



Ref: Utt/Tala/2026/003

**Re-Issuance of Request for Quotation (RFQ) for Renovation of 04 Formal Evacuation Shelter to Lakshmipur Sadar and Kamalnagar upazila at Lakshmipur district.**

Issue date: 06 May, 2026

Deadline of submission: 11 May,2026 before 4.00 pm.

**FOREWORD**

Uttaran is an NGO working in Bangladesh since 1985 to uphold rights and entitlements and to improve the socio-economic condition of the poor and disadvantaged community people. Uttaran is a people-centered organization using a rights-based approach to alleviate poverty, diversify livelihood opportunities and empower poor communities of Bangladesh.

**OBJECTIVE:** Uttaran is hereby inviting the National Tender for Price Quotation through RFQ following the below items under The Project for the Flood Response and Recovery in Chattogram Division- Lakshmipur District. If you're interested to make a business with us, please submit (hard copy) your best price Offer Following the Annex A in your organization's/company's letterhead pad within 11 May, 2026 before 4.00 PM and enclose this RFQ with that Price Offer enshrining your sign.

**Annex A**

**Package 01 (Moddho Char Falkan Govt Primary School, Union: 5 no. Char Falcon, Kamalnagar Upazila, Lakshmipur.)**

Sl. No.	Items Name with Specification	Quantity	Unit	Unit price (Including Vat, Tax & Delivery)	Total Price (Including Vat, Tax & Delivery)
A	<b>Alignment with the National Cyclone Shelter Policy</b>				
A.1	<b>Mobilization</b> with additional scaffolding for repairing RCC slab, cornice/drop wall/outer wall, etc. of a two-storied building, including site cleaning Scrapping old mosses and plaster before commencement of physical work, during the contract period, and demobilization after completion of the works under the contract accepted by the Engineer; the work shall also cover cleaning, clearing, cutting or filling, and dressing of the project area to ensure smooth execution of all activities in a safe and secure environment, including stockpiling of resulting materials at locations approved by the Engineer for disposal; payment shall be based on the ground area determined by the Engineer and shall be proportionate to the overall progress of the work as approved; the work shall	1.00	Item		



	<p>mandatorily include provision, installation, and continuous operation of a 1 HP pump motor with hose pipe and generator as required, compulsory use of tarpaulin, polythene to protect works, materials, and working areas from rain and adverse weather conditions, ensuring adequate lighting arrangements at all work locations for safe and uninterrupted execution, and provision and strict use of all necessary safety equipment and protective gear including helmets, gloves, goggles, safety vests, and safety belts in full compliance with safety standards throughout the execution period.</p>				
A.2	<p><b>Rooftop Red Marking Signal Light :</b> Supplying, fitting and fixing signal red light to ensure the shelter is visible during disasters, especially at night and in poor weather conditions. Type: LED-based solar-powered aviation warning light. Material: Weather-resistant, UV-stabilized polycarbonate and aluminum alloy body. Light Source: High-intensity red LED with a visibility range of at least 2-3 kilometers. Solar Panel Type: Monocrystalline or polycrystalline. Power Output: Minimum 5W to 10W depending on the light's power requirement. Battery: Lithium-ion battery with at least 24 hours of backup (fully charged). Lighting Mode: Steady or flashing (adjustable); Flash rate: 20-60 flashes/min. Ingress Protection: Minimum IP65 for water and dust resistance. Mounting: Steel or aluminum mounting bracket compatible with the rooftop structure. Other Features: Automatic light sensor for dusk-to-dawn operation. All complete as per direction of the E-I-C.</p>	1.00	Each		



A.3	<p><b>Mike with Siren System Installation:</b> Supplying, fitting and fixing mike with siren system to broadcast announcements and emit a siren to alert the community during emergencies. Microphone Type: Handheld or gooseneck microphone with a noise-canceling feature. Frequency Response: 50 Hz to 15 kHz. Build: Durable, shock-resistant, and weather-resistant. Amplifier: Power Output: Minimum 150W to 200W. Voltage: Compatible with the cyclone shelter's power system (solar backup preferred). Input Ports: Multiple inputs for microphone and auxiliary devices. Siren System Sound Range: Audible at a distance of 1-2 kilometers in open areas. Sound Patterns: Multi-tone options (wailing, steady, pulse) with adjustable volume. Power Source: Solar or AC/DC with a backup battery (minimum 6 hours of runtime). Speakers Type: Outdoor horn speakers with high weather resistance (IP65 minimum). Power Output: Minimum 4 Nos. 75W-100W per speaker. Material: Aluminum or ABS body with UV-resistant coating. Accessories: Necessary cables, connectors, and mounts. All complete as per direction of the E-I-C.</p>	1.00	Item		
A.4	<p><b>Rooftop "S" Mark Painting :</b> Supplying and painting "S" Mark on the roof top to identify the shelter as a designated emergency cyclone shelter from aerial views. Dimensions: Minimum 3 meters in length and 1.5 meters in width for clear visibility or as per drawings Color: High-contrast red paint with a white border (reflective for night visibility). Paint Type: Base Coat Anti-corrosion primer suitable for concrete surfaces.</p>	1.00	Each		



	<p>Top Coat: Reflective polyurethane or epoxy paint with UV and weather resistance.</p> <p>Durability: Weatherproof and resistant to rain, sun, and wind for a minimum of 5 years.</p> <p>Surface Preparation: Cleaning, sanding, and priming of the concrete rooftop before painting.</p> <p>Application: Two coats of reflective paint applied with a roller or spray for uniformity.</p> <p>All complete as per direction of the E-I-C.</p>				
<b>Total</b>					-
<b>B</b>	<b>Civil Works</b>				
<b>B.1</b>	<b>Preliminary Works</b>				
B.1.1	<p><b>Sign Board with Signage:</b> Supplying, transporting, fitting and installation of approved best quality country-made mild steel (MS) signboard as per drawing, complete in all respects and accepted by the Engineer-in-Charge (E-I-C); size 2000 mm × 1000 mm, made of 2 mm thick MS sheet continuously welded on both sides with MS rectangular hollow box frame comprising 75 mm × 75 mm × 3 mm vertical columns and 50 mm × 50 mm × 3 mm horizontal members, including 4 nos. 12 mm dia anchor bars welded with column box and embedded minimum 450 mm into foundation; RCC foundation consisting of 400 mm × 400 mm × 400 mm footing and 250 mm × 250 mm × 600 mm column base using mix ratio 1:1.5:3 with minimum cement content ensuring <math>f'_{cr} = 24</math> MPa, <math>f'_c = 17</math> MPa at 28 days and water-cement ratio not exceeding 0.45, conforming to ACI/BNBC/ASTM standards, using cement BDS EN-197-1-CEM-I 52.5N or ASTM C150 Type I, sand comprising 50% local (F.M. 1.2) and 50% Sylhet/coarse sand (F.M. 2.2), and 20 mm down well-graded stone chips as per ASTM C-33; including proper shuttering, reinforcement (12 mm dia bars @ 200 mm c/c in footing, 4 nos. 12 mm dia bars in column, 10 mm dia stirrups @ 150 mm c/c), machine mixing or batching plant, vibration, curing for</p>	1.00	Item		



	<p>minimum 28 days, and all associated costs such as water, electricity and testing; including dismantling of existing concrete if required, site cleaning and debris disposal, and 125 mm thick brick flat soling using 1st class bricks at foundation base (400 mm × 400 mm); surface preparation and painting with one coat anti-corrosive paint and two coats synthetic enamel paint in dark blue (Donor official color: RGB 0/51/160, HEX #0033A0, CMYK 100/80/3/2, Pantone 286C); also including supply and installation of 2 nos. high-quality reflective stickers (hexagonal pattern) of size 2000 mm × 1000 mm with prior sample approval from E-I-C.</p>				
B.1.3	<p><b>Dismantling of unserviceable/damaged brick works</b> (with cement or lime mortar) of thickness 250 mm in foundation and superstructure and removal of debris to a safe distance.</p>	2.08	Cu.m.		
B.1.4	<p><b>Stripping of unserviceable plaster</b> including racking out joints, cleaning etc.</p>	65.16	Sq. m.		
<b>Sub Total</b>					-
<b>B.2</b>	<b>Structural Works</b>				
B.2.1	<p><b>RCC WORKS: 1:2:4</b> (measured on gross concrete section) (<math>f'c = 19</math> MPa, minimum <math>f'cr = 26</math> MPa in nominal mix 1:2:4), with brick-chips Sand of F.M. 1.2 and F.M. 2.2 in equal proportion) Reinforced cement concrete works with minimum cement content relates to mix ratio 1:2:4 having maximum water cement ratio = 0.45 and minimum <math>f'cr = 6</math> MPa, satisfying a specified compressive strength <math>f'c = 19</math> 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, 52.5N (52.5 MPa) / ASTM-C 150 Type – I, best quality sand [50% quantity of best local sand (F.M. 1.2) and 50% quantity of Sylhet sand or coarse sand of equivalent F.M. 2.2] and 20 mm down well graded picked jhama brick chips conforming to ASTM C-33 including conducting necessary tests, breaking chips and screening, making and placing shutter in position</p>	1.18	Cu.m.		



	<p>maintaining true to plumb, making shutter water-tight properly, placing reinforcement in position; mixing in 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 &amp; centering)</p>				
B.2.2	<p><b>Rebar:</b>Grade B400C-R/ B400CWR/ 400DWR: Ribbed or Deformed bar produced and marked as per BDS ISO 6935-2:2016 with minimum yield strength, <math>f_y</math> (ReH) = 400 MPa, but the tested yield strength shall not exceed <math>f_y</math> by more than the 125 MPa and the ratio of tested ultimate strength, <math>f_u</math> (Re) to tested yield strength (<math>f_y</math>) shall be at least 1.25 and minimum elongation after fracture (A5.65) &amp; minimum total elongation at maximum force (Agt) is 17% and 8% respectively.</p>	110.00	kg		
B.2.3	<p>Supply and Installation of <b>Sandwich Panel Partition Wall:</b> Supply and installation/fitting of 50mm thick Pre-Fabricated Sandwich Panel insulation density of 16 kg/m<sup>3</sup>, the exterior and interior metal skins 0.5 mm thick conform to ASTM A792 Grade 50B and is hot dip coated with a corrosion resistant zinc/aluminum alloy with 150 g/m<sup>2</sup> wall sheeting Fastened to the roof purlins or wall girts with necessary anchoring accessories (U, L Channel, Screw/self drilling fasteners &amp; etc.) as per design and in accordance with BNBC/ AISI standard procedure and also with required pre-installed formwork and supply and carriage of all materials, labors, tools, incidentals, etc. all complete as per drawing, specification and direction of the Engineer-in-charge.</p>	58.90	Sq. m.		



B.2.4	<p><b>Plaster</b> Minimum 12 mm thick cement sand (F.M. 1.2) plaster (1:4) with fresh cement applied to both inner and outer surfaces of walls, including surface preparation by cleaning and washing of sand, finishing of corners and edges, curing for at least 7 days, and including cost of water, electricity, scaffolding, and all other incidental charges, complete in all respects as per drawings and accepted by the Engineer-in-Charge.</p>	65.16	Sq. m.		
B.2.5	<p><b>Chemical Water proofing on the roof slab:</b> The roof surface proper cleaning by flashing water before applied water proofing chemical on the roof slab approved quality material (Barger or equivalent-2 coats (horizontal and vertical direction) water Mr. Expert water barrier/Brush bond (13 Sq,M/ 20.088 kg pac) over a coat Nito bond SBR Latex plus and 2-coats Flexible Roofing Compound on top as finishing coats - color green) after preparation of the surface by removing existing rendering in alternative panels etc. After completing water proofing works on roof, the roof need to be seen smooth slope surface and uniform color. All complete as per direction of the E-I-C. The rate will include cleaning, removing and washing existing top portion of slab.</p>	209.05	Sq. m.		
B.2.6	<p><b>Brick work 125mm :</b> Providing 125 mm thick brick work in superstructure (partition walls/outer walls) with cement sand (F.M. 1.2) mortar (1:4) with 10 hole machine made ceramic bricks of approved size having uniform colour, carefully laid in cement mortar of uniform width &amp; depth of joints, true to vertical and horizontal lines including racking out joints, filling the interstices with same mortar, making bond with connected walls, cleaning, soaking brick at least 24 hours and washing of sand, curing 7 days in all floors, including cost of water, electricity and other charges accepted by the Engineer-in-charge.</p>	49.07	Sq. M.		
B.2.7	<p><b>Plastering with NCF:</b> Minimum 12 mm thick cement sand (F.M.1.2) plaster with neat cement finishing to dado (up to 150 mm from floor level), floor with cement</p>	83.69	Sq. M.		



	(1:4) including washing of sand, use black or red color to mixture, finishing the edges and corners and 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.				
<b>Sub Total</b>					-
<b>B.3</b>	<b>Ground Floor Development Works</b>				
B.3.1	<b>Floor Plastering with NCF:</b> Minimum 12 mm thick cement sand (F.M.1.2) plaster with neat cement finishing to plinth wall, floor, Dwarf wall with cement (1:4) up to 1500 mm below ground level including washing of sand, use black or red color to mixture, finishing the edges and corners and 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.	144.96	Sq. M.		
<b>Sub Total</b>					-
<b>B.4</b>	<b>Door, Window, Grill Repair Works</b>				
B.4.1	<b>Window Installation (Sandwich Panel Integration) :</b> Supply, fabrication, delivery and installation of factory-finished uPVC co-extruded fixed casement window system of approved brand (Cosmic or equivalent), comprising multi-chambered, lead-free, UV-stabilized profiles with a minimum frame thickness of 60 mm, finished in white color externally and internally as per approved sample, and fitted with 5.5 mm thick navy blue mercury/tinted glass panel providing enhanced solar control, energy efficiency, sound insulation and eco-balanced performance; the system shall be inherently fire-retardant, corrosion-resistant and maintenance-free without requirement of polishing. The window shall include provision for handle lock mechanism (where applicable), high-quality EPDM rubber gaskets for airtight and watertight sealing and necessary accessories including glazing beads, reinforcement (if required), sealant, fasteners, mosquito net and shims. Installation	10.97	Sq.M.		



	<p>shall be carried out on pre-engineered sandwich panel wall openings, including proper alignment, leveling, and anchoring using self-drilling screws/anchor fasteners compatible with sandwich panels, with perimeter sealing using approved weatherproof silicone sealant to ensure complete air and water tightness. The scope includes cutting/adjustment of sandwich panel openings (if required), provision of flashing/trims to cover junctions, finishing of edges, and making good all disturbed surfaces to match adjacent finishes. All works shall be executed as per manufacturer's specifications, approved drawings and engineer's instructions, ensuring durability, structural stability, easy installation and complete functionality to the satisfaction of the Engineer-in-Charge.</p>				
B.4.2	<p><b>Window glass Repair:</b> Renewing of window panels by replacing damaged, unserviceable or broken glass panes with 5 mm polycarbonate fiber sheet instead of glass, including supply, fitting and fixing of best quality polycarbonate sheet with all necessary hardware, sealing materials and accessories, complete in all respects as per specification and acceptance of the E-I-C.</p>	6.13	Sq.M.		
B.4.3	<p><b>Window repair:</b> Repair of metal swing frame window shutter with polycarbonate sheets by replacing the corroded GI sections and existing polycarbonate sheets should be replaced with 18 BWG GP. sheet. Existing MS/GI sections are 3mm thick and 19mm wide, shutter frame in three equal part and upper part should be provided with vertically in each shutter, fabricating, welding, installation, cost of electricity, workshop charge, carriage, fixing with MS clamps or steel royal bolt in walls/RCC member. The rate including window seal by plastering, applying 2 coats anticorrosive and 2 coats enamel paint (Berger) and finishing etc all complete as per direction of the E-I-C. including necessary repair or</p>	24.40	Sq.M.		



	replacement of window lock and adjustable window stay.				
B.4.4	<b>Window Grill Repair:</b> window grills any where directed made of Galvanized MS flat bar 40mmx6mm @100mm c/c vertically fitted with 2 nos Horizontally Galvanized MS flat bar (40mmx6mm) @ 450mm c/c maximum, in/c.removing rust with cup brush, brushing, polishing, fabricating, welding of each point, riveting if necessary, cost of electricity, workshop charge, carriage, fixing with Galvanized MS clamps or steel royal bolt in walls/RCC member and painting with two coats of synthetic enamel paint over a coat of anticorrosive priming for all floors etc. all complete as per direction of the E-I-C.	12.85	Sq.M.		
B.4.5	<b>Grill:</b> Galvanized MS flat bar 40mmx6mm @100mm c/c vertically fitted with 2 nos Horizontally Galvanized MS flat bar (40mmx6mm) @ 450mm c/c maximum, in/c.removing rust, brushing, polishing, fabricating, welding of each point, riveting if necessary, cost of electricity, workshop charge, carriage, fixing with Galvanized MS clamps or steel royal bolt in walls/RCC member and painting with two coats of synthetic enamel paint over a coat of anticorrosive priming for all floors etc. all complete as per direction of the E-I-C.	23.83	Sq.M.		
B.4.6	<b>Minor Wooden Door Repair:</b> Repairing of existing wooden door including (100mm x 38mm) lock rail, (125mm x 38mm) middle rail and (225mm x 38mm) bottom rail with 25mm thick one side raised paneling; supplying and fitting of best quality 6 nos. 100mm iron hinges, 2 nos. 12mm dia tower bolts (300mm & 225mm long), 2 nos. heavy type nickel plated handles, hinge cleats and buffer blocks; and any defective timber to be repaired or replaced as required; complete with sand papering for smooth finish for all floors, as per direction of the E-I-C; timber to be Jack wood; including supply and installation of one heavy security 60mm padlock (HMBR) for each door; applicable for	5.00	Each		



	single/double leaf doors and all sizes of wood complete.				
B.4.7	<b>Hand rail repair:</b> Supply and refixing of existing GI hand rails (Top chord 60mm dia GI pipe of 2.9mm wall thick) including a flat bar (25mm*5mm) at the bottom with vertical 20 mm dia GI pipes for stair/parapet with supply of all materials and accessories and replace the damaged/lost portions in hand rails with necessary removing, welding, fixing with the objects, carrying, loading, unloading, repairing hole, applying zinc-oxide etc all complete as required	3.44	Sq.M.		
B.4.8	<b>Minor Repairing existing collapsible gate</b> (2.7 m x 2.6m) at 1st/2nd floors including removing inside and out side rust with respectively steel brush and cup brush, brushing, polishing, fabricating, welding of each point, riveting refixing, changing wheels, bottom rail if necessary, cost of electricity, workshop charge, carriage, fixing with Galvanized MS clamps or steel royal bolt in walls/RCC member,, welding etc all complete as required to making smooth sliding as per direction of E-I-C	3.00	Each		
B.4.9	<b>MS Door Repair :</b> Repairing of existing MS door including rectification or replacement of damaged or corroded members using suitable MS flat/bar/angle/box sections as per existing design, including cutting, welding, grinding and proper alignment; providing and fixing all necessary fittings and fixtures such as heavy-duty MS hinges, tower bolts, handles, locking arrangements, hinge cleats and stoppers/buffers; cleaning the surface by wire brushing or sand papering, applying anti-corrosive primer and finishing with two coats of approved enamel paint; including supply and fixing of one 60 mm heavy duty padlock (HMBR or equivalent) for each door; all complete in all respects as per specification and direction of the Engineer-in-Charge.d are finished). Jack wood. The rate includes a Heavy Security 60mm Pad Lock (HMBR) for	4.00	Each		



	each door.				
	<b>Sub Total</b>				
<b>B.5</b>	<b>Painting Works</b>				
B.5.1	<b>Plastic emulsion paint on internal wall:</b> 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. upto desired finishing, elapsing specified time for drying or recoating; all complete in all floors and accepted by the Engineer-incharge	895.82	Sq. M.		
B.5.2	<b>Weather coat exterior paint:</b> 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 scrapping old paint 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	728.08	Sq. M.		



	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. upto desired finishing, elapsing specified time for drying or recoating; all complete in all floors and accepted by the Engineer-in-charge.				
B.5.3	<b>Enamel paint wooden mamber:</b> Prepare the surface by removing dust apply two coats of wood primer and two coats of enamel paint on wooden frame and shutter of window. Rate shall include for minor repairs, wood putting, and necessary brushes, machine, masking tape, sand papers require for surface preparation and scaffolding etc all complete as per Direction of E-I-C .	11.38	Sq. m.		
B.5.4	<b>Enamel paint for window grill/shutter/railing/door:</b> Prepare the surface by removing rust and apply two coats of anticorrosive paint and two coats of enamel paint on steel frame and shutter and window grill of both side. Rate shall include for removing existing paint, rust, dust with minor repairs and necessary brushes, mechanical wire brush, masking tape, sand papers putty require for surface preparation and scaffolding etc all complete as per Direction of E-I-C .	129.60	Sq. m.		
B.5.5	<b>Class Room Art:</b> Prepare the surface by removing rust and apply existing learning photo etc all complete as per Direction of E-I-C .	52.09	Sq. m.		
	<b>Sub Total</b>				
	<b>Total (B1+B2+B3+B4+B5)</b>				
<b>C</b>	<b>Water Supply and Sanitation Facility works</b>				
C.1	Supplying, fitting and fixing country made glazed <b>wall tiles</b> complying BDS ISO 13006: 2015, irrespective of color &/or design, with 20 mm thick cement sand (F.M. 1.2) mortar (1:3) base and raking out the joints with white cement including cutting, laying and hire charge of machine and finishing with care etc. including cost of water, electricity and other charges complete in all respect	1.35	Sq. M.		



	and accepted by the Engineer-in-charge. Wall tiles less than, equal or equivalent to 250 mm x 330 mm in sizes.				
C.2	Supplying, fitting and fixing country-made mirror polished homogeneous <b>floor tiles</b> complying with BDS ISO 13006:2015, having water absorption $\leq 0.5\%$ and modulus of rupture (MOR) $\geq 27 \text{ N/mm}^2$ , irrespective of color and/or design, laid on 20 mm thick cement sand (F.M. 1.2) mortar (1:4) base, including cutting, proper laying, raking out joints with white cement, and finishing with due care, all complete and accepted by the Engineer-in-Charge. GP (mirror polished) 600 mm x 600 mm floor tiles	3.25	Sq. M.		
C.3	Supplying, Fitting and Fixing of Bangladesh Pattern <b>Long Pan with Footrest</b> : Supplying, fitting and fixing of Bangladesh pattern long pan with footrest made of glazed vitreous china conforming to BDS 1162:2014; glaze to be thoroughly fused to body with minimum 5 mm thickness, water absorption not exceeding 0.5%, free from visible defects, blemishes, crazing and staining, and resistant to chemical solutions as per BDS standard; glaze materials shall be lead-free or contain not more than 5% lead in case of colored glaze; each appliance shall bear manufacturer's name/trademark, BDS number, country of origin and BSTI certification mark; fixing in position by preparing base with cement mortar (1:4) including use of mesh or rods if necessary, making required holes in floors, mending damages, and completing all fittings, fixing and finishing works with necessary connections, all complete as approved by the Engineer-in-Charge. Approx. 540 X 470 X 290 mm size, minimum 16 kg of weight	1.00	Each		
C.4	<b>Wash Basin Repair</b> : Repairing of existing wash basin including checking and fixing of all fittings such as pillar cock/bib cock, waste coupling, trap and connections, replacing defective parts where necessary, stopping leakage, cleaning choke if any, tightening joints, re-fixing	2.00	Each		



	in proper position with brackets/supports, making good damages with cement mortar (1:4), and ensuring proper functioning, complete in all respects as per direction of the Engineer-in-Charge.				
C.5	Supplying, Fitting and Fixing of 12 mm <b>Bib Cock:</b> Supplying, fitting and fixing of best quality country-made 12 mm dia bib cock made of copper or copper alloy, chromium plated, conforming to BDS EN 200:2009; the faucet shall be free from leakage, permeation and defects, with water hammer value not exceeding 1.47 MPa, and shall remain leak-proof after 100,000 operations while ensuring reverse flow prevention performance; all internal and external surfaces shall be smooth and free from blowholes, fissures or any injurious defects; chromium plating shall be Class 2 Grade 1 with minimum 0.1 micron thickness; fixing in position with necessary fittings including sealing tape, ensuring leak-proof installation, complete in all respects as approved by the Engineer-in-Charge. Lever CP Conceal Bib Cock long/short body with aerator	12.00	Each		
C.6	Supplying, fitting and fixing of <b>400 mm x 600 mm bevelled edge mirror</b> of approved quality with all necessary fittings, accessories and fasteners, including making holes in walls, proper fixing in position, and mending good any damages with cement mortar (1:4), complete in all respects as per approved drawing and direction of the Engineer-in-Charge. Local Mirror, 5 mm thickness	2.00	Each		
C.7	Supply and fix 20mm diameter Type 1000 UPVC pipe for water supply. Rate shall include for all necessary fittings and specials, embedding to the wall plaster and necessary connection to the main supply.	10.00	L. M		



