Republic of the Philippines
CIVIL AVIATION AUTHORITY OF THE PHILIPPINES
MIA Road, Pasay City

Purchase/Installation of Meteorological Instruments for Various Airports (Single Site) CY2024

Bid No. 24-080-10 BRAVO

Government of the Republic of the Philippines

DATE

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Glossary of Acronyms, Terms, and Abbreviations

ABC – Approved Budget for the Contract.

BAC – Bids and Awards Committee.

Bid – A signed offer or proposal to undertake a contract submitted by a bidder in response to and in consonance with the requirements of the bidding documents. Also referred to as *Proposal* and *Tender*. (2016 revised IRR, Section 5[c])

Bidder – Refers to a contractor, manufacturer, supplier, distributor and/or consultant who submits a bid in response to the requirements of the Bidding Documents. (2016 revised IRR, Section 5[d])

Bidding Documents – The documents issued by the Procuring Entity as the bases for bids, furnishing all information necessary for a prospective bidder to prepare a bid for the Goods, Infrastructure Projects, and/or Consulting Services required by the Procuring Entity. (2016 revised IRR, Section 5[e])

BIR – Bureau of Internal Revenue.

BSP – Bangko Sentral ng Pilipinas.

Consulting Services – Refer to services for Infrastructure Projects and other types of projects or activities of the GOP requiring adequate external technical and professional expertise that are beyond the capability and/or capacity of the GOP to undertake such as, but not limited to: (i) advisory and review services; (ii) pre-investment or feasibility studies; (iii) design; (iv) construction supervision; (v) management and related services; and (vi) other technical services or special studies. (2016 revised IRR, Section 5[i])

CDA - Cooperative Development Authority.

Contract – Refers to the agreement entered into between the Procuring Entity and the Supplier or Manufacturer or Distributor or Service Provider for procurement of Goods and Services; Contractor for Procurement of Infrastructure Projects; or Consultant or Consulting Firm for Procurement of Consulting Services; as the case may be, as recorded in the Contract Form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.

CIF – Cost Insurance and Freight.

CIP – Carriage and Insurance Paid.
CPI – Consumer Price Index.

DDP – Refers to the quoted price of the Goods, which means "delivered duty paid."

DTI – Department of Trade and Industry.

EXW – Ex works.

FCA – "Free Carrier" shipping point.

FOB – "Free on Board" shipping point.

Foreign-funded Procurement or Foreign-Assisted Project– Refers to procurement whose funding source is from a foreign government, foreign or international financing institution as specified in the Treaty or International or Executive Agreement. (2016 revised IRR, Section 5[b]).

Framework Agreement – Refers to a written agreement between a procuring entity and a supplier or service provider that identifies the terms and conditions, under which specific purchases, otherwise known as "Call-Offs," are made for the duration of the agreement. It is in the nature of an option contract between the procuring entity and the bidder(s) granting the procuring entity the option to either place an order for any of the goods or services identified in the Framework Agreement List or not buy at all, within a minimum period of one (1) year to a maximum period of three (3) years. (GPPB Resolution No. 27-2019)

GFI – Government Financial Institution.

GOCC – Government-owned and/or –controlled corporation.

Goods – Refer to all items, supplies, materials and general support services, except Consulting Services and Infrastructure Projects, which may be needed in the transaction of public businesses or in the pursuit of any government undertaking, project or activity, whether in the nature of equipment, furniture, stationery, materials for construction, or personal property of any kind, including non-personal or contractual services such as the repair and maintenance of equipment and furniture, as well as trucking, hauling, janitorial, security, and related or analogous services, as well as procurement of materials and supplies provided by the Procuring Entity for such services. The term "related" or "analogous services" shall include, but is not limited to, lease or purchase of office space, media advertisements, health maintenance services, and other services essential to the operation of the Procuring Entity. (2016 revised IRR, Section 5[r])

GOP – Government of the Philippines.

GPPB – Government Procurement Policy Board.

INCOTERMS – International Commercial Terms.

Infrastructure Projects – Include the construction, improvement, rehabilitation, demolition, repair, restoration or maintenance of roads and bridges, railways, airports, seaports, communication facilities, civil works components of information technology projects, irrigation, flood control and drainage, water supply, sanitation, sewerage and solid waste management systems, shore protection, energy/power and electrification facilities, national buildings, school buildings, hospital buildings, and other related construction projects of the government. Also referred to as *civil works or works*. (2016 revised IRR, Section 5[u])

LGUs – Local Government Units.

NFCC – Net Financial Contracting Capacity.

NGA – National Government Agency.

PhilGEPS - Philippine Government Electronic Procurement System.

Procurement Project – refers to a specific or identified procurement covering goods, infrastructure project or consulting services. A Procurement Project shall be described, detailed, and scheduled in the Project Procurement Management Plan prepared by the agency which shall be consolidated in the procuring entity's Annual Procurement Plan. (GPPB Circular No. 06-2019 dated 17 July 2019)

PSA – Philippine Statistics Authority.

SEC – Securities and Exchange Commission.

SLCC – Single Largest Completed Contract.

Supplier – refers to a citizen, or any corporate body or commercial company duly organized and registered under the laws where it is established, habitually established in business and engaged in the manufacture or sale of the merchandise or performance of the general services covered by his bid. (Item 3.8 of GPPB Resolution No. 13-2019, dated 23 May 2019). Supplier as used in these Bidding Documents may likewise refer to a distributor, manufacturer, contractor, or consultant.

UN – United Nations.

Section I. Invitation to Bid

Republic of the Philippines
Civil Aviation Authority of The Philippines
Bids and Awards Committee

INVITATION TO BID FOR
Purchase/Installation of Meteorological Instruments for Various Airports (Single Site)
Bid No. 24-080-10 (Bravo)

1. The **Civil Aviation Authority of the Philippines (CAAP)**, through the ***CAAP Corporate Budget CY2025*** intends to apply the sum of **Php 42,404,490.07** being the Approved Budget for the Contract (ABC) to payments under the contract for the ***Purchase/Installation of Meteorological Instruments for Various Airports (Single Site).*** Bids received in excess of the ABC shall be automatically rejected at bid opening. The following are the ANFs/Airports considered for this project.

ANFs/Airports	Meteorological Weather Sensors and Displays	Data Collection and Telemetry Systems	Meteorological Equipment Power Source	Frangible Meteorological Mast	Power Cable Provision and Civil Works
Jolo	1	1	1	1	1
Sanga-Sanga	1	1	1	1	1
Siargao	1	1	1	1	1
Surigao	1	1	1	1	1

Meteorological Weather Sensors and Displays	*Aviation wind speed and wind direction sensors, temperature and relative humidity sensors with radiation shield, pressure sensor, DOST-PAGASA Certification of Meteorological Sensors, data and wind panel displays, other ancillaries*
Data Collection and Telemetry Systems	*Meteorological Data Collection System including data logging system with NEMA 4 (or equivalent) rating steel enclosure, lightning arrester, surge protection device and ancillaries, mounting hardware, mounting kits and accessories, UHF Radio Transceivers/Modems, UHF frequency license, UHF Directional Antennas, antenna cable, lightning arrester, surge protection device and other ancillaries*
Meteorological Equipment Power Source	*Solar Photovoltaic System as main power source,12Vdc/52Ah (minimum) batteries, battery regulator or equivalent, battery fuse and over-voltage protection device, AC/DC power supply, surge protection device, other ancillaries*
Frangible Meteorological Mast	*10 meters Frangible Meteorological Mast, foundation kits with plywood box, provision for lightning rod, Passive Lightning Rod, LED Obstacle Lights, Universal Mounting Arm for wind sensors, Accessories, connectors and mounting kits*
Spare Parts	*MET Spare Parts for Jolo, Sanga-Sanga, Siargao & Surigao Airports: Data panel display, Wind panel display, UHF Radio Transceivers/Modem, Lightning arrester complete with Surge protection device, cabling, Accessories, Connectors & Mounting Kits*
Power Cable Provision and Civil Works	*Direct Earth Burial (DEB) power cable and Civil works for the cable installation (involving Excavation, Cable-Laying, Sand bedding, Backfilling/compacting jobs)*

2. The **CAAP** now invites bids for the ***Supply, Delivery, Installation/Integration, Training and Testing of Meteorological Instruments for Various Airports (Single Site).*** Delivery of the goods is required *within 365 calendar days*. Bidders should have completed, within *five (5) years* from the date of submission and receipt of bids, a contract similar to the Project. The description of an eligible bidder is contained in the Bidding Documents, particularly, in Section II. Instructions to Bidders.

3. Bidding will be conducted through open competitive bidding procedures using a non-discretionary "pass/fail" criterion as specified in the 2016 Revised Implementing Rules and Regulations (IRR) of Republic Act (RA) 9184.

   Bidding is restricted to Filipino citizens/sole proprietorships, partnerships, or organizations with at least sixty percent (60%) interest or outstanding capital stock belonging to citizens of the Philippines, and to citizens or organizations of a country the laws or regulations of which grant similar rights or privileges to Filipino citizens, pursuant to RA 5183.

4. Interested bidders may obtain further information from CAAP and inspect the Bidding Documents at the address given during **8:00am to 5pm at the BAC Office – Civil Aviation Authority of the Philippines (CAAP), MIA Road, Pasay City, 1300.**

5. A complete set of Bidding Documents may be acquired by interested Bidders on **16 October 2024 until the deadline of submission of bids** from the address below and upon payment of the applicable fee for the Bidding Documents, pursuant to the latest Guidelines issued by the GPPB, in the amount of **Php 25,000.00** (exclusive of any and all taxes imposed by relevant government agencies). The Procuring Entity shall allow the bidder to present its proof of payment for the fees presenting the Official Receipt.

   It may also be downloaded free of charge from the website of the Philippine Government Electronic Procurement System (PhilGEPS) **https://www.philgeps.gov.ph/** and the website of the Procuring Entity, provided that Bidders shall pay the applicable fee for the Bidding Documents not later than the submission of their bids.

6. The Civil Aviation Authority of the Philippines will hold a Pre-Bid Conference at **23 October 2024 @ 9:30 AM** through via Zoom/Google Meet, which shall be open to prospective bidders.

7. Bids must be duly received by the BAC Secretariat through manual submission at *Civil Aviation Authority of the Philippines*, on or before ***04*** **November 2024 @ 9:30 AM**. Late bids shall not be accepted.

8. All Bids must be accompanied by a bid security in any of the acceptable forms and in the amount stated in **ITB** Clause 14.

9. Bid opening shall be at **04 November 2024 @ 9:30 AM,** at **Civil Aviation Authority of the Philippines.** Bids will be opened in the presence of the bidders' representatives who choose to attend the activity.

10. The **Civil Aviation Authority of the Philippines** reserves the right to reject any and all bids, declare a failure of bidding, or not award the contract at any time prior to contract award in accordance with Sections 35.6 and 41 of the 2016 revised IRR of RA No. 9184, without thereby incurring any liability to the affected bidder or bidders.

11. Upon payment of the bid documents, bidders must provide their respective email addresses to the BAC Secretariat. All communications, including but not limited to Notices, Resolutions, and Replies, among others, will be sent to the email address provided by the bidder/s. The date when such email was sent shall be considered the date of receipt of the bidder/s for purposes of complying with the requirements under RA 9184.

12. Bidders must also check the PhilGEPS website, CAAP website, and BAC Secretariat for any bid bulletins and announcements related to the bidding.

13. For further information, please refer to:

ENGR. LEANDRO R. VARQUEZ
Head, BAC Secretariat
3rd Floor Supply, Procurement Buillding
Civil Aviation Authority of the Philippines
BAC Head-Secretariat
MIA Road, Pasay City
Telefax No.:(02) 8246-4988 loc. 2236
Email: **bac@caap.gov.ph**
www.caap.gov.ph

ATTY. DANJUN G. LUCAS
Chairman, Bids and Awards Committee (Bravo)

Section II. Instructions to Bidders

1. Scope of Bid

The Procuring Entity, **Civil Aviation Authority of the Philippines** wishes to receive Bids for the ***Purchase/Installation of Meteorological Instruments for Various Airports (Dual Site)***, with identification number BID NO. **24-080-10 BRAVO.**

2. Funding Information

2.1. The GOP through the source of funding as indicated below for **CY2025** in the amount of **Php 42,404,490.07**.

2.2. The source of funding is:

Supplemental **Corporate Operating Budget for CY2024 APP** item No. **10603050-2237**

3. Bidding Requirements

The Bidding for the Project shall be governed by all the provisions of RA No. 9184 and its 2016 revised IRR, including its Generic Procurement Manuals and associated policies, rules and regulations as the primary source thereof, while the herein clauses shall serve as the secondary source thereof.

