- *Attached dual occupancy Shop-top housing (residential portion only)*

Controls

The design of residential development shall meet the criteria of AS4299-1995: Adaptable Housing as follows:

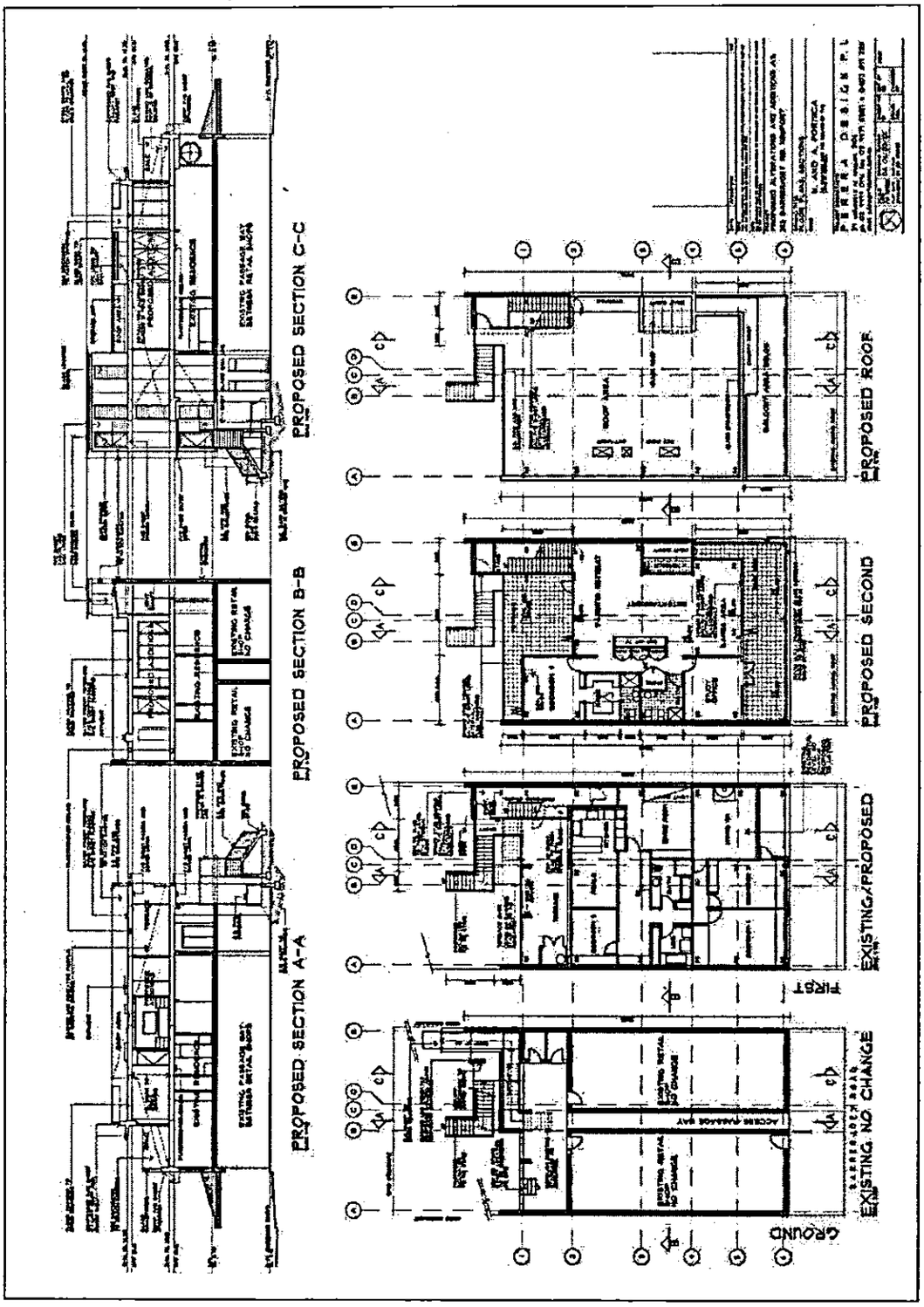
Development	***Percentage (%) of adaptable units (rounded up)***	***Minimum Class***
Multi-unit housing, residential flat building, group building and boarding house	*50%*	*Class B*
Shop-top housing	***25%***	***Class B***
Within Sectors 5 and 8, Warriewood Valley Land Release	*25%*	*Class B*
Within Sector 3, Warriewood Valley Land Release	*24%*	*Class B*
Within Warriewood STP Buffer Area	*50%*	*Class B*
SEPP No. 5 – Housing for Older People and People with a Disability	*50%* *50%*	*Class A* *Class B*

The design of all other residential development to meet the criteria of AS 4299-1995: Adaptable Housing is encouraged.

Development	Percentage (%) of adaptable units (rounded up)	Minimum Class
Development shall include the design and construction of works in the public domain to ensure accessibility for the full frontage of the site to any public road and to ensure access to the site from the public domain. ***Variations*** *Council may consider a variation to the control relating to the public domain where the development is single dwelling or dual occupancy.*		

Mark Relf
Access Consultant (ACAA)
7th July 2006

Accessibility Solutions (NSW) PTY LTD ABN 20 105 200 128 | 467 Beauchamp Road MAROUBRA NSW 2035
Tel: 9661-1945 | Fax: 9661-1982 | Mob: 0417-467-007 | Email: markrelf@bigpond.com



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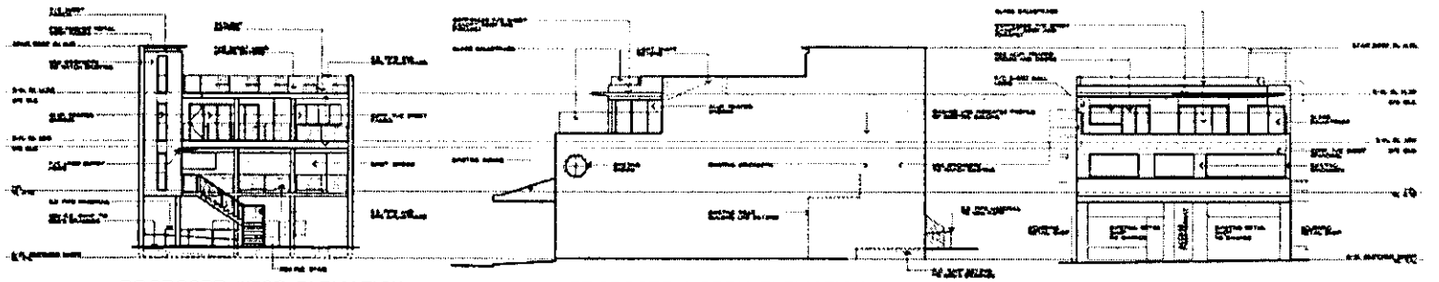
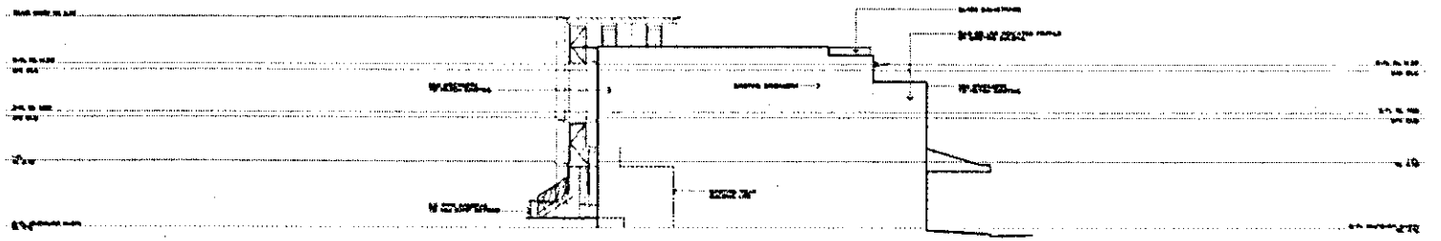


PROPOSED WEST ELEVATION

PROPOSED NORTH ELEVATION

PROPOSED EAST ELEVATION



PROPOSED SOUTH ELEVATION

PROPOSED ALTERATIONS AND ADDITIONS AT:
383 BARRENJOEY RD NEWPORT

FLOOR PLANS, SECTIONS

N. AND A. FORTICA

PERERA DESIGN P. L

accessibility solutions (NSW) PTY LTD

CONSULTANCY PROFILE & STATEMENT OF EXPERTISE

Accessibility Solutions consultancy offers a range to services to provide advice for clients to develop new and modify existing buildings, facilities and services to be accessible to people with disabilities to comply with legislation and regulations relevant to people with disabilities.

Relevant legislation and regulations that underpins advice includes the Disability Discrimination Act (DDA) Building Code of Australia, Australian Standards 1428, HREOC Advisory Notes on Premises, DDA Transport Standard, State Environment Planning Policy No. 5 Housing for Older People or People With a Disability (SEPP 5) / Seniors Living Policy, SEPP 65 – Residential Flat Buildings Design Code and various local government DCP's.

The scope of services provided by Accessibility Solutions includes:

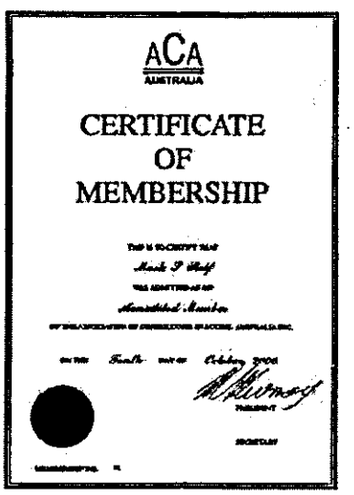
- Plan Appraisals and design advice
- Access Reports for development applications and construction certificates
- Expert Reports for Court evidence
- Access Auditing of existing buildings, facilities, transport conveyances and infrastructure
- Policy and document reviews and development of Disability Action Plans
- Staff training in access auditing

The services consider issues concerning people with all types of disability including; physical; vision; hearing, intellectual and other cognitive impairments that may affect access for people with a disability consistent with the Disability Discrimination Act.

As principle consultant Mark Relf has considerable experience and expertise in a wide range of access related projects and is a recognised Access Adviser approved by the NSW Ageing and Disability Department and has attained accreditation with the Association of Consultants in Access Australia for the purposes of providing advice concerning access to the built environment and services for people with disabilities.

His expertise has been gained over 20 years working in management and advocacy roles within the disability sector and since 1994 providing advice to clients on access issues. Mark also participates on various key committees concerning access for people with disabilities. His qualifications and affiliations are:

- Accredited Member of the Association of Consultants in Access Australia and Committee of Management member.
- Accredited Member of the Access Institute of NSW.
- Member, Standards Australia ME/64 Committee responsible for the AS1428 suite and AS4299 – Adaptable Housing.
- Member, NSW Heritage Office's – Fire, Access and Services Advisory Panel.


ACA
AUSTRALIA

CERTIFICATE
OF
MEMBERSHIP

Accessibility Solutions (NSW) PTY LTD ABN 20 105 200 128 | 467 Beauchamp Road MAROUBRA NSW 2035
Tel: 9661-1945 | Fax: 9661-1982 | Mob: 0417-467-007 | Email: markrelf@bigpond.com

PERERA DESIGN

PROJECT: PROPOSED ALTERATIONS AND ADDITIONS.
AT 353 BARRENJOEY RD NEWPORT.

EXTERNAL BRICK WALLS
MATCH EXISTING.

Sahara Sand 24B-2T

EXTERNAL WALL CLADDING.
NORTH, EAST. WEST ELEVATIONS.

WATTYL.

Gray Mood LTB

DOOR AND WINDOW FRAMES. POWDER
COATED ALUMINIUM.

Snuggle Pie D

EXTERNAL SOLID CORE
ENTRY DOOR OPTIONAL.

COLOURS MAY VARY
DEPENDING ON AVAILABILITY
AT TIME OF CONSTRUCTION.

White Watsonia • W

ALL CANOPY
EXTENSIONS + SOFFITS.

13. JULY. 2006.

perera design.

ADAIR
FIRE & EMERGENCY CONSULTANTS

Unit 5A, 188 Canterbury Road,
CANTERBURY NSW 2193

PO Box 145
CANTERBURY NSW 2193

Phone: (02) 9787 5177
Fax: (02) 9787 5153

Web: www.adairfire.com.au
Email: admin@adairfire.com.au

EXISTING FIRE SAFETY MEASURES
535 BARRENJOEY ROAD NEWPORT NSW

MEASURE	LOCATION	STANDARD OF PERFORMANCE
Portable extinguisher	Baker	AS 2444-2001
Fire blanket	Baker	AS 2444-2001
Emergency lighting	Baker	AS 2293.1-1998
Exit signage	Baker	AS 2293.1-1998
Air handling system	Baker	AS/NZS 1668.1-1998
Smoke hazard management	Baker	AS/NZS 16678.1-1998
Egress	Throughout	Div 7 EP&A Regs 2000 Clear of obstructions
Smoke dampers	Baker	AS/NZS 1668.1-1998

PROPOSED FIRE SAFETY MEASURES TO BE INSTALLED

MEASURE	LOCATION	STANDARD OF PERFORMANCE
Portable extinguisher	Baker & Butcher	AS 2444-2001
Fire blanket	Baker & residence	AS 2444-2001
Emergency lighting	Baker & Butcher	AS 2293.1-2005
Exit signage	Baker and Butcher	AS 2293.1-2005
Air handling system	Baker	AS/NZS 1668.1-1998
Smoke hazard management	Residence Baker	AS 3786-2005 AS/NZS 1668.1-1998
External wall wetting drencher system	External northern wall of proposed extension	AS 2118-1999
Egress	Throughout	Div 7 EP&A Regs 2000 Clear of obstructions
Smoke dampers	Baker	AS/NZS 1668.1-1998

MAINTENANCE SHEDULES REQUIRED TO BE IN PLACE.

Referenced Standards	Equipment	Minimum Intervals
AS 1851.- 2005 Table 15.4.1	Portable Extinguishers	6 Monthly or Annually Log book
AS 1851-2005 Table 16.4	Fire Blankets	6 Monthly Log book
AS 1851-2005 Table 18.4.1.11	Management Procedures for Maintaining the Fire & Smoke Control Features of Air Handling Systems (Including audible alarm system)	Quarterly but varies depending on other factors. Log book
AS/NZS 2293.2 1998	Exit Signage	6 Monthly Log book
AS/NZS 2293.2 1998	Emergency Lighting	6 Monthly Log book
AS 3786-2005 Table 7.4.3	Residential type smoke alarms (including audible alarms system)	Annually Log book
AS 1851-2005 Table 2.4.1 (exclude monthly)	External wall wetting drencher system	Six monthly Log book

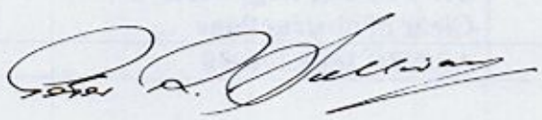
OTHER MATTERS AFFECTING INSTALLATION OF SYSTEMS

1. An audible alarm linked to the smoke hazard management for the baker has been installed in the existing level of the residence. This alarm should be extended to the proposed level to ensure occupants are aware of a fire occurring in the bakers shop below. This does not preclude the installation of hard wired residential smoke alarms throughout the existing and proposed residence.

2. A portable fire extinguisher should be installed in the butchers shop, 1 x 3.5 kg AB(E) Dry Powder unit, located adjacent to the cool room, properly mounted and signed.

3. A fire blanket (minimum 1m x 1m) should be installed in the residence adjacent to the kitchen door, properly mounted.

4. To provide as complete safety coverage as possible, the smoke alarms in the residence should be combined units comprising photo electric and ionisation components.



Peter R. Sullivan ***G. I. Fire E.***
National Manager: Technical Services
Date of this document: ***29th August 2007***
Date of assessment: ***27th August 2007***

DK BUILDING CERTIFIERS

PTY LTD

BUILDING CERTIFICATION & FIRE SAFETY CONSULTANTS

SUITE 4, 470 SYDNEY ROAD, BALGOWLAH NSW 2093
PO BOX 929 BALGOWLAH NSW 2093
TEL: 9400 2335 FAX: 9400 2405
www.dkbuildingcertifiers.com.au
email: info@dkbuilding.com.au
ABN: 96 097 502 700

Application for a Construction Certificate

1. Details of the applicant

Mr ☑ Ms ☐ Mrs ☐ Dr ☐ Other

First name: JOHN
Family name: DAVID
Flat/street no.: 353A.
Street name: BARRENJOEY RD.
Suburb or town: NEWPORT
State: NSW
Postcode: 2106
Daytime telephone: 02 9997 4133
Fax: 02 9979 1983.
Mobile: 0418 222 033
Email: jdw@bigpond.com.au.
Signature:
Date: 3/3/07

2. Identify the land

Flat/street no.: 353
Street name: BARRENJOEY RD.,
Suburb or town: NEWPORT
State: NSW
Postcode: 2106
Lot no.: 66
DP/Strata no: Sec 5 DP 6248.

You can find the lot no., section, DP/MPS no. and volume/folio details on a map of the land or on the title documents for the land. If you need additional room, please attach a schedule and/or a map with these details.

3. Estimated cost of the development

$ 310,000 including GST
est.

4. Describe the development

What type of work do you propose to carry out?

Building work ☑

Subdivision work ☐

Describe the work

ALTERATIONS + ADDITIONS

For building work, what is the class of the building under the Building Code of Australia?

CLASS 2.

Has development consent been granted for the development?

No ☐

Yes ☑ What is the development application no.?

N0389/06

What date was development consent granted?

9.2.07

5. Signatures

The owner(s) of the land must sign this application:

As the owner(s) of the above property, I/we consent to this application:

Signature

* [signature]

Name

JOHN DAVID

Date

8.8.07

Signature

Name

Date

Flat/street no.

353

Street name

BARRENJOEY RD,

Suburb or town

NEWPORT

State

NSW

Postcode

2106

Daytime telephone

02 9997 4133

Fax

02 9979 1283

Mobile

0418 222 033.

Email

jd@besser.com.au.

Date received: 13/8/07 at DK Building Certifiers Pty Limited

* For Estate of V. Fornica

Schedule to application for a construction certificate

Please complete this schedule. The information will be sent to the Australian Bureau of Statistics.

All new building works

Please complete the following:

- Number of storeys (including underground floors): 3.
- Gross floor area of building (m²): 227 m²
- Gross site area (m²): 557 m²

Residential buildings only

Please complete the following details on residential structures:

- Number of dwellings to be constructed: nil
- Number of pre-existing dwellings on site: one
- Number of dwellings to be demolished: nil
- Will the new dwelling(s) be attached to other new buildings? Yes ☐ No ☑
- Will the new building(s) work be attached to existing buildings? Yes ☑ No ☐
- Does the site contain a dual occupancy? (NB dual occupancy = two dwellings on the same site) Yes ☐ No ☑

Materials – residential buildings

Please indicate the materials to be used in the construction of the new building(s) works:

Walls		Code	Roof		Code	Floor		Code	Frame		Code
Brick (double)	☑	11	Tiles	☐	10	Concrete or slate	☐	20	Timber	☐	40
Brick (veneer)	☐	12	Concrete or slate	☐	20	Timber	☑	40	Steel	☑	60
Concrete or stone	☐	20	Fibre cement	☐	30	Other	☐	80	Aluminium	☐	70
Fibre cement	☑	30	Steel	☑	60	Not specified	☐	90	Other	☐	80
Timber	☐	40	Aluminium	☐	70				Not specified	☐	90
Curtain glass	☑	50	Other	☐	80						
Steel	☐	60	Not specified	☐	90						
Aluminium	☐	70									
Other	☐	80									
Not specified	☐	90									

OWNERS AUTHORISATION
AND
APPOINTMENT OF PRINCIPAL CERTIFYING AUTHORITY

I/We ANTONUZZA & NANCY FORMICA of

Address: 353 BARRENJOEY RD,
NEWPORT NSW 2106

Telephone: (h) 9999 4224 (w) 9997 4133 (Mobile)

Fax: 9979 1283 email: nf@bigpond.com.au

hereby authorise, (other than the owner), DAMIEN O'SHANNASSY to, (cross out if not applicable), lodge a Construction Certificate application with DK Building Certifiers Pty Ltd for the proposed works being:-

ALTERATIONS AND ADDITIONS

at: 353 BARRENJOEY RD, NEWPORT 2106

Council: PITTWATER DA No: N0339/06

and appoint Damian O'Shannassy, Accredited Certifier No 6175 (Dept of Planning - NSW) of Suite 4, 470 Sydney Road, Balgowlah NSW 2093, Ph: (02) 9400 2335, Fax: (02) 9400 2405 or info@dkbuilding.com.au as the Principal Certifying Authority.

Signed: per (Administrator).

Date: 8.3.07.

NB: The original of this form must be returned together with the Construction Certificate application.

DONOVAN
DESIGNS PTY LTD

PH/ 02 9806 3060 FAX/ 02 9891 2806 E/ jkdonovan@iinet.net.au
SUITE 102 30 COWPER ST PARRAMATTA NSW 2150
ABN 41 592 249 847

YOUR REFERENCE	OUR REFERENCE	DATE
DA NO389/06	E71342	9 August 2007

Perera Design Pty Ltd
39 Wallumatta Road
Newport 2106

RE: PROPOSED ALTERATIONS AND ADDITIONS
353 BARRENJOEY ROAD NEWPORT NSW

STRUCTURAL CERTIFICATE

The existing two storey shop and residence is, in our opinion, structurally adequate to support the proposed upper floor addition consisting of timber floor and framing with non-trafficable steel roof as shown in the architectural plans by Perera Deign P/L No. DA 06/02/101 sheets 1 and 2 Issue A, dated 25/06/07.

The existing structure has a number of minor non-structural cracks. The additional loading may affect these cracks and cause other minor cracks. If this occurs, it is anticipated that the cracks will be patched up and/or articulation joints can be introduced.

It is also recommended that a geotechnical engineer should assess the foundations of the building to confirm the above comments.

Yours faithfully

DONOVAN ASSOCIATES

GENERAL

G1 THESE DRAWINGS TO BE READ IN CONJUCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS DRAWINGS AND SPECIFICATIONS.

G2 DIMENSIONS SHALL NOT BE OBTAINED BY SCALING THE STRUCTURAL DRAWINGS. REFER TO ARCHITECTS FINAL DRAWINGS.

G3 BUILDER TO CHECK ALL RELEVANT DIMENSIONS ON SITE.

G4 ALL WORKMANSHIP AND MATERIALS TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT EDITIONS OF AUST.STANDARD CODES AND THE REGULATIONS OF THE RELEVANT BUILDING AUTHORITY.

G5 DURING CONSTRUCTION THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVER STRESSED. THE BUILDER SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE WORKS DURING CONSTRUCTION.

G6 STRUCTURAL ELEMENTS HAVE BEEN DESIGNED FOR THE FOLLOWING SUPERIMPOSED LIVE LOADINGS:

RESIDENCE 1.5 kPa

FOOTING SYSTEM

F1 THE FOOTING SYSTEM HAS BEEN DESIGNED IN ACCORDANCE WITH AS2870.

F2 DEPTH AND EXTENT OF PIERS ARE TO BE DETERMINED ON SITE IN

F3 FOOTING DETAILS SHOWN ARE FOR THE STIPULATED SITE CLASSIFICATION. DONOVAN ASSOCIATES TAKE NO RESPONSIBILITY FOR VARIATIONS WHICH MAY OCCUR DUE TO VARIATIONS IN SITE CONDITIONS.

STRUCTURAL STEEL

S1 STEELWORK GRADE 300MPa SHALL BE USED FOR BARS AND SECTIONS TO AS3678 & AS3679, GRADE 350MPa FOR HOLLOW SECTIONS TO AS1163, GRADE 450MPa FOR COLD FORMED SECTIONS TO AS1397.

S2 TWO COPIES OF SHOP DETAIL DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE COMMENCING FABRICATION. APPROVAL SHALL NOT RELIEVE THE CONTRACTOR OFFICE RESPONSIBILITY FOR CORRECTNESS OF DIMENSIONS OR COMPLIANCE WITH CONTRACT DOCUMENTS.

