

PROJECT: Sports and Culture Centre in Obrenovac

SITE: Obrenovac
Cadastral plot 509 CM Rvati

INVESTOR: City of Belgrade, Belgrade

ESTIMATED BILL OF QUANTITIES FOR CIVIL AND SPECIALISTS' WORKS
SPORTS AND CULTURE CENTRE IN OBRENOVAC

PART III - CULTURE CENTRE - OTHER (ADMINISTRATIVE) FACILITIES

July 2015

No.	Item Description	UoM	Quantity	Unit Price	Total in RSD
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1. PRELIMINARY WORKS - DEMOLITION

- 1.1. Removal of existing furniture, belongings and dismantling and removal of curtains for shading, etc. from all areas, which are to be adapted.

Usable furniture and belongings are to be stored in a storage area specified by the investor, which is located

Report shall be made on removed and stored belongings, based on which the Contractor shall make handover to the Investor.

Collect, remove, load debris to a truck and transport it to the city landfill.

The Investor and the Contractor will determine in writing the category of furniture and belongings and define in writing a place for their storage.

Calculation per m2 of room area

m2 976.86

- 1.2. Careful removal of interior doors, both single and double, along with frame, flashing and all associated parts, threshold, protective strips, etc.

Dismantled doors shall be marked, stacked, removed, loaded onto a truck and taken to a landfill designated by the investor within a distance of 15km.

Unit price includes dismantling, marking, all transport and stacking in a landfill.

Calculation per piece

single door

pcs 74.00

- 1.3. Partial stripping of damaged plaster from the interior walls of the ground floor.

The Supervision and the Contractor will define areas from which plaster shall be stripped and state it in writing.

Strip plaster, clean wall surfaces with steel brushes, dedust and prepare them for re-plastering.

As estimated, after inspecting the site, and based on visual inspection, it is estimated that approximately 20% of plastered surfaces is deducted.

Collect, remove, load debris to a truck and transport it to the city landfill.

Calculation per m2

m2 30.00

Ground floor

- 1.4. Demolition of brick walls, masonry in mortar, thickness 12cm

Walls shall be demolished together with ring beams, door lintels and all wall claddings. Usable material shall be cleaned from plaster and stacked on a construction site landfill designated by the Investor.

Collect, remove, load debris to a truck and transport it to the city landfill, up to 15km away.

Calculation per m3

m3 3.70

$((4,7+3,0)*4)*0,12$

- 1.5. Dismantling the suspended ceiling made of paneling along with the substructure.

Separate usable material, load into a truck and transport it to a landfill designated by the investor up to 15 km of distance. Collect, remove, load debris on a truck and transport it to the city landfill.

Calculation per m2

m2 343.00

Ground floor

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2. MASONRY

- 2.1.** Plastering of interior walls with compo mortar in two layers, in the area where the plaster is stripped. Before plastering, the surface shall be cleaned and sprayed with cement slurry. The first layer, ground, shall be performed with compo mortar, up to 2 cm thick, made of sifted gravel and lime. Apply plaster over the base and cut it for better application of the second layer.

The second layer shall be performed with fine and clean sand, without impurities, silt and organic matter. Float with wetting and smoothing with small floats.

The plastered surface must be flat, without breaks and waves, and the edges must be sharp and straight.

The joint with plaster that is not stripped must be flush and invisible.

Wet plaster to prevent rapid drying.

Unit price includes the necessary material, all transport, construction, and assembly and disassembly of light mobile scaffold.

Calculation per m2

m2 30.00

- 2.2.** Patching of plastered surfaces, grooves, quoins, etc. to the width of 30cm, by compo mortar in two layers. Before plastering, wall surfaces shall be wetted and sprayed with cement slurry, apply the first layer, ground, mortar, made with sifted gravel in thickness of about 2cm.

Apply the second layer on dry first layer, made with fine sand, and then thoroughly float it including wetting.

Surfaces must be flat, without breaks and waves, and edges must be sharp. The joints with the existing surfaces must be flush.

Unit price includes the necessary material, all transport, construction, and assembly and disassembly of light mobile scaffold.

Calculation per meter

md 511.80

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3. CONCRETE AND CONCRETE - REINFORCING WORKS

- 3.1.** Repair, curing of damage to cement screed
Repair should be made with polymeric materials. Surfaces for reparation should be prepared, remove loose material, in all follow the manufacturer's instructions. Mixture should be applied in layers, by hand or by machine, to the required thickness of approximately 2mm according to materials manufacturer.

Unit price contains the supply of necessary material, construction, all transport, as well as any additional material.

Calculation per m2 m2 210.30

4. JOINERY

- 4.1.** Fabrication and installation of doors, in ready-made openings.
 Door frame made of first class and dry oak, MDF door wing, according to joinery diagrams and details. Skylight is glazed with a single glass 6mm thick.
 Between the wing and frame place sealing profile of neoprene rubber.
 The doors are provide with hardware, concealed cylinder lock and three keys, three mortise hinges per wing, chosen by the Designer.
 Rubber bumper shall be placed on the floor. Transitional strip on the floor, made of stainless steel.
 Unit price contains the supply of necessary material, shop fabrication, all transport, on-site installation with all flashings inside and out, and the final product painted in colour and shade by Designer's choice.
 Calculation per piece

item IV single door 100x220	pcs	9
item V single door with skylight 100x310	pcs	16
item VI single door 90x210	pcs	1
item VI' single door 90/210	pcs	1
item VII single door with skylight 90x300	pcs	4
item VIII single door 80x210	pcs	13
item IX single door with skylight 80x300	pcs	8
item X single door 70x210	pcs	18
item XXIV double doors 149x210	pcs	1
item XXV double doors 162x210	pcs	1
item XXVI double doors 200x210	pcs	1

- 4.2.** Supply of materials, fabrication and installation of the damaged and worn out wooden parts of staircase railing.
 Worn out wooden parts, lining of the sides and handrails shall be dismantled. New ones shall be modeled after existing parts, of high quality, dry, straight, I-class timber.
 Unit price includes the supply of necessary material, shop fabrication, all transport and on-site installation.
 Calculation per m2 measured side elevation m2 15.00

5. METAL WORK

- 5.1.** Fabrication and installation of portal with doors, glazed with safety glass 8mm thick.
 Portal is made of aluminum profiles, improved with multi-chamber profile system, double sealing system with EPDM rubber, in line with joinery diagram and details.
 Install hardware of anodized aluminum, lock and three hinges per leaf, chosen by the designer.

