



**Bangladesh University of Engineering and Technology  
Department of Civil Engineering**

**Bill of Quantities Report  
of**

**A Model Solid Waste Management System at  
Community Level**

**Submitted To:**

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Section : B1  
Group No. : 04  
Level- 4, Term- II

Items and Bill of Quantity						
Item	Description of Items	Unit	Quantity	Bated Rate in (Tk)	Total Amount (Tk)	Reference
1	<b>General, Site Facility and Safety</b>					
1.1	Providing expertise engineer having minimum qualification B.Sc. in Civil Engineering and relevant experience(s) more than 10 years with registration in respective professional body for project documentation, progress study & adjustment, preparation of project material schedule and testing schedule for approval etc. & jobs assigned by the HOPE or his official, at site. (max. man month not greater than 1/4 of initial contract duration or contract completion time whichever is less & payment for the item subject to submission of CV & approved by HOPE or his authorized officer).	per month	3	120000.00	360000.00	1.9
1.2	Providing 3 sets as-built drawings subject to Engineer's approval produced in AutoCAD software in 584.5 mm x 413.5 mm (A-2 size) standard drawing paper, and operating and maintenance manual of the equipment and plant incorporated in the works, if any, in original by the date stated in the particular conditions of contract (PCC). If the contractor does not supply the as-built drawings and operating & maintenance manuals by the date stated in the particular conditions of contract (PCC), or they do not receive the Engineer-in-charge's approval, the Engineer-in-charge shall withhold the amount stated in the PCC from the payments due to the contractor. The as-built drawings must show the permanent works as actually constructed and reflect the revision of drawings supplied to the contractor during the Contract as well as revisions of drawings supplied to the contractor during the contract. (One set of as-built drawings shall be considered for measurement and payment)	per tender	1	28256.00	28256.00	1.2.1
1.3	Providing necessary facilities in construction site for maintaining site safety of 30 nos construction worker including safety helmet, safety belt, apron, gumboot, goggles etc.	set	1	38651.00	38651.00	1.1.4.1
1.4	Providing necessary facilities in construction site for maintaining site safety of 10 nos construction inspection team member including safety helmet, safety goggles, safety shoe etc.	set	1	10798.00	10798.00	1.1.4.2
1.5	Supplying and providing of first aid box with necessary materials/medicine (hygienic gown, thermometer, adhesive dressings, antiseptic solutions, bandages, cotton balls or swaps, emergency blanket, gloves, hand sanitizer, ice pack, saline etc.) all complete as per direction of Engineer-incharge.	each	1	16215.00	16215.00	1.1.4.3
1.6	Preparation & submission of work programme / schedule to the Engineer-in-charge for approval prior ground breaking showing the events (works) and successive sub-events of works including all the management & control parameters like Earliest Start Time (EST), Earliest Finish Time (EFT), float events on critical path, etc. with description of general method of works, in orderly manner all in the form of network diagram prepared in computer software like MS project/ Primavera and presenting in displayable hard and soft copy minimum 3 (three) sets.	per tender	1	32076.00	32076.00	1.4.1
1.7	Updating the work programme and submission to the Engineer-in-charge at intervals no longer than 28 days showing actual physical and financial progress achieved on each activity and the effect of the progress on the timing of the remaining work, including any changes to the sequence of the activities. However, Engineer's approval of the programme shall not alter the contractor's obligations. The contractor may revise the programme and submit it to the Engineer-in-charge again at any time. A revised programme shall show the variations and events related to change of contract price. Month wise documentation shall be the basis of payments on this item	per revision	11	9499.00	104489.00	1.4.2