S3 WELDS SHALL BE E41 ELECTRODE 6mm CONTINUOUS FILLET WELDS U.N.O. ALL BOLTS SHALL BE GALVANISED. ALL BOLTS TO BE M20 GRADE 4.6S IN 2mm CLEARANCE HOLES U.N.O. PLATES, CLEATS AND STIFFENENERS SHALL BE 10mm PLATE U.N.O.

S4 ALL WELDING SHALL BE IN ACCORDANCE WITH AS1554.

S5 ALL STEELWORK EXPOSED TO VIEW SHALL HAVE WELD SPLATTER, FLUX, DAGS, BURRS, ETC. REMOVED AND ALL SEALING AND BUTT WELDS GROUND FLUSH. ALL EXTERNAL FILLET WELDS TO BE REMOVED.

S6 GRADE 8.8 BOLTS SHALL CONFORM TO AS1252 AND BE INSTALLED IN ACCORDANCE WITH AS4100. TIGHTEN USING APPROVED LOAD INDICATING WASHERS FOR TB AND TF.
S DENOTES SNUG TIGHT GRADE 4.6 OR 8.8 BOLTS
TB DENOTES BEARING MODE - SURFACE MAY BE PAINTED. GRADE 8.8 BOLTS
TF DENOTES FRICTION GRIP MODE - SURFACE MUST BE UNPAINTED. GRADE 8.8 BOLTS.

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S8 INTERNAL STEELWORK SHALL BE GIVEN TWO COATS OF ZINC PHOSPHATE TO A DRY FILM THICKNESS OF 50 MICRONS U.N.O. BEFORE PAINTING OR ENCASING STEELWORK IS TO CLEAN OF ALL LOOSE RUST, MILL SCALE, DIRT AND OIL TO CLASS 2 AS1627.

S9 EXTERNAL STEELWORK SHALL BE PAINTED IN ACCORDANE WITH AS2312.

S10 WHERE NOTED "GALVANISED" STELLWORK SHALL BE CHEMICALLY DESCALED AND CLEANED BEFORE GALVANISING BY IMMERSING IN A BATH OF MOLTEN ZINC TO PRODUCE ZINC COATING OF 600GRAMS PER SQUARE METER IN ACCORDANCE WITH AS1650.

S11 ALL TRANSPORT AND ERECTION ABRASIONS, SITE WELD, ETC. SHALL BE REINSTATED BY THOROUGHLY WIRE BRUSHING ALL AFFECTED AREAS TO ACHIEVE A CLEAN SOUND SUBSTRATE AND PATCH COATED AS FOR PRIMING EXCEPT THAT THE MINIMUN FILM THICKNESS SHALL BE 50% GREATER THAN THE ORIGINAL PRIMER.

S12 THE CONTRACTOR SHALL PROVIDE ADDITIONAL TEMPORARY BRACING TO ADEQUATELY AND SAFELY HOLD STEELWORK IN POSITION DURING CONSTRUCTION.

S13 PROVIDE SHEETING SUPPORT ANGLES TO ALL HIPS AND VALLEYS.

S14 ALL PURLIN BRIDGING TO EXTEND TO EXTEND TO FASCIA MEMBER, TO AND BETWEEN RIDGE PURLINS OR OTHER HOT-ROLLED SECTION AS APPLICABLE.

CONCRETE

C1 CONCRETE SPECIFICATION TO BE AS FOLLOWS:

LOCATION	CONCRETE GRADE	SLUMP	MAX. AGG. SIZE	CEMENT	EXPOSURE CLASSIFN.
SLABS ON GROUND & FOOTINGS	N25	80	20	TYPE 'A'	A1
SUSPENDED SLABS	N40	80	20	TYPE 'A'	A1

C2 CLEAR COVER TO REINFORCEMENT, UNLESS NOTED OTHERWISE, TO BE AS FOLLOWS:

LOCATION	TOP	BOTTOM	SIDE
SLABS ON GROUND	20	30	40
SUSPENDED SLABS	20	20	40
FOOTINGS	40	40	40

C3 REINFORCEMENT SYMBOLS ARE AS FOLLOWS:
R STRUCTURAL GRADE ROUND BARS (250 R)
N HOT ROLLED DEFORMED BARS (500 N)
L HARD-DRAWN WIRE REINFORCING MESH (500 L)
SL SQUARE MESH (500 SL)
RL RECTANGULAR MESH (500 SL)
NUMBER FOLLOWING THE SYMBOL IS THE BAR DIAMETER IN mm.

C4 ALL REINFORCEMENT TO BE ADEQUATELY SUPPORTED IN ITS REQUIRED POSITION BY 50mm CHAIRS AT 800 CTS BOTH WAYS.

C5 SLAB MESH IS TO LAPPED ONE FULL SQUARE PLUS 25mm. TRENCH MESH AND N12 BARS ARE TO BE LAPPED 500mm.

C6 CONSTRUCTION JOINTS WHERE NOT SHOWN SHALL BE LOCATED TO THE APPROVAL OF THE ENGINEER.

C7 BEAM DEPTHS ARE GIVEN FIRST AND INCLUDE SLAB THICKNESS.

C8 NO HOLES OR CHASES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS TO BE MADE IN CONCRETE MEMBERS WITHOUT PRIOR APPROVAL OF THE ENGINEER.

MASONRY

M1 ALL MASONRY CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3700.

M2 U.N.O. BRICKS USED IN LOAD BEARING CONSTRUCTION SHALL HAVE MINIMUM COMPRESSIVE STRENGTH OF 20 MPa. THE BRICK CHARACTERISTIC EXPANSION "e" SHALL NOT EXCEED 0.8mm/m FOR WHICH COMPLIANCE CERIFICATION SHALL BE OBTAINED FROM THE BRICK SUPPLIER.

M3 A 300mm WIDE STRIP OF COURSE GRANULAR BACKFILL IS TO BE PLACED BEHIND ALL RETAINING WALLS. PROVIDE SUBSOIL DRAINAGE TO CONVEY WATER AWAY FROM WALL.

M4 MORTAR SHALL BE FRESHLY PREPARED AND COMPOSE OF CEMENT:LIME:SAND IN THE RATIO OF 1:1:6 U.N.O. MORTAR BED THICKNESS SHALL NOT EXCEED 10mm. MORTAR BOND STRENGTH SHALL BE A MINIMUM OF F'mI=0.2MPa. BOND WRENCH TESTS ON A PANEL OR IN SITU TO AS3700 SHALL BE CARRIED OUT TO CONFIRM BOND STRENGTH.

M5 NO AIR ENTRAINING AGENTS SHALL BE USED IN MORTAR.

M6 WHERE SLABS OR BEAMS BEAR ON MASONRY, A LEVEL SMOOTH BED OF MORTAR SHALL BE PLACED ON THE TOP COURSE AND COVERED WITH TWO LAYERS OF SUPER ALCOR OR OTHER APPROVED MATERIAL.

M7 NO MASONRY WALLS SHALL BE ERECTED ON SUSPENDED SLABS AND BEAMS UNTIL ALL PROPPING AND SHORING HAS BEEN REMOVED.

M8 MASONRY WALLS SHALL BE TIED TO RETURN WALLS OR ADJACENT STRUCTURAL ELEMENTS USING APPROVED WALL TIES. FREE VERTICAL MASONRY EDGES TO BE RESTRAINED USING 75x4 SHS MULLION UNLESS OTHER MEMBER IS INDICATED.

M9 CHASES AND HOLES, RECESSES, ETC. SHALL NOT BE MADE IN LOAD BEARING MASONRY WALLS.

M10 VERTICAL CONTROL JOINTS (VCJ) IN CLAY AND CALCUIM SILICATE BRICK WALLS TO BE 6000mm MAXIMUM APART.

M11 STEEL PRODUCTS INCLUDING REINFORCEMENT, WALL TILES, AND ACCESSORIES SHALL COMPLY WITH AS2699 AN AS3700. EXTERIOR WALL TIES WITHIN 1 KM OF COASTAL LINE SHALL BE GRADE 316 STAINLESS STEEL. FOR A LL OTHER AREAS U.N.O. EXTERIOR WALL TIES SHALL HAVE A CORROSION RESISTANCE RATING OF R2 ANDWILL BE HEAVILY GALVANISED TYPE A WIRE CONFORMING TO AS1650.

ADDITIONAL

A1 BRITTLE FLOOR COVERINGS SUCH AS CERAMIC TILES SHOULD BE LAID USING AN APPROVED FLEXIBLE ADHESIVE SYSTEM TO CONTROL THE EFFECT OF SHRINKAGE CRACKING.

A2 SUBTERRANEAN TERMITE PROTECTION IS TO BE PROVIDED IN ACCORDANCE WITH AS3660.1.

A3 SITE DRAINAGE REQUIREMENTS FORM AN INTEGRAL PART OF THE SLAB FOOTING SYSTEM.

A4 THE OWNER'S ATTENTION IS DRAWN TO APPENDIX 'B' - 'PERFORMANCE REQUIREMENTS AND FOUNDATION MAINTENANCE' OF AS2870 1996 AND CSIRO PAMPHLET 'GUIDE TO HOMES OWNERS ON FOUNDATION MAINTENANCE AND FOOTING PERFORMANCE.

REV	DESCRIPTION	DATE
B	PLAN AMENDED	09.08.07

DONOVAN DESIGNS PTY LTD
CIVIL AND STRUCTURAL ENGINEERS
SUITE 102, 30 COWPER STREET, PARRAMATTA NSW 2150
Ph (02) 9806 3060, FAX (02) 9891 2806 ABN 41002289867

DRAWING TITLE
FORMICA
353A BARRENJOEY RD.
NEWPORT

SHEET TITLE
NOTES

APPROVED
B.E., M.I.E. Aust.

SCALE
DATE 26.04.07
DESIGNED JD DRAWN RDP CHECKED JD
CLIENT JOB No. E71342
JOB/DRAWING No. 71342-00
ISSUE B

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S10 WHERE NOTED "GALVANISED" STELLWORK SHALL BE CHEMICALLY DESCALED AND CLEANED BEFORE GALVANISING BY IMMERSING IN A BATH OF MOLTEN ZINC TO PRODUCE ZINC COATING OF 600GRAMS PER SQUARE METER IN ACCORDANCE WITH AS1650.

S11 ALL TRANSPORT AND ERECTION ABRASIONS, SITE WELD, ETC. SHALL BE REINSTATED BY THOROUGHLY WIRE BRUSHING ALL AFFECTED AREAS TO ACHIEVE A CLEAN SOUND SUBSTRATE AND PATCH COATED AS FOR PRIMING EXCEPT THAT THE MINIMUN FILM THICKNESS SHALL BE 50% GREATER THAN THE ORIGINAL PRIMER.

S12 THE CONTRACTOR SHALL PROVIDE ADDITIONAL TEMPORARY BRACING TO ADEQUATELY AND SAFELY HOLD STEELWORK IN POSITION DURING CONSTRUCTION.

S13 PROVIDE SHEETING SUPPORT ANGLES TO ALL HIPS AND VALLEYS.

S14 ALL PURLIN BRIDGING TO EXTEND TO EXTEND TO FASCIA MEMBER, TO AND BETWEEN RIDGE PURLINS OR OTHER HOT-ROLLED SECTION AS APPLICABLE.

CONCRETE

C1 CONCRETE SPECIFICATION TO BE AS FOLLOWS:

LOCATION	CONCRETE GRADE	SLUMP	MAX. AGG. SIZE	CEMENT	EXPOSURE CLASSIFN
SLABS ON GROUND & FOOTINGS	N25	80	20	TYPE 'A'	A1
SUSPENDED SLABS	N40	80	20	TYPE 'A'	A1

C2 CLEAR COVER TO REINFORCEMENT, UNLESS NOTED OTHERWISE, TO BE AS FOLLOWS:

LOCATION	TOP	BOTTOM	SIDE
SLABS ON GROUND	20	30	40
SUSPENDED SLABS	20	20	40
FOOTINGS	40	40	40

C3 REINFORCEMENT SYMBOLS ARE AS FOLLOWS:
R STRUCTURAL GRADE ROUND BARS (250 R)
N HOT ROLLED DEFORMED BARS (500 N)
L HARD-DRAWN WIRE REINFORCING MESH (500 L)
SL SQUARE MESH (500 SL)
RL RECTANGULAR MESH (500 SL)
NUMBER FOLLOWING THE SYMBOL IS THE BAR DIAMETER IN mm.

C4 ALL REINFORCEMENT TO BE ADEQUATELY SUPPORTED IN ITS REQUIRED POSITION BY 50mm CHAIRS AT 800 CTS BOTH WAYS.

C5 SLAB MESH IS TO LAPPED ONE FULL SQUARE PLUS 25mm. TRENCH MESH AND N12 BARS ARE TO BE LAPPED 500mm.

C6 CONSTRUCTION JOINTS WHERE NOT SHOWN SHALL BE LOCATED TO THE APPROVAL OF THE ENGINEER.

C7 BEAM DEPTHS ARE GIVEN FIRST AND INCLUDE SLAB THICKNESS.

C8 NO HOLES OR CHASES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS TO BE MADE IN CONCRETE MEMBERS WITHOUT PRIOR APPROVAL OF THE ENGINEER.

MASONRY

M1 ALL MASONRY CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3700.

M2 U.N.O. BRICKS USED IN LOAD BEARING CONSTRUCTION SHALL HAVE MINIMUM COMPRESSIVE STRENGTH OF 20 MPa. THE BRICK CHARACTERISTIC EXPANSION "e" SHALL NOT EXCEED 0.8mm/m FOR WHICH COMPLIANCE CERIFICATION SHALL BE OBTAINED FROM THE BRICK SUPPLIER.

M3 A 300mm WIDE STRIP OF COURSE GRANULAR BACKFILL IS TO BE PLACED BEHIND ALL RETAINING WALLS. PROVIDE SUBSOIL DRAINAGE TO CONVEY WATER AWAY FROM WALL.

M4 MORTAR SHALL BE FRESHLY PREPARED AND COMPOSE OF CEMENT:LIME:SAND IN THE RATIO OF 1:1:6 U.N.O. MORTAR BED THICKNESS SHALL NOT EXCEED 10mm. MORTAR BOND STRENGTH SHALL BE A MINIMUM OF F'ml=0.2MPa. BOND WRENCH TESTS ON A PANEL OR IN SITU TO AS3700 SHALL BE CARRIED OUT TO CONFIRM BOND STRENGTH.

M5 NO AIR ENTRAINING AGENTS SHALL BE USED IN MORTAR.

M6 WHERE SLABS OR BEAMS BEAR ON MASONRY, A LEVEL SMOOTH BED OF MORTAR SHALL BE PLACED ON THE TOP COURSE AND COVERED WITH TWO LAYERS OF SUPER ALCOR OR OTHER APPROVED MATERIAL.

M7 NO MASONRY WALLS SHALL BE ERECTED ON SUSPENDED SLABS AND BEAMS UNTIL ALL PROPPING AND SHORING HAS BEEN REMOVED.

M8 MASONRY WALLS SHALL BE TIED TO RETURN WALLS OR ADJACENT STRUCTURAL ELEMENTS USING APPROVED WALL TIES. FREE VERTICAL MASONRY EDGES TO BE RESTRAINED USING 75x4 SHS MULLION UNLESS OTHER MEMBER IS INDICATED.

M9 CHASES AND HOLES, RECESSES, ETC. SHALL NOT BE MADE IN LOAD BEARING MASONRY WALLS.

M10 VERTICAL CONTROL JOINTS (VCJ) IN CLAY AND CALCUIM SILICATE BRICK WALLS TO BE 6000mm MAXIMUM APART.

M11 STEEL PRODUCTS INCLUDING REINFORCEMENT, WALL TILES, AND ACCESSORIES SHALL COMPLY WITH AS2699 AN AS3700. EXTERIOR WALL TIES WITHIN 1 KM OF COASTAL LINE SHALL BE GRADE 316 STAINLESS STEEL. FOR A LL OTHER AREAS U.N.O. EXTERIOR WALL TIES SHALL HAVE A CORROSION RESISTANCE RATING OF R2 ANDWILL BE HEAVILY GALVANISED TYPE A WIRE CONFORMING TO AS1650.

ADDITIONAL

A1 BRITTLE FLOOR COVERINGS SUCH AS CERAMIC TILES SHOULD BE LAID USING AN APPROVED FLEXIBLE ADHESIVE SYSTEM TO CONTROL THE EFFECT OF SHRINKAGE CRACKING.

A2 SUBTERRANEAN TERMITE PROTECTION IS TO BE PROVIDED IN ACCORDANCE WITH AS3660.1.

A3 SITE DRAINAGE REQUIREMENTS FORM AN INTEGRAL PART OF THE SLAB FOOTING SYSTEM.

A4 THE OWNER'S ATTENTION IS DRAWN TO APPENDIX 'B' - 'PERFORMANCE REQUIREMENTS AND FOUNDATION MAINTENANCE' OF AS2870 1996 AND CSIRO PAMPHLET 'GUIDE TO HOMES OWNERS ON FOUNDATION MAINTENANCE AND FOOTING PERFORMANCE.

REV	DESCRIPTION	DATE
B	PLAN AMENDED	09.08.07

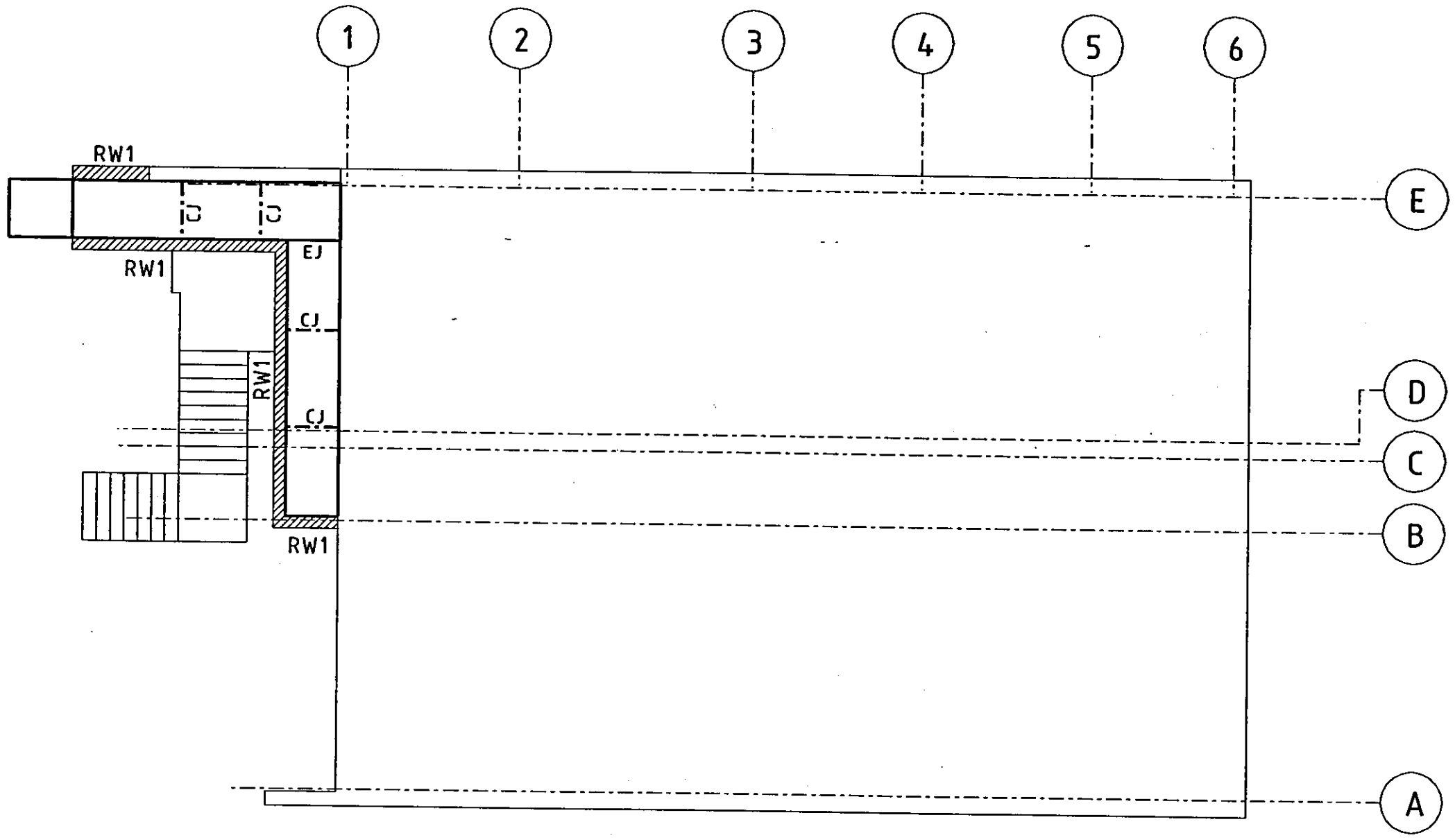
DONOVAN DESIGNS PTY LTD
CIVIL AND STRUCTURAL ENGINEERS
SUITE 102, 30 COWPER STREET, PARRAMATTA NSW 2150
Ph (02) 9806 3060, FAX (02) 9891 2806 ABN 41002289867

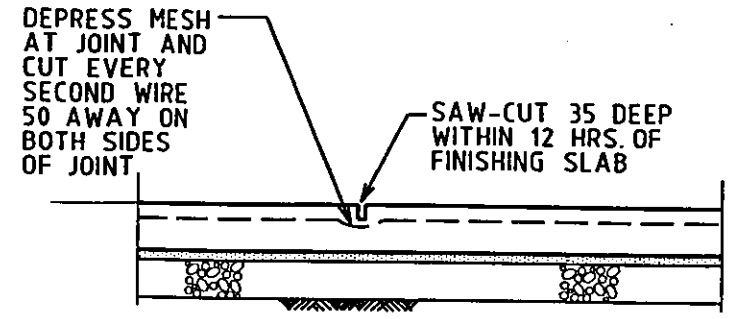
DRAWING TITLE
FORMICA
353A BARRENJOEY RD.
NEWPORT

SHEET TITLE
NOTES

APPROVED
B.E., M.I.E. Aust.

