SET NO.

3

SPECIFICATION

OF

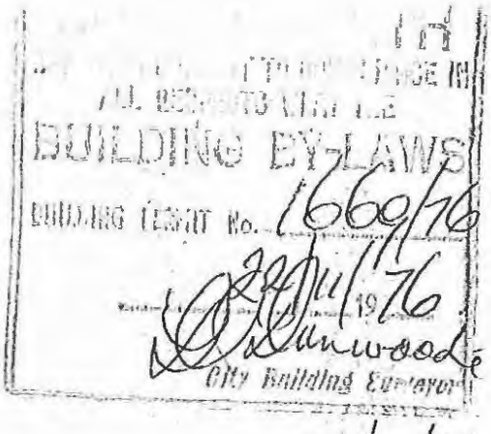
ERECTION AND COMPLETION
OF FIFTY-FOUR
RESIDENTIAL UNITS

AT

LOTS 1, 2, 3 of Y270
AND PART Y271, CHARLES
STREET, WEST PERTH

FOR

JOHN GILBERT NOMINEES
(1976) PTY. LTD.



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David Godbold and Associates
ARCHITECTS
15 HARVEST TERRACE,
WEST PERTH 6005
PHONE: 21 5000

I N D E X

S P E C I F I C A T I O N

of

Work to be done and materials to be used in the erection and completion of Fifty Four Residential Units and associated Site Works.

on

Lots 1, 2, 3 of Y270 and Part Y271 Charles Street, West Perth.

for

John Gilbert Nominees (1976) Pty. Ltd.

In accordance with the plans and this Specification prepared for the same by

DAVID GODBOLD & ASSOCIATES
Architects
15 Harvest Terrace, West Perth.
Telephone: 21.5000.

This is the Specification referred to in our CONTRACT dated this

..... day of 1976

PROPRIETOR .....

WITNESS .....

BUILDER .....

WITNESS .....

TENDERS CLOSE ..... SET NO....

A. P R E L I M I N A R I E S

A.1 TENDERS

(a) Tenders shall be lump sum, for the whole Contract and shall not be subject to any Rise and Fall adjustments.

(b) Tenders shall be delivered in sealed envelopes bearing the name of the Tenderers and the name of the job, to the Architect's office before the closing time stated on the cover. Telephoned tenders will not be accepted except at the discretion of the Architect.

(c) Tender Documents must be returned intact to the Architect's office at the time of submitting tenders.

(d) Tenders received other than in accordance with the requirements of this clause will be invalid.

(e) The Tenderer in submitting a Tender acknowledges that he has complied with all conditions of tendering as stated or indicated in the Tender Documents which in affect are the Contract Documents as hereinafter listed.

Where the term Tenderer is used in this part of the Specification it shall be read to mean the Builder as a party to the Contract.

A.2 SITE LOCATION

The site for the Works is located at Lots 1, 2 and 3 of Y270 and Part Y271, Charles Street, West Perth.

Tenderers are required to inspect the site before tendering and make themselves thoroughly conversant with, and allow for the following factors in their Tenders.

(i) All visible existing conditions on and adjacent to the site.

(ii) Conditions of access to the site for building purposes.

(iii) Services referred to or indicated on the Contract Documents.

(iv) The nature and requirements of the Works to be done.

A.3 SCOPE OF CONTRACT

This Contract shall include all materials, labour, plant equipment and cartage as necessary for the due and proper completion of the Works comprising two, three storey buildings of brick and tile residential unit development complete with all services.

A.4 CONTRACT DOCUMENTS, PREPARATION AND FEE

The Builder shall pay to the Architect at the time of signing the Contract the amount referred to in the Supplement to the Preliminaries for the supply of and stamp duty on the Contract Documents.

(a) Lump Sum Contract Edition 5b issued under the sanction of the R.A.I.A. and M.B.F.A. (Inc).

The Builder shall allow here for any costs that may be incurred in complying with the Conditions of Contract.

(b) This Specification (See Schedule of Alterations to the Lump Sum Contract Agreement and Conditions of Building Contract Section of these Preliminaries).

(c) Architectural Drawing Nos.

76/1052 76/1053 76/1054 76/1055 76/1056
76/1057 76/1058 76/1059 76/1062 76/1063

(d) Structural Engineers Drawing Nos.

51, 52, 53 and 54

A.5 PROPRIETOR

The Proprietor is John Gilbert Nominees (1976) Pty. Ltd. of 1091 Hay Street, West Perth.

A.6 DEFINITIONS

(a) Where 'Conditions' are referred to in this Specification they shall mean the Lump Sum Conditions of Contract Edition 5b, issued under the sanction of the R.A.I.A. and the M.B.F.A. (Inc) amended as scheduled in Section Schedule of Alterations to the Lump Sum Contract Agreement and Conditions of Building Contract.

(b) Where 'approved' is used in this Specification it shall mean 'approval by the Architect'. Such approvals shall be procedural approvals only. Approval of drawings, samples, prototypes, workmanship methods or any other matter whatsoever shall not be deemed to waive or prejudicially affect any right of the Proprietor or to diminish in any way the Builder's responsibility in respect of the work or Contract in any way.

A.6 DEFINITIONS (Contd).

(c) Where 'Selected' is used in this Specification, it shall mean 'selected by the Architect'.

(d) Words implying persons shall, where appropriate, be construed as including Corporations.

A.7 NOTICES AND FEES

See also Clause 4 of the Conditions of Contract.

The Builder shall give all notices, pay all fees (except where otherwise specified) and lodge all plans legally required in connection with the works, in particular to the Local Authority, M.W.S.S. & D. Board, Health Department, Scaffolding, Fire Brigades Board of W.A., and similarly satisfy such other authority as from time to time may be required. This must be done before commencement of work.

A.8 SAFETY

The Builder shall carry out the whole of the Works or procure them to be carried out by Sub-contractors and others concerned in a thoroughly safe manner and in particular shall:-

(a) Conform and procure that Sub-contractors and others conform to the requirements of all relevant Acts or Statutes of Parliament, Regulations, By-laws or orders relating to the safety of persons on or about the site.

(b) Ensure that all tools and tackle, gear, stagings, scaffolding, ladders, machines, winding arrangements, and other equipment used by the Builder or any others in connection with the Works are of adequate strength and safe for use.

(c) Immediately discontinue or procure the discontinuance by others of any practice or remove any equipment which becomes or is likely to become unsafe.

(d) Ensure the removal from the Works promptly of any of his employees or representatives or those of any Sub-contractor or other party whose conduct tends to create any danger to themselves or others or to the Works.

A.9 PROTECTION OF SITE AND ADJACENT PROPERTIES

(a) The Builder shall do everything necessary to ensure the safety and freedom from injury, damage or interference of all the adjacent public or private lands, properties, ways, services and all other adjacent real or personal property whatsoever and of persons at any time in the vicinity of the site.

A.9 PROTECTION OF SITE AND ADJACENT PROPERTIES (Contd).

(b) The Builder shall at all times take all reasonable steps to minimise nuisance to adjacent Owners, their tenants and others (including nuisance from noise, dust, debris and obstructions) arising from the Works.

A.10 INSURANCE

(See also Clauses 20 and 21 of Conditions of Contract).

(a) The Standard Conditions relating to Insurances are altered as Scheduled in Section 'Schedule of Alterations to the Lump Sum Contract Agreement and Conditions of Building Contract' of these Preliminaries.

(b) The Builder shall in accordance with Clause 21 (as amended) of the Building Contract effect Insurance in the terms of a Contractors All Risks and Public Liability Policy. Such insurance shall be arranged by the Builder and approved by the Proprietor. Such approval shall not be unreasonably withheld.

The Builder shall in accordance with Clause 21 (as amended) of the Building Contract effect insurance in the terms of an Employers Indemnity Policy.

A.11 SALES TAX

The Builder shall allow for and pay Sales Tax on all goods and materials, etc., subject to same by law except those goods and materials provided out of P.C. sums, all of which include Sales Tax where applicable.

A.12 PAYROLL TAX

The Builder shall allow for and pay Payroll Tax on all wages etc., subject to same by Law.

A.13 HOLIDAY AND SICK PAY

The Builder shall allow and pay for holidays and sickness as provided in relevant Awards laid down by Law.

A.14 DIMENSIONS AND SCALES OF DRAWINGS

(a) Wherever shown on Contract drawings and on details issued during the Contract period, figured dimensions shall be read in preference to scale.

(b) Larger scale drawings shall be read in preference to smaller scaled drawings of the same work.

(c) All dimensions indicated on drawings shall be checked on the site.

A.15 DIVISIONS OF SPECIFICATION

For the convenience of reference and to facilitate the letting of Sub-Contracts this specification is divided according to Trade sections.

Such divisions shall not obligate the Architect or Proprietor to establish the limit of any Sub-Contract between the Building and the Sub-Contractors. Nor shall the Architect or the Proprietor be held responsible for any omission caused by the Builder in sub-contracting work.

A.16 WORKS PROGRAMME AND TIME CHART

(a) The Builder shall within (two weeks) of entering into the Contract and within the limits of the information available from the Architect, prepare a Works Programme showing the programmed dates for commencement and completion of each trade in each major section of the Works and showing Practical Completion by the due date or earlier and shall refer same to the Architect before issue.

(b) After preparation of the Works Programme the dates for issue of details, nomination of sub-contractors and suppliers, submission of shop drawings and construction of prototypes shall be agreed with the Architect.

(c) The Builder shall maintain and amend the Works Programme as may be reasonably necessary and provide copies for the Architect and have a current copy available on the site at all times.

A.17 DISPUTES WITH NEIGHBOURS-
DELAY AND EXTENSION OF TIME

The Builder shall not be entitled to any extension of time under Clause 24(g) (vii) where such proceedings or disputes with adjacent or neighbouring Owners or Occupiers are due to any default of the Builder or to any act of the Builder other than an act required by this Contract.

The Standard Conditions will be amended. See Section 'Schedule of Alterations to the Lump Sum Contract Agreement and Conditions of Building Contract' of these Preliminaries.

A.18 RESPONSIBILITY

The Builder shall be held responsible for all work, materials and fittings, comprised in any sub-contract and for their care maintenance and protection. He will be required to take full responsibility for the proper execution of such work for the full period of his legal responsibility in connection with this Contract. Separate Contractors or approved firms employed by the Proprietor will take full responsibility for their work, materials, equipment and fittings until same are handed over to the Proprietor in a satisfactory condition. The Builder shall exercise every care and protection and will be responsible for the protection of such work, materials, equipment and fittings.

A.19 CONTINGENCY SUM

The Builder shall allow the Contingency Sum of $6,000 (Six Thousand Dollars) which shall be expended on the Works as the Architect in his absolute discretion may order in writing and any portion thereof remaining unexpended at the completion of the Contract shall be deducted from the Contract Sum.

A.20 PERIOD FOR PAYMENT OF CERTIFICATES

(See also Clauses 23(a) and 28(a) of Conditions of Contract).

Progress payments by the Proprietor to the Builder shall be made within (fourteen) days of presentation by the Builder of the Progress Certificate issued by the Architect. The Builder hereby agrees to this amended period.

The Conditions of Contract of Edition 5b will be amended accordingly. See Section 'Schedule of Alterations to the Lump Sum Contract Agreement and Conditions of Building Contract'.

A.21 EARLY PAYMENT FOR SUPPLIES

(See also Clauses 15, 16 and 28 of Conditions of Contract).

(a) Where specific circumstances so require and the Builder has with the consent of the Architect taken delivery upon the site of materials and goods earlier than is required for the Works, the Architect shall include allowance therefore in a Certificate issued pursuant to Clause 28(b) of the Conditions subject to the adequate storage and protection against weather or accident of such materials and goods.

A.21 EARLY PAYMENT FOR SUPPLIES (Contd).

(b) Where specific circumstances so require and the Builder has the consent of the Architect purchased goods or materials included in any sub-contract or Supply Contract for storage off the site, until such time as they are required on the site, the Architect shall include allowance therefore in a Certificate issued pursuant to Clause 28(b) of the Conditions subject to the following conditions:-

(i) The goods and materials are available for immediate delivery to the site and not subject to any lien in favour of a third party.

(ii) Full particulars of quantities and values of the goods and materials are submitted by the Builder to the Architect.

(iii) The Architect is satisfied that the goods and materials are properly stored and protected.

(iv) The goods and materials are clearly marked as the property of the Proprietor.

(v) The Storer in writing acknowledges to the Architect that he is storing the goods and materials for and on behalf of the Proprietor.

(vi) The Builder supplies evidence to the satisfaction of the Architect that the goods and materials are fully insured in the joint names of the Proprietor and of the Sub-contractor or Supplier until delivered to the site and insured under the general building insurance.

A.22 MEASUREMENT AND ASSESSMENT OF VARIATIONS

(See also Clause 19 of the Conditions of Contract)

(a) Any assessment provided by the Builder of the value of any variation under Clause 19 of the Conditions shall be supported by proper measurements, rates and prices and shall be submitted by the Builder to the Architect within (14) days of receipt of the Architect's drawing or written instruction covering the variation concerned.

In assessing the value of variations under Clause 19(e) the Builder shall include a percentage for overhead and profit. This percentage shall be 5% overhead and 5% for profit.

A.22 MEASUREMENT AND ASSESSMENT OF VARIATIONS (Contd).

(b) In assessing the value of variations under Clause 19(c)(ii) the clauses shall be interpreted such that materials are charged at invoice rates plus 7% margin; site labour is charged at the actual award (or over-award) wages plus site loadings and allowances, plus 50% to cover Foreman, Supervision, giving of instructions, overheads, administration and profit; shop labour is assessed as above but with a varied percentage margin of 30%.

