BILL OF QUANTITY

Bangladesh University of Engineering and Technology

CE 404: Capstone Project

Project Topic

Reconstruction of Green-Road Staff Quarter

Submitted To:

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Group 02, Section B1

BILL OF QUANTITY ANALYSIS							
Item no	**Description of the Item**	**Unit**	**Quantity**	**Unit Rate (TK)**	**Total Amount (TK)**	**Grand Total(TK)**	**Reference**
1	**Earthwork Excavation**						
	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.						2.1
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	837.74	19	15,917		2.1.1
1.2	Earthwork in excavation in foundation trenches up to 1.5 m depth and maximum 10 m lead	cum	1256.61	168	211,111		2.1.2
1.3	Earthwork in excavation in foundation trenches from 1.5 m depth to 4.167 m and maximum 10 m lead	cum	2234.25	160.02	357,525		2.1.3
1.4	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	52.92	3257	172,360	826,731	2.10.4
1.5	Added rate for each 1 m additional lead beyond 10 m. [we have 15 m lead]	cum	3490.87	20	69,817		2.1.4
2	**Mat Foundation**						
2.1	Mat foundation conrete (Individual & combined footing, pile cap,raft/mat, floor slab and foundation beam up to plinth level)	cum	1293.44	10292	13,312,130		07.1.1
2.2	Mat foundation CC Layer ((1:2:4) with brick chips and local sand of F.M. 1.2.)	cum	94.64	10504	994,122	23,308,586	03.5.1
2.3	Mat foundation reinforcement (Grade 400/ 420 (400MPa/ 400N/mm2 ≈ 60900 psi/ 60 Grade), BDS-6935-2006,	kg	70380.29	121	8,516,015		2.8.9
2.4	Mat formwork	sqm	828.48	587	486,319		07.12.2
3	**Column**						
3.1	Concrete:						

Item no	Description of the Item	Unit	Quantity	Unit Rate (TK)	Total Amount (TK)	Grand Total(TK)	Reference
	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 MPa, satisfying a specified compressive strength f'c = 25 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)						7.3
	Basement Concrete	cum	49.70	14964	743,711	10,772,475	7.3.2
	GF Concrete	cum	49.70	14964	743,711		7.3.2
	1st Floor Concrete	cum	49.70	15057	748,333		7.11.1
	2nd Floor Concrete	cum	49.70	15150	752,955		7.11.1
	3rd Floor Concrete	cum	49.70	15243	757,577		7.11.1
	4th Floor Concrete	cum	49.70	15336	762,199		7.11.1
	5th Floor Concrete	cum	49.70	15429	766,821		7.11.1
	6th Floor Concrete	cum	49.70	15522	771,443		7.11.1
	7th Floor Concrete	cum	49.70	15615	776,066		7.11.1
	8th Floor Concrete	cum	49.70	15708	780,688		7.11.1
	9th Floor Concrete	cum	49.70	15801	785,310		7.11.1
	10th Floor Concrete	cum	49.70	15894	789,932		7.11.1
	11th Floor Concrete	cum	49.70	15987	794,554		7.11.1
	12th Floor Concrete	cum	49.70	16080	799,176		7.11.1
3.2	Reinforcement:						
	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, fy (ReH)= 400 MPa but fy 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 fu to yield strength fy, 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						8.1.2
	Basement Steel	kg	10040.09	121	1,214,851	9,531,635	8.1.2
	GF Steel	kg	10040.09	121	1,214,851		8.1.2
	1st Floor Steel	kg	10040.09	121.67	1,221,578		8.2
	2nd Floor Steel	kg	10040.09	122.34	1,228,305		8.2
	3rd Floor Steel	kg	3569.37	123.01	439,068		8.2
	4th Floor Steel	kg	3569.37	123.68	441,460		8.2
	5th Floor Steel	kg	3569.37	124.35	443,851		8.2
	6th Floor Steel	kg	3569.37	125.02	446,243		8.2
	7th Floor Steel	kg	3569.37	125.69	448,634		8.2

Item no	Description of the Item	Unit	Quantity	Unit Rate (TK)	Total Amount (TK)	Grand Total(TK)	Reference
	8th Floor Steel	kg	3569.37	126.36	451,026		8.2
	9th Floor Steel	kg	3569.37	127.03	453,417		8.2
	10th Floor Steel	kg	3569.37	127.7	455,809		8.2
	11th Floor Steel	kg	3569.37	128.37	458,200		8.2
	12th Floor Steel	kg	4760.87	129.04	614,342		8.2
3.3	Formwork:						
	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						7.12
	Basement	sqm	238.44	522	124,467	2,077,318	7.12.4
	GF	sqm	238.44	522	124,467		7.12.4
	1st Floor	sqm	238.44	540	128,759		7.16
	2nd Floor	sqm	238.44	558	133,051		7.16
	3rd Floor	sqm	238.44	576	137,343		7.16
	4th Floor	sqm	238.44	594	141,635		7.16
	5th Floor	sqm	238.44	612	145,927		7.16
	6th Floor	sqm	238.44	630	150,219		7.16
	7th Floor	sqm	238.44	648	154,511		7.16
	8th Floor	sqm	238.44	666	158,803		7.16
	9th Floor	sqm	238.44	684	163,095		7.16
	10th Floor	sqm	238.44	702	167,387		7.16
	11th Floor	sqm	238.44	720	171,679		7.16
	12th Floor	sqm	238.44	738	175,971		7.16
4	**Beam**						
4.1	Concrete:						
	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 MPa, satisfying a specified compressive strength f'c = 25 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)						
	Base	cum	69.70	14748	1,027,936		7.2.3
	GF	cum	69.70	14748	1,027,936		7.2.3
	1F	cum	69.70	14841	1,034,418		7.11.1
	2F	cum	69.70	14934	1,040,900		7.11.1
	3F	cum	69.70	15027	1,047,382		7.11.1