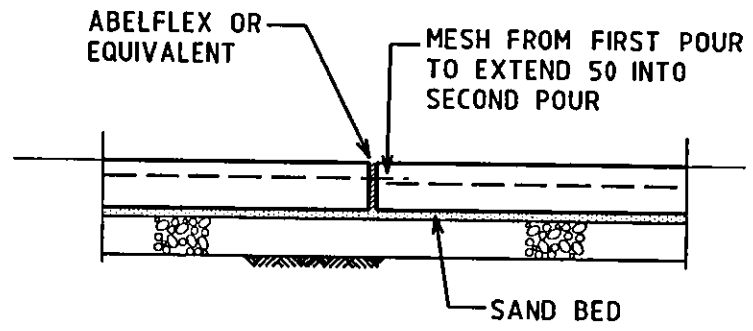
SCALE
DATE 26.04.07
DESIGNED JD DRAWN RDP CHECKED JD
CLIENT JOB No. E71342
JOB/DRAWING No. 71342-00
ISSUE B





CONTROL JOINT DETAIL

DENOTED CJ ON PLAN



EXPANSION JOINT DETAIL

DENOTED EJ ON PLAN

CONCRETE GRADE N25

GROUND FLOOR RAMP SLAB PLAN

100 THICK SLAB ON GROUND. SL72 MESH TOP. 40 COVER

HOUSE DESIGN
MODEL CUSTOM

REV	DESCRIPTION	DATE
B	PLAN AMENDED	09.08.07

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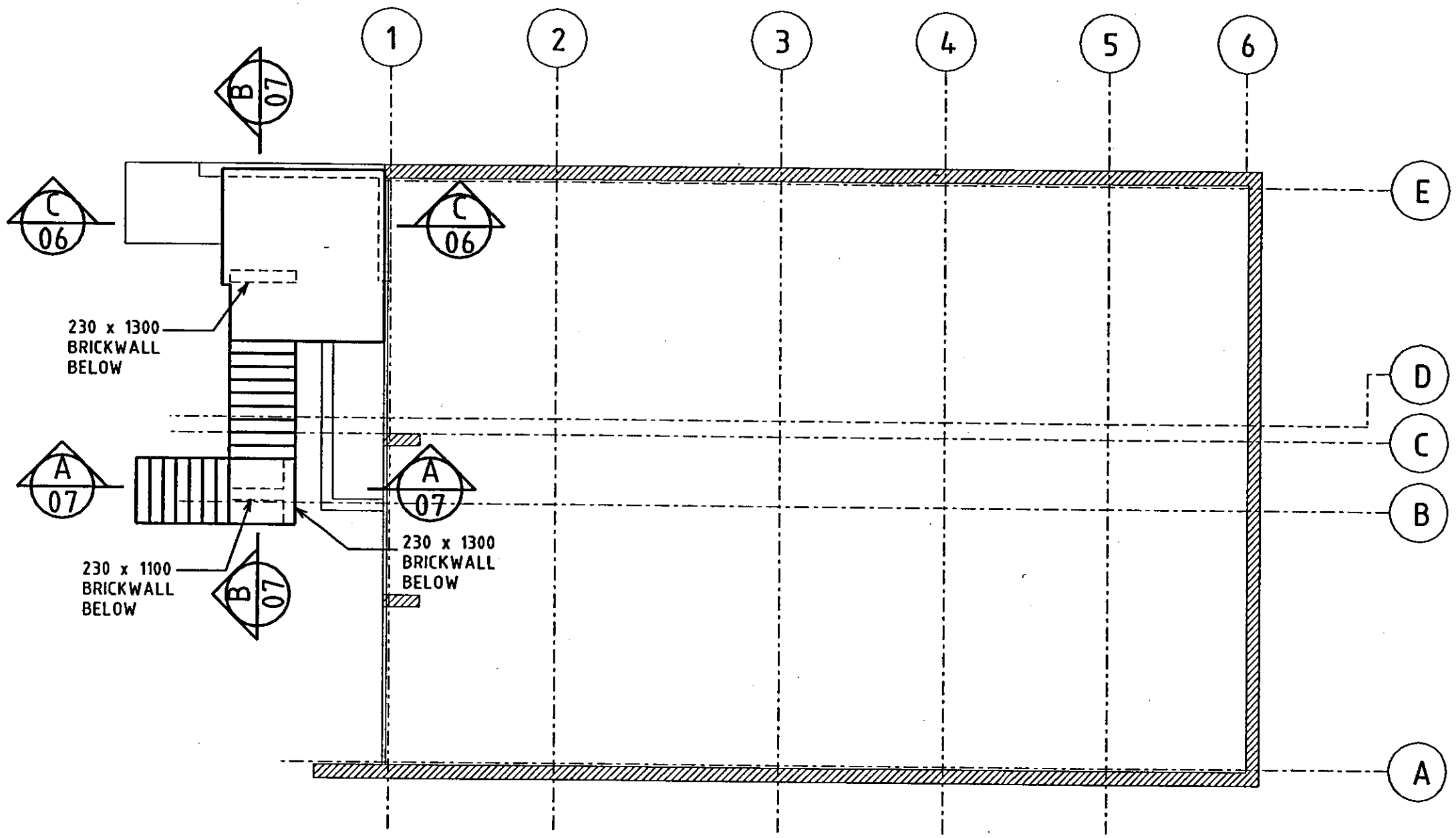
DRAWING TITLE
FORMICA
353A BARRENJOEY RD.
NEWPORT

SHEET TITLE
SLAB PLAN

APPROVED
B.E., M.I.E. Aust.

SCALE 1:100 DATE 26.04.07
DESIGNED JD DRAWN RDP CHECKED JD
CLIENT JOB No. E71342 JOB/DRAWING No. 71342-02 ISSUE B



EXISTING FIRST FLOOR PLAN
NEW STAIRCASE AND LANDING

CONCRETE GRADE N40

REV	DESCRIPTION	DATE
B	PLAN AMENDED	09.08.07

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DRAWING TITLE
FORMICA
353A BARRENJOEY RD.
NEWPORT

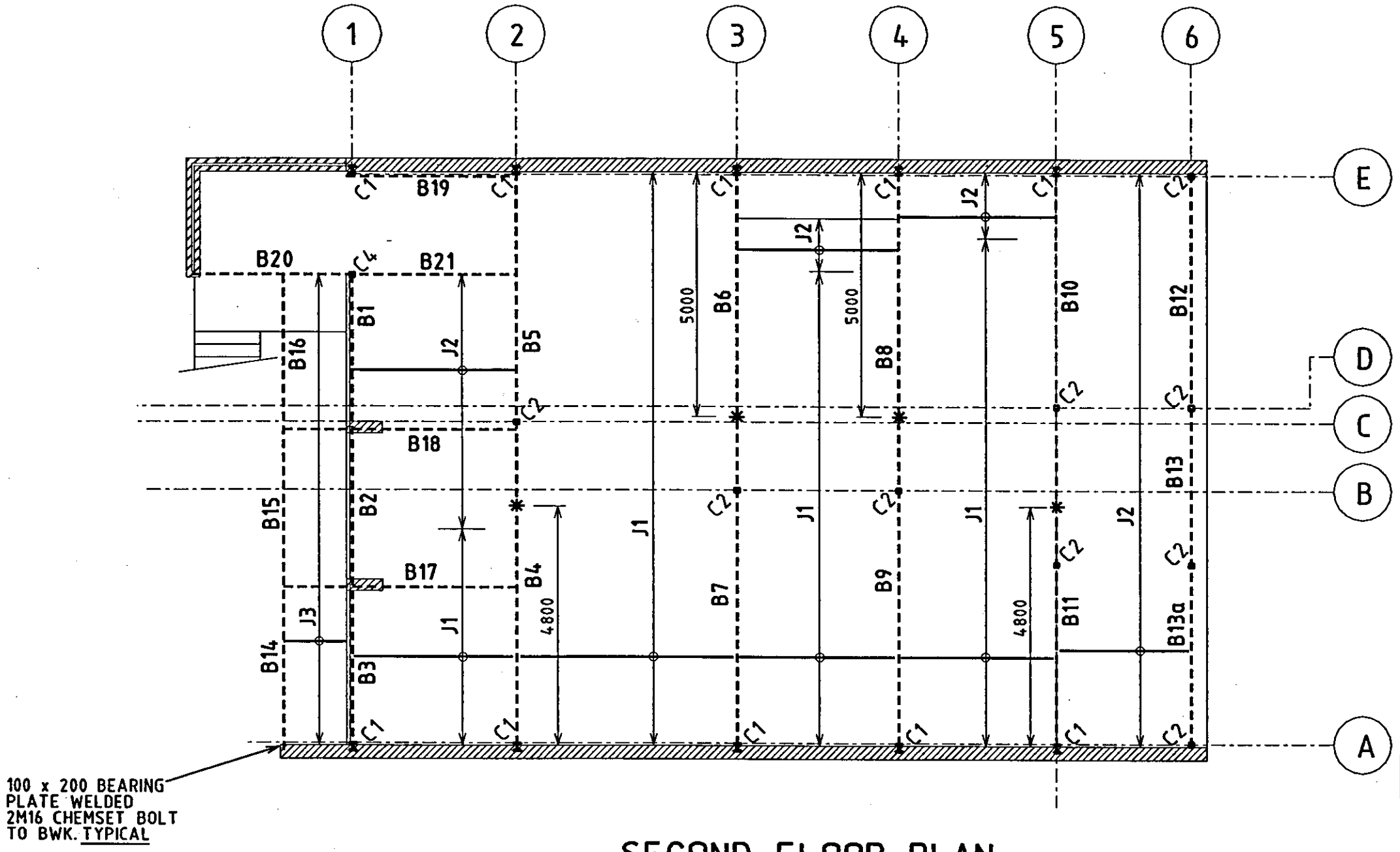
SHEET TITLE
SLAB PLAN

APPROVED
B.E., M.I.E. Aust.

SCALE 1:100 DATE 26.04.07

DESIGNED JD DRAWN RDP CHECKED JD

CLIENT JOB No. E71342 JOB/DRAWING No. 71342-03 ISSUE B



BEAM MARKING PLAN

B1-B9 - 250 UB 31.4
B10,B11 - 200 UC 46
B12,B13 - 200 UB 29
B13a - 200 UB 29
B14-B16 - 200 PFC
B17, B18 - 200 UB 25.4
B19-B21 - 200 PFC
C1 - 150 UC 30
C2 - 90 x 90 x 5.0 SHS
C4 - 200 x 100 x 5 RHS
J1 - 240 x 36 LVL @ 450 CTS
J2 - 200 x 36 LVL @ 300 CTS.
J3 - 200 x 36 LVL @ 600 CTS.

SECOND FLOOR PLAN

* POSITION OF STEEL BEAM JOINT. REFER TO DETAIL 1

1. STEELWORK SURFACE PREPARATION AND FINISH TO COMPLY WITH AS/NZS 2312 - 2002.

HOUSE DESIGN
MODEL CUSTOM

REV	DESCRIPTION	DATE
B	PLAN AMENDED	09.08.07

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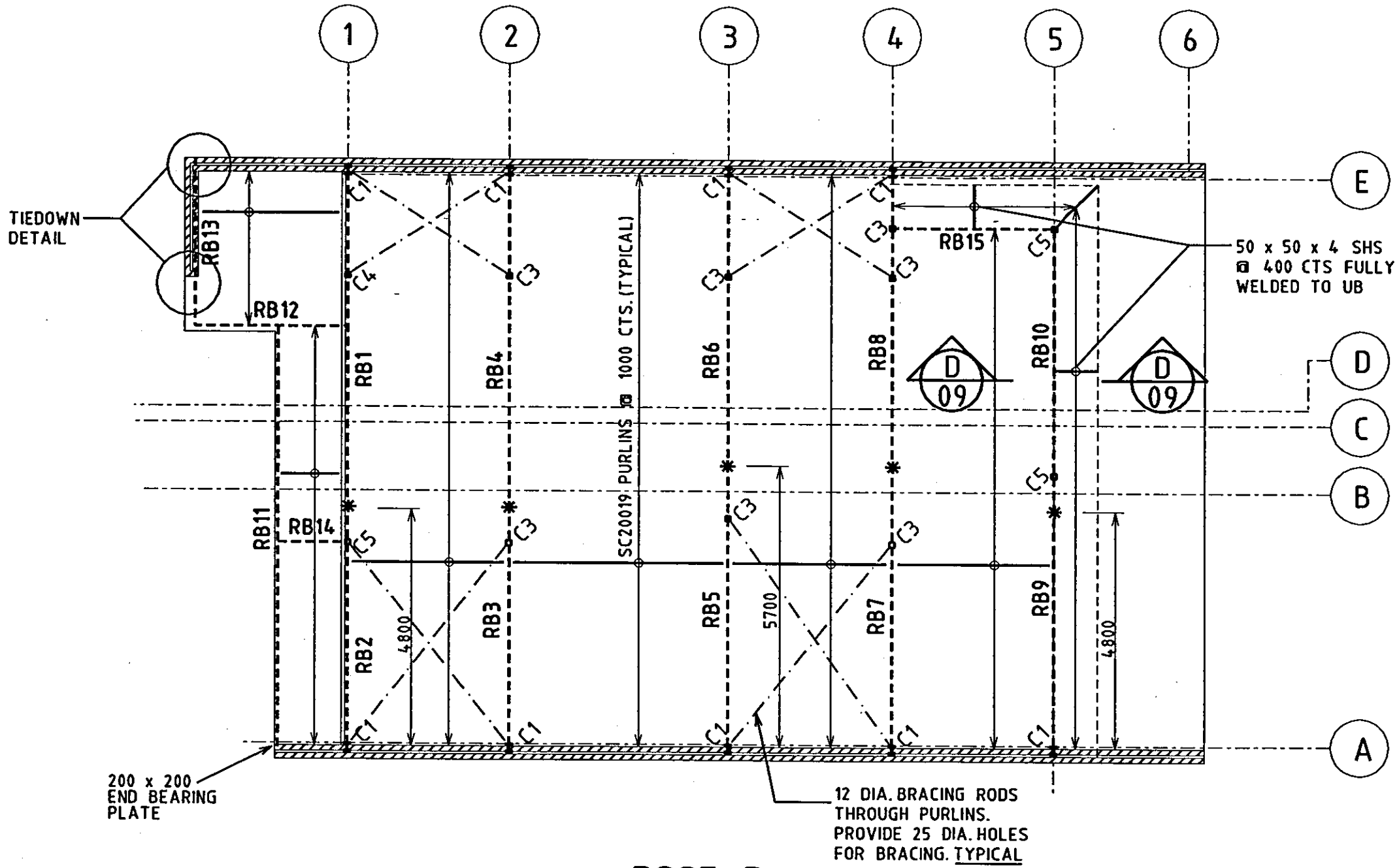
DRAWING TITLE
FORMICA
353A BARRENJOEY RD.
NEWPORT

SHEET TITLE
SECOND FLOOR PLAN

APPROVED
B.E.,M.I.E. Aust.

SCALE 1:100 DATE 26.04.07
DESIGNED JD DRAWN RDP CHECKED JD
CLIENT JOB No. E71342
JOB/DRAWING No. 71342-04
ISSUE B



ROOF PLAN

* POSITION OF STEEL BEAM JOINT. REFER TO DETAIL 1

BEAM MARKING PLAN

RB1-RB10	- 250 UB 31.4
R11-R12	- 230 PFC
RB13	- 250 PFC
RB14	- 230 PFC (FULLY WELDED TO C5)
RB15	- 250 UB 31.4
C1	- 150 UC 30
C3	- 90 x 90 x 5.0 SHS
C4	- 200 x 100 x 6 RHS
C5	- 100 x 100 x 6 SHS

1. STEELWORK SURFACE PREPARATION AND FINISH TO COMPLY WITH AS/NZS 2312 - 2002.

HOUSE DESIGN
MODEL CUSTOM

REV	DESCRIPTION	DATE
B	PLAN AMENDED	09.08.07

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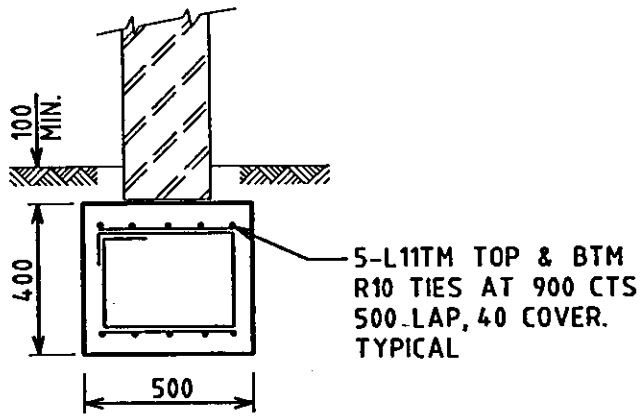
DRAWING TITLE
FORMICA
353A BARRENJOEY RD.
NEWPORT

SHEET TITLE
ROOF PLAN

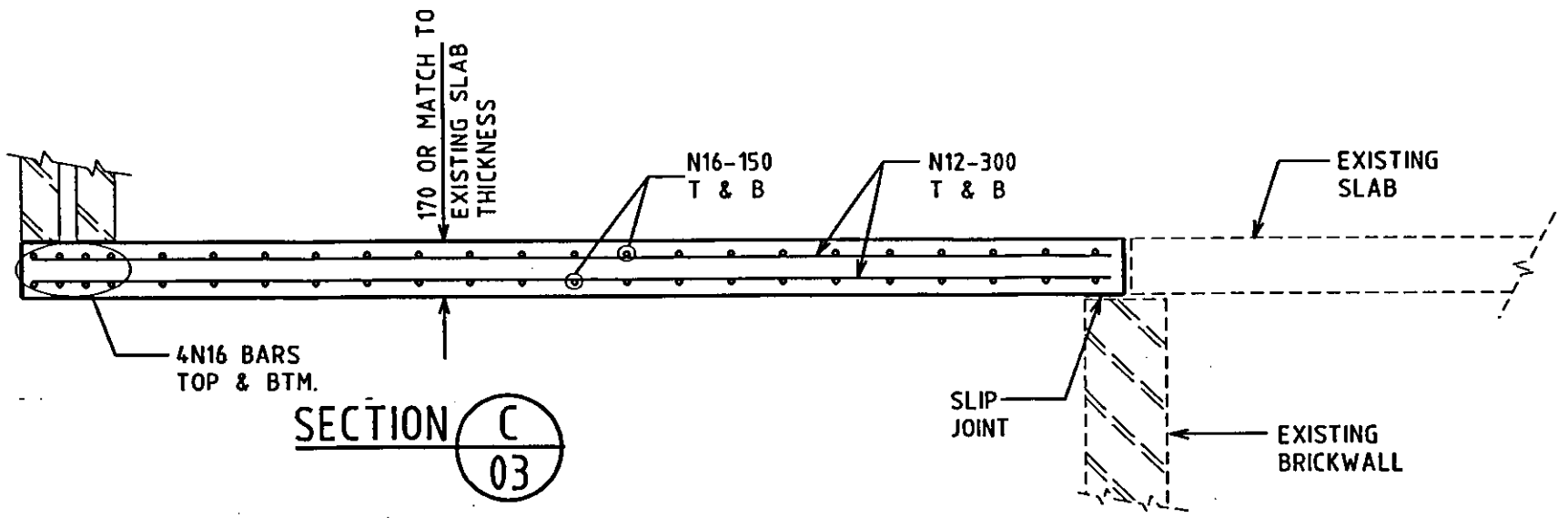
APPROVED
B.E., M.I.E. Aust.

SCALE 1:100 DATE 26.04.07
DESIGNED JD DRAWN RDP CHECKED JD
CLIENT JOB No. E71342 JOB/DRAWING No. 71342-05 ISSUE B

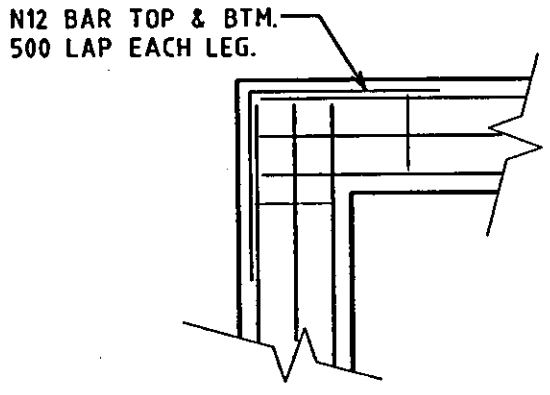


TYPICAL FOOTING DETAIL

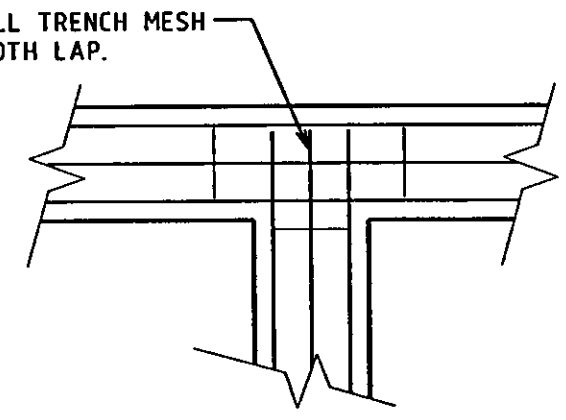
SF1



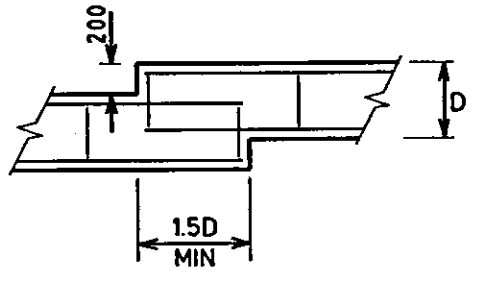
SECTION C 03



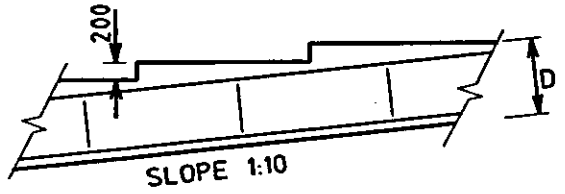
"L" FOOTING CONNECTION



"T" FOOTING CONNECTION

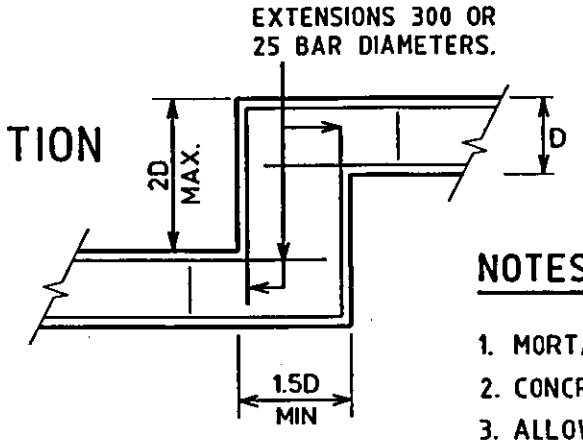


STEP ≤200

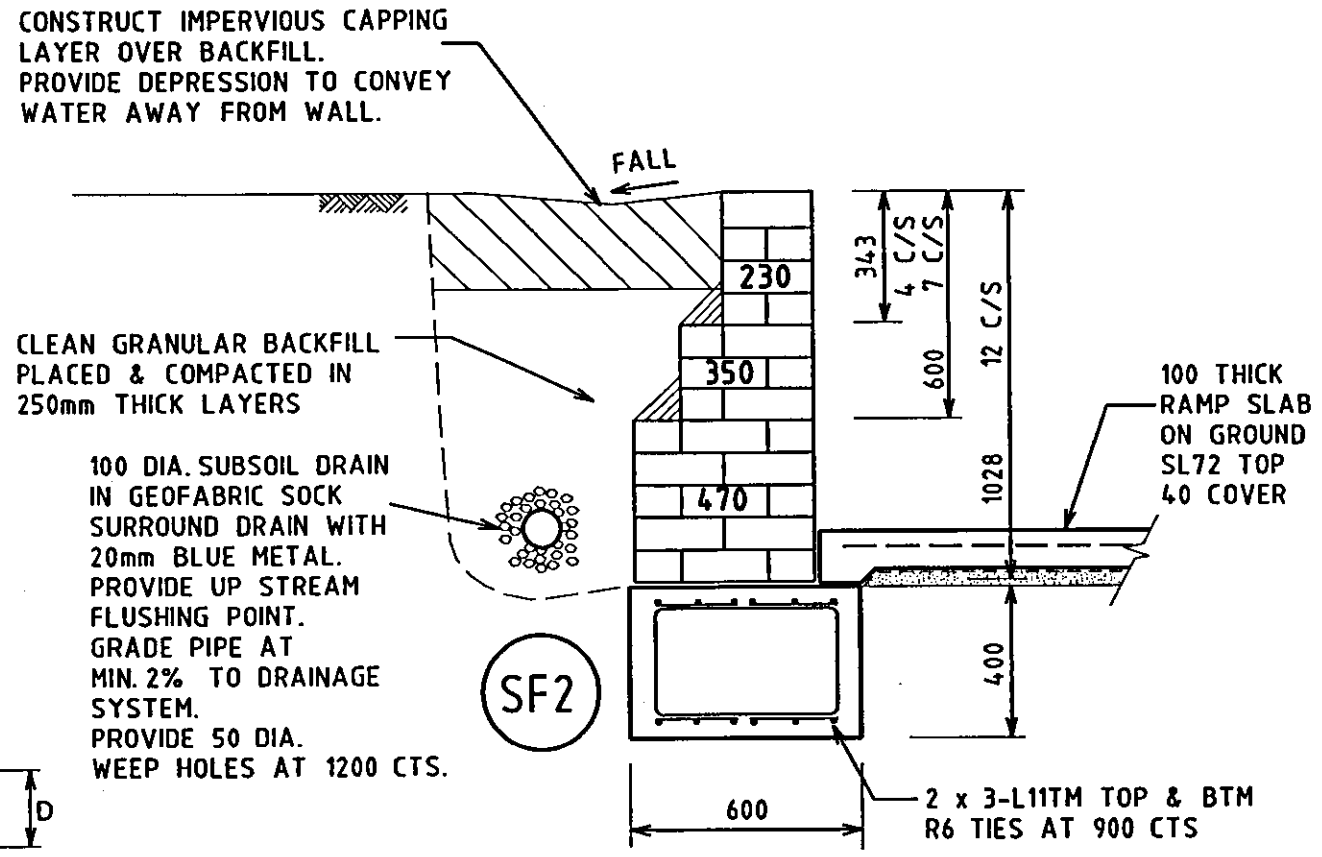


STEP ≤ 200

STRIP FOOTING STEP DETAIL



STEP >200 BUT ≤ 2D



SF2

BRICK RETAINING WALL DETAIL RW1

NOTES

1. MORTAR 1:4 (CEMENT:SAND)
2. CONCRETE FOOTINGS F'c=20 MPa
3. ALLOWABLE BEARING PRESSURE 150kPa
4. CONTROL JOINT AT 8m MAX.