(c) The Builder is to keep on the site a work book in which shall be noted, for the inspection and signature of the Architect at his next visit, all times and other details associated with any item on which it is likely that a claim will be made.

A.23 RISE AND FALL

(Refer to Supplement to Preliminary Clauses)

This Contract will not be varied by any increase or decrease in either the cost of labour or materials.

A.24 SUB-CONTRACTORS

(See also Clause 13 of Conditions of Contract)

The Builder shall bind all Sub-Contractors (whether nominated or otherwise) on written agreements in the form of the current M.B.A. SC/Gen or similar approved agreement. It shall be a condition of such an agreement that the terms of the Contract Documents shall be binding upon the Builder and Sub-Contractor.

A.25 CONSENT FOR SUB-LETTING

(See also Clause 13(b) and (c) of Conditions of Contract)

The Builder shall submit to the Architect, for his approval within (fourteen days) of acceptance of tender a complete list of Sub-Contractors to be used in the Contract.

In the event that the Architect does not dissent in writing within seven days then such approval shall be deemed as being granted.

The Architect shall not unreasonably dissent to sub-letting of any portion of the Works and in any case of such consent not being given, he shall state the reasons to the Builder.

A.26 PROVISIONAL SUB-CONTRACTS

(See also Clause 17 of Conditions of Contract)

A copy of each such Provisional Sub-Contract Agreement is annexed to the Specification.

A.26 PROVISIONAL SUB-CONTRACTS (Contd).

The Builder shall accept each such Provisional Sub-contract which he takes over in all respects as a Nominated Sub-contract and each such Provisional Sub-contract with the Proprietor shall be deemed superseded and cancelled and all monies up to that time paid by the Proprietor to such Sub-contractor shall be deemed to have been paid to the Builder.

Any discount for prompt payment allowed the Proprietor shall not accrue to the Builder.

A.27 SERVICES AND FACILITIES FOR NOMINATED SUB-CONTRACTORS

(See also Clause 15 of Conditions of Contract)

(a) Hoisting

(i) Nominated Sub-contractors are required to pay all costs for the hoisting and lowering of materials, equipment, etc., necessary for their work.

(ii) The Builder shall, if requested by nominated Sub-contractors allow the use of his hoisting facilities on site at times to be agreed. Nominated Sub-contractors shall be required to pay the Builder according to the schedule of hire published in the 'Master Builder'. Provided, however, that the Builder will not be required to erect or provide special facilities for nominated Sub-contractors in excess of such equipment required for his own work.

(iii) Nominated Sub-contractors, may at their own expense, provide their own hoisting facilities independent of the Builder.

(b) Scaffolding

(i) Nominated Sub-contractors are required to provide, at their own cost, whatever scaffolding they consider necessary for the execution of their work.

(ii) In the event of any nominated Sub-contractor being granted use of the Builder's scaffolding in position, such nominated Sub-contractor shall pay the Builder at current scaffolding hire rates.

(iii) The Builder will not be required to provide any special scaffolding or alter existing scaffolding for nominated Sub-contractors.

(c) Water

(i) The Builder shall install at least one water outlet on each floor and shall supply free of charge to nominated Sub-contractors all water required.

A.27 SERVICES AND FACILITIES FOR NOMINATED SUB-CONTRACTORS (Contd).

(ii) Nominated Sub-contractors shall provide at their own cost whatever piping, hose, fittings, etc., which they may require to carry water from the outlet provided by the Builder.

(d) Electricity

(i) The Builder shall provide at least one 15 amp power outlet on each floor and shall pay the costs of all electricity used for lighting purposes by nominated Sub-contractors.

(ii) Nominated Sub-contractors shall provide at their own cost whatever conduits, wiring, leads, lamps and similar items required for their work.

The Builder shall supply nominated Sub-contractors with all power required for the use of 250V equipment.

Power in excess of 250V required by Nominated Sub-contractors shall be their responsibility.

A.28 BUILDING WORK FOR NOMINATED SUB-CONTRACTORS

(See also Clause 15 of Conditions of Contract).

(a) Where the Specification elsewhere details requirements in respect to holes, recesses, chases and fastenings, the Builder shall at his own cost form all such holes, recesses and chases required by the nominated Sub-contractors and build in all such fastenings, bolts and sleeves similarly required by the nominated Sub-contractors.

(b) Where the Builder is required by Architect's instruction, to build in fillets, fastenings, sleeves etc., and to form holes, recesses, chases for nominated Sub-contractors and where detailed information of such work is not included in the Specification such work shall be carried out by the Builder and assessed in accordance with the detailed procedures of Clause 19 of the Conditions of Contract.

The Proprietor will not allow any charges for building work carried out by the Builder for nominated Sub-contractors unless the Builder can adequately support his claim as aforementioned.

(c) Differences between the requirements for fillets, fastenings, sleeves, holes, recesses, chases listed in nominated Sub-contractors' notional schedules, forming part of their tenders, and the work listed in the Specification and referred to in (a) above, shall be treated as variations to the Contract and assessed in accordance with the provisions of Clause 19 of the Conditions of Contract.

A.28 BUILDING WORK FOR NOMINATED SUB-CONTRACTORS (Contd).

(d) Should a nominated Sub-contractor require building work additional to that required under Sub-clause (a) of this Clause or as set out in his notional schedule, the Builder shall, on request, carry out such work at the cost of the nominated Sub-contractor and the price shall be assessed similarly to the provisions of Clause 19 of the main Contract Conditions.

(e) Where nominated Sub-contractors require chases to be cut, or other work involving the cutting away of executed work, they shall, unless by other arrangement with the Builder, perform such work and make good at their own cost.

A.29 INSPECTION OF SITE

The Builder acknowledges that before tendering he inspected the site and that he has become conversant with all visible existing conditions on and surrounding the site, with conditions of access to the site for building purposes, and with services shown on the Contract Documents and has allowed for all such factors in his tender, including:-

(a) Availability and condition of access roads, traffic and parking restrictions, etc.

(b) Obstructions to access or working, such as poles and overhead wires, hydrants, posts and telephone boxes, etc.,

(c) Work in making connections as specified to services shown or otherwise resulting from services shown.

A.30 ACCESS PRIOR TO DATE FOR POSSESSION

(See also Clause 5 of Conditions of Contract)

The Builder may apply to the Architect for access to the site prior to the Date for Possession and consent to such access shall not be deemed a variation to the Date of Possession.

A.31 DAMAGE TO ADJACENT PROPERTY

(See also Clause 31(i) of Conditions of Contract)

The Final Certificate shall not be taken to relieve the Builder from liability for any damage caused to adjacent building or other property due to the negligence of the Builder in carrying out the Works.

A.32 MATERIALS

(See also Clauses 9 and 10 of the Conditions of Contract)

A.32 MATERIALS (Contd).

(a) Unless otherwise specified all materials shall be new first quality and where practicable shall comply with the requirements of the appropriate Australian Standard Specification.

(b) As soon as practicable after entering into the Contract, the Builder shall place orders for and take all measures necessary to ensure the supply of all materials and goods necessary to carry out and complete the Works and shall take all reasonable measures to ensure that deliveries of such materials and goods will be made at such times as to sustain the necessary rate of progress of the Works to achieve Practical Completion by the due date.

(c) Any material described in one Section of the Specification and referred to in another Section should be of the same quality.

A.33 INCIDENTALS

The Builder shall supply and use either directly or through his Sub-contractors, fix or apply all nails, screws, washers, packings, hemp, glue, dowels, wedges, grease and oil and other such items incidental to the proper completion of the Works.

A.34 PROPRIETARY BRANDS

(See also Clause 9 of Conditions of Contract).

(a) Where proprietary brands of materials or equipment are used, they shall be used in strict accordance with the Manufacturer's direction, unless otherwise specified.

(b) Trade names where specified have been included only to indicate the quality required. Where the Builder has allowed for an alternative, he shall satisfy the Architect of the equal quality and in all cases the Architect's decision shall be binding.

No extra cost will be authorised for the inclusion in a tender of an alternative not acceptable to the Architect.

(c) Products bearing the Hallmark of the Standards Association of Australia shall be deemed to be superior to other products, and shall be used in preference.

A.35 SAMPLES

(See also Clause 9 of Conditions of Contract).

When specified by the Architect the Builder shall submit to the Architect identified duplicate samples

A.35 SAMPLES (Contd).

of any materials or items reasonably required to be used in the Works.

One each of approved samples shall be signed by the Architect and returned to the Builder who shall keep them on the Works in a safe place and available for inspection.

Where due to the nature of the material or item concerned the above procedure is impracticable the Builder shall make reasonably available an identified sample for the Architect's inspection. All work shall conform reasonably to samples.

A.36 ELECTRICITY

Provide and maintain a temporary electricity supply to the site and adequate lighting for safety to enable all work to be properly done and inspected. Pay all costs of electricity until Practical Completion.

A.37 WATER

Provide and maintain an adequate temporary water supply and pay all costs for water used until Practical Completion.

A.38 PLANT

The Builder shall provide all necessary plant and equipment (including tackle, tools, cranes, hoists, gantries, mixers, pumps, scaffolding, timbering, braces, struts, forms, shutters, sheds and hoardings) required for the efficient and proper carrying out of the Works and for their Practical Completion by the due date.

A.39 TELEPHONE SERVICE

(a) The Builder shall arrange for installation of a telephone on Possession of Site or earlier if possible and remove at Practical Completion.

(b) The Builder shall pay all charges associated with installation, operation and removal.

(c) The Architect and his representatives shall have the use of this facility.

(d) The telephone shall be outward calls key operated type.

A.40 WORKS ACCOMMODATION

(a) Accommodation shall be neat, clean, well constructed, watertight and well lit, ventilated and maintained.

A.40 WORKS ACCOMMODATION (Contd).

(b) Accommodation shall be erected before site Works Commence and shall be removed at Practical Completion or at a stage when alternative equivalent accommodation can be provided.

Make good after removal.

(c) The Builder shall provide an office 12' x 8' on the site for the use of the Foreman, with desk, drawing table, drawers, stools, etc.

Note: All Builders accommodation, plant, equipment and materials to be stored or located within the area of all work in this Contract and not to extend beyond the boundaries of the immediate building site.

A.41 WORKMEN'S AMENITIES

The Contractor shall provide adequate facilities on site for all workmen.

A.42 STORAGE

Provide adequate weathertight storage accommodation for all plant, equipment and materials liable to damage or deterioration by exposure.

A.43 JOB SIGNBOARD

(a) The Builder shall supply and erect where directed a signboard (6'0" x 3'6") framed and sheeted with 24 gauge plain galvanized iron with splayed timber surrounds all in accordance with details supplied by the Architect.

(b) The board shall be painted with 3 coats of enamel and the names of Proprietor, Architect, Consultants and Builder signwritten thereon.

A.44 LABOUR, DIRECTION AND CO-ORDINATION

(See also Clause 13 of Conditions of Contract).

(a) The Builder shall provide constant and competent direction, co-ordination and superintendence of all trades in all phases and parts of the Works to comply with the required standards of this Contract.

(b) The Builder shall superintend as far as is reasonably possible all building components expressly made for the Works manufactured off site or stored or stockpiled off site.

(c) The Builder shall take full responsibility for employing effective methods to comply with the requirements of this Contract.

A.44 LABOUR, DIRECTION AND CO-ORDINATION (Contd).

Approval of such methods if given by the Architect shall not relieve the Builder of his responsibility and shall be given without prejudice.

(d) Unless otherwise specified, all workmanship shall be first class and shall conform to the appropriate Australian Standard Code of Practice.

(e) Workmanship described in one Section of the Specification and referred to in another Section shall be of the same quality.

A.45 FOREMAN

(See also Clause 8 of Conditions of Contract).

The foreman shall be English speaking, be conversant with English terminology used in building practice in Western Australia and experienced in jobs of a similar nature to the Works in this Contract.

A.46 SITE MEETINGS

A senior Representative of the Builder and the Architect shall be present on the site at agreed regular intervals to discuss progress and shall arrange for the attendance of such other members of their staff and Representatives of Sub-contractors and Suppliers as may be required. When requested by the Builder or the Architect a Representative of the Proprietor shall attend such Meetings.

The Builder shall chair such Meegings and shall prepare records of the proceedings and shall provide copies within three (3) days of the Architect (2 copies) and the Clerk of Works (1 copy) and also provide copies of relevant portions to Consultants, Sub-contractors and Suppliers.

The inclusion in the record of the proceedings of such a Meeting of any instruction given by the Architect shall, subject to Clause 'Builders Objection to Architect's Representative' of these Preliminaries in Section 9, upon confirmation of such record at a subsequent Meeting cause such instruction to be deemed an Architect's written instruction in accordance with Clause 1(a) of the Conditions.

Alternatively, the Builder may confirm such an instruction specifically in writing to the Architect as provided by Clause 1(b) of the Conditions.

A.47 SECURITY

The Builder either directly or through his Sub-contractors shall be responsible for providing proper and adequate

A.47 SECURITY (Contd).

safe-guards for the Works and for fixed and unfixed materials on the site during both working and non-working hours.

A.48 SETTING OUT DRAWINGS

(See also Clause 6 of Conditions of Contract).

Where the Architect has furnished to the Builder by way of accurately dimensioned drawings the information required under Clause 6 of the Conditions for instructions in the case of any discrepancy between those dimensions and existing physical features of or on the site.

