**Appendix 7 - Technical Specifications**

**Reference #: CW/SUD/KHT/22119/2021/Elevated Water Tank**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Number** |  | **Description of Items**  | **Unit Size** | **Quantity** |
| **1** | **Mobilization and Demobilization** |   |   |
| Mobilization and Demobilization | Job | 1 |
| **2** | **Site Clearance**  |   |   |
| The Site Shall be cleared from debris & rubbish, as directed by the Engineer. | Job | 1 |
| **3** | **Foundation Earth works** |   |   |
| 3.1 | Excavate the Tank foundation and removing the excavated soil from the site as shown in the drawings and directed by the Engineer.  | m3 | 48.1 |
| 3.2 | Provide suitable compacted fill material and back fill in layers not exceeding 0.25 and compact well in foundation of Tank | m3 | 33.8 |
| **4** | **Foundation Concrete works** |   |   |
| **4.1** | **Plain Cement Concrete Grade 15** |   |   |
|   | Provide material, mix, cast and cure Plain Concrete grade 15 for foundations of Tank (2.2x2.2x0.1Thkx4No) | m3 | 1.94 |
|   | Provide material, mix, cast and cure Plain Concrete grade 15 under Grade Beams (2.2x0.5x0.1Thkx4No) | m3 | 0.44 |
|   | Provide material, mix, cast and cure Plain Concrete grade 15 for Top cover Floor Slab (2.6x2.6x0.15Thk) | m3 | 1.1 |
| **4.2** | **Reinforced Cement Concrete Grade 30** |   |   |
| 4.2.1 | Provide materials, mix, cast, vibrate and cure R.C grade 30 in Tank footings, Short columns, and Grade Beams or Tie Beams the price should include the steel reinforcement and all necessary items to complete the work as per drawings, specifications and Engineer instructions. | m3 | 13.2 |
| 4.2.2 | Supply and Install formwork (New Plywood) for construction of Tank footings, Short columns, and Grade Beams or Tie Beams | Job | 1 |
| 4.2.3 | Provide materials, cut to sizes, bend to shapes and fix in position reinforcing bars of steel grade 460 in Tank footings, Short columns, and Grade Beams or Tie Beams as follows : |   |   |
|   | T16mm | Kg | 810 |
|   | T12mm | Kg | 250 |
|   | R8mm | Kg | 100 |
| **5** | **Steel Elevated Tank and 6m high steel Tower** |   |   |
| 5.1 | Supply and Install complete with Tower a steel Tank round shape with size Ø3.82m and 4.5m high, 6mm Thick walls, base, and Roof steel plate, All Tank plates and elements shall be painted against Corrosion with unti-corrsion paint as per Engineer Instructions, including 6m high tower with M20 Anchor Bolts,made up of H - 203x203x52 Universal Columns and Beams ,I Beam 200x100x56, and L75x75x6 , diagonal bracings and horizontal Ties L100x100x5 with 25 leveling pad grouting to 4 No. columns, handrail at Tank bed and top, chequered plate on wide walkway around tank and ladders external and Internal with hoops including base plates and Stiffner plates with painting all steel members and plates as shown in the drawigs , specifications and Engineer instructions | No | 1 |
| 5.2 | Supply, transportation and installation of all the requisite pipe work including inlet, outlet, vent, overflow, drainage and valve chambers and washout pipework to nearest drainage ditch on the foot of the tank tower as shown in the drawings , specifications and Engineer instructions | Job | 1 |

***NOTE: There must be a warranty of 6 months for the materials and workmanship during installation.***