



**PERFORMANCE WORK STATEMENT (PWS)
FOR
E-3 AVIONICS SUSTAINING ENGINEERING SERVICES (ASES)**

FA8102-22-D-####

**11 February 2021
REV 0**

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1.0 DESCRIPTION OF SERVICES/GENERAL INFORMATION

This Performance Work Statement (PWS) defines the extent and types of engineering services to be provided by the Contractor. The Contractor shall provide avionics support to the E-3 Airborne Warning and Control System (AWACS) Division. Furthermore, United States Air Force (USAF) AWACS Engineering Branch at Tinker Air Force Base (AFB), OK will generate technical requirements for the USAF. E-3/707 International Branch at Tinker AFB, OK, referred to as the “Technical Coordination Group (TCG)”, will facilitate technical requirements for all TCG customers on this contract. The only TCG customer will be the North Atlantic Treaty Organization (NATO). The PWS describes types of recurring and non-recurring engineering support, services and tasks to be furnished or performed by the Contractor in support of USAF and NATO AWACS avionics systems.

The Contractor shall provide engineering services for the following aircraft models:

United States Air Force (USAF):	E-3B, E-3C, E-3G
North Atlantic Treaty Organization (NATO):	E-3A

The scope of engineering services shall include: avionics, software, and associated training equipment.

1.1. Background

Some of the Line Replaceable Units (LRUs)/components used on the E-3 AWACS are military-unique equipment; however, there are LRUs/components with embedded software that are Commercial Off the Shelf (COTS) equipment with proprietary data rights held by the Original Equipment Manufacturer (OEM), Collins Aerospace. Based on this, the Government engineers within the CNS/ATM-DRAGON Programs require the knowledge, expertise, experience, and specialized engineering capabilities of a qualified Contractor who has access to commercial design data, proprietary software codes and limited rights engineering/technical data to maintain/sustain the day to day safety and operations of these avionics systems. This Contractor support is also critical in maintaining the Operational Safety, Suitability and Effectiveness (OSS&E) of these avionics systems in the E-3 aircraft.

The NATO E-3 CNS/ATM (Communication, Navigation, Surveillance/Air Traffic Management) program and the USAF DRAGON (Diminishing Manufacturing Sources (DMS) Replacement of Avionics for Global Operations and Navigation) program upgraded several navigation, communication, displays and surveillance systems to meet current and future airspace requirements. The programs will be referred to as CNS/ATM-DRAGON for the purposes of this PWS. The programs enhanced the avionics digital backbone to provide a fully integrated,

software controlled digital system. These new avionics upgrades combined with previous avionics on the aircraft require sustainment into the future

1.2. Access

The Contractor shall have access to or possession of all design, engineering, qualification, test and reliability and configuration data (including all proprietary and limited rights drawings and technical data) for the avionics systems, subsystems, their related components, and ground/flight software code used in the avionics systems currently installed in the E-3 aircraft. The Contractor shall have access to the Technical Order Authoring and Publishing System (TOAP) to view the official complete set of E-3 Technical Orders.

1.3. Scope

Engineering support is required from a qualified Contractor to accomplish recurring and non-recurring engineering services to support maintenance and sustainment of the E-3 avionics systems in accordance with (IAW) the processes and standards implemented on the baseline CNS/ATM-DRAGON developmental program. This shall include avionics systems engineering support, detailed design engineering, design change analyses, avionics system and subsystem integration, technical analyses, liaison engineering support, qualification/certification support, drawing and technical order development, reliability and maintainability analyses, material procurement & support, ground and flight test support, program analyses, design study preparation, mishap investigation technical support, engineering feasibility studies, material deficiency report analyses, Aircrew Training Device (ATD) modification support, field problem investigation, and failure analyses.

The Contractor shall have expertise in the design, integration, qualification, certification, and sustainment of avionics systems, subsystems, their related components and associated ground/flight software/firmware codes and system components and must have access to design, engineering, qualification, test, reliability, and configuration data for all avionics systems currently installed in the E-3 aircraft. The Contractor must also possess facilities, tools, equipment, and personnel to provide all E-3 aircraft avionics engineering support services.

2.0 SERVICE REQUIREMENTS

2.1. Foreign Military Sales (FMS) Recipients of Defense Services

The Contracting Officer (CO) will supply the FMS Program Case Identifiers (where applicable) for the following:

Table 1.1.1: FMS Recipients

FMS Recipients
NATO Airborne Early Warning & Control/Force Command, Headquarters, Geilenkirchen, Germany

2.1.1. Transfer of Authorized Defense Services Under FMS Program

- a. Provisions as outlined in the International Traffic in Arms Regulation (ITAR) Section 126.6, 22 CFR Ch.1 (4-1-14 Edition); and in the Defense Security Cooperation Agency Manual 5105.38-M (Security Assistance Management Manual) Section C3.3 dated 30 April 2012, shall apply to the Contractor for engineering services that include FMS participation by the Contractor during the execution of this contract.
- b. The Contractor shall be registered with the State Department Directorate of Defense Trade Control and authorized to transfer Defense Articles and Services under the ITAR Section 126.6 exemption.
- c. Existence of this exemption does not preclude the Contractor from establishing licenses and Technical Assistance Agreements (TAA) with the foreign recipients of defense services provided under this contract.
- d. The Contractor shall establish and maintain a TAA for NATO, to provide export and disclosure capability specific to the Aircraft Modification and Integration Program (AMIP). (A010/ DI-MISC-80508B/T)

3.0 DEFINITIONS

3.1. Engineering Service Inquiry

Engineering service inquiry is defined as support that requires 100 labor hours or less to perform. If an inquiry will require more than 100 labor hours to complete, the Contractor shall notify the Contracting Officer Representative (COR) and request further direction.

3.2. Engineering Service Task (EST)

Each Engineering Service Task (EST) will be incorporated by task orders to authorize non-recurring engineering support services under the PWS. An EST identifies the problem, defines the work to be accomplished, specifies due dates and priorities, and provides the funding information for the support being acquired.

3.3. Engineering Cost Estimates/ Rough Order of Magnitude (ROM)

3.3.1 **Engineering Cost Estimate** - Shouldn't take very long (1 hour maximum of Engineering effort) for the contractor to complete. Provide a low fidelity single cost number on what it would cost to do a project as a preliminary planning tool. These inquiry requests are routine priority for accomplishment.

3.3.2 **Rough Order of Magnitude (ROM)** - A more detailed estimate usually providing limited background information used in developing the estimate (higher fidelity). The PCO will identify contractor response time (need date) in the ROM request.

3.4. Priority Characteristics – Information Only

Each engineering EST will be assigned a priority of Emergency, Urgent, Expedited, or Routine based on the nature of the issue. Typical characteristics of Emergency, Urgent, Expedited and Routine ESTs are shown in Table 1.2.1 below.

Table 1.2.1 Priority Characteristics

Category	Typical Characteristics
Emergency	<ul style="list-style-type: none"> a) Support to Class A, B and C mishaps during Safety Investigation Boards (mishap classes defined IAW AFI 91-204) and resolution of mishap board recommendations. b) Evaluation/correction of immediate safety of flight or work stoppage issues. c) Returning grounded aircraft to flight status.
Urgent	<ul style="list-style-type: none"> a) Resolution of issues that could affect the reliability, maintainability, or availability of the fleet within the next 6-12 months. b) Completion of any program/project designated by the customer as critical to the upgrade and/or sustainment of the weapon system.
Expedited	<ul style="list-style-type: none"> a) Resolution of issues that could affect the reliability, maintainability, or availability of the fleet within the next 12-24 months. b) Completion of any program/project designated by the customer as essential to the upgrade and/or sustainment of the weapon system.

Routine	<ul style="list-style-type: none"> a) Resolution of issues that could affect the reliability, maintainability, or availability of the fleet in the out-years. b) Development of processes or procedures that improve the long-term maintenance/supportability of the weapons system. c) Completion of routine, day to day, projects that maintain the operational readiness, supportability, and sustainment of the fleet.
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4.0 RECURRING ENGINEERING SERVICES

(Recurring Engineering Services requirements apply to USAF and NATO unless otherwise noted in the following subparagraphs)

The Contractor shall provide recurring engineering services specified in the PWS consisting of responses to recurring inquiries or tasks. Tasks include, Diminished Manufacturing Sources Material Shortages (DMSMS) monitoring, inquiries relating to DMSMS resolution, field level support, basic design information, proprietary data, flight test data, original qualification & certification concepts and standards, performance data, reliability data, operational effectiveness, operational and maintenance procedures, development of draft TCTOs, logistics support and any other potential problem area where Contractor engineering experience and/or information is required. Engineering services may require the generation of raw engineering data. The engineering drawings, associated lists, and all data prepared under this contract shall conform to industry standard practices and shall be marked with the approved rights legends or otherwise noted in the PWS. The Contractor shall properly mark all documents and deliverables. The Contractor shall ensure delivered TO source data, delivered as a recurring engineering service, is accurate and free from any typographical and/or grammatical errors.

4.1. Scope

The scope of work for recurring engineering services will be as indicated in Section 1.3 for the following avionic system components: CNS/ATM-DRAGON Line Replaceable Units (LRUs) and component hardware/software/firmware as stated in Appendix C. This will include Collins Aerospace avionics components interfacing with CNS/ATM-DRAGON LRUs and hardware/software/firmware.

4.2. Engineering Support

The Contractor shall provide avionics engineering support to the Government. The Contractor shall: review all avionics related service reports for similar/identical LRUs, generate avionics service letters (as applicable), respond to technical inquiries, retain, review, and deliver drawings and technical data, support DMS resolution, support re-qualification/certification

processes, ROMs, Engineering Cost Estimates, and other tasks as defined in the paragraphs below. The Contractor shall provide quality engineering inquiry solutions to the initial inquiry in order to answer the customer's issue.

