



Republic of the Philippines
SOUTHERN LUZON STATE UNIVERSITY
Lucban, Quezon



REQUEST FOR QUOTATION

CONSTRUCTION OF SMART GREENHOUSE IN SLSU TIAONG (PMO)

Purchase Request No. 2026-04-1228

Approved Budget for the Contract: ₱ 650,000.00

The Southern Luzon State University through the Bids and Awards Committee invites interested firms/supplier to submit quotation for the procurement of **Construction of Smart Greenhouse in SLSU Tiaong (PMO)** to apply the sum of **Six Hundred Fifty Thousand Pesos Only (₱ 650,000.00)** inclusive of VAT, being the **Approved Budget for the Contract (ABC)**, details as follows:

Qty.	Unit	ITEM/S DESCRIPTION
1	lot	Construction of Smart Greenhouse in SLSU Tiaong

1. The quotation must be submitted (can also be sent thru email at the contact details listed below) or to the Office of the Procurement Office/Bids and Awards Committee, Southern Luzon State University, 2nd Flr. Hermano Puli Building, and shall be received by the Committee.

E-mail : slsuprocedurement@slsu.edu.ph

2. The SLSU reserves the right to reject any or all quotations and/or proposals and waive any formalities/ informalities therein and to accept such bids it may consider as most advantageous to the agency and to the government. Southern Luzon State University SLSU neither assumes any obligation for whatsoever losses that may be incurred in the preparation of bids, nor does it guarantee that an award will be made.


MARIDEL C. ZABELLA
Director, Procurement Office
Southern Luzon State University
Lucban, Quezon
Tel. No.: (042)540-6519

Republic of the Philippines
SOUTHERN LUZON STATE UNIVERSITY
Planning and Development Office
Lucban , Quezon

PROJECT TITLE : Construction of Smart Greenhouse in SLSU Tiaong

PROJECT LOCATION : SLSU - Tiaong Quezon

OWNER : Southern Luzon State University

MODE OF IMPLEMENTATION : By Contract

ABC : Php 650,000.00

PROJECT DURATION : 60 calendar days

PROJECT BRIEF DESCRIPTION : Proposed Installation of 2 Units Tunnel Type Greenhouse

SUMMARY

ITEM	DESCRIPTION	COST OF MATERIALS	COST OF LABOR AND EQUIPMENT	TOTAL
I	General Requirements			
II	Concrete Works			
III	Masonry Works			
IV	Steel & Framing Works			
V	Shading and Irrigation works			
		TOTAL ESTIMATED DIRECT COST <i>Php</i>		
		OVERHEAD, CONTINGENCIES & MISC.(OCM) <i>Php</i>		
INDIRECT COST		CONTRACTOR'S PROFIT <i>Php</i>		
		VALUE ADDED TAX (VAT) <i>Php</i>		
		TOTAL PROJECT COST <i>Php</i>		

TOTAL PROJECT COST IN WORD: _____

CONTRACTOR / BIDDER : _____



BILL OF MATERIALS

I. General Requirements

Quantity	Unit	Description	Unit Cost	Total Cost
1	lot	Mobilization / Demobilization		
1	lot	Site Clearing		
1	lot	Excavation		

Sub - Total Php

II. Concrete Works

Quantity	Unit	Description	Unit Cost	Total Cost
	bags	Portland Cement		
	cu.m.	S1 Sand		
	cu.m.	Gravel 3/4		
	pcs	16mm dia x 6m RSB		
	pcs	10mm dia x 6m RSB		
1	lot	Consumables		

Sub - Total Php

III. Masonry Works

Quantity	Unit	Description	Unit Cost	Total Cost
	pcs	4" CHB		
	bags	Portland Cement		
	pcs	10mm RSB		
	cu.m.	Sand S1		
	cu.m.	Gravel 3/4		
1	lot	Consumables		