1.8	Mobilization and cleaning site before commencing actual physical work and during contract period and demobilization after completion of the works under contract to be accepted by the Engineer-in-charge. This work shall also cover cleaning and clearing, cutting or filling, dressing the project area on and in the ground to an extent that all the events of works of the project can be executed smoothly in a working environment with a particular attention on safety and security in all respects, and to stockpile the end outcome to a place for disposal agreed by the Engineer-in-charge, where, payments are to be based on ground area determined by the Engineer-in-charge and be proportionate to the percentage progress of work under contract as a whole in all respects and approved by the Engineer-in-charge.	sqm	408.983	218.00	89158.29	1.7
	<b>Total</b>				<b>679643.29</b>	
2	<b>Soil Investigation</b>					
2.1	<b>Percussion Method of Drilling:</b> Mobilization and demobilization of boring equipment and man-power: at site (drilling rig comprising drilling pipe, drop hammer, tripod, pulley, chain, wrange, sample collection devices etc. tools and plants; tripol for temporary camp, necessary work-force etc.) (Once for one site)	per site	1	14702.00	14702.00	31.1
2.2	Sub-Soil investigation by 100 mm dia percussion wash boring including collecting disturbed and undisturbed soil samples in numbers as required for classification of soil, conducting SPT using auto trip hammer, stratification of layers, analyzing physical parameters of soils like Atterberg limits, specific gravity, grain size distribution (by wet sieve, hydrometer if required), ground water table location, direct shear test, unconfined compression test, unit weight (dry/ weight), natural moisture content ; C - φ values and other strength parameters to ascertain bearing capacity , skin friction, end bearings etc. at every 1.5m interval as per respective national/ international standards and entering all these data & information in necessary tables & graphs and finally furnishing them in the form of standard sub-soil investigation report with CD containing video of sub-soil investigation operation of concerned site duly signed by competent engineer & exploratory office.					
2.2.1	Bore hole depth from 0 to 20 m	per bore hole	5	33871.00	169355.00	31.2.1
	<b>Total</b>				<b>184057.00</b>	
3	<b>Earthwork Excavation</b>					
3.1	Earth work in excavation in all kinds of soil for foundation trenches including layout, providing center lines, local bench mark pillars, levelling, ramming and preparing the base, fixing bamboo spikes and marking layout with chalk powder, providing necessary tools and plants, protecting and maintaining the trench dry etc., stacking, cleaning the excavated earth at a safe distance out of the area enclosed by the layout etc. all complete and accepted by the Engineer in-charge, subject to submit method statement of carrying out excavation work to the Engineer-in-charge for approval. However, engineer's approval shall not relieve the contractor of his responsibilities and obligations under the contract.					
3.1.1	Layout and marking for earthwork in excavation in foundation accepted by the Engineer-in-charge. [Plinth area of the structure shall be considered for measurement]	sqm	299.394	19.00	5688.49	2.1.1
3.1.2	Earthwork in excavation in foundation trenches up to 1.5 m depth and maximum 10 m lead	cum	95.926	168.00	16115.57	2.1.2
3.1.3	Added rate for each additional 0.5 meter depth exceeding 1.5 meter	cum	30.393	30.00	911.79	2.1.3

