



ASTI-FM 03-11
REV 0/2 APR 2018

**DOST-ASTI Bids and Awards Committee
Invitation to Bid (Public Bidding)**

ITB No:	19-09-2750	Date:	September-24-2019
PR No:	GAA-19-08-8352	Date:	August-20-2019
Source of Funds:	GAA		
Total ABC:	Php 1,209,000.00		
Time, Date & Venue of Pre-bid Conference:	October 03, 2019, 1:30 PM at DOST-ASTI		
Time and Date of Submission of Bids:	October 15, 2019, 12:00 PM		
Time, Date & Venue of Opening Bids:	October 15, 2019, 1:30 PM at DOST-ASTI		
Date of availability of Complete Set of Documents:	September 25, 2019		
Deadline of Potential Bidder's Clarifications:	October 05, 2019		
Deadline of ASTI's Supplemental Bid Bulletin:	October 08, 2019		
Delivery Schedule:			

The Advanced Science and Technology Institute (ASTI), through its Bids and Awards Committee (BAC), hereby invites all interested bidders to submit their bids for the item(s) listed below. Guidelines regarding the format, eligibility, technical and financial documents needed are described in the Instruction to Bidders of the Philippine Bidding Documents

Bidding will be conducted through open competitive bidding procedures using a non discretionary "pass/fail" criterion as specified in the 2016 R-IRR of RA 9184.

A complete set of Bidding Documents may be purchased by interested bidders upon payment of a fee for the Bidding Documents. It is also downloadable for free of charge at DOST-ASTI's website - www.asti.dost.gov.ph

For further inquiries, contact ASTI's BAC Secretariat via email at bac-sec@asti.dost.gov.ph. Interested bidders may also call the number - (632)-426-7423 and look for ASTI's BAC Secretariat.

Respectfully,


PEDRITO B. MANGHAS
Chairperson, BAC-1

NO.	TECHNICAL SPECIFICATIONS	QTY	UNIT	UNIT PRICE(Php)	TOTAL PRICE(Php)
1	<p>Controller Box Assembly with ASTI-Developed Datalogger</p> <p>3 lots charged to DOST RO IX 2 lots charged to DOST MIMAROPA 6 lots charged to LGU-Tabaco 1 lot charged to LGU-Roxas 2 lots charged to LGU-Malalag 1 lot charged to LGU-Tiwi 1 lot charged to Apayao 1 unit charged to DOST-MIMAROPA ARG</p> <p>I. Enclosure - Body color: Gray - Overall dimensions: H 14.13", W 12.26", D 6.13" - Complies with NEMA Type 1,2,3,4,4X,12 and 13, IEC 529,IP66 - Molded fiberglass polyester enclosure with matching cover</p>	17	lot	40000.00	680,000.00

ASTI Bldg., U.P. Technology Park Complex, C.P. Garcia Ave., Diliman, Quezon City, Philippines 1101

• Website: www.asti.dost.gov.ph • E-mail: info@asti.dost.gov.ph • Tel. No.s: +632 927-2541, +632 927-3502, +632 426-9759, +632 426-9760
• Fax No.: +632 925-8598

- Stainless steel draw type "snap latch" door fastener
 - Door fasteners include a provision for padlocking
 - Door is supported with a continuous stainless steel hinge
 - Captive oil resistant gasket
 - Threaded brass inserts for mounting feet to the rear of the enclosure
 - Stainless steel mounting brackets and hardware for mounting to the rear enclosure
 - Operating temperatures between 130C and -40C
 - End-user will provide a technical drawing for the customized hole upon request
 - Threaded brass inserts for mounting feet to the rear of the enclosure
 - Stainless steel mounting brackets and hardware for mounting to the rear enclosure
 - Operating temperatures between 130C and -40C
- Note: End user will provide a technical drawing for the customized hole.

II. Back Plate for Controller Box

- Material: Aluminum Sheet, 2.5 mm
- Refer to attached drawing for full specifications
- Complete with stainless fasteners (Hex bolts, washers, screws, nuts)

III. Lead Acid Battery

- Valve Regulated Lead-Acid Battery (Heavy Duty)
- Voltage: 12V
- Capacity: 17 AH
- Dimension 180x77x168 (LxWxH)
- Excellent cycling capability
- Very high energy density
- High rate discharge capability
- Lowest self discharge rate
- Approved for shipping as non-hazardous, non-spillable
- Operates in any position
- Low internal resistance
- With at least 6 months warranty
- Manufacturer of the battery must have the ISO / TS16949 certification

