

Item	Description	Qty	Unit	Rate USD	Amount USD
<b>3C</b>	<b><u>SEWER &amp; WASTE WATER</u></b>				
<b>3C1</b>	<b><u>WASTE WATER PIPE (PVC PIPE TYPE 600)</u></b> Type 600 uPVC pipe with all necessary specials laid for internal and external waste and sewage Disposal system buried in brick walls / floor, clipped to any location / soffit or laid through ground soil where necessary. Rate shall include for necessary fittings.				
3C1.1	40mm diameter.	40	m		
3C1.2	50mm diameter.	150	m		
3C1.3	63mm diameter.	70	m		
3C1.4	75mm diameter.	10	m		
<b>3C2</b>	<b><u>SEWER PIPE (PVC PIPE TYPE 600)</u></b> Type 600 uPVC pipe with all necessary specials laid for internal and external waste and sewage Disposal system buried in brick walls / floor, clipped to any location / soffit or laid through ground soil where necessary. Rate shall include for necessary fittings.				
3C2.1	110mm diameter.	200	m		
3C2.2	160mm diameter.	150	m		
<b>3C3</b>	<b><u>uPVC PIPE ANCILLARIES</u></b> uPVC ancillaries shall be as per drawing including all connections and supports				
3C3.1	Supplying and fixing of uPVC floor drain including Stainless Steel cover with a grating.	64	nr		
3C3.2	Supplying and fixing of 50mm diameter uPVC vent cowl	2	nr		
<b>3C</b>	<b>Total of Sewer and waste water Carried to Summary</b>				

Item	Description	Qty	Unit	Rate USD	Amount USD
<b>3D</b>	<b><u>SANITARY FITTINGS</u></b>				
	Rate shall include for supplying and installation of sanitary fittings with all accessories				
3D1.1	Supplying & fixing of low level water closet approved color and complete with 4/6 litter capacity duel flush cistern, seat cover, "P" or "S" trap (as directed), WC connection, flexible connection, angle valve etc., and all other necessary fittings and accessories complete to working order as per the Drawings and Technical Specifications.	28.00	nr		
3D1.2	Supply and install approved colored Disabled low level suite comprising ceramic pedestal pan complete with "P" or "S" trap, plastic flush bend, plastic seat cover and seat , 2 gallon close couple ceramic cistern with chromium plated brass angle valve. Rate shall include for fixing pedestal to floor with necessary screws etc. fixing ceramic cistern to wall with galvanized M.S. brackets, fixing flush pipe in wall and connecting water line, soil pipe line and vent pipe to fittings, with foldable Grab bar & other all related accessories for Disabled toilet.	2.00	nr		
3D1.3	Supplying & installation of Disabled wash basin of approved color, complete with ideal standard water efficient <b>mixture</b> tap angle valve, flexible connection, rubber plug and chromium plated chain waste, bottle trap fixed as including water supply and waste water connection all complete to working order. Make Rocell, American standard, Toto or equivalent.	2.00	nr		
3D1a.3	Supplying & installation of vanity type wash basin of approved color, complete with ideal standard water efficient <b>mixture</b> tap, angle valve, flexible connection, rubber plug and chromium plated chain waste, bottle trap fixed as including water supply and waste water connection all complete to working order.	18.00	nr		
<b>Page Total Carried to Summary</b>					

Item	Description	Qty	Unit	Rate USD	Amount USD
3D1.4	Supplying & installation of vanity type wash basin  <b>Supplying and installation of sanitary accessories</b>  Unless otherwise stated all sanitary accessories shall be chromium plated brass or Stainless Steel approved by the Architect.	15.00	nr		
3D1.5	Towel Rail.	16.00	nr		
3D1.6	Toilet Paper Roll holder	28.00	nr		
3D1.7	Soap Dish	33.00	nr		
3D1.8	Robe hooks	28.00	nr.		
3D1.9	Hand bidet shower including angle valve.	28.00	nr		
3D1.10	Shower head including <b>conceaied</b> mixture Valve  <b>Toilet Mirror</b>  Supplying & fixing of plain glass mirrors, with chromium plated clips and plugs to fix to wall including necessary accessories.	16.00	nr		
3D1.11	600mm x 900mm	33.00	nr		
<b>Page Total Carried to Summary</b>					

Item	Description	Qty	Unit	Rate USD	Amount USD
3D	<u>COLLECTION</u>				
	Sanitary Fittings				
	Total of Page No: 68				
	Total of Page No: 69				
	Total of Sanitary fittings to Summary				



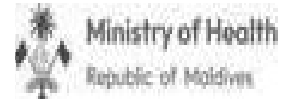
Item	Description	Qty	Unit	Rate USD	Amount USD
<b>3E</b>	<b><u>EXTERNAL DRAINAGE SYSTEMS</u></b>				
	<b><u>Other works</u></b>				
3E.1	<b>Double seal Sewer Manhole</b> , size 600mmx600mm internally as per drawings with invert depth not exceeding 900mm including excavation and back filling, 150mm thick RCC grade 30 foundation including necessary reinforcement forming channels and 100mm thick RCC walls, base, mass concrete filling with neat cement grout, and cast iron double seal manhole covers with lifting arrangement. Inlet and outlet connections to complete the manhole in order.	27.00	nr.		
3E.2	Supplying all material and construct 450x450 mm <b>gully trap</b> as per detail drawing. Rate shall include for excavation & backfilling, concreting, benching, internal plastering, precast concrete cover slab with lifting handles, etc.	19.00	nr.		
3E.3	<b><u>Excavation for Pipe Works</u></b>  Excavation and back fill to pipe trench for normal pipe laying areas, as per detail drawing. (Rate shall include for screed concrete work)	150.00	m		
<b>3E</b>	<b>Total of External Drainage System</b>				

Rv1

Rv1

Item	Description	Qty	Unit	Rate USD	Amount USD
<b>3F</b>	<b><u>STORM WATER DRAINAGE</u></b>				
3F1.1	<b>Roof drain</b> shall be cast iron, large sump, Flat type, side or bottom discharge or angle type side discharge as required and approved by the Engineer, complete with lightweight, shock resistant, aluminum elevated dome strainer, non-puncturing flashing clamping collar with integral gravel guard and perforated extension sleeve for up to 50 mm thick roof insulation and bottom inside caulking outlet of same size as rainwater pipe.	2.00	nr.		
3F1.2	0.47 mm thick Zn/AL eave gutter size 100mm x 150mm from an approved specialist supplier fixed on Galvanized iron lipped channel purlin frame work including necessary galvanized brackets and fixing accessories with good quality self trapping screws with EPDM washers all as per detail drawings. (Samples should be approved by the Engineer).	68.00	m		
3F1.3	0.47mm thick Zn/Al down pipe size 100 mm x 150 mm from specialist approved supplier fixed to wall including all rain water specials and accessories with necessary brackets etc.	30.00	m		
3F1.4	0.47mm thick Zn/Al down pipe size 200 mm x 150 mm from specialist approved supplier fixed to wall including all rain water specials and accessories with necessary brackets etc.	50.00	m		
3F1.5	(90mm) diameter type 600 uPVC perforated pipe with geo textile covering per drawing, buried in soil / floor any location where necessary. Rate shall include for necessary fittings / for excavation, backfilling etc.	50.00	m		
3F1.6	225 mm diameter PVC pipe embedded or fixed to wall / slab / earth including all specials. Rate shall include for excavation, backfilling etc.	150.00	m		
<b>Page Total Carried to Summary</b>					

Item	Description	Qty	Unit	Rate USD	Amount USD
3F1.7	Storm water catch pit with grated cover, size 450x450mm internally as per drawings with invert depth minimum 450mm including excavation and back filling, 150mm thick RCC grade 30 foundation including necessary reinforcement forming channels and 100mm thick RCC walls, base, mass concrete filling with neat cement grout, and ss screen mesh with grated cover. Inlet and outlet connections to complete as per the detail drawing.	8.00	nr		
3F1.8	Storm manhole with grated cover, size 600x600mm internally as per drawings with invert depth minimum 600mm including excavation and back filling, 150mm thick RCC grade 30 foundation including necessary reinforcement forming channels and 100mm thick RCC walls, base, mass concrete filling with neat cement grout, and ss screen mesh with grated cover. Inlet and outlet connections to complete as per the detail drawing.	5.00	nr.		
3F1.9	Any other items deemed necessary for completion of the installation as indicated in the specification and drawings for efficient operation of the system ( <b>Please Specify</b> )	1	Item		
3F1.10	Provide 3 sets of hard copy and 1 set of soft copy in CD of As Built Drawings.	1	Item		
3F1.11	Testing and commissioning of Fire detection system	1	Item		
	<b>Page Total Carried to Collection</b>				
<b>3F</b>	<u>COLLECTION</u>  <u>STORM WATER DRAINAGE</u>  Total of Page No: 72  Total of Page No: 73				
<b>3F</b>	<b>Page Total Carried to Summary</b>				



## **BILLS OF QUANTITIES**

### **BILL NO. 04 -ELECTRICAL INSTALLATION**

**DECEMBER 2023**

BILLS OF QUANTITIES BILL NO. 04 - ELECTRICAL INSTALLATION SUMMARY		
	Description	Amount
4A	ELECTRICAL INSTALLATION	
4B	LIGHTNING PROTECTION	
TOTAL CARRIED TO GRAND SUMMARY		

<b>BILLS OF QUANTITIES</b> <b>BILL NO. 04 - ELECTRICAL INSTALLATION</b>					
Item	Description	Qty	Unit	Rate USD	Amount USD
4A	<p><b><u>ELECTRICAL INSTALLATION</u></b></p> <p>All the accessories has to be purchased according to the standard and the specifications. Any brand to be used must have a local agent and it must be using for past 3 years within the country. Agent should submit the customer list and the manufacturers authorization letter.</p> <p>The wiring shall be in full rigid PVC conduits &amp; junction boxes (65mm Dia,65mmxh) &amp; Switch boxes (80x80x50mm) with the conduit system providing a continuous and effective means of protection for the wiring. The conduit system shall be concealed with 12mm covering in the building wall or fabric in the building fabric and where provided under a roof the conduit shall be clipped to the roof members. Any visible surface wiring shall be carried in PVC flat casings approved by the Engineer.</p> <p>Please note that the price are non - negotiable after tender opening.</p> <p><b><u>SWITCHES &amp; SOCKET OUTLET</u></b></p> <p><b>Legrand (Mallia), Schneider (Vivace), Schneider (Zencelo), Schneider (ULIT) Clipsal (E3000), Orange (Scintilla)</b></p>		NOTE		
4A1	<p><b><u>INDOOR LAMP OUTLET (ONE WAY SWITCH)</u></b></p> <p>Supply all material and provide final Sub circuit point wiring only for the following outlet, 3 plate ceiling rose, connector, CG lamp holder &amp; switch fixing charges with all materials and including the cost of one way switch &amp; fitting, wiring shall be in 1.5mm<sup>2</sup> PVC/PVC/Cu cables + 2.5mm<sup>2</sup> E as specified and as shown in electrical drawings.</p>				
4A1.1	Indoor lamp outlets Ground floor	182	Nr		
4A1.2	First floor	83	Nr		
4A1.3	Exhaust fan outlet (Including 13A Socket)	16	Nr		
<b>Page Total Carried to Collection</b>					

