

**CITY OF AUSTIN
DEPARTMENT OF AVIATION
SCOPE OF WORK FOR
ENERGY MANAGEMENT & CONTROL SYSTEM
SOLICITATION NO. IFB 8100 PLS1011REBID**

1. PURPOSE

The City of Austin, Department of Aviation seeks a vendor to support and maintain the Alerton Compass Energy Management & Control System (EMCS) installed at Austin–Bergstrom International Airport (AUS).

The scope of services includes telephone technical support and onsite maintenance, system preventative and corrective maintenance, software maintenance and licensing, database maintenance, systems monitoring and troubleshooting. Additional services include system analysis, optimization and improvements, programming changes, report writing, on-site training, change management, and installation support for moves, adds and changes associated with new construction and/or other airport improvement projects.

The purpose of this contract is to provide AUS with comprehensive technical support and solutions that satisfy the specific requirements of this Scope of Work.

2. TERM OF CONTRACT

This Contract term is for 60-months or the City terminates the Contract.

3. INVOICE AND PAYMENT ADDRESS

The City's preference is to have invoices emailed to Invoices@flyaustintexas.com.

For questions regarding your invoice/payment please contact the City Contract Manager.

4. DESIGNATION OF KEY PERSONNEL

The City and the Contractor resolve to keep the same key personnel assigned to this engagement throughout its term. In the event that it becomes necessary for the Contractor to replace any key personnel, the replacement will be an individual having equivalent experience and competence in executing projects such as the one described herein. Additionally, the Contractor shall promptly notify the City and obtain approval for the replacement. Such approval shall not be unreasonably withheld. The Contractor's and City's key personnel are identified as follows:

	<u>Name</u>	<u>Phone Number</u>	<u>Email Address</u>
City Contract Manager	Mike Robinson	512-530-7504	Mike.Robinson@flyaustin.com
City Contract Administrator, Procurement Specialist	Daniel Dellemonache	512-974-2981	Daniel.Dellemonache@austintexas.com

5. BACKGROUND

The Department of Aviation is responsible for the management and operation of Austin-Bergstrom International Airport. AUS site consists of 4,242 acre campus and includes the 32-gate, 1.8 million square foot Barbara Jordan Passenger Terminal, and several Airport support facilities.

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Current construction projects and continued passenger growth creates a dynamic environment at AUS. This requires a vendor who can support AUS' goal of optimizing and improving the day-to-day operations of AUS EMCS while being responsive to and assisting Airport contractors with changes to the system to accommodate construction and other improvement projects at AUS. It is anticipated that many Airport related projects will be performed throughout the AUS campus that may require services provided through this contract (see Section 9: SCOPE OF SERVICES)

The City reserves the right to award contracts for new installations to other qualified contractors. The Contractor is expected to support all additions and upgrades to the AUS energy management and control system regardless of installer.

6. CURRENT ENVIRONMENT

The existing system is comprised of the following:

- A. System Server Environments and Operating Systems:
 - 1. Server Operating System Microsoft Windows Server 2016 Standard
 - 2. Database Server MSSQL Server 2016
 - 3. Virtual servers in VMWare
- B. Alerton Compass 1.5.6 EMCS Software Version
- C. BacNet/BacTalk with Honeywell EBI Interface

7. GLOSSARY OF ABBREVIATIONS

AUS: Austin Bergstrom International Airport
DOA: Department of Aviation
EMCS: Energy Management and Control System
LAN: Local Area Network
MAC: Moves, Adds, and Changes
MAT: Maintenance Administration Terminal
MM: Multimode (fiber)
NFPA: National Fire Protection Act
SIDA: Site Identification Display Area
SCR: System Change Request
SPOC: Single Point of Contact
SM: Singlemode (fiber)
TSA: Transportation Security Administration
WAN: Wide Area Network

8. CONTRACTOR MINIMUM QUALIFICATIONS

The Contractor shall meet or exceed the following requirements:

- A. Contractor shall have a minimum of five (5) years' continuous experience prior to this solicitation performing inspection, preventative maintenance, repairs and new

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installations/upgrades of Alerton Compass Energy Management Control System software and hardware.

