

Republic of the Philippines
DEPARTMENT OF AGRICULTURE
Regional Field Unit No. 5
San Agustin, Pili, Camarines Sur

Project Title: SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BACOLOD -San Vicente SPIS
Project Location: Brgy. Bacolod, Libon, Albay
Appropriation: ₱6,930,000.00
Source of fund : Rice 2022
Subject: BILL OF QUANTITIES AND COST PROPOSAL

Classification: Irrigation Facility
Number of Unit: 1
Net Length:
Project Duration : 150 C.D.
Starting Date: upon receipt of NTP

Scope of Work:
-Delivery of Labor and Materials for the Construction of Water Pump Sump, Pump House, Solar Panel Framing Structure and Pump Stilling Basin/ Pool
-Construction of Perimeter Fence
-Installation of Solar Pump, Solar Panel Array, Electrical Wiring, Controller Devices and Components
-Installation and Laying of HDPE Pipe for Pump Irrigation Outlet

MINIMUM EQUIPMENT REQUIREMENT			TECHNICAL PERSONNEL REQUIRED		
Description	No.	Description	Description	No.	Description
Service Truck	1	3-5 m ³	Foreman	1	
Water Pump	1	4" diameter	Asst. Foreman	1	
Welding Machine	1	300 Amp, Gas Driven			
Electric Bar Cutter	1	12" Diameter Disc			
Hand Tools	enough				

COST OF PROPOSED WORK					
Item	Description	Quantity	Unit	Unit Cost (PhP)	Total Amount (PhP)
PART I	General Requirements				
	1.1.	Project Billboard/Signboard and Permanent Marker	1	e.a.	
	1.2.	Occupational Safety and Health Program	1	L.S.	
	1.3.	Mobilization / Demobilization	1	L.S.	
	1.4.	Construction of Camps, Other Temporary Facilities	1	L.S.	
	1.5.	Diversion of Water and Care of Creek	1	L.S.	
Sub-total					
PART II	SOLAR MOUNTING STRUCTURE, CONCRETE AND REINFORCEMENT				
	Part A	EARTH WORKS			
	102	Common Soil Excavation	98.00	cu.m.	
	100(2)	Structural BackFill/Backfilling	78.00	cu.m.	
	201	Aggregate Sub Base Course (Gravel Fill)	7.00	cu.m.	
	Part B	REINFORCE CONCRETE WORKS			
	405(1)	Concrete Class "A" w/ Forms (Pedestal)	5.50	cu.m.	
	405(2)	Concrete Class "A" w/out Forms (Pedestal Footing)	17.00	cu.m.	
	404	Reinforcing Steel Bar	2075.00	kgs.	
	Part C	METAL WORKS			
	II.C.1	Vertical Structure	2.00	e.a.	
		-3" dia. G.I. Pipe S40 Post (15 pcs.) -10mm thk. Metal Plate (4.0 sq.m.) -8"x20mm dia. Anchor Bolt (264 set)			
	II.C.2	Horizontal Structure	2.00	e.a.	
	-1/4"x2"x5" Channel Bar/ C Bar (17 pcs.) -Pre-Fabricated PV Module Railings, (53 pcs.) -1 1/2" Dia. S40-G.I. Pipe (96 pcs.) -2"x2"x1/4"x20' Angle Bar Cleat (5 pcs.) -2"x20mm dia. Bolt and Nut, (128 pcs.)				
Sub-total					
PART III	SUBMERSIBLE SEWAGE PUMP				
	SPL1	6" Diameter Outlet, 15KW (20HP), 3 Phase 60Hz,	1.00	unit	
	-Capacity of at least 1170 cubic meter per 5 hours operation per day at the following condition:				
	1. Pump Type : Submersible Pump	8. Outlet Diameter : 6 Inches			
	2. Total Dynamic Head : 30.0m (minimum)	9. Driver : Electric Power			
	3. Voltage : 380-415 Volt	10. Structure : Centrifugal			
	4. Frequency : 60 Hz	11. Shaft : Duplex Stainless Steel			
	5. Phase : Three Phase	12. Motor : NEMA Standard Three Phase Induction Type Motor			
	6. Pump/Impeller : Stainless Steel 304/Cast Iron HT200	13. Temperature : -5°C to +120°C			
	7. Working Principle : Submersible				
Sub-total					
PART IV	SOLAR PV MODULES, FITTINGS AND ACCESSORIES				
	SPL2	-450Wp PV Solar Module, Poly-Crystalline	60.00	pcs.	
	Max Power: 450 Watt Open Circuit Voltage: 49.60V Short Circuit Current: 11.53A	Optimum Operating Voltage: 41V Optimum Operating Current: 10.98A Temperature: -40°C to +90°C			
Sub-total					
PART V	SOLAR INVERTER				
	SPL3	-18.50KW, 300V-900V DC Input, 3phase-380V/415V-37Amp AC Output, Inverter	1	unit	
		-Built-in Maximum Power Point Tracking (MPPT) -AC/DC Compatibility -Overvoltage and Undervoltage Protection	-Overload and Overcurrent Protection -Enclosure Class: IP 66		
	SPL4	-Controller Box (300mm x 600mm x 800mm)	1	unit	
Sub-total					