Item	Description	Qty	Unit	Rate USD	Amount USD
<b>4A2</b>	<b><u>INDOOR LAMP OUTLET (TWO WAY SWITCH)</u></b> Supply all material and provide final sub circuit point wiring only for the following outlets and Conector, CG lamp holder & switch fixing charges with all materials and including the cost of one way switch & fitting ,wiring shall be in 1.5 mm <sup>2</sup> PVC/PVC/Cu cables + 2.5mm <sup>2</sup> E as specified and as shown in electrical drawings.				
4A2.1	Indoor Lamp outlet (two way switch) Ground floor	72	Nr		
4A2.2	First floor	14	Nr		
<b>4A3</b>	<b><u>FAN OUTLET</u></b> Supply and install 1.5mm <sup>2</sup> PVC cable and earth 2.5mm <sup>2</sup> connectors, hooks, including one way switch conduits and switch fixing charges with all accessories and wire for ceiling fan outlet.				
4A3.1	Ground floor	16	Nr		
	<b><u>LIGHTING FIXTURES</u></b>  All the accessories has to be purchased according to the standard and the specifications. Any brand to be used must have a local agent and it must be using for past 3 years within the country. Agent should submit the customer list and the manufacturers authorization letter.  Please note that the prices are non-negotiable after tender opening.		NOTE		
4A4	<b><u>LIGHTING FIXTURES</u></b> As per the specifications and annexed scheduled of lighting fixtures. (Lamp - Osram, Philips, Thron, EYE.) <b>Refer Electrical lighting system drawings 23553-01-PR-EL-LT-5300,5301&amp;5302 for schedule of light fittings)</b>  (Detailed drawing shows technical specifications and guideline for general lamp shape. Please note that the final approval must be obtained from the consultant Architect & an Engineer before purchasing a lamp)  Below cost shall be included for Supplying and Installation of fixtures including all the necessary accessories to complete the work.				
4A4.1	<b>Lighting fixtures in Ground Floor</b> 37W LED Ceiling Recessed Panel Lamp (600mmx600mm) (REL-32)	9	Nr		
4A4.2	22W LED Ceiling Recessed Panel Lamp (300mmx300mm) (REL-30)	38	Nr		
<b>Page Total Carried to Collection</b>					

Item	Description	Qty	Unit	Rate USD	Amount USD
4A4.3	22W LED Ceiling Recessed Panel Lamp (300mmx300mm) (2Way)(REL-30)	21	Nr		
4A4.4	7W LED Ceiling Recessed Panel Lamp (REL-5)	34	Nr		
4A4.5	12W LED Ceiling Recessed Panel Lamp (REL-6)	26	Nr		
4A4.6	22W LED Ceiling Recessed Panel Lamp (REL-7)	21	Nr		
4A4.7	22W LED Ceiling Recessed Panel Lamp (2Way) (REL-7)	42	Nr		
4A4.8	8W LED Mirror Lamp (WAL-12)	3	Nr		
4A4.9	10W LED Internal Wall Lamp (WAL-6)	10	Nr		
4A4.10	3W LED Step Lamp (Two Way)(SLT-1)	9	Nr		
4A4.11	5W LED External Wall Recessed Lamp (WAL-8)	10	Nr		
4A4.12	Bed Panel Lamp Fitting	16	Nr		
4A4.13	Exit Sign Board	11	Nr		
4A4.14	2x5W LED Emergency lamp with 3 Hrs battery backup	13	Nr		
	<b>Lighting fixtures in First Floor</b>				
4A4.15	37W LED Ceiling Recessed Panel Lamp (600mmx600mm) (REL-32)	17	Nr		
4A4.16	22W LED Ceiling Recessed Panel Lamp (300mmx300mm) (REL-30)	9	Nr		
4A4.17	100W LED High Bay Light	24	Nr		
4A4.18	12W LED Ceiling Recessed Panel Lamp (REL-6)	18	Nr		
4A4.19	22W LED Ceiling Recessed Panel Lamp (REL-7)	2	Nr		
4A4.20	8W LED Mirror Lamp (WAL-12)	6	Nr		
4A4.21	10W LED Internal Wall Lamp (Two Way) (WAL- 7)	2	Nr		
	<b>Page Total Carried to Collection</b>				



Item	Description	Qty	Unit	Rate USD	Amount USD
4A4.22	3W LED Step Lamp (SLT-1)	12	Nr		
4A4.23	Exit Sign Board	7	Nr		
4A4.24	2x5W LED Emergency lamp with 3 Hrs battery backup	17	Nr		
4A5	<b><u>FAN</u></b>				
4A5.1	Supply and install ceiling fan 1400mm dia 280 RPM, 3.5m <sup>3</sup> /S/ Air Delivery 65W, 230V, 50Hz with copper winding, hum free capacitor type speed regulator aluminium blade & accessories {PANASONIC, KDK, XPELAIR (SLS)}.	16	Nr		
4A6	<b><u>13A SINGLE SWITCH SOCKET (RING)</u></b>				
	Supply and install 2.5mm <sup>2</sup> PVC/PVC/Cu cable and 2.5mm <sup>2</sup> earth conductor with all accessories and wire 230 Volts 13Amp white indicator type single switch socket outlet. (including cost of 13A switch socket outlet)				
4A6.1	Ground floor (Ring Circuit)	167	Nr		
4A6.2	First floor (Ring Circuit)	76	Nr		
4A7	<b><u>DISTRIBUTION BOARDS</u></b>				
	Supply and install following Distribution Board, metal clad powder coated, fitted with isolators, MCCBs, ELR, RCCBs, specified MCBs and all accessories as per the single line diagrams. (Please note that the approvals for materials and shop drawings must be obtained from the consultant Engineer)				
4A7.1	MSB (Including MTS)	1	Nr		
4A7.2	0-FDB	1	Nr		
4A7.3	0-MCCB-WA	1	Nr		
4A7.4	0-DB-L	1	Nr		
4A7.5	0-DB-P	1	Nr		
4A7.6	RT-MDB-AC	1	Nr		
4A7.7	1-FDB	1	Nr		
4A7.8	1-DB-L	1	Nr		
4A7.9	1-DB-P	1	Nr		
4A7.10	0-DB-RM	14	Nr		
4A7.11	MCB-VRV-1	1	Nr		
4A7.12	MCCB-VRV-1	1	Nr		
4A7.13	MCCB-VRV-2	1	Nr		
4A7.14	RT-MCCB-LIFT	1	Nr		
<b>Page Total Carried to Collection</b>					

Item	Description	Qty	Unit	Rate USD	Amount USD
4A8	<b><u>FEEDER CABLES</u></b> Supply all materials and install termination following PVC/PVC/Cu or PVC/XLPE/Cu feeder cables drawn through and protect by rigid conduits or trunking .				
4A8.1	35mm <sup>2</sup> cable 4 core and earth 16mm <sup>2</sup> Cu From MSB To 0-FDB	30	m		
4A8.2	35mm <sup>2</sup> cable 4 core and earth 16mm <sup>2</sup> Cu From MSB To 1-FDB	30	m		
4A8.3	16mm <sup>2</sup> cable 4 core and earth 16mm <sup>2</sup> Cu From MSB To 0-MCCB-WA	10	m		
4A8.4	10mm <sup>2</sup> cable 4 core and earth 10mm <sup>2</sup> Cu From 0-FDB To 0-DB-L	13	m		
4A8.5	10mm <sup>2</sup> cable 4 core and earth 10mm <sup>2</sup> Cu From 0-FDB To 0-DB-P	10	m		
4A8.6	10mm <sup>2</sup> cable 4 core and earth 10mm <sup>2</sup> Cu From MSB To RT-MCCB-LIFT	35	m		
4A8.7	10mm <sup>2</sup> cable 2 core and earth 10mm <sup>2</sup> Cu From 0-FDB To 0-DB-RM-1	18	m		
4A8.8	10mm <sup>2</sup> cable 2 core and earth 10mm <sup>2</sup> Cu From 0-FDB To 0-DB-RM-2	21	m		
4A8.9	10mm <sup>2</sup> cable 2 core and earth 10mm <sup>2</sup> Cu From 0-FDB To 0-DB-RM-3	23	m		
4A8.10	10mm <sup>2</sup> cable 2 core and earth 10mm <sup>2</sup> Cu From 0-FDB To 0-DB-RM-4	28	m		
4A8.11	10mm <sup>2</sup> cable 2 core and earth 10mm <sup>2</sup> Cu From 0-FDB To 0-DB-RM-5	30	m		
4A8.12	10mm <sup>2</sup> cable 2 core and earth 10mm <sup>2</sup> Cu From 0-FDB To 0-DB-RM-6	35	m		
4A8.13	10mm <sup>2</sup> cable 2 core and earth 10mm <sup>2</sup> Cu From 0-FDB To 0-DB-RM-7	37	m		
4A8.14	10mm <sup>2</sup> cable 2 core and earth 10mm <sup>2</sup> Cu From 0-FDB To 0-DB-RM-8	16	m		
4A8.15	10mm <sup>2</sup> cable 2 core and earth 10mm <sup>2</sup> Cu From 0-FDB To 0-DB-RM-9	18	m		
4A8.16	10mm <sup>2</sup> cable 2 core and earth 10mm <sup>2</sup> Cu From 0-FDB To 0-DB-RM-10	20	m		
4A8.17	10mm <sup>2</sup> cable 2 core and earth 10mm <sup>2</sup> Cu From 0-FDB To 0-DB-RM-11	25	m		
4A8.18	10mm <sup>2</sup> cable 2 core and earth 10mm <sup>2</sup> Cu From 0-FDB To 0-DB-RM-12	27	m		
4A8.19	10mm <sup>2</sup> cable 2 core and earth 10mm <sup>2</sup> Cu From 0-FDB To 0-DB-RM-13	33	m		
<b>Page Total Carried to Collection</b>					