C.8	Supplying, fitting and fixing of <b>UPVC 100mm dia</b> (wall thickness of pipe 3 mm, national polymer/RFL) with all fittings and specials like plan bend, Tees, reducing sockets, junctions, door bends, 100mm dia cowls, ant siphon including gasket and cement joints making holes in walls and mending good the damages etc. all complete as per direction of the E-I-C. The rate is inclusive of 100mm thick Cement Concrete (1:3.6) all around the soil pipe under ground in/c. necessary earth cutting. The rate including removing existing damaged pipe of sewerage line and washing, cleaning etc all complete as per direction of engineer	5.00	L. M		
C.9	<b>Stainless Steel Soap Case:</b> Supplying, fitting and fixing of 1.2 mm thick stainless steel (SS) soap case of approved quality including all necessary fittings and accessories, making holes in walls wherever required, proper anchoring/fastening, and mending good any damages with cement mortar (1:4), complete in all respects as per approved drawing and direction of the Engineer-in-Charge.	6.00	Each		
C.10	<b>PVC Paper Holder:</b> Supplying, fitting and fixing of stainless steel (SS) paper holder of approved quality including all necessary fittings, accessories and fasteners, making holes in walls wherever required, proper fixing in position with screws/anchors, and mending good any damages with cement mortar (1:4), complete in all respects as per approved drawing and direction of the Engineer-in-Charge.	7.00	Each		
C.11	<b>Floor Grating Net:</b> Supplying, fitting and fixing of floor grating net in traps or drains of approved quality and type including making necessary holes in walls/floors, proper positioning and fixing with required fittings and fasteners, and mending good any damages with cement mortar (1:4), complete in all respects as per approved drawing and direction of the Engineer-in-Charge. Approx. 100 mm x 100 mm PVC floor grating net	10.00	Each		



C.12	Supplying, fitting and fixing of 100 mm inside diameter & wall thickness 2.7 mm - 3.4 mm best quality uPVC <b>Rain Water/waste water down pipe</b> fitting, fixed in position with head and shoes, bends, min.20 mm width F.I. Bar clamp and nails, and including all accessories such as round grating/domed roof grating, bands, sockets approved and accepted by the Engineer- in- charge.	30.00	L.m		
C.13	<b>Commode Repair:</b> Repairing of existing commode flushing system including thorough checking of cistern tank, flush valve/flush pipe, push button/handle mechanism, inlet (ball/float) valve, washer, seal and all internal fittings; dismantling defective parts, cleaning scales and sediments, replacing damaged or worn-out components such as float, rubber seal, washers, inlet valve, outlet valve, flush handle/button, and connecting pipes where necessary; stopping all leakages from tank and joints, adjusting float level for proper water storage, ensuring smooth and efficient flushing performance with required discharge; refixing cistern firmly in position with brackets/supports, tightening all nuts, bolts and connections, using sealing tape/compound where required; making good any damages to walls/floors with cement mortar (1:4), testing for leak-proof operation, and handing over in complete working condition as per direction of the Engineer-in-Charge.	2.00	Each		
C.14	Supplying, fitting and fixing of best quality Liver type <b>Pillar Cock</b> made of copper or copper alloy, chromium plated, conforming to BDS EN 200:2009; the faucet shall be free from leakage, permeation and other defects, with water hammer value not exceeding 1.47 MPa, and shall withstand 100,000 operations without seat leakage while ensuring reverse flow prevention performance; all internal and external surfaces shall be smooth and free from blowholes, fissures or any injurious defects; chromium plating shall be Class 2 Grade 1 with minimum 0.1 micron	2.00	Each		



	thickness; fixing in position with necessary fittings including sealing tape to ensure leak-proof installation, complete in all respects as approved by the Engineer-in-Charge.				
C.15	<b>CP angle stop cock:</b> Supplying, fitting and fixing of best quality surface mounted or concealed stop cock / angle stop cock (lever or round headed type) with wall flange, chromium plated, conforming to BDS EN 200:2009; the faucet shall be free from leakage, permeation and other defects, with water hammer value not exceeding 1.47 MPa, and shall withstand 100,000 operations without seat leakage while ensuring reverse flow prevention performance; all internal and external surfaces shall be smooth and free from blowholes, fissures or any injurious defects; chromium plating shall be Class 2 Grade 1 with minimum 0.1 micron thickness; fixing in position with necessary fittings including sealing tape to ensure leak-proof installation, complete in all respects as approved by the Engineer-in-Charge.	5.00	Each		
C.16	Supply, Fitting & Fixing Connection Pipe	5.00	Each		
C.17	Supply, Fitting & Fixing Vent Cowl 4"	2.00	Each		
C.18	Supply, Fitting & Fixing Hand Push	3.00	Each		
C.19	Septic tank desludging	1.00	Each		
C.20	<b>Pump motor :</b> Supply and installation of automatic pressure and flow controller suitable for centrifugal pump motor up to 2 HP, having minimum flow rate 80 liter/min, starting flow rate 2–2.5 liter/min, maximum switching current 12 A, maximum total pressure 10 bar and operating pressure range 1–3.5 bar; compatible with 230 V $\pm$ 5% AC, 50 Hz power supply; provided with pressure gauge of minimum 40 mm dia (0–12 bar), inlet and outlet size minimum 1 inch, inline threaded type; protection class IP-65 or better; manufactured in EU/G7 countries as per approved sample and direction of the Engineer-in-Charge, complete with all necessary fittings, connections, testing and commissioning. Maximum flow rate-80	1.00	Each		



	Liter/min				
<b>Total</b>					
<b>D</b>	<b>Electrical Works with Fittings</b>				
D.1	<b>MDB/SDB:</b> Supplying, assembling, fitting, fixing & installation (with surface/concealed electric wiring for effective connection) of Main/Sub distribution board (Metal enclosure) with necessary MCBs/DP/TP/SP, RCCB, Isolator, Basbar etc. as per sample and approval by E-I-C. Rate shall include for necessary electrical wiring from electric meter to the DB/SDB. Minimum one year warrantee, suggested Brand: Havels or equvalent.	1.00	Each		
D.2	<b>Circuit Breaker (SPMCB)</b> Providing & fixing on a prepared board 250 volt grade following single pole miniature circuit breaker (SPMCBs) having minimum breaking capacity 6-KA / 10 KA with thermal over-current and instantaneous electromagnetic short circuit release provision as per BDS IEC and IEC / VDE / NEMA / BS / JIS standard.SPMCBs accepted / approved by the Engineer-in-charge.				
	15 – 40 Amps (minimum 6 KA) MCB	8.00	Each		
	60/63 Amps (minimum 10 KA) MCB	1.00	Each		
D.3	<b>Gang Switch:</b> Providing and fixing 250 volts, 5/6 amps (minimum) concealed type gang switch / switch socket of approved quality, manufactured/assembled and tested in accordance with IEC/VDE/NEMA/BS/JIS standards along with relevant BDS standards, mounted on required size 18 SWG galvanized plain sheet or self-extinguishing PVC board (650°C rated) of 76.2 mm (3") depth; all electrical contacts shall be of brass/copper for safe and durable operation; complete with necessary fixing accessories, connections and installation as per approved design and direction of the Engineer-in-Charge. Manufactured in Hong Kong / Malaysia / Singapore / South Korea / Thailand.				
	One gang switch	2.00	Each		
	Two gang switch	3.00	Each		



	Four gang switch	8.00	Each		
	Fan regulator( gang type)	13.00	Each		
D.4	<p><b>Power Socket:</b> UNIVERSAL COMBINED SWITCH SOCKET OUTLET (SURFACE/CONCEALED TYPE) Providing &amp; fixing 250 volt single phase universal combined switch socket outlet (surface / concealed type) Manufactured/ Assembled and tested in accordance with IEC / VDE / NEMA / BS / JIS along with relevant BDS IEC standards mounted on required size 18 SWG galvanized plain sheet board / plastic board (self-extinguishing 650 degree centigrade) of 76.2 mm. (3") depth. Sample to be approved by the Engineer-in-charge. Manufacturer shall have certificate of standard which they follow. Made in HONGKONG / MALAYSIA / SINGAPORE / S KOREA / THAILAND</p>				
	13 / 15 / 16 / 20 Amps.	6.00	Each		
D.5	<p><b>Single Tube Light Fittings:</b> Providing and fixing 4' x 40 watt tube light fittings with superior quality electronic driver (minimum 1 year guarantee), lamp holder, necessary internal wiring with 2 x 0.4 sq. mm PVC insulated stranded flexible FR wire, earth terminal etc. (excluding lamp), suitable for LED lamp operation; light source 20W LED T-8 tube; body made of MS sheet with PC cover and plastic grill, size approximately L-1340 mm x B-104 mm x H-55 mm; complete with all necessary accessories, fittings, ceiling roses, installation, testing and commissioning, with 2 years warranty, and sample to be approved by the Engineer-in-Charge. Equivalent models include Gloria GTF (LED) 892x1x20W, Energy+ EPIL-4305, Cosmo BDTCL-TLF-06, Asha ACS-TLS 307x1x40W, Crescent CTLS-225x1x40W or approved equivalent.</p>	8.00	Each		



D.6	<p><b>Flood Light Fittings (LED):</b> Supply and fixing of LED flood light fittings of approved quality with minimum luminous efficacy of 100 lm/W, power factor not less than 0.95, and Colour Rendering Index (Ra) <math>70 \leq Ra &lt; 85</math>; driver shall be of IEC standard such as MEANWELL / OSRAM / ENERGY+ / SIGNIFY (PHILIPS) or equivalent, and LED chips shall be EPISTAR / OSRAM / SIGNIFY (PHILIPS) / CREE / BRIDGELUX or equivalent; colour temperature 3500K–6500K (warm white); body made of aluminium alloy with aluminium reflector and heat proof glass/polycarbonate cover; suitable for 50W LED flood light operation; complete with all accessories, fittings, internal wiring, installation, testing and commissioning with minimum 2 years warranty, and sample to be approved by the Engineer-in-Charge. Equivalent models include Gloria Cat No. GLFL-914, Energy+ EPFDL-17001 (50W), Cosmo BDTCL-LFDL-01, Adex AD FLE 50W830, Asha ACS-LFL-2155 (50W), Pasha PE FLL0005054/50W or approved equivalent.</p>	4.00	Each		
D.7	<p><b>Caged LED light:</b> Supplying, assembling, fitting, fixing, installation (with effective connection) testing &amp; Commissioning 20W LED ceiling mounted lamp with metal cage with separate gang switch as per direction and sample approved by E-I-C. Minimum one year manufacturer warrantee</p>	6.00	Each		
D.8	<p><b>LED light:</b> Supplying, assembling, fitting, fixing, installation (with effective connection) testing &amp; Commissioning 20W LED wall mounted lamp, with holder as per direction and sample approved by E-I-C. Minimum one year manufacturer warranty.</p>	22.00	Each		



D.9	<p><b>Ceiling Fan:</b> Supplying and fixing AC capacitor type ceiling fan (without regulator) of approved quality and size, complete with minimum 305 mm (1 ft) long MS pipe down rod of 0.75–1.0 inch dia and 2.3 mm thickness, tempered cast aluminium blades, 2.5 <math>\mu</math>F 400V AC capacitor, canopy, double Z ball bearing, best quality silicon sheet core, high grade copper enamel winding wire, aluminium alloy/metal body with safety pin and powder coated heat-resistant finish as per BDS 818; including PVC wiring connection and all necessary accessories, fittings, ceiling roses, fan hook with royal bolt installation, testing and commissioning. Rated voltage 230 V, frequency 50 Hz, rated speed 300 rpm <math>\pm</math>5%, service value minimum 3.5 m<sup>3</sup>/min/W, temperature rise maximum 55°C, insulation class minimum E, noise level maximum 60 dB at 1 m distance, input power maximum 70 W, all complete as per direction of the Engineer-in-Charge. 1442 mm. (56") Sweep</p>	1.00	Each		
D.10	<p><b>Surface Conduit Point Wiring (BYA)</b> Without Switch: Surface conduit wiring for point wiring looping at switch board with earth terminal using 1C <math>\times</math> 2 <math>\times</math> 1.5 sq mm PVC insulated cable (BYA) and 1C <math>\times</math> 2 <math>\times</math> 1.5 sq mm PVC insulated ECC (BYA) green/yellow bi-colour, including circuit wiring from SDB to switch board with 1C <math>\times</math> 2 <math>\times</math> 2.5 sq mm PVC insulated cable (BYA) and 1C <math>\times</math> 2 <math>\times</math> 2.5 sq mm PVC insulated ECC (BYA) through minimum 25 mm dia PVC conduit of 1.5 mm wall thickness (one conduit from switch board to ceiling point considered for three pair of cables), complete with 18 SWG G.P. sheet/PVC switch board and pull box (preferably concealed) with 3 mm thick ebonite sheet cover, excluding switches; including all necessary fittings, fixing materials, making good damages, proper connections with brass/copper contacts using connectors or soldering (no twisting allowed), cables manufactured and tested as per IEC/BS/VDE and relevant BDS standards,</p>				



	all complete as per detailed specification and direction of the Engineer-in-Charge.				
	Light point/Exhaust/Wall bracket fan point	40.00	Point		
D.11	<b>Wiring Repair:</b> Conduit or surface wiring on surface with the following PVC insulated stranded cable (BYA) & green Colored PVC insulated ECC wire (BYA) through PVC Conduit complete with fixing materials and uPVC channel & other accessories as specified, Manufacturer according to the Specification & direction, sample approval by the Engineer- in-charge.				
	1C-2x1.5sqmm (BYA) cable with 1.5sqmm (BYA) ECC wire through PVC pipe of minimum inner dia 25 mm having wall thickness of 1.5 mm	25.00	m		
	1C-2x2.5sqmm (BYA) cable with 2.5sqmm (BYA) ECC wire through PVC pipe of minimum inner dia 25 mm having wall thickness of 1.7 mm.	25.00	m		
D.12	<b>Earthing system:</b> Supply & installation (with effective connection) of 8'-0" Brass or Copper Rod (10mm dia) under 2'-0" from FGL outside school building, Connecting the rod with SDB's earthing bar by 6mm dia copper wire (properly soldering with the rod) through 25 mm dia pvc pipe complete with necessary accessories as per direction of Engineer in-charge.	1.00	Each		
<b>Total</b>					
<b>E</b>	<b>Access Development Works</b>				
E.1	<b>EWEx(Rd/C/P):</b> Earthwork in excavation of roadway/canal/pond etc. of any dimension in all kinds of soil including cutting to required depth, bailing out water if necessary, and depositing the excavated earth on embankment; breaking clods, ramming, dressing and leveling in 225 mm layers, and maintaining proper side slopes and levels of both pond and embankment as per design drawings; all complete including finishing works as per direction and satisfaction of the Engineer-in-Charge. For initial lead of 30 m and lift of 1.5 m	2.43	Cu.m		



E.2	<p><b>Sand filling</b> on road bed in improved sub-grade with clean sand having minimum FM 0.50, free from dust, earth, organic matter, vegetation and other foreign materials, including supplying, laying, spreading in layers, watering and compacting by appropriate mechanical means to achieve minimum 98% of Maximum Dry Density (MDD) as per Modified Proctor test and to ensure minimum soaked CBR 8% or design CBR as specified; all complete including necessary finishing, leveling and compaction as per direction of the Engineer-in-Charge.</p>	15.60	Cu.m		
E.3	<p><b>Brick work:</b> Brickwork with first class bricks in cement sand mortar (FM 1.2) in (1:4) proportion for exterior walls, including filling all joints with mortar, raking out joints where necessary, soaking bricks in water for at least 24 hours before use, washing of sand, proper laying and bonding, providing necessary scaffolding, curing for minimum 7 days, and including cost of water, electricity and other incidental charges; measurement to be taken considering 250 mm width for one brick length and 375 mm for one and a half brick length; all complete as per approved drawing and direction of the Engineer-in-Charge.</p>	3.78	Cu.m		
E.4	<p><b>Brick work 125mm :</b> 125 mm thick brickwork with first class bricks in cement sand mortar (FM 1.2) in (1:4) proportion, including making proper bond with connected walls, raking out joints, cleaning and soaking bricks in water for at least 24 hours before use, washing of sand, providing necessary scaffolding, proper laying and workmanship, and curing for minimum 7 days; including cost of water, electricity and other incidental charges, all complete as per approved drawing and direction of the Engineer-in-Charge.</p>	21.61	Sq. M.		
E.6	<p><b>SBFS (FM-0.50):</b> Providing single layer brick flat soling (BFS) with 1st class or picked bricks, laid true to level and maintaining camber/super elevation and grade, including carrying bricks, filling</p>	55.39	Sq. M.		



	the interstices tightly with sand of minimum FM 0.50, etc., all complete in all respects as per approved drawings, specifications, and direction of the Engineer-in-Charge.				
E.7	<b>Brick on end edging:</b> EE (75 mm): Brick on edge edging (75 mm across the road) with first class or picked jhama bricks, laid true to level and grade, including cutting trenches, removing earth, refilling and ramming the sides properly, and filling the gaps with fine sand (F.M. 0.80), including cost of all materials, all complete and accepted by the Engineer-in-Charge.	4.88	L.M.		
E.8	<b>Cement concrete:</b> 75mm thick lean cement concrete (1:2:4) in floor and wherever needed with Portland Composite Cement (CEM II/AM, 42.5N), best quality coarse sand (minimum FM1.2) and 20mm down well graded picked brick chips (LAA value not exceeding 38), in/c breaking bricks into chips screening, mixing by concrete mixer machine, laying, compacting, washing of sand, curing for requisite period, etc. all complete as per direction of the E-I-C. Top surface of floor shall be non-screeding with proper finishing.	4.08	Sq. M.		
E.9	<b>Providing single layer polythene sheet :</b> Supplying and laying of single layer polythene sheet weighing one kilogram per 6.5 square meter in floor or any where below cement concrete complete in all respect and accepted by Engineer in-charge.	4.08	Sq. M.		
E.10	<b>GI Railing for Ramp:</b> Supplying, fitting and fixing railing for ramp with 38-40mm dia of 2.3mm thickness GI pipe, 900mm height with 38mm dia 2.3mm thick vertical post @ 1200mm c/c, 150mm embedded into the ramp after cutting grooves and mending good the damages with Cement Concrete (1:2:4) in/c polishing/painting etc. The rate including making 50 X 100 mm Concrete wheel guard in both sides of the ramp with painting as direction of the E-I-C.	7.16	Sq. M.		



E.11	<b>Plastering with NCF:</b> Minimum 12 mm thick cement sand (F.M.1.2) plaster with neat cement finishing to plinth wall, floor, Dawrf wall with cement (1:4) up to 1500 mm below ground level including washing of sand, use black or red color to mixture, finishing the edges and corners and 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.	8.18	Sq.M.		
<b>Total</b>					
<b>F</b>	<b>Solar Power System Installation</b>				
F.1	<b>Solar PV Module:</b> Supply, installation, testing, and commissioning of high-efficiency Tier-1 Monocrystalline Silicon (Half-cut cell technology) Solar PV Modules, with each individual module having a rated capacity of not less than 500Wp under Standard Test Conditions (STC). The modules must be manufactured by a Bloomberg New Energy Finance (BNEF) Tier-1 listed company and comply strictly with IEC 61215 and IEC 61730 standards for design qualification and safety. The units shall feature anti-reflective coated tempered glass, an anodized aluminum alloy frame, and IP68-rated junction boxes with MC4 compatible connectors, ensuring a module efficiency of $\geq 21\%$ . All components must be delivered with a minimum 12-year product warranty and a 25-year linear performance warranty; all technical data sheets, factory test reports, and origin certificates must be submitted for technical evaluation and approval by the Engineer-in-Charge prior to site delivery.	3500.00	Wp		



F.2	<p><b>Mounting Structure:</b> Supply, fabrication, and installation of a high-resilience solar mounting structure utilizing 75mm diameter Hot Dip Galvanized (GI) pipes with a minimum wall thickness of 4mm, engineered to withstand a basic wind speed of not less than 150 km/h in strict accordance with BNBC 2020 and ASCE 7-10 standards.. Each vertical support pole shall be securely fixed to the existing RCC slab using a 200mm x 200mm x 4mm thick GI base plate fastened with heavy-duty anchor bolts, followed by the construction of a 300mm x 300mm x 300mm Cement Concrete (CC) casting block for added structural stability and ballast. The concrete pedestals must be finished with smooth plastering and high-quality weather-coated painting to ensure aesthetic uniformity and environmental protection. To maintain the integrity of the roof slab, all drilled and bolted connection areas must be hermetically sealed with a high-grade epoxy coating to provide a robust water-leakage prevention barrier. The entire structural assembly, including all welding and specialized anchoring, must be implemented with technical precision and is subject to the final inspection and approval of the Engineer-in-Charge.</p>	3500.00	Wp		
F.3	<p><b>All in one Energy Storage System:</b> Supply, installation, testing, and commissioning of a high-efficiency, fully integrated All-in-One (AIO) Energy Storage System (ESS), featuring a hybrid inverter and Lithium Iron Phosphate (LiFePO4) battery modules manufactured by the same manufacturer to ensure seamless communication and vertical system integration. The system shall provide a nominal AC output of 6kW with a minimum integrated battery capacity of 10 kWh, achieving a maximum conversion efficiency of <math>\geq 97.6\%</math> and a battery round-trip efficiency of <math>\geq 95\%</math>. Technical parameters must include a rated PV input voltage of 360V, a maximum input voltage of 600V, and dual MPPT trackers supporting up to</p>	1.00	Set		



