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SECTION C - STATEMENT OF WORK

C.1 Introduction

The Immigration and Naturalization Service's (INS) mission requires computer systems with real-time responsiveness and minimal downtime. System availability and response time can make the difference between mission success or failure and/or loss of life. Since 1985, the INS has acquired computer facilities operations and hardware maintenance support through two different contractors with separate areas of responsibility. The INS has determined that critical mission functions would be best supported through a single contract that would consolidate these areas of responsibility under one contractor and provide seamless Distributed Systems Management which provides user support, operations and technical support, and maintenance services across the organization.

Services provided under this contract are considered critical and, as such, the INS anticipates encouraging contractor excellence with the use of performance incentives which are explained in Section E.

C.1.1 Scope of the Work

The purpose of the Field Operations Support and Hardware Maintenance (FOS/HM) contract is to provide help desk and user support services, operations and technical support services, and maintenance services for INS Federal Information Processing (FIP) resources worldwide. The INS requires end-to-end support across the INS' information technology (IT) infrastructure that includes wide area networks (WANs), local area networks (LANs), communications equipment, mainframes, minicomputers and other mid-tier (client server) platforms, workstations and associated peripherals.

The FOS/HM contract is also available for use by other entities within the Department of Justice (DOJ) called Justice-wide Acquisition Contract (JWAC) and to other agencies, a Government-Wide Acquisition Contract (GWAC). Over the past several years, there has been an emphasis to meet individual component requirements in a broader context that addresses information sharing and acquisition opportunities across organizations. This contract will serve to provide the law enforcement community needs, as well as the needs of other Departmental entities and agencies.

C.1.2 INS Mission and Organization

The purpose and responsibilities of the INS are established by the Immigration and Nationality Act, as amended. The INS is responsible for carrying out a policy that provides for selective immigration and for controlled entries and stays of non-immigrant aliens. The INS performs a wide range of investigative, adjudication, enforcement, and administrative activities in support of its legislated mission. The INS business processes support its dual mission, which focuses on serving aliens by granting benefits defined by immigration laws and by apprehending and prosecuting aliens in violation of those laws.

The INS is a decentralized organization consisting of a Headquarters component in Washington, D.C. and field offices located worldwide that perform enforcement, benefit-granting, and associated support activities. The business workload is distributed among field offices that include the following:

- 3 Operating Regions
- 4 Regional Administrative Centers
- 4 Regional Service Centers

- 33 District Offices
- 21 Border Patrol Sectors
- 8 Asylum Offices
- 3 International District Offices
- 19 International Sub-Offices
- 13 Pre-Inspection Stations

In addition to these field offices, INS also includes land, sea, and air ports of entry (POE), Border Patrol Stations, Files Control Offices (FCOs), and Sector Offices. INS foreign and domestic locations are depicted in Section J, Attachment 1.

The Office of Information Resources Management (OIRM), located at INS Headquarters, is responsible for planning, developing, implementing, deploying, and maintaining cost-effective, state-of-the-art technological solutions in support of INS business processes, with the goal of optimizing mission performance. OIRM consists of two divisions: the Systems Integration Division (SID) and the Data Systems Division (DSD).

- The SID provides systems policy and planning, IT acquisition management, hardware and software deployment, and user services and support, as well as automated data processing (ADP) operations support. SID is comprised of six branches and one project staff organization as follows:

  - The End User Computing Branch is responsible for installing, maintaining, and providing INS infrastructure end user support. The branch is responsible for establishing policy, standards, and operating guidelines for the end-user technology environment, including LANs, associated hardware and software, and both on-site and distributed systems; supporting, servicing, and administering INS' electronic mail system; providing as-needed maintenance of the ADP equipment; evaluating and recommending workable solutions for infrastructure hardware and software; and assisting in customizing commercial off-the-shelf (COTS) software. The End User Computing Branch currently houses a centralized help desk known as the Distributed Systems Management Center (DSMC) where all user requests for problem resolution and maintenance are coordinated.

  - The Data Communications Branch provides for all data communications needs for the INS enterprise, which is located in the Continental United States (CONUS), Alaska, Hawaii, foreign offices, territories, and trusts. The branch is responsible for conducting research on emerging technologies; establishing and publishing policy and operating guidelines on communications standards, protocols, and interfaces; and configuring, installing, maintaining, monitoring, and managing performance of LAN/WAN facilities and resources on workstations and hosts throughout INS.