A.49 PRESERVATION OF BENCH MARKS

Where the Builder is required in the Specification to establish permanent bench or other survey marks he shall preserve them intact until Practical Completion and if any are removed or obliterated, then the same shall at the cost of the Builder be forthwith replaced by a Licensed Surveyor. See also Clause 'Datum' of this Section of these Preliminaries.

A.50 DATUM

Before commencing the Works the Builder shall ensure that the existing bench mark shall be preserved throughout the Contract Period. See also Clause 'Setting Out Drawings' of this Section of these Preliminaries.

A.51 CONSTRUCTION LOADS

The Builder shall ensure that no excessive loads are put on any parts of the structure during erection.

The Architect will on request supply to the Builder details of the loads for which the various parts of the structure were designed.

A.52 PROTECTION AND MAKING GOOD OF WORK AND MATERIALS

The Builder shall adequately and as may be more fully described in the Specification protect all work and materials and shall progressively make good all damage done to such work and materials until Practical Completion and also thereafter until the Final Certificate is issued, provided that any case of damage is done by employees or representatives of the Builder or of Nominated Sub-contractors.

In all cases protection shall be applied as provided or as soon as a surface is finished and/or materials arrive on the job or as may be otherwise desirable,

A.52 PROTECTION AND MAKING GOOD OF WORK AND MATERIALS (Contd)

and adequate protection shall be maintained in effective condition throughout the course of the work and shall be removed at Practical Completion.

A.53 CLEANING OF WORKS AND SITE

The Builder at all times shall keep the Works and site clean and tidy.

The Builder shall progressively clean up the Works and site and remove all accumulated, discarded and surplus building materials and debris.

On completion of the Works and prior to handing over to the Proprietor, the Builder shall:-

(a) Remove all temporary buildings, structures, fences, services, plant and equipment.

(b) Remove all surplus materials and debris and clean the site.

A.54 EXPLOSIVE FASTENERS

Where explosive power operated fixing devices are used, such devices shall be us ed only by persons licensed to operate them and they shall be used in accordance with the directions of the Manufacturers of the devices and with the requirements of Authorities having jurisdiction over the use of such devices.

A.55 OVERTIME

The Builder shall Practically Complete the Works by the due date and shall allow for whatever hours are necessary, including overtime.

A.56 COPIES OF DOCUMENTS

(See also Clause 2 of Conditions of Contract).

In addition to the three copies of the Contract Drawings and of the Specification referred to in Clause 2 of the Conditions, the Builder shall be supplied with six copies of each of the drawings and Specifications of each Nominated Sub-contract and Nominated Supply Contract of which he shall issue three copies as applicable to each Nominated Sub-contractor and Nominated Supplier.

The Builder shall also be similarly supplied with and shall issue copies of each additional drawing issued by the Architect as the work proceeds. Any copies of documents in addition to those listed herein required by the Builder shall be at the Builder's expense at the rate stated in the Supplement to these Preliminaries.

A.57 SHOP DRAWINGS

The Builder shall obtain and submit to the Architect comprehensive installation and Shop Drawings, with notes and/or Specification, (hereinafter called Shop Drawings) for such parts of the Work as necessary.

Shop Drawings, shall be submitted in triplicate and in ample time before stock-piling, manufacture, assembly or supply is required.

The Architect shall examine and promptly return two copies to the Builder, appropriately endorsed, or accompanied by an appropriate letter.

Where the Architect requires amendments to such drawings, the amendments shall be made and revised drawings submitted promptly.

A.58 ARCHITECT'S REASONABLE SATISFACTION

(See also Clause 1(a) of Conditions of Contract).

No expression of the Architect's reasonable satisfaction or approval shall be deemed to be an acceptance of defective materials or workmanship not complying with the terms of the Contract nor as authority for any variation except where such variation is authorised as provided in the Contract.

A.59 ACCESS FOR CONSULTANTS

(See also Clause 12 of Conditions of Contract).

For the purposes of Clause 12 of the Conditions any specialist Consultants in respect of the Works shall be deemed Representatives of the Architect.

A.60 AUTHORITY TO GIVE INSTRUCTIONS

(See also Clause 1 of Conditions of Contract).

The Builder shall not accept instructions relative to this Contract other than those issued by the Architect or on behalf of the Architect by such persons as shall be nominated in writing by the Architect to the Builder.

A.61 PROPRIETOR'S ACCESS

(See also Clause 12 of the Conditions of Contract).

The rights of access to the building site is hereby granted to the Proprietor or his representatives with the Builder's approval, subject to the following conditions:-

A.61 PROPRIETOR'S ACCESS (Contd).

(a) Prior arrangements have been made with the Architect by the Proprictor, of the time the Proprietor expects to arrive on site and that this time is passed on to the Job Foreman by the Architect prior to the Proprietor's expected time of arrival on site.

(b) That the Proprietor, when on site, will at all times be accompanied by the Architect or his Representative or a Nominated Representative of the Builder, which shall include the Builder's site Foreman.

A.62 COMPLETION AND PRACTICAL COMPLETION

(See also Clauses 'Cleaning of Works and Site' in Section 8 and 'Reasonably Fit for Occupation' in this Section of these Preliminaries.

Notwithstanding the issue of the Notice of Practical Completion the Builder shall diligently complete the Contract including the following items:-

(a) Clear and remove all surplus materials, rubbish, dirt, etc.

(b) Make good all damage, stains and blemishes and replace materials where necessary.

(c) Clean all surfaces and clean and polish glass (6,700 sq. ft. both sides measured), tile, and natural or chromed metal finishes.

(d) Bring all surfaces to the specified finishes.

(e) Ease all doors, windows, drawers, and check oil and adjust all locks and closers.

(f) Check, test and ensure that all services and equipment are functioning efficiently and satisfactorily.

(g) Label all keys, and hand over to the Architect.

(h) Submit to the Architect all guarantees, warranties, etc. specified herein, including Manufacturer's operating instructions.

A.63 REASONABLY FIT FOR OCCUPATION

(See also Clause 25(a) of Conditions of Contract).

The expression 'reasonably fit for use and/or occupation' used in Clause 25(a) or elsewhere in the Conditions, shall mean completion of the Works including structure, finishes, equipment and services in adequate working order, and allowing of reasonably full and uninterrupted occupation and use by the Proprietor.

A.63 REASONABLY FIT FOR OCCUPATION (Contd).

Minor imcomplete items, external or internal which in the opinion of the Architect do not conflict with the foregoing, shall not prevent the issue of the Notice of Practical Completion.

A.64 OCCUPATION ON PRACTICAL COMPLETION

(See also Clauses 25 and 26 of Conditions of Contract).

Upon issue of the Notice of Practical Completion the Proprietor shall be entitled to occupation of the whole of the Works.

Notwithstanding the Proprietor's occupation, the Builder shall be granted access to the Works during the Defects Liability Period to carry out any works required under Clause 26 of the Conditions. Such work shall be carried out at such times and in such manner so as not to unreasonably interfere with the Proprietor's occupation, but if the Proprietor requires the Builder to carry out such work outside normal working hours, then the additional costs shall be ascertained by the Architect and added to the Contract Sum.

A.65 OCCUPATION BEFORE PRACTICAL COMPLETION[1]

(See also Clause 25 of Conditions of Contract).

Should the Builder not have practically completed the Works by the date stated in the Appendix to the Conditions of Contract or within any extended time fixed under Clause 24 of the Conditions, the Proprietor may with the consent of the Builder and after issue the Architect of the Notice of Occupancy hereinafter referred to, occupy the whole or any part of the Works prior to Practical Completion.

In any such case the Architect shall after agreement between the parties as to the matters contained therin issue both to the Builder and to the Proprietor a Notice of Occupancy stating:-

(a) That the whole of certain stated parts of the Works may be occupied prior to Practical Completion.

(b) The date or dates upon or after which such occupancy may take place.

(c) The amended date for Practical Completion.

(d) The affect of such agreement upon the provisions of the Contract relating to Liquidated Damages, Retention and Defects Liability Period.

A.66 GUARANTEES

(a) The Builder shall provide the Guarantees as specified under the various trades except where this is not reasonably possible and where he has so notified the Architect in writing before the Work was proceeded with or the item ordered.

(b) As soon as possible after Practical Completion the Builder shall procure such guarantees, or equivalent guarantees, to be effectively transferred to or issued directly in favour of the Proprietor so that thereafter the Guarantor shall be directly responsible to the Proprietor.

(c) The guarantee period shall commence from the date of the Notice of Practical Completion and for the period specified herein.

A.67 ADVANCE NOTICE OF PRACTICAL COMPLETION

Five (5) working days.

A.68 TAXATION SCHEDULE

Within 14 days of the issue of the Final Statement of Contract Account or at such other time later as required by the Architect, the Builder shall furnish to the Architect a Schedule of Costs for the purpose of taxation calculations by the Proprictor. The Schedule shall be in such form as directed by the Architect.

SCHEDULE OF ALTERATIONS TO THE LUMP SUM CONTRACT AGREEMENT AND CONDITIONS OF BUILDING CONTRACT

(a) Workers' Compensation and Employers' Liability

(See Clause 'Insurance')

Conditions of Contract Clause 21 (b) add paragraph to end -

"Insurance as required in W.A. under the terms of The Workers Compensation Act 1912-1966 and at Common Law".

Appendix P.22 - paragraph 5 - Workers' Compensation Insurance.

Delete amount and add -

"as required by the Workers' Compensation Act 1912-1966 and at Common Law".

(b) Delay and Extension of Time

(See Clause 'Disputes with Neighbours - Delay and Extension of Time' of these Preliminaries.

Conditions of Contract Clause 24(g) (vii) delete and rewrite:-

By reasons of proceedings being taken or threatened by or disputes with adjacent or neighbouring Owners or Occupiers provided that such proceedings or disputes are not due to any default of the Builder or to any act of the Builder other than an act required by this Contract.

(c) Insurance

(See Clauses 'Alteration to Conditions of Contract' and 'Insurance' of these Preliminaries).

Clause 15(a) (iv)

Delete all the words after 'Plant' in line three together with the whole of the fourth and fifth lines.

Clause 20(a)

Delete all the words in the first line beginning with the word 'Except' and all the words in the second line with the exception of 'The Builder'.

Clause 21(a)

Delete the first four lines.

Clause 21(a) (A)

Delete the word 'and' appearing before the word 'Proprietor' in the first line and add the words 'and sub-contractors whether nominated or otherwise (Hereinafter referred to as the Insured)' after the word 'Proprietor'.

Clause 21(a) (B)

Delete this Section entirely.

Clause 21(c)

Delete this Clause entirely and substitute the following:-

Settlement of Claims

In the event of any occurrence resulting in loss or of damage to the Works or to materials or goods incorporated or to be incorporated therein in respect of which the Builder is required to insure under this Contract all moneys received by either party to this Contract in settlement of any claim under the insurances aforesaid shall, if requested in writing by the other party, be paid into a bank mutually agreed upon by the parties in an account in the joint names of the Builder and the Proprietor. The Builder shall thereupon proceed to reinstate the Works and replace and repair the materials or goods destroyed or damaged and the Architect shall certify in accordance with the provisions of Clause 28 of these Conditions against the foresaid joint account for the cost of reinstating the Works and replacing and repairing the materials or goods destroyed or damaged provided that the Builder shall not be entitled to any payments pursuant to this sub-clause other than the moneys received under the aforesaid policies exclusive to the sum provided for the fees of Architect, Engineer, Quantity Surveyor, and Consultant which shall be payable to those persons.

Clause 21(e)

In the fifth line after the word 'Property' add the following:-

'(including the Works) which may be occasioned by such occupation and use '.

Clause 21(f)

Delete from the word 'where' in line five and all of lines six, seven, eight and nine.

(d) Final Certificate

Clause 31(i)

Delete the word "conclusive" in the fourth line and substitute the words "prima facie".

(e) Retention Fund

Clause 30(d)

Delete this section entirely.

Clause 30(g)

Delete the first line.

APPENDIX TO THE CONDITIONS OF CONTRACT

The following is a copy of the Appendix to the Conditions of Contract, Edition 5b, showing where practicable how it will be filled in when the Contract is signed.

		Clause No.	
(a)	Date for the Possession of the Site of the Works.	5	Upon signing of the Building Contract or receipt of the Building Permit, whichever is the later.
(b)	Amount to be included in the sum insured to provide for costs of demolition and removal of debris.	21(a)(A)(i)	$10,000.00.
(c)	Amount to be included in the sum insured to provide for fees of Architect, Engineer and Consultants.	21(a)(A)(i)	6% of the Contract Sum.
(d)	Public Liability Insurance	21(a)(A)(i)	not less than $250,000.00.
(e)	Workers' Compensation and Employers' Liability Insurance.	21(b)	as required by the Workers' Compensation Act 1912-1966 and at Common Law.
(f)	Date for Practical Completion of the Works.		12 calender months.
(g)	Defects Liability Period	25(g)	three (3) months.
(h)	Liquidated and Ascertained Damages.	27	$2,000.00 per week.
(i)	Period for payment of Progress Payments.	28	(14) fourteen days.
(j)	Minimum amount for Progress Payments.	28 (b)	$30,000.00 (or less at the Architect's reasonable discretion)
(k)	Percentage of estimated Contract Value Retainable.	30 (b)	10%
(l)	Limit of Retention Fund (Not to exceed five per centum of the Contract Sum)	30 (b) 30 (c) 30 (d)	5% of Contract Sum.
(m)	Name and Branch of Bank nominated by Builder.		