Item	Description	Qty	Unit	Rate USD	Amount USD
4A8.20	10mm <sup>2</sup> cable 2 core and earth 10mm <sup>2</sup> Cu From 0-FDB To 0-DB-RM-14	35	m		
4A8.21	10mm <sup>2</sup> cable 4 core and earth 10mm <sup>2</sup> Cu From 1-FDB To 1-DB-L	20	m		
4A8.22	10mm <sup>2</sup> cable 4 core and earth 10mm <sup>2</sup> Cu From 1-FDB To 1-DB-P	20	m		
4A8.23	120mm <sup>2</sup> cable 4core and earth 50mm <sup>2</sup> Cu From MSB To RT-MDB-AC	35	m		
4A8.24	10mm <sup>2</sup> cable 4 core and earth 10mm <sup>2</sup> Cu From RT-MDB-AC To MCB-VRV-1	10	m		
4A8.25	4 x 25mm <sup>2</sup> cable 1 core and earth 16mm <sup>2</sup> Cu From RT-MDB-AC To MCCB-VRV-1	10	m		
4A8.26	4 x 70mm <sup>2</sup> cable 1 core and earth 35mm <sup>2</sup> Cu From RT-MDB-AC To MCCB-VRV-2	10	m		
4A9	<b><u>XLPE/SWA/PVC CABLES</u></b> Supply, install and terminate Cu/XLPE/SWA/PVC cable, buried to a depth of 900mm from FFL with warning tape, 400x200x50mm concrete cable tiles, clean sand as per specification. Excavation and backfilling shall be done as per BS standard. etc.				
4A9.1	2x150mm <sup>2</sup> cable 4core and Cu	50	m		
4A10	<b><u>CABLE TRAY</u></b> Supply and install embossed perforated heavy Hot dipped galvanized cable tray clamps and fixing Brackets, SS & MS suspending rods, Lids with all accessories.				
4A10.1	300 x 100 mm	60	m		
4A10.2	200 x 100 mm	28	m		
4A10.3	100 x 75 mm	32	m		
4A10.4	50 x 50 mm	16	m		
4A11	<b><u>GEYZER OUTLET (RADIAL)</u></b> Supply and install 2.5mm <sup>2</sup> PVC/PVC/Cu cable and 2.5mm <sup>2</sup> earth conductor with all accessories and wire 230 Volts 20Amp indicator type DP Isolator outlet. (including cost of 20A DP Isolator)				
4A11.1	Ground floor	14	Nr		
4A12	<b><u>CABLE LADDER</u></b> Supply and install heavy duty vertical cable ladder Hot dipped galvanized,clamps,Fire Barrier Systems and fixing brackets with all accessories.				
4A12.1	600mm width x 75 mm	10.00	m		
<b>Page Total Carried to Collection</b>					

Item	Description	Qty	Unit	Rate USD	Amount USD
4A13	<b><u>EARTH</u></b>				
4A13.1	Supply and install main earths 600x600x3mm copper plates and 25x3mm copper tape, 150mmx50mmx6mm Cu test clamps And Concrete Inspection Gully, enhance material with all accessories, 95mm <sup>2</sup> Cu Earth Cable from MSB to main earth. (Earth resistance less than 05Ω)	1	Item		
4A13.2	If additional copper rod, 20x2100mm and 35mm <sup>2</sup> earth cable are required to improve the earth resistance.	1	Item		
4A14	<b><u>INSPECTION AND TESTING</u></b>				
4A14.1	Testing the total electrical installation and submit a test certificate issued by a chartered engineer including detail test report acceptable to the supply authority and commissioning of the system.	1	Item		
4A15	<b><u>DRAWINGS</u></b>				
4A15.1	As built drawings, Testing and Commissioning providing operation and maintenance manual.	1	Item		
4A16	<b><u>ON GRID SOLAR POWER SYSTEM</u></b>				
4A16.1	Supply and install 125kW Solar Power System with solar panels, mounting structure, inverter, AC isolators, DC isolators, AC SPDs, DC SPDs, DC cables, AC cables, Bus bar panel and all necessary accessories. (Approved brands by the client)	1	Item		
4A16.2	<b><u>Solar PV Panels &amp; Accessories</u></b> supply and installation of 550W solar panels including MC4 connector with cable and including all other accessories to for the proper insulation comply with the specification provided	224.00	Nos		
4A16.3	Supply and installation of earthing clips for the solar panels	1	Lot		
4A16.4	<b><u>Inverter</u></b> Supply and installation of 40kW grid-tied inverter with all required accessories to complete the installation comply with the specification provided	3	Nos		
<b>Page Total Carried to Collection</b>					

Item	Description	Qty	Unit	Rate USD	Amount USD
4A17	<p><b><u>Distribution boards</u></b> Sub main panel boards shall be supplied by a reputed panel supplier having ISO certification and shall give Two years warranty for the switch gear equipment such as MCCBs, Isolators, Changeover switches, Surge Protection equipment etc., Further supplier shall be provided all test report/certificates on request. After fabrication of main panel standard test shall be done by a chartered Engineer and all such test reports shall be produced on request.</p> <p>Lockable floor mounted or wall mounted (contractor shall decide subjected to the constraint as site and actual physical size of the panel ) switch gear cubicles made out of 2mm Zink coated sheet steel enclosure (IP 54) powder coated to the approval of the engineer ,including all necessary accessories such as fuses, indicator lamps and equipment as indicated in the drawing and subjected to the given specifications. Rates for panel earthing and other necessary builders work shall be considered when pricing.</p>		Note		
4A16.1	MDB-SOLAR	1	Nos		
4A16.2	BUS-BAR Panel	1	Nos		
4A16.3	100A 4P MCB Box	3	Nos		
4A16.4	DC incoming box with 4x 2P Surge protectors, 4x2P DC unload type isolator	3	Nos		
4A16.5	<p><b><u>AC Cables</u></b> Rate shall include supplying and installation of the cable as described in the details, with all required accessories to complete the installation in fully working order</p> <p>BUS-BAR Panel to MDB-SOLAR Supply and install <b>1x [4C 95sqmm CU/XLPE/PVC ]</b> cable laid cable tray with required all accessories to complete the installation. Such cable ties, spacers, etc. installation fully working order</p>	1	Item		
<b>Page Total Carried to Collection</b>					

Item	Description	Qty	Unit	Rate USD	Amount USD
4A16.6	MDB-SOLAR to Inverter 1 Supply and install <b>1x [4C 25sqmm CU/XLPE/PVC ]</b> cable laid cable tray with required all accessories to complete the installation. Such cable ties, spacers, etc. installation fully working order	1	Item		
4A16.7	MDB-SOLAR to Inverter 2 Supply and install <b>1x [4C 25sqmm CU/XLPE/PVC ]</b> cable laid cable tray with required all accessories to complete the installation. Such cable ties, spacers, etc. installation fully working order	1	Item		
4A16.8	MDB-SOLAR to Inverter 3 Supply and install <b>1x [4C 25sqmm CU/XLPE/PVC ]</b> cable laid cable tray with required all accessories to complete the installation. Such cable ties, spacers, etc. installation fully working order	1	Item		
4A16.9	<b><u>DC Cables</u></b> Solar panel ro Panels and to inverter Supply and install <b>1x [2x1C 6sqmm Crosslinked special Polyolefin ]</b> cable laid cable tray with required all accessories to complete the installation. Such cable ties, spacers, etc. installation fully working order	1	Item		
4A16.10	<b><u>Earth Cables</u></b> PV Panel Earthing Supply and install <b>1x [1C6sqmm CU/PVC/PVC ]</b> cable laid cable tray with required all accessories such as 16mm dia Cu earth rods, couplers, driving studs, cable to rod clamps etc to complete the installation to achieve the earth resistance as mentioned in the specification and drawing	1	Item		
4A16.11	DB Earthing Supply and install <b>1x [1C16sqmm CU/PVC/PVC ]</b> cable laid cable tray with required all accessories to such as 16mm dia Cu earth rods, couplers, driving studs, cable to rod clamps etc to complete the installation to achieve the earth resistance as mentioned in the specification and drawing	1	Item		
4A16.12	Surge Arrestor Earhing Supply and install <b>1x [1C6sqmm CU/PVC/PVC ]</b> cable laid cable tray/Conduit with required all accessories such as 16mm dia Cu earth rods, couplers, driving studs, cable to rod clamps etc to complete the installation to achieve the earth resistance as mentioned in the specification and drawing.	1	Item		
<b>Page Total Carried to Collection</b>					

Item	Description	Qty	Unit	Rate USD	Amount USD
4A16.13	<b><u>Water lines for clearing</u></b> Water lines shall be installed on the roof for cleaning of the panels and shall be provided with suitable pump and a flexible hose to use in roof. All pipes and accessories shall be UV resistant and corrosion resistant.	1	Item		
4A16.14	<b><u>Testing and commissioning</u></b> total system shall be tested and commissioned using insulation test, continuity test, polarity test, phase sequence test, harmonic test and other test to approval of the engineer and relevant utility approvals. Allow for submission of test reports for Consultant's approval (03 sets)	1	Item		
4A16.15	<b><u>Drawings</u></b> Allow for submission of shop drawings for Consultant's approval before commencing the installation (03 sets)	1	Item		
4A16.16	Allow for submission of as-built drawings on completion of the contract (03 sets)	1	Item		
	<b>Page Total Carried to Collection</b>				
<b>4A</b>	<b><u>COLLECTION</u></b> <b><u>ELECTRICAL INSTALLATION</u></b> Total of page No: 75 Total of page No: 76 Total of page No: 77 Total of page No: 78 Total of page No: 79 Total of page No: 80 Total of page No: 81 Total of page No: 82 Total of page No: 83 Total of page No: 84				
	<b>Total Carried to Summary</b>				