	<p>16,000 Wp. The unit must demonstrate rigorous environmental and safety compliance, including UN 38.3 certification for safe battery transportation, RoHS/REACH environmental compliance, and an IP66 ingress protection rating for versatile installation. The system must support an Emergency Power Supply (EPS) transition time of <math>\leq 4</math>ms and provide a 200% peak overload capacity for 10 seconds. Acceptable major brands include Fox ESS, BYD, Huawei, Sungrow, GoodWE (or equivalent approved by the Engineer-in-Charge), provided the single-brand manufacturing requirement is met. The entire assembly must strictly comply with IEC 62109-1/2 and IEC 62619 safety standards, including a comprehensive 5-year manufacturer warranty, with all technical submittals and factory test reports subject to the final evaluation and approval of the Engineer-in-Charge.</p>				
F.4	<p><b>Solar Array Junction Box:</b> Supply, fitting, and fixing of a high-quality, factory-made and fully assembled Solar Array Junction Box (AJB) fabricated from 18 SWG Mild Steel (MS) sheet, featuring a robust hinged-type door and integrated locking arrangement for secure site operation. The unit must be delivered as a complete, pre-wired assembly featuring a Type II Surge Protection Device (SPD) and a DC circuit breaker of adequate rating specifically matched to the PV string configuration to ensure comprehensive overcurrent and voltage spike protection. All surfaces of the board shall be finished with a high-durability powder coating using epoxy polyester resin in a grey or off-white color to prevent corrosion and withstand environmental exposure. The factory-integrated assembly, including all internal busbars, terminal blocks, and cable glands, must be executed with technical precision and is subject to the final inspection and approval of the Engineer-in-Charge.</p>	1.00	Set		



F.5	<p><b>AC Combiner Box:</b> Supply, fitting, and fixing of a high-quality, factory-made and fully assembled AC Combiner Box (ACCB) fabricated from 18 SWG Mild Steel (MS) sheet, featuring a robust hinged-type door and integrated locking arrangement for secure site operation. The unit must be delivered as a complete, pre-wired assembly equipped with a Type II AC Surge Protection Device (SPD) and a molded case circuit breaker (MCCB) or MCB of adequate rating specifically sized to handle the combined AC output of the inverters. All surfaces of the board shall be finished with a high-durability powder coating using epoxy polyester resin in a grey or off-white color to ensure long-term resistance against corrosion and environmental wear. The factory-integrated assembly, including internal busbars, neutral links, and properly sized terminal blocks, must be executed with technical precision and is subject to the final inspection and approval of the Engineer-in-Charge.</p>	1.00	Set		
F.6	<p><b>Cables:</b> Supply and fitting, fixing cables for solar cables of following sizes with necessary accessories such as PVC Channel/flexible pipes, cable tie, PVC tape, Copper lugs, connector etc. All cables shall be manufactured and tested according to IEC/BS/VDE standards. The work shall be carried out as per direction/approval of the engineer in-charge.</p>				
F.6.1	For Inverter Wiring: 1Cx1-6RM NYFF Cable	100.00	Meter		
F.6.2	For String Wiring: 1Cx1-10 RM BYM Cable	20.00	Meter		
F.6.3	Earthing Cable: 1x1C-4RM BYA ECC	50.00	Meter		
F.6.4	Earthing Cable: 1x1C-10RM BYA ECC	50.00	Meter		
F.7	<p><b>Accessories:</b> Supply and installation of all essential installation accessories and miscellaneous hardware, including UV-stabilized PVC conduits, perforated GI cable trays, heavy-duty cable ducts, and industrial-grade nylon cable ties, along with high-quality weatherproof cable glands, end-sealing kits, and stainless steel (SS316) mounting fasteners. The</p>	1.00	Lot		



	<p>scope also includes safety signage for high-voltage DC circuits, bi-metallic lugs for dissimilar metal terminations, heat-shrinkable ferrule sleeves for wire identification, and industrial-grade sealant/gaskets for all enclosure entries to maintain IP-rated protection. All accessories must be sized and installed with technical precision to ensure maximum mechanical protection and professional cable management, fully compliant with the requirements and final satisfaction of the Engineer-in-Charge.</p>				
F.8	<p><b>Earthing and Protection:</b> Supply, installation, testing, and commissioning of a dedicated Earthing and Lightning Protection System, utilizing a 12mm diameter solid copper conductor for the main earthing lead to ensure low-impedance discharge paths. The system shall include a boring of 40 to 60 feet depth with a minimum borehole diameter of 150mm, featuring a high-conductivity copper earthing rod encased in bentonite or chemical earth enhancement compound to achieve a measured earth resistance of less than 5 Ohms. Lightning protection shall be provided via a specialized Lightning Arrester mounted on a galvanized mast, with all connections for solar panels and peripheral equipment secured using heavy-duty copper clamps, stainless steel nuts, and bolts to prevent galvanic corrosion. All earth pits must include a protective masonry chamber and a test link for periodic resistance measurement, with the entire installation executed to the technical satisfaction and final approval of the Engineer-in-Charge.</p>	1.00	Set		
F.9	<p><b>Automatic Changeover Switch:</b> Supply and installation of a high-quality 63A compact single-phase manual changeover switch, featuring a rotary handle with a 3-position (1-0-2) control mechanism for reliable source switching. The unit shall be a premium brand such as ABB, Havells, or equivalent, ensuring robust internal contacts and a durable</p>	1.00	Each		



	enclosure for long-term electrical isolation. All terminations must be securely lugged and tested to the technical satisfaction and final approval of the Engineer-in-Charge.				
F.10	<b>Drawing:</b> Preparation and provision of a comprehensive Single Line Diagram (SLD) of the as-built solar PV system, color-printed on high-quality A3 paper and finished with heavy-duty lamination for long-term site durability. The diagram must clearly illustrate all system components, including PV strings, inverters, protection devices, and cable schedules, and shall be securely mounted at the main distribution point or control room for operational reference, subject to the final approval of the Engineer-in-Charge.	1.00	Each		
<b>Total</b>					
<b>GRAND TOTAL (A+B+C+D+E+F)</b>					

**Package 2: Purbo Char Falcon Govt Primary School, Union: 5 no. Char Falcon, Kamalnagar Upazila, Lakshmipur.**

Sl. No.	Items Name with Specification	Quantity	Unit	Unit price (Including Vat, Tax & Delivery)	Total Price (Including Vat, Tax & Delivery)
A	<b>Alignment with the National Cyclone Shelter Policy</b>				
A.1	<b>Mobilization</b> with additional scaffolding for repairing RCC slab, cornice/drop wall/outer wall, etc. of a two-storied building, including site cleaning Scrapping old mosses and plaster before commencement of physical work, during the contract period, and demobilization after completion of the works under the contract accepted by the Engineer; the work shall also cover cleaning, clearing, cutting or filling, and dressing of the project area to ensure smooth execution of all activities in a safe and secure environment, including stockpiling of resulting materials at locations approved by the Engineer for disposal; payment shall be based on the ground area determined by the Engineer and shall be proportionate to the overall progress of the work as	1.00	Item		



	<p>approved; the work shall mandatorily include provision, installation, and continuous operation of a 1 HP pump motor with hose pipe and generator as required, compulsory use of tarpaulin, polythene to protect works, materials, and working areas from rain and adverse weather conditions, ensuring adequate lighting arrangements at all work locations for safe and uninterrupted execution, and provision and strict use of all necessary safety equipment and protective gear including helmets, gloves, goggles, safety vests, and safety belts in full compliance with safety standards throughout the execution period.</p>				
A.2	<p><b>Rooftop Red Marking Signal Light :</b> Supplying, fitting and fixing signal red light to ensure the shelter is visible during disasters, especially at night and in poor weather conditions. Type: LED-based solar-powered aviation warning light. Material: Weather-resistant, UV-stabilized polycarbonate and aluminum alloy body. Light Source: High-intensity red LED with a visibility range of at least 2-3 kilometers. Solar Panel Type: Monocrystalline or polycrystalline. Power Output: Minimum 5W to 10W depending on the light's power requirement. Battery: Lithium-ion battery with at least 24 hours of backup (fully charged). Lighting Mode: Steady or flashing (adjustable); Flash rate: 20-60 flashes/min. Ingress Protection: Minimum IP65 for water and dust resistance. Mounting: Steel or aluminum mounting bracket compatible with the rooftop structure. Other Features: Automatic light sensor for dusk-to-dawn operation. All complete as per direction of the E-I-C.</p>	1.00	Each		



A.3	<p><b>Mike with Siren System Installation:</b> Supplying, fitting and fixing mike with siren system to broadcast announcements and emit a siren to alert the community during emergencies. Microphone Type: Handheld or gooseneck microphone with a noise-canceling feature. Frequency Response: 50 Hz to 15 kHz. Build: Durable, shock-resistant, and weather-resistant. Amplifier: Power Output: Minimum 150W to 200W. Voltage: Compatible with the cyclone shelter's power system (solar backup preferred). Input Ports: Multiple inputs for microphone and auxiliary devices. Siren System Sound Range: Audible at a distance of 1-2 kilometers in open areas. Sound Patterns: Multi-tone options (wailing, steady, pulse) with adjustable volume. Power Source: Solar or AC/DC with a backup battery (minimum 6 hours of runtime). Speakers Type: Outdoor horn speakers with high weather resistance (IP65 minimum). Power Output: Minimum 4 Nos. 75W-100W per speaker. Material: Aluminum or ABS body with UV-resistant coating. Accessories: Necessary cables, connectors, and mounts. All complete as per direction of the E-I-C.</p>	1.00	Item		
A.4	<p><b>Rooftop "S" Mark Painting :</b> Supplying and painting "S" Mark on the roof top to identify the shelter as a designated emergency cyclone shelter from aerial views. Dimensions: Minimum 3 meters in length and 1.5 meters in width for clear visibility or as per drawings Color: High-contrast red paint with a white border (reflective for night visibility).</p>	1.00	Each		



	<p>Paint Type: Base Coat Anti-corrosion primer suitable for concrete surfaces. Top Coat: Reflective polyurethane or epoxy paint with UV and weather resistance.</p> <p>Durability: Weatherproof and resistant to rain, sun, and wind for a minimum of 5 years.</p> <p>Surface Preparation: Cleaning, sanding, and priming of the concrete rooftop before painting.</p> <p>Application: Two coats of reflective paint applied with a roller or spray for uniformity.</p> <p>All complete as per direction of the E-I-C.</p>				
		<b>Total</b>			
<b>B</b>	<b>Civil Works</b>				
<b>B.1</b>	<b>Preliminary Works</b>				
B.1.1	<p><b>Sign Board with Signage:</b> Supplying, transporting, fitting and installation of approved best quality country-made mild steel (MS) signboard as per drawing, complete in all respects and accepted by the Engineer-in-Charge (E-I-C); size 2000 mm × 1000 mm, made of 2 mm thick MS sheet continuously welded on both sides with MS rectangular hollow box frame comprising 75 mm × 75 mm × 3 mm vertical columns and 50 mm × 50 mm × 3 mm horizontal members, including 4 nos. 12 mm dia anchor bars welded with column box and embedded minimum 450 mm into foundation; RCC foundation consisting of 400 mm × 400 mm × 400 mm footing and 250 mm × 250 mm × 600 mm column base using mix ratio 1:1.5:3 with minimum cement content ensuring <math>f'_{cr} = 24</math> MPa, <math>f'_c = 17</math> MPa at 28 days and water-cement ratio not exceeding 0.45, conforming to ACI/BNBC/ASTM standards, using cement BDS EN-197-1-CEM-I 52.5N or ASTM C150 Type I, sand comprising 50% local (F.M. 1.2) and 50% Sylhet/coarse sand (F.M. 2.2), and 20 mm down well-graded stone chips as per ASTM C-33; including proper shuttering, reinforcement (12 mm dia bars @ 200 mm c/c in footing,</p>	1.00	Item		



	4 nos. 12 mm dia bars in column, 10 mm dia stirrups @ 150 mm c/c), machine mixing or batching plant, vibration, curing for minimum 28 days, and all associated costs such as water, electricity and testing; including dismantling of existing concrete if required, site cleaning and debris disposal, and 125 mm thick brick flat soling using 1st class bricks at foundation base (400 mm x 400 mm); surface preparation and painting with one coat anti-corrosive paint and two coats synthetic enamel paint in dark blue (Donor official color: RGB 0/51/160, HEX #0033A0, CMYK 100/80/3/2, Pantone 286C); also including supply and installation of 2 nos. high-quality reflective stickers (hexagonal pattern) of size 2000 mm x 1000 mm with prior sample approval from E-I-C.				
B.1.2	<b>Stripping of unserviceable plaster</b> including racking out joints, cleaning etc.	87.00	Sq. m.		
<b>Sub Total</b>					
<b>B.2</b>	<b>Structural Works</b>				
B.2.1	<b>RCC Works (1:1.5:3):</b> Reinforced cement concrete works in nominal mix ratio 1:1.5:3 (measured on gross concrete section) with stone chips and 100% sand of FM 2.2, having minimum cement content with maximum water-cement ratio 0.40, achieving characteristic compressive strength $f'c = 25$ MPa at 28 days and minimum $f'cr = 33.5$ MPa as per ACI/BNBC/ASTM standards; cement shall conform to BDS EN 197-1 CEM I 52.5N / ASTM C150 Type I, fine aggregate shall be best quality Sylhet sand or equivalent and coarse aggregate shall be 20 mm down well-graded stone chips conforming to ASTM C33; including design, making and fixing of formwork (watertight and true to plumb), placing reinforcement in position, mixing by machine with hopper using standard measuring boxes, casting, vibrating, compacting, curing for minimum 28 days, and removing shuttering after	1.68	Cu.m.		



	specified period; including all water, electricity and incidental charges, complete as per approved drawing and direction of the Engineer-in-Charge. (Rate excludes laboratory test fees, cost of reinforcement and its fabrication, placing and binding, and cost of shuttering and centering). Pedestals, column, column capital, lift wall and RCC wall up to 2nd floor.				
B.2.2	<b>Rebar:</b> Grade B400C-R/ B400CWR/ 400DWR: Ribbed or Deformed bar produced and marked as per BDS ISO 6935-2:2016 with minimum yield strength, $f_y$ (ReH) = 400 MPa, but the tested yield strength shall not exceed $f_y$ by more than the 125 MPa and the ratio of tested ultimate strength, $f_u$ (Re) to tested yield strength ( $f_y$ ) shall be at least 1.25 and minimum elongation after fracture (A5.65) & minimum total elongation at maximum force (Agt) is 17% and 8% respectively.	20.00	kg		
B.2.3	<b>Plaster</b> Minimum 12 mm thick cement sand (F.M. 1.2) plaster (1:4) with fresh cement applied to both inner and outer surfaces of walls, including surface preparation by cleaning and washing of sand, finishing of corners and edges, curing for at least 7 days, and including cost of water, electricity, scaffolding, and all other incidental charges, complete in all respects as per drawings and accepted by the Engineer-in-Charge.	87.00	Sq. m.		
B.2.4	<b>Chemical Water proofing on the roof slab:</b> The roof surface proper cleaning by flashing water before applied water proofing chemical on the roof slab approved quality material (Barger or equivalent-2 coats (horizontal and vertical direction) water Mr. Expert water barrier/Brush bond (13 Sq,M/ 20.088 kg pac) over a coat Nito bond SBR Latex plus and 2-coats Flexible Roofing Compound on top as finishing coats - color green) after preparation of the surface by removing existing rendering in alternative panels etc. After completing water proofing works on roof, the roof need to be seen	209.05	Sq. m.		



	smooth slope surface and uniform color. All complete as per direction of the E-I-C. The rate will include cleaning, removing and washing existing top portion of slab.				
B.2.5	<b>Plastering with NCF:</b> Minimum 12 mm thick cement sand (F.M.1.2) plaster with neat cement finishing to dado (up to 150 mm from floor level), floor with cement (1:4) including washing of sand, use black or red color to mixture, finishing the edges and corners and 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.	79.70	Sq. M.		
<b>Sub Total</b>					
<b>B.3</b>	<b>Ground Floor Development Works</b>				
B.3.1	<b>Floor Plastering with NCF:</b> Minimum 12 mm thick cement sand (F.M.1.2) plaster with neat cement finishing to plinth wall, floor, Dwarf wall with cement (1:4) up to 1500 mm below ground level including washing of sand, use black or red color to mixture, finishing the edges and corners and 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.	37.67	Sq. M.		
<b>Sub Total</b>					
<b>B.4</b>	<b>Door, Window, Grill Repair Works</b>				
B.4.1	<b>Window glass Repair:</b> Renewing of window panels by replacing damaged, unserviceable or broken glass panes with 5 mm polycarbonate fiber sheet instead of glass, including supply, fitting and fixing of best quality polycarbonate sheet with all necessary hardware, sealing materials and accessories, complete in all respects as per specification and acceptance of the E-I-C.	7.81	Sq.M.		



B.4.2	<p><b>Window repair:</b> Repair of metal swing frame window shutter with polycarbonate sheets by replacing the corroded GI sections and existing polycarbonate sheets should be replaced with 18 BWG GP. sheet. Existing MS/GI sections are 3mm thick and 19mm wide, shutter frame in three equal part and upper part should be provided with vertically in each shutter, fabricating, welding , installation, cost of electricity, workshop charge, carriage, fixing with MS clamps or steel royal bolt in walls/RCC member.The rate including window seal by plastering, applying 2 coats anticorrosive and 2 coats enamel paint (Berger) and finishing etc all complete as per direction of the E-I-C. including necessary repair or replacement of window lock and adjustable window stay.</p>	23.42	Sq.M.		
B.4.3	<p><b>Window Grill Repair:</b> window grills any where directed made of Galvanized MS flat bar 40mmx6mm @100mm c/c vertically fitted with 2 nos Horizontally Galvanized MS flat bar (40mmx6mm) @ 450mm c/c maximum, in/c.removing rust, brushing, polishing, fabricating, welding of each point, riveting if necessary, cost of electricity, workshop charge, carriage, fixing with Galvanized MS clamps or steel royal bolt in walls/RCC member and painting with two coats of synthetic enamel paint over a coat of anticorrosive priming for all floors etc. all complete as per direction of the E-I-C.</p>	1.93	Sq.M.		
B.4.4	<p><b>Minor Wooden Door Repair (2.1m × 1.0m):</b> Repairing of existing wooden door including (100mm × 38mm) lock rail, (125mm × 38mm) middle rail and (225mm × 38mm) bottom rail with 25mm thick one side raised paneling; supplying and fitting of best quality 6 nos. 100mm iron hinges, 2 nos. 12mm dia tower bolts (300mm &amp; 225mm long), 2 nos. heavy type nickel plated handles, hinge cleats and buffer blocks; and any defective timber to be</p>	5.00	Each		



	repaired or replaced as required; complete with sand papering for smooth finish for all floors, as per direction of the E-I-C; timber to be Jack wood; including supply and installation of one heavy security 60mm padlock (HMBR) for each door; applicable for single/double leaf doors and all sizes of wood complete.				
B.4.5	<b>Hand rail repair:</b> Supply and refixing of existing GI hand rails (Top chord 60mm dia GI pipe of 2.9mm wall thick) including a flat bar (25mm*5mm) at the bottom with vertical 20 mm dia GI pipes for stair/parapet with supply of all materials and accessories and replace the damaged/lost portions in hand rails with necessary removing, welding, fixing with the objects, carrying, loading, unloading, repairing hole, applying zinc-oxide etc all complete as required	58.88	Sq.M.		
B.4.6	<b>Minor Repairing existing collapsible gate</b> (2.7 m x 2.6m) at 1st/2nd floors including removing inside and out side rust with respectively steel brush and cup brush, brushing, polishing, fabricating, welding of each point, riveting refixing, changing wheels, bottom rail if necessary, cost of electricity, workshop charge, carriage, fixing with Galvanized MS clamps or steel royal bolt in walls/RCC member,, welding etc all complete as required to making smooth sliding as per direction of E-I-C	3.00	Each		
B.4.7	<b>MS Door Repair :</b> Repairing of existing MS door including rectification or replacement of damaged or corroded members using suitable MS flat/bar/angle/box sections as per existing design, including cutting, welding, grinding and proper alignment; providing and fixing all necessary fittings and fixtures such as heavy-duty MS hinges, tower bolts, handles, locking arrangements, hinge cleats and stoppers/buffers; cleaning the surface by wire brushing or sand papering, applying anti-corrosive primer and finishing with two coats of	3.00	Each		



	approved enamel paint; including supply and fixing of one 60 mm heavy duty padlock (HMBR or equivalent) for each door; all complete in all respects as per specification and direction of the Engineer-in-Charge. d are finished). Jack wood. The rate includes a Heavy Security 60mm Pad Lock (HMBR) for each door.				
<b>Sub Total</b>					
<b>B.5</b>	<b>Painting Works</b>				
B.5.1	<b>Plastic emulsion paint on internal wall:</b> 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. upto desired finishing, elapsing specified time for drying or recoating; all complete in all floors and accepted by the Engineer-incharge	891.88	Sq. M.		
B.5.2	<b>Weather coat exterior paint:</b> Exterior standard acrylic emulsion paint of approved best quality and color, having water-resistant properties and resistance against fungi, fading, and flaking, supplied from an authorized local agent of the manufacturer in sealed containers; applied to exterior surfaces with proper surface preparation including cleaning, drying, removal of dirt, grease, wax, chalked and scaled materials, fungus, and	725.29	Sq. M.		



	repairing surface defects by sand paper, along with necessary scaffolding; applying specified exterior sealer on the prepared surface, followed by exterior putty for leveling, spot filling, crack filling, and smooth finishing with sand paper/zero water paper; finally applying 2 coats of exterior emulsion paint by brush/roller/spray with required drying time between coats, including all scaffolding, complete in all floors and accepted by the Engineer-in-Charge.				
B.5.3	<b>Enamel paint wooden member:</b> Prepare the surface by removing dust apply two coats of wood primer and two coats of enamel paint on wooden frame and shutter of window. Rate shall include for minor repairs, wood putting, and necessary brushes, machine, masking tape, sand papers require for surface preparation and scaffolding etc all complete as per Direction of E-I-C .	11.38	Sq. m.		
B.5.4	<b>Enamel paint for window grill/shutter/railing/door:</b> Prepare the surface by removing rust and apply two coats of anticorrosive paint and two coats of enamel paint on steel frame and shutter and window grill of both side. Rate shall include for removing existing paint, rust, dust with minor repairs and necessary brushes, mechanical wire brush, masking tape, sand papers putty require for surface preparation and scaffolding etc all complete as per Direction of E-I-C .	141.50	Sq. m.		
B.5.5	<b>Class Room Art:</b> Prepare the surface by removing rust and apply existing learning photo etc all complete as per Direction of E-I-C .	52.09	Sq. m.		
<b>Sub Total</b>					
<b>Total (B1+B2+B3+B4+B5)</b>					
<b>C</b>	<b>Water Supply and Sanitation Facility works</b>				
C.1	Supplying, fitting and fixing country made glazed <b>wall tiles</b> complying BDS ISO 13006: 2015, irrespective of color &/or design, with 20 mm thick cement sand (F.M. 1.2) mortar (1:3) base and	0.25	Sq. M.		