3.2	Sand filling in foundation trenches and plinth with sand having min. F.M. 2.2 in 150 mm layers including leveling, watering and compaction to achieve minimum dry density of 95% with optimum moisture content (Modified proctor test) by ramming each layer up to finished level as per design supplied by the design office only, all complete and accepted by the Engineer-in-charge.	cum	64.08	3257.00	208708.56	2.10.4
	<b>TOTAL</b>				<b>231424.40</b>	
4	<b>Brick Flat Soling</b>					
4.1	One layer brick flat soling in foundation or in floor with first class/picked jhama bricks (BDS 208) including preparation of bed and filling the interstices with local sand, leveling etc. complete and accepted by the Engineer-in-charge.	sqm	293.93	636.00	<b>186939.48</b>	3.1.1
5	<b>RCC WORKS</b>					
5.1	1:1.5:3 (measured on gross concrete section) ( $f'c = 25\text{ MPa}$ , minimum $f'cr = 33.5 \text{ MPa}$ in nominal mix 1 : 1.5 : 3), with Stone Chips (100% Sand of F.M. 2.2)Reinforced cement concrete works with minimum cement content relates to mix ratio 1:1.5:3 having maximum water cement ratio = 0.40 and minimum $f'cr = 33.5 \text{ MPa}$ , satisfying a specified compressive strength $f'c = 25 \text{ MPa}$ at 28 days on standard cylinders as per standard practice of Code ACI / BNBC, Cement conforming to BDS EN-197-1-CEM-I, 52.5N, best quality Sylhet sand or coarse sand of equivalent F.M. 2.2 and 20 mm down well graded stone chips conforming to ASTM C-33 (Aggregate grading as per table shown in technical specification), conducting necessary tests, making and placing shutter in position and maintaining true to plumb, making shutter water-tight properly, placing reinforcement in position; mixing with standard mixer machine with hopper, fed by standard measuring boxes, casting in forms, compacting by vibrator machine and curing at least for 28 days, removing centering-shuttering after specified time approved; including cost of water, electricity, other charges etc. all complete, approved and accepted by the Engineer-in-charge. (Rate is excluding laboratory test fees, the cost of reinforcement and its fabrication, placing, binding etc. and the cost of shuttering & centering)					
5.1.1	Individual footing, floor slab and foundation beam up to plinth level	cum	2.238	14605.00	32685.99	7.3.1
5.1.2	Floor Slab	cum	5.59	14748.00	82441.32	7.3.3
5.1.3	column up to ground floor	cum	6.46	14964.00	96667.44	7.3.2
5.1.4	Beam	cum	15	14748.00	221220.00	7.3.3
5.1.5	Column	cum	14.56	14964.00	217875.84	7.3.2
5.1.6	UGWT	cum	4.68	14748.00	69020.64	7.3.3
	<b>Total</b>				<b>719911.23</b>	
6	<b>Concrete Reinforcement</b>					
6.1	Grade 400 (B400DWR / B420DWR: complying BDS ISO 6935-2:2016 / ASTM A615) ribbed or deformed bar produced and marked according to Bangladesh standard, with minimum yield strength, $f_y$ ( $\text{ReH}$ )= 400 MPa but $f_y$ not exceeding 480 MPa and whatever is the actual yield strength within allowable limit as per BNBC/ ACI 318, the ratio of ultimate tensile strength $f_u$ to yield strength $f_y$ , shall be at least 1.25 and minimum elongation after fracture and minimum total elongation at maximum force is 17% and 8% respectively : up to ground floor	kg				
6.1.1	Individual footing and grade beam	kg	109.57	121.00	13257.97	8.1.2
6.1.2	Beam	kg	2856	121.00	345576.00	8.1.2
6.1.3	Column	kg	2590.5	121.00	313450.50	8.1.2
6.1.4	Floor Slab	kg	371.73	121.00	44979.33	8.1.2
6.1.5	UGWT	kg	111000	121.00	13431000.00	8.1.2
	<b>Total</b>				<b>14148263.80</b>	
7	<b>Structural Steel</b>					

7.1	Supply and installation of 0.457 mm thick corrugated galvanized iron sheet (Bangladesh made) having min weight 63-65 kg per bundle (2'-6" width, 70 – 72 rft long) fitted and fixed on M.S. sections with 'J' hook or wooden purlin with screws, limpet washers and putty etc. (up to level-4) all complete and accepted by the Engineer-in-charge.	sqm	279.64	578.00	161631.92	10.21
7.2	Supply and fixing of connection bolts of variable diameter with nut and washer according to "ASTM A325 Type 1 or equivalent" with $F_u = 720 \text{ MPa}$ , including the cost of testing of bolts, all complete as per drawing, specification and direction of Engineer-In-Charge.	kg	277.27	361.00	100094.47	10.11
7.3	Supply, fabrication and installation of hot-rolled sections (W, H, I-shape etc.) for columns, beams, purlins, rafters, bracings etc. (up to level-4) conforming to ASTM A36, with a minimum yield strength of 250 MPa, including the cost of testing of plates, application of red/grey-oxide primer etc. all complete as per drawing, specification and direction of Engineer-in-charge.	kg	4054.3	131.00	531113.30	10.4
7.4	Supply, fabrication and installation of hot rolled structural grade steel channel and angle in roof truss or any form of structure of any thickness conforming to ASTM A36 with a minimum yield strength of 250 MPa, including the cost of testing, application of red/grey-oxide primer etc. (up to level4) all complete as per drawing, specification and direction of Engineer-in-charge.	kg	35755.66	129.00	4612480.14	10.6
7.5	Safety Canopy: Supplying temporary safety canopy around construction work place where public safety is likely to be endangered due to construction activities; which shall be made of truss system of steel sections (main frame) at 1800 mm c/c with purlins @ 750 mm c/c, making flooring system by corrugated galvanized iron sheets of thickness 0.45 mm, laying wire mesh net on iron sheets, providing continuous gutter along the edges of the building with downpipe @ 6000 mm c/c, including fitting and fixing in position providing necessary anchors, cables, wires, ties etc. by standard anchoring and welding, nut-bolts etc. all complete and accepted by the Engineer-in-charge.	sqm	585.59	2429.00	1422398.11	10.29
7.6	Scaffolding for outside netting of building: Supplying, fitting & fixing scaffolding for outside netting of building with single layer 38 mm dia MS pipe connected each other with minimum 4'-0" centre to centre both direction with 38 mm dia swivel clamp, including fitting and fixing in position providing necessary anchors, wires, ties etc. all complete and accepted by the Engineer-in-charge. (Rate is excluding the cost of netting)	sqm	585.59	348.00	203785.32	10.33
	<b>Total</b>				<b>7031503.26</b>	
8	<b>Brickwork</b>					
8.1	Brick works with 241 mm x 114 mm x 70 mm size 10 hole machine made rock-face or textured klinker facing bricks having uniform colour carefully laid in cement sand (F.M. 1.2) mortar (1:4) in superstructure with uniform width and depth of joints, true to vertical and horizontal lines including raking out joints, filling the interstices with mortar, cleaning and soaking bricks at least for 24 hours before use and washing and screening of sand, necessary scaffolding, curing at least for 7 days and pointing with cement sand (F.M. 1.2) mortar (1:2) including cost of water, electricity and other charges etc. all complete and accepted by the Engineer-in charge. (Cement: CEMII/B-M) In ground floor	cum	74.925	13442.00	1007141.85	4.8
9	<b>Door Window Glasswork</b>					