1. Contractor shall be regularly engaged in the business of providing maintenance and repair services, and parts for an EMCS for a minimum of five (5) years
 2. Contractor's prior experience shall include support in facilities of similar size and scope to AUS.
 3. Contractor's prior experience shall include support and services similar to the scope of requirements as stated in this request for proposal
- B. Contractor shall have a full-time, operational facility with a permanent business address, functional email address and telephone, and a company headquarters located in the United State of America.
- C. The Contractor shall provide and maintain a telephone dispatch system that is operational 24 hours per day, seven (7) days per week, and 365 days per year (including holidays). Telephone answering machines do not meet the requirements of this paragraph.
- D. Contractor shall be available to provide service within 48 hours of notice by the City.

9. SCOPE OF SERVICES

This SOW is intended for the City of Austin's Department of Aviation (hereinafter "AUS") telephone technical support and onsite service for the Energy Management and Control System located at Austin-Bergstrom International Airport. The Contractor shall provide all services specified for the term of the Contract, including any extensions. During such time, all support relating to hardware, software, and systems components shall be covered under the Contract.

A. General Support Services:

1. Support shall include assisting with troubleshooting, modifying, and refining all software, hardware, and industrial automation control devices related to correcting, improving, or maintaining HVAC functionality at AUS. Covered equipment includes all HVAC control systems, computer software and hardware systems, integrations and customizations.
2. Support services shall be provided through a combination of telephone technical support, remote access, and an onsite technician. The Contractor shall provide all personnel, administrative support, and other resources required for completing the functions as described in this SOW. The Contractor will promptly inform the AUS Contract Manager of any problem encountered that might threaten the timely completion or adequacy of results obtained in performing the services in the SOW.
3. Remote access to servers and workstations shall be provided by AUS via secure VPN connection.

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4. Contractor will provide full end-to-end operations and software support for the Alerton Compass Energy Control Software including all necessary and required licensing, minor and major software upgrades, incremental upgrades/updates, security patches and bug fixes.
5. Contractor shall provide and install all updates, upgrades, service packs, and monthly security patches for the EMCS server and workstation Operating System(s). However, if any updates or upgrades are NOT compatible with the EMCS software the contractor shall fall back to the latest working known version. For incompatible security patches, the contractor will provide a path and timeline for remediation of the issue and installation of the security patch.
6. For all AUS EMCS software, hardware components and integrations, the Contractor shall provide:
 - a) Maintenance
 - b) Support
 - c) Installation
 - d) Repairs
 - e) Licensing
 - f) Upgrades
 - g) Updates, bug fixes and security patches
7. Contractor support shall include preventative and corrective maintenance, performance monitoring, on-site factory certified instructor led training, renewal of software maintenance agreements and software licenses, database maintenance, troubleshooting, and moves, additions, and changes as directed by AUS.
8. Contractor shall assume responsibility for all existing software maintenance agreements and licenses related to the energy management and control system components.
9. Contractor shall assume responsibility for support, maintenance and repair of all new components and software. This includes new components and functionality installed by another installer as part of a construction contract.
10. True up and reconciliation of software licenses and end points shall be performed on an annual basis.
11. Contractor shall provide and maintain an Incident Tracking application.
12. Contractor shall be responsible for ensuring that all work area(s) are cleaned after the completion of their work. All empty boxes, extra equipment, unused cabling, cabling scraps, and trash shall be removed from the respective work area and properly disposed of or recycled when possible.
13. Contractor may be requested to perform services beyond those stated in the SOW, the Contractor and AUS will negotiate mutually acceptable terms and compensation for completing additional services.

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14. Contractor shall participate in various Airport work groups to actively support AUS' processes for improving the quality of services as requested and necessary.
15. Contractor shall coordinate as necessary with AUS Information System's Division for workstation and server hardware upgrades/replacements and additional networking needs.