REV	DESCRIPTION	DATE
B	MINOR AMENDMENT	09.08.07

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CIVIL AND STRUCTURAL ENGINEERS
SUITE 102, 30 COWPER STREET, PARRAMATTA NSW 2150
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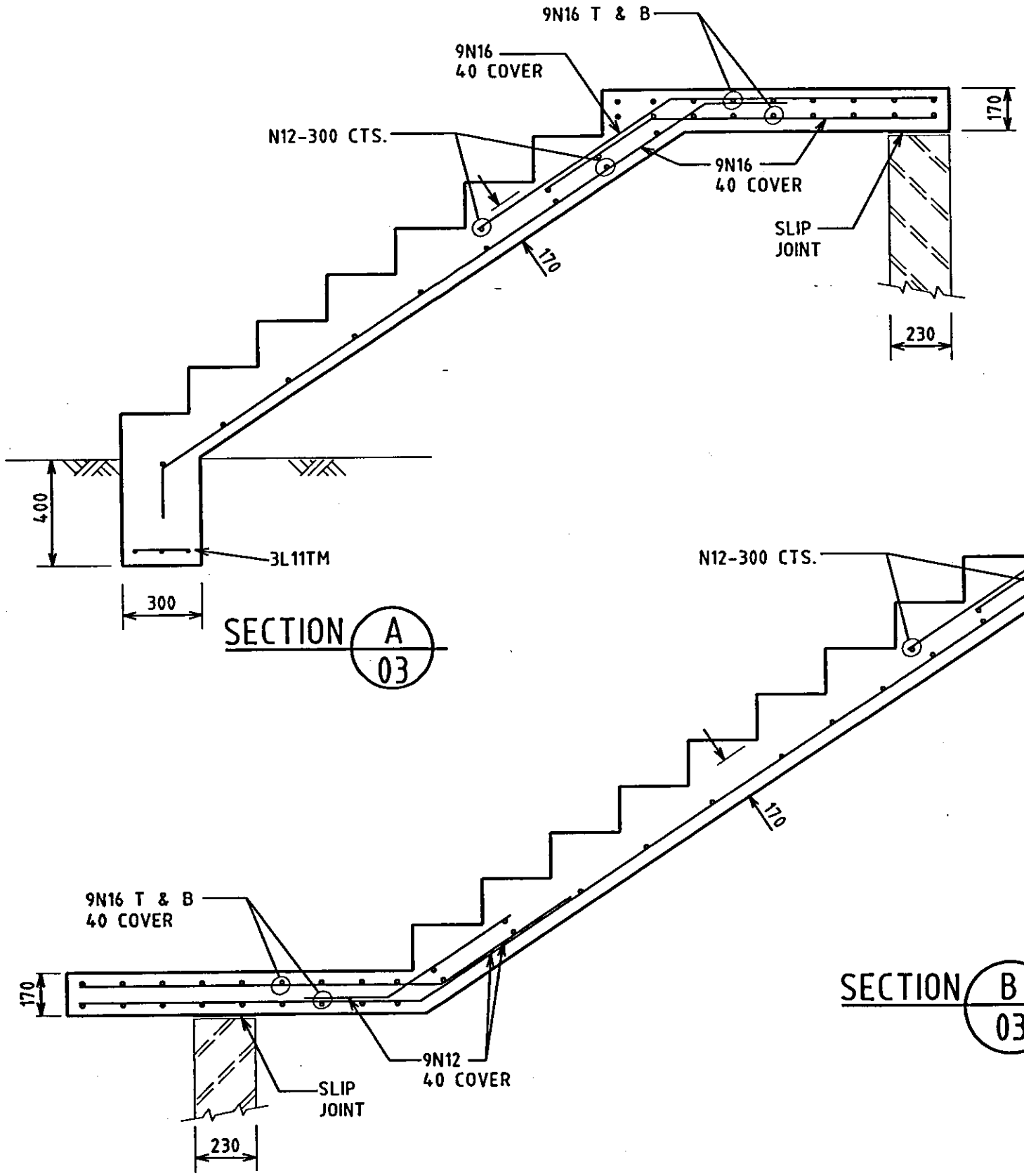
DRAWING TITLE
FORMICA
353A BARRENJOEY RD.
NEWPORT

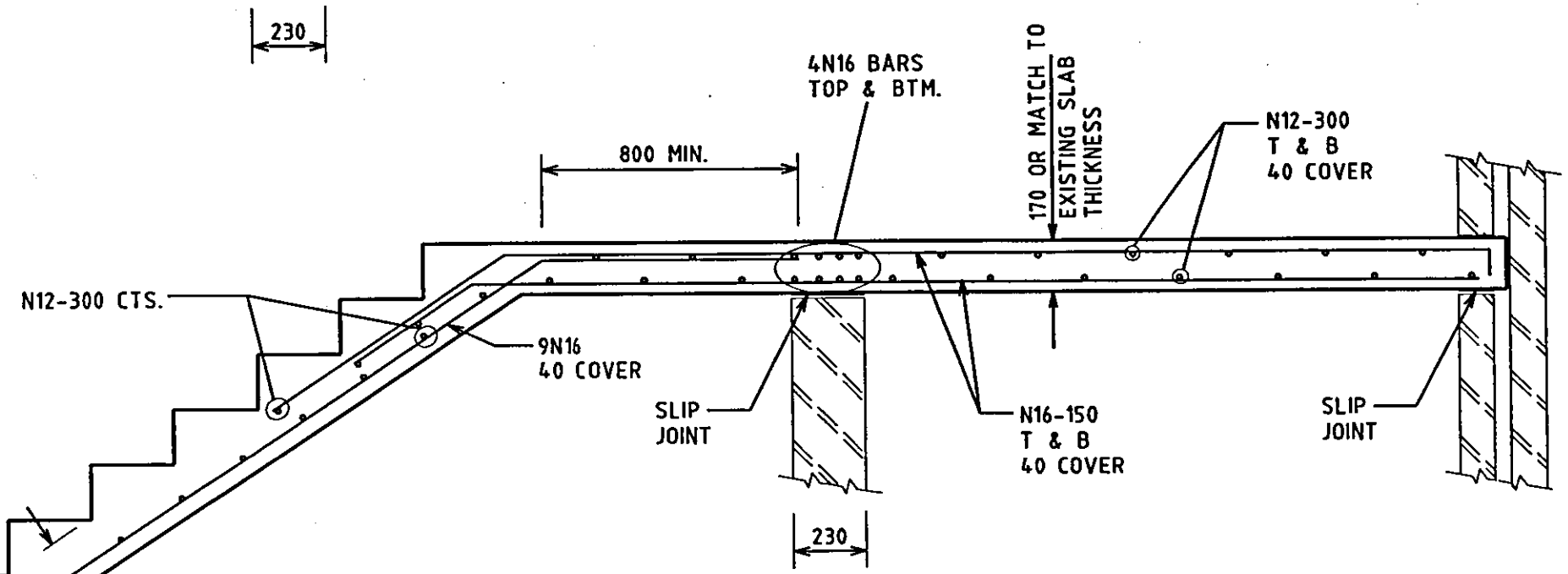
SHEET TITLE
FOOTING DETAILS

APPROVED
B.E.,M.I.E. Aust.

SCALE 1:20 DATE 26.04.07
DESIGNED JD DRAWN RDP CHECKED JD
CLIENT JOB No. E71342 JOB/DRAWING No. 71342-06 ISSUE B



SECTION A
03



SECTION B
03

CONCRETE GRADE N40

REV	DESCRIPTION	DATE
B	SECTIONS AMENDED	09.08.07

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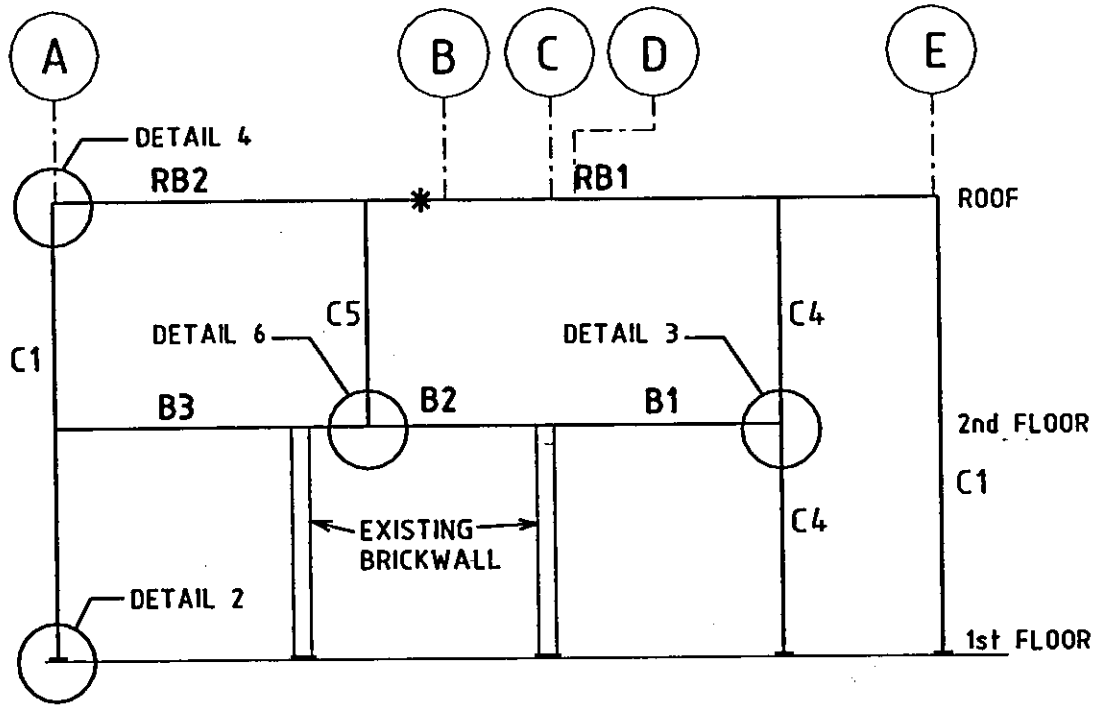
DRAWING TITLE
FORMICA
353A BARRENJOEY RD.
NEWPORT

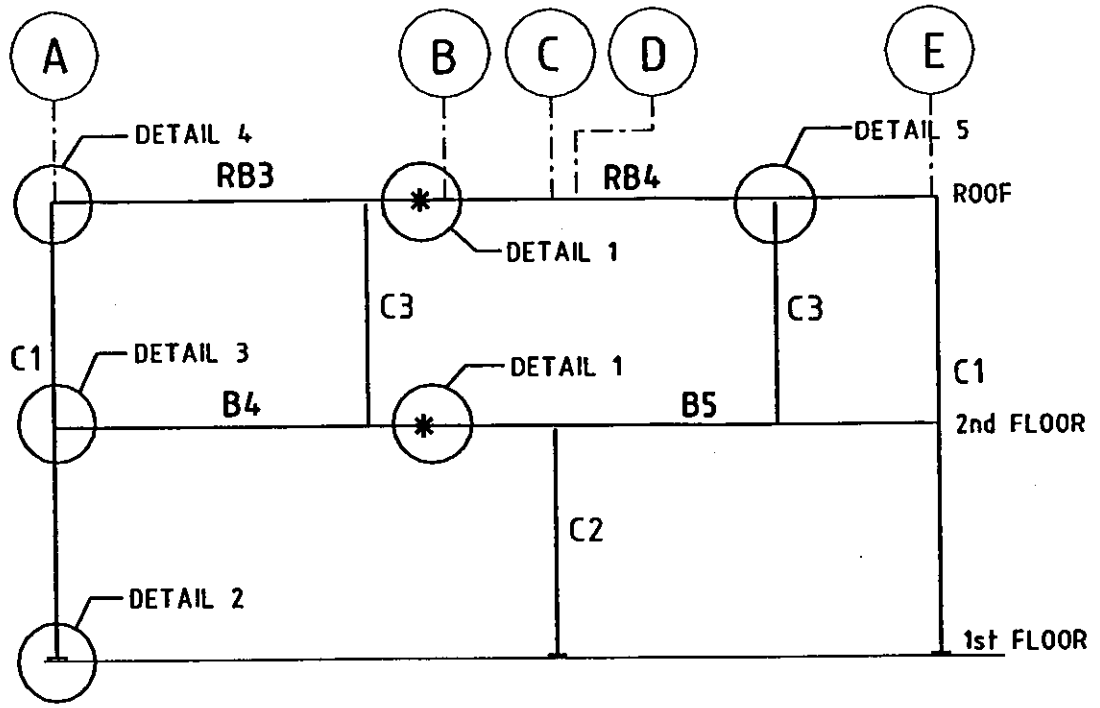
SHEET TITLE
STAIR & SLAB DETAIL

APPROVED
B.E.,M.I.E. Aust.

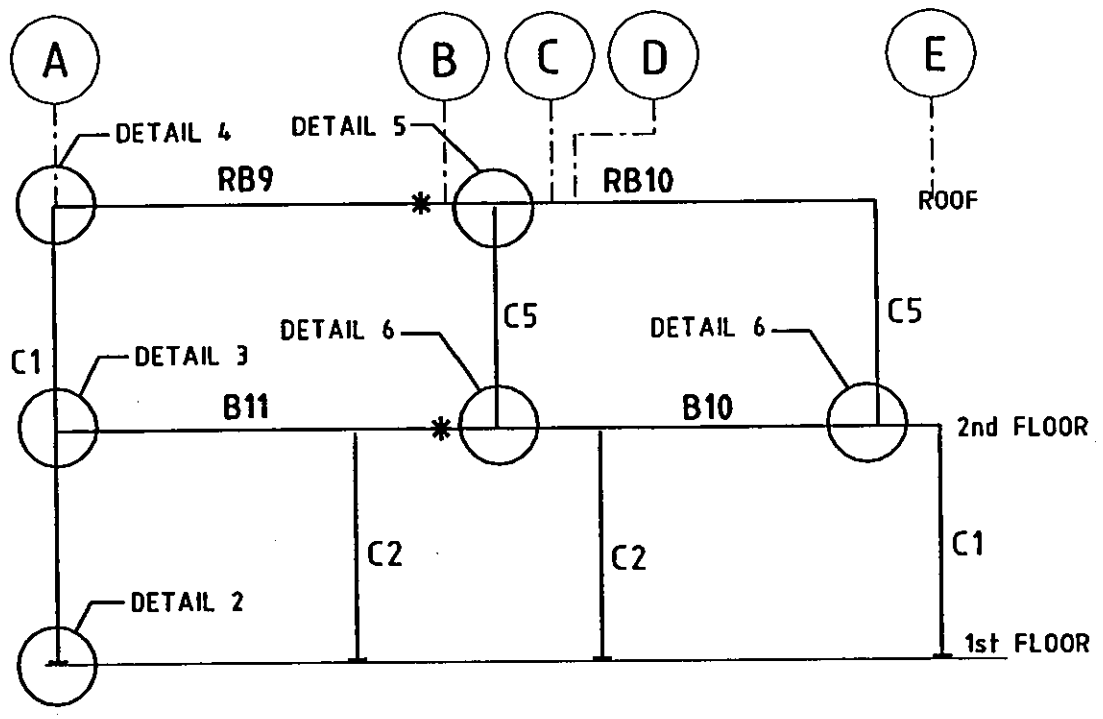
SCALE 1:20 DATE 26.04.07
DESIGNED JD DRAWN RDP CHECKED JD
CLIENT JOB No. E71342 JOB/DRAWING No. 71342-07 ISSUE B



FRAME ALONG GRID 1



TYPICAL FRAME DIAGRAM
FRAME ALONG GRID 2
GRID 3, 4 SIMILAR



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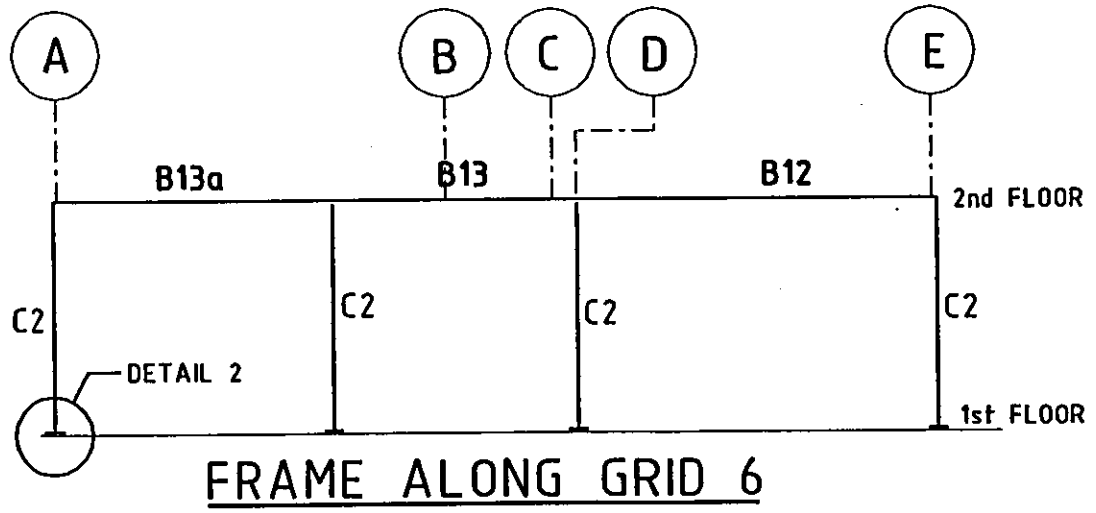

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REV	DESCRIPTION	DATE
B	MINOR AMENDMENT	09.08.07

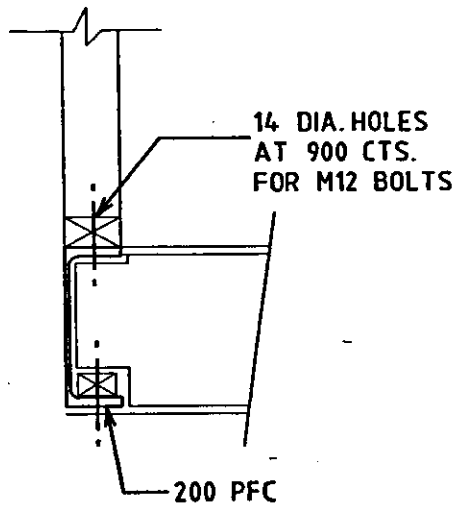
DONOVAN DESIGNS PTY LTD
CIVIL AND STRUCTURAL ENGINEERS
SUITE 102, 30 COWPER STREET, PARRAMATTA NSW 2150
Ph (02) 9806 3060, FAX (02) 9891 2806 ABN 41002289867

DRAWING TITLE
FORMICA
353A BARRENJOEY RD.
NEWPORT

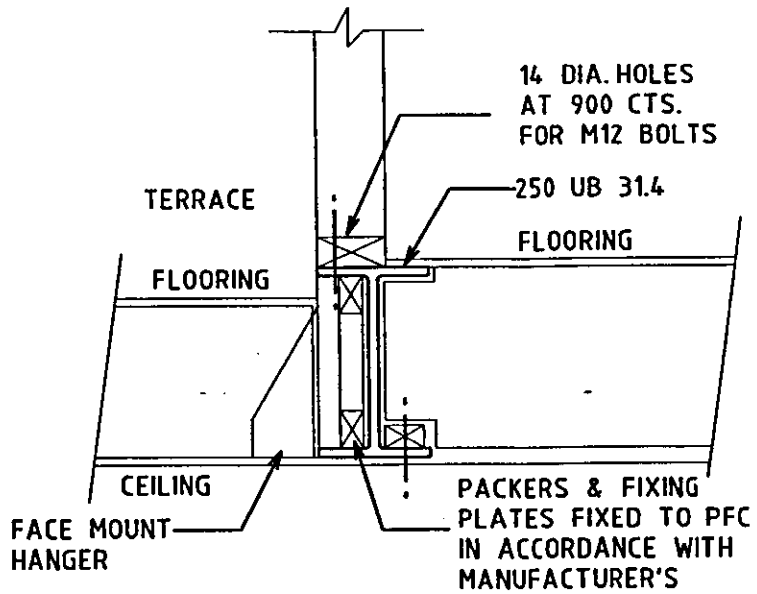
SHEET TITLE
FRAME ELEVATIONS

APPROVED
B.E.,M.I.E. Aust.

