



**INDIA BRAZIL SOUTH
AFRICA**



Ramallah Municipality



UNDP/PAPP

Project Number:

PAL -10 - 000 63002

Project Name:

**Construction of Multi-purpose Sports
Hall in Ramallah City**

Section 9:

Bill of Quantities

Consultant:

**First Option- Amara
Architects, Engineers & Construction Managements**

2009

SECTION 1

EXCAVATION ,BACKFILLING & SITE WORKS

NUMBER OF BILLS "1"

SECTION '1'
EXCAVATION ,BACKFILLING AND SITE WORKS

NUMBER OF BILLS"1"

Preambles

1. Excavation for foundation, trenches. Etc. shall be the actual dimensions shown on Drawings, and to be measured from Natural Ground Level or Reduced Level (which is lower), i.e.
 1. From Reduced level when R. L. is lower than N. G. L.
 2. 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...etc. and removal of 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 fill material and to place agricultural soil as where needed as shown in 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 x 5m 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 15 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.
12. Contractor should study site investigation report and he should visit the site.
Excavation & back filing is directly related to site investigation report.

BILLS OF QUANTITIES / PAL -10 - 000 63002 Ramallah Sport Hall					
CONSULTANT: FIRST OPTION				DATE: Sep 2009	
Bill No. (1) -Excavation , Backfilling and site Works.				(Sec-01)	
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	Unit Rate	AMOUNT
(SECTION NO. ' 1 ')					
1.01	Site Leveling. (Excavation under all the building). Cut in any kind of soil, concrete, or asphalt; to the required Levels (reduced levels=790.45&785.37) for the building and as required on drawings for the site work 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-191	M.C	1,800		0.00
1.02	Excavation for Foundations; from reduced level to bottom of blinding under footings and where required as per drawings, in any kind of soil to the dimensions and levels shown in the drawings. The price to include back filling with excavated suitable materials, or imported approved materials up to bottom of base coarse, removal of extra and unsuitable soil. Back filling material shall be applied on layers, 20cm thick, watered and compacted to 100% to comply with modified AASHTO F.D.T (T-191)	M.C	580		0.00
1.03	Supply and well Compact Base Coarse, under slab on grade and asphalt layer. Basecourse shall be watered and compacted to 100% to comply with modified AASHTO F.D.T (T-191). Price includes watering, leveling and compacting of ground (sub-base) under base coarse to min 100% according to Field Density Test.				
	a- Minimum thickness 20 cm	M.S	1,310		0.00
	b- Minimum thickness 15 cm (above basement slab in the hall Area)	M.S	530		0.00
1.04	(Provisional Item)				
	Imported Fill. Import and fill with selected Imported Approved Fill; to the required levels and where directed by the Engineer, only for the quantities that are extra and above the quantities included in item 1.02,1.03. Filling shall be on layers not to exceed 200 mm. thick. Price to include leveling, watering and compacting to 100 % field density. Complying with Modified AASHTO Density Test T-191 .	M.C	600		0.00
1.05	Demolishing and alteration Works of existing concrete walls around the existing pump Room, stairs, stone walls (Salacil), etc. Price shall include the removal of debris and surplus material to approved dumping areas	LS	1		0.00
	TOTAL				0.00
	TOTAL CARRIED TO SUMMARY				0.00

SECTION 2
SKELETON WORKS
NUMBER OF BILLS "4"

Bill No. (2) -Concrete Works. **(Sec-02)**

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	Unit Rate	AMOUNT
	<p>Preamble.</p> <p>Rates of Concrete Works shall include: -</p> <ol style="list-style-type: none"> 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 of underground reinforced concrete elements with two coats of hot bituminous paint (75/25) ,or cold applied rubberized bitumen emulsion protective coating with fiber reinforcement, the strokes of each layer to be opposite to each other. 7. Steel bars used for alignment and fixing of reinforcement works, and extra steel added to assure proper detailing and safety. 8. Temporary support and formwork. 9. Measurement of Concrete elements shall be the net dimensions as detailed in the drawings. All recesses, openings and voids shall be deducted. 10. Measurement shall be only for the seen surfaces of elements. Overlapping and measuring items twice under separate headings shall not be allowed. <p>Slabs are measured from the External Edge of external walls. All beams, drop beams, projection including fair face, sun breakers, and any part casted together with the slab will be included in the price of the slab.</p> <p>Columns are to be measured from top level of the slab to the bottom level of the beam or dropped beam.</p> <p>11.the minimum cement contents for concrete should be: a-B200 -250kg/m3 b-B250-300kg/m3 c-B300-350kg/m3</p> <p>12.Suitable propping system to be provided for basement slab during compaction of basecourse or asphalt</p> <p>13. All exposed concrete to have fairface finish, including walls columns,column capitals slabs,floors, stairs, and soectator steps</p>				

BILLS OF QUANTITIES / PAL -10 - 000 63002 Ramallah Sport Hall					
CONSULTANT: FIRST OPTION			DATE: Sep 2009		
Bill No. (2) -Concrete Works.				(Sec-02)	
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	Unit Rate	AMOUNT
2.01	Supply and Cast Plain Concrete;				
	a) Blinding Concrete grade 'B 150' under foundations and tie beams. Thickness not less than 10cm thick, should be according to drawings.	M.S	720.0		0.00
	b) Rubble concrete B200 (PROVISIONAL ITEM) with max. 30% crushed stones for filling cavities and voids which appears under foundation and according to engineers instructions.	M.C	20.0		0.00
2.02	Supply and Cast Reinforced Concrete Grade 'B300 With a minimum cement content of 350 Kg. per cubic meter. Price to include for painting with two coats of hot bitumen (75/25) (for the buried parts). or cold applied rubberized bitumen emulsion protective coating with fiber reinforcement .				
	a) Foundations, footings	M.C	131.0		0.00
	b) Ground beams & pedestals. (Measured between columns faces &(measured up to bottom of slab on grade))	M.C	150		0.00
	c) Reinforced shear and basement Walls below Ground Slab Level (measured from top of footing to the bottom of slab on grade)	M.C	41.0		0.00
2.03	Supply and Cast Reinforced Concrete Grade 'B 300 With a minimum cement content of 300 Kg. per cubic meter For Slab on grade (10) cm. thick Slab Including surface leveling, finishing, polyethylene sheets 125 micron, and all related works.	M.S	920.0		0.00
2.04	Supply and Cast Reinforced Concrete Grade 'B 300 with a minimum cement content of 350 Kg. per cubic meter for:				
	a) Stair case (stairs, landing, and where required)	M.C	7.5		0.00
	b) Reinforced concrete Basement Walls	M.C	158		0.00
	c) Reinforced concrete Shear walls	M.C	36.0		0.00
2.05	Supply and Cast Reinforced Concrete Grade 'B 300 with a minimum cement content of 350 Kg. per cubic meter for the following:				
	a) Column Necks. (measured from top of footing to the bottom of ground beam)	M.C	7.0		0.00
	b) Columns. (measured from top level of the slab to the bottom level of the beam or dropped beam). Reinforced concrete Column are fair-face finish	M.C	118.0		0.00
	c) Columns Capitals: Reinforced concrete Column Capitals are fair-face finish	M.C	12.5		0.00
2.06	Supply and Cast 20cm thick Reinforced Concrete Grade 'B 300 with a minimum cement content of 350 Kg. per cubic meter for suspended solid slab . Price to include for projected beams, other beams and projections. (measured from edge of external walls)	M.S.	915.0		0.00
	TOTAL				0.00
	TOTAL CARRIED TO NEXT PAGE				0.00

BILLS OF QUANTITIES / PAL -10 - 000 63002 Ramallah Sport Hall					
CONSULTANT: FIRST OPTION			DATE: Sep 2009		
Bill No. (2) -Concrete Works.				(Sec-02)	
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	Unit Rate	AMOUNT
	FORWARDED TOTAL				0.00
2.07	Supply and Cast Reinforced Concrete Grade 'B 300' for 25 cm thick suspended ribbed slabs .Price to include projected beams, other beams and projections . Supply, lay and arrange hollow concrete blocks 'Grade 35' for ribbed slabs, using closed end blocks as required by the engineer at all ends, edges, openings, services location etc as per drawings.	M.S	210.0		0.00
2.08	Supply and Cast Reinforced Concrete Grade 'B300 For suspended drop beams (not included in items 2.06 and 2.07) With a minimum cement content of 350 Kg. price to include formwork, rebar and any needed work to complete job	M.C	55.0		0.00
2.09	Supply and Cast Reinforced Concrete Grade 'B300 For Suspended Spectator Steps With a minimum cement content of 350 Kg. price to include formwork, rebar and any needed work to complete job	M.C	66.0		0.00
2.10	Supply and Apply Asphalt Concrete, By using Finisher in accordance with general specifications. Wearing Course (5) cm. thick, after compacting. Price to include Supplying and Applying Liquid Asphalt Prime Coat (Grd. MC. 70). 1.2 Kg. per square meter approximates. Applied with the thinner on dry, smooth and clean surface	M.S	1,010.0		0.00
2.11	(New Item) Supply and Cast Reinforced Concrete Grade B300 with a minimum cement content of 350 Kg. per cubic meter for 25 cm suspended solid slab. Price to include for projected beams, other beams and projections. (measured from edge of external walls)	M.S	65.0		0.00
	TOTAL				0.00
	TOTAL CARRIED TO SUMMARY				0.00

