VOLUME 4.2

FINANCIAL OFFER TEMPLATES

**LUMP SUM CONTRACTS**

**Introduction**

1. The breakdown of the lump-sum price (Volume 4.2.3) is the itemised list of prices showing the build-up of the price in a lump-sum contract. This breakdown of the lump-sum price does not derogate in any way to the clause stating that, in a lump-sum contract, the total contract price remains fixed irrespective of the quantity of work actually carried out.

The amounts due will be calculated:

The breakdown must coincide with the payment-definition chosen in Article 49 of the special conditions:

2. The item description given in the breakdown of the lump-sum price in no way limits the contractor’s obligations under the contract to provide all the works described elsewhere.

3. The prices of the breakdown of the lump-sum price include all incidental and contingent expenses and all risks necessary to construct, complete and maintain all works in accordance with the contract. Unless separate items are provided in the breakdown of the lump-sum price, prices include all costs involved in the various items of the breakdown.

4. The lump–sum price and the prices of the breakdown of the lump-sum price are all-inclusive and include any non-exonerated tax or fiscal duty.

**VOLUME 4.2.3 — BREAKDOWN OF THE LUMP-SUM PRICE**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| BILL OF QUANTITIES FOR CONSTRUCTION AND CONSTRUCTION CRAFTWORKS | | | | | |
| "RENOVATION OF THE HOUSE OF CULTURE IN GRADASHORTSI VILLAGE, VASILEVO MUNICIPALITY" | | | | | |
| **Item** | **Description** | **Unit** | **Unit price** | **Firm quantities** | **Lump-sum price** |
|
|
| (a) | (b) | (c) | (d) | (e) | (f=d\*e) |
|  | **PREPARATORY WORK** |  |  |  |  |
| 0.1. | Demolition of an existing roof made of salonid, complete with existing wooden construction | m2 |  | 350 |  |
| 0.2. | Removal of existing plaster from the walls | m2 |  | 620 |  |
| 0.3. | Dismantling the existing platform | m2 |  | 100 |  |
| 0.4. | Dismantling of existing carpentry | m2 |  | 50 |  |
| 0.5 | Demolition of an existing wall | m2 |  | 5 |  |
| 0.6. | Delivery to landfill up to 50 km | m3 |  | 160 |  |
|  | Total |  |  |  |  |
|  | | | | | |
| 1. | **EARTH AFFAIRS** |  |  |  |  |
| 1.2. | Excavation of soil for the foundation of a fence wall and procurement and compaction of a buffer layer | m3 |  | 30 |  |
|  | Total |  |  |  |  |
|  | | | | | |
| 2. | **MASONRY WORKS** |  |  |  |  |
| 2.1. | Brick wall construction. hollow block D=25cm in extended mortar 1:3:9, with a libation layer and scaffolding set. | m3 |  | 4 |  |
| 2.2. | Brick wall construction. hollow block D=12cm in extended mortar 1:3:9, with a layer of plaster and scaffolding set. | m2 |  | 8 |  |
| 2.3. | Plastering of internal walls, a.b. beams and columns with extended plaster, with scaffolding and by previously spraying them with cement milk. | m2 |  | 320 |  |
| 2.4. | Plastering walls in the toilet up to the ceiling, with cement mortar in one hand with a scaffold and by previously spraying them with cement milk. | m2 |  | 60 |  |
| 2.5. | Plastering a ceiling with extended plaster, with scaffolding and by previously spraying it with cement milk first on plasterboard | m2 |  | 320 |  |
|  | Total |  |  |  |  |
|  | | | | | |
| 3 | **CONCRETE WORKS** |  |  |  |  |
| .3.1 | Making a leveling layer with a cement screed d=3-5 cm. | m2 |  | 320 |  |
| .3.2 | Concreting of a fence wall around the plot | m' |  | 100 |  |
|  | Total |  |  |  |  |
