



World Vision International
World Vision Afghanistan
Badghis Zonal Office



WASH Sector
DAWAM WASH Project

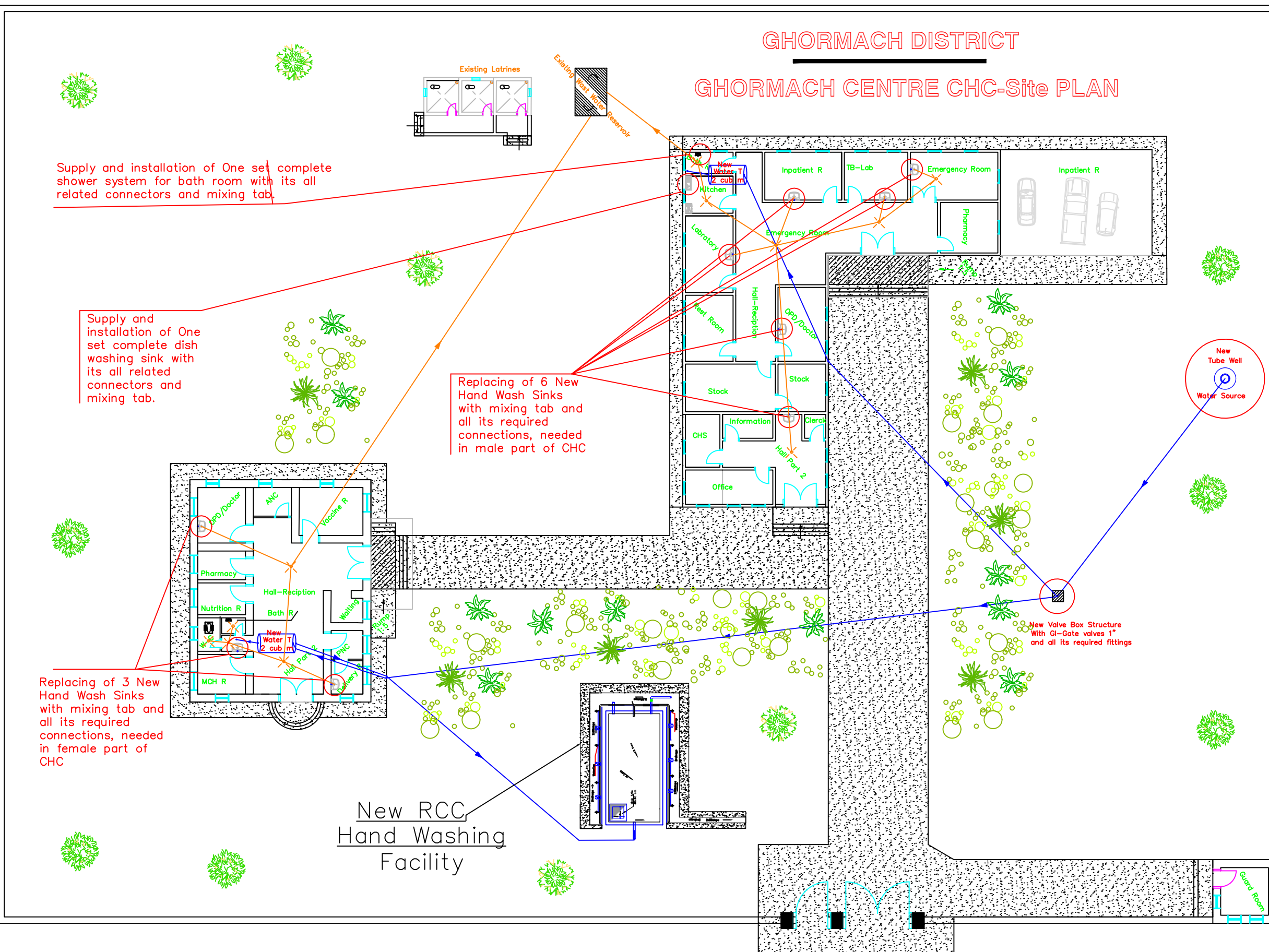
Design and Drawing for Solar Powered Water Supply System

Project Name: Water Supply System in Healthcare Facility

Location and Type: Ghormach Centre (CHC)

Location: Ghormach Centre CHC
District: Ghormach
Province: Badghis
Number of Users/day: 300 Patients
Number of Staff : 22