IV. Solar Charge Controller Regulator

- Wire size #16 AWG
- ABS plastic case: Epoxy encapsulated
- Weight: 3 oz (0.09 kg)
- Dimensions: 2.5" x 2.0" x 1.4"/63.5 x 50.8 x 35.56 mm
- Rated Solar Input: 4.5 Amps
- Max. Input (5min.): 5.5 Amps
- System Voltage: 12V
- Max. Solar Voltage: 30V
- Regulation Voltage: 14.1V
- Accuracy: 60 mV
- Self-consumption: 6 mA
- Temp. Compensation: -28 mV/ degree Celsius
- Reverse Current Leakage: <10 micro Amps

- Operating Temperature: -40 to 85 degree Celsius
- V. Electronic PCB Assembly
- ASTI designed Interconnect board
 - The end user will provide the bill of material, a gerber file for the PCB design, and instruction assembly.

- Supplier should provide samples of at least three (3) units before production

V.1. ASTI Designed Trigger Switch Board (for Warning Stations)

- includes board fabrication and component assembly
- includes component sourcing based on Bill of Materials (BOM)
- gerber and BOM files are available upon request

PCB:

- Dimension: 145mm x 90mm
- Material: FR-4
- Silkscreen: White (Top and bottom)
- Solder Mask: Double
- LPI color: Green
- PCB Thickness : 1.64 mm
- Number of Electrical Layers : 2 (Top Electrical and Bottom Electrical layer)

V.2. ASTI Designed HYDROMET Interconnect Board (for ARG, WLMS and Tandem)

- includes board fabrication and component assembly
- includes component sourcing based on BOM
- gerber and BOM files are available upon request
- must pass based on testing procedure submitted

PCB:

- Dimension: 70mm x 40mm
- Material: FR-4
- Silkscreen: White (Top and bottom)
- Solder Mask: Double
- LPI color: Blue
- PCB Thickness : 1.64 mm
- Number of Electrical Layers : 2

VI. Protective Vent/Gore

- Screw-in Type
- M12x1.5 with nut
- Water entry pressure: > 0.3 bar / 30 sec
- Typical airflow(dp = 70 mbar): 2500 ml / min
- Membrane characteristic: Hydrophobic
- Backing material: ePTFE / Polyester (PET)
- Housing material: Polyamide (PA6)
- Color of housing material: Pale Gray
- ORing material: Silicone 60 Shore A
- Wrench size: 16mm
- Overall Length: 15.55mm

VII. Cable Assemblies

- A. one(1) pc arQ Data Interface
- B. one(1) pc arQ Power Interface
- C. one(1) set Alarm Stages Interface(For Warning Stations)
- D. one(1) pc Solar Panel Interface
- E. one(1) set Battery Connectors
- F. one(1) set Grounding Kit (For Warning Stations)
- G. one(1) set of sensor data interface (for ARG,WLMS, TANDEM)

Note: End user will provide a technical drawing and

specifications on sub-items A to F.

VIII. Datalogger Clip Holders

- Must be ASTI-designed complete with screws and nuts

IX. Sticker

- glossy finished
- fade proof and weather proof
- design to be provided upon request

X. ASTI-designed Data Logger

- must be provided by ASTI-licensed fabricator/distributor

A. Overall design will be provided by ASTI (available upon signing

of Non-Disclosure Agreement)

B. Circuit boards

1. GDAT Main Board (Qty: 1 pc)

- includes board fabrication and component assembly
- includes component sourcing based on BOM
- gerber and BOM files are available upon request
- must pass based on testing procedure submitted

1.1. PCB

- Dimension: 82.22mm x 64.2mm
- Material: FR-4
- Silkscreen: White (Top and bottom)
- Solder Mask: Double
- LPI color: Black
- PCB Thickness : 1.64 mm
- Number of Electrical Layers : 2

2. GSM Module (Qty: 1 pc)

- includes board fabrication and component assembly
- includes component sourcing based on BOM
- gerber and BOM files are available upon request
- quantity:
- must pass based on testing procedure submitted

2.1. PCB

- Dimension: 37mm x 50mm
- Material: FR-4
- Silkscreen: White (Top and bottom)
- Solder Mask: Double
- LPI color: Blue
- PCB Thickness : 1.64 mm
- Number of Electrical Layers : 2

3. Power Board 1 and 2 (Qty: 1 pair)

- includes board fabrication and component assembly
- includes component sourcing based on BOM
- gerber and BOM files are available upon request
- must pass based on testing procedure submitted