|  | | | | | |
| 4 | **REINFORCEMENT WORKS** |  |  |  |  |
| 4.1. | Procurement, transport, preparation and installation of ribbed reinforcement RA-400/500 /RA-1+ RA-2/ from Ф6 -ф12, in all respects to the statics project. | kg |  | 300 |  |
| 4.2. | Procurement, transport, preparation and installation of mesh rebar MA-500/560, Q-188, in relation to the statics project. | kg |  | 1400 |  |
|  | Total |  |  |  |  |
|  | | | | | |
| 5 | **LOCKSMITH WORKS** |  |  |  |  |
| 5.1. | Procurement and installation of a metal fence for terraces and an entrance ladder, on top of a fence wall along with miniaturization and painting. | m1 |  | 7.75 |  |
| 5.2. | Procurement and installation of external aluminum carpentry, five-chamber profiles glazed with thermopan glass 4+12+4mm, complete with all the necessary hardware (according to the carpentry scheme). |  |  |  |  |
|  | 240/280 | pcs |  | 1 |  |
|  | 180/220 | pcs |  | 2 |  |
|  | 320/140 | pcs |  | 8 |  |
|  | 150/150 | pcs |  | 1 |  |
|  | Total |  |  |  |  |
|  | | | | | |
| 6 | **TIN WORKS** |  |  |  |  |
| 6.1. | Production and installation of horizontal gutters with plasticized sheet 0.55 mm, attached with sparring hooks 30/5 mm with a developed width of 40 cm. | m1 |  | 65 |  |
| 6.2. | Production and installation of vertical gutters made of plasticized sheet 0.55 mm, attached with sparring hooks 30/5 mm to the walls with a developed width of 42 cm. | m1 |  | 35 |  |
| 6.3. | Fabrication and installation of plasticized flat sheet metal d=0.55 mm in the bays of roof tiles with a developed width of 60 cm. | m1 |  | 40 |  |
|  | Total |  |  |  |  |
|  | | | | | |
| 7. | **POTTERY WORKS** |  |  |  |  |
| 7.1. | Procurement and installation of floor ceramic tiles with grouting and glued with construction glue on a pre-made leveling layer. | m2 |  | 23 |  |
| 7.2. | Supply and fitting of wall ceramic tiles with construction glue and grouting with fugomal in color. | m2 |  | 30 |  |
|  | Total |  |  |  |  |
|  | | | | | |
| 8 | **STONE CUTTING WORKS** |  |  |  |  |
| 8.1. | Procurement and installation of window boards with marble d = 2 cm and width 15 cm and their gluing. | m1 |  | 30 |  |
|  | Total |  |  |  |  |
|  | | | | | |
| 9 | **LOCKSMITH WORKS** |  |  |  |  |
| 9.1. | Production of a steel roof structure, a set of grids and cornices for the production of a roof and production of an overhang | kg |  | 5500 |  |
|  |  |  |  |  |  |
|  | | | | | |
| 10 | **CARPENTRY WORKS** |  |  |  |  |
| 10.1. | Manufacturing and installation of wooden doors with cases and double-spared wings, veneered with final staining and varnishing. |  |  |  |  |
|  | 70/210 | pcs |  | 2 |  |
|  | 80/210 | pcs |  | 3 |  |
|  | 90/210 | pcs |  | 4 |  |
|  | Total |  |  |  |  |
|  | | | | | |
| 11 | **COVERING WORKS** |  |  |  |  |
| 11.1. | Covering a roof structure with a panel /measured horizontally/. | m2 |  | 350 |  |
| 11.2. | Covering the ridge of the roof covering with covers. | m1 |  | 32 |  |
|  | Total |  |  |  |  |
|  | | | | | |
| 12 | **INSULATION WORKS** |  |  |  |  |
| 12.1, | Installation of thermal insulation from phenol, mineral wool in roof construction | m2 |  | 0 |  |
|  | Total |  |  |  |  |
|  | | | | | |
| 13 | **FACADE WORKS** |  |  |  |  |
| 13.1. | Construction of a thermal facade with hard-pressed styrofoam d=8cm, gluing it and finishing it with mineral plaster (complete procedure - glue, glass mesh, mineral plaster, substrate and paint). | m2 |  | 320 |  |
