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RFQ No.:PAL-0000109896

**Project Name: Constructing Medical Waste Treatment
Facility in Gaza Governorate
Temporary Site**

BOQ (Bill of Quantities)

Electronic copy of the BOQ shall be submitted along with the signed hard copy thereof. In case of any discrepancy between the soft and the hard copies, the hard copy shall prevail.

July, 2020

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
BILL 01- GENERAL ITEMS (INCLUDED)					
<p><u>The contractor must consider in his price to provide the following items at least:</u></p> <ul style="list-style-type: none"> - Provide office facilities for the consultant staff on site as specified per general and special conditions including all provisions and maintenance. The offices shall be provided within 1 week from the date of commencement until one month after the Taking over Certificate. - Provide Main Signboards as specified per general and special conditions installed within 1 week from the date of commencement at locations agreed with the Engineer, maintained until the end of the Defects Liability Period and then removed. - The Contractor shall submit to the Consultant Engineers after signing the contract (Maximum one week), three Hard Copies of all Design Drawings (Paper size is A2+A3 upon engineer satisfaction). - The Contractor shall submit to the Engineer or his Representative an approved one electronic set (AutoCAD Program) and 5 printed sets of As-Built Drawings including all drawings, exact levels of the executed works required according to General Conditions, Specifications, Drawings and Contract Documents. The As-built drawings shall include the actual coordinates of all structures and facilities (X, Y, Z) according to all requirement of the Municipality. - All Team Staff as described in General and specific condition. - Others as described in all tender documents (SEEN OR UNSEEN). If there is any discrepancy in tender documents, the contractor must consider it in his price which is completely his responsibility. 					
BILL B1 (General Items)					INCLUDED

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
BILL 02 - CONCRETE WORKS					
-	<i>All concrete items shall be completed according to drawings, specifications, conditions and as directed by the Engineer or his representative. All the following items shall be included in the prices but not limited to:</i>				
-	<i>Prices of all concrete items shall include shuttering, formwork, scaffolding, labour, supports, tie rods, spacers, steel reinforcement with shaping and fixing, testing of reinforcement steel, cement and concrete, supply and placing of concrete, Mix Design, vibrating, curing, workmanship, trowelling, ducts, sleeves, opening areas, etc.</i>				
-	<i>The contractor has to submit shop drawings for engineer's approval before starting any works.</i>				
-	<i>The contractor shall provide, erect and maintain all safety measures requirements according to specifications, local laws and engineer's instructions.</i>				
-	<i>Any design faults and discrepancies must be reported to the engineer and any design corrections shall be incorporated in the prices.</i>				
2.1	<u>CONCRETE (B - 250):</u>				
2.1.1	Supply and cast ready mix reinforced concrete (B-250) for Ground Beams & Top Beam with its supports with all required works. <u>The works Also include Asphalt cutting works, Removal to location approved by engineer of asphalt and its related layers, Compaction works and reinstatement works as exsiting.</u>	M ³	8.0		
2.2.1	Supply and cast ready mix reinforced concrete (B-250) for Columns with all required works according to drawings, specifications and engineer's instructions.	M ³	6.0		
<u>TOTAL OF BILL 02 - CONCRETE WORKS</u>					
<u>MOVE TOTAL TO SUMMARY</u>					