SUPPLEMENT TO THE PRELIMINARY CLAUSES

(a) FEES

$80 to the Architect for four sets of Contract Documents (see Clause A4)

(b) CONTINGENCY SUM

Six Thousand Dollars ($6,000.00).

(c) COPIES OF DOCUMENTS

The following listed fees are payable to the Architect for additional copies of Contract Documents over and above the six initial sets.

$ 0.60 per each drawing.
$15.00 per each copy of the Specification.

(d) SCHEDULE OF PRIME COST AND/OR PROVISIONAL SUMS

ITEM	AMOUNT
Mosaic Tiles (supply)	$13.00 per sq.m.
Wall Tiles (supply)	$ 9.00 per sq.m.
Clothes Hoists	$2000.00.
Landscaping	$5000.00.
Reticulation	$8000.00.
House Name and Number	$1000.00.
Supply underground power to pool site	$100.00.
Demolition	$2000.00.
Light Fittings	$6500.00.
Provisional Sum for Contract rises	$ (To be negotiated)
Pool Equipment Box	$500.00.
Barbecue	$700.00.
Housing to Pool Pump	$200.00.
Bulk Garbage Bins	$600.00.

B. S I T E W O R K S

B.1 GENERALLY

The Builder is referred to and must allow for the various preambles etc. throughout the trades which apply in every respect to similar items in the External Works Section.

Allow for all necessary straight cutting and waste in precast pavings, kerbings etc.

B.2 BITUMEN PAVING

Areas to be paved are to be evenly formed and consolidated with a vibrator roller, and are to have a 150mm thick gravel or rock base finish with 14mm thick bituminous concrete.

The grading specification for the bituminous concrete shall be as follows:-

B.S.S. Sieve		Percentage Passing		
5mm		95		
No.	7	75	±	3%
No.	14	40	±	3%
No.	25	37	±	3%
No.	52	22	±	3%
No.	100	13	±	2%
No.	200	7	±	1%

Bitumen content 5.1% ± 0.3%

Gravel or rock base shall be swept clean of all loose material, and after dampening, shall be primed with bitumen emulsion at the rate of one litre per square metre and immediately covered with 3mm screenings at approximately one tonne to 100 square metres. The screenings shall have a minimum six passes of a roller weighing not less than 5 tonnes.

After rolling and brooming of the screened primer, the area shall be sprayed with bitumen emulsion diluted to 60/40 at the rate of 0.70 litres per square metre before proceeding with laying of hot bituminous concrete.

The bituminous concrete shall be laid to a compacted depth of 14mm thick.

Allow for protecting building, pavings, reatining walls, kerbs, etc., from damage by machines and protecting with paper from staining by emulsion and bitumen while work is in progress and for cleaning or replacing damaged items as necessary.

Allow for grading the paved areas to falls as necessary prior to laying base.

B.3 CROSSOVERS

Install 1 number crossover between the boundary and street where indicated on the site plan.

Arrange for this work to be done by the Local Authority giving due notice.

Verify all boundary levels with the Local Authority before commencing paving works.

B.4 CONCRETE KERBING

Concrete kerbing is to be standard precast concrete 200 x 150 mm. section kerbing. Allow for all necessary excavation cutting back and trimming edge of bitumen paving base compacting ground against back of kerb, bedding in concrete, flaunching up at back, for all mitres, ends, etc.

Allow for marking out car bays with white paint and direction arrows as directed.

B.5 CLOTHES LINES

Allow a P.C. Sum of $2000.00. for the supply and erection of clothes lines to drying areas.

B.6 CONCRETE PATHS

All concrete paths shall be laid 900 mm. wide by 75 mm. thick on consolidated fill.

Tool slabs at every 1800 mm. centres for control joints and finish off surface with a broom.

B.7 PRECAST CONCRETE PAVING

Lay 600 x 600 x 37 mm. thick slabs on compacted sand base, where indicated on the drawings.

To all perimeters of slabs where not bordered by brick walls or fences, provide and lay 150 mm. x 50 mm. precast concrete kerbing.

B.8 LETTERBOXES

Build 2 No. brick letter boxes with 450 mm. high plinth set 25 mm. back from face of letterboxes and provide and build in 3 rows of 9 terra cotta letterboxes to each.
Allow for numbering each letterbox.
Provide concrete footing as detailed.
External brick-face to be finished in render to match the buildings and painted.

Provide solid brick capping in face-work of solid chocolates.

B.9 HOUSE NAME AND NUMBERS

Allow the P.C. Sum of $1,000.00 for the supply of letters etc. and construction of suitable supporting frame for house name and street numbers.

B.10 BITUMEN PAVING TO IVY STREET

Provide and lay bitumen paving as previously specified to the limestone base section of Ivy Street.

C. E X C A V A T O R

C.1 Excavation for water services, drains, etc. is included with their respective items in other trades.
All Builders debris such as brick batts, waste timber, timber off-cuts, old mortar and similar refuse resulting from building operations must be regularly collected and carted from the site. Allow for levelling bottoms of trenches, keeping sides plumb, back filling, ramming solid, carting away surplus excavated material from site, etc.
Back filling, bottom of footings, any fill and ground under slabs are to be well watered and compacted to 8 blows per 300mm of a 516mm diam. 600 long 9kg. falling weight penetrometer.
Allow for keeping all excavations free from water by pumping or otherwise.
Allow for excavating all footings and column bases as shown on drawings and include for trenches, keeping sides plumb, back filling, ramming solid, carting away surplus excavated material from site, planking and strutting, etc.
Allow for excavating the site to the levels shown, provide all planking and strutting or sheet piling and leave the site ready for excavation of footings etc. Regrade ground to accommodate buildings and all parking areas. Allow for checking all levels.
Protect all trees being retained.

C.2 WHITE ANT TREATMENT

The Builder shall provide to the Architect at the completion of the Works a "Certificate of Treatment", stating that the work has been carried out in accordance with A.S.A. Code No. CA43 and that the cost of such pre-treatment shall include a twelve (12) month service period.
The work shall be carried out by a member of the"Pest Control Association of Western Australia".

C.3 FILLING

Filling is to be laid in layers and compacted progressively. Where filling occurs below buildings, paths and parking areas the compaction shall reach 8 blows per 300mm as previously described.
Filling material is to be imported clean sand free from vegetable matter and rubble.
Should the excavated material be considered suitable for filling a direction will be given to the builder by the Architect or Engineer.

C.4 WATERPROOF MEMBRANE

Under all internal slabs on fill provide a continuous Fabweave membrane, as supplied by Crommelin Chemicals Pty. Ltd.

At the perimeter of slabs turn the membrane up against wall face and across bed joint in brickwall as indicated. Lap membrane at all joins and seal with Fabweave in accordance with the manufacturer's recommendations.

C.5 UNAUTHORISED EXCAVATIONS

Should excavation be taken to a greater depth or width than shown on the plans or authorised by the Architect, fill to the correct profile with footing concrete.

D. C O N C R E T O R

D.1 GENERAL CONDITIONS

All concrete construction must comply with the Standards Association of Australia Code 1480-1974 for concrete in buildings.

(a) This Specification is to be read in conjunction with specific notes on relevant Structural Drawings. All notes mandatory.

(b) All dimensions to be checked on site.

(c) The drawings are to be read in conjunction with Architectural and Plumbing drawings.

(d) All contradictory notes or statements which may occur between Structural and Architectural drawings must be brought to the attention of the Structural Engineer.

D.2 TESTS

D2.01 Generally

All concrete tests shall be carried out in accordance with S.A.A. Codes Nos. A100 - A110 - 1975 or any subsequent amendment.

The Builder shall allow for the cost of making test specimens and further supply of testing equipment and suitable Personnel to carry out tests.

D2.02 Slump Tests

Slump tests shall be carried out on the first batch of concrete to be placed and at least once for every 30 cubic metres of concrete placed thereafter on that day.

If, in the opinion of the Architect, any other batch of concrete appears to have an incorrect slump, the Builder shall conduct slump tests as directed by the Architect.

Slump tests shall be conducted by, and at the expense of, the Builder.

D2.03 Compression Tests

A test sample shall be taken from each day's pour of concrete or from each 30 cubic metres or part thereof placed on any one day.

From each sample, three 150 x 300mm cylinder specimens shall be made, one to be broken at seven days

D2.03 Compression Tests (Contd)

and two at twenty-eight days. Additional testing is to be carried out if required by the Architect.

The Architect reserves the right to have all concrete which falls below the compressive strength required, removed from the site and replaced at the Builder's expense, without any additional testing. The Builder shall also replace any associated works affected by the defective concrete, at his own expense.

No extension of time of completion will be granted for delays occasioned by demolition and re-building of concrete and associated work.

D2.04 Results of Tests

A certified record of the results of all authorised tests shall be forwarded to the Architect immediately they are available.

D.3 INSPECTION BY THE ARCHITECT

Give notice to the Architect, so that he may inspect the following stages of work:-

(a) Formwork ready for concrete.

(b) Reinforcement in position.

(c) Placing of concrete.

D.4 MATERIALS

Materials shall conform to the relevant S.A.A. Standards and Codes.

D.5 CEMENT

Cement delivered to the site shall be in branded and sealed bags stacked under protective cover and stored to prevent deterioration, so stacked that each batch delivered may be identified.

Cement that does not comply with Australian Standard Specification A.2/A53, or has been adversely affected in storage shall be removed from site.

D.6 FINE AGGREGATE

Fine aggregate shall be clean, hard, durable grains of natural sand, free from deleterious matter, or shall be crushed fine, from an approved pit and conforming to A.S.A. Code AS - A77.

D.7 COARSE AGGREGATE

Coarse aggregate shall be diorite or other screenings of hard durable uncoated particles, free from dust and other deleterious matter and conforming in cleanliness with the requirements of A.S.S. No. A77.

All coarse aggregate shall be of maximum size passing sieve sizes as follows:-

30mm footings
20mm all other work

D.8 WATER

Water shall be fresh and clean, free from impurities and fit for human consumption.

D.9 ADDITIVES

Additives shall not be added to the concrete without the prior approval of the Architect. The Builder shall advise the Architect of full details of any additive he proposes to use and shall furnish samples as required by the Architect for testing purposes.

D.10 READY - MIXED CONCRETE

Concrete shall be ready mixed concrete supplied by an approved manufacturer and shall be mixed and delivered in accordance with the requirements of A.S.S. No. A64 'Ready-Mixed Concrete'.

Acceptance criteria shall be based on the requirements of S.A.A. Code No. 1480-1974 and target strength shall be selected in order to satisfy the requirements of this Code.

D.11 REINFORCEMENT

Steel reinforcement shall consist of:-

(a) Plain Structural grade bars complying with A.S. No. 1302-1972.

(b) Deformed cold worked bars complying with A.S. No. 1302-1972.

(c) Steel fabric complying with A.S.S. No. 1304-1972.

All reinforcement shall be free from scale, loose rust, oil, paint grease or other deleterious matter they may impair the bond between the concrete and reinforcement or cause disintegration of the concrete.

Reinforcement shall be bent, bundled and securely and legibly tagged before delivery to the job.

D.12 WORKMANSHIP

D12.01 Formwork Generally

Use formwork wherever necessary to confine the concrete and shape it to the required lines. Construct and erect formwork in accordance with S.A.A. Code No. 1480-1974.

Do not use earth cuts as forming for vertical surfaces unless approved by the Architect.

Assume responsibility for the design and construction of the formwork. Should the Architect be of the opinion that the formwork and its supports are unsound, strengthen the formwork as directed by the Architect without charge.

Construct formwork so that it is sufficiently tight to prevent leakage of grout and is of such strength and rigidity as to ensure that there will be no visible displacement under the loads imposed in placing, compacting and vibrating the concrete. Where off-form concrete is to be sand blasted, ensure that no moisture leakage occurs.

Take all measures necessary to prevent damage to the surface of the formwork for off-form concrete.

D12.02 Treatment of Formwork

Treat surfaces of all standard formwork with form fluid applied sparingly on the faces of formwork at least 4 hours before concrete is placed. Clean down with a wire brush any formwork previously so treated and treat with a further coat before re-use.

Do not use any stripping agent on standard formwork which will discolour the applied finish.

D12.03 Access and Inspection Openings

Provide temporary openings at the base of column and wall forms and at other points where necessary to facilitate cleaning and inspection.

D12.04 Stripping of Formwork

Do not strip formwork until the concrete is sufficiently strong to carry any loads that may be imposed upon it.

When required, submit evidence that the concrete has reached the required strength before stripping.

Damage caused through stripping is the Builder's liability.

Notify the Architect prior to stripping formwork.

D12.04 Stripping of Formwork (Contd)

Observe the following minimum stripping times:-

Minimum Temperature endured by concrete prior to stripping	Vertical Surfaces	Bottom Forms of beams and slabs up to 1800mm span	Beams and slabs longer than 1800mm span
Not under 27°C	2 days	7 days	12 days
Under 27°C but not under 10°C	3 days	10 days	14 days

Increase these minimum times where the setting of the concrete is likely to have been retarded by unduly wet or cold weather and where the forms and concrete are used for the support of superimposed formwork.

If construction loads greater than 270kg per square metre are placed on the structure, fix emergency shoring and tomming to the satisfaction of the Architect.

D.13 REINFORCEMENT

D13.01 General

Carefully stack reinforcement free of the ground on timber bearers.

(a) Plain round bars shall be Structural Grade Steel in accordance with A.S. No. 1302-1972.

(b) Cold Twisted Deformed bars shall be in accordance with A.S. No. 1302-1972.