4.2.1. Engineering Inquiries

The Contractor shall provide avionics engineering expertise to engineering inquiries relating to basic design information, flight test data, original qualification tasks, performance, reliability, survivability and vulnerability, information assurance, electrical/electronic systems, and other potential problem areas where Contractor engineering experience and/or information is required. For engineering inquiries, the Contractor shall respond in accordance with the timeframe as identified within this PWS, Section 4.4. (A010/DI-MISC-80508B)

4.2.1.1. Engineering Inquiries Limitation

Recurring engineering inquiries assigned are limited to 100 labor hours per inquiry. With concurrence from the COR, the Contractor may exceed the limitation to a maximum of 160 labor hours. If the inquiry is anticipated to be greater than the limitation above, the Contractor shall notify the COR that a non-recurring task may be required.

4.2.1.2. Engineering Inquiry Description

The Contractor shall provide technical engineering to support sustainment of the E-3 avionics systems and their related subsystems and components. In particular, the Contractor shall:

- a) Provide engineering inquiry solutions as directed by the Government and within assigned timeline per PWS, Section 4.4. If solutions exceed the timeline, the Contractor can request an extension.
- b) Provide solutions to inquiries concerning avionics system issues from Government program managers, engineers, and technical specialists. Solutions shall be within the timeframe set by priority characteristics with extension requests permitted on a case-by-case basis.
- c) Provide engineering/technical support to the Government in maintaining a proactive and effective Avionics Integrity Program (AVIP) for all Electrical, Communications and Avionics systems, subsystems, equipment and components IAW Section 4.9.
- d) Provide quality engineering inquiry solutions. Quality solutions provide a detailed answer useful to the inquirer and provide for successful work to be accomplished IAW Section 6.6 of this PWS.

4.2.2. Data, Document, and File Repository

The Contractor shall maintain a data, document, and file repository that contains all avionics "as delivered" drawings, all avionics commodity item drawings for items supplied, copies of applicable aircraft drawings, and all Time Compliance Technical Orders (TCTOs), modifications,

and technical analysis documents, reports, specifications, and all approved Notices of Revision (NOR) developed and used during the execution of this PWS. This repository shall be kept by the Contractor for the duration of this effort and until written approval is received from the Government to cease the repository management. Type, layout, and format of the repository are at the Contractor's best discretion, but shall be in an organized system accessible to the Government upon request.

The data and documents in the repository for this effort shall be delivered to the Government with applicable distribution statements. (A019/DI-SESS-81000F)

The Contractor shall:

- a) Maintain archived copies of data for this effort in the Contractor repository.
- b) Contractor repository additions shall include:
 - 1) All Documents/Data developed under this contract.
 - 2) Documents/Data provided by the Government for USAF and/or NATO aircraft.
 - 3) An Engineering Order (EO) database that ties the EO number and title to the drawing number and title.
 - 4) Preliminary data resulting from Government actions (e.g., draft TCTOs, Engineering Change Notices, EOs) and shall be maintained in a holding file and not merged with permanent Contractor repository data.
 - 5) Engineering data provided to the Contractor repository developed and provided as a result of other avionics related contracts. This may include Preliminary Design Review, Critical Design Review, or preliminary/final engineering data.
- c) Maintain databases and accessible, up-to-date records of all drawings and documents (including appendage, changes, and revision status) contained in the Contractor repository.
- d) Maintain a list of active Proprietary Information Agreements (PIA). The Government will not submit third party proprietary repository data to the Contractor if there is no PIA allowing the Contractor to possess that third party company data.
- e) Provide engineering expertise and requested Contractor repository data in response to engineering inquiries and data requests. The Contractor shall respond in accordance with the timeframe identified in Section 4.4.
- f) Deliver data in accordance with Section 4.3 upon request.

4.2.3. Programmed Depot Maintenance (PDM) Support (USAF only)

The Contractor shall provide liaison engineering/technical support to OC-ALC, Tinker AFB, OK to analyze and assist in the disposition Air Force Materiel Command (AFMC) Form 202s, Nonconforming Technical Assistance Requests and Replies, generated during completion of PDM or Unprogrammed Depot Level Maintenance (UDLM) on USAF E-3 aircraft within the AWACS Information Routing Web Air Vehicle Engineering (AIRWAVE) system. The Contractor shall provide support for avionics for which the Government does not have knowledge,

expertise, experience, specialized engineering capabilities, or data that is unique to the OEM. The Contractor shall support status meetings and production meetings to discuss the status or disposition of any AFMC Form 202 as required. The Contractor shall respond in accordance with the timeframe identified in Section 4.4.

4.2.4. Depot Level Maintenance (DLM) Support (NATO only)

The Contractor shall provide remote engineering/technical support to NATO's DLM activities at Airbus and Leonardo facilities on an as needed basis. The Contractor shall provide support for avionics for which NATO or their DLM Contractors do not have knowledge, expertise, experience, specialized engineering capabilities, or data that is unique to the OEM. The Contractor shall support disposition of any non-conformance report (NCR) as required. NCRs are NATO's method to disposition technical issues outside of available technical data. The Contractor shall respond in accordance with the timeframe identified in Section 4.4

4.2.5. Service Report Evaluation

The Contractor shall:

- a) Review and evaluate all commercial service reports, service bulletins, avionics OEM service reports, Federal Aviation Administration (FAA)/European Aviation Safety Agency (EASA) Directives for applicability to USAF E-3 or NATO E-3 aircraft CNS/ATM-DRAGON avionics (Appendix C), and MOD changes to safety critical LRUs (Appendix D).
- b) Recommend a course of action to the Government by preparing and delivering an "Engineering Evaluation Summary" when any of the above mentioned service advisories are applicable to USAF or NATO aircraft. (A010/DI-MISC-80508B)
- c) Generate and provide an "AWACS Service Letter" for CNS/ATM-DRAGON avionics (Appendix C) and Safety Critical LRUs (Appendix D) when problems are identified during new product development, production, or when a situation is known only within the engineering community, specifying the problem statement and a recommended course of action. The AWACS Service Letter shall identify applicability and corrective action requirements for all USAF/NATO fleets. Corrective action implementation shall be the subject of a separate contractual action.
- d) Provide written formal notification to the Government identifying the potential problem(s) prior to issuance of the service letter if the Contractor identifies a safety issue.
- e) Provide quarterly service summary activity report. (A010/DI-MISC-80508B)

4.2.6. Engineering Change Proposal Review

The Contractor shall provide technical support to review and assess proposed use of substitute parts. The Contractor shall provide formal notification to identify the Change Proposal if a substitute part is identified. If use of the substitute part(s) is approved by the Government, a

non-recurring task order will be authorized for the Contractor to identify associated drawings that are impacted and update drawings in accordance with this PWS. (A010/DI-MISC-80508B)

4.3. Data Service

The Contractor shall prepare and deliver data in accordance with the following paragraphs when requested by the Government. Recurring data service shall include printed pages of data, Joint Engineering Data Management Information & Control System (JEDMICS) compatible formats, and digitally calibrated un-dimensioned drawings. The Government will specify the degree of urgency at the time of the request. Data requests under this paragraph will be for engineering projects or to update the JEDMICS data repository. All engineering drawings, associated lists, and data prepared under this contract shall be marked with appropriate data rights legends. The Contractor shall respond in accordance with the timeframe identified in this PWS, paragraph 4.4. The Contractor shall ensure technical accuracy of Data Service. (A018/DI-TMSS-80067)

4.3.1. Data Service for Paper Data

The Contractor shall prepare and provide both military drawings and E-3 applicable avionics commercial drawings to the Government, Contractors, and subcontractors.

4.3.2. Data Service for Electronic Media

The Contractor shall prepare and provide all avionics E-3 drawings and E-3 applicable avionics commercial drawings electronically.

4.3.3. Data Service for Digitally Calibrated Un-dimensioned Drawings

Recurring data service shall include no more than twenty (20) un-dimensioned drawing sheets per year per customer. Un-dimensioned drawings provided by the Contractor shall be dimensionally accurate digital images.

4.4. Recurring Engineering Services Response Times

The Contractor shall provide solutions to written inquiries and data requests for engineering information. These solutions shall be in accordance with the priority response times as defined below. The Government will assign inquiries a priority of emergency, urgent, expedited, or routine, at the Government's sole discretion. The Contractor shall provide solutions to inquiries according to the time frames specified below. All inquiry solutions shall be delivered via email, mail, or a means approved by the Government consistent with the time frames specified.

Solutions for inquiries shall:

- a) Meet the purpose of the inquiry and provide the detail, resolution, and information as requested by the Government for the correction, fix, or purpose of the inquiry

b) Be in adequate technical detail and depth for the Government to resolve the inquiry

However, for Emergency and Urgent inquiries, if the solution cannot be provided within the response time as described in the Table 4.4.1 below due to scope or level of work, then the response to the inquiry shall:

- c) Provide the Government with a way forward and detailed plan for accomplishing the work requested
- d) Provide any recommended actions to take in the interim (such as a temporary fix) before a permanent, final, solution can be implemented
- e) Include, at minimum, a notional schedule and estimated amount of hours expected to reach a solution

Typical characteristics of Emergency, Urgent, Expedited and Routine inquiries are shown in Table 4.4.1 below.