|  | Total |  |  |  |  |
|  | | | | | |
| 14 | **PAINTING WORKS** | |  |  |  |
| 14.1. | Painting of interior plastered walls and ceilings with polycolor. | m2 |  | 1000 |  |
|  | Total |  |  |  |  |
|  | | | | | |
| 15 | **MISCELLANEOUS THINGS** |  |  |  |  |
| 15.1. | Procurement and installation of a warm laminate floor 8 mm on a polypropylene film, finished with moldings, on an already made cement screed base. | m2 |  | 300 |  |
|  | Total |  |  |  |  |
|  | | | | | |
| 16 | **WATER SUPPLY AND SEWAGE** |  |  |  |  |
| 16.1. | Procurement, transport and installation of plastic pipes (pp) for water supply with all necessary joint and sealing material and shaped pieces, complete with septic tank and sanitary elements |  |  | 1 |  |
|  | Total |  |  |  |  |
|  | | | | | |
| 17 | **ELECTRICAL INSTALLATION** |  |  |  |  |
| 17.1. | Procurement, transport and installation of cables for internal installation, complete with installation of light fixtures | no. |  | down payment |  |
|  | Total |  |  |  |  |
|  | | | | | |
| 18 | **PHOTOVOLTAICS** |  |  |  |  |
| 18.1. | Procurement and installation of photovoltaics |  |  | down payment |  |
|  | Total |  |  |  |  |

|  |  |  |
| --- | --- | --- |
|  | **R E C A P I T U L A R** | |
| **0** | PREPARATORY WORK |  |
| **1** | EARTH AFFAIRS |  |
| **2** | MASONRY WORKS |  |
| **3** | CONCRETE WORKS |  |
| **4** | REINFORCEMENT WORKS |  |
| **5** | LOCKSMITH WORKS |  |
| **6** | TIN WORKS |  |
| **7** | POTTERY WORKS |  |
| **8** | STONE CUTTING WORKS |  |
| **9** | LOCKSMITH WORKS |  |
| **10** | CARPENTRY WORKS |  |
| **11** | COVERING WORKS |  |
| **12** | INSULATION WORKS |  |
| **13** | FACADE WORKS |  |
| **14** | PAINTING WORKS |  |
| **15** | MISCELLANEOUS THINGS |  |
| **16** | WATER SUPPLY AND SEWAGE |  |
| **17** | ELECTRICAL INSTALLATION |  |
| **18** | PHOTOVOLTAICS |  |
| **TOTAL:** | |  |
| **VAT 18%:** | |  |
| **OVERALL IN EUR:** | |  |

**\*ADDITIONAL BILL OF QUANTITIES FOR DIFFERENT PHASES**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| BILL OF QUANTITIES - **PHASE PERFORMANCE FOR ELECTRICAL INSTALLATIONS** | | | | | | | | |
| "RENOVATION OF THE HOUSE OF CULTURE IN GRADASHORTSI VILLAGE, VASILEVO MUNICIPALITY" | | | | | | | | |
| **Item** | | **Description** | **Unit** | **Unit price** | | **Firm quantities** | **Lump-sum price** | |
|
|
| (a) | | (b) | (c) | (d) | | (e) | (f=d\*e) | |
| **A)** | | **HIGH CURRENT INSTALATIONS** |  |  | |  |  | |
| 1. | | **POWER SUPPLY LINE** |  |  | |  |  | |
| 1.1 | | Cables passed on a wall under mortar (set with connected material) | m |  | | 15 |  | |
|  | | NYY (PP-OO) – 5x16 mm2 from KPO to GRT |
|  | | Total |  |  | |  |  | |
|  | | | | | | | | |
| 2. | | **DIVORCE BOARDS** |  |  | |  |  | |
| 2.1 | | Procurement and setup on main divorce board GRT for in a wall a taste them the following elements:   * Differential FID assembly 40A, 4p, 0.03mAAutomatic fuses: * 1 no. ST 68.1/B 6A * 3 no. ST 68.1/B 10A * 8 no. ST 68.1/B 16A * 14 no. ST 68.1/B 20A * 1 no. ST 68.1/B 32A * tiny material (rail, various terminals, inscriptionstiles..)   The board yes everything performed in everything according to unisex scheme | no |  | | 1 |  | |
|  | | Total |  |  | |  |  | |
|  | | | | | | | | |
| 3. | | **DIVORCE LINES And ELEMENTS** |  |  | |  |  | |
| 3.1. | | Power line for lighting with cable type NYM – J – 3x1.5 mm2 passed on a wall under mortar or on spacers on metallic construction | m |  | | 250 |  | |
