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من الشعب الياباني
From the People of Japan



Construction of Two Additional Floors to the Administration Building at Jericho Agro-Industrial Park

Revised Bill of Quantities

29-Oct-2018

SECTION 1 - EXCAVATION, BACK FILLING and Site Preparation Works

BILL No. 1

Excavation:

General:

1. Excavation for foundation, trenches, etc. shall be the actual dimensions shown on drawings including blinding area and to be measured from Natural Ground Level or Reduced Level (whichever is lower), i.e.
 - a. From Reduced Level when R.L is lower than N.G.L
 - b. From N.G.L when N.G.L is lower than the Reduced Level.
2. Allowance for working space is not applicable, unless it is clearly specified in the Special Conditions.
3. Excavation for foundation of retaining walls is to be measured from Lower Reduced level, or from lower Natural Ground level (as stated in item 1 above.)
4. Price to include removal of site obstacles, rocks, trees and all debris from site, including any necessary rerouting of infrastructure works, such as piping, conduits, etc. Price also to include maintaining all trees that are not obstructing the buildings, boundary walls, courts and roads.
5. Each layer of back filling shall be tested separately, on the contractor's expense, prior to applying the next layer.
6. Co-ordination with all local authorities to facilitate the works, removal of obstacles or for diversion of roads, services, etc. is the contractor's responsibility and are deemed to be included in his rates.
7. Excavated soil shall be classified and retained, to back fill with suitable selected fill material and to place agricultural soil as where needed as shown on the drawings and as instructed by the Engineer. The extra and unsuitable soil shall be removed, on the contractor's expense with no extra cost.
8. Prior to commencement of site leveling or any excavation, the Contractor shall obtain Engineer's written approval on the contour grid of 5m x5m map, checked jointly by the contractor and the Engineer, the excavation profiles and sections showing all levels and dimensions, and the calculations of excavation quantities.
9. Excavation shall be in Cubic Volume, the net measurements of the excavated elements as shown in the drawings, no allowance shall be made for increase in bulk after excavation.
10. Hard Core beds shall be of not less than 12 cm. thick. And measured in Meter Square, (the net measurement of the finished surface). No extra rate shall be paid for Leveling, ramming and filling of voids under the hard core.
11. Rate of Excavation shall include: -
 - Excavation to any depth, in any shape, in any type of soil, below water table level and keeping excavation free of water.
 - Leveling, ramming, trimming and grading excavation bottoms.
 - Planking and strutting.
 - Cost of lab. Tests of works and materials.

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Construction of Two Additional Floors to the Administration Building at Jericho Agro-Industrial Park - Jericho

ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE (US\$)	AMOUNT (US\$)
	SECTION 1: Excavation & Site Preparation Works				
	BILL No. 1 - Excavation & Site Preparation Works				
1.01	Site Leveling to reduced level (Excavation and/or make up of levels for all Site including External Works). Cut in any kind of soil, concrete, or asphalt; to the required Levels (reduced levels as required on the drawings –Below basecourse under SOG). Price to include back filling with excavated suitable soil, or imported approved materials if needed, removal of extra soil, debris, and organic materials to the approved sites specified by authorities. Back filling material shall be applied on layers, 200 mm thick, watered and compacted to min 95% according to modified AASHTO Density Test T-80. Price also includes preparation of agricultural areas according to the levels in the general site layout plan. Price to include removal of any construction elements not needed in the site or filling cavities and wells with suitable materials. ☐	L.S	1		
1.02	Excavation for Pile caps and footings; in any kind of soil to the dimensions and levels shown in the drawings. Price to include back filling with excavated soil if suitable or imported approved materials up to bottom of basecourse, removal of extra and unsuitable soil. Back filling shall be on layers of 200 mm thick with watering and compacting to min 95% to comply with modified AASHTO F.D.T. (T-80) . the depth of excavation calculated to under blinding of caps and footings	M.C	80		
1.03	Supply and well compact Base Coarse 40 cm total thick (two layers each layer average 20 cm Thick), for underground slab. Price includes leveling, watering, compacting to 98%, leveling and compacting of ground (sub-base) needed in any depth under base coarse to min 95% according to Field Density Test. The area calculated for 40 cm layer not calculated for each 20 cm layer	M.S	100		
1.04	Soil Investigation Test & Report: The contractor shall do soil investigation test upon reaching the reduced level as per relevent code (See the Jordanian Code) . Borehols shall be distributed within the building expansion area for the new toilet unit. The depth of each borehole should be as per the code. A soil investigation report shall be submitted to the engineer prior to the excavation for foundations	L.S	1		
	TOTAL CARRIED TO NEXT PAGE.				

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ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE (US\$)	AMOUNT (US\$)
	FORWARDED TOTAL				
1.05	site preparation : The contractor shall remove backfilling to a place where the engineer determine. -The contractor shall handover any parts to the owner (doors, windows, mechanical and electrical parts etc.) as determined by the Engineer				
a	Demolition of existing southern toilet. Price to include removing block walls, toilet fixtures, tiles, false ceiling, any mechanical and electrical parts, windows and doors as instructed by the Engineer	L.S	1		
b	Demolition of existing northern toilet. Price to include removing block walls, doors, toilet fixtures, tiles, false ceiling, mechanical and electrical parts as instructed by the Engineer.	L.S	1		
c	Door opening in stone wall. Price to include cutting in existing stone wall for door opening, removing stone, concrete backing and block wall within the cut area. Price also include making reinforced concrete jambs around the opening, plastering, painted frames of hardwood (Swedish) 4.5cm thickness. Opeing size 1.75 * 2.75 m	L.S	1		
d	Demolition of existing staircase slab and parapet necessary for making proper bonding and connections of the existing structural elements to the new proposed construction as shown on the drawings and as directed by the Engineer. Price to include all necessary shuttering works to ensure safety of people in and around the building prevent dust, and minimize the sound in the existing floor; removing all demolished material outside the project site to a location determined by the Engineer.	L.S	1		
e	Carefully remove existing parapet coping and reinstall for the new parapet at roof of the second floor. Price includes cleaning, preserving, replacement of damaged or broken pieces, reinstallation, cement mortar, pointing, etc.	L.M	200		
f	Demolition of existing concrete covering steel reinforcement of the columns starters at the roof of the existing floor. The work includes demolishing portions of concrete parapets necessary for making proper bonding and connection of the existing structural elements to the new construction and reinstatement of the parapet. All as shown on the drawings and as directed by the engineer.	L.S	1		
g	Demolishing and removal of the portion of the parapet wall where the building will be extended at the northwest end and at two locations to make opening escape doors to the emengency escape stairs. The coping stone shall be carefully removed and preserved for re-use at the new parapet.	L.S	1		
1.06	mechanical preparation: transfer and reinstallation of existing water tanks, pumps, and AC outdoor units from current location on the roof to the roof of the second floor after completion. Price to include all connection parts and pipes and any mechanical parts, etc. needed to complete the work. price to include also removing any parts not needed. The contractor shall be responsible for the safety of the equipment and for all works needed to put these items back into full operation.	L.S	1		
	TOTAL CARRIED TO SUMMARY.				

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SECTION 2 - SKELETON WORKS**Bill No. 2 - Concrete works**

Rates of Concrete Works shall include:-

1. All form works and shuttering in any form, shape and size. Making chamfered and curved edges, allowing for and making grooves and sleeves and the like; removal of forms and cleaning of all exposed tie wires and rods; making good the harmed surfaces and edges and all surface finishing.
2. Supplying, Casting, vibrating and curing as per specifications.
3. Approved additives and admixtures.
4. Incurred costs on Concrete Mix Designs, Sample taking, testing and providing test results certificates, storing and saving of samples, and preparation of bar bending schedules and workshops.
5. Supplying reinforcement of any grade, size and length as detailed in the drawings, storing on site including cutting, bending and fixing in position and providing all tying wires, spacers, shop drawings, testing and bar bending schedules
6. Painting of exposed surfaces to soil of underground reinforced concrete elements with two coats of hot bituminous paint or special cold bitumen (75/25), the strokes of each layer to be opposite to each other (for the buried parts)..
7. Steel bars used for alignment and fixing of reinforcement works, and extra steel added to assure proper detailing and safety.
8. The minimum cement contents for concrete should be:
 - a-B200 — 250kg/m³
 - b-B250 — 300kg/m³
 - c-B300 — 350kg/m³
9. Testing specimens for concrete quality control during construction shall be cubes of size 15x15x15 cm.

Measurement of Concrete elements shall be the net dimensions as detailed in the drawings. All recesses openings and voids shall be deducted.

Measurement shall be only for the seen surfaces of elements. Overlapping and measuring items twice under separate headings shall not be allowed.

Slabs measurement should be:

- a- from the center to center for external stone walls
- b- from the external to the external face of the outer drop beams for stone cladding walls

The columns necks shall be measured from the top level of the foundation or footing to the bottom level of the tie beam.

(All beams, drop beams, projection including sun breakers and any part casted together with the slab shall not be measured and is deemed to be included in the price of the slab). Columns are to be measured from the top level of the slab to the bottom level of the beam or dropped beam.

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE (US\$)	AMOUNT (US\$)
	SECTION 2 : SKELETON WORKS				
	Bill No. 2 - Concrete Works				
2.01	Blinding Concrete B150 under foundations, Pile caps & tie beams. Thickness should be 10cm or according to drawings.	M.S	50		
2.02	Supply and Cast Reinforced sulfate resistance concrete Grade 'B 300' for :				
	a- piles cap and footings	M.C	30		
	b- Piles ϕ 60 cm . Price to include excavation for piles, reinforcement steel and all needed	M.R	192		
2.03	Supply and Cast Reinforced sulfate resistance concrete Grade 'B 300'. For Tie Beams.	M.C	6		
2.04	Supply and Cast Reinforced Concrete Grade 'B 250'. For Slab on Hard core (12) cm thick Slab Including surface leveling, finishing, 2 polyethylene sheets 250 micron each, construction joints, steel reinforcement 5 ϕ 10/m overlapped to tie beams, and all related works.	M.S	80		
2.05	Supply and Cast Reinforced Concrete Grade 'B 300' for:				
	a-Stairs, landings, flightings and where required.	M.C	10		
	b-Reinforced Shear Walls above slab on hard core including the columns on these walls.	M.C	45		
2.06	Supply and Cast Reinforced Concrete Grade 'B 300' for columns	M.C	95		
2.07	Supply and Cast Reinforced Concrete Grade 'B 300' for 20 cm thick suspended solid slabs for stair case. Price to include projected beams, other beams and projections as per drawings.	M.S	110		
2.08	Supply and Cast Reinforced Concrete Grade 'B 300' for voided slabs .Price to include projected beams, other beams, caps and projections including sun breakers. as per drawings.				
	a- 26 cm thick.	M.S	1200		
	b- 35 cm thick	M.S	555		
	c- 45 cm thick	M.S	655		
	TOTAL CARRIED TO SUMMARY.				

