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Project Implementation Unit (PIU)
Urban Resilience Project: RAJUK Part
RAJUK Commercial Complex cum Car
Parking Building (8th - 9th Floor),
Gulshan - 1, Dhaka - 1212

Rajdhani Unnayan Kartripakkha (RAJUK)

Amendment No. 1 to the Bid Document

Package No.: URP/RAJUK/W-1

Package Name: Construction of 10 Storied plus 2 Basements Office Building with Research, Training and Testing Laboratory Facilities for Urban Resilience Unit, RAJUK

The Amendment No. 1 to the Bid document for the above package is as follows:

1. Section II. Bid Data Sheet – Volume-1/4: Main Bid Documents

Clause ITB 7.1 of Page# 26 under A. Introduction will be changed as follows:

- Within the mentioned Clause, “Electronic mail address: pd@urprajuk.com, halalyrajuk@yahoo.com” should be read as “Electronic mail address: pd@urprajuk.com, helalyrajuk@yahoo.com”

All other information within the mentioned page will be remain unchanged.

2. Section IX. Particular Conditions (PC) – Volume-1/4: Main Bid Documents

Sub-Clause 1.1.2.2 & 1.3 of Page# 238 under Part A – Contract Data will be changed as follows:

- Within the mentioned Sub-Clause, “Email: pd@urprajuk.com, halalyrajuk@yahoo.com” should be read as “Email: pd@urprajuk.com, helalyrajuk@yahoo.com”

Sub-Clause 1.3 of Page# 239 under Part A – Contract Data will be changed as follows:

- Within the mentioned Sub-Clause, “Email: halalyrajuk@yahoo.com” should be read as “Email: helalyrajuk@yahoo.com”

All other information within the mentioned pages will be remain unchanged.

3. Section IV. Bidding Forms (BOQ Part) – Volume-2/4: Bill of Quantities

Page# 7 under Part-B: Civil Works will be changed as follows:

- Item No. (10.2) of Page# 8 should be included after Item No. (10.1)

All other information within the mentioned page will be remain unchanged.

Page# 8 under Part-B: Civil Works will be changed as follows:

- Item No. (10.2) should be removed from this page.

- A new Item No. 10(a) should be included after Item No. (10.3) as follows:

Item No.	Description of Items	Unit	Quantity	Rate in BDT (in Figure)	Rate (in Words)	Amount
1	2	3	4	5	6	7
10(a)	400 mm dia Bored Pile: Boring/drilling by wash or percussion method or any other appropriate method for cast in situ pile up to the required depth and diameter with minimum 6 m long temporary steel casing, true to vertical, providing bentonite slurry and maintaining water level in the hole, washing the hole for at least 30 minutes, clean the bore-hole and make the bore-hole ready for placing steel cage and concreting including hire charge of rig set with winch machine, tripod stand, trimie pipe, cost of fuel, lubricant, mobilization, demobilization, maintenance, spares, stand-byes, insurance coverage, water, electricity and other charges all complete approved and accepted by the Engineer. Before commencing boring operation Contractor shall submit the method statement of cast-in-situ pile work including sequence of boring and casting, disposal of spoils, test result of materials to the Engineer for approval. However, Engineer's approval shall not relieve the Contractor of his responsibilities and obligations under contract.	Rm	2,160.00			

- Item No. (11.2) of Page# 9 should be included after Item No. (11.1)

All other information within the mentioned page will be remain unchanged.

Page# 9 under Part-B: Civil Works will be changed as follows:

- Item No. (11.2) should be removed from this page.
➤ A new Item No. (11.4) should be included after Item No. (11.3) as follows:

Item No.	Description of Items	Unit	Quantity	Rate in BDT (in Figure)	Rate (in Words)	Amount
1	2	3	4	5	6	7
	(11.4) 400 mm dia Bored Pile	Cum	271.30			

- A new Item No. (12.4) should be included after Item No. (12.3)

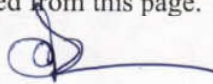
Item No.	Description of Items	Unit	Quantity	Rate in BDT (in Figure)	Rate (in Words)	Amount
1	2	3	4	5	6	7
	(12.4) 400 mm dia Bored Pile	Cum	271.30			

- Item No. (13.3) of Page# 10 should be included after Item No. (13.2)

All other information within the mentioned page will be remain unchanged.

