



on TimeLine for the rehabilitation works of the water network in the Al-Aqmah WSS in Al-Aqmah Villages - Al Awashiqh Sub-district - Mawza District - Taiz Governorate



الجدول الزمني لأعمال إعادة تأهيل شبكة الإساءة وتمديدات المياه لمشروع قرى العقمة - عزلة العوشقة - مديرية موزع - محافظة تعز

Project title : Contributing to improved health and resilience of the most vulnerable populations in highest-severity districts of IRG-controlled areas, through enhanced access to integrated WASH, Health and Nutrition services

عنوان المشروع: مشروع الاستجابة المتكاملة ومتعددة القطاعات للصدمات المفاجئة والاحتياجات الحادة للسكان المتضررين من النزاع في اليمن

	Work plan Description	الوحدة Unit	الكمية Quantity	W1	W2	W3	W4	W5	W6
1.1	Pumping line works from the well to the tanks:								
1.1.1	<p>Excavation and Backfilling Works: The excavation and backfilling process involves working with various soil types, including clay, sand, rocky, and semi-rocky soils. The excavation must reach a minimum depth of 90cm and a width of at least 40 cm for pipe installation. It is essential to support the excavation to prevent collapse and to remove any debris.</p> <p>Once the pipes are in place, backfilling should begin with a 15 cm layer of sand gneiss surrounding the pipes. the work including Any stones that could potentially damage the pipes must be removed. After ensuring there are no leaks and conducting pumping tests as per the drawings and specifications, a final layer of fine clay or gneiss should be backfilled to a height of 65 cm, following the instructions of the supervising engineer.</p>	م.ط L.M	234						
1.1.2	<p>Work for the pumping line (PEHD) from the well to the mountain foot: Supply and installation of polyethylene (PEHD) pipes with a diameter of 4 inch, high pressure (16) bar, 15.5 mm thickness. The price includes the supply and installation of all parts and installation accessories, such as joints, elbows, reducers, nipples, collars, tensioning pieces, etc., and ensuring that they are free of defects and that the flanges and protrusions used at the joints are safe, Also the necessary tests for pressure of the pipe and non-leakage of pipes and at connections with making connections, detractors and triangles for branching lines in the village, and doing everything necessary to finish the work to the fullest in accordance with the drawings, specifications, technical and factory assets, conditions, instructions and directives of the supervising engineer of the organization</p>	م.ط L.M	234						

1_1_3	<p>Dismantling, transporting and reinstalling galvanized steel pipes in the pumping line:</p> <p>Removal and relocation of galvanized iron pipes at the beginning of the pumping line 39 GI pipes (234 meters long), 3 inches in diameter, high pressure next to the well, and reinstallation of 5 GI pipes (30 meters long) in place of the damaged pipes in the pumping line reaching the reservoirs at the top of the mountain, in addition to the installation of the remaining number 34 pipes (204m length) at the beginning of the distribution lines at the outlets of the tanks at the top of the mountain. The price includes all necessary parts, and installation supplies such as fittings, valves, reducers, nipples, couplings, and other necessary parts, ensuring their defect-free condition and the safety of the joints and protrusions used in the connections. Necessary pressure tests will be conducted to ensure no leakage in the pipes and proper connections, and accessories to complete the work and water supply to the collection tank , in accordance with the specifications, drawings, and instructions of the supervising engineer.</p>	L.M متر طولي	234						
1_2	Rehabilitation of water network								
1_2_1	<p>Excavation and Backfilling Works:</p> <p>The excavation and backfilling process involves working with various soil types, including clay, sand, rocky, and semi-rocky soils. The excavation must reach a minimum depth of 90 CM and a width of at least 40 cm for pipe installation. It is essential to support the excavation to prevent collapse and to remove any debris.</p> <p>Once the pipes are in place, backfilling should begin with a 15 cm layer of sand gneiss surrounding the pipes. the work including any stones that could potentially damage the pipes must be removed. After ensuring there are no leaks and conducting tests for the pipes, a final layer of fine clay or sand should be backfilled to a height of 65 cm, as per the drawings and specifications, following the instructions of the supervising engineer.</p>	م.ط L.M	4000						
1_2_2	<p>Works to rehabilitate water supply lines with different dimensions.</p> <p>Supplying and installing 2-inch, and 1.5-inch PEHD pipes with a pressure of 10 bar. The pipes will also be installed according to the length specified below. The price includes the supply and installation of all components and installation supplies such as joints, elbows, reducers, nipples, collars, clamps, valves, couplings, and other necessary parts, ensuring their defect-free condition and the safety of the joints and protrusions used in the connections. Necessary pressure tests will be conducted to ensure no leakage in the pipes and proper connections, as well as the installation of reducers and junctions for the branching lines in the Al Aqmah villages. All necessary actions will be taken to complete the work according to the drawings, specifications, technical and manufacturing standards, terms, instructions, and guidance of the supervising engineer of the Solidarites International.</p>	م.ط L.M	4000						
1_2_3	<p>Cube-reinforced concrete:</p> <p>Placing Square light Reinforced concrete (Use Iron #12mm) of dimension (50 x 50 x 50 cm) every 15m to support (Fixing) the pumping and distribution line pipes, with concrete mixing ratio (1:2:3), the work including excavating the soil, formwork and casting and all necessary works according to the drawings and specifications and the instructions of the supervising engineer.</p>	بالعدد / No	16						
1_2_4.1	Supply and installation of ' a gate valve' with 3-inch diameter, it installing in the pipes of the two tanks outlet.	بالعدد / No	2						
1_2_4.2	Supply and installation of ' a gate valve' with 2-inch diameter.	بالعدد / No	3						
1_2_4.3	Supply and installation of ' a gate valve' with 1.5-inch diameter.	بالعدد / No	3						
1_2_4.4	Supply and installation of ' a gate valve' with 1-inch diameter.	بالعدد / No	4						
1_2_5.1	Supply and installation of a 3-inch diameter flow meter in the water distribution network pipelines outlet of both tanks, and at the end of the pumping line at the tank inlet.	بالعدد / No	3						