Glaze it with safety glass, thickness 8mm, and seal with permanently elastic EPDM rubber, vulcanized on the corners.

Colour and shade, chosen by the designer.

Unit price includes the necessary material, shop fabrication, all transport, on-site installation with all flashing inside and out.

Calculation per piece

item 65 dim 430/353 with single doors m2 15.18

5.2. Fabrication and installation of fire doors (doors with a report on fire testing issued by IMS)

Doors made of steel sections, sheet metal. The door wing is a grid of box sections 50x30x1mm, partition sheet plate is 1.5mm thick, placed at both sides, while door frame is of box sections 80x40x1,5mm.

Fire infill 30mm thick, lining, fire panels placed on both sides, metal sheet 1.5mm thick placed on both sides, fire resistant MDF panels 8mm thick placed on both sides, the color chosen by the Designer.

Sealing, double row of sealing rubber on frame and wing, double row of expansion strips on door frame and wing.

Hardware, hinges, safety locks, panic fittings.

Unit price contains the supply of necessary material, shop fabrication, all transport, on-site installation with all flashings inside and out, and the final product painted in colour and shade by Designer's choice.

Calculation per piece

item XVII dim 100/220 single doors F90 pcs 4

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6. TILING WORKS

6.1. Pointing of existing wall tiles, placed adjacent.

Clean the existing joints, wash and point them with white cement or grouts, and then clean them.

Unit price contains the supply of necessary material, all transport and construction.

Calculation per m2

m2 286.18

6.2. Pointing of existing floor tiles, placed adjacent.

Clean the existing joints, wash and point them with white cement or grouts, and then clean them.

Unit price contains the supply of necessary material, all transport and construction.

Calculation per m2

m2 95.85

6.3. Replacement of damaged wall tiles.

Replace damaged wall tiles with the same type modeled after the existing ones. Carefully remove damaged tiles with mortar, avoid damage to adjacent tiles, install new tiles and place grout in joints.

Based on the estimate on the spot, it is necessary to replace approximately 10% of wall tiles.

Unit price contains the supply of necessary material, all transport and construction.

Calculation per m2

m2 46.04

6.4. Replacement of damaged floor tiles.

Replace damaged wall tiles with the same ones modeled after the existing ones.

Carefully remove damaged tiles with mortar, avoid damage to adjacent tiles, install new tiles and place grout in joints.

Based on the estimate on the spot, it is necessary to replace approximately 15% of floor tiles.

Unit price contains the supply of necessary material, all transport and construction.

Calculation per m2

m2 14.38

6.5. Placement of wall ceramic tiles, glued with adhesive, on the newly-constructed wall.

I class tiles, domestic production, glue them in butt joint. If necessary, additionally grind the tile edges manually.

Tiled surfaces must be flat and vertical. Placed tiles shall be pointed and cleaned.

Colour, shade, dimensions of tiles and bonding are identical to that of existing wall tiled with ceramic tiles in the room.

Unit price contains the supply of necessary material, all transport and construction.

Calculation per m2

m2 83.03

6.6. Placement of the plinth of marble tiles, height up to 10cm.

Marble tiles shall be placed on the tile adhesive. The base must be flat and prepared. Placed tiles shall be pointed and plinth cleaned.

Unit price contains the supply of necessary material, all transport and construction.

Calculation per meter.

m 126.84



7. DRY WORKS

7.1. Construction of partition wall, thickness of 125mm, made of moist-proof plasterboards.

Single metal substructure covered on both sides with double moisture-proof plasterboards.

Any opening and places where equipment should be built in shall have necessary reinforcements and carriers of built-in components.

Placed rock wool must have thermal and mechanical properties prescribed by civil engineering physics study.

Type protective corner shall be installed at any protruding angles. Plate joints are filled, bandaged with tape and point with joint grout.

Joints are filled with gypsum filler by using bandage tape.

During installation of partition walls, joints with floor and ceiling as well as finish of doorjamb and window jambs shall be performed according to details and specification of the manufacturer and with the consent of the designer.

Strictly follow details from the design documents and take measures on the spot.

Unit price contains the supply of necessary material, all transport, construction, supply and installation of built-in elements for assembly of doors and sanitary devices. Assembly and disassembly of light movable scaffolding.

Calculation per m2

Calculation is provided without deduction of openings. m2 91.51

- 7.2.** Construction of suspended ceiling on a steel substructure and cladding with plasterboards 12.5 mm thick, according to Knauf system.

Double substructure should be made of load-bearing and prefabricated galvanized profiles CD 60x27 mm fixed by hangers to the supporting wall and ceiling shall be covered with plasterboards, as per the design and the manufacturer's instructions. The joints shall be finished with putty and bandage tape, as per designer's instruction.

Unit price contains the supply of necessary material, all transport, construction, assembly and disassembly of light movable scaffolding.

Calculation per m2

m2 435.39

- 7.3.** Construction of suspended ceiling on a steel substructure and cladding with acoustic panels, mounted on one side.

Double substructure should be made of load-bearing and prefabricated galvanized profiles, fixed by hangers to the supporting ceiling, and covered with acoustic panels, 12.5mm thick, mounted at one side, as per the design and the manufacturer's instructions. The joints shall be finished as per designer's and manufacturer's instruction.

Colour and shade of acoustic panels chosen by the designer.

Unit price contains the supply of necessary material, all transport, construction, assembly and disassembly of light movable scaffolding.

Calculation per m2

m2 86.72



8. FLOORING WORKS

- 8.1.** Curing and protection of marble floors.

Prior to work commencement, carefully inspect the surfaces, and visibly mark the damaged parts.

Damage, cracks, should be repaired with putty made of cement and marble flour.

Once the putty is hardened, floor shall be smoothed with grindstones of various fineness, until a smooth and flat surface of equal gloss is obtained.

Repeat the entire process, if holes or grooves appear.

Once the finest grinding is completed, floor shall be washed twice with water with the addition of detergent and then dried.

After drying, the surfaces shall be coated with transparent coating IZOLIT and two coats of silicone water-repellent transparent coating.

Tiles, which have been damaged to such an extent that cannot be repaired as described above, shall be replaced with new ones with the same size and colour.

Unit price includes the supply of necessary material, all transport and fabrication.

Calculation per m2 m2 98.52

8.2. Curing and protection of terrazzo floors.

Prior to work commencement, carefully inspect the surfaces, and visibly mark the damaged parts.

Damage, cracks, should be repaired with putty made of cement and marble flour.

