STATEMENT OF WORK (SOW)
FOR
Commander, Fleet Readiness Center (COMFRC)
Logistics and Engineering (LOGEN) Support Services

1.0 Background: Commander, Fleet Readiness Center (COMFRC) directly supports the mission of the Naval Aviation Enterprise (NAE) to deliver effective and efficient flight-line readiness through a globally managed responsive and integrated sustainment system. The Fleet Readiness Centers (FRCs) are disbursed across different geographical locations throughout the US and Japan.

The FRCs provide Maintenance, Repair, and Overhaul (MRO) Engineering (MRO-E), Logistics (MRO-L), and Production (MRO-P) support to all naval aircraft and related support equipment, providing full-spectrum aircraft maintenance operations. The key capabilities required to maintain high-performance tactical aircraft in support of war fighter readiness, as well as ensuring peak operational readiness for all supported activities are described herein. The main supported FRC sites are located at Jacksonville, FL; Cherry Point, NC; North Island, CA and the Naval Air Technical Data and Engineering Command located at San Diego, CA, as well as, detachments and remote sites inside the Continental United States (CONUS) and outside the Continental United States (OCONUS) located in Italy.

The Fleet Support Team (FST) Group provides logistics and engineering support to multiple Type/ Model/Series (T/M/S) of aircraft at FRCs for this requirement as follows:

Fleet Readiness Center Southeast (FRCSE), Jacksonville, FL:

Variants of E-2/C-2, F-5, F-16, F/A-18, F-35, E-6B, P-3C, P-8A, T-6, T-34, T-44, TH-57, T-45, ALE-47 Software Support Activity (SSA), MQ-4C Triton, Airborne Multi-Intelligence and Special Missions (AMISM), Aircraft Armament Equipment/Fuel Containment (AAE/FC), Consolidated Automated Support System (CASS), Electro Optics, Electronic Warfare, Metrology Engineering and Calibration Support, and the various engines (F-404, F-414, J85, T-56), critical safety items, structures, components and support systems associated with these and other future assigned weapon systems.

Fleet Readiness Center East (FRCE), Cherry Point, NC:

Variants of E-2/C-2, AV-8, V-22, H-1, H-53, H-60, VH-92, C-130, F-18, F-35, Unmanned Aircraft Systems (UAS), Automated Test Systems (ATS), Electro Optics, Electronic Warfare, Metrology Engineering and Calibrations Support, and the various engines (F-402, T-400, F-405, T-700), critical safety items, structures, components and support services and systems associated with these and other future assigned weapon systems.

Fleet Readiness Center Southwest (FRCSW), San Diego, CA:

E-2D, H-1, V-22, and Unmanned Aerial Vehicle (UAV) or Unmanned Aircraft Systems (UAS), AV-8B, F/A-18 (all variants), H-60, H-53, E-2C, C-2A, Consolidated Automated Support System (CASS), Electro Optics, Electronic Warfare, Metrology Engineering and Calibration Support, and the various engines, structures, components and support systems associated with these and other future assigned weapon systems.

1.1 Scope: The requirements to be performed in support of COMFRC mission are logistics and engineering support located at Jacksonville, FL; engineering support located at Cherry Point, NC and logistics support located at North Island, CA and the Naval Air Technical Data and Engineering Command (NATEC) located at San Diego, CA, as well as detachments and remote sites inside the Continental United States (CONUS). The acquisition of these services under COMFRC is required in order to ensure consistency in the procurement of logistics and engineering support services across all sites. Potential customers and weapon systems include, but are not limited to: FST Group, MRO-E, MRO-L, and MRO-P, with individual T/M/S supported at FRCSE, FRCE, and FRCSW, as assigned in section 1.0 above.

Contractor support services (CSS) outlined in sections 3.3 & 3.4 include life cycle engineering, logistics, technical and production services for various T/M/S aircraft. Individual Task Orders (TOs) will be issued to support new weapon systems, system modifications, Foreign Military Sales (FMS), and support systems, including related equipment.

Functional support areas include:

- Engineering support - technical assistance for existing aircraft, aircraft components, aircraft structures, engines and support systems; analyze, fabricate, integrate, deliver, and verify new systems; modifications to existing systems; new systems research and development; Production Support engineering services.

- Logistics and Technical support – level of repair analysis (LORA); design interface (DI); maintenance planning (MP); logistics support analysis (LSA); environmental logistics, integration, supply support and facilities; supportability test and evaluation (ST&E); training support and support equipment; metrology and calibration; Industrial Ops, Diminishing Manufacturing Sources and Material Sources (DMSMS).

- Program Management and Administrative support services -Applies project principles to investigate, analyze, plan, design, develop, implement, test, or evaluate military weapon systems; associated support systems; or management information systems. Applies project experience to perform functions such as system integration, configuration management, quality assurance testing, or acquisition and resource management. Provides routine clerical and administrative support.

2.0 Applicable documents: The Government will provide the Contractor copies of, or access to, any relevant DoD instructions, directives, policies, procedures and guidelines necessary to perform tasking during contract performance in support of individual TOs.

A comprehensive list of Navy regulatory documents can be found at the Department of the Navy (DON) Chief Information Officer (CIO) Information Technology (IT) Policy and Guidance website, http://www.doncio.navy.mil/. Throughout the life of this contract, if any policy, instruction, or regulation is replaced or superseded, the replacement or superseding version shall apply. The Contractor is responsible for adhering to all regulations applicable under this contract and resulting awarded TOs. A list of applicable documents are listed below, but are not limited to:

2.1 Department of Defense specifications:

2.1.1 DoD 5220.22-M, National Industrial Security Program Operating Manual, (NISPOM), February 2006, Incorporating Change 2, 18 may 2016
2.1.2 SECNAV M-5510.36B, Information Security Program, 12 Jul 2019
2.1.3 DoDI 5200.48, DoDI Information Security Program: Controlled Unclassified Information (CUI), 06 Mar 2020
2.1.4 DoDM 5400.07, Freedom of Information Act (FOIA) Program, 25 Jan 2017
2.1.5 DoDI 5230.24, Distribution Statements on Technical Documents 23 Aug 2012, Change 3, 15 Oct 2018
2.1.6 DoDI 8500.01, Cybersecurity dated 14 Mar 2014, Incorporating Change 1, 7 Oct 2019
2.1.7 DoDI 5154.31, Joint Travel Regulations (JTR), IAW Volume 5, "Per Diem Travel and Transportation Allowance Committee,
2.1.8 SECNAV M-5510.30C, Personnel Security Program, 24 Jan 2020
2.1.9 OPNAVINST 3440.17A, Navy Installation Emergency Management Program, 1 Aug 2014
2.1.10 DoD 5000.1
2.1.11 DoD 5000.2
2.1.12 SECNAV 5000.2
2.1.13 DoD 8570.01-M Information Assurance Workforce Improvement Program, Incorporating Change 4, 10 Nov. 2015
2.1.14 DODD 4151.18-H Depot Maintenance Capacity and Utilization Measurement Handbook 31, August 2018
2.1.15 OPNAVINST 4790.14B N43) Joint Depot Maintenance Program 14 Feb. 2013
2.1.16 DoDI 4151.20 Title 10, United States Code 2464, Jan 07.
2.1.17 DoDI 5200.48, Controlled Unclassified Information (CUI)
2.1.18 DoD Manual 5205.02, DoD OPSEC Program Manual
2.1.19 Chief of Naval Operations Instruction (OPNAVINST) 8000.16D, Naval Ordnance Maintenance Management Program
2.1.20 DoD Instruction (DoDI) 5200.02, Department of Defense Personnel Security Program (PSP)
2.1.21 OPNAVINST 2221.5C, Release of Communications Security (COMSEC) Material to U.S. Industrial Firms Under Contract to the U.S. Navy

Note: DoD Directives are available in the following link: https://www.esd.whs.mil/dd/
OPNAV & SECNAV Instructions & Notices are available in the following link: https://www.secnav.navy.mil/doni/opnav.aspx
Updated DoD Cybersecurity Policies are available in the following link: https://www.csiac.org/resources/the-dod-cybersecurity-policy-chart/

2.2 Department of Defense standards:

2.2.1 MIL-STD-1629A - Procedures for Performing a Failure Mode Effects and Criticality Analysis (FMECA)
2.2.2 MIL-STD-31000A - Technical Data Packages
2.2.3 MIL-PRF-32070A Performance Specification Test Program Sets 10 Jan 2012
2.2.4 MIL-STD-1472G Department of Defense Design Criteria Standard: Human Engineering 11 Jan 2012
2.2.5 MIL-STD-2155 Failure Reporting, Analysis and Corrective Action System (FRACAS)
2.2.6 MIL-STD-785B Reliability Program for Systems and Equipment, Development and Production
2.2.7 MIL-STD-2173 Reliability-Centered Maintenance Requirements for Naval Aircraft, Weapon Systems and Support Equipment, Jan 1986
2.2.8 MIL-STD-882E DOD Standard Practice for System Safety
2.2.9 MIL-STD-498 Software Development and Documentation, 5 Dec 1994
2.2.10 MIL-STD-61A (SE) Configuration Management Guidance, 7 Feb 2001
2.2.11 TA-STD-0017 Product Support Analysis," was adopted on 16 April 2014, for use by the Department of Defense (DoD)
2.2.12 SAE-AS1390 Level of Repair Analysis (LORA)," was adopted on 08 OCT 2014 for use by the Department of Defense (DoD)

Note: MIL-STD documents are available at the following link: https://quicksearch.dla.mil/qsSearch.aspx

2.3 Other Government documents (e.g. Naval Air Systems Command (NAVAIR) Documents):

2.3.1 NAVAIRINST 5600.14E Submission of Engineering Drawings, Models and Associated Lists to Naval Air Systems Command Drawing Repository
2.3.2 NAVAIRINST 13050.6A Configuration Management Policy, Procedures and Responsibilities for Aircraft Assigned to Naval Air Systems Command Aircraft Controlling Custodian
2.3.3 COMNAVAIRFORINST 4790.2B Naval Aviation Maintenance Program (NAMP) Instruction
2.3.4 NAVAIR 00-25-300 Naval Air Systems Command Technical Directives System management and Procedures Manual, 2009

Note: NAVAIR Instructions are downloadable from https://homepages.navair.navy.mil/directives/index.cfm

2.4. Industry documents:

2.4.1 United States Code - Title 10, Section 2451 - 2456 - Defense Standardization Program (U.S. Code is downloadable from http://uscode.house.gov/search/criteria.shtml
2.4.2 National Security Decision Directive (NSDD) 298
2.4.3 Code of Federal Regulations, Title 29 Labor (https://www.ecfr.gov/current/title-29)
2.4.4 CSP 03-01- 005 OSHA Instruction Voluntary Protection Programs Policies and Procedures Manual (https://www.osha.gov/enforcement/directives/csp-03-01-005)

2.5 Others as applicable:

2.5.1 Applicable documents pertaining to specific TOs
2.5.2 SAE GEIA-STD-0007C, Logistics Product Data
2.5.3 SWP 6710-001B DI/MP Process
2.5.4 SWP 6711-001C DI Process
2.5.5 SWP 6711-008A DI ILA
2.5.6 SWP 6711-12-001C DI/MP Process Sequence Steps
2.5.7 SWP 6711-007F Baseline Comparison System
2.5.8 SWP 6711-006A Supportability Analysis Design Review
2.5.9 SWP 6711-005C New Technology Insertion
2.5.10 SWP 6711-004A Standardization and Interoperability
2.5 11 SWP 6711-003E Comparative Analysis
2.5.12 SWP 6712-004 Level of Repair Analysis (LORA)
2.5.13 IMC Handbook AL-081AG-IMC-000
2.5.14 6714-001C AHMCM Aviation Hazardous Materials Control and Management Program
2.5.15 6714-002C ESOH Environmental Safety and Occupational Health
2.5.16 5400.161A NAVAIR Instruction for Aviation Ship Integration A/SI
2.5.17 4790.35 Diminishing Manufacturing Sources and Material Sources (DMSMS)
2.5.18 4790.22C Design Interface and Maintenance Planning NAVAIR instruction.
2.5.19 SWP 673-103 Depot Capability Planning
2.5.20 SWP 673-104 Depot Capability Establishment
2.5.21 Naval Supply Publication 724
2.5.22 AL-081AO-IMC-000
2.5.23 SWP6711-12-001C (Design Interface & Maintenance Planning Process Sequenced Work Steps)
2.5.24 DD Form 1949-3
2.5.25 COMNAVFORINST 4790.2
2.5.26 NAVSUP P-724 - Navy Inventory Integrity Procedures
2.5.27 NOLSC-724/6
2.5.28 SEMS AUTOSERD Template
2.5.29 ASME Y.14.100 Engineering Drawing Practices The American Society of Mechanical Engineers

2.5.30 IEEE Std. 15288-2015 ISO/IEC/IEEE Systems and software engineering System life cycle processes
2.5.31 IEEE Std. 12207-2008 Systems and software engineering System life cycle processes
2.5.32 IEEE Std. 29148-2011 Systems and software engineering System life cycle processes_ requirements engineering
2.5.33 ANSI/IEEE Std. 1008-1987 Software Unit Testing
2.5.34 MIL-HDBK-61A(SE) Configuration Management Guidance
2.5.35 NAVSUP P-485, Ashore Supply
2.5.36 Electronic Key Management System (EKMS) 1B, EKMS Policy and Procedures for Navy Electronic Key Management System, Tiers 2 and 3

2.6 FRC Specific Instructions:

2.6.1 FRCSE Instructions

2.6.1.1 3030.1 Anti-terrorism Plan
2.6.1.2 3030.2 Personnel Accountability in Conjunction with Natural and Manmade Disasters
2.6.1.3 3440.1 Disaster Preparedness Plan
2.6.1.4 4790.111A Foreign Object Damage Prevention
2.6.1.5 5070.1B Technical Data Management Procedures
2.6.1.6 5103.3A Hazard Prevention, Safety Inspection, and Safety and Health Deficiency Abatement
2.6.1.7 5090.14A Hazardous Material Control and Management
2.6.1.8 5090.3D Hazardous Waste Management
2.6.1.9 5103.2A Safety and Occupational Health Program
2.6.1.10 5103.4A Safety and Occupational Health Related Training
2.6.1.11 5103.8 Accident and Occupational Health Injury/Illness Reporting
2.6.1.12 5103.9A Personal Protective Equipment Program
2.6.1.13 5103.13 Sight Conservation Program
2.6.1.14 5103.15B Heavy Metals Control Program
2.6.1.15 5103.24 Review of Engineering Drawings, Plans, and Specifications
2.6.1.16 5215.6A Technical Directive Validation/Verification Procedures
2.6.1.17 5239.1 Information Systems Acceptable Use
2.6.1.18 5500.5A Physical Security
2.6.1.19 5510.14 Information, Personnel, and Industrial Security Procedures
2.6.1.20 12700.1 Proper Wearing of Apparel within FRCSE
2.6.1.21 13200.1 Electromagnetic Interference/Electrostatic Discharge Controls

2.6.2 FRCE Instructions:

2.6.2.1 Anti-terrorism Plan
2.6.2.2 5420.8 Safety Accountability
2.6.2.3 3140.3 Destructive Weather

2.6.2.4 4790.11 Foreign Object Damage Prevention
2.6.2.5 5605.5 Technical Data Control Manual
2.6.2.6 5100.4 Job Hazard Analysis
2.6.2.7 Hazardous Material Control and Management
2.6.2.8 Hazardous Waste Management
2.6.2.9 5100.2 Occupational Safety and Health Manual
2.6.2.10 Hazard Prevention, Safety Inspection, and Safety and Health Deficiency Abatement
2.6.2.11 Safety and Occupational Health Related Training
2.6.2.12 Accident and Occupational Health Injury/Illness Reporting
2.6.2.13 Personal Protective Equipment Program
2.6.2.14 Sight Conservation Program
2.6.2.15 5103.1 Heavy Metals Compliance Program
2.6.2.16 Review of Engineering Drawings, Plans, and Specifications
2.6.2.17 5605.4 Validation and Verification of Interim and Formal Technical Directives
2.6.2.18 Information Systems Acceptable Use
2.6.2.19 5500.1 Security Manual
2.6.2.20 Information, Personnel, and Industrial Security Procedures
2.6.2.21 12000.5 Proper Wearing of Apparel for Persons Entering FRCE
2.6.2.22 4790.9 Electrostatic Discharge Control/Prevention Program
2.6.2.23 4355.1 Metrology and Calibration Program
2.6.2.24 4855.8 Quality Manual
2.6.2.25 5000.1 Visitor/Contractor Site Specific Rules and Compliance

2.6.3 FRCSW
2.6.3.1 E-2D AHE PPP E-2D Advanced Hawkeye Program Protection Plan (PPP)
2.6.3.2 E-2C PPP E-2C Hawkeye Program Protection Plan
2.6.3.3 PMA 231 (E-2C/D) Critical Information (CI) Listing

3.0 Requirements

3.1 General Requirements

3.1.1 Compatibility: The Contractor shall maintain the capability to prepare documents and software packages compatible with the Government IT environment through the security classification specified in the Department of Defense Contract Security Classification (DD-254), of up to Secret. The current operating software required for this contract includes:

Microsoft Windows 10
Microsoft Project 2016
Microsoft Office Professional Plus 2016
Adobe Acrobat XI (reader)
Internet access

The Contractor shall maintain the ability to interface with and transfer data to and from requiring office software applications and their upgraded versions. The Contractor shall maintain state-of the-art anti-virus software and ensure that all media are virus free when delivered. The Contractor shall be capable of Internet and LAN communications with the COMFRC and supported FRC(s) identified under individual TOs. Contractor personnel shall be capable of maintaining real-time communications, both voice and data transfer capabilities, with COMFRC and supported FRC(s) during working hours whether at Contractor work site or on travel.

3.1.2 Work Location and Facilities:

3.1.2.1 Work locations: Approximately 65% of the work will be performed on-site at Government site(s), i.e. Government owned/leased facility/space. The Primary Government site(s) and projected % of work to be performed include: FRCSE 60.3% Jacksonville, FL, FRCE 21.4% Cherry Point, NC, FRCSW 5.6% San Diego, CA. In addition, support required at other government locations or detachment sites approximately 12.6% in support of any one of the primary sites, detachment sites locations include, but are not limited to: Patuxent River, MD; Oklahoma City, OK; Pensacola, FL; Meridian, MS; Kingsville, TX; Virginia Beach, VA; Tulsa, OK; Beaufort, SC; Signorelli, Sicily; Orlando, FL; Lakehurst, NJ; New River, NC; Norfolk, VA; Yuma, AZ; Quantico, VA; Fort Worth, SC; Ogden/ Hill AFB, UT; Fallon, NV; Stratford, CT, specific performance locations will be identified in individual task orders (TOs). Contractors performing on-site support will be provided Government-Furnished Equipment (GFE) (examples include but are not limited to: Access to workspaces, telephones, printers, facsimile machines, copy machines, shredders, computers, and network access including web servers and applicable databases or other applications) necessary to carry out assigned tasks.

3.1.2.1.1 The Contractor, upon notification to, and concurrence from the TOCOR that the on-site work tasking is eligible for telework, may utilize alternative worksites/locations and/or telework to support continued performance on its contract in accordance with company policy.

3.1.2.2 Approximately 35% of the work is to be performed off-site site at Contractor site(s), which shall be within 30 miles of the FRC Primary sites. Work conducted offsite is permitted as approved by the Contracting Officer Representative (COR)/Task Order Contracting Officer Representative (TOCOR).

3.1.2.2.1 Contractor discretion is required when making alternate worksite and/or telework decisions based upon the nature of support provided by employees. In the event telework is utilized, the Contractor remains responsible for performance.

3.1.2.2.2 The Contractor shall provide necessary workspaces for off-site support personnel. The Contractor’s facility shall meet the requirements of

the form DD-254 applicable to this contract. Additional facility requirements may be addressed in individual TOs. Off-site work is work required to be performed at the Contractor's facility.

3.1.2.3 Meeting support: Meeting support shall be identified in individual TOs in support of the tasking outlined in this SOW. The Contractor shall have the capability to host and conduct meetings at the classification levels up to Secret. The Contractor shall have the capacity to support a minimum of (20) persons, and have contractor furnished telephone and VTC capability as well as sufficient equipment to conduct meetings with presentations including compatible software as required in Paragraph 3.1.1). This support shall be provided at FRCE Cherry Point, FRCSE Jacksonville, and FRCSW North Island as indicated in individual TOs.

3.1.2.4 Meetings shall be documented in the conference minutes and included within CDRL A002. Except where noted herein, conferences and reviews shall be considered fulfilled when the following items are completed:

a. A formal meeting has been conducted and the reviews are presented to the government.
b. Topics required for discussion and presentation have been covered.
c. Action items requiring Contractor response have been resolved.
d. The Government has accepted the conference minutes.

3.1.3 Deliverables. The Contractor shall provide the following IAW the specified Contract Data Requirements List (CDRL) (CLINs 0014, 0015 and 0016). CDRLs at the IDIQ level may be utilized and updated at the TO level.

Exhibit A Technical CDRLs (DD Form 1423) to support as indicated at the TO level:

- Briefing Materials - CDRL A001
- Meeting Minutes - CDRL A002
- Scientific and Technical Reports / Engineering Change Proposal (ECP) - CDRL A003
- Technical Directive (TD) - CDRL A004
- Developmental Design Drawings/Models and Associated Lists - CDRL A005
- Status Report / Total Case Incident Rate and Days Away Restricted Time (TCIR/DART) - CDRL A006
- Scientific and Technical Report / Software Product Specification (SPS)- CDRL A007
- Maintenance and Operator/Aircrew Training deliverables- CDRL A008
- Technical Report Studies / Study/Services - CDRL A009
- Electromagnetic Environmental Effects (E3) Integration and Analysis Report (E31AR) – CDRL A010
- Failure Summary & Analysis Report- CDRL A011

Exhibit B Administrative CDRLs (DD Form 1423) are shown below.

In support of the IDIQ:

- Operation Security Plan (OPSEC) - CDRL B002
- Phase-Out Transition Plan - CDRL B003

In support of individual TOs:

- Status Report / Monthly Progress and Financial Status Report - CDRL B001
- Contracting Officer's Management Report – CDRL B004
- Contractors Personnel Roster – CDRL B005

3.1.3.1 Other Reporting: The Contractor may be required to provide additional reporting, documentation, and schedules IAW Exhibit C deliverable requirements CDRLs incorporated at the TO level. Reporting shall be in sufficient detail and quality to meet the requirement established in individual TOs, and shall comply with the standards and guidelines in Sections 3.3 through 3.7 of this SOW. Otherwise, Exhibit A and Exhibit B (B001, B004 and B005) are the known TO CDRLs and may be incorporated to the list of TO specific reporting requirements.