Bill No. (3) -Steel Works. **(Sec-02)**

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	Unit Rate	AMOUNT
	<p>Preamble.</p> <p>Rates of Steel Works shall include: -</p> <p>1-Design, fabrication, packaging , transportation to the job site, haulage, change, lifting, storage and erection, surveying, drawings, and dimensional accuracy are all considered to be included in the contractors price.</p> <p>2-All connection materials, bolts, welds, shear connectors or hammer driven screws, washers, nuts spring locking washers, plates, cleats, shop welding, site welding, drilling of holes and such like are all considered to be supplied and installed by the contractor and included in the price.</p> <p>3-All required materials that are related to the construction of the steel structure and the decking such as polycarbonate sheet, reinforcing bars, welded wire fabric, special details, accessories, adapters, fixings, sealants, connections, mountings, support and such like are considered an integral part of the framing system and are deemed to be the responsibility of the contractor for supply and installation subject to the approval of the engineer.</p> <p>4-prices shall include also all the required welding, fixing bolts, plates , anchorage bolts , Stiffeners, any temporary formwork that might be required and Rain gutter.</p> <p>5- The contractor shall design and detail all welded or bolted connections to the approval and satisfaction of the engineer.</p> <p>6- Materials and fabrication procedures shall be subject to inspection and tests in the mill, shop, and field by an independent testing laboratory. Such inspection and tests will not relieve the contractor of responsibility for providing materials and fabrication procedures in compliance with specified requirements.</p> <p>7- Inspection and testing for structural steel : Testing and inspection of structural steel will be performed by a testing laboratory for compliance with the specified materials.</p> <p>8. Inspection and testing for bolt connections : Bolted connections will be inspected by a testing laboratory in accordance with AISC 314 .</p> <p>9. Inspection and testing for welding: Welding will be inspected and tested by a testing laboratory during fabrication and erection of structural steel as follows. Certify all welders and make inspections and tests as required.</p> <p>10. Temporary support and formwork.</p> <p>11. All direct, indirect or independent testing and quality assurance expenses shall be included in the contractor's price for steel structure.</p> <p>12. The measurements for the structural steel works shall be based upon the price per metric ton of prefabricated, delivered and erected structural steel sections</p>				

BILLS OF QUANTITIES / PAL -10 - 000 63002 Ramallah Sport Hall					
CONSULTANT: FIRST OPTION			DATE: Sep 2009		
Bill No. (3) -Steel Works.				(Sec-02)	
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	Unit	AMOUNT
				Rate	
	<p>Preamble.</p> <p>Rates of Steel Works shall include: -</p> <p>13. The weights of shop or field bolts, nuts, washers, fixings, and also that of shop or field weld metal shall not be calculated , Such items shall be deemed to be included in the contractor's over-all price per ton of the structural steel for the project.</p>				

BILLS OF QUANTITIES / PAL -10 - 000 63002 Ramallah Sport Hall					
CONSULTANT: FIRST OPTION			DATE: Sep 2009		
Bill No. (3) -Steel Works.				(Sec-02)	
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	Unit Rate	AMOUNT
3.01	<p>STEEL STRUCTURE: Supply and fix in place prefabricated Steel Roof Structure & Service area steel work , including space trusses, truss (pipes, tubes), Gusset & bearing plates, purlins, bracing cables , sag rods , and Covering sheets systems (Galvanized steel covering sheets & Rodeca Polycarbonate Cover sheets Roof Panels) in accordance with Drawings and as Specified Including Painting and all Necessary Fixing Accessories and Hardware as Shown on Drawings. Prices shall include also all the required welding, fixing bolts, plates, anchorage bolts, Stiffeners, accessories, adapters, non-shrinkage mortar, fixings, sealants, connections, any temporary formwork that might be required and rain gutters (All Steel Sections should be Rolled hot Sections RHS)</p> <p>NOTE: All metallic parts should be painted with red oxide primer, enamel undercoat, and two coats of first class paint (eggshell or glass finish) in gray color approved by the Engineer according to specifications.</p>				
	a) Trusses.-pipe section	Ton	21.0		0.00
	b) Trusses.-Tube section	Ton	0.25		0.00
	c) Purlins	Ton	20.0		0.00
	d) Columns (HEB section and tubes)	Ton	3.0		0.00
	e) Bracing and sag rods as shown in the drawings	Ton	7.5		0.00
	f) Suspension Cables Φ 20,price include fixing and any necessary works to complete the job	LM	40.0		0.00
	g) Supply and install Polycarbonate cover sheets panels 25 mm thickness for the roof and walls including all the required sealants, fasteners, closure materials and rain gutter fixation				
	g1. For roof panels: Rodeca Polycarbonate sheets panels TYPE PC 2625-5 or equivalent according to specifications. Price to include windows as shown in drawings and details with all required accessories in accordance with details and Manufacturer specifications and the Engineer instructions. Price includes all required works to complete the job.	M.S	1,570.0		0.00
	g2. For vertical panels: Rodeca Polycarbonate sheets panels TYPE PC 2540-4 or equivalent according to specifications. Price includes all required work and accessories to complete the job in accordance with details and Manufacturer specifications and engineer instructions. DOES NOT INCLUDE WINDOWS.	M.S	100.0		0.00
	(New Item) Aluminum frame (Rodeca or equivalent) vertical, fixed or top hung windows, shape rectangular or arched as per drawings. Including aluminum hollow profiles, Sash prepared for reflective double glass 6-4-6 mm, locking mechanism, hook plate, hand lever, actuating chain and control cable. Also includes EPDM seals, 6mm glass, all according to specifications. Price includes all required works to complete the job. Items below (g3, g4, g5)				
	g3. Top hung opening out window size 102.5 x 95 cm with double glass	No	44.0		
	g4. Fixed window panels with double glass	M.S	100.0		

BILLS OF QUANTITIES / PAL -10 - 000 63002 Ramallah Sport Hall					
CONSULTANT: FIRST OPTION			DATE: Sep 2009		
	g5. (PROVISIONAL ITEM) Rovia motor for window opening, including electrical installations, fittings and all required as per manufacturer instructions	No	44.0		
	h) Galvanized steel covering sheets 5mm thick for services area	M.S	72.0		0.00
	TOTAL				0.00
	TOTAL CARRIED TO SUMMARY				0.00

Bill No. (4) -Stone Works. **(Sec-02)**

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	Unit Rate	AMOUNT
	<p>Preamble.</p> <p>Rates of Stone Works shall include: -</p> <p>All Stone works shall be of local white stone of First grade. Stone material, size, and texturing shall be in accordance with detailed drawings and Engineer's instructions and approval. Stones shall be of not less than (5 cm. thick, 25 cm. high and of length ranging from 1.5 to 3 times the height.) Stones shall be homogeneous in color and texturing and free of any defects. 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 Manual. 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. No measurement will be made for any recesses, projections or sides of stone pieces. Measurement of door and window jambs and reveals, corner peaces, and the like is not applicable. No allowances shall be made for stone pieces in any shape. No allowances or extra rates shall be considered for stone courses in lintels, overhanging slabs and roof slab courses. 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, dowels, hangers, steel mesh and all tying tools. • Erecting and dismantling of scaffoldings. • Pointing and pointing materials of any type, and cleaning of walls. • Lintels and other reinforced concrete elements embedded in the stone walls including reinforcement. . 3Cm Polystyrene boards for insulation between concrete and concrete blocks. 				

BILLS OF QUANTITIES / PAL -10 - 000 63002 Ramallah Sport Hall					
CONSULTANT: FIRST OPTION			DATE: Sep 2009		
BILL No. (4) -STONE WORKS				(Sec-02)	
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
4.01	Supply and Build Stone Walls to the full length and height as shown in the drawings. (Jamma'in) first class and first quality, rough textured "Mofajar" for facades, and smooth matabbah for jambs and reveals:				
	a- 40cm with plain concrete (B-200) and 5cm thermal insulation extruded Polystyrene boards (Rodopan or equivalent) and cement (concrete) block backing Grade 35 (10*20*40cm)	M.S	240.0		0.00
	b- 35cm with plain concrete (B-200), 3cm thermal insulation extruded Polystyrene boards (Rodopan or equivalent) and cement (concrete) block backing Grade 35 (7*20*40cm)	M.S	25.0		0.00
	c- 30cm with plain concrete (B-200), 3cm thermal insulation extruded Polystyrene boards (Rodopan or equivalent) and cement (concrete) block backing Grade 35 (7*20*40cm)	M.S	220.0		0.00
	d- 25cm with plain concrete (B-200) Backing,	M.S	45.0		0.00
4.02	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 and all ancillaries. Price not to include for the reinforced concrete elements to be clad, which is to be measured under another item	M.S	170.0		0.00
4.03	Supply and Build Stone Walls to the full length and height as shown in the drawings. (Jamma'in) first class and first quality, rough textured "Mofajar" for facades, and smooth matabbah for jambs and reveals:				
	a- 25 cm thick with plane concrete B200 for parapet and corridors parapets.	M.S	40.0		0.00
	TOTAL				0.00
	TOTAL CARRIED TO SUMMARY				0.00

BILLS OF QUANTITIES / PAL -10 - 000 63002 Ramallah Sport Hall					
CONSULTANT: FIRST OPTION			DATE: Sep 2009		
Bill No. (5) -Concrete Block Works.				(Sec-02)	
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	Unit	AMOUNT
				Rate	
	<p>PREAMBLE.</p> <p>1. All works of this bill shall be of Concrete blocks Grade 35 of high quality standards and as per specifications.</p> <p>2. Block works shall be measured in meter square. The net measurement of the seen elevations, excluding all openings and voids more than 0.1 M. S. in area.</p> <p>3. No allowance for thickness used other than those shown in the drawings.</p> <p>4. Rates of Block works include: -</p> <ul style="list-style-type: none"> · Vertical and horizontal joints. · Cement and mortar, · Galvanized angles butterfly ties (at joints and between walls in cavity walls) · Concrete filling at all ends including reinforcing steel to door and window openings, reveals, sills for windows and the like. · R.C. Door jambs for room doors as per detailed drawings · Lintels and bond beams to the full length of the wall, min 17 cm. High and in the same wall thickness of reinforced concrete grade B-200 with reinforcement steel (4Φ12), on top of doors and windows or as specified per drawings. <p>.Rate to include lining and hunching 10x10 cm with (45°) to the edge of External Block walls</p> <ul style="list-style-type: none"> · And all needed to complete job as per drawings and specifications. 				
5.01	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks.				
	a. 35cm Cavity Double Walls 20+10 cm Hollow concrete Block + 5cm cavity	M.S	195		0.00
	b. 25cm Cavity Double Walls 10+10 cm Hollow concrete Block + 5cm cavity	M.S	40		0.00
	c. 20cm Cavity Double Walls 10+7 cm Hollow concrete Block + 3cm cavity	M.S	98		0.00
	d. Hollow Blocks 7 cm thick for internal partitions	M.S	Null	Null	Null
	e. Hollow Blocks 10 cm thick for internal partitions	M.S	255		0.00
	f. Hollow Blocks 15 cm thick. for external partitions and parapet.	M.S	18		0.00
	g. Hollow Blocks 20 cm thick. for internal partitions and parapet.	M.S	9		0.00
	TOTAL				0.00
	TOTAL CARRIED TO SUMMARY				0.00

SECTION 3
INTERNAL FINISHES
NUMBER OF BILLS " 5 "

BILLS OF QUANTITIES / PAL -10 - 000 63002 Ramallah Sport Hall
CONSULTANT: FIRST OPTION DATE: Sep 2009

Bill No. (6) -Plastering Works.