Once the putty is hardened, floor shall be smoothed with grindstones of various fineness, until a smooth and flat surface of equal gloss is obtained.

Repeat the entire process, if holes or grooves appear.

Once the finest grinding is completed, floor shall be washed twice with water with the addition of detergent and then dried.

After drying, the surfaces shall be coated with transparent coating IZOLIT and two coats of silicone water-repellent transparent coating.

Unit price includes the supply of necessary material, all transport and fabrication.

Calculation per m2 m2 6.26

8.3. Laying of a homogenous vinyl flooring with non-directional pattern, thickness 2 mm. Colour, shade, pattern chosen by the designer.

Eco-friendly dispersion coating is applied to dry and clean surface. After drying, eco-friendly self-leveling coating is applied in a layer up to 3 mm. After levelling coating is dried, it shall be fine ground, cleaned and vacuumed.

Homogeneous vinyl flooring shall be delivered and laid on this prepared surface with a maximum 2% of humidity, with unidirectional pattern, thickness of 2mm.

Flooring characteristics

Wear class T (according to EN 600 and 660), with PUR protection, fire resistance Bfl S1 (according to EN 13501-1) and weighing up to 2950g/m², class 34-43 (EN 685), slip-resistant R9, resistant to development of mold and mildew.

Vinyl flooring is cut while dry, glued to the floor by dispersive, eco-friendly adhesive, including welding of joints with electrode, in the same colour as selected flooring.

After welding, joint shall be perfectly flush to the floor.

Floors shall be performed with vertical covings at the joint with wall at height of 15cm.

Quality and type of tiling in the class of manufacturer "TARKETT - Granit"

Any waste shall be transported to the city landfill.

Unit price includes supply of the necessary material, all transport and fabrication.

Calculation per m² of the horizontal projection, with constructed covings 15cm high. m2 592.24

9. PAINTING WORKS

9.1. Scraping of old paint from all walls and ceiling of the ground floor and first floor.

The surfaces of walls and ceilings, which are painted, shall be scraped, washed, ground, dedusted, cleaned and impregnated.

During construction, pay attention that parts of the walls and ceilings, which are covered with wooden claddings, are not damaged. They shall be protected with PVC foil.

Unit price contains the supply of necessary material, all transport and fabrication, as well as assembly and disassembly of necessary light movable scaffolding.

Calculation per m2

m2 4,141.48

walls

9.2. Troweling and painting of walls and ceilings with dispersive, antibacterial washable paint.

After they are prepared, the surfaces shall be ground, cleaned and neutralized. Inspect and point slightly damaged parts and cracks. Impregnate and apply dispersion putty twice.

All surfaces shall be ground, impregnated, while minor damages shall be pointed. Paint them and then correct with tinted dispersion putty, and paint with dispersion paint in two layers. The colour and shade are chosen by the designer.

Unit price contains the supply of necessary material, all transport, as well as fabrication and assembly and disassembly of light movable scaffolding.

Calculation per m2

m2 4,141.48

walls

9.3. Troweling and painting of new plasterboard walls and ceilings, including necessary previous activities, with dispersion, antibacterial washable paint.

Heads of screws or nails shall be red lead coated, surfaces shall be coated with boiled linseed oil and joints pointed with dispersion putty.

After they are prepared, the surfaces shall be ground, cleaned and neutralized. Inspect and point slightly damaged parts and cracks. Impregnate and apply dispersion putty twice.

All surfaces shall be ground, impregnated, while minor damages shall be pointed. Paint them and then correct with tinted dispersion putty, and paint with dispersion paint in two layers. The colour and shade are chosen by the designer.

Unit price contains the supply of necessary material, all transport, as well as fabrication and assembly and disassembly of light movable scaffolding.

Calculation per m2

m2 617.90

9.4. Cleaning and painting of stairs.

Before painting, clean metal from corrosion with chemical and physical means, and then the surfaces shall be ground and cleaned. Railing shall be impregnated and primed, and then painted twice with paint for metal.

Wooden part of railing shall be stained with Sadolin or similar agent chosen by the designer. Prior to painting, all surfaces shall be sandpapered, until obtaining smooth surface. Paint it twice, respecting the drying period of 24 hours, and then apply the finest sandpaper and paint it for the third time.

Unit price contains the supply of necessary material, all transport, and construction.

Calculation per m2

m2 18.00

10. FINISHING WORKS

10.1. Cleaning and washing of the site after the completion of all works.

Carry out thorough cleaning of the entire site, dedusting of walls, cleaning and thorough washing of all interior rooms.

Cleaning and washing of windows and doors after completion of works.

Windows and doors shall be carefully cleaned, all surfaces washed with water with the addition of appropriate chemical agents.

Calculation per m² measured net area from the data.

m2 976.86

SUMMARY

1. PRELIMINARY WORKS - DEMOLITION
 2. MASONRY
 3. CONCRETE AND RC WORKS
 4. JOINERY
 5. METAL WORK
 6. TILING WORKS
 7. DRY WORKS
 8. FLOORING WORKS
 9. PAINTING WORKS
 10. FINISHING WORKS
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ESTIMATED BILL OF QUANTITIES: INTERNAL
INSTALLATIONS

PHASE III - OTHER ADMINISTRATIVE FACILITIES

No.	DESCRIPTION	UoM	Quantity	Unit price	Total RSD
I PREVIOUS WORKS					
1	Careful dismantle of sink fixtures. Dismantle the sink fixtures, clean and hand them over to the investor through kept records. Calculation per piece.	pcs.	3.00		
2	Careful dismantle of basin fixtures. Dismantle the basin fixtures, clean and hand them over to the investor through kept records. Calculation per piece.	pcs.	16.00		
3	Careful dismantle of WC pan fixtures. Dismantle the WC pan fixtures, clean and hand them over to the investor through kept records. Calculation per piece.	pcs.	8.00		
4	Careful dismantle of urinal fixtures. Dismantle the urinal fixtures, clean and hand them over to the investor through kept records. Calculation per piece.	pcs.	4.00		
5	Careful dismantle of drain fixtures. Dismantle the drains, clean and hand them over to the investor through kept records. Calculation per piece.	pcs.	4.00		
6	Sealing of sewage pipes. Seal the sewage pipes in the floor leading from the disassembled devices. Lump sum calculation.	LS	1		
7	Dismantling of water supply network. Dismantle the water supply pipes in the walls so they can be replaced with new ones. Dismantled pipes shall be cleaned and handed over to the investor through kept records. Calculation per meter	m1	16		
8	Dismantling of sewage network. Dismantle the sewage pipes in the walls and floors so they can be replaced with new ones. Dismantled pipes shall be packed and transported to the landfill designated by the investor. Calculation per meter	m1	24		
9	Mechanical cutting of slab on the ground d=12cm. Cutting is performed in strips 1m wide. The item covers all sides of the field to be cut. Calculation per meter.	m	17.9		

TOTAL I:**II EARTHWORKS**

- 1 Trench digging, rectangular shape, width 0.8 m, maximum depth 1.20 m, disposal of excavated material on one side at a minimum distance of 1.0 m from the edge of the trench.