Table 4.4.1 Priority Characteristics

Category	Typical Characteristics	Response Time
Emergency	<ul style="list-style-type: none"> a) Support to Class A, B and C mishaps during Safety Investigation Boards (mishap classes defined IAW AFI 91-204) and resolution of mishap board recommendations b) Evaluation/correction of immediate safety-of-flight or work stoppage issues c) Returning grounded aircraft to flight status 	within 24 hours
Urgent	<ul style="list-style-type: none"> a) Resolution of issues that could affect the reliability, maintainability, or availability of the fleet imminently b) Completion of any inquiry designated by the customer as critical to the immediate sustainment of the weapon system 	1-3 business day(s)
Expedited	<ul style="list-style-type: none"> a) Resolution of issues that could affect the reliability, maintainability, or availability of the fleet requiring a rapid solution b) Completion of any inquiry designated by the customer as essential to the sustainment of the weapon system 	4-10 business days

Category	Typical Characteristics	Response Time
Routine	<ul style="list-style-type: none"> a) Resolution of issues that could affect the reliability, maintainability, or availability of the fleet during normal operations b) Development of processes or procedures that improve the long-term maintenance/supportability of the weapons system c) Completion of routine, day to day, projects that maintain the operational readiness, supportability, and sustainment of the fleet 	11-20 business days

4.5. Systems Engineering Management Plan (SEMP)

The Contractor shall prepare, deliver and follow their Systems Engineering Management Plan (SEMP) as required for use in the performance of requirements for all ESTs initiated under this PWS. The Contractor shall ensure OSS&E in accordance with (IAW) Air Force Policy Directive (AFPD) 63-12, Air Force Instruction (AFI) 63-101/20-101, and Air Force Materiel Command Instruction (AFMCI) 63-1201 Life Cycle Systems Engineering are addressed in the updated SEMP. The requirements of this updated SEMP, in conjunction with the Government’s System Engineering Plan, shall be complied with during integration assessments, studies, modifications, engineering change proposals, and reviews impacting systems or components on the E-3 aircraft. (A009/DI-SESS-81785A/T)

4.6. Informal Support

The Contractor shall provide technical and engineering to support sustainment of the E-3 avionics systems and their related subsystems and components. In particular, the Contractor shall:

- a) Provide engineering/technical support to program office/field maintainers on a daily basis for repetitive/rapid response tasks. Responses and closing actions for post-production aircraft support issues shall be technically sound, complete and accurate and provided in timeframes that meet customer requirements.
- b) Respond to e-mails, telephone calls, faxes, etc. dealing with avionics-related maintenance issues from E-3 depot and/or field locations. Responses shall be provided in a time frame consistent with the needs of the requestors as stated in the form of communication. At a minimum, if no specific time frame is dictated in the communication, the Contractor shall acknowledge receipt of communication within one (1) business day of message receipt.

4.7. Working Group Support

The Contractor shall participate and support annual Technical Meetings to discuss recurring and non-recurring engineering service activities applicable to the USAF and foreign AWACS fleets. Meetings will include, at a minimum, two (2) separate trips to attend the following three (3) meetings: 707 Aircraft Working Group (AWG), E-3 Product Improvement Working Group (PIWG), and E-3 System Safety Group (SSG). The PIWG and SSG are annual meetings that occur the same week (3 days) and the 707 AWG is an annual meeting during another week (3 days). Direction concerning specific meeting subject(s) and TCG member participation in the Technical Meetings will be provided by and coordinated through the COR. The Contractor's attendance and attendees shall be coordinated with the COR. This includes supporting avionics applicable Working Groups to ensure all solutions/decisions recommended by the Working Groups are consistent and compatible with existing/planned aircraft avionics/electrical system architectures. The Contractor shall also support other technical/engineering meetings, conferences, seminars, etc. as requested and maintain liaison with subsystem contractors and Government engineers and equipment specialists to monitor current or planned hardware/software/firmware changes that may impact future sustainment efforts. (A002/DI-ADMN-81250B/T)

4.8. Aircraft Mishap and Incident Investigations

The Contractor shall provide support in the event of investigations for mishaps/incidents. The Contractor shall provide engineering and technical support, review analyses and evaluate causes, and formulate recommendations for the elimination of avionic conditions responsible for such occurrences IAW AFI 91-204.

4.9. Avionics Integrity Program Support

The Contractor shall provide engineering/technical support to assist the E-3 Program Manager in maintaining a proactive and effective Avionics Integrity Program (AVIP) for all Electrical, Communications and Avionics systems, subsystems, equipment and components of the aircraft related to CNS/ATM-DRAGON. The Contractor shall implement a DMS monitoring system as described in AVIP. To accomplish the intent/objectives of these programs, the Contractor shall comply with the developed AVIP processes and procedures and the Avionics Integrity Program Master Plan (AIMP). Specifically, the Contractor shall perform the following AVIP processes for CNS/ATM-DRAGON Line Replaceable Units (LRUs) and component hardware/ software/ firmware as stated in Appendix C in-line with the E-3 AIMP:

- a) DMSMS monitoring of the systems contained in the scope of this contract
- b) Provide notification of obsolescence/DMSMS issues with system and subsystems to the Government COR and AIMP Manager contained in the applicable service letter(s)

- c) Upon notification of obsolescence/DMSMS issues, provide the Government COR and AIMP Manager with options for resolution and mitigation of impact in the applicable service letter(s)

4.10. Program Management Reviews

The Contractor shall conduct semiannual Program Management Review (PMR) meetings during the PWS period of performance (PoP) to review the status of the contract. The reviews shall include detailed information (such as individual EST spend plans, current cost and schedule status, potential problem areas, etc.) to allow a thorough understanding of the “health” of each EST and overall status of recurring services. These PMRs shall be conducted at a location to be determined by the Contractor. The timing of these PMRs and the formats for the briefing charts provided at the reviews shall be determined by Government and Contractor representatives. The Contractor shall provide meeting agenda within 10 business days of the review. Meeting minutes will be submitted to the Government for review no later than 5 business days following the last meeting. (A001/ DI-ADMN-81249B/T; A002/ DI-ADMN-81250B/T; A003/ DI-ADMN-81373/T)

4.10.1. Monthly Status Reviews

The Contractor shall hold monthly status reviews during the PWS PoP. These monthly status reviews will review the current ESTs in progress and the monthly inquiries, as well as address any concerns or topics of discussion in the previous month. The monthly status review will be accomplished via teleconference or an agreed to method by Contractor and Government. The Contractor shall provide meeting agendas within 3 business days of the reviews. Meeting minutes will be submitted to the Government for review no later than 2 business days following the meetings. No status review will occur during the month a PMR is scheduled; the PMR will meet both requirements. (A001/ DI-ADMN-81249B/T; A002/ DI-ADMN-81250B/T; A003/ DI-ADMN-81373/T, A008/DI-MGMT-80368A)

5.0 NON-RECURRING ENGINEERING SERVICES

Non-recurring Engineering Service Tasks (ESTs) will be those tasks where the labor hours exceed the limits specified in Section 4.4. For each EST, the Government will develop a PWS to define the nature and scope of the work, assign prioritization, and include a PoP. The Contractor shall properly mark all documents and deliverables. The Contractor shall ensure delivered Technical Order (TO) source data, delivered as a part of a non-recurring EST, is accurate and free from any typographical and/or grammatical errors.

5.1. Scope

The scope of work done for ESTs shall be all work associated with avionic systems and components as found in Appendix C and Section 4.1 that exceed the labor hour limits as

specified in Section 4.4. In addition, the scope shall also include avionic systems and components that are broader than, but associated with, those found in Appendix C and Section 4.1. The Contractor shall establish a Memorandum of Agreement (MOA) with other parties and Contractors, as required, to perform the requirements of an EST due to factors such as proprietary or competitive information. Such tasking and their requirements will be captured within the specific EST under work.

5.2. Non-Recurring EST

The Contractor shall provide deliverables as specified by each EST. All ESTs which cause a revision to existing drawings or documents shall be accomplished in accordance with the standard under which that drawing or document was prepared or modified previously or as defined in the PWS. The Contractor shall accomplish all ESTs within the specified Period of Performance (PoP) and the specified budget. The Contractor shall provide quality EST PWS inputs to the initial draft PWS. The Contractor shall respond in accordance with the timeframe identified with the draft PWS review request.

The Contractor shall properly mark all documents and deliverables. The Contractor shall ensure delivered TO source data is accurate and free from any technical, typographical and/or grammatical errors.

5.3. Software Release Delivery

The Contractor shall deliver software updates to the Government for use in the E-3 AWACS CNS/ATM-DRAGON modification and components as indicated in Appendix C. Software updates are those updates released by the Contractor to users of their systems for the continued use, performance, deficiency resolution, or improvement of the system. Updates shall be delivered to the Government as they become available for release. Software shall be delivered in the correct media and configuration for direct use on the E-3 AWACS system, laboratory, simulators, and repair facilities. Software deliveries will follow correct CPIN requirements, see TO 00-5-16, and SCC (Software Control Center) Media Label Requirements, or other Government approved format. (A005/ DI-IPSC-81441A/T; A007/DI-IPSC-81488)

6.0 ADMINISTRATION

The Contractor shall ensure CDRL submissions are complete, thorough, accurate, technically acceptable, and in compliance with all requirements of the PWS. The Contractor shall properly mark all documents and deliverables. (A001/ DI-ADMN-81249B/T; A002/ DI-ADMN-81250B/T; A003/ DI-ADMN-81373/T; A004/ DI-ALSS-81531/T; A005/ DI-IPSC-81441A/T; A006/ DI-IPSC-81443A/T; A007/ DI-IPSC-81488/T; A008/ DI-MGMT-80368A/T; A009/ DI-SESS-81785A/T; A010/ DI-MISC-80508B/T; A011/ DI-NDTI-80566A/T; A012/ DI-NDTI-80603A/T; A013/ DI-NDTI-

80809B/T; A014/ DI-SESS-80639D/T; A015/ DI-SESS-80643D/T; A016/ DI-QCIC-81794/T; A018/ DI-TMSS-80067C/T; A019/ DI-SESS-81000F/T; A020/ DI-TMSS-81354/T; A021/ DI-MISC-80048/T)

6.1. Markings and Legends

6.1.1. Data Rights Markings

The Contractor shall ensure all deliverables (i.e., drawings, briefing charts, analyzes, reports, TO source data, TO changes, software, firmware, etc.) to recurring and non-recurring tasks accomplished under the PWS shall be marked with appropriate legends in accordance with the applicable Federal Acquisition Regulation (FARs)/ Defense Federal Acquisition Regulation Supplement (DFARS), ITAR. However, if any data deliverables to be provided to the Government under the PWS cannot be delivered with either “Government Purpose Rights” or “Unlimited Rights” markings, the Contractor shall stop work immediately and notify the CO.

6.1.2. Documentation

All documentation developed under the PWS, whether produced in hard-copy or in digital format, shall be marked IAW AFI 61-201. In particular, the Contractor shall ensure that all engineering and technical information (i.e. information relating to research, development, engineering, testing, evaluation, production, operation, use, and maintenance for military products, services, and equipment for military systems) is marked with the appropriate Distribution Statement.