Item	Description	Qty	Unit	Rate USD	Amount USD
<b>4B</b>	<b><u>LIGHTNING PROTECTION</u></b>				
	Supply , Installation & Testing of complete lightning protection system for the building as specified and complying with (IEC 62305,SLSI 1261/2004).		Note		
<b>4B1</b>	<b><u>AIR TERMINATION NETWORK.</u></b>				
4B1.1	Supply & Installation of solid copper vertical multi point air terminal(Franklin type) of minimum 15mm diameter & 500 mm length with a G.I. mast of minimum 15mm diameter & 2000mm length at the locations shown in the Drawing	12	Nr		
4B1.2	Supply & Installation of annealed copper tape of minimum 25mm width x minimum 3mm thickness with copper tape clip support at 500 mm span along the roof ridge interconnecting copper air finial & down conductors as shown in the Drawing.(Rate shall include all required joints, clamps, bonds, insulators, conduits and fixing accessories.)	200	m		
<b>4B2</b>	<b><u>DOWN CONDUCTORS</u></b>				
4B2.1	Supply & Installation of bare copper conductor of minimum 70mm <sup>2</sup> cross area with heavy duty cast saddle support at 500 mm span, along the outer walls of the building, starting from interconnect the air termination network to the test box & from the test box to the earth pit as shown in the Drawing (Rate shall include all required joints, clamps, bonds, insulators, conduits and fixing accessories)	150	m		
4B2.2	Supply & Installation of Oblong Test Clamp mounted in a yellow PVC enclosure on the down conductor at 2500mm above ground level.	13	Nr		
<b>4B3</b>	<b><u>EARTH TERMINATION</u></b>				
4B3.1	Supply & Installation of 18mm thickness, 3000mm long Cu earth rods (Earth resistance should be less than 5Ω )	13	Nr		
4B3.2	Provide an earth pit with a removable cover for each down conductor.	13	Nr		
<b>Page Total Carried to Collection</b>					



Item	Description	Qty	Unit	Rate USD	Amount USD
4B3.3	Bonding of all exposed metal work to the lightning protection system by using 6 mm <sup>2</sup> PVC/Cu Earth Cable	1	Item		
4B3.4	Bonding of all earths by using 70mm <sup>2</sup> Copper bare conductor through heavy duty PVC conduits with all accessories.	150	m		
4B4	<b><u>INSPECTION AND TESTING</u></b>				
4B4.1	Testing the total installation and submit a test certificate issued by a chartered engineer including detail test report acceptable to the supply authority and commissioning of the system.	1	Item		
4B5	<b><u>DRAWINGS</u></b>				
4B5.1	As built drawings, Testing and Commissioning providing operation and maintenance manual.	1	Item		
<b>Page Total Carried to Collection</b>					

Rv1



**BILLS OF QUANTITIES**  
**BILL NO. 05 -EXTRA LOW VOLTAGE INSTALLATION**

**DECEMBER 2023**

<b>BILLS OF QUANTITIES</b> <b>Extra Low Voltage (ELV) and Public Addressing Installation</b> <b>SUMMARY</b>		
	<b>Description</b>	<b>Amount</b>
5A	Extra Low Voltage (ELV) Installation	
5B	Public Address (PA) System Installation	
<b>TOTAL CARRIED TO GRAND SUMMARY</b>		

<b>BILLS OF QUANTITIES</b> <b>Extra Low Voltage (ELV) and Public Addressing Installation</b>					
Item	Description	Qty	Unit	Rate USD	Amount USD
<b>5A</b>	<p><b>Extra Low Voltage (ELV) Installation</b></p> <p>All the accessories has to be purchased according to the standard and the specifications. Any brand to be used must have a local agent and it must be using for past 3 years within the country. Agent should submit the customer list and the manufacturers authorization letter.</p> <p>The wiring shall be in full rigid PVC conduits with the conduit system providing a continuous and effective means of protection for the wiring. The conduit system shall be concealed in the building fabric and where provided under a roof the conduit shall be clipped to the roof members. Any visible surface wiring shall be carried in PVC flat casings approved by the Engineer.</p>				
5A1	<p><b><u>FIBER BACKBONE SYSTEM</u></b></p> <p>Supply and Installation of 6C Multi Mode Fiber Optic Cables including wiring for Data System starting from Main Distribution frame (MDF) at First Level Server Room to Data Equipment Racks (DER) in the respective floor levels laid through Cable Tray and Trunking etc., and all other required accessories complete to working order as per the Drawings &amp; Technical Specifications.</p>				
5A1.1	6C Multi Mode Fiber Optic (OM3) (Indoor)	150	m		
5A2	<p><b><u>DATA OUTLETS AND POINT WIRING</u></b></p> <p>Supply and installation of Data Outlet c/w Cat6 cable in PVC Conduits/Trunking as shown in the drawing c/w RJ45 outlet and connectors.</p>				
5A2.1	Ground Floor	25	nr		
5A2.2	First Floor	14	nr		
	<i>Page total Carried to the Collection below</i>				

Item	Description	Qty	Unit	Rate USD	Amount USD
5A3	<b><u>IP CCTV OUTLETS AND POINT WIRING</u></b>  Supply and installation of CCTV Outlet c/w Cat6 cable in PVC Conduits/Trunking as shown in the drawing c/w RJ45 outlet and connectors.				
5A3.1	Ground Floor	22	nr		
5A3.2	First Floor	6	nr		
5A4	<b><u>IP TELEPHONE OUTLETS AND POINT WIRING</u></b>  Supply and installation of Telephone Outlet c/w Cat6 cable in PVC Conduits/Trunking as shown in the drawing c/w RJ45 outlet and connectors.				
5A4.1	Ground Floor	18	nr		
5A4.2	First Floor	5	nr		
5A5	<b><u>IP-TV OUTLETS AND POINT WIRING</u></b>  Supply and installation of IP-TV Outlet c/w Cat6 cable in PVC Conduits/Trunking as shown in the drawing c/w RJ45 outlet and connectors.				
5A5.1	Ground Floor	15	nr		
5A5.2	First Floor	1	nr		
5A6	<b><u>MAIN DISTRIBUTION FRAMES (MDF)</u></b>  Supply and Installation of Main distribution frame (Powder Coated Zn/ Aluminium ), glass door c/w Rack Mount Power Panel , Fan Modules, UPS and necessary quantities of following accessories complete to working order in First Level Server Room for Data and Telephone System as per Drawings and Technical Specifications.				
5A6.1	<b>Passive Components</b> 19" 24U Equipment Rack 24 port Fiber patch panels including required quantities of SC Fiber connectors with duplex modules, splice tray, cable glad and accessories	1	Lot		
	<i>Page total Carried to the Collection below</i>				

Item	Description	Qty	Unit	Rate USD	Amount USD
5A6.2	<p>24 port patch panels-Modular, Unshielded Including CAT 6 Keystone modules 1m Patch leads - Multimode Fiber Optic with LC to SC interface 1m/2m Patch leads - CAT 6, Unshielded 19" 1U management panels</p> <p><b>Active Components</b> 24 Port 1000 Base Layer 3 Fiber Optic Stackable Switch (L3) (QoS Enabled) including 850nm fiber modules - 2 Nos. (WS-C3850-24S-S or equivalent) 24 Port 10/100/1000 Server Farm Switch + 4 SFP Gigabit Uplinks (L2) (QoS Enabled) including 850nm fiber modules - 1 No. (CISCO)  Fiber MM Transceivers (CISCO)</p> <p><b><u>DATA EQUIPMENT RACKS (DER)</u></b></p>	1	Lot		
5A7	<p><b>G-DER-1</b></p> <p>Supply, installation and Termination of 19" Data Equipment Rack (Powder Coated Zn/ Aluminium ), glass door c/w Rack Mount Power Panel , Fan Modules, UPS and necessary quantities of following accessories.</p>				
5A7.1	<p><b>Passive Components</b> 19" 16U ELV equipment rack 24 port Fiber patch panels including required quantities of SC Fiber connectors with duplex modules, splice tray, cable gland and accessories</p> <p>24 port patch panels-Modular, Unshielded Including CAT 6 Keystone modules 1m Patch leads - Multimode Fiber Optic with LC to SC interface 1m/2m Patch leads - CAT 6, Unshielded 19" 1U management panels</p>	1	Lot		
5A7.2	<p><b>Active Components</b> 48 Port 10/100/1000 Switch (POE) + 2 SFP Gigabit Uplinks (L2) (QoS Enabled) including 850nm fiber modules - 2 Nos. (WS-C2960X-48FPS-L or equivalent) Fiber MM Transceiver - 2 Nos. (GLC-SX-MMD=)</p>	1	Lot		
	<i>Page total Carried to the Collection below</i>				

Item	Description	Qty	Unit	Rate USD	Amount USD
5A8	<b>1-DER-1</b>  Supply, installation and Termination of 19" Data Equipment Rack (Powder Coated Zn/Aluminium ), glass door c/w Rack Mount Power Panel , Fan Modules, UPS and necessary quantities of following accessories.				
5A8.1	<b>Passive Components</b> 19" 16U ELV equipment rack 24 port Fiber patch panels including required quantities of SC Fiber connectors with duplex modules, splice tray, cable glad and accessories  24 port patch panels-Modular, Unshielded Including CAT 6 Keystone modules 1m Patch leads - Multimode Fiber Optic with LC to SC interface 1m/2m Patch leads - CAT 6, Unshielded 19" 1U management panels	1	Lot		
5A8.2	<b>Active Components</b> 48 Port 10/100/1000 Switch (POE) + 2 SFP Gigabit Uplinks (L2) (QoS Enabled) including 850nm fiber modules - 1 Nos. (WS-C2960X-48FPS-L or equivalent) Fiber MM Transceiver - 1 Nos. (GLC-SX-MMD=)	1	Lot		
5A9	<b><u>IP-PABX SYSTEM</u></b>				
5A9.1	Supply and installation of IP-PABX compatible with 16+64 IP Extensions, Operator Console, Surge Arrestors, Battery backup and Call monitoring software including a computer. (CISCO / NEC / PANASONIC)	1	Lot		
5A10	<b><u>TELEPHONE INSTRUMENTS</u></b>				
5A10.1	IP phones (With Build in switch for PC Drop) with 12 feature keys and LCD display (7821)	5	nr		
5A10.2	IP phones with LCD display	18	nr		
	<i>Page total Carried to the Collection below</i>				



