

Tender Fee Rs. 500

TENDER DOCUMENT

for

**Supply and Installation of Solar Pumping, Drip and Sprinkler
Irrigation Systems in Thal Desert**

Under the Project

**Improved Land and Water Conservation Practices to Enhance
Waste Land Productivity in Thal Desert**

Last Date for Submission: 11th February, 2019 (02:00 PM)

**Pakistan Council of Research in Water Resources (PCRWR)
Khayaban-e-Johar, Near Edhi Homes, H-8/1, Islamabad
Ph: 051-9101272, Fax: 051-9101278**

GENERAL INFORMATION ABOUT THE CONTRACTOR/FIRM

Name of Firm: _____

Main Line or Business: _____

Type of Organization: _____

National Tax Number: _____

General Sales Tax Number: _____

Status of Active Tax Payer: _____

Registration No. with PEC: _____

Phone No(s): _____

Mailing address: _____

Fax No. _____ Email: _____

Contact person: _____

**SIGNATURE & SEAL OF
CONTRACTOR/FIRM**

TERMS AND CONDITIONS

1. GENERAL

The bids are required from the firms/companies registered with Income/Sales Tax departments who are on active tax payers list of FBR as well as with Pakistan Engineering Council for supply and installation of 3 solar pumping, drip and sprinkler irrigation systems in Mankera (1 site), Dullewala (1 site) District Bhakkar and Noorpur Thal (1 site) District Khushab with following terms and conditions:

- i. The bidder has to submit earnest money equal to 2% of the total amount of bid(s) in the form of demand draft/pay order in favor of the Pakistan Council of Research in Water Resources (PCRWR), Islamabad. Tenders without earnest money would be rejected out rightly. In case of alternate prices, earnest money will be based on the maximum quoted price of the same item(s). The Earnest Money will be forfeited if a bidder(s) withdraws his bid(s) during the period of his bid(s) validity. The earnest money of unsuccessful bidder(s) will be returned to them after evaluation of bids.
- ii. Conditional/incomplete tenders or those having overwriting will not be accepted.
- iii. Quoted price must be inclusive of all taxes having validity for at least 90 days from the date of tender opening.
- iv. The successful bidder would ensure that the bid is complete in all respects including supply, installation and commissioning of the solar pumping, drip and sprinkler systems at the specified locations (to be specified in the work order). Manage and install missing accessories for complete functionality of the system would be the obligation of the bidder within the offered cost.
- v. Last date of submission of offers is **February 11, 2019** by 02:00 PM. The tenders would be opened at 02:30 PM on the same day at PCRWR Islamabad in the presence of bidders, who may care to attend.

2. SCOPE OF SUPPLY

The bidder shall supply and install solar pumping, drip and sprinkler systems as per specifications given in **Annexure-I, II, III, & IV** at the project sites in Thal desert. The bidder shall also be responsible for their commissioning and free service, if required, during warranty period of one year from the date of commissioning.

3. BID PRICE AND QUOTING

The bidder shall indicate, in his offer the unit prices inclusive of supply, transportation, installation with all taxes and total bid prices of the goods. Payment of any taxes, duties etc. levied before or after opening of bids by the Government shall be the full responsibility of the bidder(s) subject to prevailing regulations. The prices shall be quoted in Pakistan Rupees only. The person signing the bid shall initial all the pages of the bid(s) where entries are made. Prices charged by the supplier for goods delivered and services performed under the contract shall not exceed from the prices quoted by the supplier in its bid(s). No bid received after the prescribed deadline (date and time) would be entertained and will be rejected without caring the reasons for

delayed receipt in PCRWR Head Office Islamabad even due to negligence of the postal/courier services etc.

4. PURCHASER'S RIGHTS

Pakistan Council of Research in Water Resources, Islamabad reserves the right to reduce/increase the quantity, prior to award of contract, thereby evolving no financial liability whatsoever or any other obligation on the part of PCRWR from the side of bidders. No other sub-office (outfit) of PCRWR is authorized to collect bid(s), only PCRWR Head Office located at **Khayaban-e-Johar H-8/1, Islamabad** is authorized to do so.