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
BILL 03 - BUILDING WORKS					
<u>Section 1: Block, Plastering & Painting Works</u>					
-	<i>All the following items shall be completed according to drawings, specifications, conditions and as directed by the Engineer or his representative.</i>				
-	<i>Prices of block works shall include supply of hollow concrete blocks from good and approved factory in perfect dimension and build it in good manner, cement sand mortar (1:3), but the first 40 cm from the bottom of wall the cement to sand ratio is (1:1), concrete fillet (B250) between columns, post, sills, lintels, canopies, block walls (equal to block wide minimum, and height 20 cm minimum or other wise noted in the drawing), compressive strength 35kg/cm2, works shall include all materials, testing, scaffolds, placing of approval blocks, workmanship, all ducts , sleeves, opening areas, fiber board, protection concrete (B-200) around sleeves and pipes (for electrical, sanitary & mechanical), tools and anywhere else, needed, all according to drawings, specifications, conditions and directed instructions by the Engineer or his representative.</i>				
-	<i>Installing of block is not allowed before 28 days of manufacturing day, and the contractor should submit manufacturing day certificate.</i>				
-	<u>Price of block works shall include supply and cast (B250) for sills, lintels, coping, posts, parapets, arches, decoration, electrical and mechanical sleeves. The reinforcement for sills, lintels and parapet is according to drawings and engineer's instructions.</u>				
-	<i>Prices of plastering works shall include supply of all materials, galvanized angles (for exposed edges), galvanized mesh (between block wall and concrete), mixing, scaffolds, curing, workmanship & tools and anywhere else, needed, all according to drawings, specifications, conditions and directed instructions by the Engineer or his representative. Price to include fully filling the joints both horizontally and vertically with 1cm mortar</i>				
-	<i>Rendering layer with Tyrolean machine is required for all wall before starting plastering works, and after cleaning all walls from tying wires.</i>				
-	<i>Starting new layers of plaster is not allowed before getting permission from site engineer.</i>				
-	<i>Curing plaster layer 3 days minimum by water spray.</i>				
-	<i>Paints should be from first Class Paint company which has certified from Palestine Standards Institution. The paints will be tested before approval and all test will be required.</i>				
-	<i>Prices of painting works for walls (approved by the Engineer according to catalogue/ sample for the used type, colour, and quality) shall include supply of all materials, scaffolds, workmanship & tools and anywhere else, needed, all according to drawings, specifications, and testing, conditions and directed instructions by the Engineer or his representative.</i>				
-	<i>First primer coat layer (Bendrol) should be repaint if exceed one week without starting any new paint' layer, and must be colored.</i>				
-	<i>All amount of needed of paint drums and paint' material should be stored in the storage which must be prepared by contractor, and its keys will be with site engineer</i>				

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
3.1	<u>BLOCK WORKS:</u>				
3.1.1	Supply and install Concrete hollow blocks for walls (40x20x20) cm with all required works, according to Eng. instructions and specifications.	M ²	140.0		
3.1.2	Ditto but for (40x20x10) cm.	M ²	10.0		
3.2	<u>PLASTERING:</u>				
3.2.1	Internal Plastering three layers for internal walls, partitions, edge beams, columns, soffits and likes, min. thick 20mm with all required works, according to Eng. instructions and specifications.	M ²	200.0		
3.2.2	External Plastering of ECAS "Italic plastering" for external walls/elevations, the first layer is Bondrol paint, the final layer is ECAS. according to Eng. instructions and specifications.	M ²	100.0		
3.3	<u>PAINTING:</u>				
3.3.1	Internal Painting for internal walls of Supercryl paint. 1 layer primer Coat (Pendrol) and 2 layers of Supercryl paint minimum with all required works, according to Eng. instructions and specifications.	M ²	170.0		
<u>Sub-total of section 1: Block, Plastering & Painting Works</u>					
<u>Section 2: Tiling & Flooring Works</u>					
-	<i>All the following items shall be completed according to drawings, specifications, conditions and as directed by the Engineer or his representative.</i>				
-	<i>Prices of Tiles & Marble works shall include supply of all materials, testing, mortar, sand bedding under tiles or marble or back the tiles or marble (wall), skirting, workmanship, opening areas and all materials & tools, testing and any works else, needed, all according to drawings, specifications, conditions and as directed by the Engineer or his representative.</i>				
-	<i>Grade A Spanish made of good quality imported tiles (floor & walls) shall be used.</i>				
-	<i>The Prices of Tiles works also include tile cutting, 45 degree cutting, grouting works, filling with special adhesive, decoration and pattern with additional costs, using multi color of same approved tiles, using any other needed size of same approved tile, adding aluminum or stainless steel or laminated color steel corner angles and strips, cleaning, sanding and polish .</i>				
-	<i>Rendering layer with Tyrolean machine is required for all wall before installing of wall tiles.</i>				

