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1.0 Partitions and Associated Works

1.1 Steel framed Internal Partitions

i) Steel framed interior partitions

a) Studs

Steel studs, non-load bearing "C" type studs roll-formed from 0.6mm hot-dipped galvanized steel. Punch-outs, 25mm diameter, at 600mm centers are provided for installation of services. Flanges shall be knurled to prevent screw slippage.

b) Top and Bottom Tracks

Wall stud track, roll-formed from 0.6mm hot-dipped galvanized steel. Flanged shall be angled 80 to provide friction fit to hold studs in place until Plasterboard is fixed. Track shall be in long lengths, in widths to suit the range of wall studs.

Securely fix tracks to manufacturer's recommendations, at a maximum of 600 centres.

c) Deflection Head Channel

Ceiling channel for deflection head assembly, roll-formed from 0.6mm hot-dipped galvanized steel with 25mm x 19mm cut-outs spaced 6mm apart.

d) Deflection Head Angle

Ceiling angle for alternative deflection head assembly. Formed from 0.6mm hot-dipped galvanized steel.

e) Deflection Head Top Track

Wall stud top track, roll-formed from 0.6mm hot-dipped galvanized steel. Legs are extended to 50mm to accommodate anticipated slab deflection.

f) Expansion Joint Components

Double sided PVC Closed Cell Foam Sealant, 5.5mm diameter, to be removed before plaster sets.

g) Storage

All materials used in the construction of Plasterboard Steel Stud Drywall Partition systems must be carefully stored and protected on the construction site. Plasterboard shall be stacked flat and protected from moisture.

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1.0 Partitions and Associated Works

1.1 Steel framed Internal Partitions

ii) Top Hat Rails

"Top Hat" rails for fixing benches, sinks, desks, etc. to walls where shown of 1.2mm thick galvanized steel bent to shapes and of lengths, all as shown, and welded at top and bottom of rail to each stud.

iii) Noggings

Noggings for fixing taps, and basins, shall be 100mm wide x 10mm thick galvanized M.S. flat of lengths required to and welded to each stud. Noggings for fixing grab rails shall be 100 x 38 K.D.H.W.

iv) Trimming

Trimming of partition walls shall be as detailed and where openings are shown on plan and wall elevations.

Trim for openings and form box studs at mullions and door jambs as shown.

At glazed screens fix 20 x 20 x 3mm natural anodized aluminium angle cover with mitred corners. Glass to be as specified in "Glazier".

v) Insulation - Internal Walls

Insulation shall be installed in the walls where scheduled :

Insulation shall be Fibreglass batts : 2.85Kg/m²; 38Kg/m³ for 75mm thickness; 2.5Kg/m² for 50mm thickness; 50Kg/m³ acoustic grade; or approved equivalent.

vi) Abutments to Masonry Walls

Abutments to masonry walls shall be made using full height stopping beads and full height silicone joint seals.

vii) Installation

a) Provide runner channels at raised floor as required. Align accurately. Secure at 400mm o.c. maximum.

b) Where partitions extend to ceilings only, fasten with approved fasteners.

c) Place studs vertically at 400mm o.c. or as shown on Drawings and not more than 50mm from abutting walls, and at each side of openings and corners. Position studs in tracks at top and bottom. Cross brace steel studs as required to provide rigid installation to manufacturer's instruction. Cross brace partitions over 2,736mm high, bracing channels at third points. Securely brace low partitions to provide rigid installation.

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1.0 Partitions and Associated Works

1.1 Steel framed Internal Partitions

- d) Co-ordinate simultaneous erection of studs with installation of service lines. When erecting studs ensure we openings are aligned.
- e) Provide double (boxed) studs extending full height at termination of walls, at change of line and generally at all openings and other locations shown on Drawings that are wider than the stud centres specified. Secure studs together 5mm apart using column clips or other approved means of fastening.
- f) Provide anchor plates over face of studs (spanning minimum 2 studs and screwed in place) directly behind all fixing devices (screws, bolts) for attachment of fitments.
- g) Install steel studs or furring channel between studs for attaching electrical and other boxes.
- h) Maintain clearance under beams and structural slabs to avoid transmission of structural loads to studs. Use deep channel ceiling track as required to accommodate deflection.
- i) In locations indicated, provide ceiling bulkhead consisting of metal studs, securely fastened in place. Space studs at 400mm o.c. and brace as required for stability. Use 92mm studs unless otherwise noted.
- j) Brace ceiling height partitions with diagonal studs located in ceiling space as indicated on Drawings. Locate braces at 1200mm on centres and securely anchor to structure prior approved by landlord.
- k) Provide metal stud bulkheads over partitions designated to have lead sound baffles in ceiling space. Space and install metal studs as specified for partitions. Co-ordinate with other Trades installing lead baffle.
- l) Provide felt membranes to protect ceiling grid and floor carpet at top and bottom of partition.

1.2 Gypsum Wallboard

- i) Gypsum Wallboard : Thickness as noted on Drawings. Sheets to be of sizes required to provide a minimum number of joints between sheets. Waterproof gypsum wallboard contractor to submit specification for designer approval.
- ii) Lead Sheet Sound Barrier : 0.8mm Thick continuous cast, soft pig lead sheet weighing 9.765kg per m2 and conforming to CSA HP2-1957(R1972).
- iii) Corner Bead : Galvanized sheet steel, minimum 0.59mm overall thickness, zinc coating Z275, minimum width of flanges 28.6mm for 12.7mm thick wallboard and 31.8mm for 15.9mm thick wallboard.

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1.0 Partitions and Associated Works

1.2 Gypsum Wallboard

- iv) Casing Bead : Galvanized sheet steel, minimum 0.59mm overall thickness, zinc coating Z275, U-shaped designed for finishing with joint compound.
- v) Resilient Sponge Tape : Self-sticking adhesive on one side, closed cell neoprene sponge tape, "Permastik" 122X by Jacobs and Thompson Ltd., or foamed vinyl "Arnofoam" by Arno Adhesive Tape Inc.
- vi) Wallboard Screws : Self-drilling, self-tapping gypsum wallboard screws, 25.4mm long #6 for single layer application, 41.3mm long #7 for double layer application if required. Corrosion waterproof gypsum board.
- vii) Joint Cement, Tape, Topping Compound and Accessories : As recommended by gypsum wallboard manufacturer.
- viii) Acoustic Sealant : As manufactured by CGC, Tremco or Presstite Division of Interchemical Corporation for acoustic partitions.
- ix) Acoustic Insulation : Sound attenuation blanket, unfaced and equal to CGC Red Top, 50mm thickness.
- x) Before application of drywall commences, ensure that services have been installed, tested and approved by relevant Jurisdictional Authorities and Designer; that conduits pipes, cables and outlets are plugged, capped or covered; and that fastenings and supports installed by others are in place.
- xi) Install work within 3.0mm of dimensioned location unless approved otherwise by Designer, and flat to tolerance of 3mm maximum in 5,750mm.
- xii)
 - a) Back all joints with a framing member.
 - b) Install wallboard in maximum lengths and widths to minimize joints. Stagger end joints where they are unavoidable. Locate joints in ceilings where least prominently discerned.
 - c) Form neat joints at mill ends and at field-cut edges of wallboard panels. Cut paper on face with a knife. Smooth by sanding and rubbing edges together.
 - d) Fasten wallboard to metal support members by sheet metal drywall screws at 150mm o.c, no closer than 12.5mm to and no further than 17mm from centre of joints. Do not force adjacent boards into place. Allow moderate contact. Provide extension clips where required. Drive screws to form a slight depression, but not so paper cover is broken.

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1.0 Partitions and Associated Works

1.2 Gypsum Wallboard

xiii) Joint Treatment

- a) Fill joints, screwholes, and depressions on wallboard surfaces exposed to view to provide smooth, seamless surfaces, and square, neat corners. Use jointing compounds and reinforcing tapes in conformance with manufacturer's specifications. Ensure that wall board is tight against framing members, fasteners are properly depressed, and adhesives have sufficiently cured.
- b) Fill joints by three coat tape and joint filler method.
- c) At external corners, install corner beads secured to framing at 150mm o.c. on alternate flangers. Fill to nose of corner bead with joint filler and topping cement, as specified for beveled joints.
- d) Provide casing beads at all edges of wallboard exposed to view, where wallboard butts against other materials with no trim to conceal junction, at control joints, at perimeter of ceiling surfaces, at top of partitions where they stop against continuous ceiling surfaces, and where otherwise shown on Drawings, secure casing beads to framing at 150mm o.c.
- e) At screwheads, fill holes and depressions with a two-coat application of joint filler.

xiv) Sound Retardant Partitions

- a) Carry sound retardant partitions through ceiling space and terminate immediately below the structural deck unless otherwise indicated or in locations where lead sound baffles indicated.
- b) Provide approved impermeable sound insulation material to fill space between top of partition and structure to provide for deflection.
- c) Provide sound seal in all locations where structural members, pipes, ducts, etc. penetrate acoustic partition.
- d) Install sound retardant blanket, closely fit to stud framing and the like and extend full height of partition.
- e) Seal full perimeter of cut-outs around electrical boxes, ducts etc. Seal openings in outlet boxes and the like.
- f) Do not locate outlet boxes back to back.

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1.0 Partitions and Associated Works

1.2 Gypsum Wallboard

xv) Fire Retardent Gypsum Board

- a) hour fire rating required non-combustible for BS476; Part 4 standard
- b) All fixing installation as per manufacturers details to provide rating.
- c) Product : Supalux :

xvi) Preparation for Finish

- a) Gypsum board to be properly prepared to accept surface finish. Approved gypsum board primer to be painted on walls.

2.3 Scope of Works

Work under this section includes providing all necessary materials, labour, plant, transportation and services for the completion of work shown on the drawings and in general includes the following :

Carpentry and joinery, suspended false ceiling works, glazing, painting.