B. Preventative Maintenance

1. Contractor shall perform preventative maintenance in accordance with the manufacturer's specifications.
2. All preventative maintenance shall be performed with no service disruption to AUS operations.
3. All failed parts and components identified during the monthly preventative maintenance activities will be replaced at the contractor's expense.
4. Preventative maintenance and performance monitoring events shall be scheduled with the Contract Manager or designated representative at least ten (10) business days in advance. AUS has the right to cancel a scheduled event due to AUS business needs.
5. Contractor shall submit monthly preventative maintenance and performance reports as outlined in Section 14, Reporting Requirements.
6. Routine preventative maintenance tasks shall include at a minimum the following:
 - a) Main Operator Workstation:
 - i. Perform routine and preventative maintenance SQL tasks based on Microsoft best practices.
 - ii. Review EMCS system for critical and off-line status indications.
 - iii. Review EMCS system for override and disabled status indications.
 - iv. Review event and alarm log with customer and discuss EMCS operational concerns.
 - v. Analyze the number of operator or system change occurrences for impact on performance.
 - vi. Perform or schedule reactive or proactive maintenance procedures as appropriate to resolve situations noted.
 - vii. Install appropriate EMCS software refinements and updates.
 - viii. Check monitor for clarity, focus, and color.
 - ix. Cycle power and listen for unusual motor/bearing noise.
 - x. Verify proper system restart; check system date, time and hardware status.
 - xi. Clean exterior surfaces, including monitor.
 - xii. Clean dust from internal surface(s).
 - xiii. General security/software maintenance of the main operator workstation.

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- xiv. Save/copy network workstation database, including custom graphics and resident Master Controller archive databases.
- xv. Verify and install all necessary compatible Microsoft security patches

b) Network Analysis

- i. Log onto the main operator workstation or global controller(s) to verify proper communication between all system components, hardware and software.
- ii. Review global controller error log.
- iii. For each main operator workstation and global controller unit:
- iv. Analyze communication.
- v. Perform online/offline test routine to determine power and communication restart.
- vi. Provide a report summarizing network analysis results.
- vii. Analyze the error rate & transmission rate.
- viii. Review trend logs.
- ix. Review alarm logs.
- x. Perform the network analysis tasks as appropriate to verify or discount suspected communication problems.
- xi. Perform communication “sniffing” if communication problems elude conventional troubleshooting (discussion of resource equipment needs to be discussed with owner).
- xii. Perform the network analysis tasks as appropriate to evaluate the impact on network performance of various configuration options, as part of a proposed system expansion or modification.

c) Global Control Modules

- i. Check indicators to verify proper DC power levels, appropriate transmit and receive activity on the communication trunks, and check for possible Error Code indications.
- ii. Confirm proper time sync of all Global Controller(s) with workstation.
- iii. Inspect wiring for signs of corrosion, fraying and rapid discoloration, defective shielding, or shield grounding.
- iv. Monitor LED sequencing for proper operation.
- v. Review Global Controller(s) device properties.
- vi. Remove excessive dust from internal surfaces.
- vii. Verify / calibrate other points and control processes, where the need for possible proactive maintenance is indicated.
- viii. Update firmware files, as required.
- ix. Review and maintain software documentation.

d) Unitary Controllers

- i. AHU Application Controller:
 - 1) Verify that HVAC Unit is controlled at the appropriate value(s).
 - 2) Change one set point value. Verify smooth transition and stable control at the new set point, as required.

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- 3) Return set point to original value.
- 4) Repeat for each additional control loop, as required.
- 5) Verify the proper operation of critical control processes and points associated with this unit. Make adjustments, as required.
- 6) Review and maintain software documentation.
- ii. Unitary Equipment Controller:
 - 1) Verify that controller is in control at the desired value(s).
 - 2) Change one set point value. Verify smooth transition and stable control at the new set point, as required.
 - 3) Return set point to original value.
 - 4) Repeat for each additional control loop, as required.
 - 5) Verify the proper operation of critical control processes and points associated with this unit. Make adjustments, as required.
 - 6) Review and maintain software documentation.
- C. Corrective Maintenance
 1. Corrective maintenance is defined as work required to repair equipment or software if there is a malfunction or outage.
 2. Contractor shall be responsible for all corrective maintenance of the ECMS system components, software, interfaces, and integration points.
 3. Contractor shall be responsible for all corrective maintenance of hardware including replacing/repairing damaged or non-functioning components when necessary.
 4. If repairs/replacement components/parts of hardware are needed, a quote shall be submitted and approved by the Contract Manager prior to work beginning.
 5. Contractor shall submit monthly reports of all corrective maintenance performed outlined in Section XII, Reporting Requirements.

