



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 SAN JOSE SPIS
Project Location: Brgy. San Jose, Minalabac, Camarines Sur
Appropriation: ₱6,930,693.18
Source of fund : Rice 2022
Subject: BILL OF QUANTITIES AND COST PROPOSAL

Classification: Irrigation Facility
Number of Unit: 1
Net Length:
Project Duration : 120 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, Slope Protection, Solar Panel Framing Structure and Pump Stilling Basin/ Pool
-Installation of Solar Pump, Solar Panel Array, Electrical Wiring, Controller Devices and Components
-Installation and Laying of Pipe for Pump Irrigation Outlet and Construction of Irrigation Canal

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	OTHER GENERAL REQUIREMENTS				
	I.1	Project Billboard/Signboard and Permanent Marker	1	e.a.	
	I.2	Occupational Safety and Health Program	1	L.S.	
	I.3	Mobilization / Demobilization	1	L.S.	
	I.4	Construction of Camps, Other Temporary Facilities	1	L.S.	
	I.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	106.00	cu.m.	
	100(2)	Structural BackFill/Backfilling	65.00	cu.m.	
	201	Aggregate Sub Base Course (Gravel Fill)	8.00	cu.m.	
	Part B REINFORCE CONCRETE WORKS				
	405(1)	Concrete Class "A" w/ Forms (Pedestal)	4.00	cu.m.	
	405(2)	Concrete Class "A" w/out Forms (Pedestal Footing)	18.00	cu.m.	
	404	Reinforcing Steel Bar	1600.00	kgs.	
	Part C METAL WORKS				
	II.C.1	Vertical Structure	3.00	e.a.	
		-3" dia. G.I. Pipe S40 Post (17 pcs.) -10mm thk. Metal Plate (33 sq.m.) -8"x20mm dia. Anchor Bolt (288 set)			
	II.C.2	Horizontal Structure	3.00	e.a.	
		-1/4"x2"x5" Channel Bar/ C Bar (20 pcs.) -Pre-Fabricated PV Module Railings, (60 pcs.) -1/4"x2"x2" Angle Bar (Holder and Support), (2 pcs.) -1/4"x 1 1/2"x 1 1/2" Angle Bar (Strut), (97 pcs.) -2"x20mm dia. Bolt and Nut, (192 pcs.) -1 1/2" G.I. Pipe Support, (9 pcs.)			
Sub-total					
PART III	AMTEC TESTED PUMP (SUBMERSIBLE PUMP)				
	SPL1	6" Diameter, 22KW (30HP), 3 Phase 60Hz, Submersible Pump	1	unit	
	-Capacity of at least 1,200-1,500 cubic meter per 5 hours operation per day at the following condition: 1. Pump Type : Submersible Pump 2. Total Dynamic Head : 90.0 ft (minimum) 3. Voltage : 460 Volt 4. Frequency : 60 Hz 5. Phase : Three Phase 6. Pump/Impeller : Stainless Steel 304/Cast Iron HT200 7. Working Principle : Submersible 8. Outlet Diameter : 6 Inches 9. Driver : Electric Power 10. Structure : Centrifugal 11. Shaft : Duplex Stainless Steel 12. Motor : NEMA Standard Three Phase Induction Type Motor 13. Temperature : -5°C to +120°C				
Sub-total					
PART IV	SOLAR PV MODULES, FITTINGS AND ACCESSORIES				
	SPL2	-330Wp PV Solar Module, Poly-Crystalline	84.00	pcs.	
	Max Power: 330 Watt Open Circuit Voltage: 46.70V Short Circuit Current: 9.11A Optimum Operating Voltage: 38.20V Optimum Operating Current: 8.64A Temperature: -40°C to +90°C				
Sub-total					
PART V	SOLAR INVERTER				
	SPL3	-35KW, 360V-700V DC Input, 3phase-460V-65Amp 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	-Combiner Box (800mm X 600mm X 300mm)	1	unit		
Sub-total					