5. CONVERSING

No bidder shall contact Engineer/Employer on any matter relating to its Bid from the time of the Bid opening to the time the bid evaluation result is announced by the Employer. The evaluation result shall be announced at least ten (10) days prior to award of Contract. The announcement to all bidders will include table(s) comprising read out prices, discounted prices, price adjustments made, final evaluated prices and recommendations against all the bids evaluated. Any effort by a bidder to influence Engineer/Employer in the Bid evaluation, Bid comparison or Contract Award decisions may result in the rejection of his Bid. Whereas, any bidder feeling aggrieved may lodge a written complaint not later than ten (10) days after the announcement of the bid evaluation result, however, mere fact of lodging a complaint shall not warrant suspension of procurement process.

6. PERFORMANCE GUARANTEE

The supplier will be responsible for complete installation of the system and for its free repair services, if required, during the performance guarantee period of one year, starting from the date of completion of training & full commissioning of the systems. The successful bidder(s) is/are required to furnish a performance guarantee, equivalent to 10% of the total contract amount within ten days of issuance of supply order/award of contract. Performance guarantee/security will be forfeited in case of failure to successfully complete the performance period of the equipment. The withheld performance security will be returned after successful completion of the guarantee period.

The solar system must have a warrantee of at least 10 years, pumping system along with its accessories must have a warrantee of at least 05 years while for drip and sprinkler system the warrantee of at least 3 years is required. The warrantee should be provided on the proper legally recognized document along with the bidding document. In case of malfunctioning of the components systems during the period, the company would be asked to correct or replace the faulty components. Failure to respond and correct the fault accordingly may lead to blacklisting of the company as per the rules and regulations in force by the Government of Pakistan.

7. DELIVERY AND INSTALLATION

- i. The bidder shall complete the installation and commissioning within one and a half months from the date of issuance of work order by the Pakistan Council of Research in Water Resources, Islamabad. A penalty

@ 0.01% of the quoted price per day may be charged after expiry of delivery/installation/ commissioning period (which is 45 days after the award of work order) till the supply of equipment/item, its installation and commissioning. Supply order can be canceled after an extended period of **30 days** from the expiry of first supply order and earnest money will be forfeited.

- ii. Due documentation of the procedures and photographs with date and GPS coordinates will be responsibility of the bidder to be submitted once the installation is complete and failure to do so will be considered non-compliance and will lead to withholding of performance certificate.
- iii. The systems have to be installed at farmers' fields (9-10 acres) on the address to be given in work order.
- iv. For boring following specifications have to be followed:
 - Yield required 500 lpm (Sand free delivery from bore well) with proper developing of Minimum 60 Hrs or till sand free discharge is obtained.
 - Approximate depth - 145 feet (44.196 meter).
 - Assembly - Blind/ Slotted Pipes – 8 inch dia Up to complete depth. The slotted pipes must have an effective open area of at least 15% and the slotted size should be 1.6 mm. Centering guides may be used to maintain the verticality.
 - Material – UPVC pipes (Class D) and HDPE pipe (pressure rating PN 10 or more) having following diameters

Specifications	Blind/Slotted Pipe UPVC (8")
Inner Diameter (mm)	198.5
Outer Diameter (mm)	219.1
Wall Thickness (mm)	10.3

- Packing. Well-graded pea gravel of good quality, durability and high sphericity.
- Sealing Done by grouting with cement concrete 1:2:4 (coarse aggregate 20 mm nominal size) to a depth of 4ft below the grouted level.