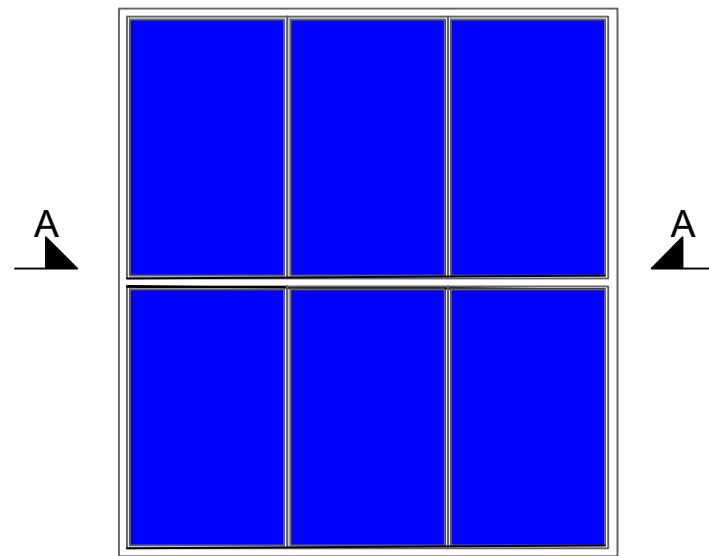
Project Information	
Number of Users/day	300
Number of Personel	22
Source Discharge Required	12.88 m3/day
Water Source	Tube Well
Number of Solar Panels 270 Watt	6 Panels
Work Days	60 days
Water Tankers for buildings (2Tankers)	2 M3
Hand Wash Facility Required for	New RCC



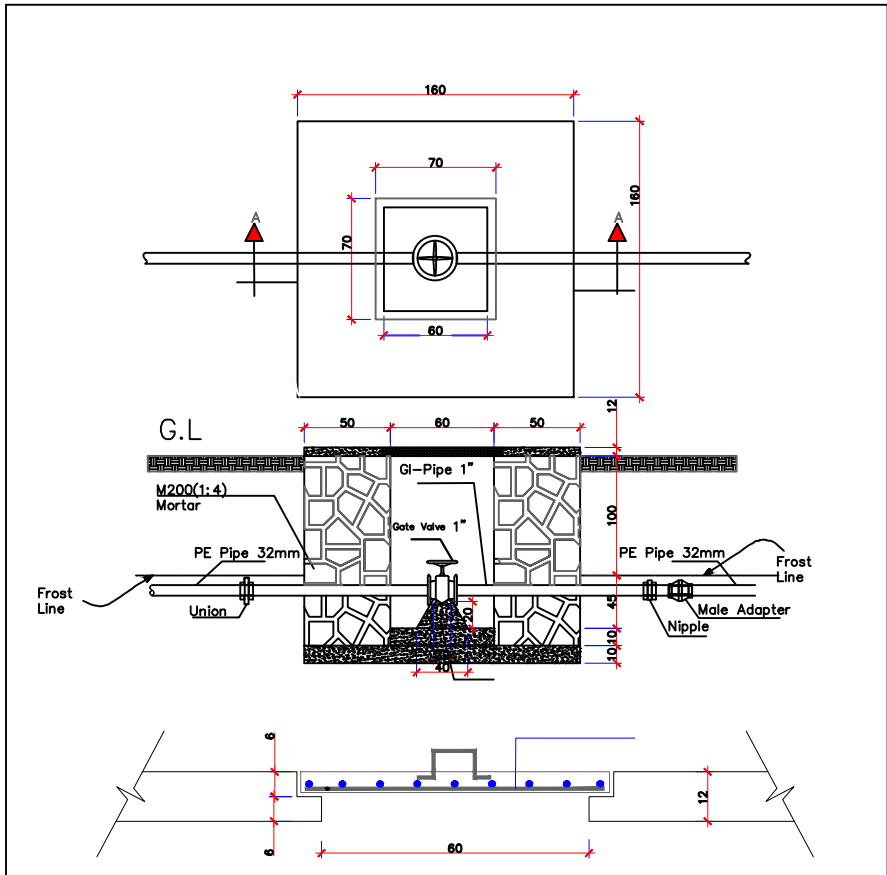
- Note:
- 1-New tube well is needed as water source.
 - 2-Piping system from well to gate valve and connecting to building's new water tankers (2Cub m) and new hand wash facility.
 - 3-Two new water tankers (3000 & 2000 liter), 3 Layer with best quality of material and covered with glass wool and proper anti sun sharkskin are required for male and female buildings.
 - 4-Need to construction of one valve box for water distribution to building and hand wash facility.
 - 5-Nine new hand washing sinks are needed to replace in the buildings with all its required fittings and connectors.
 - 6-Existing waste water pipes and system need to repairing.
 - 7-Existing waste water reservoir need to remove/clean to be empty.
 - 8-One complete set shower system for bath is needed.
 - 9-One complete set dish washing is needed for kitchen.
 - 10-Complete solar system (Solar panels, water pump, inverter, float switch and its required cabling system) as well as required for pumping water to water tankers.