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
3.4	<u>Floors Tiles & Finish:</u>				
3.4.1	Supply and install Non-Slip Floor Ceramic tiles size: 300x300x8 mm, Spanish made. All works according to drawings, specifications, conditions and as directed by the Engineer or his representative. The Item price Includes Tiolet Door thresholds Rosabita marble step	M ²	3.0		
3.5	<u>Walls Tiles & Finish:</u>				
3.5.1	Supply and install White Glazed Wall Ceramic Tile size: 200x200x6 mm for with all required works. All works according to drawings, specifications, conditions and as directed by the Engineer or his representative.	M ²	50.0		
<u>Sub-total of Section 2: Tiling & Flooring Works</u>					-
<u>Section 3: Aluminum & Metal Works</u>					
-	<i>All the following items shall be completed according to drawings, specifications, conditions and as directed by the Engineer or his representative.</i>				
-	<i>Price of Galvanized Steel works include supplying, workmanship, Hammer Finish Paint (Poly zinc Paint base coat & min. 2 layers of Hammertron Finish Paint), fixation (all galvanized steel frames should be filled with the fine aggregate rich mortar concrete), hinges, handles and all necessary parts needed to complete the works.</i>				
-	<i>Price of doors or windows or other metal works (if needed), the works includes supplying, workmanship, fixation for lock type is EuroSag or equivalent for steel door and EuroSag or equivalent for wooden, complete and all necessary parts needed to complete the works.</i>				
-	<i>Price of colored Aluminum windows or doors (NAPCO Type or equivalent Section 2000 or 4500 or 7000 ambatia or other like specified) includes supplying, workmanship, fixation, hinges, <u>6mm sandblasted Glass</u>, lock type (for door) is approved European type of good quality, handles and all necessary parts needed to complete the works</i>				
-	<u>All Aluminum profile should be not less than 1.4 mm thick, and powder paint should be 60-90 Micron, anodized paint should be 20-25 micron</u>				

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
3.6	<u>ALUMINUM WORKS:</u>				
3.6.1	Supply and install of Aluminum Door size 80x220 cm one leaf (for toilets), Powder coated colored profile 2000 type (66/40), hinge system, with 4mm double side composite panel and 40 cm height of 6 mm industrial sandblasted glass, complete with, silicone sealant, ironmonger, switch and hardware and all and anywhere else, needed, all work according to drawings, specifications, conditions and as directed by the Engineer or his representative.	NO	1.0		
3.6.2	Ditto, Aluminum tilted window size 60x60 cm, colored powder coated profile 4500, 1 tilting leaf.	NO	1.0		
3.7	<u>STEEL WORKS:</u>				
3.7.1	Supply and install of Galvanized steel Sliding Gate size 460x636 cm, Sliding system with two leaves. of main G.S Profile 100x100x3 mm and secondary G.S Profile 100x50x3 mm, covered with 0.5 mm Galvanized steel corrugated sheets. The scope of works includes all needed accessories, frame, rails, castors, Rollers, spinners, switch, door stops, handles, painting, all and anywhere else, needed, all works according to drawings, specifications, conditions and as directed by the Engineer or his representative.	NO	1.0		
3.7.2	Supply and install of Galvanized steel hinged Gate size 380x326 cm, hinged system with two leaves. of main G.S Profile 100x100x3 mm for door frame and secondary G.S Profile 60x40x2 mm for leaves, covered with 0.5 mm Galvanized steel corrugated sheets. The scope of works includes all needed accessories, frame, hinges, locks, manual closer, switch, door stops, handles, painting, all and anywhere else, needed, all works according to drawings, specifications, conditions and as directed by the Engineer or his representative.	NO	1.0		