Page# 10 under Part-B: Civil Works will be changed as follows:

- Item No. (13.3) should be removed from this page.



- A new Item No. (13.4) should be the first Item of this page.

Item No.	Description of Items	Unit	Quantity	Rate in BDT (in Figure)	Rate (in Words)	Amount
1	2	3	4	5	6	7
	(13.4) 400 mm dia Bored Pile	Point	60,480.00			

- A new Item No. (14.4) should be included after Item No. (14.3)

Item No.	Description of Items	Unit	Quantity	Rate in BDT (in Figure)	Rate (in Words)	Amount
1	2	3	4	5	6	7
	(14.4) 400 mm dia Bored Pile	Rm	388.80			

All other information within the mentioned page will be remain unchanged.

Page# 43 under Part-B: Civil Works will be changed as follows:

- 'Quantity' of Item No. 36 should be 16,287.53 instead of 15,944.00

All other information within the mentioned page will be remain unchanged.

Page# 75 under Part-C: Sanitary, Plumbing & Water Supply Works will be changed as follows:

- Within 'Description of Items' of Item No. 132, following words will be added at the end of description "Water sense level certified and cut-sheet must be provided".

All other information within the mentioned page will be remain unchanged.

Page# 76 under Part-C: Sanitary, Plumbing & Water Supply Works will be changed as follows:

- Within 'Description of Items' of Item No. 137, following words will be added at the end of description "Water sense level certified and cut-sheet must be provided".

All other information within the mentioned page will be remain unchanged.

Page# 81 under Part-C: Sanitary, Plumbing & Water Supply Works will be changed as follows:

- Within 'Description of Items' of Item No. 154, following words will be added at the end of description "Water sense level certified and cut-sheet must be provided".

All other information within the mentioned page will be remain unchanged.

Page# 82 under Part-C: Sanitary, Plumbing & Water Supply Works will be changed as follows:

- Within 'Description of Items' of Item No. 158, following words will be added at the end of description "Water sense level certified and cut-sheet must be provided".

All other information within the mentioned page will be remain unchanged.

Page# 94 under Part-D-2: Passenger Lift will be changed as follows:

- Within 'Description of Items' of Item No. 183, words in Line-1 "Passenger Lift (Capacity 1350 Kg)" should be read as "Passenger Lift (Capacity 1600 Kg)"
- Within 'Description of Items' of Item No. 183, words in Line-11 "(i) Capacity: 1350 Kg." should be read as "(i) Capacity: 1600 Kg."

All other information within the mentioned page will be remain unchanged.



Page# 95 under Part-D-2: Passenger Lift will be changed as follows:

- Within 'Description of Items' of Item No. 184, words in the Last Line "For 1350 Kg Passengers Lift." should be read as "For 1600 Kg Passengers Lift."

All other information within the mentioned page will be remain unchanged.

Page# 7-10 (*Appendix-A*), Page# 43 (*Appendix-B*), Page# 75-76 (*Appendix-C*), Page# 81-82 (*Appendix-D*) & Page# 94-95 (*Appendix-E*) under **Section IV: Bidding Forms (BOQ Part) – Volume-2/4: Bill of Quantities** of the Bid Document are attached with this **Amendment No. 1** for visibility of the whole page.

4. Section VII. Works Requirements – Volume-4/4: Drawings

Drawing# S2.601, Drawing Title: Caisson Plan under Final Structural Drawing will be changed as follows:

- Under '(3) Pile and Caisson Section' dimension of Grade to Base of Excavation '80000MM' should be read as '8000MM'.
- Under '(3) Pile and Caisson Section' dimension of Grade to Cassion Bottom '250000MM' should be read as '25000MM'.

All other information within the mentioned page will be remain unchanged.

Drawing# S2.601, Drawing Title: Caisson Plan (*Appendix-F*) under **Section VII. Works Requirements – Volume-4/4: Drawings** of the Bid Document is attached with this **Amendment No. 1** for visibility of the whole page.

A handwritten signature in blue ink, consisting of a circular scribble followed by a horizontal line extending to the right.