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ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE (US\$)	AMOUNT (US\$)
	<p>Bill No. 3 - Stone Works All</p> <p>stone works shall be of local birzait white and brown stone of First Choice and shall mach the existing stone walls in terms of color and quality.</p> <p>Stone material, size, and texture shall be in accordance with detailed drawings and Engineer's instructions and approval.</p> <p>Stones shall be of not less than (5 cm. thick, 25 cm or any height as per drawings. high and of length ranging from 1.5 to 3 times the height.)</p> <p>Stones shall be homogeneous in color and texture and free of any defects.</p> <p>Stone Specifications shall be as follows:</p> <ul style="list-style-type: none"> • Specific gravity (kg/m³) – Min. 2600. • Water absorption (%) – Max. 1%. • Distortion index – Min. 5.5. • Stiffness index (row call) – Min. 10 only for lime stones used in ground texture & exposed to traffic movements. • Crushing index (Megapaskal) – Min. 55. <p>Cutting, shaping and building of stone shall be in straight angles, no twisting, distortion or uneven sizes shall be allowed.</p> <p>All cuttings shall be made using Manjal.</p> <p>Measurement of all types shall be in Meter Square, for the net dimensions of the vertical plan of the elevations excluding openings of any area.</p> <p>No measurement will be made for any recesses, projections or sides of stone pieces.</p> <p>Measurement of door and window jambs and reveals, corner peaces, and the like is not applicable. The stone facades (either built or clad) shall be measured according to their vertical elevations excluding the openings. Neither the projections (including the sides of the stone cladded columns..etc) nor the recesses from the relevant facades shall be subjected to measurement as these are deemed to be included in the unit rates of the relevant stone works. No extra over shall be given to stone angles or any other special stone piece deemed necessary to properly complete the works according to the drawings and specifications.</p> <p>No allowances shall be made for stone pieces in any shape.</p> <p>No allowances or extra rates shall be considered for stone courses in lintels, overhanging slabs and roof slab courses.</p> <p>Taking all the above-mentioned into account, measurement for stone cladding works will follow the shape of the clad element.</p> <p>Rates of stone works shall include:-</p> <ul style="list-style-type: none"> • Supplying , storing, protection and removal of rejected and surplus materials. • Shaping, cutting and fitting. • Mortar and backing concrete (plain concrete and/or cement blocks and plain concrete). • Galvanized steel ties 6mm/20cm in both direction, dowels, hangers, steel mesh and all tying tools. • Erecting and dismantling of scaffoldings. • Pointing and pointing materials of any type, and cleaning of walls. (الكحلة طمس و بلون الحجر) • Lintels and other reinforced concrete elements embedded in the stone walls including reinforcement. • 5cm of hard randoban for thermal insulation between concrete and concrete blocks. <p>Note : The stone concrete backing should be cast against proper formwork. After deshuttering the formwork, the hard randoban can be fixed and the 10cm block can be built. Casting directly against the hard randoban and block is NOT allowed.</p>				

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ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE (US\$)	AMOUNT (US\$)
	SECTION NO. 2 - SKELETON WORKS				
	Bill No. 3 - Stone Works				
3.01	Supply and Build Stone Walls Birzeit or equivalent to the full length and height as shown in the drawings. First grade first class white stone uniform in color and texture to match the existing stone, rough textured "Matabbah , brushed mufajar " for facades:				
	a-45cm with 25cm plain concrete (B-200), 5cm thermal insulation polyethylene boards and cement (concrete) block backing Grade 35 (10*20*40cm. Price also includes pointing and pointing materials	M.S	760		
	b-Ditto but Birzait mufajar stone 51cm height	M.S	70		
3.02	Stone cladding facades over reinforced concrete walls above side walk level (apparent facades), R.C. ground tie beam with its exterior drop recess and slab beams. Price to include concrete filling of plain concrete Grade B-250, steel mesh, 5cm thermal insulation polyethylene boards and all ancillaries. Price also includes pointing and pointing materials. Price not to include for the reinforced concrete wall/element to be cladded, which is to be measured under another item.				
	a- mufajar stone 25cm height	M.S	340		
	b-Ditto but Birzait mufajar stone 51cm height	M.S	25		
3.03	Supply and Build Stone Walls Parapet to the full length and height as shown in the drawings. First grade first class white stone uniform in color and texture and first quality, rough textured "Matabbah" for facades,:				
	a- 25 cm stone hight	M.S	160		
	b- 51 cm stone hight	M.S	10		
3.04	Supply and install 5cm Copping stone for roof parapet (48 cm width) price include skrew fixing, cement mortar, pointing, etc.	L.M.	20		
	TOTAL CARRIED TO SUMMARY.				
	SECTION NO. 2 - SKELETON WORKS				
	Bill No. 4 - Block Works				
4.01	All works of this bill shall be of Concrete blocks Grade 35 of high quality standards and as per specifications.				
	a. Hollow Blocks (10 Ten) cm. Thick.	M.S	650		
	b. Hollow Blocks (20 Twenty) cm. Thick.	M.S	1050		
	TOTAL CARRIED TO SUMMARY.				

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ITEM No	DESCRIPTION	UNIT	QUANTITY	RATE (US\$)	AMOUNT (US\$)
	SECTION NO. 3 - INTERNAL FINISHES				
	Bill No. 5 - PLASTERING (SEC- 03) .				
	<p>PREAMBLE.</p> <p>PLASTERING to all areas shall be measured net, including openings, which are less than 0.25 Meter Sq.</p> <p>The price shall include all narrow widths, for taking out joints on block walls or backing concrete face for key, for making good to frames around pipes and other fittings , plastering to jambs and reveals of openings, window sills; all of which shall not be measured as plastering .</p> <p>Price shall also include Expanded metal lath, corner mesh, angle beads at all corners for the entire height, and plaster stops at opening edges, expansion joints, sills, labor, curing, erecting and dismantling of scaffoldings, additives, pigments and all incidentals required as specified and / or detailed on the Drawings. ☐</p>				
5.01	Three Coats of Cement and Sand Plaster over one slurry coat to walls and ceilings and where required.				
	a- Internal plaster:	M.S	3450		
	b-Ditto, but for External plastering price include Waterproofing additive (W 290) with the second and last face and painting with standard approved three coats of color Waterproofing supercyl for: external walls and roof parapets	M.S	260		
	TOTAL CARRIED TO SUMMARY.				
	SECTION NO. 3 - INTERNAL FINISHES				
	Bill No. 6 - TILING, FLOORING AND MARBLE WORKS (SEC- 03)				
	<p>PREAMBLE.</p> <p>1. All tilling works (ceramics and marble) shall be measured net in square meters. Deducting all opening and voids more than 0.25 M.S.</p> <p>2. Marble works for steps and treads of stairs shall be measured in linear meter. The tread, the riser, flight skirting and water stop shall all be measured as a single unit in linear meter.</p> <p>3. Marble works for window sills and other openings shall be measured in square meter.</p> <p>4. Rate shall include preparation of surfaces under tiles, Finnish to falls and cross falls, special tile pieces for edges and the like, tile surface finishing, Plastic spacers. Pointing and cleaning and all incidentals as per specifications.</p> <p>5. Rates shall include also providing and mounting in place</p>				
6.01	a-Supply, Install and finish Ceramic Porcelain 60X60X1 cm., Price to include skirting size (60 x 10 x 0.8) cm, bedding and jointing in cement and sand mortar(1:3), pointing with special pointing material (danial or equivalent , price to include sand and sand with cement filling ,and on site grinding where required, and cleaning (color to be decided by engineer) .	M.S	1960		
	b. Ditto as above but colored porcelan	M.S	45		
6.02	a-Supply and Install Non-Slip Ceramic Floor Tiles 30 *30 *0.6 cm for WCs. First choice and free from all defect grade “A”. (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site.	M.S	205		
	b. Ditto as above but for balcony	M.S	35		
6.03	Supply, Install and finish pre-polished Terazzo first class Tiles size (30x30x2.7) cm, for rooms as per drawings. Price to include skirting size (30*10*2.7) cm with same porcelain bedding and jointing in cement and sand mortar, pointing with special point (European made), required sand and aggregate fill, and on-site grading for floors, and where required cleaning.	M.S	55		
6.04	Supply and Install White Glazed Ceramic Wall Tiles (Monaliza or approved equivalent) (20 * 20 * 0.6 cm)., First choice and free from all defects Grade “A”. (Approved by Palestine Standards Institution). Price to include white round aluminum edges. All works shall be in accordance with drawings and specifications.	M.S	720		
	TOTAL CARRIED TO NEXT PAGE.				

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ITEM No	DESCRIPTION	UNIT	QUANTITY	RATE (US\$)	AMOUNT (US\$)
	FORWARDED TOTAL				
6.05	Supply and Install Marble Wall Tiles (40 * 40 cm) for elevators walls Institution). Price to include grouting. . All works shall be in accordance with drawings and specifications.	M.S	10		
6.06	Supply and Install polished Local Marble(سورمعين) Tiles size (30x30x3) cm, for stair landings. Price to include stair landing skirting size (30 * 12 * 2) cm, bedding cement mortar, grouting, and on site polishing. All as per Drawings and Specifications.	M.S	20		
6.07	a-Supply and Install Local Marble (سورمعين) Sills, Thresholds, and wherever needed 3 cm. thick). Set in cement mortar bedding price to include grouting, polishing of face and seen edges.	M.S	80		
	b- ditto to above but italian black marble sills	M.S	16		
	c-Ditto as (a) above but for Steps and Treads of Stairs. Treads of 3 cm thick and Risers of 2 cm. thick. Price shall include supplying and installing local marble for stair flight skirting in parallel setting to the nosing line at an average height of 18.45 cm .x 33 cm width and 20 mm. thickness, and local marble water stop (5cm wide X 3cm thick X length as wide as the tread of the stair minus riser thickness) fixed at the end of treads. Also the price to include filling under tiles with cement and sand 1: 6 ratio, bedding in cement mortar, grouting, pointing, polishing of face and all related works. Note: The measurement for each stair will be from the adjacent wall to the external edge of the water stop of that stair.	M.R	60		
6.08	Spplly and apply and fix granite for WC sinks 2cm thick. Price to include steel frame 4*4 cm. price also include open for sink as per details and drawings. The area measured fot top granite only.	M.S	13		
	TOTAL CARRIED TO SUMMARY.				

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ITEM No	DESCRIPTION	UNIT	QUANTITY	RATE (US\$)	AMOUNT (US\$)
	SECTION NO. 3 - INTERNAL FINISHES				
	Bill No. 7 - CARPENTRY AND JOINERY WORKS				
<p>PREAMBLES:</p> <p>Sizes of carpentry works given in the Bills of Quantities are finished sizes and shall be as per Drawings.</p> <p>Sizes of doors and other items mentioned in the Bills of Quantities shall allow for tolerance to suit the structural openings shown in the Drawings.</p> <p>· Wooden doors and pair of doors shall be measured in number for each structural opening, unless stated otherwise in the Bills of Quantities.</p> <p>Rates for carpentry and joinery work shall include :</p> <p>a) Shop and coordinated drawings.</p> <p>b) Allowance for plastering and tiling and the like.</p> <p>c) Cutting and fitting around obstructions, Bedding and painting.</p> <p>d) Grounds, blocking and backings.</p> <p>e) Plugging concrete, block work, and stone work, and making well.</p> <p>f) Ironmongery including cylinders, cylindrical locks for all the doors, handles, stoppers, screws, temporary fixing, re-fixing, oiling and adjusting.</p> <p>g) Providing three keys for each lock including tagging.</p> <p>h) Providing and fixing wall mounted wooden keys cabinet, (70*70*10) cm. varnish finished with all ironmongery including cylindrical lock.</p> <p>i) Providing and fixing Room Title Plat, aluminum (30*20) cm. mounted on wooden plate (35*25) with varnish finish for all rooms.</p> <p>j) Steel legs, brackets, bearers and other supports including painting.</p> <p>k) Glass and glazing including cutting to size and putty.</p> <p>l) Fly screening including cutting to size.</p> <p>m) Preparing surfaces to receive finishes.</p> <p>n) Painting, varnishing, polishing, oiling, and the like, to any area or width in any location including work in multicolor and cutting in edges and putty.</p>					
	SECTION NO. 3 - INTERNAL FINISHES				
	Bill No. 7 - CARPENTRY AND JOINERY WORKS				
7.01	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With (Frame).(4.5*3.5) cm hardwood (Zan) edging and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Formica (color to be designed by engineer over veneer on both sides, color for frames and Architrave as directed by engineer. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm., frames of hardwood (Swedish) 4.5cm thickness, width according to the wall thickness' and Allowance of 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Architrave of Hardwood (Swedish)(4*1.2)cm, price to include ironmongery, kick plates of aluminum 20cm height from one side for main bath room doors, U shaped 10cm height from both sides at the bottom for internal doors kick plates of aluminum 20cm height for bath room doors, U shaped both sides, and at the bottom door stoppers, Cleared glass 6 mm thick for vision panel, gaskets cylindrical Lock UNION or approved equivalent (Approved by Palestine Standards Institution), and painting in three coats of Lackr paint in addition to primer coat. All as per Detailed Drawings, specification and instructions of supervisor engineer				
	a- DW1 (1.00*2.20)	No	25		
	b- DW2 (1.60*2.20)	No	6		
	c- DW3 (0.80*2.20)	No	3		
	d- DW4 (1.60*2.20)	No	5		
	e- DW5 (0.90*2.00)	No	6		
7.02	Supply and install and fix toilet cubicles system (trespa panels) 13 mm of high performance material panels. The panels are a solid, high pressure and extremely suable decorative building panel, made from layers of quality Kraft papers impregnated with phenolic resin, incorporates a clear overlay on both decorative face, and manufactured under high pressure and temperature for all toilets price include all accessories, hinges, doors with all needed parts according to catalogue's and drawings.	M.S	210		
7.03	Supply and install Accostical Folding Partitions.100 mm thick steel plate panel faces welded to steel frames in aunique unibody construction, sound loss rat STC 55, sound absorption NRC 90, Optional U.L 1 hour fire rating, sheer lock panel edges. Price include all needed accessories , hinges and all needed parts according to drawings.	M.S	60		
7.04	Supply and install Kitchen benches. Price to include all granite and wooden works as per details and drawings. The area calculated for top of bench only	M.S	8		
	TOTAL CARRIED TO SUMMARY.				

