

AUGUSTA VICTORIA HOSPITAL RENOVATION & REHABILITATION OF CHEMOTHERAPY CENTER FINISHING WORKS TENDER Preambles					
No.	Description				
	The Preambles and general notes are applicable to all sections of the project.				
1	Contractor shall provide a time schedule at the mobilization stage of the project. This time schedule shall be active, updated periodically as requested and handed over to the A/E. It shall show percentages of progress works, completed works, delayed works if any, milestones, shop-drawings and samples deliveries time and approvals... etc.				
2	Contractor shall provide sample of materials, systems, finishes...etc for approval prior to execution of any works.				
3	Contractor shall provide shop drawings for approval prior to execution of any works.				
4	All samples and shop drawings should be submitted to the A/E engineer through written submittals in 3 copies; one shall be returned to the contractor with the Engineer's comment within 2 weeks prior to starting the relevant work and two will be retained with the A/E engineer.				
5	<u>Record keeping:</u> A daily construction report detailing the resources and the work executed during that day shall be submitted to the A/E engineer for approval not latter than noon next day.				
6	Whenever a list of approved suppliers/ manufacturers is provided, "Brand name or approval equivalent" is applicable.				
7	No work shall be measured twice under two different headings.				
8	All materials shall comply with the Local standards. All works shall comply with the Local codes of practice.				
AUGUSTA VICTORIA HOSPITAL RENOVATION & REHABILITATION OF CHEMOTHERAPY CENTER FINISHING WORKS TENDER Architectual and Civil Section Bill No. 1 DEMOLITION WORKS					
No.	Description	Unit	Quantity	Unit price	Total
			Total	USD	USD
	Demolition works				
	Excavate, demolish, dismantle, cut and remove from site the following items and works as described and as requested by A/E site engineer. The price includes removal of excavated materials, debris and dismantled items, either into Augusta Victoria Hospital storages or out of site, as directed by A/E site engineer				
1-001	Dismantle and disposal to stores or off site wooden and metallic doors.	No.	25		-
1-002	Ditto but wooden door jambs and frames	No.	4		-
1-003	Ditto but windows.	No.	19		-
1-004	Ditto but wooden windows shutters boxes.	No.	10		-
1-005	Demolish and haul debris from site gypsum and/ or block partition walls and any materials attached to them, such as tiles...etc.	M.S.	235		-
1-006	Demolish and haul debris from site of wall tiles cladding.	M.S.	100		-
1-007	Excavate in existing flooring materials, including removal of tiles, fill to any depth,...etc, to expose the existing slab system. Each examination pit to be 1x1m approximately, and to the requested depth. All areas will be calculated in meters square.	M.S.	15		-

1-008	Demolish and haul debris from site floor tiles and base tiles (skirting) if present, regardless of the tiling material and type. Job includes the removal and hauling from site of up to 20cm fill underneath and any foreign material. All areas will be calculated in meters square regardless of the width.	M.S.	370		-
1-009	Demolish and haul debris from site of fill materials, regardless of their nature, present under tiles. These quantities will be calculated beyond those of item 1-008.	M.C.	20		-
1-010	Demolish and haul debris from site suspended false ceiling.	M.S.	180		-
1-011	Create door or window opening or lowering windows in existing stone and reinforced concrete, or reinforced concrete walls up to 70cm thick using diamond cutting machines (hilti), job includes stone angles, lintels, sills, plaster corrections, and temporary structure needed to support the opening, and any permanent steel supporting stucture,and haul debris from site.	M.S.	10		-
1-011	Create a rectangular recess in existing stone facade, 40cm depth, for the fire cabinet, using diamond cutting machines (hilti), job includes stone angles, lintels, sills, plaster corrections, and temporary structure needed to support the opening, and any permanent steel supporting stucture,and haul debris from site.	M.S.	2		-
1-012	Clean the existing stone facades by means of hot water to remove all fungi forms and restore the original look.	M.S.	190		-
1-013	Apply grinding and crystal polishing on site (stones24, 36, 46, 60, 80, 120, 220, 300, 400, 600 & Salt) for the natural stone tiling.	M.S.	130		-
1-014	Dismantle, demolish and haul debris out of site of existing mechanical fixtures, manholes, piping... etc inside and outside the building.	Job	1		-
1-015	Dismantle, demolish and haul debris out of site of existing electrical fixtures, manholes, piping... etc inside and outside the building.	Job	1		-
Subtotal of BILL # 1					-

Bill No. 2 STONE, CONCRETE AND BLOCK WORKS

No.	Description	Unit	Quantity	Unit price	Total
				USD	USD
<i>Note: Contractor shall provide samples and shop drawings for all items for approval prior to the execution</i>					
1	<u>Stone works</u>				
2-011	Supply and build stone (10-15) cm thick, 35 cm width for the frame of the new doors opened in the existing walls, from sour maen, mattabeh finish from all sides. Job includes concrete backfill, and angles or special pieces of stone, pointing, & any accessories to complete the job	M.R.	10		-
2-012	Floor Mounted trunk, for the medical gases route. Work includes construction of reinforced concrete (12 cm width), steel plates, joints, adhesive materials, and tiles. As per the attached detail drawing.	M.R.	65		-
Subtotal of concrete works					0.00
2	<u>Block works</u>				
	Precast concrete hollow blocks built in cement sand mortar (1:3) mix. The price includes reinforced beam 20 cm high and equal to the width of block wall for door openings and along total length of walls exceeding 2 meters high. The reinforcement shall be 2 rebars of 12mm diameter. First row shall be insulated with tar from all sides. First row approval is mandatory prior to continuing with block walls building. Consultant's site engineer shall approve these works.				
2-021	10 cm hollow blocks	M.S.	200		-
2-022	supply and install slab on grade form B250 10cm thick, with 20*20*8mm steel mesh and 500micron, nylon layer benth.	M.S.	50		-
Subtotal of block works					0.00

3	<u>Wall and ceiling plastering works</u>				
	<p>Prepare surface and apply in two coats of rough plaster and one fine finish coat with ordinary Portland cement and sand as specified.</p> <p>The price includes installation of metal lathe 200mm wide to all chases of electro-mechanical works and to junctions of block work and concrete.</p> <p>It shall also includes for all stop beads, angle beads and movement beads, all as per drawings, specifications and A/E site engineer's requirements.</p>				
2-031	On walls	M.S.	380		-
2-032	On ceiling	M.S.	40		-
2-033	Plaster corrections on walls (width up to 25cm) Job includes cutting old plaster by cutting blade in straight lines, removal of old plaster, plastering with 3 coats as specified, and using fiberglass mesh, and as requested and directed by Consultant's site engineer.	M.R.	100		-
2-034	Ditto, but plaster corrections on ceilings (width up to 25cm)	M.S.	60		-
	Subtotal of plastering works				0.00
	Subtotal of BILL # 2				-

Bill No. 3 WATERPROOFING AND THERMAL INSULATION					
No.	Description	Unit	Quantity	Unit price	Total
			Total	USD	USD
<i>Note: Contractor shall provide samples of materials for all items for approval prior to the execution of</i>					
Waterproofing slurry					
	Supply and install on internal horizontal floors, and on walls. Clean very well the surface and apply one coat of glunce "sand, cement and pg-bond" and two coats of cement based cold applied water proofing slurry, similar to SIKATOP SEAL 107 with its two components liquid and powder. The application should be according to the manufacturer's instructions and A/E site engineer.				
3-001	On floors and skirting (30cm high) of wet areas and as requested by A/E site engineer. Area to be measured superficially.	M.S.	15		0.00
3-002	On walls at shower and wet areas, as requested by A/E site engineer. Measured areas are beyond those in item 3-001.	M.S.	10		0.00
Subtotal of water proofing slurry works					0.00
Subtotal of BILL # 3					0.00