6.2. Mission Essential Services

The Contractor shall provide for the continuation of essential Department of Defense (DoD) services during crisis IAW DFARS 252.237-7023 Continuation of Essential Contractor Services. The Contractor shall establish and provide a written plan to ensure fulfillment of contract requirements during a crisis. The plan shall be submitted with the Contractor's proposal. The Contractor shall be responsive to Mission Essential Services when exercised and inspected.

6.3. Hours of Operation (Normal Business Hours)

Work hour restrictions shall only apply when the Contractor is performing work at Government facilities. Work hours at Government facilities shall be restricted to the normal operational hours of that facility unless specific arrangements have been made to extend the normal operational hours in support of this program. Normal operating hours for Tinker AFB are from 0715 to 1700 hours, Monday through Friday. The Contractor shall have no hours of operation restriction when performing work required in the PWS at the Contractor's facility.

6.3.1. Recognized Holidays (USAF Only)

The Contractor is not required to provide service on any federal holiday or any other day specifically declared by the President of the United States to be a federal holiday. When a federal holiday falls on a non-workday (Saturday or Sunday), the holiday usually is observed on Monday (if the holiday falls on Sunday) or Friday (if the holiday falls on Saturday) (ref: www.opm.gov).

6.4. Contractor Employees

Contractor employees shall identify themselves as Contractor personnel by introducing themselves or being introduced as Contractor personnel and displaying distinguishing badges or other visible identification for meetings with Government personnel. In addition, Contractor personnel shall appropriately identify themselves as Contractor employees in telephone conversations and in formal and informal written correspondence. The Contractor shall not employ persons on this contract if such employee is identified to the Contractor by the CO as a potential threat to the health, safety, security, and/or general well-being or operational mission of the installation and its population. The Contractor shall provide the CO with initial and updated lists of Contractor employees' names, security clearances, and position titles. This initial list shall be provided to the CO within five (5) business days after contract award. Updated list shall be provided as required.

6.4.1. Contractor Personnel

6.4.1.1. Program Management Personnel

The Contractor shall provide a Project Manager who shall be responsible for the management of all contracted services. This person and any alternate(s) who act as agents of the Contractor shall be designated by name, in writing, to the CO within five (5) business days after contract award. The Contractor shall provide telephone numbers of the manager and alternate(s) so they may be contacted at any time. The manager or alternate shall have full authority to act for the Contractor on all matters relating to the performance of this contract at U. S. Air Force facilities. The manager or alternate shall be available to meet with the CO and Government personnel to discuss program issues.

6.4.1.2. Employee Selection, Staffing, Hiring, and Training

The Contractor shall be responsible for the selection, staffing, hiring, training, expertise, assignment of duties, reassignment of duties, transfer, supervision, management, control, and termination of Contractor employees to perform all work IAW the PWS. The Contractor shall ensure Contractor employees required to communicate with Government personnel can read, write, and speak English. The Contractor shall ensure all employees comply with requirements of FAR clause 52.222-50(c), (d), and (f) (Combating Trafficking in Persons).

6.4.1.3. Qualified Engineering/Technical Personnel

The Contractor shall provide qualified engineering/technical personnel in performing the activities outlined in the PWS. A full range of engineering skills in aircraft systems, software, structures, test, liaison engineering, and safety engineering may be required to accomplish the requirements of the PWS. In addition, personnel, material and equipment may be required to support laboratory testing, in-plant quality control, electronic data processing, and logistics as specified in the PWS or subsequent ESTs. The Contractor shall ensure the quality requirements are performed in accordance with established standards.

6.4.1.4. Flight Support

The Contractor may be required to perform EST tasks aboard Air Combat Command (ACC) - or 10th Flight Test Squadron (10 FLTS) conducted AWACS aircraft flights. It is desirable, but not required, that some Contractor personnel are credentialed to participate, in an engineering support/non-crewmember capacity, in separately directed non-recurring efforts aboard ACC- or 10 FLTS-conducted AWACS aircraft flights. Credentials may include a current FAA/EASA or military class III flight physical and a current altitude chamber card for flights above 18,000 ft. When required by an EST, written notification mutually agreed to by the Government and Contractor will be provided for Contractor flight support.

6.4.1.5. Personnel Restrictions/Removal

The Government retains the right to deny access to Contractor personnel, regardless of prior clearance or adjudication status, whose actions, while assigned to this contract, clearly conflict with the interests of the Government. The level of restriction and the reasons leading to denied access will be fully documented in writing by the Government. In addition, the Contractor shall notify the CO in an e-mail, within five business days, of any Contractor personnel whom they determine no longer require access to Government installations and/or computers. In addition, the Contractor shall surrender to the CO the terminated Common Access Card (CACs), restricted area badges, and other Government issued materials.

6.5. Travel

All travel in support of recurring services (see Para 4.7) shall be approved in advance by CO. Costs will be reimbursed IAW the Joint Travel Regulations and FAR 31.205-46. The Contractor shall submit travel cost estimates to the Contracting Officer and number of travel days within 10 business days prior to travel. Costs for transportation may be based upon mileage rates, actual costs incurred, or a combination thereof, provided the method used results in a reasonable charge. Travel costs will be considered reasonable and allowable only to the extent that they do not exceed on a daily basis, the maximum per diem rates in effect at the time of travel. Maximum use is to be made of the lowest available customary standard coach or equivalent airfare accommodations available during normal business hours.

The CO shall approve in advance exceptions to these guidelines. During performance, only actual costs are reimbursed in accordance with the Joint Travel Regulations (JTR), Federal Travel Regulations (FTR),

Federal Acquisition Regulations (FAR) and other applicable regulations, subject to the CO's approval. Non-recurring travel will be supported by individual ESTs.

6.6. Quality

The Contractor shall ensure the quality requirements are performed in accordance with established civil, military, national, international, and Government standards for airworthiness, aircraft, and related materiel.

6.6.1. Quality Control Program

The Contractor shall develop and submit a Quality Control Plan (QCP). The Contractor shall maintain the QCP. The Contractor shall ensure the requirements of the PWS are performed in accordance with established standards. The Contractor shall develop and implement procedures to identify, prevent, correct and ensure non-recurrence of defective services. As a minimum the Contractor shall develop quality control procedures addressing the areas identified in the Service Summary. (A016/DI-QCIC-81794)

6.6.2. Quality Assurance

The COR will evaluate the Contractor's performance through inspections. The COR may inspect each task as completed or increase the number of quality assurance inspections if deemed appropriate because of repeated failures discovered during quality assurance inspection, or because of repeated customer complaints. Likewise, the COR may decrease the number of quality assurance inspections if performance dictates. When an observation indicates defective performance, the COR will notify the CO and the Contractor. When an observation indicates a defective performance, the COR will inform the contract manager or alternate and require them to initial/sign and date the observation. The initialing of the observation does not necessarily constitute the Contractor's concurrence with the observation, only acknowledgement that the Contractor has been made aware of the defective performance.

6.6.3. Quality Assurance Provisions

The Contractor shall assume full responsibility for quality performance and the orderly/timely completion of work accomplished under the PWS. The Contractor shall use American National Standards Institute (ANSI)/ International Organization for Standardization (ISO)/ American Society of Quality (ASQ)(E) Q9001- 2008, Quality Management Systems – Requirements and/or Society of Automotive Engineers (SAE) AS9100C, Quality Management Systems – Requirements for Aviation, Space and Defense Organizations as a guide for their in-house quality managements system. The Contractor does not need to obtain or maintain either ANSI/ISO/ASQ(E) Q9001- 2008 or SAE AS9100C certification to execute the requirements of the PWS. However, at a minimum, the Contractor shall meet the following requirements:

- a) Personnel: The Contractor shall provide qualified personnel to perform the required engineering services and technical support.
- b) Supervision: The Contractor shall accomplish all required supervision and control for their employees working on engineering services and technical support.
- c) Supplies: The Contractor shall be responsible for procurement of materials and supplies required for the accomplishment of assigned engineering services subject to the scope and terms of each task, project or the basic contract.
- d) Suppliers: The Contractor shall ensure that suppliers follow established ISO 9001 standard or equivalent quality practices.

6.7. Specialty Metals

Specialty Metals (as defined in DFARS 252.225-7009) shall not be used in the performance of this Contract. Additionally, chemical substances for use by NATO shall be directed IAW Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) regulations. During performance of this contract, if the Contractor determines Specialty Metals or chemical substances in excess/banned by REACH regulations are required, the Contractor shall immediately inform the CO. When possible, the Contractor will inform the CO of possible alternatives the USAF/NATO may consider to accomplish the required work, i.e., alternate materials; possible sources of supply; possible other contract vehicles, etc.

6.8. Contractor Manpower Reporting

6.8.1. Labor Hours Reporting

The Contractor shall report ALL contract labor hours (including subcontractor labor hours) required for performance of services provided under this contract via secure data collection site. The Contractor shall completely fill in all required data fields at <https://www.sam.gov>.

6.8.2. Reporting Inputs

Reporting inputs will be for the labor executed during the period of performance for each Government fiscal year (FY), which runs 1 October through 30 September. While inputs may be reported any time during the FY, all data shall be reported no later than 31 October of each calendar year. Contractors may direct questions to the Contractor Manpower Reporting Application (CMRA) help desk.

- a) Reporting Period: Contractors shall be required to input data by 31 October of each year.
- b) Uses and Safeguarding of Information: Information from the secure website is considered to be proprietary in nature when the contract number and Contractor identity are associated with the direct labor hours and direct labor dollars. At no time will any data be released to the public with the Contractor name and contract number associated with the data.

- c) User Manuals: Data for Air Force service requirements must be input at the Air Force CMRA link. However, user manuals for Government personnel and Contractors are available at the Army CMRA link at <https://www.sam.gov>.