Calculation per m³ of excavated material in virgin condition, for all necessary labour and materials. The unit price includes possible pumping of groundwater, necessary shoring of trenches deeper than 1.0m, trench protection.

m³ 21.48

- 2 Unit price includes the supply, delivery, transport along the trench, pouring into trench, planning and compaction of sand in layers beneath and around the pipe, thickness 30cm. Material to be used is sand type "Dunavac".

Calculation per m³ of installed sand in compacted condition, for all necessary labour and materials.

m³ 5.37

- 3 Trench backfilling with excavated soil

Trench backfilling with excavated soil including compaction in layers of 30 cm, until obtaining natural compaction.

Calculation per m³ of backfilled trench in compacted state, for all labour and material.

m³ 16.11

- 4 Transport of excess soil from excavation.

Unit price includes the transport of the excavated material to the city landfill.

m³ 5.37

- 5 Base layer for concrete floor slab

Supply of materials, transport and backfilling of gravel in a layer of 10cm as a base for construction of concrete floor slab. Calculation per m².

m² 17.9

TOTAL II:**III CONCRETE WORKS**

- 1 Supply of materials, transport and construction of base for waterproofing, made of lean concrete MB20 d=10cm. Calculation per m².

m² 17.90

- 2 Supply of materials, transport and casting of concrete slab on the ground d=12cm, concrete MB25. Calculation per m².

m² 17.90

TOTAL III:**IV INSULATION WORKS**

- 1 Supply of materials, transport and construction of horizontal waterproofing on parts of the slab on the ground (after patching) to protect it against moisture and seepage water. It is performed in the layers of bleeding concrete, as follows:

- Cold applied bitulite coating "A"
- Hot applied bitumen coating 85/25
- kondor 3 (APP Plastomer Modified-Bitumen Waterproof Membrane)
- kondor 3 (APP Plastomer Modified-Bitumen Waterproof Membrane) with defined overlappings welded to the previous layer. Special attention is paid to the connection between new and existing waterproofing layer. Insulation shall be raised along the walls to the height of 30cm.

Calculation per m2, complete item.

m2 25.06

TOTAL IV:

V WATER SUPPLY INSTALLATIONS

1. Supply and installation of polypropylene (plastic) water supply pipes with all the necessary fittings for pipe network. Unit price includes hanging the pipes on wall and structure, chiselling and punching of walls in floor structure, as well as the required scaffolding.

NOTE: pipe diameter in the drawings represents the inner diameter of pipe.

Calculation per meter of finished pipeline.

Ø20,DN 15 mm	m	30.00
Ø25,DN 20 mm	m	65.00
Ø32,DN 25 mm	m	6.00

2. Testing of the newly-designed pipeline on pressure. Non-functional pipes and joints shall be replaced.

Calculation per meter m1 16.00

3. Disinfection and bacteriological testing of the newly-designed pipeline. Calculation per meter	m1	16.00
4. Supply and installation of thermal insulation for pipes made of material class A1, A2 or at least B1, which is hardly flammable in accordance with SRPS U.J1.050 or EN 13501-1. Calculation per meter.		
Ø 20-32mm	m	95.00
Ø 40-50mm	m	6.00
5. Supply of materials, transport and connection of water supply consumers to the water supply reticulation. Calculation per connection point.	pcs.	5.00

TOTAL V:
VI SEWAGE INSTALLATIONS

1. Supply and installation of PVC sewer pipes with appropriate fittings. The pipes are mounted by hanging, chiselling and punching walls of floor structure or by digging into the walls or floors in a strictly designed decline of 2%. Unit price includes sealing material for pipe joints, and scaffolding. Calculation per meter of complete pipeline.		
Ø 50 mm - PVC	m	3.00
Ø 75 mm - PVC	m	8.00
Ø 110 mm - PVC	m	4.00
2. Supply and installation of floor drains with waterless trap, plastic housing and a chrome grille, horizontal drains with a flange for toilets. Calculation for completely mounted drain.		
Ø 75 mm	pcs.	3.00
3. Watertightness testing of sewage pipes. Calculation per meter.	m'	15.00
4. Supply of materials, transport and connection of swage users to the sewage network. Calculation per connection point.	pcs.	5.00

TOTAL VI:
VII SANITARY DEVICES

1. Supply, transport and installation of complete wash basin, I class, white faience. Basin size 50/40 cm, it should be furnished with a standing single lever mixer for cold and hot water, with a short outlet, nickel-plated drain trap Ø32 mm with a rosette, plug and chain. Design and installation of fixing strips or plastic plugs in the wall for fixing the basin, and is included in the unit price. Calculation per piece including labour and material.	pcs.	8.00
- gate built-in valve Ø 15 mm	pcs.	16.00