No.	Description	Unit	Quantity	Unit price	Total
			Total	USD	USD
<i>Note: Contractor shall provide samples and shop drawings for all items for approval prior to the execution</i>					
1	WOODEN DOORS Plywood Doors				
A	<p>Supply and install the following 45-50mm thick plywood doors, solid core, 100% flex board, as per chart and drawings with 2cm hard Maple wood edging all around, tongued and grooved to the door structure.</p> <p>The door shall be covered with HPL (Formica) from Averboukh, smooth and non-glossy type. The 2cm solid wood edging shall be stained with water based color, 2 coats of sealer, and one finishing coat of 15% glossy lacquer. including solid pine (Suweg) door jambs and frame, same width as wall, and grooved to receive thermoplastic seal, sealed smooth with wood putty, painted with 3 coats of non-glossy oil paint; color coded polyor from Tambour. Job includes thermoplastic seal, 3 hinges, Hager AB700, 4x4.5" of 3mm thickness and metallic thrust ball bearings.</p> <p>Frame trim size according to details and drawings.</p> <p>Handle, and door stopper to be heavy duty, from Domus, Olivary, Colombo, or approved equal, matt chrome finish, and to comply with local hospital regulations.</p> <p>Penta type lock, with master key, such as Yale, Wally, A.G.B. or approved equal. All to have matt chrome finish.</p> <p>All glass elements of the internal doors should be 6mm laminated glass. (3mm+ polyvinyl butyral (PVB) +3mm)</p> <p>Supply samples of paint for approval by consultant and owner.</p>				
4-011	Patient's W.C. door (D5-a), as per the attached details and drawings, leaf size, 220 x 110cm, with 50*20cm wooden grill, and including semi-circular arched upper part over all size 110*67 cm, of fixed laminated glass. Door and frame shall be ready to open in both directions, preparation works for the hinges in the steel frames shall be done according to attached detail. Job includes supplying, installing and operating Stanley DAP-3 hinge and the Hager 1EA (610US26D)	No.	1		-
4-012	Patient's W.C. door (D5-b), as per the attached details and drawings, leaf size, 220 x 110cm, with 50*20cm wooden grill. Door and frame shall be ready to open in both directions, preparation works for the hinges in the steel frames shall be done according to attached detail. Job includes supplying, installing and operating Stanley DAP-3 hinge and the Hager 1EA (610US26D)	No.	1		-

4-013	Room door (D6), as per the attached details and drawings, leaf size, 220 x 100-110cm, including HPL formica lower plate, laminated double glazed middle plate, and semi-circular arched upper part over all size 110*67 cm, of fixed laminated glass. With 5cm opening from the ground level.	No.	4		-
4-014	Room door (D7), as per the attached details and drawings, leaf size, 205 x 70cm, including 50*20cm wooden grill	No.	1		-
4-015	Room door (D9), as per the attached details and drawings, leaf size, 220 x 100cm, including HPL formica lower plate, and laminated double glazed upper plate. With 5cm opening from the ground level.	No.	1		-
4-015	Entrance door (D11), as per the attached details and drawings, double-leaf, hinged leaf size 220 x 100cm. Fixed leaf size 220 x 54cm, including HPL formica lower plate, and laminated double glazed upper plate. With 5cm opening from the ground level.	No.	1		-
B	Supply and install plywood doors, with the specifications as mentioned above, in item "A", but having galvanized steel frame, 2mm thick, per the attached drawings. Hinges shall be screwed to 5mm thick plates. Inner (towards the walls) locations of the hinges, locks...etc shall be covered by galvanized steel boxes. Job includes pouring of 15cm concrete around the frame. Frame size up to 18cm. Frame shall be painted with powder coated non-glossy paint. Colors according to consultant and owner.				
4-016	Dr.'s Room door (D4), as per the attached details and drawings, leaf size, 220 x 90cm, with 5cm opening from the ground level, with 80*20cm fixed stained glass, and a stainless steel plate	No.	2		-
4-017	(Provisional) Supply and install 2mm thick brushed stainless steel, type 304, kick plates. To be one piece, U shaped, to cover both sides and bottom of door. Visible height from each side is 30cm.	No.	15		-
4-018	(Provisional) Supply and install 2mm thick brushed stainless steel, type 304, strips, 15cm wide, to be fixed on wooden elements.	M.R.	15		-
C	Supply and install solid Pine (Suwed) door jamb and frame, same width as wall, and grooved to receive thermoplastic seal, sealed smooth with wood putty, painted with 3 coats of non-glossy oil paint; color coded polyor from Tambour. Job includes thermoplastic seal, 3 hinges, Hager AB700, 4x4.5" of 3mm thickness and metallic thrust ball bearings.	No.	4		-
Subtotal of plywood doors					-

2	<u>Wooden cabinets and kitchen cupboards</u>				
	Supply and install wooden Cupboards with plywood structure, dividers, shelves and drawers and MDF doors. All internal parts covered with white HPL Formica and external parts covered HPL non-glossy colored Formica. Colors according to owner and consultant All assembly fittings, hinges, hangers, runners for drawers ...etc shall be from BLUM, Fulterer, Hettich or approved equal. Handles to be stainless steel				
4-021	Lower 60cm depth, with sliding shelves, chromed rods and angles according to attached details.	M.R.	3.00		-
4-022	Upper 40cm depth	M.R.	3.00		-
	Supply and install wooden cabinet to include and cover the "Electrical and Low Voltage Distribution Boards" width of 50cm. Specifications according to those listed in item 3 above.				
4-023	Cabinet, area of facade shall be measured only .	M.S.	10.00		-
4-024	supply and install ,Reception & Nurses Counters, 90cm height, made from maple solid wood frames and plywood structure, per attached drawings and details, area of facade shall be measured only .	M.R.	12.00		-
	Subtotal of wooden cupboards				-

3	HPL (TRESPA) Partitions				
	Supply, install and fix HPL Trespa partitions 12mm thick, for the cubicles, job includes fixed and hinged movable parts, doors, handles, locks, hinges, clips, fixtures and all accessories to complete the job. All accessories shall be metallic and covered with plastic. Colors according to A/E site engineer.				
4-031	Private treatment cubicle, per the attached drawings including the door... etc.	No.	1.00		-
	Subtotal of trespa partitions				-
4	Solid Wood & Facades				
	Supply, install and clad solid wood facades, as per drawings, made from Oak wood all tongued, grooved and fixed. Fixing of wood shall be on wooden sub-structure, made from treated pine wood. The wood shall be stained with water based color, 2 coats of sealer, and one finishing coat of 15% glossy lacquer. Including solid MOak curved section as detailed. Supply samples of staining for approval by A/E and owner.				
4-041	Solid wood façade, (measured from floor to drop beam)	M.S.	15		0.00
	Subtotal of solid wood facades				-
	Subtotal of bill # 4				-

Bill No. 5 FLOOR AND WALL FINISHES					
No.	Description	Unit	Quantity	Unit price	Total
			Total	USD	USD
	<p><i>Note: Contractor shall provide samples and shop drawings for all items for approval prior to the execution of these items.</i></p> <p><i>For all tiling works, floor and wall finishes work, areas will be calculated in meters square regardless of the width, unless states otherwise in specific items.</i></p>				
	<u>TILING</u>				
1	Porcelain Granite Tiling				
	Supply and install full body porcelain granite tiles, treated to be "Antibacterial", from Marazzi, Mirace, TAU Ceramica, or approved equal, 8mm minimum thickness. Spaced at 3mm and grouted with antibacterial and anti-fungal acrylic grout.				
	All bedded in cement mortar and a layer of small gravels (sumsum) under tiles. Layer under tiles as required and requested by site engineer. Size of tiles may vary from one space to another according to consultant requests.				
5-011	For flooring at multiple zones, 60*60cm tiles, to have rectangular edges on all sides, thus having a flush finish at the grouting edges. Tiling shall provide a perfectly flat surface. Job includes 8cm skirting. Floor area to be calculated only.	M.S.	310		-
5-012	For restrooms flooring and wet areas, 30*30cm grade R-12, in multiple slopes (1.5%) towards the floor drain.	M.S.	15		-
	Subtotal of porcelain granite tiling works				-
2	Marble floor tiling				
5-021	Supply and install polished marble, 3cm thick, from "Crema beige" Turkish origin, to be used for floor tiling for rectangular frames. Job includes grouting with epoxy grout. All bedded in cement mortar, and a layer of small gravels (sumsum) under tiles. Layer thickness under tiles as required and requested by site engineer. Job also includes crystal grinding and polishing.	M.S.	10		-
5-022	Supply and install polished marble, 3cm thick, from Local origin, to be used for door sills adjacent to the space, same width as adjacent walls. Job includes grouting with epoxy grout. All bedded in cement mortar, and a layer of small gravels (sumsum) under tiles. Layer thickness under tiles as required and requested by site engineer. Job also includes crystal grinding and polishing.	M.S.	20		-
	Subtotal of marble floor tiling works				-

