



Tender Documents

Tender Name:

Rehabilitation of the Tall Hassan Renewable Energy Station

Tender number

2/ 2026

Funded by:

**National Center for Research and Development
NCRD**

April 2026

**National Center for Research
And Development (NCRD)**

Project Timeline

Tender Title	Rehabilitation of the Tall Hassan Renewable Energy Station in AlAzraq & Safawi
Tender Currency	JOD
Last date to purchase the tender documents	12:00 pm Sunday , 24/05/2026
Pre-bid meeting	A Pre-bid meeting will take place on 03/06/2026. Interested suppliers should attend the meeting at morning 11:00 am
Last date to submit the tender & opening offers	12:00 pm Sunday, 21/06/2026
Submission information	P.O. Box 902, Al-Jubaiha – Amman 11941, Jordan/Phone: (962-6) 5335284 – 5335280/ Fax: (962-6) 5355680/ Website: www.ncrd.gov.jo
Expected commencement date	Wednesday, 01/07/2026

National Center for Research
And Development (NCRD)

Table of Contents

1. Introduction:.....	4
<u>2.</u> Project Description	5
<u>3.</u> Deliverables and Activities	5
<u>4.</u> Technical Assessment grid.....	6
<u>5.</u> Tender Entry Instructions	7
<u>6.</u> General Conditions.....	11
<u>6.1</u> First / legal conditions:.....	11
<u>6.2</u> Second / Technical Conditions:.....	12
<u>6.3</u> Third/ Special Conditions:.....	14
<u>7.</u> General Instructions for Contractors	16
<u>7.1</u> Concept of Safety:.....	16
<u>7.2</u> Organizing Work Sites and Safety Conditions	16
<u>7.3</u> Project sign Sample:.....	18
<u>7.4</u> Documentation Using Pictures for Project Phases:.....	18
<u>8.</u> Bill of Quantilitits.....	19
<u>9.</u> Project Drawing:	23

National Center for Research
And Development (NCRD)

Introduction:

Through this project, the National Center for Research and Development (NCRD) aims to rehabilitate the Tall Hassan Station, one of its facilities, after years of inactivity. The goal is to transform it into a living model for sustainable agricultural development in the Badia region. This project addresses the challenges facing local communities in the Badia, most notably water scarcity, limited employment opportunities, and a lack of agricultural production models suitable for the harsh climatic conditions. Therefore, the project adopts a participatory approach, combining the NCRD's technical and technological capabilities with the resources and potential of local community associations to ensure the station's sustainability and its developmental benefits for the local population.

First: The Role of the National Center for Research and Development

The NCRD is responsible for preparing the station's basic infrastructure. This includes a complete overhaul of the water system and irrigation networks, as well as the installation of drip irrigation and smart fertilization systems. The center will also install solar energy systems to ensure the station's independent and sustainable electricity needs, in addition to cultivating lavender areas. The center's role will not be limited to the technical aspect alone, but will also include providing ongoing technical support and agricultural supervision, in addition to training local associations on operating the station and managing hydroponic systems.

Second: Partnership with Local Community Associations

After the completion of the rehabilitation and maintenance phase, a group of cooperative associations operating in the Badia region will be selected according to transparent criteria that include their prior experience, organizational capacity, and community acceptance. These associations will be responsible for implementing production projects within the station, where they will cultivate and harvest aromatic plants, as well as operate hydroponic systems to produce high-quality vegetables that contribute to improving food security for the surrounding Bedouin communities. The associations will also participate in community mobilization, local marketing of products, and the preparation of periodic reports for the center, while adhering to the sustainable production methods defined by the center.

Third: Project Development Objectives

The project aims to achieve a set of integrated development objectives, foremost among them transforming the Tall Hassan station into a vibrant production center capable of generating a stable income for the partner associations and creating job opportunities for youth and women in the Badia region. The project also contributes to enhancing local food security through hydroponics, which produces fresh vegetables with less water consumption. It also utilizes aromatic plants like lavender in local processing industries, such as extracting essential oils and producing dried goods. All of this is part of a broader vision that positions the station as a launchpad for comprehensive development in the Badia region and a model for collaboration between research institutions and the local community.

Fourth: Sustainability and Expected Impact

The project relies on renewable energy sources and a water-efficient irrigation system, ensuring its sustainability despite the scarcity of natural resources in the Badia. After the direct technical support phase from the center concludes, local associations will be able to manage the station independently, with continued oversight and evaluation from the center to guarantee quality and productivity. The project is expected to improve the income levels of dozens of Bedouin families, provide a practical model for modern agriculture in arid regions, and strengthen the role of civil society organizations as genuine partners in achieving local development.

Project Description

The main goal of rehabilitating the Tall Hassan renewable energy station is to integrate hydroponic cultivation technology with open-field farming, thereby establishing a robust agricultural research center that merges traditional growing methods with smart technologies. The project includes preparing and connecting the irrigation water supply, which is a corrugated galvanized steel water tank, along with an automated fertigation unit to irrigate the hydroponic system. Furthermore, the project involves installing a complete irrigation network for the open cultivation fields, which includes an automated fertigation unit linked to a network of pipes, fittings, electric valves, and drippers across three zones, as detailed in the attached drawings.

The installed fertigation units for both hydroponics and open cultivation shall be powered by PV systems, which improve the generation of green energy and decrease the reliance on traditional power generation methods. Furthermore, the implementation of the project includes constructing

a service road that connects the open fields with the main road, maintenance of the gate, signboard, and the surrounding fence. Additionally, a CCTV system should be installed to cover the area inside the station.

Deliverables and Activities

The contractor will provide the following deliverables to the NCRD:

# Deliverable	Description of deliverables
Deliverable one	Supply, install, and commission a corrugated steel water tank and the automated fertigation unit for the hydroponics.
Deliverable two	Supply, install, and commission a corrugated steel water tank and the automated fertigation unit for the open cultivation.
Deliverable three	Supply, install, and commission an irrigation network for the open cultivation, including all required devices and materials.
Deliverable four	Supply, install, and commission three PV systems and connect them to the required rooms and buildings.
Deliverable five	Rehabilitation and maintenance of signboards, gate, and fences.
Deliverable six	Supply, install, and commission a CCTV system covering the station's fenced area.
Deliverable seven	As-built drawing for the implemented activities.
Deliverable eight	The final report includes the submitted weekly report with all implemented activities and a list of submitted inspection requests.

Technical Assessment grid

The technical proposal must address each of the criteria stated below explicitly and separately, quoting the relevant criteria reference number (left-column).

NCRD will evaluate technical proposals with regard to each of the following criteria and their relative importance:

	Description	Information to provide	Relative weight
1	Interpretation of the objectives and critical examination of tasks	a critical analysis of the duties, as well as an interpretation of the objectives	20 %

2	Description and justification of the contractor's strategy for delivering the services	Detailed explanation and justification of the approach that the contractor will take in order to provide the services	20 %
3	Presentation and interaction between the relevant actors in the contractor's area of responsibility	Presenting the relevant actors in the contractor's area of duty and facilitating interaction between them	20 %
4	Contractor's contribution to knowledge management at the partner and at NCRD	The contributions made by the contractor to the management of knowledge both at the partner and at NCRD	20 %
5	Approach and procedure for steering the measures with the project partners	Methodology and process for guiding the measures in collaboration with the collaborators on the project	20 %

Tender Entry Instructions

Applicants should carefully read the documents and abide by their items. Otherwise, the lack of abiding by the tender documents will disqualify the applicant. Moreover, the applicants should commit to the qualities, standards, and conditions mentioned in the tender documents.

1. Companies applying for the tender:

Participation in the tender is open to all **specialized suppliers** who have the required services and supplies and are registered with the relevant government departments. The companies that pass the criteria in **section 2** must submit a technical and financial offer.

2. Prequalification criteria

- A company profile showing the experiences and a list of the implemented projects with contact details of references.
- A copy of the company's registration certificate.
- At least two hydroponic projects have been implemented.
- Previous experience working with (I)NGOs.

3. Evaluation of bid:

The technical and financial evaluation committee in NCRD will be fully responsible for the evaluation process by considering only the qualified bidder based on **70–30% (technical–financial)** evaluation criteria, taking into consideration the following points:

- Incomplete proposals will not be evaluated further.
- Only proposals that meet all the pre-qualification criteria will be evaluated.

Technical Evaluation:

The evaluation method will be done based on the assessment grid as per the table above, where the proposal will receive a score ranging from 0 to 10 for each technical evaluation criterion, with '0' indicating a poor score and '10' indicating a high score, where the proposals that obtain a score of 60 of 100 will be excluded from further consideration. Your score for each technical evaluation criterion will be multiplied by the corresponding relative weight, and these weighted scores will be aggregated to yield your proposal's overall technical score.

Financial Assessment and Financial Ratings

The financial assessment will rely on the complete total price you provide. The financial proposal will be scored by dividing the lowest financial proposal that meets the minimum quality requirements by the total price of your financial proposal. For instance, if your financial proposal amounts to JOD 100 and the lowest financial proposal is JOD 80, your financial score will be calculated as $(80/100) = 80\%$.

Aggregate Score

The final score of the proposal will be determined by the weighted sum of the technical and financial scores. The corresponding weights will be:

Technical proficiency: 70% and fiscal: 30%, for instance, if the technical score is 83% and the financial score is 77%, the total score will be calculated as follows:

$$83 * 70\% + 77 * 30\% = 58.1\% + 23.1\% = \mathbf{81.2\%}.$$

4. Offer validation:

The technical offer should cover the all the activites mentioned in this documents of and financial offer is obligatory and the applicant cannot be withdrawn prior to presentation and the offer remains valid for 90 days starting at the date of presenting the offer.

5. Financial filling and correction:

1. All prices should be in **Jordanian Dinar**, including all types of taxes. Moreover, it should be unit price-based and include all related logistics, such as supply and any other expenses.
2. The supplier should fill all required cells in the BOQ table (unit price, grand total, and the total in words) and in any of the presented offers. In the event of errors, shortages, or contradictions between the prices, then the NCRD has the right to correct the errors based on the presented unit prices and quantities. Therefore, correcting the arithmetic multiplication, sum of prices, and bidder's price.

6. Time plan:

The awardee should present a work plan along with a timetable, which will be later considered the project work plan after authentication and approval by the project engineer. The plan should take into consideration the workdays, work hours, weekends, and holidays of the owner.

Moreover, the applicant has the right to ask the owner for a letter defining the working hours, allowable workdays, and work hours before laying down the required work plan.

7. Costs of preparing tenders

The tenderer will bear all costs associated with the preparation and submission of the tender and these costs are non refundable, and the bidder will bear all these costs.