- 2 Supply, transport and installation of complete wash basin, I class, white faience (with low-mounted water heater). Basin size 50/40 cm, it should be furnished with a standing single lever mixer for cold and hot water, with a short outlet, inlet pipes, nickel-plated drain trap Ø32 mm with a rosette, plug and chain. Design and installation of fixing strips or plastic plugs in the wall for fixing the basin, and is included in the unit price.
- | | | |
|--|------|------|
| Calculation per piece including labour and material. | pcs. | 5.00 |
| - gate built-in valve Ø 15 mm | pcs. | 5.00 |
- 3 Supply, transport and installation of a complete WC pan made of faience, I class. EK valve Ø15 mm with nickel-plated cap shall be placed on water inlet to toilet cistern. Plastic seat is mounted on the toilet pan. Low-mounted toilet cistern shall be installed, fountain type, with plastic flush pipe and other accessories. Unit price includes all connecting and sealing materials.
- | | | |
|---|------|------|
| Calculation per completely mounted and tested device. | pcs. | 7.00 |
|---|------|------|
- 4 Supply, transport and installation of complete wash basin, I class, white faience **for the disabled**. Basin size 64/55 cm, it should be furnished with a standing single lever mixer for cold water, with a short outlet, nickel-plated drain trap Ø32 mm with a rosette, plug and chain. Design and installation of fixing strips or plastic plugs in the wall for fixing the basin, and is included in the unit price. Manufacturer JIKA Laufen group, or equivalent.
- | | | |
|--|------|------|
| Calculation per piece including labour and material. | pcs. | 1.00 |
| - gate built-in valve Ø 15 mm | pcs. | 1.00 |
- 5 Supply, transport and installation of a complete sanitary ware of toiler **for the disabled**, which consists of: console ceramic WC pan for the disabled, I class, with low noise concealed cistern, buttons made of stainless steel for flush activation, in shape and colour as chosen by the Employer, lifted off the floor min. 6 cm with the seat and cover. Manufacturer INCEA or equivalent. Wall bracket shall be provided for each WC pan.
- | | | |
|--|------|------|
| Calculation per piece including labour and material. | pcs. | 1.00 |
| - angle valve for cisterns: Ø 15 mm | pcs. | 1.00 |
- 6 Supply and installation of urinal with outlet valve and drain fitting.
- | | | |
|--|------|------|
| Calculation per completely mounted urinal. | pcs. | 2.00 |
| - angle valve for urinal: Ø 15 mm | pcs. | 2.00 |
- 7 Supply and installation of electrical water heaters under pressure.
- | | | |
|--|------|------|
| Calculation per completely mounted water heater. | | |
| V = 10 lit.(low-mounted water heater) | pcs. | 5.00 |
| <u>- gate built-in valve Ø 15 mm</u> | pcs. | 5.00 |
- 8 Supply of materials and installation of valves to connect technological consumers. Calculation per piece.
- | | | |
|-------------|------|------|
| gate valves | pcs. | 5.00 |
|-------------|------|------|

EK valves	pcs.	5.00
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TOTAL VII:
VIII SANITARY WARE

1. Supporting ware in bathrooms and toilets, as chosen by the designer, with all the necessary material for fixing:

* paper holder	pcs.	8.00
* liquid soap dispenser	pcs.	14.00
* toilet brush	pcs.	8.00
* mirror dimension 80x100cm, next to wash basin	pcs.	13.00
* mirror dimension 60x40cm for the disabled	pcs.	1.00

TOTAL VIII:
IX OTHER WORKS

1. Flushing of sewer network before and after the intervention.

Calculation per meter.	m'	15.00
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TOTAL IX:
S U M M A R Y

I PREVIOUS WORKS
II EARTHWORKS
III CONCRETE WORKS
IV INSULATION WORKS
V WATER SUPPLY INSTALLATIONS
VI SEWAGE INSTALLATIONS
VII SANITARY DEVICES
VIII SANITARY WARE
IX OTHER WORKS

TOTAL:

ESTIMATED BILL OF QUANTITIES: ELECTRICAL INSTALLATIONS					
PHASE III - OTHER (ADMINISTRATIVE) FACILITIES					
Item	DESCRIPTION	UoM	Quantity	Unit Price	Total
1	Dismantling				
	Dismantling of the existing electrical equipment including the necessary works and hand over to the Investor				
1.1	- distribution cabinets RO (18pcs) and related equipment	set	1		
1.2	- relating feeding lines of cabinet, sockets, lighting 6 water heaters and 15 AC devices	set	1		
1.3	- existing lighting, 294 pcs 4x18W, 37 pcs 2x26W, 61 pcs spot lamps, 3 pcs of decorative lamps 1x14W, 25m of LED strips, 1 pcs of external reflector	set	1		
1.4	- existing outlets and HVAC consumers (157pcs)	set	1		
2	Equipment in Power Substation				
2.1	Delivery and installation of NV fuses at the other facilities outlets for consumers: - 125A, Ik=10kA, for RO-RES - outlet no. 2, pieces 3.	set	1		
3	Distribution cabinets				
	Delivery of new distribution cabinets similar to type Evrotehna, Kraljevo, for installation in/on the wall, complete with equipment similar to type Schrack, by single-line diagrams, works and commissioning				
3.1	Supply, delivery and wall-mounting of distribution cabinet RO-4.1, made from pickled sheet metal, with a door and lock, dimensions 550x800x200, IP 54, with the following accessories: - main switch 0-1, 500V, three-pole 63 A, pieces 1; - circuit breakers 10 A, type "B", pieces 9; - circuit breakers 16 A, type "B", pieces 19; - FID 25/0,5A, pieces 2	pcs.	1		
3.2	Supply, delivery and wall-mounting of distribution cabinet RO-4.2, made from pickled sheet metal, with a door and lock, dimensions 400x600x200, IP 54, with the following accessories: - main switch 0-1, 500V, three-pole 63 A, pieces 1; - circuit breakers 10 A, type "B", pieces 9; - circuit breakers 16 A, type "B", pieces 11;	pcs.	1		
3.3	Supply, delivery and wall-mounting of distribution cabinet RO-4.3, made from pickled sheet metal, with a door and lock, dimensions 550x800x200, IP 54, with the following accessories: - main switch 0-1, 500V, three-pole 63 A, pieces 1; - single-pole switch 0-1, 10 A, 250 V, pieces 1; - circuit breakers 10 A, tip "B", pieces 14; - circuit breakers 16 A, tip "B", pieces 12; - FID 25/0,5A, pieces 2.	pcs.	1		
3.4	Supply, delivery and wall-mounting of distribution cabinet RO-RES, made from pickled sheet metal, with a door and lock, dimensions 800x950x200, IP 54, with the following accessories: - main switch 0-1, 500V, three-pole 125 A, pieces 1; - single-pole switch 0-1, 10 A, 250 V, pieces 3; - circuit breakers 10 A, tip "B", pieces 4;	pcs.	1		
4	Power lines				
	Delivery of power lines for supplying distribution cabinets, including their laying in the prepared and existing route, connecting and commissioning				
4.1	-W2 power line N2XH 4x50mm ² + N2XH-Y 1x35mm ² from LV distribution TS to RO-RES	m	150		
4.2	-W4 power line N2XH-Y 5x25mm ² from LV distribution TS - RO-4	m	80		
4.2.1	-W4.1 power line N2XH 5x116mm ² from RO-4 to RO-4.1	m	25		
4.2.2	-W4.2 power line N2XH 5x16mm ² from RO-4 to RO-4.2	m	10		
4.2.3	-W4.3 power line N2XH 5x16mm ² from RO-4 to RO-4.3	m	35		
4.3	Supply, delivery and laying of lines for supplying lamps. The line is type N2XH 3x1,5mm ²	m	3000		
4.4	Supply, delivery and laying of fireproof line NHXHX Fe180/E90 3x1,5mm ² for supplying panic lighting.	m	350		
4.5	Supply, delivery and laying of line N2XH 3x2,5mm ² , for supplying single-phase sockets	m	2000		
4.6	Supply, delivery and laying of line N2XH 5x2,5mm ² , for supplying three-phase sockets	m	60		
5	Lamps				
	Delivery of lamps, complete with works on the installation, connection and commissioning				
5.1	Recessed fixed luminaire, housing is made of aluminum coated with epoxy polyester finish powder fine-grained structure, polymerised at 180°C. Applicable to all types of suspended ceilings, equivalent to type Cent 6W , light bulb GU10, 230V, Buck.	pcs.	24		