3	Marble sinks counter tops and sills				
5-031	Supply and install polished Cisar marble 2cm thick, for sinks' counter tops, depth up to 60cm. Job includes angle beads and 20cm drop parapet (skirting) to cover sinks and mechanical fixtures on all exposed sides, also includes creating and finishing any opening for sinks, water mixers (faucets), soap dispensers.. etc as required and request by site engineer. Fixed to wall by means of steel structure, painted with 2 coats of antirust, and 3 finishing coats of matt oil paint. Main frame and divisions composed of 50x50x5mm sections laid horizontally under counter top and as required and requested by site engineer.	M.R.	5.00		-
5-033	Ditto as item 5-021, but kitchen counter top, fixed on kitchen cabinets, width 60cm.	M.R.	6.00		-
5-034	Supply and install polished Cisar marble 2cm thick, for sills above water cisterns in restrooms, width up to 20cm and length according to on site measurements.	M.R.	10.00		-
	Subtotal of marble sinks, counter tops and sills works				-
3	Glazed Ceramic wall tiling				
	Supply and install glazed ceramic wall tiles, treated to be "Antibacterial", minimum 6mm thick, from Marazzi, Mirace, TAU Ceramica, or approved equal. Grouted with antibacterial and anti-fungal acrylic grout. Job includes 2 coats of rough plastering, and all backed with cement and sand mortar or tiled using adhesive material, similar to Mr. Fix 106, with all the requirements needed to complete the job. Job includes multiple colors and sizes.				
5-031	On restrooms and wet areas walls, see details	M.S.	80		-
5-032	On kitchenette walls, size of 50x25cm	M.S.	10		-
5-033	On sinks walls, size of 20x20cm	M.S.	10		-
	Subtotal of ceramic tiling works				-

4	Mirrors				
	Supply and install crystal mirrors, 5mm thick. Fixed to walls with mirror type silicon adhesive material, as required and requested by A/E site engineer.				
5-041	Fixed to walls at restrooms	M.S.	2		-
	Subtotal of mirror works				-
5	Wall protection works				
	Supply and install wall protective Sanparrel rigid vinyl sheets, 0.4" thick, and 90cm height, from INPRO CORPORATION. Job includes all required and necessary finishes on the surroundings.				
5-051	To the passage walls and patient rooms , H=90cm	M.R.	50		-
	Supply and install wall protective guard, Chair Rail 2500, 2" height, from INPRO CORPORATION. Job includes all required and necessary finishes on the surroundings. To be fixed at heights of 30cm and 90cm.				
5-052	Wall guard to the passage walls and patient rooms	M.R.	50		-
	Subtotal of Wall protection works				-
	Subtotal of BILL # 5				-

Bill No. 6 GYPSUM WORKS

No.	Description	Unit	Quantity	Unit price	Total
			Total	USD	USD
	<i>Note: Contractor shall provide samples and shop drawings for all items for approval prior to the execution Gypsum and cement boards Sheathing: In accordance with Israeli standards (SSI) and manufacturer's</i>				
1	<u>GYPSUM WALLS</u>				
	<p>Supply and install temporary gypsum wall partitions, on the start and end of the construction site, composed from regular gypsum board, of 12.7mm thick gypsum panels, with 7cm galvanized runners of 0.5mm thickness, 7cm galvanized studs, every 40cm, of 0.6mm thickness, including trims with all connections, all needed openings for doors, electrical, mechanical and HVAC installations, supports, fixing, putty sealer, wire mesh, fiberglass wool 50mm thick, 24Kg/M3 in cavities.</p> <p>completely sealed from any spaces or openings, to prevent any excess dust or unnecessary materials from entering the site.</p>				
6-011	Full height walls	Job	1		-
	<u>FALSE CEILING</u>				
2	<u>Gypsum false ceiling</u>				
	<p>Supply and install MR (Moisture resistant) gypsum board type for false ceilings (vertical and horizontal elements) of 12.7mm thick gypsum panels with 5cm galvanized studs every 40cm, of 0.5mm thickness, including decorations of any form, trims with all connections, all needed openings for electrical, mechanical and HVAC installations, supports, fixing, putty sealer, wire mesh, plastic-bag enclosed fiberglass wool 50mm thick, 24Kg/M3.</p> <p>All angles shall be finished and covered with metallic solid angle protectors, covered with hardened paper (cardboard), size 30x40mm, and all necessary accessories needed for the best completion of works. All items and components shall be approved by the local institute of standards (Teken) and submitted for approval prior to works.</p> <p>Specifications according to attached documents of specifications, and to relevant section.</p>				
6-021	On horizontal false ceiling	M.S.	65		-

3	<u>Gypsum drop beams (Provisional)</u>				
	Supply and install gypsum drop beams false ceiling, per the attached details and drawings. The gypsum specifications are according to item number 6-001. Any dimension exceeding the numbers mentioned at each of the following items will be measured in square meters as in item 6-001				
6-031	Drop beam, of which 2 sides are gypsum, at which the width of the beam is up to 50cm. All sides shall be treated as one unit when measuring.	M.R.	15		-
4	<u>Acoustic false ceiling</u>				
	Supply and install acoustical false ceilings as per drawings, composed from gypsum beams at all sides, and acoustic panels with all required hangers (one at each other connection), supports and connected with T15 Fin line (F.L.) main runners and cross T for fin line grid and aluminum angle trims L and Z. The gypsum specifications are according to item number 6-01 and the acoustical panels to be 60x60cm metal. When measuring, area shall be measured superficially, including the drop beams and the acoustical panels, as one unit.				
6-041	On horizontal false ceiling, with gypsum drop beams and 60 x 60cm Metal panels. Job includes packed in bags, 50mm thick Fiberglass insulation 24Kg/M3.	M.S.	25		-
5	<u>Galvanized suspended false ceiling</u>				
	Supply and install galvanized metallic strips 30cm wide false ceiling at the balcony and where requested. The price shall include the supply of all necessary fixing accessories, aluminum L and Z profiles, openings for services, air condition grills, diffusers, light fixtures and packed in bags fiberglass wool 50mm thick, 24Kg/M3. White in color. Works as directed by A/E site engineer.				
6-051	Plain 30cm Strips.	M.S.	30		-
	Subtotal of gypsum works				-
	Subtotal of BILL # 6				
					-

Bill No. 7 PAINT WORKS

No.	Description	Unit	Quantity	Unit price	Total
			Total	USD	USD
1	<i>Note: Contractor shall provide samples and shop drawings for all items for approval prior to the execution</i> WALL PAINTING				
	Preparation of walls surfaces, removing all old paint and foreign materials, fill holes with "calsimo X" compound. and apply two coats of putty, sanding in between each coat and then three coats of "Anti-bacterial Supercryl" from Tambour (Company Mix Colors), or approved equal, according to manufacturer's instructions. Job includes supplying and applying different colors to different walls.				
7-011	On walls	M.S.	990		-
7-012	Supply and paint two coats of Bonding primer to reinforce the substrate, such as Bondrol super from Tambour, Nirlat, APC, "OR-Equal" to all inner surfaces of external walls.	M.S.	180		-
2	CEILING PAINTING				
	Preparation of surfaces, removing all foreign materials, filling holes, and apply two coats of putty, sanding in between each coat and then three coats of "Anti-bacterial Supercryl" from Tambour (Company Mix Colors), or approved equal, according to manufacturer's instructions. Job includes supplying and applying different colors to different parts.				
7-021	Gypsum board ceilings	M.S.	65		-
7-022	2-sided gypsum drop beam, at which the width of the beam is up to 50cm. All sides shall be treated as one unit when measuring.	M.R.	15		-
	Subtotal of paint works				-
	Subtotal of BILL # 7				-