10. SOFTWARE UPDATES AND CHANGE CONTROL

- A. No software updates, patches or bug fixes shall be performed without prior written approval of the Contract Manager.
- B. Software updates, patches or bug fixes, specific to AUS installed system, shall be provided, tested and installed at no additional costs.
- C. All changes to the EMCS shall be coordinated through the contract manager.
- D. AUS will approve Contractor's System Change Request form (SCR) prior to implementation. At minimum, SCR shall include the following information:
 1. **Description** - A brief narrative of what the change is intended to accomplish. Should be phrased in business terms, not technical terms.
 2. **Scope**
 - a. **Small** – change affects one module and few settings (all are listed)
 - b. **Medium** – change affects either one module and many settings, OR many modules and few settings (all are listed)
 - c. **Large** – change affects many modules and settings (all are listed).

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3. **Source** - The name of the organization(s) instigating the change.
4. **Urgency**
 - a. **Routine** – part of normal, day-to-day, system maintenance. Will be postponed if Urgent or Emergency Changes exist
 - b. **Urgent** – required to resolve a problem causing equipment or systems to not perform normally, or address a vulnerability. Will only be postponed if Emergency Changes exist
 - c. **Emergency** – required to resolve a significant problem or system outage as determined by AUS. Cannot be postponed without risk of complete system failure or sever operational disruption.
5. **Testing** - A brief narrative of the testing performed to ensure the change accomplishes what it is intended to and that the testing is comprehensive enough that it does not cause any unforeseen impacts.
6. **Training** - Any training required by the users of the impacted systems or modules.
7. **Implementation** - The steps required to implement the change.
8. **Back Out Procedures**- The steps required to remove the change if required, and restore the systems to their previous working state.
9. **QA Validation Checklist** – The steps required to validate that all prior operations, including standard and customized, remain fully functional post change.

11. SINGLE POINT OF CONTACT (SPOC)

- A. Contractor shall provide a designated Single Point of Contact/Account Manager (SPOC) that shall be responsible for the coordination of all service and support for AUS EMCS.
- B. SPOC shall be skilled, knowledgeable, and experienced in providing the types of services listed in this specification.
- C. SPOC shall have the authority to dispatch for emergency services and shall has full decision-making authority under this contract.
- D. SPOC shall be available and on-call twenty-four (24) hours daily including weekends and holidays. Contractor shall provide the office number, email address, pager and cell phone number for the SPOC.

12. FUTURE PROJECTS AND NEW INSTALLATION

Over the term of this contract, additions and changes to the EMCS will occur because of various construction and improvement projects, and by request of AUS. Some of the potential projects that may impact the EMCS may include, but are not limited to, the following:

- Terminal optimization, improvements, and expansion.
- Information Technologies Bldg.
- New Terminal Construction

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- A. Contractor shall perform MACs pertaining to the EMCS. AUS reserves the right to award contracts for new installations to other qualified contractors.
- B. All MAC work shall be performed during normal business working hours unless otherwise approved by the contract manager.
 - 1. Any other circumstances that may require additional after-hours work shall be approved by the contract manager prior to any work being performed.
 - 2. Contractor shall provide after-hours pricing on price sheet.
- C. ALL MAC work shall include all equipment, systems, software and appurtenances necessary for a fully functional Airport EMCS.
- D. Contractor shall supply all cabling, jumpers, patch cords, connectors, adapters, and terminators, necessary to interconnect all EMCS equipment including equipment located in the telecommunications closets.
- E. Contractor shall be responsible for the integrity of all fire ratings for all telecommunications pathways, spaces, and systems that are affected by the work performed by the contractor.
- F. Troubleshooting and testing shall be performed to ensure system components are fully operational.