Item no	Description of the Item	Unit	Quantity	Unit Rate (TK)	Total Amount (TK)	Grand Total(TK)	Reference
	4F	cum	69.70	15120	1,053,864	14,896,702	7.11.1
	5F	cum	69.70	15213	1,060,346		7.11.1
	6F	cum	69.70	15306	1,066,828		7.11.1
	7F	cum	69.70	15399	1,073,310		7.11.1
	8F	cum	69.70	15492	1,079,792		7.11.1
	9F	cum	69.70	15585	1,086,275		7.11.1
	10F	cum	69.70	15678	1,092,757		7.11.1
	11F	cum	69.70	15771	1,099,239		7.11.1
	12F	cum	69.70	15864	1,105,721		7.11.1
4.2	Reinforcement:						
	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, fy (ReH)= 400 MPa but fy 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 fu to yield strength fy, 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						
	Basement Steel	kg	2295.90	121	277,804	4,009,238	8.12
	GF Steel	kg	2295.90	121	277,804		8.12
	1st Floor Steel	kg	2295.90	121.67	279,342		8.2
	2nd Floor Steel	kg	2295.90	122.34	280,880		8.2
	3rd Floor Steel	kg	2295.90	123.01	282,419		8.2
	4th Floor Steel	kg	2295.90	123.68	283,957		8.2
	5th Floor Steel	kg	2295.90	124.35	285,495		8.2
	6th Floor Steel	kg	2295.90	125.02	287,033		8.2
	7th Floor Steel	kg	2295.90	125.69	288,572		8.2
	8th Floor Steel	kg	2295.90	126.36	290,110		8.2
	9th Floor Steel	kg	2295.90	127.03	291,648		8.2
	10th Floor Steel	kg	2295.90	127.7	293,186		8.2
	11th Floor Steel	kg	2295.90	128.37	294,725		8.2
	12th Floor Steel	kg	2295.90	129.04	296,263		8.2
4.3	Formwork:						
	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 :						
	Base	sqm	594.50	508	302,006	5,062,762	07.18.5
	GF	sqm	594.50	508	302,006		07.18.5
	1F	sqm	594.50	526	312,707		17.16
	2F	sqm	594.50	544	323,408		17.16
	3F	sqm	594.50	562	334,109		17.16
	4F	sqm	594.50	580	344,810		17.16
	5F	sqm	594.50	598	355,511		17.16
	6F	sqm	594.50	616	366,212		17.16
	7F	sqm	594.50	634	376,913		17.16
	8F	sqm	594.50	652	387,614		17.16
	9F	sqm	594.50	670	398,315		17.16
	10F	sqm	594.50	688	409,016		17.16
	11F	sqm	594.50	706	419,717		17.16
	12F	sqm	594.50	724	430,418		17.16

Item no	Description of the Item	Unit	Quantity	Unit Rate (TK)	Total Amount (TK)	Grand Total(TK)	Reference
5	**Slab**						
5.1	Slab reinforcement((Grade 400/ 420 (400MPa/ 400N/mm2 ≈ 60900 psi/ 60 Grade), BDS-6935-2006, B400: and ratio fy to fu ≥ 1.25))	kg	193607.00	121	23,426,447	57,346,724	289
5.2	Slab concrete (Floor / roof slab, T-beam, L-beam and rectangular beam, tie beam, lintel, stair case slab and step etc. up to ground floor)	cum	2719.30	10435	28,375,938		07.1.3
5.3	Slab formwork	sqm	9287.00	597	5,544,339		07.12.7
6	**Floor Tiles**						
	GP (homogeneous) 600 mm x 1200 mm floor tiles	sqm	11500.00	3067	35,270,500	35,270,500	06.1.5
7	**Sunshade**						
7.1	Concrete						
	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 MPa, satisfying a specified compressive strength f`c = 25 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)						7.3
	GF	cum	1.30	15323	19,861	888,975	7.3.4
	1F	cum	4.55	15416	70,100		7.11.1
	2F	cum	4.55	15509	70,523		7.11.1
	3F	cum	4.55	15602	70,946		7.11.1
	4F	cum	4.55	15695	71,369		7.11.1
	5F	cum	4.55	15788	71,792		7.11.1
	6F	cum	4.55	15881	72,215		7.11.1
	7F	cum	4.55	15974	72,638		7.11.1
	8F	cum	4.55	16067	73,061		7.11.1
	9F	cum	4.55	16160	73,483		7.11.1
	10F	cum	4.55	16253	73,906		7.11.1
	11F	cum	4.55	16346	74,329		7.11.1
	12F	cum	4.55	16439	74,752		7.11.1
7.2	Reinforcement						