Any amendments made to the IRR and other GPPB issuances shall be applicable only to the ongoing posting, advertisement, or **IB** by the BAC through the issuance of a supplemental or bid bulletin.

The Bidder, by the act of submitting its Bid, shall be deemed to have verified and accepted the general requirements of this Project, including other factors that may affect the cost, duration and execution or implementation of the contract, project, or work and examine all instructions, forms, terms, and project requirements in the Bidding Documents and in the BDS.

4. Corrupt, Fraudulent, Collusive, and Coercive Practices

The Procuring Entity, as well as the Bidders and Suppliers, shall observe the highest standard of ethics during the procurement and execution of the contract. They or through an agent shall not engage in corrupt, fraudulent, collusive, coercive, and obstructive practices defined under Annex "I" of the 2016 revised IRR of RA No. 9184 or other integrity violations in competing for the Project.

5. Eligible Bidders

5.1. Only Bids of Bidders found to be legally, technically, and financially capable will be evaluated.

5.2. Foreign ownership limited to those allowed under the rules may participate in this Project.

5.3. Pursuant to Section 23.4.1.3 of the 2016 revised IRR of RA No.9184, the Bidder shall have an SLCC that is at least one (1) contract similar to the Project the value of which, adjusted to current prices using the PSA's CPI, must be at least equivalent to:

For the procurement of Non-expendable Supplies and Services: The Bidder must have completed a single contract that is similar to this Project, equivalent to at least fifty percent (50%) of the ABC specified in **BDS**.

5.4. The Bidders shall comply with the eligibility criteria under Section 23.4.1 of the 2016 IRR of RA No. 9184.

6. Origin of Goods

There is no restriction on the origin of goods other than those prohibited by a decision of the UN Security Council taken under Chapter VII of the Charter of the UN, subject to Domestic Preference requirements under **ITB** Clause 18.

7. Subcontracts

7.1. The Bidder may subcontract portions of the Project to the extent allowed by the Procuring Entity as stated herein, but in no case more than twenty percent (20%) of the Project.

The Procuring Entity has prescribed that:

a. Subcontracting is allowed. The portions of Project and the maximum percentage allowed to be subcontracted are indicated in the **BDS**, which shall not exceed twenty percent (20%) of the contracted Goods.

7.2. The Bidder must submit together with its Bid the documentary requirements of the subcontractor(s) complying with the eligibility criteria stated in **ITB** Clause 5 in accordance with Section 23.4 of the 2016 revised IRR of RA No. 9184 pursuant to Section 23.1 thereof.

7.3. The Supplier may identify its subcontractor during the contract implementation stage. Subcontractors identified during the bidding may be changed during the implementation of this Contract. Subcontractors must submit the documentary requirements under Section 23.1 of the 2016 revised IRR of RA No. 9184 and comply with the eligibility criteria specified in **ITB** Clause 5 to the implementing or end-user unit.

7.4. Subcontracting of any portion of the Project does not relieve the Supplier of any liability or obligation under the Contract. The Supplier will be responsible for the acts, defaults, and negligence of any subcontractor, its agents, servants, or workmen as fully as if these were the Supplier's own acts, defaults, or negligence, or those of its agents, servants, or workmen.

8. Pre-Bid Conference

The Procuring Entity will hold a pre-bid conference for this Project on the specified date and time and either at CAAP address and/or through videoconferencing / webcasting as indicated in paragraph 6 of the **IB.**

9. Clarification and Amendment of Bidding Documents

Prospective bidders may request for clarification on and/or interpretation of any part of the Bidding Documents. Such requests must be in writing and received by the Procuring Entity, either at its given address or through electronic mail indicated in the **IB**, at least ten (10) calendar days before the deadline set for the submission and receipt of Bids.

10. Documents comprising the Bid: Eligibility and Technical Components

10.1. The first envelope shall contain the eligibility and technical documents of the Bid as specified in **Section VIII (Checklist of Technical and Financial Documents)** and **BDS**.

10.2. The Bidder's SLCC as indicated in **ITB** Clause 5.3 should have been completed within *5 years* prior to the deadline for the submission and receipt of bids.

10.3. If the eligibility requirements or statements, the bids, and all other documents for submission to the BAC are in foreign language other than English, it must be accompanied by a translation in English, which shall be authenticated by the appropriate Philippine foreign service establishment, post, or the equivalent office having jurisdiction over the foreign bidder's affairs in the Philippines. Similar to the required authentication above, for Contracting Parties to the Apostille Convention, only the translated documents shall be authenticated through an apostille pursuant to GPPB Resolution No. 13-2019 dated 23 May 2019. The English translation shall govern, for purposes of interpretation of the bid.

11. Documents comprising the Bid: Financial Component

11.1. The second bid envelope shall contain the financial documents for the Bid as specified in **Section VIII (Checklist of Technical and Financial Documents)** and in **BDS**.

11.2. If the Bidder claims preference as a Domestic Bidder or Domestic Entity, a certification issued by DTI shall be provided by the Bidder in accordance with Section 43.1.3 of the 2016 revised IRR of RA No. 9184.

11.3. Any bid exceeding the ABC indicated in paragraph 1 of the **IB** shall not be accepted.

11.4. For Foreign-funded Procurement, a ceiling may be applied to bid prices provided the conditions are met under Section 31.2 of the 2016 revised IRR of RA No. 9184.

12. Bid Prices

12.1. Prices indicated on the Price Schedule shall be entered separately in the following manner:

a. For Goods offered from within the Procuring Entity's country:

i. The price of the Goods quoted EXW (ex-works, ex-factory, ex-warehouse, ex-showroom, or off-the-shelf, as applicable);

ii. The cost of all customs duties and sales and other taxes already paid or payable;

iii. The cost of transportation, insurance, and other costs incidental to delivery of the Goods to their final destination; and

iv. The price of other (incidental) services, if any, listed and specified in **BDS**.

b. For Goods offered from abroad:

i. Unless otherwise stated in the **BDS**, the price of the Goods shall be quoted delivered duty paid (DDP) with the place of destination in the Philippines as specified in the **BDS**. In quoting the price, the Bidder

shall be free to use transportation through carriers registered in any eligible country. Similarly, the Bidder may obtain insurance services from any eligible source country.

ii. The price of other (incidental) services, if any, as listed in **Section VII (Technical Specifications)** specified in **BDS.**

13. Bid and Payment Currencies

13.1. For Goods that the Bidder will supply from outside the Philippines, the bid prices may be quoted in the local currency or tradeable currency accepted by the BSP at the discretion of the Bidder. However, for purposes of bid evaluation, Bids denominated in foreign currencies, shall be converted to Philippine currency based on the exchange rate as published in the BSP reference rate bulletin on the day of the bid opening.

13.2. Payment of the contract price shall be made in:

Philippine Pesos.

14. Bid Security

14.1. The Bidder shall submit a Bid Securing Declaration or any form of Bid Security in the amount indicated in the **BDS**, which shall be not less than the percentage of the ABC in accordance with the schedule in the **BDS**.

14.2. The Bid and bid security shall be valid 120 calendar days from the date of the opening of bids and shall be callable on demand. Any Bid not accompanied by an acceptable bid security shall be rejected by the Procuring Entity as non-responsive.

15. Sealing and Marking of Bids

Each Bidder shall submit one copy of the first and second components of its Bid.

The Procuring Entity may request additional hard copies and/or electronic copies of the Bid. However, failure of the Bidders to comply with the said request shall not be a ground for disqualification.

If the Procuring Entity allows the submission of bids through online submission or any other electronic means, the Bidder shall submit an electronic copy of its Bid, which must be digitally signed. An electronic copy that cannot be opened or is corrupted shall be considered non-responsive and, thus, automatically disqualified.

16. Deadline for Submission of Bids

16.1. The Bidders shall submit on the specified date and time and either at its physical address or through online submission as indicated in *paragraph 7* of the **IB.**

17. Opening and Preliminary Examination of Bids

17.1. The BAC shall open the Bids in public at the time, on the date, and at the place specified in paragraph 9 of the **IB**. The Bidders' representatives who are present shall sign a register evidencing their attendance. In case of videoconferencing, webcasting or other similar technologies will be used, attendance of participants shall likewise be recorded by the BAC Secretariat.

In case the Bids cannot be opened as scheduled due to justifiable reasons, the rescheduling requirements under Section 29 of the 2016 revised IRR of RA No. 9184 shall prevail.

17.2. The preliminary examination of bids shall be governed by Section 30 of the 2016 revised IRR of RA No. 9184.

18. Domestic Preference

18.1. The Procuring Entity will grant a margin of preference for the purpose of comparison of Bids in accordance with Section 43.1.2 of the 2016 revised IRR of RA No. 9184.

19. Detailed Evaluation and Comparison of Bids

19.1. The Procuring BAC shall immediately conduct a detailed evaluation of all Bids rated "*passed*," using non-discretionary pass/fail criteria. The BAC shall consider the conditions in the evaluation of Bids under Section 32.2 of the 2016 revised IRR of RA No. 9184.

19.2. If the Project allows partial bids, bidders may submit a proposal on any of the lots or items, and evaluation will be undertaken on a per lot or item basis, as the case maybe. In this case, the Bid Security as required by **ITB** Clause 14 shall be submitted for each lot or item separately.

19.3. The descriptions of the lots or items shall be indicated in **Section VII (Technical Specifications)**, although the ABCs of these lots or items are indicated in the **BDS** for purposes of the NFCC computation pursuant to Section 23.4.2.6 of the 2016 revised IRR of RA No. 9184. The NFCC must be sufficient for the total of the ABCs for all the lots or items participated in by the prospective Bidder.

19.4. The Project shall be awarded as follows:

One Project having several items that shall be awarded as one contract.

19.5. Except for bidders submitting a committed Line of Credit from a Universal or Commercial Bank in lieu of its NFCC computation, all Bids must include the NFCC computation pursuant to Section 23.4.1.4 of the 2016 revised IRR of RA No. 9184, which must be sufficient for the total of the ABCs for all the lots or items participated in by the prospective Bidder. For bidders submitting the committed Line of Credit, it must be at least equal to ten percent (10%) of the ABCs for all the lots or items participated in by the prospective Bidder.

20. Post-Qualification

20.2. Within a non-extendible period of five (5) calendar days from receipt by the Bidder of the notice from the BAC that it submitted the Lowest Calculated Bid, the Bidder shall submit its latest income and business tax returns filed and paid through the BIR Electronic Filing and Payment System (eFPS) and other appropriate licenses and permits required by law and stated in the **BDS**.

21. Signing of the Contract

21.1. The documents required in Section 37.2 of the 2016 revised IRR of RA No. 9184 shall form part of the Contract. Additional Contract documents are indicated in the **BDS**.

