

BILL OF QUANTITIES

of construction and construction-crafts works on the rehabilitation of the sports hall with dressing room and bathroom in Economy/Trade secondary school in Prijepolje

I PREPARATION WORKS

No.	Description	Unit	Quantity	Unit price USD (VAT free)	Total price
1.	Dismantling of the existing prefabricated bulkheads which are used to form offices and toilets on the stage for the purpose of current users. Bulkheads that need to be removed are sandwich walls with double univer boards. Disassembly stands for dismantling the existing ceiling of the stage, extracting the door from within bulkheads the totally dismantling the toilet with all of its components (the existing water supply and sewage connections under which the final layer has ceramic tiles). Dismantled material to be taken out of the facility and stacked on a place close to the site (place to be determined by the investor). Calculation per per m2.				
		m2	38,26		
2	Dismantling of the existing heating bodies (heaters), as well as their mechanical and electrical installations. Dismantled heaters to be taken to the point determined by the investor (next to the facility being treated). Existing structural element of the heaters (consoles) to be removed from the walls and the "newly" formed holes to be treated. Calculation per piece.				
		Pc.	2,00		

3	Dismantling of the existing wooden stairs (stairs from the ground floor to the stage and two stairs from the hall to the stage). Dismantled to be taken out of the treated facility in its vicinity (place to be determined by the investor).				
		Pc.	2,00		
		Pc.	1,00		
4.	Removal of existing flooring of parquet, as well as all layers below it (up to a concrete base, which should be cleaned and prepared for the mounting of a floor structure). Debris should be taken to a dumpsite, the existing flooring should be inspected (separate part of the flooring that can be used for other purposes and a part of flooring that can not be reused should be stacked to a location appropriate for further transport) .At the stage off all the flooring layers to a wooden structure should be removed. Calculated per m2.				
		m2	231,46		
5.	Removal of existing wooden windows and doors and stacking them to a place determined by the investor as well as transportation of the rubble to a dumpsite. Calculation per piece.				
	Windows dim. 125/225	Pc.	11,00		
	Windows dim. 95/95	Pc.	2,00		

	Windows dim. 140/140	Pc.	2,00		
	Entrance door dim. 95/210	Pc.	1,00		
	Metal entrance door dim. 260/220	Pc.	1,00		
6.	Scraping off the layers of painting from the walls, partially stripping the plaster in the places where the mortar separated from the wall with transport of the rubble to a landfill. Calculation per m2 of scraped and treated wall. Area determined according to the outer insight.				
		m2	392,30		
7.	Removal of existing ceramic tiles and mortar off the walls, ceilings and floors in toilets and dressing rooms, along with transport of rubble to a landfill. Calculation per m2				
		m2	379,00		
	TOTAL PREPARATION WORKS:				
	II CONCRETE WORKS				
1.	Installation of concrete layer to make the even surface of the existing floor in toilets and dressing rooms, d= 10cm, with a concrete MB20. Fine finish as a base for hydro insulation. Calculation per per m2.				
		m2	47,50		

2.	Installation of horizontal hydro insulation under the floors of the toilets and dressing rooms out of one cold layer of bitulit and one layer of kondor "4" , along with velding. Calculation per m2.				
		m2	47,50		
3.	Installation of reinforced concrete floor d=10cm with a concrete MB-20. Fine finish as a base for final flooring. Concrete to be reinforced with a mesh Q188. Calculation per m2.				
		m2	47,50		
4.	Construction of new stairs from reinforced concrete between the hall and sanitary block, out of concrete MB30. Stairs are with open newel returning on itself with landing. To be done as the crank plate relying on the new foundation below the first step and the new mounting point on the outer wall (according to the detail from the graphic attachment). Stairs to be reinforced with RO12 to 10cm as a structural reinforcement and Ø6 to 20cm as the transverse beams. Beams at the outer wall; at the output of the second leg as well as the foundation beam to be reinforced with 4Ø12. Stirrups to be done out of smooth armature Ø6 at every 20 cm. This position stands for procurement and installation of final wooden elements at the treads of stairs (whitewood boards with thickness of 5 cm according to the detail from the graphic attachment). Calculation per m3 of installed concrete.				
		m3	7,00		
	TOTAL CONCRETE WORKS:				