	raking out the joints with white cement including cutting, laying and hire charge of machine and finishing with care etc. including cost of water, electricity and other charges complete in all respect and accepted by the Engineer-in-charge. Wall tiles less than, equal or equivalent to 250 mm x 330 mm in sizes.				
C.2	Supplying, fitting and fixing country-made mirror polished homogeneous <b>floor tiles</b> complying with BDS ISO 13006:2015, having water absorption $\leq 0.5\%$ and modulus of rupture (MOR) $\geq 27 \text{ N/mm}^2$ , irrespective of color and/or design, laid on 20 mm thick cement sand (F.M. 1.2) mortar (1:4) base, including cutting, proper laying, raking out joints with white cement, and finishing with due care, all complete and accepted by the Engineer-in-Charge. GP (mirror polished) 600 mm x 600 mm floor tiles	1.86	Sq. M.		
C.3	<b>Wash Basin Repair:</b> Repairing of existing wash basin including checking and fixing of all fittings such as pillar cock/bib cock, waste coupling, trap and connections, replacing defective parts where necessary, stopping leakage, cleaning choke if any, tightening joints, re-fixing in proper position with brackets/supports, making good damages with cement mortar (1:4), and ensuring proper functioning, complete in all respects as per direction of the Engineer-in-Charge.	2.00	Each		
C.4	Supplying, Fitting and Fixing of 12 mm <b>Bib Cock:</b> Supplying, fitting and fixing of best quality country-made 12 mm dia bib cock made of copper or copper alloy, chromium plated, conforming to BDS EN 200:2009; the faucet shall be free from leakage, permeation and defects, with water hammer value not exceeding 1.47 MPa, and shall remain leak-proof after 100,000 operations while ensuring reverse flow prevention performance; all internal and external surfaces shall be smooth and free from	8.00	Each		



	blowholes, fissures or any injurious defects; chromium plating shall be Class 2 Grade 1 with minimum 0.1 micron thickness; fixing in position with necessary fittings including sealing tape, ensuring leak-proof installation, complete in all respects as approved by the Engineer-in-Charge. Lever CP Conceal Bib Cock long/short body with aerator				
C.5	Supply and fix 20mm diameter Type 1000 UPVC pipe for water supply. Rate shall include for all necessary fittings and specials, embedding to the wall plaster and necessary connection to the main supply.	10.00	L. M		
C.6	<b>Stainless Steel Soap Case:</b> Supplying, fitting and fixing of 1.2 mm thick stainless steel (SS) soap case of approved quality including all necessary fittings and accessories, making holes in walls wherever required, proper anchoring/fastening, and mending good any damages with cement mortar (1:4), complete in all respects as per approved drawing and direction of the Engineer-in-Charge.	10.00	Each		
C.7	<b>PVC Paper Holder:</b> Supplying, fitting and fixing of stainless steel (SS) paper holder of approved quality including all necessary fittings, accessories and fasteners, making holes in walls wherever required, proper fixing in position with screws/anchors, and mending good any damages with cement mortar (1:4), complete in all respects as per approved drawing and direction of the Engineer-in-Charge.	7.00	Each		
C.8	<b>Floor Grating Net:</b> Supplying, fitting and fixing of floor grating net in traps or drains of approved quality and type including making necessary holes in walls/floors, proper positioning and fixing with required fittings and fasteners, and mending good any damages with cement mortar (1:4), complete in all respects as per approved drawing and direction of the Engineer-in-Charge. Approx. 100 mm x 100 mm PVC floor grating net	10.00	Each		



C.9	Construction of 600x600mm, 450mm deep sewer manhole with 125mm thick brick work and finish smooth with 1:3 cement sand plaster and including RCC cover, Rate shall include for necessary waste pipe connections.	1.00	Nos.		
C.10	Supplying, fitting and fixing of 100 mm inside diameter & wall thickness 2.7 mm - 3.4 mm best quality uPVC <b>Rain Water/waste water down pipe</b> fitting, fixed in position with head and shoes, bends, min.20 mm width F.I. Bar clamp and nails, and including all accessories such as round grating/domed roof grating, bands, sockets approved and accepted by the Engineer- in- charge.	35.00	L.m		
C.11	<b>Commode Repair:</b> Repairing of existing commode flushing system including thorough checking of cistern tank, flush valve/flush pipe, push button/handle mechanism, inlet (ball/float) valve, washer, seal and all internal fittings; dismantling defective parts, cleaning scales and sediments, replacing damaged or worn-out components such as float, rubber seal, washers, inlet valve, outlet valve, flush handle/button, and connecting pipes where necessary; stopping all leakages from tank and joints, adjusting float level for proper water storage, ensuring smooth and efficient flushing performance with required discharge; refixing cistern firmly in position with brackets/supports, tightening all nuts, bolts and connections, using sealing tape/compound where required; making good any damages to walls/floors with cement mortar (1:4), testing for leak-proof operation, and handing over in complete working condition as per direction of the Engineer-in-Charge.	2.00	Each		
C.12	Supplying, fitting and fixing of best quality Liver type <b>Pillar Cock</b> made of copper or copper alloy, chromium plated, conforming to BDS EN 200:2009; the faucet shall be free from leakage, permeation and other defects, with water hammer value not exceeding 1.47 MPa, and shall	2.00	Each		



	withstand 100,000 operations without seat leakage while ensuring reverse flow prevention performance; all internal and external surfaces shall be smooth and free from blowholes, fissures or any injurious defects; chromium plating shall be Class 2 Grade 1 with minimum 0.1 micron thickness; fixing in position with necessary fittings including sealing tape to ensure leak-proof installation, complete in all respects as approved by the Engineer-in-Charge.				
C.13	<b>CP angle stop cock:</b> Supplying, fitting and fixing of best quality surface mounted or concealed stop cock / angle stop cock (lever or round headed type) with wall flange, chromium plated, conforming to BDS EN 200:2009; the faucet shall be free from leakage, permeation and other defects, with water hammer value not exceeding 1.47 MPa, and shall withstand 100,000 operations without seat leakage while ensuring reverse flow prevention performance; all internal and external surfaces shall be smooth and free from blowholes, fissures or any injurious defects; chromium plating shall be Class 2 Grade 1 with minimum 0.1 micron thickness; fixing in position with necessary fittings including sealing tape to ensure leak-proof installation, complete in all respects as approved by the Engineer-in-Charge.	5.00	Each		
C.14	Supply, Fitting & Fixing Connection Pipe	5.00	Each		
C.15	Supply, Fitting & Fixing Vent Cowl 4"	2.00	Each		
C.16	Supply, Fitting & Fixing Hand Push	3.00	Each		
C.17	Septic tank desludging	2.00	Each		
<b>Total</b>					
<b>D</b>	<b>Electrical Works with Fittings</b>				
D.1	<b>MDB/SDB:</b> Supplying, assembling, fitting, fixing & installation (with surface/concelled electric wiring for effective connection) of Main/Sub distribution board (Metal enclosure) with necessary MCBs/DP/TP/SP, RCCB, Isolator, Basbar etc. as per sample and	1.00	Each		



	approval by E-I-C. Rate shall include for necessary electrical wiring from electric meter to the DB/SDB. Minimum one year warrantee, Suggested barand: Havels or Relevent				
D.2	<b>Circuit Breaker (SPMCB)</b> Providing & fixing on a prepared board 250 volt grade following single pole miniature circuit breaker (SPMCBs) having minimum breaking capacity 6-KA / 10 KA with thermal over-current and instantaneous electromagnetic short circuit release provision as per BDS IEC and IEC / VDE / NEMA / BS / JIS standard.SPMCBs accepted / approved by the Engineer-in-charge.				
	15 – 40 Amps (minimum 6 KA) MCB	8.00	Each		
	60/63 Amps (minimum 10 KA) MCB	1.00	Each		
D.3	<b>Gang Switch:</b> Providing and fixing 250 volts, 5/6 amps (minimum) concealed type gang switch / switch socket of approved quality, manufactured/assembled and tested in accordance with IEC/VDE/NEMA/BS/JIS standards along with relevant BDS standards, mounted on required size 18 SWG galvanized plain sheet or self-extinguishing PVC board (650°C rated) of 76.2 mm (3") depth; all electrical contacts shall be of brass/copper for safe and durable operation; complete with necessary fixing accessories, connections and installation as per approved design and direction of the Engineer-in-Charge. Manufactured in Hong Kong / Malaysia / Singapore / South Korea / Thailand.				
	One gang switch	2.00	Each		
	Two gang switch	3.00	Each		
	Four gang switch	8.00	Each		
	Fan regulator( gang type)	14.00	Each		



D.4	<p><b>Power Socket:</b> UNIVERSAL COMBINED SWITCH SOCKET OUTLET (SURFACE/CONCEALED TYPE) Providing &amp; fixing 250 volt single phase universal combined switch socket outlet (surface / concealed type) Manufactured/ Assembled and tested in accordance with IEC / VDE / NEMA / BS / JIS along with relevant BDS IEC standards mounted on required size 18 SWG galvanized plain sheet board / plastic board (self-extinguishing 650 degree centigrade) of 76.2 mm. (3") depth. Sample to be approved by the Engineer-in-charge. Manufacturer shall have certificate of standard which they follow. Made in HONGKONG / MALAYSIA / SINGAPORE / S KOREA / THAILAND</p>				
	13 / 15 / 16 / 20 Amps.	6.00	Each		
D.5	<p><b>Single Tube Light Fittings:</b> Providing and fixing 4' x 40 watt tube light fittings with superior quality electronic driver (minimum 1 year guarantee), lamp holder, necessary internal wiring with 2 x 0.4 sq. mm PVC insulated stranded flexible FR wire, earth terminal etc. (excluding lamp), suitable for LED lamp operation; light source 20W LED T-8 tube; body made of MS sheet with PC cover and plastic grill, size approximately L-1340 mm x B-104 mm x H-55 mm; complete with all necessary accessories, fittings, ceiling roses, installation, testing and commissioning, with 2 years warranty, and sample to be approved by the Engineer-in-Charge. Equivalent models include Gloria GTF (LED) 892x1x20W, Energy+ EPIL-4305, Cosmo BDTCL-TLF-06, Asha ACS-TLS 307x1x40W, Crescent CTLS-225x1x40W or approved equivalent.</p>	8.00	Each		



D.6	<b>Flood Light Fittings (LED):</b> Supply and fixing of LED flood light fittings of approved quality with minimum luminous efficacy of 100 lm/W, power factor not less than 0.95, and Colour Rendering Index (Ra) $70 \leq Ra < 85$ ; driver shall be of IEC standard such as MEANWELL / OSRAM / ENERGY+ / SIGNIFY (PHILIPS) or equivalent, and LED chips shall be EPISTAR / OSRAM / SIGNIFY (PHILIPS) / CREE / BRIDGELUX or equivalent; colour temperature 3500K–6500K (warm white); body made of aluminium alloy with aluminium reflector and heat proof glass/polycarbonate cover; suitable for 50W LED flood light operation; complete with all accessories, fittings, internal wiring, installation, testing and commissioning with minimum 2 years warranty, and sample to be approved by the Engineer-in-Charge. Equivalent models include Gloria Cat No. GLFL-914, Energy+ EPFDL-17001 (50W), Cosmo BDTCL-LFDL-01, Adex AD FLE 50W830, Asha ACS-LFL-2155 (50W), Pasha PE FLL0005054/50W or approved equivalent.	4.00	Each		
D.7	<b>Caged LED light:</b> Supplying, assembling, fitting, fixing, installation (with effective connection) testing & Commissioning 20W LED ceiling mounted lamp with metal cage with separate gang switch as per direction and sample approved by E-I-C. Minimum one year manufacturer warranty	6.00	Each		
D.8	<b>LED light:</b> Supplying, assembling, fitting, fixing, installation (with effective connection) testing & Commissioning 20W LED wall mounted lamp, with holder as per direction and sample approved by E-I-C. Minimum one year manufacturer warranty.	22.00	Each		



D.9	<p><b>Surface Conduit Point Wiring (BYA)</b> Without Switch: Surface conduit wiring for point wiring looping at switch board with earth terminal using 1C × 2 × 1.5 sq mm PVC insulated cable (BYA) and 1C × 2 × 1.5 sq mm PVC insulated ECC (BYA) green/yellow bi-colour, including circuit wiring from SDB to switch board with 1C × 2 × 2.5 sq mm PVC insulated cable (BYA) and 1C × 2 × 2.5 sq mm PVC insulated ECC (BYA) through minimum 25 mm dia PVC conduit of 1.5 mm wall thickness (one conduit from switch board to ceiling point considered for three pair of cables), complete with 18 SWG G.P. sheet/PVC switch board and pull box (preferably concealed) with 3 mm thick ebonite sheet cover, excluding switches; including all necessary fittings, fixing materials, making good damages, proper connections with brass/copper contacts using connectors or soldering (no twisting allowed), cables manufactured and tested as per IEC/BS/VDE and relevant BDS standards, all complete as per detailed specification and direction of the Engineer-in-Charge.</p>				
	Light point/Exhaust/Wall bracket fan point	40.00	Point		
D.10	<p><b>Wiring Repair:</b> Conduit or surface wiring on surface with the following PVC insulated stranded cable (BYA) &amp; green Colored PVC insulated ECC wire (BYA) through PVC Conduit complete with fixing materials and uPVC channel &amp; other accessories as specified, Manufacturer according to the Specification &amp; direction, sample approval by the Engineer- in-charge.</p>				
	1C-2x1.5sqmm (BYA) cable with 1.5sqmm (BYA) ECC wire through PVC pipe of minimum inner dia 25 mm having wall thickness of 1.5 mm	25.00	m		
	1C-2x2.5sqmm (BYA) cable with 2.5sqmm (BYA) ECC wire through PVC pipe of minimum inner dia 25 mm having wall thickness of 1.7 mm.	25.00	m		



D.11	<b>Earthing system:</b> Supply & installation (with effective connection) of 8'-0" Brass or Copper Rod (10mm dia) under 2'-0" from FGL outside school building, Connecting the rod with SDB's earthing bar by 6mm dia copper wire (properly soldering with the rod) through 25 mm dia pvc pipe complete with necessary accessories as per direction of Engineer in-charge.	1.00	Each		
<b>Total</b>					-
E	<b>Access Development Works</b>				
E.1	<b>EWEx(Rd/C/P):</b> Earthwork in excavation of roadway/canal/pond etc. of any dimension in all kinds of soil including cutting to required depth, bailing out water if necessary, and depositing the excavated earth on embankment; breaking clods, ramming, dressing and leveling in 225 mm layers, and maintaining proper side slopes and levels of both pond and embankment as per design drawings; all complete including finishing works as per direction and satisfaction of the Engineer-in-Charge. For initial lead of 30 m and lift of 1.5 m	1.71	Cu.m		
E.2	<b>Earth filling :</b> Earth filling work with specified soil in any type of embankment, where earth shall be arranged by the contractor at own cost including royalty, cutting, carrying, filling and compaction to 85%/95%/98% of Maximum Dry Density (MDD) at Optimum Moisture Content (OMC) as per AASHTO standard proctor test, placing earth in layers not exceeding 150 mm thickness per layer in proper alignment, grade, camber and side slopes in all types of soil except rocky, gravelly and slushy soil; including benching not more than 300 mm vertical and 600 mm horizontal steps along side slopes during widening, breaking clods to maximum size of 100 mm, removing roots, stumps (up to 200 mm girth) and other foreign materials, stripping/ploughing of base of embankment and borrow pit area,	6.37	Cu.m		



	dewatering including bailing out water, clearing jungles, rough dressing, providing 150 mm camber at crest center, and all leads and lifts complete; compaction to be done by contractor with approved equipment including all ancillary charges for compaction and field density testing; payment will be made on compacted volume as per direction of the Engineer-in-Charge. 95% Compaction				
E.3	<b>Sand filling</b> on road bed in improved sub-grade with clean sand having minimum FM 0.50, free from dust, earth, organic matter, vegetation and other foreign materials, including supplying, laying, spreading in layers, watering and compacting by appropriate mechanical means to achieve minimum 98% of Maximum Dry Density (MDD) as per Modified Proctor test and to ensure minimum soaked CBR 8% or design CBR as specified; all complete including necessary finishing, leveling and compaction as per direction of the Engineer-in-Charge.	8.83	Cu.m		
E.4	<b>Brick work:</b> Brickwork with first class bricks in cement sand mortar (FM 1.2) in (1:4) proportion for exterior walls, including filling all joints with mortar, raking out joints where necessary, soaking bricks in water for at least 24 hours before use, washing of sand, proper laying and bonding, providing necessary scaffolding, curing for minimum 7 days, and including cost of water, electricity and other incidental charges; measurement to be taken considering 250 mm width for one brick length and 375 mm for one and a half brick length; all complete as per approved drawing and direction of the Engineer-in-Charge.	0.52	Cu.m		
E.5	<b>Brick work 125mm :</b> 125 mm thick brickwork with first class bricks in cement sand mortar (FM 1.2) in (1:4) proportion, including making proper bond with connected walls, raking out joints, cleaning and soaking bricks in water for at least 24 hours before use,	24.40	Sq. M.		



	washing of sand, providing necessary scaffolding, proper laying and workmanship, and curing for minimum 7 days; including cost of water, electricity and other incidental charges, all complete as per approved drawing and direction of the Engineer-in-Charge				
E.6	<b>SBFS (FM-0.50):</b> Providing single layer brick flat soling (BFS) with 1st class or picked bricks, laid true to level and maintaining camber/super elevation and grade, including carrying bricks, filling the interstices tightly with sand of minimum FM 0.50, etc., all complete in all respects as per approved drawings, specifications, and direction of the Engineer-in-Charge.	27.62	Sq. M.		
E.7	<b>Plastering with NCF:</b> Minimum 12 mm thick cement sand (F.M.1.2) plaster with neat cement finishing to plinth wall, floor, Dawrf wall with cement (1:4) up to 1500 mm below ground level including washing of sand, use black or red color to mixture, finishing the edges and corners and 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.	4.98	Sq.M.		
<b>Total</b>					
<b>F</b>	<b>Solar Power System Installation</b>				
F.1	<b>Solar PV Module:</b> Supply, installation, testing, and commissioning of high-efficiency Tier-1 Monocrystalline Silicon (Half-cut cell technology) Solar PV Modules, with each individual module having a rated capacity of not less than 500Wp under Standard Test Conditions (STC). The modules must be manufactured by a Bloomberg New Energy Finance (BNEF) Tier-1 listed company and comply strictly with IEC 61215 and IEC 61730 standards for design qualification and safety. The units shall feature anti-reflective coated tempered glass, an anodized aluminum alloy frame, and IP68-rated junction boxes with MC4 compatible connectors, ensuring a module	3500.00	Wp		



	efficiency of $\geq 21\%$ . All components must be delivered with a minimum 12-year product warranty and a 25-year linear performance warranty; all technical data sheets, factory test reports, and origin certificates must be submitted for technical evaluation and approval by the Engineer-in-Charge prior to site delivery.				
F.2	<b>Mounting Structure:</b> Supply, fabrication, and installation of a high-resilience solar mounting structure utilizing 75mm diameter Hot Dip Galvanized (GI) pipes with a minimum wall thickness of 4mm, engineered to withstand a basic wind speed of not less than 150 km/h in strict accordance with BNBC 2020 and ASCE 7-10 standards.. Each vertical support pole shall be securely fixed to the existing RCC slab using a 200mm x 200mm x 4mm thick GI base plate fastened with heavy-duty anchor bolts, followed by the construction of a 300mm x 300mm x 300mm Cement Concrete (CC) casting block for added structural stability and ballast. The concrete pedestals must be finished with smooth plastering and high-quality weather-coated painting to ensure aesthetic uniformity and environmental protection. To maintain the integrity of the roof slab, all drilled and bolted connection areas must be hermetically sealed with a high-grade epoxy coating to provide a robust water-leakage prevention barrier. The entire structural assembly, including all welding and specialized anchoring, must be implemented with technical precision and is subject to the final inspection and approval of the Engineer-in-Charge.	3500.00	Wp		



F.3	<p><b>All in one Energy Storage System:</b> Supply, installation, testing, and commissioning of a high-efficiency, fully integrated All-in-One (AIO) Energy Storage System (ESS), featuring a hybrid inverter and Lithium Iron Phosphate (LiFePO<sub>4</sub>) battery modules manufactured by the same manufacturer to ensure seamless communication and vertical system integration. The system shall provide a nominal AC output of 6kW with a minimum integrated battery capacity of 10 kWh, achieving a maximum conversion efficiency of <math>\geq 97.6\%</math> and a battery round-trip efficiency of <math>\geq 95\%</math>. Technical parameters must include a rated PV input voltage of 360V, a maximum input voltage of 600V, and dual MPPT trackers supporting up to 16,000 Wp. The unit must demonstrate rigorous environmental and safety compliance, including UN 38.3 certification for safe battery transportation, RoHS/REACH environmental compliance, and an IP66 ingress protection rating for versatile installation. The system must support an Emergency Power Supply (EPS) transition time of <math>\leq 4\text{ms}</math> and provide a 200% peak overload capacity for 10 seconds. Acceptable major brands include Fox ESS, BYD, Huawei, Sungrow, GoodWE (or equivalent approved by the Engineer-in-Charge), provided the single-brand manufacturing requirement is met. The entire assembly must strictly comply with IEC 62109-1/2 and IEC 62619 safety standards, including a comprehensive 5-year manufacturer warranty, with all technical submittals and factory test reports subject to the final evaluation and approval of the Engineer-in-Charge.</p>	1.00	Set		
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F.4	<p><b>Solar Array Junction Box:</b> Supply, fitting, and fixing of a high-quality, factory-made and fully assembled Solar Array Junction Box (AJB) fabricated from 18 SWG Mild Steel (MS) sheet, featuring a robust hinged-type door and integrated locking arrangement for secure site operation. The unit must be delivered as a complete, pre-wired assembly featuring a Type II Surge Protection Device (SPD) and a DC circuit breaker of adequate rating specifically matched to the PV string configuration to ensure comprehensive overcurrent and voltage spike protection. All surfaces of the board shall be finished with a high-durability powder coating using epoxy polyester resin in a grey or off-white color to prevent corrosion and withstand environmental exposure. The factory-integrated assembly, including all internal busbars, terminal blocks, and cable glands, must be executed with technical precision and is subject to the final inspection and approval of the Engineer-in-Charge.</p>	1.00	Set		
F.5	<p><b>AC Combiner Box:</b> Supply, fitting, and fixing of a high-quality, factory-made and fully assembled AC Combiner Box (ACCB) fabricated from 18 SWG Mild Steel (MS) sheet, featuring a robust hinged-type door and integrated locking arrangement for secure site operation. The unit must be delivered as a complete, pre-wired assembly equipped with a Type II AC Surge Protection Device (SPD) and a molded case circuit breaker (MCCB) or MCB of adequate rating specifically sized to handle the combined AC output of the inverters. All surfaces of the board shall be finished with a high-durability powder coating using epoxy polyester resin in a grey or off-white color to ensure long-term resistance against corrosion and environmental wear. The factory-integrated assembly, including internal busbars, neutral links, and properly sized terminal</p>	1.00	Set		



	blocks, must be executed with technical precision and is subject to the final inspection and approval of the Engineer-in-Charge.				
F.6	<b>Cables:</b> Supply and fitting, fixing cables for solar cables of following sizes with necessary accessories such as PVC Channel/flexible pipes, cable tie, PVC tape, Copper lugs, connector etc. All cables shall be manufactured and tested according to IEC/BS/VDE standards. The work shall be carried out as per direction/approval of the engineer in-charge.				
F.6.1	For Inverter Wiring: 1Cx1-6RM NYF Cable	100.00	Meter		
F.6.2	For String Wiring: 1Cx1-10 RM BYM Cable	20.00	Meter		
F.6.3	Earthing Cable: 1x1C-4RM BYA ECC	50.00	Meter		
F.6.4	Earthing Cable: 1x1C-10RM BYA ECC	50.00	Meter		
F.7	<b>Accessories:</b> Supply and installation of all essential installation accessories and miscellaneous hardware, including UV-stabilized PVC conduits, perforated GI cable trays, heavy-duty cable ducts, and industrial-grade nylon cable ties, along with high-quality weatherproof cable glands, end-sealing kits, and stainless steel (SS316) mounting fasteners. The scope also includes safety signage for high-voltage DC circuits, bi-metallic lugs for dissimilar metal terminations, heat-shrinkable ferrule sleeves for wire identification, and industrial-grade sealant/gaskets for all enclosure entries to maintain IP-rated protection. All accessories must be sized and installed with technical precision to ensure maximum mechanical protection and professional cable management, fully compliant with the requirements and final satisfaction of the Engineer-in-Charge.	1.00	Lot		