  - The User Services Branch is responsible for the INS Developers' Laboratory; User Resource Center; and LAN Academy as well as the planning, development, and delivery of training on automated systems and technologies used in the support of the INS mission.

  - The Acquisition Management Branch (AMB) is responsible for providing acquisition management and support for information technology and related acquisitions accomplished in support of INS mission and administrative requirements. Support provided by AMB includes: acquisition planning, acquisition management, and implementation; contract

administration and management; and liaison to internal and external technical, functional, and procurement activities.

- The ADP Operations Branch is responsible for providing a secure, effective, responsive environment for development, implementation, processing, and production control of mission critical and decision support information systems. The branch provides facilities operations, production control, database management, and systems software services. The branch has a major role in providing Operations Center support. The Operations Center is organizationally split between four separate groups and houses various types of hardware and communications equipment throughout the center. A major portion of the equipment belongs to the ADP Operations Branch which has mainframe components, peripherals, and a heavily used printer output area. The Operations Center also houses equipment associated with the Network Communications Center, Data Services Branch, and User Services Branch.

- The Systems Policy and Planning Branch is responsible for providing strategic and tactical planning for INS automated systems; OIRM policies, procedures, and standards; the OIRM quality management program; and the management of OIRM financial and human resources.

- The Infrastructure Project Staff is responsible for managing the INS infrastructure deployment project, consisting of the acquisition and deployment of a wide range of ADP and related information technologies including wide area communications and the end-user tier technology environment in support of INS' mission. Technical Infrastructure Project (TIP) is providing standard office automation platforms to all INS locations.

- The DSD is responsible for the development and maintenance of administrative and mission systems and databases, including benefit systems, enforcement systems, management systems, and corporate systems. The DSD Benefits Systems Branch consists of the Examinations Systems, Inspections Systems, and Asylum/International Systems sections. The DSD Enforcement Systems Branch includes the Enforcement Systems, Biometrics Identification Systems, Radio Systems, and Electronic Systems sections. The DSD Management Systems Branch includes the Administrative Systems, Financial Systems, and Office Systems sections. The DSD Corporate Systems Branch is comprised of the Data Repository/Records Systems, Interagency and External Access Systems, and Corporate Database sections.

Section J, Attachment 2, provides organization charts for the INS and OIRM.

C.1.3 Current IT Environment

The INS is undertaking a systems modernization program to improve the integration and accessibility of information needed by the mission and administrative activities of the INS. The INS is transitioning its present information systems and associated IT resources from a centralized mainframe-based architecture to a distributed computing infrastructure based on the principles of open systems architecture and systems interoperability. The INS is implementing client-server based platforms that provide transparent access to data anywhere in the organization using a network of microcomputers, minicomputers, and mainframe host services.

Under TIP, OIRM is equipping the INS with a common, standard, office automation platform that provides an integrated set of hardware, software, and connectivity tools to meet current and projected office automation needs and requirements to interconnect and share data. Field offices access remote

and centralized systems and the corporate databases through WANs and the INS Integrated Network Communications (INSINC) backbone. More than 700 field sites are to be implemented.

C.1.3.1 Information Technology Partnership (ITP)

Under the ITP contract, EDS has been supporting the TIP deployment of standard office automation platforms throughout the INS environment, including field offices. In this and in other areas, the FOS/HM contractor will be required to work in coordination with the ITP effort so that field office support remains consistent with the other INS IT initiatives. These initiatives include the Personal Workstation Acquisition (PWAC), and Special Purpose Processing Equipment (SPPE) procurements for future INS infrastructure/mission expansion.

C.1.3.2 Department of Justice Data Center (JDC), Dallas

The INS uses the Department of Justice Data Center (JDC) in Dallas, Texas to support applications software development, operations, and maintenance. OIRM currently operates a Multiple Virtual Storage (MVS)/Extended Systems Architecture (ESA). The INS plans to go to OS/390 operating environment. A development domain on a Virtual Machine (VM) host is accessed remotely from its Washington, DC Headquarters using channel extenders. The INS test and production application systems reside on an Amdahl 5995 central processing unit running the MVS/ESA operating system that is managed and operated by the Department of Justice. The INS uses approximately 385, 3390-type Direct Access Storage Devices (DASDs) and a number of peripheral devices such as front-end processors, tape drives, and printers. The INS supports the development domain with comparable JDC operating systems and product capabilities.