	III MASONRY				
1	Construction of portion of the wall -2x40cm in height 2.20m. Construction to be done due to new dimensions of panic doors whose projected size is 180x220 (existing door was 260x220). Construction to be done by clay block in the current thickness of the wall in this position. This position also consists out of two sided plastering of the newly constructed wall. Calculation per m3 of the wall, according to the position description.				
		M3	1,14		
2.	Construction of partition walls of d = 12cm by blocks or full brick in the compo 1: 2: 6 together with the ring beam to the height of the door which is reinforced with + -2Ø10 which is included in the unit price. Walls to be done in the height envisaged by the graphic attachment. Calculation per m2.				
		M2	8,50		
3	Construction of collecting ventilation channels -2 units. – The slag-sent standard blocks and fittings in cement mortar with one collection and a single connecting channel, and with all the connecting elements of this type of works. Final element over the roof to be upgraded with a concrete cap d=10cm and sheet metal profiled element. Calculation per m1.				
		M1	26,50		

4	Plastering of walls and ceiling in two layers with prior sprinkling with rare cement mortar with necessary scaffolding. Calculation per m2.				
		M2	310,40		
5	Walling of two windows dimensions 140x140cm; wall d = 60cm (5cm of exterior and interior mortar layer) on the ground floor of the facility. Walling to be done with clay blocks in the width of existing outer walls. This position stands for double plastering – of the walled surfaces with prior sprinkling of the mortar. Calculation per m3 of the constructed and plastered wall.				
		M3	2,50		
6	Procurement of material and construction of a wall out of clay blocks d=20cm (wall adjacent to the new staircase wall portion serves as a carrier of a staircase-80cm above the treads; ring beam should be done in the final zone of the wall d = 15 cm with reinforcement stirrup + -2Ø10 and Ø6 to 30cm).				
		m3	1,70		
	TOTAL MASONRY:				

	IV FLOOR SETTING WORKS				
1	<p>Procurement of materials and production of floor out of ash parquet 52 x 500 x 22mm. Floor to be done according to the following detailed description and the attached details. Cement screed should be done over an existing concrete surface with an average thickness d = 6 cm (unevenness of cement screed to be treated with "Olmo" mass for equalization of up to 3cm); PE film with an overlap of 100mm (vapour barrier) should be put over it, and then set the perforated billet – under flooring spacing of 24cm. dimensions 40 / 80mm. slotted in two rows by height. Under flooring should be placed on rubber mats 60/40 / 30mm. which are glued to under flooring at a distance of 30cm. Between under flooring the thermal insulation (EPS), d = 5 cm should be set, along with transverse staffs - brace 4 / 8cm at every 2m. via perforated under flooring set the two layers of OSB plates d = 2x1cm. <u>(Plates are placed)</u> Over the OSB plates placed the PE foil with an overlap of 100mm (vapour barrier) and a final layer of ash flooring that is nailed to OSB panels at every 50cm. Floor should be sanded and varnished three times with polyurethane varnish with prescribed slipping. Dilation should be left between the floor and walls, 1-2 cm in width. Calculation per m2 of the complete position according to the provided description and details.</p>				
		m2	212		

2	Construction of plinth next to the walls of the ash timber, d = 2 cm, 23 cm wide, with two row ventilation slots width of 2cm. The plinth should be tied to the wall by a hard wood (ash) 20x40cm which is treated from the upper side. Calculation per m1 of the batten installed, according to the description and details.				
		m1	76,80		
	TOTAL FLOOR SETTING WORKS:				
	V CERAMIC WORKS				
1	Acquisition and installation of floor tiles in toilets, the corridor floor and changing rooms, over the cement liner d = 5 cm and previously constructed reinforced concrete base. Evening layer of "Olmo" mass with the possibility of the equalization for up to 3 cm should be used. Type and colour of the tiles are determined by the design. Tiles dimensions are 30c30cm, installed using the groove system, Groves to be done by Fugomal in the colour of the tiles. Calculation per m2.				
		m2	52,00		