F.8	<p><b>Earthing and Protection:</b> Supply, installation, testing, and commissioning of a dedicated Earthing and Lightning Protection System, utilizing a 12mm diameter solid copper conductor for the main earthing lead to ensure low-impedance discharge paths. The system shall include a boring of 40 to 60 feet depth with a minimum borehole diameter of 150mm, featuring a high-conductivity copper earthing rod encased in bentonite or chemical earth enhancement compound to achieve a measured earth resistance of less than 5 Ohms. Lightning protection shall be provided via a specialized Lightning Arrester mounted on a galvanized mast, with all connections for solar panels and peripheral equipment secured using heavy-duty copper clamps, stainless steel nuts, and bolts to prevent galvanic corrosion. All earth pits must include a protective masonry chamber and a test link for periodic resistance measurement, with the entire installation executed to the technical satisfaction and final approval of the Engineer-in-Charge.</p>	1.00	Set		
F.9	<p><b>Automatic Changeover Switch:</b> Supply and installation of a high-quality 63A compact single-phase manual changeover switch, featuring a rotary handle with a 3-position (1-0-2) control mechanism for reliable source switching. The unit shall be a premium brand such as ABB, Havells, or equivalent, ensuring robust internal contacts and a durable enclosure for long-term electrical isolation. All terminations must be securely lugged and tested to the technical satisfaction and final approval of the Engineer-in-Charge.</p>	1.00	Each		
F.10	<p><b>Drawing:</b> Preparation and provision of a comprehensive Single Line Diagram (SLD) of the as-built solar PV system, color-printed on high-quality A3 paper and finished with heavy-duty lamination for long-term site durability. The diagram must clearly</p>	1.00	Each		



	illustrate all system components, including PV strings, inverters, protection devices, and cable schedules, and shall be securely mounted at the main distribution point or control room for operational reference, subject to the final approval of the Engineer-in-Charge.				
Total					
GRAND TOTAL (A+B+C+D+E+F)					

**Package 3: Uttar Purbo Char Lawrence Govt Primary School, Union: 3 no. Char Lawrence,  
Kamalnagar Upazila, Lakshmipur.**

Sl. No.	Items Name with Specification	Quantity	Unit	Unit price (Including Vat, Tax & Delivery)	Total Price (Including Vat, Tax & Delivery)
A	<b>Alignment with the National Cyclone Shelter Policy</b>				
A.1	<b>Mobilization</b> with additional scaffolding for repairing RCC slab, cornice/drop wall/outer wall, etc. of a two-storied building, including site cleaning Scrapping old mosses and plaster before commencement of physical work, during the contract period, and demobilization after completion of the works under the contract accepted by the Engineer; the work shall also cover cleaning, clearing, cutting or filling, and dressing of the project area to ensure smooth execution of all activities in a safe and secure environment, including stockpiling of resulting materials at locations approved by the Engineer for disposal; payment shall be based on the ground area determined by the Engineer and shall be proportionate to the overall progress of the work as approved; the work shall mandatorily include provision, installation, and continuous operation of a 1 HP pump motor with hose pipe and generator as required, compulsory use of tarpaulin, polythene to protect works, materials, and working areas from rain and adverse weather conditions, ensuring adequate lighting arrangements at all work locations for safe and uninterrupted execution, and	1.00	Item		



	provision and strict use of all necessary safety equipment and protective gear including helmets, gloves, goggles, safety vests, and safety belts in full compliance with safety standards throughout the execution period.				
A.2	<p><b>Rooftop Red Marking Signal Light :</b> Supplying, fitting and fixing signal red light to ensure the shelter is visible during disasters, especially at night and in poor weather conditions. Type: LED-based solar-powered aviation warning light. Material: Weather-resistant, UV-stabilized polycarbonate and aluminum alloy body. Light Source: High-intensity red LED with a visibility range of at least 2-3 kilometers. Solar Panel Type: Monocrystalline or polycrystalline. Power Output: Minimum 5W to 10W depending on the light's power requirement. Battery: Lithium-ion battery with at least 24 hours of backup (fully charged). Lighting Mode: Steady or flashing (adjustable); Flash rate: 20-60 flashes/min. Ingress Protection: Minimum IP65 for water and dust resistance. Mounting: Steel or aluminum mounting bracket compatible with the rooftop structure. Other Features: Automatic light sensor for dusk-to-dawn operation. All complete as per direction of the E-I-C.</p>	1.00	Each		
A.3	<p><b>Mike with Siren System Installation:</b> Supplying, fitting and fixing mike with siren system to broadcast announcements and emit a siren to alert the community during emergencies. Microphone Type: Handheld or gooseneck microphone with a noise-canceling feature. Frequency Response: 50 Hz to 15 kHz. Build: Durable, shock-resistant, and weather-resistant.</p>	1.00	Item		



	<p>Amplifier: Power Output: Minimum 150W to 200W. Voltage: Compatible with the cyclone shelter's power system (solar backup preferred). Input Ports: Multiple inputs for microphone and auxiliary devices. Siren System Sound Range: Audible at a distance of 1-2 kilometers in open areas. Sound Patterns: Multi-tone options (wailing, steady, pulse) with adjustable volume. Power Source: Solar or AC/DC with a backup battery (minimum 6 hours of runtime). Speakers Type: Outdoor horn speakers with high weather resistance (IP65 minimum). Power Output: Minimum 4 Nos. 75W-100W per speaker. Material: Aluminum or ABS body with UV-resistant coating. Accessories: Necessary cables, connectors, and mounts. All complete as per direction of the E-I-C.</p>				
A.4	<p><b>Rooftop "S" Mark Painting :</b> Supplying and painting "S" Mark on the roof top to identify the shelter as a designated emergency cyclone shelter from aerial views. Dimensions: Minimum 3 meters in length and 1.5 meters in width for clear visibility or as per drawings Color: High-contrast red paint with a white border (reflective for night visibility). Paint Type: Base Coat Anti-corrosion primer suitable for concrete surfaces. Top Coat: Reflective polyurethane or epoxy paint with UV and weather resistance. Durability: Weatherproof and resistant to rain, sun, and wind for a minimum of 5 years. Surface Preparation: Cleaning, sanding, and priming of the concrete rooftop before painting. Application: Two coats of reflective</p>	1.00	Each		



	paint applied with a roller or spray for uniformity. All complete as per direction of the E-I-C.				
	<b>Total</b>				
<b>B</b>	<b>Civil Works</b>				
<b>B.1</b>	<b>Preliminary Works</b>				
B.1.1	<p><b>Sign Board with Signage:</b> Supplying, transporting, fitting and installation of approved best quality country-made mild steel (MS) signboard as per drawing, complete in all respects and accepted by the Engineer-in-Charge (E-I-C); size 2000 mm × 1000 mm, made of 2 mm thick MS sheet continuously welded on both sides with MS rectangular hollow box frame comprising 75 mm × 75 mm × 3 mm vertical columns and 50 mm × 50 mm × 3 mm horizontal members, including 4 nos. 12 mm dia anchor bars welded with column box and embedded minimum 450 mm into foundation; RCC foundation consisting of 400 mm × 400 mm × 400 mm footing and 250 mm × 250 mm × 600 mm column base using mix ratio 1:1.5:3 with minimum cement content ensuring <math>f'_{cr} = 24</math> MPa, <math>f'_c = 17</math> MPa at 28 days and water-cement ratio not exceeding 0.45, conforming to ACI/BNBC/ASTM standards, using cement BDS EN-197-1-CEM-I 52.5N or ASTM C150 Type I, sand comprising 50% local (F.M. 1.2) and 50% Sylhet/coarse sand (F.M. 2.2), and 20 mm down well-graded stone chips as per ASTM C-33; including proper shuttering, reinforcement (12 mm dia bars @ 200 mm c/c in footing, 4 nos. 12 mm dia bars in column, 10 mm dia stirrups @ 150 mm c/c), machine mixing or batching plant, vibration, curing for minimum 28 days, and all associated costs such as water, electricity and testing; including dismantling of existing concrete if required, site cleaning and debris disposal, and 125 mm thick brick flat soling using 1st class bricks at foundation base (400 mm × 400 mm); surface preparation and painting with</p>	1.00	Item		



	one coat anti-corrosive paint and two coats synthetic enamel paint in dark blue (Donor official color: RGB 0/51/160, HEX #0033A0, CMYK 100/80/3/2, Pantone 286C); also including supply and installation of 2 nos. high-quality reflective stickers (hexagonal pattern) of size 2000 mm × 1000 mm with prior sample approval from E-I-C.				
B.1.2	<b>Dismantling of unserviceable/damaged brick works</b> (with cement or lime mortar) of thickness 250 mm in foundation and superstructure and removal of debris to a safe distance.	50.00	Cu.m.		
B.1.3	<b>Stripping of unserviceable plaster</b> including racking out joints, cleaning etc.	29.90	Sq. m.		
<b>Sub Total</b>					
<b>B.2</b>	<b>Structural Works</b>				
B.2.1	<b>RCC WORKS: 1:2:4</b> (measured on gross concrete section) (f'c = 19 MPa, minimum f'cr = 26 MPa in nominal mix 1:2:4), with brick-chips Sand of F.M. 1.2 and F.M. 2.2 in equal proportion) Reinforced cement concrete works with minimum cement content relates to mix ratio 1:2:4 having maximum water cement ratio = 0.45 and minimum f'cr = 6 MPa, satisfying a specified compressive strength f'c= 19 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, 52.5N (52.5 MPa) / ASTM-C 150 Type – I, best quality sand [50% quantity of best local sand (F.M. 1.2) and 50% quantity of Sylhet sand or coarse sand of equivalent F.M. 2.2] and 20 mm down well graded picked jhama brick chips conforming to ASTM C-33 including conducting necessary tests, breaking chips and screening, making and placing shutter in position maintaining true to plumb, making shutter water-tight properly, placing reinforcement in position; mixing	0.92	Cu.m.		



	in 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)				
B.2.2	<b>Rebar:</b> Grade B400C-R/ B400CWR/ 400DWR: Ribbed or Deformed bar produced and marked as per BDS ISO 6935-2:2016 with minimum yield strength, $f_y$ (ReH) = 400 MPa, but the tested yield strength shall not exceed $f_y$ by more than the 125 MPa and the ratio of tested ultimate strength, $f_u$ (Re) to tested yield strength ( $f_y$ ) shall be at least 1.25 and minimum elongation after fracture (A5.65) & minimum total elongation at maximum force (Agt) is 17% and 8% respectively.	110.00	kg		
B.2.3	<b>Plaster</b> Minimum 12 mm thick cement sand (F.M. 1.2) plaster (1:4) with fresh cement applied to both inner and outer surfaces of walls, including surface preparation by cleaning and washing of sand, finishing of corners and edges, curing for at least 7 days, and including cost of water, electricity, scaffolding, and all other incidental charges, complete in all respects as per drawings and accepted by the Engineer-in-Charge.	29.90	Sq. m.		
B.2.4	<b>Chemical Water proofing on the roof slab:</b> The roof surface proper cleaning by flashing water before applied water proofing chemical on the roof slab approved quality material (Barger or equivalent-2 coats (horizontal and vertical direction) water Mr. Expert water barrier/Brush bond (13 Sq,M/ 20.088 kg pac) over a coat Nito bond SBR Latex plus and 2-coats Flexible Roofing Compound on top as finishing coats - color green) after preparation	200.40	Sq. m.		



	of the surface by removing existing rendering in alternative panels etc. After completing water proofing works on roof, the roof need to be seen smooth slope surface and uniform color. All complete as per direction of the E-I-C. The rate will include cleaning, removing and washing existing top portion of slab.				
B.2.5	<b>Brick work 125mm</b> : Providing 125 mm thick brick work in superstructure (partition walls/outer walls) with cement sand (F.M. 1.2) mortar (1:4) with 10 hole machine made ceramic bricks of approved size having uniform colour, carefully laid in cement mortar of uniform width & depth of joints, true to vertical and horizontal lines including racking out joints, filling the interstices with same mortar, making bond with connected walls, cleaning, soaking brick at least 24 hours and washing of sand, curing 7 days in all floors, including cost of water, electricity and other charges accepted by the Engineer-in-charge.	5.58	Sq. M.		
B.2.6	<b>Plastering with NCF</b> : Minimum 12 mm thick cement sand (F.M.1.2) plaster with neat cement finishing to dado (up to 150 mm from floor level), floor with cement (1:4) including washing of sand, use black or red color to mixture, finishing the edges and corners and 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.	66.91	Sq. M.		
<b>Sub Total</b>					
<b>B.3</b>	<b>Ground Floor Development Works</b>				
B.3.1	<b>Floor Plastering with NCF</b> : Minimum 12 mm thick cement sand (F.M.1.2) plaster with neat cement finishing to plinth wall, floor, Dwarf wall with cement (1:4) up to 1500 mm below ground level including washing of sand, use black or red color to mixture, finishing the edges and corners and curing at least for 7 days, cost of water, electricity, scaffolding and other charges etc. all complete in	313.32	Sq. M.		



	all respect as per drawing and accepted by the Engineer-in-charge.				
	<b>Sub Total</b>				
<b>B.4</b>	<b>Door, Window, Grill Repair Works</b>				
B.4.1	<b>Window repair:</b> Repair of metal swing frame window shutter with polycarbonate sheets by replacing the corroded GI sections and existing polycarbonate sheets should be replaced with 18 BWG GP. sheet. Existing MS/GI sections are 3mm thick and 19mm wide, shutter frame in three equal part and upper part should be provided with vertically in each shutter, fabricating, welding, installation, cost of electricity, workshop charge, carriage, fixing with MS clamps or steel royal bolt in walls/RCC member. The rate including window seal by plastering, applying 2 coats anticorrosive and 2 coats enamel paint (Berger) and finishing etc all complete as per direction of the E-I-C. including necessary repair or replacement of window lock and adjustable window stay.	13.38	Sq.M.		
B.4.2	<b>Minor Wooden Door Repair:</b> Repairing of existing wooden door including (100mm x 38mm) lock rail, (125mm x 38mm) middle rail and (225mm x 38mm) bottom rail with 25mm thick one side raised paneling; supplying and fitting of best quality 6 nos. 100mm iron hinges, 2 nos. 12mm dia tower bolts (300mm & 225mm long), 2 nos. heavy type nickel plated handles, hinge cleats and buffer blocks; and any defective timber to be repaired or replaced as required; complete with sand papering for smooth finish for all floors, as per direction of the E-I-C; timber to be Jack wood; including supply and installation of one heavy security 60mm padlock (HMBR) for each door; applicable for single/double leaf doors and all sizes of wood complete.	2.00	Each		
B.4.3	<b>Minor Repairing existing collapsible gate</b> (2.7 m x 2.6m) at 1st/2nd floors including removing inside and out side	4.00	Each		



	rust with respectively steel brush and cup brush, brushing, polishing, fabricating, welding of each point, riveting refixing, changing wheels, bottom rail if necessary, cost of electricity, workshop charge, carriage, fixing with Galvanized MS clamps or steel royal bolt in walls/RCC member,, welding etc all complete as required to making smooth sliding as per direction of E-I-C				
B.4.4	<b>MS Door Repair</b> : Repairing of existing MS door including rectification or replacement of damaged or corroded members using suitable MS flat/bar/angle/box sections as per existing design, including cutting, welding, grinding and proper alignment; providing and fixing all necessary fittings and fixtures such as heavy-duty MS hinges, tower bolts, handles, locking arrangements, hinge cleats and stoppers/buffers; cleaning the surface by wire brushing or sand papering, applying anti-corrosive primer and finishing with two coats of approved enamel paint; including supply and fixing of one 60 mm heavy duty padlock (HMBR or equivalent) for each door; all complete in all respects as per specification and direction of the Engineer-in-Charge.d are finished). Jack wood. The rate includes a Heavy Security 60mm Pad Lock (HMBR) for each door.	3.00	Each		
B.4.5	Supplying fitting and fixing of <b>Galvanized MS steel door</b> (2100mm X900mm) shutter for toilets main door with 18 BWG Galvanized MS sheet/plain plate hinged to RCC columns/brick wall reinforcement with 38mmx38mmx5mm Galvanized MS Angle and 25mmx6mm flat bar stiffener with 38mmX38mmX6mm frame, one coat anticorrosive and two coat enamel paint, welding, carrying etc. all complete as per drawing and direction of E-I-C.	1.00	Nos		
	<b>Sub Total</b>				
<b>B.5</b>	<b>Painting Works</b>				



B.5.1	<p><b>Plastic emulsion paint on internal wall:</b> 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 &amp; necessary scaffolding etc. upto desired finishing, elapsing specified time for drying or recoating; all complete in all floors and accepted by the Engineer-incharge</p>	474.82	Sq. M.		
B.5.2	<p><b>Weather coat exterior paint:</b> Exterior standard acrylic emulsion paint of approved best quality and color, having water-resistant properties and resistance against fungi, fading, and flaking, supplied from an authorized local agent of the manufacturer in sealed containers; applied to exterior surfaces with proper surface preparation including cleaning, drying, removal of dirt, grease, wax, chalked and scaled materials, fungus, and repairing surface defects by sand paper, along with necessary scaffolding; applying specified exterior sealer on the prepared surface, followed by exterior putty for leveling, spot filling, crack filling, and smooth finishing with sand paper/zero water paper; finally applying 2 coats of exterior emulsion paint by brush/roller/spray with required drying time between coats, including</p>	564.09	Sq. M.		



	all scaffolding, complete in all floors and accepted by the Engineer-in-Charge.				
B.5.3	<b>Enamel paint wooden mamber:</b> Prepare the surface by removing dust apply two coats of wood primer and two coats of enamel paint on wooden frame and shutter of window. Rate shall include for minor repairs, wood putting, and necessary brushes, machine, masking tape, sand papers require for surface preparation and scaffolding etc all complete as per Direction of E-I-C .	26.95	Sq. m.		
B.5.4	<b>Enamel paint for window grill/shutter/railing/door:</b> Prepare the surface by removing rust and apply two coats of anticorrosive paint and two coats of enamel paint on steel frame and shutter and window grill of both side. Rate shall include for removing existing paint, rust, dust with minor repairs and necessary brushes, mechanical wire brush, masking tape, sand papers putty require for surface preparation and scaffolding etc all complete as per Direction of E-I-C .	50.19	Sq. m.		
B.5.5	<b>Class Room Art:</b> Prepare the surface by removing rust and apply existing learning photo etc all complete as per Direction of E-I-C .	60.08	Sq. m.		
<b>Sub Total</b>					
<b>Total (B1+B2+B3+B4+B5)</b>					
<b>C</b>	<b>Water Supply and Sanitation Facility works</b>				
C.1	Supplying, Fitting and Fixing of 12 mm <b>Bib Cock:</b> Supplying, fitting and fixing of best quality country-made 12 mm dia bib cock made of copper or copper alloy, chromium plated, conforming to BDS EN 200:2009; the faucet shall be free from leakage, permeation and defects, with water hammer value not exceeding 1.47 MPa, and shall remain leak-proof after 100,000 operations while ensuring reverse flow prevention performance; all internal and external surfaces shall be smooth and free from blowholes, fissures or any injurious defects; chromium plating shall be Class 2 Grade 1 with minimum 0.1	16.00	Each		



	micron thickness; fixing in position with necessary fittings including sealing tape, ensuring leak-proof installation, complete in all respects as approved by the Engineer-in-Charge. Lever CP Conceal Bib Cock long/short body with aerator				
C.2	Supply and fix 20mm diameter Type 1000 UPVC pipe for water supply. Rate shall include for all necessary fittings and specials, embedding to the wall plaster and necessary connection to the main supply.	5.00	L. M		
C.3	Supplying, fitting and fixing of <b>UPVC 100mm dia</b> (wall thickness of pipe 3 mm, national polymer/RFL) with all fittings and specials like plan bend, Tees, reducing sockets, junctions, door bends, 100mm dia cowls, ant siphon including gasket and cement joints making holes in walls and mending good the damages etc. all complete as per direction of the E-I-C. The rate is inclusive of 100mm thick Cement Concrete (1:3.6) all around the soil pipe under ground in/c. necessary earth cutting. The rate including removing existing damaged pipe of sewerage line and washing, cleaning etc all complete as per direction of engineer	6.00	L. M		
C.4	<b>Stainless Steel Soap Case:</b> Supplying, fitting and fixing of 1.2 mm thick stainless steel (SS) soap case of approved quality including all necessary fittings and accessories, making holes in walls wherever required, proper anchoring/fastening, and mending good any damages with cement mortar (1:4), complete in all respects as per approved drawing and direction of the Engineer-in-Charge.	7.00	Each		
C.5	<b>PVC Paper Holder:</b> Supplying, fitting and fixing of stainless steel (SS) paper holder of approved quality including all necessary fittings, accessories and fasteners, making holes in walls wherever required, proper fixing in position with screws/anchors, and mending good any damages with cement mortar (1:4), complete in all	7.00	Each		



	respects as per approved drawing and direction of the Engineer-in-Charge.				
C.6	<b>Floor Grating Net:</b> Supplying, fitting and fixing of floor grating net in traps or drains of approved quality and type including making necessary holes in walls/floors, proper positioning and fixing with required fittings and fasteners, and mending good any damages with cement mortar (1:4), complete in all respects as per approved drawing and direction of the Engineer-in-Charge. Approx. 100 mm x 100 mm PVC floor grating net	6.00	Each		
C.7	Supplying, fitting and fixing of 100 mm inside diameter & wall thickness 2.7 mm - 3.4 mm best quality uPVC <b>Rain Water/waste water down pipe</b> fitting, fixed in position with head and shoes, bends, min.20 mm width F.I. Bar clamp and nails, and including all accessories such as round grating/domed roof grating, bands, sockets approved and accepted by the Engineer- in- charge.	30.00	L.m		
C.8	<b>Commode Repair:</b> Repairing of existing commode flushing system including thorough checking of cistern tank, flush valve/flush pipe, push button/handle mechanism, inlet (ball/float) valve, washer, seal and all internal fittings; dismantling defective parts, cleaning scales and sediments, replacing damaged or worn-out components such as float, rubber seal, washers, inlet valve, outlet valve, flush handle/button, and connecting pipes where necessary; stopping all leakages from tank and joints, adjusting float level for proper water storage, ensuring smooth and efficient flushing performance with required discharge; refixing cistern firmly in position with brackets/supports, tightening all nuts, bolts and connections, using sealing tape/compound where required; making good any damages to walls/floors with cement mortar (1:4), testing for leak-proof operation, and handing over in complete working condition as per direction of the Engineer-in-Charge.	2.00	Each		