Sub - Total Php

IV. Steel & Framing Works

Quantity	Unit	Description	Unit Cost	Total Cost
	pcs	GI Pipe (2" dia x 6.0m) sch 20		
	pcs	GI Pipe (1 1/4" dia x 6.0m) sch 20		
	pcs	GI Pipe (1" dia x 6.0m) sch 20		
	pcs	GI Pipe (3/4" dia x 6.0m) sch 20		
	sq.m.	P.E. Plastic 200 Micron (Roofing)		
4	sets	Doors at Ante Room		
	pcs	Aluminum C Profile 3m		
	pcs	Wiggle Wire 2m		
1	lot	Assorted Bolts and Nuts		
1	lot	Welding Rod		
	sq.m.	Insect net Mesh 24		
1	lot	tekscrew 1"		
	m	GI Wire #8		
	pcs	Spring Clip 1" x 3/4"		
1	lot	Consumables		

Sub - Total Php



V. Shading & Irrigation Works

Quantity	Unit	Description	Unit Cost	Total Cost
	sq.m.	Silver Shade Net 40% Shade		
1	lot	Shade net Accessories		
	sq.m.	Weed Eliminator		
	unit	IBC Tank 1000 Liters		
	unit	Water Pump 1/2 hp		
	units	Controller / Timer		
	sq.m.	Mapal Bed		
	pcs	2 1/2" x 4" x 8' PVC Tube		
	pcs	4" x 3m PVC Pipe		
	pcs	PVC Elbow 4"		
	pcs	PVC Tee 4"		
	pcs	PVC Cap 4"		
	pcs	Ball valve 1 1/4"		
	roll	PE Pipe 40mm x 30m and accessories		
	pcs	Hydroponic Pots		
1	set	EC/PH Meter		
1	set	Submersible Pump 1hp		
	pcs	Polyethylene bags (soiless)		
1	lot	Plumbing pipes and fittings		
1	lot	UV plastic & black mat flooring		
1	lot	Consumables		
			Sub - Total	Php

Grand Total Php

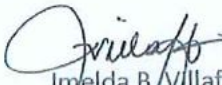
Republic of the Philippines
SOUTHERN LUZON STATE UNIVERSITY
Planning and Development Office

PROJECT TITLE : Construction of Smart Greenhouse in SLSU Tiaong
PROJECT LOCATION : SLSU, Tiaong Quezon
OWNER : Southern Luzon State University
MODE OF IMPLEMENTATION : By Contract
PROJECT DURATION : 60 Calendar days

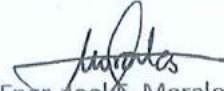
PERT-CPM/GANTT CHART

ITEM	TASK NAME	DURATION		TIMELINE						
				10	20	30	40	50	60	
I.	GENERAL WORKS									
	Mobilization/ Demobilization	60	days							
	Site Clearing	5	days							
	Excavation	5	days							
II.	CONCRETE WORKS	15	days							
	Columns	10	days							
	Construction of Concrete Water Tank	5	days							
III.	Masonry Works	10	days							
	Laying of CHB	5	days							
	Plastering	5	days							
IV.	Steel & Framing Works	25	days							
	Fabrication of Arc, Truss and Doors	10	days							
	Erection of Steel Support	10	days							
	Laying of Roof (PE Plastic 200 Micron)	5	days							
VII	Shading & Irrigation Works	20	days							
	Laying of Silver shade Net 40% shade (wall)	5	days							
	Preparation of Flooring, Waterline for	5	days							
	Hydroponics and Drip Irrigation									
	Installation of PVC tube for hydroponics & drip irrigation	10	days							

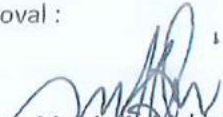
Prepared by:


Imelda B. Villaflo
Asst. Planning Engineer

Reviewed by :


Engr. Joel E. Morales
Project Development Officer 1

Recommending Approval :


Engr. Melvin A. Makipagay
Director - Project Management Office

Approved by :


Dr. Frederick T. Villa
University President

Republic of the Philippines
Southern Luzon State University
Planning and Development office
Lucban, Quezon

PROJECT TITLE: Construction of Smart Greenhouse in SLSU Tiaong
PROJECT LOCATION: SLSU Campus – Tiaong Quezon
OWNER: Southern Luzon State University
PROJECT DURATION: 60 Calendar days
SUBJECT : Specification of Materials