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ITEM No	DESCRIPTION	UNIT	QUANTITY	RATE (US\$)	AMOUNT (US\$)
	SECTION NO. 3 - INTERNAL FINISHES				
	Bill No. 8 - STEEL AND ALUMINUM WORKS				
	<p>Preamble.</p> <p>Metal works shall be measured in number.</p> <p>Rates for metalwork shall include for :</p> <p>Preparing shop drawings,</p> <p>Drilling, counter sinking, screwing, bolting and riveting.</p> <p>Lugs, plugs, holdfasts and the like.</p> <p>Gaskets, sashes, double weather strips and external and internal silicon filling around frames.</p> <p>Ironmongery including cylinders, cylindrical locks (UNION or approved equivalent), stoppers, handles, temporarily fixing, re-fixing, oiling and adjusting.</p> <p>Providing three keys for each lock and padlock including tagging and a master key for all doors.</p> <p>Hardware including cramps, dowels and the like.</p> <p>Glass and glazing to be 6mm thick with color as directed by the engineer, including cutting to size, putty and rubber.</p> <p>Preparing surfaces for painting one coat of primer before fixing.</p> <p>Sealing and Painting to any area or width in any location including work in multicolor and cutting in edges.</p>				
8.01	<p>Supply, fix and operate sliding Aluminum Windows (with 3 paths for external windows and 2 paths for internal ones) extrusion Section 7700 or approved equivalent, with protective electrostatic applied polyester powder paint of 70-80 microns. In color approved by the Engineer.</p> <p>Price to include double glass 4 mm each and 6mm void between. Float glazing and all other accessories and fittings to complete works as per drawings and specifications. ☐</p>				
	a- W01 (2.40*7.80)	No	2		
	b- W02 (1.20*7.80)	No	1		
	c- W03 (0.80*5.46)	No	1		
	d- W04 (4..80*6.50)	No	1		
	e- W05 (1.50*2.34)	No	2		
	f- W06 (2.10*2.34)	No	10		
	g- W07 (0.80*2.34)	No	26		
	h- W08 (3.60*5.98)	No	1		
	i- W09 (0.60*0.78) section 4400. see details	No	22		
	j- W10 (2.60*2.34)	No	4		
	k- W11(1.40*7.80)	No	2		
	l- W12 (1.40*7.80)	No	4		
	m- W13 (24.00*2.34)	No	1		
	n- W14 (23.35*2.34)	No	1		
8.02	<p>Supply and Install Aluminum sun brakers, Price to include fixation, accessories, welding, grinding & smoothening.</p> <p>for windows shown in drawings.</p>	M.S	120		
8.03	<p>Supply and fix suspended ceiling (Armistrong or approved equivalent) Z Shape 60x60cm with gypsum board. price to include all accessories from beams and vertical fixation as per details and drawing.</p>	M.S	1950		
8.04	<p>Ditto to 8.03 but aluminum sheets for kitchen and toilets without gypsum board</p>	M.S	225		
	TOTAL CARRIED TO NEXT PAGE.				

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ITEM No	DESCRIPTION	UNIT	QUANTITY	RATE (US\$)	AMOUNT (US\$)
	FORWARDED TOTAL				
8.05	Supply and Fix stair case handrails of Balustrades seamless Hollow steel for vertical elements of 30x30x2mm every 60cm and horizontal hollow tubes steel of 40x20x2mm as per drawings, price to include hard wood Zan handrail 80x50 and two horizontal hard wood Zan piece 150x20mm , price to include oil paint three coats in addition to primer coat and Lackar paint for hard wood Zan	M.R	20		
8.06	Supply and Fix Prefabricated Steel Doors as per drawings, specification and instructions of supervisor engineer. Price to include frame ,fixing completely, ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. Steel Door Type DS1. (100 * 210) cm. ☐	No	2		
8.07	Supply and Fix aluminum Doors (Section 2200) as per drawings, specification and instructions of supervisor engineer. Price to include frame (as per details), fixing completely, ironmongery, cylinders, cylindrical locks handles and special ground jacks italian made or approved equivalent (Approved by Palestine Standards Institution).				
	a- DA1 (3.06*3.02)	No	1		
	b- DA2 (2.60*3.02)	No	2		
	c- DA3 (5.30*3.02) with ohoto cell	No	1		
8.08	Supply, install and fix Aluminum sheet cladding from (Alcobond- natural brush 400 or approved equivalent) Thickness of aluminum layer 0.5 mm, Thermal resistant 0.0103 r din 52612, Temperature resistance (-5 c to +70 c) for external, Internal and canopy including all necessary fixings, fittings, thermal isolation and accessories complete as shown on drawings, specifications, and to Engineers satisfaction. (the color shall be approved by the engineer)	M.S	200		
8.09	Supply and install 10mm tempered glass walls (securit or approved equivelent) for office partetions and where needed. price include fixing ,doors, doors openings, doors Hinges,doors accesories sand hit, aliminum U shape fixing to walls , painted green gypsum board boards 12mm fixed on steel bars from ground to ceiling for all around the openings and all needed accesories as per drawings				
	a-SD1 (2.00*2.20)	No	11		
	b-SD2 (3.70*2.20)	No	1		
	c-SD3 (3.11*2.20)	No	1		
	d- SD4 (4.89*2.20)	No	1		
	e- SD5 (2.77*2.20)	No	1		
	f- SD6 (7.8*2.20)	No	1		
8.10	Supply and apply 4 mm thick perforated aluminum sheets for widows shown in drawings. Price to include fixing sheets to aluminum frames according to drawings	M.S	25		
8.11	Supply and install fiber glass board for all shafts at the roof top, price to include steel frame 3x3 cm tube for beams and columns connected to each other with special welding with three coats of painting (hammer paint), fiber glass board 10mm fixed to the steel tube with special bolts and all necessary works to do the job in the best way. Contractor is required to submit shop drawing for approval	L.S	4		
8.12	Supply and Install sun breakers (wide as per drawings and details) of galvanized iron (2x40) mm, and 2 mm thick galvanized iron sheets, and to be fixed to the column side by galvanized screws as per drawings and specifications. ☐	M.S	150		
8.13	Supply and Install raised floor (stage system) 30*30*3.05 cm, calcium aslphate 30 mm with bottom covered galvanized steel. Price to include all parts needed to fix and complete the works as per drawings and details	M.S	270		
	TOTAL CARRIED TO SUMMARY.				

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ITEM No	DESCRIPTION	UNIT	QUANTITY	RATE (US\$)	AMOUNT (US\$)
	SECTION NO. 3 - INTERNAL FINISHES				
	Bill No. 9 - PAINTING WORKS				
	<p>Preamble.</p> <p>Painting and decorating to walls, ceilings and the like shall be measured net in meter square.</p> <p>Painting to other works shall be included in the related items. Color as specified by engineer.</p> <p>Paints shall be supplied to site in sealed container, as approved by the Engineer, and site mixing shall not be permitted. The Contractor rates shall include for supply of all materials, workmanship, samples, primers, surface preparation, protection of painted surfaces, application to all heights as required of works, repair of all damaged surface at the contractor's expenses, and all other requirements as stated in the Specifications.</p> <p>All paint types should be approved and having a supervision certificate from the PSI.</p>				
9.01	Supply and paint high quality oil paint, for walls as per indicated in finishing tables, on one priming coat and two finishing coats, using two coats of complete putty, as per satisfaction of the supervisor engineer.	M.S	3000		
9.02	Supply and paint three coats polycide paint for ceilings and drop beams(sides and bottom) of high quality (Approved by Palestine Standards Institution).	M.S	150		
9.03	Supply and install gypsum board boards 12mm for internal walls in specific places with different hight price include fixation to the wall by galvanized steel tubes 5*7*0.1cm for beams and columns , price include all accessories and bolts and according to drawings . price to include also painting 3 coats of oil paint as per itrm 9.01.	M.S	195		
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SECTION No. 4 - PROOFING**Bill No. 10 - INSULATION, ROOFING AND EXPANSION JOINTS.**

Preamble.

All finishes shall be measured superficially net unless other wise stated clearly.

All finishes, include triangular shaped fillets except cement and sand lining to gutters, shall be measured on the slab surface only, parapets and column stubs to be included in the price and not to be measured.

Cement and sand lining to gutters shall be measured in linear meter, unless other wise stated clearly.

Rates for cement and sand work shall include for :

Hacking concrete, applying cement slurry or raking out joints of block work to form key. Application to any surface.

Finish to surface, to falls, cross-falls and currents.

Forming bays including joints. Finish to edges and arises.

Making good around steel sections, pipes, tubes, bars, brackets, outlets, and the like.

Measurement for concrete screed and waterproofing membrane shall be for horizontal projection of roof area as calculated on roof plan between plastered surfaces of parapets and walls only. Corner chamfers and vertical waterproofing shall not be measured. Expansion joint waterproofing shall not be measured, and is included in expansion joint unit prices.

Rates for waterproofing and roof sheeting shall include for

Preparation of surface, cutting in edges. Overlaps priming and treatment at the corners and floor drains.

Dressing over parapets and stub columns including forming groove to receive edge of plasticised bitumen membrane and sealing with elastic sealer.

Side and end laps, Fittings including bolts, hook bolts, screws and washers,

Sheets of any width or length.

ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE (US\$)	AMOUNT (US\$)
	SECTION No. 4 - PROOFING				
	Bill No. 10 - INSULATION, ROOFING AND EXPANSION JOINTS.				
10.01	Supply and cast in place lightweight plain concrete for screed to roof with 1% slope, cast to falls not less than 3cm thickness in the drain point, rate to include lining and hunching 10x10 cm with (45°) to the edge of roof screed and parapet, rate also include smooth surface finish to receive bitumen and all requirements as per specifications, drawings and Engineer's instructions.	M.S	1170		
10.02	Supply and Fix Polystyrene Filler Boards Expansion Joint Filler 50 mm. thick painted with cold asphalt on both faces, to be installed at expansion joint locations between columns, slabs, beams,walls and frames.	M.S	80		
10.03	Supply and apply Hot Asphalt or special kalt bitumen (75/25) for all Sanitary units. Applied in two layers stiffened with fiberglass sheet, to the full area of floors and up to 15 cm high of walls. Price to include plain concrete 5 cm thick before applying hot bitumen and 10 cm hight at edges.	M.S	300		
10.04	Lean mix concrete to encase all projected columns and shear walls, on roof. (in and out the parapet) Price to include plastering, waterproofing, block 7 cm and stone copping. As per details	L.S	1		
10.05	Supply and Fix Aluminum Cover to Expansion and/or seismic Joints for floors, walls and ceilings. Price to include mastic fill, backing rod, mastic fill and fixing with galvanized clips every 30 cm and all accessories in accordance with details and relative specifications.				
	a. 7cm wide x (2-6)mm thick for external and internal walls.	M.R	100		
	b. 10 cm. Wide x 1.0mm thick for ceilings and floors.	M.R	130		
10.06	Supply and cast; (Grade B-200) Concrete Cast-in-Place Expansion Joint Cover. Approx. Size (40 * 55) cm. Price to include concrete block, three coats of plastering, steel reinforcement, polystyrene, sika fill, backing rod, galvanized steel plate cover, and all needed works. According to drawings and details	M.R	35		
10.07	Supply and apply waterproofing membrane of bitumen rolls.(4.5mm thick. Density 180g per m.s of reinforced polyester sheets) covered with layer of crushed white stone with overlaps of not less than 10 cm .price to include primer coat, and all sheets flashing (10 cm aluminum profile , backing rod,...) & all fixation required to complete the work. For roof of main building and roof of staircase. the bitumen rolls should cover minimum 15cm of the parapet above screed level. Measurements will be in square meter for the Net surface area.	M.S	1170		
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ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE (US\$)	AMOUNT (US\$)
	SECTION No. 5 - ELECTRICAL WORKS				
	Bill No. 11 - ELECTRICAL WORKS.				
	<p>Preamble. All Supplied Materials Should be European Made (if available), Grade A and Free From Defects, Having Supervisor Certificate From Palestinian Standard Institution (PSI).</p> <ol style="list-style-type: none"> Price to include submittal and obtaining approval of shop drawings, detailed and as-built drawings for all works as well as coordinating the same with the other services, activities and furniture. Price to include, also, submittal of catalogues and manufacturer instruction. Fixtures and appliances shall be measured in number. Supply and feeder Cables, cable conduits and cable trays shall not be measured but included in DB's prices Manholes, handholds and the like shall be measured in number. All Systems and devices shall be in lump sum including installation, testing and commissioning. Rates of fixtures and appliances shall include installation, wiring, switches and conduit works. Electrical works including all required materials, accessories, labor, all as required according to drawings, specifications and bill of quantities. Cutting, and pining including all making good. Forming, or cutting haies, chases, channels etc. in reinforced concrete structure, block works or existing walls. Plugging and screwing <p>9. -Testing electrical installations including providing written reports & certificates by authorized inspector/engineer approved by consultant . The report should indicate detailed measurements for electrical installations, electrical panels, cables, outlets, isolators, lighting,... etc., and if it is matching the Local electrical code.</p> <ol style="list-style-type: none"> Protection of all electrical works All outlets, switches, cables, wires should be labeled (numbers & tags). All conduits used should be fire retardant and color coded. providing Operating and Maintenance Manual Mechanical and Electrical Services including as made drawings hard & electronic copy <p>All systems equipment (Class A and approved by Palestine Standards Institution)</p>				
11.01	<p><u>KWH Board</u> Supply, Install and Connect KWHM DB. Price to include metal panel board oven painted 2mm thickness, molded case, Main circuit breakers MCCB with minimum breaking capacity of 25 K.A, miniature circuit breaker, bus bars, Indication lamps, space for KWH meter and all accessories as per drawings and specifications. Price also to include main earth busbar and UPVC conduits 3Ø6" to accommodate the main feeder "cables as required"from KWHM DB to MDB as drawings and specifications with all necessary civil works,all work must be according electrical company regulation.</p>	L.S	1		
11.02	<p><u>Main Distribution Board (MDB)</u> Supply, Install and Connect Main Distribution Board(MDB) including power factor correction and controller section, emergency trip coil and ATS section. In Ground Floor. Price to include main feeder cable, metal panel board oven painted 2mm thickness, all cables required to connect MDB with all DB's molded case Main circuit breakers MCCB with minimum breaking capacity of 25 K.A, miniature circuit breaker MCB with minimum breaking capacity of 10 K.A., bus bars,digital volts & amps- Measuring instruments,signal lamp,protection equipment. Also to include main earth bus bar as drawings and specifications with all necessary civil works. and power factor DB as required from electricity company,all work according to drawing and spacification.</p>	L.S	1		
	TOTAL CARRIED TO NEXT PAGE.				

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	SECTION No. 5 - ELECTRICAL WORKS				
	Bill No. 11 - ELECTRICAL WORKS.				
	FORWARDED TOTAL				
11.03	<u>Sub-distribution boards</u> Supply, Install and Connect the panel Boards factory made oven painted 2mm thickness. Price to include the enclosure, molded case circuit breaker, miniature breakers (not less than 6 K.A.cap.), bus bars,digital volts &s-Measuring instruments,signal lamp,protection equipment. and all accessories including feeders XLPE Cables and PVC pipes as Shown on drawings and specifications □				
	a. DB-1	L.S	1		
	b. DB-2	L.S	1		
	c. DB-3	L.S	1		
	d. DB-4	L.S	1		
	e. DB-S	L.S	1		
	f. DB-I1	L.S	1		
	g. DB-I2	L.S	1		
	h. DB-M1	L.S	1		
	i. DB-M2	L.S	1		
	j. DB-F	L.S	1		
	k. MDB-MECH	L.S	1		
	l. DB-MECH1	L.S	1		
	m. DB-MECH2	L.S	1		
	n. DB-MECH3	L.S	1		
	o. DB-MECH4	L.S	1		
	p. DB-AC	L.S	1		
	q. DB-FIRE PUMP	L.S	1		
	r. MDB-UPS	L.S	1		
	s. DB-UPS1	L.S	1		
	t. DB-UPS2	L.S	1		
	u. DB-UPS3	L.S	1		
	v. DB-LIFT	L.S	1		
11.04	<u>Electricity Manholes</u> Supply, installing, connecting, and testing (80x80x80 cm) electrical manholes including heavy-duty cast iron 25 Ton, cover according to drawings and specifications. . Including all civil works as per drawings and specifications □	No	6		
11.05	<u>Sockets and outlets</u> Supply, install, numbering and Connect the following Socket Outlets points including (3x2.5/4/6mm ²) cable, conduits, sockets, draw boxes and all accessories up to DB as per drawings and specifications.				
	a. 3-pin Single-Phase 16 Amp sockets.	No	120		
	b. As item (a) but waterproof(IP65)	No	48		
	c. As item (a) but double socket	No	93		
	d. As item (a) but RED COLOR FOR UPS SYSTEM	No	22		
	e. As item (a) but double socket RED COLOR FOR UPS SYSTEM	No	120		
	f. 3-pin single phase 16 Amp socket (water proof) with switch with indication lamp for extract fan.	No	20		
	g. Supply, install, commission and test AC/Point. The price include cables, conduits, sockets with indication lamp switch and all accessories up to DB as per drawings and specifications and coordination to Mechanical Contractor	No	70		
	h. Supply, install, commission and test Hand dryer 2000W, The price include cables, conduits, sockets and all accessories up to DB as per drawings and specifications	No	17		
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ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE (US\$)	AMOUNT (US\$)
	SECTION No. 5 - ELECTRICAL WORKS				
	Bill No. 11 - ELECTRICAL WORKS.				
	FORWARDED TOTAL				
11.06	<u>Cable Trays, and Ladders:</u> Supply, install, test and commission cable trays, cable ladders, cable trunking and sleeves as per drawings and specifications complete with supports, fixing devices, separators, clamps, end caps, draw wires, elbows, joints, branches, reducers, offsets,...etc.with all accessories needed to complete the work as shown on drawing, as per the preamble, the specifications and supervision engineer's requirements.				
	50/8 CM cable ladder .	M.L	30		
	30/8 CM cable tray perforated for power systems .	M.L	320		
	20/8 CM cable tray perforated for low voltage.	M.L	316		
11.07	<u>cables(for item not included in distribuion board)</u> Supply, Laying, connect, test and commission cables including cable glands, cable shoes, labeling, and all associated accessories according to drawings, specifications and relevant codes, for:.				
	a. 3X150+95+95 mm2 CU/XLPE to Generator.	M.L	90		
	b. 3X120+70+50 mm2 CU/XLPE to exiting ground DB.	M.L	45		
11.08	<u>Telephone System</u> Supply, install, connect and test (RJ45) Cat6a telephone socket include , boxes, cable shielded (CAT6A S/FTP) from each socket to RACK cabinet in the floor. Connecting to PABX, conduits, Socket, plates, and all accessories according to drawings, specifications and engineer approval.				
		No	88		
11.09	<u>Telephone Manholes</u> Supply, install, connecting testing (60x60x60cm) telephone manhole. Including heavy-duty cast iron 25 Ton, cover according to drawings and specifications Includes (Ø3") UPVC pipes to main server room (main HUB). Including all civil works as per drawings and specifications .				
		NO	3		
11.10	<u>Earthing System</u> Supply, install, connect, test and commission a complete earthing system for the project including all conductors, termination to PEC ,19 mm dia steel copper rods, cables, clamps, conduits, handholes with heavy duty cast iron cover, fixing, etc., as per specification, drawings, local electric authority regulations, engineers approval and related codes				
	A. 10mm ² uninsulated earthing of all metal parts that includes cable trays, false ceiling,waterpipes,cable ladder, ac units, distribution boards bodies	L.S	1		
	B. 2x70mm insulated earthing cable as ring earth for DB's as indicated on drawings	L.S	1		
	C. 1x10mm insulated earthing cable as ring earth for DB's as indicated on drawings	L.S	1		
	D. Main earth bus bar including metal box	L.S	1		
	E. 70mm insulated earthing cable for connecting between PEC in old MDB and PEC in new MDB.	MR.	20		
	F. Clean earth bus bar in server room	LS	1		
11.11	<u>Lightning system</u> Supply, install lightning system pulsar45. On stair's roof. The system should protect the building and the area around the building. The price to include a separated earthing system(earth wire 70mm ² isolated, 3 electrodes (19mm ² ×1.5m) in 3 manholes(40×40×40cm) and according to manufacture instruction and by the approved of supervision engineer.				
		L.S	1		
11.12	<u>Lighting Points</u> Supply, Install and Connect Lighting Points including Conduits and (3×1.5/2.5/4/6 mm ²) cable up to the DB, Light Switches and all accessories as per drawings and specificationss.				
		NO.	613		
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	SECTION No. 5 - ELECTRICAL WORKS				
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	FORWARDED TOTAL				
11.13	Lighting Fixtures Supply, Install and Connect the following Lighting Fixtures including Boxes, switches, push buttons, bulbs or tubes, control gears, p.f. correction capacitors and all accessories as per drawings and specifications.				
	a. TYPE (1)	NO.	340		
	b. Ditto, but emergency type	NO.	135		
	c. TYPE (2)	NO.	73		
	d. Ditto, but emergency type	NO.	27		
	e. TYPE (3)	NO.	10		
	f. Ditto, but emergency type	NO.	10		
	g. TYPE (4)	NO.	8		
	g. TYPE (5)	NO.	10		
11.14	Video Conference System A. Supply, install, test, and commission infrastructure for Audio and video system in meeting rooms including conduits, boxes and HDMI cables and all accessories needed to complete the work as specified and as shown on drawings.	L.S	3		
	B. Supply, install empty conduit for camera in meeting rooms connected to the A/V rack including all accessories needed to complete the work as specified and as shown on drawings..	No	3		
	C. Supply, install, test, and commission 24 U Audio/Video (A/V) cabinet, including all needed internal cables, cable ties, cable management trays (horizontal and vertical) , connections and all accessories needed to complete the work as specified and as shown on drawings.	No	3		
	D. Multipoint Video conference system Including: <ul style="list-style-type: none"> • 1080p Full- HD Video ,4 points MCU • Camera: eCam PTZ II 2-megapixel CMOS sensor ,18x total zoom , Pan/tilt/zoom camera • All resolution @ 30fps • Support H.323, SIP standards, SIP TLS • Protocol Standerds: SIP, H.264, H.264 HP, H.264 SVC, H.263+, H.263, H.261, H.239 dual video streams, BFCP content sharing • Other standerd: H.224, H.225, H.245, H.281, H.323 Annex Q, H.460, SRTP. • Network:10/100/1000Mbps, NAT/firewall traversal (H.460), API support via Telnet, Wake-on-LAN (WOL) support • IR remote control with batteries. • Video outputs: HDMI, VGA • Video inputs: HDMI, VGA, DVI • EVC microphone array • Audio Input: EVC microphone daisy chain up to 4, Line-in (3.5 mm), DVI(HDMI) • Audio features: Automatic gain control (AGC), Advanced noise 				
	E. Value added feature <ul style="list-style-type: none"> • Meeting recording: In meeting and offline recording, Save directly to USB flash drive, Supports screen re-layout during playback, Playback and file conversion via VCPlayer software (.mov and .mp4 format) • Speed dialing via hot keys (10 sets) • Dual monitor • Camera presets (100 positions) • Network Time Protocol (NTP) • Firmware update via USB flash driver • Screensaver and auto power off mode • ScreenShare • VCLink • LDAP directory • Group calling • Two front USB 2.0 ports 	NO	3		
	F. LED screen full HD 55" with HDMI inputs and wall mount kit	NO.	3		
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	SECTION No. 5 - ELECTRICAL WORKS				
	Bill No. 11 - ELECTRICAL WORKS.				
	FORWARDED TOTAL				
11.15	<u>PAVA System & Public Address System</u> Supply, Install, numbering Connect and commission Sound System, including cables ,conduits from each loudspeaker to Amplifier, boxes, drew boxes as shown in the drawings. ☐				
11.15.A	Evacuation system and PAVA system in café space consisting of:				
	a. 14U Rack panel for location of equipment, includes CD/DVD Player, AM/FM Tuner,CD Player with 5 cd , 120W Amplifier, mixer, Digital Equalizer, interface Module, Recordable Massage and Power Module	L.S	2		
	b. 6-Zone call station with all calls Table top microphone goose neck type and extension 10 meter cord with pressing on/off push button.	No	2		
	c. Zone selector switch panel same manufacturer with toggle switches matching the number of speakers with led indication lamps	No	2		
	d. (6- 9W)Wall mount loudspeaker with metal grill and evacuation compliant	No	14		
	e. wireless microphone.	L.S	4		
11.15.B	<u>PAVA System IN (SHOW ROOM,MULTIPURPOSS HALLS) CONSISTING OF:</u>				
	a. Constant Beamwidth Technology™ Two-Way Line Array Column with Asymmetrical Vertical Cove • Power Capacity: 500 W (2000 W peak), 2 hrs , 350 W (1400 W peak), 100 hrs • Nominal Impedance: 8 ohms • Frequency Range (-10 dB): 60 Hz – 20 kHz • Four 130 mm (5 in) LF drivers • Sixteen 25 mm (1 in) HF drivers • Components: Sixteen 25 mm (1 in) soft dome tweeters and four 125 mm (5 in) high-power LF drivers, arranged coaxially. • Patent-pending Constant Beamwidth Technology™ provides constant directivity up to the highest frequencies and reduces out-of-coverage lobing. • Vertical pattern coverage switchable between 45° for medium-throw coverage and 25° for long-throw applications. • Switchable voicing provides flat response in music mode or mid-range presence peak in speech mode. • Dynamic SonicGuard™ overload protection of HF devices	No	6		
	b. Extension for CBT 70J-1 Line Array Column Speaker • Components: Four 125 mm (5 in) high-power LF drivers • 500 Watt power handling • Built-in purpose-designed crossover network, for combining with CBT 70J-1 • Coupler plate included	No	6		
	c. Constant Beamwidth Technology™ Line Array Column Loudspeaker • Power Capacity: 325 W (1300W peak), 2 hrs, 200 W (800W peak), 100 hrs • Nominal Impedance: 8 ohms • Sixteen 50 mm (2 in) Full-Range • Patent-pending Constant Beamwidth Technology™ provides constant directivity up to the highest frequencies and reduces out-of-coverage lobing. • Vertical pattern coverage switchable between 40° for medium-throw coverage and 15° for long-throw applications. • Switchable voicing provides flat response in music mode or mid-range presence peak in speech mode. • Dynamic SonicGuard™ overload protection • Swivel (pan)/tilt wall bracket included.	No	6		
	TOTAL CARRIED TO NEXT PAGE.				