(c) All meshes to comply with A.S. No. 1304-1972 for Hard Drawn Steel Wire Reinforcing Fabric. Mesh Nos. quoted are Australian Standard numbers and are denoted by A.S. mesh.

(d) All reinforcement to be adequately and accurately held in correct position on approved plastic or plastic tipped wire chairs. Maximum spacing of chairs to be 750mm each way.

(e) Where required, continuous rods are to be lapped 50 x dia. for plain round bars and 40 x dia. for twisted deformed bars, unless otherwise noted. All adjacent laps to be staggered where possible.

(f) Mesh laps to be 375mm for end laps, 375mm for side laps.

(g) Long and short bars are to alternate where required.

D13.01 REINFORCEMENT (Contd).

(h) Where holes occur in slab around which no concrete walls or beams occur, the steel is to be moved sideways, not cut, to miss holes. In case of doubt refer to Structural Engineer.

(i) Minimum clear cover to steel to be :-

Slabs	20mm
Beams	40mm
Slab on ground	25mm(40mm exposed)
Footings	65mm

(j) All reinforcement to be checked by architect before any concrete is poured.

D13.02 Fixing Reinforcement

Support and wire together reinforcement with soft wire or slips to prevent displacement by construction loads or the placing of concrete, beyond the limits specified in S.A.A. Code No. 1480-1974.

Use plastic-tipped metal chairs, metal hangers, metal spacers or other plastic, metal or concrete accessories as required for supporting reinforcement in accordance with the following:-

(i) Where the concrete surface is off-form and exposed to view, internally or externally, provide accessories in which the portions in contact with the formwork are of plastic matching in colour with the concrete paste.

(ii) Do not use concrete accessories without the prior approval of the architect.

Weld, tie, clip or otherwise secure mesh reinforcement together by approved means at alternate intersections and at such other points as may be required.

Take particular care to ensure that wall and column steel is properly fixed in position by the use of plastic chairs clipped on to the steel and by steel spacers for wall reinforcement. Place all such spacers in position prior to erecting the last shutter.

D.14. CONSTRUCTION JOINTS

All points of stoppage in concrete of 3/4 hour or more shall be deemed to be construction joints. Plan locations and methods in advance along lines of minimum shear, as determined in consultation with the architect.

D.14 CONSTRUCTION JOINTS (Contd).

Before depositing new concrete at construction joints, re-tighten formwork, roughen the surface of the set concrete, clean off foreign matter and laitance and thoroughly wet but not saturate.

D.15 BUILDING IN

Place all conduits and piping on concrete floors above the bottom steel and below the top steel so as to in no way interfere with the reinforcement. Where conduits and piping cross control joints, make provision for slip joints or some other means of absorbing movement without fracturing.

D.16 BUILT-IN BOLTS ETC.

Build in all necessary plugs, bolts, ties, clamps, wire ties, timbers, pipes, conduits, flashings and fastenings required, also form all necessary ducts in and through floor.

Provide and place all sleeves, openings, inserts, anchors and embedded items required for adjoining work or for its support in position prior to concreting; these items shall not be shot into the concrete with explosive devices without the approval of the architect prior to concreting.

Position accurately and support embedded items against displacement.

Position and build in holding down bolts.

Provide templates for the positioning of holding down bolts for columns or machines and for any other embedded items as the architect directs. Temporary fill voids in sleeves, inserts and anchor slots with readily removable materials to prevent the entry of concrete into the voids.

D.17 TREATMENT

Ensure that all fixings, such as bolts, plates etc. cast into concrete are hot dip galvanized.

D.18 PREPARATION FOR PLACING OF CONCRETE

Do not place any concrete in any section of the work until the formwork for that section has been inspected and approved by the architect.

Immediately before placing concrete in excavation, ensure that the excavation is free from water and all fallen materials and that the sides of excavations are such that no material will fall into freshly placed concrete.

D.18 PREPARATION FOR PLACING OF CONCRETE (Contd).

Well dampen the surfaces of foundations upon or against which concrete is to be placed for at least 24 hours prior to placing the concrete.

Clean and dampen surface of construction joints when covering with fresh concrete or mortar. Cleaning on horizontal joint surfaces shall mean that the aggregate protrudes slightly and is polished, and all loose particles, laitance and foreign matter is removed, this shall preferably be achieved by sand blasting, though water scabbling (2-4 hours after casting) or approved power or pneumatic tools may be employed.

Ensure that formwork ready for the placing of concrete is complete, with surfaces smooth and clean; immediately before placing, remove all excess water, mud and debris and secure all reinforcement in place; remove surplus ends of tie-wire make sure that expansion joint material, anchors, and other embedded items are in position.

Do not commence placing until the preparations have been approved by the Architect.

All load bearing brickwork to be built to underside of slab level before slab is poured. See load bearing brickwork notes for all other notes concerning brickwork.

Conduits to occur above bottom steel and below top steel. Use slip joints across concrete control joints.

For slabs on fill, soil to be consolidated in layers or as directed by architect using a mechanical vibrator roller, to withstand a standard penetrometer test of 8 blows/300mm.

D.19 COMPACTION OF CONCRETE

Consolidate all concrete by mechanical vibration and spading or rodding as necessary, to the maximum practicable density, free of air or stone pockets. Any concrete not vibrated will be rejected.

Have on site sufficient vibrators of an approved pattern, and keep a spare on the job for use in the event of a breakdown.

Do not commence placing until this condition is met.

Use immersion type vibrators, operating at an oscillation frequency of at least 8,000 vibrations per minute, when immersed in the concrete, wherever practicable.

It is important that placing be carried on at such a rate that no cold joints of more than 20 minutes age occur other than at construction or expansion joints.

D.19 COMPACTION OF CONCRETE (Contd).

Machine trowel slabs where required to give even finish ready to receive floor coverings.

D.20 TOLERANCES

Ensure that concrete work meets the following tolerances:

Failure to meet these tolerances will result in the concrete being rejected and the Builder must then make good.

This will normally involve the cutting down of the rejected concrete.

Members shall comply with the requirements of S.A.A. Code No. AS.1480-1974, namely that sizes of members and thicknesses of slabs shall not exceed plus 6mm or minus 0mm.

Concrete surfaces exposed to view shall not deviate from their true position indicated on the drawings by more than plus 6mm and deviations from a 1500mm straight edge placed on the surface in any direction shall not exceed 3mm.

D.21 CURING

(a) Slabs to be kept wet for a minimum of 7 days by ponding using a minimum of 50mm depth of water retained by one course of brickwork bedded in weak mortar as soon as practicable after pouring of slab.

(b) All other concrete must be kept damp in an approved manner for 7 days.

D.22 ACCEPTANCE AND REPAIR OF CONCRETE

Repair or remove from site and make good, at the sole discretion of the architect, concrete that is damaged from any cause, is honeycombed, fractured or otherwise defective, and concrete with surface irregularities beyond the tolerances specified.

Repairs to concrete surfaces are best carried out within 24 hours after the forms have been removed. Advise the architect, immediately after removal of forms, of any surfaces considered to require repair. Where directed by the Architect, repair concrete immediately, employing skilled workmen.

Advise the architect when repair of concrete is to be performed and unless inspection is waived by the Architect in each specific case, execute repairs only in his presence.

D.22 ACCEPTANCE AND REPAIR OF CONCRETE (Contd).

Select the method most applicable to the case under repair.

Fill tie-rod holes according to the Dry Pack Method. Leave all repaired areas sound and free from shrinkage cracks and drummy areas after the fillings have been cured and have dried.

On surfaces exposed to view, mix cement into the repair material to the correct proportions such that when the repair dries, the colours match.

D.23 FOOTINGS

Footings at lowest level must be first footings poured.

No footing to be further above any other adjacent footing or excavation than half the clear distance between them.

All excavations must be approved prior to pouring footings.

Any tree stumps, old excavations, rubbish, fill etc., to be cleared out and replaced with clean, compacted fill or concrete as required by the architect.

Bottoms of all footings to occur a minimum of 450mm into virgin ground unless otherwise shown.

All excavations for footings and column bases, which does not withstand a standard penetrometer test of 8 blows/300mm shall be compacted using a flat plate, or similar approved compactor.

D.24 CHANGE OF FLOOR FINISHES

Where a change of floor finish occurs build in 9mm x 4.5mm brass strip, with lugs brazed on, to finish flush with finished floor surface.

D.25 GENERALLY

Pour all footings, bases, slabs, beams, stairs, etc., form all upstands, plinths, recesses, etc., cast in all sleeves, temporary inserts, holding down bolts and all other items, materials etc., as shown on Engineers and Architectural drawings.

D.26 UPSTANDS, SETDOWNS ETC.

On all walls on which slabs bear form upstands or setdowns to brick courses where thickness of slab differs, form 150mm upstand to shower recess areas.

E. STEEL & METALWORKER

E.1 GENERALLY

Steelwork shall comply with S.A.A. 1250-1975 and welding Code CA-1965 must be free from distortion before and after welding.

Steel shall be of Australian manufacture in accordance with A.S.1131 and shall be free of silt, scale, loose rust or pitting, paint, grease, tar or other deleterious matter.

Contractor to allow for all shop drawings, tools, fabrication, shop welding, drilling, cutting to length, machined ends and bearings, grinding welds etc. smooth, delivery to the site, unloading, hoisting, plumbing, wedging temporary bracings and supports and fixing including site welding.

Welds shall be of minimum of 6 mm. fillet and are to develop full strength of adjoined members.

All welds exposed to view are to be neatly ground smooth.

When work is specified as having "Dimet" treatment Contractor to allow for full preparation of surfaces and subsequent treatment all in accordance with the Manufacturers instructions. The "Dimet" treatment is to be applied after fabrication and before delivery to site and any damage to the finished "Dimet" treatment is to be made good on site in strict accordance with the Manufacturers instructions.

Bolts to be in accordance with A.S.1250-1975.

All damaged surfaces of steel are to be brushed up after erection.

E.2 METAL DOOR FRAMES

Metal door frames to be 1.2 mm. thick pressed metal zinc annealed standard door frames having hinges welded on, rubber inset stops and latch keeper.

Frames to be of widths to suit wall thicknesses inclusive of any finishes.

Frame to W.C. door to have Tamic lift off hinges fixed instead of standard hinges.

E.3 ALUMINIUM WINDOWS AND DOORS

(a) Generally

Aluminium windows and doors shall be by an approved Manufacturer and shall comply to the following:-

Frames shall be of strong boxed or open section not less than 63 mm. wide free from wind, bow, sag or distortion.

E.3 ALUMINIUM WINDOWS AND DOORS (Contd).

Joints shall be positive mechanised or welded fixings concealed with machined edges matching truly to a hairline joint.

Frames shall be plumb and square and set level in walling.

The assembly shall be entirely waterproof in design, aided by wool pile weather sealing strips and self draining weep-holes in sills.

All moving parts shall operate freely and smoothly, but shall be close fitting.

Glazing of these windows shall be by the Window Supplier.

(b) Performance Requirements

(i) Deflection: No member in a closed or fixed unit shall deflect more than 1/175th of its span under uniform load applied normal to the plane of the unit and equal to a wind velocity of (128) km/hour.

(ii) Operation: Opening units shall operate freely and smoothly. Sash control mechanisms shall open the sashes to any position required by the design.

(iii) Standard Tests: Installed units shall have the standards for static load, dynamic load, water penetration and air infiltration listed in Australian Standard (CA53) (1970) as minimum requirements of this Specification.

(iv) Distortion: Members shall be of sufficient weight and size to transmit reactions without causing any distortion.

(v) Thermal Movement: Allow for thermal movement of 1.3 mm. per metre length of any member or frame.

(vi) Water Ingress: Where water or condensate can be otherwise entrapped, provide drainage holes to approval.

(c) Anodising

All exposed aluminium surfaces shall be Comaltone Bronze or an approved brown acrylic finish.

Coatings shall be free from marks, scratches, blemishes or discolouration from welds.

(d) Dissimilar Materials

Where aluminium surfaces may come into contact with metals other than stainless steel, the aluminium surface shall be kept from direct contact by placing a good quality caulking or gasket material between the surfaces.

E.3 ALUMINIUM WINDOWS AND DOORS (Contd).

(e) Protection

Prior to delivery to site all anodised materials shall be protected by PVC tapes or similar.

(f) Aluminium Windows

Aluminium windows shall be of approved manufacture, fabricated with extruded aluminium self weathering sections, straight and free from hammer marks and other imperfections. Main frame members shall have extended legs of special fins to facilitate weathering and sash members shall be double weathered.

Windows with sash members shall be channelled and fitted with approved aluminium backed with frame and/or sash members channelled and fitted siliconised mohair seals to prevent entry of dust and/or water.

Mitre cut frames at corners and reinforce with invisible spigots. Visible corner fastening devices such as pins, screws and pressure indentation shall not be used. Meeting stiles and/or meeting rails shall contact tightly with each other or with weather seals. Sashes shall not be removable from outside when locked.

Where the design of a window is such that water and/or condensate can be entrapped on sills internally and/or externally, special provision shall be made for draining the sills. Provide to radian arched window heads a timber infil panel of profile to suit brickwork. Flash panel into cavity and make watertight.

Fixing: Frames shall be built in as work proceeds. Accurately position frames, ensuring that they are square and that sashes operate freely.

Build in, with lugs at jambs and sill, to inner leaf of blockwork.

Securely fix into position aluminium angles, finished to match windows and doors, where necessary to seal between window frames and wall finishes, both internally and externally and or to seal wall cavities.

Angles shall be fixed to window framing and bedded in mastic on the blockwork.