Item no	Description of the Item	Unit	Quantity	Unit Rate (TK)	Total Amount (TK)	Grand Total(TK)	Reference
	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, fy (ReH)= 400 MPa but fy 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 fu to yield strength fy, 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						
	Basement Steel	kg	415.80	121	50,312		8.12
	GF Steel	kg	415.80	121	50,312		8.12
	1st Floor Steel	kg	415.80	121.67	50,590		8.2
	2nd Floor Steel	kg	415.80	122.34	50,869		8.2
	3rd Floor Steel	kg	415.80	123.01	51,148		8.2
	4th Floor Steel	kg	415.80	123.68	51,426		8.2
	5th Floor Steel	kg	415.80	124.35	51,705	726,095	8.2
	6th Floor Steel	kg	415.80	125.02	51,983		8.2
	7th Floor Steel	kg	415.80	125.69	52,262		8.2
	8th Floor Steel	kg	415.80	126.36	52,540		8.2
	9th Floor Steel	kg	415.80	127.03	52,819		8.2
	10th Floor Steel	kg	415.80	127.7	53,098		8.2
	11th Floor Steel	kg	415.80	128.37	53,376		8.2
	12th Floor Steel	kg	415.80	129.04	53,655		8.2
7.3	Formwork						
	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 :						
	Sunshade, false ceiling: ground floor	sqm	137.03	541	74,132		7..12.9
	1F	sqm	137.03	559	76,599		7.16
	2F	sqm	137.03	577	79,065		7.16
	3F	sqm	137.03	595	81,532		7.16
	4F	sqm	137.03	613	83,998		7.16
	5F	sqm	137.03	631	86,465		7.16
	6F	sqm	137.03	649	88,931	1,156,105	7.16
	7F	sqm	137.03	667	91,398		7.16
	8F	sqm	137.03	685	93,864		7.16
	9F	sqm	137.03	703	96,331		7.16
	10F	sqm	137.03	721	98,797		7.16
	11F	sqm	137.03	739	101,264		7.16
	12F	sqm	137.03	757	103,730		7.16
8	**Shear Wall**						
8.1	Concrete						

Item no	Description of the Item	Unit	Quantity	Unit Rate (TK)	Total Amount (TK)	Grand Total(TK)	Reference
	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 MPa, satisfying a specified compressive strength f'c = 25 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)						
	Base	cum	11.43	14964	171,086	2,478,146	7.3.2
	GF	cum	11.43	14964	171,086		7.3.2
	1F	cum	11.43	15057	172,150		7.11.1
	2F	cum	11.43	15150	173,213		7.11.1
	3F	cum	11.43	15243	174,276		7.11.1
	4F	cum	11.43	15336	175,340		7.11.1
	5F	cum	11.43	15429	176,403		7.11.1
	6F	cum	11.43	15522	177,466		7.11.1
	7F	cum	11.43	15615	178,529		7.11.1
	8F	cum	11.43	15708	179,593		7.11.1
	9F	cum	11.43	15801	180,656		7.11.1
	10F	cum	11.43	15894	181,719		7.11.1
	11F	cum	11.43	15987	182,783		7.11.1
	12F	cum	11.43	16080	183,846		7.11.1
8.2	Reinforcement						
	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, fy (ReH)= 400 MPa but fy 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 fu to yield strength fy, 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						
	Basement Steel	kg	1826.50	121	221,006	3,189,540	8.12
	GF Steel	kg	1826.50	121	221,006		8.12
	1st Floor Steel	kg	1826.50	121.67	222,230		8.2
	2nd Floor Steel	kg	1826.50	122.34	223,454		8.2
	3rd Floor Steel	kg	1826.50	123.01	224,677		8.2
	4th Floor Steel	kg	1826.50	123.68	225,901		8.2
	5th Floor Steel	kg	1826.50	124.35	227,125		8.2
	6th Floor Steel	kg	1826.50	125.02	228,349		8.2
	7th Floor Steel	kg	1826.50	125.69	229,572		8.2

Item no	Description of the Item	Unit	Quantity	Unit Rate (TK)	Total Amount (TK)	Grand Total(TK)	Reference
	8th Floor Steel	kg	1826.50	126.36	230,796		8.2
	9th Floor Steel	kg	1826.50	127.03	232,020		8.2
	10th Floor Steel	kg	1826.50	127.7	233,244		8.2
	11th Floor Steel	kg	1826.50	128.37	234,468		8.2
	12th Floor Steel	kg	1826.50	129.04	235,691		8.2
8.3	Formwork						
	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 :						
	Base	sqm	200.66	508	101,937	1,708,855	07.18.5
	GF	sqm	200.66	508	101,937		07.18.5
	1F	sqm	200.66	526	105,549		17.16
	2F	sqm	200.66	544	109,161		17.16
	3F	sqm	200.66	562	112,773		17.16
	4F	sqm	200.66	580	116,385		17.16
	5F	sqm	200.66	598	119,997		17.16
	6F	sqm	200.66	616	123,609		17.16
	7F	sqm	200.66	634	127,221		17.16
	8F	sqm	200.66	652	130,833		17.16
	9F	sqm	200.66	670	134,445		17.16
	10F	sqm	200.66	688	138,057		17.16
	11F	sqm	200.66	706	141,669		17.16
	12F	sqm	200.66	724	145,281		17.16
9	**Stair**						
9.1	Concrete						
	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 MPa, satisfying a specified compressive strength f'c = 25 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)						7.3
	Basement Concrete	cum	14.44	14748	213,026	3,087,148	7.3.3
	GF Concrete	cum	14.44	14748	213,026		7.3.3
	1st Floor Concrete	cum	14.44	14841	214,370		7.11.1
	2nd Floor Concrete	cum	14.44	14934	215,713		7.11.1
	3rd Floor Concrete	cum	14.44	15027	217,056		7.11.1
	4th Floor Concrete	cum	14.44	15120	218,400		7.11.1
	5th Floor Concrete	cum	14.44	15213	219,743		7.11.1
	6th Floor Concrete	cum	14.44	15306	221,086		7.11.1