	Supplying fitting and fixing of aluminium swing door with spandrel as per the U.S. Architectural Aluminium Manufacturer's Association (AAMA) standard specification and BDS 1879:2014 having 1.5 mm thick wall frame (size 101.60 mm, 44.45 mm), 2.0 mm thick shutter side (size 54 mm, 46 mm), 0.99 mm thick door glass bit (size 16.54 mm, 15.49 mm, 0.115 kg/m), 1.8 mm thick closure section (size 101.60 mm, 42.93 mm), 1.5 mm thick 106.60 mm closure cover (0.392 kg/m), 4 mm thick floor bottom (size 101.60 mm, 12.70 mm, 1 kg/m), 1.8 mm thick shutter bottom (size 82.6 mm, 43.99 mm, 0.60 kg/m), 1.8 mm thick shutter top (size 51 mm, 43.99 mm, 1.88 kg/m) and 2.3 mm to 4.01 mm thick handle (size 101.60 mm, 38.10 mm, 25.40 mm short, 1.35 kg/m), 1.5 mm thick 31.75 mm shutter divider (0.535 kg/m), 1.5 mm thick 7.14 mm spandrel section of all aluminium members will be anodized to aluminium bronze/silver/ss/black colour with a coat not less than 15 microns in thickness or powder coated to any colour with a coat not less than 25 microns in thickness and density of 4 mg per square cm etc. including all accessories like swing door closure, swing door lock, swing door mohiar, labour charge, fabrication, fitting fixing in position, carriage and electricity charge keeping provision for fitting 5/6 mm thick glass including neoprene sealant etc. and Overhead rolling steel shutter door of thickness 75 mm with paint finish complete in all respect as per drawing and accepted by the Engineer-in-charge.					
9.1	Powder coated to any colour	sqm	15.12	9159.00	138484.08	14.1.2
9.2	Supplying, fitting and fixing of aluminium top hung/casement windows as per the U.S. Architectural Aluminium Manufacturer's Association (AAMA) standard specification and BDS 1879:2014 having 1.5 mm thick casement outer (size 38.86 mm, 36.36 mm, 0.395kg/m), 1.9 mm thick casement shutter (size 47.62 mm, 28.57 mm, 0.692 kg/m), and 1.245 mm thick shutter glass clip (size 15.87 mm, 27 mm, 0.188 kg/m) sections of all aluminium members will be anodized to aluminium bronze/silver/ss/black colour with a coat not less than 15 microns in thickness or powder coated to any colour with a coat not less than 25 microns in thickness and density of 4 mg per square cm etc. including all accessories 4-bar hinge, casement handle, bolts and nuts keeping provision for fitting 5 mm thick glass including labour charge for fitting of accessories, making grooves and mending good damages, carriage, and electricity complete in all respect as per drawing and accepted by the Engineer-in-charge					
9.2.1	Powder coated to any colour	sqm	63	11524.00	726012.00	14.11.2
9.3	Supplying, fitting and fixing of aluminium curtain wall along with 10 mm thick clear tempered glass as per the US Architectural aluminium Manufacturer's Association (AAMA) Standard Specification and BDS1879:2014 having 115 mm , 64 mm, 3 mm curtain wall sub-mullion outer and inner frame, 3.0 mm thick casement shutter (size 58.40 mm, 37.20 mm, 57.40 mm), 1.2 mm thick shutter glass strips, all aluminium member will be powder coated with coat not less than 25 micron in thickness including all accessories 4 bar hinge casement handle, 50 m x 50mm x 6m aluminium angle, steel rowel bolt, screws, rivets norton tape masking tape, structural sealant, gum bracket rod etc. all complete in all respect as per drawing and direction of the Engineer-in-charge.	sqm	9	10203.00	91827.00	14.12.2.2
	<b>Total</b>				<b>956323.08</b>	
10	<b>Plastering</b>					
10.1	Minimum 12 mm thick cement sand (F.M. 1.2) plaster (1:4) with fresh cement to both inner and outer surface of wall, finishing the corner and edges including washing of sand, cleaning the surface, curing at least for 7 days, cost of water, electricity, scaffolding and other charges etc. all complete in all respect as per drawing and accepted by the Engineer-in-charge. (Cement: CEM-II/B-M) Ground floor.	sqm	829.5	315.00	261292.50	15.1.1