Bill No. 8 METAL AND ALUMINUM WORKS

No.	Description	Unit	Quantity	Unit price	Total
			Total	USD	USD
Note: Contractor shall provide samples and shop drawings for all items for approval prior to the execution					
1	ALUMINUM WORKS				
	<p>Supply and install aluminum facades, doors and windows, powder coated, color selection to be decided by consultant and owner during works, aluminum from Extal, all with BELROM door profile for any door and window system and size, including hanging to frame with all necessary fixing accessories, all as per drawings and specifications.</p> <p>Price shall include double glazing 6mm, 6mm void, and 6mm glass. The 6mm Glass shall be laminated. It shall include also galvanized steel sub frame 1.5mm thick. Aluminum profiles, angles of any width, are to be the same of aluminum color. Ironmongery and all fixing accessories shall be original from Extal such as rails, hinges, locks, brushes, rubber EPDM, angles, all to be installed as per manufacturers' instructions in accordance with the corresponding profile, filling all sides and under the threshold and sills with appropriate aluminum silicon.</p> <p>All windows and doors shall be air tight, no matter if they have fixed, hinged, tapering, or a combination of these options.</p> <p>All moving parts (sliding, tapering -keep, or hinged...etc) shall have locks with a master key.</p> <p>Any glass section up to 130cm height from the finished floor level should be fixed. A shop drawing has to be given for approval prior to any execution of aluminum works.</p>				
8-011	W1, including the semi-circular arched part, of over all dimension 2.60*2.60cm, profile to be 4300 belgium, including fixed parts, and keep only rectangular part. See Details.	No.	6		0.00
8-012	W2, including the semi-circular arched part, of over all dimension 2.64*2.87cm, profile to be 4300 belgium, fixed parts, and keep only rectangular part. See Details.	No.	5		0.00
8-013	W3, including the semi-circular arched part, of over all dimension 82x204cm. Fixed lower part, and keep only rectangular part.	No.	1		0.00
8-014	W4, including the semi-circular arched part, of over all dimension 120x200cm. Fixed upper arched part, and 2 leaves hinged lower parts. Area to be calculated net.	No.	3		0.00
8-015	W5,Including semi-circular arched upper part.Fixed lower part ,and 2 leaves hinged upper part. Area to be calculated net.	No.	2		0.00

8-016	W6 , Fixed and completely sealed windows, including the semi-circular arched part. Fixed arched parts, and 2 leaves hinged lower rectangular parts.	No.	1		0.00
8-017	W7 , including the semi-circular arched part, of over all dimension 2.64*2.87cm, profile to be 4300 belgium, fixed parts. See Details.	No.	1		0.00
8-018	W8 , Fixed and completely sealed windows, including the semi-circular arched part, fixed wood lower part and Laminated glass middle part, over all size of 113 x 289cm, profile to be 4300 belgium, with 5cm opening from ground level	No.	3		0.00
8-019	Exit to garden door (D2), as per the attached details and drawings, profile to be belgium 4300, including tempered glass, semi-circular arched upper part, and hinged door, over all size of 264 x 375cm, with 5cm opening from ground level, and automatic door closer from Yale.	No.	1		0.00
8-020	Room door (D8), as per the attached details and drawings, profile to be 4300 belgium, including the semi-circular arched tempered glazed part, fixed wood lower part and Laminated glass middle part, over all size of 113 x 289cm, , with 5cm opening from ground level	No.	1		0.00
8-021	main entrance door façade (D10), as per the attached details and drawings, profile to be belgium 4300, including fixed wood and Laminated glass, and hinged door, over all size of 290 x 230cm, with 5cm opening from ground level, and automatic door closer from Yale.	No.	1		0.00
8-022	main door facade (D12), as per the attached details and drawings, profile to be belgium 4300, including laminated glass, semi-circular arched upper part, and hinged door, over all size of 255 x 360cm, with 5cm opening from ground level, and automatic door closer from Yale.	No.	1		0.00
8-022	Tempered glass sliding door facade (D13), as per the attached details and drawings, including semi-circular arched fixed upper part, and a sliding door, over all size of 312 x 360cm. with 4" top door rails for both sliding and fixed panels, and 6" bottom door rails, for fixed panels.	No.	1		0.00
Subtotal of aluminum works					0.00

3 METAL WORKS					
8-031	Dismantle external windows steel guards, and re-install them after installing new windows. Job includes maintenance and paint. Paint includes Preparation of surfaces, removing old paint and foreign materials, filling holes, and apply two coats of anti-rust paint, and three coats of non-glossy oil paint; color coded polyor from Tambour, or approved equal, according to manufacturer's instructions. Job includes supplying and applying different colors to different parts.	No.	14		0.00
8-032	Supply and Install steel guards for external semi-circular ached window (W7) Steel guards to match the existing guards on the same east elevation. Job includes painting.	No.	1		0.00
	Supply and install security galvanized steel doors, and frames, as per drawings, including fixing ironmongery. Provided locally or equivalent. Door and frame shall be oven painted with Ral colors. Colors according to site engineer Price shall include treating by cleaning, brushing, welding, and finished with steel putty, sanding, and sealing all joints with steel putty, prior to painting. Shop drawings of assembly must be given for approval by consultant				
8-033	Fire rated Door(D1) Ready made metallic fire reated 90m doors from (multi lock) , douple leaf of over all size 175*220cm. Price includes fire rated windows, automatic door closer from Yale, side hinges, 2mm galvanized frame , stoppers, locks, handles, and all as required and requested by site engineer. Supply samples of Ral colors to be submitted to consultant	No.	1		0.00
8-034	Storage Door (D3) Ready made metallic door from (multi lock) , single leaf of over all size,205*90cm, to be fire insulated and secure for the storage according to the local regulations (teken).	No.	1		0.00
8-035	Supply and install folded metal & plastic partitions, between every two chemotherapy chairs. Height 160cm, and to expand up to 150cm width. See Detailed sample image	No.	23.00		0.00
Subtotal of metal works					0.00

4	SIGNS				
	Supply and Install Signage Plates, for the naming of the units, from plastic abd aluminum				
8-041	15cm x 20cm	No.	15		0.00
8-042	20cm x 35cm	No.	15		0.00
8-043	70cm x 50cm	No.	2		0.00
	Subtotal of signs works				0.00
5	GLASS CLADDING				
	Supply and install glass façade, from 8 mm glass, to cover the block wall attached to the main entrance door (D12)	M.S.	5		0.00
	Subtotal of glass cladding works				0.00
	Subtotal of BILL # 8				-

AUGUSTA VICTORIA HOSPITAL
RENOVATION & REHABILITATION OF CHEMOTHERAPY CENTER
FINISHING WORKS TENDER

CIVIL / ARCHITECTURAL SUMMARY SHEET

No.	Description	Total (USD)
1	Demolition	-
2	Total of Concrete and block works	-
3	Total of Insulation works	-
4	Total of Carpentry and joinery works	-
5	Total of Floor and wall finishes works	-
6	Total of Gypsum works	-
7	Total of Paint works	-
8	Total of Metal and Aluminum works	-
	Total of Architectural and Civil works bill (U.S. \$)	-

ITEM PRICES DO INCLUDE V.A.T.

AVH/Chemotherapy Unit Electrical Works
Electrical Works

Note: Contractor shall provide samples and shop drawings for all items for approval prior to the execution of these item.

Item No.	Description	Unit	Quantity	Unit price	Total
			Total	US\$	US\$
	General Provisions of Electrical Works				
	Preambles				
	Rates of electrical installations shall includes for:-				
1	Demolition of all existing electrical systems (Lighting, power, cables, outlets, trays, switches, electrical panel, fire alarm, general alarm & all related cabling trunking & conduits) , keeping in good condition delivery to owner with full in coordination with the engineer.				
2	Electrical works including all required materials, accessories, labor, all as required according to drawings, specifications and bill of quantities.				
3	Cutting, and pining including all making good				
4	Forming, or cutting hales, chases, channels etc.in reinforced concrete structure, block works or existing walls.				
5	Plugging and screwing				
6	Preparation of all required workshop drawings and as built drawings.				
7	Testing electrical installations including providing written reports & certificates by authorized inspector /engineer approved by consultant . The report should indicate detailed measurements for electrical installations, electrical panels, cables, outlets, isolators, lighting,... etc., and if it is matching the Local electrical code, fire code & ministry of health requirements				
8	Preparing working drawings by authorized Fire Alarm Engineer, testing the works during & after completion including providing and personal necessary for testing, providing written reports & certificates by authorized fire alarm inspector approved by consultant .				
9	Protection of all electrical works				

10	All outlets, switches, cables, wires should be labeled (numbers & tags)				
11	All conduits used should be fire retardant and color coded.				
12	All works to implemented according to Ministry of health electrical requirements E-01				
13	providing Operating and Maintenance Manual Mechanical and Electrical Services including as made drawings hard & electronic copy				
1 Raceways <u>Cable Trays, and Ladders</u> Supply, install, test and commission cable trays, cable ladders, cable trunking and sleeves as per drawings and specifications complete with supports, fixing devices, separators, clamps, end caps, draw wires, elbows, joints, branches, reducers, offsets,...etc.with all accessories needed to complete the work as shown on drawing, as per the preamble, the specifications and supervision engineer's requirements.					- -
1.1	30 cm wiremesh cable tray	MR	100		-
Total Raceways					-