Section III. Bid Data Sheet

Bid Data Sheet

ITB Clause	
5.3	For this purpose, similar contracts shall refer to: **Supply, Delivery, Installation/Integration, Testing of Meteorological Equipment.** Completed within last 5 years prior to the deadline for the submission and receipt of bids.
12.	The price of the Goods shall be quoted DDP sites defined in Section VI. Schedule of Requirements. In accordance with INCOTERMS."
12.1(a)(iv)	Incidental Services (for Goods offered from within Philippines) include but are not limited to the following: 1. All expenses for the processing of permits and licenses shall be part of the price schedule of the equipment. 2. Provision and installation of cables, grounding, surge protection and other additional or auxiliary electronic/electrical adapter, signal converters, connectors, components, fixtures, interface, fittings/mounting kits, cable management etc. for the different equipment to meet operational and functional requirements. Prices for these incidentals shall be incorporated to the equipment listed in the BOQ of the Schedule of Requirements to which it is primarily related. 3. Importation Licenses / Permits. 4. Civil/Electrical Engineering Services and Installation costs. 5. Training. 6. Project Management Services. 7. As-Built Plans and Drawings; and 8. Design Frangibility Certificate compliant to ICAO requirements (ICAO Doc. 9157, Part 6)
12.1(b)(ii)	Incidental Services (for Goods offered from abroad) include but are not limited to the following:

	1. Provision and installation of cables, grounding, surge protection and other additional or auxiliary electronic/electrical adapter, signal converters, connectors, components, fixtures, interface, fittings, cable management, etc. for the different equipment to meet operational and functional requirements. Prices for these incidentals shall be incorporated to the equipment listed in the BOQ of the Schedule of Requirements to which it is primarily related. 2. Export Licenses / Permits. 3. Engineering Services required for design & configurations. 4. Equipment Installation costs. 5. Training & related documents. 6. Related equipment tests. 7. Site Technical Training to be conducted by certified/authorized technical personnel from the Original Equipment Manufacturer (OEM). 8. Installation, Operational, Maintenance and other forms of Manuals, System & Circuit Diagrams, Equipment As-Built Plans and Drawings. 9. Design Frangibility Certificate compliant to ICAO requirements (ICAO Doc. 9157, Part 6)
14.1	The bid security shall be in the form of a Bid Securing Declaration, or any of the following forms and amounts: a. The amount of not less than ***Php 848,089.80***, if bid security is in cash, cashier's/manager's check, bank draft/guarantee or irrevocable letter of credit; or b. The amount of not less than ***Php 2,120,224.50,*** if bid security is in Surety Bond.
19.2	Partial Bid is not allowed. The goods are grouped in a single lot and the lot shall not be divided into sub-lots for the purpose of bidding, evaluation, and contract award.
20.2	A. The Contractor shall be responsible for securing all necessary permits and appropriate licenses (i.e. Electrical/Civil work Permits, Permit to Import, NTC, Security Pass, other local permits, etc.) from respective offices that may be necessary for the installation of the equipment at site. The cost of acquiring such permits including its processing shall be borne by the Contractor. B. Additional documents relevant to the project required by the CAAP to be submitted <u>during Post-Qualification</u>: 1. Certificate of Exclusive or Authorized Distributorship issued by the Original Equipment Manufacturer (OEM) of supplied equipment. 2. Valid ISO 9001 and 14001 Certificates (or its internationally recognized equivalent) of Company and Product. 3. Cash Flow by quarter
21.1	Additional Contract Documents: 1. A Certificate under oath attesting that the bidder has no pending case(s) against the Government;

	2. Legal Clearance to be issued by the CAAP Enforcement and Legal Service with respect to the non-pendency of any cases of prospective bidders against the Authority.

Section IV. General Conditions of Contract

1. Scope of Contract

This Contract shall include all such items, although not specifically mentioned, that can be reasonably inferred as being required for its completion as if such items were expressly mentioned herein. All the provisions of RA No. 9184 and its 2016 revised IRR, including the Generic Procurement Manual, and associated issuances, constitute the primary source for the terms and conditions of the Contract, and thus, applicable in contract implementation. Herein clauses shall serve as the secondary source for the terms and conditions of the Contract.

This is without prejudice to Sections 74.1 and 74.2 of the 2016 revised IRR of RA No. 9184 allowing the GPPB to amend the IRR, which shall be applied to all procurement activities, the advertisement, posting, or invitation of which were issued after the effectivity of the said amendment.

Additional requirements for the completion of this Contract shall be provided in the **Special Conditions of Contract** (**SCC).**

2. Advance Payment and Terms of Payment

2.1. Advance payment of the contract amount is provided under Annex "D" of the revised 2016 IRR of RA No. 9184.

2.2. The Procuring Entity is allowed to determine the terms of payment on the partial or staggered delivery of the Goods procured, provided such partial payment shall correspond to the value of the goods delivered and accepted in accordance with prevailing accounting and auditing rules and regulations. The terms of payment are indicated in the **SCC**.

3. Performance Security

Within ten (10) calendar days from receipt of the Notice of Award by the Bidder from the Procuring Entity but in no case later than prior to the signing of the Contract by both parties, the successful Bidder shall furnish the performance security in any of the forms prescribed in Section 39 of the 2016 revised IRR of RA No. 9184

4. Inspection and Tests

The Procuring Entity or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Project specifications at no extra cost to the Procuring Entity in accordance with the Generic Procurement Manual. In addition to tests in the **SCC**, **Section IV (Technical Specifications)** shall specify what inspections and/or tests the Procuring Entity requires, and where they are to be conducted. The Procuring Entity shall notify the Supplier in writing, in a timely manner, of the identity of any representatives retained for these purposes. All reasonable facilities and assistance for the inspection and testing of Goods, including access to drawings and production data, shall be provided by the Supplier to the authorized inspectors at no charge to the Procuring Entity.

5. Warranty

5.1. In order to assure that manufacturing defects shall be corrected by the Supplier, a warranty shall be required from the Supplier as provided under Section 62.1 of the 2016 revised IRR of RA No. 9184.

5.2. The Procuring Entity shall promptly notify the Supplier in writing of any claims arising under this warranty. Upon receipt of such notice, the Supplier shall, repair or replace

the defective Goods or parts thereof without cost to the Procuring Entity, pursuant to the Generic Procurement Manual.

6. Liability of the Supplier

The Supplier's liability under this Contract shall be as provided by the laws of the Republic of the Philippines.

If the Supplier is a joint venture, all partners to the joint venture shall be jointly and severally liable to the Procuring Entity.

Section V. Special Conditions of Contract

Special Conditions of Contract

GCC Clause	
1	**Delivery and Documents –**

	For purposes of the Contract, "EXW," "FOB," "FCA," "CIF," "CIP," "DDP" and other trade terms used to describe the obligations of the parties shall have the meanings assigned to them by the current edition of INCOTERMS published by the International Chamber of Commerce, Paris. The Delivery terms of this Contract shall be as follows: The delivery terms applicable to the Contract are DDP delivered at sites defined in Section VI. Schedule of Requirements. In accordance with INCOTERMS." The delivery terms applicable to this Contract are delivered *at sites defined in Section VI. Schedule of Requirements.* Risk and title will pass from the Supplier to the Procuring Entity upon receipt and final acceptance of the Goods at their final destination." Delivery of the Goods shall be made by the Supplier in accordance with the terms specified in Section VI. Schedule of Requirements. For purposes of this Clause the Procuring Entity's Representative at Project Sites are the respective **CAAP-ANS Facility-In-Charge *(or his designated authorized representative).*** **Incidental Services –** The Supplier is required to provide all of the following services, including additional services, if any, specified in ***Section VI. Schedule of Requirements***: a. performance or supervision of on-site assembly and/or start-up of the supplied Goods; b. furnishing of tools required for assembly and/or maintenance of the supplied Goods; c. furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied Goods; d. performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the Supplier of any warranty obligations under this Contract; and e. training of the Procuring Entity's personnel, at the Supplier's plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied Goods. The Contract price for the Goods shall include the prices charged by the Supplier for incidental services and shall not exceed the prevailing rates charged to other parties by the Supplier for similar services. **Spare Parts –** The Supplier is required to provide all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the Supplier:

	1. such spare parts as the Procuring Entity may elect to purchase from the Supplier, provided that this election shall not relieve the Supplier of any warranty obligations under this Contract; and 2. in the event of termination of production of the spare parts: i. advance notification to the Procuring Entity of the pending termination, in sufficient time to permit the Procuring Entity to procure needed requirements; and ii. following such termination, furnishing at no cost to the Procuring Entity, the blueprints, drawings, and specifications of the spare parts, if requested. The spare parts required are listed in ***Section VI. Schedule of Requirements*** and the cost thereof are included in the Contract Price The Supplier shall carry sufficient inventories to assure ex-stock supply of consumable spares for the Goods for a period of *ten (10) years.* Other spare parts and components shall be supplied as promptly as possible, but in any case, within **60 days** of placing the order. **Packaging –** The Supplier shall provide such packaging of the Goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in this Contract. The packaging shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage. Packaging case size and weights shall take into consideration, where appropriate, the remoteness of the GOODS' final destination and the absence of heavy handling facilities at all points in transit. The packaging, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the Contract, including additional requirements, if any, specified below, and in any subsequent instructions ordered by the Procuring Entity. The outer packaging must be clearly marked on at least four (4) sides as follows: Name of the Procuring Entity Name of the Supplier Contract Description Final Destination Gross weight Any special lifting instructions Any special handling instructions Any relevant HAZCHEM classifications A packaging list identifying the contents and quantities of the package is to be placed on an accessible point of the outer packaging if practical. If not practical the packaging list is to be placed inside the outer packaging but outside the secondary packaging. **Transportation –**

	Where the Supplier is required under Contract to deliver the Goods CIF, CIP or DDP, transport of the Goods to the port of destination or such other named place of destination in the Philippines, as shall be specified in this Contract, shall be arranged and paid for by the Supplier, and the cost thereof shall be included in the Contract Price. Where the Supplier is required under this Contract to transport the Goods to a specified place of destination within the Philippines, defined as the Project Site, transport to such place of destination in the Philippines, including insurance and storage, as shall be specified in this Contract, shall be arranged by the Supplier, and related costs shall be included in the Contract Price. Where the Supplier is required under Contract to deliver the Goods CIF, CIP or DDP, Goods are to be transported on carriers of Philippine registry. In the event that no carrier of Philippine registry is available, Goods may be shipped by a carrier which is not of Philippine registry provided that the Supplier obtains and presents to the Procuring Entity certification to this effect from the nearest Philippine consulate to the port of dispatch. In the event that carriers of Philippine registry are available but their schedule delays the Supplier in its performance of this Contract the period from when the Goods were first ready for shipment and the actual date of shipment the period of delay will be considered force majeure. The Procuring Entity accepts no liability for the damage of Goods during transit other than those prescribed by INCOTERMS for DDP Deliveries. In the case of Goods supplied from within the Philippines or supplied by domestic Suppliers risk and title will not be deemed to have passed to the Procuring Entity until their receipt and final acceptance at the final destination. **Intellectual Property Rights –** The Supplier shall indemnify the Procuring Entity against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the Goods or any part thereof.
4	*The inspections and tests to be conducted shall be the following:* *A. Verification/Inspection of meteorological equipment and conformity to Contract Specification;* *B. Verification/Inspection of frangible mast erection/tilting, direct burial power cable laying, trenching and backfilling;* *C. Periodic inspections at site, Commissioning, and SAT.*
5	The Contractor/Supplier shall warrant the entire equipment, assemblies, software and related integration/site works for *one (1) year **Defect Liability Period (DLP)** (parts and service) **plus** one (1) year **Warranty Period** (parts and service)*. *For (wind speed and wind direction sensors, temperature & relative humidity sensors with radiation shield, barometric pressure sensor, shielded connection cable, DOST-PAGASA Certification of meteorological sensors, accessories, etc., data and wind panel displays, other ancillaries, data logging system with NEMA 4 (or equivalent) rating steel enclosure, lightning arrester, surge protection device and ancillaries, mounting hardware, mounting kits and accessories, UHF Transceivers/Modems, UHF directional antenna systems, UHF antenna cable, lightning arrester, surge protection device and accessories, frequency licenses, accessories, connectors and mounting kits, Solar Photovoltaic system, 12Vdc/52Ah (minimum) batteries, battery regulator or equivalent, battery fuse and overvoltage protection device, AC/DC power supply, surge*

	protection device and other ancillaries, 10m frangible mast complete with foundation kits, passive lightning rod, LED obstruction lights, Universal Mounting Arm for wind sensors, accessories, connectors and mounting kits, Direct Earth Burial (DEB) power cable, etc.) with defects that occur within the Warranty Period and requiring the equipment to be shut down for repair/service, the Contractor/Supplier shall provide and install a service equipment with equivalent performance as temporary replacement of a defective equipment (stated above)/part in order to maintain continuous service to the Air Navigation Facility (ANF). The Contractor/Supplier shall describe the proposed support provisions within the DLP and Warranty period. The Contractor/Supplier shall submit an OEM issued guarantee that the availability of spare parts for the equipment supplied shall be at least 10 years after the Project acceptance.
	The period for correction of defects in the warranty period is *within fifteen (15) days.*
	All partners to the joint venture shall be jointly and severally liable to the Procuring Entity.