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
3.7.3	Supply and install of Galvanized steel hinged Gate size 160x240 cm, hinged system with two leaves. of main G.S Profile 60x40x2 mm for door frame and secondary G.S Profile 60x40x2 mm for leaves, covered with 0.5 mm Galvanized steel corrugated sheets. The scope of works includes all needed accessories, frame, hinges, locks, manual closer, switch, door stops, handles, painting, all and anywhere else, needed, all works according to drawings, specifications, conditions and as directed by the Engineer or his representative.	NO	3.0		
3.7.4	Supply and install of Steel Partition Of Galvanized steel Corrugated sheet, fixed on main G.S Profile 60x40x2 mm and secondary G.S Profile 60x40x2 mm, covered with 0.5 mm Galvanized steel corrugated sheets. The scope of works includes joineries, accessories, frame, Painting, all and anywhere else, needed, all works according to drawings, specifications, conditions and as directed by the Engineer or his representative.	M2	5.0		
3.7.5	Supply and install Galvanized Steel Louver Window size 446x106 cm, fixed on 60x40x2mm GS profile of shed with 2 mm GS louvers sheets. The scope of works includes joineries, accessories, frame, Painting, all and anywhere else, needed, all according to drawings, specifications, conditions and as directed by the Engineer or his representative.	NO	2.0		
<u>Sub-total of Section 3: Aluminum & Metal Works</u>					
<u>TOTAL OF BILL 03 - BUILDING WORKS</u>					
<u>MOVE TOTAL TO SUMMARY</u>					

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
BILL 04 - SHED WORKS					
-	<i>All concrete items shall be completed according to drawings, specifications, conditions and as directed by the Engineer or his representative. All the following items shall be included in the prices but not limited to:</i>				
-	<i>All steel items shall be completed according to drawings, specifications, conditions and as directed by the Engineer or his representative.</i>				
-	<i>The price of any excavation and backfilling works needed to complete the works are included. The works also includes importing if needed suitable Clean sand or kurkar soil material for back-filling in layers (25cm max. each & compaction test 98%)</i>				
-	<i>Prices of all concrete items shall include shuttering, formwork, scaffolding, labour, supports, tie rods, spacers, steel reinforcement, testing of reinforcement steel, cement and concrete, supply and placing of concrete, Mix Design, vibrating, curing, painting of the external surfaces of underground concrete with (one coat of primer & min. 2-coats of hot bitumen - 75/25), gauge 250 polyethylene sheets for concrete casted on soil, workmanship, trowelling, ducts, sleeves, opening areas, etc.</i>				
-	<i>The contractor has to submit shop drawings for engineer's approval before starting any works.</i>				
-	<i>The contractor shall provide, erect and maintain all safety measures requirements according to specifications, local laws and engineer's instructions.</i>				
-	<i>Any design faults and discrepancies must be reported to the engineer and any design corrections shall be incorporated in the prices.</i>				
4.1	<u>SHED WORKS:</u>				
4.1.1	Supply, install and paint a steel shed. The works include all the steel and concrete elements such as but not limited to: Foundation, column necks, Base Plates, Bracing, Purlins, Corrugated Sheets, Weldings, Anchor Bolts, Fasteners, Gutters, Rain Water Drainage Pipes, Cover Sheets, etc. The works include all supply, fixation, painting works (Primer + minimum 2 coats of oil paint) for the steel elements. The price will be measured on the horizontal plan of the shed. <u>The works Also include demolishing & dismantling of existing Neck Columns and base plates and re-Cast ready mix reinforced concrete (B-250) for new neck columns and Foundations if needed, and Planting a new reinforced steel on the existing Foundations if needed</u> . All works are according to drawings, specifications and engineer's	M2	290.0		
<u>TOTAL OF BILL 04 - SHED WORKS</u>					-
<u>MOVE TOTAL TO SUMMARY</u>					