1_2_6	Air Release Valve 3 inch Diameter :- Supply and installation of air release valves diameter 3-inch flanges , operating pressure of 45 kg/cm ² automatic and the valve meets British specifications B51513 or equivalent , the price includes all pieces of bonding and nuts and rubbers and flanges and all necessary for installation and according to the specifications and instructions of the supervisor engineer.	No بالعدد /	1						
1_2_7.1	Construction of new inspection room instead of the old one with (100*100)cm net dimensions, and 80cm depth, with the installation of a door with (100*100)cm dimensions, for the valve which will be installing at outlet pipe of the water distribution network of the tank, and for the air release valve.	No بالعدد /	2						
1_2_7.2	Construction of an inspection room to protect of the valves, (100*100)cm net dimensions, and 80cm depth, with installation of a door with (100*100)cm dimensions, on the main water distribution networks pipes which have 2" diameters, in the villages.	No بالعدد /	2						
1_2_7.3	Construction of an inspection room to protect of the valves, (80*80)cm net dimensions, and 60cm depth, with installation of a door with (80*80)cm dimensions, on the water distribution networks pipes which have 1.5" diameters, in the villages.	No بالعدد /	3						
1_2_7.4	Construction of an inspection room to protect of the valves, (60*60)cm net dimensions, and 40cm depth, with installation of a door with (60*60)cm dimensions, for the branches of the internal distribution network in the villages.	No بالعدد /	2						
1_2_8	Inspection Room Maintenance works: Supplying and installing an fiberglass cover for inspection rooms with dimensions (90*80) cm. The door is made of granular and hardening fiberglass, high-pressure, and 7 mm thickness with frame, taking into account that the door is well fixed from the sides, with the supply and install of the locks for all doors, with all its attachments of hinges and locks, and providing all the pieces and fixing it well; with removing soils and doing the internal and external painted works for the inspection rooms by cement mixed with sika, with a mixing rate of 1: 3 with spraying with water for four days, with painting walls rooms by white color for two layer and second layer by the same Solidarites International logo and making a logo of the Solidarites International on the door, with doing all necessary to finish the work and according to the directions of the supervising engineer.	No بالعدد /	5						
1_2_9	Excavation works of the distribution line in the valley of the flood stream: Excavation works to install and protect the GI pipeline in the soil of the valley with dimensions of 0.5 m width and 1.5 m depth, the price including dismantling and reinstalling the pipes at the required depth with protection and seafety works and tools , and all that is needed to finish the item according to specifications and including work the folwing: -Covering the pipes with a layer of sand with a thickness of 200 mm , after ensuring the integrity of the pumping line and the absence of any leaks. -Covering the pipe with pouring layer 200 mm plain concrete in crossing with flood flows . - Backfill with soil suitable for backfilling from the same area, so that the height of the backfill is 200 mm higher than the ground level. The item includes everything necessary to finish the item in accordance with the specifications and directions of the supervising engineer	م.ط L.M	10						
	Total cost of water supply network works, inspection rooms and valves								
1.3	Rehabilitation for the pumping room of Al-Aqmah villages water project, with dimensions (4*5)m								
1_3_1	Painting works for external walls: Supply and implementing of exterior wall paint using white, moisture-resistant plastic emulsion paint, consisting of three faces (one primer layer + two final layers of emulsion) to achieve a uniform and consistent color. The price includes the implementation of the logos of the organization and the donor on the room walls, as well as the execution of all necessary works to fully complete the item, in accordance with the drawings, technical specifications, standard practices, and as per the terms, conditions, and instructions of the supervising engineer from the organization.	m2 م2	60						