(Sec-03)

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	Unit Rate	AMOUNT
	PREAMBLE. PLASTERING to all areas shall be measured net, including openings, which are less than 0.25 Meter Sq.The price shall include for running rules , 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, side of columns, window sills; all of which shall be measured as plastering . Price shall also include Expanded metal lath, angle beads at all appeared 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.				
6.01	Two Coats of Cement and Sand Plaster over one slurry coat to walls and ceilings and where required including metal Lath, angle beads, plaster stops and all required as per Specifications and Drawings. 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 opening, sides of columns, window sills (will not be measured in the plaster's quantities).				
	a. Three Coats Internal Plaster. (include sport hall)	M.S	1550		0.00
	b. Ditto but for the Ceiling including drop beams.	M.S	325		0.00
	c. Ditto but for Parapet and Wherever Required, price to include water proofing liquid with each coat.	M.S	55		0.00
	d. Ditto but for external walls and Wherever Required, Price to include waterproof additives.	M.S	270		0.00
	d. Ditto but for external columns and Wherever Required. Price to include waterproof additives.	MS	205		0.00
	TOTAL				0.00
	TOTAL CARRIED TO SUMMARY				0.00

BILLS OF QUANTITIES / PAL -10 - 000 63002 Ramallah Sport Hall	
CONSULTANT: FIRST OPTION	DATE: Sep 2009

Bill No. (7) -Tiling, Flooring and Marble Works.

(Sec-03)

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	Unit	AMOUNT
				Rate	
	<p>PREAMBLE.</p> <p>1. All tiling works (terrazzo, ceramics, and marble) shall be measured net in square meters.</p> <p>2. Marble works for steps and treads of stairs shall be measured in linear meter. The thread and the riser shall be measured as a one unit.</p> <p>3. Marble works for window sills and other openings shall be measured in squared meter.</p> <p>4. Parapet coping shall be measured in linear meter.</p> <p>5. Rate shall include preparation of surfaces under tiles, Finish to falls and cross falls, special tile peace's for edges and the like, tile surface finishing, pointing and cleaning and all incidental as per specifications.</p>				
7.01	<p>Supply and Install White Ceramic Glazed Wall Tiles, First choice and free from all defects. (Spanish made or equivalent - GRADE A)</p> <p>Price to include round edges tiles perimeters, plastic angles for edges, cutting, patching around the services bedding in cement mortar, grouting, pointing with white cement and two coats of plaster. All works shall be in accordance with drawings and specification. Engineer shall approve size and color of tiles, which should be 20 * 20 * 0.6 cm</p>	M.S	138		0.00
7.02	<p>Supply and Install Non-Slip Ceramic Glazed Floor Tiles, First choice and free from all defects 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 . Engineer shall approve size and color , which should be 20 *20*0.6 cm .</p>	M.S	120		0.00
7.03	<p>Supply and Install Local Marble Sills and Thresholds (3 cm. thick) for windows, doors, and where required, Set in cement mortar bedding. Price to include grouting, polishing of face and seen edges.</p>	M.S	12		0.00
	TOTAL				0.00
	TOTAL CARRIED TO NEXT PAGE				0.00

BILLS OF QUANTITIES / PAL -10 - 000 63002 Ramallah Sport Hall	
CONSULTANT: FIRST OPTION	DATE: Sep 2009

Bill No. (7) -Tiling, Flooring and Marble Works.

(Sec-03)

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	Unit Rate	AMOUNT
	FORWARDED TOTAL				0.00
7.04	Supply, Install and finish Pre-cast pre-polished Terrazzo Tiles size (30x30x2.7) cm, with Italian marble chipping # 6. Price to include Pre-cast Terrazzo skirting size (30 x 10 x 2) cm with same marble chipping, bedding and jointing in cement and sand mortar, pointing with white cement, required gravel fill,. and on site grinding where required, polishing and cleaning.	MS	Null	Null	Null
7.05	Ditto 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 18.45cm. 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. a. To Spectator steps	M.R	Null	Null	Null
7.06	Supply and Install 5cm stone sill chamfered Parapet Copping and wherever needed (10 cm. thick). Set in cement mortar bedding price to include grouting, polishing of face and seen edges.	M.R	38		0.00
7.07	Supply and install porcelain tiles 50x50x0.8cm top quality (DAU or equally approved)	MS	285		0.00
7.08	(Provisional Item) Supply and Install epoxy layer - water based, self leveling with priemer and VARNISH coat over concrete slab (equipment Stores & outdoor corridor, and landings), as shown on drawings, and as per specification a. To Floors b. To Stair Case	M.S MR	257 19		0.00 0.00
7.09	(Provisional Item) Supply and Install Sport Rubber Flooring as per drawings and specifications (sheet D-STD-1) to be applied to asphalt base Suitably prepared . Price shall included all needed works to complete the job as details and according to manufactured specifications .	M.S	1010		0.00
	TOTAL				0.00
	TOTAL CARRIED TO SUMMARY				0.00

Bill No. (8) -Carpentry and Joinery Works **(Sec-03)**

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	Unit Rate	AMOUNT
	<p>PREAMBLE.</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> <ul style="list-style-type: none"> · Wooden doors and pair of doors shall be measured in number for each structural opening, unless stated otherwise in the Bills of Quantities. <p>Rates for carpentry and joinery work shall include:</p> <ul style="list-style-type: none"> a) Shop and coordinated drawings.. b) Allowance for plastering and tiling and the like. c) Cutting and fitting around obstructions, Bedding and painting. d) Grounds, blocking and backings. e) Plugging concrete, block work, and stonework, and making well. f) Ironmonger including Wally cylindrical locks, handles stoppers, screws, temporary fixing, re-fixing, oiling and adjusting. g)Providing 3 keys for each lock including tagging, and 3 Original master keys for all locks. h) Glass and glazing including cutting to size and putty. i)Preparing surfaces to receive finishes. j) 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. 				

BILLS OF QUANTITIES / PAL -10 - 000 63002 Ramallah Sport Hall					
CONSULTANT: FIRST OPTION			DATE: Sep 2009		
Bill No. (8) -Carpentry and Joinery Works					(Sec-03)
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	Unit Rate	AMOUNT
8.01	Supply and Fix Wooden Doors 5.0cm Thick single or double sashes. With (Frame). (4.5*3.5) cm hard wood edging and (3.5*9.5) cm soft wood stile. Edge strip banding of width 5.0mm plywood veneer on both sides, color as directed by engineer. Door paneling to be soft wood 4.0*3.0 cm. each 4 cm., frames of hardwood (Swedish) 4cm thickness, width according to the wall thickness' and Allowance of 4 - 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 and cover moulds to be fixed to door frames with panel pins 30cm high, kick plates of stainless steel protection (if applicable), 45*15mm stop counter sunk screwed to edging , gaskets cylindrical Lock (Approved by Palestine Standards Institution) ,and Painting in three coats of Oil paint in addition to primer coat . price include Providing Master Key for all the building . (as detailed for every door) All as per Detailed Drawings, specification and instructions of supervisor engineer.				
	a. Door type D2 of structural opening size (90x210)cm.	NO.	10		0.00
	b.Door type D3 of structural opening size (80x200)cm.	NO.	null	null	null
	c.Door type D4 of structural opening size (90X210)cm.	NO.	2		0.00
	d.Door type D5 of structural opening size (80X200)cm.	NO.	1		0.00
	d.Door type D6 of structural opening size (70X210)cm.	NO.	2		0.00
	f.Door type D7 of structural opening size (100X210)cm.	NO.	4		0.00
	Ditto, as above but with steel frame door				
	a. Door type D8 of structural opening size (200x220)cm.	NO.	1		0.00
8.02	Supply & Install Bottom Wooden Kitchen Cabinet. Cabinet's Top shall be with Granite , 50 mm. thick with polished surface and Granite edges. Cabinet Sides, Elevations, Partitions, Shelves and Drawers front-side shall be of 22-mm wood face panel painted, and with 10cm Granite skirting ,ironmongery, handles, two coats of lacquer paint over one primer coat and all the accessories as per drawings and Specifications . SIZE: Height (92) cm. Width (60) cm.				
	a. For Tickets room	MR	1		0.00
	b. for Secretary	MR	4.95		0.00
	C. For Cafeteria	MR	3.53		0.00
	e. For Cafeteria (with sink)	MR	3.13		0.00
	TOTAL				0.00
	TOTAL CARRIED TO SUMMARY				0.00

Bill No. (9) -Steel and Aluminum Works **(Sec-03)**

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	Unit Rate	AMOUNT
	<p>Preamble.</p> <p>Metal works shall be measured in number for Architectural Openings</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 locks, stoppers, handles, temporarily fixing, prefixing, oiling and adjusting.</p> <p>Providing three keys for each lock and padlock including tagging and 3 master keys for all door.</p> <p>Hardware including cramps, dowels and the like.</p> <p>Glass and glazing including cutting to size, putty and rubber.</p> <p>Preparing surfaces for and 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> <p>All other accessories and incidentals required for executing the work.</p> <p>Price includes Providing and fixing of room title plate aluminum (30x20)cm , mounted on wooden plate (35x25)cm with varnish finish , and all other accessories included required to execute the work .</p>				

