



Federal Aviation Administration

Memorandum

Date: JUL 11 2008

To: PGL Distribution List

From: Frank SanMartin, Manager, Airports Financial Assistance Division,
APP-500

Subject: **Action:** Program Guidance Letter 08-05

We are issuing this Program Guidance Letter (PGL) to clarify guidance on the eligibility of Automated Weather Observing Systems (AWOS). This guidance will become a replacement of Paragraph 572 of FAA Order 5100.38C in the next handbook change. This guidance is effective immediately and provides clarification on the eligibility of AWOS using AIP grant funds, the use of AWOS that offer added features and current AWOS availability.

There has been some confusion among airport sponsors and vendors as to the requirements of AIP eligibility on AWOS installations. This PGL clarifies those areas and will help ensure that AWOS grants are fully compliant.

A handwritten signature in blue ink, appearing to read "Frank SanMartin".

Frank SanMartin
Manager,
Airports Financial Assistance Division

This Program Guidance provides background on weather reporting systems, and updates and revises Paragraph 572 of the AIP Handbook.

BACKGROUND ON WEATHER REPORTING SYSTEMS

A pilot approaching or preparing to depart an airport must have accurate local weather information. This is done in one of three ways. In busier terminal areas, the pilot listens to the **Automatic Terminal Information Service**, or **ATIS**. The ATIS is a recorded information system that includes weather information, plus runway information, NOTAMS and available approaches. (Since pilots receive the routine information from a recording, controllers are freed up for more traffic-specific communications. It also frees up radio space, since it is not on the air traffic control frequencies.)

At some airports, weather information comes from the **Automated Surface Observing System (ASOS)** or the **Automated Weather Observing System (AWOS)**. The ASOS is an FAA-DOD-NWS joint venture with standard equipment arrangement and features. The ASOS is funded by the F&E program and is not eligible for AIP grant funds and is no longer manufactured. The Automated Weather Sensor System (AWSS) is the follow-on system from ASOS. The AWOS may be FAA-owned or sponsor-owned.

At airports without ATIS or AWOS/ASOS, pilots obtain local weather information from a variety of sources including observations reported by the airport UNICOM radio operator, Flight Service weather briefings, local media, the internet and other sources.

Like the ATIS, the AWOS routinely and automatically provides computer-generated voice observations directly to aircraft around an airport, using ground-to-air radio (although some ATIS still use voice recordings rather than computer-generated).

PARAGRAPH 572. AUTOMATED WEATHER OBSERVING SYSTEM (AWOS).

An AWOS designed in accordance with FAA Advisory Circular 150/5220-16 may be eligible at an eligible airport if there are no FAA-owned and maintained weather reporting systems at that airport (existing or planned.) Either the airport itself or the State under the state sponsorship provision for airport projects may install and maintain the AWOS equipment.

AWOS are not eligible for FAA-takeover under Order 6700.20.

¹ When programming an AWOS, users must indicate the type of AWOS being installed, i.e. AWOS-A, AWOS-III, etc. in the Addendum Field.

Automated Surface Observing Systems (ASOS) and Automated Weather Sensor System (AWSS) are FAA F&E program installations and are not eligible for AIP.

a. TYPES OF ELIGIBLE FAA-CERTIFIED AWOS.

The Terminal Program Operations Office, Terminal Weather Group (AJT-12²) is responsible for certifying AWOS manufacturers. As of October 15, 2007, AJT-12 has certified 4 manufacturers for many categories of AWOS. The categories increase in features from the basic AWOS-A to the AWOS III-P-T-Z, plus most recently, an AWOS IV. Not all manufacturers are certified on all types of AWOS. Appendix A of this PGL lists the certified AWOS and their manufacturers on October 15, 2007. It is critical that airport sponsors confirm current certifications with AJT-12 before bidding an AWOS project.

Only FAA-certified equipment meeting the Buy American Preference requirement may be used on AIP grant projects and only manufacturers certified for the particular AWOS being bid are responsive bidders. Only the minimum AWOS that will meet the needs of the airport should be specified.

The categories of AWOS are:

- **AWOS A:** Dual-pressure sensor measures barometric pressure and reports altimeter setting
- **AWOS A-V:** AWOS A plus visibility
- **AWOS I:** Wind Speed, Wind Gust, Wind Direction, Variable Wind Direction, Temperature, Dew Point, Altimeter Setting, Density Altitude
- **AWOS II:** Same as AWOS I + Visibility, Variable Visibility
- **AWOS III³:** Same as AWOS II + Cloud Height & Sky Condition
- **AWOS III-R:** Same as AWOS III + Runway Surface Condition
- **AWOS III-P:** Same as AWOS III + Present Weather Identification Sensor
- **AWOS III-P-R:** Same as AWOS III-P + Runway Condition Sensor

² AJT-12, the Terminal Weather Group falls within the Air Traffic Organization (AJO-0); Terminal Services (AJT-0); Terminal Programs Operations Office (AJT-1).