Item no	Description of the Item	Unit	Quantity	Unit Rate (TK)	Total Amount (TK)	Grand Total(TK)	Reference
	7th Floor Concrete	cum	14.44	15399	222,430		7.11.1
	8th Floor Concrete	cum	14.44	15492	223,773		7.11.1
	9th Floor Concrete	cum	14.44	15585	225,116		7.11.1
	10th Floor Concrete	cum	14.44	15678	226,460		7.11.1
	11th Floor Concrete	cum	14.44	15771	227,803		7.11.1
	12th Floor Concrete	cum	14.44	15864	229,146		7.11.1
9.2	Reinforcement						
	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, fy (ReH)= 400 MPa but fy 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 fu to yield strength fy, 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						8.1.2
	Basement Steel	kg	524.27	121	63,436	915,504	8.1.2
	GF Steel	kg	524.27	121	63,436		8.1.2
	1st Floor Steel	kg	524.27	121.67	63,787		8.2
	2nd Floor Steel	kg	524.27	122.34	64,139		8.2
	3rd Floor Steel	kg	524.27	123.01	64,490		8.2
	4th Floor Steel	kg	524.27	123.68	64,841		8.2
	5th Floor Steel	kg	524.27	124.35	65,192		8.2
	6th Floor Steel	kg	524.27	125.02	65,544		8.2
	7th Floor Steel	kg	524.27	125.69	65,895		8.2
	8th Floor Steel	kg	524.27	126.36	66,246		8.2
	9th Floor Steel	kg	524.27	127.03	66,597		8.2
	10th Floor Steel	kg	524.27	127.7	66,949		8.2
	11th Floor Steel	kg	524.27	128.37	67,300		8.2
	12th Floor Steel	kg	524.27	129.04	67,651		8.2
9.3	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.						7.12
	Stair case slab and steps up to ground floor	sqm	297.59	551	163,972	163,972	7.12.10
10	**BRICKWORK**						
	Brick works of width one brick or one and a half brick length of first class bricks with cement sand (F.M. 1.2) mortar (1:6) in superstructure including raking out joints, filling the interstices with mortar, cleaning and soaking the bricks at least for 24 hours before use and washing of sand, necessary scaffolding, curing at least for 7 days etc. all complete (measurement to given as 250 mm width for one brick length and 375 mm for one brick and a half brick length) and accepted by the Engineer-in-charge. (Cement: CEM-II/B-M) In ground floor	cum	1234.84	9785	12,082,904	12,082,904	4.2
11	**LINTEL**						

Item no	Description of the Item	Unit	Quantity	Unit Rate (TK)	Total Amount (TK)	Grand Total(TK)	Reference
	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 MPa, satisfying a specified compressive strength f`c = 25 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						7.3
	Floor/ roof slab, T-beam, L-beam and rectangular beam, tie beam, lintel, stair case slab and steps etc.	cum	37.80	14758	557,522	1,516,767	7.3.3
	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, fy (ReH)= 400 MPa but fy 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 fu to yield strength fy,	kg	7928.00	121	959,245		8.1.2
12	**TIMBER (DOOR FRAME)**						
	Supplying and making door and window frames (Chowkat) for all floors including wall side grove cutting, moulding by CNC machine or any other means with matured seasoned wood of required size including painting two coats of coal tar to the surface in contact with wall,					4,417,932	11.1
	Frame made from seasoned Mehgoni wood (Chemically treated)						11.1.1
	Up to Size 0'-2.5" x 0'-6" (finished)	cum	32.60	135509	4,417,932		11.1.1.1
13	**TIMBER (DOOR SHUTTER)**						
	Supplying, fitting and fixing of 38 mm thick well matured seasoned (moisture content should be between 12% to 16%) solid wood single leaf door shutter having stile section 100m x 38mm, top rail section 125mm x 38mm, lock rail section 100mm x 38mm and bottom rail section 225mm x 38mm (made from minimum 250mm wide plank) with 4nos 100mm long, 3mm thick hinge, 12mm dia 250mm long tower bolt, 12mm dia 200mm long socket bolt, 2nos 150mm long handle, hinged cleats and buffer blocks. All complete in all floors and accepted by the Engineer-in-charge. (All sizes of wood are finished)					1,137,054	12.1
	Kathal (SS Fittings)	sqm	125.75	9042	1,137,054		12.1.1.1
14	**ESTIMATION OF GLASSWORK**	sqm					