3.1.3.2 Data Preparation and Management: The Contractor shall develop, manage, and deliver acceptable contractually required engineering data for all data deliverables. This requirement includes all data deliverables cited in the individual TO and all source documents. The following requirements shall apply as required and specified in the individual TO:

a. The Contractor shall ensure that all data items to be delivered to the government meet the quantity, quality and schedule requirements.
b. The Contractor shall establish data management procedures and policies to provide control and configuration management of all contractually required data. To ensure subcontractors meet the contract data requirements set forth in the TO, the prime Contractor shall maintain control of all data developed by subcontractors.
c. The Contractor shall establish and maintain data libraries consisting of technical manuals, system technical description, and software documentation for the data developed for system devices and other data pertaining to systems.
d. The Contractor shall deliver CDRLs IAW the Distribution Statement provided in the CDRL document, as required by the TO. Requests for documents with a Distribution Statement authorized to DoD components only, shall be referred to: Commander, Fleet Readiness Centers, 47060 McLeod Road, Building 447, Patuxent River, MD 20670.

3.1.4 Work Schedule to include Compressed Work Schedule (CWS), overtime, holidays, and installation closure.

3.1.4.1 Work schedule: The Contractor shall provide the required services and staffing coverage during normal working hours. Normal working hours are usually 8.5 hours (including a 30-minute lunch break), from *0630 to 1500* each Monday through Friday (except on the legal holidays specified in paragraph 3.1.4.1.2). Some supported Government offices have flexibility to deviate from normal working hours, as approved by the TOCOR.

3.1.4.1.1 Compressed Work Schedule (CWS): CWS is an alternative work schedule to the traditional five 8.5 hour workdays (which includes a 30-minute lunch) worked per week. Under a CWS schedule, an employee completes the following schedule within a two-week period of time: eight weekdays are worked at 9.5 hours each (which includes a 30-minute lunch), one weekday is alternately worked as 8.5 hours (which includes a 30-minute lunch) and one weekday is not worked by the employee. The result is 80 hours worked every two weeks, with 44 work hours one week and 36 work hours the other.

The Contractor may allow its employees to work a CWS schedule provided the requirements of this SOW are met. If the Contractor chooses to allow its employees to work a CWS schedule in support of this contract, any additional costs associated with the implementation of the CWS schedule vice the standard schedule are unallowable costs under this contract and will not be reimbursed by the Government. Additionally, the CWS schedule shall not prevent Contractor employees from providing necessary staffing and services coverage as required by the Government and approved by the TOCOR/COR.

3.1.4.1.2 Holidays: The Government observes the following holidays:

New Year's Day, January 1
Martin Luther King's Birthday, the third Monday in January
President's Birthday, the third Monday in February
Memorial Day, the last Monday in May
Junetheenth National Independence Day, June 19
Independence Day, July 4
Labor Day, the first Monday in September
Columbus Day, the second Monday in October
Veteran's Day, November 11
Thanksgiving Day, the fourth Thursday in November
Christmas Day, December 25

With the exception of the events in section 3.1.4.1.3 below, the Contractor is permitted to observe the above Holidays IAW its corporate policy.

3.1.4.1.3 Installation closure: When Federal facilities are closed by the Government, or when Federal employees are officially excused from work due to a holiday or a special event, severe weather, a security threat, or any other Government facility related problem that prevents Federal personnel from working at the Government facility. Contractor personnel assigned to work at that facility in support of such Federal employees shall follow their parent company's policies.

While generally, contractor personnel may not perform work on-site at a Government facility without oversight from Federal personnel, in very limited circumstances, work being performed by contractor personnel may be deemed mission essential and performance of such mission essential work may be authorized to continue at the Government facility despite the facility being otherwise closed for normal operations. The circumstances permitting work being performed by contractor personnel to be deemed mission essential are extremely limited and generally only apply to performance of efforts related to public health, safety, or matters related to national security. The cognizant TPOC must concur with any determination that work being performed by contractor personnel is mission essential.

3.1.4.1.4 Overtime: Overtime is not authorized under this contract.

3.1.5 Other Direct Costs (CLINs 0012 and 0013):

3.1.5.1 Travel: Travel will be allowable only when it is essential to the performance of the tasks detailed in individual TOs. Reimbursement for travel performed shall be IAW the Department of Defense Joint Travel Regulation (JTR) (http://www.defensetravel.dod.mil/site/travelreg.cfm). The TOCOR shall approve all travel performed in support of individual TOs under this contract. IAW NAVAIR Clause 5252.232-9509 Travel Approval and Reimbursement Procedures, travel within a 50-mile radius of the Contractor's regular worksite is considered the Contractor's official station and therefore not subject to reimbursement. Travel may include general and administrative expenses as appropriate, but shall not include profit. Temporary travel to other locations in support of program tasking may be required. Temporary travel locations include CONUS & OCONUS locations, which will be identified in individual TOs. Locations may change over the life of the contract.

Travel authorization requests shall be submitted to the TOCOR for approval 30 days in advance of required travel, when possible, but no less than 10 business days prior to travel. Contractor required access to Government-owned facilities will be authorized with the proper clearances and visit requests. The Contractor shall provide all necessary information, as required, to support such clearances and visit requests.

3.1.5.2 Material: All materials not depleted during the performance of this contract shall become Government property upon completion of this contract. The Contractor shall transfer all materials not depleted to the TOCOR/COR by way of Material Inspection and Receiving Report (DD Form 250). Material costs may include general and administrative expenses as appropriate, but shall not include profit/fee.

The Contractor may be required to incur incidental supply and material costs in support of this effort as ODCs as specified within individual Task Orders. Incidental supply and material purchases shall be reimbursed in accordance with Federal Acquisition Regulation (FAR), the Defense Federal Acquisition Regulation Supplement (DFARS), and applicable DON regulations and instructions. NAVAIR Clause 5252.242-9515 details allowable costs and restrictions on the direct charging of material costs. Only those material expenses as specified in individual task orders shall be reimbursed to the Contractor.

The costs of general purpose business expenses required for the conduct of the Contractor's normal business operations are not an allowable direct cost in the performance of this contract. General purpose business expenses include, but are not limited to, the cost for items such as telephones and telephone charges, reproduction machines, word processing equipment, personal computers and other office equipment and office supplies.

3.1.6 Subcontractors and Consultants: Requirements stated herein shall be clearly and effectively communicated to all subcontractors providing support under this contract.

3.1.7 Management of Contractor Personnel: The Government will neither supervise contractor employees nor control the method by which the contractor performs the required tasks. Under no circumstances will the Government assign tasks to, or prepare work schedules for, individual contractor employees. The Contractor shall manage its employees and guard against any actions that are of the nature of personal services, or give the perception of personal services.

3.1.8 Transition Out Strategy: The Contractor's overall transition out strategy shall be built around maintaining the mission of the programs/departments across all FRC sites with minimal impact, not only in terms of timeliness of performance, but also to ensure that critical data and knowledge transfer occurs. Upon termination or expiration of the contract, the Contractor shall ensure an orderly transition of responsibilities, while minimizing impact to the operation. The Contractor shall submit a Transition Out Plan, to include the minimum elements listed below IAW CDRL B003.

3.1.8.1 Work Turnover. The Contractor shall provide a plan of action to effectively transfer tasked work that is in process at the expiration or termination of the contract to the successor company. Establish and maintain effective communication with the incoming Contractor or Government personnel for the period of transition via weekly status meetings.

3.1.8.2 Quality Assurance. The Contractor shall provide a plan of action to ensure continuation of quality review processes during the transition period to the successor company.

3.1.8.3 Risk Mitigation Strategies. The Contractor shall provide a plan of action to mitigate contract performance risks (quality and schedule) encountered during the transition period.

3.1.8.4 Data/Information Transfer. The Contractor shall provide a plan of action for the efficient inventory and transfer of program data to the successor company.

3.1.9 Quality Surveillance and Performance Standards: The Government will conduct quality surveillance via various methods including formal and informal meetings, review of technical reports, review of monthly progress reports, and review of deliverables.

3.1.10 Government Furnished Property (GFP)/Government Furnished Information (GFI): Government Furnished Property, Equipment, and Information: The Government reserves the right to provide Government Property, Equipment, and Information on an as needed basis at the TO level. The Contractor will be required to manage and track such furnished property in accordance with applicable Government property clauses and reporting requirements (Attachment 2).

If a TO is issued to support the Government on-site, the Government will furnish a Navy Marine Corps Intranet (NMCI)-issued computer, desk, phone, fax machine, copier and scanner.

NMCI Assets that are removed from the Government site of performance, are GFP and will be listed as accountable to the applicable TO, if not accountable to the basic contract, and shall be managed by the Contractor in accordance with FAR Clause 52.245-1. Otherwise, NMCI Assets, desks, phone, fax machine, copier and scanner that remain at the Government site of performance are considered "incidental" property per FAR Part 45 and shall not be tracked as accountable to the contract. "Scheduled Government-Furnished Property (SGFP)," Contract Attachment 2, will be filled in and included on applicable TOs to specify the Government Property to be furnished.

Any GFP/GFI listed in the contract resulting TOs will be provided to the Contractor within 30 days after award. Additional GFP/GFI such as training, and documentation requiring Contractor review, analysis, and updating will be provided throughout the contract period of performance. Disposition of GFP/GFI will be made at contract completion.

The Contractor shall not utilize any GFP and GFI for purposes other than those authorized for the performance of this contract. All GFP and GFI is the property of the U.S. Government and is not to be transferred by any individual or agency, public or private, without the express written approval of the Contracting Officer, except as required for the specific performance of the TOs. Both the Government and Contractor will maintain

formal records of government property. The Contractor shall exercise reasonable safeguards and care for the GFP. The Contractor shall comply with the following regulations: FAR 52.245-1, DFARS 252.245-7001, and DFARS 252.245-7002.

3.1.11 Contractor Medical Surveillance Program: The Contractor is solely responsible for the protection and treatment of Contractor employees suffering on-the-job illness or injury. If a Contractor employee departs the supported FRC site or ceases work, due to illness or injury, the Contractor shall notify, by phone or email, the government supervisor of the respective work area, as well as the TOCOR/COR. The Contractor shall also comply with local facilities for recording and reporting of Occupational Injuries and Illnesses, and IAW CDRL as identified in individual TOs.

3.1.12 Standards of Conduct: The Contractor shall not employ any person whose employment under the contract could in any way result in a conflict of interest with the mission of the program and/ or the supported FRC site. All personnel employed by the Contractor in the performance of this effort, or any agent of the Contractor entering the government installation shall obey all regulations of the installation and the supported FRC site. The Contractor shall be responsible for employee competency and conduct and for taking disciplinary actions with respect to its employees. The Government reserves the right to deny the Contractor employee(s) access to an FRC site or facility if the employee's presence would be detrimental to the FRC mission or performance of work in this SOW. The Government reserves the right to require removal of any Contractor employee from the job site, if said employee endangers personnel, property or mission. The removal of Contractor personnel from the job site shall not relieve the Contractor of the requirement to provide personnel to perform the specified tasks outlined in this SOW. In such cases, the TOCOR/COR will advise the Contractor of the reason for requesting removal of an employee or for withdrawal of authorization for the employee to enter the installation.

3.1.13 Work Attire: Contractor employees shall maintain a standard of grooming and personal appearance IAW the FRC site specific instructions. Contractor employees working in a production facility shall wear a company outer garment to distinguish themselves from organic production personnel. The prime Contractor's company name must be identified on the outer garment and shall be distinguishable from FRC site government employees. The shirt shall have sleeves and be clean, neat, and fit properly. Subcontractor employees shall wear the uniform of the prime contractor, and may, under the prime contractor's company name, list the subcontractor's name. Company identification shall be displayed on the outer garment and affixed permanently (e.g., sewed, embroidered, or inked). All costs associated with the purchase, maintenance, and laundering of uniforms will be at the Contractor's expense.

3.1.14 Configuration Management (CM): The Contractor shall define, document, manage, and apply a CM process IAW NAVAIRINST 13050.6A (Configuration Management Policy, Procedures and Responsibilities for Aircraft Assigned to Naval Air Systems Command Aircraft Controlling Custodian). The Contractor shall place Government Furnished Software (GFS), Non-Development Item (NDI), and commercial item software, and each item's associated documentation under CM upon receipt. The Contractor shall

place commercial item software items under CM as “disk image” files of the physical media.

3.1.15 Total Case Incident Rate and Days Away Restricted Time (TCIR/DART): The Contractor shall deliver a Contractor’s Progress, Status and Management Report for Total Case Incidence Rate/Days Away Restricted Time (TCIR/DART) and tailored Data Item Description (DID) paragraph 3 IAW CDRL A006 as follows:

3.1.15.1 Submit TCIR/DART rates or injury and illness rates (for the Standard Industrial Classification Systems (SICS) code or the North American Industrial Classification Systems (NAICS) code) for the applicable industry annually using the Bureau of Labor Statistics (BLS) formula IAW CSP 03-01- 005

3.1.15.2 If TCIR/DART rates or injury and illnesses rates are not maintained due to OSHA authorized exclusions, submit comparable insurance rates or compensation injury rates.

3.1.16 Software Product Specification (SPS): The Contractor shall prepare the Scientific and Technical Report (Software Product Specification (SPS)) IAW. The Contractor shall not develop or furnish executable files IAW CDRL A007.

3.2 Security

3.2.1 Citizenship Requirements: Only U.S. citizens may perform under this contract. Contractor personnel working at government sites and in the contractor’s own facilities supporting government work shall undergo the company internal vetting process prior to gaining access to U.S. Government controlled unclassified information, or performing government-related sensitive duties. All personnel working under the resultant contract shall be U.S. citizens. Foreign nationals are prohibited from using FRC assets, and they will not be allowed to access any resource of the FRC legacy network at any time, this includes both the legacy network and the NMCI network.

3.2.2 Investigative Requirements: (3.2.2.1 Unclassified or 3.2.2.2 Classified will be determined in individual TOs based on classification of work performed):

3.2.2.1 Unclassified: All Contractor personnel must be eligible to perform Non-Critical Sensitive work as defined by SECNAV M-5510.30. All Contractor personnel are required to have a favorably adjudicated Tier-3 investigation from the Office of Personnel Management. The Contractor shall submit a request for personnel security investigation to the Government Security Office. The Government Security Office shall initiate the Contractor's Electronic Questionnaire for Investigations Processing (eQIP)), shall do a preliminary screening of the Contractor's eQIP for suitability and derogatory information. The Contractor employee shall provide all requested information pursuant to the Privacy Act of 1974. The Government Security Office may deny the Contractor access to Government facilities and information and may prohibit the Contractor from

performance of sensitive duties for failure to provide requested information or when derogatory or adverse information is present on the Contractor's eQIP, in such cases, the Contractor employee may not perform on the Contract.

The Contractor shall implement and maintain security procedures and controls to prevent unauthorized disclosure of Controlled Unclassified Information (CUI) and to control distribution of CUI IAW DoD 5220.22-M, National Industrial Security Program Operating Manual (NISPOM), and SECNAV M-5510.36B. All Contractor facilities shall provide an appropriate means of storage for CUI and materials. All CUI shall be appropriately identified and marked as For Official Use Only IAW DoD Instruction 5200.48, Controlled Unclassified Information (CUI).

3.2.2.2 Classified: All Contractor personnel shall maintain security clearance eligibility commensurate with the level of classification of the work performed as annotated in the Contract's DD-254, Contract Security Classification Specification Form.

Contractor personnel may require access to classified information in performance of this contract up to and including Secret, with a safeguarding level of None as specified in the DD254, and determined by the TO. The Contractor is responsible for ensuring that all personnel receive the requisite investigation and are favorably adjudicated IAW DoDM 5220.22-M, National Industrial Security Program Operating Manual. Contractor employees who fail to meet security clearance requirements may not access classified information or perform sensitive duties. In such cases, the Contractor employee may not perform on the contract.

The Contractor shall comply with security requirements specified in the DD-254 attached to this contract. Information or data that the Contractor accesses shall be handled at the appropriate classification level. Unclassified information shall be handled IAW the appropriate designation as Controlled Unclassified Information. Distribution is authorized to the Requiring Office's Organization and supported Activity only. Other requests for deliverables under this contract shall be referred to the TPOC/COR of this contract for approval.

3.2.2.3 CUI including For Official Use Only and Covered Defense Information (meeting the definition of 48 CFR 252.204–7012(a)) generated and/or provided under this contract shall be marked and safeguarded as specified in DoDI 5200.48 Controlled Unclassified Information (CUI)) available at https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/520048p.PDF Any product containing Covered Defense Information shall be assigned a distribution statement (distribution statements B through F) using the criteria set forth in DoDI 5230.24 (Distribution Statements on Technical Documents); and have this statement displayed per DoDI 5230.24, Enclosure 3.

All controlled unclassified technical information shall be appropriately identified and marked with the distribution statement(s) as identified and required in the TO

CDRL document. Deliverables with a Distribution Statement authorized to DoD components only. Shall direct requests to Commander, Fleet Readiness Centers, 47060 McLeod Road, Building 447, Patuxent River, MD 20670.

3.2.3 Common Access Card (CAC)/Public Key Infrastructure (PKI), System Authorization Access Request (SAAR-N).

3.2.3.1 SAAR-N: All Contractor personnel requiring access to Government Information Technology (IT) systems shall have an approved System Authorization Access Request (SAAR-N) Form OPNAV 5239/14 (Rev Sep 2011) on file, and complete required Annual Information Awareness Training. New employees must submit their SAAR forms within thirty (30) days of their first day of work. Instructions for processing the SAAR-N forms are available at: http://www.cnrc.navy.mil/publications/Forms/OPNAV_5239_14_SAAR_N.pdf. SAAR-N forms shall be submitted to the TOCOR/COR, Government Technical Point of Contact (TPOC), or to the assigned government Trusted Associate Sponsorship System (TASS) Trusted Associate.

Contractor personnel shall be in the Defense Information Security System (DISS) for Information Technology II and III positions. IT I position requires that an SF-86 (Questionnaire for National Security Positions) be provided to the cognizant FRC site Facility Security Officer (FSO). IT-II & III positions are those that require a Contractor to have non privileged access to data or application. An IT-I position shall have root level access to servers and be a privileged user. For purposes of this contract, all Contractor personnel shall be required to be IT-II and hold/maintain a secret clearance, unless IT-I is required by individual TOs.

3.2.3.2 Command Access Cards (CAC) / Local Badges: Contractor CACs and facility specific identification badges will be issued by the Government to on-site Contractor personnel and shall be visible at all times while personnel are at the Government site. The Contractor shall furnish all requested information required to facilitate issuance of identification badges and shall conform to local installation badge policy and guidance. All CACs and identification badges issued to contractor employees shall be returned to the Government Security Department at the Government site IAW local installation badge policy and guidance following completion of the contract, relocation or termination of an employee, or upon request from the Contracting Officer's Representative. The Government will provide the badged Contractor access to Government facilities, as required, for performance of tasks under this contract. Contractor personnel shall comply with local installation badge policy and guidance.

3.2.3.3 DD-254: The Contractor shall comply with security requirements specified in the DD-254 attached to this contract. Information or data that the Contractor accesses shall be handled at the appropriate classification level, unclassified information shall be handled as "For Official Use Only". Distribution is authorized

to the Requiring Office's Organization and supported Activity only. Other requests for deliverables under this contract shall be referred to the COR of this contract for approval, request under individual TOs shall be referred to the TOCOR/TPOC identified in the TO.

3.2.4 Information Security: If the work is performed at the Contractor's facility, the Contractor shall implement and maintain security procedures and controls to prevent unauthorized disclosure of classified information and controlled unclassified information (CUI) and to control distribution of CUI IAW DoD 5220.22-M (NISPOM), and SECNAV M-5510.36B. If the work is performed at the Government's facility, the Contractor shall comply with local Security Policy and Procedures.

3.2.4.1 Marking: All information generated by the Contractor shall be properly marked. For Official Use Only information generated and/or provided under this contract shall be marked IAW DoDM 5200.01. Technical information shall also be marked with appropriate Distribution Statements and Export Control warnings IAW DoDD 5230.24 and program Security Classification Guidance

3.2.4.2 Public Release for Classified and Unclassified Information: Any controlled information pertaining to this contract shall not be released for public dissemination, including posting to any social media sites such as Facebook or Twitter, unless it has been approved for public release by appropriate U.S. government authority. Proposed public releases shall be submitted for approval prior to release via the PEO, and through the Public Affairs Office, 47038 McLeod Road, BLDG 447, Patuxent River, MD 20670-1547.

3.2.4.3 Loss, Compromise and/or Electronic Spillage of Classified or Controlled Unclassified Information: All instances of loss, compromise and electronic spillage of classified or controlled unclassified information shall be reported to the COR, TOCOR, TPOC and Government Security Office within 24 hours of the incident occurring.

3.2.5 Operations Security (OPSEC): The Contractor shall develop, implement, and maintain an OPSEC program to protect controlled unclassified and classified activities, information, equipment, and material used or developed by the Contractor and any subcontractor during performance of the contract. The Contractor shall be responsible for the subcontractor implementation of the OPSEC requirements. This program may include Information Assurance and Communications Security (COMSEC). The OPSEC program shall be IAW National Security Decision Directive (NSDD) 298, and at a minimum shall include:

a. Assignment of responsibility for OPSEC direction and implementation.
b. Issuance of procedures and planning guidance for the use of OPSEC techniques to identify vulnerabilities and apply applicable countermeasures.
c. Establishment of OPSEC education and awareness training.

d. Provisions for management, annual review, and evaluation of OPSEC programs.
e. Flow down of OPSEC requirements to subcontractors when applicable.

While performing aboard FRC, NAVAIR or Naval Air Warfare Center (NAWC) sites, the Contractor shall comply with facility OPSEC program instructions and contribute to organization-level OPSEC efforts. Include OPSEC as part of its ongoing security awareness program and take all required Agency training. Be responsive to the Supporting OPSEC Manager on a non-interference basis. Protect sensitive unclassified information and activities, which could compromise classified information or operations, or degrade the planning and execution of operations performed by the Requirements Owner (RO) and Contractor in support of the mission. CDRL B002

3.2.6 Anti-Terrorism Force Protection and Emergency Management: The work performed on this contract *is not Emergency* Essential IAW OPNAVINST 3440.17A and Government Emergency Management, Antiterrorism and/or Continuity of Operations Plans. Contractor personnel shall comply with all Government Emergency Management, Antiterrorism and/or Continuity of Operations Plans and directives. Contractor personnel shall not report for work at Government facilities upon declaration of Force Protection Condition CHARLIE or in any event or emergency where Government officials direct curtailment of operations to "Mission Essential Only". All Contractor personnel assigned to a government facility shall complete annual Antiterrorism (Level One) and Active Shooter training.