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
BILL 05 - MECHANICAL WORKS					
*	Notes:				
	- The Contractor shall when pricing this Bill take into consideration, include and allow for costs or expenses of all requirements stipulated in the section entitled “ Preambles” preceding this Bill.				
	- The exact lengths of the required pipes, the exact number of the required valves and the exact quantities of concrete will be determined during the implementation of the Works.				
	- Price should include all excavation, backfilling, supporting of trenches and all associated works.				
5.1	<u>PLUMBING FIXTURES</u>				
5.1.1	Approve, Supply, install, test and commission Vitreous China wash basin (50x40cm), VITRA First Class or Equivalent, completed with chrome plated mixer (Egmatour or equivalent), bottle trap, soap tray, chrome plated angle valves, flexible tubes, wall fixed mirror 60x60 cm and all accessories, supports and hangers.	No.	1		
5.1.2	Approve, Supply, and install. Vitreous China, European type W.C. VITRA First Class, completed with 2.5 Gallon flush reservoir roll holder, chrome plated angle valves and flexible connections, supports, hand spray with flexible chrome connection and all necessary fitting, heavy duty cover, rubber connector on WC outlet to the drain pipes.	No.	1		
5.1.3	Approve, Supply, install & test vitreous china shower tray First Class (70x70 cm), complete with chrome mixer (Egmatur or equivalent), towel holder, floor trap, angle valves and all related works, with all necessary supports a and fixing as per specifications, drawings, international standards and Engineer satisfaction.	No.	1		

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
*	Approve, supply, lift to position, install and test; hidden in walls, berried in concrete, berried in soil, under tile, exposed, suspended or in shafts, Siksik or Kholyot UPVC pipes, complete with all required and necessary Kholyot or European made (Tees, Elbows, Y type Tees, Vent Caps, Clean Outs, Mesh for rain pipes ...), price shall include all related works (Cutting of concrete or asphalt , excavating, drilling in manholes, filling with fine sand, covering with concrete layer or bitumen asphalt and reinstatement work to original condition ...) as per specifications, drawings, international standards, local regulations and engineer satisfaction.				
5.1.4	Diam. 4" SN8 UPVC pipes.	LM	30		
*	Approve, Supply and install floor cleanout sealed type and floor drain (20*20) as per specification and according to the DIN or EN standrad.The floor cleanout shall be provided with adjustable head and concealed complete with Stainless Steel Cover and the floor drain shall be provided with an adjustable head, chrome plated strainer and concealed chrome plated cover. The price shall includes all 2" pipes needed to connect the fixtures (Lavoratory, shower, bathtub,etc).				
5.1.5	F.D. 4", price shall include diam. 4" S-type UPVC trap.	No.	1		
5.1.6	Supply and install storm water cast iron grills, cast iron cover (25 tons capacity and 60 cm opening with 1.9 meter length), frame, rings, internal coating to the existing storm concrete water gutter as shown in drawings and all required works to complete the job as in drawings, specifications and according to Engineer instructions. <u>The item includes cleaning and use water jetter to clean the existing gutter and existing 2 Grits Removal chambers and all connected exsiting manholes from this gutter to the nearest Sewage manhole at the street and repair the cracks in the gutter wall using appropriate material.</u>	No.	2		