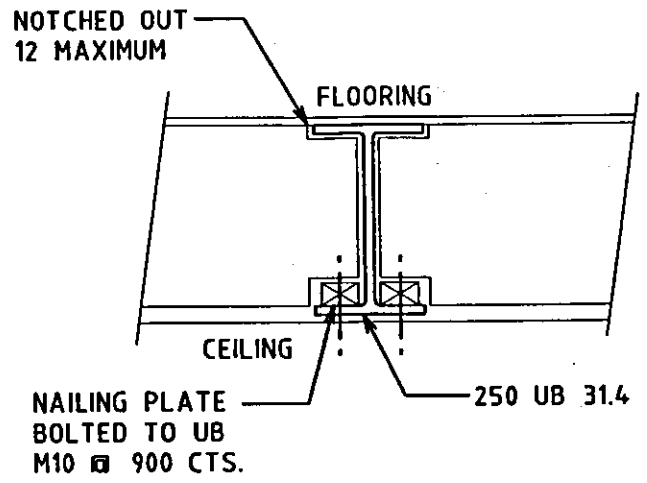
SCALE 1:100 DATE 26.04.07
DESIGNED JD DRAWN RDP CHECKED JD
CLIENT JOB No. E71342 JOB/DRAWING No. 71342-08 ISSUE B



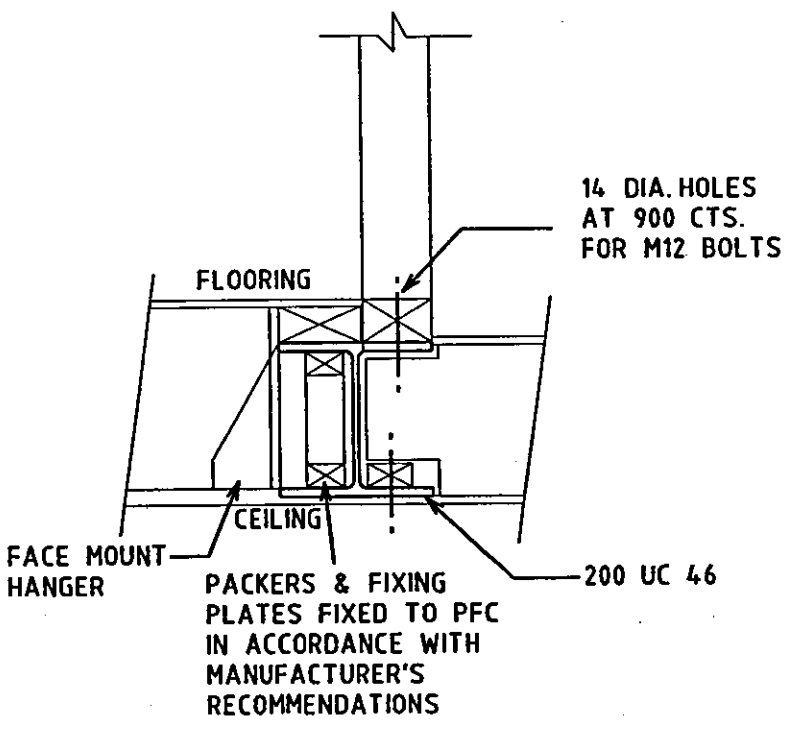
B14, B15, B16
DETAIL



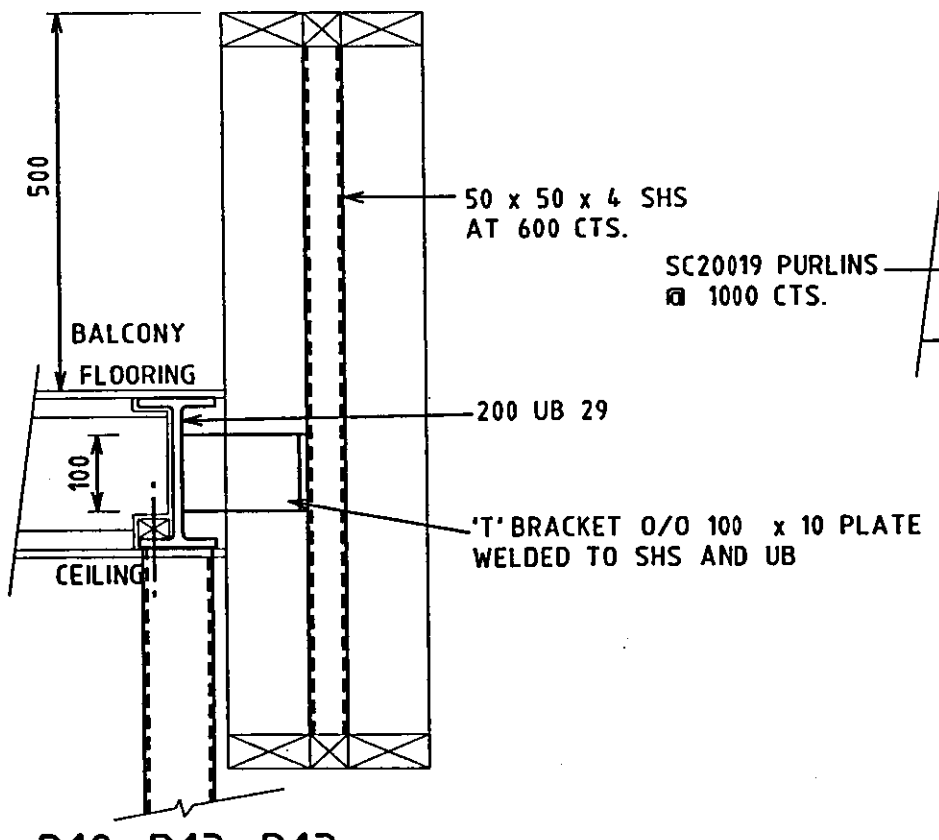
B1, B2, B3
DETAIL



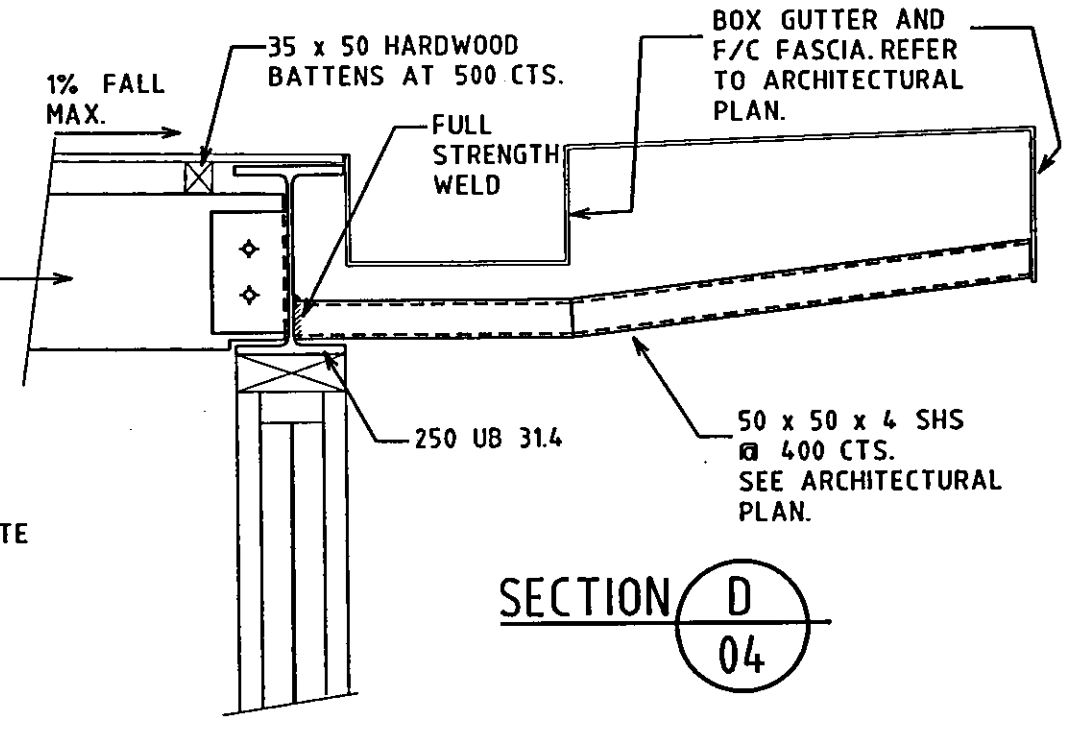
B4, B9 DETAIL



B10, B11 DETAIL



B12, B13, B13a
DETAIL



SECTION D/04

REV	DESCRIPTION	DATE
B	DETAILS AMENDED	09.08.07

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CIVIL AND STRUCTURAL ENGINEERS
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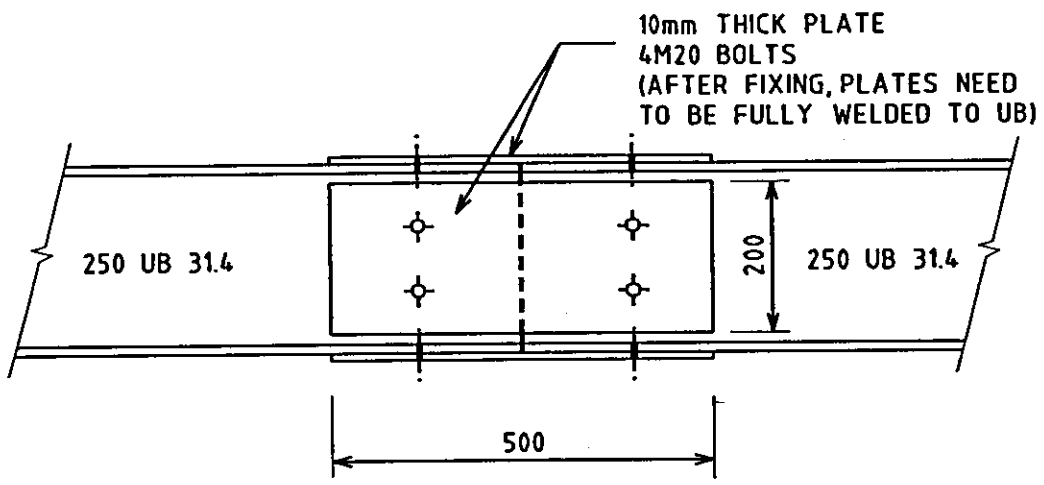
Ph (02) 9806 3060, FAX (02) 9891 2806 ABN 41002289867

DRAWING TITLE
FORMICA
353A BARRENJOEY RD.
NEWPORT

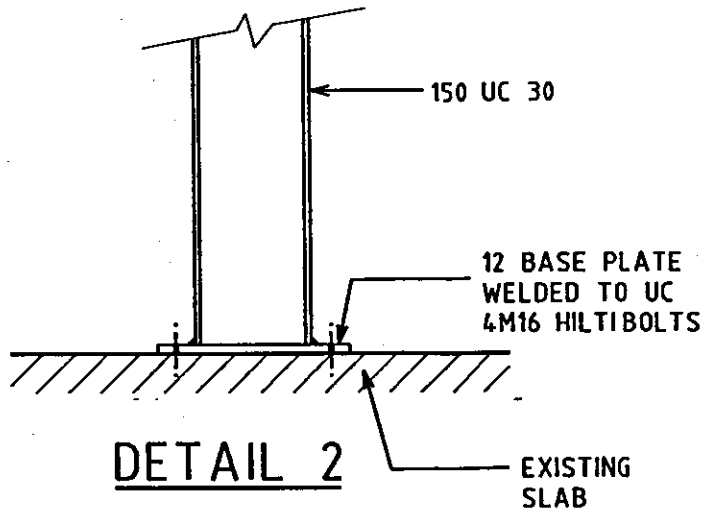
SHEET TITLE
STEEL DETAIL

APPROVED
B.E.,M.I.E. Aust.

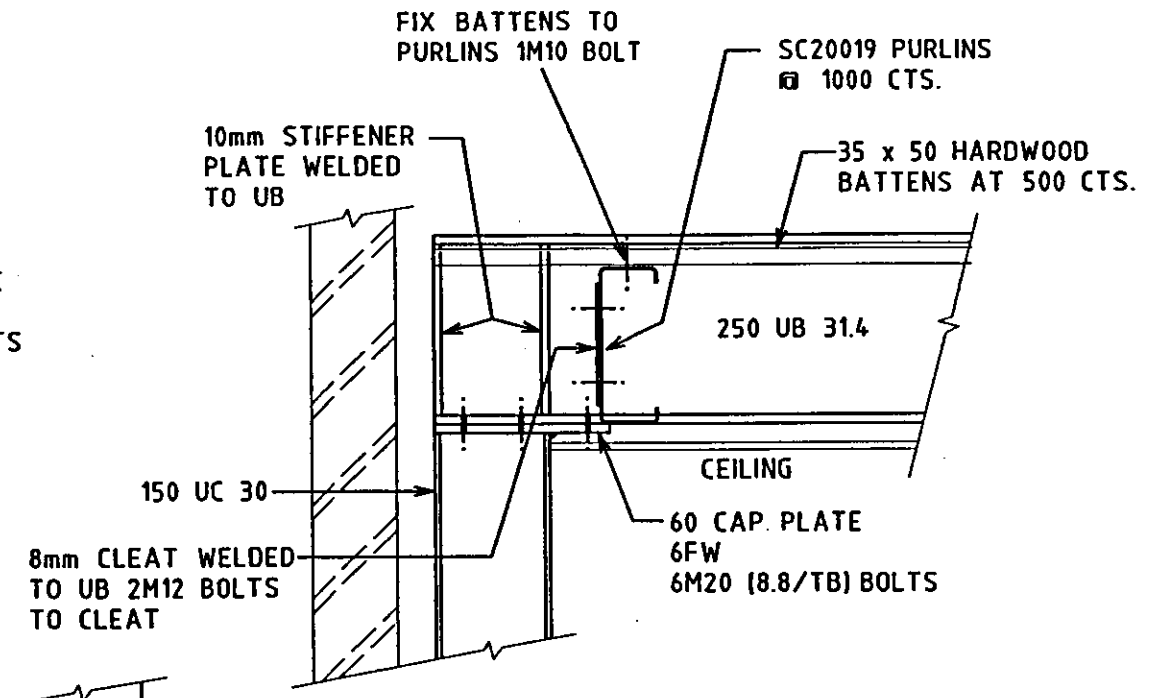
SCALE 1:10 DATE 26.04.07
DESIGNED JD DRAWN RDP CHECKED JD
CLIENT JOB No. E71342 JOB/DRAWING No. 71342-09 ISSUE B



DETAIL 1
BEAM SPLICE DETAIL



DETAIL 2



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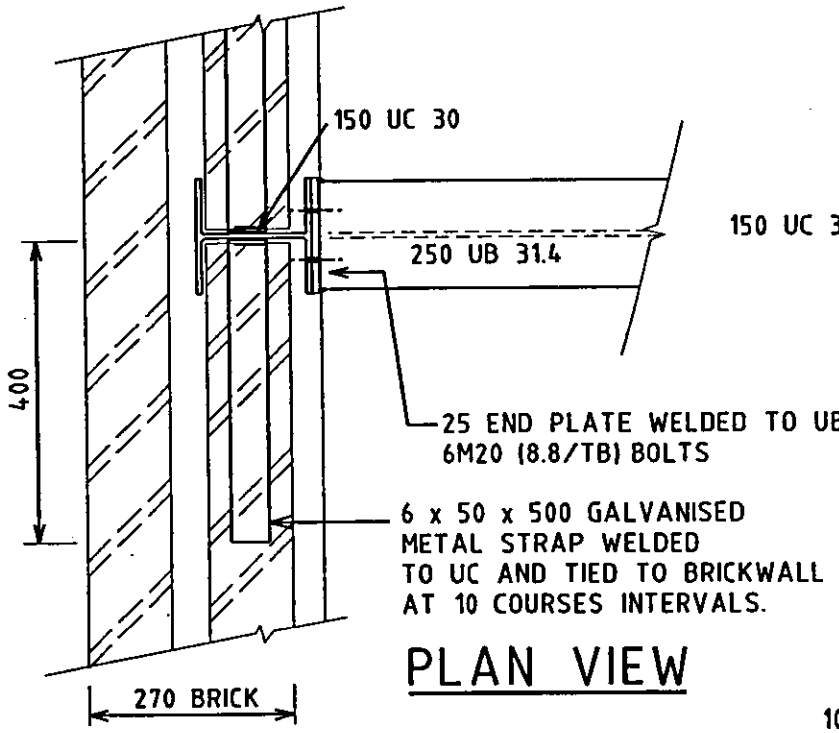
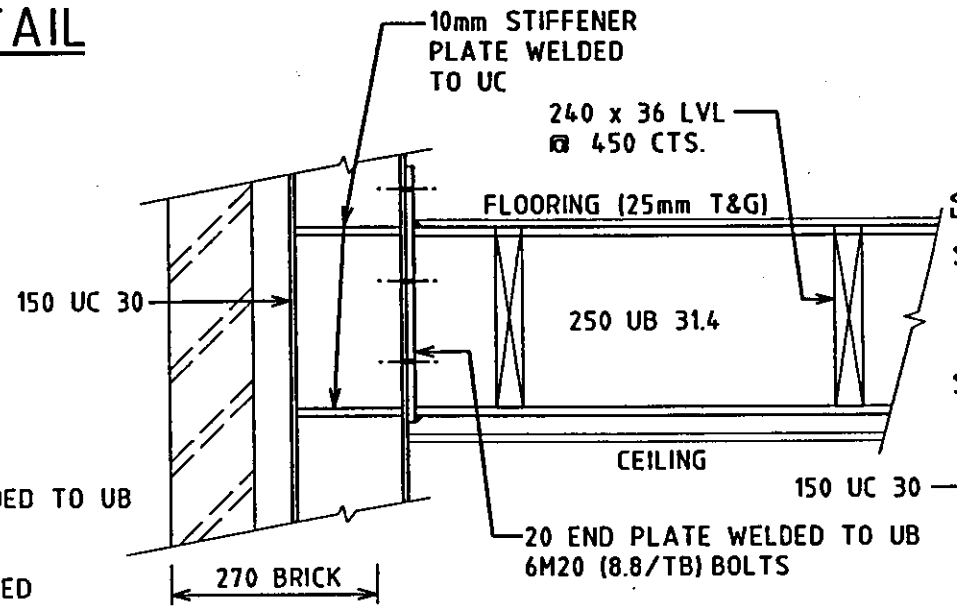


PLAN VIEW



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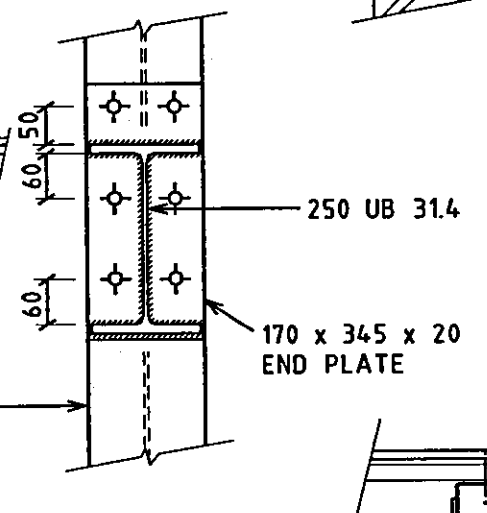

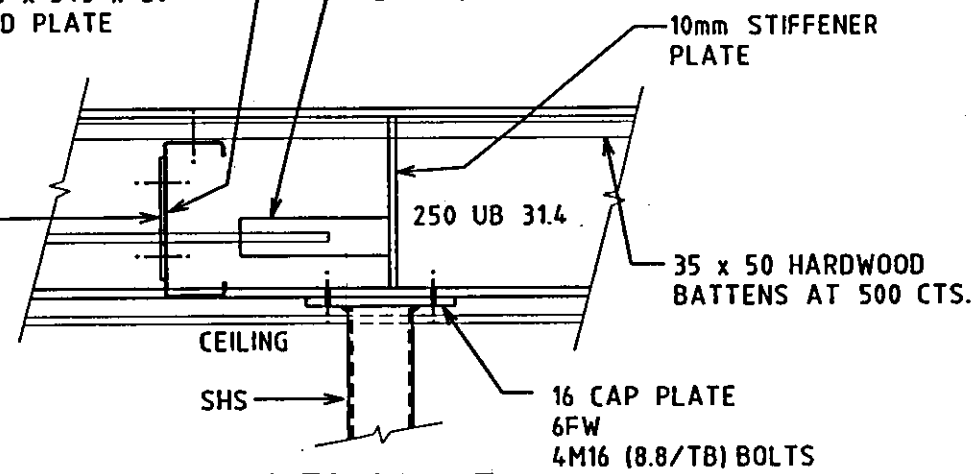

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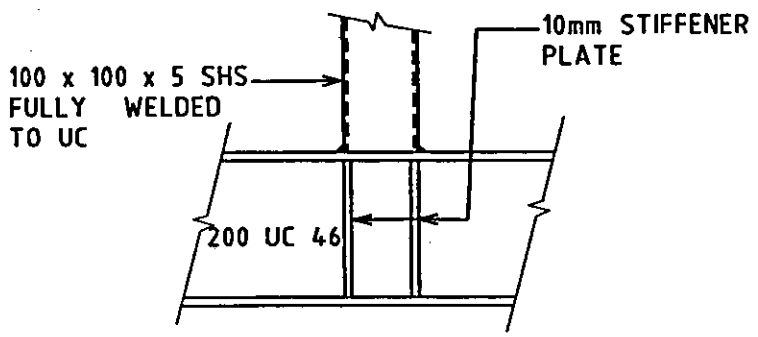


DETAIL 6

REV	DESCRIPTION	DATE
B	DETAILS AMENDED	09.08.07

DONOVAN DESIGNS PTY LTD
CIVIL AND STRUCTURAL ENGINEERS
SUITE 102, 30 COWPER STREET, PARRAMATTA NSW 2150
Ph (02) 9806 3060, FAX (02) 9891 2806 ABN 41002289867

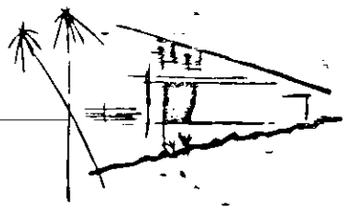
DRAWING TITLE
FORMICA
353A BARRENJOEY RD.
NEWPORT

SHEET TITLE
STEEL DETAIL

APPROVED
B.E.,M.I.E. Aust.

SCALE 1:10 DATE 26.04.07
DESIGNED JD DRAWN RDP CHECKED JD
CLIENT JOB No. E71342
JOB/DRAWING No. 71342-10
ISSUE B

perera design
residential commercial interiors



DK BUILDING CERTIFIERS PTY LTD
ABN 96 097 502 700
CONSTRUCTION CERTIFICATE No: 07090-CC
APPROVAL DATE: 3/9/07
SIGNED:
Accredited Certifier - Damian O'Shannassy
Accreditation No BPB0306

N AND A FORMICA
AS TRUSTEES FOR THE ESTATE OF THE LATE V FORMICA
PO BOX 1423, MONA VALE, NSW, 2103.

PROPOSED ALTERATIONS AND ADDITIONS

SPECIFICATION OF BUILDING WORKS
N & A FORMICA
353 Barrenjoey Road
Newport NSW 2106
CC ISSUE 20th JULY, 2007
PROJECT REFERENCE 06 02

p: 02 9999 0196 m: 0407 017 228 f: 02 9979 5797 e: pereradesign@bigpond.com
w: www.pereradesign.com a: 39 wallumatta road newport nsw 2106:

N AND A FORMICA
353 BARRENJOEY ROAD
NEWPORT NSW 2106

PROPOSED ALTERATIONS AND ADDITIONS

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SECTION 1 - PRELIMINARY CLAUSES

1.01 GENERAL CONDITIONS

All technical enquiries should be addressed to:

Mr Nalin Perera
Architectural Consultant
Telephone No: 02 9999 0196
Mobile No: 0407 017 228

Perera Design Pty Ltd
39 Wallumatta Road
Newport NSW 2106

Time for completion shall be.....weeks from the date of Contract.

All work shall be carried out by skilled tradesmen in a manner conforming to the highest of trade practice to ensure that a quality finish is obtained.

The Contractor shall compile a construction programme which shall be forwarded to the architectural consultant and discussed prior to commencement of work.

1.02 DRAWINGS AND SPECIFICATIONS

The drawings and the specification shall be taken as mutually explanatory and anything contained in one but not the other shall have the same significance as if it were contained in both.

Minor items not expressly mentioned in the specification but which are necessary for the satisfactory completion and performance of the work under the contract shall be supplied and executed by the Contractor without adjustment to the contract sum.

The following drawings shall form part of the contract documents and shall be read in conjunction with this specification:

Drawing No.	Subject
CC 06 02 101 D	Floor plans sections
CC 06 02 102 C	Elevations, details
CC 05 02 103 B	Wall, roof, amenities details Door/window schedule
EL 06 02 101 TBA.	Electrical layout

1.03 INTERPRETATION OF DRAWING

The Contractor or any sub-Contractor shall check all relevant dimensions on site before commencement of works. Under no circumstances shall dimensions be scaled from drawings.

The building layout as shown on the drawings shall be taken as diagrammatic only and all measurements and other information required to carry out the works specified shall be obtained by the Contractor on site. No claim for extras arising from failure to obtain measurements and other information of the site will be allowed.

1.04 BY-LAWS, FEES AND NOTICES

The Contractor is not required to submit building plans to local or other Authorities for approval unless work is being carried out in the A.C.T. where approvals are required.

Unless otherwise specified the Contractor is responsible for connection of all water, drainage, sewerage, gas and electricity services and he shall apply for all relevant permits and, pay associated fees and/or charges which are levied by the Relevant Authority.

1.05 COMPLIANCE WITH STANDARDS AND CODES

Where the contract requires the Contractor to comply with any Standard or Code that Standard or Code shall, unless otherwise specified, be that which is current at the signing of contracts.

1.06 REGISTRATION OR LICENSING OF BUILDERS

Where an Act or Ordinance of the State or Territory in which site of the works is located requires that a builder (as defined by the Act or Ordinance), be registered, or licensed to carry the work described in the Contract, it shall be a condition of tendering that a tenderer produce evidence with his tender that he is so registered or licensed.

Failure by a tenderer to produce such evidence, satisfactory to the architectural consultant may result in the rejection of his tender.