| 3.2. | | Power line for anti-panic lighting with cable type NYM – J – 3x1.5 mm2 passed on a wall under mortar or on spacers on metallic construction | m |  | | 70 |  | |
| 3.3. | | Power supply line for connectors with cabletype NYM – J – 3x2.5 mm2 passed on a wall under mortar | m |  | | 320 |  | |
| 3.4. | | Power supply line for connectors with cabletype NYM – J – 5x2.5 mm2 passed on a wall under mortar | m |  | | 25 |  | |
| 3.5. | | Procurement and installation in the wall of monophasic shuko socket 230V, 10/16A | no |  | | 5 |  | |
| 3.6 | | Procurement and installation in the wall of monophasic shuko socket 230V, 16A | no |  | | 11 |  | |
| 3.7 | | Procurement and installation on the wall of OG monophasic shuko socket 230V, 16A | no |  | | 14 |  | |
| 3.8 | | Procurement and installation on the wall of three- phase shuko socket 380V, 16A | no |  | | 1 |  | |
|  | | Procurement and montage on light bodies |  |  | |  |  | |
| 3.9 | | S1 Upgraded ICE panel 24W, 60x60 see | no |  | | 27 |  | |
| 3.10 | | S2 Wall LED lamb 12W IP65 | no |  | | 2 |  | |
| 3.11 | | S3 Upgraded ICE panel 12W, 30x30 see | no |  | | 5 |  | |
| 3.12 | | S4 Upgraded ICE panel 60W, 1200 mm, 6000K, IP54 | no |  | | 6 |  | |
| 3.13 | | S5 Wall LED lamb 20W IP65 for exernally lignting | no |  | | 8 |  | |
| 3.14 | | Anti – panic lamb with arrow or inscription EXIT | no |  | | 11 |  | |
|  | | Procurement and montage on switches |  |  | |  |  | |
| 3.15 | | Procurement and montage on switches for montage on a wall 230V, 10A |  |  | |  |  | |
|  | | ordinary | no |  | | 7 |  | |
|  | | serially | no |  | | 3 |  | |
|  | | alternating | no |  | | 10 |  | |
| 3.16 | | Examination, release in work and issuance on certificate for correctness | Lump sum |  | | 1 |  | |
|  | | Total |  |  | |  |  | |
|  | | | | | | | | |
| B) | | **LIGHTING PROTECTION INSTALLATION** |  |  | |  |  | |
| 1 | | Vertical drain from galvanized steel tape FeZn platoon P 25x3 mm, MKS N.B4.901^ placed on appropriate brackets | m |  | | 100 |  | |
| 2 | | Accepted platoon from galvanized steel tape FeZn platoon P 25x3 mm, MKS N.B4.901^ placed on roof on appropriate brackets. In the price yes everthing turn on brackets for roof | m |  | | 180 |  | |
| 3 | | Crosswise piece MKS N.B4.908 –P for merger on FeZn strips | number |  | | 20 |  | |
| 4 | | Clamps for gutter MKS N.B4.908 –P ford fastening on the acceptable one platoon on the gutter | number |  | | 4 |  | |
| 5. | | Box for measured junction typr N.B4.912 placed in prepared opening in the concrete onez pillars on height 1.75m from ground | number |  | | 8 |  | |
| 6. | | Examination on lightinh rod installation and issuance on certificate for correctness on the same | Lump sum |  | | 1 |  | |
|  | | Total |  |  | |  |  | |
|  | | | | | | | | |
| C) | | **LOW CURRENT INSTALLATIONS** |  |  | |  |  | |
| 1) | | **FIRE PROTECTION INSTALLATION** |  |  | |  |  | |
| 1.1. | | Analog – addressable PP headquarters with 4 loops (with opportunity for expansion) and with opportunity for connection on 99 callers on fire after loos and 99 modules, with alpha numerically display with 4 order after 20 the character and with programmable relays come out PC 485 and PC232, for 200 events | piece |  | | 1 |  | |
| 1.2. | | Analogously addresable caller on fire optical, type 2251EM-R kit with footer type V501 | number |  | | 13 |  | |
| 1.3 | | Addresable manual caller on fire type M500KAS –R complete with footer type SR3T-P or simillar | number |  | | 4 |  | |