Flashing: All windows shall be complete with 150 mm. wide Alcor jamb and sill flashings fastened to extended legs of aluminium window extrusions and dressed into cavity. Flashings to be supplied and fixed to frames by the Window Manufacturer.

(g) Aluminium Doors

Aluminium sliding doors shall meet the same performance requirements as for windows and shall have the same finish.

E.3 ALUMINIUM WINDOWS AND DOORS (Contd).

Fixing: Frames shall be installed as for windows above. Accurately position frames, ensuring that they are square and plumb.

Securely fix in position with matching colour anodised angles, internally and externally.

Flashings: All as specified for windows above.

(h) Glazing

All glazing shall be carried out by the Window Suppliers.

Glass weights and thicknesses shall comply with the relevant current Australian Standard Code of Practice to withstand the wind loads directed upon the panels.

Glass shall be selected, first quality free from defects. Drawn sheet glass shall be free from undue or noticeable distortion of vision or reflection. All draw lines shall be horizontal.

Plate glass shall be clear with both surfaces ground and polished and having no distortion.

Accurately cut all glass square to sizes that allow proper tolerances between edges of glass and frame. Finish edges of glass smooth, even and free from chipping and other irregularities.

(i) Flyscreens and Flywire Doors

Provide to all opening window sashes and sliding doors, sliding flyscreens and flywire doors in matching colour anodised aluminium.

(j) Guarantee

The Contractor shall provide to the Proprietor before completion of the Works a two year written guarantee for water-tightness on all aluminium windows and doors.

(k) Maintenance

Allow for a free maintenance period of three (3) months after the date of Practical Completion of the Building Contract.

(l) Cleaning

Clean all aluminium, glass and other exposed items of stains and marking occurring before or during installation.

Clean aluminium only with chemically mild, non-abrasive materials, ensuring that the surface treatment is not affected.

E.4 DOOR SEALS

Supply and fix to the sill of all entrance doors D1, a Daniels weather seal.

E.5 SWITCHBOARDS

Provide metal fabricated switchboards in the locations shown on the drawings and to the requirements as specified under "Electrician".

E.6 CARPORT FRAMING

Supply and erect framing to covered carports as detailed on the drawings.

All mild steel sections to be Dimet finished.

Apply a heavy coating of bitumen to column sections from footing level to ground level.

E.7 BALUSTRADE

Provide and fix m.s. balustrading and handrails to balconies and stairs as detailed.

Columns to be 75 x 75 x 6 mm. R.H.S.

To all walkways and private balconies provide and fix 50 x 10 mm. m.s. flat bar galvanized balusters as detailed on drawings, welded to plates cast into concrete and to 100 x 50 mm. R.H.S. galvanized handrail. Balusters to be at approximately 1500 mm. centres to suit brick coursing.

Provide all necessary bends, fixings, mitred corners etc. Touch up with rust proof paint after erection.

Balusters to have 25 x 1.6 x 400 mm. long straps shot fixed at every second course (See Bricklayer).

E.8 RAINWATER DOWNPIPE COLUMNS

At downpipes on walkway areas provide and fix 100 x 50 mm. galvanized R.H.S. column between floors as protection for downpipes as detailed on drawings. Base of column to be welded to 100 x 100 mm. fixing plates as specified under Concretor. Top to have 50 x 50 x 6 mm. cleats welded to either side and drilled to take 10 mm. and or bolts to soffit of concrete slab.

Top floor to have 150 x 100 x 6 mm. m.s. cleat welded to top of column twice drilled to take 10 mm. galvanized bolts to timber roof framing.

Touch up with rust proof paint after erection.

Note: These columns to be site measured to make sure of an accurate fit between slabs.

Bolts etc. to be complete with washers, nuts etc.

E.9 ROOF SUPPORT COLUMNS

To top floor private balconies provide and fix 75 x 75 mm. galvanized R.H.S. columns. Weld base to 100 x 100 mm. fixing plates and to top weld 150 x 100 x 6 mm. twice drilled galvanized fixing cleat to take 10 mm. galvanized bolts to 150 x 50 mm. timber beams as detailed.

Provide all necessary fixings etc.

Allow for shot fixing straps to column for brickwork (See Bricklayer)
Touch up with rust-proof paint after erection.

E.10 CARPORT FRAMING

Supply and fix 64 x 64 x 4.06 mm. galvanized R.H.S. columns at centres as shown on drawings.

Top of column to have 200 x 100 x 10 mm. galvanized m.s. cleat four times drilled to take 10 mm. galvanized bolts to 150 mm. deep cold rolled 'C' purlins continuous in as long a lengths as possible with joints at column.

Columns to have 230 x 230 x 10 mm. galvanized base plate cast into concrete footing 75 mm. from bottom as detailed.

Columns to be diagonally braced as shown on drawings with 25 x 6 mm. galvanized mild steel flat welded to columns and, at point of crossing, to each other.

Generally touch up with rust-proof paint after erection.

E.11 GAS METER CABINETS

Provide and fix where shown, recessed gas meter cabinets.

Cabinets to be to the approval of the Gas Supply Authority.

E.12 FRAMING TO DUCT COVERS

Construct the framing to the duct covers from rolled hollow sections of sizes indicated on the drawings.

Weld onto the lower horizontal member, suitable m.s. angle cleats. Cleats to rest on concrete slab for additional support to covers.

Fix covers to m.s. angle jamb linings by means of butterfly nuts. All steelwork to be Dimet treated.

F. B R I C K L A Y E R

F.1 GENERALLY

Clay bricks shall be soaked in water before being used, after which the bricks shall be allowed to surface dry before they are layed.

All brickwork shall be carried up plumb in level courses, bonded together with perpends accurately kept. Four courses including joints to measure 400mm in height. Perpends shall not exceed 10mm in thickness and shall be well flushed up. Lay all bricks on a full bed of mortar.

All walls shall be carried up simultaneously, no part to be raised more than 1200mm above any adjoining part and these to be raked back.

No toothing will be allowed.

Door and window openings shall be formed where shown with reveals plumb.

Do all chasing and fair and rough cutting as required or directed, attend upon and make good after all other trades. Replace all defective bricks, point up faulty joints, holes, put-log holes and chases.

F.2 CEMENT

Cement shall be as described in 'Concretor'.

F.3 LIME

Lime is to be lime putty or hydrated lime obtained from an approved supplier.

F.4 SAND

Sand generally shall be as described in 'Concretor'.

F.5 WATER

Water shall be as described in 'Concretor'.

F.6 MORTAR

All mortar is to be machine mixed in a mixer of sufficient size to accommodate at least 1 x 40 kg. bag of cement together with the appropriate quantities of sand and lime. The cement is to be transferred from bag to mixer immediately the bag is opened. Add sufficient water only for optimum workability and use before initial set takes place.
Mortar is to be natural colour throughout.

F.7 BRICKS

Bricks are to be well burnt having a minimum compressive strength of 20 m.p.a.
Longreach bricks shall be nominal 290 x 90 x 76 mm. complying with Australian Standard 1255 unless otherwise approved.
Bricks for loadbearing walls shall be standard common clay bricks having a minimum compressive strength as required by the relevant Australian Standard Code. Bricks shall be as follows:

(a)	All walls to ground floor and first floor except external leaf of external cavity walls.	Standard Clay commons
(b)	All external leaves of external walls where they are not loadbearing.	Longreach.
(c)	All walls above second floor slab except internal loadbearing leaf of external walls.	Longreach.
(d)	Internal walls to second floor.	Standard Clay commons
(e)	All brickwork below ground floor level.	Longreach.

(f) Face Bricks: All internal face brick walls shall be Midland Standard plain face "Tahitian".
Walls to garbage enclosures shall be chocolates.

F.8 ADDITIVES

Additives shall only be used with the Architect's written permission and then in strict accordance to manufacturer's recommendations.

F.9 MORTARS

The following mortars shall be used in the positions later specified. The unit of measurement shall be one cubic foot and proportions quoted are by dry volume for all material except lime putty.

(a) Cement Mortar

1 part cement
3 parts sand
1/4 part hydrated lime

(b) Cement-Lime Mortar

1 part masonry cement
4 parts sand

F.9 MORTARS (Contd).

Mixing

Shall be done by machine wherever practicable. If mixed by hand, the ingredients shall be placed on a waterproof board, turned over dry till the whole is of a uniform colour, the water then added and mixing continued to bring the mass to the right consistency. Only sufficient mortar is to be mixed as is required for immediate use.

No mortar shall be used more than 30 minutes after cement has been added.

Use of Mortars

Cement mortar shall be used in the following positions:-

(a) Retaining walls
(b) All work below D.P.C. level
(c) Piers
(d) Reinforced brick lintels
(e) Four courses above arch bars and angles
(f) Pointing and building in of loose bricks
(g) Bricking up openings
(h) Corbelling

Elsewhere, all mortar shall be cement-lime mortar.

F.10 WALL TIES

Wall ties shall be of thickness not less than 3.55 mm. and of stainless steel spaced at horizontal intervals of not more than 900 mm. and vertical intervals of not more than 450 mm.

F.11 CAVITIES

Particular attention is to be given to daily clearing of mortar droppings from cavities of hollow walls.
Bricks are to be left out at the bottom of walls as required by the Architect to facilitate inspection and cleaning out.
The use of cavity battens is strongly recommended.

Fill all cavities up to one course below floor level with concrete.

F.12 JOINTS

Except where walls are to be rendered or plastered, joints shall be rolled.

To all external walls to be painted the excess mortar to joints shall be brushed on to the face of walls as work proceeds and to the satisfaction of the Architect.

F.13 SILL BRICKS

All sill bricks shall be laid in stretcher bond and shall be standard chocolate weathered sill bricks.

Note: Sill bricks not to be painted.

F.14 BRICK CAPPINGS

To all low walls finish at top course with solid chocolate brick cappings.

F.15 AIR BRICKS

Provide 225 mm. x 75 mm. matching air bricks as cavity ventilation.

Vents to be set 13 mm. proud of the face of brickwork and spaced at 2400 mm. centres.

F.16 CONTROL JOINTS

Control joints are to be 12 mm. wide vertical joints where indicated on the drawings with no mortar or other hard substances remaining in the joint prior to caulking with an approved compressive sealant to a depth of at least 25 mm.

F.17 RETAINING WALLS

Construct retaining walls where and as shown on the drawings.

F.18 EXHAUST FAN SLEEVES

Provide and build in approximately 200 mm. diameter x 1.2 mm. thick galvanized iron exhaust fan sleeve where located in each kitchen wall.

F.19 FLASHINGS

Flashings shall be mica and bitumen coated aluminium of core thickness not less than 0.7 mm.

Flash all breaches of cavities and roof abutments, balconies, generally as detailed on the drawings.

All flashings breaching cavity walls shall be roll jointed to prevent penetration of water.

Flashings where visible, stepped flashings to roofs etc. shall be of 4 lb. lead.

F.20 DAMP PROOF COURSE

Provide damp-proof course in external leaf of external walls where shown.

Damp proof course shall be formed with an approved additive mixed with mortar in accordance with the manufacturers instructions.

F.21 WEEP HOLES

Form weepholes by leaving open every sixth vertical joint above the cavity fill. Keep weepholes clear of mortar and render to walls.

F.22 FORMED RADIAN ARCHES

Where shown on the drawings, form up with approved templates, radian arches to brickwork. Lay first course of arch from springing line to springing line, in headers.

F.23 INSPECTION OPENINGS

Leave cavity inspection openings in outer leaf at damp course and first floor level, for final cleaning out and inspection of cavities.

After satisfactory inspection by the Architect, build in the loose bricks.

F.24 STRAPS

Provide and build in where shown 38 mm. x 1.6 mm. galvanized iron frame straps, built into brickwork.

F.25 BUILDING IN

Build in aluminium windows as recommended by manufacturers with approved aluminium or galvanized M.S. fixing lugs.

Build in door frames as brickwork proceeds. Frames to be secured plumb and level with galvanized hoop iron straps every fifth course.

Build in all necessary plugs, bolts, ties, metal clamps, dowels, fastenings and fixings required by other trades.

F.26 BRICK STEPS

Construct steps where shown on plan in chocolate clay bricks layed on edge, as shown on the drawings. Mortar to be natural colour and joints to be lightly rolled.

F.27 FRAMES

All frames to be built in solid as the work proceeds and properly and securely flashed at heads, sides and under the sill. External frames to be built hard against the inside face of the external wall. Strap all frames to the brickwork by means of 25 mm. x 12 mm. galvanized hoop iron straps, nailed to the frames and built into the brickwork every seven courses as the work proceeds. Provide wire ties to metal frames and fill frame solid with mortar.

F.28 SWITCHBOARD AND GAS CABINETS

In the location shown on the drawings build in and or leave openings for the main switch and sub-electrical boards and gas meter cabinets.

F.29 COMPLETION

Wait upon and make good all trades. Replace defective bricks.

Build up all putlogs and other holes. Point up all faulty joints, chasings and imperfections.

G. C A R P E N T E R

G.1 TIMBER GENERALLY

Timbers are to be best of their respective kinds and unless otherwise stated to be jarrah complying with the current Australian Standard Specification.

All joints shall be secure, butt jointing will not be permitted. All fixings where exposed to be galvanised.

All exposed timber shall be wrot on all visible faces and shall be slightly arrised, unless otherwise stated.

Allow for protecting all frames stained timbers etc. and for making good any damage.

Allow for all labours, framing, checking, notching, drilling, plugs, nails, screws and fixing blocks, templates and temporary structures, bolts, straps and similar fixings.