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2.0 Carpentry and Joinery

2.1 Carpentry and Joinery Generally

- i) The rates for carpentry and joinery work are to include for all cutting and waste, notching, holes, housing ends, miters, ends and shaped ends, angles, junctions, heading joints, short lengths, etc. for all nails, spikes, pins or brads, for coating the backs of frames, backing fillets, etc., with two coats of approved wood preservative, and for all necessary templates or moulds for circular work states "plugged to walls, etc." the prices are to include for plugging and fixing with nails, spiles, etc. to brickwork, block-work or concrete work, and any hacking off and clearing away existing plaster as necessary. The rates shall also include for the provision of all samples and shop drawings.
- ii) Joinery is to be prepared immediately after the placing of the Contract, framed up, bonded and wedged up. Any portions that warp or develop shakes or other defects are to be replaced before wedging up. The whole of the work is to be framed and finished in a proper and workmanlike manner, in accordance with the detailed drawings, where required and fitted with all necessary metal ties, straps, bolts, screws, glue, etc. Running bonded joints are to be crosstongued with teak tongues and where over 12mm thick, double crosstongued.
- iii) Should joints in Joiner's work open, or other defects arise within the period stated for maintenance in the Contract, and the cause thereof be deemed by the Interior Designer to be due to unseasoned timber or faulty or bad workmanship, such defective joinery shall be taken down, refitted, redecorated and/or replaced if necessary and any work disturbed shall be made good at the Main Contractor's expense.
- iv) Exposed Joinery shall have a high degree of finish and shall be of the best quality throughout.
- v) Joinery shall comply with the detail drawings. Prepare joinery for stained or tinted finishes. Conceal all fastenings. Use the minimum of surface railing. Punch rail heads below surface and fill with putty coloured to match finish. Adhesive and jointing compounds shall be non staining and kept off visible surfaces. Surface screws where necessary shall, if visible, be Philips Heads, countersunk flush.

The Main Contractor shall provide all fixings, fastenings, anchors, plugs and the like of approved type to transmit the loads and stresses imposed and ensure the rigidity of the assembly.

- vi) Carcass work, shelving and framework to built-in and freestanding units shall be generally constructed of plywood or MDF board as described and specified, properly housed, grooved, tongued, glued, blocked and screwed together as per manufacturers guidelines, and entirely to the satisfaction of the Designer.
- vii) All exposed surfaces of joinery to be properly finished. All laminated surfaces to be finished on both sides of MDF or Plywood regardless of drawing.

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2.0 Carpentry and Joinery

2.2 Protection of Finished Work

- i) The Main Contractor shall be responsible for providing and maintaining any boxing or other temporary coverings required for the protection of dressed or finished work that might be damaged during the progress of the work if left unprotected. He is to clean out all shavings, cut ends and other waste from all parts of the Works before coverings or infillings are constructed.

2.3 Timber

- i) Timber generally shall be the best of its kind and of the species indicated on drawings and on the Materials and Finishes Specifications Chart. It is to be thoroughly seasoned and kiln dried, with moisture content not less than 12% and not more than 20%. It is to be free from worm holes, large loose or dead knots or other defects, sawn die square and without warping, splitting or other defects. Where exposed it is to be matched for colour and graining.
- ii) Timber is to be cut to the required sizes and lengths as soon as practicable after the works are begun and stored under cover, so that the air will circulate freely around it.
- iii) Unless otherwise stated all timber is to be wrote all round and all sizes shown on drawings or specified are finishes sizes.

2.4 Medium Density Fibreboard

- i) Fabrication, Lamination and Finish of MDF to conform to National Particleboard Association technical guide "MDF From Start to Finish".
- ii) MDF (Medium Density Fibreboard) to have the following properties (minimum) for 9, 12, 16, 18mm thickness.

	"Lightboard"	Standard Density
Density	600kg/m ³	725kg/m ³
Internal bond	700KPa	850Kpa
Modulus of ruptur	36.0MPa	36.0Mpa
Modulus of elasticity	2600MPa	3000Mpa
Thickness Tolerance		
1 hour thickness swell :	+0.15mm	+0.15mm
-18mm	1.5%	1.5%
-12mm	2.6%	2.6%
1 hour water absorption :		
-18mm	2.5%	1.5%
-12mm	3.5%	2.4%
Moisture Content	7.5%	8.0%

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2.0 Carpentry and Joinery

2.4 Medium Density Fibreboard

iii) Screw Holding

Screw type : Parallel thread. Screws such as the Twinfast or particle board screws. Wood screws not to be used.

Maximum screw gauge is :

12mm board thickness - 6

16mm board thickness - 7

18mm board thickness - 8

Pilot Hole recommended to avoid splitting during edge screw fixing, drilled approximately 2.3mm beyond the expected depth of insertions of the screws.

Screw position should be decided in relation to board thickness and screw size and not less than 25mm from corners.

Screw must not be overtightened as further turning reduces the holding strength.

iv) Nails and Stapling

Add adhesive to joint prior to assembly. Nails to be either annular, groove or helical of 13 or 14 gauge.

v) Sanding and Finishing

Use 120 grit paper followed by 240 or 320 grit paper.

vi) Painting

Prior to priming for paint finishes all nail holes to be stopped with solvent based wood dough and lightly sanded. Solvent or turps based systems recommended.

vii) Products

Approved manufacturers such as Golden Edge or Medite to be specified as supplied by EV International Limited.

viii) Formaldehyde Emissions

a) MDF board manufactured to comply with industry's voluntary emission standard of 0.3ppm at a loading of 0.08 ft² of product surface per cube foot of room space.

b) Sealing finish required to all exposed areas including edges, backs and underside of drawers, etc. Acceptable wet coatings are : oil wood primer and enamel top coat, latex-ammonia coatings plus two coats of latex waterbase wall paint.

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2.0 Carpentry and Joinery

2.4 Medium Density Fibreboard

ix) Storage / Fabrication

MDF to be fabricated and stored according to manufacturers instructions. MDF must be stored and fabricated in controlled environment.

2.5 Plywood

- i) Plywood shall be best quality close grained plywood suitable for veneering, painting or bonding plastic laminate. It is to be a resin bonded weatherproof brand, exposed edges will be finished with an edge strip of solid wood, tongued and grooved and glued, or as detailed.

2.6 Joints

- i) Joints shall be as indicated on detail drawings. The contact surfaces of dowels, tenons, wedges, etc. shall be glued with a best quality cold setting, synthetic resin adhesive of moisture resistant, gap filling type or with best quality cold-setting case in glue. Where glued joinery is likely to come into contact with moisture the glue shall be waterproof. Animal glues are not to be used.
- ii) Nails, spikes, bolts, etc. shall be of the best quality mild steel or wrought iron except in those places where brass headed nails are indicated on drawings. All screws are to be brass unless otherwise stated. Refer to item 5.02.04 (ii) & (iii) for MDF board.

2.7 Templates

- i) Templates, boxes and moulds shall be accurately set out and rigidly constructed so as to remain accurate during the time they are in use.

2.8 Grounds

- i) Grounds are to be clean sawn, free from large knots, splayed as required, plugged and fixed to walls, etc. at 450mm centres.

2.9 Plugs

- i) Where joiners work is to be plugged to walls, etc. Raw plugs, Phili plugs or plugs of similar and approved pattern shall be used. The use of wooden plugs will not be permitted.

2.10 Preservative

- i) All unexposed surfaces of timber, e.g. false ceilings, backing fillets, backs of door frames, cupboard framing, grounds, etc., are to be treated with two coats of an approved timber preservative or vacuum pressure impregnated with an approved water soluble timber preservative before fixing or bedding.

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2.0 Carpentry and Joinery

2.11 Door and Fixed Glazing Frames

- i) Frames to doors fixed glazing etc. shall be of approved hardwood timber or MDF board as specified and will be constructed in full accordance with the detail drawings, to the required sizes and with all necessary mouldings and other labours, morticed and tenoned and put together in the method indicated using the materials and finishes specified.

2.12 Doors

- i) Refer to door schedule and drawings for size type, thickness and hardware (ironmongery).
Unless otherwise shown on the contract drawings the door shall be constructed as follows :

- ii) Hollow Core Doors

Hollow core doors are to be of 19mm plywood covered with paint grade, timber veneer or 1.6mm plastic laminate as required.
The doors are to be lipped on all edges with a 9mm timber twice splay rebated ending mitred at angles. Lippings to meeting stiles of doors are to be 25mm thick rebated or rounded as required.

- iii) Solid Core Doors

Solid core doors are to be framed up with 50mm hardwood mitred edge and filled in with a core of 45mm MDF board to receive finish of paint, veneer or laminate or as per drawings.

- iv) Fabrication

- a) Fabricate doors in accordance with MDF manufacturers guidelines.
- b) Hardwood edge to be one piece and same species as face veneer or birch timber veneer for paint or plastic laminate finish unless otherwise noted.
- c) Stiles and rails to be of sufficient width to accommodate surface mounted or concealed hardware (min 100mm stile).
- d) Undercut on rebate bottom rails as required.
- e) Reinforce for locks and other hardware.

- v) Finishing

- a) Doors to be prefinished and delivered to site ready to be hung.
- b) All exposed edges to be sealed prior to delivery to site.

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2.0 Carpentry and Joinery

2.12 Doors

vi) Fitting and Hanging

- a) Hang full height doors on two pair butts, unless otherwise noted, to close fully in all cases.
- b) Provide 1.5mm clearance at head and jambs, 7-9mm clearance over carpet and 6mm over thresholds.
- c) Hang doors according to manufacturers instructions where prefabricated frames (i.e. Jeb System) are used.

vii) Installation of Finish Hardware

- a) Make hardware cuts in timber finishes neat and true, fit and adjust hardware according to manufacturer printed instructions.
- b) After installation, place wrappings on knobs pulls etc. (as protection until completion of contract).
- c) Carefully safeguard keys to ensure that unauthorized personnel do not have access to them. On completion of work deliver keys to employer with suitable tag attached to each key indicating the door operated thereby.