2	Lining the walls with ceramic tiles on the layer of adhesive, types of colours to be chosen by the investor. Tiles dimensions are 30x30cm and they should be installed using the groove system. Pointing <u>Grooving</u> to be done by mixture for pointing in the colour of the tiles. Walls should be tiled up to the height of 3.45m (ceiling height) and 2.20m – top of the walls that are being built. Walls that are being tiled up to 2.20m should have a “top end” horizontally mounted wall tiles. Heights of individual walls are given in graphic attachments. Calculation per m2.				
		m2	168,20		
	TOTAL CERAMIC WORKS:				
	VI JOINERY WORKS				
1.	Preparation and installation of PVC doors and windows of standard five chambered profiles in brown colour, glazed with thermopan glass 4+16+4 with corresponding fastenings, all in accordance to schemes dimensions: Heat transfer coefficient is 2 W / m 2 K per unit. Calculation per piece.				
	a) 125/225 outer window	Pc.	11		
	b) 95/95 outer window	Pc.	2		
	c) 95/220 one-winged entry door (outer)	Pc.	1		
	d) 180/220 outer two-winged fire proof door	Pc.	1		
	e) 81/198.5 inner door	Pc.	4		

	f) 71/198.5 inner door	Pc.	3		
	g) 61/198.5 sliding door	Pc.	2		
	h) 125/220 two-winged door behind basketball construction.	Pc.	1		
	TOTAL JOINERY WORKS:				
	VII LOCKSMITHING WORKS				
1	Fabrication and installation of the net as the protection of the windows - dimension of moulded steel mesh (mesh size 5x5cm) with the box-type frame made of steel profiles is 153x253. The frame is made of profiles and 40x40 mesh is directly welded at it. Mesh should be hung from the console of steel "L" carriers screw anchored the outer wall. Altogether should be degreased, repainted by base paint and 2 coats of oil paint, in a tone determined by the designer. All according to the position description and the details of the locksmithing scheme. Calculation per piece.				
		Pc.	11,00	x	=
2	Fabrication and installation of the mesh for protection of double doors behind the basketball construction - dimensions of pressed steel mesh (mesh size 5x5cm) with a border of box steel profiles is 125x220. Frame is made of profiles 40x40 a network is directly welded to it. The network should be done in two sections which open to the side and are accessible on the hinge in the inside of door frame. Altogether should be degreased, repainted by base paint and 2 coats of oil paint, in a tone determined by the designer. All according to the position description and				

	the details of the locksmithing scheme. Calculation per piece.				
		Pc.	1,00		
	TOTAL LOCKSMITHING WORKS:				

	VIII CARPENTRY WORKS				
1	Construction and installation of wooden stairs with the platform (assembly and disassembly) –from the hall to the stage. Stairs construction with the landing, dimensions 90x180 should be made of work of whitewood with wooden columns and beams 14x14cm , and the stairs should be made also from whitewood, dimensions 90x30x5cm.				
		Pc.	1,00		
	TOTAL CARPENTRY WORKS:				
	IX FAÇADE WORKS				
1	Painting of walls and eilings with a dispersion paint, with previous evening of the surfaces. Calculation per m2 .				
		m2	740,00		
	TOTAL FAÇADE WORKS:				
	X MISCELLANEOUS WORKS				