C.1.3.3 Workstations

The INS has deployed an ADP equipment base of more than 17,000 Microsoft (MS)-DOS and Windows based microcomputers and supporting peripheral equipment, and approximately 200 Macintosh microcomputers and peripherals for information processing. A significant number of the computers are connected by LANs. These assets are deployed at locations throughout the United States, its territories and possessions, and selected overseas locations, including Italy, Germany, Mexico, Russia (Moscow), Canada, England, and Ireland.

Most workstations are connected to Ethernet LANs running the Novell NetWare network operating system. There are, however, a small number of Token Ring networks. The LANs provide gateways to a variety of databases and services hosted on the minicomputers and mainframes used by the INS.

In summary, the INS end-user workstation environment will consist of no less than the following:

- Hardware
  - 486/66 and Pentium File Servers (file, database, print, communications)
  - 386, 486/66 and Pentium Workstations
  - Laser Printers
  - Dot Matrix and Ink Jet Printers (color and black and white)
  - Tape Backup Units
  - Scanners
- Software: Workstation Operating Systems
  - MS/PC DOS and Windows 3.1 (current)

- Windows 95 or Windows NT
- Office Automation Suite: MS Office Professional
- Project Management: MS Project
- INS Forms Package: Delrina Formflow
- Communications
- Utilities and Security
- E-mail: Lotus cc:Mail
- Network Operating System: Novell Netware, Versions 3.12, 4.1

C.1.3.4 Application Servers

Current INS application servers include microcomputer-based automation servers running NetWare, UNIX, Windows NT, and OS/2. Minicomputers support larger scale data processing operations at the Regional Service Centers, selected District Offices, and at Headquarters, Washington, DC. The INS currently uses the following minicomputers: Pyramid, SEQUENT, HP UNIX, and Data General MV/5500 and MV/5600 (AOS/VS). Other applications run on Amdahl (MVS) mainframe processors providing terminal access to host applications.

C.1.3.5 Office Automation

In the past, the INS acquired a variety of office automation software products. Commercial-off-the-Shelf (COTS) products in predominant use today include the MS Office Professional suite of products (MS Word, MS Excel, MS Powerpoint, MS Access), MS Project, WordPerfect (DOS and Windows versions), Lotus 1-2-3, and a variety of database packages including dBase and FoxPro. Some INS installations also use Harvard Graphics, FormMaker Pro, and Adobe Illustrator. The hardware to run the legacy office automation COTS products varies from office-to-office.

C.1.3.6 Mission Applications

Currently, mission applications are generally partitioned by program functions with interfaces among mission applications, supported with a combination of batch interfaces, database replication, LU 6.2 services, and distributed database services. Large volume batch file transfers run in off-peak times. Data exchange with organizations external to the INS is generally accomplished by magnetic tape, although the use of LU 6.2 is being tested. Some on-line access is available to the National Crime Information Center (NCIC) and the National Law Enforcement Telecommunications (NLETS) law enforcement data repositories, Treasury Enforcement Communications System (TECS), and the Bureau of Prisons SENTRY system. Projects are underway to exchange and consolidate data of common interest with other agencies, such as the Interagency Border Inspection System (IBIS) project, which supports the inspections function at ports of entry (POEs) in cooperation with U.S. Customs, and the Federal Bureau of Investigation (FBI) Integrated Automated Fingerprint Identification System (IAFIS) project.

Some INS information systems have been decentralized on various hosts. The Receipt and Alien File Accountability and Control System (RAFACS) application operates on microcomputers at the INS Service Centers and District Offices. The computer-assisted design and reporting enhancement (ICAD) system, which provides intrusion detection and reporting along borders, is implemented on an OS2 platform. A number of local administrative applications are in operation or are being developed for networked microcomputers.