6.9. Environmental Requirements

The Contractor shall be knowledgeable of and comply with all applicable federal, state, European (i.e. REACH), and local laws, regulations, and requirements regarding environmental protection. In the event environmental laws or regulations change during the term of this contract, the Contractor is required to comply as such laws come into effect.

6.10. Safety Requirements

6.10.1. Occupational Safety and Health Administration (OSHA)

The Contractor shall be knowledgeable of and comply with all applicable federal, state, and local laws, regulations, and requirements regarding OSHA. In the event OSHA laws or regulations change during the term of this contract, the Contractor is required to comply as such laws come into effect.

6.10.2. Voluntary Protection Program (VPP)

Tinker AFB, OK, is VPP recognized under the OSHA Voluntary Protection Plan (VPP). VPP affects all "applicable contractors" operating on Air Force installations. Applicable Contractors are Contractors that have completed 1000 hours or more at Tinker AFB, OK, within three (3) months on the same contract. It is the Contractor's responsibility to ensure its employees and managers have a comprehensive understanding of VPP and are in full compliance with OSHA requirements (Public law 91-596). The Contractor shall follow the safety and health rules of the installation and OSHA. Detailed information on VPP is available on the OSHA website at <http://www.osha.gov/dcsp/vpp/index.html>.

The Contractor shall comply with the Air Force Contracting VPP guide. If the Contractor is an applicable Contractor, then the Contractor shall submit a requirements document to include: (A008/ DI-MGMT-80368A/T)

- a) A requirement for the applicable Contractor to submit a safety and health plan to the CO within 10 days after contract award.
- b) For services acquisitions, the Services Summary should include a requirement for CORs to assess the Contractor for compliance with their health and safety plan, to include mishap reporting.
- c) A requirement for applicable Contractor to submit their Total Case Incident Rate (TCIR), Days Away, Restricted or Transferred (DART) rate and OSHA Form 300A to the CO by the 15th of January of each year.

- d) A requirement for the Contractor's Quality Control Plan to identify the processes and procedures the Contractor will use to track compliance with their Safety and Health Plan, and the processes and procedures to be used to correct violations.
- e) A requirement for the Contractor to establish the VPP PWS requirements for all subcontractors who qualify as applicable contractors under the resulting contract.

6.11. Security

6.11.1. DD Form 254

The E-3 AWACS Security Classification Guide identifies specific information pertaining to the E-3 AWACS requiring protection in the interest of national security. Security requirements for this PWS are established under Executive Order 13526, "Classified National Security Information," December 29, 2009, Executive Order 13556, "Controlled Unclassified Information," November 4, 2010, and DoDI 5200.48, 6 March 2020. These documents direct the preparation of DD Form 254 entitled "Contract Security Classification Specification".

6.11.2. Homeland Security

The Contractor shall adhere to all security measures IAW Homeland Security Presidential Directive 12 (HSPD-12).

6.11.3. Tinker AFB Visitor Passes and Visitor Requests

The Contractor shall provide required visit request information through the Joint Personnel Adjudication System (JPAS) prior to any visit to Tinker AFB.

6.11.4. NATO Passes and Visitor Requests

The Contractor shall provide required visit request information as required to NATO locations as applicable.

6.11.5. Security Clearance

According to AFI 31-601, Tinker AFB Supplement 1, para 2.3, all Contractor personnel accessing Air Force classified information shall possess the required security clearances. In accordance with (AWI) AFI 31-601, Tinker AFB Supplement 1, para 2.4, if Contractors require unescorted entry to restricted areas, access to sensitive unclassified information, access to Government Automated Information Systems (AIS), access to sensitive equipment (not including access to classified information) the security questionnaire for Contractor personnel is processed by the sponsoring Air Force activity per DOD 5200.2-R and AFI 31-501. An interim clearance may be granted to Contractor personnel at the beginning of the performance period so that contractual services as identified by the PWS are performed.

6.11.6. Identification Badges

The Contractor shall work with appropriate Government sponsors to obtain identification badges. The Contractor shall complete a "Request for Identification Credential (AFMC Form 496) for each employee of the Contractor requiring access to Tinker AFB. The request shall be submitted to Pass and Registration (Bldg. 590). The Government will provide a complete "Identification Credential" (AFMC Form 387), which shall be issued, displayed and surrendered as directed in TAFBI 31-101, Installation Security Program. Contractor personnel requiring access to Government Information Technology systems will be issued a Common Access Card (CAC) utilizing the Contractor Verification System (CVS) in lieu of the procedures identified above. The Contractor shall ensure that all employees have the proper identification credentials prior to entering Tinker AFB.

6.12. Cybersecurity

The Contractor shall implement cybersecurity measures related to any work performed under this contract for the E-3 AWACS avionics system, its subsystems, components and support systems/equipment IAW DoDI 8500.01, DoDI 8510.01 and/or other measures as requested for non-recurring tasks.

6.13. Ground Rules and Assumptions

Travel may require Contractor personnel to travel outside of the continental United States. Such travel may require the Contractor to obtain required documentation for travel to foreign countries in support of TCG (NATO) requirements. The Contractor shall be responsible for obtaining proper documentation for travel to support the requirements of this PWS.

Technical Interchange Meetings (TIMs) and Working Groups may have the presence of TCG members and other foreign national partners. The Contractor shall be responsible for ensuring any shared information complies with Section 2.1. - Foreign Military Sales (FMS) Recipients of Defense Services.

The Contractor shall ensure all CDRLs and deliverables shall be releasable to the TCG. Export compliance will be accomplished by the Tinker Foreign Disclosure office.

7.0 SERVICE SUMMARY

The Contractor shall be aware that the absence of any contract requirement from the Service Summary (SS) does not detract from its enforceability nor limit the rights or remedies of the Government. The Contractor shall ensure the following service summary requirements are accomplished:

7.1. Service Summary Requirements.

The Contractor shall ensure the performance thresholds and surveillance methods are achieved as follows:

7.1.1. Performance Thresholds

The Contractor shall achieve performance thresholds identified in table 7-2 *Contractor Performance Evaluation* and Quality Assurance Surveillance Plan.

7.1.2. Surveillance Methods

The Contractor shall accomplish the Government's surveillance methods identified below:

- a) Periodic inspection of the process or output.
- b) Customer complaints.

7.2. Contractor Performance Evaluation.

The Government shall evaluate the service of the Contractor to determine whether or not it meets the performance measures of the contract.

Table 7-2 Performance Evaluation

	Performance Objective	PWS Para (and subparagraphs)	Performance Threshold
SS-1	<p><u>The Contractor shall respond to written inquiries and data requests for engineering information in accordance with priority response times</u></p>	<p><u>4.0</u> <u>4.2</u> <u>4.3</u> <u>4.4</u> <u>4.6</u></p>	<p><u>At least 90% of Engineering inquiries and Data Services closed during each contract period must be completed within the established date(s) needed.</u></p> <p><u>The remaining Engineering inquiries and Data Services closed during each contract period must be completed to 100% at no more than 20% above the originally specified date needed:</u></p> <p><u>Emergency – 5 Additional hours</u></p> <p><u>Urgent – 1 Additional Calendar Day</u></p> <p><u>Expedited – 2 Additional Business Days</u></p> <p><u>Routine – 4 Additional Business Days</u></p> <p><u>Note: For purposes of calculating performance threshold requirements, fractional numbers shall be rounded up to the next whole number.</u></p>

	Performance Objective	PWS Para (and subparagraphs)	Performance Threshold
SS-2	<u>Ensure technical accuracy of Data Service.</u>	<u>4.3</u> <u>4.3.1</u> <u>4.3.2</u> <u>4.3.3</u>	<u>95% percent of Data Services first responses shall be technically accurate during each contract period.</u> <u>The remaining 5% of Data Service responses, which are considered rejected and shall be corrected to 100% and resubmitted with corrections to the Government within 3 business days after rejection.</u> <u>NOTE 1: For this objective, a rejected complaint is defined as an inquiry or data submittal which is returned to the Contractor for rework due to noncompliance with inquiry requirements or contains technical errors. Grammatical errors are NOT considered technical errors.</u> <u>NOTE 2: For purposes of calculating performance threshold requirements, fractional numbers shall be rounded up to the next whole number.</u>

	Performance Objective	PWS Para (and subparagraphs)	Performance Threshold
<u>SS-3</u>	<u>Properly mark all documents and deliverables</u>	<u>4.0</u> <u>5.0</u> <u>6.0</u>	<p><u>All documents and other deliverables shall be without proprietary or restricted markings and include Government markings when provided as deliverables generated under this contract or any individual EST.</u></p> <p><u>No more than 5 deliverables shall be rejected during each contract period. Rejected submittals shall be corrected to 100% and resubmitted to the Government within 3 business days after initial rejection.</u></p> <p><u>NOTE 1: For this objective, a rejected complaint is defined as a document submittal which is returned to the Contractor for rework due to noncompliance with data markings and delivery inquiry requirements or contains technical errors. Grammatical errors are NOT considered technical errors.</u></p> <p><u>NOTE 2: For purposes of calculating performance threshold requirements, fractional numbers shall be rounded up to the next whole number.</u></p>
<u>SS-4</u>	<u>Provide quality engineering inquiry solutions</u>	<u>4.0</u> <u>4.2</u> <u>4.6</u>	<p><u>90% of all engineering inquiries submitted during the contract period shall be answered satisfactorily on the first official solution. Satisfaction shall be determined on if it meets the requestors need.</u></p> <p><u>The remaining 10% of solutions shall be corrected to 100% and resubmitted within 3 business days after rejection.</u></p> <p><u>Satisfaction shall be measured by the requestor.</u></p> <p><u>The need for clarification on a requestor's inquiry shall not constitute as a solution but may be done by the Contractor to verify or understand the scope of the inquiry.</u></p>