WORLD VISION AFGHANISTAN				World Vision
DAWAM WASH PROJECT				ورلد ویژن
Province Badkhis	District Ghormach	Village Ghormach CHC	Project ID Number: A221873	
Designed by:	Reviewed by:	Approved by:	File Name:	Drawing.dwg
WASH Engineer	WASH Advisor	Operation & Response Director	Map Size:	A3
Ghormach Centre Healthcare Facility Site Plan			Plot Date: Jun11, 2024	Plot Scale: NTS

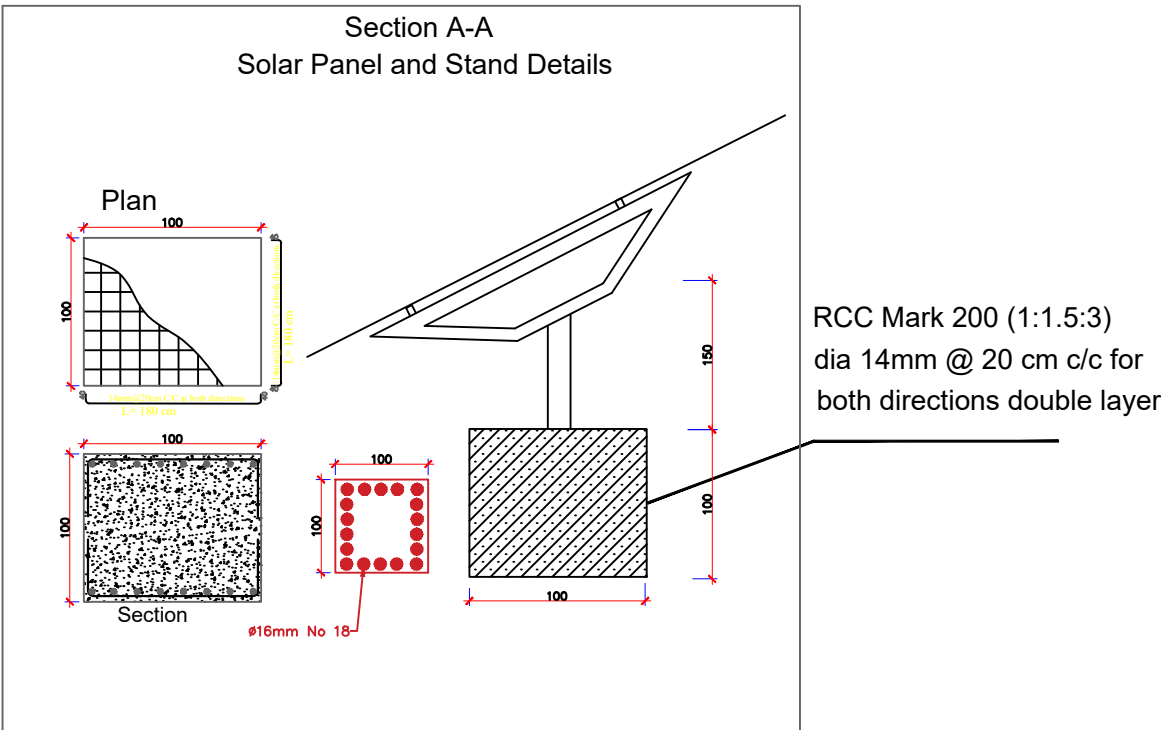
SOLAR PANEL



Gate Valve Box-1 Details