Item No.	Description of Items	Unit	Quantity	Rate in BDT (in Figure)	Rate (in Words)	Amount
1	2	3	4	5	6	7
PART - B: CIVIL WORKS						
8	Mobilization and cleaning site before commencing actual physical work and during contract period and demobilization after completion of the Works under contract accepted by Engineer. This work shall also covers clayey 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, where, payments are to be based on ground area determined by the Engineer and be proportionate to the percentage progress of work under contract as a whole in all respects and approved by the Engineer.	Sqm	3,000.00			
9	Providing layout and carry over PWD Bench-Mark (BM) at site from nearby BM pillar, Property lines, existing ground level (EGL), formation ground level (FGL), highest flood levels (HFL), plinth levels (PL), mean sea level (MSL), setting and marking all pillars, marker, pegs etc. showing and maintaining reduced levels (RL's) including locating, establishing, protecting all public utilities within the premise of work and finally all to be presented in black and white.	Sqm	1,800.00			
10	Auger Boring/Rotary Drilling for cast in situ pile up to the required depth and diameter with minimum 6 m long temporary steel casing, true to vertical, providing bentonite slurry and maintaining water level in the hole, washing the hole for at least 30 minutes, clean the bore-hole and make the bore-hole ready for placing steel cage and concreting including hire charge of rig set, trimie pipe, cost of fuel, lubricant, mobilization, demobilization, maintenance, spares, stand-byes, insurance coverage, bentonite, water, electricity and other charges all compete approved and accepted by the Engineer. Before commencing boring operation Contractor shall submit the method statement of cast-in-situ pile work including sequence of boring and casting, disposal of spoils, test result of materials to the Engineer for approval. However, Engineer's approval shall not relieve the Contractor of his responsibilities and obligations under contract. (10.1) 1000 mm dia Shore Pile: (Attention: Contractor shall complete the shore piling work within 45 days by using at least 3 nos. or more Rotatory Rig)	Rm	2,025.00			
	(10.2) 900 mm dia Bored Pile: (Attention: (i) Cut-Off level of the pile will be 8m below the existing ground level & Contractor shall maintain the uniformity of pile diameter, fresh concrete, steel cage property at 8m below the existing ground level. Drilling, pouring of concrete and placing of steel cage up to 8m below the existing ground level shall not consider for payment. (ii) Contractor shall complete the piling work within 45 days by using at least 3 nos. or more Rotatory Rig)	Rm	4,320.00			

Item No.	Description of Items	Unit	Quantity	Rate in BDT (in Figure)	Rate (in Words)	Amount
1	2 (10.3) 1500 mm dia Bored Pile: (Attention: (i) Cut-Off level of the pile will be 8m below the existing ground level & Contractor shall maintain the uniformity of pile diameter, fresh concrete, steel cage property at 8m below the existing ground level. Drilling, pouring of concrete and placing of steel cage up to 8m below the existing ground level shall not consider for payment. (ii) Contractor shall complete the piling work within 45 days by using at least 3 nos. or more Rotatory Rig)	3 Rm	4 1,824.00	5	6	7
10(a)	400 mm dia Bored Pile: Boring/drilling by wash or percussion method or any other appropriate method for cast in situ pile up to the required depth and diameter with minimum 6 m long temporary steel casing, true to vertical, providing bentonite slurry and maintaining water level in the hole, washing the hole for at least 30 minutes, clean the bore-hole and make the bore-hole ready for placing steel cage and concreting including hire charge of rig set with winch machine, tripod stand, trimie pipe, cost of fuel, lubricant, mobilization, demobilization, maintenance, spares, stand-byes, insurance coverage, water, electricity and other charges all complete approved and accepted by the Engineer. Before commencing boring operation Contractor shall submit the method statement of cast-in-situ pile work including sequence of boring and casting, disposal of spoils, test result of materials to the Engineer for approval. However, Engineer's approval shall not relieve the Contractor of his responsibilities and obligations under contract.	Rm	2,160.00			
11	Cast in situ pile with reinforced cement concrete works with minimum cement content relates to mix ratio 1 : 1.5 : 3 having minimum $f_{cr} = 26$ MPa, and satisfying a specified compressive strength $f_{c'} = 21$ MPa at 28 days on standard cylinders as per standard practice of Code ACI/BNBC/ASTM & cement conforming to BDS EN-197-1- CEM -I (52.5 N) / ASTM-C 150 Type - I, best quality coarse sand [Sylhet sand or coarse sand of F.M.2.5], 20 mm down well graded crushed stone chips conforming to ASTM C-33, including breaking chips, screening through proper sieves, making, placing re-bar cage in position, placing and removing tri-pod as per requirement, pouring the concrete in bore-hole with the help of a trimie pipe, maintaining the trimie pipe immersed in concrete by at least 1 meter throughout the period of concreting, maintaining required slump, etc. mixing the aggregates with standard mixer machine with hopper, casting in forms, all complete including water, electricity, testing of materials and concrete etc. and other charges as per design, drawing etc. all complete approved and accepted by the Engineer. (Rate is excluding the cost of reinforcement and its fabrication, binding, welding and placing)					
	(11.1) 1000 mm dia Shore Pile	Cum	1,589.63			
	(11.2) 900 mm dia Bored Pile	Cum	2,746.87			