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	SECTION No. 5 - ELECTRICAL WORKS				
	Bill No. 11 - ELECTRICAL WORKS.				
	FORWARDED TOTAL				
11.15.B	d. Dual 10 in. Indoor / Outdoor High Output Compact Subwoofer • 2 x 250 mm (10 in) Aluminum/ Ceramic Composite Cone Drivers. • 400 W Power Handling. • Fully Outdoor Capable Design. • SonicGuard™ Overload Protection. • 13 x M6 Suspension Inserts for Optional U-Bracket. • AV Shielded. • Compact, Low Profile Design.	No	3		
	e. Four-channel, 1250W @ 4Ω Power Amplifier with BLU Link, 70V/100V.	No	3		
	f. 4x4 Signal Processor with BLU link.	No	3		
	g. Audio Mixer • 16 mono mic inputs • 4 line inputs • 4 FX busses • 8 Matrix busses • LR and C Mix busses	No	3		
	h. Gooseneck Microphone with table stand MEG 1440B + MAT-133S • Pre-polarized condenser microphone • Phantom Power; P12 to P48 V • Connectivity: XLR 3M	No	15		
	i. Podium microphone, MEG 1440L-B + MAT-133S Gooseneck Microphone with table stand • Pre-polarized condenser microphone • Phantom Power; P12 to P48 V • Connectivity: XLR 3M	No	6		
	j. UHF handheld Wireless System • Sturdy metal housing (transmitter and receiver • 42 MHz bandwidth: 1680 tunable UHF frequencies for interference-free reception • Enhanced frequency bank system with up to 12 compatible frequencies • High-quality true diversity reception • Pilot tone squelch for eliminating RF interference when transmitter is turned off • Automatic frequency scan feature searches for available frequencies • Enhanced AF frequency range • Increased range for audio sensitivity • Wireless synchronization of transmitters via infrared interface • User-friendly menu operation with more control options • Illuminated graphic display (transmitter and receiver) • Auto-Lock function avoids accidental changing of settings • HDX compander for crystal-clear sound	No	6		
	k. UHF neck Wireless System	No	3		
	l. Microphones floor stand	No	3		
	m. Stage floor box including:- • VGA input + HDMI • AV input • 5 Mics inputs	No	3		
	TOTAL CARRIED TO NEXT PAGE.				

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Construction of Two Additional Floors to the Administration Building at Jericho Agro-Industrial Park - Jericho

ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE (US\$)	AMOUNT (US\$)
	SECTION No. 5 - ELECTRICAL WORKS				
	Bill No. 11 - ELECTRICAL WORKS.				
	FORWARDED TOTAL				
11.16	<u>T.V System:</u> a. 80 CM satalite dish with 3No,s universal LNB,s, painted base, WP distribution diesec and splitters, the system must be suitable for 5 receivers. b. Supply, install, test, and commission Cascadable multiswitch with 8 outputs including enclosures,box, support, cables, and conduits, complete as specified and as shown on the drawings. c. Supply, install, connect, test and commission T.V outlet in the building, the price included T.V outlet and all pipes and cable from T.V outlet to the dish on the roof and also included the boxes, pull boxes and accessories needed to complete the job according to the specification, drawings and engineer approval.	L.S N.O N.O	1 1 7		
11.17	<u>UPS DEVICE:</u> Supply, install, test and commission complete on-line 30-KVA UPS devices 3-phase input/ 3-phase output, modular system (centralized static switch)30minut Duration with web interface for monitoring and management, including hot swap batteries , battery cabinet , all connections , cables and all necessary accessories as specified and as shown on drawings	L.S	1		
11.18	<u>Fire alarm System:</u> Supply, install and commissioning addressable fire alarm system 3-loop including all fire retardant conduits, wires, and Data socket point including CAT6A cable, including boxes,.. To be used as data or telephone or Camera or intercom or monitor &PAVA system point including cables 2x1.5 mm2 & Conduits and all accessories as drawings and specifications and engineer approval a. Fire alarm control panel addressable 3-loop including back-up Batteries & Charger, b. Smoke detector. c. Heat detector. d. Indoor fire alarm bell with flasher. e. Auto-Dialer f. Fire alarm breaking glass unit.	 NO N.O N.O N.O N.O N.O	 1 70 2 14 1 14		
11.19	<u>LCD PRPJECTOR:</u> A. Supply, install, connect , test and commission LCD projector, Projector, XGA - 5000 Lumens, HDMI Digital connectivity, with wireless dongle • HDMI, 2-VGA, YCbCr,S-video, Video, USB-A, USB-B, Audio: 3.5 Mini-Jack, RJ45 • Contrast: 10,000:1 • Lamp Life (hrs) (Eco mode): 7000 B. Electrical projection screen 200x200 cm with remote C. Electrical projector ceiling lifter D. 4x4 HDMI switcher(LCD IN SPACE CAFE NOT INCLUDE THIS ITEM) • Supports video up to 1920x1200, including HDTV 1080p/60 • RS-232 and RS-422 control port • Rack-mountable 2U, full rack width metal enclosure • Ethernet monitoring and control • Supported HDMI specification features include data rates up to 6.75 Gbps, Deep Color up to 12-bit, 3D, and HD lossless audio formats	 N.O N.O N.O N.O	5 5 5 4		
	TOTAL CARRIED TO NEXT PAGE.				