C.1.3.7 Database Management Systems (DBMS)

The INS uses four different DBMSs to support service-wide applications:

- Computer Associates (CA) Integrated Data Management System (IDMS)
- SAS System 2000 (S2K) (Scheduled to be discontinued in FY96)
- ORACLE, Release 7.0
- Microsoft Access
- dBase

The first two are centralized, multi-user DBMS environments running on a mainframe. The current IDMS is version 10.2; however, a migration to release 12 is scheduled for early FY97. The INS is planning to expand existing DBMS technology, standardizing on ORACLE Version 7.0 on a UNIX platform. INS is currently implementing the ORACLE environment on a central UNIX-based database server. The INS uses Microsoft Access as the DBMS that supports applications at the microcomputer departmental level. The INS has identified the CA IDMS as the standard DBMS for mainframe-based systems and ORACLE for distributed systems.

C.1.3.8 INS Communications

The INS infrastructure is supported by the INSINC network, a wide-area data communications network that services INS operational facilities worldwide. INSINC provides authorized users with access to INS centralized ADP systems and databases, as well as peer-to-peer communications between sites. The INSINC WAN currently uses the Transmission Control Protocol (TCP), User Datagram Protocol (UDP), the Internetwork Packet Exchange (IPX), and the Sequential Packet Exchange (SPX) protocols. TCP and UDP are part of the TCP/Internet Protocol (IP) suite, while IPX and SPX are part of the NetWare/IPX protocol family. INS uses all of the affiliated TCP/IP, IPX, and NetWare transport layer protocols. For NetWare, IPX routing is handled by Routing Information Protocol (RIP) at the LAN level, and IPX routes are redistributed with CISCO's Enhanced Interior Gateway Routing Protocol (EIGRP) across the WAN. INS uses Open Shortest Path First (OSPF) to route all IP packets, and uses Vines Routing Protocol (VRTP) and Routing Table Maintenance Protocol (RTMP) to update routing information for VINES and AppleTalk. INS is planning to replace the RIP (IPX) protocol with Netware Link Services Protocol (NLSP).

With regard to WANs, the INS utilizes X.25 virtual circuits with devices that use Bisync and high-level Data Link Control (HDLC) Link Access Protocol Balanced (LAPB) framing. The X.25 circuits are being phased out with the migration to a routed TCP/IP internetwork. HDLC is the framing protocol within the current implementation of the INS INSINC IP network, with frame relay used in special situations. The INS has converted over 95 percent of its IBM Binary Synchronous Communications (BSC) circuits to Synchronous Data Link Control (SDLC). The INS uses the EICON System Network Architecture (SNA) gateway product. LAN communications in use are the Fiber Distributed Data Interface (FDDI), Ethernet 2, and Token Ring.

In the CONUS, the INS is using NetWare with the IPX protocol for office automation and mission application services; however, the INS is migrating to the IP. VINES IP is the network layer protocol used in the INS' foreign offices. The AppleTalk protocol family is being used by Macintosh workstations for file sharing, printing, and other communication services. The AppleTalk Datagram Delivery Protocol (DDP) is routed within HQ and other INS LANs.

Novell NetWare is the standard Network Operating System of the INS. Version 3.12 is currently being installed. The fielding of version 4.1 was started in 1996, with a NetWare Directory Service (NDS) implementation. This will provide an enterprise-wide approach to providing resources on a network. VINES is currently in use for the INS' overseas offices; StreetTalk is its directory service. NDS is in the initial stages of an enterprise-wide deployment for locations that require NetWare's file and print services. NDS is also being prototyped to determine its viability for managing UNIX platforms in the INS environment.

The INS is installing Type 3, Category 5 (Cat 5) Unshielded Twisted Pair (UTP) cable for networks using 16 Mb/s Token Ring and 10 Mb/s Ethernet. The INS currently uses Type 3, Cat 5 UTP cable and multimode fiber optic cable in all installations. For LANs, INS is installing Type 3, Cat 5 UTP cable to connect workstations to intelligent wiring hubs. Fiber optic cabling is used when installations require connection from hub to hub and for high-speed communication channel technologies, such as FDDI or asynchronous transfer mode (ATM).

C.1.3.9 Storage Media

The INS currently uses a variety of storage media, including microfilm, magnetic tape cartridges, and disk systems. These are being replaced or supplemented by new, compact high-density environments such as magnetic disks, WORM drives, magnetic-optical disks, and CD-ROMs. The INS will continue using magnetic disks as the main on-line storage medium for most applications.