1.07 REGISTRATION OF BUILDERS - EXECUTION OF WORK BY SUB-CONTRACT

Where the Contractor makes application for approval to sub-contract, the application shall include evidence of the registration or licensing of the proposed sub-Contractor where legislation is in force which requires registration or licensing for the class of work that the sub-Contractor will carry out.

Failure by the Contractor to produce such evidence will be sufficient cause for the architectural consultant to withhold his approval to the application.

1.08 TRADE NAMES

It should be understood that where trade names are mentioned, it is not intended that the particular brand or type should be used exclusively.

The use of trade names is solely for the purpose of indicating the acceptable type or standard of fittings or components. When alternatives are proposed, the builder shall submit complete technical information of the alternative, and state any modification required to the works as a consequence, and that he shall accept full responsibility for the modified work.

1.09 SAMPLES

If requested, the Contractor shall, prior to installation, furnish for the approval of the architectural consultant, samples of plant, equipment, fittings and fixtures to be used in the works.

1.10 LIGHT AND POWER

The Contractor shall have access to existing electrical light and power installations.

1.11 WATER AND SANITARY ACCOMMODATION

The Contractor and all sub-Contractors may be permitted to use the existing sanitary accommodation provided that the facilities are used properly and that they comply with the requirements of the appropriate authority.

1.12 FIRE PROTECTION

The Contractor shall provide fire extinguisher and first aid protection appropriate to meet the hazards of welding or any other high risk hazard associated with the work of the contract.

1.13 REMOVAL OF RUBBISH

The Contractor shall remove all rubbish and debris from the site from time to time as is necessary or as directed. The area shall be clean at all times.

On completion, the Contractor shall ensure that the premises are cleaned and surplus materials, debris and the like removed so that areas worked in are left fit for immediate occupation or use.

1.14 CUTTING FIXING AND MAKING GOOD

All cutting, forming and making good of openings required for the work shall be the responsibility of the Contractor.

The breaking and cutting of completed work must be avoided wherever possible.

All fixings, equipment, cable trays, ducts and the like shall be securely fixed to the approval of the architectural consultant.

Damage caused in the course of the works shall be made good by the appropriate tradesmen to the surface finish and match adjacent surfaces.

1.15 DAMAGE TO FINISH OF EQUIPMENT

The Contractor shall be responsible for the refinishing or replacing of any fixtures, fittings and materials damaged during the course of installation.

1.16 WORKING HOURS

Tendered prices shall be based on the performance of all works specified in normal working hours, as set out by the relevant governing authorities.

The additional costs of wages and any other costs caused by overtime or shift work outside of these working hours shall be borne by the building contractor.

1.17 MAINTENANCE PERIOD

At the completion of all works to the approval of the architectural consultant, a notice of practical completion shall be issued by the architectural consultant.

As a part of this Contract, a "Maintenance Period" shall apply from the date of issue of the "Notice of Practical Completion" for a period of ..... weeks. During this period the Contractor shall be responsible for the repair of any part of the installation that may become faulty or inoperative.

If during the maintenance period any defects become apparent under normal use of the works and the defects are due to any cause including design, workmanship or material, the Contractor shall be responsible for making good at his own expense any such defect to the approval of the architectural consultant.

Should the Contractor fail to commence to make good such defects as directed by the architectural consultant within seven (7) days of written notice to do so the architectural consultant will have the right to have all such defects rectified by others at the risk and expense of the Contractor.

An amount equal to 2.5% of the Contract sum shall be retained for this Maintenance Period.

1.18 WARRANTY

All equipment, components and material supplied by the Contractor shall be covered by a twelve (12) months warranty against faulty manufacture, workmanship and materials.

1.19 ASBESTOS

If at any time the Contractor discovers the presence on site of the works of any loose fibrous material which may contain asbestos, he shall not disturb the material under any circumstances but shall contact the architectural consultant and inform him of the existence of the material on site. The Contractor shall ensure that his workmen are protected from exposure to the material until the nature of the material has been completely determined.

Bonded Asbestos Fibre

The removal of any bonded asbestos products such as asbestos cement shall be carried out in such a manner so to cause the minimum of dust creation. The Contractor shall seek approval from the Superintendent on the method and staging of such works.

The removal method shall comply to the following codes:-

a. The report on the health hazards of asbestos and appendices by the National Health and Medical Research Council, current at the signing of contracts.

b. Department of Industrial Relations Code for asbestos removal, current at the signing of contracts.

1.20 HOT WORK PERMIT

Prior to all cutting and welding type work or work of a similar nature being carried out on site by the Contractor, the "HOT WORK PERMIT" (Appendix I) shall be endorsed by both Contractor and Responsible Officer respectively.

All requirements stated thereon shall be strictly followed by the Contractor in conjunction with the requirements of the S.A.A. Cutting and Welding Safety Code.

SECTION 2 - FENCER

2.01 GENERALLY

Supply all labour, materials, plant and equipment necessary to demolish, remove the existing fence and then erect a new fence as specified hereafter and in accordance with the manufacturer's instructions.

2.02 EXTENT OF WORK

All fencing to rear yard to be discussed and detailed by owner. Builder to nominate PC sum after site inspection.

SECTION 3 – DEMOLISHER

3.01 GENERALLY

Prior to demolition works being undertaken the builder or his contractor, shall contact the owner and/or architectural consultant, to ascertain what components and/or items are to be removed, demolished, or retained by the owner.

The Contractor shall carry out all demolition work in a careful and systematic manner with all precautions taken against accidental damages.

Carefully demolish and dismantle sections of the existing building as indicated in the associated drawing and as specified in this section.

Provide all necessary struts, props, supports, needles, beams and the like to prevent any collapse, cracking or deformity in the existing building while carrying out the works. This equipment shall be in conformity with the Council and Department of Industrial Relations regulations. The Contractor shall pay all fees payable under the relevant Acts.

A signed certificate of approval for all scaffold shall be obtained prior to their use, in accordance with the Scaffolding and Lifts Act 1912 amended.

Provide all necessary drop sheets and any other protective screens as required to prevent the spread of dust and debris.

Cut away, break down, take up and remove such portion of existing work as may be required to make way for new work as specified herein or necessary to complete the contract.

During demolition and/or construction, work shall be carried out in such a manner as to ensure minimum of inconvenience to adjoining residents, residences and the surrounding environment.

NOTE: Preliminary clauses 1.13 for Removal of Rubbish, 1.14 Making Good

3.02 SECURITY

Contractor to provide security screens/hoardings as necessary to prevent entry of unauthorised persons to building site and to areas which have been indicated for demolition.

3.03 SERVICES

Arrange for disconnection, cutting, sealing off, diverting of existing electrical, hydraulic and other services as required by the works.

Provide temporary electrical, hydraulic and telephone services, or retain services as necessary to ensure that occupied buildings, whether on the site of the works or not, are not deprived of continuous supply of existing electrical, hydraulic and telephone services while they are occupied, by causes due to demolition work.

Prevent damage or interference to services that serve buildings adjacent to the site of the works. Any damage to the above mentioned shall be rectified immediately at the Contractor's expense.

Dispose of water from any source during demolition.

3.04 DEMOLISHED MATERIALS

Unless otherwise specified, all demolished material shall become the property of Contractor.

All such materials shall be removed from site regularly and progressively.

The Contractor shall ensure that existing items specified to be retained or restored and reused are protected from damage.

Auction or other forms of sale of material before it is removed from site shall not be permitted.

Fires on the site for the disposal of materials shall not be permitted.

3.05 PROTECTION FROM WEATHER

Contractor shall keep the building dry and weatherproof by suitable means at all times.

3.06 SAFETY PRECAUTIONS AND PROTECTION OF PERSONS

The Contractor shall at all times provide and maintain proper protection necessary for the safety of all persons on or about the site and any such special precautions deemed necessary by the relevant authorities.

3.07 EXTENT OF WORK

Demolish areas on site as indicated on plan and as required to construct the proposed new third level residence.

SECTION 4 - EXCAVATOR

4.01 GENERALLY

The Contractor shall set out, clear and excavate the areas specified or indicated on the associated drawings.

Where rock is likely to be encountered, the Contractor is required to submit a rate for excavation in rock. Do not allow any contingency allowance for rock.

All excavations shall be supported by shoring, strutting and planking as required and kept free of spoil or water.

4.02 ROCK DEFINITION

"Rock" shall be defined as solid material which could not, in the opinion of the architectural consultant, be removed with reasonable economy by hand pick or mechanical excavators and would require the use of pneumatic tools, wedges and sledge hammers, blasting or special boring rig for its dislodgment.

"Other than Rock" shall be defined as softer material not covered by the foregoing definition and including all remaining portions of building foundation, pipes, building materials and the like found on the site.

4.03 BLASTING

The method of rock excavation shall be subject to approval. The use of explosives for rock removal or any other purpose shall not be permitted.

4.04 NOISE OF EXCAVATION

All compressors shall be fully insulated including the use of a silencer. All jack hammers or other noisy pneumatic tools shall be fitted with silencers.

4.05 SHORING

Provide all shoring, planking and strutting necessary to retain sides of the excavations, and to ensure safe working. Provide safety covers over holes. Provide any necessary needling, shoring and strutting to adjacent buildings.

4.06 DISPOSAL OF SPOIL

Remove all surplus excavated material from site. Any spoil retained for future use on the site shall be stored only at locations approved by the architectural consultant.

Retain top soil on the site for future use.

4.07 SETTING OUT

The Contractor is responsible for the setting out of the work in accordance with the associated drawings.

4.08 CLEARING OF SITE

The areas indicated on the associated drawings shall be grubbed up with all roots, trees, shrubs removed prior to commencing building operations.

4.09 TERMITE CONTROL

Inspect area where slabs are to be laid and remove all traces of timber, tree stumps, branches, etc.

Guarantee: Treatment shall be carried out by specialist and a written guarantee shall be furnished by the Contractor that treatment has been carried out according to specification, and that all soil barriers are intact and unbridged at the time of practical completion.

The guarantee shall be comprehensive and include protection against any termite infestation and damage for a period of 10 years.

4.10 TRENCHES

The depths for footings that are shown on the associated drawing are provisional.

The trenches shall be excavated to a depth necessary to obtain a solid base and a safe even bearing material. The bottom of the trench shall be stepped as necessary (refer to structural engineers drawings and details).

4.11 EXTENT OF WORK

Excavate all areas of site to accommodate proposed works. All excavation for footings shall be to engineer's details and requirements.

SECTION 5 - CONCRETOR

5.01 GENERALLY

The work specified in this section covers the general provisions relating to materials and workmanship to be used for the concrete work.

5.02 GRADE OF CONCRETE

Concrete for use in the various parts of the works shall be as follows:

- Slump shall be 80mm and maximum aggregate size 20mm unless otherwise specified.
- All concrete in slabs and footings shall be 25mpa and other concrete shall be 20mpa.

5.03 FORMWORK

The Contractor shall be responsible for the design, construction safety and adequacy of the formwork. Before construction commences, notify the architectural consultant of the general method and system of formwork it is proposed to use. Construct formwork to give concrete members the shapes and dimensions required by the contract documents.

5.04 REINFORCEMENT

Reinforcement shall be strictly as nominated and specified on associated drawings/document in relation to this project.

5.05 PRIOR TO POURING

The Structural engineer shall be notified at least 48 hrs before pouring.

5.06 CONCRETE SUPPLY AND DELIVERY

The concrete shall be supplied by an approved ready-mix supplier. Concrete delivered in non-agitating trucks shall not be permitted.

The Contractor shall present to the architectural consultant, concrete delivery dockets stating the quantity and the strength.

5.07 MEMBRANE

Waterproof membrane shall be installed under the new concrete slabs, complete with formed penetrations and accessories fixed in accordance with the manufacturer's written recommendations and to the approval of the architectural consultant and the structural engineer.

The membrane shall be black or orange low-density polyethylene membrane laid over prepared surfaces which must be entirely free of sharp projections. Membrane to have a nominal thickness of 0.200mm and no less than 0.165mm at any point.

Lay the membrane in sheets of maximum width in order to minimise the number of lap joints. Seal the joints thoroughly with an approved tape.

Lap all joints in the membrane a minimum of 150mm and completely seal with tape.

5.07 MEMBRANE (CONTINUED)

Turn the membrane up against all abutting walls and temporarily hold in place by means of tape.

At internal angles fold the membrane as necessary and tape the surplus material in the fold to one of the vertical surfaces.

At external angles, where cutting is unavoidable, use additional pieces of membrane as necessary to maintain minimum lap of 150mm and seal to the main sheet with tape.

Wrap service pipes and conduits passing through the membrane separately, tightly, with membrane sealed to the pipe and to the main sheet with tape so as to effect a waterproof junction.

Patch punctured or displaced membrane immediately to maintain a minimum lap of 150mm and seal to the undamaged membrane with tape.

Support reinforcement above membrane on pre-cast concrete chairs made with flat bases and without sharp edges, or suspended from hangers.

5.08 POURING AND PLACING OF CONCRETE

The concrete shall be placed to avoid segregation or loss materials. No water or admixtures shall be added to the concrete at the time of delivery or during placement. When placing concrete the Contractor shall take care not to dislodge the reinforcing. The concrete shall be placed continuously between construction joints and in such a manner that a "wet edge" is maintained. Mechanically vibrate the concrete during placement.

5.09 CURING

Freshly cast concrete shall be protected from premature drying and excessively hot and cold temperatures. The concrete shall be kept continuously moist for at least 24 hours. After pouring lay polythene over the concrete and moisten three times a day (morning, noon, and finishing time), for another 3 consecutive days after pouring. The polythene shall be left in position for a total of seven days. Weights shall be used to prevent the polythene being moved by the wind.

5.10 EXTENT OF WORK

Construct all concrete floor slabs, pathways, patios, courtyards and footings as indicated on the associated architectural and structural engineer's drawings and details.

SECTION 6 - STRUCTURAL STEEL

6.01 GENERALLY

Unless otherwise specified, all steel used in the work shall comply with the requirements of the current editions of the relevant Australian Standards as follows, and any other standards current at date of signing of contracts.

Structural Steel :	AS1131-1973	"Dimensions of Hot Rolled Structural Steel Sections."
	AS1227-1974	"General Requirements for Supply of Hot Rolled Steel Plates, Sections, Piling and Bars for Structural Purposes."
	AS1204-1972	(Grade 250) "Structural Steels Ordinary Weldable Grades."
Hollow Sections :	AS1163-1973	"Welded and Seamless Steel Hollow Sections for General Purposes" (Grade 250).

The Contractor shall also comply with the relevant Australian Standards for:

a)	Fabrication	-	AS1250-1972, AS1554 Parts 1 and 2, AS1511-1973
b)	Welding	-	AS1554, Part 1-1974 and AS1554, Part 2
c)	Bolting	-	AS1111-1972, AS1112-197 (cont.)
d)	Galvanising	-	AS1214-1973

6.02 STRUCTURAL CERTIFICATE

A Structural Certificate certified by a qualified practising structural engineer shall be provided by the Contractor for components required by the architectural consultant before commencement of work.

6.03 SHOP DRAWINGS

The builder shall provide detailed shop drawings showing the method of construction for any details required to carry out the proposed works as indicated in the architectural and structural engineers' drawings and details.

Delivery to Site

Steelwork shall be adequately supported and secured during transportation to prevent, temporary or permanent, overstressing or damage to any member, cleat, etc., or to its surface treatment.

Contractor shall be responsible for the provision of lifting equipment and the unloading of the steelwork.

6.04 STORAGE ON SITE

Steelwork to be stored on site prior to erection shall be adequately supported to prevent temporary or permanent, overstressing or damage to any part. Care is also to be taken to ensure that no part of the steelwork is in contact with the ground and that no pounding of water can occur.

6.05 BEDDING OF BASEPLATES ON MORTAR

Each column base or baseplate shall be wedged up and bedded to the correct level on mortar composed of two (2) parts of approved sand to one (1) part of cement dampened with water to a "damp earth" consistency and packed in tightly by approved caulking tools.

6.06 EXTENT OF WORK

Provide all structural steelwork inclusive of columns, purlins, baseplates, bolts, splices and connections to complete the whole of the works as shown on the associated drawings and as specified herein. All structural steel construction shall be in strict accordance with engineer's details.

SECTION 7 - BRICKLAYER AND BLOCKLAYER

7.01 GENERALLY

The Contractor is to supply all labour and materials to carry out the necessary brickwork/blockwork to complete this contract. All brickwork/blockwork shall be carried out by proficient and experienced tradesmen.

7.02 BRICKS/BLOCKS

Bricks/blocks shall be machine made, sound with straight sharp arrises, free from distortion and other defects. Where used for facework bricks shall be uniform texture and colour. Clay bricks shall be well burnt.

7.03 BRICKWORK/BLOCKWORK

Brickwork/blockwork shall be laid true and plumb in locations indicated on the associated plan. Lines of beds must be horizontal. Perpends in each alternate course shall occur vertically one above the other. All bed and perpends joints shall be an even 10mm thickness.

7.04 MORTAR

Bricks/blocks shall be laid in a compo mortar of the following proportions.

		Above D.P.C.	Below D.P.C.
Portland Cement	-	1 part	1 part
Hydrated lime	-	1 part	1/10 part
Clean Sand	-	6 parts	3 parts

The mortar volumes shall be measured by volume in suitable calibrated devices.

The mortar components shall be thoroughly mixed by mechanical means to produce a mortar of even colour and consistency.

Care shall be taken during placement of mortar that no mortar is dropped down the cavity. All mortar droppings shall be removed.

7.05 BOND

All brickwork/blockwork shall be laid in stretcher bond unless otherwise specified.

7.06 TIES

4mm galvanised kinked wire or strap ties shall be used every 700mm apart and on each fourth course. Ties shall be staggered. Galvanised clouts shall be used for fixing strapping to stud work, frames and roof plates.

7.07 CAVITY WALLS AND BRICK VENEER WALLS

Build cavity brick and/or Brick Veneer walls where shown on the drawings; widths as shown.

Wall ties to be built into cavities ABS in this Section.

Keep wall ties clear of mortar droppings; use neat fitting cavity battens and clean off at replacing on each wall tie level; leave out of external skin one brick every 470mm immediately above flashings and the through wall damp proof course at bottom of walls, until cavity has been approved, then build in to match; use pressure hose or chain if necessary or directed to clean wall ties and cavities.

7.08 BRICK SILLS

Window sills must not be completed until a late stage in the job so as to avoid damage.

Sills as indicated in the details shall be brick-on-edge laid in cement mortar mix.

7.09 WEEPHOLES

In cavity walls where a flashing or damp proof course crosses the cavity, in the course above in the external skin leave every third perpend open full height above the flashing or damp proof course to form a weephole.

Leave similar open joints above cavity filling.

7.10 DAMP PROOF COURSE AND FLASHINGS

All necessary flashings and D.P.C. shall be bituminous coated aluminium.

Flashings shall be installed over all windows, doors and other openings. Flashings on sills shall have an upstand of at least 25mm.

D.P.C. shall be the full width of the brick work and placed no higher than the bottom of the bearer.

Minimum lap for D.P.C. and flashings is 150mm.

7.11 ANT CAPPING

Ant capping shall be on brickwork under the bearer. Ant capping shall be 0.5mm galvanised metal projecting 38mm and at 45□ degrees down from the wall. All joints shall be lapped and soldered to provide continuous ant capping.

7.12 LINTELS

Lintels shall be installed to support and distribute the above brickwork or load evenly below. Minimum end bearing shall be 100mm for flat bar and 150mm for angle.

All lintels shall be galvanised after fabrication.

The following table shall be used as a guide only in determining general openings to be supported:

SPAN (mm)	LINTEL SIZE (mm)
Up to 1000	75 x 10 flat bar
1000 to 1800	102 x 76 x 10 angle
1800 to 3000	152 x 89 x 10 angle

7.13 WINDOWS

Protect all windows prior to commencement of brickwork with suitable masking tape or plastic to avoid window damage.

7.14 CLEANING DOWN

The whole of the facing brickwork/blockwork shall be cleaned down and completed to the satisfaction of the architectural consultant. Only approved cleaning methods shall be used.

Remove the excess mortar before it sets hard.

Wash down with copious amounts of water and remove excess water with sponge after cleaning is completed.

Commence the cleaning operation at the top of the wall by completing the above procedure.

Adequately protect all metal before and during cleaning.

7.15 EXTENT OF WORK

Construct all brick / block walls as indicated on associated drawings.

SECTION 8 – STONEMASON (if applicable)

8.01 GENERALLY

All stonework and associated work shall be carried out in such a manner as to exclude damage to the building.

Transport all stonework to the site with adequate packing and protective material to prevent damage of any kind.

Protect where necessary all undisturbed stonework, and all other building features such as windows, doors, metalwork, plaques, pavings and fixtures.

Where windows are prevented from closure by scaffolding ties provide and fix plywood protection in such a manner as to prevent water and stone dust entering rooms and to provide security against entry of intruders.

8.02 PROTECTION OF ADJOINING PREMISES

The Contractor shall take all precautions necessary to protect adjoining premises during the duration of all the work.

8.03 GENERALLY

The contractor shall supply all shop drawings templates and drawings as may be required for the work to be carried out.

It is the responsibility of the contractor to provide safe, secure and structurally adequate fixing of all work undertaken.

The fixing of all stonework must be supervised by an experienced foreman mason and any sweetening in shall be carried out by a foreman mason.

8.04 STONEWORK

The lines of all mouldings, curves, returns, angles and the like have to exactly match that portion removed.

8.05 CUTTING BACK

Unless otherwise directed, existing joint lines shall be maintained and preserved. All cutting shall be carried out under the supervision of an experienced mason. New approved stone shall be dressed to fit tightly into the opening made. It shall be cut, moulded and finished exactly as that portion removed.

8.06 BEDDING AND FIXING OF STONE

All stone shall be correctly and accurately set level and plumb in position as indicated on the control drawings. The beds and face and back joints of every stone shall be free from hollow or rough surfaces. Where possible stone shall be bedded and jointed in one operation. Each stone shall be fixed to take its own weight without support from adjoining stones.

Before bedding any stone, the replacement stone and the excavated area of existing stone shall be cleaned free of all dust and impurities and shall be thoroughly wettened or dampened down before the mortar is laid. After any stone is bedded and adjusted to its correct position it shall be solidly grouted at its back and at the joints. Prior to the stonework grouting, all stone shall be set and packed out as necessary.

8.07 MORTAR

All mortar and cement shall be in accordance with AS A123 "Mortar for Masonry Construction". White Portland cement only shall be used.

1. Lime shall conform to the code as appropriate for the purpose required and shall be hydrated.

2. White cement should comply with the Code A.B.S.

3. The mortar for bedding and jointing sandstone shall be:

Cement	1 Part
Lime	1 Part
Sand	6 Parts

All grouting shall be equal to bedding mortar.

8.08 JOINTING

All stone shall be set on a full bed of mortar and new joints shall match existing width.

8.09 FIXINGS, CRAMPS, ETC.

Provide and fit all necessary fixings, cramps, dowels and the like as required to fix the stone.

1. The metal dowels and fixings shall be of non corrodible, non ferrous metal.

2. The tying back and together (restraint) fixings shall be of copper or phosphor bronze.

3. The loadbearing fixings shall be of phosphor bronze, all to the appropriate A.S. codes.

Cramps, dowels, bolts, ties and all other fixings shall be designed and fixed to support each stone.

The Contractor shall be responsible for the positioning and strength of each cramps, dowel, bolt, tie and other fixing.

8.10 SMALL CRACKS, HOLES AND REEDS

Stonework which is cracked, scratched, holed or contains service fixing pockets shall be filled with a low viscosity epoxy resin solvent free hydrophilic equal to "Ciba-Geigy Araldite K79" Kit. The material shall be mixed with a suitable sand to bring it to a colour and texture similar to the stone being treated. All work associated with this patching shall be performed in accordance with technical advice and assistance of the product manufacturer.

For fine jointing, a jointing adhesive equal to "Neomastik" as manufactured by Neolite, shall be used. Mix Neomastik with an approved hardener and apply all in accordance with the manufacturer's instructions.

