## 10General information معلومات عمومی

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| **FCDO – Driving Action for Wellbeing to Avert Mortality (DAWAM) Project**  **تلاش برای رفا و کاهش مرگ و میر** | |
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| **Administration of survey** | **مدیریت سروی** |
| Name of province: | Herat |
| Name of district: | Farsi |
| Name of health center | Sartik SHC |
| Health Center Type: please select one ( H3, CHC,BHC,SHC) | SHC |
| Building ownership (private or governmental) | Government |
| Number of clinic personnel | 5 |
| Number of patients visited in clinic (daily basis) | 115 |
| Number of hospitalized patients (the max capacity) |  |
| Name of surveyor(s) | Eng: Farjad, Zalal, Samim |
| DATE of survey | 29-July-24 |

## Description of workتشریح کار

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| **Scope of intervention**  **عرصه حمایت** | | **All three component require major maintenance:** | |
| **Perimeter protection** | | The provision and improvement of Water, Sanitation, and Hygiene (WASH) facilities play a pivotal role in safeguarding human health and overall well-being. These initiatives serve multifaceted purposes, ranging from the prevention of waterborne and diarrheal diseases to the control of vector-borne illnesses. Additionally, they contribute to the enhancement of health and nutrition outcomes, mitigate the risk of epidemics, and foster dignity and safety among communities. Economically, investing in WASH facilities yields significant benefits, while also ensuring environmental protection and alignment with international sustainability and health standards.  To enhance the capacity of healthcare workers to uphold hygiene standards, ActionAid is committed to revitalizing and enhancing existing Water, Sanitation, and Hygiene (WASH) facilities in targeted Healthcare Facilities (HCFs). | |
| **Clinic map** نقشه کلینیک | | | |
| GPS of SHCF: Please collect the GPS related SHCF building جی پی اس نقاط کلیدی: لطفا جی پی کلنیک مربوطه را بگیرید: | | | |
| 1 | N: 33.82764252 | | E: 63,43777913 |
| Please draw a freehand sketch of the HCF facility; point out : Main building – Sanitation facilities, water source , waste disposal site ) | | | |
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## Project feasibilityامکان پذیری پروژه