Dressed timber shall be thoroughly sanded and scraped to a smooth finish before fixing. Edges shall be slightly arrissed to prevent splintering.

G.2 FASTENINGS

Fastenings such as nails, screws, bolts, fixing hooks, straps, etc., shall, unless otherwise specified, be of steel.

Fastenings exposed to weather or in contact with karri, mortar or water paints or where in any other corrosive situation shall be of non-ferrous metal or of galvanized steel.

Unless otherwise required, nails shall be wire and of approved manufacture, of a length equal to 2.1/2 times the thickness of the first timber through which they are driven and for lapped boards added to this length. Where nails are to be driven into end grain their length shall be equal to 3 times the thickness of the first timber and shall have the thickness of the second board added to this length.

G.3 GROUNDS, PLUGS ETC.

Form timber grounds where shown or required.

Grounds, plugs, fillets, battens, etc., shall be dry softwood plugs, dry straight grained Oregon grounds, patent fibre plugs or patent plastic plugs.

The Contractor shall ensure that all required plugging is carried out.

G.3 GROUNDS, PLUGS ETC. (Contd).

Provide and fix all grounds, templates, fillets, battens, etc. as required and provide all labours, framing, checking, notching, drilling, nailing, screwing and fixing including that to temporary structures.

G.4 HANDLING AND STACKING

On site, properly strip and stack all timbers including frames, clear of ground on level bearers and protect dressed timbers from sun and rain. Handle flat sheeting to avoid surface and edge damage and stack on level surfaces clear of ground and under cover.

G.5 MAIN ROOF FRAMING

Provide gangrail trusses at 15° pitch at 900 mm. centres designed for Marseille tiled roof. Trusses are to be held down at extremities of building and also where bearing on wall plates with 'Trip-L-Grip' galvanized connectors.

Provide and fix 50 x 38 mm. tile battens at centres to suit tiles.

Note: Gangrail trusses to be supplied by an approved manufacturer. The Contractor shall submit to the architect three copies of the roof truss shop drawings for approval prior to fabrication.

Ceiling Joists

75 x 50 mm. ceiling joists between each truss, secured with 31 mm. x 16 g. galvanized hoop iron straps to 100 x 38 mm. trimmers across bottom chord of truss at 1800 mm. centres.

Ceiling joists nailed to sides of truss where possible and securely nailed to wall plate.

Trim for manholes 675 x 400 mm. where directed, line inside opening with double thickness fibrous plaster sheeting 38 mm. deep. Form manhole cover 13 mm. thick plywood of same size as manhole to fit neatly into wall and bear on fibrous plaster lining. Finish cover to match ceiling with an approved flat oil paint.

Fix fascia board to rafter ends as shown. Adjust depth of batten over eaves soffits to allow for depth of asbestos lining.

G.6 BALCONY AND STAIR ROOFS

Frame up as shown on the drawings by extending the top chord of trusses through to the balcony and or stair beams. All to be securely fixed and finished with ex 25 mm. linings to walls notched out for rafters and fascia boards as shown.

G.7 EAVES SOFFITS

Provide and fix 4.5 mm. asbestos cement sheets to soffit of rafters and trusses at eaves and over stairs and balconies. Sheets to be set out symmetrically and with all necessary extruded P.V.C. mouldings etc.
Provide 50 x 50 mm. trimming where required.

G.8 MANHOLES

Provide and fix 100 x 50 mm. trimmers to 600 x 600 mm. manholes where shown to top floor ceilings.

G.9 DUCT COVERS

Provide and fix removable duct covers as detailed.

G.10 ASBESTOS FENCES

Provide and fix to both side and rear boundaries of site and between units at rear, super six asbestos cement fences, complete with capping.

All fences to be 2400 mm. length sheets.

G.11 TIMBER SCREEN FENCE

To perimeter of the drying area where indicated provide and fix a timber railed fence as detailed on the drawings.

H. J O I N E R

H.1 GENERALLY

All joinery shall be accurately and neatly framed up with all joints glued and shall be left ready for painting.

Dressed timber shall be thoroughly sanded and scraped to a smooth finish before fixing. Edges shall be slightly arrised to prevent splintering.

All timber shall be selected jarrah and shall be dressed unless otherwise stated.

All sizes given are nominal unless otherwise stated and must be checked with later drawings and with dimensions on the site.

Include for checking dimensions, all grounds, spacers, packing, framing, fixing in position, nails, spikes and screws etc.

H.2 SKIRTING

To all areas of units excluding bathroom/laundry area, provide 75 x 25 mm. plain square skirting securely fixed to grounds or plugs including all mitres.

H.3 FLUSH PANEL DOORS

External Doors

With the exception of those doors specified later to be glazed doors, provide and install 38 mm. thick semi-solid core flush door with solid lipped edging to sides and covered both sides with 5 mm. waterproof plywood for paint finish fixed to frame in opening approximately 840 x 2050 mm. high.

Frame to be ex 125 x 50 mm. rebated with 19 x 19 mm. wind-moulds all round both sides.

Internal Doors

Provide and install 38 mm. thick paper cored doors lined both sides with Hardboard for painting.

H.4 DOOR SEALS

To external doors supply and fix 'Daniels' or similar door seals to clear carpet and set in mastic.

H.5 METER BOXES

Provide and build in wooden framed electric meter box to S.E.C. requirements to contain either 9, 12 or 15 master meters, house meters etc. (Fuses to be located above entry doors) and built into outer skin of cavity brickwork wall complete with galvanized metal framed and clad doors,

H.5 METER BOXES (Contd).

framing, ball catch, barrel bolt, handle and hinges etc. and galvanized iron sheeted top as weather protection.

Note: For actual size and location see Electrical Contractor.

H.6 KITCHEN CUPBOARDS

Cupboards to be generally as shown on the drawings with one midshelf and floor of 12.5 mm. particle board with 12.5 mm. edge stripping. Cupboards to be framed up out of ex 50 x 25 mm. frames and ex 75 x 38 mm. floor plates and on edge. Tops to be 19 mm. particle board with a fascia depth matching that of S.S. sink, finished on top and face of edge with selected laminate. S.S. sink and drainer to be as shown on drawings and set in flush with the bench top.

Cupboard doors to be 19 mm. particle board with 12.5 mm. x 150 mm. long radius rebate to top as finger pull.

Particle board to be selected vertical laminated plastic to both faces and all edges.

Doors to be hung on approved concealed hinges and fitted with approved magnetic catches.

Provide one bank of 5 equal drawers out of 12.5 mm. sides and 4.5 mm. plywood base with 19 mm. laminated plastic front all securely framed and notched etc. Rebate bottom of drawer with 12.5 mm. radius rebate 150 mm. long in centre of drawer.

Face of drawers and doors to be 19 mm. outside face of frame and flush with front edge of bench.

H.7 OVERHEAD SHELVES

Shelves to be framed up with 19 mm. particle board top, bottom and ends securely fixed to wall with ex 50 x 25 mm. aloes fixing pieces as required to give solid shelving. All faces and edges of particle board to be laminated as selected.

H.8 WARDROBES

Construct wardrobes as shown on drawings.
Frames and wall plates to be ex 50 x 25 mm.
Shelves to be 19 mm. particle board with 12.5 mm. edge stripping.
Base to be 12.5 mm. edge stripped particle board on ex 75 x 38 mm. floor plates on edge.
Provide and install drawers to extent shown on drawings framed up in 12.5 mm. chipboard sides, front and back, plough in 4.5 mm. thick plywood bases.
Drawers to be set flush with frame. Cut out top of front 100mm x 25 mm. for pull.

H.8 WARDROBES (Contd).

Doors to be framed in ex 50 x 25 mm. timber sheeted both sides with 4.5 mm. plywood linings both sides colour to be selected and hung on concealed hinges with brass ball catches. Hang doors outside frame. Provide and fix 15 mm. c.p. hanging rail to all robes. Finish to doors to be selected veneer.

H.9 VANITY CUPBOARD

Vanity to be generally as shown on drawing with one midshelf and floor of 13 mm. plain veneered particle board with 13 mm. edge strip. Vanity to be framed up ex 50 x 25 mm. ladder frames and ex 175 mm. x 38 mm. floor plates on edge.

Top to be 19 mm. particle board with a 150 mm. fascia projecting 50 mm. as shown on drawing. Two doors of 19 mm. particle board with 50 mm. edge strips, on 'Weldon 409' concealed door hinges. Top, front fascia, and doors to be finished in selected 'Formica'.

Overall width of cabinets shall be checked on site. Doors shall be of equal size with knob type pulls and ball catches.

H.10 TOWEL RAILS

Allow to fix to each bathroom in a position to be nominated a 1500 mm. x 25 mm. diam. C.P. towel rail.

H.11 SILL BOARDS

Form up sill boards to bedroom windows from ex 38 mm. jarrah, with cover bead under. Top outer edge to be slightly rounded with 6 mm. radius.

H.12 SLIDING DOOR

Door to bathroom to be constructed as previously specified. Hang door on suitable Cowdroy head track.

Provide and fix with sliding door lockset.

H.13 LINEN CUPBOARD

Construct linen cupboard as shown on drawings with ex 50 x 25 mm. framing, 12.5 mm. particle board shelving and 4.5 mm. ply linings to sides.
Construct ex 75 x 38 mm. on edge base plates.
Door to be framed in ex 50 x 25 mm. timbers with 4.5 mm. ply linings to both sides.
Finish to be selected.
Provide concealed hinges and brass ball catch.

H.14 IRONMONGERY & TOILET FITTINGS

All door furniture shall be 'Lanes' whose catalogue references have been used unless otherwise stated, or similar approved with satin chrome plated finish. Keys for locks to be tagged and handed to Architect on completion.

All entry doors to be master keyed.

Contractor to allow for all fittings, cutting, sinking, boring, morticing etc. and fixing complete with matching screws.

'Elray' deluxe bathroom cabinet with mirrored doors approximately 700 x 450 mm. high x 175 mm. deep fixed above basins in bathrooms (available from Elray-Claremont).

Door D1	Satin C.P. Lockset Lanes '400B' Bel Air Knob Supply and fix 1 pair 100 mm. C.P. steel butt hinges.
Door D2	Satin C.P. Latchset Lanes '200B' Bel Air Knob.
Door D3	Sliding door set as previously specified.
Door D4	Satin C.P. Latchset Lanes '300B' Bel Air Knob To be fitted with 'Tamic' lift off hinges to manufacturers instructions.

H.15 EXHAUST DUCT AND HOOD

Above the stove position to all two bedroom Units, provide a 19 mm. selected Formica chipboard hood and exhaust duct as shown on the drawings. Finish to internal sides, back and front of hood with black gloss Formica.

Build in to hood a 225 mm. exhaust fan. Carry exhaust duct across top of overhead cupboard to external wall.

Flume through wall with p.g.i. duct and finish on outer face of wall with a suitable flyproof grille.

I. R O O F E R & R O O F P L U M B E R

I.1 CONCRETE TILES

The whole of the roof area is to be tiled with Monier Elabana Profile, "Sahara" concrete tiles of a colour to be selected. Laid by the manufacturers to their specification on timber battens and guaranteed for a period of two years. Provide all necessary ridge and hip tiles.

Note: No tile battens shall cross full height common walls between adjoining units.

I.2 GUTTERS

Eaves gutters to be an approved semi-circular, 24 gauge p.g.i. gutter in long lengths as supplied by A.D. Coote Pty. Ltd. Fixed with approved straps and fully sweated and soldered at all joints.

Provide all necessary stop ends, mitres, outlets, fixings etc.

I.3 DOWNPIPES

Provide 100 x 50 x 0.7 mm. downpipes where shown on drawings and connect to earthenware drains. Supply and fix with all necessary galvanized iron brackets.

I.4 METAL DECK ROOFING

To all carport roofed areas supply and fix Osborne 800 metal deck 0.55 mm. thick fixed to purlins.

Decking to be properly clipped, button punched and finished in accordance with the manufacturers recommended practice.

All cut edges of metal deck are to be protected by an application of rust proofing paint prior to fixing.

All materials and workmanship shall be guaranteed for 2 years commencing at the end of the Defects Liability Period.

J.5 COMPLETION

Upon completion of the roofing, gutters shall be cleaned, all debris such as unused fasteners, wire nails, metal clippings and filings shall be removed and the edges of the roofing at eaves, parapets and the lapping and weather tightness of all flashings shall be checked.

J. ELECTRICAL SERVICES

(THIS SECTION OF THE SPECIFICATION
TO BE INCLUDED AS AN ADDENDA)

K. SANITARY PLUMBER, WATER SUPPLY AND DRAINER

K.1 SCOPE OF WORK

The Contractor is to allow for the supply, installation and testing of the complete plumbing work including hot and cold water service, sewerage and stormwater drainage. All as indicated on the drawings.

All work performed and equipment provided under this Contract shall in every respect comply with the regulations and requirements of:-

(a) The Standards Association of Australia

(b) The Departments of Labour and Public Health

(c) The Metropolitan Water Supply, Sewerage and Drainage Board

(d) The Local Municipal Council

K.2 PERMITS AND DRAWINGS

The Contractor shall make application, pay all fees except those stated herein and obtain all necessary permits for these works.

Application has been made and fees have been paid for the M.W.S.S. and D. Board approved 'sewerage plan'.

The Contractor shall be responsible for the preparation of any plumbing and sewerage layouts, drawings, details etc. as may be required by Governing Authorities.

K.3 CERTIFICATES

A Certificate of satisfactory completion must be obtained from the M.W.S.S. and D. Board and forwarded to the Architect before final payment will be made.