3.1. PCB

- Dimension: 24.4mm x 64.2mm
- Material: FR-4
- Silkscreen: White (Top and bottom)
- Solder Mask: Double
- LPI color: Green
- PCB Thickness : 1.64 mm
- Number of Electrical Layers : 2

Qty breakdown:

- 1 pair = 1 pc of Power Board 1 and 2

4. Pressure Module Board

Specs :

- includes board fabrication and component assembly
- includes component sourcing based on BOM

- gerber and BOM files are available upon request.
- must pass based on testing procedure submitted

PCB:

- Dimension: 20.32mm x 20.32mm
- Material: FR-4
- Silkscreen: White (Top and bottom)
- Solder Mask: Double
- LPI color: Blue
- PCB Thickness : 1.64 mm
- Number of Electrical Layers : 2

C. Enclosure (Qty: 1 pc)

- fabrication of customized casing for the datalogger based on drawing design
- includes fabrication of saddle clamps and lock bars based on drawing design
- includes industrial design for the tooling
- materials: weatherproof and UV-resistant
- ingress protection: IP67

D. Assembly and Testing

- includes all assembly and integration of boards, enclosure/mechanical fixtures, solar panels and sensors
- includes functional testing and must pass based on end-user's testing procedure (generate individual test report from test

XII. 30 W Solar Panel

- Type: Mono-crystalline Solar Module

A. Electrical Specs.

- Peak Power : at least 25 W
- Cell Efficiency : 14.02 % (min)
- Max. power voltage (Vmp) : 17.56 V (min)
- Max. power current (Imp) : 1.42 A (min)
- V (open circuit) : 21.16 V
- I (short circuit) : 1.64 A
- Max system voltage: 600 V

B. Mechanical system specs.

- Dimensions: 450x541x25 mm
- Weight: 2.9 kg (6.19 lbs.)
- No. of cells: 36 in series (4x9)
- Construction: High transmission low-iron tempered glass,EVA,TPT
- Frame: Anodized Aluminium

C. Module warranty:

- 25-yr limited warranty of 80% power output
- 10-yr limited warranty of 90% power output
- 5-yr limited warranty of materials and workmanship
- Manufacturer of the module must have the necessary ISO certification

XIII. Configuration

- 8 units with ARG Configuration
- 2 units with TANDEM Configuration
- 4 units with WLMS configuration
- 2 units with Alerting Station Configuration
- 1 unit with Agromet Configuration

Notes:

- Items 1 to 10 will be assembled according to the end user's drawing.
- At least 1 year warranty for parts and services

	<ul style="list-style-type: none"> - Assembled units shall be delivered to ASTI - End-user shall request for a demonstration of one working unit with the winning bidder before actual delivery/production of the remaining items - Items must be compatible with ASTI-arQ Datalogger - Price inclusive of government fees, taxes and duties - Delivery: 45 days upon receipt of NTP 				
2	<p>Rain Gauge 3 units charged to DOST RO IX 1 unit charged to DOST MIMAROPA 2 units charged to LGU-Tabaco 1 unit charged to LGU-Roxas 1 unit charged to LGU-Mafalag 1 unit charged to LGU-Tiwi 1 unit charged to DOST MIMAROPA ARG</p> <p>A. General Specifications</p> <ul style="list-style-type: none"> - Sensor Type: Self-emptying tipping bucket, patented single spoon - Spoon Material: Polyoxymethylene (POM) engineering thermoplastic - Housing Material: STYROSUN, UV radiation, heat and frost resistant, moulded modified high-impact polystyrene - Dimensions: Orifice: 31 in2 (200 cm2), Inside Diameter: 6.3" (159.6 mm), Outside Diameter: 6.5" (165mm) - Splash room height including bottom: 6.7 inch (170mm) - Weight: 342g to 418g <p>B. Output Interface</p> <ul style="list-style-type: none"> - Normally Closed and Normally Open magnetic switches - 4 connections / 2 outlets - 2 reed switches - Resolution per tip: 0.5 mm - designed to meet the guidelines of the World Meteorological Organization - with single adjustment screw for easy calibration <p>C. Accessories</p> <ol style="list-style-type: none"> 1. One(1) unit customized cabling <ul style="list-style-type: none"> - customized 0.6 meter round cable pre-wired to rain collector with waterproof 2/3-pin M8/M10 connector termination 2. One(1) unit mating connector assembly for the cable above with the ff. specs: <ul style="list-style-type: none"> - panel mount, rear entry (to be placed on panel with 3-4mm wall thickness) - with soldered 8cm hook-up wires(#22AWG), multi-colored, stripped and tinned - waterproof, IP67 	10	unit	8000.00	80,000.00