Item	Description	Qty	Unit	Rate USD	Amount USD
5A11	<b><u>IP CCTV CAMERAS</u></b> Supply and installation of IP CCTV Cameras including mounting brackets, Poles for the freestanding cameras and all other necessary accessories required, complete to working order as per the drawings and technical specifications in following areas.				
	<b><u>IP CAMERA 4MP(Vari Focal)</u></b>				
5A11.1	Ground Floor	22	nr		
5A11.2	First Floor	6	nr		
5A12	<b><u>NETWORK VIDEO RECORDER</u></b> Supply and Installation of 32 channel Network Video Recorder (NVR) for the CCTV system including all necessary equipment and accessories required for recording and play back video files as per the specifications and drawing. NVR shall be installed in the First Level Server room area.				
5A12.1	Network Video Recorders for 30 days recording.	1	Item		
5A13	<b><u>CCTV MONITORING STATION</u></b>				
5A13.1	Supply and Installation of equipment related to the CCTV monitoring c/w below items at the security room and ELV room. LED Monitors (32 inch 2 Nos) with all the mounting brackets Key Boards and controllers Power Supply Unit	1	Lot		
5A14	<b><u>SOFTWARE</u></b>				
5A14.1	Allow cost for Supply and Installation of necessary Software for Close Circuit Television System (CCTV) as per the specifications	1	Item		
5A14	<b><u>IP-TV</u></b> Supply and installation of 43" flat LED display with network compatible CPU, Inbuilt speakers and mounting accessories as per the drawings for following areas.				
5A14.1	Ground Floor	15	nr		
5A14.2	Third Floor	1	nr		
	<i>Page total Carried to the Collection below</i>				

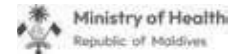
Item	Description	Qty	Unit	Rate USD	Amount USD
5A14	<b><u>WI-FI UNIT</u></b> Supply and installation of high quality Wi-Fi units from a reputed brand with all the accessories (CISCO-AIR-CAP1702I-E-K9 or equivalent)				
5A14.1	Ground Floor	2	nr		
5A14.2	First Floor	1	nr		
5A15	<b><u>NURSE CALLING SYSTEM</u></b> Nurse calling system shall be consist of Digital Room Indicator panels at the Nurses Stations, Call Points at the Bed Head panels, Power supply units ,control wires and all necessary accessories to provide fully functional system. Identification lamps shall be installed at both Bed Head Panel and Patient's room door to identify the location easy.  Supply and install 230V, 50Hz digital indicator panel with DC push button station two in parallel, Blue colour LED wall indicator lamps, Reset push button switch and necessary cables from patient room to nurses station, complete with all accessories.				
5A15.1	Ground floor - 14 way	1	Item		
5A16	<b><u>TESTING &amp; COMMISSIONING</u></b>				
5A16.1	Testing and commissioning of the <b>IP Close Circuit Television(CCTV) System, Data, Telephone &amp; IP TV System</b> , to the entire satisfaction of the engineer and submission of commissioning report in triplicate.	1	Item		
5A16.2	As built drawings, shop drawings and maintenance manual for Data/CCTV/Wi-Fi/Telephone/TV systems.	1	Item		
	<i>Page total Carried to the Collection below</i>				

Item	Description	Qty	Unit	Rate USD	Amount USD
<b>5A</b>	<b>Extra Low Voltage (ELV) Installation</b> Total of Page No: 89  Total of Page No: 90  Total of Page No: 91  Total of Page No: 92  Total of Page No: 93  Total of Page No: 94				
	<b>Total carried to the Summary</b>				

Item	Description	Qty	Unit	Rate USD	Amount USD
<b>5B</b>	<p><b>Public Address (PA) System Installation</b></p> <p><b><u>PIPE MUSIC SYSTEM</u></b></p> <p>All the accessories has to be purchased according to the standard and the specifications. Any brand to be used must have a local agent and it must be using for past 3 years within the country. Agent should submit the customer list and the manufacturers authorization letter.</p> <p>The wiring shall be in full rigid PVC conduits with the conduit system providing a continuous and effective means of protection for the wiring. The conduit system shall be concealed in the building fabric and where provided under a roof the conduit shall be clipped to the roof members. Any visible surface wiring shall be carried in PVC flat casings approved by the Engineer.</p> <p><b><u>INSTALLATION</u></b></p> <p>Supply, Installation of Multi Snack Cable, which is inter connect stage Control room, Speaker System in ceiling, Control room equipment, inter connect through Patch Bay, Including audio Recorder, Audio Mixer, Digital Effect Processor, Speaker Monitoring System. Supply, Installation of speaker Bracket, Chain Block Controller System.</p> <p>All accessories in respect of the above should be of <b>Inter -M, DAS, JBL, Sennheiser, Behringer, TOA..</b></p>				
5B1	Supply and install 360W output power PA Amplifier with accessories.	2	nr		
5B2	Supply and install professional 6 channel inline mixing console with integrated metebriidge with all accessories.	2	nr		
5B3	Supply and install 31- Band stereo graphic equalizer with all accessories.	2	nr		
5B4	Supply and install DVD Player(USB Type) heavy duty 3m length audio video cable with all accessories.	2	nr		
	<i>Page total Carried to the Collection below</i>				

Item	Description	Qty	Unit	Rate USD	Amount USD
5B5	Supply and install digital tuner with all accessories.	1	nr		
5B6	Supply and install 8 way zone selector panel with all accessories	1	nr		
5B7	Supply and install 2 way zone selector switch with all accessories	1	nr		
5B8	Supply and install cordless hand held micro phone & receiver with all accessories. (Adjustable frequency type)	3	nr		
5B9	Supply and install standard microphone with 10m cable with all accessories.(Voice)	3	nr		
5B10	Supply and install 6W soffit mounted speaker with line transformer.	26	nr		
5B11	Supply and install 6W wall speaker with line transformer.	18	nr		
5B12	Supply and install 60W column array speaker (wall mounted) with line transformer.	6	nr		
5B13	Supply and install volume control (Attenuator) with all accessories.	19	nr		
5B14	Supply and install 19" system rack with all accessories for above items.	2	nr		
5B15	Supply and install DVD audio recorder(USB Type) with all accessories.	1	nr		
5B16	Supply & install required copper flexible conductor PVC/PVC for all speaker wiring (2x1.5mm <sup>2</sup> ) and junction boxes with all accessories.	1	nr		
5B17	<b><u>INSPECTION &amp; TESTING</u></b> Testing the total installation and submit a test certificate issued by a chartered engineer including detail test report acceptable to the supply authority and commissioning of the system.	1			
5B18	As built drawings, Testing and Commissioning providing operation and maintenance manual.	1			
	<i>Page total Carried to the Collection below</i>				

Item	Description	Qty	Unit	Rate USD	Amount USD
<b>5B</b>	<u>COLLECTION</u>  <b>Public Address (PA) System Installation</b>  Total of Page No: 96  Total of Page No: 97				
	<b>Total carried to the Summary</b>				



## **BILLS OF QUANTITIES**

### **BILL NO 06 - VRV/VRF TYPE AIR CONDITIONING SYSTEM**

**DECEMBER 2023**

Rv1

<div>BILLS OF QUANTITIES</div> <div>VRV/VRF TYPE AIR CONDITIONING SYSTEM</div> <div>SUMMARY</div>		
	Description	Amount
6A	VRV/VRF TYPE AIR CONDITIONING SYSTEM	
TOTAL CARRIED TO GRAND SUMMARY		



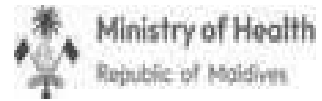
BILLS OF QUANTITIES VRV/VRF TYPE AIR CONDITIONING SYSTEM					
Item	Description	Qty	Unit	Rate USD	Amount USD
6A1	<b>VRV/VRF TYPE AIR CONDITIONING SYSTEM</b>				
	<b><u>VRV Units</u></b> Supply and installation of following air cooled VRF/VRV outdoor units suit to the respective indoor unit combinations given in the specification, complete with function controller, inverter capacity controller and <b>weather resistance &amp; marine treated condenser coils and all other accessories out door unit. All outdoor unit panel, brackets, nut &amp; bolts, base pan, motor, heat exchanger and all the components of the outdoor units tested for salty spray test &amp; all the components consists corrosion resistant coating &amp; weather resistant coating on both inside &amp; outside. Manufacture Test certificates for salty test for out door unit components submit with Bid Document.</b>				
	Supply Installation of variable refrigerant volume (VRF or VRV) Certification, UL registration complete with air-cooled condensing units, with refrigerant R-410a, comprises of inverter driven compressors, DX-evaporator indoor units & wireless report controller and all accessories required to complete the work				
	6A1.1 Outdoor unit - <b>VRV-OU-GF 50TR</b> (Refer the Specification, Drawings)	1.00	Nos		
	6A1.2 Outdoor unit - <b>VRV-OU-FF 80TR</b> (Refer the Specification, Drawings)	1.00	Nos		
	<b>VRV Indoor unit</b> Supply and installation of approved quality <b>Ceiling Concealed Ducted</b> type VRV Indoor units c/w wired remote controller & all necessary accessories to complete the installation as specified				
	6A1.3 Cooling Capacity 0.8 TR	1.00	Nos		
	6A1.4 Cooling Capacity 1.1 TR	1.00	Nos		
	6A1.5 Cooling Capacity 1.5 TR	2.00	Nos		
	6A1.6 Cooling Capacity 2 TR	2.00	Nos		
	6A1.7 Cooling Capacity 2.2 TR	12.00	Nos		
	6A1.8 Cooling Capacity 2.3 TR	1.00	Nos		
	6A1.9 Cooling Capacity 2.4 TR	1.00	Nos		
	<i>Page total carried to the Collection</i>				