K.4 AS CONSTRUCTED DRAWINGS

The Contractor shall supply to the Architect prior to the issue of the Final Certificate, one set of "As Constructed" drawings for all works required in this section of the specification.

K.5 SANITARY PLUMBING AND WATER SUPPLY

The whole of the Sanitary Plumbing and Water Supply work shall be carried out under the direct supervision of a licensed Sanitary Plumber.

The work shall be in accordance with the M.W.S.S. and D. Board Regulations and all local authority By-Laws. The Builder shall make application for and pay all fees for necessary permits. The Sub-Contractor shall supply all necessary materials and equipment to complete these works.

K.6 NEW SEWERAGE CONNECTION

The Plumbing Sub-Contractor shall make all applications and submit stamped plans of the job and pay all fees to the M.W.S.S. and D. Board. The Plumber will also be required to prepare the necessary sewerage layout diagram for the above submission.

Excavate where indicated on the site plan for the sewer lines. Lines to grade as required to the existing I.L. at the M.W.S.S. and D. Board sewer connection.

Carry out all drains in conformity with relevant By-Laws. Carry out all tests as required.

K.7 PROTECTION

All pipework shall be protected against the entry of foreign matter at all times.

Sanitary fixtures are to be adequately protected against damage and any item not considered in first class condition on completion of the work shall be removed and replaced at the expense of the Contractor upon receipt of notice from the Architect.

K.8 TESTING

All pipework is to be tested at regular intervals or as required during the progress of the work.

Tests shall be carried out in the presence of the Architect or his representative and at the expense of the Contractor who shall provide all necessary equipment.

Sections of pipework built into masonry or in inaccessible positions are to be tested and passed before installation.

K.9 MATERIALS

K2.01 Generally

Materials used shall be the best of their respective kinds manufactured in accordance with the relevant Australian Standard Specification or in its absence the relevant British Standard Specification. Where required materials are to be tested and stamped by the M.W.S.S. and D. Board.

K.10 FLOOR WASTES

Provide and fix 50 dia. c.p. combination floor wastes, connected to waste pipes.

K.11 VENT PIPES

Provide and fix anti-syphon, educt, back and fresh air vent pipes, combined where possible or as shown on sizes indicated, extend through roof to correct height and fit copper vent cowls or baskets as required.

K.12 WATER SERVICE

The whole of the cold water service shall be solid drawn copper pipe generally of sizes and gauges as required by M.W.S.S. and D. Board Regulations.

Bends shall be formed and junctions fabricated in the tube. Where it becomes necessary to use a union, it shall be a flare type.

K.13 PIPES

Extend from mains a copper lead-in, of a size stipulated by the Supply Authority.

Service all units with all fixtures and hose cocks with 13 mm. dia. branches.

K.14 FIXTURES

Supply and fix to manufacturers instructions the following fixtures complete with all necessary fittings and connected to services. All fixtures shall be white except those of stainless steel.

W.C.	Caroma Uni-Set suite with matching cistern with black flap and seat.
Vanity	Fowler Ware 'Regent' counter top, self trimming vanity basin.
Stainless Steel Kitchen Sink	'Bristile' 1200 mm. long single bowl and drainer.
Stainless Steel Laundry Trough	Radiant "Gem, skini Mini" - 15 gallon model complete with cabinet or similar.

K.15 FITTINGS

All taps internally shall be McIlwraith "Bellevue Delux" type in chrome plate finish with hot and cold inserts.

Roman Bath	Combined concealed assembly with adjustable shower nozzle to end wall, such as Rosmear Engineering's adjustable shower rose and arm Cat. No. 56. Bath set with hot and cold wall mounted combined assembly with fized nozzle.
Vanity Basin	13 mm. basin set.
S.S. Sink	$\frac{1}{2}$" combined wall mounted assembly with a swivel extension arm.

K.15 FITTINGS (Contd).

Hot Water System and W.C. Cistern	13 mm. stop cock.
Laundry Trough	13 mm. combined wall mounted assembly with a swivel extension arm.
Stand Pipes	14 No. Brass Hose Cocks.

K.16 RAINWATER SUMPS

Provide 750 mm. diam x 600 mm. deep approved type slotted soak wells for roof stormwater.

Connect downpipes with approved PVC piping.

K.17 SOAK WELLS

Provide in bitumen areas where shown 1200 mm. diam x 1200 mm. deep precast concrete, slotted soak wells.

Wells to have trafficable heavy duty concrete lids and grates.

Also provide similar soak wells to trench grate where shown.

K.18 TRENCH GRATING

Provide on boundary line to main street crossover a heavy duty gatic trench grate. Grate to be firmly bedded into concrete spoon drain.

Drain to be connected to soak wells previously specified. Provide suitable grate in drain outlet.

K.19 POOL SUPPLY

Allow for extending a 20 mm. copper service and stand pipe to the swimming pool site.

K.20 TESTING

Allow for hydrostatic testing as required by the M.W.S.S. and D. Board.

K.21 GAS SERVICE

Supply and install a gas service complete with separate metering to each unit, all in accordance with the Gas Supply Authority.

Provide gas supply to the kitchen stove, hot water system and heating point in living area.
Meters to be recessed into brickwork, outer leaf.

K.22 GAS STOVES

Allow for the connection to the gas stoves, to be supplied by owner.
Allow for placing stoves in position to each unit.

K.23 GAS HOT WATER SYSTEMS

Supply and install within the plumbing duct a 10 gallon Rheem gas hot water unit.
Flue all units in accordance with the manufacturers requirements. One unit per flat.

L. P L A S T E R E R

L.1 GENERALLY

For general descriptions of sand, water, etc., refer to 'Concretor'. Lime is either to be bagged and branded hydrated lime or tanker delivered pure white lime putty.

Include for all screeds, grounds, internal angles, roughening or otherwise preparing the particular surface to be rendered, wetting all surfaces before plastering making good around pipes and up to face bricks at internal angles etc., and for protecting all work.

Note: The mixes specified are intended as basic mixes and are to be varied at the discretion of the Builder to suit the particular surface to be plastered.

L.2 HARDWALL PLASTER

To all wall areas internally except where shown as face brickwork or for tiled surfaces apply hardwall plaster in two coats, the first coat composed of cement, lime and sand (1:1:7) and scratched to form key, the second coat composed of lime putty and hardwall plaster (1:1) total 16 mm. thickness, finished with a steel trowel to a smooth even surface.

L.3 SET ONLY CEILINGS

Alternative 1 Prepare, flush up, apply suitable bonding agent and set only with lime putty and plaster of paris on soffit of concrete soffits internally, apply white set coat plaster finished to a smooth even surface with a steel trowel.

Alternative 2 Finish to soffits of concrete soffits internally, sprayed vermiculite in natural colour. All to the approval of the Architect.

L.4 FIBROUS PLASTER CEILINGS

Top floor ceiling, to units only supply and fix fibrous plaster 10 mm. thick to A.S. No.144 strapped direct to ceiling battens checked and packed level as required with joints grouted up solid and finished off flush. Provide cornice mould to all wall perimeters. Cornice mould to be 75 mm. radius coved.

Form up small cove at ceiling and carry down concrete down stand at wall. Cut off neatly at brickwork.

L.5 MANHOLES

Form up manholes in second floor ceiling only, in passage outside W.C. door, a 600 x 600 mm. removable panel.

L.6 EXTERNAL RENDERED WALLS

(Alternative see Bricklayer)

Render all external brick walls, brick screen walls and letter boxes with cement render mixed in the proportions of 1 part cement, 1/10 part lime, 5 parts sand.

Render to be one coat work finished off a steel trowel to an approved random swirl pattern.

M. P A V I O R & T I L E R

M.1 GENERALLY

Include for all temporary rules, screeds, grounds, etc., symmetrical setting out, all normal cutting, bedding and pointing materials, cleaning down and making good around pipes, sanitary fixtures etc., and for working up to and making good to metal frames floor division, strips etc.

Allow for covering and protecting all pavings, floor coverings, etc., from the climate or building operations as required.

M.2 MOSAIC TILES

To Bathroom and Laundry including sides, base and top of plinth to the roman bath, lay mosaic tiles of colour to be selected.
Tiling to be bedded on and including cement and sand screed (1:3) with not more than 10% of plasticiser and laid to falls as required. Allow for cutting or working around floor wastes and fittings.
On completion clean down, fill all joints, remove any damaged or defective tiles and leave in a perfect condition.
Allow the P.C. Sum of $13.00 per square metre for the supply of mosaic tiles.
Provide brass edge strip to doorway.

M.3 WALL TILES

Provide two courses of 150 x 150mm glazed wall tiles to rear of benches, sink and stove in units, behind basins and troughs and to 1950mm high in shower recess. Lay round edge tiles to window sill in bathroom and kitchen. Wall tiles are to be glazed, true and even with no discolourations. Lay tiles on screeded backing coat composed of cement, lime and sand (1:1:6) finished 125mm thick and bedded with mortar composed of cement and sand (1:6) minimum. Fill all joints with white tile trim, allow for all necessary cutting of tiles, rounded edge tiles etc. Provide one row of rounded edge tiles as skirting to bathrooms and W.C.'s and tile outer face of plinth to roman bath. In shower recesses provide semi-recessed ceramic soap holders. Allow the P.C. Sum of $9.00 per square metre for the supply only of tiles.

M.4 VINYL FLOOR TILES

Provide smooth monolithic finish to top of slab under areas designated for vinyl tiles, i.e. kitchen.

Supply and install 300 x 300mm x 2.5mm thick vinyl asbestos floor tiles of approved manufacture of colour to be selected laid with approved adhesive allow for all cutting etc. On completion clean down, seal and apply two coats of non-slip polish.

M.5 DISSIMILAR SURFACES

Unless otherwise required, at all junctions between dissimilar surface materials, provide and install between such materials $\frac{1}{8}$" thick straight brass strips with 3/16" diameter lugs brazed on.

Keep top edges of brass strip flush with the finished flooring surfaces.

M.6 CLEANING

Keep tiles clean while laying and thoroughly clean all tiled surfaces on completion. After cleaning protect the tiled surfaces until the building is ready for occupation.

N. G L A Z I E R

N.1 GENERALLY

Glass shall be selected, first quality free from defects, drawn sheet glass shall be free from undue or noticeable distortion of vision or reflection. All draw lines shall be horizontal.

Plate glass shall be clear, with both surfaces ground and polished and having no distortion. Mirror glass shall be $\frac{1}{4}$" thick polished plate glass of mirror quality with chrome silver reflective surface and patent copper coated moisture proofing on back and finished with an approved mirror backing paint.

N.2 CUTTING

Accurately cut all glass square to sizes that allow proper tolerances between edges of glass and frame. Finish edges of glass smooth, even and free from chipping and other irregularities.

N.3 WINDOWS

Wherever possible glazing shall be carried out using gaskets provided by the Window Manufacturer. Glass weights and thicknesses shall comply with the relevant current Australian Standard Code of Practice to withstand the wind loads directed upon the glass.

Glazing of all windows must be carried out by the "Window Suppliers".

N.4 OBSCURE GLAZING

Windows to the W.C.'s and bathrooms shall be obscure glazed in 5 mm. "Satinlite" by A.C.I.

N.5 SHOWER SCREENS

Supply and fix georgian wired, anodised aluminium framed shower screens including combined 19 mm. diam. aluminium curtain rod across opening to roman bath.

0. P A I N T E R

0.1 GENERALLY

All materials are to be of the best grade delivered to site in sealed containers.

The interior of the building is to be well cleaned out before painting is commenced.

Colours will be selected by the Architect. Including for any mixing, cutting in and removing and replacing any door furniture, switches, etc., and for protecting all work and removing all paint spots and the like.

All work must be carried out, all surfaces prepared, all materials applied etc., in strict accordance with the Manufacturer's instructions and recommendations.

0.2 EXTERNAL WOODWORK

Prepare, knot and prime and stop and apply one undercoat and two finishing coats high gloss on the following:

Flush doors, door frames and windmoulds.

0.3 EXTERNAL RENDERED WALLS

Clean down, prepare and apply two coats PVA to all external walls to units, brick screen fences and letterboxes, excluding the chocolate capping.

0.4 EAVES SOFFITS AND A.C. LINING

Prepare and apply two coats PVA.

0.5 EXTERNAL STEEL AND METALWORK

All exposed metalwork including structural members but not aluminium, chrome plated or brass surfaces are to be etched, primed and painted two coats oil paint.

0.6 INTERNAL WALLS

All plastered walls internally to be prepared and have 2 coats satin acrylic paint applied. Apply likewise to fibrous plaster ceiling in bathroom laundry.

0.7 INTERNAL CEILINGS

To all rooms other than bathroom laundry apply 2 coats PVA to fibrous plaster ceilings and cornices and to all set coat rendered ceilings.

0.8 INTERNAL METALWORK

All internal metalwork to be painted and prepared as for external metalwork. Includes door frames etc. exposed lintols and plumbing pipes.

0.9 TIMBER VENEER AND SILL BOARDS

All veneered faces of the wardrobes and timber sill boards shall be given two coats of approved clear finish.

0.10 INTERNAL JOINERY

Prepare, prime, knot and apply one undercoat and two finishing coats of gloss enamel.

0.11 UNDERSIDE CONCRETE BALCONIES AND LANDINGS

Prepare and paint the underside of all access balconies, private balconies and stair landings including all exposed vertical edges, with two coats PVA.

0.12 CAR-PARK BAYS

Paint all division lines to carparking bays and an approved 175 mm. high number to each bay 1 to 54 inclusive, in an approved white paving paint.