| 1.4 | | Addresable alarm siren, internal with visual signalling | number |  | | 1 |  | |
| 1.5 | | Addresable alarm siren, external with visual signalling | number |  | | 1 |  | |
| 1.6 | | Cable J-H (st)H 2x2x0.8mm2 red color drawn in ribbed instetine | m |  | | 190 |  | |
| 1.7 | | Montage on ribbed instetine f13.5 mm set up in a wall from brick or on spacers on metallic construction | m |  | | 190 |  | |
| 1.8 | | Examination and release in use with training for usage on staff | Lump sum |  | | 1 |  | |
|  | | Total |  |  | |  |  | |
|  | | | | | | | | |
| 2) | | **COMPUTER And ANTENNA INSTALATION** |  |  | |  |  | |
| 2.1 | | Procurement and setup on ROUTER with 8 gates for networking on the elements | number |  | | 1 |  | |
| 2.2 | | Procurement and setup on by phone and by computer cable FTP Cat 5E 4x2x0.6 mm, drawn in plastic ribbed pipes F16mm, placed on a wall under plaster | m |  | | 130 |  | |
| 2.3 | | Procurement and setup on aerial cable RG11, drawn in plastic ribbed pipes F16mm, placed on a wall under plaster | m |  | | 130 |  | |
| 2.4 | | Flexible pipe F16mm placed on the wall under mortar | m |  | | 130 |  | |
| 2.5 | | Computer socket for montage in a wall with RJ 45 | number |  | | 6 |  | |
| 2.6 | | Aerial socket for montage in a wall | number |  | | 6 |  | |
| 2.7 | | Examination and release in use on the weak current instalation | Lump sum |  | | 1 |  | |
|  | | Total |  |  | |  |  | |
|  | | | | | | | | |
|  | **R E C A P I T U L A R** | | | | | | |
| **A)** | **HIGH CURRENT INSTALATIONS** | | | |  | | |
| **1** | **POWER SUPPLY LINE** | | | |  | | |
| **2** | **DIVORCE BOARDS** | | | |  | | |
| **3** | **DIVORCE LINES And ELEMENTS** | | | |  | | |
| **B)** | **LIGHTING PROTECTION INSTALLATION** | | | |  | | |
| **C)** | **LOW CURRENT INSTALLATIONS** | | | |  | | |
| **1** | **FIRE PROTECTION INSTALLATION** | | | |  | | |
| **2** | **COMPUTER And ANTENNA INSTALATION** | | | |  | | |
| **TOTAL:** | | | | |  | | |
| **VAT 18%:** | | | | |  | | |
| **OVERALL IN EUR:** | | | | |  | | |

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| BILL OF QUANTITIES - **PHASE INSTALLATION OF PHOTOVOLTAICS** | | | | | |
| "RENOVATION OF THE HOUSE OF CULTURE IN GRADASHORTSI VILLAGE, VASILEVO MUNICIPALITY" | | | | | |
| **Item** | **Description** | **Unit** | **Unit price** | **Firm quantities** | **Lump-sum price** |
|
|
| (a) | (b) | (c) | (d) | (e) | (f=d\*e) |
| **1.** | **GENERAL NOTE:** |  |  |  |  |
| 1.1 | The bill of quantities must be read together with the rest of the tender documentation and the tenderer will be deemed to be informed of all the necessary works to be carried out and which are described in the tender documentation. All works must be carried out according to the applicable standards. All offered electrotechnical products, equipment or plants must be attested and have a certificate from an authorized institution that they are suitable for use for the intended purpose. All works that are not specifically mentioned in the bill of quantities and which are an integral part of the work and are necessary for the quality performance of the same according to the applicable standards and norms, will be deemed to be included in the unit price of each separate item of the bill of quantities. |  |  |  |  |
| **2.** | **PHOTOVOLTAIC PANELS** | piece |  | 72 |  |