Item	Description	Qty	Unit	Rate USD	Amount USD
	Supply and installation of approved quality <b>Ceiling Cassette 4-way</b> air flow VRV Indoor units c/w wired remote controller, drain pump & all necessary accessories to complete the installation as specified				
6A1.10	Cooling Capacity 0.8 TR	4.00	Nos		
6A1.11	Cooling Capacity 1.1 TR	2.00	Nos		
6A1.12	Cooling Capacity 1.5 TR	6.00	Nos		
6A1.13	Cooling Capacity 2.5 TR	2.00	Nos		
	<b>Supply Air Diffuser Lamina Flow Diffuser with HEPA Filter</b>				
	Supply & installation of the all supply air outlets c/w insulated plenum boxes, Grilles, fixing, connections and necessary accessories complete with volume control damper as required. (Color to be finalized with the Architect)				
6A1.14a	600 x 200 x 20 N.S	16.00	nr		
6A1.14b	600 x 200 x 20 N.S (Spairs - Store at hospital store for Mainanance)	16.00	nr		
	<b>Air Handling units</b>				
	Supply and install the following factory assembled and tested variable refrigerant volume (VRF or VRV) Certification, UL registered DX type AHUs complete with filter bank and all inter-connecting pipe work, Valves, anti-vibration fittings in accordance with Specification, all other necessary accessories,				
6A1.15	Ceiling suspended ducted type AHU units having 35 TR capacities' with all inter-connecting pipe work, Valves, anti-vibration fittings in accordance with Specification, all other necessary accessories,	2.00	nr		
6A1.16	Supply and installation of PVC cladding (i.e.. min. 100mmx50mm) to encase insulated refrigerant line, electrical wiring between indoor unit and outdoor unit of air conditioners, drain water lines etc. (measure & Pay item)	1.00	item		
<b>6A2</b>	<b><u>Drain Pipes</u></b>				
6A2.1	Supply & installation of the Condensate drain pipes c/w 13mm tk Class "O" Closed cell elastomeric type insulations necessary fittings,supports,fixing , connections and necessary accessories to the UPVC Type 600 pipes	1.00	item		
	<i>Page total carried to the Collection</i>				

Item	Description	Qty	Unit	Rate USD	Amount USD
6A2.2	<b><u>Refrigerant Piping</u></b> Supply & Installation of the Hard drawn Refrigerant Copper pipes to ASTM B 280 Type K/L (Compatible to R410a) complete with Class "O" closed cell elastomeric type insulations (minimum 20/25mm Thickness ), necessary fittings, supports,fixing connections.	1.00	lot		
6A3	<b><u>Fresh Air Supply Fan</u></b> Note : All fans shall be complete with flexible connectors, hangers, mountings, vibration isolators, duct collars etc.				
6A3.2	Supply and installation of duct mounted axial flow Fresh Air Supply fan capacity of 60 l/s at 30Pa ( <b>Fan Should be interconnect work with Indoor Units</b> ) . Rate shall include for all fixtures and fittings & controllers required for complete fan installation	16.00	Nos		
6A3.2	Supply and installation of duct mounted axial flow Fresh Air Supply fan capacity of 1200 l/s at 100Pa ( <b>Fan Should be interconnect work with Indoor Units</b> ) . Rate shall include for all fixtures and fittings & controllers required for complete fan installation	2.00	Nos		
6A4	<b><u>Duct Work</u></b> Duct work system shall be medium pressure duct class and stiffeners shall be used along the duct work. - Rates shall include fabricating installation and balancing of duct work including as per drawings. Sheet metal duct including seams, flanges, duct sealants, duct tapes, hangers ,flexible joints, plenum box, inspection hatches as per the specifications, threaded rods, angle iron cross bars, anti corrosive paint, etc.  Prices of duct work shall include duct leakage test, duct identification labeling & surface protection as per drawing.				
6A4.1	<b><u>Ducting with Insulation</u></b>	700	sqm		
6A4.2	<b><u>Volume Control Dampers(VCD)</u></b> Supply and installation of Volume control dampers & flexible ducts. Rate shall include necessary fittings & accessories.	1	lot		
	<i>Page total carried to the Collection</i>				

Item	Description	Qty	Unit	Rate USD	Amount USD
<b>6A5</b>	<b>Toilet Exhaust Grills</b>				
6A5.1	Supply and installation of Egg crate type return grills having face size 250mm x 250mm c/w VCD & all necessary accessories to complete the installation	46	Nrs		
6A5.3	Supply and installation of inline ducted type back draft exhaust fan c/w electrical wiring, mounting brackets and all necessary accessories to complete the installation as per the specification & drawings.				
	<b>Capacity : 30l/s @50 Pa.</b>	3	Nos		
	<b>Capacity : 40l/s @50 Pa.</b>	2	Nos		
	<b>Capacity : 45l/s @50 Pa.</b>	15	Nos		
	<b>Capacity : 60l/s @50 Pa.</b>	1	Nos		
	<b>Capacity : 90l/s @50 Pa.</b>	1	Nos		
	<b>Capacity : 135l/s @80 Pa.</b>	1	Nos		
	<b>Capacity : 140l/s @50 Pa.</b>	1	Nos		
	<b>Capacity : 235l/s @100 Pa.</b>	2	Nos		
	<b>Capacity : 550l/s @50 Pa.</b>	1	Nos		
<b>6A6</b>	<b>Toilet Exhaust air louver</b>				
6A6.1	Supply and installation of weather proof type Exhaust Air louver with insect screen c/w all necessary accessories to complete the installation.				
	Neck size : 150 x 150	22	Nos		
	Neck size : 250 x 250	2	Nos		
	Neck size : 300 x 300	3	Nos		
	<b>Exhaust air louver</b>				
	Neck size : 250 x 250	20	Nos		
	Neck size : 500 x 550	1	Nos		
	<b>Fresh Air Louver</b>				
	Neck size : 250 x 250	19	Nos		
	Neck size : 500 x 550	1	Nos		
	<i>Page total carried to the Collection</i>				

Item	Description	Qty	Unit	Rate USD	Amount USD
<b>6A7</b>	<b><u>Electrical Supply</u></b> <b>N.B. Power supply to both outdoor and indoor units shall be drawn from the relevant isolators and socket outlets provided closed to indoor &amp; outdoor units by the Air Conditioning contractor</b>				
6A7.1	To supplying and installing Electrical power and control panels required for MVAC system with all necessary, correctly sized PVC/PVC copper cored cables, PVC conduits & accessories for connection up all items of equipment used in the Air Conditioning and Ventilation system	1	Item		
<b>6A8</b>	Any other items deemed necessary for completion of the installation as indicated in the specification and drawings for fully functioning of the system ( Please Specify)	1	Item		
<b>6A9</b>	Provide 3 sets of hard copy and 1 set of soft copy in CD of As Built Drawings.	1	Item		
<b>6A10</b>	Testing and commissioning of the system.	1	Item		
	<i>Page total carried to the Collection</i>				
	<b><u>COLLECTION</u></b>  Total of Page No: 100  Total of Page No: 101  Total of Page No: 102  Total of Page No: 103  Total of Page No: 104				
	<b>Page Total Carried to Collection</b>			<b>USD</b>	



**BILLS OF QUANTITIES**  
**BILL NO. 07 -FIRE PROTECTION AND DETECTION SYSTEM**

**DECEMBER 2023**

Rv1

**BILLS OF QUANTITIES  
FIRE PROTECTION AND PROTECTION SYSTEM  
SUMMARY**

	Description	Amount
7A	FIRE PROTECTION System	
7B	ADDRESIBLE FIRE DETECTION SYSTEM	
<b>TOTAL CARRIED TO GRAND SUMMARY</b>		

Rv1

<b>BILLS OF QUANTITIES</b> <b>FIRE PROTECTION AND PROTECTION SYSTEM</b>					
Item	Description	Qty	Unit	Rate USD	Amount USD
7A	<b>General Note:</b>  <b><u>FIRE PROTECTION System</u></b>  For the full description of scope, materials and workmanship refer Technical Specification  All materials, equipment, wiring and workmanship shall confirm to local codes of specifications, B.S Standards and local authority requirements.  Contractor shall investigate the site conditions before submitting the Bid.  <u>All the pipe supports/ brackets shall be hot dipped galvanized from a reputed company.</u>		Note		
7A1	<b><u>Fire Hose Reel System</u></b>  Connecting fire protection system with existing connection point compete with PRV, isolation valves and other necessary accessories.	1.00	item		
7A1.1	<b>Fire Hose reel System</b> Supply and installation of 50mm die heavy duty galvanized iron pipes complete with all necessary fittings such as bends, tees, reducers etc. with protective paint outside and supports and fixing materials.	30.00	L.m		
7A1.2	Supply and installation of 25mm die heavy duty galvanized iron pipes complete with all necessary fittings such as bends, tees, reducers etc. with protective paint outside and supports and fixing materials.	90.00	L.m		
7A1.3	<b>Hose Reel</b> Supply & Installation of Drum mounted recessed Automatic swing type fire hose reels 19mm diameter and 30 m length complete with all piping fittings and accessories.	4.00	Nos		
	<i>Page total carried to the Collection</i>				



Item	Description	Qty	Unit	Rate USD	Amount USD
7A1.4	Supply & Installation of Hose Reel cabinet type 1 (FHRC 1) in each floor level at the locations shown in the drawings.	4.00	Nos		
<b>7A2</b>	<b><u>Portable Fire Extinguishers</u></b>				
7A2.1	3 Kg CO2 portable fire extinguisher fully charged complete with metal bracket fixed on to the wall at the location shown in the drawings / keep in the Fire Hose Reel Cabinet at the each floor.	12.00	Nos		
7A2.2	9 Litre water/CO2 portable fire extinguisher fully charged complete with metal bracket fixed on to wall at the locations shown in the drawings / keep in the Fire Hose Reel Cabinet at the each floor..	12.00	Nos		
7A2.3	6 kg ABC dry powder portable fire extinguisher fully charged complete with metal bracket fixed on to wall at the locations shown in the drawings.	2.00	Nos		
<b>7A3</b>	Any other items deemed necessary for completion of the installation as indicated in the specification and drawings for efficient operation of the system ( Please Specify )	1.00	Item		
	<b><u>Exit/Fire Exit Sign Boards</u></b> Supply and installation of a ceiling mounted maintained type Exit Sign Luminaire with pictogram on single side and 8W fluorescent tube comprising Ni-Cd battery for one-hour duration complete with necessary fixing materials.	16.00	nr.		
<b>7A4</b>	Provide 3 sets of hard copy and 1 set of soft copy in CD of As Built Drawings.	1.00	Item		
<b>7A5</b>	Testing and Commissioning of fire protection system	1.00	Item		
	<i>Page total carried to the Collection</i>				

Item	Description	Qty	Unit	Rate USD	Amount USD
7A	<u>COLLECTION</u>  <b><u>FIRE PROTECTION System</u></b>  Total of Page No: 106  Total of Page No: 107				
	<b>Total Carried to the Summary</b>				