PART VI	PV DISCONNECT, PV PROTECT and COMBINER BOX					
	SPL5	DC-AC Line Protection	1	L.S.		
		-DC MCB, 20A 2P (6 pcs.) -DC SPD, 1000VDC 2P (6 pcs.) -AC MCB, 150A 3P (3 pcs.) -MC4 Straight (20 pcs.)				
	Sub-Total					
PART VII	CABLE WIRE and ACCESSORIES					
	SPL6	System Wiring Installation	1	L.S.		
		-Royal Cord 3C, 8 AWG (100 l.m.) -Royal Cord 2C, 14 AWG (300 l.m.)				
Sub-Total						
PART VIII	OUTLET WORKS					
	SPL7	Pump Outlet Pipe	1	L.S.		
		-6m X 6" Diameter S40 G.I. Pipe (12 pcs.) -10 Bolts, 8" Diameter End Flange (12 sets)				
Sub-Total						
PART IX	PUMP INTAKE STRUCTURE, SUMP AND HOUSE					
	Part A	EARTH WORKS				
	102	Common Soil Excavation	130.00	cu.m.		
	100(2)	Structural BackFill/Backfilling	97.00	cu.m.		
	201	Aggregate Sub Base Course (Gravel Fill)	4.00	cu.m.		
	Part B	REINFORCE CONCRETE WORKS				
	405(1)	Concrete Class "A" w/ Forms (Wall, Slab, Manhole and Landing)	18.00	cu.m.		
	405(2)	Concrete Class "A" w/out Forms (Flooring and Footing)	7.50	cu.m.		
	404	Reinforcing Steel Bar	2500	kgs.		
	Part C	METAL WORKS				
SPL8	Pump House Railings, Fabricated Steel Door, Trash Rack and Fish Screen	1.00	L.S.			
Sub-Total						
PART X	SLOPE PROTECTION (10 L.M.)					
	Part A	EARTH WORKS				
	102	Common Soil Excavation	6.00	cu.m.		
	100(2)	Structural BackFill/Backfilling	3.00	cu.m.		
	Part B	REINFORCE CONCRETE WORKS				
	405(1)	Concrete Class "A" w/ Forms (Wall)	7.00	cu.m.		
	504	Grouted Rip Rap	29.00	cu.m.		
404	Reinforcing Steel Bar	600	kgs.			
Sub-Total						
PART XI	IRRIGATION WORKS (50mm x 50mm Concrete Canal)					
	Part A	EARTH WORKS				
	102	Common Soil Excavation	102.00	cu.m.		
	100(2)	Structural BackFill/Backfilling	22.00	cu.m.		
	201	Aggregate Sub Base Course (Gravel Fill)	35.60	cu.m.		
	Part B	REINFORCE CONCRETE WORKS				
	405(3)	Concrete Class "B" w/ Forms (Wall)	46.00	cu.m.		
405(4)	Concrete Class "B" w/out Forms (Flooring)	35.60	cu.m.			
404	Reinforcing Steel Bar	3,460.00	kgs.			
Sub-Total						
PART XII	PUMP STILLING POOL					
	Part A	EARTH WORKS				
	102	Common Soil Excavation	1.00	cu.m.		
	100(2)	Structural BackFill/Backfilling	0.50	cu.m.		
	201	Aggregate Sub Base Course (Gravel Fill)	0.33	cu.m.		
	Part B	REINFORCE CONCRETE WORKS				
	405(3)	Concrete Class "B" w/ Forms (Wall)	0.75	cu.m.		
405(4)	Concrete Class "B" w/out Forms (Flooring)	0.33	cu.m.			
404	Reinforcing Steel Bar	65	kgs.			
Sub-Total						
PART XIII	PERIMETER FENCE (64 L.M.)					
	Part A	EARTH WORKS				
	102	Common Soil Excavation	35.00	cu.m.		
	100(2)	Structural BackFill/Backfilling	21.00	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 (Column)	3.00	cu.m.		
	405(2)	Concrete Class "A" w/out Forms (Column and Wall Footing)	7.00	cu.m.		
	404	Reinforcing Steel Bar	710	kgs.		
	XIII.B	CHB Wall	70	sq.m.		
Part C	METAL WORKS					
SPL9	Cyclone Wire Perimeter Fence w/ G.I. Pipe Steel Frame	16.00	e.a.			
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