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Construction of Two Additional Floors to the Administration Building at Jericho Agro-Industrial Park - Jericho

ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE (US\$)	AMOUNT (US\$)
	Bill No. 11 - ELECTRICAL WORKS.				
	FORWARDED TOTAL				
11.2	<u>Access System</u> Supply, install, connect, test, operate and commission networked intelligent controller. It shall be capable to control 8 doors, I/O programmable relays, high speed LAN/wan connection, data guard,100 cards, flash memory and battery backup. Control panel inclusive also all equipment's, batteries, charger, internal conductors , boxes, and all accessories, cables, complete as specifications, as shown on drawing, riser and engineer's instruction				
	a. Smart Card Reader	NO.	10		
	b. Exit Push Button	NO.	8		
	c. Green Break Glass	NO.	8		
	d. Mag. Lock 300 kg (MG) Single	NO.	8		
	g. Access Control Panel	NO.	1		
11.21	<u>Generator works:</u> Supply, installing, connecting, and testing Stand by diesel Generator set (200KVA), Speed 1500rpm heavy duty industrial turbo charger engine with original sound proof canopy to reduce the sound level to be maximum 70 dBA at 7m away, with automatic fuel filling system, digital control panel, with built in RJ45 interface port for remote monitoring and managment over LAN/WAN as per specification and related code , cooling system for diesel and tools set including radiator and cooling fan complete with protection guards , exhaust from engines, 24 volt system with battery charging alternator, original AC charger starter motor , batteries and battery rack mounted on machine base frame and with static battery charger, the price to include cable, pipe, (80x80x80 cm) electrical manholes including heavy-duty cast iron 8 Ton, cover according to drawings and specifications for connecting generator. Price also to include main UPVC conduits Ø6" from MDB and separate Earthing system as drawings and specifications with all necessary civil works.	L.S	1		
11.22	<u>CCTV System:</u> Supply, install and connect a complete digital monitoring system including conduits (data cables CAT6A, power cables, connectors , sockets RJ45. boxes and all accessories according to plans specifications, engineer's instructions. and all cameras must connect for all monitors.				
	a. IP Indoor Dome Camera, with the following features: HDTV 1080p video quality, Remote zoom and focus, Lightfinder technology, WDR – Forensic Capture, Zipstream technology, Image sensor Progressive scan RGB CMOS 1/3", Day and night Automatically removable infrared-cut filter, Minimum illumination: HDTV 1080p 25/30 fps with WDR - forensic capture and Lightfinder: Color: 0.15 lux, F1.4B/W: 0.03 lux, F1.4 HDTV 1080p 50/60 fps: Color: 0.3 lux, F1.4 B/W: 0.06 lux, F1.4, Shutter time 1/66500 s to 1 s, Pan/Tilt/Zoom Digital PTZ, Preset positions, Casing IP52-rated, IK08 impact-resistant.	NO	11		
11.23	<u>DATA System:</u>				
	A. Cat6A RJ 45 Data socket CAT7A cable fire retardant conduit.	NO.	132		
	B. Supply, install, test, and commission a 19" server rack cabinet (D.C.), 42U, 100cm depth, 75 cm width, including 2 power strips, fans, all needed internal cables, cable ties, cable management trays (horizontal and vertical), shelves , connections and all accessories needed to complete the work as specified and as detailed on drawings, and according to the Engineer's instructions..	L.S	1		
	C. As above but 16Udata cabinet	L.S	1		
	D. As above but 10Udata cabinet	L.S	1		
	E. 48 port data patch panel with patch cord cat6a	NO.	1		
	F. 24 port data patch panel with patch cord cat6a	NO.	3		
	G. 12 port data patch panel with patch cord cat6a	NO.	3		
	H. 12 port camera patch panel with patch cord cat6a	NO.	2		
	I. 48 port telephone patch panel with patch cord cat6a	NO.	1		
	J. 24 port telephone patch panel with patch cord cat6a	NO.	2		
	K. 1/2U, Air patch panel	NO.	24		
	TOTAL CARRIED TO NEXT PAGE.				

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ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE (US\$)	AMOUNT (US\$)
	SECTION No. 5 - ELECTRICAL WORKS				
	Bill No. 11 - ELECTRICAL WORKS.				
	FORWARDED TOTAL				
11.23	L. SWITCH 48 port for data - CAT6A Shielded 10/100/1000MHZ Ethernet Base-T , 1000Base-X , - 24xGigabit Ethernet Network , - No. of Expansion Slot 4x Gigabit Ethernet type SFP - 1X RJ-45 Console Port type □	NO	1		
	M. ditto but 24 port for data.	NO	3		
	N. ditto but 12 port for data.	NO	3		
	O. ditto but 12 port for camera.	NO	2		
	P. ditto but 48 port for telephone.	NO	1		
	Q. ditto but 24 port for telephone.	NO	2		
	R. Electronic PABX: 3/200 KX-TDA100D line external/internal - 100 line Future extendable Private Automatic Branch Exchange (PABX) Voice Mail integration- Data line security- Background Music- Flexible station Numbering- Directed Flexible night service- Trunk answer from any station, Station Massage detail recording SMDR- Administration via RS-232, Via PT, remotely, RJ45 Ethernet, ISDN Capability- 2 way recording - Line call screening- Call pack and all accessories	L.S	1		
	S. NVR original package hardware & software, connect with internet from IP address, Windows 10 Pro 64-bit* CPU: Intel Core i7, such as Intel Core i7-4770 Quad Core 3.4Ghz. RAM: 8 GB, DDR3-1600 Network: 1 Gbps. With axis camera station licenses for 11 cameras and 4TB HDD. With colored two 42"LCD monitor of high resolution HDMI output.	NO	1		
11.24	FM 200: a. Supply, install, connect, test and commission complete FM 200 FOR SERVER ROOM including smoke, heat detectors (cross zoning) each cubicle, factory filled and pressurized with 60KG clean agent, automatic actuation unit, pressure gauge with switch, flexible hose and three discharge nozzles, control release module, horn, abort, and release stations, ULFM approved, with direct connection to FACP and sound system and AC system all accessories as per drawings, specifications engineers approval and related codes..	NO	1		
	b. Ditto above, but 10Kg for (MDB-MEC,DBMEC4)	NO	3		
11.25	Electricity Connection (Provisional Items): A. Payment to Electricity Company for upgrading the existing electric power supply to meet the new power demand. This includes the complete supply, installation and connection of any required transformers, lines, civil work, etc. This item is estimated at US\$ 30,000 and it shouldn't be changed by the contractor. Payment will be made to the contractor at the actual amount paid to the Electricity company against official invoice or payment receipt issued by the Electricity Company.	L.S	1	30,000.00	30,000.00
	B. Coordination and followup with the Electric Company and other relevent parties to perform the above mentioned works, on the Owner's behalf. This should include any extra expennses incurred due to this coordination, follow up and other administrative cost.	L.S	1		
	TOTAL CARRIED TO SUMMARY.				

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ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE (US\$)	AMOUNT (US\$)
	SECTION No. 6 - MECHANICAL WORKS				
	Bill No. 12 - PLUMBING, SANITARY AND MECHANICAL WORKS				
<p>Preamble:</p> <p>Supply networks pipes: to water tanks on roof, from tanks to collectors, and from collectors to sanitary fixtures shall be measured in linear meter (LM).</p> <p>Water tanks shall be measured in number (No).</p> <p>Sanitary fixtures shall be measured in number, price of fixture shall include -in addition to what is stipulated in the corresponding bill item -drain pipes and fittings needed to do the connection to nearest floor drain, or nearest drain pipe, or riser pipe, or manhole.</p> <p>Internal sanitary sewage network beyond the said connection points and external sewage pipes shall be measured in linear meter and paid for according to quoted rates.</p> <p>Floor drains, Floor Traps, Cleanouts and the like shall be measured in number. Price for all outlet pipes from such fittings to nearest main sewage pipe or manhole shall be included in the unit rate of the corresponding fitting.</p> <p>Vents and vertical stacks shall be measured in linear meter.</p> <p>Pipes of all sizes designated for sewage conveyance, whether internal or external, including fittings, traps and the like, shall be HDPE material of the welded type. All storm water pipes and fittings of all sizes shall be uPVC.</p> <p>Manholes, gullies and the like shall be measured in number.</p> <p>External sewer pipes shall be measured in linear meter for each individual diameter and material.</p> <p>Rates of all fittings, fixtures, appliances and pipe spans shall include: supply of material, workmanship, installation, testing and commissioning.</p> <p>Rates to include also all pieces and fittings, including by- passes, floats, cleaning outlets, automatic vents, vents and stacks, covers, valves and non-return valves and the like needed to complete the works as per specifications and Engineer's instructions.</p> <p>Pipes unit rates shall include insulation against corrosion, painting, excavation and cutting for all pipe laying works, bedding, backfilling and all works connected to pipe laying, all ties, sleeves, joints, tie bolts and threaded rods, brackets and the like, approved workshop drawings and as-built drawings, where all such works and materials should be performed and supplied as called for in Specifications and instructions of the Engineer.</p>					
12.01	Supply and Install floor mounted Toilet European Standard of reputable make or equivalent, complete with sturdy seat and cover, factory-coupled 8 liter porcelain flush tank, the price includes chrome-plated 13mm angle stop valve, waste pipes to nearest network sewage pipe or manhole (whichever is closer and makes most appropriate connection), water faucet for bidet spray (hand shower) with 1m/8 mm flexible tube and wall hook, stainless steel toilet paper holder, and all other fittings as per specifications, drawings and approval of supervising Engineer.	NO	39		
12.02	Supply and install porcelain counter-mounted washbasin European Standard of reputable make or equally approved, size (40*50) cm, complete with all fittings, valves, chrome plated syphon, waste pipes to nearest floor trap, gear mixers European Standard of reputable make or equally approved, stainless steel soap dispenser and any other necessary parts as per Specifications and as directed by the Engineer. Price includes supplying and installing 40*60cm aluminum framed mirror.	NO	34		
12.03	Supply and install white porcelain washbasin semi-pedestal, European Standard of reputable make, size (40 * 56) cm. Complete with all fittings, valves, waste pipes to nearest floor trap, European Standard of reputable make gear mixer, traps, and any other necessary parts as Specified and as directed by the Engineer. Price includes supplying and installing 40x60cm aluminum framed mirror and stainless-steel soap dispenser.	NO	6		
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ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE (US\$)	AMOUNT (US\$)
	SECTION No. 6 - MECHANICAL WORKS				
	Bill No. 12 - PLUMBING, SANITARY AND MECHANICAL WORKS				
	FORWARDED TOTAL				
12.04	Supply and Install stainless-steel kitchen sink (20 cm. deep) single bowl European Standard of reputable make, complete with all necessary valves, gear mixer of European Standard and reputable make or equivalent, drain pipe connection to nearest floor trap, and any other necessary parts and fittings as per specifications, drawings and approval of the Engineer.	NO	4		
12.05	A- Supply, install, test, and commission 4" HDPE floor trap (FT) with 15cmX15cm chrome plated threaded cast brass cover, multi inlet adjustable with trap floor drain, 4" siphon, any all other necessary parts, accessories and fittings, connecting HDPE outlet drain pipe to nearest main sewage pipe or manhole as per Specifications, drawings and approval of the Engineer.	NO	28		
	B- Ditto , but floor trap 4" sealed chrome plated cover special for urinal.	NO	6		
12.06	A- Supply, install, test and commission 4" HDPE cleanout, non-adjustable 15*15 cm with chrome plated cast brass cover, and any other necessary parts and fittings, as per Specifications, drawings and approval of the Engineer	NO	17		
	B- Ditto, but suspended HDPE clean out with HDPE plug and any other necessary parts and all other fittings, as per specifications, drawings and approval of supervisor engineer.	NO	16		
12.07	Supply, installation, testing and commissioning of HDPE PE-80 drainage down to manholes and connect to network sewage, including suspending on ceiling, with all required electrofusion fittings, sleeves, cascades, vent cap, clamps and any needed accessories & fittings with all required civil works (excavation, concrete cutting, encasement, coring, etc). All pipe drain shall all complying to the relevant British Standards for HDPE sewage pipes, and in accordance with Specifications, drawings and approval of the Engineer.				
	A- Size 4-inch diameter, HDPE PE-80.	MR	214		
	B- Size 6-inch diameter, HDPE PE-80.	MR	95		
	C- size 2" diameter CPVC rigid pipe solvent welded for drainage AC condensate water network, suspended under ceiling and connected to nearest floor drain or outdoor planter according to Engineer's instructions and preference.	MR	330		
12.08	Supply and Install porcelain wall-hung urinal with concealed trap 40*30*25 overall dimensions. Complete with all fittings, waste pipes to nearest sewage pipe, connection to water distribution collectors, isolation valves, flush valve, and any other necessary parts as per Specifications and as directed by the Engineer.	NO	12		
12.09	Supply and install rain water grill (100*25) cm made of sturdy galvanized steel grating with frame. Price includes 4" HDPE siphon to be imbedded in the reinforced concrete and with all necessary works needed to complete the job as per Specifications, drawing and Engineer's satisfaction.	NO	1		
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ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE (US\$)	AMOUNT (US\$)
	SECTION No. 6 - MECHANICAL WORKS				
	Bill No. 12 - PLUMBING, SANITARY AND MECHANICAL WORKS				
	FORWARDED TOTAL				
12.10	Supply and Install of precast circular concrete manhole with the				
	A- Manholes Ø 60 cm clear size	NO	2		
	B- Manholes Ø 80cm clear size	NO	3		
	C- Manholes Ø 100 cm clear size	NO	2		
12.11	Supply and Install PVC 4-layers white color water tank of 1.5 cubic meter volume. Price to include well-painted sturdy steel stand, float valves, valves, fittings, vents, watertight cover, and all necessary works to complete the job as per Specifications and drawings.	NO	16		
12.12	Supply, installation and commissioning of HDPE rainwater roof drain with meshed dome from a reliable and reputable make compatible for connection with asphalt sheet water proofing membrane. Rainwater drain size is: 20cm x 20cm. (4" Outlet)	NO	10		
12.13	Rain Water pipes:- (Size UPVC Pipe 4") Supply, installation, testing and commissioning of SN8 UPVC rain water pipes down to a free discharge with wired mesh above ground level, with all required fittings, cascades, vent cap, clamps and any needed accessories & fittings and includes al required civil works (excavation, concrete cutting, encasement, coring, etc) suspending pipes on ceiling (excavation, concrete cutting, encasement, coring, etc) as per specifications, drawings and approval of supervisor engineer.	MR	96		
12.14	Supply and install brass water collector for domestic hot and cold water as made by Giacomini, NTM or equally approved. The price includes all fittings, vent, valves for main and branches, brackets, steel cupboard with double-leaf door made from GI sheet oven painted with minimum 1.5 mm thickness, price includes (Eyes) for all sanitary fixtures, brass adaptors and elbows, and all other fittings as per the Specifications, drawings and approval of the supervising Engineer.				
	A- Size ¾"	NOE	52		
	B- Size 1"	NOE	138		
12.15	Supply and install vertical pressure booster pumping set on roof (Willo, Grundfos, or equivalent). Set comprises two alternating pumps, including all needed valves, fittings, strainers, flexible connectors, electrical works such as but not limited to weather proof electrical power and control panel, electrical cables from panel to pumps, IP56 maintenance man isolation switches, and all electrical accessories, as well as, concrete inertia base, all according to drawings, Specifications and approval of the supervising Engineer: Pumps data: Q=3m3/hr., Head=10 m head, enclosure protection IP 56 with stainless steel body and bronze impeller.	Set	1		
	TOTAL CARRIED TO NEXT PAGE.				