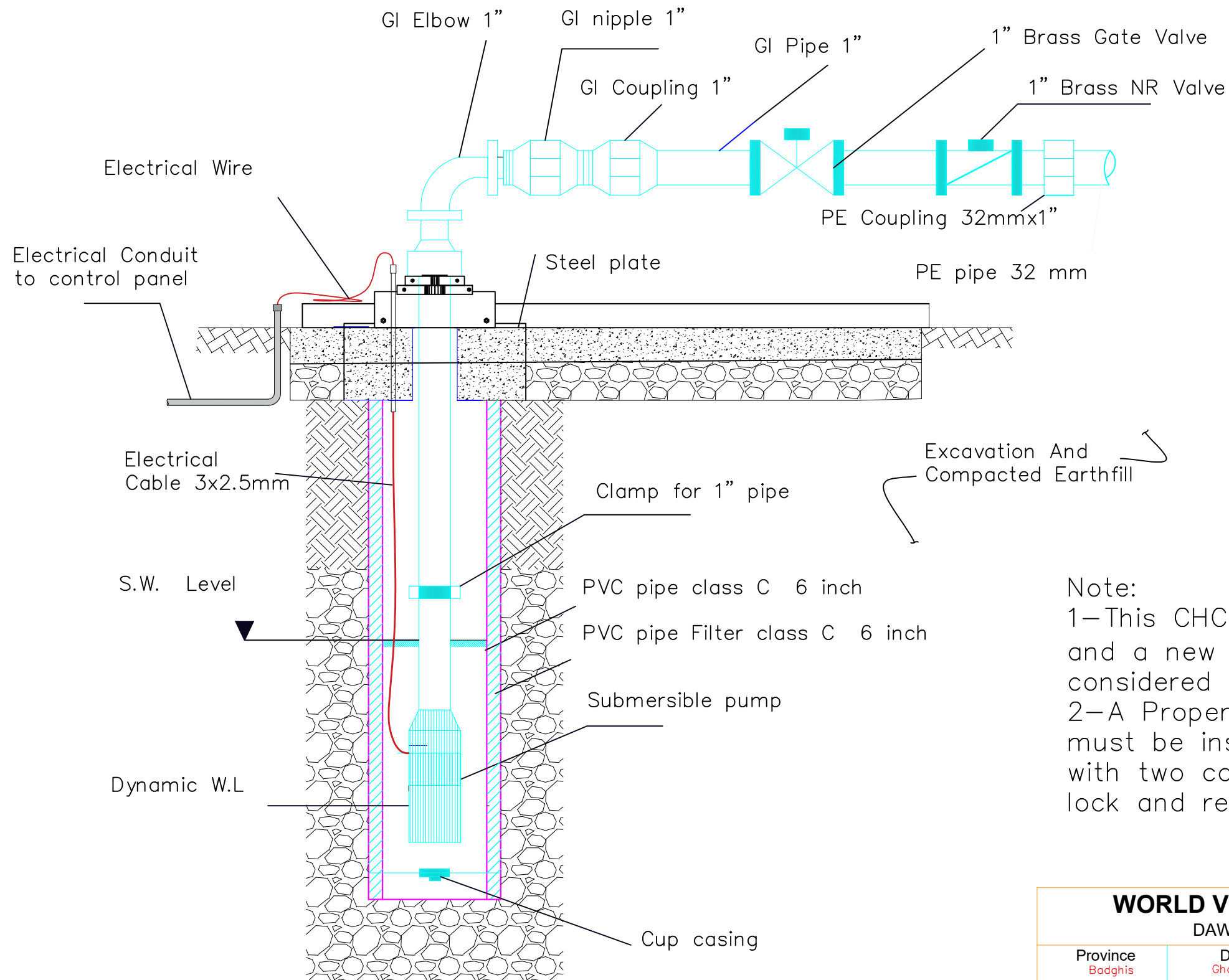


Section A-A Solar Panel and Stand Details



Note:
1-One Valve Box structure with GI-Gate valves and its all required fittings and connectors is needed near to bore well to manage and distribute water to SHC on the building's water tanker and Hand washing facility's water tanker.
2-The solar panels and solar stand must be installed on the roof of SHC building with stable and proper GI frame and 1 cubic m RCC for its firm and foundation.