8.11 POINTING

On completion of the required stone repairs all joints to be pointed in. New and existing work shall be raked out to a minimum depth of 10mm and cleaned ready to take pointing.

8.12 POINTING MATERIAL

An approved primer shall be used and all joints shall be pointed with Masons Putty or with an approved silicone material similar and equal to "Perennator V23-4" in accordance with the manufacturer's recommendations.

Contractor shall protect all finished stonework from damage or staining.

8.13 CLEANING DOWN ON COMPLETION

On completion of the work all stone in the immediate vicinity and below shall be adequately cleaned down and protected. All mortar stains shall be washed off the stone no longer than 12 hours after the time of application. Only high pressure, clean water is to be used for cleaning down, no acids or alkaline solutions are to be used.

8.14 EXTENT OF WORK (ONLY IF APPLICABLE)

SECTION 9 - PLUMBER AND DRAINER

9.01 GENERALLY

The whole of the work shall be carried out by tradesmen licensed to perform work on the waste and water systems.

All work to be carried out in strict accordance with the regulation of the Local Authority.

Contractor is required to pay all fees and render all applications, diagrams as may be required by the Authority.

No work shall be covered or concealed from view before it has been inspected, tested and approved by the Local Authority and any relevant authority.

9.02 INTERRUPTION OF EXISTING SERVICES

Work shall be scheduled in such a manner as to reduce to the practicable minimum any interruption of existing services. The Contractor is to give 48 hours notice of interruption to services.

Connection, disconnection or interference with services, shall be carried out under the supervision of the Superintendent.

9.03 SAFETY PROTECTION

The Contractor shall provide all lights, barriers, flags and the like at all times during the contract period around the trenches to ensure the safety of all persons.

9.04 INSTALLATION OF FIXTURES AND FITTINGS

Installation of fixtures and fittings requires all the necessary waste, soil, vent and service pipes of requisite size complete with inspection opening fittings to be connected.

9.05 SANITARY SERVICE - U.P.V.C. PIPELINES

Unplasticized Polyvinyl Chloride pipes shall be of an approved manufacture and shall conform to the following standards:-

AS1260 U.P.V.C. Pipes and Fittings for Sewerage Applications 1-5. The type used shall be SM (Sewer Medium) class. The pipes shall only be used in accordance with Australian Standard CA67. The pipes shall be of the solvent welded joint type and all joints are to be made strictly according to the manufacturer's instructions.

AS1254 1973 U.P.V.C. Pipes for Stormwater Applications. The type used shall be STORMWATER HD Class. The pipes shall only be used in accordance with Australian Standard, CA67. The pipes shall be of the solvent welded type and all joints are to be made strictly in accordance with the manufacturer's instructions.

AS1477 U.P.V.C. Pipes and Fittings for Pressure and Non-Pressure Application. Pipes conforming to this standard shall be used for all Sanitary Plumbing pipework.

The pipes shall be of the solvent welded type and all joints are to be made strictly according to the manufacturer's instructions. Moulded U.P.V.C. fittings for solvent welding to U.P.V.C. pipes shall conform to Australian Standard A159.

9.05 SANITARY SERVICE - U.P.V.C. PIPELINES (CONTINUED)

Solvent welding cement shall conform with Australian Standard A185 Solvent Welding Cement for use with rigid P.V.C. pipe.

9.06 VITRIFIED CLAY PIPE (IF APPLICABLE)

Vitrified clay pipes shall conform to the requirements of SAA 1741 and shall be approved and tested by the Metropolitan Water Sewerage and Drainage Board or approved alternative agency.

Vitrified clay pipes and fittings shall be jointed using AS1693 toroidal rubber ring to approved manufacture (cement jointing will not be allowed).

In accordance with current manufacturing practice vitrified clay junctions will be 60□ angle or 45□ angle in larger sizes if available. Inspection branches will be located adjacent to junctions and bends in an approved manner.

All vitrified clay pipes shall be cut as required with approved cutters or abrasive disc saw.

Vitrified clay pipe fittings fabricated with epoxy resin glue shall be fully encased by 150 thick concrete.

9.07 INTERNAL STACK WORK

Install all internal or external stackwork as shown on the architectural drawings details, flush as possible to walls and corners to keep the size of the boxing in (if required) to a minimum.

9.08 BEDDING MATERIALS IN TRENCHES

Bedding for cast iron and vitrified clay and U.P.V.C. pipelines shall comprise clean sharp sand, free from clay, salt and organic materials. Such material shall also be used for backfilling as required over cast iron, vitrified clay and U.P.V.C. pipelines. Sparging with cement mortar shall be done to the pipes ten (10) sand and one (1) cement.

Grandular material for backfilling over all pipelines under pavements and between concrete surfaces and sides of excavation shall comprise grandular material in the form of sand, (as specified above), approved crusher dust, or similar approved material, ashes shall not be permitted.

9.09 BACKFILLING

After a length of pipeline has been constructed, tested and approved, and permission has been given to backfill, the trench shall be backfilled as specified below with the material specified for the particular type of pipe.

For vitrified clay U.P.V.C. and cast iron pipelines, back-filling shall comprise sand to a level of 75mm over the top of the pipe.

For coated cast iron pipelines backfilling shall comprise sand to a level of 150mm over the top of the pipes.

9.09 BACKFILLING (CONTINUED)

For pipelines other than those under pavements (whether existing or proposed) the next 300mm height of the trench where applicable shall be fill material free of stone or hard formation consisting of the best of the excavated material and shall be well consolidated and watered to approval. The remainder of the trench shall be backfilled in layers not exceeding 150mm in thickness with selected fill material from the excavation, each layer being well consolidated and watered as directed. Should the Superintendent consider the excavation material unsuitable for backfilling of any portion of trenches, then such portions shall be backfilled with granular material, well consolidated and watered in layers as specified above.

For pipelines under pavement, whether such pavements are existing or to be constructed under this contract or shown on the drawings as to be constructed in the future, backfilling with excavated material will not be permitted, but shall be carried out using approved granular material in layers not exceeding 450mm in thickness, each layer being consolidated and watered to approval.

Backfilling between concrete structures and the sides of excavations shall be with granular materials consolidated in layers as directed, but not exceeding 150mm in thickness.

9.10 SURPLUS SPOIL

Surplus spoil shall mean excavation material not required for the purpose of this contract and it shall be removed from the site of the excavation by the Contractor.

The Contractor shall cart and dispose of the surplus spoil.

9.11 RESTORATION OF SURFACES

The Contractor shall be responsible for the restoration of any road surface or any lawns removed or damaged as a result of this contract.

Any roads, paths, or other areas, so affected shall be restored with materials of the same nature as and of equal quality to those contained in the original pavement and to the same standards of construction and the same depth so as to produce at the end of the maintenance period a finished surface at least equal in all respects to that existing before the commencement of the works comprising this contract.

9.12 STORMWATER DRAINAGE LINES

Contractor shall rod out and clear all stormwater lines and report on their condition.

If stormwater lines are damaged, approval to replace shall be obtained from the architectural consultant.

Damaged lines shall be replaced with 100mm diameter V.C.P./90 U.P.V.C. laid, jointed and backfilled as required by the local authority.

9.13 WATER SUPPLY

Renewal of Main Water Service/Extension of Existing Service

Renew the main water supply and/or extend existing service from the water meter, to all draw off points including urinals, W.C. cisterns, basins, hose cocks and the like.

The service shall be in 20 x 19 gauge (1.1mm) seamless solid drawn tubing.

9.14 JOINTING AND FITTINGS

All joints except screwed joints shall be made with approved capillary type fittings or by brazing with 15% silver soldering. Screwed jointing shall be used for taps.

All pipework shall be bent where practical, care being taken to preserve the diameter of the pipe at all bends.

All fittings used on copper pipelines shall be 70/30 cast brass, copper or gun metal.

9.15 EXPOSED INTERNAL PIPEWORK

All pipework within the building shall be concealed where practical and where exposed or directed it shall be chromium plated and fitted with chromium plated wall roses.

9.16 GENERAL MAINTENANCE

The Contractor shall reseat and rewasher all cocks and taps including W.C. cisterns.

9.17 SANITARY WARE

Supply and install all sanitary fixtures, detailed under "Sanitary ware schedule" or as necessary to complete the installation of each system. Supply and fix all accessories, bolts, brackets, putty, mastic, mortar and the like, for the correct installation for the fixtures.

9.18 SANITARY WARE SCHEDULE

Refer to architectural drawings and kitchen, laundry, ensuite and bathroom details provided with this contract.

9.19 WATERPROOFING

All internal wet areas to bathrooms, ensuites, powder rooms and laundries are to be completely waterproofed by a licensed applicator using a proprietary accredited product designed for wet areas. Membrane should be waterproof not water resistant. Area to be waterproofed should be clear of all obstructions and thoroughly cleaned prior to application of product. System must include upstands, angles, a turn should be provided at door thresholds. Membrane should be dressed into floor waste outlets. The whole area of all wet area floors should be waterproofed. Balcony areas over internal habitable rooms to be treated under the same guidelines as internal wet areas. Accredited products should be used and applied by a licensed waterproofing contractor and the manufacturer's instructions be explicitly followed. Certificate showing type of membrane, installation date, name and license no. of approved installer to be supplied on completion.

9.20 STAINLESS STEEL SINKS

Stainless steel sinks shall comply with AS1756.

Sink bowls shall not be formed by spinning.

Finish to all visible metal: satin/bright.

Waste outlets shall comply with AS1589 where applicable, and shall have stainless steel flanges and brass or plastic body.

9.21 LAUNDRY TUBS

Stainless steel laundry tubs shall be installed in the location indicated in the associated drawings. Tub shall be as selected by architectural consultant and/or as specified in laundry detail drawings. Mount tub on a white stove enamelled steel cabinet supplied by the tub manufacturer, having a hinged door with a pull handle and cupboard catch.

9.22 WALL BASINS/VANITY BASINS (REFER BATHROOM & ENSUITE DETAILS)

Install in the locations indicated on the associated plans.

9.23 BATHS (REFER BATHROOM DETAILS)

Install in the locations indicated on the associated plans.

9.24 WATER CLOSET ASSEMBLIES (REFER BATHROOM, POWDER ROOM & ENSUITE DETAILS)

9.25 CISTERN (REFER BATHROOM, POWDER ROOM & ENSUITE DETAILS)

Complying with AS1218. Flushing cisterns, nominal capacity 11 litres, vitreous china matching pan in colour low level type. Install to regulatory authorities requirements.

9.26 TAPS AND FITTINGS (REFER TO BATHROOM, KITCHEN, LAUNDRY & ENSUITE DETAILS)

9.27 EXTENT OF WORK

Carry out all plumbing and drainage work as indicated on the associated architectural drawings, including, bathroom, powder room, laundry and ensuite detail drawings. If the builder and/or the plumbing contractor are unsure about any item pertaining to this section the architectural consultant should be consulted immediately.

All sanitary fixtures and fitments shall comply with current AAA rating for water conservation inclusive of tap flow regulators, shower head roses and dual flush toilets. All hot water systems are to have a minimum rating of 3.5 stars.

SECTION 10 - PLASTERER

10.01 GENERALLY

All plastering shall be carried out by competent tradesmen under conditions which will not adversely affect the finished work.

Return plastering into reveals, heads, sills, recesses, niches and the like. Plaster faces, ends and soffits of projections in the background, such as string courses, sills, pilasters, corbels and the like. Run throatings on soffits of external projections. Trim around openings.

On completion cut out any damaged or faulty work and make good.

10.02 PROPORTIONING AND MIXING

Measure materials by volume in suitable calibrated devices. Mix materials mechanically unless otherwise approved. Mixing by hand shall be done on a clean platform. Continue mixing until mixture is uniform in colour and consistency. Maintain uniform proportions from batch to batch.

Clean all platforms, tools and mixing machines before each batch is mixed.

Use mixes containing cement within 2 hours and mixes containing gypsum plaster within thirty minutes, after the addition of water. The proportions shall be as follows:

Cement Render

4:1:16	Cement: Lime	: Sand for clay brick; concrete (external)
2:1:10	Cement: Line	: Sand for clay brick; concrete (internal)
1:6	Cement Sand for concrete block	

Hard Wall Gypsum Plastering

Apply two coats hard-wall gypsum plaster as follows:

Proportions

First Coat 2:5	Gypsum plaster	: Sharp washed sand
Setting Coat 3:1	Hardwall gypsum plaster	: Lime putty

Finish: Leave the first coat off the rule. Finish the setting coat 4mm maximum thickness with a steel trowel.

10.03 APPLICATION

If possible apply each coat to the whole of each individual area in one continuous operation. If joining-up is unavoidable make the junction so that it is invisible in the finished work.

Press plaster through the apertures of the metal lath.

Make finished surfaces even, free from defects, and true to the required surface. Make vertical surfaces plumb and horizontal surfaces level. Make re-entrant corners and salient angles straight and true.

10.04 MULTI-COAT WORK

Where multi coat work is specified, scratch comb each undercoat in two directions, when it has stiffened enough, to form a key.

10.05 THICKNESS OF COATS

Apply plaster coats to finish within the following thickness limits.

One coat work	:	12-15mm	
Multi coat work	:	First coat	9-15mm
	:	Floating coat	6-9mm
	:	Finishing coat	6-9mm (except setting coats)
	:	Setting coats	2-3mm

10.06 TOLERANCES

Finish plane surface of finish coats within a tolerance.of 3mm as determined by a 3m straight edge placed anywhere in any direction. Make true corners, angles and edges, and curved or radiused surfaces, within equivalent tolerances.

10.07 SURFACE FINISHES

Steel Trowel : Provide a smooth dense surface free from texture and free from shrinkage cracks, but not glass-like.

Wood Float : Provide an even texture by wood floating the screeded surface and finishing with a clean sponge.

10.08 VEE JOINTS

Provide neat vee joints in plaster whenever it crosses junctions between different background materials, except where the junction is bridged as specified in metal lath bridging. Rule the vee joints straight and true and cut it right through the plaster to background exactly on the line of the junction.

10.09 CORNERS AND ANGLES

Make plaster corners and angles as follows:

Re-entrant corners : Round off to a mm radius

Salient angles : Round off pencil round to a mm radius

10.10 PLASTERBOARD LINING

Gypsum plasterboard sheets for internal wall and ceiling lining shall be an approved type, covered on both sides and edges with smooth faced cardboard with recessed or square edges. Square edged sheets shall be used where abutting exposed framing members cornices etc.

Sheet thickness shall be for:

i)	Walls	-	mm	(As specified by Acoustic Consultants report)
ii)	Ceilings	-	mm	(As specified by Acoustic consultants report)

10.11 FIXING PLASTERBOARDS

Type of fixing shall be in accordance with the manufacturer's recommended instructions.

Apply sheets horizontally to walls, across joist or rafters to ceilings. Nail direct to timber framing. Drive nail heads just below the surface without damage to face and core of sheet, and fill with jointing cement. Nails to be galvanised 2.6mm diameter, flat heads.

All joints are to be taped and set flush with gypsum-based jointing cement fine sanded and left ready for painting.

10.12 PLASTERBOARD CORNICE

Cornice shall be fixed in accordance with the manufacturer's recommended instructions.

All joints shall be accurately butt jointed and mitred.

The builder and/or plasterboard contractor will contact the architectural consultant before ordering the product, to be advised of the Type and Profile to be used.

10.13 INTERNAL BUILDING BOARDS

The lining for wet areas shall be 6mm fibre cement sheeting similar to "Hardies Villaboard".

All sheet fixing and installation shall be fixed in accordance with the manufacturer's recommended instructions.

All joints shall be taped and set flush ready for painting.

Fixing to timber shall be 2.8mm diameter galvanised lattice head nails.

When installing sheeting the Contractor shall ensure that all flashings are installed and that they are not damaged during the fixing of sheeting.

10.14 EXTENT OF WORK

1. Supply and install plasterboard lining to all internal walls as indicated on plan. Install CSR Gyprock shadow set profile plant on application cornices. Builder shall provide sample to architectural consultant for approval.

2. Apply and integrate cement render to internal walls where existing and maintain continuity. Match existing on site in all respects. Maintain appropriate point of intersection between plasterboard lining and cement render.

SECTION 11 - CARPENTER AND JOINER

11.01 GENERALLY

The whole of the carpentry and joinery work of this contract shall be constructed and completed by qualified tradesmen in the best workmanlike manner in accordance with recognised trade practice.

11.02 TIMBERS GENERALLY

Timber shall be of the species and grades specified. If the grade is not specified, it shall be that which is normally used in a similar application.

All joinery timbers shall be free from lyctus susceptible sapwood in, accordance with the provisions of the Timber Marketing Act and its Regulations.

All joinery timber shall be seasoned so that the moisture content is between 10% and 13%, the Contractor shall submit satisfactory proof as to the moisture content if and when called upon to do so.

All timber and boarding exposed to view shall have dressed and sanded surfaces and be suitably primed before dispatch from joinery shop.

11.03 TIMBER SIZES

Milled timber products shall be within the tolerances given by the relevant Australian Standard. Dressed timber shall not be less than the specified sizes.

11.04 WORKMANSHIP

Tradesmen shall perform all operations necessary to provide first class carpentry and joinery work including grooving, rebating, framing, housing, beading, mitring, scribing, nailing, screwing, gluing in addition to operations specified hereafter.

Work specified to be framed shall be morticed and tenoned, dovetailed or framed by other approved methods where not specifically described.

All exposed finishing timbers to be dressed and visible edges arrised.

All exposed timber or joinery required to be clear finished, painted or polished shall be matched for grain and colour, sanded, nails punched and fill with putty/stopping to match finish.

11.05 FASTENINGS

All fixings, fastenings, anchors, lugs and the like shall be of approved type and shall transmit the loads and stresses imposed and ensure the rigidity of the assembly.

Timbers shall be drilled for fastenings where appropriate and where necessary to prevent splitting.

11.06 WEATHERBOARD SHEETING

Supply and fix fibre cement horizontal cladding (Newport profile) where indicated on the associated drawing.

11.07 DOOR SCHEDULE

Location	No.	Type	Size	Hardware
Bedroom A	02	Hollow Core Flush panel	820 x 2040	Lockwood Privacy Set
Ensuite	03	Hollow Core Flush panel	820 x 2040	Lockwood Privacy Set
Bathroom	04	Hollow Core Flush panel	820 x 2040	Lockwood Privacy Set
Store	05	Hollow Core Flush panel	2 (620 x 2040)	Lockwood Latch Set
Linen	06	Hollow Core Flush panel	6 (450 x 2040)	Lockwood Latch Set
Study/Office	07	Hollow Core Flush panel	820 x 2040	Lockwood Privacy Set

Note: Refer to architectural consultant for type and make of all door hardware to be used for the project.

11.08 DOOR AND WINDOW HARDWARE

Contractor to ensure easy operation of all locks, latches, closers, window grips and hinges.

11.09 VANITY UNITS (REFER TO BATHROOM, ENSUITE & POWDER ROOM DETAILS)

Supply and install vanity units to locations indicated on the associated drawings.

11.10 KITCHEN CUPBOARDS AND BENCHTOPS (REFER TO KITCHEN DETAILS)

Manufacture and install all kitchen floor and overhead cupboards as shown on architectural consultant's detail drawings.

SECTION 12 - METAL WORKER

12.01 GENERALLY

Provide all materials and workmanship necessary to complete this trade.

Provide all screws bolts, rivets, pop rivets, plain and counter-sunk, washers and fastening of a type and material suitable, galvanically compatible and matching in finish and appearance to the components fastened.

All work shall conform to the requirements of the Standards Association of Australia Codes or Equivalent Codes.

12.02 STANDARDS OF FABRICATION

All fabrication and methods of fabrication shall be in accordance with good practice, the relevant sections of Australian Standards and any special requirements noted on the drawings or in this specification.

12.03 LETTER BOXES

Supply and install built in letterboxes into the brick piers as shown on the associated drawings. Contact architectural consultant prior to brick piers being constructed, for exact size, type and finish to be used.

12.04 SHOWER SCREEN

Supply and install semi frameless shower screens to areas indicated on associated drawings in accordance with manufacturers recommendations The shower screen shall be of best quality and of approved manufacture. Refer to architectural consultant for exact finish and colour to be used.

12.05 CLOTHES LINES

Provide approved clothes lines, type and size as selected by architectural consultant, and install in locations indicated on the drawings.

Lines shall consist of 5mm dia. non-stretch plastic having a twisted polypropylene core encased in translucent PVC.

Install in accordance with the manufacturer's written instructions.

Uprights shall be cast into concrete pads.

12.06 EXTENT OF WORKS

Supply and install powder coated aluminium framed fully glazed door, window and skylight units. Aluminium framing shall have nominal size of 90mm W x 45mm H and of semi-commercial grade. Name of window/door system shall be nominated with tender reply and samples provided prior to any order being place.

SECTION 13 - ROOFER

13.01 GENERALLY

The Contractor shall inspect all roof areas so that the roof is left as a fully weathertight and birdproof roofing system.

All nails, screws and other fasteners shall be galvanically compatible.

All roofing shall be fixed in a tradesmanlike manner in accordance with the Manufacturer's recommendations and relevant SAA standards.

13.02 SWEEPING OF THE ROOF

The roof and gutters shall be swept clean of all debris (nuts, screws, cuttings) using a soft broom at the end of each day and particularly on completion of fixing.

13.03 METAL ROOF SHEETING
(Type, Profile and Colour as Selected by Architectural Consultant)

Sheeting shall be fixed to supports with approved fasteners as per the manufacturer's recommendations.

Sheets shall have approved side laps with top sheet facing away from the prevailing weather.

Roof sheeting shall project a minimum of 50mm into gutters with the maximum protection into gutters providing access for cleaning.

Flashings are to be manufactured from like or compatible materials as designated and shall cover the sheets a minimum of 100mm.

Attachments and joints are to be made with mechanical fasteners and sealant approved by the cladding manufacturer. Packs of sheets shall be kept dry in transit and on-site to prevent water and/or condensation being trapped between adjacent surfaces. Packs of sheets standing on-site shall be stored clear of ground. Sheets shall be handled using clean dry gloves.

13.04 SARKING AND INSULATION

Metal Sheet Roof

Prior to fixing roof sheeting sark and insulate all roof areas. Sarking shall be double sided, aluminium faced and reinforced foil anti-glare sarking of approved manufacture and shall comply with AS1736.

Support sarking on galvanised wire netting draped over and fixed to purlins in accordance with AS1736.

Lay sarking in horizontal runs starting from eaves gutters. Allow for 50mm turn down into gutter. Finish at ridge, lapping horizontal joints at least 150mm.

Insulate roof by laying approved 75mm thick mineral fibre glass insulation blanket over the sarking and wire netting. Butt blankets tightly at joints.

Before laying roof sheeting, install approved, continuous, polyethylene corrugation filler strips profiled to suit roofing sheets. Fix filler strips to galvanised steel fascia girts immediately behind line of wall cladding.

13.05 EXTENT OF WORK

Supply and install metal roof sheeting, type, profile and colour as selected by the architectural consultant in locations as shown on the architectural drawings and strictly to the manufacturer's instructions.

Roof sheeting shall be equal to Bluescope Steel – Lysaght Klip Lok 406 long length sheeting. All fixed to manufacturer's instructions.

SECTION 14 - ROOF PLUMBER

14.01 GENERALLY

The Contractor is to execute the work in the best trade practice by tradesmen from approved firms specialising in the trade, all in accordance with the manufacturer's instructions.

The Contractor shall inspect and repair all faulty roof plumbing so that water is conveyed from the roof away from the building.

On completion all roof plumbing shall be swept or rodded out and all debris removed to prevent corrosion and restriction of the flow of water.

14.02 VALLEY GUTTERS

Valley gutters shall fitted with 0.68mm thick colourbond/galvanised steel sheet to match roofing.

The valley gutter shall be laid on timber boarding and secured to the rafters. Dress the valley gutter into the eaves gutter not less than 38mm.

14.03 EAVES GUTTERS

Install metal colourbond eaves gutters, type, profile and colour as selected by architectural consultant.

Fix stopped ends where guttering does not extend the full perimeter.