| 2.1 | Procurement, delivery and installation of Monocrystalline photovoltaic panel with the following characteristics:  manufacturer: ULICA SOLAR  type: UL-575M-144DG, 575Wp  efficiency up to 22.26%  protection degree ≥IP68  panel dimensions: 2278mm x 1134mm x 35mm  panel weight: 32kg  Maximum Power Voltage: 42.3V  Maximum Power Current: 13.59A  The entire set is paid for: |
| **3.** | **INVERTERS** |  |  |  |  |
| 3.1 | Supply, delivery and installation of Inverter DC/AC, with the following  features:  manufacturer: HUAWEI  type: SUN2000-40KTL-M3, 40kW  Input  Max. Input Voltage: 1100V  Current per MPPT: 26A  Max. Short Circuit Current per MPPT: 40A  Start Voltage: 200V  MPPT Operating Voltage Range: 200V~1000V  Rated Input Voltage: 600V  Number of Inputs: 16  Number of MPPT Trackers: 4  Output  Rated AC Active Power: 40000W  Rated AC Apparent Power: 44000VA  Max. AC Apparent Power: 44000VA  Max. AC Active Power (cos φ=1): 40000W  Rated Output Voltage: 380V/400V, default 3W/N+PE;  Rated AC Grid Frequency: 50Hz/60Hz  protection level IP66  inverter dimensions: 640mm x 530mm x 270mm  inverter weight: <43kg  Purchase, installation, programming of a wi-fi dongle for wireless communication with the inverter itself.  Setting and programming of a smart meter, for reading the electricity production, hour, month, year and for limiting the electricity produced in the system up to the installation  of a two-way meter from the electricity distribution operator.  The entire package is paid for: | piece |  | 1 |  |
| **4.** | **AC ASSEMBLED CABINET** |  |  |  |  |
| 4.1 | AC distribution cabinet for wall mounting in accordance with the applicable standards: IEC EN 60529, with IP65 protection, IKXX IEC 62262, 750 degrees/ 5 seconds 60695-2-1, for installations in public buildings. A 30% reserve shall be provided. The installed equipment shall be in accordance with the European standards: IEC EN 60947-2. The cabinet shall be manufactured with inlet and outlet on the bottom, with elements for mounting on a DIN rail, with lock and serial key equipped with: Base for cylindrical fuses 80A, 3p | piece |  | 2 |  |
| 4.2 | Cylindrical fuses 63.1p | piece |  | 6 |  |
| 4.3 | Base for cylindrical fuses 20A, 1p DC side (for strings) | piece |  | 8 |  |
| 4.4 | Cylindrical fuses 15A, 1p DC side (for strings) | piece |  | 8 |  |
| 4.5 | Base for cylindrical fuses 125A,3p | piece |  | 1 |  |
| 4.6 | Cylindrical fuses 125A,1p | piece |  | 3 |  |
| 4.7 | Surge arrester 25kA | piece |  | 1 |  |
| 4.8 | Copper rails, DIN rail, grommets and other small mounting and connecting materials | Lump sum |  | 1 |  |
| **5.** | **POWER CABLE LINES** |  |  |  |  |
|  | Procurement, transportation, installation and connection of cable lines by an authorized person: |  |  |  |  |
| 5.1 | solar cable PV1-F 1x6mm2 | m |  | 480 |  |
| 5.2 | cable line N2XY-5x16mm2 for connecting the inverter to the AC cabinet. | m |  | 18 |  |
| 5.3 | cable line N2XY-5x16mm2 for connecting the AC cabinet to the existing GRO. | m |  | 8 |  |
| 5.4 | PNK cable channel | m |  | 6 |  |
| 5.5 | Silicone UV stabilized hose | m |  | 240 |  |
| 5.6 | MC4 connectors "+" | piece |  | 4 |  |
| 5.7 | MC4 connectors "-" | piece |  | 4 |  |
| 5.8 | cable F/FTP Cat 6a 4x2x0.56 AW23 for interconnecting the communicators of the inverters and the router | m |  | 40 |  |
| **6.** | **CONSTRUCTION** |  |  |  |  |
|  | Procurement, transportation and installation of a structure for the installation of photovoltaic panels. |  |  |  |  |
| 6.1 | Al supporting structure for the panels, with a height of not less than 60mm, preferably from 90mm to 120mm. | m |  | 172 |  |