Section VI. Schedule of Requirements

Section VI. Schedule of Requirements

The delivery schedule expressed as weeks/months stipulates hereafter a delivery date which is the date of delivery to the project site.

Item Number	Description	Quantity	Unit	Delivered, Weeks/Months
I	**Meteorological Sensor and Display**			**365 calendar days upon receipt of NTP.** *(Project Sites: Jolo, Sanga-Sanga, Siargao, Surigao Airports)*
	Aviation Weather System complete with:	4	sets	
	Wind speed and wind direction sensors			
	Temperature and relative humidity sensor with radiation shield			
	Barometric pressure sensor			
	Shielded connection cable (minimum of 10 meters)			
	DOST-PAGASA Certification of Meteorological Sensors			
	Accessories, Connectors, Configuration Tool and Mounting Kits			
	Operation, Maintenance, Technical manuals in English Language including diagrams			
	Aviation Weather Display complete with:			
	Data panel display			
	Wind panel display			
	Power supply			
	Uninterruptible Power Supply (UPS)			
	Communication cable, Accessories, Mounting Kits			
	Testing &Personnel Training			
II	**Data Collection and Telemetry System**			
	Meteorological Data Collection System complete with:	4	sets	
	Data Logging System			
	Stainless steel enclosure with NEMA 4 (or equivalent) rating (located at the runway sensor sites)			
	Lightning arrester			
	Surge protection device, cabling and interface			
	Mounting hardware, mounting kits and accessories			
	UHF Communication Radio Systems complete with:			
	UHF Radio Transceivers/Modem (located at control tower/FSS Building)			
	UHF Radio Transceivers/Modem (located at runway sensor sites)			
	UHF Directional Antenna Systems			
	UHF Antenna cable (minimum of 10 meters per antenna)			
	Lightning arrester			
	Surge protection device, cabling and interface			
	UHF Frequency Licenses			
	Operation and Maintenance Manuals			
	Accessories, Connectors & Mounting Kits			
	Testing & Personnel Training			
III	**Meteorological Equipment Power Source**			
	Meteorological equipment power source complete with:	4	sets	
	Solar Power System (main power source)			
	12VDC/52Ah (minimum) batteries			
	Battery regulator or equivalent			
	Battery fuse and over-voltage protection device			
	AC/DC power supply			
	Surge Protection Device, Cabling and Interface			

	Mounting Hardware, Mounting Kits and Accessories			
	Testing & Personnel Training			
IV	**Frangible 10 meters Mast with Lightning Protection and Obstacle Light**			
	ICAO Compliant Frangible 10m Mast complete with:	4	sets	
	Foundation kits with plywood box			
	Provision for lightning rod			
	Passive Lightning Rod			
	LED Obstacle Lights			
	Universal Mounting Arm for wind sensors			
	Accessories, Connectors & Mounting Kits			
	Testing & Personnel Training			
V	**Spare Parts**	1	lot	
	MET Spare Parts for Jolo, Sanga-Sanga, Siargao & Surigao Airports			
	Data panel display			
	Wind panel display			
	UHF Radio Transceivers/Modem			
	Lightning arrester complete with Surge protection device, cabling, Accessories, Connectors & Mounting Kits			
VI	**Power Cable Provision and Civil Works**	1	lot	
	Direct Earth Burial (DEB) power cable			
	Civil works for the installation of DEB power cable:			
	Excavation Jobs			
	Cable-laying			
	Sand bedding			
	Backfilling/compacting Jobs			
	4-inch Yellow "CAUTION" Tape			
	Concrete chipping			
	Equipment Rental Concrete Cutter			

NOTE: *Refer to Technical Specifications for details requirement.*

Section VII. Technical Specifications

Technical Specifications

Bidders must state here either "Comply" or "Not Comply" against each of the individual parameters of each Specification stating the corresponding performance parameter of the equipment offered. Statements of "Comply" or "Not Comply" must be supported by evidence in a Bidders Bid and cross-referenced to that evidence. Evidence shall be in the form of manufacturer's un-amended sales literature, unconditional statements of specification and compliance issued by the manufacturer, samples, independent test data etc., as appropriate. A statement that is not supported by evidence or is subsequently found to be contradicted by the evidence presented will render the Bid under evaluation liable for rejection. A statement either in the Bidders statement of compliance or the supporting evidence that is found to be false either during Bid evaluation, post-qualification or the execution of the Contract may be regarded as fraudulent and render the Bidder or supplier liable for prosecution subject to the provisions of **ITB Clause 4.**

The Bidder shall also indicate the appropriate reference section including its page number in documents submitted to support the compliance statement indicated in the table of Technical Specifications. The Bidder shall indicate "Will Supply" if items required are to be supplied by the Bidder with corresponding prices indicated in the Financial Proposal.

Section	Specification	Compliance Statement	Reference to support statement (also INDICATE PAGE No.)
A.	**GENERAL REQUIREMENT**		
A.1	The Civil Aviation Authority of the Philippines (CAAP) intends to procure a brand-new aviation meteorological equipment and other ancillaries that will improve the meteorological service for Various Airports (Jolo, Sanga-Sanga, Siargao, Surigao) in accordance with the International Civil Aviation Organization (ICAO) Standards and Recommended Practices (SARPs). The project intends to install new state-of-the-art meteorological system which shall include wind speed & wind direction, temperature & relative humidity with radiation shield, barometric pressure, data collection and telemetry systems, solar power system (main power source), 10 meters frangible aviation mast, and other vital ancillaries.		
A.2	Construction design drawings and installation plans shall be submitted after the receipt of Notice-to-Proceed (NTP) for approval of CAAP (design review) prior to its installation/implementation. As-built drawings shall be submitted prior to commissioning flight check.		
A.3	For non-OEM bidders (whether sole or JV partner), the CAAP requires that the bidder is an exclusive or authorized distributor of the meteorological equipment.		
A.4	The CAAP requires the equipment supplied by the contractor shall be brand-new and of latest version/model.		
A.5	The winning bidder shall be required to submit a Cash-Flow Statement. The said document shall be submitted together		

Section	Specification	Compliance Statement	Reference to support statement (also INDICATE PAGE No.)
	with the construction drawings for approval before the start of project implementation.		
A.6	The contractor shall assure that the supplied meteorological equipment (including its subsystems) are operational & functional and that no equipment/spare parts is/are left non-operational or subject for replacement. Non-compliance to this provision shall subject to non-acceptance of the project.		
A.7	The following documents shall be *submitted together with the Technical Proposal:* 1. System Interconnection Design Diagram *signed and sealed by a Professional ECE (PECE);* 2. Siting/Location Plan *(Wind Sensors, Temperature and Relative Humidity Sensors, Mast and Cable Layout plan)* and shall indicate their distance with respect to the runway centerline and control tower/FSS Building. The document shall be *signed and sealed by a Professional ECE (PECE);* 3. Detailed equipment room layout plan of MET instrument & other subsystems and shall be *signed and sealed by a Professional ECE (PECE);* 4. Power/Electrical/Grounding and Cabling System Design Plan including electrical system single line diagram signed by Professional Electrical Engineer (PEE); 5. Project Work Schedule/Plan (365 calendar days); 6. Original latest versions of OEM Equipment Technical Characteristics/Specifications, Manuals and Brochures of proposed products; 7. Copy of the PRC Certificate or a clear photocopy of PECE/PEE License of the signing PECE/PEE; 8. Copy of PTR of the signing PECE/PEE; 9. Certificate of Good Standing from an Accredited Professional Organization of the signing PECE/PEE; 10. Item H.4 – Certificate of Site Inspection of Section VII. Technical Specifications. In addition to the required documents the following documents shall be ***submitted during the Post Qualifications stage:*** 1. Project implementation schedule. 2. Cash Flow by quarter		

Section	Specification	Compliance Statement	Reference to support statement (also INDICATE PAGE No.)
	3. Certificate of Exclusive or Authorized Distributorship issued by the Original Equipment Manufacturer (OEM) of supplied equipment. 4. Valid ISO 9001 and 14001 Certificates *(or its internationally recognized equivalent)* of Company and Product.		
A.8	The aviation meteorological equipment shall be aeronautical standard type.		
A.9	The scope of the project shall be supply, delivery, installation, integration, configuration and testing of meteorological equipment including the supply of its necessary subsystems and components as specified in Section VI. Schedule of Requirements.		
A.10	The contractor shall acquire a calibration certification for the supplied meteorological instrument from PAGASA prior to installation and site testing. Cost of the certification shall be borne by the contractor.		
A.11	The contractor shall facilitate and shoulder the cost of facilitation, registration and permits of UHF frequency license as per NTC regulation under the name of CAAP.		
A.12	For this project, the contractor shall install one (1) runway sensor site per ANF.		
A.13	The contractor shall supply all the necessary bushing, grounding kits, passive lightning rods, surge protection device or equivalent to prevent the aviation meteorological system from damages produced by lightning strikes.		
A.14	The contractor shall provide all the necessary connectors, mounting accessories and other ancillaries for the entire system.		
A.15	The contractor shall supply a service communication cable *(such as but not limited to RS485, RS232, and etc.)* that shall be able to interface the sensors with the ANS maintenance/service laptop. The contractor shall assure that the supplied service communication cable shall be fully compatible and/or of the same brand with the sensor and shall be at least two (2) meters in length.		
A.16	Proper cable management and cable tagging shall be strictly enforced. The contractor shall provide documentation indicating the label and locations/terminations of the cables after the completion of installation activities.		
A.17	The contractor shall provide a (sticker) nameplate attached to the body of the equipment which clearly states the following labels: 1. Civil Aviation Authority of the Philippines (CAAP) 2. Name/type of Equipment 3. Date Installed *(mm/dd/yyyy format)* 4. Location/Site/Facility		

Section	Specification	Compliance Statement	Reference to support statement (also INDICATE PAGE No.)
	5. Name of Contractor		
A.18	The nameplate shall be attached to the body of the unit using special type of adhesives. The contractor shall assure that the attached nameplate shall last for the next five years regardless of continuous operation of the equipment or not.		
A.19	A warranty seal (sticker) containing the date accepted, warranty period and properly signed by the authorized representative shall be attached to the body of the equipment.		
A.20	After the end of the reliability testing, the contractor shall inform the ANS-FICs and ATS-FICs of the schedule of the conduct of meteorological readings sampling.		
A.21	The sampling of meteorological instrument shall serve as proof and assurance that the meteorological equipment supplied by contractor is of its highest performance, reliability and availability. *(Please refer to the ANNEX B - Meteorological Instrument Readings Sampling Form).*		
A.22	The remarks and findings observed by the ANS and ATS personnel pertaining to operational performance shall be given immediate action by the contractor. *ANNEX B - Meteorological Instrument Readings Sampling Form* shall serve as one of the required documents before the start of the Site Acceptance Test (SAT).		
A.23	The contractor shall inform the CAAP of the completion of the sampling procedure.		
A.24	The contractor may have the option to supply a meteorological display that is not of the same brand/company as meteorological sensors. Provided, the supplied display shall be compatible with other critical components and shall display all required fields significant to the ATC operations in accordance with the International Civil Aviation Organization (ICAO) Standards and Recommended Practices (SARPs).		
A.25	The Bidder shall be issued with the approved reference drawing/s upon presentation of the official receipt (OR) as proof of payment of the applicable fee for the Bidding Document for this project.		
A.26	The contractor shall use the issued reference drawing/s for the proposed location of the meteorological equipment including its subsystem. Any significant changes to the location of the meteorological equipment and its subsystem from the issued reference drawing/s, which is beneficial to CAAP, shall be put into writing by the prospective bidder and shall be subject for approval of CAAP during implementation. Any cost that may arise from the location change shall be borne by the Contractor.		
A.27	The contractor shall assure that the supplied meteorological		