1	Patching window jambs after installing new windows and doors with lime mortar finish on the inside and the outside-dispersion coating as the existing façade (sprayed facade). Calculation per piece of windows and doors.				
		Pc.	15		
2	The supply of materials and construction of the ceiling of OSB panels, d = 18mm. with metal sub-construction set in increments of 60cm. On the compounds of the panel to set the double "U" profile (according to the details of graphic attachment) which are attached to the construction by ribbed construction and is visible at the ceiling. This position also assumes removing the covers (disassembling) of the current ceiling panels of chipboard, stacking and transporting them to a place (next to the facility) that the investor may determine. Calculation per m2 ceiling, produced fully according to the description.				
		m2	211,10		
3	Acquisition and installation of aluminium railings coated in brown colour. Railings is made out of pillars Ø50 approximately at every 115 cm, as well as all the other horizontal elements (the horizontal distance between the elements is 18 cm). Tying elements between pillars and other elements are to be done with standard non plasticised hinges. Pillars should be anchored to the concrete reinforcement on part of the first leg of the stairs; the concrete beam in the				

	part of the stage and in the second leg of the tread. Calculated per m2.				
		m2	8,10		
4.	Procurement and installation of fire extinguishers:				
	a) CO2-5kg	Pc.	2,00		
	b) S9	Pc.	3,00		
	TOTAL MISCELLANEOUS WORKS:				
	RECAPITULATION				
	I PREPARATION WORKS				
	II CONCRETE WORKS				
	III MASONRY WORKS				
	IV FLOOR SETTING WORKS				
	V CERAMIC WORKS				
	VI JOINERY WORKS				
	VII LOCKSMITHING WORKS				
	VIII CARPENTRY WORKS				
	IX FAÇADE WORKS				
	X MISCELLANEOUS WORKS				
	TOTAL CONSTRUCTION AND CONSTRUCTION-CRAFTS WORKS:				

BILL OF QUANTITIES

Of works on sanation of water supply and sewage systems of the Sports hall in Economy/Trade secondary school in Prijepolje

No.	Description	Unit	Quantity	Unit price USD (VAT free)	Total price
A)	SEWAGE SYSTEM				
I.	Gravel works				
1.	Punching and destruction of the asphalt and the curtain 70 cm in width (asphalt d = 8 cm, curtain d = 20 cm) at the part of the compound where the excavation for the installation of sewer pipes is carried out, with the transport of the cut asphalt and the excavated material to the landfill, up to 5km distance. Re-paving of the spot where the asphalt is demolished should be done with the asphalt mass, 70 cm wide and a thickness of d = 8 cm and at the curtain of d = 20cm. Calculated per m2.	m2	11,00		
2.	Manual excavation of soil III category in the trench, according to the designed depth and width of 0,70m1, for installing sewage pipes with a rejection of the gravel 1.00 m1 from the edge of the trench and planning of the channel in the projected decline. Calculation per m3.	m3	14,00		
3.	Demolition of the existing inspection manhole and manual excavation of soil III category for new inspection manhole with the rejection of the gravel 1.00 m1 from the edge of the trench and planning of the	m3	2,00		

	channel in the projected decline. Calculation per m3.				
4.	Procurement, transportation, spreading and planning of sand under, around and above the pipes. Thickness should be 5cm under pipes and 10cm over pipes. Calculation per m3 of sand.	m3	8,00		
5.	Backfilling of excavation in layers of 30cm with manual compacting by soil compactors to natural compaction. The top 50cm of soil above the pipe should be soil without lumps and stones so as not to damage the pipe. Calculation per m3 of earth backfilled.	m3	6,00		
6.	Transportation of soil remained from excavations and demolition to the landfill up to 5km away with loading soil into a truck. Calculation per m3 of earth and debris taken away.	m3	12,50		
	TOTAL GRAVEL WORKS :				
II.	CONCRETE WORKS:				
7.	Concreting of the inspection manhole with compacted concrete MB20 in a double-sided plate. Manhole has internal dimensions of 0.90x0.90 m1 with thickness of the wall d = 15 cm and the bottom of the manhole d = 15 cm, the depth should be done as per design. Manhole should be plastered from inside with cement mortar and ironed to black gloss. All to be paid by m1 the completed manhole without a cover which is paid separately.	m1	1,30		