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| **Parameters inspection and findings**  **بررسی پارامترها و یافته ها** | Background information: The SHC Clinic of Sartik is constructed 10 years ago by Government. In this clinic there are five Staff, one Doctor (male), one midwife (female), one vaccinator (female), one nutritionist (female), one guard (Male). So totally there are 5 Staff at this clinic center. The clinic center has one main clinic building, it also has got laboratory, doctor room, drug store, Admin office This Sub health care facility is located 23 Km far from Center of Farsi District  This SHC serves to the whole people living in Sartik area. The clinic center can serve for 115 outpatients on diurnal basis with 40 males and 80 females.  The main challenge facing this health center is the lack of water inside the clinic building and sanitation services, which leads to the spread of diseases. Currently, the water of the clinic is supply from the Bore Well which is out site of the clinic building and Absence of a standard water supply system the existing water well with a diameter of 12 inches and a depth of 40 meters without any casing, with a one-inch DC pump and two Solar without stand frames and Mark).  Therefore, the ActionAid office technical team had a technical survey during the observation and technical survey the main problems found in this SHC are as follows:  1. The lack of Wash drain in all the rooms and corridors of the clinic  2. Absence of hand washing sink inside the corridors of Building and clinic area.  3. Absence of hot water pipes for all clinic rooms (only cold water is connected to the  rooms; hot water pipes are not considered)  4. Absence of a standard water supply system (an existing water well with a diameter of  12 inches and a depth of 40 meters without a casing,  5. Lack of tiles and ceramics for the floors of the rooms and corridors inside the Building  (only the delivery room has tiles). The floors of the rooms are PCC concrete, which is  not suitable for washing.  6. Necessity to plastic water Tank (the existing water tank volume is not enough) and  insulation of the existing storage  7. Need to build a sewage system (septic tank) for the clinic (the existing absorption well  is 3 meters deep and one meter in diameter, which is completely filled and has no  place, the waste material has moved to the clinic area)  8.The need to provide garbage containers inside the Clinic building  9.The need to create a ramp for the entrance gate of latrines facilities of men's and  women  10. Lack of public hand washing sink inside the clinic area  11. Absence of hand-washing sink inside the men's and women Latrine.  12. Absence of toilet and bathroom in the delivery room Water source For both clinical use and drinking purposes, the water supply at the Sartik Sub Health center (SHC) is provided by the bore well with a diameter of 12 inches and a depth of 40 meter with a one-inch DC pump and two Solar panel without Stand, frames and Marks)  The well is without a casing, which causes contaminated of the water. Water storage and distributionWater Tanks one water tank currently installed at Sartik clinic Which is metallic tank with a capacity of 1500 liters. Necessity to be isolated to be safe in the cold weather. Hand washing In total 6 hand washing sinks are installed inside the clinic rooms and 4 new handwashing sink considered to be installed in the corridor and latrines station and connect to the system also one handwashing facility station will construct in the Sartik SHC. Bathroom There is a Max bathroom and toilet in the building of Sartik Clinic but it’s not functional they do not have bath fixtures such as a shower or floor drain and do not have tile and ceramic needed to be repaired to be functional and become ready for use of staff  also We well change the location of delivery room because it is next to street most of patients did not feel comfortable, so according to suggestion of patients and clinic staff it should be in location of nutrition room, also there is space to construct a toilet & bath for delivery room Latrines There are currently two single latrines at the clinic, but no proper toilets available. Existing female toilets we will remove the partition wall of corridor to make one corridor for both toilet and install one stand WC for disabled patients   * The latrines are locally constructed and lack modern toilet facilities. * There is no access to water in the latrines. * The latrines are not equipped with facilities to accommodate persons with disabilities (PWDs).  Septic Tank: The sub-health center has no septic tank because the existed latrines are dry pit latrines.  which is currently filled which causes separation diseases. Waste management The following process and system for solid waste collection and disposal are in place at the Sartik Healthcare Center: Waste collection and separation: Although all types of solid waste are separately stored and collected, the available bins are of low quality and insufficient to handle the daily volume of disposed waste. Incineration A metallic incinerator is available on the premises, positioned over a pit to allow ash to be directly emptied into it. the incinerator functioning properly Sharp pits Sharps waste is disposed of in a special sealed pit, constructed with RCC cover. The pit is covered with an RCC slab; it does not need additional lining. Organic waste pit: Organic waste pit is disposed of in a special sealed pit, constructed with RCC cover. The pit is covered with an RCC slab; it does not need additional lining. |