8. MODE OF PAYMENT

No advance payment will be made to any firm against any supply order in any case. No such demand will be entertained and failure to supply of items against supply order will lead to forfeiture of the earnest money. Payment shall be made in the form of cross-cheque, which shall be issued, after receipt of equipment/items, inspection, installation, commissioning and training of the beneficiaries to be nominated by the farmer. The mode of payment will be as under:

- i. 90% payment on successful installation/commissioning of the system and training of the beneficiaries for proper operation and maintenance
- ii. 10% payment after completion of one year.

9. TRAINING

Supplier will arrange on-site necessary operation and maintenance training to the beneficiaries to be nominated by the farmer. The training package should be included as a part of bid.

10. PCRWR RESPONSIBILITY

Coordinate and collaborate with the firm about all the technical aspects of the project components.

11. EVALUATION CRITERIA

- The bids would be evaluated based upon their technical soundness.
- Technical soundness includes registration with PEC in category C-6 or above.
- The Bidder will provide a list of all major equipment and related items and a list of Technical Staff on Judicial Stamp Paper that following equipments and staff will be available for execution of the project.
- Due to compatibility issues of parts and accessories, the bids will be evaluated as a complete package and not in parts or separate components.
- The bidders will provide the financial audit reports of their respective firms for the last 3 years.
- The bidder will also provide past performance of the last 3 years along with supporting documents (work orders and performance certificates) and current commitments for technical scrutiny. (These will be verified by the client).
- The procuring agency may cancel the tender prior to award as per PPRA Rule No. 33(1).
- The representative of PCRWR, or his designated Field Engineer, may examine any item, equipment, material, supplies and/or services to be provided under this contract, at any time prior to expiry of this contract. He may reject or require alteration thereto or replacements thereof as a condition of acceptance and its findings shall be conclusive except in regard to defects or fraud which may appear later.
- Accomplishment and/or execution of each item of work (total or a part thereof) shall be considered subject to the verification of Field Engineer designated by the PCRWR for work accomplishment.

SOLAR PUMPING SYSTEM

Sr. No.	Items Description	Unit	Tentative Quantity	Unit Rate (Rs.)	Amount (Rs.)
1	Solar Panel with following specifications Manufacturing firm () Model (If Any) () Origin of Assembly () Warranty Period (Minimum 10 years) Cell Type (Polycrystalline 60 cell (260W)) Module Efficiency (15-17%) Open Circuit Voltage (34-40 V) Short Circuit Current (7-9.5 A) Maximum Power Voltage (V_{mp}) (28-32 V) Maximum Power Current (I_{mp}) (6-9 A) Temperature Coefficient of I_{sc} (0.04 to 0.07 %) Temperature Coefficient of V_{oc} (-0.35 to -0.30) Temperature Coefficient (P_{max})(-0.42 to -0.39%) Maximum System Voltage(1000V DC) Maximum series fuse rating(15-20 A)	No.	102		
2	Complete set of Solar Submersible pump Power rating :(AC 7.5 HP), required discharge 7 lps at 140 ft head, with all the accessories including auto dry run shut off switch with (one year warranty) Model (if any) () Manufacturing firm () Origin of Assembly () Warranty Period (Minimum 5 years) Pump efficiency (Not less than 55%)	No.	03		
3	Solar Pump Inverter (7.5 HP) with Breakers/Distribution Box (PV disconnect) Model (if any) () Manufacturing firm () Origin of Assembly ()	No.	03		
4	Frame/Tracker (Galvanized Iron) Moveable(dual Axis) with accessories and Concrete (1:2:4) foundation (2ftx2ftx4ft)	No.	09		
5	Wire 3-core (10-mm) Voltage (380-440 V) Current Rating (20 Amp)	Meter	180		
6	Wire 1-core (6-mm) Voltage (600-1000 V) Current Rating (20 Amp)	Meter	45		