8. Conditions and working mechanism:

- The supplier commits to the conditions, standards, and descriptions of the tender.
- The supplier should provide the tools and equipment needed to execute tasks in the defined time.
- NCRD has the right to request all the tests needed to define the work quality, and the expenses for sample testing will be shouldered upon the supplier. If the needed works do not match the required quality, NCRD will request the supplier to redo the work within a limited period. In the event the supplier refuses to execute that, NCRD has the right to bring a different supplier to execute the work at the supplier's expense, no matter how much the cost of the replacement supplier, as well as that NCRD holds the right to monetize the performance bond.
- The supplier holds full responsibility for the safety of the equipment until it is formally delivered to the sites and under NCRD representatives' validation. None of the materials are delivered formally unless it holds a delivery note with the field supervisor's signature.
- NCRD is not obligated to award the least prices and has the right to re-announce it or cancel any of its items as it sees fit.
- The bidder is obligated to submit a work plan with a timetable, and it becomes the project work plan after approval by the project engineer. This plan considers the permissible working days and hours, the weekly and official holidays for the employer. He has the right to ask the employer for a letter specifying the working hours and days in which he is permitted to work before drawing up the required plan.

9. Bid bond guarantee:

- Applicants should deliver **3%** of the total bid value as a bid bond guarantee in the name of the National Center for Research and Development (NCRD) as a bank bond or an authenticated bank check. From a bank approved by the government of Jordan and should be valid for no less than 90 days.

- The bid bond guarantee will be returned to the awardee after signing the contract and to non-awardee suppliers after 7 days from receiving a notification that their bids were not accepted.
- It is forbidden to transfer the bid bond guarantee to another tender in the existence of multiple bids at the same time period.

10. The applicant should guarantee that all the works required will be executed and will be free of any blemishes or defects. Bids (two separate files) will be delivered to the following address: (P.O. Box 902, Al-Jubaiha—Amman 11941, Jordan/Phone: (962-6) 5335284—5335280) in a sealed envelope and titled “**Rehabilitation of the Tall Hassan Renewable Energy Station**”

11. NCRD will sign a special contract with the awardee. The awardee does not hold the right to start supplying unless notified by NCRD after issuing the supply order.

a. Payment will be as follows:

Payment No	Conditions of payment	Payment Value
1	First Payment upon complete installation of two corrugated steel tanks and two fertigation units. & complete installation of the irrigation network and preparation of the open field for cultivation.	30%
2	Second payment upon complete installation of three PV systems and connecting them to the rooms and buildings.and fence instulation.	40%
3	Final payment upon complete installation of CCTV and all project components.	30%

b. The awardee is obligated to work within one week after signing the contract, with the condition that the supply period does not exceed 90 calendar days after the signature of the agreement.

c. In the event of exceeding the designated supply period, NCRD will deduct 50 (JOD) as a fee for each day exceeding the designated date to finish works without exceeding 20% of the total contract amount.

13. The contractor bears the responsibility of ensuring the works and labor from the beginning of the works until the end for the purpose of covering any incidents or harm that can happen during work during the implementation period, as the contractor should cover the following:

- a- Lost or damaged materials
- b- Lost or damaged equipment
- c- Losses or damages to possessions and property
- d- Personnel injuries or fatalities inflicted on workers.

General Conditions

First / legal conditions:

- The bidder must implement the works of the subject of the contract and carefully observe the following texts, and if the bidder does not observe all of them, then we shall not pay attention to his bid. The bidder is not entitled to add any condition or amendment to any item; in case of the contrary, his bid will be eliminated.
- Bids are submitted on a special form on the day and date specified in the bid form.
- The bidder confirms that he submitted his bid among the competitors for the project in accordance with the established principles and based on the freedom and integrity of procedures and free from manipulation, and that he did not offer or give any advantages, directly or indirectly, to employees or persons associated with the bid. The bidder also confirms that he will not offer incentives or bonuses during the project implementation period, and he assures the public that he will publicize this to his project employees who are committed and pledge his absolute responsibility for their performance, obligations, and integrity in accordance with the applicable system.
- This bid shall be effective for a period of 120 days (one hundred and twenty days) from the date of opening the envelopes, and it is not permissible to revoke it during this period, and if the owner withdraws it before the end of the mentioned period and before notifying him of accepting his bid, then the entry insurance of the bid he paid becomes due to the NCRD without taking any judicial measures.
- Prices are written with ink, and the unit price for each item is based on what is written in the bill of quantities, considering the number or scale without change or modification.
- NCRD reserves the right to increase the specified quantity for any item included in the bill of quantities or cancel any item and thus decrease the total bid value by a percentage that does not exceed 25% at the same prices.
- If the accepted bidder does not deposit the final insurance on the specified date, the enforcement center may withdraw the acceptance of his bid and confiscate the paid temporary insurance. The execution authority also has the right to purchase (or execute at its expense) some or all of the quantity that has been deemed by him in a manner that the implementing authority finds suitable, and it has the right to claim from the contractor any compensation or losses incurred by it, all without the need to take any legal action or resort to the judiciary.

- The bidder has no right to delete any clause of the tender conditions or technical specifications or make any amendment of any kind, and in the event of violating this term, his bid will be eliminated.
- It is not permissible to assign this contract to others without obtaining the approval of the NCRD. The assignment must be official, and the assigned contractor must have participated in the tender at the same prices as the assigning contractor.
- The contractor is obligated to submit an invoice based on the payment schedule mentioned above and must be able to obtain all the necessary official supporting documents from the needed authorities to obtain this invoice.
- If the contractor uses fraud or manipulation and it is proven that this is true, NCRD has the right to claim compensation, and his name shall be struck off the list of approved contractors in the center.
- If the contractor does not comply with the implementation of all the agreed-upon works and in accordance with the agreed terms, or negligence or procrastination, the center shall have the right to take all financial and administrative measures it deems appropriate to preserve the rights of the NCRD.
- If it is proven against the contractor that he has initiated or committed himself or through others, directly or indirectly, bribing one of the owner's employees or colluding with him, causing damage, his contract is canceled immediately, and the insurance is confiscated as well, and the center shall take all judicial and administrative measures against him.
- The contractor—before and after the commencement of work—shall conduct the necessary tests for the materials that are included in the completion of the work in an accredited laboratory approved by the owner or on the site according to the test for all works included in this bid and according to the request of the supervising engineer. These tests include
 - All checks for materials supplied
 - Checking systems after operation
- Only the metric system in units is approved when applying the specifications. Final accounting will be done according to the quantities that have been accomplished and that were approved after checking the measurements, auditing them, and getting approval from the NCRD's supervising engineer.
- A maintenance bond guarantees of 5% of the total bid value should be submitted to NCRD prior to requesting the final payment and will be released after 90 calendar days from the final handing over site to NCRD.

Second / Technical Conditions:

1. Once the bid is submitted, the contractor is responsible for facing the difficulties, whether foreseeable or not, and NCRD is not responsible for any excess loss or additional expenses

resulting from the carrying out of additional work that is required to secure the implementation of the works required from him, where all the project components will be discussed deeply in the pre-mid meeting.

2. NCRD has the right to supervise, inspect, and receive the work on the project site, and the contractor is requesting to submit a request for inspection to the project manager, where all the RFIs should be submitted with the invoices, and the project manager has the right to reject any work that does not meet the required conditions and specifications.

3. The contractor shall provide all materials, equipment, and tools necessary to complete the stages of work required in this bid, and he is fully responsible for them and for their safety, maintenance, and use.

4. Upon completion of the work, the contractor must vacate the site and remove the work's waste to another location specified by the project engineer and return it to its normal condition at his own expense.

5. The contractor must make the necessary insurances on his machinery and equipment. These insurances must be delivered to the owner upon his request, and they must be within the period specified by the owner.

Third/ Special Conditions:

- In the event that the contractor used a mechanism that did not carry out the work efficiently as it should be, then NCRD has the right to request a replacement to it with another effective mechanism that carries out the work according to what is required, this is based on what the supervising engineer decides.
- In the event that the contractor hires one of his staff, whether for supervision or technical need, and it becomes clear to the supervising engineer that this technician or engineer is obstructing the work, then the supervising engineer has the right to request from the contractor in writing to eliminate this person.
- The mechanism for implementing the work at the project work sites shall be according to an action plan set by the work team of the implementing agency.
- Work is carried out upon a written permission from the supervising engineer at every stage of the work.
- If the contractor fails to perform the work as it should be, then NCRD has the right to fine him for each day of delay as stated in the previous terms.
- The contractor is fully responsible for the safety and security of the equipment during work, and any damage to any of his equipment under any reason is merely the responsibility of the contractor.
- The contractor must abide by the deadlines set by the project engineer, whether they were written or verbally communicated with him, and the contractor is solely responsible for the financial consequences that may result from having no commitment towards the deadlines.
- If the supervising engineer refuses to receive one or more items or received an item that was later found to be deficient or contrary to the specifications, the contractor will be notified in writing of the reasons for the refusal and that these rejected items must be withdrawn immediately and replaced with materials competent to the specifications within three days at most from the date of the notification. Otherwise, he must pay a delay fine of 50 JOD for each day of delay, and NCRD has the right to carry out the work on the contractor's account in the way it deems appropriate without referring to him and without being liable to any financial or legal claims by the contractor.
- The executed quantities are calculated according to the actual measurements as mentioned in the bill of quantities, which are performed by the supervising engineer and the contractor's representative together. In case of working according to the hourly system, this will be

calculated based on the supervising engineer's report. All the above is subject to the approval of the supervising engineer of NCRD.

- The contractor is committed to all the provisions of this bid throughout the time necessary for the implementation of the project.
- Once the bid is submitted, the contractor is responsible for everything stated in the bid.
- All the mentioned in this bid concerning the introduction, general conditions, special conditions, quantities, technical specifications, and legal and financial conditions are complementary to this bid.
- NCRD has the right to suspend the contract with the contractor at any time, provided that the contractor shall be paid for the work that was completed and received up until the suspension date, which must be received by the project supervision body , and the contractor has no right to claim the center for any compensation.

National Center for Research
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General Instructions for Contractors

Commitment to Safety Instructions:

All contractors must fully comply with the instructions and security and safety measures, which form an essential part of the signed contract. Note that work will be stopped if it becomes clear to the supervisory staff that the contractor is not serious in implementing all the instructions and safety measures stipulated, and the contractor will not be compensated for the suspension period, and it will be calculated from the contract's period; also, a fine will be imposed on him if he fails to take the safety measures.

Concept of Safety:

The diversity in the methods of implementing projects has the necessity of adhering to the safety regulations and conditions required for any type of work to be carried out, and a full study of safety requirements must be made, and all required precautions should be taken to secure the safety of workers, individuals, property, services, and public facilities. Therefore, work must be done to avoid accidents during work, whether they are due to work tools or equipment, because of the implementing methods in work, or human errors.

This is the concept of safety so that preventive measures are taken and the causes that lead to the occurrence of accidents and the consequent loss of life and money must be avoided. Therefore, it is necessary to acknowledge and be informed of new safety requirements and to keep developing the methods of implementing facilities, to see them and interact with them seriously.

There is no doubt that adherence to the terms and safety regulations will contribute effectively to the completion of the work in the required manner without causing injuries to individuals, material losses, or damage to services, property, or public facilities and sources of public wealth and reflects the civilized appearance of those in charge of the work. The engineers, technicians, and administrators in charge of the implementation must ensure compliance with the required safety terms and regulations.