2.13 Skirtings

- i) Provide and fix MDF, or timber skirtings or Jeb aluminum skirting, where shown in the Schedule of Finishing, on hardwood grounds securely plugged to walls, scribed to floors and properly mitered at angles. All Skirting to be medium density fibreboard where specified.

All skirtings are to be accurately scribed to fit the contour of any irregular surface against which they should form a close butt connection.

2.14 Fire Protection Treatment

- i) Timber materials above finished ceilings should be avoided. However, if necessary, timber ceilings and support materials above ceilings shall have fire retardant treatment. Main Contractor shall submit proposed treatment to Interior Designer for approval from Landlord before works.

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2.0 Carpentry and Joinery

2.15 Fixing of Timber to Concrete

Fixing of timber to concrete or brick work shall be by :

- a) Hardened steel pins direct into concrete or brickwork for fixing small sections such as skirtings and architraves. The head shall be punched home and filled.
 - b) Preformed plugs such as "Rawplug" or similar approved in formed holes.
 - c) Plastic compounds such as "Rawplug Fixate" or similar approved in formed holes.
 - d) Expanding bolts such as "Rawlplug Fixrite" or similar approved in formed holes.
 - e) Cartridge operated hand tools such as "Ramset" or similar approved but shall not be used within 50mm of any edge.
- i) Care must be taken to locate any buried pipes, cables, or other services when fixing timber to concrete or brickwork. If any hole hits reinforcement it must be repositioned.
- ii) Fixing of timber to metal shall be by :
- a) Self tapping screws in thin sheet.
 - b) Bolts in preformed holes (tapped as required).
 - c) Cartridge operated hand tools.
- Main Contractor shall submit proposed fixings method to Interior Designer for approval.
- iii) Boards and linings, other than tongued and grooved, and less than 180mm wide on face, shall be secured with 2 nails at each fixing position or joist. The nails shall be not less than 12mm nor more than 20mm from edges. Boards and linings other than tongued and grooved, and more than 175mm wide on face, shall be secured with 3 nails at each fixing position or joist. The outernails shall be not less than 12mm nor more than 20mm from the edge.
- iv) Tongued and grooved boards and linings less than 100mm wide on face shall be secured with one nail at each fixing position or joist. Tongued and grooved boards and linings more than 100mm wide on face shall be secured with 2 nails at each fixing position or joist.

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2.0 Carpentry and Joinery

2.15 Fixing of Timber to Concrete

- v) All nails shall have a length of not less than :
 - 1. Plain boards and linings, 2-1/2 x thickness.
 - 2. Tongued and grooved boards and linings, 2 x thickness.
- vi) All boards and linings shall be secured with hammer driven nails unless specified to be fixed with screws. When screws are specified they shall be not less than No.8 and not shorter than 2 x thickness.
- vii) All finished work shall be smooth, free from abrasion, tool marks, raised grain grade markings or similar defects on exposed surfaces.
- viii) Foam padding, pressed moulded fiberglass and mineral wool shall be to the Interior Designer's approval.
- ix) Protect finished and prefinished surfaces from work of other trades.

2.16 Wall Panelling

- i) All wall panelling to be flush veneered, factory fabricated and finished. No exposed fixing or fabrication allowed.
- ii) Solid timber core of narrow laminated spruce ships faced on both sides with high density chipboard or MDF construction.
- iii) Edge lippings of minimum 10 mm thickness in matching timber applied to two long edges unless otherwise noted. Before veneering, lippings to be concealed other than edge and shaped in accordance with drawings. Matching jointing piece/ trims to be supplied in accordance with drawing reference.
- iv) Veneers to be cut as per Specification and book matched as specified.
- v) Panels to be concealed fixing by means of softwood battens, split battens or proprietary fixing method.

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2.17 Plastic Laminate

- i) Plastic decorative laminated sheeting will be of the brand, catalogue number, colour etc. indicated on the Materials and Finishes Chart. Unless otherwise shown or specified the laminate sheeting shall be 1.6mm thick on all flat surface and 0.8mm thick sheets shall be used on post formed surfaces as required. Laminates shall be veneered to mounting surface with an approved waterproof and heatproof area based cement, used in strict accordance with the manufacturer's instructions. Rubber based adhesive shall not be used. Sheeting must not be applied to timber with a moisture content of more than 15% or at temperature of less than 15°C (60°F). The sheeting is to be applied only to close grained plywoods or medium density fibreboard to ensure a smooth ripple free surface; it is not to be applied to open grained plywoods such as Fir plywood.

Underside surface of counter tops and shelves which are faced with plastic laminate shall have corresponding 0.8mm backing sheet applied unless otherwise noted. Cabinet doors faced with plastic laminate shall have corresponding 0.8mm backing sheet applied unless otherwise noted. Cabinet doors faced with laminate shall receive the same laminate on all exposed surfaces (on the back side and edges). Top sheet shall be placed on and over finished edge unless otherwise noted. Edges not faced with laminate, as at field joints, shall be machined and sealed. Butt joining of laminates shall be minimized by using longest available lengths where required, and all butt joints shall be perfectly flush and sealed.

- ii) No surface sanding of laminated plastics is permissible.
- iii) Unless otherwise specified, all laminated plastics shall have the standard matte finish.
- iv) Samples showing the surface texture and pattern are to be submitted to the Interior Designer for approval before fixing.

2.18 Scope of Work

- i) Work under this section includes providing all necessary materials, labour, plant, transportation and services for the completion of work shown on the drawings and including the following :

Rough and finished carpentry, joinery, doors and frames.

Section B - Technical Specifications (Fit-out Work)

3.0 Metal Work

3.1 Hardware Generally

- i) The hardware throughout shall be of approved manufacture and supply, well made and equal in every respect to the samples to be deposited with the Interior Designer. All the ironmongery shall be provided by the Main Contractor and shall be of approved manufacture and obtained from nominated suppliers or other approved sources.

All ironmongery shall meet with requirements of the following relevant standards unless otherwise stated : BS 1227, BS 5872, BS 4951, BS 5725, BS 4112, BS 1331, BS 2088.

- ii) The rates for hardware are to include for supplying necessary screws to match and for the provision of keeps, striking plates, etc. as necessary. The rates for fixing hardware are to include for all fittings, cutting, sinking, forming, morticing, first fixing, removing for decoration, finally refixing after execution of the decoration, easing oiling, adjusting, making good and leaving in perfect working order to the satisfaction of the Interior Designer. Screws for fixing ironmongery items shall generally be in accordance with BS 1494 Part 2.

3.2 Hardware Finishes

- i) Exposed hardware shall have the finish specified on the Hardware Schedule and it shall normally be assumed that all hardware on each item, if not specified otherwise shall have identical or similar non-staining, non-tarnishing finish.
- ii) Screws are to match the finish of the article to be fixed and to be round or flat headed or countersunk as required.
- iii) Chromium plating, where specified, is to be on a base material of copper or brass and is to accord with International and British Standards for chromium plating for normal outdoor conditions.
- iv) Unless otherwise specified aluminum shall have an anodized finish and comply with samples approved by the Interior Designer.
- v) All solid brass, brass sheeting or brass plating specified in polished finish shall be further finished with two pack clear polyurethane coating for non-staining, non-tarnish protection from discolouration unless otherwise specified.

3.3 Strength

- i) All steel, brass, bronze, aluminum and stainless steel articles shall be submitted to a reasonable test for strength if so required by the Interior Designer at the Main Contractor's expense.

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3.0 Metal Work

3.4 Protection

- i) Brass and bronze surfaces are to be protected with a thick grease or other suitable protective material, i.e. clear lacquer coating. This protective coating is to be renewed as necessary and cleaned off at completion of the work.

3.5 Completion

Upon practical completion the Main Contractor shall ensure that the following requirements are carried out :

- i) Remove all protective covering, clean all items of ironmongery and ensure that they are in proper working condition.
- ii) Each set of keys shall be provided with an approved circular chromium plated brass plate 25mm dia. x 1.5mm thk. stabled with the identification of Floor/Unit/Door to which it belongs for handing over to Employer.
- iii) Properly arrange wrenches, spare parts and lock spurner wrenches, spare parts and any other tools furnished by the manufacturers with the ironmongery for handing over to the Employer.
- iv) Properly arrange in a file all guarantees and certificates etc. of the manufactures furnished with the ironmongery, if any, for handing over to the Employer.

3.6 Bolts

- i) Provide all bolts, nuts, washers and other metal fittings required in the work where applicable.

3.7 Stainless Steel

- i) Stainless steel to conform to BS 1449 Part 4. All Stainless steel shall be of polished mirror finish, hair-line finish or baked enamel as identified in finishes schedule.
- ii) Gauge of material to be confirmed by Main Contractor. Main Contractor to submit sample to Interior Designer for Approval before fixing.

3.8 Mild Steel

- i) Mild steel to conform to BS 1449 Part 1.

3.9 Wrought Iron

- i) Wrought iron is to be selected tough metal with an even silky fibrous grain, formed clean and free from flaws and cracks, etc.

Section B - Technical Specifications (Fit-out Work)

3.0 Metal Work

3.10 Aluminum

- i) All aluminum shall either receive a polished bronze or gold colour anodic coating to the Designer's approval and to BS 1470 and BS 1474.

3.11 Decorative Metalwork

- i) Brass/bronze, polished chrome, stainless steel, for trim, panels, frames, railings, fittings, etc., shall be solid first quality metal in sizes and thickness shown in detailing. All exposed joints will be welded and ground smooth and attachments shall be concealed. Finish shall be bright high mirror polished or hair line appearance and coated with an approved suitable clear sealer.
- ii) Metal angles, retainer clips, support angles, etc. shall be in mild steel unless otherwise noted. They shall be primed and painted with two coats of semi-gloss enamel with color to match surface on which metal is fastened.
- iii) Brass trim for all areas shown shall be standard .050 GA. or similar, prefinished brass plated steel*.
- iv) Fabricate and assemble brasswork with true sharp profiles and minimum of joints. Necessary joints shall be hairline, tight butted. Use concealed fasteners throughout for securing brasswork to substructures.

