



WILLIAMSON COUNTY

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November 30, 2017

To Whom It May Concern:

Williamson County is accepting bids for an airborne sensor package for the Williamson County Sheriff's Office. Minimum bid specifications are enclosed. Please note any exceptions to the bid.

It is not the intent of Williamson County to favor one vendor; however, we do, from time to time, have to rely on vendors' help in writing specifications. We will accept all bids with exceptions noted, and all bids will be given equal consideration.

Bids will be opened Thursday, December 21, 2017, 2:00 p.m. Bids should be submitted in a sealed envelope to the County Mayor's Office, 1320 West Main Street, Suite 125, Franklin, TN 37064. Each envelope should be plainly marked: **Bid – Airborne Sensor Package, Sheriff's Office, December 21, 2017. Envelope must also include bidder's company name. PLEASE NOTE: IF THE SEALED PACKAGE IS NOT LABELED EXACTLY AS SPECIFIED ABOVE, THE BID WILL NOT BE OPENED.**

Williamson County reserves the right to reject any and/or all proposals, to waive technicalities or informalities, and to accept any proposal deemed to be in the best interest of Williamson County. **No bid shall be valid unless signed.** No bid shall be accepted by FAX machine or e-mail.

Enclosed is an *Ethical Standards Affidavit* and *Business Tax and License Affidavit*. Please complete these documents and return them with your bid.

If you have any questions, please e-mail lesliem@williamson-tn.org. All questions must be submitted in writing by 4:30 p.m. CST on December 15, 2017. No addenda will be issued within 48 hours of the bid opening date and time.

Sincerely,

Leslie Mitchell, CPPO, CPPB
Purchasing Agent

LM/lw
Enclosure

Minimum Specifications Airborne Sensor Package

To increase the impact and efficiency of our Aviation Unit, Williamson County Sheriff's Office will acquire a new or factory reconditioned, FLIR Systems, Inc. Ultra 7500b airborne dual-sensor package, or its equivalent. This bid allows for bidders to submit a total bid for either a new or factory reconditioned package, or both. The award will be made to the bid that is in the best interest of the Williamson County Sheriff's Office.

This sensor package must have both thermal (IR) and visual (TV) sensing capability. Williamson County Sheriff's Office Aviation Unit requires this capability so that they will be better equipped for missions such as search and rescue (SAR), criminal apprehension, vehicle tracking, and counter-drug operations. In addition to being able to carry out its own independent missions, an Aviation Unit with airborne imaging capability will more effectively safeguard the lives of officers on the ground. In such cases as high-speed pursuit and counter-drug operations, the Aviation Unit will be able to safely gather and disseminate tactical and evidentiary information while communicating it to ground units; thus providing a greater measure of safety to uniformed and civilian personnel. The selected dual-sensor package will be mounted on the Aviation Unit's OH-58 aircraft.

Williamson County Sheriff's Office will purchase the most versatile dual-sensor package available within its budgetary and operational constraints. Aviation Unit crews must be able to respond to a unique variety of missions with no equipment-related delays or restrictions. These missions may involve or require any combination of the following:

- Day and night, all-weather operations
- Last-minute changes to mission parameters
- Long duration observation and surveillance flights
- Landing at un-improved areas
- Airborne Surveillance
- Search and Rescue
- Lost children
- Elderly walk-away
- Criminal Apprehension
- Evidence gathering
- Manhunts

The airborne dual-sensor package must incorporate features that address all of these tactical issues.

1.0 Day and night, all-weather operations – By its very nature, the Aviation Unit is an asset that must be available 24 hours per day, in a wide variety of weather conditions and tactical scenarios. Use of the dual-sensor package must not restrict, or be restricted by, these operations. The dual-sensor package must incorporate the following characteristics:

- 1.1 Gimbal Sealing – The components of the sensor system that are exposed to free airflow around the aircraft (i.e. sensor gimbal) must be sealed against moisture.
- 1.2 Focal Plane Array – Given that the Aviation Unit needs to be mission-ready day and night, the reliability of the sensor system is critical. To maximize reliability and reduce system down time, the infrared sensor must employ Focal Plane Array (FPA) technology. The array must be composed of at least a 320 x 240 pixel arrangement to achieve maximum viewing area. Systems incorporating scanning mechanisms must not be utilized.
- 1.3 Quick-disconnect Mount – The sensor gimbal will be mounted between the aircraft's landing skids with quick-disconnect type mounting hardware, such as will allow for the mounting or removal of the dual-sensor turret during the same amount of time required for a normal refueling evolution.