Organizing Work Sites and Safety Conditions

Work must be done to organize the work site well and secure the necessary safety requirements to protect people and property within and surrounding borders. Therefore, work must be done to secure safe passages and roads within the boundaries of the site and link them with the surrounding streets with entrances and exits that do not interfere with the traffic movement of the street and the sidewalks around the site.

A) Requirements for Organizing Work Sites

- ✓ Ensure proper and clear entrance and exit.
- ✓ Determine the location and route of public service lines.
- ✓ Avoiding to place offices and buildings under towers and moving cranes.
- ✓ Hazardous and flammable materials should be stored in safe and secure places.
- ✓ The materials must be imported to the site in a suitable manner, stored securely according to the conditions of storage for each material.
- ✓ Non-workers should not enter the site.
- ✓ The necessary warning instructions, traffic signs, and what is needed, especially in road works, must be studied and put in place

B) Safety Clothing and Safety Equipment

Safety clothing of various kinds is one of the most important requirements and precautions for personal safety for workers. The aim of safety personal clothing and equipment is to secure protection and safety for the worker's body from any potential danger that may result from the type of work the worker is performing and thus avoid any injuries that may occur.

Therefore, the site must be equipped with appropriate clothes and equipment for the types of work that will be performed, and during the implementation of the work, it must be prohibited to enter the work site without wearing safety clothing, knowing that safety clothing consists of items and the most important are the following:

Helmet, The helmet is one of the most important safety items that must be emphasized because it protects the head from the danger of materials and tools that may fall from the top, as well as any shocks that may affect the head.

Shoes, Safety shoes must be used in all works, so that these shoes should be in accordance with locally approved safety standards and specifications.

Safety Belt, When working at a height of more than 2 meters, a safety belt must be worn to avoid the risk of falling from the top.

Face Protection Tools, The worker should wear protective glasses around the eyes completely, and a shield for the face must be worn in the event of flying and scattering of different materials.

C) Safety in Road Work

Road works pose an unexpected danger on the roads, and this requires taking all necessary safety precautions and measures in appropriate places to alert pedestrians and vehicles using an adequate and safe distance from the work site.

D) Safety Conditions and Precautions for Road Work:

- A road cutting permit must be obtained before starting work on the streets and sidewalks and the cutting permit includes getting the approval of the Ministry of Public Work, the General Traffic Department and the Municipality's Safety Department.
- Warning signs and traffic warning signs must be placed on the plan attached to the permit and an agent waving a red flag.
- A sign must be placed in the site stating the name of the project, contract's number and necessary information.
- These warning signs must be clear, visible, and lit at night, with flushes and phosphorescent signs, according to the Traffic Department's specifications.
- All workers are required to wear safety clothing and a phosphorescent jackets.
- If there is excavation in the project, a secure and safe fence must be made around the excavation site with warning signs.
- If there is cutting in the road, a diversion must be secured as a passage for vehicles, with the coordination and approval of the municipality, works and traffic.

E) Safety of Demolishing Work:

Demolition work is one of the most dangerous and difficult works as it requires great experience and technical skill, safety program must be thoughtfully planned to demolish the required location with attention paid to the surrounding buildings, streets, sidewalks and appropriate precautions must be taken to protect individuals and property:

- ✓ Dangers on demolishing workers
- ✓ Ceilings and walls' collapse on workers.
- ✓ Injuries and sticking to materials falling from above.
- ✓ Injuries to the face, eyes and body with flying objects.
- ✓ Infection of the respiratory system with flying dust.
- ✓ Tripping with leftover materials resulting from demolition.
- ✓ Risks arising from demolition equipment and machinery.
- ✓ Infection with tools used to cut iron waste, especially thermal.

Project sign Sample:

The contractor must adhere to the signs specified by the implementation authority, and the contractor must keep the panels in the places specified for him until the completion of the project and during the maintenance period.

Documentation Using Pictures for Project Phases:

The contractor must take pictures of the project that represent different stages of the implantation which must be before, during, and after completion of work.

Bill of Quantities

* The price should include all needed fittings, tools and equipments for supply, installation and testing.

#	Description	Unit	Qty	Unit price (JD)	Total Price (JD)
<p>The Contractor shall supply and install all systems as specified in the attached drawings and specifications. Furthermore, the Contractor shall provide all supplementary materials, equipment, and resources not explicitly listed but reasonably required to achieve full commissioning and successful completion of the work, including all necessary connections, supports, terminations, and consumables.</p>					
1	Water Storage & Filling System				
1.1	<p>Corrugated steel sheet tank as per the following specs:</p> <ul style="list-style-type: none"> • Outer Layer: The outer layer consists of high-strength (DX51D) corrugated hot-dip galvanized steel sheets. The galvanized coating is a zinc coating (Z275) that provides corrosion resistance and UV protection. The thickness of the corrugated galvanized steel sheets is not less than 1.2 mm. • Middle Layer: An insulation layer made of aluminized fiberglass fabric, with a thickness of 0.15 mm, is installed between the inner and outer tank layers to protect the inner layer from fire exposure. • Inner Layer: The inner layer is made of PVC fabric with a thickness of 0.7 mm and a density of 900 g/m², coated with an anti-algae layer (For General Use Water). • Cover: The cover consists of • Concrete Rim: A plain concrete rim is constructed around the tank base with a thickness of 10 cm. • Outlet Port: The tank includes 4" outlet port equipped with a 4" PVC valve. 	Tank	2		
1.2	<p>Water filling pump per the following specs:</p> <ul style="list-style-type: none"> • Power: 3 HP/2.2 kW. • Voltage: 220V (50Hz), 1 Phase • Inlet – Outlet: 2 x 2 inch. • Motor with Cooper Winding. 	Pump	1		
1.3	<p>HDPE pressure pipe (PE100):</p> <ul style="list-style-type: none"> • Size 63 mm, working pressure not less than 8 bar 	m.l	200		
1.4	<p>Plastic Compression Elbow:</p> <ul style="list-style-type: none"> • Size: 63 mm, working pressure not less than 8 Bar 	Piece	5		
1.5	<p>Plastic Compression Tee:</p> <ul style="list-style-type: none"> • Size: 63 mm, working pressure not less than 8 Bar 	Piece	1		
1.6	<p>Plastic Compression Male Adapter:</p> <ul style="list-style-type: none"> • Size: [2"X63mm], Working pressure not less than 8 Bar 	Piece	8		
1.7	<p>PVC Ball Valve:</p> <ul style="list-style-type: none"> • Size: 2", Working pressure not less than 8 Bar 	Piece	3		
2	Fertigation System for Hydroponics				

2.1	Automatic Fertigation Unit as per the following specs: <ul style="list-style-type: none"> • Body[Structure]: Stainless Steel or Aluminum. • Number of dosing Channels: 3 [Include Acid Channels]. • Dosing Channel Flow: up to 600 l/hr. • Working Pressure: Not less than 3 bar. • Sensors: EC & pH sensors. • Interface: Touch screen. • Irrigation control capacity: not less than 100 irrigation program. • Ability to set and adjust the EC & pH values for each program. • Irrigation control valves capacity : [up to 100] valves. • Mixing system for solution tanks. • Ability to be connected to mobile application 	Unit	1		
2.2	Water irrigation pump per the following specs: <ul style="list-style-type: none"> • Power: 2 HP/1.5 kW. • Voltage: 220V (50Hz), 1 Phase • Inlet – Outlet: 2 x 2 inch. • Motor with Cooper Winding. 	Pump	1		
2.3	Plastic Compression Male Adapter: <ul style="list-style-type: none"> • Size: [2"X63mm], Working pressure not less than 8 Bar 	Piece	4		
2.4	Plastic Compression Elbow: <ul style="list-style-type: none"> • Size: 63 mm, working pressure not less than 8 Bar 	Piece	6		
2.5	Plastic fertilizer solution tank: <ul style="list-style-type: none"> • Capacity: 500 liters • Material: HDPE [Hight Density polyethylene] • Shall be compatible to contain all used types of fertilizers and acids without any chemical reaction. • Outlet: compatible with 0.5-inch valve. 	Tank	3		
2.6	PVC Ball Valve: <ul style="list-style-type: none"> • Size: 0.5", Working pressure not less than 4 Bar 	Piece	3		
2.7	Flixeble hose: <ul style="list-style-type: none"> • Size: 0.5" 	m.l	6		
2.8	Disc Filter: <ul style="list-style-type: none"> • Size: 63 mm [2 inch]. • Material: Polypropylene. • Operating Pressure: up to 10 bar. • Female threaded inlet & outlet 	Piece	1		
3	PV System				
3.1	PV System with the following specs: <ul style="list-style-type: none"> • PV panles 500W, Qty: 10 • PV off-grid inverter (capacity: 5 kW,1 Phase, 220 V), Qty:1 • Li-Battery (capacity: 5kW, 60 A), Qty: 1 • Main circuit breaker 60 A, Qty:1 • Electrical Panel box, Qty:1 	Unit	3		
4	Fertigation System for Open Cultivation				

4.1	Automatic Fertigation Unit as per the following specs: <ul style="list-style-type: none"> • Body[Structure]: Stainless Steel or Aluminum. • Number of dosing Channels: 3 [Include Acid Channels]. • Dosing Channel Flow: up to 600 l/hr. • Working Pressure: Not less than 3 bar. • Sensors: EC & pH sensors. • Interface: Touch screen. • Irrigation control capacity: not less than 100 irrigation program. • Manual adjust the EC & pH values. • Irrigation control valves capacity : [up to 100] valves. • Mixing system for solution tanks. 	Unit	1		
4.2	Water irrigation pump per the following specs: <ul style="list-style-type: none"> • Power: 3 HP/2.2 kW. • Voltage: 220V (50Hz), 1 Phase • Inlet – Outlet: 2 x 2 inch. • Motor with Cooper Winding. 	Pump	1		
4.3	Plastic Compression Male Adapter: <ul style="list-style-type: none"> • Size: [2"X63mm], Working pressure not less than 8 Bar 	Piece	4		
4.4	Plastic Compression Elbow: <ul style="list-style-type: none"> • Size: 63 mm, working pressure not less than 8 Bar 	Piece	5		
4.5	Plastic fertilizer solution tank: <ul style="list-style-type: none"> • Capacity: 500 liters • Material: HDPE [High Density polyethylene] • Shall be compatible to contain all used types of fertilizers and acids without any chemical reaction. • Outlet: compatible with 0.5-inch valve. 	Tank	3		
4.6	PVC Ball Valve: <ul style="list-style-type: none"> • Size: 0.5", Working pressure not less than 4 Bar 	Piece	3		
4.7	Flixible hose: <ul style="list-style-type: none"> • Size: 0.5" 	m.l	6		
4.8	Disc Filter: <ul style="list-style-type: none"> • Size: 63 mm [2 inch]. • Material: Polypropylene. • Operating Pressure: up to 10 bar. • Female threaded inlet & outlet 	Piece	1		
5	Irrigation Network for Open Cultivation				
5.1	HDPE pressure pipe (PE100): <ul style="list-style-type: none"> • Size 63 mm, working pressure not less than 8 bar 	m.l	600		
5.2	Plastic Compression Elbow: <ul style="list-style-type: none"> • Size: 63 mm, working pressure not less than 8 Bar 	Piece	16		
5.3	Plastic Compression Tee: <ul style="list-style-type: none"> • Size: 63 mm, working pressure not less than 8 Bar 	Piece	12		
5.4	Plastic Compression Coupling: <ul style="list-style-type: none"> • Size: 63mm, working pressure not less than 8 Bar 	Piece	8		
5.5	Plastic Compression Male Adapter: <ul style="list-style-type: none"> • Size: [2"X63mm], Working pressure not less than 8 Bar 	Piece	24		
5.6	Plastic Compression End: <ul style="list-style-type: none"> • Size: 63 mm, working pressure not less than 8 Bar 	Piece	15		