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
5.1.7	Supply and install storm water cast iron grills, cast iron cover (25 tons capacity and 30 cm opening with 1meter length), frame, rings, internal coating to the existing storm water gutter as shown in drawings and all required works to complete the job as in drawings, specifications and according to Engineer instructions. <u>The item includes cleaning and use water jetter to clean the existing gutter and repair the cracks in the gutter wall using appropriate material.</u>	No.	8		
5.2	<u>DOMESTIC COLD AND HOT WATER SYSTEM</u>				
5.2.1	Approve, supply, lift to position, install and test; hidden in walls, berried in concrete, berried in soil, under tile, exposed, suspended or in shafts, 1" HDPE pipes, complete with all required and necessary (Tees, Elbows, Y type Tees, Valves, connection from the existing steel water source and connection to the ground tanks ...), price shall include all related works (Cutting of concrete or asphalt , excavating, filling with fine sand, covering with concrete layer or bitumen asphalt and return it to its origin condition ...) as per specifications, drawings, international standards, local regulations and engineer satisfaction.	LM	70		
5.2.2	Supply and install water distribution box (W.D.B.) Box Frame Material: Granite (Rossabita 2cm) and aluminum doors with frame and with switch key. The size of W.D.B. is to fit the No. of outlets and other components + 20 % spare space Box Components: Including all needed accessories and fittings, complete with all associated water supply pipework from hot and cold water tanks. Including PE-X pipes 16mm outer diameter and 2.2mm thick wall with flexible polyethylene corrugated conduit of 25mm outer diameter and 20mm inside diameter . The price shall be deemed to include all distribution manifolds, copper headers (NTM Italy type), valves on cold and hot water manifolds, air release valves, suitable fixing brackets, all and all required accessories. all works according to drawings, specifications, conditions and as directed by the Engineer or his representative.	No.	1		

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
5.2.3	Approve, supply, install, purge, test and commission, 5000 Liters plastic cold water tanks complete with galvanized steel base made of galvanized (8cm X 8cm - 5mm thick) angle, concrete base, , float valves, pipes, gate valves, lockable cover, air vents, price shall include painting all tanks with white color as per specifications, drawings, international standards, local regulations and engineer satisfaction.	No.	2		
5.2.4	Approve, supply, install, purge, test and commission, white 500 Liters plastic cold water tanks complete with galvanized steel base made of galvanized (5cm X 5cm - 4mm thick) angle, concrete base, , float valves, gate valves, lockable cover, air vents, as per specifications, drawings, international standards, local regulations and engineer satisfaction. The item includes the HDPE pipe from the tank to the distribution box with all needed accessories valve and fittings.	No.	1		
5.2.5	Supply, install, test and Commission 80 liters hot water storage tank, Internal ceramic coated, external insulation, cladding, electrical heater 2.5 kw, AAV and all fittings, supports, all connections to hot and cold water pipes as per drawings, specifications, and engineer satisfaction.	No.	1		
5.2.6	Supply and operate electric high-pressure washer 2100 W, 165 bar and 360 l/h. as per Specification and engineer approval. The item includes the pipes, fittings and all necessary works to Connect to water from the Two ground water Tanks with all needed works, sleeves, fittings, connections , excavation and re instatement .	Set	2		
<u>TOTAL OF BILL 05 - MECHANICAL WORKS</u>					
<u>MOVE TOTAL TO SUMMARY</u>					