PART VI	PV DISCONNECT, PV PROTECT and COMBINER DEVICE					
	SPL5	DC-AC Line Protection	1	L.S.		
		-6 Pair Terminal Block Connector (2 pcs.)				
		-DC MCCB, 15A 4P (6 pcs.)				
		-DC MCCB, 60A 2P (2 pcs.)				
	-DC SPD, 1000VDC 2P (2 pcs.)					
	-AC MCCB, 60A 3P (20 pcs.)					
Sub-Total						
PART VII	CABLE WIRE and ACCESSORIES					
	SPL6	System Wiring Installation	1	L.S.		
		-3.5mm ² THHW (#12 AWG) Wire (200 L.M.)				
		-Royal Cord 3C #8 AWG + 1C #10 AWG (150 L.M.)				
		-Royal Cord 2C, #6 AWG (20 L.M.)				
	-25mm Diameter PVC Pipe Conduit (15 pcs)					
Sub-Total						
PART VIII	OUTLET WORKS					
	Part A EARTH WORKS					
	102	Common Soil Excavation	220.80	cu.m.		
	100(2)	Structural BackFill/Backfilling	154.00	cu.m.		
	Part B REINFORCE CONCRETE WORKS					
	405(2)	Concrete Class "A" w/ Forms (Pipe Support)	6.00	cu.m.		
	404	Reinforcing Steel Bar	186.00	kgs.		
	Part C PIPE OUTLET INSTALLATION					
SPL7	Pump Outlet Pipe Installation	1	L.S.			
	-6m X 6" Diameter S40 G.I. Pipe (2 pcs)					
	-6m X 6" Diameter SDR17 HDPE Pipe (115 pcs)					
	-10 Bolts, 8" Diameter End Flange (3 sets)					
PART IX	PUMP INTAKE STRUCTURE, SUMP AND CONTROLLER HOUSE					
	Part A EARTH WORKS					
	102	Common Soil Excavation	64.00	cu.m.		
	100(2)	Structural BackFill/Backfilling	30.00	cu.m.		
	201	Aggregate Sub Base Course (Gravel Fill)	2.00	cu.m.		
	Part B REINFORCE CONCRETE WORKS					
	405(1)	Concrete Class "A" w/ Forms (Column, Slab, Sump Wall and Intake Structure)	10.00	cu.m.		
	405(2)	Concrete Class "A" w/out Forms (Column Footing and Sump Foundation)	6.00	cu.m.		
	404	Reinforcing Steel Bar	1,240.00	kgs.		
	Part C MASONRY WORKS					
	704.3	CHB Controller House Wall (100mm non load bearing, incl. Reinforcing Steel Bar)	14.00	sq.m.		
	700.1	Cement Masonry Plaster Finish	28.00	sq.m.		
	Part D METAL WORKS					
SPL8	Ladder, Chain Block Holder, Fabricated Steel Door, Trash Rack and Fish Screen	1.00	L.S.			
Sub-Total						
PART X	PERIMETER FENCE (60 L.M.)					
	Part A EARTH WORKS					
	102	Common Soil Excavation	37.00	cu.m.		
	100(2)	Structural BackFill/Backfilling	24.60	cu.m.		
	201	Aggregate Sub Base Course (Gravel Fill)	4.00	cu.m.		
	Part B REINFORCE CONCRETE WORKS					
	405(3)	Concrete Class "B" w/ Forms (Column)	1.50	cu.m.		
	405(4)	Concrete Class "B" w/out Forms (Wall and Couolumn Footing)	7.00	cu.m.		
	404	Reinforcing Steel Bar	725.00	kgs.		
	Part C MASONRY WORKS					
	704.3	CHB Wall (100mm non load bearing, incl. Reinforcing Steel Bar)	65.00	sq.m.		
	700.1	Cement Masonry Plaster Finish	130.00	sq.m.		
Part C MASONRY WORKS						
SPL9	Steel Matting Fence w/ 2" Dia. S40-G.I. Framing	14.00	e.a.			
Sub-Total						
PART XI	PIPE END CHECK AND PIPE TURN-OUT STRUCTURE					
	Part A EARTH WORKS					
	102	Common Soil Excavation	7.00	cu.m.		
	100(2)	Structural BackFill/Backfilling	3.50	cu.m.		
	201	Aggregate Sub Base Course (Gravel Fill)	2.10	cu.m.		
	Part B REINFORCE CONCRETE WORKS					
	405(3)	Concrete Class "B" w/ Forms (Walls)	5.25	cu.m.		
405(4)	Concrete Class "B" w/out Forms (Flooring)	2.67	cu.m.			
404	Reinforcing Steel Bar	454	kgs.			
Sub-Total						
PART XII	FINISHING/ PAINTING WORKS					
	XII.A	Painting on Concrete Works	158.00	sq.m.		
	XII.B	Painting on Metal Works	367.00	sq.m.		
Sub-Total						
TOTAL PROJECT COST						~

Note: All taxes, contractor's profit and hauling cost are included in unit cost per item.

NAME AND SIGNATURE OF BIDDER