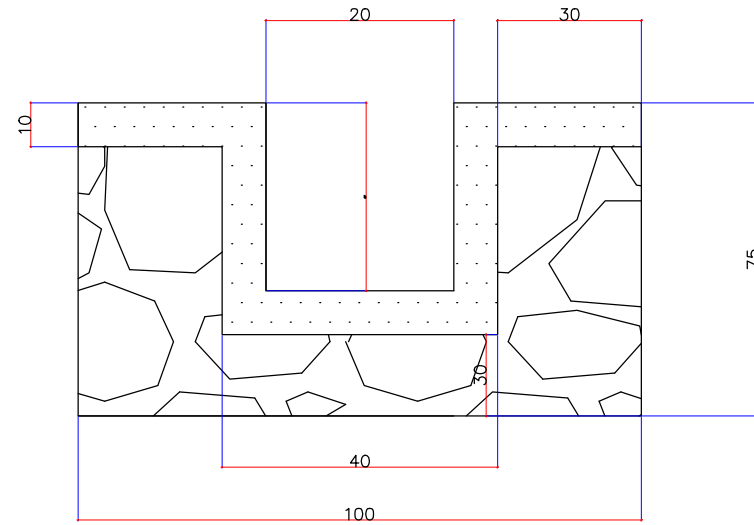
WORLD VISION AFGHANISTAN			World Vision
DAWAM WASH PROJECT			ورلد ویژن
Province Badghis	District Ghormach	Village Ghormach CHC	Project ID Number: A221873
Designed by: WASH Engineer	Reviewed by: WASH Advisor	Approved by: Operation & Response Director	File Name: Drawing.dwg
Solar Stand & Valve Box Details			Map Size: A3
			Plot Date: Jun11,2024 Plot Scale: NTS



Well Details

Note:
 1—This CHC needs to one water source and a new tube/bore well in 12" dia considered for its water supply system.
 2—A Proper GI Cover Box as well cup must be installed at the top of well with two coat anti rust color and its lock and requirements.

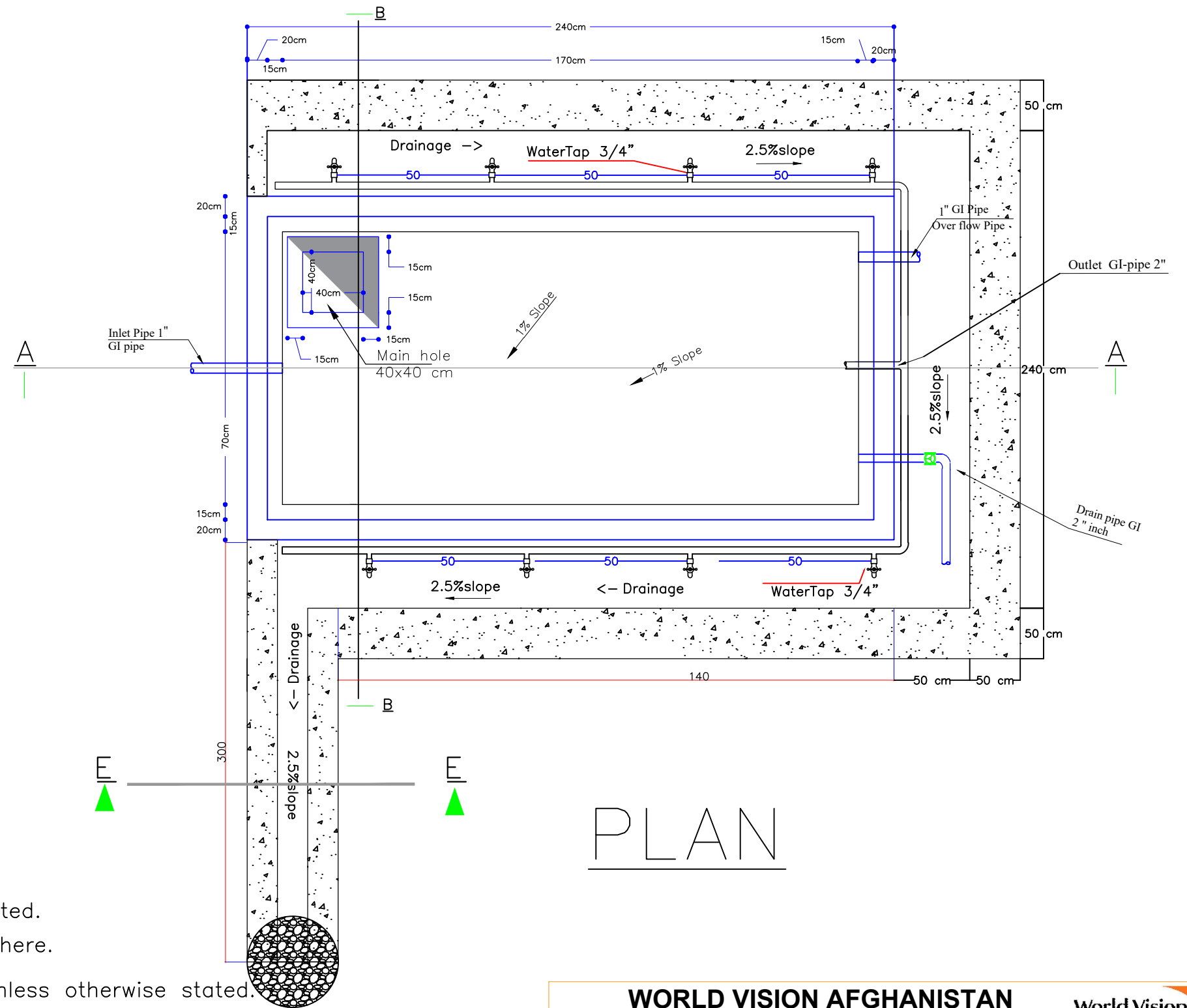
WORLD VISION AFGHANISTAN			World Vision ورلد ویژن
DAWAM WASH PROJECT			
Province Badghis	District Ghormach	Village Ghormach Centre CHC	Project ID Number: A221873
Designed by: WASH Engineer	Reviewed by: WASH Advisor	Approved by: Operation & Response Director	File Name: Drawing.dwg
Well Details			Map Size: A3
			Plot Date: Jun11,2024 Plot Scale: NTS