C.9	<b>CP angle stop cock:</b> Supplying, fitting and fixing of best quality surface mounted or concealed stop cock / angle stop cock (lever or round headed type) with wall flange, chromium plated, conforming to BDS EN 200:2009; the faucet shall be free from leakage, permeation and other defects, with water hammer value not exceeding 1.47 MPa, and shall withstand 100,000 operations without seat leakage while ensuring reverse flow prevention performance; all internal and external surfaces shall be smooth and free from blowholes, fissures or any injurious defects; chromium plating shall be Class 2 Grade 1 with minimum 0.1 micron thickness; fixing in position with necessary fittings including sealing tape to ensure leak-proof installation, complete in all respects as approved by the Engineer-in-Charge.	2.00	Each		
C.10	Supply, Fitting & Fixing Connection Pipe	4.00	Each		
C.11	Supply, Fitting & Fixing Hand Push	2.00	Each		
C.12	Septic tank desludging	1.00	Each		
C.13	<b>Supplying, fitting and fixing of deep set Tube Well Pump (Hand Set) No. 6</b> with all necessary fittings and accessories including 50 mm dia G.I. pipe 0.61 m long, 50 mm x 40 mm reducing socket, 40 mm dia pipe nipple 1.22 m long, cylinder, tie foot valve/ball, tie plunger, 3 nos. 10 mm dia sockets, 4 nos. 10 mm dia nuts, 5 nos. end threaded 10 mm dia M.S. rods 3 m long, and required quantity of sealing solution and sealing tape, including proper assembling, installation and testing, complete in all respects as per approved drawing and direction of the Engineer-in-Charge.	1.00	Each		
<b>Total</b>					
<b>D</b>	<b>Electrical Works with Fittings</b>				
D.1	<b>MDB/SDB:</b> Supplying, assembling, fitting, fixing & installation (with surface/concealed electric wiring for effective connection) of Main/Sub	1.00	Each		



	distribution board (Metal enclosure) with necessary MCBs/DP/TP/SP, RCCB, Isolator, Basbar etc. as per sample and approval by E-I-C. Rate shall include for necessary electrical wiring from electric meter to the DB/SDB. Minimum one year warrantee, Suggested Brand: Havels or Rlevant.				
D.2	<b>Circuit Breaker (SPMCB)</b> Providing & fixing on a prepared board 250 volt grade following single pole miniature circuit breaker (SPMCBs) having minimum breaking capacity 6-KA / 10 KA with thermal over-current and instantaneous electromagnetic short circuit release provision as per BDS IEC and IEC / VDE / NEMA / BS / JIS standard.SPMCBs accepted / approved by the Engineer-in-charge.				
	15 – 40 Amps (minimum 6 KA) MCB	5.00	Each		
	60/63 Amps (minimum 10 KA) MCB	1.00	Each		
D.3	<b>Gang Switch:</b> Providing and fixing 250 volts, 5/6 amps (minimum) concealed type gang switch / switch socket of approved quality, manufactured/assembled and tested in accordance with IEC/VDE/NEMA/BS/JIS standards along with relevant BDS standards, mounted on required size 18 SWG galvanized plain sheet or self-extinguishing PVC board (650°C rated) of 76.2 mm (3") depth; all electrical contacts shall be of brass/copper for safe and durable operation; complete with necessary fixing accessories, connections and installation as per approved design and direction of the Engineer-in-Charge. Manufactured in Hong Kong / Malaysia / Singapore / South Korea / Thailand.				
	One gang switch	3.00	Each		
	Two gang switch	3.00	Each		
	Four gang switch	12.00	Each		
	Fan regulator( gang type)	10.00	Each		



D.4	<p><b>Power Socket:</b> UNIVERSAL COMBINED SWITCH SOCKET OUTLET (SURFACE/CONCEALED TYPE) Providing &amp; fixing 250 volt single phase universal combined switch socket outlet (surface / concealed type) Manufactured/ Assembled and tested in accordance with IEC / VDE / NEMA / BS / JIS along with relevant BDS IEC standards mounted on required size 18 SWG galvanized plain sheet board / plastic board (self-extinguishing 650 degree centigrade) of 76.2 mm. (3") depth. Sample to be approved by the Engineer-in-charge. Manufacturer shall have certificate of standard which they follow. Made in HONGKONG / MALAYSIA / SINGAPORE / S KOREA / THAILAND</p>				
	13 / 15 / 16 / 20 Amps.	5.00	Each		
D.5	<p><b>Single Tube Light Fittings:</b> Providing and fixing 4' x 40 watt tube light fittings with superior quality electronic driver (minimum 1 year guarantee), lamp holder, necessary internal wiring with 2 x 0.4 sq. mm PVC insulated stranded flexible FR wire, earth terminal etc. (excluding lamp), suitable for LED lamp operation; light source 20W LED T-8 tube; body made of MS sheet with PC cover and plastic grill, size approximately L-1340 mm x B-104 mm x H-55 mm; complete with all necessary accessories, fittings, ceiling roses, installation, testing and commissioning, with 2 years warranty, and sample to be approved by the Engineer-in-Charge. Equivalent models include Gloria GTF (LED) 892x1x20W, Energy+ EPIL-4305, Cosmo BDTCL-TLF-06, Asha ACS-TLS 307x1x40W, Crescent CTLS-225x1x40W or approved equivalent.</p>	4.00	Each		



D.6	<p><b>Flood Light Fittings (LED):</b> Supply and fixing of LED flood light fittings of approved quality with minimum luminous efficacy of 100 lm/W, power factor not less than 0.95, and Colour Rendering Index (Ra) <math>70 \leq Ra &lt; 85</math>; driver shall be of IEC standard such as MEANWELL / OSRAM / ENERGY+ / SIGNIFY (PHILIPS) or equivalent, and LED chips shall be EPISTAR / OSRAM / SIGNIFY (PHILIPS) / CREE / BRIDGELUX or equivalent; colour temperature 3500K–6500K (warm white); body made of aluminium alloy with aluminium reflector and heat proof glass/polycarbonate cover; suitable for 50W LED flood light operation; complete with all accessories, fittings, internal wiring, installation, testing and commissioning with minimum 2 years warranty, and sample to be approved by the Engineer-in-Charge. Equivalent models include Gloria Cat No. GLFL-914, Energy+ EPFDL-17001 (50W), Cosmo BDTCL-LFDL-01, Adex AD FLE 50W830, Asha ACS-LFL-2155 (50W), Pasha PE FLL0005054/50W or approved equivalent.</p>	4.00	Each		
D.7	<p><b>Caged LED light:</b> Supplying, assembling, fitting, fixing, installation (with effective connection) testing &amp; Commissioning 20W LED ceiling mounted lamp with metal cage with separate gang switch as per direction and sample approved by E-I-C. Minimum one year manufacturer warranty</p>	6.00	Each		
D.8	<p><b>LED light:</b> Supplying, assembling, fitting, fixing, installation (with effective connection) testing &amp; Commissioning 20W LED wall mounted lamp, with holder as per direction and sample approved by E-I-C. Minimum one year manufacturer warranty.</p>	20.00	Each		



D.9	<p><b>Surface Conduit Point Wiring (BYA)</b>  Without Switch: Surface conduit wiring for point wiring looping at switch board with earth terminal using 1C × 2 × 1.5 sq mm PVC insulated cable (BYA) and 1C × 2 × 1.5 sq mm PVC insulated ECC (BYA) green/yellow bi-colour, including circuit wiring from SDB to switch board with 1C × 2 × 2.5 sq mm PVC insulated cable (BYA) and 1C × 2 × 2.5 sq mm PVC insulated ECC (BYA) through minimum 25 mm dia PVC conduit of 1.5 mm wall thickness (one conduit from switch board to ceiling point considered for three pair of cables), complete with 18 SWG G.P. sheet/PVC switch board and pull box (preferably concealed) with 3 mm thick ebonite sheet cover, excluding switches; including all necessary fittings, fixing materials, making good damages, proper connections with brass/copper contacts using connectors or soldering (no twisting allowed), cables manufactured and tested as per IEC/BS/VDE and relevant BDS standards, all complete as per detailed specification and direction of the Engineer-in-Charge.</p>				
	Light point/Exhaust/Wall bracket fan point	34.00	Point		
D.10	<p><b>Wiring Repair:</b> Conduit or surface wiring on surface with the following PVC insulated stranded cable (BYA) &amp; green Colored PVC insulated ECC wire (BYA) through PVC Conduit complete with fixing materials and uPVC channel &amp; other accessories as specified, Manufacturer according to the Specification &amp; direction, sample approval by the Engineer- in-charge.</p>				
	1C-2x1.5sqmm (BYA) cable with 1.5sqmm (BYA) ECC wire through PVC pipe of minimum inner dia 25 mm having wall thickness of 1.5 mm	25.00	m		
	1C-2x2.5sqmm (BYA) cable with 2.5sqmm (BYA) ECC wire through PVC pipe of minimum inner dia 25 mm having wall thickness of 1.7 mm.	25.00	m		



D.11	<b>Earthing system:</b> Supply & installation (with effective connection) of 8'-0" Brass or Copper Rod (10mm dia) under 2'-0" from FGL outside school building, Connecting the rod with SDB's earthing bar by 6mm dia copper wire (properly soldering with the rod) through 25 mm dia pvc pipe complete with necessary accessories as per direction of Engineer in-charge.	1.00	Each		
<b>Total</b>					
E	<b>Access Development Works</b>				
E.1	<b>EWEx(Rd/C/P):</b> Earthwork in excavation of roadway/canal/pond etc. of any dimension in all kinds of soil including cutting to required depth, bailing out water if necessary, and depositing the excavated earth on embankment; breaking clods, ramming, dressing and leveling in 225 mm layers, and maintaining proper side slopes and levels of both pond and embankment as per design drawings; all complete including finishing works as per direction and satisfaction of the Engineer-in-Charge. For initial lead of 30 m and lift of 1.5 m	0.13	Cu.m		
E.2	<b>Sand filling</b> on road bed in improved sub-grade with clean sand having minimum FM 0.50, free from dust, earth, organic matter, vegetation and other foreign materials, including supplying, laying, spreading in layers, watering and compacting by appropriate mechanical means to achieve minimum 98% of Maximum Dry Density (MDD) as per Modified Proctor test and to ensure minimum soaked CBR 8% or design CBR as specified; all complete including necessary finishing, leveling and compaction as per direction of the Engineer-in-Charge.	37.70	Cu.m		
E.3	<b>Brick work 125mm :</b> 125 mm thick brickwork with first class bricks in cement sand mortar (FM 1.2) in (1:4) proportion, including making proper bond with connected walls, raking out joints, cleaning and soaking bricks in water for at least 24 hours before use,	3.49	Sq. M.		



	washing of sand, providing necessary scaffolding, proper laying and workmanship, and curing for minimum 7 days; including cost of water, electricity and other incidental charges, all complete as per approved drawing and direction of the Engineer-in-Charge.				
E.4	<b>SBFS (FM-0.50):</b> Providing single layer brick flat soling (BFS) with 1st class or picked bricks, laid true to level and maintaining camber/super elevation and grade, including carrying bricks, filling the interstices tightly with sand of minimum FM 0.50, etc., all complete in all respects as per approved drawings, specifications, and direction of the Engineer-in-Charge.	288.68	Sq. M.		
E.5	<b>Brick on end edging:</b> EE (75 mm): Brick on edge edging (75 mm across the road) with first class or picked jhama bricks, laid true to level and grade, including cutting trenches, removing earth, refilling and ramming the sides properly, and filling the gaps with fine sand (F.M. 0.80), including cost of all materials, all complete and accepted by the Engineer-in-Charge.	305.49	L.M.		
E.6	<b>GI Railing for Ramp:</b> Supplying, fitting and fixing railing for ramp with 38-40mm dia of 2.3mm thickness GI pipe, 900mm height with 38mm dia 2.3mm thick vertical post @ 1200mm c/c, 150mm embedded into the ramp after cutting grooves and mending good the damages with Cement Concrete (1:2:4) in/c polishing/painting etc. The rate including making 50 X 100 mm Concrete wheel guard in both sides of the ramp with painting as direction of the E-I-C.	3.25	Sq. M.		
E.7	<b>Plastering with NCF:</b> Minimum 12 mm thick cement sand (F.M.1.2) plaster with neat cement finishing to plinth wall, floor, Dawrf wall with cement (1:4) up to 1500 mm below ground level including washing of sand, use black or red color to mixture, finishing the edges and corners and curing at least for 7 days, cost of water, electricity, scaffolding and other	5.34	Sq.M.		



	charges etc. all complete in all respect as per drawing and accepted by the Engineer-in-charge.				
	Total				
F	Solar Power System Installation				
F.1	<b>Solar PV Module:</b> Supply, installation, testing, and commissioning of high-efficiency Tier-1 Monocrystalline Silicon (Half-cut cell technology) Solar PV Modules, with each individual module having a rated capacity of not less than 500Wp under Standard Test Conditions (STC). The modules must be manufactured by a Bloomberg New Energy Finance (BNEF) Tier-1 listed company and comply strictly with IEC 61215 and IEC 61730 standards for design qualification and safety. The units shall feature anti-reflective coated tempered glass, an anodized aluminum alloy frame, and IP68-rated junction boxes with MC4 compatible connectors, ensuring a module efficiency of $\geq 21\%$ . All components must be delivered with a minimum 12-year product warranty and a 25-year linear performance warranty; all technical data sheets, factory test reports, and origin certificates must be submitted for technical evaluation and approval by the Engineer-in-Charge prior to site delivery.	3500.00	Wp		
F.2	<b>Mounting Structure:</b> Supply, fabrication, and installation of a high-resilience solar mounting structure utilizing 75mm diameter Hot Dip Galvanized (GI) pipes with a minimum wall thickness of 4mm, engineered to withstand a basic wind speed of not less than 150 km/h in strict accordance with BNBC 2020 and ASCE 7-10 standards.. Each vertical support pole shall be securely fixed to the existing RCC slab using a 200mm x 200mm x 4mm thick GI base plate fastened with heavy-duty anchor bolts, followed by the construction of a 300mm x 300mm x 300mm Cement Concrete (CC) casting block for added structural stability and ballast. The concrete pedestals must be finished	3500.00	Wp		



	<p>with smooth plastering and high-quality weather-coated painting to ensure aesthetic uniformity and environmental protection. To maintain the integrity of the roof slab, all drilled and bolted connection areas must be hermetically sealed with a high-grade epoxy coating to provide a robust water-leakage prevention barrier. The entire structural assembly, including all welding and specialized anchoring, must be implemented with technical precision and is subject to the final inspection and approval of the Engineer-in-Charge.</p>				
F.3	<p><b>All in one Energy Storage System:</b> Supply, installation, testing, and commissioning of a high-efficiency, fully integrated All-in-One (AIO) Energy Storage System (ESS), featuring a hybrid inverter and Lithium Iron Phosphate (LiFePO<sub>4</sub>) battery modules manufactured by the same manufacturer to ensure seamless communication and vertical system integration. The system shall provide a nominal AC output of 6kW with a minimum integrated battery capacity of 10 kWh, achieving a maximum conversion efficiency of <math>\geq 97.6\%</math> and a battery round-trip efficiency of <math>\geq 95\%</math>. Technical parameters must include a rated PV input voltage of 360V, a maximum input voltage of 600V, and dual MPPT trackers supporting up to 16,000 Wp. The unit must demonstrate rigorous environmental and safety compliance, including UN 38.3 certification for safe battery transportation, RoHS/REACH environmental compliance, and an IP66 ingress protection rating for versatile installation. The system must support an Emergency Power Supply (EPS) transition time of <math>\leq 4\text{ms}</math> and provide a 200% peak overload capacity for 10 seconds. Acceptable major brands include Fox ESS, BYD, Huawei, Sungrow, GoodWE (or equivalent approved by the Engineer-</p>	1.00	Set		



	<p>in-Charge), provided the single-brand manufacturing requirement is met. The entire assembly must strictly comply with IEC 62109-1/2 and IEC 62619 safety standards, including a comprehensive 5-year manufacturer warranty, with all technical submittals and factory test reports subject to the final evaluation and approval of the Engineer-in-Charge.</p>				
F.4	<p><b>Solar Array Junction Box:</b> Supply, fitting, and fixing of a high-quality, factory-made and fully assembled Solar Array Junction Box (AJB) fabricated from 18 SWG Mild Steel (MS) sheet, featuring a robust hinged-type door and integrated locking arrangement for secure site operation. The unit must be delivered as a complete, pre-wired assembly featuring a Type II Surge Protection Device (SPD) and a DC circuit breaker of adequate rating specifically matched to the PV string configuration to ensure comprehensive overcurrent and voltage spike protection. All surfaces of the board shall be finished with a high-durability powder coating using epoxy polyester resin in a grey or off-white color to prevent corrosion and withstand environmental exposure. The factory-integrated assembly, including all internal busbars, terminal blocks, and cable glands, must be executed with technical precision and is subject to the final inspection and approval of the Engineer-in-Charge.</p>	1.00	Set		
F.5	<p><b>AC Combiner Box:</b> Supply, fitting, and fixing of a high-quality, factory-made and fully assembled AC Combiner Box (ACCB) fabricated from 18 SWG Mild Steel (MS) sheet, featuring a robust hinged-type door and integrated locking arrangement for secure site operation. The unit must be delivered as a complete, pre-wired assembly equipped with a Type II AC Surge Protection Device (SPD) and a molded case circuit breaker (MCCB) or MCB of adequate rating specifically sized to</p>	1.00	Set		



	handle the combined AC output of the inverters. All surfaces of the board shall be finished with a high-durability powder coating using epoxy polyester resin in a grey or off-white color to ensure long-term resistance against corrosion and environmental wear. The factory-integrated assembly, including internal busbars, neutral links, and properly sized terminal blocks, must be executed with technical precision and is subject to the final inspection and approval of the Engineer-in-Charge.				
F.6	<b>Cables:</b> Supply and fitting, fixing cables for solar cables of following sizes with necessary accessories such as PVC Channel/flexible pipes, cable tie, PVC tape, Copper lugs, connector etc. All cables shall be manufactured and tested according to IEC/BS/VDE standards. The work shall be carried out as per direction/approval of the engineer in-charge.				
F.6.1	For Inverter Wiring: 1Cx1-6RM NYFF Cable	100.00	Meter		
F.6.2	For String Wiring: 1Cx1-10 RM BYM Cable	20.00	Meter		
F.6.3	Earthing Cable: 1x1C-4RM BYA ECC	50.00	Meter		
F.6.4	Earthing Cable: 1x1C-10RM BYA ECC	50.00	Meter		
F.7	<b>Accessories:</b> Supply and installation of all essential installation accessories and miscellaneous hardware, including UV-stabilized PVC conduits, perforated GI cable trays, heavy-duty cable ducts, and industrial-grade nylon cable ties, along with high-quality weatherproof cable glands, end-sealing kits, and stainless steel (SS316) mounting fasteners. The scope also includes safety signage for high-voltage DC circuits, bi-metallic lugs for dissimilar metal terminations, heat-shrinkable ferrule sleeves for wire identification, and industrial-grade sealant/gaskets for all enclosure entries to maintain IP-rated protection. All accessories must be sized and installed with technical precision to ensure maximum mechanical protection and	1.00	Lot		



	professional cable management, fully compliant with the requirements and final satisfaction of the Engineer-in-Charge.				
F.8	<b>Earthing and Protection:</b> Supply, installation, testing, and commissioning of a dedicated Earthing and Lightning Protection System, utilizing a 12mm diameter solid copper conductor for the main earthing lead to ensure low-impedance discharge paths. The system shall include a boring of 40 to 60 feet depth with a minimum borehole diameter of 150mm, featuring a high-conductivity copper earthing rod encased in bentonite or chemical earth enhancement compound to achieve a measured earth resistance of less than 5 Ohms. Lightning protection shall be provided via a specialized Lightning Arrester mounted on a galvanized mast, with all connections for solar panels and peripheral equipment secured using heavy-duty copper clamps, stainless steel nuts, and bolts to prevent galvanic corrosion. All earth pits must include a protective masonry chamber and a test link for periodic resistance measurement, with the entire installation executed to the technical satisfaction and final approval of the Engineer-in-Charge.	1.00	Set		
F.9	<b>Automatic Changeover Switch:</b> Supply and installation of a high-quality 63A compact single-phase manual changeover switch, featuring a rotary handle with a 3-position (1-0-2) control mechanism for reliable source switching. The unit shall be a premium brand such as ABB, Havells, or equivalent, ensuring robust internal contacts and a durable enclosure for long-term electrical isolation. All terminations must be securely lugged and tested to the technical satisfaction and final approval of the Engineer-in-Charge.	1.00	Each		



F.10	<b>Drawing:</b> Preparation and provision of a comprehensive Single Line Diagram (SLD) of the as-built solar PV system, color-printed on high-quality A3 paper and finished with heavy-duty lamination for long-term site durability. The diagram must clearly illustrate all system components, including PV strings, inverters, protection devices, and cable schedules, and shall be securely mounted at the main distribution point or control room for operational reference, subject to the final approval of the Engineer-in-Charge.	1.00	Each		
<b>Total</b>					
<b>GRAND TOTAL (A+B+C+D+E+F)</b>					

**Package 4: Purbo Sayedpur Girls Govt Primary School, Union: Char Shahi, Lashmipur Sadar Upazila, Lakshmipur.**

Item	Items Name with Specification	Quantity	Unit	Unit price (Including Vat, Tax & Delivery)	Total Price (Including Vat, Tax & Delivery)
A	<b>Alignment with the National Cyclone Shelter Policy</b>				
A.1	<b>Mobilization</b> with additional scaffolding for repairing RCC slab, cornice/drop wall/outer wall, etc. of a two-storied building, including site cleaning Scrapping old mosses and plaster before commencement of physical work, during the contract period, and demobilization after completion of the works under the contract accepted by the Engineer; the work shall also cover cleaning, clearing, cutting or filling, and dressing of the project area to ensure smooth execution of all activities in a safe and secure environment, including stockpiling of resulting materials at locations approved by the Engineer for disposal; payment shall be based on the ground area determined by the Engineer and shall be proportionate to the overall progress of the work as approved; the work shall mandatorily include provision, installation, and continuous operation of a 1 HP pump	1.00	Item		



	<p>motor with hose pipe and generator as required, compulsory use of tarpaulin, polythene to protect works, materials, and working areas from rain and adverse weather conditions, ensuring adequate lighting arrangements at all work locations for safe and uninterrupted execution, and provision and strict use of all necessary safety equipment and protective gear including helmets, gloves, goggles, safety vests, and safety belts in full compliance with safety standards throughout the execution period.</p>				
A.2	<p><b>Rooftop Red Marking Signal Light :</b> Supplying, fitting and fixing signal red light to ensure the shelter is visible during disasters, especially at night and in poor weather conditions. Type: LED-based solar-powered aviation warning light. Material: Weather-resistant, UV-stabilized polycarbonate and aluminum alloy body. Light Source: High-intensity red LED with a visibility range of at least 2-3 kilometers. Solar Panel Type: Monocrystalline or polycrystalline. Power Output: Minimum 5W to 10W depending on the light's power requirement. Battery: Lithium-ion battery with at least 24 hours of backup (fully charged). Lighting Mode: Steady or flashing (adjustable); Flash rate: 20-60 flashes/min. Ingress Protection: Minimum IP65 for water and dust resistance. Mounting: Steel or aluminum mounting bracket compatible with the rooftop structure. Other Features: Automatic light sensor for dusk-to-dawn operation. All complete as per direction of the E-I-C.</p>	1.00	Each		