	Performance Objective	PWS Para (and subparagraphs)	Performance Threshold
<u>SS-5</u>	<u>Provide quality EST PWS inputs to the initial draft PWS.</u>	<u>4.0</u> <u>5.0</u> <u>5.2</u>	<p><u>90% of PWS inputs submitted during each contract period shall meet the Government’s requirements outlined in the PWS, be technically accurate, and logically organized.</u></p> <p><u>The remaining 10% of PWS inputs shall be corrected to 100% and resubmitted to the COR within 3 business days after rejection.</u></p> <p><u>NOTE 1: For this objective, a rejected complaint is defined as a PWS input submittal which is returned to the Contractor for rework due to noncompliance with requirements outlined in the PWS, contains technical errors, or not logically organized. Grammatical errors are NOT considered technical errors.</u></p> <p><u>NOTE 2: For purposes of calculating performance threshold requirements, fractional numbers shall be rounded up to the next whole number.</u></p>
<u>SS-6</u>	<u>Accomplish all ESTs within the specified Period of Performance (PoP).</u>	<u>5.2</u>	<p><u>85% of ESTs* closed during a contract period must be completed within the originally authorized POP.</u></p> <p><u>The remaining 15% ESTs* must be completed to 100% with no more than a 25% schedule increase** from the originally authorized POP.</u></p> <p><u>*For purposes of calculating performance threshold requirements, fractional number of tasks or ESTs shall be rounded up to the next whole number.</u></p> <p><u>**For purposes of calculating performance threshold requirements, schedule increase will be rounded up to the next whole number of days.</u></p> <p><u>NOTE 1: Tasks or EST Schedule extensions driven by the Government will not be considered a Contractor schedule deviation.</u></p>

	Performance Objective	PWS Para (and subparagraphs)	Performance Threshold
SS-7	<u>Accomplish all ESTs within specified budget</u>	<u>5.2</u>	<p><u>85% of ESTs* closed during a contract period must be completed within the originally authorized budget.</u></p> <p><u>The remaining 15% ESTs* must be completed to 100% with no more than a 10% budget increase** from the originally authorized budget.</u></p> <p><u>*For purposes of calculating performance threshold requirements, fractional number of tasks or ESTs shall be rounded up to the next whole number.</u></p> <p><u>**For purposes of calculating performance threshold requirements, budget increase will be rounded up to the next whole dollar.</u></p> <p><u>NOTE 1: Tasks or EST budget increases driven by the Government will not be considered a Contractor budget deviation.</u></p>
SS-8	<u>The Contractor shall ensure CDRL submissions are complete, thorough, accurate, technically acceptable, and in compliance with all requirements of the PWS.</u>	<u>6.</u>	<p><u>90% of CDRL submissions shall be technically accurate during each contract period.</u></p> <p><u>No more than 10% of submissions shall be considered rejected and shall be corrected to 100% and resubmitted within 3 business days after rejection.</u></p> <p><u>NOTE 1: For this objective, a rejected submission is defined as a CDRL submittal which is returned to the Contractor for rework due to noncompliance with Government requirements or contains technical errors. Grammatical errors are NOT considered technical errors.</u></p> <p><u>NOTE 2: For purposes of calculating performance threshold requirements, fractional numbers shall be rounded up to the next whole number.</u></p>

	Performance Objective	PWS Para (and subparagraphs)	Performance Threshold
<u>SS-9</u>	<u>Delivered TO source data is accurate and free from any typographical and/or grammatical errors.</u>	<u>4.</u> <u>5.</u> <u>5.2</u>	<u>At least 98% of pre-publication TO source data is delivered accurate and error free.</u> <u>100% of final delivery TO source data is delivered accurate and error free.</u>
<u>SS-10</u>	<u>Ensure the quality requirements performed in accordance with established standards.</u>	<u>6.4.1.3</u> <u>6.6</u>	<u>95% of all inspections result in an acceptable rating during each contract period with the remaining 5% correctable within 5 business days.</u>
<u>SS-11</u>	<u>Responsive to Mission Essential Services.</u>	<u>6.2</u>	<u>100% of responses to services identified in PWS.</u>
<u>SS-12</u>	<u>Ensure all employees comply with requirements of FAR clause 52.222-50(c), (d), and (f) (Combating Trafficking in Persons).</u>	<u>6.4.1.2</u>	<u>100% compliance with FAR clause identified in PWS.</u>

8.0 GOVERNMENT FURNISHED PROPERTY AND SERVICES

8.1. Government Furnished Services (USAF Only)

If this PWS drives a requirement to locate Contractor personnel on Tinker AFB, the Government will provide telephone/computer/office space/Local Area Network (LAN) on site. Any requirement must be approved and coordinated by the Government. The Government will furnish the following services:

- a) Telephone. The Government will provide telephone service consisting of Class C service (to include Defense Switching Network (DSN) service). The Contractor shall ensure that the Government provided telephone usage is limited to official Government business related to the performance of this contract. The Contractor shall furnish their own

telephone service provided by local commercial carrier for their use in matters other than official Government business pertaining to this contract.

- b) LAN. The Government will provide LAN access and maintenance. Contractor shall comply with all security requirements pertaining to LAN usage and shall ensure that services are utilized only for official contract matters pertaining to the PWS.

8.2. Emergency Procedures

Contractor employees shall follow the direction of Government employees in regards to emergency procedures, i.e. fire, tornado, active shooter, bomb threats outlined in the Base Support Agreement. It is the responsibility of the Contractor to provide guidance and establish procedures for responding to an emergency for their employees. It is the Contractors' responsibility to account for their employees following an emergency evacuation. Contractor personnel shall participate with Government personnel in all fire and tornado drills at no additional cost to the Government.

9.0 DELIVERABLES

9.1. Contract Data Requirements List (CDRL) Deliverables

The Contractor shall comply with all CDRL and Data Item Descriptions (DIDs) outlined in the PWS. The Contractor will be evaluated on if the deliverable products are properly marked.

9.2. Performance Work Statement Review of Deliverables

The Contractor shall schedule delivery of EST deliverables with sufficient time remaining on the EST to allow for Contractor document revision based on allocation of 20 business days for Government review. The Government will not be financially liable for completion of EST deliverables, if completed after the EST end date, if the Contractor has not provided the Government a full and complete EST deliverable package no later than (NLT) the required 20 business day allocation for review and comment. If applicable, a DD 250 for each non-recurring engineering assignment shall be provided to the Government's CO at the end of each task.

9.3. Shipping

The Contractor shall ship all hardware and software IAW instructions provided in the EST.

10.0 SAFEGUARDING CONTROLLED UNCLASSIFIED INFORMATION (CUI)

The Contractor shall adhere to the guidance for generating, marking, disseminating, safeguarding and destroying of Controlled Unclassified Information. The Contractor is responsible for determining, at the time of creation, whether information in a document or material falls into a CUI category. If so, the Contractor is responsible for applying CUI markings and dissemination instructions accordingly. The contractor shall follow the procedures to protect controlled unclassified information in accordance with

DODI 5200.48 “Controlled Unclassified Information (CUI)” and Air Force Guidance Memorandum (AFGM) 2020-16-01 “Controlled Unclassified Information”

EXPORT-CONTROLLED CUI. Transfers to foreign persons must be in accordance with the Arms Export Control Act, International Traffic in Arms Regulations, Export Control Reform Act, Export Administration Regulations, and DoDI 2040.02. In accordance with DoDDs 5230.11 and 5230.20, a positive foreign disclosure decision must be made before CUI is released to a foreign entity.

HANDLING AND DESTROYING UNCLASSIFIED/LIMITED DISTRIBUTIONS DOCUMENTS. Unclassified/Limited Distribution documents containing Controlled Unclassified Information (CUI) shall be handled per DODI 5200.48, and will be destroyed by any method that will prevent disclosure of contents or reconstruction of the document. When destroying Unclassified/Limited Distribution documents containing CUI, including in electronic form, the Contractor must do so in a manner making it unreadable, indecipherable, and irrecoverable. Record and non-record CUI documents may be destroyed by means approved for destroying classified information or by any other means making it unreadable, indecipherable, and unrecoverable the original information such as those identified in NIST SP 800-88 and in accordance with Section 2002.14 of Title 32, CFR.

Acronyms and Definitions

Acronym	Definition
ACC	Air Combat Command
ACO	Administrative Contracting Officer
AFMC	Air Force Materiel Command
AIRWAVE	AWACS Information Routing Web Air Vehicle Engineering
AMIP	Aircraft Modification and Integration Program
ANSI	American National standards Institute
ASQ	American Society of Quality
ATD	Aircrew Training Device
AVIP	Avionics Integrity Program
AWACS	Airborne Warning and Control System
AWG	Aircraft Working Group
CAC	Controlled Access Card
CDRL	Contract Data Requirements List
CMRA	Contractor Manpower Reporting Application
CNS/ATM	Communication Navigation Surveillance/Air Traffic Management
CO	Contracting Officer
COR	Contracting Officer Representative
COTS	Commercial Off the Shelf
CUI	Controlled Unclassified Information
CVS	Contractor Verification System
DART	Days Away Restricted or Transferred
DID	Data Item Description
DLM	Depot Level Maintenance
DMSMS	Diminished Manufacturing Sources Material Shortages
DRAGON	Diminishing Manufacturing Sources (DMS) Replacement of Avionics for Global Operations and Navigation
EASA	European Aviation Safety Agency
ECP	Engineering Change Proposal
EST	Engineering Service Task
FAA	Federal Aviation Administration
FMS	Foreign Military Sales
FTR	Federal Travel Regulations
FY	Fiscal Year
HSPD	Homeland Security Presidential Directive
IAW	In Accordance With
ISO	International Organization for Standardization
ITAR	International Traffic in Arms Regulation
JEDMICS	Joint Engineering Data Management Information & Control System
JPAS	Joint Personnel Adjudication System
JTR	Joint Travel Regulations
LRU	Line Replaceable Units
MOA	Memorandum of Agreement

NATO	North Atlantic Treaty Organization
NCR	Non-Conformance Report
NOR	Notices of Revision
OEM	Original Equipment Manufacturer
OSHA	Occupational Safety and Health Administration
OSS&E	Operational Safety, Suitability and Effectiveness
PDM	Programmed Depot Maintenance
PIA	Proprietary Information Agreements
PIWG	Product Improvement Working Group
PMR	Program Management Review
PoP	Period of Performance
PWS	Performance Work Statement
QCP	Quality Control Plan
REACH	Restriction of Chemicals
SAE	Society of Automotive Engineers
SEMP	Systems Engineering Management Plan
SS	Service Summary
SSG	E-3 System Safety Group
TAA	Technical Assistance Agreements
TAFB	Tinker Air Force Base, Oklahoma, City OK
TCG	Technical Coordination Group
TCIR	Total Case Incident Rate
TCTO	Time Compliance Technical Order
TIM	Technical Interchange Meeting
TOAP	Technical Order Authoring and Publishing System
UDLM	Unprogrammed Depot Level Maintenance
USAF	United States Air Force
VPP	Voluntary Protection Plan

APPENDIX A – GOVERNMENT DISTRIBUTION STATEMENTS

The contractor shall not include proprietary markings on any technical deliverables generated as a result of this contract. Non-hardware technical deliverables generated as a result of this contract shall contain on the cover page the following Government statements.