	<p>3. One(1) pc bull's-eye bubble level (preferably built-in)</p> <p>D. Miscellaneous</p> <ul style="list-style-type: none"> - At least 2 years warranty for parts and services - Must be compatible with ASTI-ARQ datalogger <p>Notes:</p> <ul style="list-style-type: none"> - End-user may request for a demonstration with the winning bidder before the actual delivery - Winning bidder must provide two (2) samples of connectors of actual unit for approval by the end-user prior to delivery. If approved by end-user, one (1) sample will be retained as reference for the units to be delivered. - At least 2 years warranty for parts and services - Must be delivered to ASTI - Must be compatible to ASTI-ARQ datalogger - Delivery: 45 days upon receipt of NTP - Price is inclusive of government duties and taxes and other fees. 				
3.	<p>Mechanical Mountings for ARG</p> <p>2 lots charged to DOST RO IX 1 lot charged to DOST MIMAROPA 2 lots charged to LGU-Tabaco 1 lot charged to LGU-Malalag 1 lot charged to LGU-Tiwi 1 lot charged to DOST MIMAROPA ARG</p> <p>I. Solar Panel Holder and Bracket</p> <p>A. General Specifications</p> <ul style="list-style-type: none"> - Material: Stainless Steel - refer to attached drawing for full specifications - complete with stainless fasteners(u-bolts, washers, screws, nuts) - detailed manufacturing drawing with BOM must be submitted by supplier and approved by end-user before production - supplier must provide at least one(1) prototype design based on approved BOM - at least 1 year warranty - supplier should provide support under warranty period <p>B. Packaging</p> <ul style="list-style-type: none"> - all metal parts and fasteners must be properly assembled according to end-user's drawing - complete assembled parts must be properly packed <p>II. Enclosure Box Bracket</p> <p>A. General specifications</p> <ul style="list-style-type: none"> - Material: 1.5in x 1.5in Stainless Steel Angle Bar - refer to attached drawing for full specifications - complete with stainless fasteners (u-bolts, washers, screws, nuts) <p>B. Other requirements</p> <ul style="list-style-type: none"> - detailed manufacturing drawing with BOM will be submitted by end-user upon signing of a NDA. production - supplier must provide at least one (1) prototype 	8	lot	10000.00	80,000.00

	<p>design based on approved BOM and prototype must be approved by end-user before mass production</p> <ul style="list-style-type: none"> - at least 1 year warranty - supplier should provide support under warranty period <p>C. Packaging</p> <ul style="list-style-type: none"> - all metal parts and fasteners must be properly assembled according to end-user's drawing - complete assembled parts must be properly packed <p>III. Rain Gauge Bracket</p> <p>A. General Specifications</p> <ul style="list-style-type: none"> - refer to attached drawing - material: anodized aluminum, 2.25 thick (min) - complete with stainless fasteners(U-bolts, saddle clamps, hex bolts, washers, screws, nuts) <p>B. Other requirements</p> <ul style="list-style-type: none"> - detailed manufacturing drawing with BOM will be submitted by the end-user upon signing of an NDA - supplier must provide at least one prototype design based on approved BOM and prototype must be approved by the end-user before mass production - at least 1 year warranty - supplier should provide support under warranty period <p>C. Packaging</p> <ul style="list-style-type: none"> - all aluminum parts and fasteners (excluding U-bolts and clamps) must be properly assembled according to end-user's drawing - each set must be properly packed and delivered according to: <p>A. Rain bracket set</p> <p>B. U-bolt and saddle clamp set</p> <p>Notes:</p> <ul style="list-style-type: none"> - Prices inclusive of government fees, taxes and duties - Delivery: 45 days upon receipt of NTP 				
4	<p>Mechanical Mountings for WLMS</p> <p>1 lot charged to DOST MIMAROPA 2 lots charged to LGU-Tabaco 1 lot charged to LGU-Malalag</p> <p>1. General Station Mountings</p> <p>I. Solar Panel Holder and Bracket</p> <p>A. General Specifications</p> <ul style="list-style-type: none"> - Material: Stainless Steel - refer to attached drawing for full specifications - complete with stainless fasteners(u-bolts, washers, screws, nuts) - detailed manufacturing drawing with BOM will be submitted by the end-user upon signing of an NDA - supplier must provide at least one prototype design based on approved BOM and prototype must be approved by the end-user before mass production - at least 1 year warranty - supplier should provide support under warranty period <p>B. Packaging</p> <ul style="list-style-type: none"> - all metal parts and fasteners must be properly assembled according to end-user's drawing 	4	lot	10000.00	40,000.00