10.2	Minimum 12 mm thick cement sand (F.M. 1.2) plaster (1:4) with fresh cement to outer surface of wall, finishing the corner and edges including washing of sand, cleaning the surface, curing at least for 7 days, cost of water, electricity, scaffolding and other charges etc. all complete in all respect as per drawing and accepted by the Engineer-in-charge. (Cement: CEM-II/B-M) Ground floor.	sqm	316.38	335.00	105987.30	15.1.2
	<b>Total</b>				<b>367279.80</b>	
11	<b>Painting</b>					
11.1	Exterior premium acrylic emulsion paint of approved best quality and color with high performance against dirt picking tendency and efflorescence resistance properties along with water resisting properties and resistance properties against fungi, fading and flaking from authorized local agent of the manufacturer in a sealed container; applying to exterior surface with surface preparation including cleaning drying, making free from dirt, grease, wax, removing all chalked and scaled materials, fungus, mending good the surface defects using sand paper and necessary scaffolding; applying necessary exterior sealer of specified brand on prepared surface; then applying necessary exterior putty of specified brand for levelling, spot filling, crack filling and cutting by sand paper/zero water paper; finally applying 2 coats of exterior emulsion paint spreading by brush/roller/spray & necessary scaffolding etc. up to desired finishing, elapsing specified time for drying or recoating; all complete in all floors and accepted by the Engineer-in-charge.	sqm	316.38	274.00	86688.12	16.1.1
11.2	Interior super premium acrylic emulsion painting (odorless) of approved best quality and colour delivered from authorized local agent of the manufacturer in a sealed container; applying to interior wall and ceiling with surface preparation including cleaning drying, making free from dirt, grease, wax, removing all chalked and scaled materials, fungus, mending good the surface defects using sand paper and necessary scaffolding; applying necessary interior sealer of specified brand on prepared surface; then applying necessary interior putty of specified brand for levelling, spot filling, crack filling and cutting by sand paper/zero water paper, finally applying 2 coats of interior emulsion paint spreading by brush/roller/spray & necessary scaffolding etc. up to desired finishing, elapsing specified time for drying or recoating; all complete in all floors accepted by the Engineer in-charge	sqm	829.5	314.00	260463.00	16.2.3
	<b>Total</b>				<b>347151.12</b>	
12	<b>Formwork (steel)</b>					
12.1	Centering and shuttering, including strutting, propping etc. (The formwork must be rigid enough both in and out of plane, to make the concrete surface true to the designed shape and size by using necessary MS sheets of minimum 16 BWG, angles of minimum size 40 mm x 40 mm x 5 mm, flat bars etc.) and removal of form for :					
12.1.1	Individual footing	sqm	12.16	582.00	7077.12	7.12.1
12.1.2	Foundation beam	sqm	143.3	493.00	70646.90	7.12.3
12.1.3	Column upto ground floor, Column	sqm	153.6	522.00	80179.20	7.12.4
12.1.4	Beam	sqm	117.37	574.00	67370.38	7.12.6
12.1.5	Floor Slab	sqm	49.179	597.00	29359.86	7.12.7
12.1.6	Lintel	sqm	32.1	543.00	17430.30	7.12.5
	<b>Total</b>				<b>272063.76</b>	
13	<b>Roof Finish</b>					