8.	Procurement and installation of cast iron manhole cover at the layer of fresh concrete MB20 with appropriate plating. Calculation per piece of manhole cover installed.				
	a) LGV cover 60 kg	Pc.	1		
	TOTAL CONCRETE WORKS:				
III.	INSTALLATION WORKS				
9.	Supply, delivery and installation of plastic sewer pipes with providing the necessary fittings and sealing materials which are not paid separately but are included in the price 1 m1 of mounted pipes. The pipes are first class, domestic production without damages and cracks, set in the ground on a layer of fine sand in the projected decline and out of the ground properly installed in the wall and beyond. By making the installation of pipes and making an inspection manhole and before backfilling canals and close to the wall, make a check of the integrity of joints and fall pipes. All necessary chiselling and punching walls, floors and ceilings, connections to the existing external sewage network, as well as vertical cladding do not pay separately but are included in the price of 1m1 of pipes.				
	a) plastic pipes Ø160mm	m1	26,00		
	b) plastic pipes Ø110mm	m1	23,00		
	c) plastic pipes Ø75mm	m1	1,00		
	d) plastic pipes Ø50mm	m1	3,00		

10.	Procurement and installation of plastic drains with a syphon and enamelled perforated grid.				
	a) floor drain Ø75mm	Pc.	4		
11.	Construction and installation of ventilation heads out of zinc coated sheet metal, thickness d = 0,60mm length l = 1,50m1, - 1,00m1 above the roof and 0,50m1 under the roof				
	a) ventilation head Ø150mm	Pc.	1		
	TOTAL INSTALLATION WORKS :				
IV.	SANITARY FACILITIES				
12.	Supply and installation of the English toilet with a ceramic toilet, low construction plastic flush, plastic pipes Ø5 / 4 " for rinsing and plastic box for toilet paper. Toilet should be fastened to the floor by brass screws, with a rubber pad between the toilet and the floor. Payment per piece of toilet of domestic production.				
	a) Toilet dim. 360/460/390mm	Pc.	2		
13.	Supply and installation of ceramic sink set with syphon, nickel plated faucet, with chain stopper, mirror with shelf and towel holder. Payment per piece of sink of domestic production connected to water and sewer systems.				
	a) Sink dim. 500/400mm with cold water faucet	Pc.	4		

14.	Supply and installation of a set of built-enameled steel shower tray with waste valve and nickel-plated single lever mixer for hot and cold water. Connection to the sewer to be made through the drain (or via a separate siphon). For almost all connected to water and sewer paid per piece.				
	a) Steel bath tub dim. 900/900mm	Pc.	2		
	TOTAL SANITARY FACILITIES:				
	RECAPITULATION SEWAGE SYSTEM				
I.	GRAVEL WORKS				
II.	CONCRETE WORKS				
III.	INSTALLATION WORKS				
IV.	SANITARY FACILITIES				
	TOTAL:				

B)	WATER SUPPLY SYSTEM				
I.	GRAVEL WORKS				
1.	Punching and destruction of the asphalt and the curtain 70 cm in width (asphalt d = 8 cm, curtain d = 20 cm) at the part of the compound where the excavation for the installation of water supply pipes is carried out, with the transport of the cut asphalt and the excavated material to the landfill, up to 5km distance. Re-paving of the spot where the asphalt is demolished should be done with the asphalt mass, 70 cm wide and	m2	20,00		

	a thickness of d = 8 cm and at the curtain of d = 20cm. Calculated per m2.				
2.	Manual excavation of soil III category in the trench, according to the designed depth and width of 0,70m1, for installing water supply pipes with a rejection of the gravel 1.00 m1 from the edge of the trench and planning of the channel in the projected decline. Calculation per m3.	m3	10,00		
3.	Procurement, transportation, spreading and planning of sand under, around and above the pipes. Thickness should be 5cm under pipes and 10cm over pipes. Calculation per m3 of sand.	m3	2,50		
4.	Backfilling of excavation in layers of 30cm with manual compacting by soil compactors to natural compaction. The top 50cm of soil above the pipe should be soil without lumps and stones so as not to damage the pipe. Calculation per m3 of earth backfilled.	m3	7,50		
5.	Transportation of remaining graver to a distance up to 5km, with loading of the gravel to the truck. Calculation per m3 of gravel transported.	m3	0,50		
	TOTAL GRAVEL WORKS :				
II.	INSTALLATION WORKS				