3.2.7 Program Unique Requirements: Program Unique requirements shall be reviewed for applicability and incorporation into individual TOs as needed.

3.2.7.1 Restricted Area Access: Performance of work in restricted areas, such as access to the Flight Line, shall require additional access badge procedures and active Information Technology (IT) Level 2 clearance IAW the latest version of the site specific FRC Instruction/s.

3.2.7.2 System Safety Tasks: The Contractor shall comply with System Safety requirements that meet FRC site specific program objectives and ensures that the system meets the system safety requirements as required in the individual TOs. The main objectives of the programs shall be to identify, document, analyze, and resolve (i.e., eliminate or reduce the associated risk to a level acceptable to the government) safety hazards to both personnel and equipment IAW MIL-STD-882E.

3.3 Detailed Life Cycle Engineering, Support Requirements for Site FST and MRO Teams: The following associated funding types are representative, though not all encompassing, of the tasks, services, technical data, material development, and information, identified in individual task orders (TOs).

Engineering Support Requirements: (CLINs 0001-0006) The following sections describe various engineering requirements the Contractor shall be required to provide in the individual TOs. These

services shall be provided as a result of on-site evaluation, technical meeting attendance, responses to telecommunications requests, and changes in technology for the following:

a. Existing systems- The Contractor shall provide on-site technical assistance for existing aircraft, aircraft components, aircraft structures, engines and support systems (e.g., Test Program Sets (TPS)), as well as, depot utilities and depot facility equipment.
b. New systems- The Contractor shall analyze, fabricate, integrate, deliver, and verify new aircraft and depot facility systems.
c. Modifications to existing systems- The Contractor shall analyze, fabricate, integrate, deliver, install, and test, as well as verify and validate modifications to existing aircraft and depot facility systems.
d. Modification of existing Support Equipment - The Contractor shall analyze, fabricate, integrate, deliver, install, and test, as well as verify and validate modifications to existing support equipment.
e. New systems research and development- The Contractor shall analyze, fabricate, deliver, install, and test, as well as verify and validate new systems research and development. and
f. Production Engineering Services: The Contractor shall provide FRC site Production Support engineering services including:

- On-Site Production Shop support will take place within the FRC industrial complex. This includes support to any of the aircraft, engine or component rework facilities/shop areas as well as depot utilities and facility equipment.
- Troubleshooting of aircraft, engines, support equipment, and related systems, both aircraft and facility equipment.
- Preparation of Local Engineering Specifications (LES), Temporary Engineering Instructions (TEI), responses to Material Review Board (MRB) requests, Service Requests, Maintenance Repair Overhaul Deviation Requests (MDR), and other production requests for engineering support.
- Design, modification, maintenance, and documentation of production support systems.
- Provide calibration support to FRCs IAW the Metrology Engineering production support processes.

3.3.1 Engineering Data: The Contractor shall develop, manage, and deliver contractually required engineering data for all types of technical directives (i.e., bulletins, changes), technical manuals, drawings, engineering investigations and other documents. The Contractor shall provide engineering data IAW with CDRL A005 using tools, software, and government format Technical Data Package (TDP) option selection worksheet attachment as directed by the Government TOCOR/TPOC and provided in individual task orders as required.

3.3.2 System and Support Equipment Installation: Maintenance Technical Assistance Modification, and Retrofit Services: The Contractor shall provide organizational, intermediate, and depot level weapon systems engineering consultation and liaison services and technical assistance pertaining to installation and maintenance, modification, refurbishment, and/or retrofit for systems, subsystems, structures, support equipment, components, and software in support of aircraft and depot facility equipment.. These services will be provided as a result of on-site evaluation, technical meeting attendance, responses to telecommunications requests, and changes in technology.

3.3.3 Engineering Investigations, Health/Hazard Material and Quality Deficiency Reports of New and Existing Production Systems and Components: The Contractor shall use the Naval Aviation Maintenance Program (NAMP) COMNAVAIRFORINST 4790.2 manual to perform scientific and engineering investigations, analysis, and evaluations, finite element analyses (FEA), health and/or hazard material analyses and studies, and prepare reports and documentation to convey results, findings and applicable deficiencies.

The Contractor shall employ sound engineering and scientific practices and shall follow applicable government and industry specifications, standards, handbooks and practices. Reports shall identify alternatives, impacts, cost factors, findings, results, and documentation. Mathematical, numerical, and computer models shall be used where required.

The Contractor shall prepare computer-aided FEA using current versions of ANSYS, ProEngineer/Mechanica, CATIA and /or other software as identified in specific TOs.

The Contractor shall obtain data for studies through investigation, inspection of aircraft and equipment, visits to other Contractor and government facilities, data from other Contractors, and from government data sources.

These studies and investigations may be accomplished in areas such as:

Acoustics	Engines	Navigation
Aerodynamics	Environmental Control	Operational Test Program Sets
Airframes	Failure Analysis	Operations Requirements
Avionics	Flight Performance	Power and Wiring
Automatic Test Systems	Flutter Dynamics	Quality Assurance
Communications	Flying Qualities	Reliability and Maintainability
Configuration Control	Hazard Analyses	Software
Control Systems	Human Factors/Ergonomics	Stress Analysis
Dynamics	Life-Cycle Cost	Structural Technologies
Electrical Systems	Materials and Processes	Systems Integration
Electromagnetic Compatibility	Mechanical Design	Vibration

The Contractor shall prepare Engineering Investigation (EI) analyses, Hazardous Material Reports (HMR) or Quality Deficiency Report (QDR) IAW CDRL A003 and applicable standard ISO processes, technical reviews, reports, directive, and papers as directed by the Government TOCOR/COR.

3.3.4 Reliability and Affordable Readiness Tasks (RAAT): The Contractor shall perform a variety of RAAT related tasks to include the following:

3.3.4.1 Engineering Analyses: The Contractor shall perform engineering analyses and studies, as required, to identify candidates that would improve RAAT.

3.3.4.2 Preventive Maintenance (PM): The Contractor shall review, study, and/or prepare PM requirements for government equipment and systems IAW each individual TO.

3.3.4.3 Integrated Maintenance Plans: The Contractor shall identify and propose PM and inspection tasks to be included in Integrated Maintenance Concept/Plan (IMC/P) specifications or Phased Depot Maintenance (PDM) plans IAW each individual TO.

3.3.4.4 Depot Maintenance Requirements: The Contractor shall review depot level PM requirements, for aircraft and facility equipment, and propose changes to the IMC/PDM plan IAW each individual TO.

3.3.4.5 Reliability and Affordable Readiness (RAAT) Defect Analysis: The Contractor shall support defect data collection and analysis of existing systems to include the preparation and execution of Age Exploration (AE) requirements. The Contractor shall prepare an RAAT analysis technical report IAW CDRL A003 and applicable standard ISO processes, technical reviews, reports, directive, and papers as directed by the Government TPOC/TOCOR

3.3.4.6 Failure Mode Analysis: The contractor shall perform and/or review either a Failure Mode Effects Analysis (FMEA) or a Failure Mode Effects Criticality Analysis (FMECA). Specifications used to complete FMEA or FMECA are procedures for performing a failure mode, effects and criticality analysis (MIL-STD-1629A) or commercial standards. The contractor shall prepare FMECA reports using SAE JA1000-1 paragraph A.10 standard. MIL–STD–1629A was canceled without replacement in 1998, but nonetheless remains in wide use for military and space applications today and is applicable under this contract.

3.3.5 Computer Aided Design and Manufacturing: The Contractor shall support a system architectural design process. The Contractor shall support Computer Aided Design/Computer Aided Manufacturing (CAD/CAM) efforts and projects. CAD/CAM support consists of creation of 3-D models and drawings, database creation/maintenance and CAM programming. The Contractor shall prepare drawing packages and associated lists relative to equipment and configuration changes. The Contractor shall provide TDP as required by the TO IAW CDRL A005. If drawing levels are not specified, the Contractor shall prepare product level equivalent drawings IAW MIL-STD-31000A. All drawings will be completed within the required ISO format provided by the government. The Contractor shall use engineering drawing practices and requirements established in ASME Y.14.100-2013 when preparing and revising manual or computer-generated engineering drawings and associated lists.

IAW NAVAIRINST 5600.14E (Submission of Engineering Drawings, Models and Associated Lists to Naval Air Systems Command Drawing Repository), the Contractor shall digitize drawings in PDF format for an electronically stored database. Data shall be capable of being retrieved using plotters and/or Computer Aided Design and Drafting (CADD) systems in the government specified format. Production level drawings shall be Joint Engineering Data Management Information and Control System (JEDMICS) compliant and include related metadata in the Data File Index Structure (DFIS) format. Deliveries shall use the Compact Disk Engineering Data Exchange (CDEX) method of delivery to facilitate JEDMICS uploads.

The Contractor shall prepare drawing packages and 3-D models using current versions of AutoCAD, Solid Edge, ProEngineer, CATIA and/or other software. The Contractor shall deliver engineer drawings in PDF and native formats. The Contractor shall prepare developmental drawings and models, and the TDP IAW site specific guidance for (Review of Engineering Drawings, Plans, and Specification as identified in individual TOs, and CDRL A005 using tools, software, and government format TDP option selection worksheet attachment as directed by the Government TPOC/TOCOR .

The Contractor shall support Guidance Conferences hosted by the Government to establish an execution plan and/or schedule for the delivery of technical source data IAW CDRL A005.

3.3.6 Technical Writing/Editing Tasks: The Contractor shall perform the following technical writing/editing tasks in support of technical data work efforts:

3.3.6.1 Technical Manual Source Data: The Contractor shall prepare technical manual source data such as manuscript data, illustrations, wiring diagrams, parts lists and tables for both new and existing technical manuals. The Contractor shall prepare and deliver technical manual source data IAW CDRL A005 using tools, software, and government format TDP option

selection worksheet attachment as directed by the Government TPOC/TOCOR.

3.3.6.2 Presentation Materials: The Contractor shall prepare presentation materials including slides, viewgraphs, illustrations, and transparencies. The Contractor shall prepare and deliver data IAW Briefing Material DID CDRL A001.

3.3.7 Engineering Data Library: The Contractor shall establish and/or maintain a data library consisting of all system documentation and the system technical description developed for the system, and/or other data pertaining to the device. The Contractor shall review, write, update, and/or maintain engineering technical plans and reports, historical data, military handbooks, directives, standards, equipment specifications, operational descriptions, Naval Air Training and Operating Procedures Standardization (NATOPS) Program, Naval Aviation Technical Information Product (NATIP) and computer documentation. All documents shall be generated in editable electronic files in the appropriate format as specified. The Contractor shall develop and/or maintain a master listing of all documentation developed or prepared for use in the system.

3.3.8 System Delivery Services: The Contractor shall provide organizational, intermediate, and depot level weapon systems engineering consultation, coordination and technical assistance pertaining to delivery of systems, subsystems, structures, support equipment, components, and software for aircraft and facility equipment. These services shall be provided as a result of on-site evaluation, technical meeting attendance, and responses to telecommunications requests in support of production.

3.3.9 Analyses and Technical Studies: The Contractor shall provide analysis and technical studies in support of new systems, as well as depot utilities and facility equipment. IAW CDRL A003 or CDRL A009 and applicable standard ISO processes, technical reviews, reports, directives, and papers as directed by the Government TPOC / TOCOR.

3.3.9.1 Engineering Change Proposal (ECP): The Contractor shall identify schedule and cost data to include consideration of maintenance data, fleet reports, logistics plans, and technical and vendor documentation when developing ECPs IAW MIL-HDBK-61A (SE).

3.3.9.2 ECP Configuration Impacts: The Contractor shall determine impact on configuration and fleet/depot operations by incorporation of the proposed changes. If configuration changes are identified, the Contractor shall notify the TPOC/TOCOR IAW CDRL A003.

3.3.9.3 Product Deficiency Report: The Contractor shall write technical reports in support of engineering changes on systems, subsystems, avionics,

structures, components, support equipment and associated parts which are directly attributed to product deficiencies. The Contractor shall prepare a Product and Design Deficiency Report IAW ECP CDRL A003.

3.3.9.4 ECP Implementation: The Contractor shall provide engineering services necessary to implement approved ECPs and prepare configuration changes to systems, subsystems, structures, support equipment, avionics, components and software. If configuration changes are identified, the Contractor shall notify the TOCOR IAW CDRL A003.

3.3.9.5 ECP Configuration Changes: Configuration changes will be implemented by technical directives CDRL A004 such as, but not limited to: airframe changes, avionics changes, accessory changes, aircrew systems changes, and support equipment changes.

3.3.9.5.1 Configuration Change Data: Technical data developed to document configuration changes will be validated and verified by the government, unless specifically waived.

3.3.10 On-site Production Support: The Contractor shall support the prototype, validation, verification, and/or production efforts with qualified technical and engineering personnel on-site. Such on-site support shall be accomplished in an expeditious and timely manner. Personnel providing support shall be familiar with the design data to enable immediate technical, on-site response. These services shall be provided as a result of on-site evaluation, technical meeting attendance, responses to telecommunications requests, and changes in technology in support of production.

3.3.11 Analysis of Existing Engineering Investigations, Hazard Material Reports (HMR) and Quality Deficiency Reports (QDR): The Contractor shall use the COMNAVAIRFORINST 4790 to provide engineering analyses and studies to review and evaluate previously conducted engineering investigations and other documented failure reports on systems, subsystems, support equipment, components, hazards analysis and software for failure trends which are directly attributed to design deficiencies. Upon completion of evaluation, list alternative design changes necessary to restore operational capabilities of production systems, performance, reliability, maintainability, parts interchangeability, or render it capable of alternative or additional use. The Contractor shall prepare an existing engineering investigation analysis, QDR or HMR IAW CDRL A003.

3.3.12 Prototype Development Systems: The Contractor shall support development of prototype designs to integrate new technologies into weapon systems. Development of prototype designs may include documentation (e.g., drawings), analyses, operational instructions and troubleshooting procedures.

3.3.13 Prototype Support Equipment Systems: The Contractor shall support development of prototype designs applicable to support equipment systems. Development of prototype designs may include documentation (e.g., drawings), analyses, operational instructions and troubleshooting procedures.

3.3.14 Weapon Systems Engineering Services: The Contractor shall provide analyses and technical studies in support of weapon systems, installation, modification, and repair requirements IAW CDRL A009. The Contractor shall provide depot level weapon systems design engineering consultation, coordination, and technical assistance pertaining to installation, modification, refurbishment, and maintenance for systems, subsystems, structures, support equipment, components, and software. These services will be provided as a result of on-site evaluation, technical meeting attendance, responses to telecommunications requests, and changes in technology.

3.3.15 Quality Engineering Services: The Contractor shall provide professional industrial and quality engineering services in support of manufacturing and quality production processes performed at FRCs. The Contractor shall provide analysis and technical studies in support of manufacturing and quality production processes IAW CDRL A009.

3.3.15.1 Process and Workflow Analyses: The Contractor shall analyze and identify process and workflow constraints and/or problems and develop engineering solutions based on a thorough knowledge of industrial engineering techniques, practices and the application of progressive methods in the field of manufacturing and quality engineering.

3.3.15.2 Optimize Production Process: The Contractor shall develop and maintain procedures for maintaining complex Automated Test Equipment (ATE).

3.3.15.3 Production Methods Deployment: The Contractor shall determine methods, systems, operations, equipment, procedures and tools to be deployed via engineering requirements to fulfill the production needs and ensure quality products.

3.3.15.4 Production Process and Workflow Oversight: The Contractor shall provide manufacturing and quality engineering oversight of production processes and workflow to ensure that operations continue to perform as intended by the original engineering requirements.

3.3.15.4.1 Process Control Charts and Feedback: The Contractor shall work with Quality Assurance and Examination and Evaluation personnel to establish process control charts and feedback mechanisms.

3.3.15.4.2 Process Evaluation: The Contractor shall design the methodologies used to evaluate process data to decide what processes are within control limits and what processes require attention to maintain and improve quality or productivity.

3.3.15.4.3 Project Engineering: The Contractor shall apply engineering principles to investigate, analyze, plan, design, develop, implement, test, and evaluate engineering projects.

3.3.16 Production Analyses and Trade Studies: The Contractor shall provide production analysis and technical studies in support of systems design and systems modifications.

3.3.17 Depot System Design Deficiency Report: The Contractor shall research, develop and write technical reports in support of engineering changes on depot systems, which are directly attributed to design deficiencies. The Contractor shall prepare a Product and Design Deficiency Report IAW DID DI-MISC-80508B CDRL A009.

3.3.18 Electronic Work Package (EWP) Readiness: The Contractor shall provide assistance to production lines associated with aircraft, aerospace components, avionics, industrial process utilized in the aerospace industry as the production lines convert from a paper based workload management system to a digital workload management system. TOs will be issued for efforts that support requirements through the different phases of EWP readiness efforts and may vary by site.

3.3.18.1 Review of existing and creation of new MRO instructions and development of quality inspection plans, and technical work documentation: Contractor shall support the review of existing MRO instructions and, in some cases where instructions are inadequate or non-existing; the Contractor shall draft and coordinate inspection plans for government engineering approval. The Contractor shall also provide analysis and technical studies in support of manufacturing and quality production processes IAW CDRL A009 in support of quality assurance efforts. The Contractor shall provide Industrial Engineering Technician services to create new and maintain existing routers based upon current released technical data as well as changes due to updates to technical data. They shall perform analysis for work processes, capabilities, performances and efficiency across multiple platforms. They may be required to organize with other departments and personnel in related activities to resolve issues and promote maximum efficiency for routing sequence of operations.

3.3.18.2 Production Services: The Contractor shall provide FRC production support and engineering services:

3.3.18.2.1 On-Site Production Shop support will take place within the FRC industrial complex. This includes support to any of the aircraft, engine or component rework facilities/shop areas.

3.3.18.2.2 Preparation, review and maintenance of Electronic Work Packages for production support and engineering support, by trades as identified below.

3.3.18.2.3 Design, modification, maintenance, and documentation of production and engineering support systems.

3.4 Detailed Life Cycle Logistics and Technical Support Requirements for Site FST and MRO Teams: (CLINs 0001 & 0007-0011) The following associated funding types are representative, though not all encompassing, of the tasks, services, technical data, material development, and information, identified in individual task orders (TOs).

The Contractor shall provide the following logistics and technical support services/tasks.

3.4.1 Level of Repair Analysis (LORA):

3.4.1.1 Develop and provide a LORA compliant with TA-STD-0017 and SAE AS 1390.

3.4.1.2 Identify the data element inputs for development of the LORA (These inputs may become the basis for an organic conducted LORA or provided to the Original Equipment Manufacturer (OEM) for development of a LORA).

3.4.1.3 Conduct an economic LORA, apply sensitivities to identify the most economical repair level and provide results and recommendations for the Government LORA report and shall include a Source, Maintenance and Recoverability (SM&R) code and a rationale statement section of a part I maintenance plan.

3.4.1.4 Conduct an economic LORA to determine possible costs of all maintenance support options and then identify least cost solution. Conduct a non-economic LORA to identify reasons maintenance at the Organizational, Intermediate, or Depot level should or should not be performed and provide recommendations in the LORA report.

3.4.1.5 Evaluate the LORA of systems, equipment, and associated hardware for all class one ECP that change the baseline maintenance concept and possible impact on Provisioning Support Analysis (PSA) packages and recommendations for improvements.

3.4.1.6 Perform audits to verify existing system repair performance against identified repair specification or objectives. Determine the difference between results of the LORA and the programs' planned or baseline maintenance concept. Provide recommended rationale for changing the programs' maintenance concepts.

3.4.1.7 Perform Configuration Management (CM) reviews to ensure repair operations are optimally maintained.

3.4.1.8 Identify Logistics Product Data (LPD) key entities and attributes commensurate with the acquisition phase for the development of LORA input data.

3.4.2. Design Interface (DI):

3.4.2.1 Assess and provide recommendations for establishing or changing the maintenance programs for new or existing systems and equipment, which includes:

3.4.2.1.1 Assessing and evaluating available maintenance data;

3.4.2.1.2 Identifying and/or developing a Baseline Comparison system (BCS) and

3.4.2.1.3 Conducting a Comparative Analysis of new systems/equipment to the BCS.

3.4.2.2 Conduct independent, technical and systems engineering assessments of logistics data for affordability, reliability, maintainability, supportability, supply support, maintenance concepts and warranty considerations.

3.4.2.3 Perform database research and analyses of impacts of any proposed engineering changes that would affect the Integrated Logistics Support (ILS) and operational readiness.

3.4.2.4 Review and analyze naval aviation and weapon systems maintenance engineering, logistics, technical, financial and schedule data to support ILS and maintenance policy development.

3.4.2.5 Identify the underlying quantitative and qualitative data necessary to support new policy initiatives required in response to changing technical, acquisition and operational logistics needs.

3.4.2.6 Identify ILS and maintenance policy options and conduct cost/benefit trade-off analyses of policy options.

3.4.2.7 Identify and apply alternative Life Cycle Cost (LCC) model procedures, validation approaches and tracking procedures for incorporation into LCC management plans.

3.4.2.8 Assess alternatives, identify advantages and disadvantages of LCC planning and maintenance concepts for the selected end items and support items.

3.4.2.9 Provide recommendations to update the LCC program objectives and technical information requirements.

3.4.2.10 Develop and conduct general and specialized tests and analyses related to: specification and material certifications, process specifications, maintenance task developments, failure analyses, process controls, and verifications of material tasks, material processes, specifications and standards.

3.4.3 Maintenance Planning (MP):

3.4.3.1 Determine, analyze and conduct performance monitoring of the Organizational, Intermediate and Depot levels of maintenance regarding overall reliability, maintainability, and availability characteristics and determine their projected availability, specifically with the following metrics:

a. Direct Maintenance Man-Hours / Flight Hours (DMMH/FH);
b. Mean-Time-To-Repair (MTTR);
c. Mean-Time-Between-Removals (MTBR);
d. Mean-Time-Between-Failures (MTBF);
e. Mean-Flight-Hours-Between-Failures (MFHBF) and
f. Cost Per Flight Hour (CPFH).

3.4.3.2 Assess the interface between weapon systems, Government Furnished Equipment (GFE), aircraft systems and other Government furnished systems and provide a list of alternatives for improving operating/maintenance procedures.

3.4.3.3 Investigate and validate maintenance concepts, storage and handling requirements and procedures for composite materials.

3.4.3.4 List alternatives for improvements to existing maintenance concepts, procedures and handling requirements.

3.4.3.5 Provide alternatives for the assignment of composite maintenance and repair capabilities among Organizational, Intermediate and Depot level activities.

3.4.3.6 Assess and review the maintenance planning programs and compare the maintenance engineering aspects of the programs with projected requirements for transition of maintenance capabilities.