3.12 Cast Iron

- i) Cast iron to be approved gray metal, sound, free from flaws, blow holes, etc. and have a clean smooth surface.

3.13 Protection of Metals

- i) All galvanized metal shall be galvanized by hot dip process in accordance with BS 729 Part 1 chromatic passivated (to allow for immediate painting without the use of a mordant solution).
- ii) All non-galvanized ferrous metal shall be coated with one shop coat or priming before delivery to site.
- iii) All aluminum work in contact with dissimilar metals or with materials containing alkalies, e.g. concrete, cement and like mortar shall be painted with two coats bituminous paint on the contact surfaces.
- iv) All decorative metalwork shall be protected with a suitable factory applied covering which shall not be removed without the approval of the Interior Designer.

Section B - Technical Specifications (Fit-out Work)

3.0 Metal Work

3.14 Workmanship

- i) The work shall be carried out in accordance with the requirements of the Local Building By-laws and to the satisfaction of the Local Building Authorities empowered to control the quality of the work in the district where the work is situated and the Main Contractor must acquaint himself of such requirements which may effect his price. The Main Contractor shall comply with all reasonable instructions and directions given from time to time by the Interior Designer and/or his Representative for the purpose of ensuring that the work shall be carried out in accordance with this Specification and completed at the proper time.
- ii) All work shall be in accordance with the best practice and workmanship and materials shall be to the approval of the Interior Designer. Any defective work which does not comply with the Specification or Drawings shall be removed and replaced by the Main Contractor at his own expense.

3.15 Products

- i) Hinges and magnetic catch for new cabinets, heavy duty (50 Kg) roller tracks for drawers to be supplied and install by Main Contractor. Full extension drawer runners to be Hafele soft roller 60 KTS or equal.

3.16 Scope of Work

- i) Work under this section includes providing all necessary materials, labour, plant, transportation and services for the completion of work shown on the drawings and include the following :
 - a) Sundry metal sections in fixing partitions to underside structural slab.
 - b) Sundry metal sections in framing and architectural detailing.
 - c) Hardware for all doors and furniture. All timber doors to be provided with three number hinges. Fill height doors to have two pair hinges.

Section B - Technical Specifications (Fit-out Work)

4.0 Plaster

4.1 Cement

- i) Cement shall be ordinary Portland cement complying with BS 12.

4.2 Sand

- i) Sand for plastering, etc. shall comply with the requirements of BS 1198 and 1199 and shall be clean, sharp naturally occurring sand or shall consist of crushed rock or gravel. It should be clean, hard, free from adherent coatings and vegetable matter. It shall not contain soft, porous or flaky grains or crushed dust, alkali, loam, clay or any deleterious organic matter.
- ii) Samples shall be submitted to and be approved by the Interior Designer before commencement of work. The sand shall be kept clean and be re-washed if necessary.

4.3 Water

- i) Water to be clean, free from acids, alkalis and other harmful matter.

4.4 Plastering

- i) All plastering, unless otherwise described, shall be applied in two coats to walls to a total thickness of 12mm finished with a steel trowel. Plastering to ceilings and soffits shall be similar. All arises shall be slightly rounded.
- ii) All plastering with cement and sand (1:6) mix shall be with plasticiser and shall comply with BS.
- iii) Provide drips where shown on the drawings.
- iv) All brickwork shall be thoroughly cleaned, the joints raked out and well wetted before and kept damp during rendering. Concrete surfaces to be hacked for key before rendering.
- v) The Main Contractor shall protect all plastering work in accordance with usual trade practices and he shall replace any damage work at his own expense.
- vi) The Main Contractor shall obtain the Interior Designer's approval of the plastering works prior to removing his workmen and equipment off the site.
- vii) All wall and ceiling plaster shall be properly made good around all pipes, brackets, gratings and similar intrusions.
- viii) Plaster shall be continued into grooves and rebates in door and window frames and finished against metal windows with slightly cover internal angles.

Section B - Technical Specifications (Fit-out Work)

5.0 Glazing

5.1 Glass

- i) All glass is to be of best quality of approved manufacture, and be free from bubbles, smoke wanes, air holes and other defects. It is to accord with the indications given on the Material Selection Schedule.
- ii) Plate or float glass shall be clear, of selected glazing quality. Glass generally to conform to BS 952 and glazing to be CP 152.
- iii) Tempered glass shall have structural integrity and shall not contain any harmful scratches, pinholes, unevenness, sharp angled or field edge.
- iv) Georgian wired polished glass to be of a brand approved by the Interior Designer.
- v) Putty for glazing in wood sashes shall be an approved tropical putty. For glazing to metal, an approved patent mastic shall be used or otherwise noted..
- vi) The glass shall be well bedded and carefully back puttied, sprigged in and fixed with beads. The glass shall be neatly cut to fit the rebates with 3mm clearance all round and the rebates shall be primed before glazing.
- vii) "Plexi-glass" shall be to the Interior Designer's approval.
- viii) Mirrors shall be of glazing quality polished plate, with electrodeposited copper and silver backing, guaranteed for five (5) years, by LOF P.P.G. or equal, 8mm thick, light bronze, dark bronze or grey tinted or clear, adhered to backing. Type to be as shown on the drawings. Exposed edges and butt joint edges shall be ground smooth and squared. Mirror shall have bevelled edges where indicated as such in the drawings. Bevelled glass shall be individual and polished smooth. Bevelled mirror panels shall be individual units, applied to backing as recommended by mirror manufacturer and as shown.
- ix) Where mirror within cabinet or interior works is required, it shall be as far as possible, cut off site.
- x) Mirrors shall be fixed with approved glue and wood beading to plywood backing and excess glue to be carefully cleaned off prior to completion.
- xi) On completion, all glass and mirror shall be cleaned both sides and any broken, cracked or defective panes shall be replaced at Main Contractor's own expense.
- xii) Etched glass to conform to industry standard and pattern, size and detail to material selection schedule and drawings. Etched glass to be protected and sealed by approved method such as product supplied by Glass Brain Ltd.

Section B - Technical Specifications (Fit-out Work)

5.0 Glazing

5.2 Mirror Glass

- i) Mirror glass shall be 6mm float glass of silvering quality backed with a reflective surface layer of chrome silver or other metal, a protective layer of copper, a coat of protective mirror backing paint and a coat of moisture sealer.

5.3 Colourback Glass

Colourback* glass is manufactured in accordance with Pilkington Seraphic specifications:

SER.009 Wall and Spandrel Panels
SER.010 Partition Panels
SER.011 Sound Insulation
SER.012 Laminated (Available on request)

i) Glass

Types: Soda-lime float glass.
Low iron float glass.
Types: Clear, green, bronze, grey.

ii) Physical Properties

Mass: Panel weight 2.5kg/square metre/millimeter of substance.

Example: $2.4\text{m} \times 1.25\text{m} \times 8\text{mm} \times 2.5\text{kg} = 60\text{kg}$

Co-efficient
of linear
expansion: $80 \times 10^{-6}/^{\circ}\text{C}$

Thermal
conductivity: $1.05\text{W}/\text{m}^{\circ}\text{C}$

- a) Sound insulation
Depends on substance, configuration and other environmental factors. As a guide a 6mm panel reduces sound transmission by 28 dB.
- b) Mechanical shock
Toughened Colourback panels exceed Australian Standards AS.2208 for mechanical shock which is defined as equivalent to the impact of a child running into a glass panel. A toughened glass panel is approximately 5 times stronger than an annealed glass panel.

Section B - Technical Specifications (Fit-out Work)

5.0 Glazing

5.3 Colourback Glass

- c) Thermal characteristics
Toughened Colourback panels are stable over the range of minus 70° to plus 280°C. Panels will withstand a temperature differential of up to 250°C.

iii) Tolerances

Dimension	250-999mm	1000-1999mm	2000-3000mm
Substance			
3-6mm	±1mm	±2mm	±2mm
8-12mm	±2mm	±2mm	±4mm

- a) Squareness
The squareness of rectangular panels shall be such that no point around the periphery of the panel falls inside a minimum size true rectangle or outside a maximum size rectangle.

iv) Toughening

The toughening process is conducted in a Roller Heat Furnace by heating the glass to near its softening temperature then cooling quickly with jets of cold air.

The toughening process instills the mechanical and thermal shock properties while firing in the ceramic decoration. Toughening does not affect the other properties of the glass.

Incidents of breakage of toughened panels are rare. Should this occur, the glass fractures into granular fragments with blunt edges. These fragments are harmless if handled carefully.

v) Printing

- a) Material
All paints used are ceramic based and fired into the surface during the firing process, becoming part of the permanent abrasive resistant Colourback panel.

vi) Opacity

A full range of light transmission from clear to virtually zero is available.

Light transmission values:

Transparent	60% and upwards.
Frost	25% to 70%
Solid colour	Up to 10%

By using any of these finishes with a pattern such as stripes or dots any Degree of visibility can be achieved.

5.0 Glazing

5.3 Colourback Glass



- a) Visual
Normal standard or otherwise noted. When the Colourback panel is mounted in its final position/ lighting, no defect should be visible from a distance of 1.5m or over.
- b) No flaw which is likely to lead to failure in service of the panel is acceptance.

viii) Weathering

The ceramic decoration is reasonably resistant to handling and cleaning, may be affected by acids and other pollutants in the atmosphere.

Colourback panels should not be glazed in an open air environment with the ceramic coating outermost. When glazing with the ceramic coating inward adequate sealing, to prevent the entry of pollutants, is necessary. There is no restriction on the internal glazing of Colourback.

ix) Colourback Types And Sizes

Final dimensions of the panel depends on the thickness, shape and required processing. Colourback of building applications can be produced up to 3000mmx1500mm. Thicknesses of 5, 6, 8, 10 and 12mm are available in toughened safety glass, with 6 and 8mm available in heat strengthened glass.

Clear float glass is normally specified. Grey, bronze or green are available on request. Maximum length to width ratio 7:1.