Item No.	Description of Items	Unit	Quantity	Rate in BDT (in Figure)	Rate (in Words)	Amount
1	2	3	4	5	6	7
	(11.3) 1500 mm dia Bored Pile	Cum	3,221.64			
	(11.4) 400 mm dia Bored Pile	Cum	271.30			
12	Removing of spoils / mud accumulated during boring for cast in situ pile by wash boring from working site to a safe distance by contractors own arrangement i.e. with container set in truck or on cart including loading, unloading everything complete as per standard practice.					
	(12.1) 1000 mm dia Shore Pile	Cum	1,589.63			
	(12.2) 900 mm dia Bored Pile	Cum	2,746.87			
	(12.3) 1500 mm dia Bored Pile	Cum	3,221.64			
	(12.4) 400 mm dia Bored Pile	Cum	271.30			
13	Providing and making point welding at contact point of the spiral binders at reasonable intervals with the main reinforcements by electric arc welding for construction of cast in situ bored pile carefully with highly oxidized electrodes making the points prominent and accepted by the Engineer. (Rate is inclusive of all materials labour, tools and plants, electricity and all equipment)					
	(13.1) 1000 mm dia Shore Pile	Point	110,160.00			
	(13.2) 900 mm dia Bored Pile	Point	237,600.00			
	(13.3) 1500 mm dia Bored Pile	Point	225,720.00			



Item No.	Description of Items	Unit	Quantity	Rate in BDT (in Figure)	Rate (in Words)	Amount
1	2	3	4	5	6	7
	(13.4) 400 mm dia Bored Pile	Point	60,480.00			
14	Providing and making welded splice by welding of minimum 300 mm length at the lap of main reinforcement in re-bar cage to be placed in bore-hole where necessary by electric arc welding with highly oxidized electrodes making the joint prominent and accepted by the Engineer. (Rate is inclusive of all materials labour, tools and plants, electricity and all equipment)					
	(14.1) 1000 mm dia Shore Pile	Rm	777.60			
	(14.2) 900 mm dia Bored Pile	Rm	1,728.00			
	(14.3) 1500 mm dia Bored Pile	Rm	1,641.60			
	(14.4) 400 mm dia Bored Pile	Rm	388.80			
15	Conducting static load test as per ASTM D1143 or equivalent standard for the cast-in-situ pile providing required scaffolding, bracing, jacks, pressure test gauge, loading unloading, Kenledge and other plants and equipment including staging, mobilization, demobilization, hire charge, gunny bags, sand and filling sacs/gunny bags for loading, record readings and preparation of results in standard forms and other incidental charges per standard practice and procedures including submission of load test report, furnishing all graph and chart etc. complete in all respects approved and accepted by the Engineer (Minimum two cyclic loading: one at service load and another cycle at double the service load then to continue loading till failure of the pile). Before commencing load test, Contractor shall submit method statement for conducting load test to the Engineer for approval. However, Engineer's approval shall not relieve the Contractor of his responsibilities and obligations under Contract. Load test and report shall be conducted under the supervision of a professional Geotechnical Engineer. Boring and pouring logs / driving logs of piles and method statement shall be the part of load test report.					