<p>2 Cables and Wires Supply, install, test and commission 600/1000 volts N2XY copper cables with all required accessories for proper installation and operation conduits, cable lugs, ties... etc. as shown on drawing, as per the preamble, the specifications and supervision engineer's requirements.</p> <p>2.1 (5X35 mm2) ,N2XY For Essential & Non Essential Power supply from SMDB</p> <p>2.2 (5X10 mm2) ,N2XY For UPS Power supply from USMDB</p> <p>2.3 (5X16 mm2) ,N2XY For VRF outdoor unit including 2" conduits & excavation up to unit</p> <p>2.4 1h. Fire Rate Cable orange 5x10 mm2 for smoke fans</p>	Mr	260		-
	Mr	120		-
	Mr	50		-
	Mr	150		-
Total Cables and Wires				-
<p>3 Electrical Distribution Panels Supply, install, connect, test and commission complete Type Test approved factory made sub-main distribution boards including digital instruments, signal lamps, (MCCB) circuit breakers bus bars, space for cables, cable clamps/terminals, cable shoes, current transformers, protection equipment, as per drawings, specifications and local electric authority requirements.</p> <p>3.1 DB-Chemotherapy</p>	NO	1		-
Total Electrical Distribution Panels				-

<p>4 <u>Supporting Devices</u> <u>Power sockets</u> Supply, install, test and commission the following power sockets/points as shown on drawing, as per the preamble, rate includes conduits, N2XY cables (individual wires not allowed) up to related panels,... the specifications and supervision engineer's requirements.</p> <p>Biticino, Unica/Schneider or approved equal</p> <p>4.1 16A power socket outlet normal or (N2XY 3x2.5 mm2)</p> <p>4.2 16A power socket outlet water proof (N2XY 3x2.5 mm2)</p> <p>4.3 Office set including 2 sockets 16 A white, 2 sockets RED & 2 Sockets BLUE ,3 data RJ45 cat 6 including all related cables</p> <p>4.4 Preparation For Bed head units (2 power circuit, 1 light circuit, 2 Cat6 cable to data cabinet, 16 mm2 isolated grounding cable from DB inside 10x10 wall box</p> <p>4.5 Satellite socket outlet RG6 cable, 3/4" fire retardant conduit terminated to SAT SW inside data room</p>	<p>NO</p> <p>NO</p> <p>NO</p> <p>NO</p> <p>NO</p>	<p>60</p> <p>15</p> <p>10</p> <p>15</p> <p>4</p>		<p>-</p> <p>-</p> <p>-</p> <p>-</p> <p>-</p>
<u>Total Supporting Devices</u>				-
<p>5 <u>Electromechanical works</u></p> <p>5.1 Ceiling/Wall mounted 16 A single phase socket including cabling to related panel board for fan coil units including preparation of 16 mm conduit and pull wire for thermostat units</p> <p>5.2 Double pole switch with indication lamp for Fan operation wall mount behind lighting switch</p> <p>5.3 Ceiling/Wall mounted 16 A single phase socket + indicated 2 pole switch, cabling to related panel board for 1 phase fans.</p> <p>5.4 4 Pole,16A isolator in WP enclosure for 3 phase fans including N2XY 5x1.5 Cables and flexible thermal conduits</p> <p>5.5 4 Pole,63A isolator in WP enclosure for VRF outdoor unit (N2XY 5x16 Cables and flexible thermal conduits for outdoor use will be measured separately)</p>	<p>NO</p> <p>NO</p> <p>NO</p> <p>NO</p> <p>NO</p>	<p>21</p> <p>11</p> <p>8</p> <p>6</p> <p>1</p>		<p>-</p> <p>-</p> <p>-</p> <p>-</p> <p>-</p>
<u>Total Electromechanical works</u>				-

<p>6 <u>Lighting</u> <u>Lighting points</u></p> <p>Supply, install, connect, test and commission a complete lighting point including conductors, fire retardant PVC conduits, N2XY cables (individual wires not allowed) ,(3*1.5mm2)/ (5x2.5mm2), switches & push buttons, boxes, ceiling rose, fire retardant silicon flexible connection cables and all other accessories terminated to electrical panel. as per drawings specifications and related standards.</p>				
<p>6.1 Lighting point (N2XY 3x2.5 mm2) <u>Lighting Fixtures</u> Supply, install, connect, test and commission complete lighting fixture, including all supports, suspensions, clamps, power supplies, drivers, internal conductors and/or cables, and all other accessories necessary as per drawings, specifications and related standards.</p>	NO	110		-
<p>6.2 60x60 cm LED panel as per Philips LED panel 4200K</p>	No	20		-
<p>6.3 3W LED Non-Maintained Emergency Down light in Cool White, LED Down light, min. 3 hours, electrozen or Eq.</p>	No	20		-
<p>6.4 3W LED Non-Maintained Emergency EXIT with self test function, min. 3 hours, electrozen or Eq. surface or recessed</p>	No	20		-
<p>6.5 Suspended Continuous LED lighting profile 10watt/meter opal cover body aluminum body cool white 4200K complete with power supply & Led driver.</p>	Mr.	5		-
<p>6.6 7 watt LED downlight aluminum body complete with driver, ceiling recessed</p>	No	5		-
<p>6.7 16 watt LED downlight aluminum body complete with driver, ceiling recessed</p>	No	8		-
<p>6.8 2x28 watt T5 ceiling recessed opal cover electronic driver Philips or approved equal</p>	No	10		-
<p>6.9 Rectangular, up down light Led 50 watt wall mount , aluminum complete with driver and reflector, IP54- Philips or approved equal</p>	No	40		-
<p><u>Total Lighting System</u></p>				-

7	<u>Grounding</u>				
	Supply, install, connect, test and commission a complete earthing system for the project including all conductors, termination to PEC ,19 mm dia steel copper rods, cables, clamps, conduits, hand holes with heavy duty cast iron cover, fixing, etc., as per specification, drawings, local electric authority regulations, engineers approval and related codes.				
7.1	10 mm2 flex. earthing of all metal parts that includes cable trays, water pipes, cable ladder,ac units, distribution boards bodies	JOB	1		-
7.2	4mm2 earthing of false ceiling	NO	20		-
7.3	PA grounding Bus (40/4 Copper L=20 cm) inside box	No	2		-
Total Grounding System					-

8	<u>Fire Alarm System</u> <u>Fire Alarm Main Controller</u> Rate includes in this section:				
1	Fire Alarm System shall be UL-FM listed				
2	All works should be according specification of fire alarm system attached to this section				
3	All required materials, accessories, labor, all as required according to drawings, specifications and bill of quantities.				
4	Cutting, and pining including all making good Forming, or cutting hailes, chases, channels etc.in reinforced concrete structure, block works or existing walls.				
5	Plugging and screwing				
6	Protection of all materials				
7	Labeling				
8	All conduits used should be fire retardant and color coded.				
9	Providing all maintenance & operation manuals, training and warranties				
10	Preparing working drawings by authorized Fire Alarm Engineer, testing the works during & after completion including providing and personal necessary for testing, providing written reports & certificates by authorized fire alarm inspector approved by consultant .				

<p>8-1 <u>Existing Main Fire Alarm Station / controller Moving</u> supply all workmanship & material & cabling to move the main fire alarm station - controller from its existing location to proposed location beside hospital reception, the works shall be done with coordination with hospital fire alarm engineer and according to codes & civil defense requirements</p> <p>8-2 Supply, install, connect, test and commission analog addressable fire-alarm system as existing , including all accessories as per drawings, specifications and related codes , specifications engineers approval and related codes , connecting to existing system testing and operation in addition of providing testing certificates as specified :</p>	JOB	1		-
<p>8-3.1 Fire alarm system point rate should include fire retardant conduits, 4*0.8mm fire resistance cables and boxes (850c) and all accessories as per drawings " conduits, boxes & wires for smoke, heat detectors, break glass, siren, horn/strobe, control module.)</p> <p>8-3.2 Analog Addressable photo smoke detector</p> <p>8-3.3 Analog Addressable manual call point (break glass) TPB-800ASR - analog addressable call point</p> <p>8-3.4 Addressable Alarm Notification Sounder indoor</p> <p>8-3.5 Fire Alarm Repeater</p> <p>8-3.6 3kg FM200 for Electrical Panel including copper piping, SD's, control module, indication lamps, release lamp, release button & abort buttons</p> <p>Total Fire Alarm System</p>	<p>NO</p> <p>NO</p> <p>NO</p> <p>NO</p> <p>NO</p> <p>NO</p>	<p>35</p> <p>29</p> <p>2</p> <p>2</p> <p>1</p> <p>1</p>		<p>-</p> <p>-</p> <p>-</p> <p>-</p> <p>-</p> <p>-</p>