6.	<p>Procurement, transport and installation of plumbing steel galvanized pipes with the administration of the required fittings, and shut-off valve with a valve for emptying of the network (at the start of the vertical axis). Fittings, valves and other materials, as well as all possible Punching chisel and foundations, walls and ceilings, and connection to the existing water supply network, are not paid separately and should be included in the price of 1m1 mounted pipes. Pipes in the ground should be primed twice by bitumen. Pipes above the ground should be properly attached to the wall by clamps and painted to the appropriate paint. After mounting of pipes pressure test should be done in the network and to 5 bar higher than the pressure citywide. After the test pressure, network should be disinfected and rinsed thoroughly. For technical acceptance a certificate to ensure that the water in the network of bacteriological correct should be obtained.</p>				
	a) zinc coated pipes Ø2"	m1	45,00		
7.	<p>Procurement, transport and installation of plastic water pipes with administration of the required fittings and valves to close under each tapping point. At the beginning of the separation appropriate diameter of valve should be fitted for draining of network. Fittings, valves and other materials, as well as all necessary chiselling and punching walls and ceilings are not paid separately but are included in the price of 1m1 of mounted pipes. Pipes should be properly secured to the wall. After the installation of pipes and before closure in the wall, make a test pressure in the</p>				

	network up to 5 bar higher than the pressure citywide. After the test pressure, network should be disinfected and rinsed thoroughly. For technical acceptance a certificate to ensure that the water in the network of bacteriological correct should be obtained.				
	a) plastic pipes $\varnothing 3/4''$ (25mm – external diameter)	m1	8,00		
	b) plastic pipes $\varnothing 1/2''$ (20mm - external diameter)	m1	15,00		
8.	Procurement and installation of electric boiler with nickle plated pipes and safety valve. To be paid upon complete installation per piece of installed boiler.				
	a) Electric boiler V = 80 l	Pc.	2		
9.	Supply and installation of internal hydrant with plastic hose, cap, socket and nozzle - all located in a typical metal cabinet and properly labeled.				
	a) hydrant $\varnothing 2''$	Pc.	2		
10.	Rehabilitation of existing water meter shaft at the Economic Trade School: cleaning, replacement of a length of tubing, fittings, valves, expansion of the shaft at 50 cm in the direction of the sports hall the extension of the cover, set the lock key, the connection of water pipes from the direction of the sports hall and installation permeable drainage valve $\varnothing 2''$ for that leg. Everything is paid a set.				

	TOTAL INSTALLATION WORKS:				
	RECAPITULATION WATER SUPPLY SYSTEM				
I.	GRAVEL WORKS				
II.	INSTALLATION WORKS				
	TOTAL:				
C)	MISCELLANEOUS WORKS				
1.	Dismantling of the existing water supply and sewerage networks and sanitation facilities, with loading into the truck and transporting to a landfill site at a distance up to 5km. Everything is paid a set.				
	RECAPITULATION				
A)	SEWAGE SYSTEM				
B)	WATER SUPPLY SYSTEM				
C)	MISCELLANEOUS WORKS				
	TOTAL:				

BILL OF QUANTITIES

Of electricity works at the sports hall in Economy/Trading secondary school in Prijepolje