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
BILL 6 - ELECTRICAL WORKS					
	* Notes:				
	- <i>Suppling, installing, testing and commission of the electrical works as per drawings, specifications, and engineer's instructions. The prices of the follwing items include all necessary junction boxes, wires, conduits, clamps, bolts, connectors and connecting all cables to switch boards. The price includes all required Rinforced concrete works B250 to all items in this Bill.</i>				
	- <i>All installation shall be in accordance with :</i>				
	- <i>The drawings , specifications and instructions and demands of the engineer.</i>				
	- <i>The electricity law and electrical code requirments of the BRITISH standards.</i>				
	- <i>The contractor should refer to the drawings , specifications and other Contract Documents .</i>				
-	<i>The prices will be deemed to include for the full cost as described in all Documents.</i>				
Section 1: Electrical Wiring					
A.	Supply, install and commissioning switches including switch box, colored rigid Fire resistant pvc conduits, 3x 1.5mm2 n2xy cables ,s.s terminal boxes and all connection between the appropriate lighting point to the terminal point as detailed on drawings. The price shall include all other required accessories, material and/or works that may be needed to make the system functional acc. To drawings, general specifications and all other relevant prevailing engineering standards for the successful completion of the work to the satisfaction of the engineer. All works and materials shall be approved by the engineer prior to placing orders.				
*	The following type of switches shall be included:				
6.1.1	Three gang - one way 10A, 250V Waterproof IP55 white color switch. Type GIWISS CHORUS Made in Italy.	No.	1		
B.	Supply, install and commissioning socket outlets including all boxes, Colored rigid Fire resistant pvc conduits/ trucking, cables 3x2.5mm2 n2xy, s.s terminal boxes and all connection between the appropriate distribution board to the terminal point as detailed on drawings. The price shall include all other required accessories, material and/or works that may be needed to make the system functional acc. To drawings, general specifications and all other relevant prevailing engineering standards for the successful completion of the work to the satisfaction of the engineer. All works and materials shall be approved by the engineer prior to placing orders.				
*	The following type of sockets shall be included:				
6.1.2	Single socket outlet with water proof cover 3pin with safety shutters, 250V, 10/16A. Type GIWISS CHORUS Made in Italy.	No.	5		

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
Section2 : Cables					
*	Supply, install and Testing the following power cables as per standards and drawings including rigid pvc pipes, connecting cable from sources to destinations, labeling, fixing of the cables in the trenches, cable lugs, cable glands, brackets, fitting clamps, shoes, and all other relevant materials and accessories. The price shall include the cables with required accessories, material and/or works that may be needed to make the system functional acc. To drawings, general specifications and all other relevant prevailing engineering standards for the successful completion of the work to the satisfaction of the engineer. Taken type.				-
*	The following type of cable sizes shall be included:				
6.2.1	XLPE cable (3x150+70)+E(70) mm2 AL from MDB to nearby electrical network. Price include clamps, connection and all needed works to connect the cable.	LM	250		
6.2.2	XLPE cable (3x70+35) +E(35)mm2 CU from MDB to microwave system main feeder. Price include underground PVC pipes SN8, manhole, and all installation works.	LM	35		
6.2.3	Ditto, but 3x4mm2 CU. Price include underground PVC pipes SN8, manhole, and all installation works.	L.M	20		

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
Section 3: Distribution Boards					
*	Supply, install & commissioning panel board wired and tested in accordance with international British Standards, including 2mm hot galvanized steel frame IP55, with anti-static paint (As per EATON TYPE TESTED Boards or approved equivalent type) painted with anti-rust insulating paint, factory assembled, wired & tested in accordance to approved international testing The panel shall be equipped with 3 phases, N, E bus bars made of annealed copper of adequate sizes and short circuit capacity. The price shall also includes MCB'S , MCCB'S, ELCB'S , indication lamps, earthing terminal, step rotary switches , emergency stop, pushbuttons , signal lamps, flexible wires, conduits, terminals, fuses , and handing over clean, tested and in operating conditions, ammeters, voltmeters, switches , DMMs, termination of cables, Numbering, Labelling, steel pocket on door for as built drawings and testing, handing over in operable conditions The size shall accommodate all the internal fittings plus 30% space for future use and not less than 60x40x20cm. all according to drawings and engineers instructions.				
6.3.1	Main Distribution Board MDB, as per drawings. The works include but not limited to metering system, ATS, MTS, Power Factor Correction System, Over and under voltage protection, Complete External lighting system, Phase sequence protection, Phase failure protection. All works to be done according to GEDCO requirements, specifications, and engineer instructions. The price include moving the old MBD to client store in Gaza.	Ls.	1		
6.3.2	DB-MIC, Waterproof enclosure	Ls.	1		
6.3.3	Increase the existing subscription from 160A 3-phase to 250A 3-phase subscription, including fees, all works must be done with full coordination with GEDCO, and supervisor engineer.	L.S	1		