9	<u>Public Address/Voice Evacuation System</u>				
	<u>Speakers</u>				
	Supply , Install , connect and testing public address/ voice alarm system speakers including fire retardant conduits, 2x1.5mm2 audio cables and all related cabling to data room , 850C connection boxes as described in specification & shown on drawing.				
9.1	Ceiling recessed speaker as Toa PC-580RVU with fire dome.	NO	5		-
9.2	As 1 but Wall Mount Speaker	NO	10		-
9.3	Amplifier 200 watt	NO	1		-
9.4	Lan interface	NO	1		-
9.5	Local Microphone with 6 select zones table mount including related cabling to PA system	NO	2		-
	<u>Total Public Address/Voice Evacuation System</u>				-

10 Data system				-
Supply, install, connect, test, label and commission complete data point including boxes, RJ-45 (3M, DATWYLER or R&M)				
** socket outlet with 8 pins being crimped and also earth pin for (Cat 6A) FTP data cables as per drawings, specification and related codes.				-
Data socket point including CAT6A cable, fire retardant conduit including boxes,... To be used as data or telephone or Camera or intercom or monitor				
10.1	NO	40		-
Data rack communication cabinet as per APC or equal 24U/60cm depth including fans set				
10.2	NO	1		-
24 port patch panel including nickel RJ45				
10.3 OUTLETS CAT6A WITH cover and fully terminated, labeled..	NO	2		-
10.4 Surge Power strip	NO	1		-
Access switch 24 port with PoE 370W 1Gig				
10.5 + 4x1G SFP ports as Catalyst 2960 with SFP transceiver.	NO	2		-
10.6 1/2U, Air patch panel, brush	NO	10		-
10.7 Patch cord 3M/0.5m length	NO	50		-
Total Data system				-

<p>11 <u>Nurse Call System for Bathrooms</u> Supply , Install , connect and operate the following UL Listed (UL 1069) Nurse Call System Type Aiphone or approved equal as shown on drawings rate should include al wiring, boxes & conduits required.</p> <p>11.1 Master station type Aiphone NHX-50M</p> <p>11.2 Duty Station type NHR-SP</p> <p>11.3 Server type NHX-80X CCU</p> <p>11.4 Bathroom Pull cord NHR-7A</p> <p>11.5 Warning Lamp NHR-4A</p>	<p>No</p> <p>No</p> <p>No</p> <p>No</p> <p>No</p>	<p>1</p> <p>1</p> <p>1</p> <p>4</p> <p>4</p>		<p>-</p> <p>-</p> <p>-</p> <p>-</p> <p>-</p>
<u>Total Nurse Call System</u>				-
<p>12 <u>CCTV SYSTEM/ IP CAMS</u> <u>Indoor Cameras (IP Network)</u> Supply, install & connect the following specs Cameras Reate includes connecting to existing hospital CCTV system.</p> <ul style="list-style-type: none"> • 1/2.5" progressive scan CMOS • 5 megapixel resolution • H.264 / MPEG4 / MJPEG video compression • Full HD 1080P real time video • True day / night(-I model) • Up to 20m IR range(-I model) • Motorized VF lens(-Z model) • Two-way audio • Vandal proof • PoE • 1/2.5" progressive scan CMOS <p>12.1</p>	<p>No</p>	<p>5</p>		<p>-</p>
<u>Total CCTV SYSTEM/ IP CAMS</u>				-
<u>Total Electrical Works (US\$)</u>				-

AUGUSTA VICTORIA HOSPITAL HEMOTHERAPY UNIT -RENOVATION & REHABILITATION					
Summary of Electrical Works					
Item No.	Section name and Description				Total Amount
					US\$
1	Raceways				0
2	Cables & Wires				0
3	Electrical Distribution Panels				0
4	Supporting Devices				0
5	Electromechanical Works				0
6	Lighting System				0
7	Grounding				0
8	Fire Alarm System				0
9	Public Address/ Voice Evacuation System				0
10	Data System				0
11	Nurse Call System				0
12	CCTV System/ IP CAMS				0
	Total of Electrical Works				\$0

**AUGUSTA VICTORIA HOSPITAL
CHEMOTHERAPY UNIT -RENOVATION & REHABILITATION
MECHANICAL INSTALLATIONS**

The Bills of Quantities, Specifications, Schedule of Equipment and Drawings and all other Contract documents are complementary to each other.

It is the responsibility of the Contractor to check the locations and quantities of the materials and equipment to be executed in accordance with the contract drawings.

The unit rate of the materials and equipment shall be based on the Specification, all components as required and specified under each item concerned in the Specifications, Technical Data and Notes on the Schedules of Equipment Sheet, Contract Drawings, and all other Contract documents.

All materials and equipment specified in this Volume shall be of a quality equivalent to/or better than furnished or manufactured by the following:

Equipment & Trade Mark

Fans

- Vortice
- S&P
- Rosenberg

Sanitary fixtures

- Ideal standard
- Creavit
- Villeroy&Boch
- Vitra

Sanitary fixtures fittings (wash basin mixer & kitchen mixer)

- Grohe

PPR Pipes

- Aquatherm
- Wavin

Hangers ,Anchors & Supports for pipes & ducts

- Hilti

Valves & Strainers

- Hakohav
- Raphael

HDPE drain pipe & fittings

- Wavin
- Geberit

Air grills & diffusers, volume & fire dampers

- Metal press
- Cooling industries company

Pipe insulation

Vidoflex

VRV System

- Daiken
- Mitsubishi
- Panasonic

Medical Gases

- BeaconMedaes
- Atlas Copco
- Penlon
- Greggersen
- Tech West Inc.

In addition to the above mentioned requirements, the Unit Rate shall include the following:
(The following requirements are complementary to the mentioned items in the B.O.Q.).

A. General

1. Supply of materials and equipment. (unless mentioned to be supplied by the owner)
2. Off loading and handling from trucks on site to place of installation.
3. Installation of materials and equipment.
4. All civil work required and connected with the mechanical installations, such as: equipment concrete bases and supports, cutting through walls and slabs for passage of pipes and conduits and ducts, pipe sleeves, repatching, fixing of pipe and duct hangers and supports to structure, wooden frames for air outlets and louvers and wall mounted fans, excavation and backfilling, riggings, hoisting, water proofing, cleaning, protection and painting.
5. All testing, balancing, adjusting, commissioning and handling to client complete operational systems.
6. Allowance for cleaning and for proper protection of all equipment plants, electrical installations and structures during insulation and paintings.
7. Disinfection, flushing and water treatment.
8. All labor, materials, tools, instruments, electric power supply fuel and water required for installation, testing, balancing, adjusting, disinfection, flushing, operation and commissioning.
9. Thermal insulation for all equipment, valves, trimming and accessories.
10. System identifications, tags, labels, nameplates, and charts.
11. Shop-drawings and record drawings.
12. Spare parts and components for ideal running of all services and equipment.
13. Spare parts information and tools, as recommended by the manufacturer
14. Operation and maintenance manuals.
15. Training of nominated staff
16. Samples as required by the Engineer.
17. Inspection, testing, rejection, adjusting, balancing, commissioning, and handling to client of all materials, equipment and workmanship.
18. Maintenance of all items supplied by contractor as per Contract Conditions
19. Electrical wiring between equipment and power panel
20. For pipe works: Steel, PPR, HDPE, UPVC for all services.

The unit price shall include all pipe fittings and joints such as elbows, bends, tees, reducers, unions, expansion joints, flanges, anchoring, sleeves, floor plates, flanges, sockets and all joining materials, pipe hangers and supports, expansion bellows loops and joints, fire retardant and protection sealants for all pipes crossing fire rated structures, adapters and dielectric unions for connecting dissimilar materials, excavation and back-filling, chasing in walls, painting, pipe protection against corrosion, pipe coating, as required per specifications and drawings.

Pipe work shall be measured in meter run (MR).