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CONSULTANT: FIRST OPTION	DATE: Sep 2009

Bill No. (9) -Steel and Aluminum Works (Sec-03)

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	Unit Rate	AMOUNT
9.01	Supply, install and operate local made hinged Aluminum Windows , Section 4400 or equal , two and half runs for horizontal and vertical partitions including fly screen mesh, with protective electrostatic applied polyester powder paint of 70-80 microns. the color approved by the Engineer Price to include, double glass 4-6-4. Float colored glazing and all other accessories, G.S. Sub Frame, and fittings to complete works as per drawings and specifications.				
	1. Window Type W1 Size (0.8x1.30) m.	NO.	7		0.00
	2. Window Type W2 Size (3.20x.52) m.	NO.	1		0.00
9.02	Supply and Install Protection Steel Grills, Price to include accessories, welding, grinding & smoothening. Price also to include oil painting three coats in addition to two primer coats for windows .	M.S	9		0.00
9.03	Supply and fix metallic Fagoon steel doors as per drawings , specification and supervision engineer instruction Price to include fixing complete, Ironmongery, cylindrical locks and handles (Yale or Equally approved), 6mm. Wired glazing ,gaskets oil paint in three coats in addition to two primer coats .(as per drawings).price include providing 3 Master keys for all the building .				
	a. Door type D1 size (260x225) cm. (steel frame with glass)	NO.	2		0.00
	b. Door type D9 size (100x210) cm.	NO.	2		0.00
	c. Door type D10 size (300x240) cm Roll-up shutter Door.	NO.	1		0.00
	d. Door type D11 size (190x220) cm.(Metal & glass)	NO.	1		0.00
	e. Door type D12 size (100x210) cm.	NO.	2		0.00
	f. Door type D13 size (90x210) cm.	NO.	Null	Null	Null
	g. Door type D14 size (70x210) cm.	NO.	1		0.00
	h. Door type D15 size (80x210) cm.	NO.	Null	Null	Null
	i. Door type D16 size (200x220) cm.	NO.	Null	Null	Null
	j. Door type D17 size (90x210) cm.	NO.	1		0.00
	k. (new item) Door type D10 size (300x240cm) motorised Roll-up door. Price includes a suitable single-phase motor with a minimum capacity of 200 kg.	No.	3		0.00
9.04	Metal Tiles False Ceiling System Powder coated suspended metal tiles, including suspension system, access panels, fixings, fittings, and accessories, complete as shown on drawings and as per specifications (for dressing Area & WCs)	M.S	130		0.00
9.05	Gypsum Board False Ceiling System: Gypsum board suspended ceiling, 12mm thick, including suspension system, access panels, fixings, fittings, accessories and skim coat complete as shown on drawings and as per specifications				
	a. Horizontally	MS	162		0.00
	b. Bulkheads, 70 mm height. As shown in details	MR	156		0.00
	TOTAL				0.00
	TOTAL CARRIED TO NEXT PAGE				0.00

BILLS OF QUANTITIES / PAL -10 - 000 63002 Ramallah Sport Hall
CONSULTANT: FIRST OPTION
DATE: Sep 2009

Bill No. (9) -Steel and Aluminum Works (Sec-03)

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	Unit Rate	AMOUNT
	FORWARDED TOTAL				0.00
9.06	Ditto, but for Acoustical fiber tiles suspended ceiling, (recessed type)including suspension system, access panels, fixings, accessories complete as shown on drawings, and as per specifications (Armstrong or approved equal), Horizontally, size 600 x 600mm	MS	Null	Null	Null
	For main Entrance lobby	MS	75		0.00
9.07	Supply and Fix Balustrades of Seamless steel ,cylindrical and solid profiles as per Drawing				
	a. Stair case hand rails of 50mm dia steel pipe (vertical and horizontal)	MR	18		0.00
	b. for Out door hand rails & Service Area hand rails	MR	86		0.00
	c. for Spectator Steps hand rail	MR	44		0.00
9.08	Supply and install HPL (High Pressure Laminated) toilet partitions cabin any color, the panel 13 mm thick, all hardware and accessories from Nurbo – Germany or equivalent (the locker, handle, hinge, pedestal, and screws well be stainless steel 304, all the supporting system top bar and wall support shall be heavy duty aluminum U shape along the panel (were the panel lay @ the wall) for each cabin according to detail plans, maximum privacy 183 cm high panels and door, 11-15 cm floor clearance floor anchored stainless steel edge, each door should have three gravity closed hinges.	NO.			
1	a. Toilet cubicles 1-a (80x162) cm ²	NO.	9		0.00
	c. Toilet cubicles 1-b (98x177) cm ²	NO.	2		0.00
	b. Toilet cubicles 2 (125x127) cm ²	NO.	1		0.00
2	a. For Showers (100cm lengthx200cm height)	NO.	6		0.00
9.09	Supply and Fix steel ladder, as per drawings(sheet D-MW-1) and specifications(All fixing are diagrammatical Manufactures details apply)	NO.	1		0.00
9.10	(New Item) Supply and fix stepped flag posts of 9 m high, galvanized steel or fiberglass pipes (2.5",2",1.5") in diameter ,with fixing plates ,anchors and anchor bolts ,flag hanging bullies, robe guide and rob catches ,price to include excavation and all concrete works for base, and any needed works according to the details	NO.	4		0.00
	TOTAL				0.00
	TOTAL CARRIED TO SUMMARY				0.00

BILLS OF QUANTITIES / PAL -10 - 000 63002 Ramallah Sport Hall	
CONSULTANT: FIRST OPTION	DATE: Sep 2009

Bill No. (10) -Painting Works

(Sec-03)

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	Unit	AMOUNT
				Rate	
	Preamble. painting and decorating to walls , ceilings and the like shall be measured net in meter square .				
	painting to other works shall be included in the related items .Color as specified by engineer .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 contactor 's expenses , and all other requirements as stated in specifications. All paint types should be approved and having a supervision certificate from the PSI . The price shall include all narrow widths , painting to jambs and reveals of opening ,sides of columns , window sills (will not be measured in the paint quantities).				
10.01	Supply and paint high quality emulsion 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	980		0.00
10.02	Supply and paint three coats "Polisid" paint of high quality (Approved by Palestine Standards Institution) for ceilings & drop beams and where required by the Engineer	M.S	400		0.00
10.03	Ditto, but matte oil paint.	M.S	530		0.00
	Ditto, but for Gypsum board bulkhead	M.S	156		0.00
10.04	Supply & paint three coats of external quality waterproofing supercryl paint for , parapets ,external walls at entrance ,and wherever needed, and directed by the engineer and according to drawings and specifications.	M.S	Null	Null	Null
10.05	Supply and Apply High Quality Marking Paint , for Marking sport hall yards (indoor only) as shown in drawings , Marking Lines 100 mm. wide in accordance with Olympic regulation	LS	1		0.00
	TOTAL				0.00
	TOTAL CARRIED TO SUMMARY				0.00

SECTION 4
INSULATION & ROOFING
NUMBER OF BILLS " 1 "

Bill No. (11) -Insulation and Roofing

(Sec-04)

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	Unit Rate	AMOUNT
	(SECTION NO. ' 4 ') INSULATION, AND ROOFING				
	<p>Preamble.</p> <p>All finishes, shall be measured superficially net unless otherwise stated clearly.</p> <p>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</p> <p>Cement and sand lining to gutters shall be measured in linear meter, unless other wise stated clearly.</p> <p>Rates for cement and sand work shall include for :</p> <p>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.</p> <p>Forming bays including joints. Finish to edges and arises.</p> <p>Making good around steel sections, pipes, tubes, bars, brackets, outlets, and the like.</p> <p>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. and is included in expansion joint unit prices. □</p> <p>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.</p> <p>Dressing over parapets and stub columns including forming groove to receive edge of plasticized bitumen membrane and sealing with elastic sealer.</p> <p>Side and end laps, Fittings including bolts, hook bolts, screws and washers, Sheets of any width or length.</p>				
11.01	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	56		0.00
11.02	Supply and apply waterproofing membrane of bitumen rolls (SBS). (4.5 mm. 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 and painted with two coats of white bitumen. price to include primer coat, and all sheets flashing. For roof of main building, and roof of staircase.	M.S	56		0.00
11.03	Lean mix concrete to encase projected columns of roof Price to include plastering, single layer torch applied polyester membrane, turn up and asphalt-base aluminum coating.	L.S	Null	Null	Null
	TOTAL				0.00
	TOTAL CARRIED TO NEXT PAGE				0.00

Bill No. (11) -Insulation and Roofing

(Sec-04)

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	Unit Rate	AMOUNT
	(SECTION NO. ' 4 ') INSULATION, AND ROOFING				
	FORWARDED TOTAL				0.00
11.04	Supply and apply Hot asphalt (75/25) for sanitary units, in special room flooring above ground floor only, and for entrances .Applied in two layers stiffened with fiberglass sheet, to the full area of floors and up to 15 cm. high of walls.	M.S	60		0.00
11.05	Supply and Fix Aluminum Cover to Expansion and/or seismic Joints for floors, walls and ceilings. Price to include mastic fill, backing rod, fixing with galvanized clips every 30 cm and all accessories in accordance with details and specifications. Price also to include Polystyrene boards at expansion joints between columns and beams.				
	a. (10x10)cm (L-shaped for corners) 2mm thick for external and internal columns and walls	L.M	25		0.00
	b.ditto as above but for ceiling	L.M	15		0.00
	c.ditto as above but for floors	L.M	15		0.00
	d. 10 cm. Wide x 2mm thick for ceilings.	L.M	Null	Null	Null
	e. ditto as above but for walls and columns.	L.M	5		0.00
	f. 10cm wide x 2mm thick for Floors.	L.M	Null	Null	Null
	TOTAL				0.00
	TOTAL CARRIED TO SUMMARY				0.00