5.7	Electrical solenoid valve: • Size: 2", Working pressure not less than 8 Bar • Voltage: 24VDC or compatible with fertigation unit	Piece	12		
5.8	Plastic Elbow: • Size: 16mm	Piece	240		
5.9	Plastic End: • Size: 16mm	Piece	240		
5.1	Metal Clamp: • Size: 0.25"	Piece	240		
5.1	LDPE pipe: • Size 20 mm, working pressure not less than 4 bar	m.l	12000		
5..13	On-Line Dripper: • Flow Rate: 4 L/hr. • Working Pressure: 4 bar.	Piece	10000		
5.1	Diging watering ring around the Lavender and installation of irrigation network	Hole	10000		
6	Service Road				
6.1	Supply and construct a 10 cm thickness volcanic tuff layer	m ³	144		
7	Water Sprout for Cattle				
7.1	HDPE pipe size: 1" with all required connections and fittings	m.l	250		
8	CCTV System				
8.1	Cameras with a resolution of 1080p, IP68, Qty: 8. Recorder (DVR type), up to 32 channels, 10 TB storage, Qty: 1. Power supply, cables, monitor 32" and other required devices and materials for the system function. with smart LED screen	Unit	1		
8	Board Sign				
8.1	Rehabilitation of the sign by reinforcing the supports, painting the board, and printing the required information	Sign	2		
10	Gate				
10	Rehabilitation of the gate by painting with high-quality exterior paint for optimal durability	Unit	1		
9	Surrounding Fence				
9.1	instalationof surrounding fence height 2m the required inclined top steel corners (4X4 cm) every 4 m of the fence length, and installing I-Beam (8X4cm) every 40m of the fence length, the existing fence can be used	m.l	900		
				Total Price (JD)	

National Center for Research
And Development (NCRD)

Project Drawings



Proposed
Existing

**National Center for Research
And Development (NCRD)**

Drawing Title: Project Layout

Project: Rehabilitation of the Tal Hassan Renewable Energy Station

Drawing No. 1	Sheet No. 1	Scale: 1:2000	Sheet Size: A4	Dimension Unit: cm
Drawn By: N/A	Checked By: N/A	Approved By: N/A	Date: 05/04/2026	

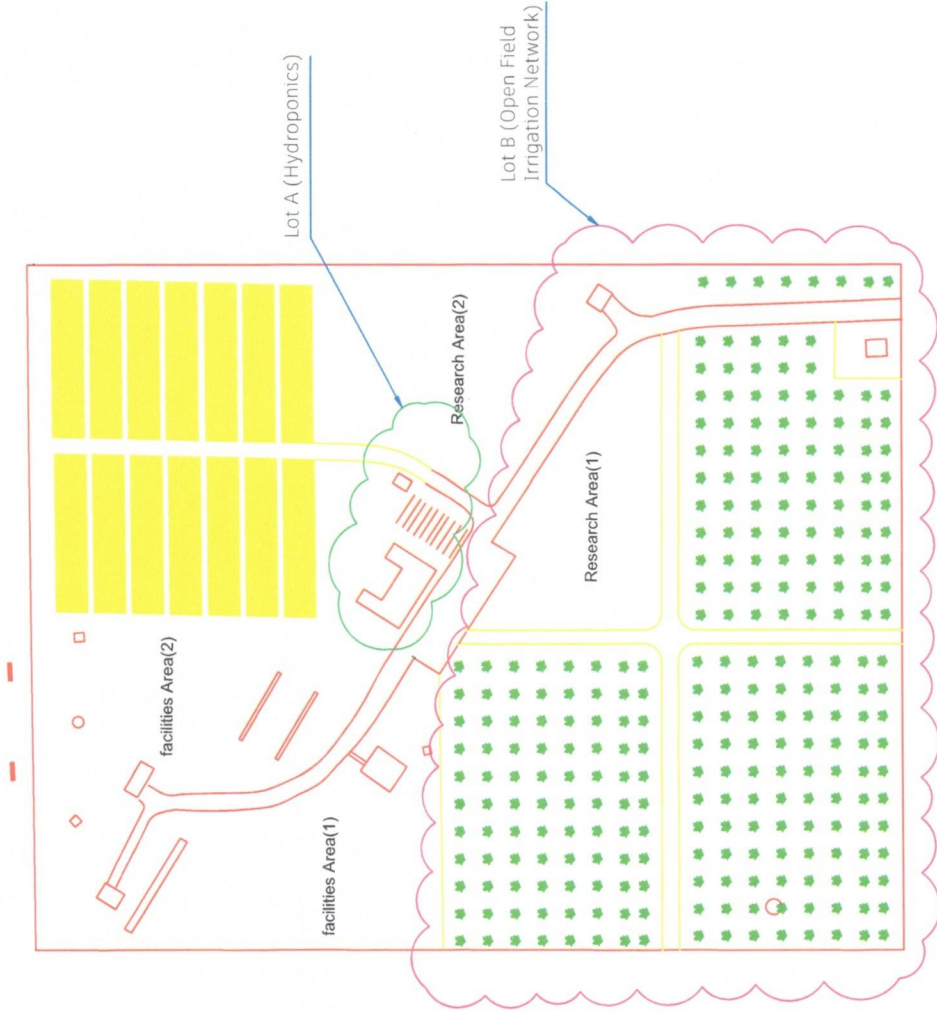
Google Earth

Image © 2026 CNES / Airbus

Imagery Date: 5/12/2022 31°58'09.84" N 36°54'34.20" E elev 583 m eye at 1.07 km

1985

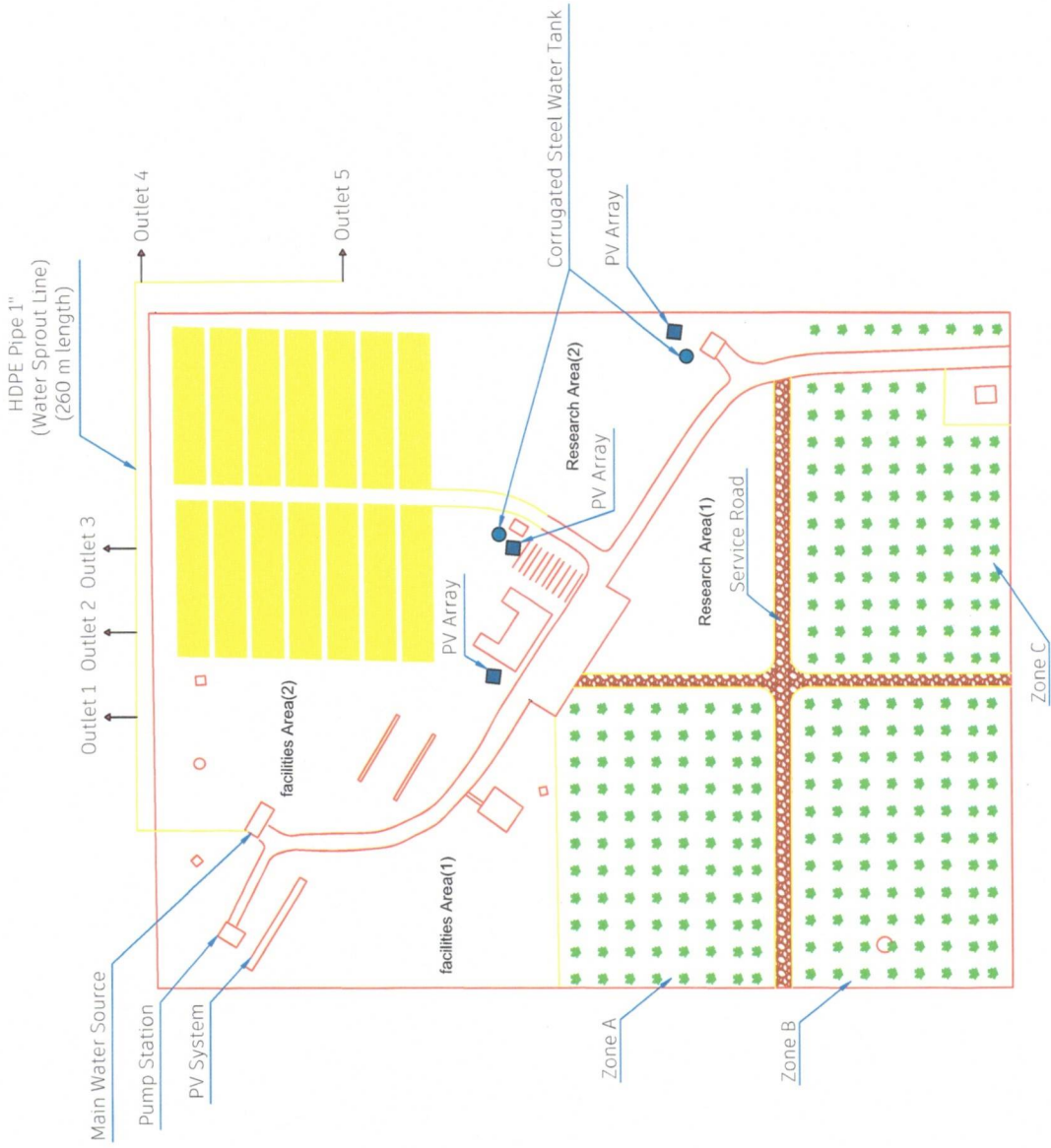
National Center for Research And Development (NCRD)



Drawing Title: Lots Layout

Project: Rehabilitation of the Tal Hassan Renewable Energy Station

Drawing No.: 1	Sheet No.: 2	Scale: 1:2000	Sheet Size: A4	Dimension Unit: cm
Drawn By: N/A	Checked By: N/A	Approved By: N/A	Date: 05/04/2026	