SECTION E—E

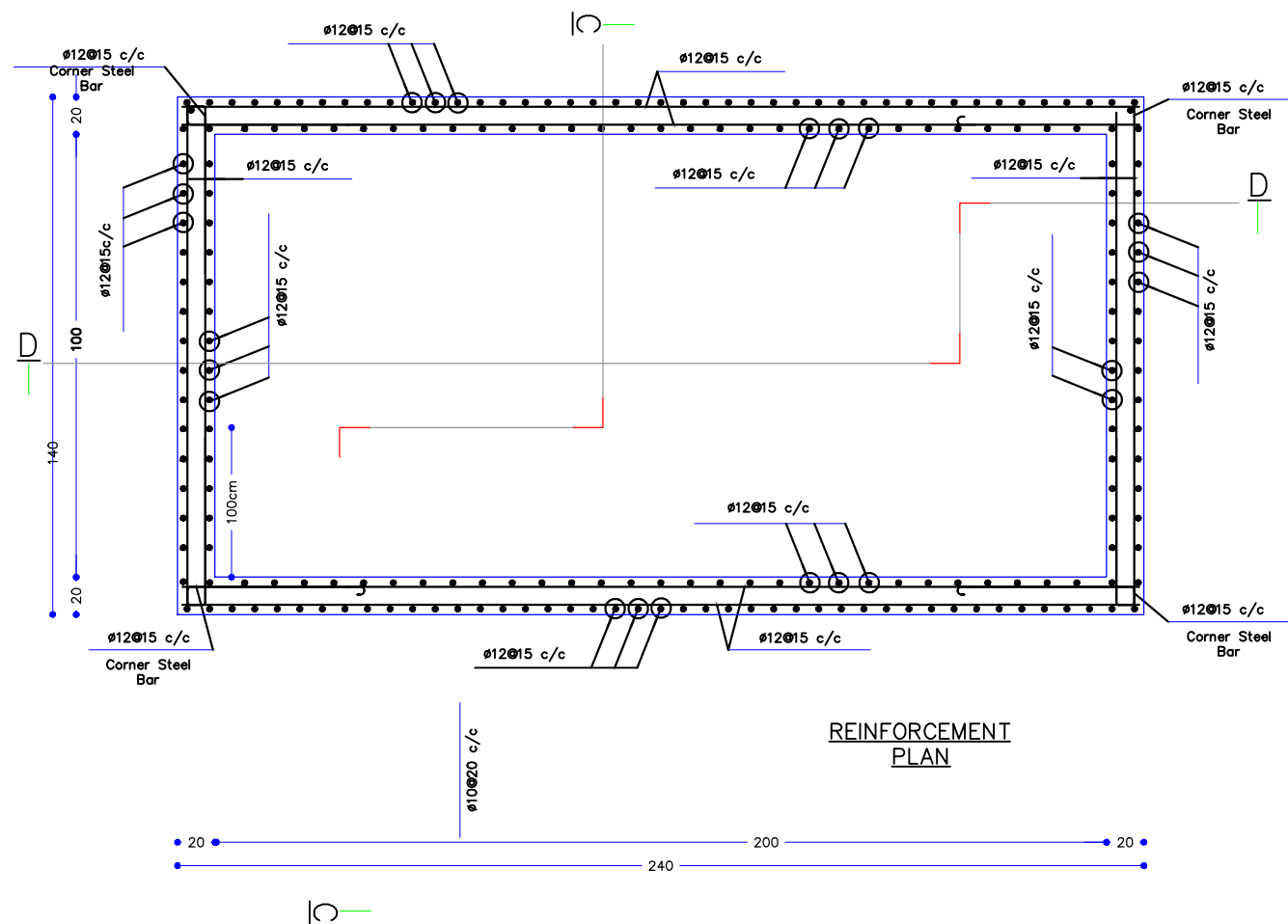