1_3_2	Painting works for interior walls and ceiling: Supplying and implementing an oily, moisture-resistant, matte paint in the required color for the interior walls and ceiling. It consists of three sides (base + putty with sanding + an oily final layer) to obtain a homogeneous color, the work include treatment the cracks/erosion of the cement plastering in the walls by using moisture-proof materials, and do everything necessary to finish the work perfectly according to the drawings, specifications, technical and workmanship assets, conditions, instructions, and the directives of an engineer Supervisor organization.	m2 2م	76						
1_3_3	Rehabilitation of an iron door : Maintenance and repainting of the pumping room door, the iron door with dimensions of (3.0*3.0)m. The work include painting in three layers after removing and sanding of rust, first apply base primer, second epoxy layer anti-corrasion, and required color in final layer. The price includes welding the locks and hinges, or replacing the locks and hinges, if any, and all installation accessories necessary to complete the item according to the specifications and instructions of the supervising engineer.	مقطوعية LS	1						
1_3_4	Rehabilitation of 3 iron windows according to the following dimensions: Maintenance and repainting of the pumping room windows for 3 iron windows dimensions of (1.5*1.0) m. The work include painting in three layers after removing and sanding of rust, first apply base primer, second epoxy layer anti-corrasion, and required color in final layer. The price includes welding the locks and hinges, or replacing the locks and hinges, if any, and all installation accessories necessary to complete the item according to the specifications and instructions of the supervising engineer.	بالعدد / No	3						
Total amount for pumping room rehabilitation									
1.4	Rehabilitation works of the Concrete Tanks								
1_4_1	Painting the walls, floor, and ceiling inside the tank (5*4*3.3)m & (3*4*3.3) m: Painting the walls, floor, and ceiling inside the tank with epoxy (EPX) material, resistant to leakage, fungi, and bacteria. The work includes two coats of paint, applied by a specialized insulation office, and should be executed under the supervision of a consultant engineer; the price includes treatment any cracks inside the tanks in the walls, floors, and roofs, according to the specifications and instructions. (A sample should be provided to the supervising engineer before implementation).	متر مربع M2	169.6						
1_4_2	Painting Works for External Walls: Supply and execution of painting for the external walls of all components of the tank with inspection rooms beside both tanks, consisting of a mixture of white cement and powder. The work will be carried out using a manual spray machine on three faces, with printing and homogenization for all external walls of the tank in an appropriate color. The price includes treatment any cracks outside the tanks in the walls, floors, and roofs, with the creation of logos for the organization, and the donor, according to the dimensions provided by the supervisor engineer of the organization, and according to the specifications, drawings, and instructions of the supervising engineer.	متر مربع M2	227.8						
1_4_3	Supply and installation of Aluminum Ladder : by number supply and installation of aluminum ladder in dimensions (3.0 m long and 0.5 m width) installed and fixed inside the tank with the provision of all necessary pieces of installed and doing all necessary to finish work according to the specifications and directions of the supervising engineer.	بالعدد / No	2						
1_4_4	Supply and installing an fiberglass door for the tank : Supplying and installing an fiberglass door with dimensions (80*80) cm. The door is made of granular and hardening fiberglass, high-pressure, and 7 mm thickness with frame, taking into account that the door is well fixed from the sides, and have a slope of a 15 degrees to prevent dust and water from remaining on it, with the supply and install of the locks for all doors, with all its attachments of hinges and locks, and providing all the pieces and fixing it well in tank hole with screws, bolts and cement mortar, and doing all necessary to finish the work and according to the directions of the supervising engineer.	بالعدد / No	1						

1_4_5	<p>Supply and installation of a 3-inch diameter iron pipe</p> <p>Supply, installation, and replacement of the 3-inch diameters distribution (outlet) pipes, in the two tanks. With removed the old pipes and installation of the new pipes in the distribution lines at the tanks outlet and connected to the distribution line, with high thickness according to BS1387 specifications or equivalent, in addition to installation of new pipes in the overflow pipes to connect the water between two tanks with all necessary connect needed. The work should include providing all necessary materials, including removal of the old pipe and completing the installation according to the specifications and instructions of the supervising engineer.</p>	م.ط L.M	6						
1_4_6	<p>Cleaning, Fixing, Sanding, and Painting of the Steel Pipes for the Both Tanks (Inlet, Outlet, Cleaning and Overflow pipes):</p> <p>Cleaning, fixing, sanding, and painting of the inlet pipes, ascending pipes, overflow and cleaning pipes in the both tanks. This will involve removing rust that has formed due to weather conditions through proper sanding, primer paint rust-resistant of three layers (three faces), and layer of epoxy, according to the instructions and guidelines of the supervising engineer. (A sample will be received by the supervising engineer prior to execution).</p>	م.ط L.M	8						
1_4_7	<p>Rainwater Drain Pipes Works:</p> <p>Supply and installation of 2-inch diameter, 3.2 mm thick UPVC drainage pipes to drain rainwater from tank roofs, with doing all necessary to connect it.</p>	م.ط L.M	20						