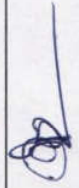
Item No.	Description of Items	Unit	Quantity	Rate in BDT (in Figure)	Rate (in Words)	Amount
1	2	3	4	5	6	7
	(35.1.9) From (+)36.15m level to (+)40.35m level:					
	(35.1.9.1) RCC Work	Cum	9.00			
	(35.1.9.2) Formworks & Propping/Scaffolding	Sqm	240.00			
	(35.1.10) From (+)40.35m level to (+)45m level:					
	(35.1.10.1) RCC Work	Cum	9.00			
	(35.1.10.2) Formworks & Propping/Scaffolding	Sqm	240.00			
36	Supplying, fabrication, and fixing to details as per design: deformed bar reinforcement for reinforced cement concrete, produced and marked in accordance with BDS ISO 6935-2: 2006 (or standard subsequently released from BSTI) including straightening and cleaning rust, if any, bending and binding in position with supply of G.I. wires, conducting necessary laboratory tests, etc. (excluding splices or laps) complete in all respects and accepted by the Engineer (Measurement shall be recorded only on Standard Mass per Unit length of Bars, while, dia of bars exceeds its standard). Grade 400 (RB 400/ RB 400W: complying BDS ISO 6935-2:2006) deformed bar produced and marked according to Bangladesh standard, with minimum yield strength, fy (ReH) = 400 MPa but fy not exceeding 450 MPa and whatever is the 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 total elongation after fracture and minimum total elongation at maximum force is 16% and 8% respectively.	Qntl.	16,287.53			



Item No.	Description of Items	Unit	Quantity	Rate in BDT (in Figure)	Rate (in Words)	Amount
1	2	3	4	5	6	7
PART - C: SANITARY, PLUMBING & WATER SUPPLY WORKS						
132	Supplying, fitting and fixing European type glazed porcelain Combi closet, including plastic seat cover, system system, preparing the base with cement concrete and with wire mesh or rods if necessary, in all floors including making holes wherever required and mending good the damages and fitting, finishing etc. complete with Superior.(b) Special coloured: 700mm x 360mm x 785mm, 36(+/-) 36.5kg. <i>Water sense level certified and cut-sheet must be provided.</i>	Each	50.00			
133	Supplying, fitting and fixing European type glazed porcelain commode "S" or "P" type 465mm x 340mm x 415 mm in size, approximately 14 kg by weight, plastic seat cover and preparing the base with cement concrete and with wire mesh or rods, if necessary, in all floors including making holes wherever required and mending good the damages and fitting, fixing finishing etc. complete with all necessary fittings and connection approved and accepted by the Engineer.	Each	4.00			
134	Supplying, white glazed vitreous W/H Wash Basin including pedestal and fitting, fixing the same in position with heavy type C.I. brackets, 32 mm dia PVC waste water pipe with brass coupling (not exceeding 750 mm in length), 32 mm dia C.P. basin waste with chain plug, bracket including making holes in walls and floors and fitting with wooden blocks, screws and mending good the damages with cement mortar (1:4), etc. all complete approved and accepted by the Engineer. Superior. Special coloured: 650mmx485mmx870mm, 34kg.	Each	54.00			
135	Supplying, fitting and fixing Bangladesh pattern, long pan with foot-rest, made of Vitreous China and preparing the base of pan with cement mortar (1:4) and with wire mesh or rods, if necessary in all floors including making holes wherever required and mending good the damages and fitting, finishing etc. complete with all necessary fittings and connection approved and accepted by the Engineer. Special coloured: 540mmx470mmx290mm; 16kg.	Each	4.00			
136	Supplying, fitting and fixing 490 x 385 x 290 mm in size European type glazed vitreous standing bowl urinal, approx. 8.0 kg by weight including fitting, fixing the same 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.	Each	24.00			

Item No.	Description of Items	Unit	Quantity	Rate in BDT (in Figure)	Rate (in Words)	Amount
1	2	3	4	5	6	7
137	Supplying, fitting and fixing double bowl stainless steel sink with sink tray with heavy type CI or steel brackets 12 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 the damages, finishing etc. all complete approved and accepted by the Engineer. (Malaysia / Singapore / Thailand made or equivalent). <i>Water sense level certified and cut-sheet must be provided.</i>	Each	20.00			
138	Supplying, fitting and fixing of 450 x 600 mm size and 5 mm thick wooden framed super quality mirror with hard boards at the back 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.	Each	54.00			
139	Supplying, fitting and fixing super quality 600 x 125 mm coloured glass (plate) shelf having 5 mm thickness with fancy C.P. brackets, screws and frames including making holes in walls and mending good the damages with cement mortar (1:4) etc. all complete approved and accepted by the Engineer.	Each	54.00			
140	Supplying, fitting and fixing super quality C.P. Towel rail of 600 mm long and 20 mm in dia with C.P. holder including making holes in walls and mending well the damages with cement mortar (1:4) etc. all complete approved and accepted by the Engineer.	Each	54.00			
141	Supplying, fitting and fixing of special coloured toilet paper holder Size (150 mm x 150 mm x 126 mm) including making holes in walls and mending good the damages with cement mortar (1:4) etc. all complete approved and accepted by the Engineer. Colored (Porcelain).	Each	54.00			
142	Supplying, fitting and fixing standard size 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. Porcelain soap tray (coloured)	Each	54.00			
143	Supplying, fitting and fixing SS floor grating with hinged cover size 150 x 150 mm 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.	Each	120.00			