Item	DESCRIPTION	UoM	Quantity	Unit Price	Total
5.2	Recessed luminaire, circular, with matte glass, equivalent to type Lara W DO 226 EPP , IP 20, G24q3, with electronic control gear accessories and compact fluorescent light source 26W/840. Lamp ring is white. Buck-Berng.	pcs.	129		
5.3	Recessed luminaire, circular, equivalent to type Dora DLE 28W , IP 20, with electronic transformer LED light source 28W, 300K. Lamp ring is fine-structured colour.	pcs.	53		
5.4	Recessed luminaire, circular, movable in the two planes, equivalent to type Dora 1x70W , bulb Gx8.5, 230V, IP20, with electronic transformer BTE 70W and metal halogen light source of 70W, 3000K, Buck. Ring is fine-structured colour.	pcs.	32		
5.5	Recessed luminaire for suspended ceilings module 600x600 and monolithic suspended ceilings, with shiny, aluminum, double parabolic, DarkLight grid made of MiroSilver aluminum, purity of 99.99%, the limit glare in accordance with EN 12464 (UGR <19), limit Dark limit 65° ≤1000 (cd/m²) in accordance with EN 12464, the optical efficiency of luminaire (Downward Light Output Ratio) 82%, made of 0.6 mm thick sheet steel of increased strength, powder coated with electrostatic application of powder paint, RAL 9003, equivalent to the type of Arco T5 414 DL (Buck) 4xT16 14W /840 G5, IP20, 230V. The luminaire has electronic control gear accessories class A2, is delivered as a transient wired, protective polyethylene foil (self-adhesive), mounting accessories and light source of 14W/840	pcs.	138		
5.6	Surface-mounted luminaire with opal polycarbonate diffuser equivalent type of Prima M DO 1x49W , T5, IP20, Buck. Complete with electronic control gear accessories, suspension accessories and fluorescent light sources 49W / 840, Buck. Body of the luminaire is made of extruded aluminum profile in gray.	pcs.	13		
5.7	Luminaire on hanger and cylindrical for direct illumination, equivalent type of Neo Spot TB INT / S 1xPar 38 Led , 230V, IP20, complete with LED light source. Luminaire housing is made of aluminum sheet metal, painted in white, reflector made of polished aluminum, Buck. The luminaire is supplied with suspension accessories and light source.	pcs.	5		
5.8	Surface mounted circular luminaire diameter Ø300mm made of impact-resistant (IK08) UV stabilized polycarbonate, halogen free, equivalent to type 1544 Globo (Buck-Disano) 1x100W, E27, IP65, 230V. Luminaire is supplied complete with mounting accessories and light source maximum 100W	pcs.	29		
5.9	Surface mounted luminaire equivalent to type Titan 236W PC , IP65. The luminaire is made of polycarbonate, with electronic control gear accessories, reflector made of white plastic sheet, plastic buckles and fluorescent light source 36W/840, Buck-Berng	pcs.	12		
5.10	Surface mounted luminaire security lighting with local power supply in non-maintained, made of V2 self-extinguishing polycarbonate with a transparent, polycarbonate diffuser, equivalent to type AESTETICA LED 8SE3-40 (Beghelli) , 230V, IP40, operating autonomy 3h, electronic control gear accessories, with battery, inverter, LED light source and an appropriate label on adhesive foil, code: 16225	pcs.	63		
5.11	Supply, delivery and installation of an ordinary switch 250V, 16A, white, similar to type Aling.	pcs.	45		
5.12	Supply, delivery and installation of two-gang switch 250V, 16A, white, similar to type Aling.	pcs.	11		
5.13	Supply, delivery and installation of one-gang switch 250V, 16A, white, similar to type Aling.	pcs.	6		
5.14	Supply, delivery and installation of toggle switch 250V, 16A, white, with signal lamp, similar to type Aling.	pcs.	5		
6	Sockets and HVAC consumers				
	Delivery of sockets, complete with the works on the installation, connection and commissioning				
6.1	Supply, delivery and installation of single phase socket 250V, 16A with protective contact, white, similar to the type Aling.	pcs.	227		
6.2	Supply, delivery and installation of three-phase socket 400V, 16A, white, similar to the type Aling.	pcs.	2		
7	Construction of cable routes				
	Delivery of necessary materials and equipment for making cable routes, complete with works on the installation.				
7.1	Installation of PNK 200mm cabinet through corridors. Complete with brackets, joints, T branches and bends.	m	20		

Item	DESCRIPTION	UoM	Quantity	Unit Price	Total
7.2	Installation of PNK 300mm cabinet through corridors. Complete with brackets, joints, T branches and bends.	m	20		
7.3	Installation of fireproof PNK 100/60mm, similar to type OBO Bettermann	m	35		
7.4	Delivery of material and making of grounding PNK cabinet with conductor P/Y 1x6mm2 fed from the nearest PE bus.	set	1		
8	Other				
8.1	Required testing and commissioning with the issuance of certificates of compliance				
	Testing the continuity of protective conductor and equipotential				
	Measurement of insulation resistance of cables, electrical equipment and devices, individual and entire installations performed.				
	Testing of protection by electrical separation of electrical installation				
	Testing of additional equipotential - testing of functionality of individual devices and equipment.				
	Measuring transitional resistance and grounding				
	After measuring, the Contractor shall make a protocol and provide the investor with all the necessary certificates along with certification of the obtained values.	set	1		
8.2	Sealing of penetration of power lines in the transition from one to another fire zone by fireproof compound.	pcs.	4		
8.3	Development of As-built design	set	1		
8.4	Development of equipotential of metal masses in the toilets by conductor P/Y 1x6mm2. Including box for equipotential PS-49, as well as cable P/Y 1x6mm2 fed from the nearest PE bus.	pcs.	4		
	TOTAL:				