| **Technical solution in compliance with MoPH/WHO standards**  **راه حل تخنیکی مطابق ستندرد های وزارت صحت عامه وسازمان صحی جهان** | Water source  1. **Quantity Perspective:** Water supply at the Sartik Sub Health Center (SHC) is provided by a bore well with a diameter of 12 inches and a depth of 40 meters. the aquifer layer between 10 and 40 meters underground, we anticipate that the bore well will yield approximately 3000 to 4,000 liters per hour. This yield is expected to meet the daily water requirements of the health center   **Borehole Justification:** The existing bore with diameter 12 inches and depth of 40 meters. designed to ensure a sustainable and reliable water supply. Based on ActionAid's technical observations from this bore wells, the well is uncased, leading to water contamination. To address this issue, a Class C PVC casing should be installed inside the well, along with a standard pump and solar panels, it has been identified that the region contains a productive aquifer layer located between 10 and 40 meters below ground.   * **Depth and Diameter:** The bore well will reach a depth of 40 meters with a diameter of 12 inches, sufficient to fully penetrate the aquifer layer and ensure a consistent water flow. * **Sanitary Seal:** A sanitary seal, extending at least 2 meters below the ground surface, will be implemented using cement grout to prevent contaminants from entering the well.   **Casing and Screen:** The existing well is without casing, a Class C PVC casing should be installed inside the well to support the well structure and prevent collapse, along with a standard pump and solar panels  **Expected Yield:** Given the favorable conditions of the aquifer layer between 10 and 40 meters underground, we anticipate that the bore well will yield approximately 3000 to 4,000 liters per hour. This yield is expected to meet the daily water requirements of the health center by incorporating these design features and conducting thorough testing, we aim to secure a clean, safe, and sustainable water source for the Sartik Sub Health Center, ultimately improving the health and well-being of the community it serves.  2- **Quality Perspective**: ActionAid is committed to ensuring that the water from the tap meets the highest standards of quality. As part of this effort, water quality testing will be conducted during the process to ensure compliance with the WHO water quality standards. The results of the water analysis will be documented and included in the table below.   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Parameters | Turbidity (NTU | Color | Odor | Water Temperature | TTC (CFU/100ml | PH | TDS | Arsenic | | WHO Guideline | <5 NTU | None Detected | Not Offensive | 25C° - 30C° | 0/100ml | 6.5 to 8.5 | 1000 ppm | 10µg/l | | Lab Result |  |  |  |  |  |  |  |  |  Water storage and distributionWater tank (water availability)  |  |  | | --- | --- | | **WHO suggested minimum water quantities in health care facilities** | | | Use | Guideline quantity | | Outpatients | 5 liters/consultation | | In patients | 40–60 liters/patient/day | | Operating theatre / maternity | 100 liters/intervention | | Dry or supplementary feeding center | 0.5–5 liters/consultation | | Wet supplementary feeding center | 15 liters/consultation | | Inpatient therapeutic feeding center | 30 liters/patient/day | | Cholera treatment center | 60 liters/patient/day | | Severe acute respiratory diseases isolation center | 100 liters/patient/day | | Viral hemorrhagic fever isolation center | 300–400 liters/patient/day |  |  |  |  |  | | --- | --- | --- | --- | | **Total daily water demand of Sartik Health Care Center** | | | | | Type of user | # of user | Consumption norm (Liters /day) | Total daily demand | | Outpatients | 120 | 5 | 600 | | In bed patients | 0 | 100 | 0 | | clinic personnel | 5 | 110 | 550 | | Total daily water need | | | 1150Liters | | Required water for 48 hours to avoid any shortage | | | 2300 |   To ensure an uninterrupted water supply for at least 48 hours, it's imperative to have adequate water storage capacity. Based on our calculations, there is enough water during the day to supply water for the system to avoid any shortage we recommend the installation of water tank with capacity of 2000 lit and one 500-liter water tank for the solar water tank to the water supply network. The water tank is factory-made from high-density polyethylene, ensuring durability, lightness, and ease of handling. It’s perfectly smooth inner surface allows for easy cleaning with traditional detergents. The tank is supplied with a top screwed lid and includes all necessary accessories and fittings and the water tanks is planned to be connected to the new water supply system inside the building and toilet. Solar System: Install the solar panels on the healthcare center’s rooftop, ensuring they are tightly secured against wind and theft. Position them for optimal sunlight and proper tilt. Although relocation is possible, consistent sunlight exposure is crucial for efficient energy production.  Fortunately, as far as there is enough space available on the roof Sartic SHC building. Therefore, the solar will be installed there. And the solar will be protected by a fixed lockable frame.  Submersible pump: We need the PEDROLLO product the submersible model: 4SR1.4/17 1HP 0.75Kw 220V because it is a suitable pump for our system Its flow rate is 1.2m3/hour. the well probe should be installed in the system to prevent the pump from running dry.  Total required pipe: only 70-m pipe is needed from the well to the water tank.  Metallic box for protecting Inverter: To protect the Inverter, it needs to be installed in a metallic box that could be a safe place for the inverter.  Solar Panels: Solar sizing calculation indicates that we should use 4 numbers of PVs PROPSOLAR 270W Poly crystalline 37.9V 9.22A for running the system. (for more details please have a look at the attached solar sizing calculation in PDF file).  Inverter: The Controller FRECON IP65 1.5Kw 220V made in China is designed for this system and can control the fluctuation of the electrons and prevent the pump from most breakdown.  Note : If the specified brand of solar panels or any other listed accessories are unavailable, the supplier must obtain written approval from the AAA WASH Specialist or an authorized technical team member for an alternative and changes. This ensures that any substitute meets the project's technical requirements and maintains quality standards  Remember!  Each solar pump item needs to be supplied by a registered customs license seller with the following standard certifications:  FCC C009911 Standard, ISO 0991:2000 Standard, UL Standard, TUV Standard Water reticulation within the SHC premises: To optimize the existing distribution system and accommodate the addition of new facilities, it's imperative to connect it to the tap and extend it to the newly constructed toilets, handwashing sinks, this will ensure efficient water distribution throughout the facility. To achieve this, we will utilize PPR pipes with a diameter size of 1 inch, PN 25-bar.  