	<ul style="list-style-type: none"> - complete assembled parts must be properly packed II. Enclosure Box Bracket A. General specifications - Material: 1.5in x 1.5in Stainless Steel Angle Bar - refer to attached drawing for full specifications - complete with stainless fasteners (u-bolts, washers, screws, nuts) B. Other requirements - detailed manufacturing drawing with BOM will be submitted by the end-user upon signing of an NDA. - supplier must provide at least one prototype design based on approved BOM and prototype must be approved by the end-user before mass production. - at least 1 year warranty - supplier should provide support under warranty period C. Packaging - all metal parts and fasteners must be properly assembled according to end-user's drawing - complete assembled parts must be properly packed. 2. WLMS Mountings I. Water Level Sensor Housing and Bracket - housing material: anodized aluminum - bracket material: stainless steel with powder coating, thickness: 3mm - includes with the ff. stainless fasteners (individually packed in clear plastic per set) - 2 set of 5/16 inches (D) x 3 inches (H) hex bolts each with nuts, flat and lock washer - fabricated according to drawing (available upon request) - sample and detailed drawing with BOM must be submitted and must be approved before production - properly packed with label and boxed with corrugated carton II. Crossarm - material: hot-dipped galvanized, painted - to be fabricated according to drawing (available upon request) - all galvanization treatment must be class A - includes square clamps, brace clamps and z-channels Notes: - Prices inclusive of government fees, taxes and duties - Delivery: 45 days upon receipt of NTP 				
5	<p>Mechanical Mountings for Tandem 1 lot charged to DOST RO IX</p> <p>1. General Station Mountings</p> <p>I. Solar Panel Holder and Bracket</p> <p>A. General Specifications</p> <ul style="list-style-type: none"> - Material: Stainless Steel - refer to attached drawing for full specifications - complete with stainless fasteners(u-bolts, washers, screws, nuts) 	1	lot	10000.00	10,000.00

- detailed manufacturing drawing with BOM will be submitted by the end-user upon signing of an NDA
- supplier must provide at least one prototype design based on approved BOM and prototype must be approved by the end-user before mass production
- at least 1 year warranty
- supplier should provide support under warranty period

B. Packaging

- all metal parts and fasteners must be properly assembled according to end-user's drawing
- complete assembled parts must be properly packed

II. Enclosure Box Bracket

A. General specifications

- Material: 1.5in x 1.5in Stainless Steel Angle Bar
- refer to attached drawing for full specifications
- complete with stainless fasteners (u-bolts, washers, screws, nuts)

B. Other requirements

- detailed manufacturing drawing with BOM will be submitted by the end-user upon signing of an NDA
- supplier must provide at least one prototype design based on approved BOM and prototype must be approved by the end-user before mass production
- at least 1 year warranty
- supplier should provide support under warranty period

C. Packaging

- all metal parts and fasteners must be properly assembled according to end-user's drawing
- complete assembled parts must be properly packed

2. Tandem Mountings

I. Water Level Sensor Housing and Bracket

- housing material: anodized aluminum
- bracket material: stainless steel with powder coating, thickness: 3mm
- includes with the ff. stainless fasteners (individually packed in clear plastic per set)
- 2 set of 5/16 inches (D) x 3 inches (H) hex bolts each with nuts, flat and lock washer
- fabricated according to drawing (available upon request)
- sample and detailed drawing with BOM must be submitted and must be approved before production.
- properly packed with label and boxed with corrugated carton

II. Crossarm

- material: hot-dipped galvanized, painted
- to be fabricated according to drawing (available upon request)
- all galvanization treatment must be class A
- includes square clamps, brace clamps and z-channels

III. Rain Gauge Bracket

A. General Specifications

- refer to attached drawing
- material: anodized aluminum, 2.25 thick (min)