**SECTION 5
ELECTRICAL WORK
NUMBER OF BILLS "1 "**

BILL No. (12) ELECTRICAL WORK

(Sec-05)

Item NO.	DESCRIPTION	Unit	Quantity	Unit Rate	AMOUNT
	<p>Preamble:</p> <p>This BOQ shall be read in conjunction with parts of the electrical technical specifications general and particular and the electrical drawings except where otherwise indicated. The unit price for all items in all sections shall include for supplying, installation, and commissioning unless otherwise specially mentioned. The price is also including submittal of working drawings, as built drawings and coordinating drawings by sheets and by computer diskettes. All civil & finishing works related to the concerned item shall be included in the unit price, unless otherwise indicated. The contractor must submit two options from the trade marks for each equipment according to the approved manufacturer list attached to the tender documents.</p>				
12.01	<p><u>Distribution boards</u></p> <p>Supply, install and commissioning electrical distribution board metal 2mm thickness, oven painted with a 25% surplus space. includes all circuit breakers and all internal components, associated materials and labor and connections. Price to include all structural elements required in order to install the switchboard, including bus-bars, terminals, wiring, bolts, clamps, etc. as detailed on drawings and technical specifications.</p>				
a	MDB	No.	1		0.00
b	DBH	No.	1		0.00
12.02	<p><u>Electrical outlets</u></p> <p>Supply, install and connect the following socket outlets points including cables, conduits, sockets, draw boxes, isolating switch, power cable to first point and all accessories up to DB as per drawings and specifications.</p>				
a	3 pin Single-Phase 16 Amp sockets in walls or tables	No	41		0.00
b	Ditto, but weatherproof socket	No	10		0.00
c	Ditto, as (a) but double socket	No	8		0.00
d	Power point for electrical water heater	No	5		0.00
	TOTAL				0.00
	TOTAL CARRIED TO NEXT PAGE				0.00

BILL No. (12) ELECTRICAL WORK

(Sec-05)

Item NO.	DESCRIPTION	Unit	Quantity	Unit Rate	AMOUNT
	FORWARDED TOTAL				0.00
e	16A A/C socket with isolating switch wall recessed	No	4		0.00
f	Power point for extract fan including louver point	No	4		0.00
g	Power point for shutter door	No	5		0.00
h	Power point for window motor	No	29		0.00
i	Automatic operated infra red hand dryer 2000 watt, UL approved stainless steel.	No	4		0.00
j	16A single phase isolating switch (IP65) include cables XLPE 3*4mm2.	No	2		0.00
k	16A three phase isolating switch (IP65) include cables XLPE 5*4mm2.	No	6		0.00
l	25A three phase isolating switch (IP65) the price note include cable	No	2		0.00
m	Combined power unit (IP65) include 3PH industrial socket 16A, 1PH industrial socket 16A & double 16A socket outlets, the price include 5x4mm2 cable.	No	2		0.00
12.03	<u>Power Cables</u>				
	Supply, install, and commissioning, the following XLPE cables, rate include cables, conduits, ducts, cable trays(if necessary), galvanized trunk, boxes, connection cable at both side and all accessories needed to connect and test the cables between appropriate distribution boards. All as specified and as drawings				
a	4x95+50mm2	MR	75		0.00
b	4x70+35mm2	MR	60		0.00
c.	5x6mm2	MR	110		0.00
d.	3x6mm2	MR	200		0.00
12.04	<u>Switch Panel</u>				
	Supply, install and connect switch panel including conduits, wires, control cable to DBH, light switches, , on/off switch, boxes, metal panel, indication lamps and all accessories as per drawings and specifications.	No	1		0.00
	TOTAL				0.00
	TOTAL CARRIED TO NEXT PAGE				0.00

BILL No. (12) ELECTRICAL WORK

(Sec-05)

Item NO.	DESCRIPTION	Unit	Quantity	Unit Rate	AMOUNT
	FORWARDED TOTAL				0.00
12.05	Lighting points Supply, install and connect lighting points including conduits, wires , fire proof conduits and cables for external points and points under falls ceiling up to the DB, galvanized trunk, light switches, installation for all lighting fixtures, power cable to first point and all accessories as per drawings and specifications.	No	239		0.00
12.06	Lighting Fixtures Supply, install and connect the following lighting fixtures including P.F. correction capacitors, lamps and all accessories as per drawings and specifications.				
a	Type (A): 2X26W Compact fluorescent up down lighting fixture wall mounted cylindrical die-cast aluminum body and glass diffuser, IP65.	No	4		0.00
b	Type (B): 2X18W Compact fluorescent wall mounted lighting fixture with die-cast aluminum body and high grade aluminum reflector, IP65.	No	11		0.00
c	Type (C): 1X250W Metal halide flood light with die-cast aluminum body and glass reflector complete with control gear, IP65.	No	2		0.00
d	Type (D): 2X18W Compact fluorescent lighting fixture surface mounted cylindrical aluminum sheet body and polycarbonate reflector, IP44.	No	38		0.00
e	Type (DE): Ditto above, but with an emergency lighting maintained for 1X18W for duration of 90min.Complete with control, batteries & charger.	No	2		0.00
f	Type (F): 2X26W Compact fluorescent lighting fixture surface mounted cylindrical aluminum sheet body and aluminum diffuser, IP20.	No	18		0.00
g	Type (FE): Ditto above, but with an emergency lighting maintained for 1X26w for duration of 90min.Complete with control, batteries & charger.	No	6		0.00
	TOTAL				0.00
	TOTAL CARRIED TO NEXT PAGE				0.00

BILLS OF QUANTITIES / PAL -10 - 000 63002 Ramallah Sport Hall

CONSULTANT: FIRST OPTION

DATE: Sep 2009

BILL No. (12) ELECTRICAL WORK

Item NO.	DESCRIPTION	Unit	Quantity	Unit Rate	AMOUNT
	FORWARDED TOTAL				0.00
h	Type (G): 2X58W Fluorescent suspended/wall lighting fixture with polycarbonate body and polycarbonate diffuser, IP65.d	No	9		0.00
i	Type (GE): Ditto above, but with an emergency lighting maintained for 1X58w for duration of 90min.Complete with control, batteries & charger.	No	3		0.00
j	Type (H): 2X36W Fluorescent surface mounted lighting fixture with polycarbonate body and polycarbonate diffuser, IP65.	No	7		0.00
k	Type (HE): Ditto above, but with an emergency lighting maintained for 1X36w for duration of 90min.Complete with control, batteries & charger.	No	2		0.00
l	Type (I): 2X36W Fluorescent surface mounted lighting fixture with steel sheet body and double parabolic light louver, IP20.	No	4		0.00
m	Type (IE): Ditto above, but with an emergency lighting maintained for 1X36w for duration of 90min.Complete with control, batteries & charger.	No	4		0.00
n	Type (J): 2X26W Compact fluorescent lighting fixture recessed mounted steel sheet body and polycarbonate reflector, IP20.	No	4		0.00
o	Type (JE): Ditto above, but with an emergency lighting maintained for 1X26w for duration of 90min.Complete with control, batteries & charger.	No	2		0.00
p	Type (K): 1X18W Compact fluorescent lighting fixture recessed in wall with rectangular fiber glass body and polycarbonate diffuser, IP65.	No	17		0.00
q	Type (L): 2X18W Compact fluorescent lighting fixture surface mounted with polycarbonate body and polycarbonate reflector, IP44.	No	3		0.00
r	Type (M): 1X35W Metal halogen angle lighting effect fixture floor mounted with die-cast aluminum body and glass diffuser, IP65.	No	4		0.00
s	Type (N): 1X250W Metal halide high-bay suspended lighting fixture with die-cast aluminum body and prismatic diffuser, IP65.	No	60		0.00
	TOTAL				0.00
	TOTAL CARRIED TO NEXT PAGE				0.00

BILL No. (12) ELECTRICAL WORK

(Sec-05)

Item NO.	DESCRIPTION	Unit	Quantity	Unit Rate	AMOUNT
	FORWARDED TOTAL				0.00
t	Type (O): 2X55W Metal tungsten halogen emergency luminary for 1 hour duration with adjustable head in horizontal and vertical planes, IP65.	No	6		0.00
u	Type (P): 1X35W Metal halogen LV(24V) recessed down light with die-cast aluminum body and glass diffuser, IP44.	No	11		0.00
v	Type (Q): 1X42W Compact fluorescent wall mounted decorative lighting fixture with steel sheet body and poly carbonate diffuser, IP40.	No	12		0.00
w	Type (R): Wall mounted EXIT light, maintained 1X8w fluorescent tube for a duration of 90min. Complete with control, batteries & charger with steel body and polycarbonate copper, IP20.	No	7		0.00
x	Type (S): 1X18W Fluorescent wall mounted decorative mirror light with polycarbonate body and polycarbonate diffuser, IP44.	No	2		0.00
y	Type (T): 2X18W Compact fluorescent lighting fixture recessed down light with opal diffuser IP44.	No	1		0.00
12.07	<u>Telephone system</u>				
	Supply, install, and commissioning following telephone system the price including cat3 telephone cable, conduit boxes and all accessories needed to complete the work according to drawings & specifications				
a	RJ11 Telephone outlet	No	9		0.00
b	MTB (40 PAIR)	No	1		0.00
c	L.V BOX (10PAIR)	No	1		0.00
d	10 Pair CAT3 cable for main lines	MR	75		0.00
12.08	<u>Private Automatic Branch Exchange.</u>				
	PABX IP- based with capacity 20 line internal 3 line external, expandable to 40 line complete with voice mail record, mail box, and all internal wires and all accessories needed for complete work. All hardware included and shall be in accordance with specifications and drawings.	L.s	1		0.00
	TOTAL				0.00
	TOTAL CARRIED TO NEXT PAGE				0.00