Moreover, to guarantee the longevity and reliability of the system, the pipes will be buried at a depth of at least 60 cm from the ground level. This strategic placement not only protects the pipes from external damage but also helps maintain consistent water flow, particularly during colder seasons when the risk of freezing is heightened.  With a total length of 119 meters, these PPR pipes will seamlessly integrate with the existing distribution network, facilitating uninterrupted water supply to the newly established amenities. By preventing leakages and minimizing water wastage, this comprehensive approach not only enhances the functionality of the system but also promotes sustainability and responsible resource management. Hand washing sinkThe installation of handwashing sinks within healthcare facilities is paramount for effective infection control, adherence to hygiene standards, and the enhancement of overall health outcomes. By ensuring that healthcare workers, patients, and visitors have easy access to handwashing facilities, the spread of infections can be significantly reduced, thereby supporting compliance with protocols and minimizing health risks. This initiative ultimately results in lower infection rates, heightened staff productivity, improved patient care, and an overall safer environment within the healthcare setting.Moreover, the presence of handwashing sinks fosters hygiene awareness, contributing to broader public health initiatives and promoting a culture of cleanliness and wellness. To address this critical need, ActionAid has outlined plans to install a total of 4 new ceramic handwashing sinks in key sections of the building, and one handwashing facility station will construct in the Sartik SHC and the other existing hand washing sink shall be conned to the building water supply system and sewerage.Septic Tank: ActionAid plans to Construction new septic tank and standard sewerage system to solve the problem of sanitation system we advise to consider a septic tank by dimension of 4.7x2.7x2.3 Toilets and latrines At the Sartik Health Care Facility (HCF), there are currently two dry pit latrines at the clinic premises which present several significant issues. These issues include the absence of hand-washing facilities, non-washable surfaces, and small pits that fill up quickly. To address these problems, ActionAid has devised a comprehensive plan to upgrade the existing latrines into fully equipped toilets the Existing toilets we will remove the partition wall of corridor to make one corridor for both toilet and install one stand WC for disabled patients.  For the delivery room there is not any bath & toilet so we planned to construct one single Bath & toilet adjoining to the delivery room also We well change the location of delivery room because it is next to street most of patients did not feel comfortable, so according to suggestion of patients and clinic staff it should be in location of nutrition room, also there is space to construct a toilet & bath for delivery room  The existing toilet at clinic site is not enough for the clinic staff and patients so we consider to construct a double male and female toilets the new toilets will be equipped with flush tanks and adjacent hand-washing sinks to ensure proper hygiene. Additionally, the facilities will be designed to accommodate People with Disabilities (PWDs), incorporating railings to the toilet stairs to enhance accessibility and safety.  In terms of infrastructure, the water supply for these toilets will be connected to the water tank, ensuring consistent access to water. Furthermore, the sewer pipes will be connected to a septic tank to manage waste effectively. All construction and plumbing work will adhere closely to the specifications outlined in the relevant drawings, ensuring the durability and functionality of the new facilities.  following actions are planned for upgrading the existing latrines and new toilets.   * Flash tanks should be installed at each toilet and latrines * The latrines should be connected to the water network * Making the internal surface of walls and floors washable by using tile and ceramic. Totally 89 square meters of walls and floor needs to be furnished by tile and 98 square meters of walls and floor needs to be furnished by ceramic. * For two latrines should install the eastern water closet with flash tanks and for four toilets should install the western water closet with flash tanks in order to install the p-traps properly to avoid bad odors. * Plumbing work such connection of water closet to main sewer and connection of cold-water pipes to pipe network should be done. * Trash bins should be mounted at each latrine and toilet.  Waste managementAccording to WHO’s requirements, the perimeter of healthcare facilities must be protected not only against clinical hazardous waste but also from domestic waste generated within these facilities. For this purpose, Sartik SHC already has a standard waste management system and doesn’t need extra structures for solid wastes.Incinerator: In general, the incinerator well is functional.Waste Disposal Pits: the existed pits of organic waste (such as placental waste) and hazardous waste (such as sharp objects) are already functionally work there is no need for any extra workIncineration Area Security: The incineration area secured by erecting a fence with galvanized iron pipe.These measures will ensure a safe, secure, and hygienic environment for waste management at the Sartik Sub Health Center. |
|  | Note: An allocation of 4.7% of the total cost has been designated for miscellaneous and unexpected expenses. Contractors may claim overspend only when changes in the definable feature of work are recommended and approved by the Action Aid superintendent and AAA budget holder. |

## Period of workمدت زمان کار

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| **Start Dateتاریخ شروع** |  |
| **End Dateتاریخ ختم** |  |

## Summary of BoQ

## Signatoriesامضا کننده گان

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| --- | --- | --- | --- | --- | --- |
| ActionAidاکشن اید | | | DopH and HCF agents نماینده ریاست صحت عامه ومرکزصحی | | |
| Name and position  نام و وظیفه | Date  تاریخ | Signature  امضا | Name and position  نام و وظیفه | Date  تاریخ | Signature  امضا |
| Project Coordinator  کوردیناتور پروژه |  |  |  |  |  |
| WASH Specialist  متخصص واش |  |  |  |  |  |
| Program Manager  مدیر پروگرام |  |  |  |  |  |