	<ul style="list-style-type: none"> - complete with stainless fasteners(U-bolts, saddle clamps, hex bolts, washers, screws, nuts) B. Other requirements <ul style="list-style-type: none"> - detailed manufacturing drawing with BOM will be submitted by the end-user upon signing of an NDA - supplier must provide at least one prototype design based on approved BOM and prototype must be approved by the end-user before mass production - at least 1 year warranty - supplier should provide support under warranty period C. Packaging <ul style="list-style-type: none"> - all aluminum parts and fasteners (excluding U-bolts and clamps) must be properly assembled according to end-user's drawing - each set must be properly packed and delivered according to: <ul style="list-style-type: none"> A. Rain bracket set B. U-bolt and saddle clamp set <p>Notes:</p> <ul style="list-style-type: none"> - Prices inclusive of government fees, taxes and duties - Delivery: 45 days upon receipt of NTP 				
6	<p>Mechanical Mountings for Alerting Station 2 lots charged to LGU-Tabaco</p> <p>1. General Station Mountings I. Solar Panel Holder and Bracket A. General Specifications</p> <ul style="list-style-type: none"> - Material: Stainless Steel - refer to attached drawing for full specifications - complete with stainless fasteners(u-bolts, washers, screws, nuts) - detailed manufacturing drawing with BOM will be submitted by the end-user upon signing of an NDA - supplier must provide at least one prototype design based on approved BOM and prototype must be approved by the end-user before mass production - at least 1 year warranty - supplier should provide support under warranty period <p>B. Packaging</p> <ul style="list-style-type: none"> - all metal parts and fasteners must be properly assembled according to end-user's drawing - complete assembled parts must be properly packed <p>II. Enclosure Box Bracket A. General specifications</p> <ul style="list-style-type: none"> - Material: 1.5in x 1.5in Stainless Steel Angle Bar - refer to attached drawing for full specifications - complete with stainless fasteners (u-bolts, washers, screws, nuts) <p>B. Other requirements</p> <ul style="list-style-type: none"> - detailed manufacturing drawing with BOM will be submitted by the end-user upon signing of an NDA - supplier must provide at least one prototype design based on approved BOM and prototype must be approved by the end-user before mass production - at least 1 year warranty - supplier should provide support under warranty period 	2	lot	10000.00	20,000.00

	<p>C. Packaging</p> <ul style="list-style-type: none"> - all metal parts and fasteners must be properly assembled according to end-user's drawing - complete assembled parts must be properly packed <p>2. Alerting Station Mountings</p> <p>I. Beacon Cage</p> <ul style="list-style-type: none"> - Material: Stainless Steel Rod, 1/8" - complete with stainless fasteners(hex bolts, washers, screws, nuts) - refer to attached drawing <p>II. Beacon Cage base</p> <ul style="list-style-type: none"> - 1.2mm S.S. Sheet (304) - 2mm S.S. Sheet (304) - refer to attached drawing for full specifications <p>III. Electronic Siren Holder</p> <p>GENERAL:</p> <ul style="list-style-type: none"> - Material: Stainless Steel - refer to attached drawing for full specifications - complete with stainless fasteners(Hex bolts, washers, screws, nuts) <p>Notes:</p> <ul style="list-style-type: none"> - Prices inclusive of government fees, taxes and duties - Delivery: 45 days upon receipt of NTP 				
7	<p>Alerting Siren 6 units charged to LGU-Tabaco</p> <p>A. Features</p> <ul style="list-style-type: none"> - This alerting-siren enables the recording of any type of content such as voice or music that can be played back at CD quality output at SPL to 112dB(A) at 1 metre. This content can be reproduced repeatedly, alternating with or without one of the built-in 45 alarm tones. The alarm tone notification has an output of up to 126dB(A) at 1 metre. For multiple unit installations the recording process is only required once to create a master unit which can then be used to program all other units on the system, guaranteeing synchronisation during playback, using the supplied 'Synch' cable. <p>B. Specifications</p> <ul style="list-style-type: none"> - Voice content output: 111dB(A) @ 1 metre (min) - Music content output: 112dB(A) @ 1 metre (min) - Alarm tone output: 126dB(A) @ 1 metre (min) - No. of alarm tones: 45 (UKOOA/PFEER compliant) - No. of messages: 4 (30 seconds each) (min) - Volume controls: Independent controls for user recorded content and built-in alarm tones - Effective range: 300m @ 1KHz (min) - Voltages DC: 12-30Vdc - Ingress protection: Type 4 / 4X / 3R / 13, IP66 - Rating: Continuous - Housing material: UL94V0 & 5VA FR ABS - Housing colour: RAL3000 Red or RAL7038 Red - Fixings: Stainless Steel - Cable entries: 2 x M20 clearance gland entries - Terminals: 0.5 to 2.5mm² - Operating temp: -25° to +55°C 	6	unit	16000.00	96,000.00