3.4.3.7 The Contractor shall perform the following with regard to Remove and Replace (R&R) tasks:

3.4.3.7.1 Verify the accuracy and completeness of the maintenance plans;

3.4.3.7.2 Verify and document the Remove and Replace (R&R) items in the maintenance plans and ensure the scheduled maintenance and preventive maintenance inspection requirements are complete;

3.4.3.7.3 Review the items appearing on the Inspect and Repair (I&R) working lists and determine which items must be repaired;

3.4.3.7.4 Develop complete data for each replaceable item on the aircraft including but not limited to, Part Number, Manufacturer, and Quantity per assembly, National Stock Number, Level of maintenance, failure rate and nomenclature;

3.4.3.7.5 Rank the failure rates and repair levels of systems, subsystems and equipment on in-service aircraft similar to those on developing aircraft;

3.4.3.7.6 Determine the impacts of each replaceable item on the supportability of the aircraft. Include manpower, cost, spares, maintenance capability and operational readiness impacts; and

3.4.3.7.7 Review the difference in recovery rates between interchangeable and replaceable items.

3.4.3.8 Assess the impact to maintenance planning for alternative maintenance concepts and provide alternatives for enhancements.

3.4.3.9 Identify and provide alternatives in areas for changes and improvements for optimizing maintenance intervention and tactics to meet predetermined affordability and reliability goals.

3.4.3.10 Provide on-site support to improve O-Level corrosion prevention, inspection, detention, and repair technologies, and improve weapon system material conditions while reducing In-Service Repair (ISR) costs, Planner and Estimator (P&E) costs, and Integrated Maintenance Concept/Program (IMC/P) Turnaround Time (TAT).

3.4.3.11 Conduct engineering analyses and studies of maintenance/support disciplines. Provide Integrated Product Support (IPS) planning alternatives and courses of action to meet fleet readiness requirements in response to Product Quality Deficiency Reports (PQDRs) or Engineering Investigations (EIs).

3.4.3.12 Develop and maintain maintenance plans, supportability analyses, maintenance tasks and LORA. Review supportability analysis worksheets, ECPs for analytical correctness, product support integration and return on investments (ROI).

3.4.3.13 Develop and/or evaluate and list alternatives for changes to maintenance plans for systems, equipment, subsystems, Weapon Replaceable Assemblies and Shop Repairable Assemblies. This includes the following:

3.4.3.13.1 Analyze the data/techniques and source of data used in generating data maintenance plans;

3.4.3.13.2 Evaluate failure modes, design feature comparisons, support experience, and operational environments;

3.4.3.13.3 Track the full integration of logistic support elements;

3.4.3.13.4 Monitor logistic elements and data required to support end items;

3.4.3.13.5 Determine compliance with maintenance policies and philosophies;

3.4.3.13.6 Document analytical processes with supportability analysis procedures; and

3.4.3.13.7 Feedback changes in failure modes, design features, operational environments and performance baseline monitoring back through the Reliability Centered Maintenance (RCM) and PSA process for possible updates to PSA packages, or MRC decks.

3.4.3.14 Identify the quantitative and qualitative data necessary to support new policy initiatives required in response to changing/evolving technical,

acquisition and operational logistic needs utilizing Naval Aviation and/or Weapons maintenance, engineering, technical, financial and schedule data to support IPS policies/conceptualizations and the development and/or implementation of IPS documentation.

3.4.3.15 Identify and update IPS, maintenance policy options, related forecasts, and project how they might impact Fleet support. Conduct cost/benefit tradeoff analyses of policy options.

3.4.3.16 Provide maintenance planning support to the organization's Continuous Process Improvement (CPI) program by developing maintenance sustainment strategies.

3.4.3.17 Identify maintenance performance gaps regarding CPI deployment and functionality to include list of alternatives for gap closure.

3.4.3.18 Perform analysis of fleet maintenance, operational data, and readiness degraders to identify systemic in-services support issues and shortfalls and provide a list of alternative solutions.

3.4.4 Logistics Support Analysis (LSA) Database and Reports:

3.4.4.1 Provide analyses, technical studies and reports, using the government database, in support of task analyses and IPS resource requirements IAW TA-STD-0017.

3.4.4.2 Identify LSA output report requirements and provide assistance in developing Logistics Product Data (LPD) key entities and attributes commensurate with the acquisition phase.

3.4.4.3 Conduct maintenance task analyses, identify maintenance task requirements and resources that complement the maintenance concept, and identify sequential subtasks and task resource requirements.

3.4.4.4 Assess prime and OEM maintenance task analyses of specified Airborne Weapon Systems, Subsystems and Support Systems. This includes tailoring PSA requirements and objectives.

3.4.4.5 Conduct logistics engineering evaluations of selected components of weapon systems to identify variances in the actual performances versus LSA projections and identify impacts to PSA packages for updating the LSA database(s).

3.4.4.6 Investigate, identify, and provide possible options for corrective and/or mitigation options of system(s)/subsystem(s) or the individual components.

3.4.4.7 Provide an Analysis of Alternatives (AoA) that provides costs, resolution cost, trade-off studies, return on investments and solution options and produce report summarizing findings and list of alternatives.

3.4.4.8 Develop alternatives to analyze and track deployment discrepancies regarding support resources and spares. List alternatives for Beyond Capability Maintenance (BCM) interdictions.

3.4.4.9 Conduct post-deployment review of maintenance, engineering and logistics management plans and provide report to:

3.4.4.9.1 Identify the requirements for evaluating the adequacy of deployed resources to include supply shortages in repairable and consumable items for possible pack-up kits;

3.4.4.9.2 Include identification of problem areas noted during the review and assessment phase;

3.4.4.9.3 Provide alternatives to improve policies and procedures for the conduct of evaluations;

3.4.4.9.4 Provide schedules, milestones, and estimates of the level of personnel required;

3.4.4.9.5 Provide Lessons Learned for support planning adequacy of systems and equipment.

3.4.5 Environmental Logistics: The Contractor shall:

3.4.5.1 Conduct environmental reviews & analyses during the design interface and maintenance planning process to ensure compliance with Federal, DoD, Navy, state and local environmental regulations and policies.

3.4.5.1.1 Comply with applicable International environmental law when required by a joint, international, or FMS program.

3.4.5.2 Collect, analyze, evaluate and report on emergent technologies and their corresponding processes, storage and disposal requirements.

3.4.5.3 Participate in the LSA process, ECP reviews, RCM, planning/analysis, technical publication reviews in order to:

3.4.5.3.1 Identify and review impacts of new designs/design changes on existing support systems relative to environmental policies, regulations, and laws.

3.4.5.3.2 Ensure support of the Aviation Hazardous Materials Control and Management Program by identifying hazardous materials and making recommendations for the elimination, minimization, or substitution of their use.

3.4.5.3.3 Promote cost effective environmental technology solutions to reduce LCC and environmental impact.

3.4.5.4 Plan and coordinate the integration of maintenance pollution prevention and hazardous material technology alternatives.

3.4.5.5 Identify hazardous materials as an analysis report or as data elements in the Logistics Support Analysis Record (LSAR) output report.

3.4.5.6 Provide analyses and technical studies in support of Environmental Compliance initiatives.

3.4.5.7 Review and identify life cycle support requirements and their effects on environmental policies, regulations and laws.

3.4.6 Aviation/Ship Integration:

3.4.6.1 Review ship, aviation and weapons program acquisition documentation to identify areas of aviation and weapons interface and possible logistics concerns for both new and in-service ships and new and legacy aircraft and weapons. Provide recommendations to promote the integration of evolving Navy goals and priorities.

3.4.6.2 Collect and analyze aviation maintenance and support requirements. Deliver consolidated evaluation of aviation requirements across the proposed Carrier Air Wing, Aviation Combat Element or aviation detachment.

3.4.6.3 Provide analysis of aviation maintenance and support processes for both current and future systems in relation to aviation/ship integration.

3.4.6.4 Develop shipboard aviation logistics footprints addressing all aviation and weapons requirements, capabilities, and issues aboard a single ship or ship class.

3.4.6.5 Support shipboard weapons integration analysis and testing efforts in relation to aviation/ship integration.

3.4.6.6 Conduct trade studies of specific ship, aviation and weapons interface issues including in-depth analysis of aircraft operations, maintenance and maintenance support functions such as supply operations.

3.4.6.7 Collect and analyze data provided by Navy and related data systems, if required.

3.4.6.8 Develop and provide ship design recommendations regarding the location and design of effective and efficient aviation maintenance and support activities to include shipboard space assessments detailing the spaces required, as well as the preferred location within the ship's general arrangements, and the internal space layouts.

3.4.6.9 Support developing aircraft programs for future shipboard operations and support.

3.4.6.10 Coordinate with the Fleet, OPNAV, Commandant Marine Corps (CMC), program offices and competencies with other systems commands, industry and other stakeholders.

3.4.6.11 Incorporate evolving Navy goals and priorities to effect integration of aviation systems and aircraft.

3.4.7 Supply Support - the Contractor shall:

3.4.7.1 Support the Direct Vendor Delivery (DVD) and Requirements Determination programs by coordinating overall Fleet Support Team (FST) actions for DVD programs. Provide recommendations on the development of hardware requirements and provide preliminary repair data to prospective vendors. Ensure milestone efforts that require NAVSUP Weapon Systems Support (WSS) actions are completed on time. Provide support in the adaptation of provisioning tasks (e.g. item selection, cataloging, and classification) to the DVD program through independent research and analyses of findings. Document any improvements to DVD programs as required.

3.4.7.2 Perform Requirements Determinations of aircraft initiatives by collecting and validating relevant data to support specific item reviews for possible Logistics Engineering Change Proposals (LECP) and DVD programs and determine which require further investigations and those that do not meet specified selection criteria. Input information in the requirement determination calculation programs and store calculations into databases.

3.4.7.3 Identify the initial stock of spare and repair parts for inventory to support fielded weapons systems and subsystems. Determine the quantity

of each part required to repair end items at each maintenance level for a specified part or system, in order to achieve the most cost-effective method.

3.4.7.4 Continuously monitor the supply support posture for a given system. This may include, but not be limited to work such as, administering Requirements Based Forecasting Model (RBFM), forecasting efforts, parts call support, quarantine issues, DLA/NAVSUP WSS critical parts reviews.

3.4.7.5 The Contractor shall catalogue IAW NAVSUP P-724, Chapter 8, and maintain logs, matrices, websites, and other cataloguing tools, to include the following:

3.4.7.5.1 Prepare, submit and coordinate National Stock Number/ Naval Ammunition Log Code (NALC) submittals using NOLSC-724/6, cataloging/ Identification/ Disposition Request.

3.4.7.5.2 Obtain technical documentation for explosive items (AUR or Component Item) for cataloguing purposes (i.e., HERO, ESD, and Packaging, Certification and Final Hazard Classification documentation).

3.4.7.5.3 Prepare weekly highlights and keep Government Team Lead current on status of any/all cataloguing efforts.

3.4.7.6 Execute provisioning requirements using the Interactive Computer-Aided Provisioning System (ICAPS) database. The Interactive Computer Aided Provisioning System is used to prepare a Provisioning Parts List (PPL) which will be prepared using the production Contractor-originated baseline based upon the Technical Data Package.

3.4.7.6.1 Draft PPL – Prepare a draft PPL using the baseline and a Provisioning Requirements Statement (PRS), a draft PPL will be prepared by the Supply Support Contractor and then distributed to the technical “ilities”, as specified by the Acquisition Program Manager Logistics (APML), for their review. Upon a Desk Top Provisioning Conference lead by the Supply Support Lead, a PPL will be entered into the ICAPS program.

3.4.7.6.2 Final PPL – Submit the final PPL to NAVSUP WSS for final APL (Allowance Parts List) preparation by NAVSUP WSS. The APL will be used by the 'users' and Fleet for ordering purposes and maintenance by NAVSUP WSS.

3.4.7.7 Prepare and submit Support Equipment Recommendation Data (SERD) efforts for cataloguing purposes.

3.4.7.7.1 Prepare draft SERDs IAW the latest CASS OTPS SERD Preparation Guide and Technical Data Package (TDP).

3.4.7.7.2 Data repository for SERDS is the Support Equipment Requirements Management Information System (SERMIS).

3.4.7.7.3 Submit to the APML for approval by the NAWCAD Lakehurst Weapon System Manager (WSM).

3.4.7.8 Perform a needs assessment, requirements determination, and/or requirements validation concerning Interim Supply Support (ISS). Assure program requirements are appropriately understood and reflected in relevant Acquisition Plans, Integrated Logistics Support Plans, Maintenance Plans, operational and interim support plans, data requirements, job analysis, task analysis, POA&Ms, and performance criteria as required for the development, procurement, acceptance, deployment, sustainment and support of the weapons system/platform.

3.4.7.9 Provide advice in a wide range of Material Supply Support (MSS), DMSMS/technical and functional obsolescence requirements and Supply Chain Management (SCM). Conduct research and analysis within programs defined supply chain concerning elements of procurement, transportation, storage, handling, receiving, issuing and delivery of material. Assess and analyze reliability, availability, supportability, and affordability requirements, developing viable alternatives in supporting program requirements. Recommend changes to existing or prospective solutions and provides risk management assessment.

3.4.8 Facilities – The Contractor shall:

3.4.8.1 Provide support to the Facilities Logistics Element Manager (LEM)

3.4.8.1.1 Provide policy and process input Ship/Shore facilities. Collect and analyze aviation maintenance and support facility requirements.

3.4.8.1.2 Support facilities configuration control board.

3.4.8.1.3 Assist in the development of facility LEM Training.
3.4.8.1.4 Perform Independent Logistics Assessments (ILAs) and provide Recommendations for ILA policy changes.

3.4.8.1.5 Review Program facilities documentation (e.g., SDDs, SOWs, ALSPs, LRFS, etc.) and provide inputs.

3.4.8.1.6 Develop shore aviation logistics footprints addressing all aviation requirements, capabilities, and issues.

3.4.8.2 Provide support to the facilities Logistics Element Manager (LEM) in support of Program Execution Offices (PEOs):

3.4.8.2.1 Attend Assistant Program Execution Officer (Logistics) (APEO (L)) meetings and Program facility meetings.

3.4.8.2.2 Monitor program milestone status.

3.4.8.2.3 Participate in and ensure that Site Evaluations are performed and gaps have been identified and documented.

3.4.8.2.4 Participate in Site/Unit Activation planning schedules.

3.4.8.2.5 Provide Subject Matter Expertise (SME) for Ship/Shore facilities policy and processes.

3.4.8.2.6 Perform Facility LEM inventory tracking.

3.4.9 Naval Aviation Maintenance Program (NAMP) – the contractor shall:

3.4.9.1 Manage, use, update and maintain the Change History and Review Tracking System (CHARTS).

3.4.9.2 Maintain coordination within NAVAIR and externally with other organizations, to include but not limited to, Commander Naval Air Forces (COMNAVAIRFOR), Head Quarters Marine Corp (HQMC), NAWCAD, COMFRC, NATEC and Space and Naval Warfare Systems Center (SPARWARSYSCEN) to assist with coordination of maintenance and logistics policy development and changes.

3.4.9.3 Provide support as required to the NAMP Working Committee.

3.4.9.4 Develop and recommend policy changes in support of CPI sustainment, and changes to aviation operations and policy resulting from CPI sustainment.

3.4.10 Maintenance Scheduling/Management – The Contractor shall:

3.4.10.1 Review ship, weapons and aviation program acquisition documentation to identify areas of aviation interface and possible logistics concerns for both new and in-service ships and new and legacy aircraft and weapons. Provide recommendations to promote the integration of evolving Navy goals and priorities.

3.4.10.2 Provide analyses on current and future depot/intermediate capabilities/capacity requirements and issues.

3.4.10.3 Develop metrics, track progress, and provide status reports on depot capability establishment against required capability plans.

3.4.10.4 Develop metrics, track progress and assist in analyzing depot and intermediate production in support of mission, COMFRC, NAVAIR and NAE goals. Provide reasons for late work-in-process and late deliveries. Assist in process improvement identification and the development of production recovery plans.

3.4.10.5 Provide analyses, technical studies and reports in support of organizational, intermediate, and depot level maintenance tasks and maintenance scheduling and management efforts.

3.4.10.6 Provide analyses on current and future Workload Standards (WLS).

3.4.10.7 Provide Readiness improvement status evaluations, identifying current fleet readiness problems, mission capabilities and full mission capability factors causing readiness degradations, corrective actions, and get well dates.

3.4.10.8 Conduct Industrial Source of Repair process tasks in support of depot capability establishment.

3.4.10.9 Perform analysis of current processes and procedures/documents and recommend improvements.

3.4.10.10 Provide data input and data base administration for Maintenance and Scheduling Management data bases.

3.4.11 Supportability Test and Evaluation (ST&E) – The Contractor shall:

3.4.11.1 Develop and/or evaluate and provide input to requirements, contracts and documentation to ensure ST&E requirements are included.

3.4.11.2 Develop Supportability Test Plans to ensure Systems (ship, weapons, and aircraft) products go through appropriate Test and Evaluation processes. Provide Supportability Test plan results and reports.

3.4.11.3 Evaluate, plan, coordinate and provide logistics support of the test program.

3.4.11.4 Respond to Program Office, HQ and other agency data calls/requests with documented information, briefings, meetings and/or guidance for ST&E.

3.4.12 Integrated Warfighter Support Community (IWSC) /Warfighter Response Center (WRC) – The Contractor shall:

3.4.12.1 Perform in depth analysis and capture the as-is state, perform gap analysis and develop the to-be state for various aviation logistics/maintenance processes, business processes and associated data applications/systems.

3.4.12.2 Develop and integrate functional requirements and design of an enterprise architecture that supports the Integrated Warfighter Support Community future state.

3.4.12.3 Develop policy and procedures that address the Integrated Warfighter Support processes.

3.4.12.4 Develop metrics and methods to measure and monitor ability to deliver reactive, predictive and proactive support to the Warfighter to include emergent requirements/capabilities.

3.4.12.5 Assist in the implementation, operation and enhancement of the Integrated Warfighter Support Services systems and supporting systems/components.

3.4.13 Training/Training Support – The Contractor shall:

3.4.13.1 Analyze Manpower, Personnel and Training (MPT) effectiveness to determine interim and follow-on training requirements, recommended method of training, manpower and personnel impacts, Navy Enlisted Code (NEC) changes or recommendations, increase/decrease of manning and other MPT information. The Contractor shall request and review Navy Training Systems Plans (NTSP). The Contractor shall review manpower projections, research training courses and NEC rate applicability as part of the NTSP development/update. Provide input to and review Front End Analysis and skill sets. Review maintenance tasks to align to the proper rate/NEC.

3.4.13.2 Define training requirements and associated support strategies for new and modified weapon systems, and support Logistics Managers (LM) for training in the preparation of input to acquisition milestone schedules, ILS SOWs, Engineering Change Proposals (ECPs), Configuration Control Board forms and other logistic element planning documents. The Contractor

shall coordinate, track, and review curriculum and training data development.

3.4.13.3 Perform cost-benefit analyses and logistics training support impact assessments on new, modified, pre-planned improvements, ECPs, Technical Directives and other documentation detailing recommendations for correction of performance and logistics deficiencies.

3.4.13.4 Participate in logistics-related meetings including NTSP review meetings, logistics reviews, ILS Management Teams meetings and provide coordination with other government or fleet personnel. Additionally, the Contractor shall coordinate training events, meetings and conferences; prepare and deliver briefing materials, charts, viewgraphs, document meeting minutes and other items needed to facilitate logistics presentations.

3.4.13.5 Review Human Systems Integration (HSI) Plans and Documents, and participate in meetings where applicable to evaluate impacts among the Systems applicable HSI Elements (i.e., Human Factors, Safety, Manpower & Personnel, Training, etc.).

3.4.13.6 Review and evaluate Training Strategies/Plans, Training assessments, including but not limited to Integrated Learning Environment, Web Based Training and Embedded Training.

3.4.13.7 Review, analyze, and assess manpower estimates, to include maintenance and operations manpower determinations, calculation and methodologies.

3.4.13.8 Review current systems Watch Stations requirements and assess impacts driven by new or differing positions for future Personnel Qualification Standards (PQS) revisions.

3.4.13.9 Analyze collective and/or individual task analysis, learner analysis and needs assessment.

3.4.13.10 Develop Initial and Full Navy Training Systems Plans (NTSP).

3.4.13.11 Develop maintenance and operator/aircrew training deliverables using the training products by functional area DID guide IAW Exhibit A and CDRL A008 Specifications and format will be specified in the TO.

FUNCTIONAL AREAS 1, 2 and 3 for above section 3.4.13.11 are as follows:
1. Analysis, Design and Evaluation
2. Development and Production
3. Sustainment

3.4.13.12 Support in the preparation documentation and delivery of updates of Government course modules for Continuous Process Improvement (CPI) curriculum that meet or exceed Naval Education and Training Command requirements. Support includes, but is not limited to: assistance and coaching in content establishment, construction of training simulations/exercises, revision of existing course content, graphics support for training materials using standard structured templates and techniques, drafting of instructor's guides and testing/construction of material via pilot classes.

3.4.14 Support Equipment (SE) – The Contractor shall:

3.4.14.1 Identify the SE quantitative and qualitative data necessary to support new policy initiatives required in response to changing/evolving technical, acquisition and operational logistics support. Identify SE Naval Aviation, weapons and ship, maintenance engineering, technical, financial and schedule data. Identify SE ILS maintenance policies and concepts. Develop and implement SE ILS documentation in support of aircraft, weapon and ship programs. Identify SE ILS and SE Maintenance policy options and related forecasts and projections of the options' impact on fleet support. Conduct cost/benefit trade-off analyses of policy options.

3.4.14.2 Develop, review and update SE Integrated Logistics Support Documentation.

3.4.14.3 As part of the Request for Engineering Instruction (REI) process, evaluate and recommend material and hardware substitutions to Fleet Support Team (FST) Site Engineering TOCOR/TPOC for their approval.

3.4.14.4 Conduct engineering assessments of approved systems and equipment ECP’s. This includes:

3.4.14.4.1 Determining changes to engineering elements and associated engineering requirements data;

3.4.14.4.2 Developing Technical Directives (TD) to meet Fleet introduction of the proposed engineering changes;

3.4.14.4.3 Recommending baseline engineering modification schedules to incorporate each ECP into the applicable systems and

3.4.14.4.4 Evaluating engineering parameters and logistics support requirements to support the systems engineering aspects of the ECP.

3.4.14.5 Assess and review ECPs, TDs and Publication changes, and related documents to assure that ILS requirements are properly addressed and are consistent within known program constraints. Identify their impacts on life cycle logistics planning. These evaluations shall include identifying changes to logistic support elements, associated requirements dates and impacts on delivery and deployment schedules. Identify problems and provide recommendations for their correction.