ESTIMATED BILL OF QUANTITIES: TELECOMMUNICATION AND SIGNAL INSTALLATIONS

PHASE III - OTHER (ADMINISTRATIVE) FACILITIES

ITEM	DESCRIPTION	UoM	QUANTITY	UNIT PRICE	TOTAL (RSD)
1	COMMUNICATION AND DATA SHARING SYSTEM				
	Passive equipment				
1.1	Equipment for existing cabinet - splice box with cassettes for 24 splices, pigtails, patch panel with 12 SC duplex adapters MULTIMODE - 1 piece - patch panel 25 x RJ-45 cat 3 - 1 pcs. - patch panel 24 x RJ-45 cat 6a - 2 pcs. - Shunting ring - 3 pcs. - delivery, installation, connection	pcs.	1		
1.2	Socket with two modules RJ-45 category 6 with built-in box and mask - delivery, connection, installation	pcs.	40		
1.3	Copper twisted pair cable, FTP LSHF-FR, category 6a, 4x2x0,5 mm. - delivery, laying	m	4,200		
1.4	Optical cable, MM, 50/125, 8 fibres, LSHF-FR. - delivery, laying	m	150		
1.5	Installation cable JH(St)H 20x2x0.8 mm. - delivery, laying	m	100		
1.6	Patch cord - delivery, connection	pcs.	2		
1.7	Patch cord, FTP category 6a - delivery, connection	pcs.	95		
1.8	Attestation of links 6A category with the development of measurement protocol	pcs.	95		
1.9	Attestation of optical links with the development of measurement protocol	pcs.	1		
	Active equipment				
1.10	Layer 2 switch, 48 x 10/100/1000BASE-T PoE similar to type Cisco Catalyst WS-C2960S-48FPS-L - delivery, installation, connection	pcs.	1		
1.11	Layer 2 switch, 24 x 10/100/1000BASE-T PoE similar to type Cisco Catalyst WS-C2960S-24PS-L - delivery, installation, connection	pcs.	1		
1.12	SFP module, multimode - delivery, installation, connection	pcs.	2		
1.13	Access point for wireless network access - delivery, installation, connection	pcs.	1		
1.14	Testing and commissioning	lump	1		
1.15	Development of As-build design	lump	1		
TOTAL 1					

ITEM	DESCRIPTION	UoM	QUANTITY	UNIT PRICE	TOTAL (RSD)
2 TV SIGNAL DISTRIBUTION SYSTEM					
2.1	Distribution amplifier bidirectional similar to type Televes 5383 - delivery, installation, connection	pcs.	2		
2.2	Distributor, two-way - delivery, installation, connection	pcs.	1		
2.3	Distributor, three-way - delivery, installation, connection	pcs.	1		
2.4	Distributor, four-way - delivery, installation, connection	pcs.	3		
2.5	Distributor, six-way - delivery, installation, connection	pcs.	3		
2.6	Output broadcasting connector - delivery, installation, connection	pcs.	29		
2.7	Coaxial cable RG6 HF - delivery, laying	m	1,000		
2.8	Coaxial cable RG11 HF - delivery, laying	m	100		
2.9	Testing and commissioning	lump	1		
2.10	Development of As-build design	lump	1		
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TOTAL 2					

ITEM	DESCRIPTION	UoM	QUANTITY	UNIT PRICE	TOTAL (RSD)
3	VIDEO SURVEILLANCE SYSTEM				
3.1	IP day/night box camera for indoor mounting, similar to type Siemens CCMS2025, 2MP, 1/3 inch DSP; HD 1080p (max. 12 ips), with installation accessory - delivery, installation, connection	pcs.	5		
3.2	IP day/night box camera for indoor mounting, similar to type Siemens CCMS2025, 2MP, 1/3 inch DSP; HD 1080p (max. 12 ips), with installation accessory - delivery, installation, connection	pcs.	9		
3.3	Testing and commissioning	lump	1		
3.4	Development of As-build design	lump	1		
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TOTAL 3					

ITEM	DESCRIPTION	UoM	QUANTITY	UNIT PRICE	TOTAL (RSD)
4	INSTALLATION MATERIAL				
4.1	Halogen-free cable ducts dimensions 16x25mm including forming of penetration through walls made of concrete, gypsum or brick - delivery and installation	m	280		
4.2	Halogen-free cable ducts dimensions 25x40mm including forming of penetration through walls made of concrete, gypsum or brick - delivery and installation	m	140		
4.3	Halogen-free cable ducts dimensions 40x60mm including forming of penetration through walls made of concrete, gypsum or brick - delivery and installation	m	10		
4.4	Halogen-free cable ducts dimensions 75x150mm including forming of penetration through walls made of concrete, gypsum or brick - delivery and installation	m	15		
4.5	Sealing of penetrations for telecommunication and signal cables between different fire zones with fire-resistant compound - delivery of materials and penetration sealing	lump	1		
4.6	Small installation material	lump	1		
4.7	Development of As-build design	lump	1		
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TOTAL 4					

ITEM	DESCRIPTION	UoM	QUANTITY	UNIT PRICE	TOTAL (RSD)
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SUMMARY

- 1 **COMMUNICATION AND DATA SHARING SYSTEM**
- 2 **TV SIGNAL DISTRIBUTION SYSTEM**
- 3 **VIDEO SURVEILLANCE SYSTEM**
- 4 **INSTALLATION MATERIAL**

TOTAL (RSD)