A.3	<p><b>Mike with Siren System Installation:</b> Supplying, fitting and fixing mike with siren system to broadcast announcements and emit a siren to alert the community during emergencies. Microphone Type: Handheld or gooseneck microphone with a noise-canceling feature. Frequency Response: 50 Hz to 15 kHz. Build: Durable, shock-resistant, and weather-resistant. Amplifier: Power Output: Minimum 150W to 200W. Voltage: Compatible with the cyclone shelter's power system (solar backup preferred). Input Ports: Multiple inputs for microphone and auxiliary devices. Siren System Sound Range: Audible at a distance of 1-2 kilometers in open areas. Sound Patterns: Multi-tone options (wailing, steady, pulse) with adjustable volume. Power Source: Solar or AC/DC with a backup battery (minimum 6 hours of runtime). Speakers Type: Outdoor horn speakers with high weather resistance (IP65 minimum). Power Output: Minimum 4 Nos. 75W-100W per speaker. Material: Aluminum or ABS body with UV-resistant coating. Accessories: Necessary cables, connectors, and mounts. All complete as per direction of the E-I-C.</p>	1.00	Item		
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A.4	<p><b>Rooftop “S” Mark Painting :</b> Supplying and painting “S” Mark on the roof top to identify the shelter as a designated emergency cyclone shelter from aerial views. Dimensions: Minimum 3 meters in length and 1.5 meters in width for clear visibility or as per drawings Color: High-contrast red paint with a white border (reflective for night visibility). Paint Type: Base Coat Anti-corrosion primer suitable for concrete surfaces. Top Coat: Reflective polyurethane or epoxy paint with UV and weather resistance. Durability: Weatherproof and resistant to rain, sun, and wind for a minimum of 5 years. Surface Preparation: Cleaning, sanding, and priming of the concrete rooftop before painting. Application: Two coats of reflective paint applied with a roller or spray for uniformity. All complete as per direction of the E-I-C.</p>	1.00	Each		
<b>Total</b>					
<b>B</b>	<b>Civil Works</b>				
<b>B.1</b>	<b>Preliminary Works</b>				
B.1.1	<p><b>Sign Board with Signage:</b> Supplying, transporting, fitting and installation of approved best quality country-made mild steel (MS) signboard as per drawing, complete in all respects and accepted by the Engineer-in-Charge (E-I-C); size 2000 mm × 1000 mm, made of 2 mm thick MS sheet continuously welded on both sides with MS rectangular hollow box frame comprising 75 mm × 75 mm × 3 mm vertical columns and 50 mm × 50 mm × 3 mm horizontal members, including 4 nos. 12 mm dia anchor bars welded with column box and embedded minimum 450 mm into foundation; RCC foundation consisting of 400 mm × 400 mm × 400 mm footing and 250 mm × 250 mm × 600 mm column base using mix ratio 1:1.5:3 with minimum</p>	1.00	Item		



	<p>cement content ensuring <math>f'_{cr} = 24</math> MPa, <math>f'_c = 17</math> MPa at 28 days and water-cement ratio not exceeding 0.45, conforming to ACI/BNBC/ASTM standards, using cement BDS EN-197-1-CEM-I 52.5N or ASTM C150 Type I, sand comprising 50% local (F.M. 1.2) and 50% Sylhet/coarse sand (F.M. 2.2), and 20 mm down well-graded stone chips as per ASTM C-33; including proper shuttering, reinforcement (12 mm dia bars @ 200 mm c/c in footing, 4 nos. 12 mm dia bars in column, 10 mm dia stirrups @ 150 mm c/c), machine mixing or batching plant, vibration, curing for minimum 28 days, and all associated costs such as water, electricity and testing; including dismantling of existing concrete if required, site cleaning and debris disposal, and 125 mm thick brick flat soling using 1st class bricks at foundation base (400 mm × 400 mm); surface preparation and painting with one coat anti-corrosive paint and two coats synthetic enamel paint in dark blue (Donor official color: RGB 0/51/160, HEX #0033A0, CMYK 100/80/3/2, Pantone 286C); also including supply and installation of 2 nos. high-quality reflective stickers (hexagonal pattern) of size 2000 mm × 1000 mm with prior sample approval from E-I-C.</p>				
B.1.2	<p><b>Dismantling of unserviceable/damaged brick works</b> with cement or lime mortar) of thickness 75/125 mm in foundation and superstructure and removal of debris to a safe distance.</p>	1.67	Sq. m.		
B.1.3	<p><b>Stripping of unserviceable plaster</b> including racking out joints, cleaning etc.</p>	230.66	Sq. m.		
	<b>Sub Total</b>				
<b>B.2</b>	<b>Structural Works</b>				



B.2.1	<p><b>RCC WORKS: 1:2:4</b> (measured on gross concrete section) (<math>f'c = 19</math> MPa, minimum <math>f'cr = 26</math> MPa in nominal mix 1:2:4), with brick-chips Sand of F.M. 1.2 and F.M. 2.2 in equal proportion) Reinforced cement concrete works with minimum cement content relates to mix ratio 1:2:4 having maximum water cement ratio = 0.45 and minimum <math>f'cr = 6</math> MPa, satisfying a specified compressive strength <math>f'c = 19</math> 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, 52.5N (52.5 MPa) / ASTM-C 150 Type – I, best quality sand [50% quantity of best local sand (F.M. 1.2) and 50% quantity of Sylhet sand or coarse sand of equivalent F.M. 2.2] and 20 mm down well graded picked jhama brick chips conforming to ASTM C-33 including conducting necessary tests, breaking chips and screening, making and placing shutter in position maintaining true to plumb, making shutter water-tight properly, placing reinforcement in position; mixing in 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 &amp; centering)</p>	0.73	Cu.m.		
B.2.2	<p><b>Rebar:</b>Grade B400C-R/ B400CWR/ 400DWR: Ribbed or Deformed bar produced and marked as per BDS ISO 6935-2:2016 with minimum yield strength, <math>f_y</math> (ReH) = 400 MPa, but the tested yield strength shall not exceed <math>f_y</math> by more than the 125 MPa and the</p>	10.00	kg		



	ratio of tested ultimate strength, $f_u$ (Re) to tested yield strength ( $f_y$ ) shall be at least 1.25 and minimum elongation after fracture (A5.65) & minimum total elongation at maximum force (Agt) is 17% and 8% respectively.				
B.2.3	<b>Plaster</b> Minimum 12 mm thick cement sand (F.M. 1.2) plaster (1:4) with fresh cement applied to both inner and outer surfaces of walls, including surface preparation by cleaning and washing of sand, finishing of corners and edges, curing for at least 7 days, and including cost of water, electricity, scaffolding, and all other incidental charges, complete in all respects as per drawings and accepted by the Engineer-in-Charge.	230.66	Sq. m.		
B.2.4	<b>Chemical Water proofing on the roof slab:</b> The roof surface proper cleaning by flashing water before applied water proofing chemical on the roof slab approved quality material (Barger or equivalent-2 coats (horizontal and vertical direction) water Mr. Expert water barrier/Brush bond (13 Sq,M/ 20.088 kg pac) over a coat Nito bond SBR Latex plus and 2-coats Flexible Roofing Compound on top as finishing coats - color green) after preparation of the surface by removing existing rendering in alternative panels etc. After completing water proofing works on roof, the roof need to be seen smooth slope surface and uniform color. All complete as per direction of the E-I-C. The rate will include cleaning, removing and washing existing top portion of slab.	179.55	Sq. m.		
B.2.5	<b>Plastering with NCF:</b> Minimum 12 mm thick cement sand (F.M.1.2) plaster with neat cement finishing to dado (up to 150 mm from floor level), floor with cement (1:4) including washing of sand, use black or red color to mixture, finishing the edges and corners and curing at least	47.66	Sq. M.		



	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.				
	<b>Sub Total</b>				
<b>B.3</b>	<b>Ground Floor Development Works</b>				
B.3.1	<b>Floor Plastering with NCF:</b> Minimum 12 mm thick cement sand (F.M.1.2) plaster with neat cement finishing to plinth wall, floor, Dwarf wall with cement (1:4) up to 1500 mm below ground level including washing of sand, use black or red color to mixture, finishing the edges and corners and 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.	397.89	Sq. M.		
	<b>Sub Total</b>				
<b>B.4</b>	<b>Door, Window, Grill Repair Works</b>				
B.4.1	<b>Grill:</b> Galvanized MS flat bar 40mmx6mm @100mm c/c vertically fitted with 2 nos Horizontally Galvanized MS flat bar (40mmx6mm) @ 450mm c/c maximum, in/c.removing rust, brushing, polishing, fabricating, welding of each point, riveting if necessary, cost of electricity, workshop charge, carriage, fixing with Galvanized MS clamps or steel royal bolt in walls/RCC member and painting with two coats of synthetic enamel paint over a coat of anticorrosive priming for all floors etc. all complete as per direction of the E-I-C.	1.67	Sq.M.		
B.4.2	<b>Minor Wooden Door Repair (2.1m × 1.0m):</b> Repairing of existing wooden door including (100mm × 38mm) lock rail, (125mm × 38mm) middle rail and (225mm × 38mm) bottom rail with 25mm thick one side raised paneling; supplying and fitting of best quality 6 nos. 100mm iron hinges, 2 nos. 12mm dia tower bolts (300mm & 225mm long), 2 nos. heavy type nickel plated handles, hinge cleats and buffer blocks; and	3.00	Each		



	any defective timber to be repaired or replaced as required; complete with sand papering for smooth finish for all floors, as per direction of the E-I-C; timber to be Jack wood; including supply and installation of one heavy security 60mm padlock (HMBR) for each door; applicable for single/double leaf doors and all sizes of wood complete.				
B.4.3	<b>Plastic Door Repair:</b> Repairing of existing plastic (PVC) door including checking and fixing of door frame, shutter, hinges, handle, latch/lock and all accessories; replacing damaged or defective parts such as hinges, handles, locks, stoppers and fasteners where necessary; rectifying misalignment, tightening loose fittings, repairing cracks or minor damages using suitable adhesive/sealant, and ensuring smooth opening and closing of the door; making good any damages to adjoining surfaces with cement mortar (1:4) where required, and completing all works in proper functional condition as per direction of the Engineer-in-Charge.	6.00	Each		
B.4.4	<b>New collapsible gate:</b> Manufacturing, supplying, fitting and fixing M.S. collapsible gate of any design and shape made of 20 mm x 20 mm x 3 mm M.S. angle placed @ 112 mm c/c vertically, connected with each other by 20 mm x 3 mm M.S. flat bar scissors of 525 mm and 600 mm length provided in 3 rows, including cutting M.S. members to required sizes, fabrication, welding, riveting with required size rivets, providing wheels, pulling handles on both sides, suitable locking arrangement, electrodes, grease, and placing the gate in position between two nos. 50 mm x 50 mm x 6 mm M.S. tee rails made by welding two nos. 50 mm x 6 mm M.S. flat bars, fixed at top and bottom with R.C.C. lintel/roof slab, floors, and side walls using required nos. of 150 mm to 225 mm long 38	14.22	Sq.M.		



	mm x 6 mm M.S. flat bar clamps, one end welded with the gate member and the other end bifurcated and embedded in C.C., including cutting holes, making good damages by pouring 1:2:4 concrete into holes, finishing, painting with 2 coats of approved synthetic enamel paint over a coat of anti-corrosive paint, including carriage, greasing, electrodes, curing, and all incidental works complete as per drawing and design and accepted by the Engineer-in-Charge.				
	<b>Sub Total</b>				
<b>B.5</b>	<b>Painting Works</b>				
B.5.1	<b>Plastic emulsion paint on internal wall:</b> 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. upto desired finishing, elapsing specified time for drying or recoating; all complete in all floors and accepted by the Engineer-incharge	922.25	Sq. M.		



B.5.2	<p><b>Weather coat exterior paint:</b> Exterior standard acrylic emulsion paint of approved best quality and color, having water-resistant properties and resistance against fungi, fading, and flaking, supplied from an authorized local agent of the manufacturer in sealed containers; applied to exterior surfaces with proper surface preparation including cleaning, drying, removal of dirt, grease, wax, chalked and scaled materials, fungus, and repairing surface defects by sand paper, along with necessary scaffolding; applying specified exterior sealer on the prepared surface, followed by exterior putty for leveling, spot filling, crack filling, and smooth finishing with sand paper/zero water paper; finally applying 2 coats of exterior emulsion paint by brush/roller/spray with required drying time between coats, including all scaffolding, complete in all floors and accepted by the Engineer-in-Charge.</p>	680.60	Sq. M.		
B.5.3	<p><b>Enamel paint wooden member:</b> Prepare the surface by removing dust apply two coats of wood primer and two coats of enamel paint on wooden frame and shutter of window. Rate shall include for minor repairs, wood putting, and necessary brushes, machine, masking tape, sand papers require for surface preparation and scaffolding etc all complete as per Direction of E-I-C .</p>	6.83	Sq. m.		
B.5.4	<p><b>Enamel paint for window grill/shutter/railing/door:</b> Prepare the surface by removing rust and apply two coats of anticorrosive paint and two coats of enamel paint on steel frame and shutter and window grill of both side. Rate shall include for removing existing paint, rust, dust with minor repairs and necessary brushes, mechanical wire brush, masking tape, sand papers putty require for surface preparation and scaffolding etc all complete as</p>	61.38	Sq. m.		



	per Direction of E-I-C .				
B.5.5	<b>Class Room Art:</b> Prepare the surface by removing rust and apply existing learning photo etc all complete as per Direction of E-I-C .	51.77	Sq. m.		
	<b>Sub Total</b>				
	<b>Total (B1+B2+B3+B4+B5)</b>				
<b>C</b>	<b>Water Supply and Sanitation Facility works</b>				
C.1	Supplying, Fitting and Fixing of 12 mm <b>Bib Cock:</b> Supplying, fitting and fixing of best quality country-made 12 mm dia bib cock made of copper or copper alloy, chromium plated, conforming to BDS EN 200:2009; the faucet shall be free from leakage, permeation and defects, with water hammer value not exceeding 1.47 MPa, and shall remain leak-proof after 100,000 operations while ensuring reverse flow prevention performance; all internal and external surfaces shall be smooth and free from blowholes, fissures or any injurious defects; chromium plating shall be Class 2 Grade 1 with minimum 0.1 micron thickness; fixing in position with necessary fittings including sealing tape, ensuring leak-proof installation, complete in all respects as approved by the Engineer-in-Charge. Lever CP Conceal Bib Cock long/short body with aerator	8.00	Each		
C.2	<b>Stainless Steel Soap Case:</b> Supplying, fitting and fixing of 1.2 mm thick stainless steel (SS) soap case of approved quality including all necessary fittings and accessories, making holes in walls wherever required, proper anchoring/fastening, and mending good any damages with cement mortar (1:4), complete in all respects as per approved drawing and direction of the Engineer-in-Charge.	3.00	Each		
C.3	<b>PVC Paper Holder:</b> Supplying, fitting and fixing of stainless steel (SS) paper holder of approved quality including all necessary fittings, accessories and fasteners, making holes in walls	2.00	Each		



	wherever required, proper fixing in position with screws/anchors, and mending good any damages with cement mortar (1:4), complete in all respects as per approved drawing and direction of the Engineer-in-Charge.				
C.4	<b>Floor Grating Net:</b> Supplying, fitting and fixing of floor grating net in traps or drains of approved quality and type including making necessary holes in walls/floors, proper positioning and fixing with required fittings and fasteners, and mending good any damages with cement mortar (1:4), complete in all respects as per approved drawing and direction of the Engineer-in-Charge. Approx. 100 mm x 100 mm PVC floor grating net	4.00	Each		
C.6	Supplying, fitting and fixing of 100 mm inside diameter & wall thickness 2.7 mm - 3.4 mm best quality uPVC <b>Rain Water/waste water down pipe</b> fitting, fixed in position with head and shoes, bends, min.20 mm width F.I. Bar clamp and nails, and including all accessories such as round grating/domed roof grating, bands, sockets approved and accepted by the Engineer- in- charge.	30.00	L.m		
C.7	Supply, Fitting & Fixing Vent Cowl 4"	2.00	Each		
C.8	soak pit : Supplying, fitting and fixing 900mm ring 3nos and 900mm slab with 150 mm 4 Lm upvc pipe.	1.00	Each		
C.9	Septic tank desludging	1.00	Each		
<b>Total</b>					
D	<b>Electrical Works with Fittings</b>				
D.1	<b>MDB/SDB:</b> Supplying, assembling, fitting, fixing & installation (with surface/concelled electric wiring for effective connection) of Main/Sub distribution board (Metal enclosure) with necessary MCBs/DP/TP/SP, RCCB, Isolator, Basbar etc. as per sample and approval by E-I-C. Rate shall include for necessary electrical wiring from electric meter to the DB/SDB. Minimum one year warrantee	1.00	Each		



D.2	<b>Circuit Breaker (SPMCB)</b> Providing & fixing on a prepared board 250 volt grade following single pole miniature circuit breaker (SPMCBs) having minimum breaking capacity 6-KA / 10 KA with thermal over-current and instantaneous electromagnetic short circuit release provision as per BDS IEC and IEC / VDE / NEMA / BS / JIS standard. SPMCBs accepted / approved by the Engineer-in-charge.				
	15 – 40 Amps (minimum 6 KA) MCB	8.00	Each		
	60/63 Amps (minimum 10 KA) MCB	1.00	Each		
D.3	<b>Gang Switch:</b> Providing and fixing 250 volts, 5/6 amps (minimum) concealed type gang switch / switch socket of approved quality, manufactured/assembled and tested in accordance with IEC/VDE/NEMA/BS/JIS standards along with relevant BDS standards, mounted on required size 18 SWG galvanized plain sheet or self-extinguishing PVC board (650°C rated) of 76.2 mm (3") depth; all electrical contacts shall be of brass/copper for safe and durable operation; complete with necessary fixing accessories, connections and installation as per approved design and direction of the Engineer-in-Charge. Manufactured in Hong Kong / Malaysia / Singapore / South Korea / Thailand.				
	One gang switch	1.00	Each		
	Two gang switch	3.00	Each		
	Four gang switch	8.00	Each		
	Fan regulator( gang type)	8.00	Each		



D.4	<p><b>Power Socket:</b> UNIVERSAL COMBINED SWITCH SOCKET OUTLET (SURFACE/CONCEALED TYPE) Providing &amp; fixing 250 volt single phase universal combined switch socket outlet (surface / concealed type) Manufactured/ Assembled and tested in accordance with IEC / VDE / NEMA / BS / JIS along with relevant BDS IEC standards mounted on required size 18 SWG galvanized plain sheet board / plastic board (self-extinguishing 650 degree centigrade) of 76.2 mm. (3") depth. Sample to be approved by the Engineer-in-charge. Manufacturer shall have certificate of standard which they follow. Made in HONGKONG / MALAYSIA / SINGAPORE / S KOREA / THAILAND</p>				
	13 / 15 / 16 / 20 Amps.	4.00	Each		
D.5	<p><b>Single Tube Light Fittings:</b> Providing and fixing 4' x 40 watt tube light fittings with superior quality electronic driver (minimum 1 year guarantee), lamp holder, necessary internal wiring with 2 x 0.4 sq. mm PVC insulated stranded flexible FR wire, earth terminal etc. (excluding lamp), suitable for LED lamp operation; light source 20W LED T-8 tube; body made of MS sheet with PC cover and plastic grill, size approximately L-1340 mm x B-104 mm x H-55 mm; complete with all necessary accessories, fittings, ceiling roses, installation, testing and commissioning, with 2 years warranty, and sample to be approved by the Engineer-in-Charge. Equivalent models include Gloria GTF (LED) 892x1x20W, Energy+ EPIL-4305, Cosmo BDTCL-TLF-06, Asha ACS-TLS 307x1x40W, Crescent CTLS-225x1x40W or approved equivalent.</p>	7.00	Each		



D.6	<p><b>Flood Light Fittings (LED):</b> Supply and fixing of LED flood light fittings of approved quality with minimum luminous efficacy of 100 lm/W, power factor not less than 0.95, and Colour Rendering Index (Ra) <math>70 \leq Ra &lt; 85</math>; driver shall be of IEC standard such as MEANWELL / OSRAM / ENERGY+ / SIGNIFY (PHILIPS) or equivalent, and LED chips shall be EPISTAR / OSRAM / SIGNIFY (PHILIPS) / CREE / BRIDGELUX or equivalent; colour temperature 3500K–6500K (warm white); body made of aluminium alloy with aluminium reflector and heat proof glass/polycarbonate cover; suitable for 50W LED flood light operation; complete with all accessories, fittings, internal wiring, installation, testing and commissioning with minimum 2 years warranty, and sample to be approved by the Engineer-in-Charge. Equivalent models include Gloria Cat No. GLFL-914, Energy+ EPFDL-17001 (50W), Cosmo BDTCL-LFDL-01, Adex AD FLE 50W830, Asha ACS-LFL-2155 (50W), Pasha PE FLL0005054/50W or approved equivalent.</p>	4.00	Each		
D.7	<p><b>Caged LED light:</b> Supplying, assembling, fitting, fixing, installation (with effective connection) testing &amp; Commissioning 20W LED ceiling mounted lamp with metal cage with separate gang switch as per direction and sample approved by E-I-C. Minimum one year manufacturer warranty</p>	6.00	Each		
D.8	<p><b>LED light:</b> Supplying, assembling, fitting, fixing, installation (with effective connection) testing &amp; Commissioning 20W LED wall mounted lamp, with holder as per direction and sample approved by E-I-C. Minimum one year manufacturer warranty.</p>	20.00	Each		



D.9	<p><b>Ceiling Fan:</b> Supplying and fixing AC capacitor type ceiling fan (without regulator) of approved quality and size, complete with minimum 305 mm (1 ft) long MS pipe down rod of 0.75–1.0 inch dia and 2.3 mm thickness, tempered cast aluminium blades, 2.5 <math>\mu</math>F 400V AC capacitor, canopy, double Z ball bearing, best quality silicon sheet core, high grade copper enamel winding wire, aluminium alloy/metal body with safety pin and powder coated heat-resistant finish as per BDS 818; including PVC wiring connection and all necessary accessories, fittings, ceiling roses, fan hook with royal bolt installation, testing and commissioning. Rated voltage 230 V, frequency 50 Hz, rated speed 300 rpm <math>\pm</math>5%, service value minimum 3.5 m<sup>3</sup>/min/W, temperature rise maximum 55°C, insulation class minimum E, noise level maximum 60 dB at 1 m distance, input power maximum 70 W, all complete as per direction of the Engineer-in-Charge. 1442 mm. (56") Sweep</p>	2.00	Each		
D.10	<p><b>Surface Conduit Point Wiring (BYA)</b> Without Switch: Surface conduit wiring for point wiring looping at switch board with earth terminal using 1C <math>\times</math> 2 <math>\times</math> 1.5 sq mm PVC insulated cable (BYA) and 1C <math>\times</math> 2 <math>\times</math> 1.5 sq mm PVC insulated ECC (BYA) green/yellow bi-colour, including circuit wiring from SDB to switch board with 1C <math>\times</math> 2 <math>\times</math> 2.5 sq mm PVC insulated cable (BYA) and 1C <math>\times</math> 2 <math>\times</math> 2.5 sq mm PVC insulated ECC (BYA) through minimum 25 mm dia PVC conduit of 1.5 mm wall thickness (one conduit from switch board to ceiling point considered for three pair of cables), complete with 18 SWG G.P. sheet/PVC switch board and pull box (preferably concealed) with 3 mm thick ebonite sheet cover, excluding switches; including all necessary fittings, fixing materials, making good damages, proper</p>				



	connections with brass/copper contacts using connectors or soldering (no twisting allowed), cables manufactured and tested as per IEC/BS/VDE and relevant BDS standards, all complete as per detailed specification and direction of the Engineer-in-Charge.				
	Light point/Exhaust/Wall bracket fan point	37.00	Point		
	Fan point	1.00	Point		
D.11	<b>Wiring Repair:</b> Conduit or surface wiring on surface with the following PVC insulated stranded cable (BYA) & green Colored PVC insulated ECC wire (BYA) through PVC Conduit complete with fixing materials and uPVC channel & other accessories as specified, Manufacturer according to the Specification & direction, sample approval by the Engineer- in-charge.				
	1C-2x1.5sqmm (BYA) cable with 1.5sqmm (BYA) ECC wire through PVC pipe of minimum inner dia 25 mm having wall thickness of 1.5 mm	25.00	m		
	1C-2x2.5sqmm (BYA) cable with 2.5sqmm (BYA) ECC wire through PVC pipe of minimum inner dia 25 mm having wall thickness of 1.7 mm.	25.00	m		
D.12	<b>Earthing system:</b> Supply & installation (with effective connection) of 8'-0" Brass or Copper Rod (10mm dia) under 2'-0" from FGL outside school building, Connecting the rod with SDB's earthing bar by 6mm dia copper wire (properly soldering with the rod) through 25 mm dia pvc pipe complete with necessary accessories as per direction of Engineer in-charge.	1.00	Each		
<b>Total</b>					
<b>E</b>	<b>Access Development Works</b>				
E.1	<b>EWEx(Rd/C/P):</b> Earthwork in excavation of roadway/canal/pond etc. of any dimension in all kinds of soil including cutting to required depth, bailing out water if necessary, and depositing the excavated earth on embankment; breaking clods, ramming, dressing and leveling in	0.26	Cu.m		