13.1	25 mm thick ferrocement treatment work for heat and water proofing on roof having minimum cement content relates to mix ratio 1:2 cement conforming to BDS EN-197- 1-CEM-I, 52.5N, and best quality coarse sand (F.M. 2.2) including, the supply of all materials, cutting, binding of one layer of 20 BWG galvanized wire mesh having minimum yield strength fy = 450 MPa & having 2 mesh per 25 mm in both ways, clear cover 12mm at the middle of the ferrocement lining, applying 62 mm thick EPS sheet having density 15 kg per cum, with washing of sand, chipping, cleaning the surface, watering, grouting, casting, laying on proper level of roof top or floor in panels (1.25 m x 1.25 m). Compaction including leveling, curing at least for 21 days including cost of water, electricity, in all respect as per drawing, design and accepted by the Engineer-in-charge.	cum	1.127	1943.00	<b>2189.76</b>	17.5.2
14	<b>Sanitary and Water Supply Works</b>					
14.1	Supplying, fitting and fixing European type glazed porcelain combi closet plastic seat cover in all floors including making holes wherever required and making good the damages and fitting, fixing finishing etc. complete with all necessary fittings and connection approved and accepted by the Engineer- in-charge.					
14.1.1	Approx. 670~690 X 360~362 mm size, minimum 27.5 kg of weight; Equivalent to Stella:Victoria/ Stella:Imola/ RAK:Amy/ RAK:Karla or similar brand	each	4	8963.00	35852.00	26.01.1
14.2	Supplying, fitting and fixing of country made glazed vitreous standing bowl urinal. The sanitary ware shall conform BDS1162:2014. The glaze shall be thoroughly fused to body. The fixture should be placed in position after making holes in walls and floors, providing 32 mm dia plastic waste pipe with brass coupling up to grading below, 12 mm dia plastic connection pipe with brass coupling, 12 mm dia brass stop cock including mending good the damages with cement mortar (1:4) etc. all complete approved and accepted by the Engineer-in-charge.					
14.2.1	Approx. 330 X 355 X 445 mm size, minimum 10.0 kg of weight	each	1	3482.00	3482.00	26.05.1
14.3	Supplying, fitting and fixing of country made glazed vitreous W/H wash basin excluding pedestal. The sanitary ware shall conform BDS1162:2014. Each product shall also be marked with the BSTI Certification Mark. The fixture should be placed in position with heavy type C.I. Brackets. basin waste with chain plug including making holes in walls and floors and fitting with wall, screws and mending good the damages, finishing etc. all complete approved and accepted by the Engineer-in-charge					
14.3.1	Over Counter: Approx. 400X 200 mm, minimum weight 6.0 kg	each	5	3529.00	17645.00	26.12.1
14.4	Supplying, fitting and fixing of 5 mm thick unframed super quality double coated mirror with all necessary fitting including making holes in walls and mending good the damages with cement mortar (1:4) etc. all complete approved and accepted by the Engineer-in-charge.					
14.4.1	Local Mirror, 5 mm thickness	each	5	2590.00	12950.00	26.19.1
14.5	Supplying, fitting and fixing of best quality toilet paper holder of standard size including making holes in walls and mending good the damages with cement mortar (1:4) etc. all complete approved and accepted by the Engineer-in-charge					
14.5.1	PVC toilet paper holder	each	6	293.00	1758.00	26.23
14.6	Supplying, fitting and fixing of standard size country made soap tray including making holes in walls and mending good the damages with cement mortar (1:4) etc. all complete approved and accepted by the Engineer-in-charge.					
14.6.1	PVC soap tray	each	6	150.00	900.00	26.24
14.7	Supplying, fitting and fixing of floor grating net in traps or in drains including making holes in walls/ floors and mending good the damages with cement mortar (1:4) etc. all complete approved and accepted by the Engineer-in-charge of following type.					
14.7.1	Approx. 100 mm x 100 mm stainless steel floor grating net	each	7	212.00	1484.00	26.27.4