Item no	Description of the Item	Unit	Quantity	Unit Rate (TK)	Total Amount (TK)	Grand Total(TK)	Reference
	Supplying, fitting and fixing in Aluminium door frames, windows, partitions and curtain wall distortion free glass of approved quality and shade including cost of fitting fixing all necessary accessories etc. complete in all respect as per drawing and accepted by the Engineer-in-charge.					2,081,751	14.16
	5 mm thick tinted tempered glass	sqm	869.57	2394	2,081,751		14.16.1.1.2
15	**ESTIMATION OF ALUMINIUM WINDOW FRAME**						
	Supplying, fitting and fixing of aluminium sliding window as per the U.S. Architectural Aluminium Manufacturer's Association (AAMA) standard specification and BDS 1879:2014 having minimum 1.2 mm thick outer bottom (size 75.50 mm, 32 mm, 0.605 kg/m), minimum 1.2 mm thick outer top (size 75.50 mm, 28.50 mm, 0.705 kg/m), minimum 1.2 mm thick shutter top (size 33 mm, 26.80 mm, 0.42 kg/m), minimum 1.2 mm thick shutter bottom (size 60mm, 24.40 mm,0.589 kg/m), minimum 1.2 mm thick outer side (size 75.50 mm, 19.90 mm, 0.52 kg/m), minimum 1.2 mm thick shutter lock (size 49.20 mm, 25.80 mm, 0.543 kg/m) and minimum 1.2 mm thick inter lock (size 34.40 mm, 32.13 mm, 0.562 kg/m) sections 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					268,002	14.7
	Size up to: 1500 mm x 1400 mm.						14.7.1
	Powder coated to any colour	sqm	32.16	6523	209,780		14.7.2.2
	Supplying, fitting and fixing window grills made of 16 mm dia M.S. rod @ 100 mm c/c fitted with 3 (three) nos. horizontal M.S. flat bar (38 mm x 6 mm) including fabrication, welding, riveting, cost of electricity, workshop charges, carriage, fixing with clamps in wall/RCC member for all floors, finished with anti-corrosive painting (Red-Oxide) etc. complete and accepted by the Engineer-in-	sqm	20.23	2878	58,222		13.1
16	**RETAINING WALL**						

Item no	Description of the Item	Unit	Quantity	Unit Rate (TK)	Total Amount (TK)	Grand Total(TK)	Reference
	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 MPa, satisfying a specified compressive strength f'c = 25 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)					9,698,567	7.3
	Individual & combined footing, pile cap, raft/mat, floor slab and foundation beam up to plinth level	cum	423.00	14605	1,922,018		7.3.1
	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, fy (ReH)= 400 MPa but fy 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 fu to yield strength fy, 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	64269.00	121	7,776,549		8.1.2
17	**Skirting**						
	GP (homogeneous) 400 mm x 400 mm floor tiles	sqm	1727.87	1486	2,567,615	2,567,615	06.1.2
18	**Plastering**						
	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						15.1.1
	Basement	sqm	321.30	315	101,210		
	Ground Floor	sqm	1511.00	315	475,965		
	1st Floor	sqm	2364.82	330	780,391		15.16
	2nd Floor	sqm	2364.82	345	815,863		15.16
	3rd Floor	sqm	2364.82	360	851,335	12,283,034	15.16
	4th Floor	sqm	2364.82	375	886,808		15.16
	5th Floor	sqm	2364.82	390	922,280		15.16
	6th Floor	sqm	2364.82	405	957,752		15.16
	7th Floor	sqm	2364.82	420	993,224		15.16
	8th Floor	sqm	2364.82	435	1,028,697		15.16
	9th Floor	sqm	2364.82	450	1,064,169		15.16
	10th Floor	sqm	2364.82	465	1,099,641		15.16
	11th Floor	sqm	2364.82	480	1,135,114		15.16

Item no	Description of the Item	Unit	Quantity	Unit Rate (TK)	Total Amount (TK)	Grand Total(TK)	Reference
	12th Floor	sqm	2364.82	495	1,170,586		15.16
19	**Painting**						
19.1	Exterior standard acrylic emulsion paint of approved best quality and color having water resisting properties and resistance properties against fungi, fading & flaking delivered 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	9063.00	274	2,483,262	7,939,188	16.1.1
19.2	Interior standard acrylic emulsion paint (plastic or matt finish) 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 and accepted by the Engineer-in-charge	sqm	21147.00	258	5,455,926		16.2.1
20	**Under Ground Water Reservoir for Firefighting**					506,977	
	Mass concrete in floor (1:2:4) with brick chips and local sand of F.M. 1.2.	cum	1.26	10458	13,177		03.5.2
	Floor/ roof slab, T-beam, L-beam and rectangular beam, tie beam, lintel, stair case slab and steps etc. up to ground floor	cum	25.52	14748	376,353		07.3.3
	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, fy (ReH)= 400 MPa but fy 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 fu to yield strength fy, 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	945.38	121	114,391		08.1.2
	FORM WORK (Steel):Floor and roof slab up to ground floor	sqm	11.15	597		506,977	07.12.7