Plumbing System					
Item	Description	Unit	Qty.	Rate (\$)	Amount (\$)
1)	<u>Plumbing Works</u>				
	<u>Water Piping :</u>				
1.1	<u>PPR Pipes:</u>				
	PPR pipes (PN16) for domestic and flush water systems,with all necessary fittings like elbow, t, vent.....etc.,for complete installation Of approved quality. Price includes 6mm for cold pipes inside block and concrete walls.				
1.1.1	20mm diameter	Mr	16		-
1.1.2	25mm diameter	Mr	12		-
	Ditto,but underground cold PPR pipes .Price also includes excavations and refilling works.				
1.1.3	20mm diameter	Mr	75		-
1.1.4	25mm diameter	Mr	20		-
1.1.5	32mm diameter	Mr	5		-
1.1.6	40mm diameter	Mr	2		-
	Ditto , but with 13mm insulation for hot pipes,with the following diameter:				
1.1.7	20mm diameter	Mr	25		-
	Ditto , but with 13mm insulation for underground hot pipes ,.Price also includes excavations and refilling works,with the following diameter:				
1.1.8	20mm diameter	Mr	115		-
1.1.9	25mm diameter	Mr	10		-
1.1.10	32mm diameter	Mr	6		-

1.2	<u>Butterfly Shut-off copper Valves</u> Butterfly Shut-off valves from copper where required diameter as follows:				
1.2.1	20mm diameter	No.	6		-
1.2.2	25mm diameter	No.	2		-
1.2.3	32mm diameter	No.	1		-
1.2.4	40mm diameter	No.	1		-
	<u>Sewage and storm water system :</u> Internal sanitary sewers network of 4" & 2" UPVC pipes shall be included in the rates of sanitary fixtures and appliances to nearest riser. The price is also includes water pex pipe of 16mm to water collector inside 25mm plastic insulation and copper angle valve and necessary fittings to complete the job.				
1.3	<u>Wash Basin</u>				
1.3.1	Wash basin . Complete with chrome single lever mixer.	No.	1		-
1.3.2	Ditto, but wash basin (counter type). Ditto, but white vitreous china wash basin for handicapped .The price includes	No.	5		-
1.3.3	electronic mixer, brackets and all accessories to complete the job.	No.	2		-

1.4	<u>European Toilet</u>				
1.4.1	Wall hung White Vitreous China European type Toilet, with concealed flush tank.	No.	1		-
1.4.2	Ditto ,but wall hung white vitreous china European toilet for handicapped use with concealed flush tank. The price includes open front ,raised toilet cover ,two support arms and all needed to complete the job as per drawings and specifications and supervisor engineering instructions.	No.	2		-
1.5	<u>Hose bib</u> Chromium plated hose bib hand spray for WC's.	No.	3		-
1.6	<u>Kitchen Sink</u> Stainless steel single Bowl Kitchen Sink with tray. Price includes: Kitchen Type mixer. All Fittings and accessories.	No.	2		-
1.7	<u>Shower</u> Shower head, complete with diverter, hand spring , hose, bracket. Price includes: Waste Outlet and drainage connection. Water supply lines. All required fittings and accessories.	No.	2		0
1.8	<u>Floor Trap</u>				
1.8.1	Floor drain with trap and 15cmx15cm grating stainless steel cover.	No.	10		-
1.8.2	Ditto,but 4"/2" floor trap for fancoils drain	No.	15		-
1.9	<u>Clean Out</u>				
1.9.1	4" HDPE Clean out, with 15/15 cm stainless steel cover.	No.	6		-
1.9.2	Ditto, but 2" cleanout	No.	6		-

1.10	<u>HDPE Pipes</u> Drainage HDPE (High Density Poly Ethylene) drainage pipes and fittings for drainage and vent pipes. Price Includes: Couplings Hanging for vertical pipes Digging and refilling for underground pipes All Accessories needed for complete installation.				
1.10.1	4" diameter	Mr.	75		-
1.10.2	2" diameter (vent pipes)	Mr.	10		-
1.10.3	Ditto, but 2" PN6 ac drain pipes	Mr.	55		-
1.11	Dismantling of existing mechanical system (drain, fixtures, water piping, HVAC) and handling over to owner in an approved store.	L.S.	1		-
Total of Plumbing Works (\$)					0

HVAC Works					
Item	Description	Unit	Qty.	Rate (\$)	Amount (\$)
2)	<u>Air conditioning & ventilation system :</u> <u>VRF SYSTEM</u> Variable refrigerant flow system, as required in the schedule of equipment Heat pump VRF (variable refrigerant volume) system.Refrigerant R410a.Complete with the outdoor and indoor units,piping network,control system(thermostat) and all necessary parts needed according to drawings and specifications.				
2.1	<u>Outdoor Units</u> variable refrigerant flow outdoor unit, DC brushless motor type and scroll compressor with DC inverter drive, refrigerant R 410 A, including lifting to roof with crane - if needed-, concrete base, vibration absorber and electric connection to panel, copper piping connection and all fittings as recommended by manufacturer. Capacity selection should be corrected to 24 C indoor temperature,35 C summer outdoor temperature,2C winter outdoor temperature, actual equivalent refrigerant piping length Cooling capacity =73.12kw,heating capacity =65.85kw,34hp.	No.	1		-

2.2	<u>Indoor Units</u>				
	Concealed ceiling type of External static pressure not less than 50Pa. According to the following cooling capacities:-				
	Selection to be based on medium speed, external air pressure of 0.25 ", indoor temperature of 24 C and outdoor temperature of 35 C (summer) 2 C (winter)				
2.2.1	cooling capacity up to 3.13kw and air flow 525 cfm	No.	1		-
2.2.2	cooling capacity up to 5.3kw and air flow 735 cfm	No.	1		-
2.2.3	cooling capacity up to 8.67kw and air flow 1120 cfm	No.	2		-
	Ditto.but floor mounted indoor units with the following capacities:				
2.2.4	cooling capacity up to 2.18kw and air flow 246 cfm	No.	4		-
2.2.5	cooling capacity up to 2.34kw and air flow 384 cfm	No.	2		-
2.2.6	cooling capacity up to 3.92kw and air flow 490 cfm	No.	2		-
2.2.7	cooling capacity up to 4.59kw and air flow 560 cfm	No.	7		-

2.3	<u>Control & Wiring</u> All wiring between indoor and outdoor units inside electrical conduits according to the following system capacity: For system with outdoor units size up to 34 HP	L.S.	1		0
2.4	<u>Piping Network</u> Insulated copper pipes for refrigerant 410 between indoor units and outdoor unit according to manufacturer instructions and calculations. Price includes all required fittings, hanging, 20mm thick isolation and digging. According to the followings: For system with outdoor units size up to 34 HP	L.S.	1		0
2.5	<u>Extract Fan</u> Ducted Extract Fans Price includes: Vibration isolators resilient mountings, skids and hangers. Flexible connections on fan inlet and outlet insect screen back draft dampers or automatic shutter one set of spare belt drives per each fan With the following capacities: 2.5.1 Ref.Faf#1 inline centrifugal ducted fan Capacity of 415 cfm, 0.25" head 2.5.2 Ref.Faf#3 inline centrifugal ducted fan Capacity of 115 cfm, 0.2" head 2.5.3 Ref.Faf#4 inline centrifugal ducted fan Capacity of 160 cfm, 0.2" head 2.5.4 Ref.Faf#5 inline centrifugal ducted fan Capacity of 100cfm, 0.2" head 2.5.5 Ref.Faf#6 inline centrifugal ducted fan Capacity of 295cfm, 0.2" head 2.5.6 Ref.Exf#1 inline centrifugal ducted fan Capacity of 50cfm, 0.2" head 2.5.7 Ref.Exf#2 inline centrifugal ducted fan Capacity of 445cfm, 0.25" head 2.5.8 Ref.Exf#3 inline centrifugal ducted fan Capacity of 570cfm, 0.2" head 2.5.9 Ref.Exf#5 Acoustic cabinet fire rated fan(400°C/2hr) Capacity of 450cfm, 0.2" head 2.5.10 Ref.Exf#6 Acoustic cabinet fire rated fan(400°C/2hr) Capacity of 850cfm, 0.2" head				
		No.	1		-
		No.	1		-
		No.	1		-
		No.	1		-
		No.	1		-
		No.	1		-
		No.	2		-
		No.	1		-
		No.	1		-
		No.	1		-
		No.	1		-
		No.	1		-

	Ditto, but axial fans. Price includes: Required wall coring fixation set Automatic shutter and inlet guard With the following capacities: Ref.Faf#2 glass mounted axial fans Capacity of 30 cfm Ref.Faf#7 glass mounted axial fans Capacity of 390 cfm Ref.Exf#4 glass mounted axial fans Capacity of 390 cfm				
2.5.11		No.	1		-
2.5.12		No.	1		-
2.5.13		No.	1		-
2.6	<u>Ceiling Mounted Diffuser</u> Ceiling diffusers, square 4-way type with opposed blade dampers and with dampers and registers.				
2.6.1	300x300mm (12"/12")	No.	6		-
2.6.2	375x375mm (15"/15")	No.	1		-
2.6.3	150x150mm (6"/6") for fresh air	No.	4		-
	Ditto, but wall mounted supply grills for the following sizez:				
2.6.4	15x10cm for fresh air	No.	2		-
2.6.5	15x15cm for fresh air	No.	1		-
2.6.6	20x15cm for fresh air	No.	3		-
2.6.7	25x15cm for fresh air	No.	1		-
2.6.8	45x15cm for fresh air	No.	1		-
2.6.9	45x20cm for fresh air	No.	1		-
2.6.10	85x15cm	No.	2		-