2.0 Changes to mission parameters – The Williamson County Sheriff's Office Aviation Unit is called upon to respond quickly to its dynamic mission requirements. This may involve quickly modifying crew composition or aircraft configuration. The selected dual-sensor package must not limit the aircrews' ability to respond in a timely manner to changes in mission characteristics or circumstances. In order to meet these demands, the dual-sensor package must meet the following requirement:

- 2.1 Weight of 42 lbs or less – The complete sensor package must not add enough weight to the aircraft to negatively impact Aviation Unit crew composition or aircraft configuration options. Based on this requirement, the maximum weight allowable for the entire dual-sensor package (to include gimbal, required electronics, and hand controller) must be less than 42 pounds. (This figure does not include the weight of monitor, VCR, or cables.)

3.0 Long-duration missions – Operational safety compels Aviation Unit personnel to always consider all factors contributing to crew fatigue. In order for use of the sensor system to counteract this consideration, it must incorporate the following features:

3.1 Ergonomic Hand Controller – The sensor system’s controller must be designed for one-handed use, and weigh 2 pounds or less. It must offer NVG compatible backlighting.

3.2 Automatic/Manual Gain and Level Controls – The thermal sensor must automatically adjust the Gain and Level settings to reduce the demands on the operator; however, the operator must also be afforded the option of manually adjusting these controls when appropriate.

3.3 Intuitive Graphical Display - The dual-sensor system’s on-screen symbology must continuously display critical camera functions in an intuitive, easily interpreted format. The information displayed should include Field of View (FOV), GPS Data, Gain and Level Mode, and Gimbal Position. The simple collection of data relating to system function and status should not add to operator workload.

3.4 Adjustable Gimbal Sensitivity – The operator must be given the flexibility to customize the gimbals’ slew rate as the tactical situation requires, rather than having to fight a one-size-fits-all factory-set gimbal slew rate. The gimbal slew rate, or sensitivity, must be fully adjustable and easily accessible through the hand controller, as this will markedly reduce operator workload.

3.5 Auto-Scan Search and Rescue (SAR) Mode - The camera system must have an Auto-Scan Mode to relieve operator fatigue during extended SAR missions. In Auto-Scan Mode, the camera will automatically scan in the azimuth at a rate that is operator adjustable.

4.0 Influence on landing operations – The Williamson County sheriff's Office Aviation Unit's support of Ground Unit personnel might require landings in areas that include rough terrain, up-sloping terrain, and obstacles to aircraft safety such as rocks, debris, etc. The installation of a dual-sensor package cannot impede the Aviation Unit's options or impact aircrew decision-making when called upon to operate in such an environment. Therefore, the installation of the dual-sensor system must meet the following requirements:

4.1 At least 8" of Ground Clearance – With all required quick-disconnect mounting hardware attached, the turret size must allow for at least 8" (measured from a flat surface) of remaining ground clearance when mounted. The Aviation Unit will not accept a requirement to modify the aircraft's landing gear in order to meet this specification.

4.2 Mounted aft of Wire Strike – Crew safety requires that the sensor gimbal must be mounted aft of the aircraft's wire-strike components.

4.3 Stow Feature – The dual-sensor package must incorporate a stowing feature, to protect the lenses from flying debris.

5.0 Airborne Surveillance – The dual-sensor package must incorporate Fields of View (FOV) that allow for both adequate ground coverage and magnification, without sacrificing the operator's situational awareness. To enhance the quality of evidentiary information gathered by the Aviation Unit during surveillance missions, the dual-sensor system must have the capability to display (and thereby record) aircraft position information, as supplied by the compatible on-board GPS receiver. Therefore, the dual-sensor system's FOV must meet the following criteria:

5.1 Continuous Zoom for IR Sensor – To enhance the operator's ability to maintain situational awareness, and to reduce workload, the system's infrared sensor will utilize a Continuous Zoom mechanism to move smoothly between its optical Wide and Narrow Field-of-View limits. The magnification between Wide and Narrow Fields of View must be at least a 10:1 ratio. The camera must be capable of utilizing an auto-focus mode to help reduce operator workload. The system shall incorporate both a fixed field of view for fast zoom position changes and the continuous zoom feature, which can be selected by the operator to accommodate different mission profiles.