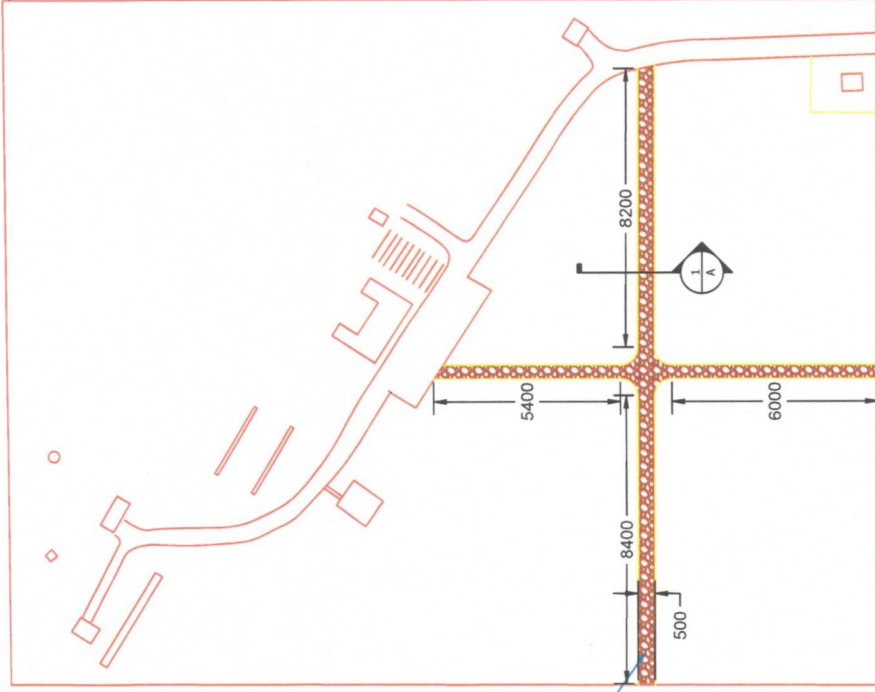
Proposed
Existing

National Center for Research And Development (NCRD)

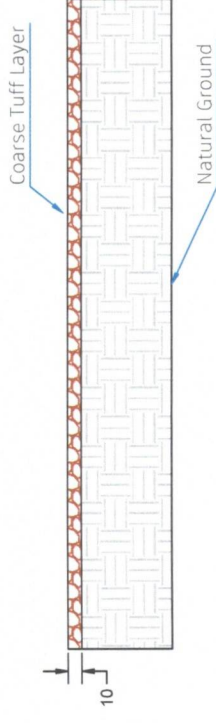
Drawing Title: Lots Detailed Layout

Project: Rehabilitation of the Tal Hassan Renewable Energy Station

Drawing No : 1	Sheet No : 3	Scale: 1:2000	Sheet Size: A4	Dimension Unit: cm
Drawn By: N/A	Checked By: N/A	Approved By: N/A	Date: 05/04/2026	



Section A / Scale 1:50



Proposed
Existing

National Center for Research
And Development (NCRD)

Drawing Title: Service Road Layout

Project: Rehabilitation of the Tal Hassan Renewable Energy Station

Drawing No.: 1 Sheet No.: 4 Scale: 1:2000 Sheet Size: A4 Dimension Unit: cm

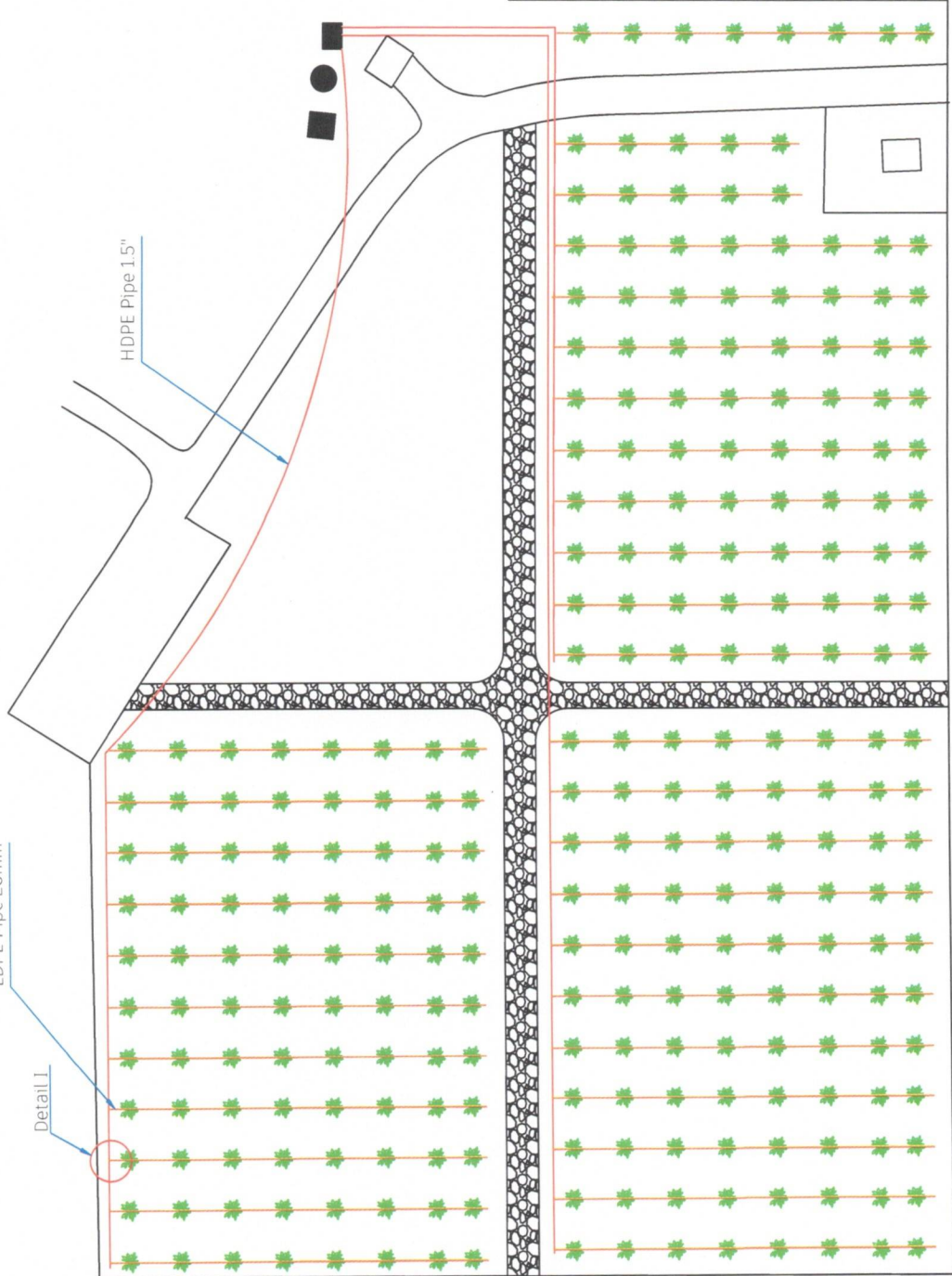
Drawn By: N/A Checked By: N/A Approved By: N/A Date: 05/04/2026

Top View / Scale 1:1000

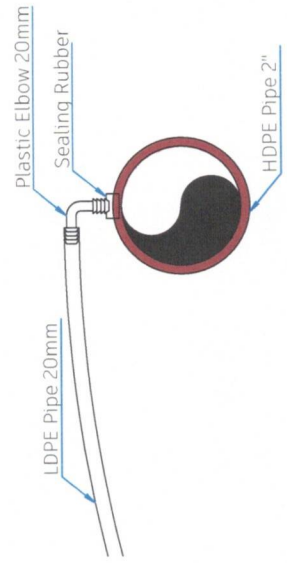
LDPE Pipe 20mm

HDPE Pipe 1.5"

Detail I.



Detail I / Scale 1:5



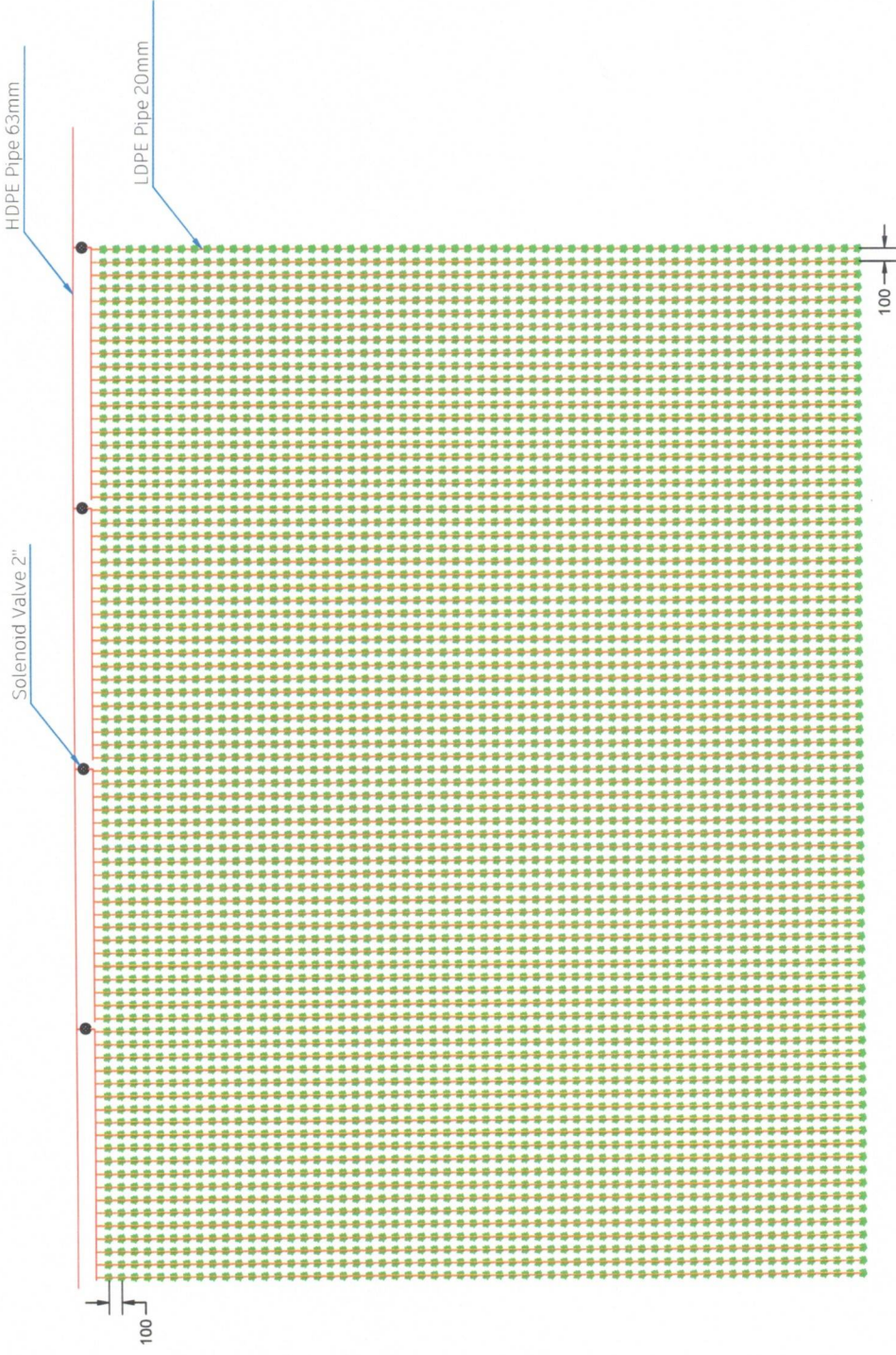
National Center for Research
And Development (NCRD)