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ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE (US\$)	AMOUNT (US\$)
	SECTION No. 6 - MECHANICAL WORKS				
	Bill No. 12 - PLUMBING, SANITARY AND MECHANICAL WORKS				
	FORWARDED TOTAL				
12.16	Dismantle existing pumping set (set of 2 pumps) and reinstall on new roof in accordance with the existing mechanical and electrical configurations, including all valves, fittings, strainer, and electrical works. The price shall include reassembling the set with all existing hardware and fittings to serve the ground floor as per original setup. Any deficient fitting or electric cable (damaged or short) shall be replaced and paid for separately in accordance with relevant bill item rate(s). The job shall be completed and commissioned according with to Engineer's instructions and approval.	Job	1		
12.17	Supply and install approved quality locally made solar heating boiler comprising 2 solar panels 0.90*1.90m and 200 Lit. double-jacket cylindrical, glazed internally and galvanized externally with 2inch thick thermal insulation layer sheathed with galvanized sheet metal, well painted sturdy steel stand made from 50/50/5 mm steel angles. The price also includes white 4-layers uPVC 1000 Lit feeding tank erected on the same stand, automatic air vent and all required fittings and connections. Price also includes built-in electrical heating element 2500 watt for hot water cylinder, as well as, all electric connections: wiring cabling and isolation switches, earthing from boiler to feeding electric board.	NO	4		
12.18	Supply and install galvanized steel pipes (sch-40, seamless) for domestic cold and hot water supply network from pump set on roof to sanitary fixture collectors, and for the connection pipes between tanks, and for tanks outlet pipes and connecting header, as well as, pipe connection from existing municipal water supply point to water tanks on roof. Price includes all fittings, T's, elbows, insulation, cladding, etc., needed to complete the piping as described, specified, drawn and instructed by the Engineer.				
	a- Size ¾"	MR	220		
	b-size 1 1/4"	MR	35		
	c-size 1 1/2"	MR	85		
	d-size 2"	MR	110		
12.19	Supply and install portable CO2 fire extinguisher 5 Kg. capacity each with erection bracket. The quality of the extinguisher and location shall comply with the local Civil Defense Standards and requirements.	NO	10		
12.20	Supply and install portable dry powder fire extinguisher 9 Kg. capacity each with erection bracket. The quality of the extinguisher and location shall comply with the local Civil Defense Standards and requirements.	NO	8		

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Construction of Two Additional Floors to the Administration Building at Jericho Agro-Industrial Park - Jericho

ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE (US\$)	AMOUNT (US\$)
12.21	Supply and install fire hose reel inside 120*80*30 cm galvanized and oven painted steel cabinet of minimum thickness 1.5mm. The cabinet includes 30m long 25mm dia. rubber hose, 2 textile (linen) hoses 15m long each with 50 mm dia. with quick coupling ends, 1" ball valve, 2" globe valve, 2" landing valve, 1" jet nozzle, 2" jet nozzle both with incorporated levered cock, multipurpose dry powder fire extinguisher 6kg with 3 years validity from the date of commissioning, all in accordance with the local Civil Defense Specifications and requirements. Cabinet should be identified by a decent sticker (FIRE CABINET) adhered to the panel door.	NO	8		
	TOTAL CARRIED TO NEXT PAGE.				
	SECTION No. 6 - MECHANICAL WORKS				
	Bill No. 12 - PLUMBING, SANITARY AND MECHANICAL WORKS				
	FORWARDED TOTAL				
12.22	Supply and install PVC 4-layers white color water tank 2 Cubic meters in size for fire system. Price to include well-painted sturdy steel stand, float valves, valves, fittings, vents, watertight cover, and all necessary works to complete works as per Specifications and drawings.	NO	10		
12.23	Supply and install approved quality water cooler (drinking water fountain). The price includes all necessary fittings, drain connections to nearest floor drain or planter, and all necessary works needed for proper installation as per Specifications, drawings and Engineers satisfaction.	NO	6		
12.24	Supply and install and commissioning of certified workshop assembled firefighting pump set, consisting of three pumps: two alternating primes and one jockey. The works include electrical wiring, cabling conduiting, and control panel, isolator switch and other needed accessories and gadgets. Price also includes adequately sized pressure tank, concrete base, and all other fittings as per specifications, all in accordance with local Civil Defense Standards and approval. Pump data: 250gpm, 55m head, IP 56 enclosure protection for pumps and electric parts, all as made by Grundfos or equally approved.	Set	1		
12.25	Supply, install and commission K-type copper pipes (coiled lengths) for LPG gas distribution network, 8mm diameter with PVC outer sheathing installed inside 16 mm PVC sleeve, with all necessary fittings as Tees and valves. The price includes supports, hangers, and all necessary digging, coring, bracing and fixation needed to connect the gas outlet points shown on drawing with the existing LPG gas cylinders at the ground level. The works shall be carried out as per set Specifications, drawings and approval of the local Civil Defense authorities.	L.S	1		
12.26	Supply, install, test, and commission black steel pipes for firefighting network (Sch-40 seamless pipes as per ASTM-A53 standard), 2" and smaller pipes shall be jointed by threaded ends, while pipes above 2" shall be welded in accordance with NFPA13 requirements. Pipes to be primed and painted in red, the works also include valves, unions, nipples, automatic vents, galvanized steel hangers, and all necessary accessories to complete the works as per Specifications, drawings and related Codes.				

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ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE (US\$)	AMOUNT (US\$)
	A- Size 3" fire pipes.	MR	50		
	B- Size 2" fire pipe	MR	190		
12.27	Exhaust Grills: Supply, install exhaust square ceiling grills with volume damper, non return damper all as per specifications, drawings and approval of supervisor engineer.				
	Capacity 75 CFM (6"*6")	NO	48		
	Capacity 100 CFM (6"*6")	NO	13		
	Capacity 125 CFM (6*6")	NO	2		
	Capacity 150 CFM (6*6")	NO	2		
	TOTAL CARRIED TO NEXT PAGE.				

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ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE (US\$)	AMOUNT (US\$)
	SECTION No. 6 - MECHANICAL WORKS				
	Bill No. 12 - PLUMBING, SANITARY AND MECHANICAL WORKS				
	FORWARDED TOTAL				
12.28	Supply and install galvanized air duct of varied thickness according to ASHRAE standard for ventilation system, the price including all joints, sealant compound, hanging, digging, wooden sleeves or frames around duct passing through walls, splitter dampers, volume dampers and flexible connection, and all other fittings as per Specifications, drawings and approval of supervising Engineer (without insulation).	M2	193		
12.29	A. Supply, install, testing and commissioning of Wall/ Window mounted, exhaust air fan with capacity 150 CFM with gravity shutter and all other fittings & accessories, also including connection to electrical system and all required civil works (excavation, concrete cutting, encasement, coring, etc) as per specifications ,drawings and approval of supervisor engineer.	NO	4		
	B. Ditto, but with capacity 300 CFM	NO	1		
12.30	Supply and install inline ducted exhaust air fan of low noise sound level with out grill. The price include vibration insulation, flexible connection between the fan and the duct ,in addition to installing galvanized steel duct from out door grill till the fan outlet and all accessories need for installation. The price shall also include				
	A. In line ducted Exhaust fan, capacity 400 CFM, 65 Pa.	NO	11		
	B. In line ducted Exhaust fan, capacity 525 CFM, 65 Pa.	NO	2		
	VRF SYSTEM WORKS				
12.31	Supply, install & commissioning Heat pump VRF (variable refrigerant Flow) system of type Samsung or equivalent Refrigerant R410a. Complete with the outdoor and indoor units, piping & wiring network, control system and all necessary parts needed according to drawings and specifications.				
	Outdoor Units				
	Variable refrigerant flow outdoor unit, with all scroll compressor with invertors drive, refrigerant R 410 A, including lifting to roof - if needed-, galvanized steel base, vibration absorber and electric connection to Isolator Switch (2 meters max).				
	Outdoor unit size 90 HP	NO	2		
12.32	Indoor Units 360 Cassette.				
	Supply and Install of 360 cassette VRF indoor units with filter, drain pump, thermostat including on-off, real time clock, schedule timer, fan control, temperature limit operation, and temperature set and display. Indoor design conditions 23C cooling, 50%relative humidity at high speed According to the following capacities:				
	A. Cooling Capacity 4.5 KW 360 cassette	NO	1		
	B. Cooling Capacity 5.6 KW 360 cassette	NO	9		
	C. Cooling Capacity 7.1 KW 360 cassette	NO	7		
	D. Cooling Capacity 9 KW 360 cassette	NO	6		
	E. Cooling Capacity 11.2 KW 360 cassette	NO	22		
	F. Cooling Capacity 12.8 KW 360 cassette	NO	2		
	G. Cooling Capacity 14 KW 360 cassette	NO	4		
	TOTAL CARRIED TO NEXT PAGE.				