3.4.14.6 Validate Technical Publications against the Maintenance Plans and Supportability Analyses and report the findings in regard to Support Equipment.

3.4.14.7 Conduct independent assessments of logistics data for affordability, reliability, maintainability, supportability, supply support, maintenance concepts and warranty considerations. Perform research and analyses of impacts for the proposed engineering changes on Integration Logistics Support and operational readiness.

3.4.14.8 Review and analyze Naval Aviation Maintenance engineering/technical, financial and schedule data to support ILS and maintenance policy conceptualization, development, and implementation of ILS documentation. Develop the quantitative and qualitative data necessary to support new policy initiatives required in response to changing technical, acquisition and operational logistics needs resulting from experiences gained during program executions, fleet operations, tests and evaluations and in response to directions by higher authorities. Identify ILS and Maintenance options and related forecasts/projections of the options' impacts on fleet support. Conduct cost/benefit trade-off analyses of options.

3.4.14.9 Research and provide recommendations for ILS fleet maintenance procedures, techniques and requirements to ensure adequacy of maintenance tasks to satisfy operational requirements under stationary and mobilization conditions.

3.4.14.10 Evaluate systems and equipment to identify obsolete/out-of-production components. Assess Government owned inventory of obsolete/out-of-production components, usage rates and remaining service life of used-on systems/equipment. Perform analyses to determine the severity of problems and recommend alternatives.

3.4.14.11 Recommend methods for identifying and assessing the principal factors impacting the supportability of systems and equipment to quantify the scope and nature of logistic support required to affordably, efficiently and effectively meet specific operational mission requirements.

3.4.14.12 Assess ILS planning and management data and documentation to identify supportability problem areas. Recommend quantitative and qualitative methodologies to evaluate the impact of Integrated Logistics Support shortfalls. Recommend actions to correct and alleviate identified support problems.

3.4.14.13 Conduct on-site quantitative and qualitative analyses of the ILS elements, assessing support prior to and during the introduction of systems and equipment at selected test and evaluation sites, training sites and operational ashore and afloat sites. Identify variances from the documented plans, recommend corrective actions and track implementation to meet site/unit activation planning milestones.

3.4.14.14 Conduct an assessment of approved systems and equipment ECPs. This includes: developing Technical Directives to meet fleet introduction of the proposed engineering changes; recommending modification schedules to incorporate each ECP into the applicable systems and evaluating logistics support requirements provided to the Government IAW CDRL A009.

3.4.14.15 Define SE requirements and associated support strategies for new and modified weapon systems, and support Logistics Managers (LM) in the preparation of input to acquisition schedules, Life Cycle Supportability Plans (LCSP), User's Logistics Support Summaries (ULSS), Logistics Requirements Funding Summaries (LRFS), ILS SOWs, DMSMS/obsolescence Plans, Unique Identification (UID) Plans, Support Equipment Recommendation Data (SERD), Engineering Change Proposals (ECPs), Configuration Control Board forms, and other logistic element planning documents. Provide inputs for the preparation, review and management of acquisition documents such as SOWs, Request for Proposals (RFPs) and/or Integrated Logistics Support Detail Specification (ILSDS).

3.4.14.16 Support LMs in the identification of, impact on, and implementation, of all SE ILS elements.

3.4.14.17 Perform cost-benefit analyses, supportability analyses and logistics impact assessments on new modified and pre-planned improvements, SE ECPs, Technical Directives, Design Change Notices, Source Maintenance & Recoverability (SM&R) Code changes and other documentation detailing recommendations for correction of SE performance and logistics deficiencies.

3.4.14.18 Originate, update and review SE information used in Support Equipment Recommendation Data (SERD), AUTOSERD, Support Equipment Requirements Management Information System (SERMIS) and

other Government SE-related databases in consonance with the appropriate Weapon System Manager. The Contractor shall submit database inputs and provide review comments. The Contractor shall secure the proper SEMS access.

3.4.14.19 Access government SE databases to generate SE ILS management reports.

3.4.14.20 Support SE LMs in developing repair of repairable and spare/material budgets while utilizing Naval Supply models to forecast dollar requirements.

3.4.14.21 Conduct site surveys and review available data to evaluate SE requirements, capabilities, availability, and supportability capabilities to provide logistics, maintenance planning, MPT, and supply support recommendations and accompanying documentation.

3.4.14.22 Review and assess Contractor proposed changes in SE component reliability, maintainability, obsolescence or performance characteristics and develop or provide recommended changes to SE ILS planning documents such as Support Material Lists, Gross Requirements Lists, and Provisioning Technical Documentation (PTD).

3.4.14.23 Participate in logistics-related meetings including logistics reviews, ILS Management Teams meetings, LSA/LMI reviews, Provisioning Guidance Conferences, telephone conferences, program reviews, procurement review planning conferences, site activation meetings and initial outfitting meetings and provide coordination with other government, Fleet users, FMS customers and industry representatives while providing inputs to ensure complete SE logistics support.

The Contractor, when required, shall participate in “Team Building” and coordination meetings, briefings and other information exchanges to include specialized Government unique training, as approved and directed by competent Government Authority in support of Acquisition Logistics requirements. Additionally, the Contractor shall prepare and deliver briefing and presentation materials, charts, viewgraphs, document meeting minutes and other items needed to facilitate logistics presentations IAW CDRL A001 & A002.

3.4.14.24 Analyze in-service SE reliability, maintainability and availability characteristics, project availability, identify Fleet readiness problems and supply support deficiencies. Associated metrics for SE shall be tracked and reported, to assist in Cost-Wise Readiness Improvements. This shall include preparing data base queries from NAVAIR Logistics Data Analysis (NALDA)/ Decision Knowledge Programming for Logistics Analysis and

Technical Evaluation (DECKPLATE) and Online Account Request System (OARS), reports and briefings as required.

3.4.14.25 Conduct investigations and technical studies to identify the status of pertinent integrated logistics support elements affecting the overall maintenance programs for the systems and equipment. Identify problem areas and recommend corrective actions.

3.4.14.26 Review, assess and recommend changes to site support ILS readiness including: maintenance planning; phased support; manpower and personnel requirements; initial provisioning and material support; support equipment including automatic test equipment; training and training devices; technical data including computer resources support; packaging, handling, storage and transportation; and facilities, both shore and ship.

3.4.14.27 Review technical manuals and instructions for compliance with environmental policies, regulations and laws.

3.4.14.28 Provide technical support for the management of Support Equipment Recommendation Data (SERD) efforts. Includes but not limited to creating, revising and reviewing SERDs, entering applicable data into Navy applications AUTOSERD, tracking excess/deficit SE in Support Equipment Resources Management Information System (SERMIS) and creating unique queries in ACQ Access for program management, engineering and logistics personnel.

3.4.14.29 Review Source Data Revision Recommendations (SODARRS) and provide disposition recommendations.

3.4.14.30 Provide technical support for system/design requirements determination and SE acquisition. Support preparation of all acquisition documents for the procurement of new and modified SE end-items including technical specifications and Statements of Work (SOWs).

3.4.14.31 Provide on-site representative (OSRs) to support acquisition, site activation and design and development logistics tasks.

3.4.14.32 Attend and participate in design reviews, program reviews, Technical Coordinating Meetings (TCMs) and other designated meetings. The Contractor shall assist in the support of aircraft platform Fleet Support Team (FST) meetings, SE meetings, aircraft maintenance plan reviews and tool vendor meetings.

3.4.14.33 Proficiency in utilizing Government provided access to information systems including LSA, Aircraft Platform Interface

Management Information System (APIMIS), NATEC Website, NAVICP Asset Visibility and SERMIS.

3.4.14.34 Acquire and maintain access to both Government and prime Contractor websites and databases as necessary to perform his/her duties. Note: May require associate contractor agreement and non-disclosure agreement (NDA) under Exhibit C for specific task order requirement.

3.4.14.35 Assist in distributing SE including the initial outfitting of Peculiar Support Equipment for Aircraft Platform Site Activations.

3.4.14.36 Support site standup requirements; assist in the design or evaluation of kitting and container layouts; compare tool list requirements, and screen for stock numbered equivalents; assist in the design or evaluation of modified tool requirements; conduct vendor research; determine etching needs, and develop and update schedules.

3.4.14.37 Provide personnel and support to ensure the timely delivery of designated SE for initial outfitting/site activation purposes. Tasks shall include (but are not limited to):

3.4.14.37.1 Support the Acquisition Manager by scheduling/managing deliveries of SE to the fleet utilizing the authorized government SE management database;

3.4.14.37.2 Enter, maintain, and update all program acquisition information in the authorized Government acquisition database;

3.4.14.37.3 Support program Site Activation personnel in the planning for and preparation of site activation SE requirements lists, shipping schedules and discrepancy lists;

3.4.14.37.4 Generate Temp Loan request forms, arrange shipment, track return dates and ensure all equipment is returned, when required;

3.4.14.37.5 Maintain all SE site activation lists and record changes/updates as new equipment is sent to each activity and

3.4.14.37.6 Provide monthly and/or ADHOC reports such as Staging Facility receives/pushes, Temp Loan status, MILSTRIP status, Cataloging & data imaging status and

current acquisition activities database status. IAW SOW Section 3.1.3.5

3.4.15 Metrology and Calibration – The Contractor shall:

3.4.15.1 Monitor, evaluate, track, and report Engineering Investigations (EIs), PQDRs, Hazardous Material Reports, Aircraft Inspection Discrepancy Reports, Depot work/rework and trouble reports.

3.4.15.2 Collect, analyze, evaluate and report on Local Engineering Specifications and Local Process Specifications.

3.4.15.3 Evaluate and recommend calibration and measurement requirements and implement Calibration and Measurement Requirements Summary reports.

3.4.15.4 Collect, analyze, evaluate and report on engineering specifications and local process specifications related to metrology and calibration requirements/support.

3.4.15.5 Interface with, liaison and assist elements of metrology/calibration in all phases of acquisition planning, estimating, requisitioning and tracking of reference Calibration Standards/equipment required to support aviation calibration activities.

3.4.15.6 Review, assess and support for development of, and possible changes to, calibration standards related documents, analyses, algorithms, data, inventory objectives, range/depth and technical measurement capabilities.

3.4.15.7 Evaluate reference calibration standards, calibration equipment, infrastructure, support processes and policies in terms of their effectiveness in meeting aviation readiness goals. Provide recommendations and methods of improvement.

3.4.15.8 Provide technical support for managing commercial and organic technical data, documents and manuals that support the metrology and calibration program, including effective liaison with supporting organizations responsible for distribution to aviation activities (and others as required). This task includes electronic media and digitization of current and legacy documents.

3.4.15.9 Provide analysis, recommendations and implementation assistance for product line organizational structure and process

reengineering required to meet high-level METCAL policy/guidance as required to support naval aviation engineering, logistics and maintenance.

3.4.15.10 Assess, develop, provide, review and evaluate metrology and calibration training strategies/plans, conduct skill assessments and training; including but not limited to, Integrated Learning Environment, Web Based Training, and Embedded Training.

3.4.15.11 Provide metrology technical support in program reviews. Propose technical program improvements based on engineering expertise, and judgment when appropriate. Contribute to strategic planning and identify initiatives when experience gained from participating in technical issue resolutions dictates. Provide support in planning and managing the execution of the metrology and calibration engineering and logistics programs.

3.4.15.12 Schedule equipment into global service centers and calibration laboratories for calibration and repair using Government database MEASURE, and direct interface with customer activities to determine their mission support needs and priorities.

3.4.15.13 Provide technical and procedural advice, guidance and support to calibration laboratory personnel and other Navy & Marine personnel concerning metrology related matters such as the repair, calibration and modification of precision measurement equipment.

3.4.15.14 Provide repair, calibration and modification of a variety of complex precision measurement equipment utilized by the Navy & Marine Corps activities and other laboratory customers.

3.4.15.15 Interface with NAVAIR METCAL Program Office on matters requiring their assistance or direction, including, but not limited to: providing required reference calibration standards and equipment; new or revised calibration procedures; support of newly identified customers; and/or data logging and reporting requirements.

3.4.15.16 Provide analysis, assessments and justification for new reference calibration standards required for performance of calibration maintenance and traceability to US National and International Units of Measurement.

3.4.15.17 Attend, participate, support, analyze, provide input, develop, prepare and report on meetings, conferences and review boards.

3.4.16 Joint Underservice – The Contractor shall:

3.4.16.1 Coordinate, manage, and support the successful execution of the Joint Depot maintenance (JDM) program IAW OPNAVINST 4790.14B.

3.4.16.2 Coordinate and optimize efficiencies across Services for the joint Depot Maintenance Inter-Services process in support of NAVAIR, NAVSEA, and SPAWAR.

3.4.16.3 Coordinate, track progress, perform analyses, and provide status reports for depot source of repair (DSOR)/DMI introductions and recommendations between services IAW OPNAVINST 4790.14B.

3.4.16.4 Monitor workload forecasting, track inter-service production data, coordinate funding, and organize training across the Navy in support of the Navy DMISA workload.

3.4.16.5 Support ILAs in DSOR analyses and document findings in the format specified.

3.4.16.6 Identify and update information and briefing materials to support APML/APMSE and other critical briefing requirements, to include, if necessary, presenting the briefing

3.4.17 Core Title 10 – The Contractor shall:

3.4.17.1 Provide industrial legislative support to include the delivery of timely and accurate products in support of Core Analysis/Title 10 Branch to support the successful execution of the Industrial Legislative program IAW DoDI 4151.20 of Jan 07 and Title 10, United States Code. This includes:

3.4.17.1.1 Support the loading and coding of data received from other activities critical to the Core determination process.

3.4.17.1.2 Provide continued Visual Basic or other programming support as either problems in the current software operations occur or changes in the input/output data requirements.

3.4.17.1.3 Provide continued maintenance support to the Core Component Application including maintenance training, configuration, and security, including emphasis on components to provide optimal integration of I and D level maintenance. This involves answering questions and conducting training on the Core database and the Core Calculation process.

3.4.17.2 Conduct research, document, and submit Core analyses/advisories to determine if workload associated with a NAVAIR-procured weapon system or other military equipment is required to sustain aviation depot-level core capability IAW Title 10, United States Code, section 2464 and DoD Instruction 4151.20 of Jan 07.

3.4.17.3 Research, compile, and validate core depot-level workload and depot-level funding for calculating the core-sustaining workload, expressed in units/direct labor hours, for the informal annual, formal biennial, and long-range reports interfacing with program manager/office, COMFRC, NAVSUP, and OPNAV, as required by the DoDI 4151.20 of Jan 07 and Title 10, United States Code 2464.

3.4.17.4 Research, compile, validate core depot-level workload for estimating core-sustaining workload during acquisition planning, expressed in units/direct labor hours, for interfacing with program manager/office as required by the DoDI 4151.20 of Jan 07 and Title 10, United States Code 2366(a) and 2366(b).

3.4.17.5 Identify and update information and briefing materials to support Assistant Program Manager, Logistics (APML) / Assistant Program Manager, Systems Engineering (APMSE) and other critical briefing requirements, to include, if necessary, presenting the briefing.

3.4.17.6 Support Programs to generate and route Congressional Notifications on commercial items as defined by 10USC2464.

3.4.18 Industrial Business Ops – The Contractor shall:

3.4.18.1 Provide timely and accurate tactical, operational, and strategic planning support for depot maintenance industrial business operations in support of weapon systems with primary focus on those that are aeronautical in mission.

3.4.18.2 Conduct thorough and complete analyses of specific studies and identify and document trends occurring in the Navy organic sector, commercial sector, and inter-service sector, as directed.

3.4.18.3 Analyze the full spectrum of technology trends and document the findings in the format specified.

3.4.18.4 Perform full spectrum manufacturing and/or repair trends analysis including the Bill of Materials (BOM) and document the findings.

3.4.18.5 Perform performance, capability, capacity, and throughput assessments to optimize resource allocation and usage across the industrial sectors.

3.4.18.6 Perform detailed analyses that link program, SYSCOM, service staff, fleet, and full-spectrum maintenance sector acquisition and sustainment strategies to optimize investment and support plans.

3.4.18.7 Define and develop long range goals and objectives for emerging issues and industrial trends and develop a viable plan for their implementation within the Industrial complex.

3.4.18.8 Identify, develop, coordinate, and document innovative industrial maintenance support strategies via intra-Navy and inter-service agencies to optimize future investment strategies for both acquisition and sustainment plans for full spectrum weapons systems support.

3.4.18.9 Represent the Industrial Depot Maintenance subject area, and its goals and objectives, in all intra-Navy and joint DoD and service IPTs/working groups that affect, guide, or influence its activities. This includes, but is not limited to, participation on teams conducting maintenance efficiency studies, software maintenance, advanced maintenance technology study and development, and UAV maintenance. Deliver report summaries as directed.

3.4.18.10 Identify and update information and briefing materials to support APML/APMSE and other critical briefing requirements, to include, if necessary, presenting the briefing.

3.4.19 Diminishing Manufacturing Sources and Material Shortages (DMSMS) – The Contractor shall:

3.4.19.1 Perform sustainment assessment/identification of Life Cycle Management opportunities for system and subsystems, as tasked.

3.4.19.2 Perform sustainment assessment/identification of Life Cycle Management opportunities for system and subsystems, as tasked. This task may include, but is not limited to loading Bill of Material (BOM) into appropriate obsolescence management/predictive tool(s).

3.4.19.3 Perform sustainability/obsolescence assessment on a system or subsystem to evaluate supply, reliability, logistics and readiness constraints and/or impacts using customer specified Tools and Data Sources.

3.4.19.4 Identify and investigate possible options for corrective and/or mitigation options of the whole system(s)/subsystem(s) or the individual components, as the analysis dictates.

3.4.19.5 Provide Analysis of Alternatives (AoA) that provides costs, resolution cost, and trade-off studies. Produce report summarizing findings and recommendations.

3.4.19.6 Provide support planning and/or implementation of alternative solutions to programs/platforms as required.

3.4.19.7 Provide cross-platform engineering, technical, and programmatic support and analysis to the DMSMS/Obsolescence Team.

3.4.19.8 Provide analyses of alternatives, selecting the best solutions, measuring progress, and documentation of metrics, common processes, design decisions, best practices, and "lessons to be learned."

3.4.19.9 Perform trade-off studies among requirements, design alternatives, and other cost, schedule and performance related issues.

3.4.19.10 Perform program risk analysis, and provide recommendations for mitigation. Additionally, establish product performance metrics to measure performance, cost, and schedule.

3.4.19.11 Support customer collaboration and communication efforts through participation in the following: NAVAIR/DoD DMSMS Working Group; DMSMS Conference; Technology

Forums; various Government Meetings; “Lead Free” restriction of hazardous Substances (RoHS) mitigation training; and development of source data for website(s) and communication media. The aforementioned list is not all-inclusive.

3.4.20 Packaging, Handling, Storage, and Transportation (PHS&T) - The Contractor shall (Exhibit C):

3.4.20.1 Provide physical inventory management for weapons systems parts inventory movement, maintenance tools, support equipment, and test equipment utilizing government provided systems.

3.4.20.2 Track parts and components data and provide Inventory Reports.

3.4.20.3 Provide ammunition-unique information and procedures necessary to effectively execute DoD/Navy material ordering, movement, reporting, and supply management procedures contained in over-arching supply management and logistics directives.

3.4.20.4 Supply chain support collaboration with weapon system support Contractors, retail supply activities, distribution depots, and transportation networks.

3.4.20.5 Materiel Requirements Support. Utilize Navy cost saving initiatives to minimize inventory investments.

3.4.20.6 Determine how best to deliver materiel to satisfy highly variable readiness and sustainment needs in a variety of operational environments.

3.5 General System Engineering Support Services: These support services shall apply to applicable sustainment engineering task areas. The Contractor shall use the system engineering process to define the requirements for the system, to transform the requirements into an effective product or process, to use the product or process to provide the required functionality, and to sustain the provisions of that functionality.

3.5.1 Systems Requirements Definition: The Contractor shall define, document, manage, and apply a requirements definition process IAW IEEE Std 15288-2015, section 6.4.3.

3.5.2 Systems Requirements Analysis: The Contractor shall define, document, manage, and apply a requirements analysis process IAW IEEE Std 12207-2008, section 6.4.2; and IEEE Std 29148-2011 sections 5.2 and 9.4. The Contractor shall

analyze the requirements specified in the individual TO to determine further decomposition and derivation of lower level functional requirements. The Contractor shall analyze the interaction between systems, subsystems, and components to derive the functional requirements. The Contractor shall decompose and derive requirements IAW the criteria within IEEE Std 29148-2011, sections 5.2 and 9.4.

3.5.3 Software Requirements Analysis: The Contractor shall define, document, manage, and apply software requirements analysis. The Contractor shall analyze and define software requirements. The purpose of the software requirements analysis process is to establish the requirements of the software elements of the system.

3.5.4 Software Architectural Design: The Contractor shall define, document, control, maintain, and implement a software architectural design.

3.5.4.1 Software Architectural Design Verification: The Contractor shall perform software architectural design verification IAW IEEE Std 12207-2008, section 7.2.4.3.2.2.

3.5.4.2 Software Detailed Design: The Contractor shall define, document, control, maintain, and implement software detailed design. The purpose of the software detailed design process is to provide a design for the software that implements, and can be verified against the requirements and the software architecture, and is sufficiently detailed to permit coding and testing.

3.5.5 Implementation: The Contractor shall define, document, manage, and apply an implementation process IAW IEEE Std 12207-2008, section 6.4.4.

3.5.5.1 Software Implementation: The Contractor shall define, document, control, maintain, and perform software implementation IAW IEEE Std 12207-2008, section 7.1.1.

3.5.5.2 Software Unit Construction and Testing: The purpose of the software construction process is to produce both source code and executable software units that properly reflect the software design. When required in an individual TO, the Contractor shall define, document, control, maintain, and implement software construction IAW IEEE Std 12207-2008, section 7.1.5. The Contractor shall accomplish software unit testing IAW ANSI/IEEE Std 1008-1987.

3.5.5.2.1 Software Code Verification: The Contractor shall perform software code verification IAW IEEE Std 12207-2008, section 7.2.4.3.2.3.

3.5.5.3 Software Integration: The Contractor shall define, document, control, maintain, and implement software integration IAW IEEE Std 12207-2008, section 7.1.6.

3.5.5.4 Software Integration Verification: The Contractor shall perform software integration verification IAW IEEE Std 12207-2008, section 7.2.4.3.2.4.

3.5.5.5 Software Qualification Testing: The Contractor shall define, document, control, maintain, and implement software qualification testing IAW IEEE Std 12207-2008, section 7.1.7.

3.5.6 System Integration: The Contractor shall define, document, manage, and apply a system integration process IAW IEEE Std 12207-2008, section 6.4.5.