Section	Specification	Compliance Statement	Reference to support statement (also INDICATE PAGE No.)
	equipment/system shall be fully operational from sensors at the runway up to the displays at the tower cab room/FSS Building.		
A.28	The bidder shall explain any deviation from the design/configuration or specification giving the rationale/benefit of offering such. The explanation shall be supported by references and shall not be of lesser or lower quality or performance to meet the objective of the project.		
A.29	The contractor shall submit the approved as-built plans of the project to each respective airport/ANF (Jolo, Sanga-Sanga, Siargao, Surigao) and to the ANS Technical Center for future reference and archive purpose. Failure to do so shall result to non-acceptance or non-payment of the project.		
A.30	The CAAP shall have the full authority to inspect, recommend, accept and reject materials and workmanship that will be found to be below the required minimum specifications and Philippine Standards, as reflected in the Section VII. Technical Specifications.		
B.	**EQUIPMENT REQUIREMENTS**		
B.1	**Meteorological Weather Sensor and Display**		
B.1.1	**Wind speed and Wind Direction Sensors**		
B.1.1.1	***Performance Requirement***		
B.1.1.1.1	The contractor shall supply a robust, durable, high reliability and corrosion resistant wind speed and wind direction sensors.		
B.1.1.1.2	The contractor shall supply a wind speed and direction sensor with an Ingress Protection (IP) 65 or higher protection.		
B.1.1.1.3	The supplied wind sensors shall have the capability to measure both wind speed and wind direction. The raw data collected shall be input to the data logging system for pre-processing and transmission to CAB room/FSS Building.		
B.1.1.1.4	The contractor shall supply wind speed and wind direction sensors in accordance with Section VI. Schedule of Requirements.		
B.1.1.2	***Functional Specification***		
B.1.1.2.1	Wind Speed Sensor		
B.1.1.2.1.1	Measuring range : 0 - 75m/s		
B.1.1.2.1.2	Accuracy : ±0.2 m/s		
B.1.1.2.1.3	Resolution : > 0.01 m/s		
B.1.1.2.1.4	Threshold : > 0.01 m/s		
B.1.1.2.1.5	Units : m/s, knots, mph, km/h		
B.1.1.2.2	Wind Direction Sensor		
B.1.1.2.2.1	Measuring range :0 - 360˚ *or* 0 - 359.9˚		
B.1.1.2.2.2	Accuracy : ± 2°		
B.1.1.2.2.3	Resolution : > 0.1°		
B.1.1.2.2.4	Threshold : minimum of 0.1 m/s		

Section	Specification	Compliance Statement	Reference to support statement (also INDICATE PAGE No.)
B.1.1.2.2.5	Units : ˚ (degrees)		
B.1.2	**Temperature and Relative Humidity Sensors**		
B.1.2.1	***Performance Requirement***		
B.1.2.1.1	The contractor shall supply reliable and high stability temperature and relative humidity sensor that can withstand harsh environmental conditions.		
B.1.2.1.2	The contractor shall supply a radiation shield that will serve as protection from scattered & direct sunlight exposure, precipitation and help achieve maximum performance of the sensor.		
B.1.2.1.3	The supplied temperature and relative humidity sensors with radiation shield shall be weather-proof and corrosion-resistant with an Ingress Protection (IP) 65 or higher protection.		
B.1.2.1.4	The contractor shall supply a service communication cable that shall be able to interface the temperature & relative humidity sensor and service /maintenance laptop. The contractor shall assure that the supplied service communication cable shall be fully compatible and/or of the same brand as the sensor.		
B.1.2.1.5	The contractor shall supply a minimum number of temperature and relative humidity sensors in accordance with Section VI. Schedule of Requirements.		
B.1.2.2	***Functional Specification***		
B.1.2.2.1	Relative Humidity Sensor		
B.1.2.2.1.1	Measurement range : 0 - 100% RH		
B.1.2.2.1.2	Accuracy : ± 0.8% RH or ± 1% RH		
B.1.2.2.2	Runway Surface Temperature Sensor		
B.1.2.2.2.1	Measurement range : minimum 0°C to 60°C		
B.1.2.2.2.2	Sensor type : Pt100 RTD		
B.1.3	**Barometric Pressure Sensor**		
B.1.3.1	***Performance Requirement***		
B.1.3.1.1	The supplied barometric pressure sensor shall be light-weight and can be interfaced via RS232, RS485, SDI 12 (Serial Digital Interface at 1200 baud) or its equivalent connection interface.		
B.1.3.1.2	The contractor shall supply a barometric pressure sensor in a properly sealed NEMA 4 (or equivalent) rating enclosure.		
B.1.3.1.3	The contractor shall assure that the enclosure of pressure sensor shall be properly sealed and the opening of the sensor shall be free from any foreign object intrusion.		
B.1.3.1.4	The contractor shall supply a barometric pressure sensor containing a multiple transducer installed inside the sensor.		
B.1.3.1.5	The contractor shall supply a digital barometric pressure sensor that shall be installed inside the CAB Room/FSS Building.		

Section	Specification	Compliance Statement	Reference to support statement (also INDICATE PAGE No.)
B.1.3.1.6	The contractor shall supply a minimum number of barometric pressure sensor in accordance with Section VI. Schedule of Requirements.		
B.1.3.2	***Functional Specification***		
B.1.3.2.1	Measurement range : 500 to 1100hPa		
B.1.3.2.2	Resolution : 0.1hPa		
B.1.3.2.3	Accuracy : less than 0.5hPa		
B.1.3.2.4	Pressure Fitting : hose barbed or barbed fitting		
B.1.3.2.5	Pressure Units : hPa, Pa, KPa, mmHg, inHg, psi and etc.		
B.1.3.2.6	Operating Temp. Range : 0°C to +60°C		
B.1.3.2.7	Voltage Supply :10 V_{DC} to +30V_{DC} *or as per OEM*		
B.1.4	**Aviation Weather Displays**		
B.1.4.1	***Performance Requirement***		
B.1.4.1.1	The contractor shall assure that the aviation weather display unit supplied shall contain all meteorological information/fields needed by the ATC operations. It shall be able to display all the required fields in real-time.		
B.1.4.1.2	The contractor may have the option to supply an aviation weather display that is not of the same brand/company as the meteorological sensors. Provided, the supplied display shall be compatible with the sensors and shall display all required fields significant to the ATC operations in accordance with the International Civil Aviation Organization (ICAO) Standards and Recommended Practices (SARPs).		
B.1.4.1.3	The contractor shall supply an aviation weather display that is readable by the ATC controller regardless of daylight and brightness of the environment.		
B.1.4.1.4	The supplied aviation weather display shall be portable and be installed directly or fit to the ATC console at ATC cab room/FSS Building.		
B.2	**Data Collection and Telemetry Systems**		
B.2.1	**Meteorological Data Collection System**		
B.2.1.1	***Performance Requirement***		
B.2.1.1.1	The contractor shall supply a data logging system which will collect and pre-process all necessary raw data and transmit it to the ANF equipment room for post processing and data display.		
B.2.1.1.2	The circuit board and/or data logging system shall be protected from electrostatic discharge which may cause latent damage to electronic circuits. The contractor shall supply the said protective device.		
B.2.1.1.3	The data logging system shall be powered-up by either the solar PV system (main) *or* AC or local power source		

Section	Specification	Compliance Statement	Reference to support statement (also INDICATE PAGE No.)
	(secondary).		
B.2.1.1.4	Each sensor inputs of the data logging system shall be protected against induced transient. Varistor or any equivalent technology shall be used by the contractor as protection device to each sensor inputs of the logging system.		
B.2.1.1.5	The data logging system shall be housed inside a stainless-steel enclosure together with the solar PV battery, battery regulators or equivalent, over-voltage protection device, radio modems, surge protection device and other vital ancillaries.		
B.2.1.1.6	The contractor shall provide separate surge protection devices for the sensor inputs and input power cable to protect them against lightning or any induced transients.		
B.2.1.1.7	The contractor shall supply a stainless-steel enclosure with NEMA 4 rating (or equivalent) and painted in white powder coated paint with Ingress Protection (IP) 65 or better performance.		
B.2.1.1.8	The contractor shall supply a data logging system with a capability to manually reset in case the system shows abnormalities and inappropriate behavior.		
B.2.1.1.9	The data logging system shall be able to interface via UHF communication radios for data transmission and meteorological sensor.		
B.2.1.1.10	The enclosure shall use din rails for easy mounting & placement of equipment, proper tagging and labeling of the connection wires inside the enclosure is strictly observed.		
B.2.1.1.11	The contractor shall supply a minimum number of data logging system in accordance with Section VI. Schedule of Requirements.		
B.2.1.2	***Functional Specification***		
B.2.1.2.1	Analog Channels : minimum of 10 inputs		
B.2.1.2.2	Memory : > 2MB *(RAM)* and > 1MB *(built-in non-volatile memory/program)*		
B.2.1.2.3	Serial Ports : one (1) RS232 and/or one (1) RS485 *(optional)*		
B.2.2	**Telemetry System**		
B.2.2.1	***Performance Requirement***		
B.2.2.1.1	The contractor shall supply a telemetry system that will serve as a main communication protocol and shall encompass data transfer of raw data from runway sensor site to the ANF equipment room for post processing.		
B.2.2.1.2	The contractor shall supply an Ultra High Frequency (UHF) radio transceiver/modem.		

<table>
<tr><th>Section</th><th>Specification</th><th>Compliance Statement</th><th>Reference to support statement (also INDICATE PAGE No.)</th></tr>
<tr><td>B.2.2.1.3</td><td>The contractor shall supply a UHF transceiver radio/modem based on the following:

<table><tr><th>ANF/Airport</th><th>Runway Sensor Site</th><th>FSS Building (Redundant)</th></tr><tr><td>Jolo</td><td>1</td><td>1</td></tr><tr><td>Sanga-Sanga</td><td>1</td><td>1</td></tr><tr><td>Siargao</td><td>1</td><td>1</td></tr><tr><td>Surigao</td><td>1</td><td>1</td></tr></table></td><td></td><td></td></tr>
<tr><td>B.2.2.1.4</td><td>The contractor shall strictly implement the installation of the entire telemetry system for the defined airports.</td><td></td><td></td></tr>
<tr><td>B.2.2.1.5</td><td>The contractor shall supply and install all the necessary accessories for the operation of the telemetry system including directional antenna, antenna cables, brackets, etc.</td><td></td><td></td></tr>
<tr><td>B.2.2.1.6</td><td>The contractor shall supply a UHF antenna cable with a minimum of 10 meters per antenna.</td><td></td><td></td></tr>
<tr><td>B.2.2.1.7</td><td>The supplied telemetry system shall not be affected by light to moderate rains and/or moderate wind. Continuous good in quality or performance of data transmission shall be strictly implemented at installation.</td><td></td><td></td></tr>
<tr><td>B.2.2.1.8</td><td>The contractor shall assure that the supplied UHF radios (telemetry system) of the meteorological system shall not cause any interference and/or undesirable noise to the aeronautical frequencies (communications and navigational aids) used by the airport/ANF during implementation.</td><td></td><td></td></tr>
<tr><td>B.2.2.1.9</td><td>The contractor shall supply a lightning arrester capable of protecting the telemetry systems at the runway sensor site and at the ATC control tower/FSS Building. (Please refer to requirement specification in Item B.4. Frangible 10-meter Mast with Lightning Protection and Obstacle Light).</td><td></td><td></td></tr>
<tr><td>B.2.2.1.10</td><td>The contractor shall provide separate surge protection devices for the data cabling and input power cable to protect them against lightning or any induced transients.</td><td></td><td></td></tr>
<tr><td>B.2.2.1.11</td><td>The contractor shall assure during implementation that the supplied telemetry system shall be fully operational and functional. Minimum downtime and loss of signal from transmit to receive shall be highly achieved.</td><td></td><td></td></tr>
<tr><td>B.3</td><td>Meteorological Equipment Power Source</td><td></td><td></td></tr>
<tr><td>B.3.1</td><td>Performance Requirement</td><td></td><td></td></tr>
<tr><td>B.3.1.1</td><td>The contractor shall supply a meteorological equipment that shall be powered up by a solar photovoltaic (PV) system. This system shall act as the main power source and shall cater for the main power requirements of the equipment installed at sensor site (wind and temperature sensors including their radio link and ancillaries).</td><td></td><td></td></tr>
</table>