Item no	Description of the Item	Unit	Quantity	Unit Rate (TK)	Total Amount (TK)	Grand Total(TK)	Reference
	Supply and application of 19mm thick (9.5 mm X 2 layer) water proof, damp proof, dry and breathable plaster on roof slab/ underground water reservoir/ overhead water reservoir/ basement/ retaining wall with water proof, damp proof, dry and breathable Izonil cement (STN-EN -1015-11, compressive strength 34 MPa, max depth of water penetration into hardened plaster is < 1 mm) or equivalent compound in a proportion of 1:2.4 (Izonil cement or equivalent compound 1: sand 2.4) after cement grouting on existing concrete surface including finishing the corner and edges, washing sand, cleaning the surface scaffolding and curing at least 3 days etc. all completed in all respects as per direction of Engineering-in-charge. Above mentioned plaster includes glass fiber mesh of 10 mm X 10 mm grid and weight 110 gm/sqm placed in between two layers.	cum	2.46	1240	3,056		17.3
21	**Overhead Water Tank**						
	Mass concrete in floor (1:2:4) with brick chips and local sand of F.M. 1.2.	cum	1.91	10458	19,975		03.5.2
	Floor/ roof slab, T-beam, L-beam and rectangular beam, tie beam, lintel, stair case slab and steps etc. up to ground floor	cum	28.35	14748	418,106		07.3.3
	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, fy (ReH)= 400 MPa but fy 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 fu to yield strength fy, 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	1247.67	121	150,968		08.1.2
	FORM WORK (Steel):Floor and roof slab up to ground floor	sqm	16.72	597	9,982		07.12.7
	Supply and application of 19mm thick (9.5 mm X 2 layer) water proof, damp proof, dry and breathable plaster on roof slab/ underground water reservoir/ overhead water reservoir/ basement/ retaining wall with water proof, damp proof, dry and breathable Izonil cement (STN-EN -1015-11, compressive strength 34 MPa, max depth of water penetration into hardened plaster is < 1 mm) or equivalent compound in a proportion of 1:2.4 (Izonil cement or equivalent compound 1: sand 2.4) after cement grouting on existing concrete surface including finishing the corner and edges, washing sand, cleaning the surface scaffolding and curing at least 3 days etc. all completed in all respects as per direction of Engineering-in-charge. Above mentioned plaster includes glass fiber mesh of 10 mm X 10 mm grid and weight 110 gm/sqm placed in between two layers.	cum	3.15	1240	3,906		17.3
	Total Cost of 2 OHWT(Tk)					1,205,874	
22	**Under Ground Water Reservoir for Daily Consumption**						

Item no	Description of the Item	Unit	Quantity	Unit Rate (TK)	Total Amount (TK)	Grand Total(TK)	Reference
	Mass concrete in floor (1:2:4) with brick chips and local sand of F.M. 1.2.		3.50	10458	36,603		03.5.2
	Floor/ roof slab, T-beam, L-beam and rectangular beam, tie beam, lintel, stair case slab and steps etc. up to ground floor	cum	35.85	14748	528,716		07.3.3
	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, fy (ReH)= 400 MPa but fy 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 fu to yield strength fy, 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	1934.94	121	234,127		08.1.2
	FORM WORK (Steel):Floor and roof slab up to ground floor	sqm	30.65	597	18,298		07.12.7
	Supply and application of 19mm thick (9.5 mm X 2 layer) water proof, damp proof, dry and breathable plaster on roof slab/ underground water reservoir/ overhead water reservoir/ basement/ retaining wall with water proof, damp proof, dry and breathable Izonil cement (STN-EN -1015-11, compressive strength 34 MPa, max depth of water penetration into hardened plaster is < 1 mm) or equivalent compound in a proportion of 1:2.4 (Izonil cement or equivalent compound 1: sand 2.4) after cement grouting on existing concrete surface including finishing the corner and edges, washing sand, cleaning the surface scaffolding and curing at least 3 days etc. all completed in all respects as per direction of Engineering-in-charge. Above mentioned plaster includes glass fiber mesh of 10 mm X 10 mm grid and weight 110 gm/sqm placed in between two layers.	cum	4.81	1240	5,964		17.3
	Total cost of 2 UGWR for daily use(Tk)					1,647,417	
23	**Septic Tank**						
	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	39.59	19	752		02.1.1
	Earthwork in excavation in foundation trenches up to 1.5 m depth and maximum 10 m lead	cum	51.90	168	8,719		02.1.2
	Mass concrete in floor (1:2:4) with brick chips and local sand of F.M. 1.2.	cum	3.99	10458	41,751		03.5.2
	Floor/ roof slab, T-beam, L-beam and rectangular beam, tie beam, lintel, stair case slab and steps etc. up to ground floor	cum	16.63	14748	245,324		07.3.3