SPECIFICATION OF MATERIALS

I. GENERAL REQUIREMENTS

- Mobilization and Demobilization

II. SITE CONSTRUCTION

- All excavation shall carry out to the required lengths, breadths, depths, inclinations and curvatures as required for the construction of the permanent works, in whatever materials that maybe found.
- The Contractor shall be solely responsible for:
 - Implementing an adequate method of excavation, and adhering to safework sequences and proper standards of workmanship in connection therewith.
 - Providing adequate protection of all excavation from collapse and subsidence of adjacent ground and properties.
 - The safety and integrity of the adjacent properties of the permanent works.
 - Chlpping of Concrete walls
 - Hauling out of debris.

III. CONCRETE WORKS

- Cement shall conform to Portland Cement ASTM C150
- Concrete aggregates shall conform to ASTM C33 except the aggregates falling to meet these specifications but which we have produced concrete to adequate strength and durability may be used to the approval of Civil Engineer.
- Water used in mixing concrete shall be clean and free from injurious amounts of oil, acids, alkalis, salts, organic materials or other substances deleterious to concrete or steel. In addition, the mixing water for the pre stressed concrete shall not contain deleterious amounts of chloride ion.
- Reinforcing bars shall conform to ASTM A615.
- Admixtures to be used in concrete shall be subject to prior approval by the Structural Engineer.
- Cement and aggregates shall be stored in such a manner as to prevent their deterioration or the intrusion of foreign matter.
- Concrete cylinder samples for strength tests of each class of concrete shall be taken in min of 3 concrete samples. The cylinder samples for strength test shall be taken cured and tested in accordance with the ASTM C172, ASTM C31 and ASTM C39.
- Acceptance of Concrete

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- Concrete poured will be considered satisfactory if the average of all set of these consecutive strength test results equal or exceeds the required f_c' and not individual strength test falls below the required f_c' by more than 400 psi.
- Core test and load test
- If Individual tests of laboratory cured cylinder samples produced strength more than 400 psi below f_c' core test and or load tests maybe restored subject to the approval by the Civil Engineer.
- Mixing of Concrete
- All concrete shall be mixed until there is uniform distribution of the materials and shall be discharges completely before the mixer is recharged.
- Conveying of concrete
- Concrete shall be conveyed from the mixer to the place of the final deposit by methods that will prevent the separation or loss of materials.
- Depositing of concrete.
- Concrete shall be deposited as nearly as practicable in its final position to avoid segregation due to the re handling or flowing.
- Curing
- Concrete shall be maintained in a moist condition for at least 7 days after placing.

IV. MASONRY WORKS

- Unless otherwise specified, the vertical reinforcement shall be 10mm dia. at 800mm O.C. for all thickness and horizontal reinforcements for CHB shall be 10mm dia. at every 3 layers of CHB.
- Plaster materials, specified on a volume basis, shall be measured accurately in an approved containers that will insure the specified proportion.
- All surfaces to receive plaster shall be cleaned of all projection, dust, loose particles, grease bond breakers and other foreign matters.
- Plaster shall not be applied directly to concrete of masonry surfaces that have been painted of previously plastered.
- Plaster work shall be finished level, plumb, square and true to line within a tolerance of 3mm (1/8") in 3.00m with out waves, cracks, blisters, pits, crazing & other imperfections.
- All patching of plastered surfaces and plaster work abutting or adjoining any other finish work, shall be done in a neat and workmanlike manner.
- Laster drops or spatter shall be removed from all surfaces. Exposed plastered surfaces shall be left in a clean unblemished condition ready to receive paint or other finish.