Section	Specification	Compliance Statement	Reference to support statement (also INDICATE PAGE No.)
B.3.1.2	The solar PV system shall be connected to a battery capable of withstanding 48 hours of continuous operation without any incident of power interruption or power loss.		
B.3.1.3	The battery shall have a regulator or its equivalent technology to act as charger, regulator, and an automatic switch to AC or local power (secondary source) once the battery is drained and no sunlight is present.		
B.3.1.4	The contractor shall supply a control circuit device that shall automatically trip once overcurrent is detected to avoid overcharging the battery. The control circuit device shall be installed inside the enclosure.		
B.3.1.5	The contractor shall provide a connection for the meteorological equipment to AC or local power (secondary source) via direct earth burial cable. *(Please refer to requirement specification in Item B.8. Power Cable Provision and Civil Works).*		
B.4	**Frangible 10-meter Mast with Lightning Protection and Obstacle Light**		
B.4.1	***Performance Requirement***		
B.4.1.1	The contractor shall supply frangible, lightweight, safe, durable, robust and serviceable weather mast that shall hold and support the meteorological sensors and other aviation weather ancillaries.		
B.4.1.2	The supplied mast should be frangible in order to ensure that they will break, distort or yield if they are accidentally impacted by an aircraft.		
B.4.1.3	The contractor shall supply an aviation frangible mast with a minimum height of 10 meters.		
B.4.1.4	The aviation frangible mast shall be corrosion-free, weather-proof and tiltable during preventive maintenance of sensors and other vital ancillaries.		
B.4.1.5	The contractor shall supply a frangible mast made of fiber glass strips and powder-coated paint or any manufacturer-approved mast compliant to ICAO Frangibility Requirements. The Contractor shall submit together with the Technical proposal a copy of frangibility compliance certificate of the mast design and another copy for the ANF FIC during the implementation.		
B.4.1.6	The contractor shall supply all mounting brackets, foundation bolts & kits, base frames and other ancillaries for the proper erection of the frangible aviation mast.		
B.4.1.7	The contractor shall supply a minimum number of frangible aviation mast in accordance with Section VI. Schedule of Requirements.		
B.4.1.8	The contractor shall supply a lightning arrester capable of protecting the sensors (including the data logging and UHF radio communication systems and ancillaries) at the runway sensor site and the UHF radio communication		

<table>
<tr><th>Section</th><th>Specification</th><th>Compliance Statement</th><th>Reference to support statement (also INDICATE PAGE No.)</th></tr>
<tr><td></td><td>system at the ATC control tower/FSS Building.</td><td></td><td></td></tr>
<tr><td>B.4.1.9</td><td>The contractor shall provide a provision for lightning arrester. A separate/dedicated grounding wire shall also be provided.</td><td></td><td></td></tr>
<tr><td>B.4.1.10</td><td>The contractor shall supply passive lightning arrester that shall serve as protection against lightning strikes and prevent the weather sensor and other vital ancillaries from damage.</td><td></td><td></td></tr>
<tr><td>B.4.1.11</td><td>The contractor shall supply tinned-copper wire connected from the arrester and shall serves as passage of high current lightning strike directly to ground.</td><td></td><td></td></tr>
<tr><td>B.4.1.12</td><td>The contractor shall assure that the tinned-copper wire shall be highly isolated from the aviation mast structure, weather sensors and other vital ancillaries at the runway sensor site.</td><td></td><td></td></tr>
<tr><td>B.4.1.13</td><td>The contractor shall assure that the supplied lightning protection device shall be able to handle a multi-strike without being damaged.</td><td></td><td></td></tr>
<tr><td>B.4.1.14</td><td>The contractor shall assure that the supplied lightning arrester are properly connected to the ground via grounding radials.</td><td></td><td></td></tr>
<tr><td>B.4.1.15</td><td>The contractor shall supply a grounding radial that shall be placed with 120 degrees separation.</td><td></td><td></td></tr>
<tr><td>B.4.1.16</td><td>The supplied lightning protection device shall be rated with minimum ingress protection (IP) 65 that will serve as protection against extreme weather conditions.</td><td></td><td></td></tr>
<tr><td>B.4.1.17</td><td>The lightning protection device to be supplied at runway sensor site shall be placed on the top-most portion of the aviation frangible mast.</td><td></td><td></td></tr>
<tr><td>B.4.1.18</td><td>The supplied lightning arrester shall be able to handle wind load in the respective ANFs at installation.</td><td></td><td></td></tr>
<tr><td>B.4.1.19</td><td>The minimum number of lightning protection device shall be four (4) units per airport/facility as follows:
<table>
<tr><th>ANF/Airport</th><th>Runway Sensor Site (mast)</th><th>FSS Bldg</th><th>Standby/Spare</th></tr>
<tr><td>Jolo</td><td>1</td><td>1</td><td>1</td></tr>
<tr><td>Sanga-Sanga</td><td>1</td><td>1</td><td>1</td></tr>
<tr><td>Siargao</td><td>1</td><td>1</td><td>1</td></tr>
<tr><td>Surigao</td><td>1</td><td>1</td><td>1</td></tr>
</table></td><td></td><td></td></tr>
<tr><td>B.4.1.20</td><td>The contractor shall supply a Light Emitting Diode (LED) obstruction lights that shall serve as collision avoidance lighting system, protecting the structure/mast and the passing aircraft from collision especially during night</td><td></td><td></td></tr>
</table>

<table>
<tr><th>Section</th><th>Specification</th><th>Compliance Statement</th><th>Reference to support statement (also INDICATE PAGE No.)</th></tr>
<tr><td></td><td>operations.</td><td></td><td></td></tr>
<tr><td>B.4.1.21</td><td>The obstruction lights shall have a luminous intensity greater than 10 candelas with aviation red color and a horizontal radiation pattern of 360°.</td><td></td><td></td></tr>
<tr><td>B.4.1.22</td><td>The obstruction lights shall have a cable gland for easy chaining without external distribution boxes.</td><td></td><td></td></tr>
<tr><td>B.4.1.23</td><td>The LED obstruction light shall be photo-controlled which shall automatically illuminate on low-light/overcast environmental condition.</td><td></td><td></td></tr>
<tr><td>B.4.1.24</td><td>The obstruction lights shall have a colorless glass cover and protected against severe weather condition by an Ingress Protection (IP) 65 or higher protection.</td><td></td><td></td></tr>
<tr><td>B.4.1.25</td><td>The supplied obstruction lights shall be able to handle wind load in the respective ANFs at installation.</td><td></td><td></td></tr>
<tr><td>B.4.1.26</td><td>The minimum number of obstruction lights shall be as follows:
<table><tr><th>ANF/Airport</th><th>Runway Sensor Site (Mast)</th></tr><tr><td>Jolo</td><td>2</td></tr><tr><td>Sanga-Sanga</td><td>2</td></tr><tr><td>Siargao</td><td>2</td></tr><tr><td>Surigao</td><td>2</td></tr></table></td><td></td><td></td></tr>
<tr><td>B.4.1.27</td><td>All the supplied obstruction lights shall be installed on the top-most portion of frangible aviation mast.</td><td></td><td></td></tr>
<tr><td>B.4.1.28</td><td>The contractor shall supply a cross arm which shall be used to attach the wind speed and direction sensors.</td><td></td><td></td></tr>
<tr><td>B.4.1.29</td><td>The contractor shall provide all the necessary connectors, mounting kits and other ancillaries for the entire installations on and of the mast.</td><td></td><td></td></tr>
<tr><td>B.5</td><td>Transient Voltage Surge Suppressor (TVSS)</td><td></td><td></td></tr>
<tr><td>B.5.1</td><td>Functional Specification</td><td></td><td></td></tr>
<tr><td>B.5.1.1</td><td>The contractor shall supply a Transient Voltage Surge Suppressor (TVSS) device that shall divert the excess voltage and current from transient/surge into grounding wire and prevents it from flowing through the electrical and electronic equipment while at the same time allowing the normal voltage to continue along its path.</td><td></td><td></td></tr>
<tr><td>B.5.1.2</td><td>The surge protection device shall have minimum current handling capacity of 30KA or as per OEM design.</td><td></td><td></td></tr>
<tr><td>B.5.1.3</td><td>The contractor shall supply transient surge protection device that will serve as power line protection of the equipment.</td><td></td><td></td></tr>
<tr><td>B.6</td><td>Uninterruptible Power Supply (UPS) with extra battery</td><td></td><td></td></tr>
<tr><td>B.6.1</td><td>Performance Requirement</td><td></td><td></td></tr>
<tr><td>B.6.1.1</td><td>The contractor shall supply uninterruptible power supply (UPS) that shall provide battery backup when the electrical</td><td></td><td></td></tr>
</table>

<table>
<tr><th>Section</th><th>Specification</th><th>Compliance Statement</th><th>Reference to support statement (also INDICATE PAGE No.)</th></tr>
<tr><td></td><td>power fails, drops or increase to an unacceptable voltage level.</td><td></td><td></td></tr>
<tr><td>B.6.1.2</td><td>The contractor shall supply an uninterruptible power supply (UPS) with a minimum runtime of 25 minutes during power outages.</td><td></td><td></td></tr>
<tr><td>B.6.1.3</td><td>The contractor shall assure that the supplied UPS can handle the load requirements of the equipment.</td><td></td><td></td></tr>
<tr><td>B.6.1.4</td><td>The contractor shall provide a replacement/spare battery per UPS.</td><td></td><td></td></tr>
<tr><td>B.6.1.5</td><td>The UPS shall have an audible alarm when operating below performance such as low battery, etc.</td><td></td><td></td></tr>
<tr><td>B.6.1.6</td><td>The UPS shall have a control console or a multi-function LCD display which indicate the status of the voltage level of battery, voltage level of AC source and other controls of the UPS.</td><td></td><td></td></tr>
<tr><td>B.6.1.7</td><td>The contractor shall properly observe the minimum number of the UPS for this project:<table><tr><th>Equipment</th><th>Number of UPS</th></tr><tr><td>ATC Cabroom/FSS Building Aviation Weather Displays (Wind/Data)</td><td>1 unit per ANF</td></tr></table></td><td></td><td></td></tr>
<tr><td>B.6.2</td><td>Functional Specification</td><td></td><td></td></tr>
<tr><td>B.6.2.1</td><td>Output capacity : 900 Watts/ 1.5KVA or as per MET OEM requirements</td><td></td><td></td></tr>
<tr><td>B.6.2.2</td><td>Output frequency : 60Hz</td><td></td><td></td></tr>
<tr><td>B.6.2.3</td><td>Input voltage : 220V</td><td></td><td></td></tr>
<tr><td>B.6.2.4</td><td>Input Frequency : 60Hz +/- 3Hz</td><td></td><td></td></tr>
<tr><td>B.6.2.5</td><td>Output connections : = to the no. of required loads supported + one (1) spare connection</td><td></td><td></td></tr>
<tr><td>B.6.2.6</td><td>Typical recharge time : min. of three (3) hours</td><td></td><td></td></tr>
<tr><td>B.6.2.7</td><td>Battery type : maintenance-free sealed lead-Acid battery</td><td></td><td></td></tr>
<tr><td>B.7</td><td>EMP Surge Protector</td><td></td><td></td></tr>
<tr><td>B.7.1</td><td>Performance Requirement</td><td></td><td></td></tr>
<tr><td>B.7.1.1</td><td>The contractor shall supply a lightning EMP surge protector that can give protection against dangerous surge signals on coaxial lines.</td><td></td><td></td></tr>
<tr><td>B.7.1.2</td><td>The contractor shall supply a lightning EMP surge protector complete with gas discharge tube.</td><td></td><td></td></tr>
<tr><td>B.7.1.3</td><td>The contractor shall supply an EMP surge protection device that shall be installed at the cable before the antenna of the UHF transceiver radio/modem.</td><td></td><td></td></tr>
<tr><td>B.7.1.4</td><td>The contractor shall supply an additional/spare gas discharge tubes equivalent to the supplied surge protection device.</td><td></td><td></td></tr>
<tr><td>B.7.1.5</td><td>The supplied EMP surge protector shall be rated with ingress protection (IP) 65.</td><td></td><td></td></tr>
<tr><td>B.8</td><td>Power Cable Provision and Civil Works</td><td></td><td></td></tr>
</table>