Thickness Nominal mm	Range mm	Maximum Sizes Rectangle mm Circle mm(dia)		Mass Unit Area kg/sm
5	4.8-5.2	3000x1500	1500	12.5
6	5.8-6.2	3000x1500	1500	15.8
8	7.8-8.2	3000X1500	1500	25.0
12	11-7-12-3	3000X1500	1500	30.0

Section B - Technical Specifications (Fit-out Work)

5.0 Glazing

5.3 Colourback Glass

a) Edgeworking

A guide for the edgework available for Colourback is set out below.

Colourback glasses up to and including 12mm thickness is an arrissed edge.

Type of edgework	Description	Recommended Application
Rough Arrissed	This is the simplest type of edgework whereby the sharp edges from "as cut" glass are removed.	Concealed
Flat Smoothed	This is a machine edge of flat form with chamfered sides.	Butt joined edges with silicon seal or exposed edges
Flat Polished	This is a machine edge of flat form with chamfered sides which have been polished.	Exposed edges
Mitred	This is a machined edge of flat form at a 45° or otherwise noted to the face of the panel. The minimum thickness of glass remaining at the edge is 3mm.	Butt jointed edges with silicone seal

5.4 Delivery

- i) Glazing to be delivered to site in cut sizes, in packages bearing the manufacturer's name and/or trade mark. The type, quality, thickness or weight of the glazing is to be clearly marked on the package.

5.5 Cutting of Glass and Mirror

- i) In cutting glass, proper allowance shall be made for expansion. Each square of glazing to be as large as possible. Glazing is to comply with requirements of BS Code of Practice 152. All glass edges to be properly machine ground and polished.

Section B - Technical Specifications (Fit-out Work)

5.0 Glazing

5.6 On Completion

- i) On completion, clean all glazing, replace all cracked, scratched or broken sections and leave in good condition to the satisfaction of the Designer.

5.7 Gaskets

- i) Gaskets for glazing shall be preformed rubber gaskets to BS 4255 part 1 on approved neoprene gaskets, to be used strictly in accordance with the manufacturer's printed instructions.

5.8 Scope of Works

- i) Work under this section includes providing all necessary materials, labour, plant, transportation and services for the completion of work shown on the drawings and in general includes the following :

Glazed partitions, windows, doors and other glazing works.

Section B - Technical Specifications (Fit-out Work)

6.0 Vinyl Tile, Sheet Vinyl

6.1 General

- i) The vinyl flooring to be installed is to be in accordance with the details on Tender Drawing set.
- ii) The sub floor is to be completely clean and dry before laying. Tiles are to be set out from the centre of all rooms and passages to that any cutting required takes place at the extremities. The tiles are to be glued to the sub floor with an approved glue. All marks of the glue are to be removed from the surface of the tiles and the tiles are to be polished waxed before handover.
- iii) Sheet vinyl to be installed as per manufacturers guidelines. Seams to be properly sealed.

6.2 Scope of Works

- i) Refer to the Drawings for details of required vinyl floor tiling works.
- ii) The Main Contractor shall check on site and allow for any making good work to existing floor for vinyl tiling in tendering.

Section B - Technical Specifications (Fit-out Work)

7.0 Carpet

7.1 Broadloom

- i) All carpet is to be supplied and installed by the main contractor as specified in drawings and schedules, including underlay, fixings and accessories.
- ii) The underlay shall be deluxe type. Polypropylene not permitted.
- iii) Carpet is to be fastened to floors with double fastening strips to prevent pulling away from walls due to frequent shampooing and shrinkage, such strips shall be securely anchored to concrete floors by means of concrete nails.
- iv) Free edges of carpet at other than walls shall be turned and tacked and shall be installed in a non-trip manner.
- v) All seams shall be free of puckering and shall lie flat. Carpet must be stretched properly so that all surfaces are smooth, unwrinkled, and without twist in the seamed work. All cut edges must be free of fraying. Pattern design in weave to be matched and lined up.
- vi) Where carpet meets ceramic tile, marble, or wood flooring, carpet pile height should be approximately 3mm higher than wood or ceramic material. This may require elimination of padding or feathering of padding.

7.2 Carpet Tile (Modular Carpet)

- i) Carpet tile to be supplied and installed by the Main Contractor as specified in drawings and schedules, including fixings and accessories.
- ii) Floor and room temperature should be maintained at 65F for 24 hours before installation. Relative humidity should not exceed 65%.
- iii) Floor to be level and free of grease, oil, paint, dirt, wax etc. All holes, cracks depressions must be filled with latex patching compound.
- iv) Concrete floors to be sealed.
- v) Carpet tile to be installed as per manufacturers instructions. Only release adhesive to be used if required.
- vi) Carpet tile to be installed from the center of the room.

- 7.3 After the installation of the work is completed, the carpeted area shall be cleared of excess materials, the carpet vacuumed thoroughly, and left in a manner ready for occupancy. Carpet to be protected prior to occupancy.

Section B - Technical Specifications (Fit-out Work)

7.0 Carpet

7.4 All work shall be done under the direction of the carpet installer's capable superintendent, who shall have long experience in this type of work and with projects of comparable scope. The superintendent in the field shall give direction for installation and inspect the work, as it is being done and after it is completed. Without waiting for orders to do so, he shall direct correction of all faulty workmanship he may encounter.

7.5 The colour and pattern of the carpet is to be as per the approved samples held by the Interior Designer.

7.6 Scope of Works

i) Work under this section includes providing all necessary materials labour, plant, transportation and services for the completion of the work shown on the drawings and including the following :

[Click **here** and type in the Project Specific Scope of Work]

Section B - Technical Specifications (Fit-out Work)

8.0 Stone, Ceramic Tile

8.1 General

- i) Stone shall be in the colors, types, sizes, finishes, and thickness and the Manufacturers as shown by the drawings and specified herein, or an approved equal.
- ii) Unless otherwise shown on drawings or specifications, stone shall have a polished finish, on all exposed surfaces; concealed surfaces may be sawn.
- iii) Visual : All examinations, selections and approvals shall be for the purpose of achieving a final appearance of Stone with greatest possible uniformity and will be based upon the following criteria.
 - a) All Stone shall be of sound stock and uniform texture and shall be free from holes, seams, shakes, clay pockets, spalls, stains, starts and other defects which would impair the strength, durability and appearance of the work, as determined by the Interior Designer.
 - b) Inherent variations characteristic of the Stone and the quarry from which the Stone is to be obtained shall be brought to the attention of the Interior Designer at the time the samples are submitted for approval and shall be subject to approval of the Interior Designer. Stone provided at time of installation shall be of same quarry, color, veining and other characteristics as that approved by Interior Designer.
 - c) All Stone shall be selected for background color, veining, marking and matching shall run in even shades and shall be set accordingly.
- iv) All engineering calculations and design shall be based on the mechanical and physical properties of the selected Stone.

8.2 Accessory Materials for Stonework

- i) Mortar materials shall be as recommended by the Manufacturer for each Stone type, size and application. Mortar color shall be as selected by Interior Designer.
- ii) For colored pointing mortar, furnish matching Stone ground down to meet grading requirements for sand.

8.3 Stone Support

- i) Manufacturer and General :

Where required, Stone support systems, anchors and accessories shall be manufactured by a company specializing in the design and fabrication of Stone approved by the Interior Designer. Provide all fastening devices, support angles, relieving angles, anchors, coping anchors, dowels, cramps, bolts, nuts, shims, expansion shields, flashing etc., necessary to properly secure Stone to the structure as required.

Section B - Technical Specifications (Fit-out Work)

8.0 Stone, Ceramic Tile

8.4 Fabrication

- i) Stone shall be accurately cut to sizes, shapes, profiles and dimensions. There shall be no deviation from jointing.
- ii) Exposed surfaces and edges of Stone units shall be free from cracks, broken corners, chipped arrises, scratches or other defects affecting appearance. Patching or filling not permitted.
- iii) Cut Stone units full and true on faces, reveals, beds, joint and top, to the full dimensions required by shop drawings submitted by the Main Contractor. All edges shall be straight and true with sharp and true arrises. All Stone shall fit together accurately.
- iv) Make faces of Stone Units in same plane flush at joints. All finished surfaces shall be true in line and face.
- v) Sawn surfaces and edges shall be cleaned of all rust stains and iron particles.
- vi) No patching or use of Stone with chipped edges or faces shall be permitted.
- vii) Provide holes and sinkages required for anchors, dowels, other devices required to support and/or suspend Stone, and to accommodate other items which connect to or penetrate the Stone.
- viii) Include all cutting, drilling and fitting of Stonework required to accommodate the work of other trades. In cutting and fitting carefully cut and grind edges to a neat tight fit. Do cutting in such a manner so as not to impair strength or appearance of Stone. Use physical templates for all cutting and drilling; obtain required templates from proper trades.

8.5 Inspection

- i) Main Contractor to advise requirements relating to his placement of any inserts which are to be used for anchoring and supporting stonework.

8.6 Installation

i) Erection Tolerances :

The work shall be designed to accommodate all permitted tolerances and anticipated dead and live load movement, creep, sway and torsion of the structure without any harmful effects.

- ii) Patching or hiding defects in Stone will not be permitted.
- iii) Clean Stone before setting as recommended by Stone Manufacturer. Follow all Manufacturer directions during installation.

Section B - Technical Specifications (Fit-out Work)

8.0 Stone, Ceramic Tile

8.6 Installation

iv) Connections :

a) Anti-galvanized Action : Isolate dissimilar metal surfaces to prevent galvanic action.

b) Metal-to-metal contact : Separate metal surfaces in such a manner that metal does not move on metal. Materials used for this purpose shall be low friction components, sealants or gaskets.