14.8	Supplying, fitting and fixing of best quality country made 12 mm bib cock made from copper or copper alloy, chromium plated. The faucet conforms BDS EN 200:2009. The faucet tap shall be free from any leakage, permeation and other abnormalities. The water hammer value shall be 1.47 MPa or under. The faucet shall be made leak proof and fixing in position with selected tape etc. all complete approved and accepted by the Engineer-in-charge.					
14.8.1	12 mm CP open Bib Cock	each	10	981.00	9810.00	26.29.3
14.9	Supplying different inside dia best quality uPVC soil, waste and ventilation pipe having specific gravity 1.35 - 1.45, wall thickness 2.5 mm - 3.0 mm, and other physical, chemical, thermal, fire resistivity properties etc. as per BSTI approved manufacturer standards or ASTM, BS/ISO/IS standards fitting and fixing in position with sockets, bends, of uPVC Pipe with all accessories such as Round grating/ domed roof grating bands, sockets etc. approved and accepted by the Engineer in-charge.					
14.9.1	50 mm inside dia thickness 2.5 - 3.0 mm	m	42	564.00	23688.00	26.43.1
14.9.2	100 mm inside dia thickness 3.4 - 4.0 mm	m	96.5	881.00	85017.00	26.43.2
14.9.3	Fittings(20% of total pipe cost)				21741.00	
14.10.1	Supplying different inside dia best quality cPVC pressure pipe for water supply having specific gravity 1.35 - 1.45, and other physical, chemical, thermal, fire resistivity properties etc. as per BSTI approved manufacturer standards or ASTM, BS/ISO/IS standards fitting and fixing in position with sockets, bends, with all accessories such as round grating/ domed roof grating, bends, sockets etc. approved and accepted by the Engineer-in-charge.					
14.10.1.1	37 mm dia thickness 3.6 mm - 4.2 mm	m	47	868.00	40796.00	26.46.5
14.10.2	Fittings(30% of total pipe cost)				13276.00	
14.10.3	Riser Pipe (19 mm)	m	13	266.00	3458.00	26.46.1
	<b>Total</b>				<b>271857.00</b>	
15	<b>Tileswork</b>					
	Supplying, fitting and fixing foreign made 800 mm x 800 mm polished porcelain/ mirror polished homogeneous floor tiles complying BDS ISO 13006: 2015, water absorption $\leq$ 0.5%, modulus of rupture (MOR) $\geq$ 35 N/mm <sup>2</sup> , irrespective of color &/or design, with 20 mm thick cementsand (F.M. 1.2) mortar (1:4) base and raking out the joints with white cement including cutting and laying the tiles in proper way and finishing with care etc. all complete and accepted by the Engineer-in-charge. (Cement: CEM-II/B-M)	sqm	44.5	2873.00	<b>127848.50</b>	6.4.2
16	<b>False Ceiling</b>					
16.1	Supplying, fitting and fixing of Melamine/ Plain gypsum/ veneered board false ceiling (Drop/ Plain) laminated by mechanical hot press milk white PVC membrane, framing by aluminium/ powder coated aluminium T-bar of any colour and of natural anodized finish suspended in 600 mm x 600 mm grid from ceiling by 12 SWG double ply wire, fixed to the ceiling by rowel plug, screws, hooks, nails etc., maintaining straight lines and desired finished level at bottom face including vertical wooden strut as required, making holes in slabs or beams by electric drill machine and mending good the damages, if any during execution of the work, including the provisions of lighting arrangement, also including cost of all materials, electricity, accessories, scaffoldings, labour for installation, screws, nails, etc. all complete as per drawing, design and accepted by the Engineer-in-charge. Measurement will be taken as per finished surface area					
16.1.1	12 mm thick veneered board ceiling	sqm	12.5	1998.00	<b>24975.00</b>	18.1.2.1
17	<b>Fence</b>					