5.A ELECTRICITY INSTALLATIONS	Unit and Quantity	Unit price USD (VAT free)	Total price
<p>5.1</p> <p>Delivery and laying, connecting, putting under voltage of cables, power distribution box, lighting cabinet and sockets. The cables are laid by air construction on the walls construction according then concealed by mortar. All put into boxes and put under voltage. Before purchasing and cutting lengths should be checked on the site by measuring routes. Gauge of the power cord is 50 i6mm2.</p>			
--PP00—A—5X16mm2	m 50		
--N2XH-Y-5X6mm2	m 8		
-- N2XH Y--5x 2,5 mm2	m 150		
-- N2XH Y -- 3x1,5 mm2	m 250		
-- N2XH Y -- 1x6 mm2	m 50		
- N2XH Y -- 3x2,5 mm2	m 170		
RG59/video surveillance/	m 120		
--CEV 16mm „halogen free,,/	m 300		
--CEV 23mm „halogen free,,/	m 200		
CEV 36mm	m 50		
<p>5.2 Delivery of all necessary materials for construction of the closet IP44 that is tested by the factory, out of sheet metal and a lock. Closet should be installet to the</p>			

wall and put under voltage. The closets consist out of:			
<p>RO-S</p> <p>4pc switch GS16-U-10/16A</p> <p>1pc switch with the trigger 100A</p> <p>11pcs MC10 automatic fuse switch</p> <p>3 pcs MC16 automatic fuse switch</p> <p>3 pcs MC20 automatic fuse switch</p> <p>1 pc FID40/0,5A switch</p> <p>Set of RO-S</p>	1 pc.		
<p>RO-PR</p> <p>4pc MC10 automatic switch</p> <p>5pc MC16 automatic fuse switch</p> <p>1 pc FID40/0,5A switch</p> <p>Set of RO-PR</p>	1pc		
5.3 Delivery, mounting, connecting and putting under voltage of lights (along with light bulbs) set under voltage.			
<p>-- Projectors for the hall</p> <p>Projectors „ECO3I/1915/400W</p> <p>With ceramic burner with all connecting gadgets and metal halogen lightbulb 400W</p>	Pcs 6		

- Ship light with net NLS/20W/led/	Pcs 2		
-PA15/20/led/W bowl	Pcs. 12		
- antipanic lights PPN2x 8W	Pcs. 3		
5.4 Delivery, mounting and connecting of electricity material for mounting under mortar, complete with boxes. Connected and put under voltage. In metal housing „OG,,			
-Monophase socket 16A/220V	Pcs. 5		
-triphase socket 10A/220V	Pc. 1		
Regular for installation in the wall			
Light switch alternating 10 A /220 V	Pcs. 2		
--""-- --""-- regular --""--	Pcs.2		
--""-- --""-- serial --""--	Pcs.1		
Bathroom fan 60w/220V	Pcs. 2		
Triple bathroom switch 16A	Pcs. 2		
Phone outlet RJ45	Pcs. 2		
- Boc PSK-49	Pcs. 6		
- Measuring and atests	Lumpsum		
TOTAL ELECTRICITY INSTALLATIONS:			

<p>5.B. INSTALLATION OF LOW CURRENT</p> <p>Stands for delivery, mounting, putting into function, training of users of the following systems and equipment for video surveillance and sound system</p>			
<p>5.B.1 VIDEO SURVEILANCE</p>			
<p>5.B.1.1 Camera HVB 905/CCD COLOR SONY SSHHQ u in housing for internal mounting, resolution 540TVL/0,3lux with Lens 3,8-9mm,auto iris OSD meni,12VDC</p>	<p>Pcs. 4</p>		
<p>5.B.1.2 power supply 220/12V DC,6A</p>	<p>Pcs. 1</p>		
<p>5.B.1.3 Recording device 320GB Integrated, 16 channels, digital recorder and IP video server. Recording up to 50pps,DVD writer HARD DISC 320GB</p>	<p>Pcs. 1</p>		
<p>5.B.1.4 MONITOR SAMSUNG, 19" TFT</p>	<p>Pcs. 1</p>		
<p>5.B.1.5 connector BNC/F-F</p>	<p>Pcs. 30</p>		
<p>5.B.1.6 expendable material</p>	<p>Lumpsum</p>		
<p>5.B.1.7 mounting, connecting, outing into function, training</p>	<p>Lumpsum</p>		
<p>TOTAL VIDEO SURVEILANCE:</p>			
<p>5.B.2 SOUND SYSTEM</p>			
<p>5.B.2.1 Amplifier-mixer TOA A-1121/100V ,250W,2aux,3mic,4zone/</p>	<p>Pcs. 1</p>		
<p>5.B. 2.2 Internal speaker on the wall TOA BS677 100v/10W</p>	<p>Pcs. 6</p>		