8.7 Setting Stone

i) Mortar and grout shall be as recommended by Stone Manufacturer for size, weight, location and use of Stone Color as selected by Interior Designer.

ii) Mixing :

a) Mix mortar for setting Stone on anchor plates and for spotting back of Stone. Mix approved non-shrinking cement for filling of anchor holes in accordance with Manufacturer's directions.

b) Mix mortar in small batches to make a stiff plastic mass; mix until thoroughly homogenous; retempering with water is prohibited.

iii) Set Stone in accordance with drawings and final shop drawings for Stonework. Provide anchors, supports, fasteners and other attachments shown or necessary to secure stonework in place. Shim and adjust accessories as required for proper setting of Stone. Completely fill holes, slots and other sinkages for anchors, dowels, fasteners and supports with non-shrink grout during setting of Stones.

iv) Maintain even joints between units, 1mm maximum unless noted otherwise on drawings.

v) Grout joints full and flush with face of Stone. Where metal inset strips are indicated, butt Stone flush and tight against strips with no gaps exceeding 0.8mm.

vi) Cleaning : After final cleaning of Stone, repoint any open joints with grout.

Section B - Technical Specifications (Fit-out Work)

8.0 Stone, Ceramic Tile

8.8 Repair and Cleaning (After Erection)

- i) Remove and replace Stone units which are broken, chipped, stained or otherwise damaged. Where directed, remove and replace units which do not match adjoining stonework. Patching or hiding defects in stonework will not be permitted. Provide new matching units, install as specified and reseal joints to eliminate evidence of replacement. Reseal defective and unsatisfactory joints to provide a neat, uniform appearance.
- ii) Clean vertical stonework after completion of work, using clean water and stiff-bristle brushes. Do not use wire brushes, acid type cleaning agents or other cleaning compounds with caustic or harsh fillers.

8.9 Protection

- i) After installation and cleaning, protect stonework from damage during subsequent construction activities.
- ii) At completion of construction work, remove all temporary protection from the work of this Section.
- iii) Examine all work and repair all damage. Clean soiled or stained surfaces. In the event damage is irreparable or soiled or stained surface cannot be cleaned, then remove and replace such items at not additional cost.

Section B - Technical Specifications (Fit-out Work)

9.0 Paint

9.1 General

- i) No paint shall be used on the work until the Interior Designer has inspected the materials and given instructions for the work to proceed.
- ii) Paints shall be supplied on site in the markers' sealed containers and must be thoroughly mixed or stirred before use and mixed and used strictly, in accordance with the manufacturer's instructions.
- iii) Paints shall be of anti-fungus quality and of approved manufacture.
- iv) Knotting shall be of approved manufacture and consist of shellac dissolved in mentholated spirits.
- v) Linseed oil for use on joinery shall be best clear boiled linseed oil well rubbed in.
- vi) The works "three coats of paint" shall mean :
 - a Gypsum Board
 - 1 coat latex primer
 - 2 coats alkyd enamel (eggshell finish)
 - b Woodwork (Opaque finish)
 - 1 coat wood primer
 - 2 coats alkyd trim enamel (semi gloss finish)
 - c Woodwork (natural finish)
 - Stain to match sample
 - 2 coats of approved lacquer
 - d Surfaces to which wall covering 1 coat primer to be applied
 - e MDF - spray applied systems
 - f Opaque finish
 - 1 coat primer, Dulux Interior Primer undercoat 66 line or equal, 1 coat interior primer, 1 coat "top coat" Dulux Super or equal
 - g Stain Finish or Sealer
 - Stain Dulux Timbaglow stain to match sample
 - 1 coat Dulux Timbaglos polyurethane Satin
 - 2 coat Dulux Timbaglow polyurethane Satin or Gloss

Section B - Technical Specifications (Fit-out Work)

9.0 Paint

9.1 General

- | | | |
|---|---------------|---|
| h | Opaque finish | 1 coat sealer, Dulux Hi Fill or Autocolour Hi Speed Primer
1 coat 2K Acran*
*contains MD Isocyanate |
| I | Clear finish | 1 coat sealer, Dulux Prelux Sanding Sealer
1 coat Dulux Prelux |
| j | Stain finish | As above plus Dulux Wiping Stain or Dulux Timbaglow Woodstain before sealer |

- vii) The respective types of finishes to surfaces to be painted shall be that as stated in the Interior Finish Schedule or above.

9.2 Primers and Paints

- i) All emulsion paint, primers and paints, except where otherwise described, shall be I.C.I paints (i.e. Pentalite/Dulux) or other approved equal and cement paint shall be "Super-Snowcem" or other equal and approved.
- ii) The primer for paint on ferrous metal work shall be red oxide or lead primer, and the primer for paint of non-ferrous metal work shall be zinc chromatic primer.
- iii) Wood sealer shall be of an approved manufacture and applied strictly in accordance with the manufacturer's instructions.
- iv) The emulsion paint shall be of the Polyvinyl Acetate (P.V.A.) type.
- v) Bituminous paint shall be of an approved brand applied in accordance with the manufacturer's instructions.
- vi) Wax polish for wood surface shall be obtained from an approved manufacturer.
- vii) Silicone based water repellents shall conform to BS 3826 Class "A".
- viii) Epoxy paint shall be ICI Dulux Epoxy Chemical Resistant Finish F430-Line or other approved and to be applied all in accordance with the manufacturer's instructions.
- ix) Alkali-resisting primer shall be a solvent based primer obtained from the maker of the undercoat and finishing coat.

Section B - Technical Specifications (Fit-out Work)

9.0 Paint

9.3 Special Wall Coating

- i) This work to be carried out by nominated sub-contractor as indicated.
- ii)
 - a) Job Mock-Up :
 - 1) Minimum 1 sample area application of specified coating systems on each type of surface.
 - 2) Upon approval by Interior Designer, mock-ups to serve as standard for the work.
 - 3) Mock-ups to be left in place as part of completed project.
 - b) Applicator (certified by manufacturer)
 - 1) Applicator shall certify in writing that technicians utilized for work in this section have been trained by the manufacturer. Applicator shall include in his certification that specialized equipment as required by the manufacturer will be used for work in this section.
 - c) Product to conform to specifications and product requirements as indicated in manufacturers specifications.
- iii) Job Conditions :
 - a) Apply coating only under the following prevailing conditions :
 - 1) Air and surface temperatures not below 50F.
 - 2) Prevent wide variation of temperature which might result in condensation on freshly coated surfaces.
 - b) Protect surfaces not to be coated.
 - c) Areas broom clean free of excessive dust.
 - d) Adequate illumination.
- iv)
 - a) Primers, Sealers and Fillers :
 - 1) Zo-Dri-Wall Primer 95
 - 2) Zo-Crete Primer 90
 - 3) Zo-Wood Primer 93
 - 4) Zo-Multi-Purpose Primer 98
 - 5) Zo-Ferro Primer 91
 - 6) Zo-Prime Block Filler 96
 - 7) Stop-Lift Barrier Coating 15-820

Section B - Technical Specifications (Fit-out Work)

9.0 Paint

9.3 Special Wall Coating

- b) Intermediate and Finish Coats :
 - 1) Zolatone 43-Line
- c) Top Coat
 - 1) Zo-Pol Clear Epoxy Overcoat
- v)
 - a) Examine surfaces to be coated and report any conditions that would adversely affect the appearance or performance of the coating systems and which cannot be put into an acceptable condition by specified surface preparation.
 - b) Do not proceed with surface preparation and application until the surface is acceptable or authorization to proceed is given by the Interior Designer.
- vi)
 - a) Prior to all surface preparation and application operations, completely mask, remove or otherwise adequately protect all hardware, accessories, plates, lighting fixtures and similar items in contact with coated surfaces but not scheduled to receive special coating.
 - b) Before applying special coating, thoroughly clean all surfaces involved. Schedule all cleaning so that dust and other contaminants from the cleaning process do not fall on wet, newly coated surfaces.
 - c) All surfaces shall be clean, dry and adequately protected from dampness. Surfaces shall be smooth, even and true to place, and free of any foreign material which will adversely affect adhesion or appearance of applied coating.
 - d) Mildew shall be removed and neutralized.
 - e) Before coating is applied, surfaces shall be tested with moisture-testing device. No coating shall be applied when moisture content exceeds 12% except as may be required by the manufacturer of the coating materials used. Test sufficient area in each space and as often as necessary to determine the proper moisture content for application.
 - f) Patching and repair of defects and damage to drywall, concrete, masonry and other materials refer to related section.
 - g) Provide recommended priming for all surfaces to receive special coating.
 - h) Main Contractor shall sand and reprime all abrasions and damage spots in the surface of the prime coat before proceeding with subsequent finish coat.

Section B - Technical Specifications (Fit-out Work)

9.0 Paint

9.3 Special Wall Coating

- vi) Shop coated, unprimed or damaged areas shall be cleaned to meet the requirements of the Steel Structures Painting Council SP-3 Power Tool Cleaning and primed in accordance with these specifications.
- vii)
 - a) Follow manufacturer's recommendations and instructions carefully regarding special coating product so as to provide the best quality work.
 - b) Apply special coating material by using two-step, pressure differential spray technique, with variable control to assure uniform distribution and 100% full coat (continuous) coverage.
 - c) Equipment shall be kept clean and in proper condition to provide best quality work as intended by this Specification.
 - d) All materials shall be applied under adequate illumination, evenly spread and smoothly applied, free of runs, sags, holidays, lap marks, air bubbles and pin holes to assure a smooth finish.
 - e) Suction or hot spots shall be reprimed prior to applying special finish.
 - f) The number of finish coats required is shown on the schedule hereinafter. The coats scheduled are field applied coats, and shall be in addition to prime coats or any special preparation.
 - g) Should any coat of coating be deemed unsatisfactory, it shall be sanded and additional coats applied as necessary until satisfactory finish is achieved.

9.4 Colours

- i) All tints, shades and colours of paints shall be selected by the Interior Designer. and the priming, undercoat and finishing coats shall be obtained from the same manufacturer.
- ii) The tints of undercoats are to approximate those of the finishing colour.
- iii) In order to indicate the number of coats applied a difference shall be made in the tint of each succeeding coat.