DISTRIBUTION STATEMENT D: *Distribution authorized to the Department of Defense and U.S. DoD contractors only; Critical Technology and/or Export Controlled, 13 January 2020. Other requests shall be referred to AFLCMC/HBS E-3 AWACS Division, 3001 Staff Drive Ste. 2AH1-100B, Tinker AFB OK 73145.*

DISTRIBUTION STATEMENT E: *Distribution authorized to DoD Components only; Proprietary Information (Contractor Financial Data); 13 January 2020. Other requests shall be referred to AFLCMC/HBS E-3 AWACS Division, 3001 Staff Drive Ste. 2AH1-100B, Tinker AFB OK 73145.*

DISTRIBUTION STATEMENT F: *Further dissemination only as directed by AFLCMC/HBS E-3 AWACS Division, 3001 Staff Drive Ste. 2AH1-100B, Tinker AFB OK 73145; 13 January 2020 or higher DoD authority.*

NOTE: Distribution Statement F may be applied under rare and exceptional circumstances when specific authority exists or when need-to-know must be verified. Use of this distribution statement requires prior approval from the PCO before use.

EXPORT CONTROL WARNING STATEMENT SHOWN BELOW:

WARNING - This document contains technical data whose export is restricted by the Arms Export Control Act (Title 22, U.S.C., Sec 2751, et seq.) or the Export Administration Act of 1979 (Title 50, U.S.C., App. 2401 et seq.), as amended. Violations of these export laws are subject to severe criminal penalties. Disseminate in accordance with provisions of DoD Directive 5230.25.

Use of the abbreviated "Export Controlled" statement is approved for all pages that follow the title page with the full data markings as shown below.

EXPORT CONTROLLED: *Use or disclosure of data contained herein is subject to restriction on the title page.*

HANDLING AND DESTROYING UNCLASSIFIED/LIMITED DISTRIBUTIONS DOCUMENTS. Unclassified/Limited Distribution documents shall be handled using the same standard as "Controlled Unclassified Information (CUI)" material, and will be destroyed by any method that will prevent disclosure of contents or reconstruction of the document.

NOTE: If the contractor deems it necessary, on an individual basis to use "Distribution Statement B", the contractor may be requested to submit a written request with proper justification in accordance with applicable contract clauses and for the use of other "Restrictive Markings" other than "Distribution Statement D" on a technical document. If requested, the Government will review the contractor's request and provide a written response in accordance with applicable contract clauses.

DISTRIBUTION STATEMENT B: *Distribution authorized to U.S. Government agencies only (Proprietary Information), 13 January 2020. AFLCMC/HBS E-3 AWACS Division, 3001 Staff Drive Ste. 2AH1-100B, Tinker AFB OK 73145.*

APPENDIX B – APPLICABLE DATA AND FORMS

The documents listed below form a part of the PWS only to the extent specified herein. Only the basic documents, without specific revision, are referenced in the PWS text. For all documents referenced herein without specifying a version date or referenced as “Current Version”, the document version shall be deemed to be the version of the document, including all revisions thereto, in effect as of the effective date of the contract award for this Engineering Assignment. The use of versions of documents referenced herein that are released subsequent to the effective date of the contract award for this Engineering Assignment must be authorized by the Government.

Applicable Data

Publication Number	Title
AFMCMAN 21-1	Technical Order System Procedures
22 CFR parts 120 through 130	International Traffic in Arms Regulations
FAR/DFARS	Federal Acquisition Regulation/Defense Federal Acquisition Regulation Supplement
JTR	Joint Travel Regulations
DSCA 5105.38-M	Security Assistance Management Manual
AFPD 63-12	Assurance of OSS&E
AFI 63-101/20-101	Integrated Life Cycle Management
AFI 61-201	Management of Scientific and Technical Information (STINFO)
AFMCI 63-1201	Life Cycle Systems Engineering
MIL-STD-1796A	Avionics Integrity Program
R-14876-1	USAF E-3 Modification Summary Report
R-N30017-1	NATO E-3 Modification Summary Report
T.O. 00-5-16	Software Manager’s Manual
RTCA DO-178C	Software Considerations in Airborne Systems and Equipment Certification

Executive Order 13526	Classified National Security Information
Executive Order 13556	Controlled Unclassified Information
DoDM 5200.01-V1	DoD Information Security Program
DoD 5200.5-R	Personnel Security Program
HSPD-12	Homeland Security Presidential Directive 12
AFI 31-601	Industrial Security Program Management
AFI 31-501	Personnel Security Program Management
TAFBI 31-101	Tinker AFB Integrated Defense Plan
DoDI 8500.01	Cybersecurity
DoDI 8510.01	Risk Management Framework
Attachment 1	Mission Essential Services
Attachment 2	Air Force Contracting VPP Guide

Applicable Forms

The Contractor shall ensure latest revisions of all forms are completed IAW corresponding directives as follows:

Form Number	Form Title
AF IMT 3925/3926/3927	Engineering Order
AFMC 202	Engineering Change Order
OSHA Form 300A	Summary of Work-Related Injuries and Illnesses
DD Form 254	Contract Security Classification Specification
AFMC Form 496	Request for Identification Credential
AFMC Form 387	Identification Credential

APPENDIX C – LRUS AND COMPONENTS IN THE DRAGON MODIFICATION

LRUs

Mission Avionics (Group B) - LRU Count
Collins Aerospace LRUs
Communication
VHF Data Radio (VHF-4000)
Navigation
Attitude Heading Computer AHC-3000A
Flux Detector Unit FDU-3000
External Compensation Unit ECU-3000
Air Data Computer ADC-3020 with s/w 810-0071-108
Distance Measuring Equipment Receiver DME-442
Multi-Mode Receiver (MMR) GNLU-955M
Low Range Radio Altimeter (ALT-4000)
Receiver/Transmitter TACAN TCN-500
Surveillance and Safety
Weather Radar with Predictive Windshear T/R (WRT-2100)
WXR Antenna WFA-701X
WXR Antenna Pedestal WMA-701X
Enhanced Ground Proximity Warning System(EGPWS) (with Reactive Windshear) Mark V
Flight Management
Integrated Processing Center IPC-8310A with s/w 811-9568-001
Data Transfer Unit (DTU) DTU-7100 with s/w 811-0938-011
Control and Display Unit CDU-7000E with s/w 811-9566-00X *
Communications Management Unit (CMU)
External Compensation Unit (ECU) (ECU-3000)
Multifunction Display MFD-268C2 with s/w 811-9567-00X *
Display Brightness Control Panel (Inboard/Outboard)
PFD Control Panel CP-255K
ECU-3000 License Keys DLC-6200
ECU-3000 License Keys FAN-6200
Engine Instrument Data Concentrator Unit (DCU) 4800
Flight Director Control Panel MSP - 7000
Air Vehicle (Group A) - LRU Count
Collins Aerospace
Miscellaneous/Accessories
Interactive Hand Controller (Left) IHC-2000 Pilot
Interactive Hand Controller (Right) IHC-2000 Copilot
Radio Altimeter Antenna (ANT-52)

GPS Antenna (GNA-925)
Distance Measuring Equipment (DME) L-band Antenna ANT- 42
VHF Antenna, Blade AS-3064/A, VDL
Miscellaneous/Accessories
Air Data Computer Tray
MMR Mount
DME Mount (UMT-13)
IPC Mount 8310
AHC Mount MMT-3010
WXR mount WMT-701X
CMU Mounting Tray (MMT-130)
CMU Mounting Tray Piggyback mount
AHRS FDU- Mounting Plate
Receiver/Transmitter TACAN Tray
CMU 4000 Connector Kit
DME - RT Connector Kit
Radio Altimeter Connector Kit
EGPWS Install Kit
DTU - Compact Flash Memory Card (2 Gb)
DME - Antenna Gasket, Grounding
Radio Altimeter Grounding Bracket
VHF-4000 Radio Tray
Mounting Base - UMT-12
Piggyback Tray Bracket
Piggyback Tray
VHF-4000 Connector Kit

Part Number List

<u>Major HW Item</u>	<u>Proposal HW Title</u>	<u>P/N</u>
<i>VHF Data Radio (VHF-4000)</i>	<i>TRANSCEIVER, VHF COMM ASSEMBLY - VHF-400</i>	822-1468-310
<i>Flux Detector Unit FDU-3000</i>	<i>FDU-3000 FLUX DETECTOR UNIT</i>	822-1193-001
<i>WXR Antenna WFA-701X</i>	<i>ANTENNA RADIATOR-FLAT PLATE</i>	622-5137-601
<i>ECU-3000 License Keys DLC-6200</i>	<i>SOFTWARE KEY FOR FANS ATC DATALINK (DLCA</i>	810-0186-100
<i>ECU-3000 License Keys FAN-6200</i>	<i>SOFTWARE KEY FOR DUAL ATC DATALINK (FANS</i>	810-0185-100
<i>Interactive Hand Controller (Left) IHC-2000 Pilot</i>	<i>INTERACTIVE HAND CONTROLLER</i>	218-1239-010