V. STEEL WORKS & TRUSSES WORKS

- Use GI Pipe 2" diameter for Greenhouse post
- Use GI Pipe 1" diameter for greenhouse arc truss
- Use GI Pipe 3/4" diameter for greenhouse purlins
- Metal connections must be welded, screwed or bolted as indicated

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- Steel frames shall be custom built size and details as indicated on the plans or shop drawing.
- Use Welding rods appropriate for the steel classification being used

VI. ELECTRICAL WORKS

- The work under this Division consist of furnishing all materials, equipment, tools and all other services necessary to complete and make ready for operation the Electrical Power and Lighting system.
- Furnishing and installation of panel boards at location indicated on the plan and electrical riser layout, including all accessories required.
- Furnishing and installation of feeder and branch circuit conductors with the necessary conduits, approved type of fittings and devices as indicated in the electrical plans.
- All materials to be installed shall be unused, brand new and shall conform with the standards.
- Only skilled workmen using proper tools and equipment shall be employed during the entire course of installation.\
- Wiring for all the system shall be type THHN or TW conductors using plastic conduit pipes. Other types of conductors shall be as indicated. Conduits shall be embedded in the columns, walls and toppings of floor slabs.
- All boxes for outlets and switches shall be PVC or Galvanized Iron approved products of reputable manufacturers.
- Suitable single pole, 2-gang, 3-gang and 3-way switches of the flush type and receptacles with proper bake lite cover plates shall be furnished and installed as indicated in the drawing.
- All lighting fixtures shall be furnished and installation by the contractor.

VII. PLUMBING WORKS

- All plumbing works included herein shall be executed according to the provisions of the National Plumbing Code, National Building Code and the Rules and Regulations of the City/Province
- Use PPR Pipes and fittings of approved size and quality for water lines.
- Use PVC pipes and fittings (Neltex or approved equivalent) for sanitary and sewer lines.
- The drawings are not intended to show every pipes, fittings, valves and appliances. All such item whether specifically mentioned or not, or indicated on the drawings shall be finishes and installed if necessary to complete the system in accordance with the best practice of the Plumbing Trade and to the satisfaction of the Owner/Representative.
- All materials to be used shall be new and shall conform to the Reference Code and Standards. Use of materials shall further be governed by other requirements, imposed on other section of these specifications. Materials shall be subject to test necessary for their fitness if so required.
- The Contractor shall furnish all materials, labor and equipment necessary for the installation of all water lines, and sewer lines.
- All materials and equipment to be installed shall be of approved quality and should be presented to Southern Luzon State University / Representative Engineer/Architect for approval of prior installation.

Republic of the Philippines
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Prepared by:


IMEILDA B. VILLAFLOR
Assistant Planning Engr.


Reviewed by:


ENGR. JOEL E. MORALES
Planning Development Officer 1

Recommending approval:


ENGR. MELVIN A. MAKIPAGAY
Dir.-Project Management Office

Approved by:


DR. FREDERICK T. VILLA
University President

Republic of the Philippines
Southern Luzon State University
Planning and Development office
Lucban, Quezon

PROJECT TITLE: Construction of Smart Greenhouse in SLSU Tiaong
PROJECT LOCATION: SLSU – Tiaong Quezon
OWNER: Southern Luzon State University
PROJECT DURATION: 60 Calendar days
SUBJECT : Scope of Works

SCOPE OF WORKS

I. GENERAL REQUIREMENTS

- Mobilization / Demobilization

II. SITE CONSTRUCTION

- Excavation – The Contractor shall make all necessary excavation for foundations, footing tie beam to establish grades indicated in the drawings and plans.
- Clearing and Grubbing of the perimeter area.
- Hauling out of Debris

III. MASONRY WORKS

- The Masonry works include the laying of 2 layers of 4" Concrete Hollow blocks above and below ground level along the perimeter of the greenhouse
- The masonry finishes shall be smooth plaster finish.
- Concrete Water Tank for Hydroponics : 1.2M x 1.2M x 1.5 complete with EC/PG Meter, Submersible 1HP Pump & Controller Timer

IV. STEEL AND ROOF FRAMING WORKS

- All Structural support of the greenhouse as indicated in the drawing will be pre fabricated in the supplier's warehouse and will be delivered on site ready for installation.
(there will be no cutting and welding on site of the construction)
- GI Pipes support will be primer painted
- Provide 2 sets of Screen door with aluminum Frames for Ante Room
1 Swing door and Sliding Door