	<ul style="list-style-type: none"> - Storage temp: -40° to +70°C - Relative humidity: 90% at 20°C - Weight : DC: 2.10kg - At least 2 years of warranty <p>Notes:</p> <ul style="list-style-type: none"> - End-user may request for a demonstration with the winning bidder before the actual delivery. - Winning bidder must provide two (2) samples of connectors of actual unit for approval by the end-user prior to delivery. If approved by end-user, one (1) sample will be retained as reference for the units to be delivered. - Must be delivered to ASTI - Must be compatible to ASTI-ARQ datalogger - Delivery: Thirty (45) days upon issuance of NTP- - Delivery: 45 days upon receipt of NTP, <p>Price is inclusive of government duties and taxes and other fees.</p>				
8	<p>Beacon 2 units charged to LGU-Tabaco</p> <ul style="list-style-type: none"> - Bright LED Beacon with low power consumption - Multi-Voltage: 12VDC / 24VDC - Current Rating (maximum) : 230mA / 110mA - Flash Rate (per Minute) : 65 - Flash Pattern : 6 burst per flash - Diameter : 147mm - Length / Height :160mm - IP Rating : IP65 - Colour : Red - Operating Temp : -20°C to + 50°C - At least one year warranty <p>Notes:</p> <ul style="list-style-type: none"> - End-user may request for a demonstration with the winning bidder before the actual delivery. - Winning bidder must provide two (2) samples of connectors of actual unit for approval by the end-user prior to delivery. If approved by end-user, one (1) sample will be retained as reference for the units to be delivered. - Must be delivered to ASTI - Must be compatible to ASTI-ARQ datalogger - Delivery: 45 days upon receipt of NTP - Price is inclusive of government duties and taxes and other fees. 	2	unit	9000.00	18,000.00
9	<p>Mechanical Mountings for Agromet Charged to Apayao</p> <p>1. General Station Mountings I. Solar Panel Holder and Bracket. A. General Specifications</p> <ul style="list-style-type: none"> - Material: Stainless Steel - refer to attached drawing for full specifications - complete with stainless fasteners(u-bolts, washers, screws, nuts) 	1	lot	10000.00	10,000.00

	<ul style="list-style-type: none"> - detailed manufacturing drawing with BOM will be submitted by the end-user upon signing of an NDA - supplier must provide at least one prototype design based on approved BOM and prototype must be approved by the end-user before mass production - at least 1 year warranty - supplier should provide support under warranty period <p>B. Packaging</p> <ul style="list-style-type: none"> - all metal parts and fasteners must be properly assembled according to end-user's drawing - complete assembled parts must be properly packed <p>II. Enclosure Box Bracket</p> <p>A. General specifications</p> <ul style="list-style-type: none"> - Material: 1.5in x 1.5in Stainless Steel Angle Bar - refer to attached drawing for full specifications - complete with stainless fasteners (u-bolts, washers, screws, nuts) <p>B. Other requirements</p> <ul style="list-style-type: none"> - detailed manufacturing drawing with BOM will be submitted by the end-user upon signing of an NDA - supplier must provide at least one prototype design based on approved BOM and prototype must be approved by the end-user before mass production - at least 1 year warranty - supplier should provide support under warranty period <p>C. Packaging</p> <ul style="list-style-type: none"> - all metal parts and fasteners must be properly assembled according to end-user's drawing - complete assembled parts must be properly packed <p>2. Agromet Mountings</p> <p>I. Crossarm</p> <ul style="list-style-type: none"> - material: hot-dipped galvanized, painted - to be fabricated according to drawing (available upon request) - all galvanization treatment must be class A - includes square clamps, brace clamps and z-channels <p>Notes:</p> <ul style="list-style-type: none"> - Prices inclusive of government fees, taxes and duties - Delivery: 45 days upon receipt of NTP 				
10	<p>Mechanical Mountings Charged to LGU-Roxas</p> <p>1. General Station Mountings</p> <p>I. Solar Panel Holder and Bracket</p> <p>A. General Specifications</p> <ul style="list-style-type: none"> - Material: Stainless Steel - refer to attached drawing for full specifications - complete with stainless fasteners(u-bolts, washers, screws, nuts) - detailed manufacturing drawing with BOM will be submitted by the end-user upon signing of an NDA - supplier must provide at least one prototype design based on approved BOM and prototype must be approved by the end-user before mass production - at least 1 year warranty - supplier should provide support under warranty period 	1	lot	10000.00	10,000.00

B. Packaging

- all metal parts and fasteners must be properly assembled

according to end-user's drawing

- complete assembled parts must be properly packed

II. Enclosure Box Bracket

A. General specifications

- Material: 1.5in x 1.5in Stainless Steel Angle Bar

- refer to attached drawing for full specifications

- complete with stainless fasteners (u-bolts, washers, screws, nuts)