<i>Interactive Hand Controller (Right) IHC-2000 Copilot</i>	<i>INTERACTIVE HAND CONTROLLER</i>	218-1239-020
<i>Radio Altimeter Antenna (ANT-52)</i>	<i>ANT-52 ANTENNA, RADIO ALTIMETER</i>	622-6793-001
<i>GPS Antenna (GNA-925)</i>	<i>ANTENNA, GLOBAL POSITIONING SATELLITE</i>	822-2033-001
<i>Distance Measuring Equipment (DME) L-band Antenna ANT- 42</i>	<i>ANT-42 ANTENNA DME</i>	622-6591-001
<i>Air Data Computer Mount</i>	<i>MODULAR MOUNTING TRAY MMT-3000</i>	822-1227-001
<i>MMR Mount</i>	<i>TRAY ASSEMBLY</i>	247-1027-010
<i>DME Mount (UMT-13)</i>	<i>MOUNT, 1/2 ATR UNIT - UMT-13</i>	622-5213-001
<i>IPC Mount 8310</i>	<i>MOUNT ASSEMBLY MT-8310</i>	822-2477-002
<i>AHC Mount MMT-3010</i>	<i>MOUNT - MMT-3010</i>	822-1290-003
<i>WXR mount WMT-701X</i>	<i>MOUNT, R/T - X BAND, SINGLE</i>	622-5133-007
<i>CMU Mounting Tray (MMT-130)</i>	<i>TRAY, MTG , RUGGED VIBRATION - MMT-130</i>	622-9671-002
<i>CMU Mounting Tray Piggyback mount</i>	<i>TRAY, MTG , RUGGED VIBRATION - MMT-130</i>	622-9671-001
<i>AHRS FDU- Mounting Plate</i>	<i>RING, MOUNTING</i>	628-9778-001
<i>Removable Storage Media</i>	<i>REMOVABLE STORAGE MEDIA</i>	270-3523-080
<i>DME - Antenna Gasket, Grounding</i>	<i>SHIELDING GASKET, ELECTRONIC</i>	018-1394-110
<i>Radio Altimeter Grounding Bracket</i>	<i>BRACKET</i>	992-3477-004
<i>VHF-4000 Radio Tray</i>	<i>TRAY, MTG , RUGGED VIBRATION- MMT-125</i>	622-9670-001
<i>Mounting Base - UMT-12</i>	<i>MOUNT, 3/8 ATR UNIT - UMT-12</i>	622-5212-004
<i>Piggyback Tray Bracket</i>	<i>PIGGY-BACK MOUNT KIT</i>	634-1103-003
<i>Piggyback Tray</i>	<i>PIGGYBACK MOUNT KIT-</i>	653-9078-106
<i>VHF-4000 Connector Kit</i>	<i>CONNECTOR KIT,VHF-4000</i>	653-9079-005
<i>TCAS Antenna TRE-920</i>	<i>TCAS RADIATING ELEMENT - TRE-920</i>	622-8973-001
<i>PC Run Time License CORESIM</i>	<i>PC Run Time License CORESIM</i>	946-6742-010
<i>CONTROL, RADIO SET - 379F-21</i>	<i>CONTROL, RADIO SET - 379F-21</i>	822-2092-001
<i>Aero Flex IFR-6015</i>	<i>Aero Flex IFR-6015</i>	
<i>Aero Flex IFR-4000</i>	<i>Aero Flex IFR-4000</i>	
<i>Multifunction Display (MFD)</i>	<i>MFD-268C2</i>	822-1757-110
<i>PFD Control Panels</i>	<i>CP-255K</i>	822-1059-007

<i>Flight Director Control Panel (MSP)</i>	<i>MSP-7000</i>	822-2954-002
<i>Control and Display Unit (CDU)</i>	<i>CDU-7000E</i>	822-2654-020
<i>Integrated Processing Center (IPC)</i>	<i>IPC-8310A</i>	822-2476-002
<i>Multi-Mode Receiver (MMR)</i>	<i>GNLU-955M</i>	822-1591-130
<i>Weather Radar Pedestal</i>	<i>WMA-701X</i>	622-5135-801
<i>Weather Radar Receiver/Transmitter (WXR/T)</i>	<i>WRT-2100</i>	822-1710-422
<i>Distance Measuring Equipment (DME)</i>	<i>DME-442</i>	622-7309-101
<i>Data Transfer Unit (DTU)</i>	<i>DTU-7100</i>	822-2429-001
<i>Communications Management Unit (CMU)</i>	<i>CMU-4000</i>	822-1739-003
<i>Air Data Computer (ADC)</i>	<i>ADC-3020</i>	822-2504-002
<i>Attitude Heading Computer (AHC)</i>	<i>AHC-3000A</i>	822-1378-001
<i>Datalink Router - External Compensation Unit</i>	<i>ECU-3000</i>	822-1200-205
<i>AHRS- External Compensation Unit</i>	<i>ECU-3000</i>	822-1200-996
<i>Engine Instrument Data Concentrator Unit (DCU)</i>	<i>DCU</i>	
<i>Enhanced Ground Proximity Warning System (EGPWS)</i>	<i>MARK V</i>	
<i>Display Brightness Control Panel</i>		
<i>Low Range Radio Altimeter</i>	<i>ALT-4000</i>	822-0615-305
<i>Receiver/Transmitter TACAN</i>	<i>TCN-500</i>	622-8149-001
<i>MOUNT, ELECTRICAL EQUIPMENT</i>		622-8150-001
<i>TRAY, MTG , RUGGED VIBRATION- MMT-125</i>		622-9670-002
<i>CONNECTOR KIT</i>		634-4192-017
<i>CONNECTOR KIT</i>		634-4193-005
<i>CONNECTOR KIT, RIU-4000</i>		653-9079-002
<i>COMMUNICATION MANAGEMENT UNIT, CMU-4000</i>		822-1739-690
<i>SHIELDING GASKET, ELECTRONIC 1</i>		018-1394-110
<i>INTERACTIVE HAND CONTROLLER 1</i>		218-1239-010
<i>INTERACTIVE HAND CONTROLLER 1</i>		218-1239-020
<i>TRAY ASSEMBLY 2</i>		247-1027-010
<i>REMOVABLE STORAGE MEDIA 4</i>		270-3523-080
<i>MOUNT, R/T - X BAND, SINGLE 1</i>		622-5133-007
<i>MOUNT, ANTENNA-WMA-701X 1</i>		622-5135-801
<i>ANTENNA RADIATOR-FLAT PLATE 1</i>		622-5137-601
<i>MOUNT, 3/8 ATR UNIT - UMT-12 2</i>		622-5212-004
<i>MOUNT, 1/2 ATR UNIT - UMT-13 1</i>		622-5213-001
<i>ANT-42 ANTENNA DME 1</i>		622-6591-001
<i>ANT-52 ANTENNA, RADIO ALTIMETER 2</i>		622-6793-001
<i>DISTANCE MEASURING EQUIPMENT - DME-442 1</i>		622-7309-101
<i>MOUNT, ELECTRICAL EQUIPMENT 1</i>		622-8150-001
<i>TRAY, MTG , RUGGED VIBRATION- MMT-125 1</i>		622-9670-001

TRAY, MTG , RUGGED VIBRATION - MMT-130 1		622-9671-001
TRAY, MTG , RUGGED VIBRATION - MMT-130 1		622-9671-002
RING, MOUNTING 1		628-9778-001
PIGGY-BACK MOUNT KIT 1		634-1103-003
PIGGYBACK MOUNT KIT- 1		653-9078-106
CONNECTOR KIT,VHF-4000 1		653-9079-005
SOFTWARE KEY FOR DUAL ATC DATALINK (FANS 2		810-0185-100
Name unknown		810-0186-100
ALTIMETER - ALT-4000 2		822-0615-305
Control Panel - CP-255K 2		822-1059-007
FDU-3000 FLUX DETECTOR UNIT 1		822-1193-001
ECU-3000 EXTERNAL CMP UNIT 1		822-1200-205
EXTERNAL COMPENSATION UNIT 2		822-1200-996
MODULAR MOUNTING TRAY ^^ MMT-3000 2		822-1227-001
MOUNT - MMT-3010 1		822-1290-003
AHC-3000A ATTITUDE HEADING COMPUTER 1		822-1378-001
TRANSCEIVER, VHF COMM ASSEMBLY - VHF-400 1		822-1468-310
GLOBAL NAVIGATION AND LANDING UNIT - GNL 2		822-1591-130
RECEIVER/TRANSMITTER - RT-2012/APN 1		822-1710-422
COMMUNICATION MANAGEMENT UNIT, CMU-4000 2		822-1739-690
MULTIFUNCTIONAL DISPLAY - MFD-268C2 5		822-1757-110
ANTENNA, GLOBAL POSITIONING SATELLITE 2		822-2033-001
DATA TRANSFER UNIT 1		822-2429-001
IPC-8310 ASSEMBLY 2		822-2476-002
MOUNT ASSEMBLY MT-8310 2		822-2477-002
AIR DATA COMPUTER 2		822-2504-002
CONTROL DISPLAY UNIT CDU-7000E 2		822-2654-020
BRACKET 7		992-3477-004
MODE SELECT PANEL, MSP-7000 2		822-2954-002
DATA CONCENTRATOR UNIT, DCU-4800 2		822-3188-001
DISPLAY CONTROL PANEL, DCP-4005 2		822-3215-001
COMPUTER, WARNING, GROUND PROXIMITY 1		822-3216-001
TCAS RADIATING ELEMENT - TRE-920 2		622-8973-001
CONTROL, RADIO SET - 379F-21 1		822-2092-001
VHF ANTENNA, VHFA-4000 1		822-2778-010
CORESIM SW License Fee 1		946-6742-010
6000-OPT 3 1		

APPENDIX D – LRU Safety Critical List

LRU Safety Critical List
Attitude and Heading Reference System - AHRS
Air Data Computer - ADC
Integrated Standby Display - ISD
Data Concentrator Unit – DCU
Control and Display Unit – CDU
Inter Communication System/Audio Management Unit - ICS/AMU
Multifunction Display - MFD

DRAFT