

## ITEM L-107 (A) INSTALLATION OF UNICOM BASED WEATHER STATION

### DESCRIPTION

**107(A)-1.1** This item shall consist of furnishing and installing a UNICOM based weather station (UBWS) in accordance with these specifications.

The work shall include furnishing of the equipment specified, all manufacturer required installation of the equipment, the testing of the installation, and all incidentals necessary to place the weather station in operation as a completed unit to the satisfaction of the Engineer. Installation of equipment or components typically completed by the Owner shall not be included.

### EQUIPMENT AND MATERIALS

#### 107(A)-2.1 GENERAL.

**a.** Airport weather equipment and materials covered by Federal Aviation Administration (FAA) specifications shall have the prior approval of the FAA, and are listed in Advisory Circular (AC) 150/5345-1, Approved Airport Equipment.

**b.** All other equipment and materials covered by other referenced specifications shall be subject to acceptance through manufacturer's certification of compliance with the applicable specification when requested by the Engineer.

**107(A)-2.2 WEATHER STATION.** The weather station components shall meet or exceed the requirements of AC 150/5220-16C, Automated Weather Observation (AWOS) Systems for Non Federal Applications, including Flight Standards requirements for providing official weather on Unicom or VHF frequencies, where required. The UNICOM Based Weather Station (UBWS) shall have the following features:

- Broadcast weather information via airport UNICOM radio (ie, microphone clicks, hand held device)
- 110/220 AC Power Supply connection
- 12 V DC Battery back up, including battery.
- Wind speed
- Wind Direction
- Ambient Temperature
- Dewpoint
- Relative Humidity
- Graphical Display with Wind Rose and Runway Overlay
- Dual Barometric Pressure Sensors
- Visibility Sensor
- Telephone and Internet connection capability.
- Local recorded advisory or NOTAM broadcast capabilities.
- Expandable for future sensor upgrades (eg. ceilometer, precipitation)
- Provide new UNICOM radio

### CONSTRUCTION METHODS

**107(A)-3.1 INSTALLATION.** The equipment shall be mounted on a pole provided by the owner (if necessary) as shown on the plans.

**107(A)-3.2 ELECTRICAL CONNECTION.** The Owner shall provide 120V AC power, mounting pole, and ground rod or grounding system required by manufacturer at the site. The Owner shall furnish all labor and materials and shall make complete electrical connections to the provided equipment, as required.

**107(A)-3.3 TELEPHONE CONNECTION.** The Owner shall provide one telephone line for telephone access to the weather, if necessary, and at the Owner's option, and additional line for internet access.

### **METHOD OF MEASUREMENT**

**107(A)-4.1** The quantity to be paid as a unit weather station installed as a completed unit in place, accepted, and ready for operation.

### **BASIS OF PAYMENT**

**107(A)-5.1** Payment will be made at the contract unit price for each completed and accepted job. This price shall be full compensation for furnishing all materials and for all preparation, assembly, and installation of these materials, and for all labor, equipment, tools, and incidentals necessary to complete this item.

Payment will be made under:

<b>Item L-107(A)-5.1</b>	<b>UNICOM Based Weather Station, in place--per unit</b>
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### **MATERIAL REQUIREMENTS**

Fed.Spec.J-C-30	Cable and Wire, Electrical (Power, Fixed Installation)
Fed.Spec.W-P-115	Panel, Power Distribution
AC 150/5345-7	Specification for L-824 Underground Cable for Airport Lighting Circuits
AC 150/5220-16C	Automated Weather Observation (AWOS) Systems for Non Federal Applications
Underwriters Laboratories Standard 6	Rigid Metal Conduit
Underwriters Laboratories Standard 514	Fittings For Conduit and Outlet Boxes
Underwriters Laboratories Standard 1242	Intermediate Metal Conduit

END OF ITEM L-107(A)