Item No.	Description of Items	Unit	Quantity	Rate in BDT (in Figure)	Rate (in Words)	Amount
1	2	3	4	5	6	7
	(151.2) 50 mm dia uPVC Y or T - Y Cleanout	Each	100.00			
	(151.3) 100 mm dia uPVC 'P' or 'S' Trap	Each	200.00			
	(151.4) 100 mm dia uPVC Y or T - Y Cleanout	Each	200.00			
152	Supplying, fitting and fixing best quality faucets etc. complete approved and accepted by the Engineer. - 12 mm Special quality CP Bib Cock	Each	70.00			
153	Supplying, fitting and fixing best quality CP pillar cock etc. complete approved and accepted by the Engineer. - 12 mm CP special heavy-duty Pillar Cock	Each	20.00			
154	Supplying, fitting and fixing best quality CP self closing pillar cock (sensor type) with necessary hardware etc. complete approved and accepted by the Engineer. <i>Water sense level certified and cut-sheet must be provided.</i>					
	(154.1) Exclusive CP self closing Pillar Cock (without mixture)	Each	45.00			
	(154.2) Exclusive CP self closing Pillar Cock (with mixture)	Each	50.00			
155	Supplying, fitting and fixing Special/Fancy quality C.P. concealed Angle stop cock etc. complete approved and accepted by the Engineer. - 12 mm CP special concealed heavy type Angle Stop Cock	Each	150.00			
156	Supplying, fitting and fixing best quality concealed fixed sink cock etc. complete approved and accepted by the Engineer - 12 mm CP concealed Moving Cock	Each	12.00			



Item No.	Description of Items	Unit	Quantity	Rate in BDT (in Figure)	Rate (in Words)	Amount
1	2	3	4	5	6	7
157	Supplying, fitting and fixing CP Basin Mixture with all necessary hardware and consumables approved and accepted by the Engineer.	Each	54.00			
158	Supplying, fitting and fixing CP Shower Mixture including Shower Head and faucet with all necessary hardware and consumables approved and accepted by the Engineer. <i>Water sense level certified and cut-sheet must be provided.</i>	Each	12.00			
159	Groove cutting in brick work, R.C.C floor, including cost for concealing of G.I. pipe work (12 mm and 20 mm dia) in brick wall by cutting groove in wall, lintel, beam etc. by any means carefully without damaging the structure and filling the grooves with C.C (4:2:1) after laying of pipe including cost of scaffolding, finishing, curing etc. all complete approved and accepted by the Engineer. Groove Size 40 x 40 mm (For laying 12 mm to 20 mm dia pipes)	Rm	500.00			
160	Supply and fitting-fixing hand / push shower for ablution / toilet including holder Moving type hand shower	Each	54.00			
161	Supplying, fitting and installation of automatic hand drier of high speed, energy efficient, rapid drying, automatic sensor, adjustable speed and sound control, adjustable heat control, electric hand dryer, surface mounted or semi-recessed which can eliminate over 99% of airborne bacteria and particles as small as 0.3 microns with the removable super filter system and it shall be powered by 220v AC supply/ batteries and shall operate automatically from IR sensor that shall activate it when hand are placed in sensor zone etc. all complete accepted by the Engineer-in-charge.	Each	32.00			
162	Supplying fitting and fixing of Automatic liquid soap dispenser (wall mounted) to hold and dispense up to min 600 ml of liquid and lotion soaps, synthetic detergents and antibacterial soaps. Dispenser shall be powered by batteries and shall operate automatically from IR sensor that shall activate soap dispensing when hands are placed in sensor zone. Sensor detection range shall be adjustable by owner. Dispenser shall pump a drop volume of 0.8 ml to 1.0 ml of soap during each activation. A tamper resistant soap level-viewing window shall be provided. Unit shall have a swing open body secured with side-mounted lock that is opened with special key provided, all complete and accepted by the Engineer-in-Charge.	Each	54.00			