Sr. No.	Items Description	Unit	Tentative Quantity	Unit Rate (Rs.)	Amount (Rs.)
7	Tube well Development				
i.	Bore (10") using Percussion Method (at 3 sites)	Meter	132.5		
ii.	OR Bore (10") using Rotary Method (at 3 sites) If required depending on site conditions	Meter	132.5		
iii.	Blind/Slotted Pipes UPVC 8", class – D	Meter	132.5		
iv.	Discharge Pipe HDPE (63 mm) and pressure rating of PN 10 or more	Meter	150		
8	Other items required (if any)				
9	Installation Charges for Solar Pumping System	Lump sum (Rs.)			
Total Unit Cost (Rs.) (A)					

Rs. _____ Amount in words (Rupees) _____

Place :- _____ Date :- _____

Sign & Seal of the Tenderer

Annexure-II

DRIP IRRIGATION SYSTEM

Sr. No.	Items Description	Unit	Tentative Quantity	Unit Rate (Rs.)	Amount (Rs.)	
I.	Drip Tubing/Lines					
1.	UV stabilized LDPE 16 - mm , WT 1.2 mm, with pressure rating of 2.5 kg/cm ² Brand name Country of origin	Meter	11,025			
2.	UV stabilized 16-mm Integrated drip pipe WT1.2 mm, discharge of 4lph and dripper spacing of 50 cm Brand name Country of origin	Meter	19,500			
3.	Ratchet clip,16-mm,UV stabilized	No.	2,100			
4.	End Cap/ figure 8 type for 16-mm Drip line , UV stabilized	No.	900			
5.	Drip emitters 12 lph (PC) Brand Name : Country of origin	No.	2,400			
6.	Joiner 16-mm Brand name : Country of origin :	No.	600			
7.	GTO16-mm Brand name : Country of origin:	No.	900			
II.	Pipe Works					
8.	2" G.I pipe , good quality for head unit Brand name	Meter	45			
9.	1 ½" uPVC pipe Class – D Brand name	Meter	1,300			
	Inner Dia					43.3 mm
	Outer Dia					48.3 mm
	Wall Thickness	2.5 mm				
10.	2" uPVC pipe Class D Brand name	Meter	1,266			
	Inner Dia					54.1 mm
	Outer Dia					60.3 mm
	Wall Thickness	3.1 mm				

uPVC Pipe Fittings					
1	1.	2x1½" uPVC reducer	No.	24	
1	2.	1½ " uPVC 90 deg. Elbow	No.	18	
1	3.	2 " uPVC 90 deg. Elbow	No.	48	
1	4.	1½ " uPVC equal tee	No.	05	
1	5.	2 " uPVC equal tee	No.	06	
1	6.	1½" uPVC socket	No.	03	
1	7.	2" uPVC socket	No.	03	
1	8.	1½" Flush valve	No.	48	
1	9.	2" Flush valve	No.	12	
2	0.	PVC cement/solution	Liter	09	
IV. Others					
2	1.	1½" uPVC double union ball valve	No.	18	
2	2.	2" uPVC double union ball valve	No.	12	
2	3.	2" Pressure Release Valve	No.	03	
2	4.	Pressure Gauge 1-10 Bar	No.	06	
2	5.	2" Flow Meter	No.	03	
2	6.	2" Air release valve	No.	03	

2 7.	2" Non return valve (NRV)	No.	03		
V.	Filtration System				
28.	Disc Filter 15-25 m ³ /h brand name (country of origin)	No.	03		
29.	Hydro Cyclone Filter 15-25 m ³ /h brand name (country of origin)	No.	03		
VI.	Fertigation System				
30.	Ventury Injector (2")	No.	03		
VI	Other items required (if any)				
VIII.	Installation charges	Per Acre			
Total Unit Cost (Rs.) (B)					