Drawing Title: Open Cultivation Irrigation Network Layout

Project: Rehabilitation of the Tal Hassan Renewable Energy Station

Drawing No. 2	Sheet No. 1	Scale: N/A	Sheet Size: A4	Dimension Unit: cm
Drawn By: N/A	Checked By: N/A	Approved By: N/A	Date: 05/04/2026	

Top View / Scale 1:500



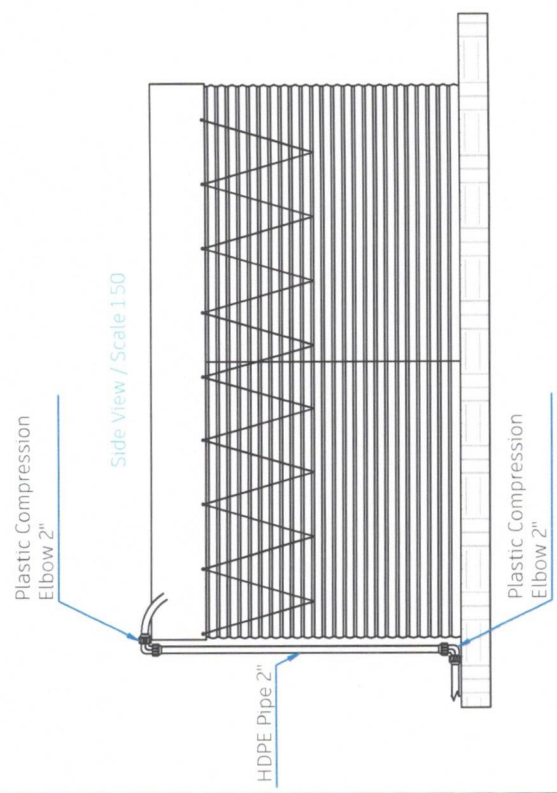
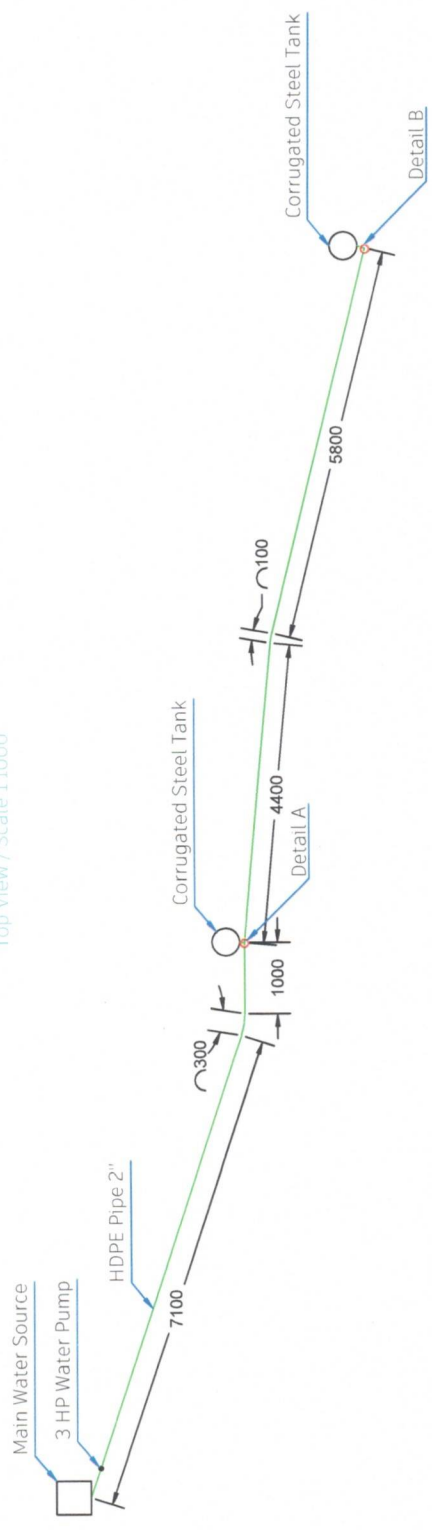
National Center for Research
And Development (NCRD)

Drawing Title: Detailed Open Cultivation Irrigation Network Layout (Zone A,B,C)

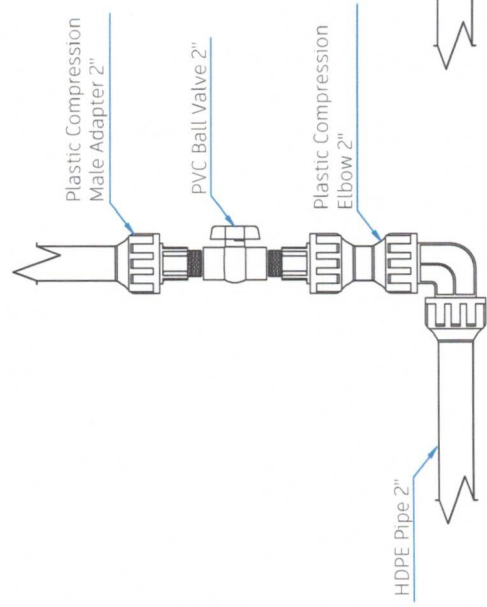
Project: Rehabilitation of the Tal Hassan Renewable Energy Station

Drawing No. 2	Sheet No.2	Scale: N/A	Sheet Size: A4	Dimension Unit: cm
Drawn By: N/A	Checked By: N/A	Approved By: N/A	Date: 05/04/2026	

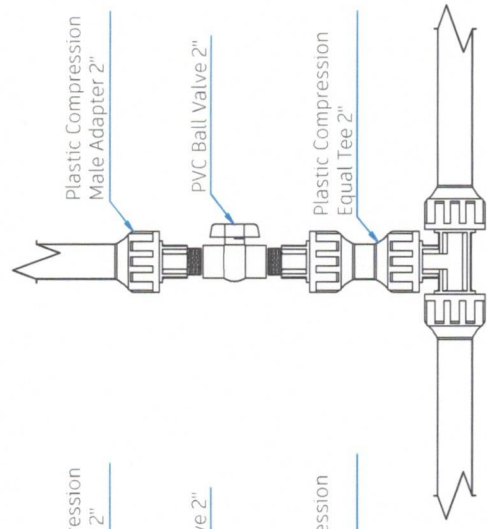
Top View / Scale 1:1000



Detail B / Scale 1:10



Detail A / Scale 1:10



Drawing Title: Water Filling Network Layout

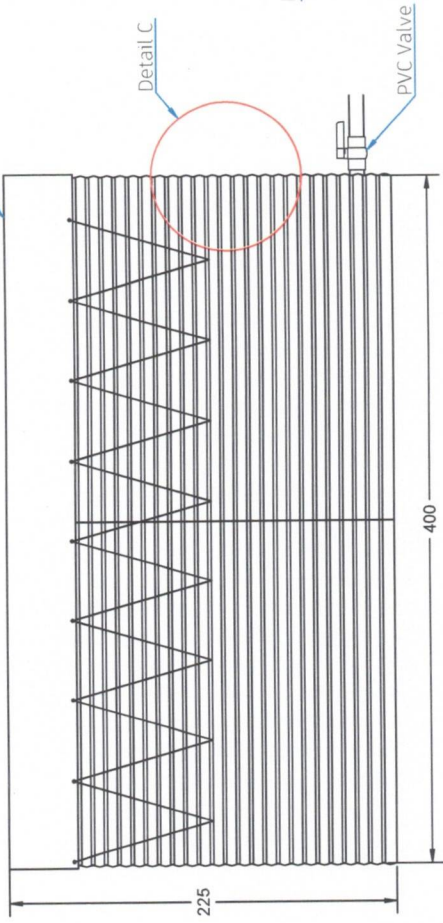
Project: Rehabilitation of the Tal Hassan Renewable Energy Station

Drawing No.: 3	Sheet No.: 1	Scale: N/A	Sheet Size: A4	Dimension Unit: cm
Drawn By: N/A	Checked By: N/A	Approved By: N/A	Date: 05/04/2026	