Item no	Description of the Item	Unit	Quantity	Unit Rate (TK)	Total Amount (TK)	Grand Total(TK)	Reference
	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, fy (ReH)= 400 MPa but fy 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 fu to yield strength fy, 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	1132.04	121	136,977		08.1.2
	FORM WORK (Steel):Floor and roof slab up to ground floor	sqm	35.30	597	21,074		07.12.7
	Brick works with first class bricks with cement sand (F.M. 1.2) mortar (1:4) in exterior walls including filling the interstices with mortar, raking out joints, cleaning and socking the bricks at least for 24 hours before use and washing of sand, necessary scaffolding, curing at least for 7 days etc. all complete including cost of water, electricity and other charges (measurement to given as 250 mm width for one brick length and 375 mm for one brick and a half brick length) accepted by the Engineer-in-charge. (Cement: CEM-II/B-M) In ground floor	cum	13.78	10097	139,137		4.3
	Supply and application of 19mm thick (9.5 mm X 2 layer) water proof, damp proof, dry and breathable plaster on roof slab/ underground water reservoir/ overhead water reservoir/ basement/ retaining wall with water proof, damp proof, dry and breathable Izonil cement (STN-EN -1015-11, compressive strength 34 MPa, max depth of water penetration into hardened plaster is < 1 mm) or equivalent compound in a proportion of 1:2.4 (Izonil cement or equivalent compound 1: sand 2.4) after cement grouting on existing concrete surface including finishing the corner and edges, washing sand, cleaning the surface scaffolding and curing at least 3 days etc. all completed in all respects as per direction of Engineering-in-charge. Above mentioned plaster includes glass fiber mesh of 10 mm X 10 mm grid and weight 110 gm/sqm placed in between two layers.	cum	2.99	1240	3,702		17.3
	Total cost of 2 septic tank(Tk)					1,194,876	
24	**Plumbing**						
24.1	**Sanitary Fixtures and Ancillaries:**						

Item no	Description of the Item	Unit	Quantity	Unit Rate (TK)	Total Amount (TK)	Grand Total(TK)	Reference
	Supplying, fitting and fixing of European type country made best quality glazed porcelain combi closet (two piece), including plastic seat cover with soft closing, cistern system, water consumption 6 litre, siphon wash down/siphon jet single or dual flushing system which reduce water consumption, hygienic glaze in toilet bowl, glaze in inner waste line, round bowl, outlet range 280~305 mm. The sanitary ware shall conform BDS1162:2014. The glaze shall be thoroughly fused to body. The minimum thickness of body at any section shall be 5 mm. When assembled together and when examined from a distance of 60 cm, the outer surface shall not show to the unaided eye, blemishes or defects in excess of those listed in BDS standard. The mean value of water absorption shall not be greater than 0.5% of the ware when dry. When tested with chemical solutions (Acetic acid, Citric acid, Detergent, Hydrochloric acid, Sodium hydroxide, Sodium stearate and Sulfuric acid of various strength) as per BDS1162:2014 procedure, none of the test pieces should suffer any loss of reflectivity on the glaze. There shall be no crazing and no stain on the ware. The materials used for making glaze shall not contain lead compound. In case of certain coloring oxides used for making colored glaze, the lead content, if any, shall not						26.01
	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	NO.	4.00	8963	35,852		26.01.1
	Supplying of country made glazed vitreous W/H wash basin of any color including pedestal. The sanitary ware shall conform BDS1162:2014. The glaze shall be thoroughly fused to body. The minimum thickness of body at any section shall be 5 mm. When assembled together and when examined from a distance of 60 cm, the outer surface shall not show to the unaided eye, blemishes or defects in excess of those listed in BDS standard. The mean value of water absorption shall not be greater than 0.5% of the ware when dry. When tested with chemical solutions (Acetic acid, Citric acid, Detergent, Hydrochloric acid, Sodium hydroxide, Sodium stearate and Sulfuric acid of various strength) as per BDS1162:2014 procedure, none of the test pieces should suffer any loss of reflectivity on the glaze. There shall be no crazing and no stain on the ware. The materials used for making glaze shall not contain lead compound. In case of certain coloring oxides used for making colored glaze, the lead content, if any, shall not exceed 5 percent of the weight of the glaze materials. Appliances shall be clearly and indelibly marked at a prominent place, visible even after the appliances are installed with the following: a) manufacturer's name and/or registered trademark, b) the number of						26.13
	Approx. 436 x 343 mm, minimum weight 14.8 kg	NO.	5.00	3834	19,170		26.13.1
	Supplying, fitting and fixing of best quality single bowl stainless steel sink with heavy type CI steel brackets, 40 mm dia C.P. chain plug, 40 mm dia C.P. waste, 40 mm dia PVC waste pipe with brass coupling (750 mm length) including making hole in walls and floors and mending good						26.17
	Approx. 762 X 457 mm size single bowl with sink tray	NO.	1.00	5299	5,299		26.17.4
	Belgium Mirror, 5 mm thickness	sqm	5.00	1724	8,620		26.19.2