BILLS OF QUANTITIES / PAL -10 - 000 63002 Ramallah Sport Hall					
CONSULTANT: FIRST OPTION				DATE: Sep 2009	
BILL No. (12) ELECTRICAL WORK				(Sec-05)	
Item NO.	DESCRIPTION	Unit	Quantity	Unit Rate	AMOUNT
	FORWARDED TOTAL				0.00
12.09	Data Computer System				
	Supply, install and commissioning network system complete with all internal connection CAT6 cables, surge protection power strip 4 outlets in each rack and all accessories needed for complete work, as specified and as detailed on drawings.				
a	Rack cabinet 10U with fans, air patch panel & patch core cable.	No	1		0.00
b	Cat6 patch panel 24 port	No	1		0.00
c	Switch 24 port 10/100/1000	No	1		0.00
d	Supply, install, and commissioning data sockets RJ45, rate includes sockets all conduits terminal boxes, CAT6 shielded cables and all accessories needed to complete the system according to specifications and drawings	No	13		0.00
12.10	Fire Alarm System				
	Supply , install , connect & commissioning addressable fire alarm system, including modules to connect with other systems and all required works, conduits, cables , wires and fittings, according to drawings , specifications				
a	Fire alarm analog addressable control panel (one loop) expandable with batteries and charger.	No	1		0.00
b	Analog addressable photo optical smoke detector	No	27		0.00
c	Analog addressable heat detector	No	1		0.00
d	Analog addressable break glass unit including back box	No	5		0.00
e	Audio-Visual electronic fire a strobe with addressable interface modular base.	No	7		0.00
f	Ditto above but water proof.	No	1		0.00
g	Short circuit isolator (SCI)	No	2		0.00
h	Automatic dialer with speech processor(4No.) ,24 V	No	1		0.00
	TOTAL				0.00
	TOTAL CARRIED TO NEXT PAGE				0.00

BILLS OF QUANTITIES / PAL -10 - 000 63002 Ramallah Sport Hall

CONSULTANT: FIRST OPTION

DATE: Sep 2009

BILL No. (12) ELECTRICAL WORK

(Sec-05)

Item NO.	DESCRIPTION	Unit	Quantity	Unit Rate	AMOUNT
	FORWARDED TOTAL				0.00
12.11	<u>CCTV System</u>				
	Supply , install and commissioning CCTV system includes all required works, conduits, boxes, wiring (RG95), the price include a complete system and all necessary accessories all equipment must be of the same company and should be UL approved as specified and drawings				
a	PC based digital video recorder/multiplexer, 12 digital camera with 500GB, HD. 2 CIF resolution and minimum 12.5 frames/sec with DVD writer.	No	1		0.00
b	High performance Indoor color fixed camera 540TVL, recessed, with CS lens ,1/3inch,10 to 40mm, direct drive, f/1.4 to 360,4-pin connector and G3-style wall mounted with bracket, charcoal trim ring. with max sensitivity 0.5-0.2Lux.	No	4		0.00
c	Outdoor color day/night camera, 1/3" 540TVL with CS lens, 1/3-inch, 12 to 240mm, direct drive, f/1.6 to 360, 4-pin connector with housing , out door IP55, for camera/ lens to 262mm, 24VAC, 50/60HZ, heater/ blower and mount , feed -thru ,12-inch. With max sensitivity 0.1-0.01Lux	No	4		0.00
d	DVR Work station with 20" color LCD flat screen monitor,500 TVL ,1200x 1920 resolution, CVBS, VGA, Y/C,audio, 120/230VAC	No	1		0.00
12.12	<u>Display Screen (First Fixed)</u>				
	Supply, install and test PVC conduit & boxes for display screen in hall the price include all accessories needed for complete work, as specified and as detailed on drawings.	L.s	1		0.00
	TOTAL				0.00
	TOTAL CARRIED TO NEXT PAGE				0.00

BILLS OF QUANTITIES / PAL -10 - 000 63002 Ramallah Sport Hall

CONSULTANT: FIRST OPTION

DATE: Sep 2009

BILL No. (12) ELECTRICAL WORK

(Sec-05)

Item NO.	DESCRIPTION	Unit	Quantity	Unit Rate	AMOUNT
	FORWARDED TOTAL				0.00
12.13	Public Address & Sound System				
	Supply , install and commissioning sound system includes all required works, conduits, boxes, wiring shielded 2*2.5mm ² , the price include a complete system and all necessary accessories all equipment must be of the same company and should be UL approved as specified and drawings				
a	Sound system rack equipped with enough power amplifiers to handle the below mentioned speakers, rack should Include monitoring panel ,CD player, tuner, 3 microphone with stands & all accessories. The system should also Include zoning capabilities (zone mixer) at least 4 Zones. The rack should Include all required internal cabling , cooling fans , glass door with lock.	L.s	1		0.00
b	Recessed/Surface mounted loudspeaker 10w, round and metal grill.	No	12		0.00
c	Wall mounted 2way 150w, 10" loudspeaker	No	2		0.00
d	Microphone outlet point	No	2		0.00
12.14	Power Manhole				
	Supply, install, connect, and construct 100x100x100 cm electrical manholes including heavy-duty cast iron cover 25Ton, UPVC conduits, excavation, backfilling and all civil works need to complete the work as Shown on drawings, specifications and engineer approval.	No	5		0.00
12.15	Telephone Manhole				
	Supply, install, connect, and construct 80x80x80 cm telephone manholes including heavy-duty cast iron 25Ton cover, UPVC conduits, excavation, backfilling and all civil works need to complete the work as Shown on drawings, specifications and engineer approval.	No	3		0.00
	TOTAL				0.00
	TOTAL CARRIED TO NEXT PAGE				0.00

BILLS OF QUANTITIES / PAL -10 - 000 63002 Ramallah Sport Hall					
CONSULTANT: FIRST OPTION				DATE: Sep 2009	
BILL No. (12) ELECTRICAL WORK				(Sec-05)	
Item NO.	DESCRIPTION	Unit	Quantity	Unit Rate	AMOUNT
	FORWARDED TOTAL				0.00
12.16	<u>Earthing system</u>				
a	Supply, install, test and commissioning foundation Earthing system include connecting foundation earthing (galvanized steel 3*30mm) with main earth bus bar in DBH, the system include 3copper rods, isolated copper wires, test boxes and manholes. Earth resistance must be less than 1.0 Ohm all works must be according to code of practice, specification & drawings.	L.s	1		0.00
b	Earthing all mechanical, steel structure, power panel and low current frames the price include earthing wires, busbars, connection and all accessories to complete the work according to specification and drawings.	L.s	1		0.00
12.17	<u>Electrical Generator</u>				
	Supply, install, test, and commissioning stand by diesel generator set (65KVA) , speed 1500rpm heavy duty industrial turbo charger engine with control panel and all equipment as specified and as shown on the drawings including of all equipment, 1000 liters fuel tank, 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, starter motor , batteries and battery rack mounted on machine base frame and with static battery charger, and original sound proof canopy, and all controls including voltmeter, voltmeter phase selector 7 position, ammeter , ammeter selector with 4 position, frequency meter, hours run meter, battery voltmeter, coolant temperature gauge, oil pressure gauge and tools set required to provide an installers which is complete and a full set of operation and maintenance manuals in English. Price to include concrete base, control cable, earthing system for generator and all accessories to complete the work according to specification & drawings.	L.S	1		0.00
	TOTAL				0.00
	TOTAL CARRIED TO NEXT PAGE				0.00

BILLS OF QUANTITIES / PAL -10 - 000 63002 Ramallah Sport Hall

CONSULTANT: FIRST OPTION

DATE: Sep 2009

BILL No. (12) ELECTRICAL WORK

(Sec-05)

Item NO.	DESCRIPTION	Unit	Quantity	Unit Rate	AMOUNT
	<i>FORWARDED TOTAL</i>				0.00
12.18	<p><u>Lightning Protection.</u></p> <p>Supply, install, test, and commissioning lightning protection including lightning arrestor 5 meter height with level of protection II and 55m radius of protection, isolated cable Ø70mm², earthing pit and all accessories, needed to complete work as specifications, drawings.</p>	L.S	1		0.00
12.19	<p><u>Electrical Connection</u></p> <p>The contractor shall price the following as a provisional item and to be as part of tender documents and will be paid according to electrical company, authority bill plus 4% as management and overhead prices. Price to include all payments to the Electric Company.</p> <p>The contractor shall feed the building with electrical power, according to the drawings, specifications, and site location, engineer approval and according to the Palestinian Electrical Authority instructions. The price shall include pipes, ducts, manholes, poles, skirting, cables, civil works and all accessories to be completed working job including connecting costs and fees to the electrical authority.</p>	L.S	1		0.00
12.20	<p><u>Light points (First Fixed)</u></p> <p>Supply, install and test PVC conduit & boxes for lighting point the price include all accessories needed for complete work, as specified and as detailed on drawings.</p>	No	53		0.00
12.21	<p><u>Fire points (First Fixed)</u></p> <p>Supply, install and test PVC conduit & boxes for fire alarm point the price include all accessories needed for complete work, as specified and as detailed on drawings.</p>	No	21		0.00
12.22	<p><u>CCTV points (First Fixed)</u></p> <p>Supply, install and test PVC conduit & boxes for CCTV camera point the price include all accessories needed for complete work, as specified and as detailed on drawings.</p>	No	1		0.00
	TOTAL				0.00
	<i>TOTAL CARRIED TO SUMMERY</i>				0.00

SECTION "6"
MECHANICAL WORK
NUMBER OF BILLS "1"

BILLS OF QUANTITIES / PAL -10 - 000 63002 Ramallah Sport Hall

CONSULTANT: FIRST OPTION

DATE: Sep 2009

Bill No. (13) -Mechanical Works

(Sec-06)