- 5.2 GPS Interface – For evidentiary purposes, the selected dual-sensor system will display the continuously updated aircraft position (as provided from the compatible on-board GPS receiver) on the screen, and will enable this information to be recorded.
- 5.3 IR WFOV Ground Coverage – While in the infrared sensor's Wide Field of View (WFOV), and at operating altitudes (1,000'-1,500' AGL), this sensor must be able to view an area the size of 1-1½ standard city blocks wide (approximately 450'-500' wide measured at the center of the field of view) or greater while looking down at angles of 45° or greater.
- 5.4 Visual-light Camera – To increase the Aviation Unit's covert surveillance capabilities, the visual-light (TV) camera will incorporate a minimum optical zoom ratio of 18:1. The visual light camera must be auto-focusing. The visual light camera must also incorporate low light capabilities of at least 0.2 lux.
- 5.5 Searchlight Slave (SLASS) – The dual-sensor package must have the capability of slaving Spectrolab Nightsun Searchlights to the dual-sensor gimbal.
- 5.6 Autotracker – The selected dual-sensor package must incorporate an Autotracking feature to decrease operator workload, and facilitate target tracking. This feature must provide a "Scenelock"-type option for tracking while in the IR or TV sensor.

Bid Sheet
Airborne Sensor Package

Total Bid-New Unit \$ _____

Total Bid- Factory Refurbished Unit \$ _____

The bidder has received the following addenda:

Addendum #	_____	Dated	_____
Addendum #	_____	Dated	_____
Addendum #	_____	Dated	_____

Company Name _____

Physical Address _____

Remittance Address _____

Authorized Signature _____

Printed Name _____

Phone _____ Fax _____

Email Address _____

Date _____

Ethical Standards Affidavit

State of Tennessee

County of Williamson County

Ethical Standards Affidavit. After first being duly sworn according to law, the undersigned ("Affiant") states that he/she has the legal authority to swear to this on behalf of _____, ("Contractor") that no part of any other governmental monies provided for the services or products contemplated in this Agreement which was received from the State of Tennessee or Williamson County shall be paid directly to an employee or official of the State of Tennessee or Williamson County as wages, compensation, or gifts in exchange for acting as a Contractor, officer, agent, employee, subcontractor, or consultant to the County or the Contractor in connection with any Services or Work contemplated or performed relative to this Agreement. Affiant and Contractor further swears that no federally, state, or county appropriated funds have been paid or will be paid, by or on behalf of the Contractor, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, any employee of the State of Tennessee, or employee of Williamson County in connection with the awarding of any federal, state, or county contract, the making or awarding of any government grant, the making of any government loan, and entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any federal, state or county contract, grant, loan, or cooperative agreement.

Affiant

By: _____

Title: _____

Date: _____

Witness: _____

Date _____

Business Tax and License Affidavit

Business Tax and License Affidavit. The undersigned, (“Affiant”), states that he/she has the legal authority to swear to this on behalf of _____, (“Contractor”); that Contractor is not in any manner in violation of *Tennessee Code Annotated, Section, 5-14-108(l)* which provides that “(n)o purchase shall be made or purchase order or contract of purchase issued for tangible personal property or services by county officials or employees, acting in their official capacity, from any firm or individual whose business tax or license is delinquent.” Affiant affirms and warrants that Contractor’s licenses are currently valid and all business taxes have been paid and are current as of the date of this affidavit. Contractor is licensed and pays business taxes in _____ (County), Tennessee.

IV. Affiant

By: _____

Title: _____

Date: _____

Witness: _____

Date: _____