Section B - Technical Specifications (Fit-out Work)

9.0 Paint

9.5 Workmanship

- i) All surfaces to be painted shall be thoroughly dusted and cleaned, cracks cut out, holes stopped, steelwork cleaned of rust etc., in accordance with approved general practice.
- ii) Each coat of paint shall be dry and well rubbed down before the next is applied.
- iii) No paint shall be applied to a damp surface and no external painting shall be carried out during wet weather.
- iv) On no account shall the Contractor allow his employees to empty washings or painting materials into sanitary fittings or drainage systems and the Contractor must provide a suitable receptacle outside the building to receive such and the receptacle with contents must be removed from the site at completion by the Main Contractor.

9.6 Plastered Surfaces

- i) All dust, dirt, plaster splashes or efflorescence shall be brushed off or removed by wiping first with a dry coarse cloth and then with a damp cloth.
- ii) If efflorescence is present, the surface shall then be left for 48 hours to see if further efflorescence occurs.
- iii) The internal plastered or concrete surfaces shall be treated initially with a coat of anti-alkali primer and subsequently with two coats emulsion paint.
- iv) The external plastered and concrete surfaces shall be treated with one coat of stabilizing solution and two coats "Sandtex Matt" sand-based paint.

9.7 Fibrous Plasterboard Surfaces (Drywall Surfaces)

- i) Fibrous plasterboard surfaces requiring painting shall be thoroughly cleaned to remove dirt and dust.
- ii) The board shall first be primed before applying filler. A normal plaster board filler shall be applied and rubbed down to give the desired surface.
- iii) Apply three coats of emulsion paint to board surfaces.

Section B - Technical Specifications (Fit-out Work)

9.0 Paint

9.8 Wood or MDF Board Surfaces

- i) Woodwork which is to be painted shall be thoroughly cleaned to remove dirt, grease, etc.
- ii) All cracks, crevices and holes shall be scraped out, primed and made good with hard stopping, faced up and rubbed to an even surface.
- iii) The hard stopping shall be of an approved make or made up of paste, white lead and gold size stiffened with whiting.
- iv) All knots in woodwork shall be treated to prevent bleeding. Large and loose knots shall be cut out and replaced with sound wood or cut back and the surface made good with filler. Smaller knots shall be treated with two thin coats of knotting.
- v) Woodwork surfaces shall be primed with one coat of wood primer well brushed in.
- vi) Unexposed timber framing and backs of wood frames built in contact with masonry shall be painted with two coats wood preservative.
- vii) All internal surfaces of cabinets, shelves, cases, stations, etc. where visible when doors are opened, shall be sealed or finished with laminate.
- viii) "Oil stain clean lacquer", "stain and polish", "lacquer" shall mean two coats of stain and two coats of clear catalytic lacquer for a fine furniture finish and that "paint" shall mean one coat of primer and three coats of emulsion paint.
- ix) Painting to wood veneer shall consist of light oil stain to match coloration of design sample and shall be sealed with multiple coats of clear flat sealer and sanded between coats in the workshop. Final finish shall have 20-40% reflective sheen and shall match design sample.
- x) Dulux, Mirotone and Wattyl brand systems are recommended for spray application on MDF board.

9.9 Ferrous Surface

- i) Surfaces shall be thoroughly cleaned down to remove all dirt, grease etc. and all rust and seals shall be entirely removed by chipping, scraping or wire-brushing and a perfectly clean surface obtained.
- ii) Immediately after preparation, the surface shall be primed with one coat of metallic primer well brushed on, before the subsequent application of two coats of gloss enamel paint or otherwise noted.

Section B - Technical Specifications (Fit-out Work)

9.0 Paint

9.10 Non-Ferrous and Galvanized Surfaces

- i) Non-ferrous and galvanized exposed surfaces which are to be painted shall be thoroughly cleaned down or degreased by washing with white spirit.
- ii) Surfaces shall then be roughened by lightly rubbing down with steel wool, wire-brush or abrasive paper and cleaned down,
- iii) When required, mordant solution shall be used for the preparatory treatment.
- iv) Immediately after preparation, the surfaces shall be primed with the coat of zinc chromatic primer, well brushed on, before the subsequent application of one undercoat and one finishing coat as directed.

9.11 Clear Varnish

- i) Clear varnish to conform with BS 256.

9.12 Clear Polishing

- i) Woodwork requiring to be polished shall be stopped with hard stopping and rubbed down and polished with an approved polish applied in two separate coats.

9.13 Samples

- i) Samples showing colours of all paints to be used shall be prepared by the Contractor as and when directed by the Designer for his approval and at the Contractor's own expense. Three samples of each paint finish to be submitted for approval by Designer.

9.14 Scope of Works

- i) Work under this section includes providing all necessary materials, labour, plant, transportation and services for the completion of work shown on the drawings and in general including the following :

Doors, frames and partitions.
Carpentry and Joinery.

Section B - Technical Specifications (Fit-out Work)

10.0 Wallcovering

10.1 General

- i) The Contractor will make good all holes and indentation, touch up including hair cracks rub and sand down to a smooth and level surface for the existing walls before the application of the wallcovering.
- ii) The Contractor will apply an approved alkali resisting primer to seal all walls to receive wallcovering.
- iii) The Contractor will first install on single layer of approved lining paper (to be hung horizontally) using an approved adhesive.
- iv) The Contractor will install all wallcoverings with the manufacturers specified pre-mixed adhesive which is to be applied thoroughly and evenly to the back of the wallcovering.
- v) All joints are to be perfectly met with both ends wiped clean of surplus adhesive. A clean roller or brush is to be used to drive out all air bubbles.
- vi) Where applicable pattern matching must be perfect.

10.2 Clean Up

- i) When the Contractor has completed the installation all areas are to be cleared of excess materials. All left over rolls or half rolls are to be turned over to the Employer.

10.3 Supervisor

- i) All work on site shall be done under the direction of a capable supervisor who has had a minimum of 12 years experience in this type of work.

10.4 Scope of Work

- i) Work under this Section includes providing all necessary materials, labour, plant, transportation and services for the completion of work shown on the drawings including the following :

Partitions and Doors.

Section B - Technical Specifications (Fit-out Work)

11.0 Suspended False Ceiling Works

11.1 General Requirements on Construction and Installation

- i) The Contractor shall provide complete suspension system and related accessories for each and every panel of the suspended ceilings independently. Where in areas the suspension system cannot be suspended directly from the soffits of concrete slabs due to the presence of services pipings or ducting, the Contractor shall provide all necessary straps, hangers and brackets to form independent support for the suspension system.
- ii) All suspension system, unless otherwise stated, shall be fabricated from corrosion resistant material. If they are of such materials that react with aluminium they shall be separated from the aluminium by materials that do not react with it advisedly.
- iii) Fixing of suspension straps or hangers to concrete or brickwork with cartridge fired fasteners shall be carried out by means of an automatic cartridge operated hand tool, used in accordance with the manufacturer's instruction. Alternatively, the fixing may be carried out by morticing and inserting fibrous inserts or other approved fixing materials and using suitable nails or screws.
- iv) Natural anodized finished to exposed aluminium members shall be in accordance with BS 1615 : 1972. The anodic coating shall have a minimum average thickness of 0.0004" (10 Microns).
- v) All openings in the ceilings to accommodate installation of light fittings, sprinkler heads, air-conditioning grilles, return air slots, speakers, smoke detectors, etc. shall be provided by the Contractor. The Contractor shall allow in his tender for all necessary cutting, framing, suspension system and additional edge trims and hangers in connection with the provision of such openings.
- vi) The ceilings shall be installed to patterns shown on the reflected ceiling plans and the Contractor shall allow herein all the necessary cuttings, wastage, etc. to obtain the pattern as shown on the reflected ceiling plans.
- vii) Ceiling boards should be installed after all wet work are completed and dried and after all mechanical and electrical work in the pleunum space are installed.
- viii) The edges of all the ceilings shall be properly cut to fit neatly against the curved walls, beams or any other structural members and the Contractor shall provide for all the necessary edge trimming angles bent to fit the profile.
- ix) All ceiling components shall be aligned true with level surfaces and straight lines. Deflection of any component must not exceed 1/360 of the span between supports.
- x) On completion of installation, no dirt, spots or marks shall appear on the exposed surfaces.
- xi) All damaged or improperly installed units shall be removed and replaced at the Contractor's own expenses.

Section B - Technical Specifications (Fit-out Work)

11.0 Suspended False Ceiling Works

11.2 Nominated Contractor's Design Recommendation and Other Information

- i) For the complete assessment of the Contractor's design solutions, the Contractor must submit together with his tender the following :
 - a) Contractor's Design Recommendation and Calculations.
 - b) Preliminary Shop Drawings showing salient details, in particular, suspension details of all types of suspended ceilings.
 - c) Brochures and descriptive literature of the materials and goods offered.
 - d) Sample of ceiling panels, aluminium suspension tees, etc. and certificates from the Director of Fire Services.
- ii) These documents (2.1.1) to (2.1.4) after its approval by the Designer shall form part of this Contract.

11.3 Approval of Director of Fire Services

- i) All suspension systems and ceiling boards must comply with the flame spread classification and fire resistant requirements laid down hereinafter to the satisfaction of the Designer and the Director of Fire Services. The specialist Contractor shall produce certificates from the Director of Fire Services and manufacturer's tests certificates to substantiate compliance with the said stipulations of the ceilings to be supplied and installed. If the approval of the Director of Fire Services of any ceiling installed is not substantiated to the satisfaction of the Designer, it shall be removed from the site at the Contractor's own expenses.
- ii) The Contractor shall be deemed to have included in his rates for everything, whether specified herein or otherwise, to comply with the above.

11.4 Suspended Ceilings

Fibrous Plasterboard Ceilings or Drywall

- i) Fibrous plasterboard ceilings or drywall shall be Brady's "Fibroceil" or other approved equivalent.
- ii) All fibrous plasterboard ceilings shall be installed in strict accordance with the manufacturer's written instructions.
- iii) Fibrous plasterboard to be 2400mm approx. length of 1200mm width and 12mm thickness, to have 2 opposing edges rebated and are to be reinforced across the width of the panels with 20 gauge (0.07mm) galvanized mild steel angles at 450mm centres.