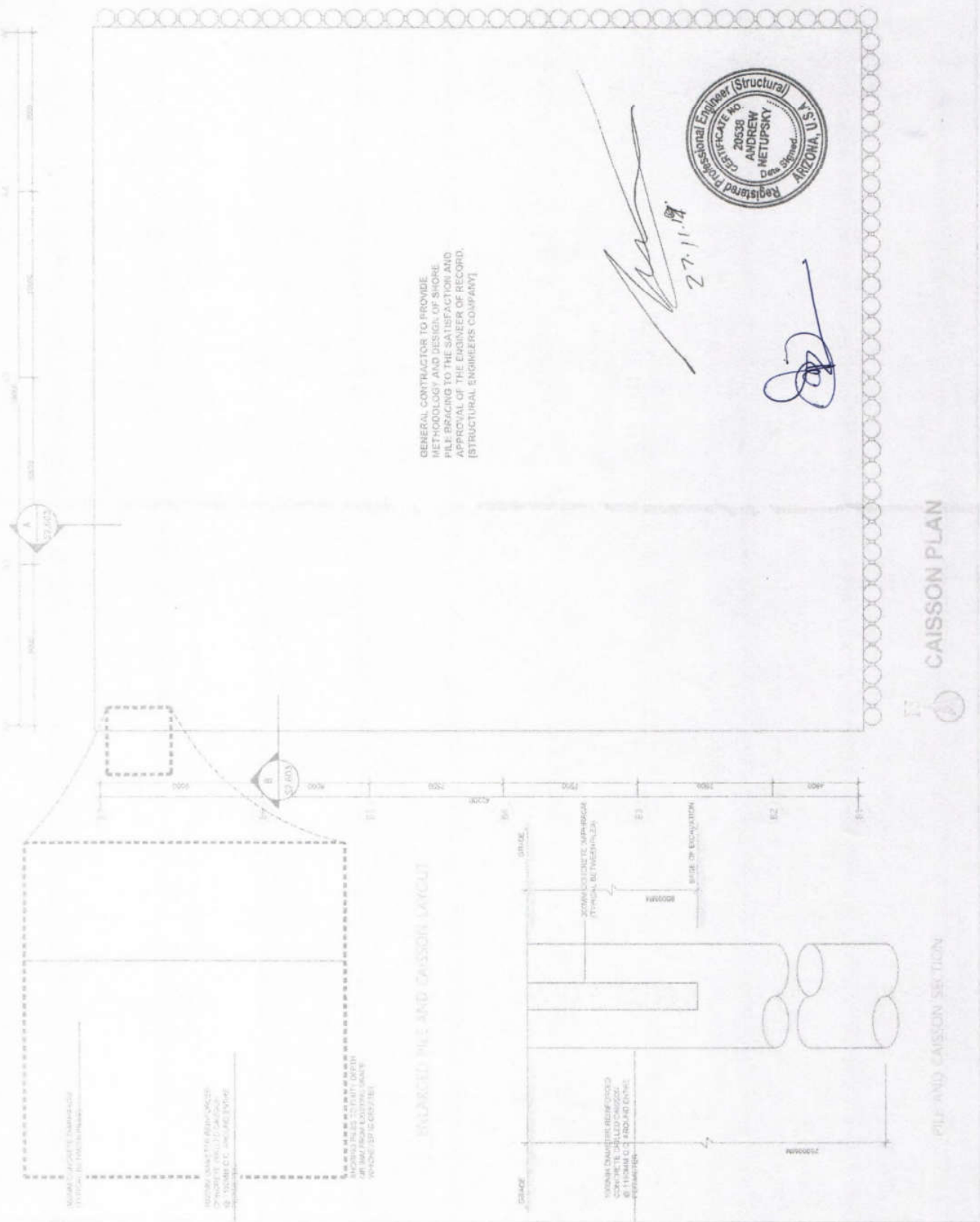


Item No.	Description of Items	Unit	Quantity	Rate in BDT (in Figure)	Rate (in Words)	Amount
1	2	3	4	5	6	7
183	<p>PART - D-2: PASSENGER LIFT</p> <p>Passenger Lift (Capacity 1600 Kg): Supply of Passenger lift complete with car, control panel, traction machine (permanent magnet synchronous motor type), gearless, oil free, steel suspension ropes, safety devices, guide rails, push buttons, with other necessary accessories etc. complete including counter weight - as required, suitable for installation & use in tropicalized country like BANGLADESH (considering ambient temperature from 0°C to 46°C and relative humidity from 40% to 98%) & as per detailed specifications and standards as mentioned in General & Specific Specifications in Volume - 3/4 of the bidding document.</p> <p>Important Features:</p> <p>(i) Capacity: 1600 Kg. (ii) No. of stops: 12 Stops (iii) Speed: 1.5 Meters per second (iv) Car travel height: 52 Meters (Approximate) (v) Floor Designations : B2, B1, G, 1,2,3,4,5,6,7,8 and 9 (vi) Car Dimensions (nominal): Width: 1600mm Depth: 2300 mm Height: 2200/2250 .mm (vii) Power Rating : Compatible with the capacity of the lift as mentioned above with 180 starts per hour minimum (viii) Number of entrances : 16 Nos. arranged in the same line.(ix) Shaft size : Width 2350 mm Depth.2900mm (x) (a) Pit depth : 1500 mm (b) Overhead Height : 5000 mm (xi) Machine room location : Directly above hoist way (xii) Power source: 400 Volt. (+10%), 3-Phase, 50Hz (xiii) Light mains: 230 Volt. (+10%), single-phase 50Hz(xiv) Signal source: 24 volt. D.C or as designed. Opening type: Automatic 2 Panel Center opening. xv) Operation System: Simplex and so on.</p> <p>Country of Origin: Fujitec (Japan), Hitachi (Japan), Kone (Finland), Mitsubishi (Japan), Otis (USA / Japan / France), Schindler (Switzerland), Thyssenkrupp (Germany) or approved equivalent product.</p>	Each	2.00			