3.5.7 System Qualification Testing: The Contractor shall define, document, manage, and apply a system verification process IAW IEEE Std 12207-2008, section 6.4.6.

3.5.8 Device Transition: The Contractor shall define, document, manage, and apply a system transition and installation process IAW IEEE Std 15288-2015, section 6.4.10.

3.5.9 Software Installation: The Contractor shall define, document, control, maintain, validate, and implement software installation IAW IEEE Std 12207-2008, section 6.4.7.

3.5.10 Software Product: The Contractor shall support the government to define, document, control, maintain, validate, and prepare the system software IAW IEEE/EIA 12207-2008, section 6.1.1.3.1 (Software Development and Documentation). The Contractor shall support the development of any government software databases and non-commercial item software with corresponding source code, build tools, build procedures, executable code, configuration information, and build procedures required to meet the performance defined in the individual TO. The Contractor shall prepare the Scientific and Technical Report (Software Product Specification (SPS)) IAW CDRL A007, as required and specified in the individual TO.

3.5.11 System Validation: The Contractor shall define, document, manage, and apply a system validation process IAW IEEE Std 15288-2015, section 6.4.11.

3.5.11.1 Software Acceptance Support: The Contractor shall define, document, control, and implement software acceptance support IAW IEEE Std 12207-2008, section 6.4.8.

3.5.12 Electromagnetic Environmental Effects (E3) Engineering: The Contractor shall support E3 control planning into the design approach, hardware selection, and the integration of products into the system site electromagnetic environment IAW TO supported FRC INST (Electromagnetic Interference/Electrostatic Discharge/ Controls) and CDRL A010.

3.5.12.1 Electrostatic Discharge (ESD) Management: The Contractor shall support ESD control program for the protection of ESD sensitive electrical and electronic parts, assemblies, and equipment from damage due to ESD. Applicable functions where ESD control elements are to be applied are design, production, inspection and test, storage and shipment, installation, maintenance, and repair. The ESD control program elements to be considered are classification, design protection for system equipment only, protected areas, handling procedures, protective coverings, training, marking of hardware, documentation, packaging, quality system requirements, and audits and reviews IAW site specific instruction/s for supporting ESD programs.

3.5.13 Reliability and Maintainability (R&M) Engineering: The Contractor shall support active and effective R&M programs that meet program objectives. The R&M programs shall ensure that the system equipment, including commercial items, NDI, and system equipment meet the R&M requirements IAW MIL-STD – 785B.

3.5.13.1 Failure Reporting, Analysis and Corrective Action System (FRACAS): The Contractor shall establish and maintain a closed loop FRACAS that applies to the failures that occur throughout development, manufacture, handling, checkout, and testing of the system equipment, including subcontracted items. Failure analysis shall be of sufficient depth as to permit the identification of failure causes and the corrective actions. The Contractor shall collect maintainability data (e.g., failure isolation, repair, and checkout times) as an integral part of the FRACAS. The Contractor shall present a summary of the R&M data collected under FRACAS at the scheduled program reviews as required and specified in the individual TO IAW MIL-STD-2155 and CDRL A011.

3.5.14 Human Systems Engineering (HSE): The Contractor shall integrate human factors into the system design. Objectives shall include balance of system performance and cost of ownership by ensuring that the system design is compatible with the capabilities and limitations of the personnel who will operate and maintain the item. Cognitive HSE design decisions shall be reflected in the supporting instructional strategies and materials IAW MIL-STD-1472G.

3.5.15 Interoperability: The Contractor shall define, document, control, maintain, and implement Interoperability.

3.5.16 Reviews: The Contractor shall provide technical support reviews to be held at government facilities.

3.5.16.1 System Requirements Review/System Functional Review (SRR/SFR): The Contractor shall participate and provide technical support SRR/SFR. The SRR/SFR is a multi-disciplined product and process assessment to ensure that the system under review can proceed into preliminary design, and that the system functional requirements, including derived and decomposed requirements, are defined and consistent with program cost, schedule, risk, and other system constraints. The SRR/SFR shall assess the system functional requirements and ensure that the required system performance is fully defined and is traceable to the functional baseline as required and specified in the individual TO. As required in the individual TO, the Contractor shall provide the following support:

3.5.16.1.1 Identify and discuss resource availability to support the schedule.

3.5.16.1.2 Provide a complete program organizational structure.

3.5.16.1.3 Identify relevant Contractor subject matter experts to be used during development and testing.

3.5.16.1.4 Show that the functional requirements are traceable to the system requirements.

3.5.16.1.5 Show that the explicit and derived requirements are quantified and documented.

3.5.16.1.6 Address the following applicable functional areas: a. Electromagnetic Environment Effects (E3)

3.5.16.1.7 Human Systems Integration

3.5.16.1.8 Environment, Safety, and Occupational Health

3.5.16.1.9 Logistics/Life-Cycle Support Requirements

3.5.16.1.10 Technical Documentation

3.5.16.1.11 Interoperability

3.5.16.1.12 Cybersecurity

3.5.16.1.13 Quality Management

3.5.16.1.14 Configuration Management

3.5.16.1.15 Security

3.5.16.1.16 Data Management

3.5.16.1.17 Safety Requirements

3.5.16.1.18 Present the results of a comprehensive risk assessment for design, integration, and test

3.5.16.2 In-Process Reviews (IPRs): The Contractor shall attend and participate in IPRs. IPRs provide attendees with information regarding the status and planned activities of the program. IPR support required as specified in the individual TO may include the following:

3.5.16.2.1 A presentation on the status of the overall program, including the system design (hardware and software), QMS, CM, E3, testing, and production.

3.5.16.2.2 Review of software status.

3.5.16.2.3 Review of FRACAS data, when applicable.

3.5.16.2.4 Review of the program schedule status.

3.5.16.2.5 Review of program risks.

3.5.16.3 Preliminary Design Review (PDR): The Contractor shall participate in a PDR. The purpose of the PDR is for the Government to formally review the activities and work products generated during the performance of the preliminary design stage in order to develop the allocated baseline, and to verify that the approach for the system design is ready to proceed into the detailed design phase. The PDR presents and describes the training systems design and program status, and addresses the design changes made to the preliminary design proposed. As required in the individual TO, the Contractor may be required to support the following:

3.5.16.3.1 System hardware and software design

3.5.16.3.2 Models

3.5.16.3.3 Communication and audio systems

3.5.16.3.4 Network

3.5.16.3.5 Interoperability design and implementation

3.5.16.3.6 Software tools

3.5.16.3.7 Use of developmental and Commercial and Non-Developmental Item (CaNDI) as applicable to software and databases.

3.5.16.3.8 Software development files

3.5.16.3.9 Hardware and software interfaces

3.5.16.3.10 Design modularity and commonality

3.5.16.3.11 E3 impacts

3.5.16.3.12 R&M, and systems safety program progress

3.5.16.3.13 Logistics design aspects and concerns

3.5.16.3.14 Parts management program progress and identification of long lead time items.

3.5.16.3.15 Test and evaluation

3.5.16.3.16 Security and cybersecurity, including systems security design, security test approach, security training approach, and any other security and cybersecurity relevant information.

3.5.16.3.17 Program problem and risk areas, recommended solutions, and evaluation of alternatives.

3.5.16.4 Critical Design Review (CDR): The Contractor shall participate in a CDR. The purpose of the CDR is for the Government to formally review the activities and work products generated during the performance of the critical design stage in order to develop the product baseline, and to verify that the system is ready to proceed into the hardware/software coding, assembly, and integration phase. The CDR presents and describes the finalized system design and program status. As required in the individual TO, the Contractor may be required to support the following:

3.5.16.4.1 System hardware and software design

3.5.16.4.2 Models

3.5.16.4.3 Communication and audio systems

3.5.16.4.4 Network

3.5.16.4.5 Interoperability design and implementation

3.5.16.4.6 Software tools

3.5.16.4.7 Use of developmental and Commercial and Non-Developmental Item (CaNDI) as applicable to software and databases.

3.5.16.4.8 Software development files

3.5.16.4.9 Hardware and software interfaces

3.5.16.4.10 Design modularity and commonality

3.5.16.4.11 E3 impacts

3.5.16.4.12 R&M, and systems safety program progress

3.5.16.4.13 Logistics design aspects and concerns

3.5.16.4.14 Parts management program progress and identification of long lead time items.

3.5.16.4.15 Test and evaluation

3.5.16.4.16 Security and cybersecurity, including systems security design, security test approach, security training approach, and any other security and cybersecurity relevant information.

3.5.16.4.17 Program problem and risk areas, recommended solutions, and evaluation of alternatives.

3.5.16.5 Test Readiness Review Conferences (TRRs): TRRs shall be supported. The purpose of the TRRs is to determine the system's readiness for government testing.

3.5.16.6 Technical Documentation Reviews: The Contractor shall participate in recurring technical documentation reviews. The purpose of the technical documentation reviews is to review and discuss the progress of the technical manual, training documentation, and technical data development.

3.5.16.7 Production Readiness Review (PRR): The Contractor shall participate in PRRs to determine whether the production hardware and software are ready for efficient and economical production. The PRR

discusses the manufacturing and T&E (Production Testing) program as required and specified in the individual TO. The PRR demonstrates that production engineering challenges are resolved, production processes and controls are in place, parts and materials are on hand, and testing methods are provided.

3.5.17 Commercial and Non-Developmental Items (CaNDI): The Contractor shall fulfill the requirements of the contract through use of CaNDI to the maximum extent practicable. CaNDI intended to be utilized by the Contractor will be reviewed by the Government to determine whether each proposed CaNDI component is, in fact, CaNDI. The Government will also determine the extent to which the proposed CaNDI is practicable for off-the-shelf use within the Government's logistical environment. The Government reserves the right to perform inspections and tests as deemed necessary to verify the practicability of items proposed as CaNDI for off-the-shelf use in the system.

3.5.18 Product Assurance Audits and Inspections: The Contractor shall support performance of audits and 100% inspections on products, including product assurance programs such as reliability, maintainability, parts management, safety, ESD control, CM, and QMS, at any time during the performance of the contract. The Contractor shall make non-deliverable product assurance documentation and data available to the government during these audits and inspections as required and specified in the individual TO. The government will provide notice to the Contractor prior to conducting audits and inspections.

3.5.19 Total Ownership Costs: The Contractor shall control Total Ownership Costs (TOC) by minimizing the Logistics Cost Drivers specified in the TOs.

3.5.19.1 Supportability Analysis: The Contractor shall consider logistics and supportability related requirements in the conduct of design trade studies as an element affecting cost, schedule, and performance. The Contractor shall develop and maintain requirements while modeling the impact of design decisions on the support processes required for maintaining and sustaining the equipment in its operational use. Provide analysis, including any supporting justification, as substantiation of trade studies and subsequent design decisions as they relate to maintenance planning shall be presented in design reviews and meetings.

3.5.19.2 Technical Data Package: The Contractor shall prepare and deliver a comprehensive TDP IAW CDRL A005 which shall consist of all documentation and drawings required to operate, repair, and modify a system consistent with the government's maintenance concept. The TDP shall include drawings, Operation and Maintenance (O&M) instructions, instructor operator utilization instructions, planned maintenance data, and Commercial Off-The-Shelf (COTS) technical support data. The Contractor shall develop operation, maintenance, and training documentation that

supports the training courses as required by the individual TO. The TDP to be provided in the individual TO may include, but is not limited to, the following:

3.5.19.2.1 Operation and Maintenance (O&M) Manual

3.5.19.2.2 Planned Maintenance System (PMS) documentation

3.5.19.2.3 COTS manuals and associated supplemental data

3.5.19.2.4 The Contractor shall comply with site specific guidance for Technical Data Management Procedures as required in the individual TO.

3.5.19.3 Technical Documentation Validation: The Contractor shall conduct validation of the technical documentation. Validation of technical documentation is a process by which the Contractor tests a technical manual for accuracy and adequacy. The Contractor shall accomplish validation by actual utilizing the operation and maintenance instructions on the system/equipment for which the technical manual is written. Validation procedures shall be witnessed by government representative(s).

3.6 Program / Project Management: Program / Project Management - Serves as the working level primary interface and point of contact with Government program authorities and representatives on program / project.

3.6.1 Initiates and maintains technical direction within broad program objectives directly related to aircraft systems and sub systems hardware and software, configuration control, test and evaluation, systems integration, and systems supportability, as well as, apply acquisition policies and procedures experience with the requirements of the DoD 5000 series.

3.6.2 Conduct organizational studies and evaluations, design systems and procedures, conduct work simplification and measurement studies, and prepare operations and procedures manuals to assist management in operating more efficiently and effectively.

3.6.3 Develop and interpret information that assists management with decision making, policy formulation, or other managerial functions. May collect and analyze data and develop decision support software, services, or products.

3.6.4 May develop and supply optimal time, cost, or logistics networks for program evaluation, review, or implementation.

3.6.5 Oversee the overall program / project operation by developing management procedures and controls, planning and directing project execution and monitoring and reporting progress.

3.6.6 Assists front-end team organization in providing methodology and general project approach concepts, interim and final project reviews, overall management of cost, schedule, and performance of all projects/tasks. Reviews and prepares project and technical analyses, reports, change proposals, and other technical documentation.

3.7 Administrative Support: In support of the Logistics and Engineering tasks ordered via individual task orders, the Contractor shall prepare, maintain, and preserve technical or administrative documentation, data, correspondence, and records. Specifically, the contractor shall:

3.7.1 Perform Data Entry and Word Processing; routine clerical and secretarial tasks. (Such as but not limited to: operating copiers, filing, answering telephones, scheduling meetings, sorting and distributing mail.

3.7.2 Produce a variety of documents, such as correspondence, memos, publications, forms, reports, tables and graphs. Develop analytics and metrics.

3.7.3 Work independently on projects requiring high-level administrative support by conducting research, preparing statistical reports, briefing charts and other presentation materials, and handling information requests.

4.0 Labor Categories

4.1 The Contractor shall be responsible for employing personnel having at least the minimum level of education and training, experience, and security clearance as stated for each labor category specified herein.

4.2 Key Personnel are those who will be performing in Key Labor Categories as specified for applicable labor categories below. Key Personnel are subject to the substitution restrictions clause NAVAIR Clause 5252.237-9501 entitled “Additional or Substitution of Personnel (Services).” All KEY Personnel must have or be able to obtain the appropriate security clearance of SECRET. The Key Personnel for this requirement are shown below:

Key Labor Category	Level	BLS SOC Code
*Physical Scientist	Senior	19-2012
*Engineer / Aerospace Engineer	Senior	17-2011
*Engineer / Electrical Engineer	Senior	17-2071
*Systems Engineer / Mechanical Engineer	Senior	17-2141
*Engineer / General	Senior	17-2199
*Test Engineer / Mechanical Engineer	Senior	17-2141
*Test Engineer / Materials Engineer	Senior	17-2131
*Program Manager	Senior	13-1111
*Project Manager	Senior	13-1198
*Acquisition Logistics Manager	Senior	13-1111
*Operations Logistics Manager	Senior	11-1021
*Logistics Manager	Senior	11-1021
*Logistics Specialist	Senior	13-1081
*Logistics Analyst	Senior	13-1111
*Logistics Engineer	Senior	17-2199
*Logistician	Senior	13-1081
*Computer Operator	Senior	43-2099
*Engineering Technician	Senior	17-3098
*Industrial Engineering Technician	Senior	17-3026
*Software Developer	Senior	15-1256

4.3 College Degree: All degrees shall be obtained from an "accredited college or university" as recognized by the U.S. Department of Education. This includes Associates, Bachelor's, Master's, or Doctorate degrees. (https://www.ed.gov/accreditation)

4.3.1 Degree Majors: If specific field required, the field is specified under the applicable labor category.

4.3.2 Technical Certification Training: If specific field required, the field is specified under the applicable labor category.

4.4 Experience and Education

The following qualification substitution chart is the standard experience/education substitutions. Unless otherwise noted in the specific labor category description.

Bachelor's Degree	6 years' additional work experience may be substituted for a Bachelor's Degree	Associate's Degree plus 4 years' additional work experience may be substituted for a Bachelor's Degree

"Years of experience" shall mean full, productive years of participation.

"Productive years" shall mean 52 weeks of work reduced by reasonable amounts of time for holidays, annual and sick leave. If participation was part-time, or if less than one-half of the standard work week was spent performing qualifying functions, the actual time spent performing qualifying functions may be accumulated to arrive at full years of experience.

4.4.1 Engineering and engineering discipline - when used in relation to educational or work experience requirement, "engineering" shall mean any of the following specific subject, disciplines, or areas of work experience: aerospace, chemical, civil, computer, electrical, electronics, industrial, materials, mechanical, nuclear, safety engineering, engineering technology and computer, etc. The above mentioned engineering disciplines require a BS degree, without substitution, in a professional engineering (from an American Board for Engineering and Technology [ABET]-accredited [www.abet.org] educational program) or a relevant scientific/technical degree in the applicable task area.

4.4.2 On a case by case basis, the Government may waive certain labor category requirements if experience is significantly above the minimum required or a highly unique skill set, specialized training, and/or professional certification is determined to qualify the individual to meet the need.

4.4.3 The required skill an individual qualifies for is dependent upon the relevant education, experience, and capabilities of the individual which equips him/her to perform within the assigned functional/technical area. Individual TO Statement of Work (SOW) will be written in terms of work to be accomplished and may reference required experience above the minimum level to most affectively accomplish the task.

4.5 Labor Categories and Qualifications:

Labor Categories: The following lists the labor category level(s) Standard Occupational Classification (SOC), Bureau of Labor and Statistics (BLS) code, minimum education and experience requirements, and the functional descriptions for each labor category. Required experience qualifications may have been obtained concurrently.

4.5.1 Physical Scientist (BLS/SOC 19-2012)

Levels:
Journeyman (Non-Key) (Secret)
Senior (Key) (Secret)

Functional duties: Provides chemistry or applied physical scientific services in the aerospace field in at least one (1) of the seven (7) following areas as specified in the delivery order. 1) metals and metal manufacturing; 2) nondestructive inspection (NDI); 3) composites, polymers, organic coatings; 4) industrial cleaning as it relates to the aerospace and military weapon system community; 5) chemistry and analytical testing of metals, lubricants, polymers, and common military aviation fuels; 6) failure analysis of typical Naval Aviation systems and materials; or 7) inorganic coating, corrosion and surface finishing. The Contractor shall be capable of rapidly learning the operation of common laboratory test instruments specified in the delivery order, preparing reports, developing process control documentation, resolving minor equipment problems and troubleshooting FRC industrial processes. The Contractor shall be able to develop engineering guidance required to resolve manufacturing and aircraft repair problems at FRC and select acquisition programs of record. On occasion the Contractor (estimated percentage of time based on experience level) may be required to execute unique testing and troubleshooting of processes and procedures within the technical area specified in the delivery order. The Contractor shall document all work in common engineering documents such as local process specifications, local engineering instructions, temporary engineering instructions, materials engineering services request and materials engineering laboratory reports. All reports shall be suitable for publication with moderate editing assistance from senior engineers.

4.5.1.1 Journeyman Required Experience: At least three (3) to ten (10) years of experience in providing chemistry or applied physical scientific services in the aerospace field related to least one (1) of the of the seven (7) functional areas as specified in the delivery order. Requires minor assistance from senior engineers in the performance of functional duties. Journeyman Required Education: Relevant degrees: BS or BA degree in Chemistry or Physics.

4.5.1.2 Senior Required Experience: At least ten (10) years of extensive experience in providing chemistry or applied physical scientific services in the aerospace field related to least one (1) of the of the seven (7) functional areas as specified in the delivery order. Senior Required Education: Relevant degrees: BS or BA degree in Chemistry or Physics.

4.5.2 Engineer/Aerospace Engineer (BLS/SOC 17-2011)

Levels:
Junior (non-Key) (Secret)
Journeyman (Non-Key) (Secret)
Senior (Key) (Secret)

Functional duties: Applies engineering principles to perform stress analyses in support of military weapon systems, to include but not limited to, providing technical support in the Stress Analysis area (development and review) using Finite Element Modeling (FEM) software (such as Stress Check, PATRAN/NASTRAN, AFGROW, Lifeworks, Lug, 1D Joint, etc.), interfacing with other engineering disciplines (mostly Structures and Mechanical Engineers), and providing engineering input to different types of structure projects. Senior level shall provide input, coordinates, conducts, and solves basic to complex air vehicle engineering issues requiring stress analysis and evaluation of causes. Applies technical knowledge to solve and properly mitigate complex air vehicle engineering and stress analysis issues. Identifies, plans, evaluates, and prescribes corrective action for air vehicle deficiencies of significant proportions reported through appropriate reporting systems (at organic, intermediate, and depot levels) to improve reliability, maintainability, safety, accuracy, and/or efficiency. Evaluates and recommends disposition of emergent stress analyses based on priority and direction of COR through the Government engineer or program manager.

4.5.2.1 Junior Required Experience: from zero (0) to three (3) years of experience performing the functional duties to be performed for this position. Junior Required Education: Relevant degrees: BS degree in Aerospace, Aerodynamics, Materials, Mechanical Engineering, or civil engineering with relevant aircraft experience.

4.5.2.2. Journeyman Required Experience: At least three (3) to ten (10) years of experience performing the functional duties to be performed for this position. Journeyman Required Education: Relevant degrees: BS degree in Aerospace, Aerodynamics, Materials, Mechanical Engineering, or civil engineering with relevant aircraft experience.

4.5.2.3 Senior Required Experience: At least ten (10) years of extensive experience performing the functional duties to be performed for this position. Senior Required Education: Relevant degrees: BS degree in Aerospace, Aerodynamics, Materials, Mechanical Engineering, or civil engineering with relevant aircraft experience.

4.5.3 Engineer/Electrical Engineer (BLS/SOC 17-2071)

Levels:
Journeyman (Non-Key) (Secret)
Senior (Key) (Secret)

Functional duties: Applies engineering principles to troubleshoot and resolve problems and issues with test equipment and aircraft electrical/power, avionics, navigation, communications, and radar systems. Supports rapid and/or correct interpretation of reading and understanding paper and electronic engineering drawings, specifications, and technical documents. Demonstrates experienced in designing, maintaining, or modifying aircraft systems and developing and changing

paper and electronic engineering drawings and specifications to document the design or modification. Shall be able to create, modify, and work with AutoCAD or Solidworks engineering drawings. A senior level will demonstrate extensive experience in aircraft electrical/power, avionics, navigation, communications, and radar systems, developing Electrical Load Distribution Analyses (ELDAs), and AutoCAD or Solidworks.