ESTIMATED BILL OF QUANTITIES FOR STAGE EQUIPMENT

PHASE III - OTHER (ADMINISTRATIVE) FACILITIES

100V AUDIO EQUIPMENT FOR PA IN CULTURE CENTRE

NO	DESCRIPTION - SUPPLY AND INSTALLATION:	UoM	QUANTITY	Unit Price	TOTAL excl. VAT
1.0.	Audio system				
1.1.	6"+1.5" ceiling recessed speaker in a metal enclosure, power 6W-12.5W-25W-50W on 100V line, dimensions 280 x 190mm, white.	pcs.	45		
2.0.	Audio control room				
2.1.	Preamplifier with 6 zones, 6 output lines for amplifiers, 3 AUX inputs, built-in microphone and a memory for easy recording of voice messages, playing 3 voicemails at once or separately, control of 6 zones over paging console with microphone, or equivalent technical parameters.	pcs.	1		
2.2.	Paging microphone with 6 zones, recording of messages, priority and alarm signals, or equivalent technical parameters.	pcs.	1		
2.3.	Attenuator for volume control, 100W, with relay, for moutage on the wall, white	pcs.	1		
2.4.	Digital single-channel power amplifier 120W - 100V / 70V / 4 ohms, or equivalent technical parameters.	pcs.	1		
2.5.	Digital two-channel power amplifier 2 x 500W - 100V/70V/4ohms, or equivalent technical parameters.	pcs.	2		
2.6.	Digital 19" stereo tuner/CD/MP3 player, USB / SD connector, for mounting in a rack, or equivalent technical parameters.	pcs.	1		
2.7.	Current distribution with three-phase connection for power supply 32A, 12 Schuko outlets (3 x 4 per phase) with protective fuses of 16A, and digital meter for voltage current at each of the phases, or equivalent technical parameters.	pcs.	1		
2.8.	Metal rack 19", 16U dimensions 866x600x800mm, with internal wiring.	pcs.	1		
3.0.	Cables and connectors for audio system installation				
3.1.	Speaker cable LS-FRNC 2 x 2.5 mm ² , halogen-free, package 100 m.	pcs.	8		
3.2.	Installation and small supplies.	pcs.	1		
3.3.	Programming, commissioning and training of users.	pcs.	1		
TOTAL 1-3:					

ESTIMATED BILL OF QUANTITIES: MECHANICAL INSTALLATIONS

PHASE III - OTHER (ADMINISTRATIVE) FACILITIES

III.A. GALLERY AIR-CONDITIONING

1. Supply and installation of recovery AC units manufactured by "FROST" or equivalent with integrated heat pump and control module. Characteristics according to BoQ. All installed and tested.

ULYSSE HP3000 (CONFIGURATION E)	
air flow	3000 m3/h
Fan pressure	200 Pa
Cooling capacity TP	5 kW
Cooling capacity TOTAL	8.4 kW
Heating capacity TP	5.1 kW
Heating capacity TOTAL	16.8 kW
Number of fans	2 pcs.
El.power of fans	1.1 kW
Speed of fan rotation	1
Current input power	2.9 kW
Input current	22.1 A
Voltage	230V/1+N/50 Hz

set 1

2. Fabrication and installation galvanized steel channels, rectangular sections, complete with MEC sections

thickness 0,8 mm kg 800

3. Supply and installation of carriers, hangers, sealing self-adhesive tapes and small accessories for air ducts 20% of the duct weight
All brackets and hangers to be used should be incombustible, ie. metal, minimum incombustibility class A2 d1,s0

kg 160

4. Supply and installation of prefabricated insulation with vapour barrier thickness 19 mm for insulating rectangular channels for distribution of air, complete with connecting tape all min. combustibility class B-s1,d0

m² 55

5. Supply and installation of aluminium grilles

for air extraction with flow regulator, manufactured by "KLIMA OPREMA" Belgrade or equivalent

type OAV 1- L 625x225 pcs. 7

6. Supply and installation of aluminium grilles for air intake with flow regulator, manufactured by "KLIMA OPREMA" Belgrade or equivalent

type OAV 2- L 625x225 pcs. 7

7. Supply and installation of fixed blinds for air intake and extraction, produced by "KLIMA OPREMA" Belgrade or equivalent

type FŽ 785x600 mm pcs. 2

8. Forming and finishing of openings for passage of air ducts

450x450 mm pcs. 2

800x650 mm pcs. 2

9. Supply and installation of drain as per equipment manufacturer's instructions

pcs. 1

10. Supply and installation of thermostatic switches for air handling unit fans, including connecting and commissioning. Thermostatic switch in the push flow of fresh air is adjusted to 55°C, and to 52°C for return flow of old air

pcs. 2

11. Supply and installation of PVC pipes for condensate drainage

ø32 m' 15

12. Material for fastening, connecting, and sealing of PE pipes, elbows, branches and similar, approx.40% of the previous item

LS 1.00

TOTAL III.A.:

III.B. RADIO MULTI SPLIT SYSTEM

1. Supply and installation of MULTISPLIT air conditioning units produced by LG or equivalent. The system comprises two internal wall-mounted units and external units and distribution copper pipes and condensate drain including insulation

external unit

MU5M30

Heating power is provided for -15C external temperature and 20C of internal temperature max $Q_{h1}/Q_{gr}=10.6/12.1$ kW

1Ø, 220-240V

el. power 2.74/2.78 kW

pcs. 1

internal units

MS18SQ

max $Q_{h1}/Q_{gr}=8.8/5.92$ kW

pcs. 2

2. Supply and installation of soft copper pipes in coils or hard copper pipes in bars, degreased for AC systems

Ø 6.4 m' 20

Ø 12.7 m' 20

3. Material for mounting and connecting pipes small copper fitting, approx. 40% of the previous item.

All brackets and hangers to be used should be incombustible, ie. metal, minimum incombustibility class A2 d1,s0

LS 1.00

4. Supply and installation of PVC pipes for condensate drain



ø32	m'	3
ø50	m'	6

5. Material for fastening, connecting, and sealing of PE pipes, elbows, branches and similar, approx.40% of the previous item

LS 1.00

6. Supply and installation of drain for connection of condensate drain to sewage stack

ø50 pcs. 1

7. Supply and installation of prefabricated insulation with vapour barrier for insulation of copper distribution elements and condensate drain min.thickness 19 mm, including insulation tape all min. combustibility class B-s1,d0

ø 6.4 m' 20
ø 12.7 m' 20

TOTAL III.B.:

III.C. OTHER WORKS

1. Forming openings through walls and floor structure, including the installation of ribbed PVC pipe framing on distribution piping, at penetration points and making the passage beneath doors

set 10

2. Preparatory and finishing works, with installation handover.

LS 1

TOTAL III.C.:

SUMMARY - PHASE III

III.A. GALLERY AIR-CONDITIONING

III.B. RADIO MULTI SPLIT SYSTEM

III.C. OTHER WORKS

OTHER:

GRAND SUMMARY FOR REPAIR AND ADAPTATION WORKS - PHASE III, OTHER ADMINISTRATIVE FACILITIES

NO	Type of works				TOTAL
1	Specialist's works				
2	W&S installations				
3	Electrical installations				
4	Telecommunication and signal installations				
5	Audio equipment - general PA				
6	Mechanical installations				
	TOTAL:				