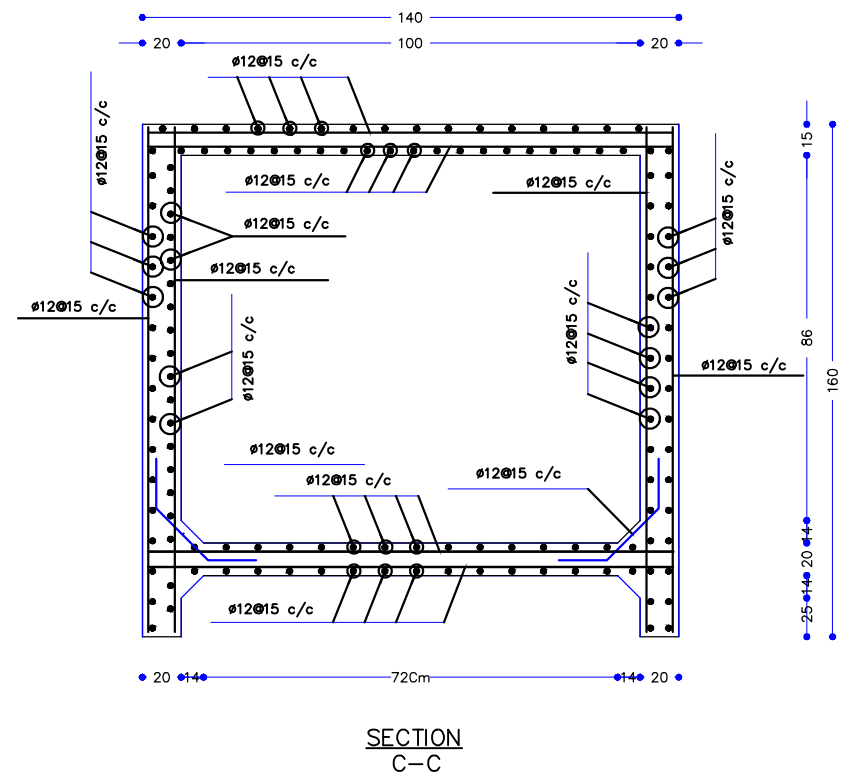
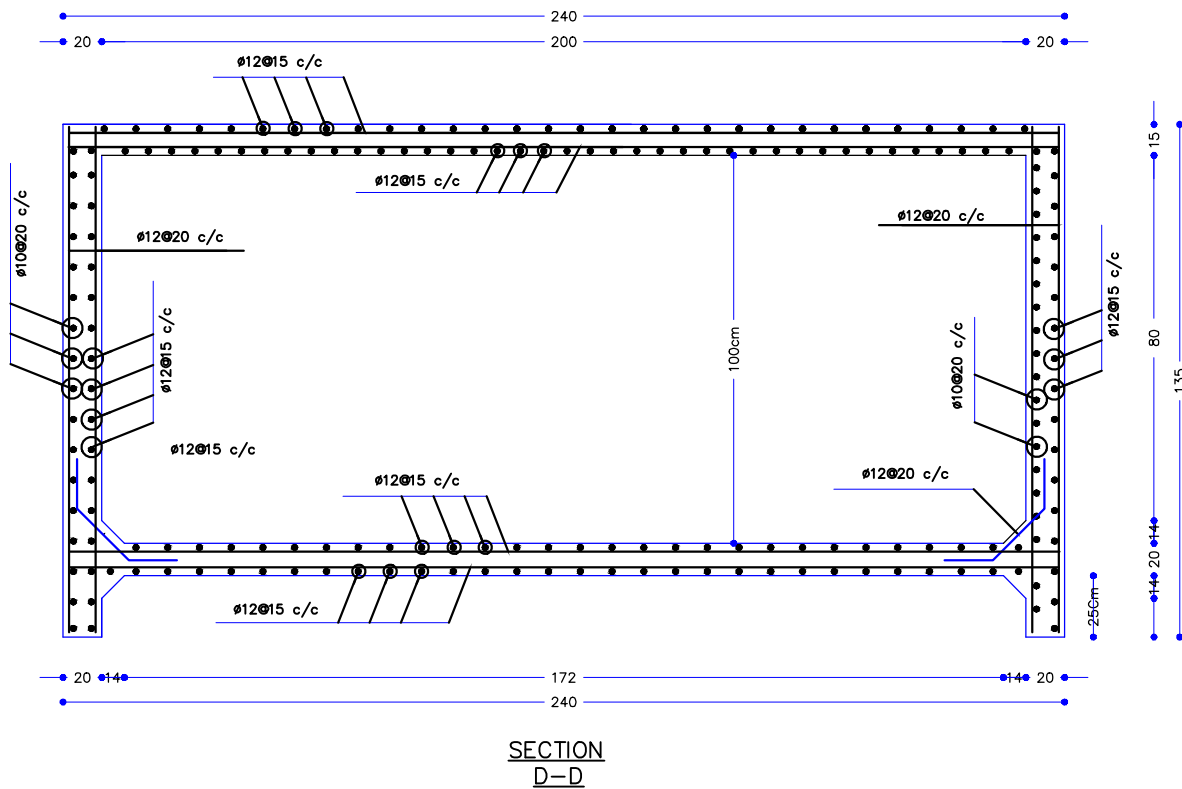
Note:

- 1– Isolation material is glass wool.
- 2– All RCC works should be with 1:1:2 mortar.
- 3– Curing must be continued up to 28 days.
- 4– All dimensions are in cm unless otherwise stated.
- 5– Clear and Clean water must be used every where.
- 6– All PCC works should be with 1:2:4 mortar unless otherwise stated.
- 7– During RCC work vibrator must be used to avoid water leakage from reservoir.
- 8– The inlet, outlet, overflow and washing pipes should be adjusted according to site condition.



PLAN

WORLD VISION AFGHANISTAN			World Vision
DAWAM WASH PROJECT			ورلد ویژن
Province Badghis	District Ghormach	Village Ghormach CHC	Project ID Number: A221873
Designed by: WASH Engineer	Reviewed by: WASH Advisor	Approved by: Operation & Response Director	File Name: Drawing.dwg
Hand Washing Facility			Map Size: A3
			Plot Date: Jun11,2024 Plot Scale: NTS



STEEL BAR SCHEDULE FOR 2 CUBIC METER RCC WATER RESERVOIR

Shape of bar	Bar No	Bar Dia (mm)	Number of Bar	Total Number	Length (m)	Total Leng (m)	Weight (kg/m)	Total weight (kg)	Total weight +5% (kg)
	1	12	4x17	68	1.35	91.8	0.888	81.52	85.59
	2	12	4x11	44	1.35	59.4	0.888	52.75	55.38
	3	12	4x17	68	1.40	95.2	0.888	84.53	88.76
	4	12	4x11	44	2.40	105.6	0.888	93.77	98.46
	5	12	2x10	20	8	160	0.888	142.08	149.18
	6	12	2x10	20	7.20	144	0.888	127.87	134.26
	7	12	2x18	36	1.1	39.6	0.888	35.16	36.92
Total Weight of Steel Bar +5% (Kg)									648.55 kg

WORLD VISION AFGHANISTAN
DAWAM WASH PROJECT

World Vision
ورلد ویژن

Province Badghis	District Ghormach	Village Ghormach CHC	Project ID Number: A221873
Designed by: WASH Engineer	Reviewed by: WASH Advisor	Approved by: Operation & Response Director	File Name: Drawing.dwg
Hand Washing Facility			Map Size: A3
			Plot Date: Jun11,2024 Plot Scale: NTS