4.5.3.1 Journeyman Required Experience: At least three (3) to ten (10) years of experience performing the functional duties to be performed for this position.
Journeyman Required Education: Relevant degrees: BS degree in Aerospace, Electrical or Electronics Engineering

4.5.3.2 Senior Required Experience: At least ten (10) years of extensive experience performing the functional duties to be performed for this position
Senior Required Education: Relevant degrees: BS degree in Aerospace, Electrical or Electronics Engineering

4.5.4 Systems/Mechanical Engineer (BLS/SOC 17-2141)

Levels:
Journeyman (Non-Key) (Secret)
Senior (Key) (Secret)

Functional duties: Apply theoretical and applicable engineering principles to troubleshoot test equipment, aircraft electrical/power, air conditioning, cabin pressure, auxiliary power , hydraulics and mechanical (flight controls /landing gear) systems. Perform fluid dynamics, heat transfer, and thermodynamics, mechanical, hydraulic and kinematic analyses in support of military weapon systems. i.e., demonstrate experience in providing technical support of these analyses (development and review), interfacing with other engineering disciplines (Mechanical, Avionics and Structural Engineers), reading and understanding paper and electronic engineering drawings, specifications, and technical documents. Designing or modifying aircraft systems and developing engineering drawings and specifications to document the design or modification, creating and working with AutoCAD drawings or similar CAD software. A senior level employee will provides oversight of and input to complex projects.

4.5.4.1 Journeyman Required Experience: At least three (3) to ten (10) years of experience performing the functional duties to be performed for this position.
Journeyman Required Education: Relevant degrees: BS degree in Aerospace, Aerodynamics, Mechanical Engineering, Electrical or Electronics Engineering.

4.5.4.2 Senior Required Experience: At least ten (10) years of extensive experience performing the functional duties to be performed for this position.
Senior Required Education: Relevant degrees: BS degree in Aerospace, Aerodynamics or Mechanical Engineering, Electrical or Electronics Engineering.

4.5.5 Test Engineer – Mechanical (BLS/SOC 17-2141)

Levels:
Journeyman (Non-Key) (Secret)
Senior (Key) (Secret)

Functional duties: Apply engineering principles and knowledge to gas turbine engine operation and design practices. Shall demonstrate experience with maintenance engineering principles and how they relate to in-service engines and support requirements provided to the O, I, and D levels of maintenance /production, reading and understanding engineering drawings, specifications, and technical documents, develop and assist with engine and engine component repairs and engineering drawings. Applies experience and knowledge of Reliability-Centered Maintenance, Age Exploration, failure trending, repair techniques, Power Plant Bulletins, Maintenance Awareness, engine troubleshooting and propulsion engineering investigations to different types of aircraft propulsion engines. A senior level employee will provides oversight of and input to complex projects.

4.5.5.1 Journeyman Required Experience: At least three (3) to ten (10) years of experience performing the functional duties to be performed for this position. Journeyman Required Education: Relevant degrees: BS degree in Aerospace, Aerodynamics or Mechanical Engineering.

4.5.5.2 Senior Required Experience: At least ten (10) years of extensive experience performing the functional duties to be performed for this position. Senior Required Education: Relevant degrees: Relevant degrees: BS degree in Aerospace, Aerodynamics or Mechanical Engineering.

4.5.6 Test Engineer – Materials (BLS/SOC 17-2131)

Levels:
Junior (Non-Key) (Secret)
Journeyman (Non-Key)
Senior (Key) (Secret)

Functional duties: Provides chemistry or applied physical scientific services in the aerospace field in at least one of the following areas as specified in the delivery order. 1) metals and metal manufacturing; 2) nondestructive inspection (NDI); 3) composites, polymers, organic coatings; 4) industrial cleaning as it relates to the aerospace and military weapon system community; 5) chemistry and analytical testing of metals, lubricants, polymers, and common military aviation fuels; 6) failure analysis of typical Naval Aviation systems and materials; or 7) inorganic coating, corrosion and surface finishing. The Contractor shall be capable of rapidly learning the operation of common laboratory test instruments specified in the delivery order, preparing reports, developing process control documentation,

resolving minor equipment problems and FRC industrial processes. On occasion, the Contractor may be required to execute unique testing and troubleshooting of processes and procedures within the technical area specified in the delivery order. The Contractor shall be able to develop engineering guidance required to resolve manufacturing and aircraft repair problems at FRCs and select acquisition programs of record. The Contractor shall document all work in common engineering documents such as local process specifications, local engineering instructions, temporary engineering instructions, materials engineering services request and materials engineering laboratory reports. All reports shall be suitable for publication with moderate editing assistance from senior engineers.

4.5.6. 1 Junior Required Experience: At least one (1) to three (3) years of experience in providing chemistry or applied physical scientific services in the aerospace field related to least one (1) of the of the seven (7) functional areas as specified in the TO. Junior Required Education: Relevant degrees: BS degree in Aerospace, Aerodynamics, Materials or Mechanical Engineering.

4.5.6.2 Journeyman Required Experience: At least three (3) to ten (10) years of experience in providing chemistry or applied physical scientific services in the aerospace field related to least one (1) of the of the seven (7) functional areas as specified in the TO. Journeyman Required Education: Relevant degrees: BS degree in Aerospace, Aerodynamics, Materials or Mechanical Engineering.

4.5.6.3 Senior Required Experience: At least ten (10) years of extensive experience in providing chemistry or applied physical scientific services in the aerospace field related to least one (1) of the of the seven (7) functional areas as specified in the TO. Senior Required Education: Relevant degrees: BS degree in Aerospace, Aerodynamics, Materials or Mechanical Engineering.

4.5.7 Computer Scientist (BLS/SOC 15-1221)

Level:
Journeyman (Non-Key) (Secret)

Functional duties: Applies knowledge of computer science concepts and techniques, mathematics, and methods of statistical analysis to develop and apply automated solutions to engineering, scientific, or business data acquisition and management problems. Uses mathematical, statistical, and scientific logic to identify conceptual or theoretical solutions to problems of automated data processing (ADP) hardware or software systems design and operations. Analyzes and formulates architectural and functional specifications, interfaces, and data structures. Researches applications for ADP hardware, software, and operating systems. Writes, modifies, and adapts computer programs in machine level, assembly, and third or fourth generation programming languages. May act as team

leader or supervisor, developing project plans, guidelines, or controls, and directing the work of other computer scientists, specialists, and technicians.

4.5.7.1 Journeyman Required Experience: At least three (3) to ten (10) years of experience performing the functional duties to be performed for this position. Journeyman Required Education: Relevant BS degrees: Computer Science, Computer Information Systems, Physics, and Computer Engineering

4.5.8 Computer Programmer (BLS/SOC 15-1251)

Level:
Journeyman (Non-Key) (Secret)

Functional duties: Performs routine programming assignments that do not require skilled background experience but do require knowledge of established programming procedures and data processing requirements, and works according to clear-cut and complete specifications. The data are refined, and the format of the final product is very similar to that of the input, or is well defined when significantly different, i.e., there are few, if any, problems with interrelating varied records and outputs. The Computer Programmer shall maintain and modify routine programs, makes approved changes by amending program flow charts, developing detailed processing logic, and coding changes, tests and documents modifications and writes operator instructions, may write routine new programs using prescribed specifications, and may confer with electronic data processing (EDP) personnel to clarify procedures, and processing logic. In addition, the Computer Programmer may evaluate simple interrelationships in the immediate programming area confers with user representatives to gain an understanding of the situation sufficient to formulate the needed change, and implements the change upon approval of the supervisor or higher level staff. The incumbent is provided with charts, narrative descriptions of the functions performed, an approved statement of the product desired (e.g., a change in a local establishment report), and the inputs, outputs, and record formats. This Worker reviews objectives and assignment details with higher level staff to insure thorough understanding; uses judgment in selecting among authorized procedures and seeks assistance when guidelines are inadequate, significant deviations are proposed, or when unanticipated problems arise. Work is usually monitored in progress, and all work is reviewed upon completion for accuracy and compliance with standards.

4.5.8.1 Journeyman Required Experience: At least three (3) to ten (10) years of experience performing the functional duties to be performed for this position. Journeyman Required Education: High School diploma or GED; and either: (1) certification of a Certified Software Development Professional (CSDP) (Previously known as Certified Software Engineering Professional (CSEP)); or with TOCOR approval, complete a vendor/platform specific certification (e.g., Microsoft Certified Solutions Developer (MCSD), Microsoft Certified Applications Developer (MCAD), Microsoft Certified Database Administrator

(MCDBA), Sun Certified Professional (SCP), Red Hat Certification Program (RHCP), CISCO Certified Network Professional (CCNP) or Oracle Certified Professional (OCP), with an additional three (3) years of experience with performing computer and network hardware services, including programming analysis and development of specifications for data inputs, flow, actions, decisions, and outputs; or Associate's degree from an accredited college or university in computer science, programming or related field, with an additional two (2) years of experience performing computer and network hardware services, including programming analysis and development of specifications for data inputs, flow, actions, decisions, and outputs; or Bachelor's degree from an accredited college or university in computer science, programming, or related field, with no additional experience required.

4.5.9 Engineer / General (BLS/SOC 17-2199)

Levels:
Junior (Non-Key) (Secret)
Journeyman (Non-Key) (Secret)
Senior (Key) (Secret)

Functional duties: Provides support in a specialty engineering/scientific discipline, applying engineering principles to investigate, analyze, plan, design, develop, implement, test or evaluate military weapons systems. Provides support solving problems in a narrow specialty field, or over a broad scope of specialties applicable to the specific program tasking by reviewing and preparing engineering and technical analysis, reports, change proposals, and other technical. Proficient and sound judgment in formulating, evaluating, and correlating broad engineering/ scientific concepts, guiding the analysis of unique problems, and developing new and improved techniques and methods. Interprets, organizes, and executes projects concerned with unique or controversial items having a major effect on the programs by applying engineering experience to perform functions such as system integration, configuration management, quality assurance testing, or acquisition and resource management.

4.5.9.1 Junior Required Experience: from zero (0) to three (3) years of experience in providing entry level or developmental level assignments, which have clearly specific objectives and require the investigation of a limited number of variables.
Junior Required Education: Relevant degrees: BS degree in in professional engineering (from an American Board for Engineering and Technology [ABET]-accredited [www.abet.org] educational program) or a relevant scientific/technical degree in the applicable task area.

4.5.9.2 Journeyman Required Experience: At least three (3) to ten (10) years of experience in providing Mid-level assignments, which have unique objectives and require the investigation of a broad number of variables. Journeyman Required Education: Relevant degrees are BS degree in in professional engineering (from an

American Board for Engineering and Technology [ABET]-accredited [www.abet.org] educational program) or a relevant scientific/technical degree in the applicable task area.

4.5.9.3 Senior Required Experience: At least ten (10) years of extensive experience, of which five (5) years shall be in the recognized specialty area. Applies intensive and diverse knowledge to problems and makes independent decisions. Senior Required Education: Relevant degrees: BS degree in in professional engineering (from an American Board for Engineering and Technology [ABET]-accredited [www.abet.org] educational program) or a relevant scientific/technical degree in the applicable task area.

4.5.10 Program Manager (BLS/SOC 13-1111)

Levels:
Journeyman (Non-Key)
Senior (Key) (Secret)

Functional duties: The Program Manager (PM) will serves as the working level primary interface and point of contact with Government program authorities and representatives on program / project and contract administration issues for large / critical efforts (task order). The Program Manager Initiates and maintains technical direction within broad program objectives directly related to aircraft systems and sub systems hardware and software, configuration control, test and evaluation, systems integration, and systems supportability, as well as, apply acquisition policies and procedures experience with the requirements of the DoD 5000 series. The PM works with large and diverse teams and requires the ability to effectively provide guidance, direction, and supervision in all areas of contracted effort such as program management, systems engineering, major system acquisitions, and financial management. The Program Manger supervises the overall program / project operation by developing management procedures and controls, planning and directing project execution and monitoring and reporting progress. The PM is responsible for top-level oversight of TO/project activities this includes: timely staffing of qualified contractor personnel, and subsequent availability to support the TO Performance Work Statement requirements, and assist in providing methodology and general project approach concepts, interim and final project reviews, overall management of cost, schedule, and performance of all projects/TOs. Work requires the ability to manage and allocate/prioritize resources for simultaneous work efforts.

4.5.10.1 Journeyman Required Experience: At least three (3) to ten (10) years of experience in performing the functional duties to be performed for this position. Journeyman Required Education: Relevant degrees: Bachelor of Science (BS) or Bachelor of Arts (BA) degree in Business Administration, or a discipline relevant to the Statement of Work (SOW) for this effort to include, but not limited to, Business Management, Management Science, Program Management, Purchasing

Management, Procurement/Acquisitions, Contracts Management, or Supply Chain and Logistics Management.

4.5.10.2 Senior Required Experience: At least ten (10) years of extensive experience performing the functional duties to be performed for this position. Senior Required Education: Relevant degrees: Bachelor of Science (BS) or Bachelor of Arts (BA) degree in Business Administration, or a discipline relevant to the Statement of Work (SOW) for this effort to include, but not limited to, Business Management, Management Science, Program Management, Purchasing Management, Procurement/Acquisitions, Contracts Management, or Supply Chain and Logistics Management.

4.5.11 Project Manager (BLS/SOC 13-1198)

Level:
Senior (Key) (Secret)

Functional duties: The Project Manager Applies project principles to investigate, analyze, plan, design, develop, implement, test, or evaluate military weapon systems. Reviews and prepares project and technical analyses, reports, change proposals, and other technical documentation. Applies project experience to perform functions such as system integration, configuration management, quality assurance testing, or acquisition and resource management. Analyzes designs, develops, implements, tests, or evaluates automated data processing software related to engineering or functional requirements of military weapon systems, associated support systems, or management information systems. As the project manager for the contracted effort, ensure project procedures and controls are followed, manage manning and staffing project efforts, and lead problem resolution efforts. Interfaces with system or program Contractors, vendors, and Government representatives regarding the technical aspects of the programs/projects. The Project Manger assists front-end team organization in providing methodology and general project approach concepts, interim and final project reviews, overall management of cost, schedule, and performance of all projects/tasks. Reviews and prepares project and technical analyses, reports, change proposals, and other technical documentation.

4.5.11.1 Senior Required Experience: At least ten (10) years of extensive experience performing the functional duties to be performed for this position. Senior Required Education: Relevant degrees: Bachelor of Science (BS) or Bachelor of Arts (BA) degree in Business Administration, or a discipline relevant to the Statement of Work (SOW) for this effort to include, but not limited to, Business Management, Management Science, Program Management, Purchasing Management, Procurement/Acquisitions, Contracts Management, or Supply Chain and Logistics Management.

4.5.12 Acquisition Logistics Manager (BLS/SOC 13-1111)

Levels:
Journeyman (Non-Key) (Secret)
Senior (Key) (Secret)

Functional duties: Duties include support of all Life Cycle Logistics support elements. Person provides technical and management discipline associated with the design, development, test, production; fielding, sustainment and improvement/modification of cost effective systems that achieve the user's readiness and sustainability requirements. Provides acquisition and /or operational advice and guidance to Journeyman and Junior logisticians. Plans, schedules, coordinate and estimates major complex tasks. Directs activities of all acquisition and/or operational logistics support/maintenance engineering disciplines. Performs expert support for maintenance planning, technical data, manpower /personnel, computer resources support, supply support, facilities, support equipment, training and support, and packaging, handling, storage and transportation.

4.5.12.1 Journeyman Required Experience: At least three (3) to ten (10) years in Acquisition Logistics Support /Maintenance Engineering, as well as operations or maintenance of systems in the field. Journeyman Required Education: Relevant degrees: BS or BA degree in Supply Chain and Logistics Management, or a discipline relevant to the Statement of Work (SOW) for this effort to include, but not limited to, Business Management, Management Science, Program Management, Purchasing Management, Procurement/Acquisitions, Contracts Management, or Supply Chain and Logistics Management.

4.5.12.2 Senior Required Experience: At least ten (10) years of experience performing acquisition and/or operational logistics support/maintenance engineering, and Program Management. Senior Required Education: Relevant degrees: BS or BA degree in Supply Chain and Logistics Management, or a discipline relevant to the Statement of Work (SOW) for this effort to include, but not limited to, Business Management, Management Science, Program Management, Purchasing Management, Procurement/Acquisitions, Contracts Management, or Supply Chain and Logistics Management.

4.5.13 Operations Logistics Manager (BLS/SOC 11-1021)

Level:
Senior (Key) (Secret)

Functional duties: Performs various tasks related to the development, operation, evaluation, and improvement of weapon systems supportability and/or maintainability programs and information systems. Works on logistics and maintainability programs, with logistics and maintenance control organizations, on issues such as: technical evaluation and identification of weapons systems logistics requirements and resources; development of logistics support and maintainability

programs or plans; systems acquisition requirements analysis; budgetary or financial analysis and control; life cycle cost analysis and control; weapons systems hardware and software standardization and compatibility; Integrated Logistics Support (ILS)/Reliability & Maintainability (R&M) program test and evaluation planning and execution; and, ILS/R&M program management analysis. Collects, compiles, analyzes, investigates, researches, or applies logistics, maintenance, acquisition, or financial data and information.

4.5.13.1 Senior Required Experience: At least ten (10) years of extensive experience in performing the functional duties to be performed for this position. Senior Required Education: Relevant degrees: BS or BA degree in Supply Chain and Logistics Management, Operations Management, Business Management, Management Science, Program Management, Purchasing Management, Procurement/Acquisitions, Contracts Management, or Supply Chain and Logistics Management.

4.5.14 Logistics Manager (BLS/SOC 11-1021)

Level:
Senior (Key) (Secret)

Functional duties: Support SMEs for ILS areas of Avionics, Power and Propulsion, and maintenance planning. Performs various tasks related to the development, operation, evaluation, and improvement of weapon systems supportability and/or maintainability programs and information systems. Works on logistics and maintainability programs and with logistics and maintenance control organizations on issues such as: technical evaluation and identification of weapons systems logistics requirements and resources; development of logistics support and maintainability programs or plans; systems acquisition requirements analysis; budgetary or financial analysis and control; life cycle cost analysis and control; weapons systems hardware and software standardization and compatibility; Integrated Logistics Support (ILS)/Reliability & Maintainability (R&M) program test and evaluation planning and execution; and, ILS/R&M program management analysis. Collects, compiles, analyzes, investigates, researches, or applies logistics, maintenance, acquisition, or financial data and information. Develops, modifies, prepares, or validates documentation in relation to automated logistics or maintenance data reporting systems, and management information systems.

4.5.14.1 Senior Required Experience: At least ten (10) years of extensive experience in performing the functional duties to be performed for this position. Senior Required Education: Relevant degrees: BS or BA degree in Supply Chain and Logistics Management, Operations Management, Business Management, Management Science, Program Management, Purchasing Management, Procurement/Acquisitions, Contracts Management, or Supply Chain and Logistics Management.

4.5.15 Logistics Specialist (BLS/SOC 13-1081)

Levels:
Journeyman (Non-Key) (Secret)
Senior (Key) (Secret)

Functional duties: Performs various tasks related to the development, operation, evaluation, and improvement of weapon systems supportability and/or maintainability programs and information systems. Works on logistics and maintainability programs and with logistics and maintenance control organizations on issues such as: technical evaluation and identification of weapons systems logistics requirements and resources; development of logistics support and maintainability programs or plans; systems acquisition requirements analysis; budgetary or financial analysis and control; life cycle cost analysis and control; weapons systems hardware and software standardization and compatibility; Integrated Logistics Support (ILS)/Reliability & Maintainability (R&M) program test and evaluation planning and execution; and, ILS/R&M program management analysis. Collects, compiles, analyzes, investigates, researches, or applies logistics, maintenance, acquisition, or financial data and information. Develops, modifies, prepares, or validates documentation in relation to automated logistics or maintenance data reporting systems, and management information systems.

4.5.15.1 Journeyman Required Experience: At least three (3) to ten (10) years of experience performing the functional duties to be performed for this position. Journeyman Required Education: Relevant degrees: Relevant degrees: BS or BA degree in Supply Chain and Logistics Management, Operations Management, Business Management, Management Science, Program Management, Purchasing Management, Procurement/Acquisitions, Contracts Management, or Supply Chain and Logistics Management.

4.5.15.2 Senior Required Experience: At least ten (10) years of extensive experience performing the functional duties to be performed for this position. Senior Required Education: Relevant degrees: BS or BA degree in Supply Chain and Logistics Management, Operations Management, Business Management, Management Science, Program Management, Purchasing Management, Procurement/Acquisitions, Contracts Management, or Supply Chain and Logistics Management.

4.5.16 Logistics Analyst (BLS/SOC 13-1111)

Levels:
Journeyman (Non-Key) (Secret)
Senior (Key) (Secret)

4.5.16.1 Journeyman functional duties**:** Provides support to Senior Logistics Manager and correspondingly to the Program Office APML/Deputies and LEMs

across the full spectrum of ILS elements. Support SMEs for respective organizations, including Individual Material Readiness List (IMRL), Support Equipment (SE), Tech Data, etc. Performs various tasks related to the development, operation, evaluation, and improvement of weapon systems supportability and/or maintainability programs and information systems. Works on logistics and maintainability programs and with logistics and maintenance control organizations on issues such as: technical evaluation and identification of weapons systems logistics requirements and resources; development of logistics support and maintainability programs or plans; systems acquisition requirements analysis; budgetary or financial analysis and control; life cycle cost analysis and control; weapons systems hardware and software standardization and compatibility; Integrated Logistics Support (ILS)/Reliability & Maintainability (R&M) program test and evaluation planning and execution; and, ILS/R&M program management analysis. Collects, compiles, analyzes, investigates, researches, or applies logistics, maintenance, acquisition, or financial data and information. Develops, modifies, prepares, or validates documentation in relation to automated logistics or maintenance data reporting systems, and management information systems.

Journeyman Required Experience: At least six (6) years of experience performing operational logistics support/maintenance engineering or Demonstrated Master Logistician (DML) and three (3) of which must provide recent experience in acquisition logistics/maintenance engineering; technical analysis of operational ILS requirements; and specific experience in operational logistics planning. Preferred experience or education demonstrating ability to perform ILS studies, analysis, and evaluations in support of DoD weapons systems/equipment. Journeyman Required Education: Relevant degrees: BS or BA degree in Business Analysis, or a discipline relevant to the Statement of Work (SOW) for this effort to include, but not limited to, Supply Chain and Logistics Management, Business Management, Management Science, Operations Management, Purchasing Management, or Logistics Management; or a High School diploma or General Education Development High School Equivalency and five (5) additional years of acquisition or operational logistics management experience may be substituted for a BS or BA degree with six (6) years of experience. An MS or MA degree may be substituted for two (2) years of operations logistics experience.

