**Technical Scope of Work for Repairing/Improvement of 21 Schools in Bamyan Province**

**INTRODUCTION**

The scope of the works requires Repairing/Improvement of 21 schools located in (Shibar and Saighan districts) of Bamyan province. The work includes major repair/improvement of schools buildings, latrines, boundary walls, repair and adjusting the door and windows, roof ezogam, installing concertina fens on boundary wall, provide and installation of water tank with stone masonry apron, mud & straw for roof, retaining walls to protect school building or components from flood risk, provide and installation of main gate for school boundary wall, repairing damaged parts of floor and walk way PCC, provide and installing anti-knock mesh for windows and other repairing works according to the upcoming details and attached drawings.

* Total number of schools in Shibar district: 8
* Total number of schools in Saighan district: 13

**SITE PREPARATION**

For implementation of this project, contractor will do site preparation and clearance all construction activities before commencing, during work and after completion of work, removing of grass, levelling ground level, removing of old cement and sand.

For all activities, the ground and surfaces should be levelled, and barriers set up to demarcate the working areas. During excavation for pits and septic tank, excavated soil will transfer far from working area if there will no place available, after completion of work, contractor will do final clean-up of all areas nearby the wok areas. For toilets, site clearance will also include existing extra removal for the rehabilitation and improvement.

1. **Repairing and adjusting of wooden doors and windows**

repairing of wooden doors and windows includes, adjusting of panels to easily open/close, replacing hinges if not working, replacing damaged locks, installing wooden board 8 to 10mm from Khar wood, installing 4mm glasses and anti-knock mesh with wooden trim 3cm as per BoQ and replacing the damaged panels if needed.

All mentioned activities described in BoQ in details.

1. **Repairing and re-casting of floor and walkway PCC (M150)**

The repairing works of PCC in all locations includes damage and removing the existing concrete, and re-cast with high workmanship and high quality, wooden board 5cm should install for expansion joints in every 1.5m length of concrete, the concrete should mix with mixer and have good finishing.

1. **Ezogam work**

Before Ezogam, surface cutting and levelling of existing soil of the rood is must, to have proper slope to gutters, a 5cm thick layer of sandy gravel is for more levelling and a bed for concrete under Ezogam.

PCC layer M150 with thickness 5cm before and after ezogam should made with smooth and suitable surface for Ezogam is need as per BoQ.

Ezogam layer with thickness 5mm that suitable for cold weather condition, the ezogam type should select in coordination of assigned engineer instruction.

1. **Mud & straw work**

Mud & straw works includes, surface cutting and removal of existing soil of the roof, to make suitable slope to gutters, installation of two-layer plastic sheet and providing mud & straw layer with thickness 5cm with high finishing surface.

1. **Provide and installation of metallic (GI) water tank**

Installation of metallic (GI) water tank includes, water tank made from 2.8mm GI sheet with all necessary fittings as per attached technical drawings, a 2inch supply(outlet) GI pipe with 6x3/4” taps(valves) according to drawings should install with all necessary fittings.

1. **Installation of stand taps**

Installation of stand taps in Briglich Secondary School includes construction of RCC apron, laying 1.5inch HDPE pipe with length 40m from main distribution pipe to inside the school, laying 0.5inch to each stand taps with length 20m.

The excavation for HDPE pipes includes excavation for pipes with depth 80cm, width 40cm and backfilling with loose material (sieved soil/sand) around the pipe and the remaining backfilling from existing materials with proper compaction.

1. **Provide and installation of main gate and doors for boundary wall**

Construction and installation of main gates includes provide and installation of main gate (3x2.2) m and door (1.2x2.2) m with oil painting for schools in Shibar and Saighan districts.

Before installing the doors, 3 RCC columns with dimensions (35x35) cm should construction according to technical drawings.

For more details see the attached BoQ and technical drawings.

1. **Stone masonry work 1:4**

Stone masonry works includes construction of protection wall for schools against flood, construction of apron for water tank construction of abutment walls, wing walls and cut off walls for culvert for Dwabi school in Shiber district, including excavation, pointing 1:4, and PCC M150 on the top with thickness 8cm.

The protection wall’s locations by length 30m for Ghar Ghari-e Kaloo School in Shibar, Cheraghan and pishing schools in Saighan district.

Stone should freshly be crushed from mind with good surface to prepare good workmanship during working, sand should be clean from soil, dust, and other extra materials.

Curing of stone masonry, pointing and PCC is must at least for two weeks.

1. **Repairing of GI roof**

Repairing of GI roof includes cross check of all roofs to find all damaged, leaked and rusted parts of the roof.

All the rusted sheets should remove and replace with new including installation and insulation.

1. **RCC works (M200)**

RCC works for construction culver and apron for stan taps in Dwabi and Briglech schools of Shibar district includes shuttering, reinforcing and concrete casting.

The dimension and other specification of the RCC works should take from attached technical drawings.