Section B - Technical Specifications (Fit-out Work)

11.0 Suspended False Ceiling Works

- iv) Suspension system shall be of the concealed type and consist of aluminium tee sections 44mm x 28mm x width with 25mm x 22 gauge (0.07mm) galvanized metal hangers at maximum 100mm centres along length of tee bar. Tee sections shall be joined longitudinally by 76mm x 25mm galvanized strips double riveted to each tee section. All angle sections, edge trims etc. to perimeter of ceilings, columns, etc. shall be secured by nailing or "shure set" fixing device.
- v) Fibrous plasterboard are to be laid onto the aluminium suspension and a fibreglass bandage impregnated with gypsum plaster applied over to at "T" bars. Flush up all joints with super fine gypsum plaster and leave smooth for application of paint.
- vi) Fibrous plasterboard ceilings to all areas shall be of smooth finish except where the fibrous plasterboard ceiling is textured and of overall board thickness of 18mm.
- vii) Access panels to be printed where required. Contractor to submit detail and location for designers approval.

11.5 Timber Ceilings

- i) Lattice ceilings shall be fixed to pattern as shown in the drawings.
- ii) Lattice ceilings shall consist of 38mm x 9mm slats and fixed to sawn timber framing which shall be of approved sizes and installed at approved centres.
- iii) Tongue and groove ceilings shall be fixed to pattern as shown on the drawings.
- iv) Tongue and groove ceiling shall consist 76mm x 20mm boards and fixed to sawn timber framing which shall be of approved sizes and installed at approved centres.

11.6 Scope of Work

- i) Work under this section includes providing all necessary materials, labour, plant, transportation and services for the completion of work shown on drawings.
- ii) Number, location and size of A/C transfer air louvre, return air louvre to be designed by A/C direct sub-contractor.
- iii) Alternative items in the Schedule of Rates to be selected by the Designer.
- iv) Check existing false ceiling system, ensure stabilizer bars are installed at each hanger wire.
- v) Leveling splints shall be installed between tiles supported by cross members.

Section B - Technical Specifications (Fit-out Work)

12.0 Windows Treatment

12.1 General Requirements

This section of the Specification shall be read in conjunction with the Drawings, other contract documents and other sections of this specification which shall be deemed to be complementary with one another. The Contractor carrying out this work shall be responsible for providing all plant, tools, materials and all items necessary for the proper execution, completion and maintenance of these works.

12.2 Fabrics

Fabrics generally shall be to B.S.3121: 1959 - Performance requirements of fabrics described as low flammability, and to B.S.5867: 1980 Parts 1 and 2 - Specification for fabric for curtains and drapes, unless otherwise approved.

12.3 Dimensions

Figured dimensions shall be taken in preference to scaled dimensions in all cases. Before commencing any work the Contractor shall verify all measurements on the Site.

12.4 Fire Regulations

All materials shall conform to local fire regulations as previously specified.

12.5 Operating Hardware

i) Generally -

The curtain hardware, unless otherwise indicated on Drawings or otherwise specified, shall be fully rigged GRABER, KIRSCH or equivalent heavy duty double traverse rod or track sets, complete with hooks, headings, lead-weighted cord tape, tension pulleys and all other accessories necessary for an approved installation. The make of the track shall be approved prior to fabrication and installation. When a curtain box or pelmet (valance) is not required, the curtain box or pelmet (valance) is not required, the curtain rods or tracks shall be screwed flat to the ceiling without end brackets. Panel glides shall be cord operated and weighted and shall be as manufactured by SILENT GLISS, London, England. Special window and stage treatments may require heavy duty hardware and the Main Contractor shall verify with the Interior Designer its suitability for any such installation. All operating shall be subject to approval.

ii) Templates -

The locations for fasteners shall be accurately marked by template and pilot holes of the proper size for the secure engagement of fastener neatly drilled into structure or backings. All tracks and rods shall be in single lengths, joined track will not be accepted.

Section B - Technical Specifications (Fit-out Work)

12.0 Windows Treatment

12.5 Operating Hardware

iii) Tracks

- a) All tracks, fittings, screws and the like shall have a rustproof finish. The face of the track or the channel in which the carriers operate shall not be damaged in fabrication or fixing. All damaged track shall be replaced.
- b) Tracks and rods shall be of hand traverse operation and for centre close curtains.
- c) Tracks shall be fixed in the position and at the heights indicated on drawings and with fixings at the manufacturer's recommended centres either directly through the track or by means of approved proprietary brackets.
- d) Tracks and rods shall be fixed in accordance with manufacturers' instructions using the manufacturers' recommended carriers, with a minimum of four carriers per 1'10" length of track.

iv) Cords and Pulleys

- a) The traverse cord shall be held into the rod with a tension pulley attached to the baseboard (skirting) or to the sill, in the case of sill length draperies, or as dimensioned on drawings.
- b) If tension pulleys are not available, a continuous cord with a KIRSCH type weight attached to a ring holding the bottom of the cord loop in position shall be used. Where it is impractical to use a traverse cord a short cord is to be attached to the track, behind drapery. The cord shall not be attached to the curtain fabric.

12.6 Making of Scrims, Drapery and Linings

- i) Fullness -
Unless otherwise indicated all draperies except sheer curtains shall be of at least double fullness. Sheer curtains (glass type) shall be a minimum of two and a half fullness or as indicated on drawings.
- ii) Selvedges - All selvedges shall be cut off before making.
- iii) Pressing -
Fabric which shows bolt fold marks or other creases shall be ironed before cutting.
- iv) Cutting - All cutting shall be to straight edges established by pulling a thread.

Section B - Technical Specifications (Fit-out Work)

12.0 Windows Treatment

12.6 Making of Scrims, Drapery and Linings

v) Seams

- a) Unless shown on the Drawings and schedules seams shall be "French type". Double serged seams may be used subject to approval.
- b) If a single needle serger machine is used the seam shall be sewn with a straight-stitch machine approximately 3 mm to 6 mm from the serged seam. Alternatively, the seams shall be joined by double sewing at 12 mm and 6 mm in from the edge of the cut selvedge.
- c) Thread tensions and machine pressures shall be adjusted to a minimum to prevent fabrics puckering. The stitch shall be adjusted to 8 to 10 stitches per inch. (32-40 stitches per 100 mm)

vi) Side hems -

Side hems for unlined curtains shall be stitched by hand unless machine stitching is approved. Side hems for lined curtains may be machine stitched. The right sides of the fabrics shall be stitched (from the inside and turned) so that the stitching does not show. The lining edge shall be 30 mm in from the edge of the drapery. Side hems shall not be pressed.

vii) Bottom hems -

Bottom hems shall be triple folded with an average depth of 90 mm and weights shall be inserted in the corners. Unless machine hemming is approved, the hems shall be stitched by hand. Silk or loosely constructed type fabrics shall be hand hemmed, unless otherwise approved. Loosely woven and changeable fabrics shall be hand hemmed on the site after they have been hanging for several days. Lining fabrics shall be hemmed separately. The bottom hems shall not be pressed. Bottom hems should clear the floor finish by 25 mm. If carpet is not yet installed 50 mm shall be allowed above the floor screed; 6 mm clearance should be allowed above window sills.

viii) Headings -

Headings shall be 100 mm wide with a 37 mm deep French pleat and stiffened with an interlining of crinoline or washable plastic coated fabric unless otherwise indicated. Horizontal machine stitching shall be on the reverse side and shall not show on the heading and at the top of the heading before it is doubled over. Unlined curtains of sheer fabric shall have the stiffening to match the curtain fabric as closely as possible.

ix) Hooks -

Nylon tape hook holders shall be used unless sewn-on hooks are approved. Sewn-on hooks are not to be used on Washable fabrics.

x) Thread -

Mercerized cotton thread shall be used on all fabrics which are not synthetic or fibreglass. Synthetic fibres shall be sewn with nylon thread to avoid gathering.

Section B - Technical Specifications (Fit-out Work)

12.0 Windows Treatment

12.6 Making of Scrims, Drapery and Linings

xi) Pressing and delivery

- a) Finished draperies are to be pressed to remove creases and wrinkles except for hems, which shall not be pressed.
- b) After pressing draperies shall be long folded at each pleat, tied at each end and at the centre and folded over a padded hanger.
- c) After delivery of draperies the top and centre ties shall be removed and the bottom tie left to prevent the bottom hem from soiling or damage on site.

xii) Patterned fabric -

Pattern fabric shall be matched and the quantity that the Contractor shall purchase shall be sufficient to allow the patterns to be on the same level (line) on all panels and to ensure that matched patterns repeat.

12.7 Sliding Panel Drapes

Fabric for sliding panel drapes shall be matched and the quantity that the Contractor shall purchase shall be sufficient to allow the patterns to be on the same level (line) on all panels and to ensure that matched panels repeat.

12.8 Louvre Blinds

i) Generally -

Vertical and horizontal louvre blinds shall be by LUXAFLEX or similar manufacturer approved by the Interior Designer. Louvres shall be in plastic, aluminum alloy, wood or other material as shown on the drawings. Blinds shall be manufactured to an approved sample. Louvres are to be straight, true and free from kinks, twists, scratches nicks or other blemishes.

ii) Accessories -

Metal accessories shall be in rust-proof alloy to approved finish and colour. Cords and pulls shall be in nylon, terylene or similar artificial fibre. Rods are to be in nylon, timber as approved.

iii) Existing blinds -

Where the installation is to match existing blinds they are to be taken down, checked repaired and thoroughly cleaned prior to reerection.

Section B - Technical Specifications (Fit-out Work)

12.0 Windows Treatment

12.9 Protection

The Contractor shall be responsible for protecting all drapes and track in those areas of work forming part of this contract. The Contractor shall make good or replace at his own expense any damaged work caused through lack of adequate protection or case in installation.

The Contractor shall make his own investigation to guard against local sources of attack and damage and take all necessary precautions for protection.

12.10 Completion

On completion of the installation of drapes and track the Contractor shall leave all work clean and perfect.