| 6.2 | Panel mounting brackets for aluminum profile (finish) | piece |  | 32 |  |
| 6.3 | Panel mounting brackets for the aluminum profile (between two panels) | piece |  | 128 |  |
| **7.** | **POTENTIAL EQUALIZATION OF PHOTOVOLTAIC PANELS AND ALU PROFILES** |  |  |  |  |
| 7.1 | ф8mm full cross-section Al wire for connecting the terminals from the Al support of the panels | m |  | 36 |  |
| 7.2 | coupling for connecting the Al support to the metal parts of the AC cabinet and cathode assembly. | piece |  | 16 |  |
| 7.3 | p/F 1x10mm2 cable line for connection to the measuring junction and metal parts of switch cabinets | m |  | 38 |  |
|  | **TOTAL** |  |  |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| BILL OF QUANTITIES – **PHACES WATER WORKS** | | | | | |
| "RENOVATION OF THE HOUSE OF CULTURE IN GRADASHORTSI VILLAGE, VASILEVO MUNICIPALITY" | | | | | |
| **Item** | **Description** | **Unit** | **Unit price** | **Firm quantities** | **Lump-sum price** |
|
|
| (a) | (b) | (c) | (d) | (e) | (f=d\*e) |
| **А** | **Water supply** |  |  |  |  |
| 1. | **Soil works** |  |  |  |  |
| 1.1 | Excavation of earth of category III for a canal trench with a width of 0.6m and a depth of more than 0.8m (for frost protection), so-called dumping of the excavated material at a distance of 0.6m from the edge of the trench | m3 |  | 28 |  |
| 1.2 | Procurement, transport and embedding of sand  In layers from 10 cm under the pipes and 10 cm  over the pipes, so it was pounding, and because of mechanical protection | m3 |  | 1.20 |  |
| 1.3 | Burring a canal ditch with already dug material  material with compaction of layers into place by 15-20 cm | m3 |  | 23 |  |
| 1.4 | Excavation of land category III for a water manhole with its drainage to landfill | m3 |  | 4 |  |
|  | Total |  |  |  |  |
| 2. | **Plumbing works** |  |  |  |  |
| 2.1 | Polypropylene PP water pipes for  NP 10bar laid in a trench in the ground or in a noick wall at a height of 30cm from the floor,  jointed together and attached to the wall with  clamps. The price shall include all  necessary fittings that fit 1m1 of pipe. The installation shall be carried out with a slope towards the water meter manhole due to emptying.  The price shall also include the testing of |  |  |  |  |
|  | ND 75 | m |  | 22 |  |
|  | ND 25 (3/4") | m |  | 5.50 |  |
|  | ND 20 (1/2") | m |  | 6 |  |
| 2.2 | Procurement and installation of check valves for pipes in junctions boxes and on risers |  |  |  |  |
|  | f3/4" | no |  | 1 |  |
|  | f 1/2" | no |  | 6 |  |
| 2.3 | Procurement and installation of Roteh pipe system installed in a protective flexible hose with the necessary adapter couplings and endings elbows for connecting sanitary items to the floor with a protective flexible hose |  |  |  |  |
|  | ND 16 | m |  | 155 |  |
| 2.4 | Procurement and installation of PP permeable  valves for pipes and on verticals |  |  |  |  |
|  | f3/4" | no |  | 2 |  |
|  | f1,2" | no |  | 4 |  |
| 2.5 | Procurement and installation of a horizontal water meter with an extended holender |  |  |  |  |
|  | f 3/4" - | no |  | 1 |  |
| 2.6 | Procurement and installation of EC valves  φ1/2" with chrome heads, built-in front  every toilet flush | no |  | 2 |  |
| 2.7 | Construction of connection to the street line with digging, cutting of the asphalt and re-asphalting  and replacement of the already dug with gravel material, pipes and fittings which should be performed by the authorized utility enterprise | no |  | 1 |  |