Section	Specification	Compliance Statement	Reference to support statement (also INDICATE PAGE No.)
B.8.1	***Performance Requirement***		
B.8.1.1	The contractor shall supply a direct earth burial cable that shall serve as a connection medium between the powerplant or facility designated main power source and runway sensor site.		
B.8.1.2	The supplied direct earth burial power cable shall contain a minimum of 8 mm^2 copper wire cross sectional area, XLPE or ERP/PCP insulation, 2KV stranded direct burial PVC jacketed and printed with manufacturers trademark throughout the length. Appropriate or approved termination adapters, or provision of breakers, if needed shall be implemented in terminating the power cable to the sensor site.		
B.8.1.3	The contractor shall assure that the length of the supplied direct earth burial power cable shall be able to accommodate the distance from the AC or local power source to the meteorological equipment at runway sensor site. Cable length provided shall cover for the slack, bending and turns at installation.		
B.8.1.4	The contractor shall coordinate with the ANS Facilities In-Charge (FICs) of each respective ANFs or refer to the attached preliminary drawings regarding the location of the AC or local power source.		
B.8.1.5	The contractor shall provide surge protection device for the power cable to protect them against lightning or any induced transients.		
B.8.1.6	The contractor shall consider minor civil works for the excavation jobs, cable-laying, sand bedding and backfilling/compacting jobs for the direct burial power cable.		
B.8.1.7	The contractor shall strictly implement the standard cable trenching minimum depth and width. CAAP requires that the depth shall be at minimum of 0.6 meters and width shall be at minimum of 0.3 meters all trough-out the entire trenching.		
B.8.1.8	The implementation of standard trenching shall be monitored by the ANS-FIC of each respective ANF. Non- compliance by the contractor to the specified trenching dimension shall result to the non-acceptance of the project.		
B.8.1.9	The contractor shall supply a 4-inch yellow caution tape that shall serve as critical marker and demarcation of the cable trenching in the advent of new installation or trenching on the existing site.		
B.8.1.10	The trench shall be provided with a yellow caution tape three (3) inches from the top soil running in line with the Direct Earth Burial (DEB) cable.		
B.8.1.11	The contractor shall secure a copy of reference drawing		

Section	Specification	Compliance Statement	Reference to support statement (also INDICATE PAGE No.)
	from the CAAP End-User office after payment of applicable fee for the bidding documents.		
C.	**WORK SCHEDULE**		
C.1	The Bidder shall include in their proposal a project activity schedule for the project starting from receipt of the Notice to Proceed.		
C.2	CAAP specifies that the project be ***completed within 365 calendar days***.		
C.3	The preliminary Project Management Schedule shall be as detailed as possible highlighting the following project component activities:		
C.3.1	Equipment Manufacturing;		
(a)	*Meteorological Weather Sensor and Display*		
(b)	*Data Collection and Telemetry Systems*		
(c)	*Meteorological Equipment Power Source*		
(d)	*Frangible 10 meters Mast with Lightning Protection and Obstacle Light*		
(e)	*Direct Earth Burial (DEB) Power Cable*		
C.3.2	Shipment and Delivery		
(a)	*Meteorological Weather Sensor and Display*		
(b)	*Data Collection and Telemetry Systems*		
(c)	*Meteorological Equipment Power Source*		
(d)	*Frangible 10 meters Mast with Lightning Protection and Obstacle Light*		
(e)	*Direct Earth Burial (DEB) Power Cable*		
C.3.3	Installations		
(a)	*Civil Works*		
(b)	*Meteorological Equipment Power Source*		
(c)	*Erection of frangible aviation mast*		
(d)	*Meteorological Weather Sensor and Display*		
(e)	*Data Collection and Telemetry Systems*		
C.3.4	Testing		
(a)	*Site (local testing)*		
C.3.5	Training		
(a)	*Local On-Site*		
C.3.6	Final Configurations		
C.3.7	Site Acceptance Test		
C.3.8	Submission of As-Built Drawings /Plans		
C.3.9	Project Completion		
C.3.10	Defect Liability Period (1 year)		
C.3.11	Warranty Period (1 year)		
D.	**SYSTEMS SUPPORT**		
D.1	**Quality Plan**		
D.1.1	The Contractor shall be responsible for the quality assurance, configuration management, and acceptance testing being in accordance with known standards and procedures.		

Section	Specification	Compliance Statement	Reference to support statement (also INDICATE PAGE No.)
D.2	**Maintenance Plan**		
D.2.1	The Contractor shall submit **together with the Technical Proposal** a plan on how the Contractor/OEM will conduct maintenance services during the warranty period and during the life cycle of the system. The plan shall detail the procedures of the following:		
(a)	*repair/replacement of defective hardware components;*		
(b)	*software maintenance and repair;*		
(c)	*help desk support;*		
(d)	*management of components obsolescence*		
D.3	**Training Plan**		
D.3.1	The Contractor shall submit together with the Technical Proposal a plan for each of the identified training courses that include a description of the following elements:		
(a)	*Type of training;*		
(b)	*Course Title;*		
(c)	*Course Objectives;*		
(d)	*Course Contents;*		
(e)	*Duration in Days;*		
(f)	*Location;*		
(g)	*Maximum number of Trainees per course;*		
(h)	*Training Materials and Training Aids*		
D.3.2	Training courses and materials shall enable the trainees to later instruct other technical staff according to the obtained knowledge.		
D.3.3	Training courses shall be of a high standard and apply the latest teaching techniques.		
D.3.4	Trainings shall be conducted for the maintenance (hardware/software) and operation of the meteorological equipment *(Meteorological Weather Sensor and Display, Data Collection and Telemetry Systems, Meteorological Equipment Power Source, and Frangible 10 meters Mast with Lightning Protection and Obstacle Light).*		
D.3.5	All training materials and training aids utilized shall be provided by the supplier in softcopy and hardcopy.		
D.3.6	The CAAP requires On-site training of ANS personnel of each respective ANF on the supplied meteorological equipment.		
D.3.7	Site Training (ST) shall be attended by a minimum of 10 personnel in each facility.		
D.3.8	The contractor shall advice the CAAP for the schedule of the training, one-month prior to the start of the site training.		
D.3.9	The OEM shall issue a Training Certificate to ANS personnel who attended the training. The Certificate shall indicate the following: (a) name of the trainee, (b) course		

Section	Specification	Compliance Statement	Reference to support statement (also INDICATE PAGE No.)
	title, (c) place of training, (d) date and duration of the training with the OEM company logo.		
D.3.10	The cost of the accommodation and meals of the personnel conducting the training on site shall be borne by the contractor and shall be included in the financial estimates.		
D.4	**Documentations**		
D.4.1	Aside from training materials, the following documents shall be delivered for each ANF:		
(a)	*2 set of operation manuals;*		
(b)	*2 sets of maintenance (hardware/software) manual;*		
(c)	*2 sets of software manual;*		
(d)	*2 sets of inventory list of equipment to include spare parts*		
D.4.2	*2 Softcopy of all delivered documents shall be provided in a CD or USB medium.*		
E.	**INSTALLATION AND TESTING**		
E.1	**Delivery, Storage and Handling**		
E.1.1	The Equipment shall be protected against extreme temperature, humidity, and shall be stored in a conditioned place to prevent corrosion and/or contamination.		
E.1.2	The Equipment shall be wrapped up in dust-tight covers and kept away from construction activities in order to be protected against dust and debris.		
E.1.3	The contractor shall be responsible for correct storage of the equipment under the conditions as specified.		
E.1.4	The contractor shall deliver, store, and handle the equipment and materials in accordance with the manufacturer's recommendations.		
E.1.5	The contractor shall be responsible for the delivery/shipment of equipment from their premise up to the installation sites.		
E.2	**Installation and Site Acceptance Testing**		
E.2.1	A Site Acceptance Test shall be conducted after the completion of the installation. The Contractor shall be responsible for notifying the CAAP that the installation is complete and that a Site Acceptance Test is to be conducted.		
E.2.2	The contractor shall submit two (2) sets of detailed Site Acceptance Test (SAT) plan for CAAP's approval four weeks prior to the Site Testing.		
E.2.3	The SAT plan shall consist of a set of functional and performance tests aiming at validating the compliance of the system with specification.		
E.2.4	SAT shall be performed for all hardware and software deliverables.		

Section	Specification	Compliance Statement	Reference to support statement (also INDICATE PAGE No.)
E.2.5	At the beginning of the SAT, the contractor shall provide introduction/briefing and the baseline for the installed system.		
E.2.6	Each test executed at the SAT shall be described on one single page including at least the following information:		
(a)	*test identifier and title;*		
(b)	*the procedure to follow for performing the test;*		
(c)	*the system configuration required for the test;*		
(d)	*the expected result(s) of the test;*		
(e)	*the way to control whether the test has succeeded or not;*		
(f)	*comments where appropriate.*		
E.2.7	A 2-day **Reliability Test** shall be conducted by the contractor after a successful Site Acceptance Testing.		
E.2.8	After the conduct of a successful Reliability Test (no alarms of any type observed for 2 continuous days), the contractor shall immediately inform CAAP of its completion and schedule/conduct the Commissioning of the new meteorological equipment *(Meteorological Weather Sensor and Display, Data Collection and Telemetry Systems, Meteorological Equipment Power Source, and Frangible 10 meters Mast with Lightning Protection and Obstacle Light).*		
E.3	**Engineering Personnel**		
E.3.1	The CAAP requires that only OEM-qualified personnel will perform the installations/commissioning of all equipment. CAAP requires submission of Certificate of Authorization from the OEM.		
E.3.2	The Bidder shall submit, together with its Technical bid, resumés of qualified installers/personnel who will be involved in the Project. The Bidder shall specify/describe the responsibilities of these personnel as regards to the implementation of the project.		
F.	**PROJECT COMPLETION**		
F.1	A Certificate of Project Completion shall be issued by CAAP to the contractor upon successful completion of the Project.		
F.2	The following documents (submitted in a binder with corresponding tabs) shall be the attachment for the approval of the Certificate of Project Completion:		
(a)	*Copy of approved Contract including the Terms of Reference;*		
(b)	*Training Report including photocopy of the training certificates issued;*		
(c)	*Site Acceptance Test Report;*		
(d)	*Operation/User and Service Manuals;*		
(e)	*As-Built Drawings;*		
(f)	*Inventory of decommissioned/dismantled equipment;*		
(g)	*Inventory of newly installed equipment;*		

Section	Specification	Compliance Statement	Reference to support statement (also INDICATE PAGE No.)
(h)	*Reliability Test Result;*		
F.3	The Defect Liability Period (DLP) shall start after the date of issuance of the Certificate of Project Completion by CAAP, wherein all of the works were executed, completed by the contractor as per contract.		
F.4	A Facility Availability report shall be submitted by the contractor to CAAP after the end of the Warranty to determine if the system installed is within the required availability requirements of 99.99%.		
F.5	A Certificate of Final Acceptance shall be issued by CAAP after the end of the Defect Liability Period (DLP) (i.e. 1 year after completion/commissioning).		
G.	**DEFECT LIABILITY PERIOD AND WARRANTY**		
G.1	The CAAP requires one (1) year Defect Liability Period (DLP) for both software and hardware components and after which a one (1) year Warranty Period for both software and hardware components.		
G.2	The contractor shall be responsible for the shipment of defective parts to the Manufacturer and vice-versa. Cost of which shall be borne by the contractor within the duration of the DLP and Warranty periods.		
H	**OTHER REQUIREMENTS**		
H.1	**Permits**		
H.1.1	The contractor shall be responsible for securing all necessary permits (i.e. Electrical/Civil work Permits, Permit to Import, NTC, Security Pass, other local permits, etc.) from respective offices that may be necessary for the installation of the meteorological equipment at site. All incurred costs of /relating to the above shall be borne by the contractor.		
H.1.2	The contractor shall be responsible for obtaining the NTC license, permits, and registrations of the UHF frequency/ies. All incurred costs relating to these shall be borne by the contractor.		
H.2	**MOS for Aerodromes/Method of Working Plan (MOWP)**		
H.2.1	The Contractor shall comply with the latest provisions of the Civil Aviation Authority of the Philippines (CAAP) Manual of Standards (MOS) for Aerodromes. A Method of Working Plan (MOWP) shall be submitted to CAAP prior to project implementation. The MOWP shall be in accordance with Section 10.11 of the CAAP MOS.		
H.3	**ICAO Compliance**		
H.3.1	The supplied meteorological equipment shall be in accordance with ICAO Standards and Recommended Practices.		
H.4	**Certificate of Site Inspection**		