Rs. _____ Amount in words (Rupees) _____

Place :- _____ Date :- _____

Sign & Seal of the Tenderer

Annexure-III

SPRINKLER IRRIGATION SYSTEM

Sr. No.	Items Description	Unit	Tentative Quantity	Unit Rate (Rs.)	Amount (Rs.)
I.	Sprinkler System				
1.	Rain Gun (1.5 " base) 16 mm Flow (3 - 6 lps) Throw (60 - 110 ft) Trajectory Angle (greater than 20°) Operating Pressure (2-5 kg/cm ²) Working Method (Half Circle and Full Circle) Brand name : Origin of Assembly:	No.	03		
2.	Portable Rain gun tripod	No.	03		
3.	GI Hydrant complete incl. Brass gate valve 1.5", Light Grade L2 GI with fittings	No.	12		

4.	Flexible Canvas pipe Ø 2"	Meter	300		
5.	Booster pump	No.	03		
II.	Civil Work				
6.	Head Unit Foundation (1:4:8) (10x4x2ft)	No.	03		
7.	Sprinkler Hydrant Concreting (1:2:4) (1x1x3ft)	No.	12		
8.	Sign Board (Urdu)	Lump sum	09		
III	Other items required (if any)				
IV	Installation charges	Per Acre			
Total Unit Cost (Rs.) (C)					

Rs. _____ Amount in words (Rupees) _____

Place :- _____ Date :- _____

Sign & Seal of the Tenderer

Annexure-IV

Total Bid Price

Sr. No.	Items Description	Amount (Rs.)
1	Solar Pumping System (A)	
2	Drip Irrigation System (B)	
3	Sprinkler Irrigation System (C)	
Total Unit Cost (Rs.) (A+B+C)		

Rs. _____ Amount in words (Rupees) _____

Place :- _____ Date :- _____

Sign & Seal of the Tenderer

LETTER OF TECHNICAL BID

The Project Director (ILWCP).
Pakistan Council of Research in Water Resources (PCRWR),
Khayaban-e-Johar, H-8/1,
Islamabad.

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Documents.
- (b) We offer to execute and complete in conformity with the Bidding Documents the following Works.

“Supply and Installation of Solar Pumping, Drip and Sprinkler Irrigation Systems in Thal Desert”.
- (c) Our Bid consisting of the Technical Bid and the Price Bid shall be valid for a period of days from the date fixed for the bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
- (d) As security for due performance of the under takings and obligations of our bid, we submit here with a Bid security, in the amount specified in Bidding Data Sheet, which is valid (at least) 28 days beyond validity of Bid itself.
- (e) We are not participating, as a Bidder or as a subcontractor, in more than one bid in this bidding process.
- (f) We agree to permit Employer or its representative to inspect our accounts and records and other documents relating to the bid submission and to have them audited by auditors. This permission is extended for verification of any information provided in our Technical Bid which comprises all documents enclosed herewith.

Name
In the capacity of
Signed

Duly authorized to sign the Bid for and on behalf of
Date:
Address.....

LETTER OF PRICE BID

The Project Director (ILWCP).
Pakistan Council of Research in Water Resources (PCRWR),
Khayaban-e-Johar, H-8/1,
Islamabad.