Item NO.	DESCRIPTION	Unit	Quantity	Unit Rate	AMOUNT
	<p>Preamble:</p> <p>This BOQ shall be read in conjunction with parts of the mechanical technical specifications general and particular and the mechanical drawings except where otherwise indicated. The unit Price for all items in all sections shall include for supplying, installation, and commissioning unless otherwise specially mentioned. The price also includes submittal of working drawings, as built drawings and coordinating drawings soft and hard copy. All civil & finishing works related to the concerned item shall be included in the unit price, unless otherwise indicated.</p> <p>Vents and vertical stacks shall measure in linear meter.</p> <p>Rates of all fittings , fixtures , appliances and pipe laying shall include:-</p> <p>Supply of material, workmanship, installation, testing and commissioning.</p> <p>Rates to include also all pieces and fittings, including by passes, float, cleaning outlets, automatic vents, vents and stack covers, valves and non return valves and the like needed to complete works as per specifications.</p> <p>the price of all systems includes provision of fuel water and electric power.</p>				
13.01	European Toilet				
a	Supply and install White Vitreous China European type wall mounted toilet complete with European made concealed flush tank , fittings, chrome plated 13mm stop and valve side tap. Price to include concealed flush tank, water tap, China plated paper holder, hard seat cover, water hose with flusher and all other fittings as per drawings and specifications.	NO	11		0.00
b	Ditto but for handicapped	NO	2		0.00
	TOTAL				0.00
	TOTAL CARRIED TO NEXT PAGE				0.00

BILLS OF QUANTITIES / PAL -10 - 000 63002 Ramallah Sport Hall

CONSULTANT: FIRST OPTION

DATE: Sep 2009

Bill No. (13) -Mechanical Works

(Sec-06)

Item NO.	DESCRIPTION	Unit	Quantity	Unit Rate	AMOUNT
	FORWARDED TOTAL				0.00
13.02	<u>Wash Basin</u>				
a	Supply and install White Vitreous China with counter Wash Basin, size (40 * 56) cm complete with all fittings, valves, waste pipes to nearest floor traps , connection to water distribution, the price also includes the mixer ,mirror40*60cm with stainless steel frame and any other necessary parts as per drawings and specifications.	NO	15		0.00
b	Ditto but handicapped (sliding)	NO	2		0.00
13.03	<u>Kitchen Sink</u>				
	Supply, install and commission of stainless steel single bowl kitchen sink, from approved quality. Complete with: chrome plated mixer for kitchen sinks, supports, waste outlet, tail piece, P-trap chrome plated, chrome plated 13mm pipe as per drawings and specifications. single bowl sink size 60*45 CM	NO	1		0.00
13.04	<u>Urinal</u>				
	supply , install and commission white virtuous china wall mounted urinal bowel complete with the following accessories:- pair bowl supports 40mm diameter, chrome plated outlet grating, 40mm diameter chrome plated p-trap with extension tube to wall and wall flange, 20 mm diameter chrome plated flush valve with regulator and spreader all according to drawings and specifications .	NO	5		0.00
13.05	<u>Shower Head</u>				
	Supply, install and commissioning of vitreous china shower tray. Size is 800*800mm, complete with shower head, diverter, hand set ,hose, bracket, and all accessories, waste outlet , as shown in the drawings and specifications..	NO	6		0.00
13.06	<u>Floor Trap</u>				
a	Supply and install PVC Floor Trap. Price to include siphon to be fixed in reinforced concrete, (15*15) double chrome plated cover one grated and one-closed. and all other fittings needed to comply with the drawings and specifications .	NO	13		0.00
b	Ditto but sealed cover	NO	2		0.00
c	Ditto but 4/2"	NO	1		0.00
	TOTAL				0.00
	TOTAL CARRIED TO NEXT PAGE				0.00

BILLS OF QUANTITIES / PAL -10 - 000 63002 Ramallah Sport Hall

CONSULTANT: FIRST OPTION

DATE: Sep 2009

Bill No. (13) -Mechanical Works

(Sec-06)

Item NO.	DESCRIPTION	Unit	Quantity	Unit Rate	AMOUNT
	FORWARDED TOTAL				0.00
13.07	<u>Manholes</u>				
a	Supply and install precast Manholes of diameter 60cm*60cm, Price to include excavation, concrete works, back filling, cement plaster, benching, Cast Iron medium cover and all necessary works to comply with drawings and specifications.	NO	2		0.00
b	Ditto but 120cm*120cm	NO	1		0.00
13.08	<u>UPVC Drainage Pipes</u>				
a	Supply, install, test and commission of 2" drainage and ventilation pipes down to manholes with all required fittings including excavation, back filling, incasing with concrete and roof vent caps, including connections as shown in drawings and in accordance to specifications. Size 2-inch diameter.	MR	65		0.00
b	Ditto but 4"	MR	50		0.00
c	Ditto but 6"(sn8)	MR	95		0.00
13.09	<u>Floor Clean out</u>				
a	Supply and install 6" (Clean Out), of drainage Network. In size and location shown in the drawings and where necessary, including (15*15)CM chrome plated screwed in cover and all needed to complete work as specification and drawings.	NO.	11		0.00
b	Ditto but 4"	NO	2		0.00
13.10	<u>UPVC Rain Pipes</u>				
	Supply installation, testing and commissioning 4" UPVC rain water pipes down to a free discharge with wired mesh above ground level, with all required hanging accessories, fittings and vent caps, all as shown in drawings, specifications.	MR	50		0.00
13.11	<u>Water Collectors</u>				0.00
	Supply and install of copper collector for domestic water the price includes all fittings (vent, valves, on main line and branches), and the steel cupboard oven painted thickness 2mm and all other fittings as per drawings and specifications.				0.00
a	3/4" COLL(2outlet)	NO.	1		0.00
b	3/4" COLL(4outlet)	NO.	1		0.00
c	1" COLL(3outlet)	NO.	4		0.00
d	1" COLL(4outlet)	NO.	2		0.00
e	1" COLL(6outlet)	NO.	1		0.00
f	1 1/4" COLL(7outlet)	NO.	1		0.00
g	1 1/4" COLL(8outlet)	NO.	1		0.00
h	1 1/4" COLL(9outlet)	NO.	3		0.00
	TOTAL				0.00
	TOTAL CARRIED TO NEXT PAGE				0.00

BILLS OF QUANTITIES / PAL -10 - 000 63002 Ramallah Sport Hall

CONSULTANT: FIRST OPTION

DATE: Sep 2009

Bill No. (13) -Mechanical Works

(Sec-06)

Item NO.	DESCRIPTION	Unit	Quantity	Unit Rate	AMOUNT
	FORWARDED TOTAL				0.00
13.12	<u>Galvanized Pipes</u>				
	Supply and install Galvanized pipes for hot and cold water pipes The price includes the insulation for pipes and all other fittings as per drawings and specifications.				
a	3/4"	MR	75		0.00
b	1"	MR	40		0.00
c	1 1/4"	MR	80		0.00
d	1 1/2"	MR	85		0.00
e	2"	MR	70		0.00
13.13	<u>Water Tanks</u>				
a	Supply and install HDPE Water Tank 2 Cubic meters in size. Price to include well-painted steel stand, automatic float valves, valves, fittings, vents, watertight cover, lock and all necessary works to complete works as per drawings and specifications	NO.	1		0.00
b	Ditto but 5 cubic meter	NO.	5		0.00
13.14	<u>Solar System</u>				
	Supply and install of approved quality a local made solar heating unit including 10 solar plates 1.22*1.90m with 13 pipes copper and one tank of 2000 Liter with 25kw electric heater. Cylindrical galvanized steel tank, painted metal stand of 50/50/5 mm steel angles, the price also includes automatic air vent and all required fittings and connections as per drawings and specifications.	NO.	1		0.00
13.15	<u>Portable Fire Extinguisher CO2</u>				
	Supply and install Portable Fire Extinguisher of 3 Kg. CO2 capacity each in Location as decided by the Engineer. The installation shall be complete with brackets and it should be usable for at least three years from the date of receipt all in accordance with the Civil Defense specification .	NO.	1		0.00
13.16	<u>Portable Fire Extinguisher Powder</u>				
	Supply and install Portable Fire Extinguisher of 3 Kg. powder capacity each in Location as decided by the Engineer. The installation shall be complete with brackets and it should be usable for at least three years from the date of receipt all in accordance with the Civil Defense specification .	NO.	8		0.00
13.17	<u>Fire Pipes</u>				
a	Supply and install and commissioning of galvanized steel (schedule 40) 1 1/4 inch for fire cabinet including all required sleeves, gate valves, check valves, strainers, rubber pressure regulators, automatic air vents, drain cocks, elbows, T, with all necessary fittings and connections .All is according to drawings and specifications.	MR	20		0.00
b	Ditto but 2 1/2"	MR	110		0.00
	TOTAL				0.00
	TOTAL CARRIED TO NEXT PAGE				0.00

BILLS OF QUANTITIES / PAL -10 - 000 63002 Ramallah Sport Hall

CONSULTANT: FIRST OPTION

DATE: Sep 2009

Bill No. (13) -Mechanical Works

(Sec-06)