<table>
<tr><th>Section</th><th>Specification</th><th>Compliance Statement</th><th>Reference to support statement (also INDICATE PAGE No.)</th></tr>
<tr><td>H.4.1</td><td>The Contractor shall secure a Certificate of Site Inspection from the respective ANS Facility In-Charge of Jolo, Sanga-Sanga, Siargao, Surigao Airports (or his authorized representative) as proof of the conduct of survey/inspection of the site.</td><td></td><td></td></tr>
<tr><td>H.4.2</td><td>The Certificate of Site Inspection form found in this document may be used.</td><td></td><td></td></tr>
<tr><td>H.4.3</td><td>The prospective bidders shall submit their Site Inspection/Survey schedules for each respective site to CAAP End-User. For this purpose, it shall be sent to ANS. Schedules and names of the person to conduct the site survey/inspection shall be submitted for proper coordination of ANOD with our concerned Air Navigation Facilities (ANFs).</td><td></td><td></td></tr>
<tr><td>H.4.4</td><td>The prospective bidder may conduct sites surveys prior to purchase of the bidding documents. Provided, the site survey schedule has been coordinated with ANOD as stated in item H.4.3.</td><td></td><td></td></tr>
<tr><td>H.4.5</td><td>The bidder can directly contact the respective ANS Facility In-Charge (or his designated authorized representative) prior to proceeding to the site:
<table>
<tr><th>ANF/Airport</th><th>ANS FIC</th><th>Contact No.</th></tr>
<tr><td>Jolo</td><td>Peter John R. Sanico</td><td>09153977423</td></tr>
<tr><td>Sanga-Sanga</td><td>Emile A. Saavedra</td><td>09064343034</td></tr>
<tr><td>Siargao</td><td>Felix M. Ochavo</td><td>09093881403</td></tr>
<tr><td>Surigao</td><td>Roy T. Campilan</td><td>09202311376</td></tr>
</table></td><td></td><td></td></tr>
<tr><td>H.4.6</td><td>Previously issued site inspection certificates from respective project site/s relative to the MET equipment project is acceptable. CAAP accepts the certificates in the assumption that the Bidder already have all the site inspection data or information necessary to prepare for the Bid.</td><td></td><td></td></tr>
<tr><td>H.4.7</td><td>Photocopy of the company ID of the bidder/bidder’s representative who conducted the sites inspection shall be attached.</td><td></td><td></td></tr>
<tr><td>H.4.8</td><td>Photocopy of the visitor’s logbook from the respective ANF inspected shall be submitted as an attachment for the bid proposals.</td><td></td><td></td></tr>
<tr><td>H.4.9</td><td>The bidder/bidder’s representative who conducted the sites inspection shall be photographed together with the ANS FIC (or his authorized representative at site) inside the tower/FSS Building where the equipment be installed and outside the tower/FSS building during the conduct of site inspection.</td><td></td><td></td></tr>
</table>

Section	Specification	Compliance Statement	Reference to support statement (also INDICATE PAGE No.)
	END OF SPECIFICATIONS		

ANNEX A – ITB 10.1 Form

Name of the Project: _____
Name of Bidder: _____
Calendar Year: _____

(1)	(2)	(3)	(3.1)	(3.2)	(4)	(4.1)
Item	Country of origin	Description	Brand	Type / Model / Version	Quantity	Unit

_____ _____

[signature] *[in the capacity of]*

Duly authorized to sign Bid for and on behalf of_____
Date_____

NOTE: All equipment/items offered must be reflected in this form. Columns 3.1 & 3.2 for applicable items.

Omnibus Sworn Statement

REPUBLIC OF THE PHILIPPINES)
CITY/MUNICIPALITY OF _____) S.S.

A F F I D A V I T

I, [*Name of Affiant]*, of legal age, *[Civil Status]*, *[Nationality]*, and residing at *[Address of Affiant]*, after having been duly sworn in accordance with law, do hereby depose and state that:

1. ***Select one, delete the other:***

   If a sole proprietorship: I am the sole proprietor or authorized representative of *[Name of Bidder]* with office address at *[address of Bidder]*;

   If a partnership, corporation, cooperative, or joint venture: I am the duly authorized and designated representative of *[Name of Bidder]* with office address at *[address of Bidder]*;

2. ***Select one, delete the other:***

   If a sole proprietorship: As the owner and sole proprietor, or authorized representative of *[Name of Bidder]*, I have full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for *[Name of the Project]* of the *[Name of the Procuring Entity], as shown in the attached duly notarized Special Power of Attorney*;

   If a partnership, corporation, cooperative, or joint venture: I am granted full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for *[Name of the Project]* of the *[Name of the Procuring Entity]*, as shown in the attached *[state title of attached document showing proof of authorization (e.g., duly notarized Secretary's Certificate, Board/Partnership Resolution, or Special Power of Attorney, whichever is applicable;)]*;

3. *[Name of Bidder]* is not "blacklisted" or barred from bidding by the Government of the Philippines or any of its agencies, offices, corporations, or Local Government Units, foreign government/foreign or international financing institution whose blacklisting rules have been recognized by the Government Procurement Policy Board;

4. Each of the documents submitted in satisfaction of the bidding requirements is an authentic copy of the original, complete, and all statements and information provided therein are true and correct;

5. *[Name of Bidder]* is authorizing the Head of the Procuring Entity or its duly authorized representative(s) to verify all the documents submitted;

6. ***Select one, delete the rest:***

   If a sole proprietorship: The owner or sole proprietor is not related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

If a partnership or cooperative: None of the officers and members of *[Name of Bidder]* is related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

If a corporation or joint venture: None of the officers, directors, and controlling stockholders of *[Name of Bidder]* is related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

7. *[Name of Bidder]* complies with existing labor laws and standards; and

8. *[Name of Bidder]* is aware of and has undertaken the following responsibilities as a Bidder:

   a) Carefully examine all of the Bidding Documents;

   b) Acknowledge all conditions, local or otherwise, affecting the implementation of the Contract;

   c) Made an estimate of the facilities available and needed for the contract to be bid, if any; and

   d) Inquire or secure Supplemental/Bid Bulletin(s) issued for the *[Name of the Project]*.

9. *[Name of Bidder]* did not give or pay directly or indirectly, any commission, amount, fee, or any form of consideration, pecuniary or otherwise, to any person or official, personnel or representative of the government in relation to any procurement project or activity.

IN WITNESS WHEREOF, I have hereunto set my hand this __ day of ___, 20__ at _____, Philippines.

_____
Bidder's Representative/Authorized Signatory

SUBSCRIBED AND SWORN to before me this ___ day of *[month] [year]* at *[place of execution]*, Philippines. Affiant/s is/are personally known to me and was/were identified by me through competent evidence of identity as defined in the 2004 Rules on Notarial Practice (A.M. No. 02-8-13-SC). Affiant/s exhibited to me his/her [insert type of government identification card used], with his/her photograph and signature appearing thereon, with no. _____ and his/her Community Tax Certificate No. _____ issued on ____ at _____.

Witness my hand and seal this ___ day of *[month] [year]*.

NAME OF NOTARY PUBLIC
Serial No. of Commission _____
Notary Public for _____ until _____
Roll of Attorneys No. _____
PTR No. _____ *[date issued], [place issued]*
IBP No. _____ *[date issued], [place issued]*

Doc. No. _____
Page No. _____
Book No. _____
Series of _____

* This form will not apply for WB funded projects.

CERTIFICATE OF SITE INSPECTION

This is to certify that (*Bidder's Name/Bidder's Representative*), (Position) of (*Company Name)*, has conducted the required site inspection for the bidding of the project "(*Name of the Project*)" at (*Airport Address*).

Issued this (*Date*).

_____
Facility In-Charge/Authorized Representative

Section VIII. Checklist of Technical and Financial Documents

Checklist of Technical and Financial Documents

I. TECHNICAL COMPONENT ENVELOPE

Class "A" Documents

Legal Documents

☐ (a) Valid PhilGEPS Registration Certificate (Platinum Membership) (all pages) in accordance with Section 8.5.2 of the IRR;

Technical Documents

☐ (b) Statement of the prospective bidder of all its ongoing government and private contracts, including contracts awarded but not yet started, if any, whether similar or not similar in nature and complexity to the contract to be bid; and

☐ (c) Statement of the bidder's Single Largest Completed Contract (SLCC) similar to the contract to be bid, except under conditions provided for in Sections 23.4.1.3 and 23.4.2.4 of the 2016 revised IRR of RA No. 9184, within the relevant period as provided in the Bidding Documents; and

☐ (d) Original copy of Bid Security. If in the form of a Surety Bond, submit also a certification issued by the Insurance Commission or Original copy of Notarized Bid Securing Declaration; and

☐ (e) Conformity with the Technical Specifications, which may include production/delivery schedule, manpower requirements, and/or after-sales/parts, if applicable; and

☐ (f) Original duly signed Omnibus Sworn Statement (OSS) and if applicable, Original Notarized Secretary's Certificate in case of a corporation, partnership, or cooperative; or Original Special Power of Attorney of all members of the joint venture giving full power and authority to its officer to sign the OSS and do acts to represent the Bidder.

Financial Documents

☐ (g) The prospective bidder's computation of Net Financial Contracting Capacity (NFCC) or A committed Line of Credit from a Universal or Commercial Bank in lieu of its NFCC computation.

Class "B" Documents

☐ (h) If applicable, a duly signed joint venture agreement (JVA) in case the joint venture is already in existence or duly notarized statements from all the potential joint venture partners stating that they will enter into and abide by the provisions of the JVA in the instance that the bid is successful.

II. FINANCIAL COMPONENT ENVELOPE

☐ (i) Original of duly signed and accomplished Financial Bid Form; and

☐ (j) Original of duly signed and accomplished Price Schedule(s).

Other documentary requirements under RA No. 9184 (as applicable)

☐ (k) *[For foreign bidders claiming by reason of their country's extension of reciprocal rights to Filipinos]* Certification from the relevant government office of their country stating that Filipinos are allowed to participate in government procurement activities for the same item or product.

☐ (l) Certification from the DTI if the Bidder claims preference as a Domestic Bidder or Domestic Entity.

REVISED ANNEX A

Name of the Project: _____

Name of Bidder: _____

Calendar Year: _____

(1)	(2)	(3)	(3.1)	(3.2)	(4)	(4.1)
Item	Country of Origin	Description	Brand	Type / Model / Version	Quantity	Unit

_____ _____

[signature] *[in the capacity of]*

Duly authorized to sign Bid for and on behalf of _____

Date _____

NOTE: All equipment/items offered must be reflected in this form. Columns 3.1 & 3.2 for applicable items. Provide additional sheets when necessary.

ANNEX B

Meteorological Instrument Readings Sampling Form

Date (mm/dd/yy)	Time of Sample	Wind Speed		Wind Direction			Pressure (mBar)			Temperature			Verified by	
		Workstation	Display	Existing	New Met 1	New Met 2	Existing	New Met 1	New Met 2	Existing	New Met 1	New Met 2	ANS	ATS

Performed by: (Supplier Representatives)

Signature over printed name
Designation

Signature over printed name
Designation

Signature over printed name
Designation

Witnessed by: (ANS Representatives)

Signature over printed name
Designation

Signature over printed name
Designation

NOTE: *Data for current Hours of Operation only. To be filled up for seven (7) consecutive days. Provide additional sheets when needed. Return all accomplished form/s to ANPPDD.*

Remarks *(if any)* _____


Republic of the Philippines
gppb
Government Procurement Policy Board