



PURCHASE AND INSTALLATION OF COMMUNICATIONS EQUIPMENT
FOR LAOAG INTERNATIONAL AND CAUAYAN AIRPORT
(BID NO. 24-049-07 BRAVO)

BID BULLETIN NO. 4

SEP 25 2024

Clarifications of requirements in the Technical Specifications bid document issued for the above project shall apply as follows:

Bidders' Clarification

1. Type of interface of AWOS that will be integrated to ATIS system. Based from the current the current site survey, AWOS from PAGASA is not operational and they cannot give any details of the equipment because of the said fault. How will it be stated in the compliance since AWOS is not operational.

REPLY: CAAP AWOS instrument in Laoag is yet to be procured. The requirement input for ATIS system is IP interface. See also Bid Bulletin No.2

2. Could CAAP please share these schematics and drawings:
 - a. ATC Console Layout
 - b. Design 2B

REPLY: The schematics and drawings are available at the BAC Secretariat Office and/or ANS

3. Regarding Laoag Transmitter and receiver quantity, understood only 4 radios in main & standby are used and the balance used placed in cold storage as spare. Further question regarding Laoag's ATIS system; can CAAP please confirm it comprise single transmitter and receiver?

REPLY: Yes, the ATIS System only require single transmitter and receiver

4. Cauayan's Transmitter and receiver quantity 3-main, 2-standby + 1-extra does not tally with Cauayan's channel qty, i.e. 3-channels in main standby. Question, is the extra transmitter and receiver connected to the VCS or designated as a spare?

REPLY: Cauayan requires 7 transmitter and 7 receiver units for the 3 frequencies in main and standby setup; that is 6 units each for transmit and receive. The remaining pair of transmitter and receiver is the spare.

5. There are 6-High Power RF circulators. As the transmitters are connected to their respective 4-Channel cavity combiner (these combiners are normally supplied from factory with isolators to block reflected RF and intermod products). From a design standpoint, the only reasonable connection for these circulators would be at the combiner's common output. Question, what is the intended use of these circulator where one leg is unterminated? And would CAAP consider an alternate design without the circulators?

REPLY: The RF circulators are intended to isolate the different frequency transmission and reception. The 6-High Power RF circulators are distributed to Laoag and Cauayan airports; 3 units for each site. Main and back-up antennae will use 2 circulators and the remaining unit is spare. The design intends to have only a single antenna for transmit and receive path. Alternate design can be considered but replacement of components in the bill of quantities must be explained well and approved by the Original Equipment Manufacturer (OEM) and/or PECE.

6. Antenna quantity (3x-Laoag & 3x-Cauayan) does not tally with 4-Channel Tx combiner & 4-Channel Rx coupler. Question, could you please clarify how these are distributed.

REPLY: The design intends to have only a single antenna for transmit and receive path. Main and back-up antennae will use 2 circulators and the remaining unit is spare. See Design 2B drawing.

7. Would CAAP consider a possibility of an alternate design incorporating an increased number of antennas?

REPLY: Alternate antenna design can be considered but replacement of components in the bill of quantities must be explained well and approved by the Original Equipment Manufacturer (OEM) and/or PECE.

8. C.1.4. Transient Voltage Surge Suppressor (TVSS)

- a. Although written in the requirement for TVSS device per-radio. Is CAAP open to alternative where a TVSS device is used for each supply phase into the rack (Main & back up phase)?

REPLY: For TVSS, alternative design can be considered but must be explained well and approved by the Original Equipment Manufacturer (OEM) and/or PECE.

9. Can we have the tower blueprint including roof and total height with additional information on what else will be placed on the tower roof?
- a. How tall is the lightning spike? As the antenna boom shall not be taller than the lightning spike.
- b. Please provide the GPS coordinates of the Tower

REPLY: These information are part of the purpose why site inspection is required. The bidder is advised to take note of these site information as consideration to their bid submission and which will be part of the consideration that CAAP will extend in the design alternatives being proposed.

10. Room drawings:

- a. Floor plan for equipment room.
- b. RF feeder cable entry location

REPLY: The schematics and drawings are available at the BAC Secretariat Office and/or ANS

11. How is the current VCS & VHF system setup, or is this a new tower installation?

REPLY: The project intends to replace the old VCS & VHF systems of Laoag and Cauayan airports.

12. Are transmitter & receiver racks located in the same room in the tower?

REPLY: The first option is to install the new equipment in the same room as the old/existing equipment to be replace. The information gain by the bidder in site inspection will form part of the consideration that CAAP will extend in the alternatives being proposed.

13. Transmitter & receiver antennas, located on the tower roof or is there a separated transmitter building some distance away from VCS equipment? If yes, please do furnish us with such information.

REPLY: Transmitter and receiver antennas, as far as practicable, shall be located on the tower deck or within the tower building; or at existing steel radio towers available outside the ATC Tower building or within the facility perimeter where transmit and receive signals are not obstructed.

14. AC power source is it 220-230VAC or 110-115VAC or both.

- a. Please clarify if the 3-phase is a "Delta" or "Star" because our equipment needs L,N,E inputs.

REPLY: The 3-phase power supply is Delta with 220-230VAC only. Nonetheless, these information can be verified and are part of the purpose why site inspection is required. The bidder is advised to take note of these site information as consideration to their bid submission and which will be part of the consideration that CAAP will extend in the design alternatives being proposed.

15. Would CAAP consider an alternate to the folded dipole antenna in C.3.2.5.7 to an omnidirectional dipole antenna design which does not employ a balun?

REPLY: These information are part of the purpose why site inspection is required. The bidder is advised to take note of these site information as consideration to their bid submission and which will be part of the consideration that CAAP will extend in the design alternatives being proposed.

16. Regarding C.4.2.4.6, can CAAP clarify what type of lines are these, below:

- a. "Spare" lines are analog? If yes, are they 2-wire (Telephone) or 4-wire (E&M Radio).
- b. "VHF AM Transceivers" are existing and analog, or they are connected via an IP (ethernet) interface?

REPLY: Please refer to issued Bid Bulletin No. 2 dated 6 Sept 2024, particularly items 9 and onwards.

17. Regarding C.4.1.3. requirement for 8-lines, could CAAP please clarify how these 8-line quantity would tally with the line quantity in C.4.2.4.6?

REPLY: Please refer to issued Bid Bulletin No. 2 dated 6 Sept 2024, particularly items 9 and onwards.

18. Regarding C.2.2.23 & .24, We think these parameters are more relevant to the antenna installation, rather than the receiver, nevertheless could CAAP clarify this, and if so, how shall we word our response the compliance?


REPLY: VSWR and MTBF of antenna is required as stated. Antenna VSWR requirement is also expected to be complied in the installation.

19. Regarding C.3.2.2.6. This parameter is relevant for transmit combiner. If yes, how shall we word our response the compliance?

REPLY: This is a requirement in the installation. Necessary channel separation may be implemented per bidder design and/or site applicability.

For the information and guidance of all concerned.

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Approved by:


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Chair, Bids and Awards Committee - Bravo