Item	Description	Qty	Unit	Rate USD	Amount USD
7B	<p><b>ADDRESIBLE FIRE DETECTION SYSTEM</b></p> <p><b>Note:</b></p> <p>For the full description of scope, materials and workmanship refer Technical Specification</p> <p>All materials, equipment, wiring and workmanship shall confirm to local codes of specifications, B.S Standards and local authority requirements.</p> <p>Contractor shall investigate the site conditions before submitting the Bid.</p> <p>General</p> <p>Rate point wiring for conventional type manual call points shall be complete with fire department approved break glass type manual call point, conduits, conduit fittings, casings, fixing material wiring and termination</p> <p>Rate point wiring for conventional type electronic sounders, strobe lights shall be complete with fire department approved electronic sounders, strobe lights, conduits, conduit fittings, casings, fixing material wiring and termination</p> <p>Supply and installation of circuit wiring from the Fire Alarm Control Panel to the system peripheral equipment complete with all cables conduits and all other materials required for a good installation and proper functioning of the fire alarm system as described in the specification. Cables shall be installed in soffit/wall encased in PVC conduits. Floor to floor vertical sections shall be installed in the Fire shaft adjacent to passenger lifts. Cables dropping from the soffit to the false ceiling shall be drawn in flexible steel conduits not more than 1m in length.</p>				
	<i>Page total carried to the Collection</i>				

Item	Description	Qty	Unit	Rate USD	Amount USD
<b>7B1</b>	<b><u>Addressable Type Fire Alarm Control Panel</u></b>				
7B1.1	Supply and install Addressable type Main Fire Alarm Control Panel c/w CPU/Printer/Battery Backup, Charger C/w all devices, PCB's Indicators etc. at Fire Commanding Centre at Ground Floor. However, provision shall be made to send a signal to the Public Address System for activating fire alarm warning through speakers.	1	nr.		
<b>7B2</b>	<b><u>Point Wiring Addressable type Manual call points, Detectors, Alarms</u></b>				
7B2.1	Supply install a smoke detector point, wired using 1.5 mm <sup>2</sup> fire resistant cable in 25mm PVC Conduit from the respective fire control module as shown in the drawings	70	nr		
7B2.2	Supply install a manual call point, wired using 1.5mm <sup>2</sup> fire resistant cable in 25mm PVC Conduit from the respective fire control module as shown in the drawings	12	nr.		
	Supply and installation of Interface (or <b>control</b> ) <b>module</b> for controlling the <b>Passenger Lifts</b> to travel to ground when the Fire Alarm is activated, including wiring up to Lift machine. Rate shall include all materials required.	1	nr.		
7B2.3	Supply and installation of Interface (or <b>control</b> ) <b>Module</b> to shut down <b>Air Conditioning System</b> when the Fire Alarm is activated including wiring up to Air Conditioning Units. Rate shall include all materials required.	2	nr.		
7B2.4	Supply install an electronic sounder wiring point c/w sounder, wired using 1.5mm <sup>2</sup> fire resistant cable in 25mm PVC Conduit from the respective control module as shown in the drawings	6	nr.		
	<i>Page total carried to the Collection</i>				

Item	Description	Qty	Unit	Rate USD	Amount USD
7B4	Any other items deemed necessary for completion of the installation as indicated in the specification and drawings for efficient operation of the system ( <b>Please Specify</b> )	1	Item		
7B5	Provide 3 sets of hard copy and 1 set of soft copy in CD of As Built Drawings.	1	Item		
7B6	Testing and commissioning of Fire detection system	1	Item		
	<i>Page total carried to the Collection</i>				
<b>7B</b>	<u>COLLECTION</u> <b>ADDRESIBLE FIRE DETECTION SYSTEM</b>  Total of Page No: 110  Total of Page No: 111				
<b>7B</b>	<b>Page Total Carried to Collection</b>			<b>USD</b>	



## **BILLS OF QUANTITIES**

**BILL NO. 08 -LIFT**

**DECEMBER 2023**

BILLS OF QUANTITIES		
SUMMARY		
	Description	Amount
8A	PASSENGER( MACHINE ROOMLESS STANDARD CAR TYPE)	
TOTAL CARRIED TO GRAND SUMMARY		

BILLS OF QUANTITIES					
BILL NO. 08 -LIFT					
Item	Description	Qty	Unit	Rate USD	Amount USD
8A	<p><b>Passenger( Machine Room less Standard Car Type)</b></p> <p>Prior to pricing the bidders are requested to study the technical specification of this item and familiarize with the full scope of work.</p> <p>Prices quoted shall be for the complete and fully functioning system. BOQ items are only for major equipment and the quoted price shall include for all the necessary items for the complete and fully functioning of the system.</p> <p>It will be the responsibility of the contractor to carry out all the electrical wiring work from the MCCBs provided at machine rooms/hoist way. Price quoted shall include all anticipated work which may be permanent or temporary.</p> <p>Prices quoted shall be for the complete and fully functioning system. BOQ items are only for major equipment and the quoted price shall include for all the necessary items for the complete and fully functioning of the system.</p> <p>The cost of all temporary works such as scaffolding and associated electrical and civil works etc. related to the elevator installation such as drilling of suitable holes in walls, breaking of any parts of walls and finishing works of the same such as plastering/painting shall be included in the rates quoted.</p>				
8A1	<p>Supply &amp; Installation of Passenger lift of capacity 825 kg (11 passengers), speed 1m/sec,3 openings with landing doors &amp; all accessories.</p> <p><b>Supply &amp; Installation Cost</b></p>	1	No.		
	<i>Page total carried to the summary</i>				



Item	Description	Qty	Unit	Rate USD	Amount USD
8A1.1	Emergency battery banks with the charger to operate during power failure as specified.				
	<b>Supply &amp; Installation Cost</b>	1	Nos.		
8A2	Testing & commissioning	1	Item		
	<i>Page total carried to the summary</i>				
	<p><b><u>COLLECTION</u></b></p> <p>Total of Page No: 113</p> <p>Total of Page No: 114</p>				
To Summary				USD	



**BILLS OF QUANTITIES**  
**BILL NO. 09 -MEDICAL GAS SYSTEM**

**DECEMBER 2023**

BILL NO 10 - MEDICAL GAS SYSTEM					
Item	Description	Qty	Unit	Rate USD	Amount USD
B9	<p><b>Medical Gas System</b></p> <p><b>Notes:</b> Contractor shall refer to the drawings, specifications, notes, measurement &amp; rate clauses and trade preambles before pricing.</p> <p>The bills of quantities shall be read together with particular specifications and contract drawings.</p> <p>The products and work shall comply with the Health Technical Memorandum 2022 and British Standards for Medical Gas System.</p> <p><b>Rates for piping work shall include for :-</b></p> <p>(a) Laying of pipes to falls. (b) All pipe specials such as bends, junctions, elbows, tees etc. (c) Connection to sides of manholes etc. (d) Giving notices, obtaining permits, paying fees, fixing, testing and commissioning etc. (e) Supply, installation, testing and commissioning of the entire installation work. (f) Making good of the work disturbed. (g) Submitting samples for the approval by the Engineer. (h) Protecting the works.</p>				

Item	Description	Qty	Unit	Rate USD	Amount USD
B9.1	Connecting of medical gas system with the existing medical gas plant	1	Item		
B9.2	<b><u>Distribution system</u></b> Copper pipe manufactured from phosphores de oxidized non arsenical copper to BS EN 1412:1996 grade CW024A (Cu DHP) conforming to HTM 02-01:				
B9.2.1	15 mm diameter copper pipe	350	m		
B9.2.2	22 mm diameter copper pipe	150	m		
B9.2.3	28 mm diameter copper pipe	90	m		
B9.2.4	35 mm diameter copper pipe	50	m		
B9.2.5	42 mm diameter copper pipe	40	m		
B9.2.6	54 mm diameter copper pipe	20	m		
B9	<b><u>Bedhead trunking and headwall system</u></b>				
B9.1	Vertical head wall system, 715mm wide, with provisions for three medical gas terminal units , electrical sockets, lighting switches, telephone and data outlets, equipotential pins and nurse call system	17	nr		
C9	<b><u>Terminal units and Probes</u></b>				
C9.1	Medical gas terminal units shall conform to BS EN ISO 91701:2008 and accept probes to BS 5682:1998. Terminal units shall be capable of single handed insertion and removal of medical gas prob. The AGSS terminal unit shall conform to BS 6834:1987.				
D9	Vertical head wall system, 715mm wide, with provisions for three medical gas terminal units , electrical sockets, lighting switches, telephone and data outlets, equipotential pins and nurse call system				
D9.1	Oxygen Terminal unit	17	nr		
D9.2	Medical air terminal unit	17	nr		
D9.3	Medical vacuum terminal point	17	nr		
<b>Page Total Carried to Collection</b>					

Item	Description	Qty	Unit	Rate USD	Amount USD
<b>E9</b>	Medical gas line ball valve c/w NIST confirming to HTM 02-01				
E9.1	22 mm diameter medical gas ball valve	2.00	nr		
E9.2	28 mm diameter medical gas ball valve	2.00	nr		
E9.3	42 mm diameter medical gas ball valve	2.00	nr		
F9.1	Any other items deemed necessary for completion of the installation as indicated in the specification and drawings for efficient operation of the system ( <b>Please Specify</b> )	1	item		
F9.2	Provide 3 sets of hard copy and 1 set of soft copy in CD of As Built Drawings.	1	item		
F9.3	Testing and commissioning of Fire detection system	1	item		
	<b>Page Total Carried to Collection</b>				
	<u>COLLECTION</u>  Total of Page No: 117  Total of Page No: 118				
	<b>Medical Gas System To Summary</b>			<b>USD</b>	



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## **BILLS OF QUANTITIES BILL NO. 10 - EXTERNAL WORKS**

**Emergency Construction of Patient Wards at Kulhudhuffushi Island in Maldives**

**DECEMBER 2023**

<b>BILLS OF QUANTITIES BILL NO 09 - EXTERNAL WORKS SUMMARY</b>		
	<b>Description</b>	<b>Amount</b>
10	EXTERNAL WORK	
<b>TOTAL CARRIED TO GRAND SUMMARY</b>		