The wooden board for shuttering should be new with minimum 2.5cm thickness, all shuttering works need check by assigned engineer before further activity.

Steel should have at least 60 Ksi yield strength, the type of steel should select in coordination with assigned engineer before supplying to the site.

For mor details see the attached drawings.

1. **Installing Concertina fence on boundary wall**

Almost of schools selected for repairing are girls are mixed type, so the concertina fence has been considered.

The concertina fence with Ø (60 to 70) cm need to fix with GI pipes 2inch that fixed with steel plate at bottom side in concrete.

**MONITORING& HAND OVER OF THE PROJECT:**

The work of the project will be monitoring by the IRC staff to ensure that the work is ongoing based on the plan, BOQ and scope of work. If the quality of the work is poor or the curing was not properly given to the concrete, the IRC technical staff reserve the right to remove poor quality of work done by contractor and the contractor has no rights for claiming additional cost. As soon the work of the project is completed by the contractor, handing over process to the governmental/line departments will start and contractor will make correct the work if any work was questionable to the committee.

**Activities Timeline:**

The Contractor is expected to complete all the requested work within 2.5 months or 10 weeks.

**Safety**

Contractor is responsible and shall continue management and implementation of a safety and health program throughout construction.

The IRC reserve the right to suspend work when and where Contractor's safety and health program is operating in an inadequate or non-complying manner.

Contractor shall provide all Personal Protective Equipment for the workers as per the requirement of the site. Work will be stopped in case the proper protection equipment is not found with the workers and the lapse of time shall be at the Contractor’s expense.

Contractor will not leave the work site in an unsafe condition or any other condition that might cause injury to personnel, damage to existing work, plants or equipment.

Contractor will use all safety gadgets e.g. hard hats, cotton gloves and goggles as required on site to avoid the accident.

Any equipment or work considered dangerous shall be immediately discontinued.

1. **Warranty**

The contractor shall guarantee that all work performed will be free from all defects in workmanship and materials and that all installation will provide the capacities and characteristics specified. The contract further guarantees that if, during a period of three months from the date of the certificate of completion and acceptance of the work, any such defects will be repaired by the contractor at his own cost.

**Site Visit**

The site visit locations are according to below table, the date for site visit will specify when the procurement process completed.

**Workmanship:**

The Contractor is expected to carry out all works according to this SOW and BOQ and as instructed by the IRC Engineering staff in a through and workman-like manner, and up to today's professional standards. The Contractor shall carry out operations with due efficiency and dispatch in accordance with the terms of the contract and to the satisfaction of the supervisor. For this purpose, the Contractor shall use suitable equipment, and supply efficient and experienced staff.

**Locations of performance:**

The location for all 21 schools in Shibar and Saighan districts is as per below table,

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Schools’ locations** | | | | | |
| **No** | **Province** | **District** | **Village** | **Name of School** | **Remarks** |
| 1 | Bamyan | Shibar | Kaloo | Ghar Ghari-e Kaloo High school |  |
| 2 | Bamyan | Shibar | Briglech | Briglech Secondary School |  |
| 3 | Bamyan | Shibar | Dwabi | Dwabi Secondary School |  |
| 4 | Bamyan | Shibar | Sardeh-Ghandak | Sardeh-Secondary School |  |
| 5 | Bamyan | Shibar | Jalmish | Jalmish Secondary school |  |
| 6 | Bamyan | Shibar | Jola | Jola Secondary School |  |
| 7 | Bamyan | Shibar | Kangor-e Ghandak | Kangoor High School |  |
| 8 | Bamyan | Shibar | Toghai-e Jalmish | Toghai Jalmish primary School |  |
| 9 | Bamyan | Saighan | Ghorab | Ghorab High School |  |
| 10 | Bamyan | Saighan | Qarawna | Qarawna Girls High School |  |
| 11 | Bamyan | Saighan | Ab Dara-e Bigal | Ab Dara-e Bigal High School |  |
| 12 | Bamyan | Saighan | Bigal | Bigal High School |  |
| 13 | Bamyan | Saighan | Poshtawaz | Poshtawaz Secondary School |  |
| 14 | Bamyan | Saighan | Pishin | Pishing High School |  |
| 15 | Bamyan | Saighan | Cheraghdan | Cheraghan Secondary School |  |
| 16 | Bamyan | Saighan | Bayani | Bayani & Ashania High School |  |
| 17 | Bamyan | Saighan | Ghorawchi | Imam-e Abo Hanifa Ghorawachi Secondary School |  |
| 18 | Bamyan | Saighan | Deh Nola | Saighan Female High School |  |
| 19 | Bamyan | Saighan | Deh Eman | Mukhtalat Shikh Najmudin Secondry School |  |
| 20 | Bamyan | Saighan | Saied Baba | Said Baba Female High School |  |
| 21 | Bamyan | Saighan | Qara Khawal | Qara Khawal High School |  |