B. Other requirements

- detailed manufacturing drawing with BOM will be submitted by the end-user upon signing of an NDA

- supplier must provide at least one prototype design based on approved BOM and prototype must be approved by the end-user before mass production

- at least 1 year warranty

- supplier should provide support under warranty period

C. Packaging

- all metal parts and fasteners must be properly assembled

according to end-user's drawing

- complete assembled parts must be properly packed

2. Tandem Mountings

I. Water Level Sensor Housing and Bracket

- housing material: anodized aluminum

- bracket material: stainless steel with powder coating, thickness:

3mm

- includes with the ff. stainless fasteners (individually packed in clear plastic per set)

- 2 set of 5/16 inches (D) x 3 inches (H) hex bolts each with nuts,

flat and lock washer

- fabricated according to drawing (available upon request)

- sample and detailed drawing with BOM must be submitted and

must be approved before production

- properly packed with label and boxed with corrugated carton

II. Crossarm

- material: hot-dipped galvanized, painted

- to be fabricated according to drawing (available upon request)

- all galvanization treatment must be class A

- includes square clamps, brace clamps and z-channels

III. Rain Gauge Bracket

A. General Specifications

- refer to attached drawing

- material: anodized aluminum, 2.25 thick (min)

- complete with stainless fasteners(U-bolts, saddle clamps, hex

bolts, washers, screws, nuts)

B. Other requirements

- detailed manufacturing drawing with BOM will be submitted by the end-user upon signing of an NDA

- supplier must provide at least one prototype design

	<p>based on approved BOM and prototype must be approved by the end-user before mass production</p> <ul style="list-style-type: none"> - at least 1 year warranty - supplier should provide support under warranty period <p>C. Packaging</p> <ul style="list-style-type: none"> - all aluminum parts and fasteners (excluding U-bolts and clamps) must be properly assembled according to end-user's drawing - each set must be properly packed and delivered according to: <p>A. Rain bracket set B. U-bolt and saddle clamp set</p> <p>Notes:</p> <ul style="list-style-type: none"> - Prices inclusive of government fees, taxes and duties - Delivery: 45 days upon receipt of NTP 				
11	<p>Sunshine Duration Sensor Charged to Apayao</p> <p>A. General: Measures solar radiation through a high quality glass tube No moving parts uses 3 photo-diodes with specially designed diffusers operates from 12 VDC power and has two levels of built-in heating to dissipate rain, snow and frost</p> <p>Specification Spectral range: 400 to 1100 nm Operating temperature range: -40 to +70 °C Sunshine signal: 1 ±0.1 V (direct radiation > 120 W/m²) Accuracy: > 90% (monthly sunshine hours) Accuracy : > 90% (direct signal for clear sky) Analogue output signal : 1 mV/Wm² Non-stability: < 2 % change per year Temperature dependence: < 0.1 %/ °C Response time: < 1 m s Power supply: 12 VDC</p> <p>B. Accessories:</p> <ol style="list-style-type: none"> 1. Shielded 3meters M8 cable, connectors on both ends 2. Mating connector assembly for the cable above with the ff. specs: - panel mount, rear entry (to be placed on panel with 3mm wall thickness) - with soldered hook-up wires, multi-colored(same colors as for the cable) - waterproof, IP67 **supplier must provide detailed mechanical drawing and datasheet of the connectors for approval by the end-user prior to production 3. Must include drying Two(2) pcs Drying Cartridges good for three(3) years 	1	unit	165000.00	165,000.00

<p>4. Detailed Operation and Installation Manual</p> <p>C. Maintenance: - Supplier should provide quote for factory recalibration - Supplier should provide provision for 24-hour response time and Thirty(30) calendar days turn around time for repair services</p> <p>D. Notes: 1. End-user may request for a demonstration with the Least Calculated Bid (LCB) / Single Calculated Bid (SCB) during post-qualification. 2. Supplied with comprehensive, traceable, calibration certificates 3. At least 2 years warranty of parts and services 4. Must be delivered to ASTI 5. Must be compatible to ASTI-ARQ datalogger Firmware 3.0 and latter</p> <p>E. Others: - Delivery: 45 days upon receipt of NTP 2. Price is inclusive of government duties and taxes and other fees. 3. Payment upon full delivery</p>				
TOTAL APPROVED BUDGET FOR THE CONTRACT (ABC):				Php 1,209,000.00
RESERVATION CLAUSE				
The Advanced Science and Technology Institute reserves the right to accept or reject any proposal, to annul the bidding process, and to reject all proposals at any time prior to contract award, without thereby incurring any liability to the affected proponent or proponents.				