13. SERVICE HOURS

Normal business hours are 7:00 AM to 5:00 PM, Monday through Friday. However, AUS is a twenty-four (24) hour, seven (7) day-a-week operation and technician(s) may be required to perform work during non-normal business hours to include weekends and holidays to support AUS' needs.

14. RESPONSE AND ESCALATION

Contractor support and time frames shall be as follow:

- A. Upon receiving a telephone request for service from AUS, the call will be ranked in accordance with the severity level listed in the chart below. AUS will be provided a call tracking number and a Contractor technician will immediately begin troubleshooting the situation.
- B. When dealing with an issue that holds a severity level of High or Medium, the Contractor will continue to work on the problem until either;
 - 1. The problem is resolved and the system is restored to the state it was in before the problem occurred; or
 - 2. The system is no longer in a High or Medium state.
 - 3. In the event that a higher severity level is downgraded to Low, the Contractor will continue to work on the problem based on the requirements of the lower level.

SEVERITY LEVEL	RESPONSE TIME	DESCRIPTION
HIGH	Call back response within 15 min	Energy Management Control System is 1 AHU and associated VAV's not operational and indoor comfort is adversely affected. Contractor response to

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	Onsite Technician within 4 hours	customer with offsite remote support shall be within 15 minutes. If technician is required to be onsite, The response time shall be within 4-hours of initial call.
MEDIUM	Call back response within 15 min Onsite Technician within 8 hours	Energy Management Control System is operational but indoor comfort is affected in multiple areas. Contractor response to customer with offsite remote support shall be within 15 minutes. If technician is required to be onsite, response time shall be within eight (8) hours.
LOW	Call back response within 1 hour Remote or onsite technician within 48 hours	Energy Management Control System is operational. Indoor comfort is not currently impacted. However, an issue has been identified that may affect indoor comfort if not addressed.

15. REPORTING REQUIREMENTS

- A. Contractor shall be required to submit a monthly maintenance report due the 1st of every month.. This report shall outline all service problems from the previous month. It shall describe the service problem, the technician who performed the service call and the steps and time frames required to clear the trouble.
- B. Contractor shall submit quarterly maintenance and performance summary report.
 - 1. Reports shall include a summary of all preventative and corrective maintenance completed during the reporting quarter, tasks and plans outlined for the upcoming quarter, financial status for the contract, identified risks and/or outstanding problems, and outstanding or pending action items.
 - 2. Contractor shall deliver quarterly reports for the prior quarter no later than the 15th day of the first month of the subsequent quarter.
 - 3. The reports shall be submitted via an electronic document.
 - 4. The document format shall be approved by the contract manager.
- C. Contractor shall provide documentation of all MACs upon completion of each work order.
- D. All on-call remote service support instances shall be documented within two (2) business days of the incident. Included in the incident report will be the following:
 - 1. AUS individual requesting the assistance
 - 2. Contractor engineer providing the support
 - 3. Detailed description of the fault or issue
 - 4. Corrective action, if any taken
 - 5. Identification of the root cause
 - 6. Time stamped start and end times

16. TOOLS AND EQUIPMENT

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- A. Contractor shall provide technicians with all vehicles, tools, equipment, and supplies necessary to perform their job responsibilities.
- B. AUS will provide the technician with a work area and a workstation connected to AUS network. The Technician shall be required to comply with all City of Austin acceptable use policies concerning AUS network.
- C. AUS will provide VPN access for remote troubleshooting.

17. SECURITY AND CONFIDENTIALITY

- A. Access to the premises is strictly controlled, employees, or agents of the contractor shall never enter a restricted or operational area of AUS without the express permission of AUS or the governmental bodies having jurisdiction. Contractor assumes full liability from any such unauthorized incursions.
- B. Contractor personnel will be required to obtain an airport security badge that shall be displayed at all times when on the AUS property. Failure to do so may be cause for removal of contractor personnel from the work site, without regard to contractor's schedule.
- C. All Contractor personnel assigned to work at AUS shall meet the minimum airport security requirements and be capable of obtaining and maintaining a current valid SIDA badge at AUS.
- D. Contractor remote personnel assigned to work at AUS will be required to sign an NDA.