**National Center for Research
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Front View / Scale 1:40

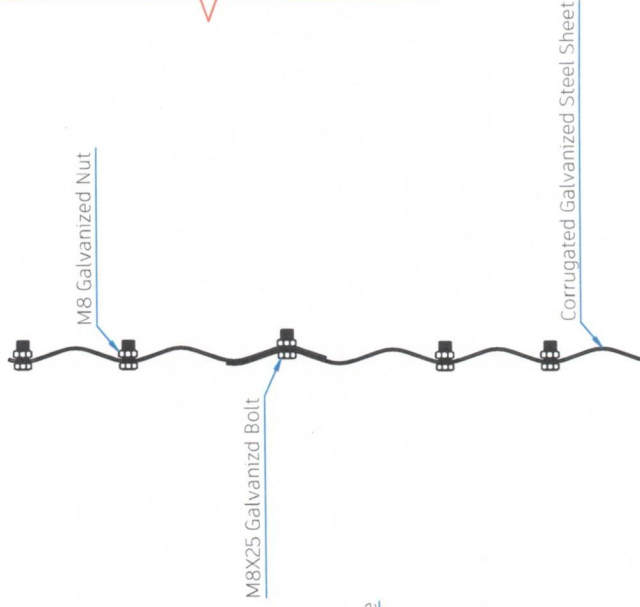
PVC Cover



Detail C

PVC Valve

Detail C / Scale 15

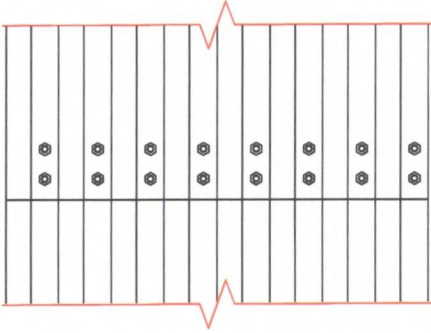


M8 Galvanized Nut

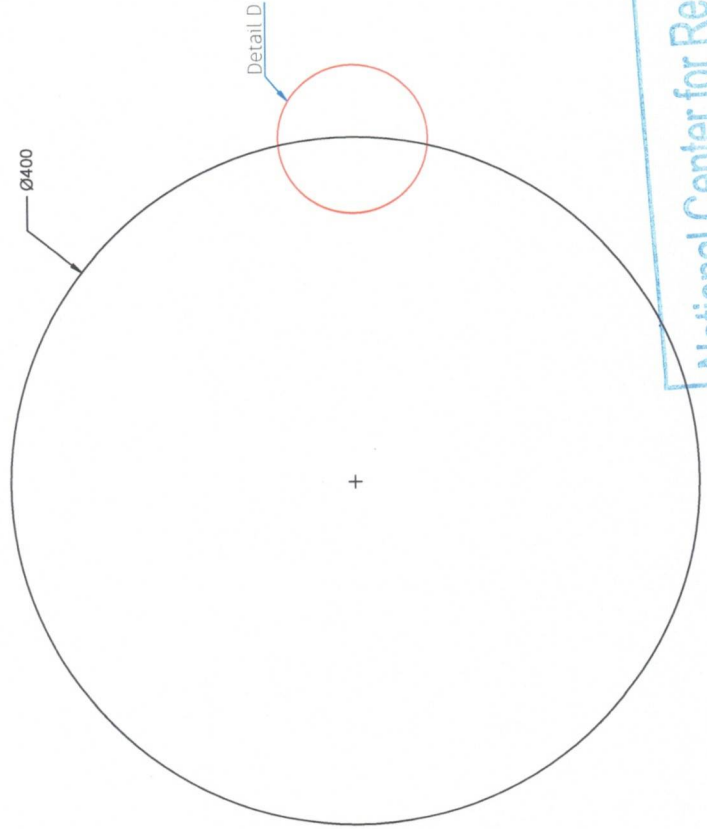
MBX25 Galvanized Bolt

Corrugated Galvanized Steel Sheet

Detail D / Scale 15



Top View / Scale 1:40



Detail D

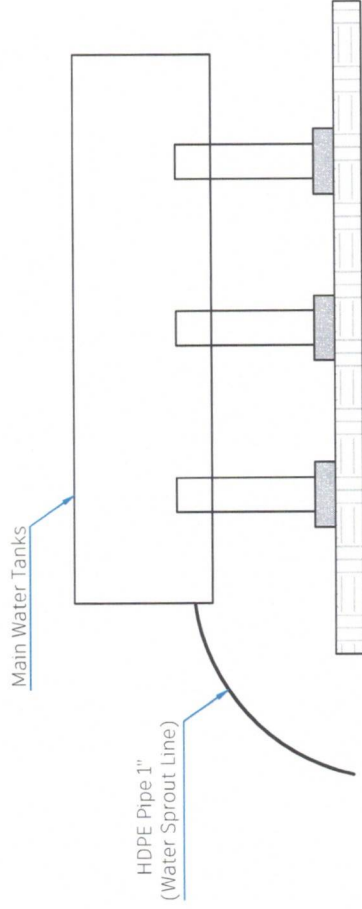
Drawing Title: Corrugated Steel Sheet Tank Layout

Project: Rehabilitation of the Tal Hassan Renewable Energy Station

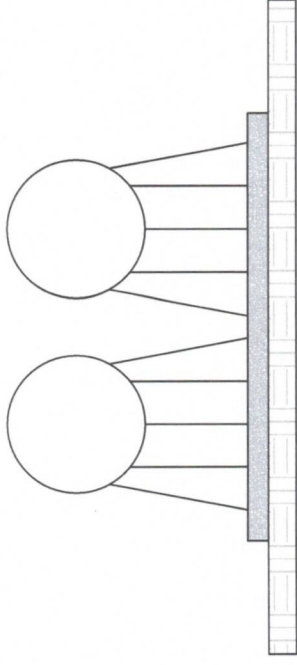
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Drawn By: N/A	Checked By: N/A	Approved By: N/A	Date: 05/04/2026	

National Center for Research
 And Development (NCRD)

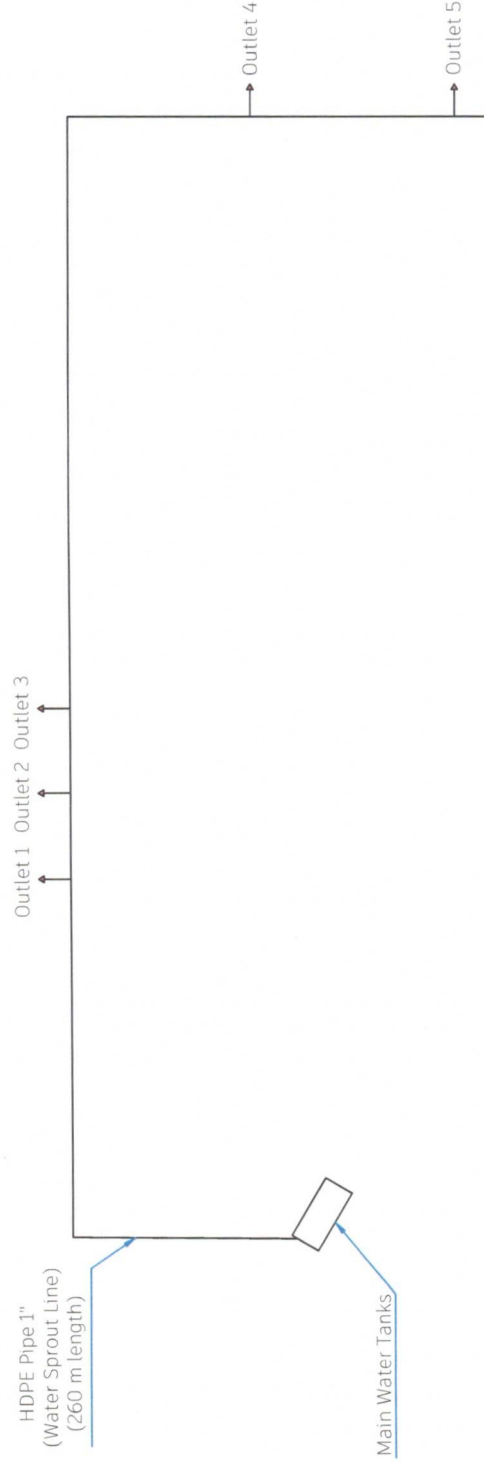
Side View / Scale 1:100



Front View / Scale 1:100



Top View / Scale 1:1000



Drawing Title: Water Sprout for Cattle Layout

Project: Rehabilitation of the Tal Hassan Renewable Energy Station

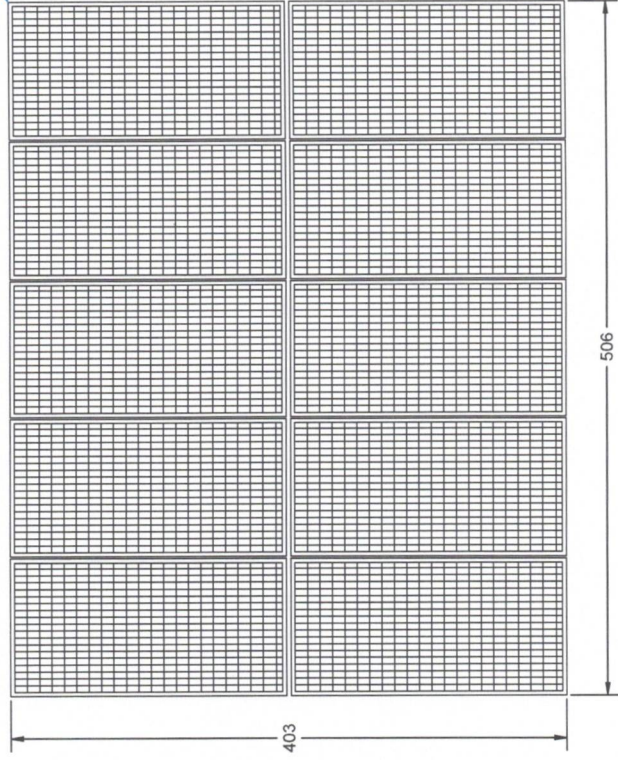
Drawing No. 3	Sheet No.: 3	Scale: N/A	Sheet Size: A4	Dimension Unit: cm
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Drawn By: N/A	Checked By: N/A	Approved By: N/A	Date: 05/04/2026
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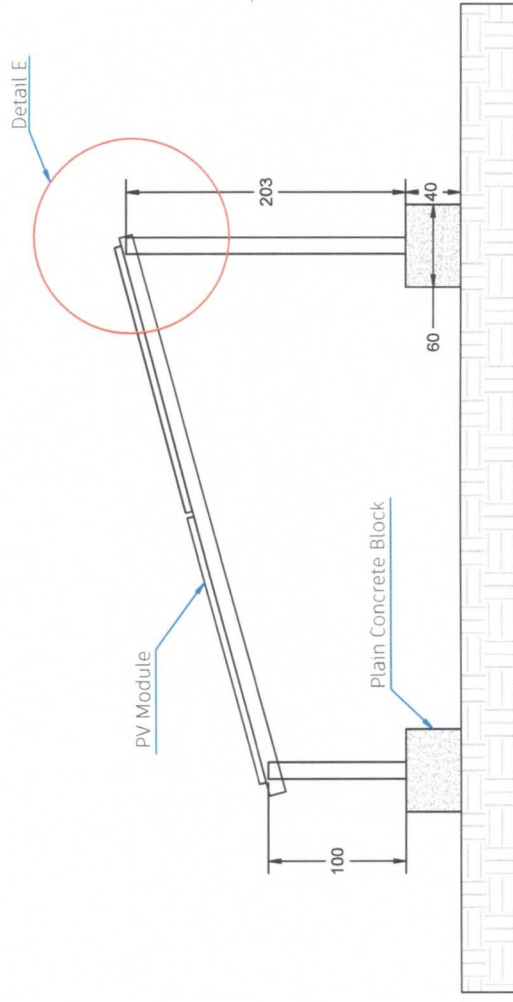
National Center for Research
And Development (NCRD)

Top View / Scale 1:50

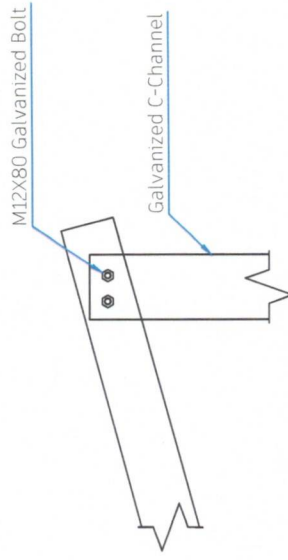
PV Array (10 Modules)