	Brick works with 10 holes machine made bricks of approved size (241 mm x 114 mm x 70 mm) having uniform colour carefully laid in cement sand (F.M. 1.2) mortar (1:4) in superstructure with uniform width and depth of joints, true to vertical and horizontal lines including raking out joints, filling the interstices with mortar, cleaning and soaking bricks at least for 24 hours before use and washing and screening of sand, necessary scaffolding, curing at least for 7 days and pointing with cement sand (F.M. 1.2) mortar (1:2) including cost of water, electricity and other charges etc. complete and accepted by the Engineer-in-charge. (Cement: CEM-II/B-M) In ground floor	cum	74.4	10097.00	<b>751216.80</b>	4.3
18	<b>Gate</b>					
	Manufacturing, supplying, fitting and fixing S.S. collapsible gate of any design and shape made of 25 mm x 25 mm x 3 mm S.S. angle placed @ 112 mm c/c vertically and connecting the same with each other by 25 mm x 3 mm S.S flat bar scissors 525 mm, 600 mm long provided in 3 rows including cutting the different S.S. members to required sizes, fabricating, welding, riveting with required size rivets, providing required size wheels, pulling handles on both sides, suitable locking arrangement, electrodes, grease and finally placing the same in position in between 2 (two) nos. 50 mm x 50 mm x 6 mm S.S. tee rail made by welding 2 nos. 50 mm x 6 mm S.S. flat bar fitted and fixed at top and bottom with R.C.C. lintel/ roof slab, floors and side wall with required nos. 150 mm to 225 mm long 38 mm x 6 mm S.S. flat bar clamps one end welded with the gate member and the other end bifurcated and embedded in C.C. at the respective point including cutting holes and mending good the damages by pouring concrete (1:2:4) into the holes and finishing, both end carriage, including polishing, greasing, electrodes, curing etc. complete as per drawing and design and accepted by the Engineer-in-charge. (For S.S. Grade A201)		38722	<b>38722.00</b>	Annexure-A	
19	<b>Safety Net &amp; Scaffolding</b>					
	Safety net with G.I Wire: Supply, fabrication, installation and taking out temporary horizontal safety net around construction work place where public safety is likely to be endangered due to construction activities; which shall be made of Chain link net with 24 BWG wire fitted at 15'-0" height horizontally of the outer periphery of the building with 75 mm x 40 mm x 5 mm MS Chanel post and purlin, 20 mm MS Rod and 40 mm x 40 mm x 6 mm MS Angle as ties etc. by standard anchoring and welding, nut-bolts etc. all complete and accepted by the Engineer-in-charge. (Salvage materials shall be the contractors property after completion of work.)	sqm	183.8	1554.00	285625.20	10.3
	Scaffolding for outside netting of building: Supplying, fitting & fixing scaffolding for outside netting of building with single layer 38 mm dia MS pipe connected each other with minimum 4'-0" centre to centre both direction with 38 mm dia swivel clamp, including fitting and fixing in position providing necessary anchors, wires, ties etc. all complete and accepted by the Engineer-in-charge. (Rate is excluding the cost of netting)	sqm	183.8	348.00	63962.40	10.32
	<b>Total</b>				<b>349587.60</b>	
20	<b>Additional Cost</b>					
	Electricity	sqm	300	2490.00	747000.00	additional cost chart 7
	Environment Monitoring Cost				4894000.00	
	Components and equipments				7225040.00	
	<b>Total</b>				<b>12866040.00</b>	
21	<b>Test</b>					
	Compressive Strength	no	12	2200.00	26400.00	
	Setting time	no	12	4300.00	51600.00	
	Fineness	no	12	3100.00	37200.00	
	Density	no	12	4300.00	51600.00	
	Tension test including wt and elongation (up to 25 mm)	no	12	2500.00	30000.00	
	Bend Test (up to 25 mm)	no	12	1200.00	14400.00	
	Tension test including wt and elongation (above 25mm & up to 32mm)	no	6	3700.00	22200.00	

Bend Test (above 25mm)	no	6	1300.00	7800.00	
Crushing Strength	no	15	4800.00	72000.00	
Efflorescence	no	15	400.00	6000.00	
Absorption	no	15	2400.00	36000.00	
Fire Extinguisher	no	6	4200.00	25200.00	
<b>Total</b>				<b>380400.00</b>	

Grand TOTAL 40,944,539

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## Summary:

Abstract	Column1	Column2
Materials and Component	Cost (in BDT)	% of Total Cost
Soil Investigation	184057	0.45
Earthwork Excavation	231424.4	0.57
Brick Flat Soling	186939.48	0.46
RCC Works	719911.23	1.76
Concrete Reinforcement	14148263.8	34.56
Structural Steel	7031503.26	17.17
Brick Work	1007141.85	2.46
Door Window Glasswork	956323	2.34
Plastering	367279.8	0.9
Painting	347151.12	0.85
Formwork(Steel)	272063.76	0.66
Roof Finish	2189.76	0.01
Sanitary and water supply works	271857	0.66
Tiles work	127380	0.31
False ceiling	24793	0.06
Fence	751216.8	1.83
Gate	38722	0.09
Safety Net and Scafolding	349587.6	0.85
Testing cost	380400	0.93
Additional cost	12866040	31.42
General, Site facility & Engineering Cost	679643.29	1.66
<b>Grand total cost</b>	<b>4,09,44,539</b>	
<b>Cost per Sft</b>	<b>12,711</b>	