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Construction of Two Additional Floors to the Administration Building at Jericho Agro-Industrial Park - Jericho

ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE (US\$)	AMOUNT (US\$)
	SECTION No. 6 - MECHANICAL WORKS				
	Bill No. 12 - PLUMBING, SANITARY AND MECHANICAL WORKS				
	FORWARDED TOTAL				
12.33	Indoor Units wall mounted				
	Supply and Install of wall mounted VRF indoor units with filter				
	Cooling Capacity 3.6 kw wall mounted	NO	2		
12.34	Indoor Units Ducted MSP				
	Supply and Install of MSP Ducted VRF indoor units with filter, drain pump, thermostat including on-off, real time clock, schedule timer, fan control, temperature limit operation, and temperature set and display. Indoor design conditions 23C cooling, 50%relative humidity at high speed According to the following capacities:				
	Cooling Capacity 16 kw MSP Ducted	NO	4		
12.35	Energy recovery ventilation unit				
	Supply, install & commissioning of ERV units with 600 CFM capacity according to manufacturer instructions and calculations.	NO	2		
12.36	Copper piping network				
	Supply, install & commissioning copper pipes for refrigerant R410a between indoor units and outdoor unit according to manufacturer instructions and calculations. Price includes all required fittings, hanging, isolation and digging. According to manufacturer	L.S	1		
12.37	Control & Wiring				
	All wiring between indoor and outdoor units inside electrical conduits	L.S	1		
12.38	Duct work: Supply, install galvanized air duct according to SMACNA requirements. Price includes all hardware and accessories needed to meet the Standards and requirements of ASHRAE for proper adjusting and balancing of air and cooling load distribution.				
	Supply, install galvanized air duct with Acoustical fiberglass thermal insulation 1" thickness, of 24 kg/m3 density with reinforced aluminum foil cladding layer, all according to ASHRAE	M2	170		
	Supply, install of flexble duct 8"	MR	50		
	Supply, install galvanized air duct with Acoustical insulation 1" thickness, 24kg/m3 density for ERV units	M2	60		
12.39	Supply Grills				
	Supply 15"X15" with volume damper as made by House of Grills or equally approved.	NO	20		
	TOTAL CARRIED TO NEXT PAGE.				

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ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE (US\$)	AMOUNT (US\$)
	SECTION No. 6 - MECHANICAL WORKS				
	Bill No. 12 - PLUMBING, SANITARY AND MECHANICAL WORKS				
	FORWARDED TOTAL				
12.4	Return Grills				
	RETURN GRILL 60X60 with filter, serving as maintenance door for MSP ducted fan coil units, as made by House of Grills or equally approved.	NO	4		
12.41	split for control room				
	Supply, install & commissioning of cooling only inverter AC spilt				
	Two split 2 T.R inverter type units	L.S	1		
12.42	Dismantle of VRF existing units				
	Dismantle of the existing VRF outdoor units on roof serving the ground floor and reinstalling the same on the roof of the second floor upon completion. The work should include all workmanship, crane charges, new and replacement material including copper tubing where needed for extension and where inapplicable for new arrangement. The works should meet the optimum Standard for best efficiency. The existing AC works serving the ground floor should stay operable throughout the construction period. Cooling/heating supply to the ground floor is not allowed to be interrupted for more than three days in total during the modules relocating process.	L.S	1		
	TOTAL CARRIED TO SUMMARY.				

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ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE (US\$)	AMOUNT (US\$)
	SECTION No. 7 - External Works				
	Bill No. 13 - External Works.				
13.01	Supply and Build; Grade B '250' Concrete Pre-cast Curbstone. Size (18/20*25*100) cm. exposed height 20 cm. Price to include excavation, casting of blinding 40*10 cm., struts 15*15 cm. of plain concrete Grade B ' 150 ', pointing and grouting Struts and Blinding of curbs. as Detailed in drawings, (Lowering curbs in entrance of ramps specially detailed for handicapped. Price also includes colored painting for curb stone as per engineer instructions.	M.R	20		
13.02	Supply and install prefabricated structural steel canopy for back terrace area according to drawings. Price to include all required steel elements, polycarbonate corrugated sheets 10mm, reinforced concrete elements and foundations, excavations, backfilling, fittings and welding elements. The price also includes Hammer Finish painting in three coats in addition to two primer coats, and all related works as per detailed drawings, specifications Measurements are for Horizontal dimensions of the Canopy only.	M.S	95		
13.03	Supply and tile interlock colored concrete bricks of size (20x10) cm and 6cm thick in different texture. Price to include tiling, cutting and a layer of 10cm compacted Adasiya mixed with sand in accordance with the manufactures instructions. Price also includes 20cm thick compacted Basecourse.	M.S	25		
13.04	Supply and install and fix emergency steel stairs. Price to include steel columns, beams, stairs, steel plates, angles, chequards, hand rails and all works needed to complete the work as per details and drawings. Price also include welding and bolted connections as needed. price also include painting in three coats in addition to two primer coats as directed by the engineer	L.S	2		
	TOTAL CARRIED TO SUMMARY.				

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	SECTION No. 8 - Elevator Works				
	Bill No. 14 - Elevator				
Technical Specifications for Elevator: GENERAL TYPE: Machine - Room less, Gearless ORIGIN: FULL PACKAGE, European Standards APPLICABLE CODE: EN-81/20/50 USE: PASSENGERS CAPACITY: 1000 KG, 13 Passengers Number of Floors: 3 levels Number of Landing Doors: 3 Doors on the same line Floors Numeration: GF, F1, F2 SPEED: 1 M/S SHAFT DIMENTION: 200* 90cm MOTION CONTROL: FULL COLLECTIVE CAR GROUP: SIMPLEX CONTROLLER: MICROPROCESSOR, inverter type with built-in VVVF controller PIT: 1500 MM MACHINE ROOM LOCATION: No machine Room SAFETY GEAR: PROGRESSIVE ROPING/PISTON: 2:1 POWER SUPPLY: 380 V, 3-PHASE, 50 HZ LIGHTING SUPPLY: 220 V 1-PHASE, 50 HZ START PER HOUR: 240 LEVELING ACCURACY: ±3 MM CABIN VENTILATION: Automatic Fan					
ELEVATOR CAR CAR DESIGN: mirror etched stainless steel 304 with pattern according to Engineer's selection ENTRANCES: ONE CAR INTERNAL SIZE: W= 1600, D= 1400, H= 2400 MM CAR DOOR OPENING: W= 900, H= 2100 MM CAR DOOR PROTECTION: Photo electric barrier/or light curtain CAR DOOR TYPE: Automatic center opening CAR DOOR FINISH: Mirror etched stainless steel 304 with pattern according to Engineer's selection DOOR OPERATOR: VVVF CAR WALLS: Mirror etched stainless steel 304 with pattern according to Engineer's selection CAR FLOORING: Italian granite (TIGER or Equivalent) CAR VENTILATION: Electric fan MIRROR: Full mirror along back wall HANDRAIL: Stainless steel LIGHTING: Automatic led light along ceiling or at corners CEILING: Stainless steel CAR OPERATING PANEL: FULL HEIGHT IN HAIRLINE STAINLESS STEEL : DOOR OPEN BUTTON, DOOR CLOSE BUTTON : ALARM BUTTON : 3 WAYS INTERCOM : AUTOMATIC FAN : POSITION INDICATOR, 7 SEGMENTS Floor button ALL PUSH BUTTONS INSIDE ELEVATOR CAR MUST BE STAINLESS STEEL, LIT AND BRAILLE COMPLIANT.					
LANDING DOORS DOOR TYPE: Automatic center opening DOOR OPENING SIZE: W= 900 MM, H= 2100 MM MAIN DOOR FINISH: Mirror etched stainless steel 304 with various patterns according to engineer selection OTHER DOORS FINISH: Mirror etched stainless steel 304 with pattern according to Engineer's selection HALL SIGNALS HALL CALL BUTTON: Electromechanical HALL POSITION INDICATOR: At all floors EMERGENCE FIRE MAN: At main floor					

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ADDITIONAL FEATURES

CAR OVERLOAD DEVICE
 GONG ON THE CAR
 VVVF DOOR OPERATOR
 U.P.S Battery (automatic evacuation to nearest floor) OR ARD SYSTEM
 SAFETY FEATURES
 PHASE FAILURE RELAY
 PHASE SEQUENCE CONTRACTOR
 THERMAL OVERLOAD DEVICE
 VOLTAGE DROP PROTECTOR IN CONTROLLER
 PREPARED FOR EARTH LEAKAGE PROTECTION
 THE LANDING DOORS ARE 120 MINUTE FIRE RESISTANCE DOORS
 THE COUNTER WEIGHT CAST IRON ENCLOSE STEEL
 EMERGENCY FIRE MAN SWITCH
 OVER LOAD INDICATION WITH BUZZER
 LCD SCREEN
 EMERGENCY LIGHT
 ALARM BEEB
 BATTERIES FOR EMERGENCY TRAVEL
 DIRECTIONAL SIGN
 FULL LOAD BYPASS
 DOOR CLOSE BOTTON
 DOOR OPEN BUTTON.

The Contractor shall supply the elevator according to specifications and approval of the Engineer, and he shall test and commission the Works to the satisfaction and approval of the Civil Defense authorized personnel. All liaising and payable charges for testing, commissioning and certification of the elevator shall be furnished by the contractor.

ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE (US\$)	AMOUNT (US\$)
	SECTION No. 8 - Elevator Works				
	Bill No. 14 - Elevator				
14.01	Supply, install, test and commission European Standard elevator of a reputable and reliable International brand. The electric elevator shall comply with EN-81/20/50 Standards, backed with certificate of compliance, and coupled with two years warrantee beyond the commissioning date. The elevator supplier should be certified representative by the manufacturer to install, commission and provide after-sale service for the rendered product. The supplier must have credible after-sale service history. Full package price includes all electrical works, the necessary tests, maintenance, and two years warrantee beyond date of commissioning, as well as, price of submersible pump of Q=3m ³ /hour and Head=3m and pit with 60*60 with suitable cover electrical DB, telephone line and all related works as per drawings and Engineer's instructions and Civil Defense approval.				
	3 Stops elevator	NO	1		
	TOTAL CARRIED TO SUMMARY.				

Summary		
Item	Description	Total Price
		US \$
Bill No. 1	Excavation & Site Preparation Works	
Bill No. 2	Skeleton Works - Cncrete Works	
Bill No. 3	Stone Works	
Bill No. 4	Block Works	
Bill No. 5	Plastering	
Bill No. 6	Tiling, Flooring And Marble Works	
Bill No. 7	Carpentry And Joinery Works	
Bill No. 8	Steel And Aluminum Works	
Bill No. 9	Painting Works	
Bill No. 10	Insulation, Roofing And Expansion Joints	
Bill No. 11	Electrical Works	
Bill No. 12	Plumping, Sanitary And Mechanical Works	
Bill No. 13	External Works	
Bill No. 14	Elevator Works	
Grand Total		
Percentage % discount or addition		
Net Grand Total		
<p>Note: All Prices Exclude VAT</p> <p>The sum of ----- US\$</p> <p>Contractor: -----</p> <p>Signature and Stamp: -----</p> <p>Date: -----</p>		