<b>BILL OF QUANTITIES</b> <b>BILL NO 09 - EXTERNAL WORKS</b> <b>Emergency Construction Of Patient Wards at Kulhudhuffushi Island in Maldives</b>					
Item	Description	Qty	Unit	Rate LKR	Amount LKR
<b>10</b>	<b>EXTERNAL WORK</b>				
<b>10A</b>	<b><u>Site Clearing</u></b>				
<b>10A.1</b>	Clearing site and preparation of the site for external works and boundary wall including cutting down & uprooting un-wanted tress.	726	m <sup>2</sup>		
<b>10B</b>	<b>Paving -Pre-cast concrete Blocks</b>				
	Supply and laying of 80mm thick interlocking approved type <b>pre cast concrete paving blocks</b> , in selected colour and design, as per the specifications, detail drawings and technical literature in following. The rate shall include for necessary edge restrains as per detail, floor preparation, excavation, filling with 200mm high selected imported earth compacted base and 50 mm thick quarry dust filling, to the approval of the Engineer.				
10B.1	Size 110x220 mm pre-cast inter lock blocks with grass paved area	846.00	m <sup>2</sup>		
10B.2	Size 100x100 mm 40kn/mm2 rough cement inter locking paving blocks	223.00	m <sup>2</sup>		
	<i>Page total carried to the Collection below</i>				



Item	Description	Qty	Unit	Rate LKR	Amount LKR
<b>10C</b>	<p><b>Landscaping</b></p> <p>The following soft landscaping work shall be carried out generally in accordance with the Specifications.</p> <p><b>Planting</b></p> <p>Supply and planting trees as shown in the detail drawings. Type of trees as indicated in the detail drawings Rate shall include preparation of the ground , adding fertilizer, watering, trimming and maintaining the plant up to handing over .</p> <p>trees ( Provisional Qty ) in the species as given below</p>	Note			
<b>10C.1</b>	2100 high palm trees approved by the architect.	32	nr		
<b>10C.2</b>	2100 high shady tree variety of mangrove or similar approved by the architect.	10	nr		
<b>10C.3</b>	<p><b>Planting in flower trough</b></p> <p>Supply and planting of bushes in flower trough as shown in the detailed drawings. Rate shall include for the ground preparation, adding fertilizer, watering, trimming, and maintaining the plant up to handing over and construction of flower trough in block masonry walls, plastering and painting etc.</p>	26	m		
	<i>Page total carried to the Collection below</i>				

Item	Description	Qty	Unit	Rate LKR	Amount LKR
	<u>COLLECTION</u>  Total of Page No: 120  Total of Page No: 121				
10	External work	To Summary		LKR	



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## **BILLS OF QUANTITIES BILL NO. 11 DAYWORKS**

**Emergency Construction of Patient Wards at Kulhudhuffushi Island in Maldives**

**DECEMBER 2023**

<p style="text-align: center;">BILLS OF QUANTITIES</p> <p style="text-align: center;"><b>BILL NO 11 - DAYWORK</b></p> <p style="text-align: center;"><b>Emergency Construction Of Patient Wards at Kulhudhuffushi Island in Maldives</b></p>					
Item	Description	Qty	Unit	Rate LKR	Amount LKR
<b>B11</b>	<p><b>DAYWORKS</b></p> <p><b>Notes:</b></p> <p>The Engineer may, if in his opinion it is necessary or desirable, issue an instruction that any varied work shall be executed on a day work basis. The Contractor shall then be paid for such varied work under the terms set out in the day work schedule included in the Contract and at the rates and prices affixed thereto by him in the Tender.</p> <p>The Contractor shall furnish to the Engineer such receipts or other vouchers as may be necessary to prove the amount paid and, before ordering materials, shall submit to the Engineer quotations for the same for his approval.</p> <p>In respect of the such of the Works executed on a day work basis, the Contractor shall, during the continuance of such work, deliver each day to the Engineer an exact list in duplicate of the names, occupation and time of all workmen employed on such work and a statement, also in duplicate, showing the description and quantity of all materials and Contractor's Plant &amp; Equipment used thereon or therefore other than Contractor's Plant &amp; Equipment which is included in the percentage addition ( If any ) in accordance with such day work schedule. One copy of each list and statement will, if correct, or when agreed, be signed by the Engineer and returned to the Contractor.</p>		<p>Note</p> <p>Note</p> <p>Note</p>		

Item	Description	Qty	Unit	Rate LKR	Amount LKR
	<p>At the end of each month the Contractor shall deliver to the Engineer a priced statement of the labor, materials and Contractor's Plant &amp; Equipment, except as aforesaid, used and the Contractor shall not be entitled to any payment unless such lists and statements have been fully and punctually rendered. Provided always that if the Engineer considers that for any reason the sending of such lists or statements by the Contractor, in accordance with the foregoing provision, was impracticable he shall nevertheless be entitled to authorize payment for such work, either as day work, on being satisfied as to the time employed and the labor, materials and Contractor's Plant &amp; Equipment used on such work, or at such value therefore as shall, in his opinion, be fair and reasonable.</p> <p><b>Generally</b></p> <p>The Contractor shall be paid for any part of the Works carried out on a day work basis in accordance with the Contract at the rates and percentages set down in and subject to the provisions of this Day work Schedule.</p> <p>Time engaged in the actual works only will be allowed. Idle time will not be allowed.</p> <p>All rates in this Day work Schedule shall be fixed for the duration of the Contract</p> <p><b>Labour</b></p> <p>The following labor rates are to be applied to the days worked and are to be all inclusive</p> <p>A day shall mean an 8 hour day.</p> <p>The said rates are to be based on the rates of wages and other emoluments and expenses, including holiday credits (if any), and insurances, payable by the Contractor.</p>		Note		
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Item	Description	Qty	Unit	Rate LKR	Amount LKR
	<p>The said rates are to include, inter alia, for all supervision, importation of labor including transport, travelling time, fares, subsistence and lodging allowances, operation of incentive schemes and costs of overtime working, guaranteed time, sick pay and any other disbursements arising from the employment of labor, for the use and repair of all non-mechanical tools (including paint brushes), sharpening of tools and use of standing scaffolding and other Contractor's Equipment and for overheads and profit.</p> <p>The Tenderer shall state the rates required for labor per day irrespective of public holidays, week-ends, etc., required for work ordered to be executed as Day works .</p> <p>Gangers and trade charge hands when working with their gangs shall be paid for at the below rates for laborers and the applicable craftsman respectively</p> <p><b>Labour</b></p> <p>B11.1 Carpenter 45.00 day</p> <p>B11.2 Mason 45.00 day</p> <p>B11.3 Plumber 50.00 day</p> <p>B11.4 Painter 50.00 day</p> <p>B11.5 Electrician 50.00 day</p> <p>B11.6 Bar Bender 45.00 day</p> <p>B11.7 Welder 50.00 day</p> <p>B11.8 Unskilled Worker 30.00 day</p> <p><b>Materials.</b></p> <p>The rates for the below listed materials are to be used for day work or Extra Work at the site of the works</p> <p>The rates shall cover all the expenses such as loading, delivery to site, unloading, storing &amp; protecting, profit and overheads less all trade discounts, rebates and allowances and all cash discounts.</p>		<p>Note</p> <p>Note</p> <p>Note</p> <p>day</p> <p>day</p> <p>day</p> <p>day</p> <p>day</p> <p>day</p> <p>day</p> <p>day</p> <p>day</p> <p>Note</p> <p>Note</p>		
	<p><i>Page total carried to the Collection summary.</i> Rv1</p>				

Item	Description	Qty	Unit	Rate LKR	Amount LKR
B11.9	Portland cement 50 Kg	20.00	bag		
B11.10	M.Sand	20.00	bag		
B11.11	Lime		kg		Deleted
B11.12	Rubble 150-225 mm		m3		Deleted
B11.13	Solid cement blocks 100x175x350 mm (with transport)	50.00	nr.		
B11.14	Solid cement blocks 150x190x390 mm (with transport)	50.00	nr.		
B11.15	Solid cement blocks 200x190x390 mm (with transport)	50.00	nr.		
B11.16	Formwork with sawn timber	15.00	m2		
B11.17	Formwork with plywood	20.00	m2		
B11.18	Mild steel 6mm	50.00	kg		
B11.19	Reinforcement steel	100.00	kg		
B11.20	Structural Steel	200.00	kg		
B11.21	Concrete grade 15	6.00	m3		
B11.22	Concrete grade 25	6.00	m3		
	<b>Plant and Equipment</b>				
	The following rates for plant and equipment are to be applied to the days worked and use of such plant/equipment in good working condition .		Note		
	A day shall mean an 8 hour day.		Note		
	The rates are to include all operational and maintenance costs, fuel, oil, grease, transport to and from site and other consumables, operator and attendants wages, supervision, overheads and profit.		Note		
	Only time actually employed upon the work will be paid for and the rates shall include for idle time, travelling time and overtime.		Note		
	All items of plant and equipment shall be priced.		Note		
	<i>Page total carried to the Collection summary.</i>				

Item	Description	Qty	Unit	Rate LKR	Amount LKR
	Any other plant and equipment employed but not included below shall be priced at rates analogous to those rates included below.		Note		
B11.23	Pumping set (2")	30.00	hr.		
B11.24	Concrete mixer	30.00	hr.		
B11.25	Vibrator	30.00	hr.		
B11.26	Motor Lorry 5 ton	30.00	hr.		
B11.27	Tractor with trailer (3/4cube)	30.00	hr.		
B11.28	Tipper truck (3cube)	30.00	hr.		
B11.29	Plate compactor	30.00	hr.		
B11.30	Jack Hammer with compressor	15.00	hr.		
B11.31	Loader and backhoe	45.00	hr.		
B11.32	Bulldozer	15.00	hr.		
B11.33	Mobile crane (5t)	10.00	hr.		
B11.34	Portable generator (5KVA)	30.00	hr.		
B11.35	Road roller	15.00	hr.		
B11.36	Gas cutter	15.00	hr.		
B11.37	Electric drill	15.00	hr.		
B11.38	Electric grinder	15.00	hr.		
B11.39	Welding plant	15.00	hr.		
B11.40	Compressor	15.00	hr.		
	<i>Page total carried to the Collection summary.</i>				
	Collection  Total of Page No: 125  Total of Page No: 126  Total of Page No: 127				
	<b>Total of Day works carried to the Summary.</b>				
<b>Note:</b> Above rates & amount are inclusive of the contractor's profit & overheads.					