	225 mm layers, and maintaining proper side slopes and levels of both pond and embankment as per design drawings; all complete including finishing works as per direction and satisfaction of the Engineer-in-Charge. For initial lead of 30 m and lift of 1.5 m				
E.3	<b>Sand filling</b> on road bed in improved sub-grade with clean sand having minimum FM 0.50, free from dust, earth, organic matter, vegetation and other foreign materials, including supplying, laying, spreading in layers, watering and compacting by appropriate mechanical means to achieve minimum 98% of Maximum Dry Density (MDD) as per Modified Proctor test and to ensure minimum soaked CBR 8% or design CBR as specified; all complete including necessary finishing, leveling and compaction as per direction of the Engineer-in-Charge.	1.30	Cu.m		
E.4	<b>Brick work:</b> Brickwork with first class bricks in cement sand mortar (FM 1.2) in (1:4) proportion for exterior walls, including filling all joints with mortar, raking out joints where necessary, soaking bricks in water for at least 24 hours before use, washing of sand, proper laying and bonding, providing necessary scaffolding, curing for minimum 7 days, and including cost of water, electricity and other incidental charges; measurement to be taken considering 250 mm width for one brick length and 375 mm for one and a half brick length; all complete as per approved drawing and direction of the Engineer-in-Charge.	0.06	Cu.m		
E.5	<b>Brick work 125mm :</b> 125 mm thick brickwork with first class bricks in cement sand mortar (FM 1.2) in (1:4) proportion, including making proper bond with connected walls, raking out joints, cleaning and soaking bricks in water for at least 24 hours before use, washing of sand,	2.56	Sq. M.		



	providing necessary scaffolding, proper laying and workmanship, and curing for minimum 7 days; including cost of water, electricity and other incidental charges, all complete as per approved drawing and direction of the Engineer-in-Charge.				
E.8	<b>Cement concrete:</b> 75mm thick lean cement concrete (1:2:4) in floor and wherever needed with Portland Composite Cement (CEM II/AM, 42.5N), best quality coarse sand (minimum FM1.2) and 20mm down well graded picked brick chips (LAA value not exceeding 38), in/c breaking bricks into chips screening, mixing by concrete mixer machine, laying, compacting, washing of sand, curing for requisite period, etc. all complete as per direction of the E-I-C. Top surface of floor shall be non-screeding with proper finishing.	5.11	Sq. M.		
E.9	<b>Providing single layer polythene sheet :</b> Supplying and laying of single layer polythene sheet weighing one kilogram per 6.5 square meter in floor or any where below cement concrete complete in all respect and accepted by Engineer in-charge.	5.11	Sq. M.		
E.10	<b>GI Railing for Ramp:</b> Supplying, fitting and fixing railing for ramp with 38-40mm dia of 2.3mm thickness GI pipe, 900mm height with 38mm dia 2.3mm thick vertical post @ 1200mm c/c, 150mm embedded into the ramp after cutting grooves and mending good the damages with Cement Concrete (1:2:4) in/c polishing/painting etc. The rate including making 50 X 100 mm Concrete wheel guard in both sides of the ramp with painting as direction of the E-I-C.	7.16	Sq. M.		
E.11	<b>Plastering with NCF:</b> Minimum 12 mm thick cement sand (F.M.1.2) plaster with neat cement finishing to plinth wall, floor, Dawrf wall with cement (1:4) up to 1500 mm below ground level including washing of sand, use black or red color to mixture, finishing the edges and	2.56	Sq.M.		



	corners and 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.				
	<b>Total</b>				
<b>F</b>	<b>Solar Power System Installation</b>				
F.1	<b>Solar PV Module:</b> Supply, installation, testing, and commissioning of high-efficiency Tier-1 Monocrystalline Silicon (Half-cut cell technology) Solar PV Modules, with each individual module having a rated capacity of not less than 500Wp under Standard Test Conditions (STC). The modules must be manufactured by a Bloomberg New Energy Finance (BNEF) Tier-1 listed company and comply strictly with IEC 61215 and IEC 61730 standards for design qualification and safety. The units shall feature anti-reflective coated tempered glass, an anodized aluminum alloy frame, and IP68-rated junction boxes with MC4 compatible connectors, ensuring a module efficiency of $\geq 21\%$ . All components must be delivered with a minimum 12-year product warranty and a 25-year linear performance warranty; all technical data sheets, factory test reports, and origin certificates must be submitted for technical evaluation and approval by the Engineer-in-Charge prior to site delivery.	3500.00	Wp		
F.2	<b>Mounting Structure:</b> Supply, fabrication, and installation of a high-resilience solar mounting structure utilizing 75mm diameter Hot Dip Galvanized (GI) pipes with a minimum wall thickness of 4mm, engineered to withstand a basic wind speed of not less than 150 km/h in strict accordance with BNBC 2020 and ASCE 7-10 standards.. Each vertical support pole shall be securely fixed to the existing RCC slab using a 200mm x 200mm x 4mm	3500.00	Wp		



	<p>thick GI base plate fastened with heavy-duty anchor bolts, followed by the construction of a 300mm x 300mm x 300mm Cement Concrete (CC) casting block for added structural stability and ballast. The concrete pedestals must be finished with smooth plastering and high-quality weather-coated painting to ensure aesthetic uniformity and environmental protection. To maintain the integrity of the roof slab, all drilled and bolted connection areas must be hermetically sealed with a high-grade epoxy coating to provide a robust water-leakage prevention barrier. The entire structural assembly, including all welding and specialized anchoring, must be implemented with technical precision and is subject to the final inspection and approval of the Engineer-in-Charge.</p>				
F.3	<p><b>All in one Energy Storage System:</b> Supply, installation, testing, and commissioning of a high-efficiency, fully integrated All-in-One (AIO) Energy Storage System (ESS), featuring a hybrid inverter and Lithium Iron Phosphate (LiFePO<sub>4</sub>) battery modules manufactured by the same manufacturer to ensure seamless communication and vertical system integration. The system shall provide a nominal AC output of 6kW with a minimum integrated battery capacity of 10 kWh, achieving a maximum conversion efficiency of <math>\geq 97.6\%</math> and a battery round-trip efficiency of <math>\geq 95\%</math>. Technical parameters must include a rated PV input voltage of 360V, a maximum input voltage of 600V, and dual MPPT trackers supporting up to 16,000 Wp. The unit must demonstrate rigorous environmental and safety compliance, including UN 38.3 certification for safe battery transportation, RoHS/REACH</p>	1.00	Set		



	<p>environmental compliance, and an IP66 ingress protection rating for versatile installation. The system must support an Emergency Power Supply (EPS) transition time of <math>\leq 4\text{ms}</math> and provide a 200% peak overload capacity for 10 seconds. Acceptable major brands include Fox ESS, BYD, Huawei, Sungrow, GoodWE (or equivalent approved by the Engineer-in-Charge), provided the single-brand manufacturing requirement is met. The entire assembly must strictly comply with IEC 62109-1/2 and IEC 62619 safety standards, including a comprehensive 5-year manufacturer warranty, with all technical submittals and factory test reports subject to the final evaluation and approval of the Engineer-in-Charge.</p>				
F.4	<p><b>Solar Array Junction Box:</b> Supply, fitting, and fixing of a high-quality, factory-made and fully assembled Solar Array Junction Box (AJB) fabricated from 18 SWG Mild Steel (MS) sheet, featuring a robust hinged-type door and integrated locking arrangement for secure site operation. The unit must be delivered as a complete, pre-wired assembly featuring a Type II Surge Protection Device (SPD) and a DC circuit breaker of adequate rating specifically matched to the PV string configuration to ensure comprehensive overcurrent and voltage spike protection. All surfaces of the board shall be finished with a high-durability powder coating using epoxy polyester resin in a grey or off-white color to prevent corrosion and withstand environmental exposure. The factory-integrated assembly, including all internal busbars, terminal blocks, and cable glands, must be executed with technical precision and is subject to the final inspection and approval of the Engineer-in-Charge.</p>	1.00	Set		



F.5	<p><b>AC Combiner Box:</b> Supply, fitting, and fixing of a high-quality, factory-made and fully assembled AC Combiner Box (ACCB) fabricated from 18 SWG Mild Steel (MS) sheet, featuring a robust hinged-type door and integrated locking arrangement for secure site operation. The unit must be delivered as a complete, pre-wired assembly equipped with a Type II AC Surge Protection Device (SPD) and a molded case circuit breaker (MCCB) or MCB of adequate rating specifically sized to handle the combined AC output of the inverters. All surfaces of the board shall be finished with a high-durability powder coating using epoxy polyester resin in a grey or off-white color to ensure long-term resistance against corrosion and environmental wear. The factory-integrated assembly, including internal busbars, neutral links, and properly sized terminal blocks, must be executed with technical precision and is subject to the final inspection and approval of the Engineer-in-Charge.</p>	1.00	Set		
F.6	<p><b>Cables:</b> Supply and fitting, fixing cables for solar cables of following sizes with necessary accessories such as PVC Channel/flexible pipes, cable tie, PVC tape, Copper lugs, connector etc. All cables shall be manufactured and tested according to IEC/BS/VDE standards. The work shall be carried out as per direction/approval of the engineer in-charge.</p>				
F.6.1	For Inverter Wiring: 1Cx1-6RM NYFF Cable	100.00	Meter		
F.6.2	For String Wiring: 1Cx1-10 RM BYM Cable	20.00	Meter		
F.6.3	Earthing Cable: 1x1C-4RM BYA ECC	50.00	Meter		
F.6.4	Earthing Cable: 1x1C-10RM BYA ECC	50.00	Meter		



F.7	<p><b>Accessories:</b> Supply and installation of all essential installation accessories and miscellaneous hardware, including UV-stabilized PVC conduits, perforated GI cable trays, heavy-duty cable ducts, and industrial-grade nylon cable ties, along with high-quality weatherproof cable glands, end-sealing kits, and stainless steel (SS316) mounting fasteners. The scope also includes safety signage for high-voltage DC circuits, bi-metallic lugs for dissimilar metal terminations, heat-shrinkable ferrule sleeves for wire identification, and industrial-grade sealant/gaskets for all enclosure entries to maintain IP-rated protection. All accessories must be sized and installed with technical precision to ensure maximum mechanical protection and professional cable management, fully compliant with the requirements and final satisfaction of the Engineer-in-Charge.</p>	1.00	Lot		
F.8	<p><b>Earthing and Protection:</b> Supply, installation, testing, and commissioning of a dedicated Earthing and Lightning Protection System, utilizing a 12mm diameter solid copper conductor for the main earthing lead to ensure low-impedance discharge paths. The system shall include a boring of 40 to 60 feet depth with a minimum borehole diameter of 150mm, featuring a high-conductivity copper earthing rod encased in bentonite or chemical earth enhancement compound to achieve a measured earth resistance of less than 5 Ohms. Lightning protection shall be provided via a specialized Lightning Arrester mounted on a galvanized mast, with all connections for solar panels and peripheral equipment secured using heavy-duty copper clamps, stainless steel nuts, and bolts to prevent galvanic corrosion. All earth pits must include a</p>	1.00	Set		



	protective masonry chamber and a test link for periodic resistance measurement, with the entire installation executed to the technical satisfaction and final approval of the Engineer-in-Charge.				
F.9	<b>Automatic Changeover Switch:</b> Supply and installation of a high-quality 63A compact single-phase manual changeover switch, featuring a rotary handle with a 3-position (1-0-2) control mechanism for reliable source switching. The unit shall be a premium brand such as ABB, Havells, or equivalent, ensuring robust internal contacts and a durable enclosure for long-term electrical isolation. All terminations must be securely lugged and tested to the technical satisfaction and final approval of the Engineer-in-Charge.	1.00	Each		
F.10	<b>Drawing:</b> Preparation and provision of a comprehensive Single Line Diagram (SLD) of the as-built solar PV system, color-printed on high-quality A3 paper and finished with heavy-duty lamination for long-term site durability. The diagram must clearly illustrate all system components, including PV strings, inverters, protection devices, and cable schedules, and shall be securely mounted at the main distribution point or control room for operational reference, subject to the final approval of the Engineer-in-Charge.	1.00	Each		
Total					
<b>GRAND TOTAL (A+B+C+D+E+F)</b>					

## Terms and Conditions

### 1. Submission Deadline

All quotations must be submitted to the designated email address on or before **11 May 2026, by 4:00 PM BST**. Late submissions will not be accepted.

### 2. Tender Opening Date

The quotations will be opened on **11 May 2026 at 5:00 PM** by the Procurement Committee. Only shortlisted/selected vendor(s) will be contacted after completion of the evaluation process.



3. **Pre-Bid Meeting**

The pre-bid meeting will be held on **09 May 2026 at 10:30 AM to 12:00 PM**. Interested vendors may participate through either of the following options:

- **Online:** Through the provided Google Meet/Calendar link
- **In-person:** Uttaran Regional Office, Mobarakpur, Tala, Satkhira

To avoid misunderstanding regarding the RFQ process, package details, site requirements, documentation, and submission procedure, all interested vendors are strongly encouraged to register in advance through the provided Google Form link.

4. **Price Quotation**

The quoted price must be inclusive of **VAT, Tax, loading-unloading, transportation, delivery, installation, labour, tools, equipment, safety arrangements, and all other related costs**. No additional claim will be entertained later.

5. **Submission Requirements**

Vendors must submit their price quotation on their official company/organization letterhead. The quotation must be duly signed and sealed by the authorized representative. Vendors must also attach the completed **Annex-A** and all required supporting documents.

6. **Package-wise Submission**

Vendors may submit quotations for **Package 01, Package 02, Package 03, Package 04 all packages**. If a vendor submits quotations for all packages, separate quotations must be submitted for each package, preferably through separate emails, clearly mentioning the package name in the email subject line.

7. **Field Visit Report**

Vendors/construction suppliers must conduct a site visit and submit a **field visit report with photographs** along with their quotation. The field visit report is a mandatory eligibility requirement. Any quotation submitted without the field visit report may be treated as incomplete and non-responsive.

8. **Quotation Validity**

The quotation must remain valid for at least **60 days** from the submission deadline. Vendors must clearly mention the validity period in their price offer.

9. **Labor Engagement and Compliance**

The selected supplier/contractor must engage **100% unskilled day laborer's** from the local flood-affected community and at least **30% skilled laborer's** from the same community, where available and feasible. All engaged labourers must be paid fair wages in accordance with local market rates and applicable government guidelines.

The contractor must maintain and submit supporting documents, including labor lists, attendance sheets, payment records, and relevant photographs. Failure to comply with this requirement may result in withholding of payment, cancellation of the contract, or other actions as per contract terms.

10. **Responsible Use of RFQ Information**

Vendors shall not misuse, alter, or share RFQ-related information for any fraudulent, misleading, or unauthorized purpose. Any such practice may result in disqualification.

11. **Work Completion Timeline**

The selected supplier/contractor must complete the assigned renovation works by **15 June 2026**. The awarded contractor must commence work within **three working days** after receiving the contract/work order.

12. **Work Locations**

The works will be implemented in Lakshmipur Sadar and Kamalnagar Upazilas under Lakshmipur District. The package-wise sites are as follows:



## Kamalnagar Upazila

**Package 01:** Moddha Char Falcon Govt. Primary School, Union: 5 No. Char Falcon, Kamalnagar Upazila, Lakshmipur.

**Package 02:** Purbo Char Falcon Govt. Primary School, Union: 5 No. Char Falcon, Kamalnagar Upazila, Lakshmipur

**Package 03:** Uttar Purbo Char Lawrence Govt. Primary School, Union: 3 No. Char Lawrence, Kamalnagar Upazila, Lakshmipur

## Lakshmipur Sadar Upazila

**Package 04:** Purbo Sayedpur Girls Govt. Primary School, Union: 12 no Char Shahi, Lakshmipur Sadar Upazila, Lakshmipur.

### 13. Tax Compliance

Vendors must submit their quotation including applicable VAT and Tax. VAT and Tax will be deducted at source from the payment as per Government of Bangladesh rules.

### 14. Payment Mode

- Payment will be made through **Account Payee Cheque** only in favour of the selected vendor/contractor.
- Payment will be processed upon submission of the original invoice/bill, money receipt, completion certificate, and all required supporting documents, subject to satisfactory verification of completed works.
- No cash payment or alternative payment method will be allowed.

### 15. Performance Security

The selected supplier/contractor shall submit **10% of the total contract value as Performance Security** before signing the contract/work order. The Performance Security may be submitted in the form of a Pay Order, Bank Guarantee, or other acceptable instrument in favour of Uttaran. The Performance Security will be released after satisfactory completion of the assigned works, quality verification, and confirmation that no defects, incomplete works, or pending obligations remain.

### 16. Right to Accept or Reject

Uttaran is not bound to accept the lowest bid. Uttaran reserves the right to accept or reject any or all quotations, either in part or in full, without assigning any reason. The evaluation will be based on best value, considering price, quality, technical capacity, documentation compliance, relevant experience, and ability to complete the work within the required timeline.

### 17. Required Documents

Vendors must submit the following documents along with their quotation:

- Valid Trade License
- TIN Certificate and updated Income Tax Return Certificate
- BIN Certificate
- Relevant experience certificate/work order/completion certificate, if available
- Bank statement for the last 6 months
- Organizational capacity statement/company profile
- Mushak 6.3, where applicable
- Field Visit Report with photographs
- Any other document requested in the RFQ

### 18. Anti-Corruption Policy

Uttaran follows a zero-tolerance policy against bribery, corruption, collusion, coercion, fraud, or any attempt to influence the procurement process. Any such attempt will lead to immediate disqualification and may result in further action as per organizational policy and applicable law.



**19. Prohibition of Child Labor**

Employment of child labor, meaning any person under 18 years of age, is strictly prohibited. If any vendor/contractor is found engaging child labor, the agreement may be cancelled, payment may be withheld, and legal or administrative action may be taken.

**20. Safeguarding and Code of Conduct**

The selected supplier/contractor and all engaged workers must comply with Uttaran's safeguarding, child protection, anti-harassment, anti-exploitation, and code of conduct requirements. Any misconduct at the worksite or with community members may result in cancellation of the contract.

**21. Site Safety and Risk Management**

The contractor will be fully responsible for maintaining site safety during implementation. Use of appropriate personal protective equipment, safe scaffolding, safe electrical practices, safe material storage, and safe working arrangements is mandatory. Any accident, damage, or safety incident caused by negligence of the contractor will be the responsibility of the contractor.

**22. Submission Method**

Quotations must be submitted by email only to [procurement@uttaranbd.org](mailto:procurement@uttaranbd.org). Physical, hand-delivered, or courier submissions will not be accepted.

- **Email subject line:** RFQ – [Package Name] – [Vendor Name] – Lakshmipur Shelter Renovation Project
- **File format:** Single PDF file, scanned, signed, and stamped
- Each vendor/contractor must submit their quotations in a single email, regardless of the number of packages they are bidding for.
- Emails must be received by **11 May 2026, before 4:00 PM BST**
- Late emails will be rejected
- **Vendors may submit quotes for all four (4) packages, but they will only be awarded a maximum of two (2) package.**

**23. Clarifications and Queries**

Any clarification regarding this RFQ must be requested through the official communication channel only:

- **Email:** [procurement@uttaranbd.org](mailto:procurement@uttaranbd.org)
- **Phone:** +880 1716328299 during office hours only

**24. Selection Criteria and Evaluation Scoring**

The supplier/contractor will be selected based on the principle of **best value**, not solely on the lowest quoted price. The evaluation will be conducted using the following scoring system:

Evaluation Criteria	Maximum Score
Price Evaluation	75
Documentation and Compliance	15
Relevant Experience	5
Technical / Field Quality Capacity	5
<b>Total</b>	<b>100</b>

**Price Evaluation — Maximum 75 Points**

The lowest responsive quoted price under each package will receive the full 75 points. Other responsive quotations will receive proportionate scores using the following formula:

$$\text{Price Score} = (\text{Lowest Responsive Quoted Price under the Package} \div \text{Vendor's Quoted Price}) \times 75$$

Price evaluation will be conducted separately for each package.



**Mandatory Eligibility Requirement — Field Visit Report**

Submission of the field visit report with photographs is mandatory. Any quotation submitted without the field visit report may be considered incomplete and non-responsive and may not proceed to the scoring stage. This requirement will be used for eligibility verification and will not carry any separate score.

**Documentation and Compliance — Maximum 15 Points**

A maximum of 15 points will be allocated based on the completeness, validity, and compliance of submitted documents as required in the RFQ.

**Relevant Experience — Maximum 5 Points**

A maximum of 5 points will be allocated based on demonstrated experience in similar construction, renovation, or repair works.

**Technical / Field Quality Capacity — Maximum 5 Points**

A maximum of 5 points will be allocated based on the vendor's technical capacity, manpower, tools, equipment, material mobilization capacity, site management capacity, and ability to complete the work within the required timeline.

**Penalty Criteria under Documentation and Compliance**

The following deductions may apply where submitted documents are incomplete, invalid, or non-compliant:

- Bank statement submitted without authorized seal and signature: **–3 points**
- Quotation submitted without company/organization letterhead: **–3 points**
- Missing, incomplete, or non-compliant required documents: **–2 points for each document**

**25. Solar Installation Requirement**

For solar power system installation, the selected contractor must engage a technically competent and standard solar installation company/team. Finalization of the solar installation arrangement will be subject to approval from the Uttaran Procurement Committee and Project Engineer.

**26. Work Schedule**

The awarded supplier/contractor must submit a detailed work schedule specifying the start date, activity-wise implementation plan, site-wise mobilization plan, and expected completion date for each activity.

**27. Simultaneous Work Implementation**

The awarded supplier/contractor must commence and continue work simultaneously at each shelter under the respective package to ensure completion within the approved timeline.

**28. Delay or Non-Performance**

Failure to commence or complete the work within the agreed timeline without acceptable justification may result in cancellation of the contract, payment deduction, forfeiture of Performance Security, or other actions as per contract terms.

**29. Quality Assurance and Final Acceptance**

Final payment will be subject to site verification, quality inspection, completion certification, and acceptance by Uttaran's authorized representative/project engineer/procurement committee. The contractor must rectify any defects or incomplete works identified during verification before final payment or release of Performance Security.



**30. Vendor Declaration**

By submitting the quotation, the vendor confirms that they have read, understood, and accepted all terms and conditions of this RFQ, visited the relevant site(s), prepared the quotation based on actual site requirements, and agreed to complete the works within the required timeline.

**Member Secretary**  
Procurement Committee  
Uttaran



Annex -B

Field Visit Report Evacuation Shelter wise

**Vendor Information:**

Vendor Name:	
Address:	
Contact Person:	
Phone/Email:	

**Field Visit Details:**

Date of Visit: \_\_\_\_\_

Visited Location: \_\_\_\_\_

Purpose of Visit: \_\_\_\_\_

**Observations:**

(Please provide comprehensive details of your measurements and relevant notes from the field visit.)

**Pictures from Field Visit with caption**

Please attach/insert pictures here.

Any additional information or comments from the vendor.

**Vendor Authorization:**

Name & Signature: \_\_\_\_\_

Date: \_\_\_\_\_