Lap guttering 25mm at joints in direction of flow, and rivet and sweat/silicone all joints.

Set gutters to even falls to outlets and provide thimbles for connections to downpipes.

Support on galvanised/colourbond brackets at 1200mm max centres.

14.04 DOWNPIPES

Supply and install metal colourbond downpipes of type, profile and colour as selected by architectural consultant.

Downpipes shall be galvanised steel/colourbond, sheet thickness 0.60mm formed into dimensions and shape as indicated on drawings and/or as selected by architectural consultant.

All downpipes having mitred joints and offsets shall be strengthened at all mitres. Make joints in the direction of flow. Form all elbows offsets and junctions.

Vertical downpipes shall be plumb and secured at the top and bottom with matching astragals at intervals not exceeding 1800mm. Astragals not less than 38mm wide shall be fixed with patent type plastic wall plugs and brass screws to the wall.

14.05 FLASHINGS

Provide where necessary and form and fix all the various flashings in continuous lengths to the sizes and shapes to render the building watertight.

Flashing shall be in accordance with roof manufacturers specifications.

Flashings let into brick joints shall be securely fixed with cement mortar or suitable metal or plugs where necessary.

14.06 EXTENT OF WORK

Supply and install all associated gutters and downpipes as per associated plans. Install in accordance with manufacturer's details/instructions.

SECTION 15 - TILER

15.01 GENERALLY

Provide all labour, materials, plant and services, and carry out the operations necessary for the proper performance of laying wall and floor tiles in accordance with the associated drawings, details, this specification, schedules and any other instructions issued and/or given by the Superintendent during the progress of the works.

Floor and wall tiling shall be laid only by an approved firm or tradesmen experienced in this type of finish.

15.02 SAMPLES
(To Be Provided By Architectural Consultant)

Contractor shall submit samples of -

. ceramic floor tiling
. ceramic wall tiling
. quarry tiles

to the architectural consultant for approval prior to commencement of work.

15.03 PREPARATION OF SURFACES

All grounds, outlets, inspection openings, rough plumbing, fixtures and fittings shall be in place and all chases and openings properly closed before commencement of tiling.

Rake out joints of masonry backgrounds to a minimum depth of 10mm, and hack and chip concrete backgrounds to provide a good key. Thoroughly clean down and give one (1) dash coat of two (2) parts of coarse sand and one (1) part of cement.

15.04 WORKMANSHIP

Tiling shall be executed by competent tradesmen in the best workmanlike manner and in accordance with the best trade practice.

Set out tiles properly, lay with close joints with surfaces in same planes, horizontal joints true to line and level with perpends straight and plumb and neatly and closely fitted against abutting work or fittings.

All materials, and fixing of ceramic tiling, shall conform to the Australian Code of Practice.

15.05 CUTTING

All cutting and drilling of tiles shall be carefully and neatly carried out and tiling set out to bring cut tiles into the least prominent positions.

Inclusion of cut tiles less than half a tile in area will not be permitted.

Where required, drill neat holes for pipes and fixings passing through the tiling.

15.06 SETTING

Set out work to ensure symmetry about centre line of the tiled areas to obviate the use of less than half tiles as fillers. The use of thin cuts, spalled, crazed or distorted tiles will not be permitted.

At the appropriate stages in course of tiling, allow for securing to the walls the splashbacks, soap holders and other accessories as scheduled elsewhere.

15.07 EXPANSION JOINTS

Expansion joints already incorporated in the structural walls and floors shall not be tiled over but carried through to the face of the tiles.

In addition to the structural expansion joint, provide large areas with 6mm wide expansion joints incorporated in both the bedding and the tiles at internal vertical angles and at 4500mm maximum intervals.

Expansion joints shall be kept free from dirt and bedding material, unless specified otherwise, before neatly filling joint completely with either an approved polysulphide based sealing composition, or a silicone rubber sealant, strictly in accordance with manufacturer's written instructions.

15.08 CERAMIC WALL AND FLOOR TILES
(As Selected By Architectural Consultant)

Location: Provide ceramic wall and floor tiles to the following areas:-

1. Bathrooms, Ensuites, Laundries and Powder rooms.

2. Front porches

3. Central Courtyards

Cover wall areas where indicated on the detailed drawings.

15.09 LAYING CERAMIC WALL TILES

Set on Adhesive Bed

The surface to receive the tiles shall be clean, dry, sound, true and even.

Apply a bed of approved flexible waterproof, two component rubber based adhesive evenly spread at the rate of approximately one square metre at a time.

Press the dry tiles immediately into the adhesive setting bed tap firmly and carefully into position to ensure that no voids are present.

The whole of the back of the tile shall be in contact with the adhesive.

Accurately scribe and cut tiles around fixtures, fittings, pipes and the like and carry tiles through doorways without breaks in tiles or joint lines.

Remove surplus adhesive remaining on the face of the tiles or between tile joints.

Protect newly tiled areas for 24 hours.

SECTION 16 - GLAZIER

16.01 GENERALLY

All Glazing shall conform generally with the requirements of AS1288. Parts 1-3 and AS2208.

Glass shall be of the best quality approved Australian manufacture. All glass to conform generally with BS952, and be free from cracks, scratches, bubbles, blisters and other defects.

All glass edges shall be clean, wheel cut edges with minimum feather. Glass shall be accurately cut, allow for proper tolerances between edges of glass and frame and allow for thermal expansion.

Rebates and grooves shall be primed and shall be clear, unobstructed and dry before glazing. Where reglazing into existing timber frames and/or sashes remove all old putty, clean out and prime rebates before glazing.

16.02 MIRRORS
(Refer To Bathroom, Powder Room & Ensuite Detail Drawings)

Supply and fix mirrors to locations as indicated on architectural detail drawings associated with this contract.

16.03 EXTENT OF WORK

Supply and install all glazing to aluminium framed doors in accordance with BCA guidelines.

All glazing shall have a maximum reflectivity index of 25%.

SECTION 17 - PAINTER

17.01 GENERALLY

Carry out the whole of the painting work, employing skilled tradesmen and in a manner conforming to the best trade practice.

Execute the work as quickly as the satisfactory completion of any single section of the work will permit, under conditions which will not jeopardise the appearance or the quality of the job in any way.

Paint finishes called for are in addition to shop coats or primers mentioned in other sections of this specification.

Provide all labour, materials, plant, scaffolding and cartage to and from the works necessary for the supplying of paint and for the completion of painting as specified.

Place "Wet Paint" notices conspicuously and do not remove until paint is dry.

17.02 SAMPLES
(As Selected By Architectural Consultant)

Test colour patches and samples of the paint being used on the job may be taken for testing by, and at the discretion of the architectural consultant.

At least a 250ml sealed container of each paint, or component part of multipack coating, is required with full details of the product, coating type, manufacture and batch numbers.

17.03 WORKMANSHIP

No painting shall be carried out during excessively hot, dusty, wet, foggy or frosty weather. Otherwise painting shall be done only on surfaces which are thoroughly dry, except as required for surfaces on which cold water paints are to be applied.

All priming coats shall be applied by brush.

After priming, do all putty stopping with a knife.

Apply all paints and other applications specified by brush (or by roller where authorised by the architectural consultant) to a uniform colour and finish free from roller or brush marks.

The painter must pay particular attention to, and strictly follow, any printed directions issued by the manufacturer of any proprietary brands of paint used, even though such directions may disagree with this specification, so that any guarantee of quality given or supplied by the manufacturer shall not be rendered void through the incorrect use of the manufacturer's product.

17.04 STORAGE OF MATERIALS

Store all painting materials and equipment not in immediate use in a room, or rooms, assigned for that purpose. The receiving and opening of all paint materials and mixing shall be done in this room.

Take all necessary precautions to prevent fire.

Provide the appropriate fire extinguishers to distinguish any fire which may ignite.

Remove rags, waste, etc. soiled with paint, from the premises at the end of each day's work, or store in airtight metal containers, under water.

17.05 PROTECTION

The Contractor shall be responsible for the protection of the paintwork and other surfaces from damage and staining. Properly mask all aluminium trim and metal work not specified to be painted.

Provide drop sheets or other approved protection to cover all adjacent finished works. Promptly remove paint spots from finished work.

The Contractor shall be liable for the repair or replacement of any accessories or surfaces that are damaged either directly, or indirectly as a result of the Painter's work, to the satisfaction of the architectural consultant. All making good cost shall be borne by the Contractor.

17.06 PREPARATION OF SURFACES

1. Generally

Examine surfaces prior to commencing painting and ensure that such surfaces are in proper condition to receive the finish.

Prepare all defective surfaces before any finish is applied.

Thoroughly clean and smooth all surfaces to be painted and leave free from oil, grease, stains, dirt, acidic content and rust.

2. New Woodwork

All new dressed timbers where scheduled to be alkyd painted, shall be knotted, stopped and primed with one (1) coat linseed oil based primer then sanded down ready for painting.

3. New Hard plaster, Fibrous plaster and plasterboard

All surfaces to dry out thoroughly then treat with an approved sealing preparation.

4. New Metalwork (On-Site Painting)

All new ferrous metalwork, including galvanised metalwork shall be thoroughly degreased with mineral turpentine.

Loose scale and rust shall be removed with a wire brush.

Light rust may be treated with a proprietary rust converter. After preparation apply one coat of zinc chromate primer.

17.06 PREPARATION OF SURFACES (CONTINUED)

5. New SteelWork (Shop Priming)

a. Surface Preparation

Oil, grease or any other contaminant shall be removed by solvent cleaning. Any soluble salts should be removed by water rinsing. Any rust, millscale, loose or flaky paint should be removed by abrasive blast cleaning surface to AS1627 Part 4, Class 21, 2 or acid pickling to AS1627 Part 5. Apply primer within four hours.

b. Priming

Apply one coat of a two pack solvent based ethyl silicate inorganic zinc rich primer. Such a primer shall also be capable of being topcoated without bubbling taking place.

c. Touch Up

Where coating has been damaged a two pack polyamide epoxy zinc rich primer such as 627 Microzinc EP or equivalent shall be used, after proper cleaning of damaged surfaces. Coating thickness shall be brought back to a total dry film thickness of 75 microns.

17.07 HARDWARE & FITTINGS

Remove all locks, door and window hardware and other fittings before painting commences and refix upon completion. The premises shall be secure at the end of each day.

17.08 PAINTING PROCEDURE

As the painting proceeds, the colour of each coat of paint shall differ from that of the preceding coat. The finishing coat, when dry, shall be the selected colour.

17.09 PAINTS

All paints, except where specified otherwise, shall be shelf line products approved by the relevant governing authorities, as suitable for the execution of this contract. Any other surface coatings included in this specification shall be the best of their respective kinds and shall comply with Australian Standards.

Number	Title	Similar Spec
CPC-P-18/1	Primer for Woodwork	Dulux Prepcoat Oil based Primer or similar
GPC-P-18/3	Primer for Woodwork	Dulux Prepcoat Acrylic sealer Undercoat or similar
CPC-P-32	Primer for Metalwork	Dulux Luxaprime Zinc Phosphate or similar
CPC-P-2	Red Oxide zinc Phosphate	Dulux Luxaprime Zinc Phosphate or similar
CPC-E-15	Enamel High Gloss or Satin	Dulux Super enamel Gloss / satin or similar
CPC-V-16	Undercoat	Dulux Prepcoat Oil based Undercoat or similar
CPC-L-28	Acrylic, Semi-Gloss Exterior	Dulux Weathershield X10 Gloss / Satin or similar
CPC-L-26/4	Latex, Internal	Dulux Wash & wear 101 Flat or similar
CPC-L-26/3	Latex, External	Dulux Weathershield X10 Low Sheen or similar
CPC-L-27	Latex Semi-Gloss Interior	Dulux wash & wear 101 Semi gloss, or similar

Supply all paints on the job in their unopened, original, branded, sealed containers and use in accordance with the manufacturer's directions. All other painter's material shall be top quality and as specified later.

All primer, undercoats and finishing coats used in conjunction with each other shall be of the same manufacture and compatible with each other and the materials on which they are applied.

17.10 FILLERS

Filling paste for porous or open grain timbers shall be composed generally of fine ground silica and/or titanium dioxide, quick drying varnish and solvent colour pigments may be included if required.

17.11 PRIMERS

Primers shall be formulated to provide an approved key. They shall be surface filling, moistureproof paints compatible with the following coats.

17.12 PRIMING

1. Generally

Before any coats are applied to a surface, touch up and make good then thoroughly prepare the surface to receive the paint. All priming shall be applied by brush.

2. Shop Priming

In "Carpenter and Joiner" Section it is specified that external joinery shall be primed before leaving joinery works. Should any priming be damaged, touch up immediately after delivery and before building, in with particular attention to end grain.

17.13 CONSULT OTHER TRADES

Consult other trades to ensure priming coats specified to be applied by those trades are of the kind recommended by the manufacturers of the surface coatings specified in this Section.

17.14 INACCESSIBLE OR BUILT-IN WORK

Prime to approval before fixing, all work that is to be concealed and which will be inaccessible after building in.

17.15 KNOTTING

Knotting shall comprise lac or approved resin in an approved solvent. It shall dry to a uniform film resistant to natural knot exudations and be compatible with subsequent paint coats, and shall conform to BS1336.

17.16 STOPPING

Stopping shall be as follows:-

1. To Woodwork

Stopping putty shall be composed generally of chalk whiting, linseed oil, solvent, white lead driers and pigment to blend with the following coats.

2. To Plasterwork

Stopping shall consist of gypsum plaster and lime or an approved proprietary brand plaster base filler.

3. To Metal

Hard stopping shall be a stiff paste comprised of white lead and gold size. Gold size shall conform to BS311.

17.17 CLEAR POLYURETHANE FINISH

A one pack, low odour, polyurethane alkyd leaving minimum brushmarks with excellent toughness and minimum yellowing on aging shall be used. Two or three coats of Microtone 560 Tuffgloss or equivalent shall be applied depending on openness of timber grain in accordance with manufacturer's recommendation.

17.18 UNDERCOATS

Undercoats shall be coloured to approximate the subsequent coats, compatible with both the primer and finishing coats, shall dry harder than the subsequent coats. The undercoat shall have high capacity and filling properties.

17.19 FINISHING COATS

Finishing coats shall contain a higher proportion of vehicle, binder or varnish than the preceding coats, be opaque, flow to a finish required after brushing out on a vertical surface without run or sags and adhere to such surface after hardening. They shall be free from lead.

Glossy finishes shall retain their high gloss after becoming "Hard Dry", semi-gloss and satin shall partially lose their gloss before becoming "Hard Dry". Flat Finishes shall completely lose their gloss before becoming "Hard Dry".

17.20 ZINC RICH PAINTS

Zinc rich paints shall not be used with alkyd or two pack products. Zinc rich paints (cold galvanising) shall contain 90-95% (w/w) metallic zinc when dry. Metallic Zinc Dust shall conform to BS3982.

17.21 ACRYLIC PAINTS

The first coat may be diluted with not greater than twenty percent (20%) by volume of water. Subsequent coats shall not be diluted. When "Hard Dry" they shall be resistant to wash scrubbing.

17.22 PAINTING SPECIFICATION

Undercoats and colour coats shall have a minimum dry film thickness of 35 micrometers. Manufacturer's data and volume of paint applied shall be supplied to the architectural consultant, if requested. High build and waterproofing coatings shall be applied to the dry film thickness recommended by the manufacturer.

1. **New Woodwork - External**
   One (1) coat primer
   One (1) coat universal undercoat
   Two (2) coats full gloss acrylic

2. **New Woodwork - Internal**
   One (1) coat universal undercoat
   Two (2) coats satin enamel

3. **Clear Finish (where applicable)**
   One (1) coat clear polyurethane on bare timber
   Two (2) coats clear polyurethane

4. **New Ceilings**
   Two (2) coats flat acrylic

5. **New Walls**
   One (1) coat sealer undercoat
   Two (2) coats satin acrylic

6. **New Metalwork (where applicable)**
   One (1) coat zinc chromate primer (spot prime on existing)
   Two (2) coats full gloss enamel

17.23 COMPLETION

Touch up where required and make good after all trades, clean off all marks, paint spots and stains throughout and leave painting and finishing in a satisfactory condition.

Upon completion, all empty cans and other debris arising out of the painting work shall be removed from the site.

17.24 MAKING GOOD

If any cracks, or other defects, appear in the paintwork before completion or before expiration of the maintenance period, cut them out, stop up, make good and repaint to the satisfaction of the architectural consultant.

Similarly, make good any defects apparent in the paint finish which are caused by commencing work on an imperfectly prepared, or damp surface or for any other cause, at the Contractor's expense.

17.25 GUARANTEE

Provide a guarantee, in writing, covering all paint finishes for a period of two (2) years from date of Completion of the Contract and lodge same with the architectural consultant.

Make good any finishing materials failing within the 2 year period by lifting, peeling, showing excessive or uneven loss of colour and all deficiencies attributable to faulty materials or workmanship at the Contractors's expense, to the satisfaction of the architectural consultant.

17.26 HIGH BUILD ACRYLIC COATINGS (Where Applicable)

1. Acrylic Seamless Waterproof Coating

Application shall be carried out by approved applicators.

The system shall be formulated for the long life protection and waterproofing of various building components, all as specified hereunder and/or as indicated on associated drawings.

2. System (Material)

A high build 100% Acrylic copolymer resin Seamless Coating system containing approximately 65% solids by volume.

17.26 **HIGH BUILD ACRYLIC COATINGS (CONTINUED)**
(Where Applicable)

3. System (Properties)

The system shall be:

a) a complete waterproofing membrane;

b) a water based single component system, eliminating additives, catalysts, fumes, fire and toxic hazards;

c) a pliable coating with a minimum 100% sketch film thickness;

d) supplied in the consistency of a soft paste capable of being applied by brush, roller or airless spray to a wet film thickness of 750 microns (3 mls) in one spray application;

e) resistant to dirt, organism, steam, water and impact; and completely inhibit the growth of bacteria and mould; its resistance to micro-organism shall last the lifetime of the membrane.

f) approved by Government Paint committee - long life exterior durability (G.P.C.- C - 117)

g) highly resistant to Ultra Violet and Infra Red Radiation to atmospheric extremes;

h) suitable for exterior and interior applications and carries a 5 plus 5 years written guarantee.

4. Application

Application of the Seamless Coating system shall mean, those applicators approved by the Manufacturers of the Coating system.

5. Primer

Primer shall be as specified by the manufacturer and compatible with seamless coating.

6. Thickness

Finished dry film thickness of applied coating shall be as strictly recommended by the manufacturer.

7. Colour

Colour of each applied coat shall vary in shade from the previously applied coat.

8. Reinforcement of Seamless Coating

Where coating is specified to be reinforced, such reinforcement shall be by means of Fibre Glass "woven mat" or "chopped strained mat".

9. Glaze Coat

Apply glaze coat as specified.

17.27 COLOUR SCHEME

As selected by the architectural consultant.

17.28 EXTENT OF WORK

The Building contractor is to consult with the architectural consultant, prior to painting works being commenced, to determine the finish, type, brand and colour of all surfaces on the proposed new building.

SECTION 18 - CARPET LAYER

18.01 GENERALLY

The whole of the carpet laying shall be carried out by skilled tradesmen in a manner conforming to the best of trade practice.

The carpet shall be laid in the areas as indicated on the associated plan.

18.02 LAYING

The Contractor shall contact the architectural consultant and advise what carpet meterage is required and the direction of laying.

Prior to laying, the floor area shall be swept clean removing any dirt or debris.

Smoothedge strips shall be used around the perimeter of the carpet with metal naplocks fitted where the carpet meets other floor coverings.

When laying the carpet it shall be butted and taped then stretched to the correct tension.

On completion the carpet shall be vacuumed and the debris removed from it.

18.03 EXTENT OF WORK

Supply and lay underlay and carpet to Bedroom 4, Robe and Study/Office as indicated on associated drawing and/or as advised by the architectural consultant.

The Building Contractor will consult with the architectural consultant to determine the style, brand, type and colour of the carpet to be used.

Carpet shall be minimum 50/50 synthetic and natural fibre.

SECTION 19 - LANDSCAPING

19.01 GENERALLY

Carry out loaming and provide all plant material where shown on the Drawings and as specified on the associated landscaping plan associated with this contract.

19.02 TREES

Provide trees and shrubs as indicated on the site plan. They are to be in an advanced state.

Trees shall as specified (of an approved type).

19.03 TURFED AREAS

The areas to be turfed are shown on the drawings.

The areas shall be covered with approved loam containing not more than 15% fine material such as silt, clay etc. spread over the areas to be grassed to finish 80mm deep after consolidating with 100 to 150 kg light roller. After rolling the whole area shall be well watered.

The areas shall be covered with sods of Buffalo/Kikuyu/Couch grass and shall be not more than 25mm thick and preferably 300mm square or in rolls 300mm wide to facilitate handling.

After laying of the sods they shall be thoroughly consolidated by watering and rolling with a light roller 100 to 150 kg in weight.

Sulphate of ammonia at the rate of 2.5 kg per 100m² shall be applied three to four weeks after laying, and shall be well watered in immediately after application, or the sulphate of ammonia shall be applied as a solution in water at the same rate stated previously.

After the sods have been rolled, topsoil as previously specified shall be spread to a depth of 12mm over the whole area and thoroughly watered.

The fertiliser to be spread over the sods may be mixed with this top dressing.

19.04 MAINTENANCE

Maintain the trees, shrubs and turf carefully during the defects liability period and replace any diseased or dying trees/shrubs.

19.05 RESTORATION OF SURFACES

The Contractor shall be responsible for the restoration of roads, paths, paved and unpaved areas, lawns and gardens, trees and shrubs - damaged or affected in any way during the currency of this Contract.

All restoration shall be affected with materials (building and horticultural) of the same nature as and of equal quality to that existing at the time of the commencement of the Contract.

19.06 EXTENT OF WORK

Carry out all works associated with the Landscaping and associated siteworks as indicated on the plans included in this contract and/or as directed by the architectural consultant.

SECTION 20 - PAVIOUR

20.01 SCOPE OF WORK

Provide all necessary labour, materials and equipment to carry out paving as specified hereafter in accordance with the manufacturer's instructions to areas indicated on plan.

20.02 BASE MATERIALS

Shall consist of 10:1 ratio of clean sharp sand and cement bed with a minimum depth of 60mm.

20.03 JOINTS

Shall be tight jointed and sand grouted.

20.04 LAYING

Suitably prepare base surfaces to receive paving as specified below. Lay pavers to even and correct falls where required. The deviation between adjacent finished paving surfaces shall not exceed 2mm.

20.05 PROTECTION

Keep loads of traffic off completed work at least until bonding has set. If possible, lock up areas after completion of finishes.

20.06 CLEANING

Clean paving finishes on completion in accordance with manufacturer's recommendations.

20.07 PAVERS

Pavers shall be as selected by the architectural consultant.

20.08 EXTENT OF WORK

Builder shall provide item cost and supply unit rate to supply and install 300 x 300 x 40 concrete paving in grid pattern, to be determined on site.

SCHEDULE OF RATES AND PRIME COST ITEMS

The following Schedule of Rates and Prime Cost Item shall be completed by the Contractor as forming part of this Contract and shall be used to determine Pricing Variations for the relevant Sections of this Specification.

Item	Price
Entertainment unit/Linen/Store/Robe	$20,000.00
Vanitites x (2 off)	$2,200.00
Toilet Suites (full ceramic pan and cistern)	$800.00 each
Bidet	$800.00
Laundry tub	$300.00
Tapware	$180.00 each set
Continuous Hot water systems	$900.00 each unit
Semi frameless shower screens (2 off)	$1,200.00
Mirrors, towel rails, toilet roll holder (total)	$1,500.00
Timber floating flooring S(L&M)	$110.00 m2
Floor and Wall Tiles	$60.00 m2
Carpet	$50.00 m2
Glass Balustrade	$250.00 Lm

NOTE:
1) All P.C. Items are included in contract price.
2) Contract price includes supply and labour for timber floating floor
3) Contract price includes all labour for all P.C. Items listed.