Side View / Scale 1:50



Detail E / Scale 1:12.5



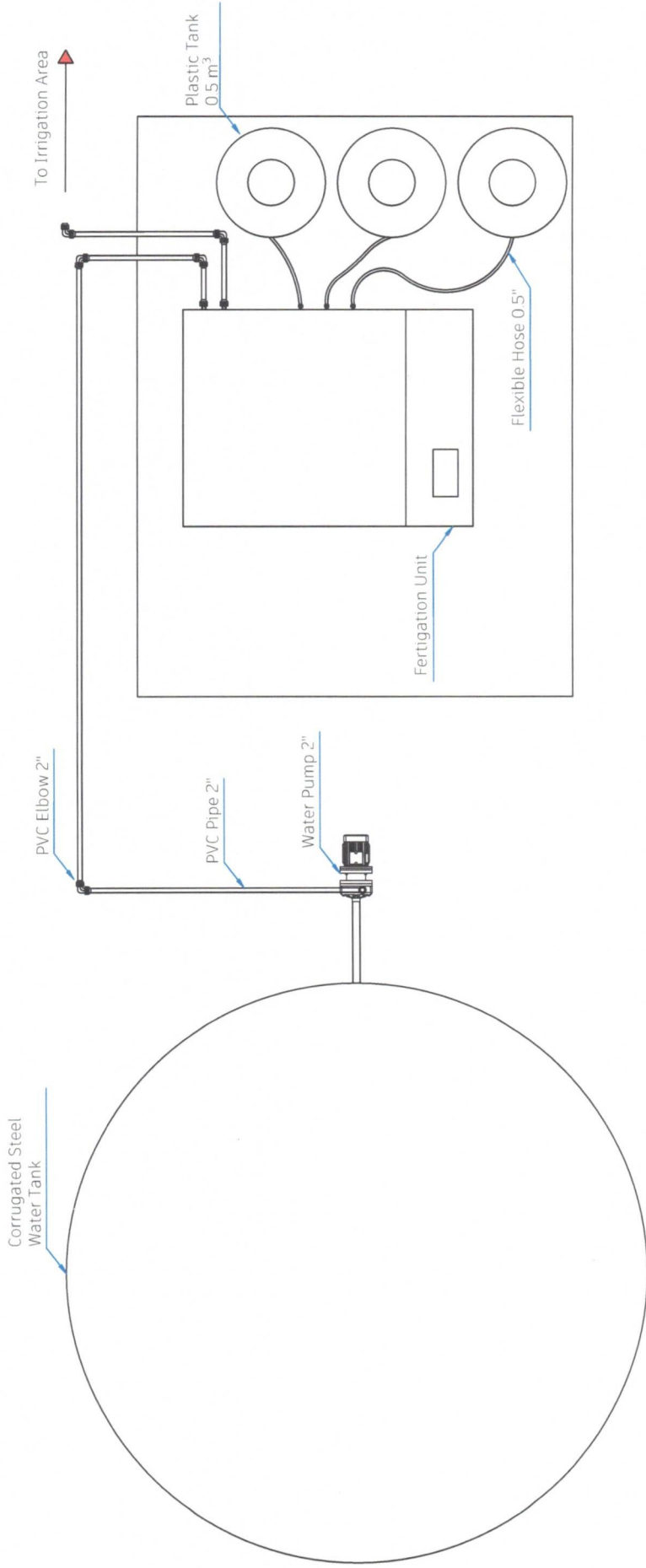
Drawing Title: PV System Layout

Project: Rehabilitation of the Tal Hassan Renewable Energy Station

Drawing No.: 4	Sheet No.: 1	Scale: N/A	Sheet Size: A4	Dimension Unit: cm
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Drawn By: N/A	Checked By: N/A	Approved By: N/A	Date: 05/04/2026
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National Center for Research
And Development (NCRD)



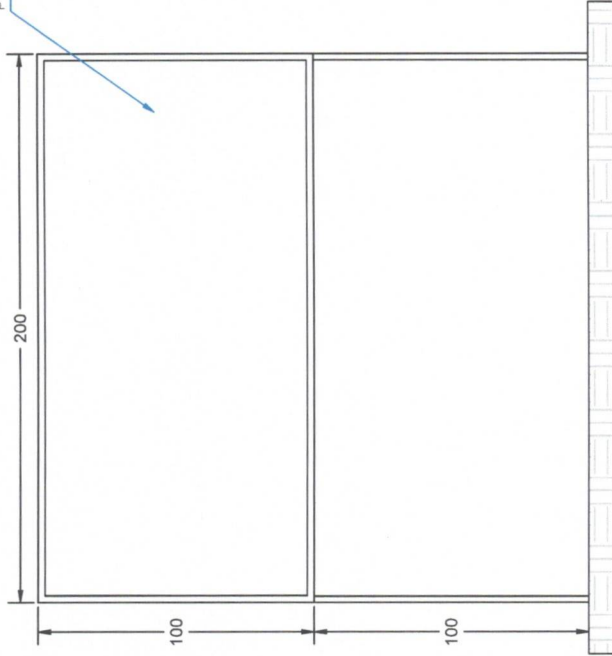
Drawing Title: Fertigation Unit (Hydroponics & Open Cultivation) Layout

Project: Rehabilitation of the Tal Hassan Renewable Energy Station

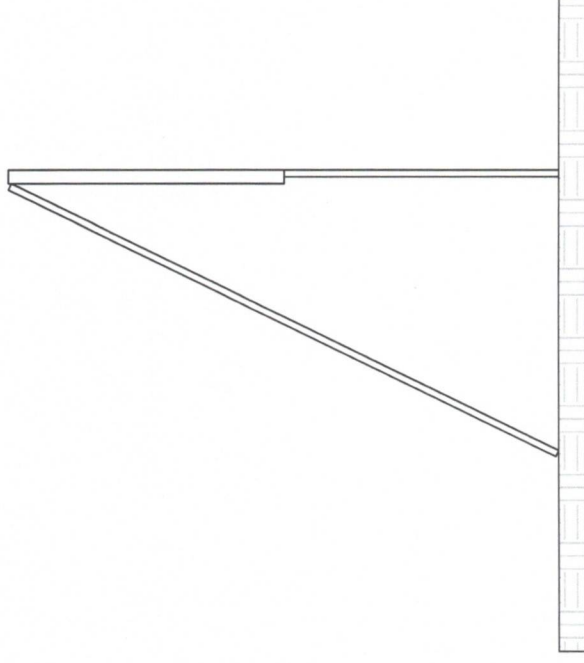
Drawing No.: 5	Sheet No.: 1	Scale: N/A	Sheet Size: A4	Dimension Unit: cm
Drawn By: N/A	Checked By: N/A	Approved By: N/A	Date: 05/04/2026	

National Center for Research
And Development (NCRD)

Front View / Scale 125



Side View / Scale 125



Rehabilitation of the sign by reinforcing the supports, painting the board, and printing the required information

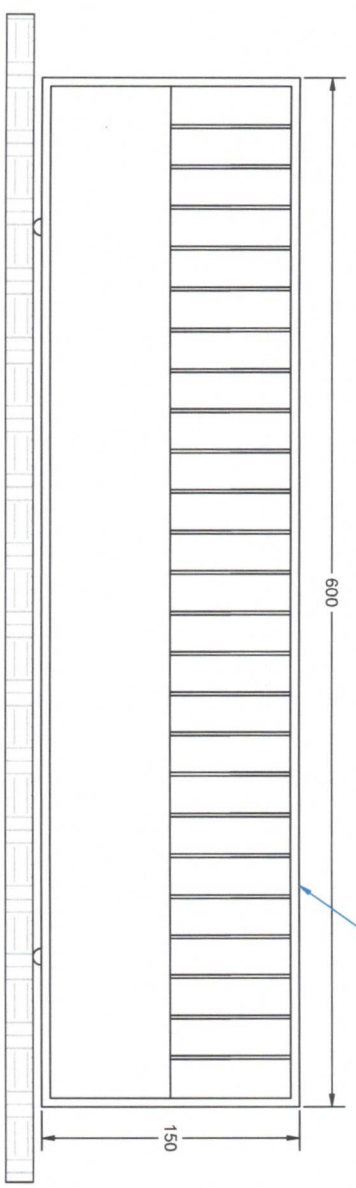
Drawing Title: Signboard Layout

Project: Rehabilitation of the Tal Hassan Renewable Energy Station

Drawing No.: 6 Sheet No.: 1 Scale: N/A Sheet Size: A4 Dimension Unit: cm

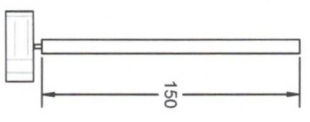
Drawn By: N/A Checked By: N/A Approved By: N/A Date: 05/04/2026

National Center for Research
And Development (NCRD)



Front View / Scale 1:40

Rehabilitation of the gate by painting
with high-quality exterior paint for
optimal durability



Side View / Scale 1:40

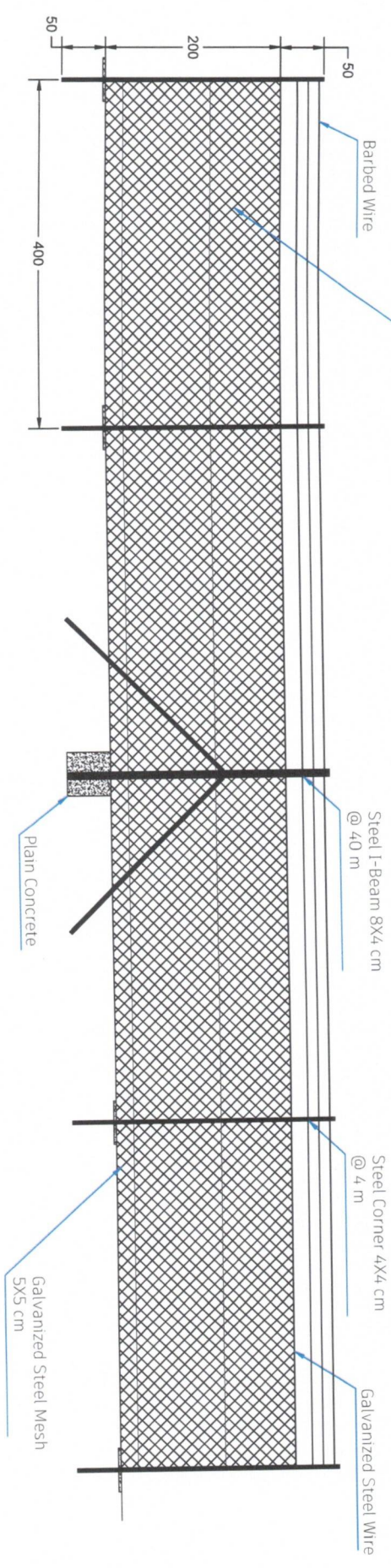
Drawing Title: Gate Layout

Project: Rehabilitation of the Tal Hassan Renewable Energy Station

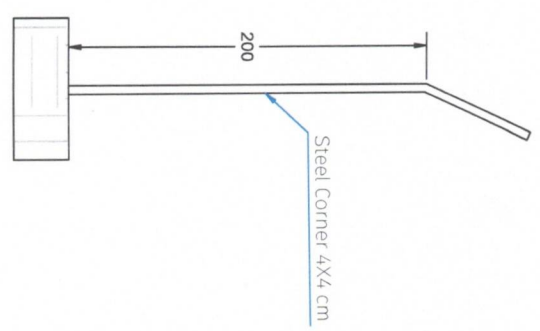
Drawing No.: 7	Sheet No.: 1	Scale: N/A	Sheet Size: A4	Dimension Unit: cm
Drawn By: N/A	Checked By: N/A	Approved By: N/A	Date: 05/04/2026	

Rehabilitation of the fence by installing
2 m height fence with the required
corners, beams, wires, etc.

Front View / Scale 1:66.67



Side View / Scale 1:33.33



Drawing Title: Fence Layout

Project: Rehabilitation of the Tal Hassan Renewable Energy Station

Drawing No. : 8	Sheet No. : 1	Scale : N/A	Sheet Size : A4	Dimension Unit : cm
Drawn By : N/A	Checked By : N/A	Approved By : N/A	Date : 05/04/2026	