Item no	Description of the Item	Unit	Quantity	Unit Rate (TK)	Total Amount (TK)	Grand Total(TK)	Reference
	Supplying, fitting and fixing of country made best quality towel rail/ ring/ shelf minimum 20 mm in dia with C.P. holder 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.						26.22
	600 mm long C.P. double towel rail	NO.	5.00	1264	6,320		26.22.3
	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.						26.23
	PVC toilet paper holder	NO.	4.00	293	1,172		26.23.1
	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.						26.24
	Stainless steel soap tray	NO.	4.00	628	2,512		26.24.4
	Supplying, fitting and fixing of 100 mm floor drain with vertical outlet in traps 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.	NO.	4.00	1371	5,484		26.28
	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 after it has been operated 100000 times it shall be free from a seat- leakage and shall satisfy the reverse flow preventing performance. The inside and outside surfaces of the faucet shall be smooth and be free from blowholes, fissures, remarkable flows or injurious defects. The chromium plating on the faucet shall be of class 2 grade 1. The final coating should be done with chromium of minimum 0.1 micron.The faucet shall be made leak proof and fixing in position with selected tape etc. all complete approved and accepted by theEngineer- in-charge.						26.29
	Round headed CP Conceal Bib Cock short body (Essco/ coaster/ star/ diamond/ delux/ deco/ orbed/ delin/ triple/ master/ classic headed or similar head)	NO.	10.00	1172	11,720		26.29.1
	Supplying and fitting-fixing Chromium plated (CP) Shower head all complete approved and accepted by the Engineer in- charge.						26.38
	Moving type 200 mm CP shower head	NO.	4.00	2534	10,136		26.38.3
	Supplying and fitting-fixing stainless steel hand / push shower for ablution including holder etc. all complete approved and accepted by the Engineer- in- charge.						26.39
	Moving type push shower	NO.	4.00	1049	4,196		26.39.2

Item no	Description of the Item	Unit	Quantity	Unit Rate (TK)	Total Amount (TK)	Grand Total(TK)	Reference
		Total cost for 1 apartment			110,481		
	Total cost for 1 building				5,303,088		
24.2	**Drainage & Vent Pipe**						
	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.						26.43
	50 mm inside dia wall thickness 2.5 mm - 3.0 mm						26.43.1
	Horizontal pipe soil stack	m	564.00	129.23	72,886		
	Horizontal pipe waste stack	m	564.00	50.59	28,533		
	100 mm inside dia wall thickness 3.4- 4.0 mm						26.43.2
	Vertical pipe soil stack	m	881.00	36.58	32,227		
	Vent pipe soil stack	m	881.00	270.8	238,575		
	Horizontal pipe soil stack	m	881.00	169.16	149,030		
	horizontal pipe waste stack	m	881.00	230.12	202,736		
	150 mm inside dia wall thickness 4.5 mm - 5.2 mm						26.43.3
	Vertical pipe waste stack	m	1599.00	36.58	58,491		
	Vent pipe waste stack	m	1599.00	270.8	433,009		
				total	1,215,487		
	Total cost for 1 building				4,861,948		
24.3	**Water Supply System**						
	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.						26.46
	CPVC pipe						
	Diameter 100 mm	m	49.80	4444	221,311		
	Diameter 80 mm	m	55.47	2,933	162,694		
	Diameter 65 mm	m	210.92	2222	468,664		
				Total	852,669		
	Total Plumbing Cost for 1 Building				3,410,676		
	Total cost of Pipe				8,272,624		
24.4	**Fittings**						
	25% of Total Pipe Cost for 1 Building				2,068,156		

Item no	Description of the Item	Unit	Quantity	Unit Rate (TK)	Total Amount (TK)	Grand Total(TK)	Reference
	TOTAL COST OF PLUMBING					15,643,868	
25	**Miscellaneous**						
25.1	Electrification Cost (10% of total cost)				27,381,146	37,887,246	
25.2	Labour Cost	Per 1500 sqft	48.00	25000	1,200,000		
25.3	Plumbing, electrification labour cost	Per 1500 sqft	48.00	35000	1,680,000		
25.4	Lift	per lift	2.00	4E+06	7,000,000		
25.5	Test				626,100		

TOTAL COST OF ONE BUILDING (BDT) **369,751,051.7**

COST PER SQUARE FEET(BDT): 3225

SUMMARY OF COSTING			
TOTAL COST OF ONE BUILDING		**369,751,051.7**	
Serial	Item	Cost	% of Total Cost
1	Earthwork Excavation	826731	0.23
2	Mat Foundation	23308586	6.59
3	Column	22381428	6.33
4	Beam	23968703	6.77
5	Slab	57346724	16.21
6	Floor Tiles	35270500	9.97
7	Sunshade	2771175	0.78
8	Shear Wall	7376541	2.08
9	Stair	4166624	1.18
10	Brickwork	12082904	3.42
11	Lintel	1516767	0.43
12	Timber (Door Frame)	4417932	1.25
13	Timber (Door Shutter)	1137054	0.32
14	Estimation Of Glasswork	2081751	0.59
15	Estimation Of Aluminium Window Frame	268002	0.08
16	Retaining Wall	9698567	2.74
17	Skirting	2567615	0.73
18	Plastering	12283034	3.47
19	Painting	7939188	2.24
20	Under Ground Water Reservoir for Daily Consumption	1647417	0.47
21	Under Ground Water Reservoir for Firefighting	506977	0.14
22	Overhead Water Tank	1205874	0.34
23	Septic Tank	1194876	0.34
24	Plumbing	15643868	4.42
25	Miscellaneous cost	37887246	10.71