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
Section 4: Lighting System					
*	Supply, install and test lighting outlets and lighting fixtures as per drawings, the Lighting outlets includes colored rigid Fire resistant pvc conduits 20mm dia., pull box, cables 3x1.5mm ² , switch boxes, fixing screws, ceiling rose from appropriate distribution board to lighting point internal and/or external as specified and detailed on drawings. All pvc conduits, trucking should be inflammable type. and Lighting fixture includes lamps, starters, supports, connection, clamps, conduits, wires and/or cables of not less than 3x1.5mm ² , and all accessories to complete systems. The price shall also include all required other accessories, material and/or works that may be needed to make the system functional acc. to the drawings, general specs and all other relevant prevailing engineering standards for the successful completion of work to the satisfaction of the engineer. All works and materials shall be approved by the engineer prior to placing orders. Type				-
*	The Lighting fixture types shall include the followings:				
6.4.1	Surface LED lighting fixture waterproof min. IP44, 120cm with LED lamp 32W,220VAC. Type Matix or equivalent.	No.	12		

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
Section 5: CCTV Camera					
*	Supply, install, test and commissioning the following systems including colored rigid Fire resistant pvc conduits, junction and pull boxes and all accessories in accordance to the drawing, technical specifications and code of practice. The price shall include the outlet (fitting) and all other required accessories, material and/or works that may be needed to make the system functional acc. To the drawings, general specifications and all other relevant prevailing engineering standards for the successful completion of the work to the satisfaction of the engineer. All works and materials shall be approved by the engineer prior to placing orders.				-
*	Supply, install and commissioning new analog camera to the existing Closed Circuit Television (CCTV) system as described in Specification below and shown on Drawings, including accessories, conduiting, cables, cable trays where necessary and the like, fixing in position according to below: Note: the existing DVR is HIKVISION DS-7216.				
6.5.1	Supply, install, test and operate 3MP analog day and night camera True day and night Infrared Cut Filter Removal IR Range: 40m (min.) Weather proof: IP66 (min.) External Installation Video Compression Resolution: HD (min) Alarm Trigger: Motion detection, Tampering alarm, Network disconnect, IP address conflict, Storage exception. The works include a junction box – IP66 (min) - glands, connections, fixed near the camera in wall or steel pole and with ceiling/ wall mounting bracket included, price include video and power cables. All works according to engineer instructions and specifications. Type Provision, Hikvision or approved equivalent type.	No.	5		

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
<u>Section 6: Miscellaneous</u>					
6.6.1	Supply, install, test and commission Earthing System for the main electrical network as per drawings, work includes but not limited to earthing concrete manholes, cast iron cover with 19 mm electrodes, earthing cables, and all necessary works. Resistance of the system must not exceed 2 Ohms, complete cables connection to the electrical room and risers with all necessary underground PVC pipes, connections, accessories, and all according to drawings, specifications and engineer instructions.	Ls.	1		
<u>TOTAL OF BILL 6 - ELECTRICAL WORKS</u>					
<u>MOVE TOTAL TO SUMMARY</u>					

GRAND SUMMARY FOR BOQ FOR CONSTRUCTING MEDICAL WASTE TREATMENT FACILITY IN GAZA GOVERNORATE <u>TEMPORARY SITE</u>		
BILL No.	DESCRIPTION	AMOUNT (USD)
BILL 01	GENERAL ITEMS	INCLUDED
BILL 02	CONCRETE WORKS	
BILL 03	BUILDING WORKS	
BILL 04	SHED WORKS	
BILL 05	MECHANICAL WORKS	
BILL 6	ELECTRICAL WORKS	
GRAND TOTAL		
GRAND TOTAL IN WORDS ()		

Contractor Name : _____

Signature with stamp: _____

Date: _____ / /20