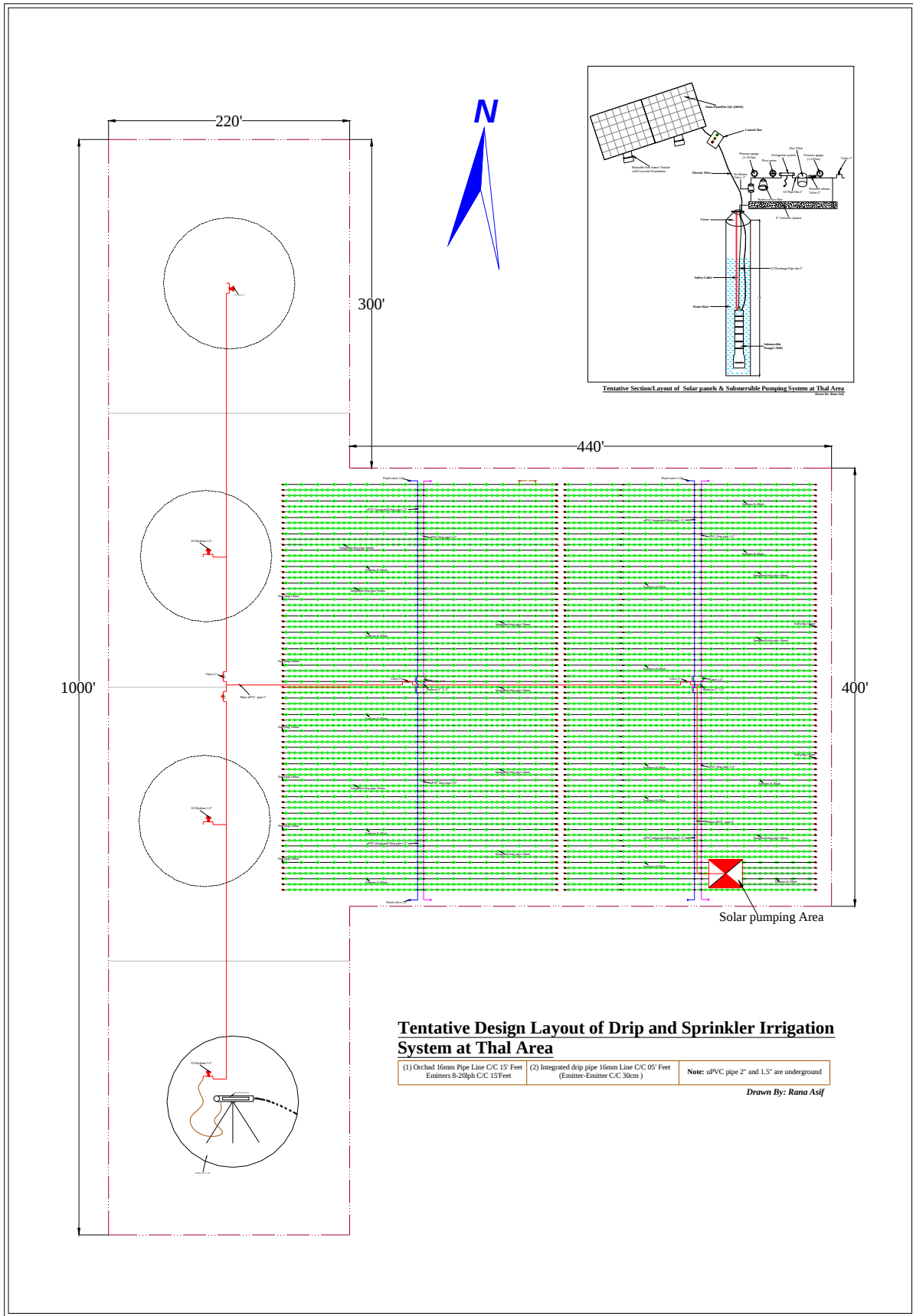
We, the undersigned, declare that:

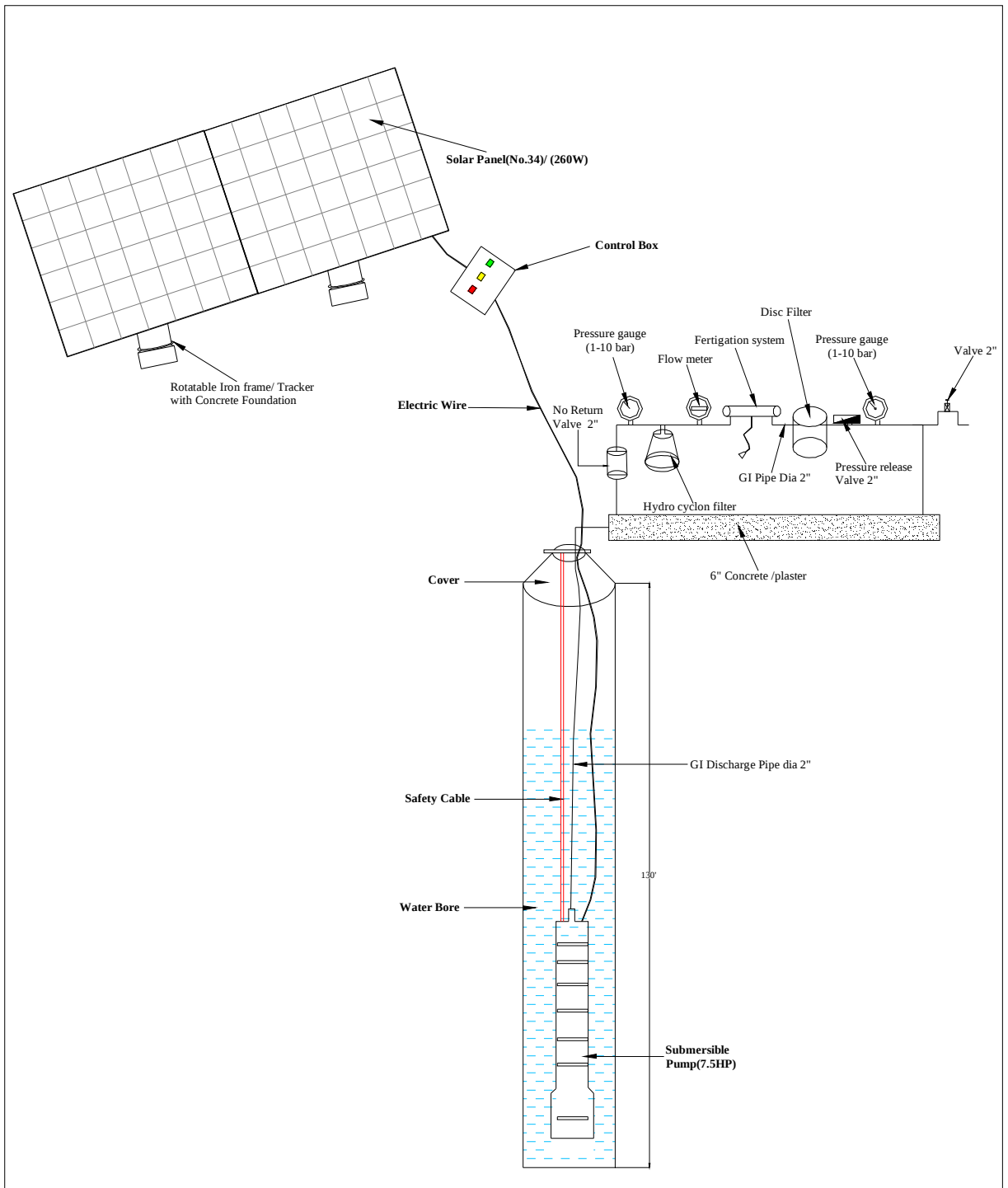
- (a) We have examined and have no reservations to the Bidding Documents.
- (b) The total price of our Bid offered is:
Rupees

- (c) Our Bid shall be valid for a period of days from the date fixed for the bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
- (d) If our Bid is accepted, we commit to obtain a performance security in accordance with the Bidding Documents.
- (e) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us and we do hereby declare that the Bid is made without any collusion, comparison of figures or arrangement with any other bidder for the Works.
- (f) We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive.
- (g) We agree to permit Employer or its representative to inspect our accounts and records and other documents relating to the bid submission and to verify any information provided in our Technical Bid which comprises all documents enclosed herewith.
- (h) If awarded the contract, the person named below shall act as Contractor's Representative.

Name
In the capacity of
Signed

Duly authorized to sign the Bid for and on behalf of
Date:
Address.....





Tentative Section/Layout of Solar panels & Submersible Pumping System at Thal Area

Drawn By: Rana Asif