³ AWOS III and better report obscurations such as fog, mist, freezing fog, and haze. The algorithm is based on visibility and temp/dew point depression.

- **AWOS III-P-T:** Same as AWOS III + Present Weather & Lightning Detection
- **AWOS III-P-T-R:** Same as AWOS III-P-T + Runway Condition Sensor
- **AWOS III-T:** Same as AWOS III + Lightning Detection
- **AWOS III-T-R:** Same as AWOS III-T + Runway Condition Sensor
- **AWOS III-P-T-Z:** Same as AWOS III + Present Weather & Lightning Detection, Freezing Rain Detection
- **AWOS IV:** Same as AWOS-P-T-Z + Runway Condition Sensor

AWOS equipment may only be bid for the certification that it has received. In other words, if a manufacturer's equipment is certified as an AWOS I and it is bid on an AWOS III-T-R proposal, the bid must be considered nonresponsive.

b. Radio Transmission and Communications Equipment.

AWOS may broadcast via the Unicom frequency or over a dedicated radio frequency. Different manufacturers of FAA-certified AWOS may use Unicom or radio transmission. Airport sponsors may not limit a bid for an AWOS based on the method of radio transmission.

Automatic telephone answering systems or radio transmitters are eligible as an allowable cost to an AWOS.

c. Operations and Maintenance

Sponsors are required to operate and maintain AWOS equipment during its life cycle. The special condition required for navigation aid projects (Appendix 7) shall be in each AWOS grant. Inspection by FAA may also be required.

d. Standard AWOS Specification

A standard specification for AWOS acquisition and installation is being prepared by AAS-100. Once issued, this specification must be used for all AWOS projects. Caution must be used when modifying the specification to avoid inadvertent sole-source procurement of the equipment.

e. AWOS Selection

There are different AWOS configurations and capabilities available for nonfederal installations. For most airports, an AWOS A or AWOS A-V will provide the capabilities needed, therefore a benefit-cost analysis is not needed to program an AWOS A or AWOS A-V using AIP grant funds.

However, to request grant funding for a more advanced AWOS, an airport must submit a positive benefit-cost analysis using the instructions in FAA Order 7031.2C – Airway Planning Standard Number One; Terminal Air Navigation Facilities and Air Traffic Control Services⁴ (APS-1).

When airports requests a more advanced AWOS, regions must ensure that the AWOS selected is justified by an operational need at the airport and supported by a complete, positive benefit-cost analysis. When preparing the BCA, airports must include the full costs of the AWOS, including all fixed costs and variable costs, not simply the incremental cost increase over the basic cost of an AWOS A or AWOS A-V installation.

⁴ Available on-line at
http://www.faa.gov/regulations_policies/policy_guidance/benefit_cost/media/7031.pdf

Appendix A

List of Current Certified AWOS Manufacturers
As of October 15, 2007

This list is provided to illustrate the AWOS certified manufacturers on October 15, 2007. It will not be updated and may not be used as the means for determining whether bidders are responsive. Airport sponsors must verify the current list of certified AWOS manufacturers when preparing the bid documents.

Manufacturer	AWOS A: Dual-pressure sensor measures pressure and reports altimeter setting	AWOS A-V: AWOS A plus visibility	AWOS I: Wind Speed, Wind Gust, Wind Direction, Variable Wind Direction, Temperature, Dew Point, Altimeter Setting, Density Altitude	AWOS II: Same as AWOS I + Visibility, Variable Visibility	AWOS III: Same as AWOS II + Cloud Height & Sky Condition	AWOS III-P: Same as AWOS III + Present Weather Identification Sensor	AWOS III-P-T: Same as AWOS III + Present Weather & Lightning Detection	AWOS III-P-T-Z: Same as AWOS III + Present Weather & Lightning Detection, Freezing Rain Detection	AWOS IV: Same as AWOS III P-T-Z plus runway surface condition sensor
Potomac Aviation (SuperAWOS) Manufactured in Maryland	X	X							
Belfort Manufactured in Maryland	X	X							
Vaisala* Sensors manufactured in Finland	X		X	X	X	X	X	X	X
AWI Manufactured in California	X		X	X	X	X	X	X	

* A waiver to Buy American Preference Requirements on AIP projects through December 2012 was issued to Vaisala for AWOS I, II, III and above on December 27, 2007. All Vaisala AWOS III or above may include runway condition sensors.

(Source: ATO-T/ AJT-12, October 15, 2007)