Item No.	Description of Items	Unit	Quantity	Rate in BDT (in Figure)	Rate (in Words)	Amount
184	<p>Lift Installation: Installation, testing and commissioning of the above lift including supplying of necessary fixing materials, shaft lighting with wirings, additional works on base foundation (if necessary) for machineries and painting of all parts and initial lubrication shall be carried out as per BSEN-81 /EN-81 (Lift Directive 95/16/EC)/DIN/VDE/ ANSI /ASME A17.1/ JIS .The supplier / Installer shall carry out 16 hours per day trial run operation for 30 (thirty) days before handing over the lift to the competent authority.</p> <p>All electrical and civil works mending good the damages in connection with installation of the lift shall be carried out in accordance with the provision of the BANGLADESH National Building code, latest BANGLADESH Electricity Rules, Regulations & PWD specification. All non-current carrying metallic enclosure of electrical materials/equipment viz. electric motor frames, control panel, other metallic cases, door, call and control button, car switch, limit switch, junction boxes & similar electric fittings shall be properly connected to the earthing system. All the works in this regard shall conform to general standards, codes and specifications of PWD. The bidder shall ensure all the safety measure as per international safety codes for the workers, supervisors and others during the installation period.</p> <p>For 1600 kg Passengers Lift.</p>	Each	2.00	5	6	7
<p>Total Amount of (Part - D-2: Passenger Lift):</p>						

Appendix-F

Design and engineering for
Undersea Pipeline Installation



GENERAL CONTRACTOR TO PROVIDE
METHODOLOGICAL DESIGN FOR MOORE
PILE BRACING TO THE SATISFACTION AND
APPROVAL OF THE ENGINEER OF RECORD.
(STRUCTURAL ENGINEERS COMPANY)



27.11.19

CAISSON PLAN

PILE AND CAISSON SECTION

CONCRETE DIMENSIONS
BY THE CONTRACTOR

CONCRETE DIMENSIONS
BY THE CONTRACTOR

CONCRETE DIMENSIONS
BY THE CONTRACTOR

ENLARGED PILE AND CAISSON LAYOUT