4.5.16.2 Senior functional duties: Provides guidance and supervision for logistics analysts supporting aircraft, weapon systems, training, or SE programs Conducts logistics, supportability, reliability, maintainability, and operational analyses and provides recommendations for tailoring, optimizing, and establishing logistics element requirements in support of aircraft, weapon systems, training, or SE programs. Provides recommendations for changes to site support including maintenance planning, phased support, manpower and personnel requirements, initial provisioning and material support, support equipment, training and training devices, technical data packaging, handling, storage and transportation, and facilities. Provides recommendations for the development of Life Cycle Cost (LCC) and Total Ownership Cost (TOC) Management Plans. Provides

recommendations for the review and development of Maintenance Plans/Logistics Support Analysis (MP/LSA) records, maintenance tasks and Level of Repair (LOR) Analysis recommendations.

Senior Required Experience: At least ten (10) years of experience performing acquisition Level of Repair Analysis (LORA), Maintenance Planning, Logistics Support/Supportability Analysis, Operational Availability analysis, or resource requirements analysis related to in-service support of DoD weapons systems. Life Cycle Costing (LCC) experience desired. At least four (4) of the ten (10) years' experience supervising and directing logistics analysts in the performance of comprehensive analyses across the spectrum of ILS elements, during a job assignment in an Acquisition Command or supporting an acquisition command.
Senior Required Education: Relevant degrees: BS or BA degree in Business Analysis, or a discipline relevant to the Statement of Work (SOW) for this effort to include, but not limited to, Supply Chain and Logistics Management, Business Management, Management Science, Operations Management, Purchasing Management, or Logistics Management.

4.5.17 Logistics Engineer (BLS/SOC 17-2199)

Level:
Senior (Key) (Secret)

Functional duties: Directs and coordinates program activities designed to provide subcontractors, management, and customers with logistics technology that ensures effective and economical support concerned for manufacturing or servicing of products, systems, or equipment. Analyzes contractual commitments, customer specifications, design changes, and other data to plan and develop logistic program activities from conceptual stage through life cycle of product.

4.5.17.1 Senior Required Experience: At least ten (10) years of experience in an engineering or logistics position, three (3) of which must be directly related to Naval systems. Demonstrated knowledge in area of engineering or logistics expertise.
Senior Required Education: Relevant degrees: Master of Science (MS) or Master of Arts (MA) degree in engineering, logistics, physics, mathematics, or science.
Allowable Substitution: A BS or BA degree in engineering, logistics, physics, mathematics, or science with 14 years of experience in an engineering or logistics position may be substituted for the MS or MA degree with 10 years of experience.

4.5.18 Logistician (BLS/SOC 13-1081)

Levels:
Junior (Non-Key) (Secret)
Journeyman (Non-Key) (Secret)
Senior (Key) (Secret)

Functional duties: Performs various tasks related to the development, operation, evaluation, and improvement of weapon systems supportability and/or maintainability programs and information systems. Works on logistics and maintainability programs and with logistics and maintenance control organizations on issues such as: technical evaluation and identification of weapons systems logistics requirements and resources; development of logistics support and maintainability programs or plans; systems acquisition requirements analysis; budgetary or financial analysis and control; life cycle cost analysis and control; weapons systems hardware and software standardization and compatibility; Integrated Logistics Support (ILS)/Reliability & Maintainability (R&M) program test and evaluation planning and execution; and, ILS/R&M program management analysis. Collects, compiles, analyzes, investigates, researches, or applies logistics, maintenance, acquisition, or financial data and information. Develops, modifies, prepares, or validates documentation in relation to automated logistics or maintenance data reporting systems, and management information systems.

4.5.18.1 Junior Required Experience: At least one (1) to three (3) years of experience in defense life-cycle (acquisition) logistics support of electronic systems, to include logistics principles, practices, and processes. Junior Required Education: BS or BA degree in Supply Chain and Logistics Management, or a discipline relevant to the Statement of Work (SOW) for this effort to include, but not limited to, Business Management, Management Science, Program Management, Business Administration, Purchasing Management, or Logistics Management. Allowable Substitution: A High School diploma or General Education Development High School Equivalency and two (2) additional years of recent experience working in direct support of Defense life-cycle logistics may be substituted for a BS or BA degree with three (3) years of experience.

4.5.18.2 Journeyman Required Experience: At least six (6) years of experience in defense life-cycle (acquisition) logistics. Journeyman Required Education: BS or BA degree in Supply Chain and Logistics Management, Operations Management, Business Management, Management Science, Program Management, Purchasing Management, Procurement/Acquisitions, Contracts Management, or Supply Chain and Logistics Management. Allowable Substitution: A High School diploma or General Education Development High School Equivalency and eight (8) years of recent experience working in direct support of Defense life-cycle logistics may be substituted for a BS or BA degree with six (6) years of experience.

4.5.18.3 Senior Required Experience: At least ten (10) years of extensive experience in defense life-cycle (acquisition) logistics. Senior Required Education: BS or BA degree in Supply Chain and Logistics Management, Operations Management, Business Management, Management Science, Program Management, Purchasing Management, Procurement/Acquisitions, Contracts Management, or Supply Chain and Logistics Management. Allowable Substitution: A High School diploma or General Education Development High School

Equivalency and fifteen (15) years of recent experience working in direct support of Defense life-cycle logistics may be substituted for a BS or BA degree with ten (10) years of experience.

4.5.19 Computer Operator (BLS/SOC 43-2099)

Levels:
Junior (Non-Key) (Secret)
Journeyman (Non-Key) (Secret)
Senior (Key) (Secret)

Functional duties: Monitor and control electronic computer and peripheral electronic data processing equipment to process business, scientific, engineering, and other data according to operating instructions. Monitor and respond to operating and error messages. May enter commands at a computer terminal and set controls on computer and peripheral devices.

4.5.19.1 Junior level functional duties: The Computer Operator Junior works under close personal supervision and is provided detailed written or oral guidance before and during assignments. As instructed, this worker resolves common operating problems and may serve as an assistant operator working under close supervision or performing a portion of a more senior operator's work. This worker may processes scheduled routines that present few difficult operating problems (e.g., infrequent or easily resolved error conditions). In response to computer output instructions or error conditions, this worker applies standard operating or corrective procedure, refers problems that do not respond to preplanned procedure, and may serve as an assistant operator, working under general supervision. Junior Required Experience: At least one (1) to three (3) years of experience as a paid computer operator. Junior Required Education: High School diploma, General Education Development High School Equivalency, or vocational training in operating computers.

4.5.19.2 Journeyman functional duties: The Computer Operator Journeyman adapts to a variety of nonstandard problems that require extensive operator intervention (e.g. frequent introduction of new programs, applications, or procedures). In response to computer output instructions or error conditions, this worker chooses or devises a course of action from among several alternatives and alters or deviates from standard procedures if standard procedures do not provide a solution (e.g. reassigning equipment in order to work around faulty equipment or transfer channels); then refers problems if necessary. Typically, completed work is submitted to users without supervisory review. Journeyman Required Experience: At least three five (5) years of experience as a paid computer operator. Journeyman Required Education: High School diploma, General Education Development High School Equivalency, or vocational training in operating computers.

4.5.19.3 Senior functional duties: The Computer Operator Senior resolves a variety of difficult operating problems (e.g. making unusual equipment connections and rarely used equipment and channel configurations to direct processing through or around problems in equipment, circuits, or channels or reviewing test run requirements and developing unusual system configurations that will allow test programs to process without interfering with ongoing job requirements). In response to computer output instructions and error conditions or to avoid loss of information or to conserve computer time, operator deviates from standard procedures. Such actions may materially alter the computer unit's production plans. This operator may spend considerable time away from the control station providing technical assistance to lower level operators and assisting programmers, systems analysts, and subject matter specialists with resolution of problems. Senior Required Experience: At least ten (10) years of experience as a paid computer operator. Senior Required Education: High School diploma, General Education Development High School Equivalency, or vocational training in operating computers.

4.5.20 Data Entry Operator (BLS/SOC 43-9021)

Levels:
Junior (Non-Key) (Secret)
Journeyman (Non-Key) (Secret)

Functional duties: This position operates keyboard-controlled data entry devices such as a computer, key-operated magnetic tape, or disc encoder to transcribe data into a format suitable for computer processing. Job task requires skill in operating an alphanumeric keyboard, and an understanding of transcribing procedures and relevant data entry equipment. Positions are classified into levels based on the following definitions:

4.5.20.1 Junior functional duties: This position works under close supervision and follows specific procedures or detailed instructions. The Data Entry Operator I works from various standardized source documents that have been coded and require little or no selecting, coding or interpreting of data. Problems such as erroneous items and codes, or missing information are resolved at the supervisory level. Work is routine and repetitive.

Junior Required Experience: At least one (1) to three (3) years of performing data entry duties on electronic databases. Junior Required Education: High School diploma, General Education Development High School Equivalency, or vocational training in data entry.

4.5.20.2 Journeyman functional duties: This position requires the application of experience and judgment in selecting procedures to be followed, and searching for interpreting, selecting, or coding items to be entered from a variety of document sources. The Data Entry Operator II may occasionally perform routine work as

described for Data Entry Operator I. Excluded are operators above Level II using the key entry controls to access, read, and evaluate the substance of specific records to take substantive actions, or to make entices requiring a similar level of knowledge.

Journeyman Required Experience: At least three (3) to five (5) years of performing data entry duties on electronic databases. Journeyman Required Education: High School diploma, General Education Development High School Equivalency, or vocational training in data entry.

4.5.21 Word Processor (Clerk Typist) (BLS/SOC 43-9022)

Level:
Junior (Non-Key) (Secret)
Journeyman (Non-Key) (Secret)

Functional duties: This position uses automated systems, such as word processing equipment, personal computers, or work stations linked to a larger computer or local area network, to produce a variety of documents, such as correspondence, memos, publications, forms, reports, tables and graphs. The Word Processor uses one or more word processing software packages; may also perform routine clerical tasks, such as operating copiers, filing, answering telephones, ad sorting and distributing mail.

4.5.21.1 Junior functional duties: This position produces a variety of standard documents, such as correspondence, form letters, reports, tables and other printed materials. Work requires skill in typing; a knowledge of grammar, punctuation and spelling; and ability to use reference guides and equipment manuals. The Word Processor I performs familiar, routine assignments following standard procedures, seeks further instructions for assignments requiring deviations from established procedures.

Junior Required Experience: At least one (1) to three (3) years of clerical, secretarial, or office work experience; ability to type at least 40 words per minute. Junior Required Education: High School diploma or General Education Development High School Equivalency.

4.5.21.2 Journeyman functional duties: This position uses knowledge of varied and advanced functions of one software type, knowledge of varied functions of different types of software, or knowledge of specialized or technical terminology to perform such typical duties as:

a. Editing and reformatting written or electronic drafts. Examples include: correcting function codes; adjusting spacing formatting and standardizing headings, margins, and indentations.

b. Transcribing scientific reports, lab analysis, legal proceedings, or similar material from voice tapes or handwritten drafts. Work requires knowledge of specialized, technical, or scientific terminology. Work requires familiarity with office terminology and practices. Incumbent corrects copy, and questions originator of document concerning missing information, improper formatting, or discrepancies in instructions. Supervisor sets priorities and deadlines on continuing assignments, furnishes general instructions for recurring work and provides specific instructions for new or unique projects, may lead lower level word processors.

Journeyman Required Experience: At least three (3) to five (5) years of clerical, secretarial, or office work experience; ability to type at least 40 words per minute. May lead lower level word processors. Journeyman Required Education: High School diploma or General Education Development High School Equivalency.

4.5.22 Administrative Assistant (BLS 43-9199; SOC 43-9024)

Levels:
Junior (Non-Key) (Secret)
Journeyman (Non-Key) (Secret)

Functional duties: In addition to secretarial duties (filing, taking phone calls, scheduling appointments, making travel arrangements), this position will provide administrative support to executive staff with office management responsibilities to include budgeting, personnel records and payroll. The Administrative Assistant may be required to work independently on projects requiring research and preparation of briefing charts and other presentation materials.

4.5.22.1 Junior Required Experience: from zero (0) to three (3) years of experience performing the functional duties to be performed for this position. Junior Required Education: High School diploma or General Education Development High School Equivalency.

4.5.22.2 Journeyman Required Experience: At least three (3) to five (5) years of experience performing the functional duties to be performed for this position. Journeyman Required Education: High School diploma or General Education Development High School Equivalency.

4.5.23 Drafter / CAD Operator (BLS/SOC 17-3019)

Level:
Journeyman (Non-Key) (Secret)

Functional duties: This operator prepares complete sets of complex drawings or computer models that include multiple views, detail drawings, and assembly drawings. Drawings or models include complex design features that shall require

considerable drafting skill to visualize and portray. Assignments regularly require the use of mathematical formulas to draw land contours or to compute weights, center of gravity, load capacities, dimensions, quantities of material, etc. The Draft/CAD Operator works from sketches, computer models, and verbal information supplied by an engineer, architect, or designer to determine the most appropriate views, detail drawings, and supplementary information needed to complete assignments. This operator selects required information from computer programs, and internet sites, precedents, manufacturers' catalogs, and technical guides. This operator independently resolves most of the problems encountered. Supervisor or design originator may suggest methods of approach or provide advice on unusually difficult problems. Typical assignments include:

a. Prepares complete sets of drawings of test equipment to be manufactured from layouts, models, or sketches. Several cross-sectional and subassembly drawings are required. From information supplied by the design originator and from technical handbooks and manuals, this operator describes dimensions, tolerances, fits, fabrication techniques, and standard parts to use in manufacturing the equipment.
b. From electronic schematics, information as to maximum size, and manuals giving dimensions of standard parts, determines the arrangement and prepares drawing of printed circuit boards.
c. From precedents, drafting standards, and established practices, prepares final construction drawings for floodgates, navigation locks, dams, bridges, culverts, levees, channel excavations, dikes and berms, prepares boring profiles, typical cross-sections, and land profiles; and delineates related topographical details as required.
d. Prepares final drawings for street paving and widening or for water and sewer lines having complex trunk lines; reduces field notes and calculates true grades. From engineering designs, lays out plan, profile and detail appurtenances required; and notifies supervisor of conflicting details in design.

4.5.23.1 Journeyman Required Experience: At least five (5) years of experience developing complex drawing sets with multiple views, detail drawings, assembly drawings and complex design features. Journeyman Required Education: High School diploma or GED. Allowable Substitution: Associate's Degree from an accredited college or university in drafting or engineering technology, with three (3) years of experience developing complex drawing sets with multiple views, detail drawings, assembly drawings and complex design features.

4.5.24 Engineering Technician (BLS/SOC 17-3098)

Levels:
Junior (Non-Key) (Secret)
Journeyman (Non-Key) (Secret)
Senior (Key) (Secret)

4.5.24.1 Junior functional duties: Performs standardized or prescribed assignments involving a sequence of related operations, follows standard work methods on recurring assignments but receives explicit instructions on unfamiliar assignments. Technical adequacy of routine work is reviewed on completion; non-routine work may be reviewed in progress. This technician performs at this level, one or a combination of such typical duties as:

a. Following specific instructions, assembles or constructs simple or standard equipment or parts, servicing or repairing simple instruments or equipment or systems;
b. Conducting a variety of tests using established methods, preparing test specimens, adjusting and operating equipment, recording test data, and pointing out deviations resulting from equipment malfunction or observational errors;
c. Extracting engineering data from various prescribed but non-standardized sources, processing the data following well-defined methods including elementary algebra and geometry, and presenting the data in prescribed form.

Junior Required Experience: At least three (3) years of experience applying engineering principles to investigate, analyze, plan, design, develop, or evaluate military weapon systems. Junior Required Education: High School diploma or GED and either: (1) completion of a technical school, trade school, or advanced armed services technical school in the fields of electricity, electronics, avionics, mechanics, armaments/ordnance, or engineering technology; or (2) completion of at least 30 semester hours of course studies at an accredited college or university in an engineering, physics or related scientific discipline.

4.5.24.2 Journeyman functional duties: Performs assignments that are not completely standardized or prescribed, selects or adapts standard procedures or equipment, using fully applicable precedents, receives initial instructions, equipment requirements, and advice from supervisor or engineer as needed, performs recurring work independently. Work is reviewed for technical adequacy or conformity with instructions. This technician performs at this level has one or a combination of such typical duties as:

1) Constructing components, subunits, or simple models or adapts standard equipment; may troubleshoot and correct malfunctions.
2) Following specific layout and scientific diagrams to construct and package simple devices and subunits of equipment or systems.
3) Conducting various tests or experiments which may require minor modifications in test setups or procedures as well as subjective judgments in measurement, selecting, preparing, and operating standard test equipment and records test data.

4) Extracting and compiling a variety of engineering data from field notes, manuals, lab reports, etc., processing data, identifying errors or inconsistencies, selecting methods of data presentation.
5) Assisting in design modification by compiling data related to design, specifications, and materials that are pertinent to specific items of equipment or component parts; developing information concerning previous operational failures and modifications, and using judgment and initiative to recognize inconsistencies or gaps in data and seek sources to clarify information.

Journeyman Required Experience: At least six (6) to eight (8) years of extensive experience applying engineering principles to investigate, analyze, plan, design, develop, or evaluate military weapon systems. Journeyman Required Education: High School diploma or GED and either: (1) completion of a technical school, trade school, or advanced armed services technical school in the fields of electricity, electronics, avionics, mechanics, armaments/ordnance, or engineering technology; or (2) completion of at least 30 semester hours of course studies at an accredited college or university in engineering, physics, or related scientific field.

4.24.3 Senior functional duties**:** Performs non-routine assignments of substantial variety and complexity, using operational precedents that are not fully applicable, such assignments that are typically parts of broader assignments, are screened to eliminate unusual design problems. This incumbent may plan such assignments. This technician receives technical advice from supervisor or engineer. Work is reviewed for technical adequacy (or conformity with instructions). This position may be assisted by lower level technicians and have frequent contact with professionals and others within the establishment, and performs one or a combination of such typical duties as:

a. Developing or reviewing or trouble shooting designs or systems by extracting and analyzing a variety of engineering data, applying conventional engineering practices to develop, prepare, or recommend schematics, designs, specifications, electrical drawings and parts lists. (Examples of designs include: detailed circuit diagrams; hardware fittings or test equipment involving a variety of mechanisms; conventional piping systems; and building site layouts).
b. Conducting tests or experiments requiring selection and adaptation or modification of a wide variety of critical test equipment and test procedures, preparing and operating equipment, recording data, measuring and recording problems of significant complexity that sometimes require resolution at a higher level, and analyzes data and prepares test reports.
c. Applying methods outlined by others to limited segments of research and development projects, constructing experimental or prototype models to meet engineering requirements; conducts tests or experiments and redesigns as necessary and recording and evaluating data and reports findings.

Senior Required Experience: At least ten (10) years of extensive experience applying engineering principles to investigate, analyze, plan, design, develop, or evaluate military weapon systems. Senior Required Education: High School diploma or GED and either: (1) completion of a technical school, trade school, or advanced armed services technical school in the fields of electricity, electronics, avionics, mechanics, armaments/ordnance, or engineering technology; or (2) completion of at least 30 semester hours of course studies at an accredited college or university in engineering, physics, or related scientific field.

4.5.25 Industrial Engineering Technician (BLS/SOC 17-3026)

Levels:
Journeyman (Non-Key) (Secret)
Senior (Key) (Secret)

Functional duties: Apply engineering theory and principles to problems of industrial layout or manufacturing production, usually under the direction of engineering staff. May perform time and motion studies on worker operations in a variety of industries for purposes such as establishing standard production rates or improving efficiency.

4.5.25.1 Journeyman Required Experience: At least six (6) to eight (8) years of experience performing the functional duties to be performed for this position. Journeyman Required Education: High School diploma or GED and either: (1) completion of a technical school, trade school, or advanced armed services technical school in the fields of electricity, electronics, avionics, mechanics, armaments/ordnance, or engineering technology; or (2) completion of at least 30 semester hours of course studies at an accredited college or university in engineering, physics, or related scientific field.

4.5.25.2 Senior Required Experience: At least ten (10) years of experience performing the functional duties to be performed for this position. Senior Required Education: High School diploma or GED and either: (1) completion of a technical school, trade school, or advanced armed services technical school in the fields of electricity, electronics, avionics, mechanics, armaments/ordnance, or engineering technology; or (2) completion of at least 30 semester hours of course studies at an accredited college or university in engineering, physics, or related scientific field.

4.5.26 Program Management Analyst (BLS/SOC 13-1111)

Level:
Journeyman (Non-Key) (Secret)

Functional duties: Conduct organizational studies and evaluations, design systems and procedures, conduct work simplification and measurement studies, and prepare

operations and procedures manuals to assist management in operating more efficiently and effectively. Includes program analysts and management consultants.

4.5.26.1 Journeyman Required Experience: At least three (3) to ten (10) years of extensive experience in performing the functional duties to be performed for this position. Journeyman Required Education: Relevant degrees: BS or BA degree in Operations Management, Business Management, Management Science, Program Management, Purchasing Management, Procurement/Acquisitions, Contracts Management, or Supply Chain and Logistics Management.

4.5.27 Operations Research Analyst (BLS/SOC 15-2031)

Level:
Junior (Non-Key) (Secret)
Journeyman (Non-Key) (Secret)

Functional duties: Formulate and apply mathematical modeling and other optimizing methods to develop and interpret information that assists management with decision making, policy formulation, or other managerial functions. May collect and analyze data and develop decision support software, services, or products. May develop and supply optimal time, cost, or logistics networks for program evaluation, review, or implementation

4.5.27.1 Junior Required Experience: At least zero (0) to three (3) years of experience in performing the functional duties to be performed for this position. Junior Required Education: Relevant degrees: BS or BA degree in Supply Chain and Logistics Management, Operations Management, Business Management, Management Science, Program Management, Purchasing Management, Procurement/Acquisitions, Contracts Management, or Supply Chain and Logistics Management.

4.5.27.2 Journeyman Required Experience: At least three (3) to ten (10) years of experience performing the functional duties to be performed for this position. Journeyman Required Education: Relevant degrees: BS or BA degree in Supply Chain and Logistics Management, Operations Management, Business Management, Management Science, Program Management, Purchasing Management, Procurement/Acquisitions, Contracts Management, or Supply Chain and Logistics Management.

4.5.28 Software Developer (BLS/SOC 15-1256)

Level:
Senior (Key) (Secret)

Functional duties: Research, design, and develop computer and network software or specialized utility programs. Analyze user needs and develop software solutions,

applying principles and techniques of computer science, engineering, and mathematical analysis. Update software or enhance existing software capabilities. May work with computer hardware engineers to integrate hardware and software systems, develop specifications, and performance requirements. May and maintain databases within an application area, working individually or coordinating database development as part of a team.

4.5.28.1 Senior Required Experience: At least ten (10) years of extensive experience in performing the functional duties to be performed for this position. Senior Required Education: Relevant degrees: A Bachelor's degree from an accredited college or university in computer science, programming, or related field, with no additional experience required.