V. SHADING AND IRRIGATION WORKS

- For all sides of the greenhouse use Insect Proof net at 24 mesh imported from Taiwan, Retractable Shading System use Silver shade net 40% shade net complete with plastic locking system.
- Roofing Specs to be PE Plastic UV Clear 200 micron.
- for Solless Greenhouse provide an IBC tank with 1000 liters capacity. Complete with ½ Hp Water pump, Controller / Timer
- Contractor to provide all accessories for the hydroponic and solless farming, like hydroponics pots, polyethylene bags, PE Pipes/Tubes and fittings and other materials indicated in the drawings and needed for the solless and hydroponics farming

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VI. GREENHOUSE FLOORING

- Make sure that the soil is well compacted and treated with weed eliminator before laying Black Mat Flooring with UV Resistant.
- For Ante Room it will be concrete finish with foot bath.

VII. ELECTRICAL WORKS

- Supply and Installation of 1/2hp Water pump, Controller/Timer, EC/PH meter, 1hp Submersible pump, Circuit Breaker and the like necessary to run the hydroponics and soilless farming.
- Electrical wirings from the power supply to be provided by SLSU.

VIII. PLUMBING WORKS

- Supply and Installation of waterline pipes and fittings tapping to the water supply provided by the Southern Luzon State University.
- Supply and Installation of Water Tank indicated on drawing.

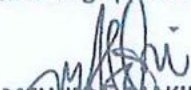
Prepared by:


IMELDA B. VILLAFLOR
Assistant Planning Engr.

Reviewed by:

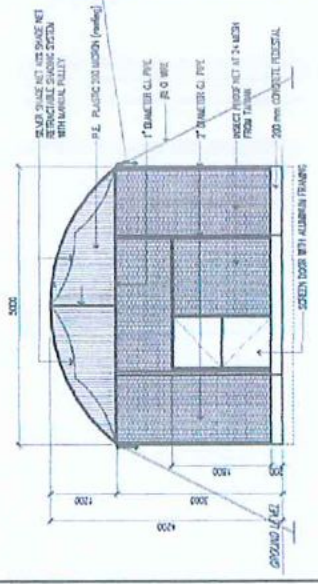

ENGR. JOEL E. MORALES
Project Development Officer 1

Recommending approval:


ENGR. MELVIN A. MAKIPAGAY
Dir.-Project Management Office

Approved by:

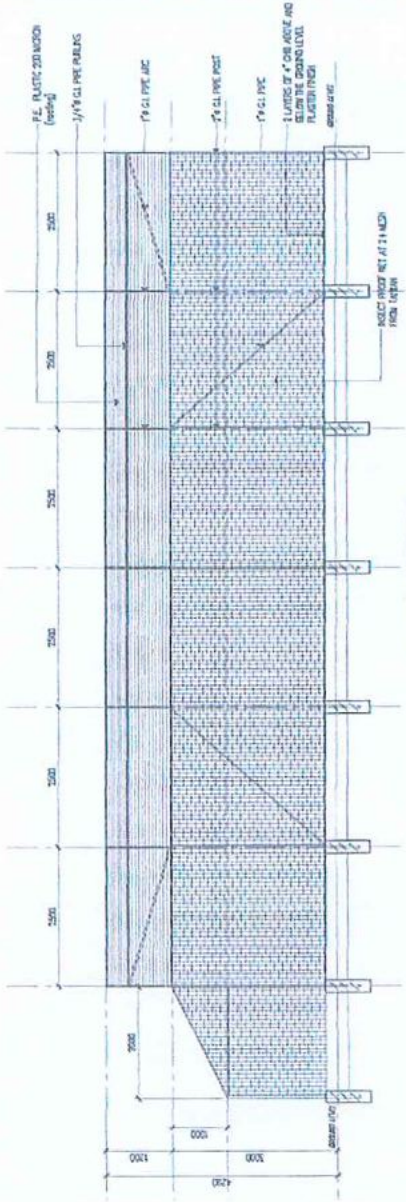

DR. FREDERICK T. VILLA
University President



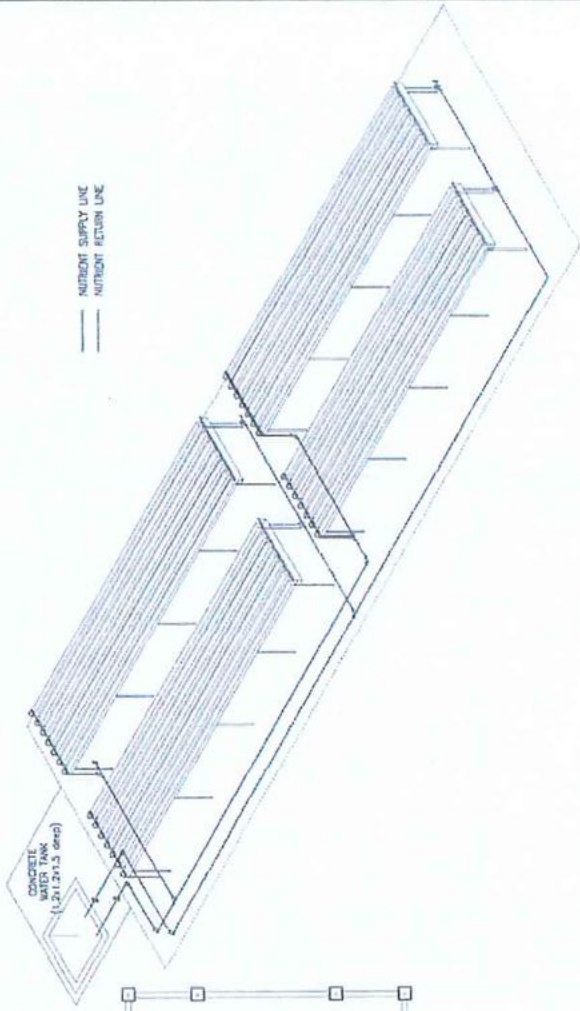
FRONT ELEVATION
SCALE 1:30



PLASTIC CURTAIN

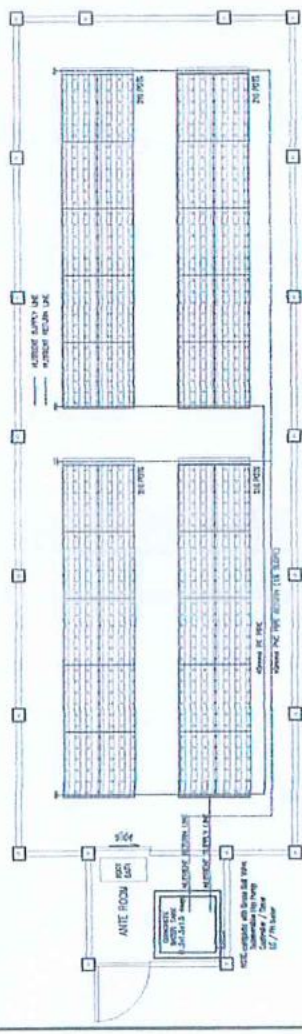


SIDE ELEVATION
SCALE 1:30




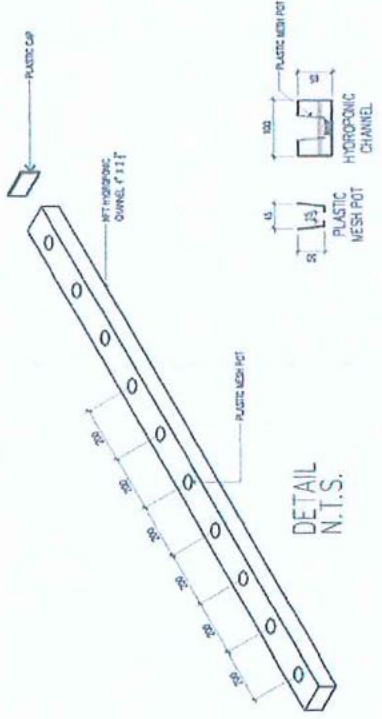
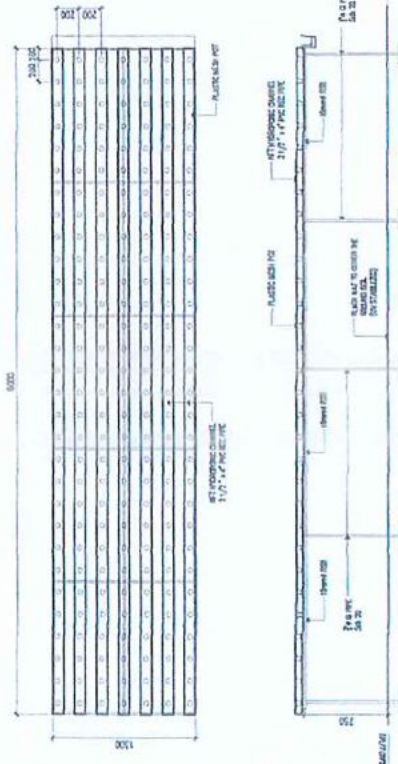
CONCRETE WATER TANK (1.21x21x3 deep)