Item NO.	DESCRIPTION	Unit	Quantity	Unit Rate	AMOUNT
	FORWARDED TOTAL				0.00
13.18	<u>Fire Cabinet</u>				
	Supply and install 80*80*30 cm steel fire hose reel cabinet minimum thickness 2mm 25m rubber hose under pressure 25mm diam. mounted on swinging reel, an angle globe valve inside the cabinet, a jet nozzle with an incorporated cock, a lower compartment for 6kg. Multipurpose dry powder fire extinguisher, and 2.5 kg.CO2 fire extinguisher and it should be usable for at least three years from the date of receipt all in accordance with the Civil Defense specification . . Each cabinet should be supplied with operating instructions ,and approved sticker (FIRE CABINET) from outside. as shown in drawings, specifications .	NO	2		0.00
13.19	<u>Duct</u>				
	Supply, install galvanized sheet metal (of approved European manufacturer) for air duct of varies thickness as required by SMAGNA , the price including hanging, digging, wooden sleeves or frames around duct passing through walls, splitter dampers, volume dampers and flexible connection duct 6",8"10"and all fittings.	M2	350		0.00
13.20	<u>Fans</u>				0.00
	Supply and install extract fans with capacity shown in drawings .The price includes automatic shutter , louvers, electrical connections, wires needed to complete the job.				
a	Exf-1	NO	1		0.00
b	Exf-2	NO	1		0.00
c	Exf-3	NO	1		0.00
d	Exf-4	NO	1		0.00
e	Exf-5	NO	1		0.00
f	Exf-6	NO	1		0.00
g	FF(FRESH AIR FAN	NO	1		0.00
13.21	<u>Air diffusers</u>				
	Supply, install, and commission white anodized aluminum grills and diffusers, complete with O.B, damper, all with registers ceiling mounted. The price includes the adapter between the diffuser and the duct.				
a	40"*12"	NO	5		0.00
b	Ditto but 6"*6"	NO	14		0.00
c	Ditto but wall side 9"*6"	NO	1		0.00
d	Ditto but circular 12"	NO	16		0.00
e	Ditto but 24"*21"	NO	2		0.00
13.22	<u>Sleeve</u>				
a	Supply and install sleeve 2" for fire as shown in drawings.	NO	2		0.00
b	Ditto but 4"	NO	1		0.00
C	Ditto but 8"	NO	1		0.00
	TOTAL				0.00
	TOTAL CARRIED TO NEXT PAGE				0.00

BILLS OF QUANTITIES / PAL -10 - 000 63002 Ramallah Sport Hall					
CONSULTANT: FIRST OPTION				DATE: Sep 2009	
Bill No. (13) -Mechanical Works				(Sec-06)	
Item NO.	DESCRIPTION	Unit	Quantity	Unit Rate	AMOUNT
	FORWARDED TOTAL				0.00
13.23	<u>XLPE cross-linked polyethylene</u>				
	Supply, install, and commissioning of XLPE cross-linked polyethylene pipes, for all branches between sanitary fixtures and manifolds. The price includes the non-corrugated sleeves, and plastic box that contain the elbow or injasa for fixing in the wall. And the brass elbow itself for the connection to angle valve, with flush chrome plated hole cover, 16mm internal diameter, as in drawings and in accordance to engineering instructions and specifications	MR	120		0.00
13.24	<u>Pumps</u>				
	Supply, install, and commissioning horizontal or vertical in-line pump complete with two gate valves one at the suction side and one at the discharge side and pressure gauges on both sides of pump and check valve connected on the discharge side and a strainer on the suction side. . The price shall include, the electrical connections and all control wires.				
a	pp	NO	1		0.00
b	cp	NO	1		0.00
13.25	<u>Vrv Split Unit(provisional)</u>				
	Supply and install heat pump VRV (variable refrigerant volume) system. Refrigerant R410A Complete with the outdoor and indoor units, piping network insulated 13mm ,drain network sch40 insulated, control system with digital thermostat and all the needed necessary parts according to the drawings and specifications. As for the following:				0.00
a	Indoor Units:SP	NO	4		0.00
b	Outdoor Units:-4ton	NO	1		0.00
13.26	<u>Fire Pumps</u>				
	Supply and install and commission fire electrical pump (60gpm@3.5 bar) as shown on drawings .Price includes all needed to complete the job from os&y valves, fittings, control panel .all the set of pumps shall be ULFM listed all according to specifications and drawings.	LS	1		0.00
13.27	<u>Fountain (provisional)</u>				
	Supply and install all needed for the fountain, The price includes filter and chlorinator, floor inlets #2, floor drain #4, nosseles #4, piping UPVC PN 16 between the room and the fountain, pumps, the submersible pumps in sump pit, 60*60cm sump pit in pumps room, 2"hdpe to ground level and power control panel and all needed to complete the job according to drawings and specifications. The price also include excavation, concrete works (B200), RC slab, Screed, water proofing, Ceramic tiles as shown in drawings	LS	1		0.00
13.28	<u>FM200</u>				
	Supply and install all FM200.The price includes the 5kg cylinder with 4 nossles,4 smoke detectors,4heat detectors ,pipingsch40 ,control panel ,all needed to comply the job according to NFPA.The price includes the connection with fire alarm system.	LS	1		0.00
13.29	<u>Siamese Connection</u>				
	Supply and install 65mm Siamese connection as in drawings and specifications.	NO	1		0.00
	TOTAL				0.00
	TOTAL CARRIED TO NEXT PAGE				0.00

BILLS OF QUANTITIES / PAL -10 - 000 63002 Ramallah Sport Hall

CONSULTANT: FIRST OPTION

DATE: Sep 2009

Bill No. (13) -Mechanical Works

(Sec-06)

Item NO.	DESCRIPTION	Unit	Quantity	Unit Rate	AMOUNT
	FORWARDED TOTAL				0.00
13.30	(New Item) Supply and install 10" UPVC (SN8) heavy duty pipe with all fittings and accessories. Price includes excavation, backfilling and compaction.	MR	100		0.00
13.31	(New Item) Supply and install a precast concrete manhole 1m diameter, depth 4.5m and a 25-Ton cover. The manhole should be supplied with rilsan-coated cast iron steps. Price includes excavation, backfilling, compaction and all work necessary to complete the job.	NO	1		0.00
13.32	(New Item) Relocate the existing electrical panel for the pumping station to a position near the main electrical panel of the sports hall. Works include supply of cables, wires, cable trays, ties, etc. as well as all workmanship, erection, and reinstatement steps needed to complete the job, all to the satisfaction of the Engineer and in accordance with JDECO codes and practice.	LS	1		0.00
	TOTAL				0.00
	TOTAL CARRIED TO SUMMERY				0.00

SUMMARY (Including provisional items)

Section No.	Bill No.	Title	Amount
1	1	Excavation, Backfilling And Site Works	0.00
2	2	Skeleton Works - Concrete Works	0.00
2	3	Skeleton Works -Steel Works	0.00
2	4	Skeleton Works - Stone Works	0.00
2	5	Skeleton Works - Concrete Block Works	0.00
3	6	Internal Finishes - Plastering Works	0.00
3	7	Internal Finishes - Tiling, Flooring and Marble Works	0.00
3	8	Internal Finishes - Carpentry and Joinery Works	0.00
3	9	Internal Finishes - Steel and Aluminum Works	0.00
3	10	Internal Finishes - Painting Works	0.00
4	11	Insulation, Roofing and Expansion Joints	0.00
5	12	Electrical Works	0.00
6	13	Plumbing, Sanitary and Mechanical Works	0.00
Grand Total - Excluding V.A.T			0.00

All Prices exclude taxes of any kind except income Taxes.

The Sum of : -----
 and -----

Currency of Bid (USD or NIS) : -----

Signed and Sealed:- -----

Authorized Person :- -----

Title:- -----

Signature:- ----- Date:-----

Annex 1 to BOQ : Approved Electrical Manufacturer List

Item	Description	(1)		(2)		(3)	
		Manufacturer	Origin	Manufacturer	Origin	Manufacturer	Origin
1	Main Distribution Boards	Schnider	France	Moeller	Germany	ABB	Sweden
2	Distribution Boards	Schnider	France	Moeller	Germany	ABB	Sweden
3	Isolating Switch	Schnider	France	Moeller	Germany	Legrand	France
4	Contactors and controls	Schnider	France	ABB	Sweden	Moeller	Germany
5	Circuit Breakers	Schnider	France	Moeller	Germany	ABB	Sweden
6	Wires and Cables	Synergy	Local	Pirelli General	Turkey	Draka	UK
7	Wiring Accessories, Sockets & switches	Schnider	France	Legrand	France	Bticino	Italy
8	PVC Conduits & Accessories	Visman	Local	Merical	Local	Kasem plast	Local
9	Wiring for Fire Alarm System	Teldor	Local	Pirelli	Turkey	Cavical	Italy
10	Wiring for Data System	R&M	Swiss	Teldor	Local	Synergy	Local
11	Data Outlet & Patch Panel	R&M	Swiss	3M	Germany	Legrand	France
12	Public Address System	TOA	Japan	Bosch	Holland	Honeywell	USA
13	Fire Alarm System	Simplex	USA	Notifier	USA	Morely	Canada
14	Communication System	Aiphone	Japan	Ormel	Italy	Comelit	Italy
15	Access Control System	Honeywell	USA	GE	USA	Cardax	Newzland
16	CCTV System	Bosch	Holland	Honeywell	USA	Pelco	USA
17	Lighting Fixtures	Disano	Italy	Thorn	UK	Philips	Holland

Annex 1 to BOQ : Approved Electrical Manufacturer List

Item	Description	(1)		(2)		(3)	
		Manufacturer	Origin	Manufacturer	Origin	Manufacturer	Origin
18	Cable Glands & Accessories	BICC	UK	OBO Bettermann	Germany	Wiska	UK
19	Telephone & PABX System	Panasonic	Japan	Ericson	Sweden	Siemens	Germany
20	Floor Boxes	Wiremold	UK	OBO Bettermann	Germany	Legrand	France
21	UPS	APC	USA	Marlin Gerin	France	Makelsan	Turkish
22	Automatic Hand Dryers	Wandsworth	UK	Vortice	Italy		
23	SMATV System	Hirshman	Germany	Fuba	Germany	Polytron	Germany
24	Stand by Diesel Generator	SDMO	France	Caterpillar	UK	Perkins	UK
25	Lightning Protection	Furse	UK	Helita	France	Indelic	France
26	Power Factor Correction	Schneider Electric	France	EKG	Germany	Simens	Germany
27	Cable Trays, Ladders & Metallic Cable Trunking	OBO Bettermann	Germany	Nidax	Germany	Wiremold	UK
28	Elevators	Shindler	Swiss	Otis	France	Mitsubishi	Japan

Notes:

1. Given list of manufactures is intended only to be used as a guideline for materials/equipment quality objective.
2. Contractors can provide equal or better quality of that stated, and as per engineer approval.