|  | Total |  |  |  |  |
| 3. | **Concrete works** |  |  |  |  |
| 3.1. | Concreting of a reinforced concrete manhole for accommodating a water meter with noight dimensions of 1.5x3.5x1.3m, with MB20 and a wall thickness of 15cm, reinforced with Q188 reinforcing mesh, with a metal cover, minimized | no |  | 1 |  |
|  | Total |  |  |  |  |
| 4. | **Other works** |  |  |  |  |
| 4.1. | Drilling concrete walls for passage | no |  | 1 |  |
|  | Total |  |  |  |  |
| B. | **SEWAGE SYSTEM** |  |  |  |  |
| 1 | **Soil works** |  |  |  |  |
| 1.1 | Excavation of land III category for canal ditch with width from 0,6m in depth according to the conditions and the fall of  the pipes, by discarding the excavated material | m3 |  | 4 |  |
| 1.2 | Procurement, transport and embedding of sand  on a planned bottom of the ditch in put  from 10 cm above and 10 cm below the pipes so  beat. | m3 |  | 0.50 |  |
| 1.3 | Burring a canal ditch with already dug material  material with compaction of layers into place by 15-20 cm | m3 |  | 3.50 |  |
| 1.4 | Excavation of soil for inspection manholes with transportation of the excavated material to a landfill | m3 |  | 2.50 |  |
| 1.5 | Loading and transport of the surplus | m3 |  | 3 |  |
|  | Total |  |  |  |  |
| 2. | **Plumbing works** |  |  |  |  |
| 2.1 | Procurement and installation of PVC sewer pipes, connection using heads and rubbers that are coated with potassium soap for easier installation. The connection should be pressed all the way in, and then pulled out by 1-1.5 cm, due to temperature expansion of the pipes. The pipes should be installed on a 10 cm layer of sand in the trench. |  |  |  |  |
|  | f 160 | m |  | 41 |  |
| 2.2 | Procurement and installation of PVC sewer pipes |  |  |  |  |
|  | F 50 | m |  | 25 |  |
|  | F 70 | m |  | 22 |  |
|  | F 100 | m |  | 14 |  |
|  | F 160 | m |  | 2 |  |
| 2.3 | Procurement and installation of PVC ventilation head mounted above the roof, with treatment of the pipe penetration through the roof |  |  |  |  |
|  | Ф75 | no |  | 1 |  |
| 2.4 | Procurement and installation of floor drains, made of PVC material with gratings f 70si with vertical outlet | no |  | 3 |  |
|  | Total |  |  |  |  |
| 3. | **Concrete works** |  |  |  |  |
| 3.1 | Concreting of a reinforced concrete inspection pit for sewage with MB20 with a noight opening of 0.8x0.8m with a manufactured manhole and cover type 251 | no |  | 1 |  |
|  | Total |  |  |  |  |
| 4 | **Other works** |  |  |  |  |
| 4.1 | Making pipe passages through foundations and slabs with protective pipe, putty and caulking | no |  | 3 |  |
| 4.2 | Drilling concrete walls for passage | m |  | 1 |  |
|  | Total |  |  |  |  |
| C. | **SANITARY ITEMS** |  |  |  |  |
| 1. | Procurement, transportation and installation of a faience toilet in tone, complete with washer and screws, plastic supply pipe and low-mount flush | no |  | 2 |  |
| 2. | Procurement and installation of a matching faience washbasin with set, noackets and chrome or plastic siphon and other small materials | no |  | 2 |  |
| 3. | Supply and installation of a chrome towel rail | no |  | 2 |  |
| 4. | Procurement and installation of a toilet roll holder | no |  | 2 |  |
| 5. | Procurement and installation of a toilet  mirror with dimensions 60x50, attached  on the wall | no |  | 2 |  |
| 6. | Supply and installation of a single-lever basin faucet | no |  | 2 |  |
|  | **TOTAL** |  |  |  |  |