--- NUTRIENT SUPPLY LINE
--- NUTRIENT RETURN LINE



FLOOR PLAN FOR HYDROPONIC LAYOUT
SCALE 1:30

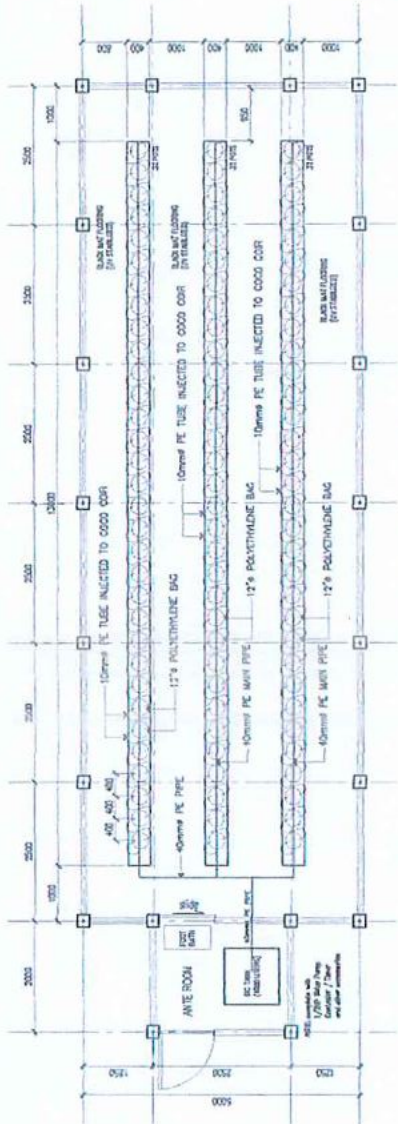
 CIVIL / STRUCTURAL ENGINEER	PROJECT TITLE	CONSTRUCTION OF SMART GREENHOUSE IN SLSU TIAONG	PLANNED BY	DR. JESSE ERICK T. VILLA ENGR. (1987) / PRC (1988)	APPROVED BY	DR. JESSE ERICK T. VILLA ENGR. (1987) / PRC (1988)	SHEET NO.	GH-3 03 04
							SHEET CONTENTS	
							DRAWING HYDROPONIC LAYOUT PLASTIC CURTAIN	



31 HYDROPHONIC TABLE DETAILS
 (GH-4) SCALE 1:2



32 DOOR SCHEDULE
 (GH-7) SCALE 1:8



33 FLOOR PLAN (FOR SOILLESS GREENHOUSE)
 (GH-12) SCALE 1:8



12\"/>

	CIVIL STRUCTURAL ENGINEER	PROJECT TITLE CONSTRUCTION OF SMART GREENHOUSE IN SLSU TIAONG	REVIEWED BY <i>[Signature]</i> ENGR. MELVIN T. VILLA REGISTERED PROFESSIONAL ENGINEER CIVIL ENGINEERING (1998)	RECOMMENDING APPROVAL <i>[Signature]</i> ENGR. MELVIN T. VILLA REGISTERED PROFESSIONAL ENGINEER CIVIL ENGINEERING (1998)	APPROVED BY <i>[Signature]</i> DR. FREDERICK T. VILLA	SHEET NO. GH-4 04/04
	SHEET CONTENTS: HYDROPHONIC TABLE ELEV. DOOR SCHEDULE FLOOR PLAN					