5.B.2.3 CD player	Pcs. 1		
5.B.2.4 TUNER	Pcs. 1		
5.B.2.5 Microphone with a stand	Pcs.1		
5.B.2.6 Wireless microphone	Pcs. 1		
5.B. 2.7 expendable materials, putting into function	Lumpsum		
TOTAL SOUND SYSTEM:			
5.B INSTALLATION OF LOW CURRENT			
5.B.1 VIDEO SURVEILANCE SYSTEM			
5.B. 2 SOUND SYSTEM			
TOTAL:			

REAPITULATION

5.A ELECTRICITY INSTALLATIONS

5.B LOW CURRENT

Total without VAT:

BILL OF QUANTITIES

Mechanical installations

I	Pipe network and heating bodies	Unit	Quantity	Unit price USD (VAT free)	Total price
1	Delivery and installation				
1.1.	Steel panel radiators, type 22, dimensions				
	22-900/1200	Pcs.	10		
	22-600/1000	Pcs.	4		
	22-900/800	Pcs.	2		
	22-900/1000	Pcs.	1		
1.2.	Tubular radiators dimensions				
	600x1600	Pcs.	1		
	600x1200	Pcs.	1		
1.3.	Angular valves for radiators dimensions 1/2" with thermos heads	Pcs.	19		
1.4	Angular ballast for radiator dimensions 1/2"	Pcs.	19		
1.5	Hand radiator deaeration, dimensions 1/2"	Pcs.	19		
1.6	Taps (Faucets) for filling and emptying, dimensions 1/2"	Pcs.	5		

1.7 Delivery and installation of circulation pump produced by Grundfos from Belgium or similar, set with flanges and counter flanges and sealing materials. Type UPS 40- 60/2F G=2.5m ³ /h, H=35kpa, P=250 w	Pcs.	1		
1.8 Delivery and mounting of level shut-off valves together with counter flanges and flange set with the following dimensions NO50NP16	Pcs.	2		
1.9.Delivering and installing black steel pipes				
φ60,3x2,9	m	160		
φ48.3x2,2.6	m	12		
φ 42.4x2.6	m	60		
φ 33.7x2.6	m	30		
φ 26.6x2.6	m	60		
φ 21.3x2.0	m	60		
1.10 For fitting, gas, velding material as well as for other expendable material, 50% is calculated from the point 14.		0.5		
1.11. Cleaning, painting of pipes in two layers and insulation of network by mineral wool thickness 50mm,	M2	50		

in the AL cover, thickness 0,5mm				
1.12 Steel pillars made out of pipes 80x80 mm for pipeline from the boiler room to the entrance to the facility, height 3m from the ground.	Pcs.	24		
TOTAL Pipe network and heating bodies:				
II. Preparation finishing works				
1 Various chase cutting works for passage pipelins, excavation and concreting bases for pillars.	Lumpsum			
2 Other works such as transport of material, preparation and finishing works, cold and hot trials is calculated 5% of total value under point 1.		0.05		
3.Designing costs, preparation of final documentation	Lumpsum			
TOTAL preparation and finishing works:				

RECAPITULATION

- I. Pipe network and heating bodies
- II. Preparation finishing works

Total without VAT:

GRAND TOTAL for all works (value in USD without VAT):	
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It is obligatory to fill all requested information from the BoQ.

Bidder is obliged to calculate all costs in the price. The Investor will not accept any costs that are not calculated in the price.