2.7	<u>Ceiling Return Grill</u> Ceiling return Grills.				
2.7.1	300x300mm (12"/12")	No.	4		-
2.7.2	375x375mm (15"/15") Ditto, but wall mounted return grills for the following size:	No.	2		-
2.7.3	130x20cm	No.	1		-
2.8	<u>Ceiling Exhaust Grill</u> Ceiling mounted exhaust air grill , with register . Price includes flow rate calibration.				
2.8.1	150mmx 150mm	No.	4		-
2.8.2	300mmx 300mm	No.	1		-
2.8.3	375mmx 225mm	No.	2		-
2.8.4	375mmx 300mm	No.	1		-
2.8.5	Ditto, but wall mounted exhaust louver of size:				
2.8.6	15 cmx10 cm	No.	2		-
2.8.7	50 cmx15 cm	No.	1		-
2.8.8	50 cmx20 cm	No.	2		-
2.8.9	55 cmx15 cm	No.	1		-
2.8.10	60 cmx15 cm	No.	1		-
2.8.11	75 cmx20 cm	No.	1		-
2.9	<u>Air Ducts</u>				
2.9.1	Galvanized air ducts in various thickness as required by Smacna. Price Includes: Hanging , supports and brackets where required. Reinforcing Angels Vanes Volume Split Damper All Required Fittings and accessories. Ditto, but fire rated black galvanized sheet metal duct with thickness 1mm welded joint and flanged connections.	M ²	70		-
2.9.2		Mr	10		-
2.10	<u>Duct Insulation</u>				
2.10.1	internal acoustic duct insulation (1" thickness, 24 kg\m ³ density)	M ²	5		-
2.10.2	External duct insulation (1 1/2" thickness , 24 kg\m ³ density)	M ²	30		-
2.11	<u>Flexible air ducts:</u> Flexible insulated round air ducts connection from duct to grills through rectangular to round connection piece , excavation, hanging, and all required fittings and accessories.				
2.11.1	Diameter 6"	Mr	10		-
2.11.2	Diameter 8"	Mr	10		-

2.12	<u>Non return dampers</u> Aluminum Non-return dampers where required according to the following sizes: Area up to 0.1 m ²	No	1	-
2.13	<u>Air Curtain</u> 1.5m concealed type air curtain flow min/max 650/1240 cfm with door contact connection possibility, price includes all required accessories for complete installation.	No	1	-
Total of HVAC Works (\$)				0

MEDICAL GASES WORKS

Item	Description	Unit	Qty.	Rate (\$)	Amount (\$)
3)	<u>Medical Gases System</u>				
3.1	<u>Copper pipes</u> Copper pipes to be connected to the served terminals, phosphorous de-oxidized non-arsenical copper pipes complete with, such as, but not limited to, fittings, valves, supports, brackets, etc., as shown on drawings, and the technical specifications. Include all labeling, accessories for the completion of the works. Inside diameter of pipes as follows:				
3.1.1	Diam. Ø 1/2"	Mr	150		-
3.1.2	Diam. Ø 3/4"	Mr	70		-
3.1.3	Diam. Ø 1"	Mr	10		-
3.2	<u>Area Valve& Service Units(AVSU)</u> Areas, valve and service units (AVSU) in the hospital where shown on the drawings, and technical specifications with all necessary equipment, pipe work, fittings, boxes, accessories, connectors pressure gauges, switches including the zone pressure alarm panel and all related electrical works to have complete and full operational AVSU units. 3 Gas pipes				
		No.	1		-
3.3	<u>Local Alarm Unit</u> Area Alarm Panel for medical gases pressure indication and audio and visual alarms for low and high pressures including all sensors and electrical wiring. For 3 services				
		No.	1		-
3.4	<u>Zone Valves</u> All required valves, check valves for the medical gases and vacuum system, shown or not shown on the drawings, and technical specifications.				
3.4.1	Diam. 1/2"	No.	2		-
3.4.2	Diam. 1"	No.	1		-

3.5	<p>Medical trunking system</p> <p>Medical trunking system of modular aluminum extrusion section, supplied fully factory piped, wired and tested.</p> <p>Trunking system shall consist of three modular extrusions joined together to form a profile according to detail:</p> <p>Medical trunking system manufacturing and installation shall satisfy the latest version of Israeli health ministry guide for medical gases networks (G 01) and shall comply with the following European code: EN 793: Particular requirements for safety of medical supply units.</p> <p>Price includes all medical gases outlets as per drawings and all electrical sockets as per electrical drawings</p> <p>Gas sockets installed inside the trunking system- shall satisfy the latest version of Israeli health ministry guide for medical gases networks (G 01) and shall comply with the following European codes:</p> <p>EN 737- 1: Terminal units for compressed medical gases and vacuum.</p> <p>EN 737- 4: Terminal units for anesthetic gas scavenging systems.</p> <p>EN 737- 6: Dimensions of probes for terminal units for compressed medical gases and vacuum</p> <p>Price shall include dual hanging rail for recovery, birth, day care, incubator and emergency rooms. Single hanging rail to be included for other rooms.</p>				
3.5.1	Bed Head Unit vertical type for one bed with 3 gas outlets	No.	11		-
3.5.2	Install only of existing vertical type bed head units price includes electrical & piping connections.	No.	2		-

3.6	Aluminium trunk Supply & install (as per detail) of aluminium trunk 20x10cm inside floor for passage of medical gases under tiles.Price includes tile cutting ,concrete bedding ,excavation,steel plate cover 30x1 cm ,steel angle and porcelain tiles.	Mr.	50	-
3.7	Fees to qualified third party verifier acceptable to the engineer and owner to perform and attest to final verification of the systems . Make corrections as required ,including additional testing if necessary to attain full and unqualified certification.	L.S.	1	-
Total of Medical Gases Works (\$)				0

FIRE FIGHTING WORKS

Item	Description	Unit	Qty.	Rate (\$)	Amount (\$)
4)	<u>Fire Fighting System</u>				
4.1	<u>Fire Cabinet</u> Fire cabinet includes $\phi 2''$ hydrant, 30m long hose rack. $\phi 3/4''$, 30m long hose reel with combined pressure reducing to limit pressure to 4.5 bar, fast closing valve and 6 kg Powder fire extinguisher. Price includes painted galvanized sheet metal cabinet of size 1200x800x300 mm	No.	2		-
4.2	<u>Butterfly Valve</u> Butterfly valve of the following diameter. diameter 2"	No.	2		-
4.3	<u>Fire pipes</u> Underground Galvanized seamless steel pipe (SCH40) work to ASTM A53 grade (A) schedule (40). Price Includes: protection against corrosion of laminated polyethylene, backed self adhesive, rubberized, bitumastic compound tape. Excavation and refilling. All Required fittings and accessories. with the following sizes: 2" nominal pipe size	Mr.	10		0
4.4	Approval of local fire fighting department and Israeli Standard Institute (Makhon Tkaneem) for system components and installation including all required fees, tests, drawings and documents, works or modifications. Contractor should be responsible for submission and flow-up of approval request	L.S.	1		-
Total of Fire Fighting Works (\$)					0

**AUGUSTA VICTORIA HOSPITAL
CHEMOTHERAPY UNIT -RENOVATION & REHABILITATION
Summary of Mechanical Works**

Item No.	Section name and Description		Total Amount
			US\$
1	Plumbing Works		0
2	HVAC System		0
3	Medical Gases Works		0
4	Fire Fighting Works		0
	Total of mechanical Works		\$0

**AUGUSTA VICTORIA HOSPITAL
RENOVATION & REHABILITATION OF CHEMOTHERAPY CENTER
FINISHING WORKS TENDER**

GENERAL SUMMARY SHEET

No.	Description	Total (U.S\$)
1	Architectural and Civil	-
2	Electrical	-
3	Mechanical	-
	Grand Total of Renovation works bill (US\$)	-

ITEM PRICES DO NOT INCLUDE V.A.T.