C.1.3.10 Video Teleconferencing Services (VTCS)

The INS is expanding the capabilities and use of video teleconferencing to provide audio and video communications between distant locations for briefings, training, meetings, and hearings. The INS is implementing VTCS, using the VTEL model 127V and the Elmo graphics station, throughout the service, including Executive Office of Immigration Review (EOIR) courtrooms and detention facilities, and remote locations such as Regional Border Patrol Sector Headquarters, Regional Service Centers, Regional Administrative Centers, and District Offices. The current VTCS provides two-way audio and video communications; the INS plans to hold multipoint conferences that link two or more locations for fully interactive video teleconferences by adding a Multipoint Control Unit to the present VTCS system.

C.1.3.11 Electronic-mail (E-mail) Services

The INS is providing E-mail services to all employees. Currently three platforms are in use: Lotus cc:Mail, GroupWise mail (also known as WordPerfect Office mail), and VINES mail. INS plans to expand E-mail connectivity to other Federal agencies via X.400 gateways and to the Internet via a Simple Mail Transfer Protocol (SMTP) gateway. Because the INS user community is worldwide, each E-mail platform must support mail transfer to users in different geographic locations such as foreign offices. Currently INS has mail-enabled applications in the proprietary GroupWise suite and in Lotus Organizer working with Lotus cc:Mail.

C.2 Project Management

The contractor shall provide all necessary supervision, management, technical, and administrative support to accomplish each task specified in individual orders issued under this contract. The contractor shall provide a single senior member of its corporate staff as Program Manager (PM) to serve as the focal point for management of the services provided under this contract. The primary responsibility of

the PM is to act as liaison between the contractor and the Government in the conduct of the field office support and maintenance effort related to this contract. The PM shall be at a sufficient organizational technical and contractual level of authority within the contractor's organization to ensure full access to corporate personnel commitment of resources which may be necessary in the performance of this contract, and in the technical and contractual resolution of all issues which pertain to that performance. The Government will separately order program management and administrative support for the contractor's overall management of the contract.

C.2.1 Program Management Plans

Within 10 calendar days following contract award, the contractor shall meet with the Government to provide a briefing on the contractor's approach to managing the future contract and provide all points-of-contact information. Within 20 calendar days of contract award, the contractor shall provide the following management plans for the Government's review and approval.

- Project Management Plan
- Quality Control Plan
- Maintenance Plan
- Contingency Plan
- Personnel and Staffing Plan
- Contract Transition Plans

The contractor shall incorporate Government comments into the plans within 10 calendar days of receipt and provide periodic plan updates, as required by the Government, at least annually. The contractor shall submit plan updates to the COTR within 15 calendar days of an event necessitating update, and, if updated annually, within 15 calendar days of the date of the anniversary of the contract start of these plans.

C.2.1.1 Project Management Plan

The contractor shall provide a Project Management Plan that describes the contractor's understanding of the FOS/HM requirement and explains how the contractor will manage the effort to meet all requirements. It shall describe the contractor's existing and proposed infrastructure for operating a DSMC as described in C.3, providing operational and technical support as described in C.4, and providing maintenance support as described in C.5. It shall explain how the FOS/HM program will fit into that infrastructure without complications to other existing contracts. The contractor shall explain the management structure of its FOS/HM project team, including an organization chart showing the Program Manager and main points of contact (POCs) with the Government and any subsidiary management structure, including the management of key personnel. The Project Management Plan shall also identify all subcontracts and describe subcontractor management, roles, and responsibilities. The plan shall explain how the contractor will maintain compliance with INS personnel and computer security requirements and respond to urgent situations and emergencies in all FOS/HM support areas, including maintenance on a 24-hour per day basis. The plan shall describe any systems the contractor has in place to manage and/or control orders, costs, inventory, dispatching of labor, billing, and payment.

The Project Management Plan shall also explain how the contractor will assure satisfactory performance and satisfactory technical skills by its team members and any subcontractors. It shall explain how the contractor's corporate-level management will respond to and correct any problems, complaints, and/or conflicts over its team's performance of the contract.

C.2.1.2 Quality Control (QC) Plan

Quality control is the monitoring and oversight performed by the contractor to ensure that work is accomplished in accordance with the terms of the contract. Quality assurance, discussed in Section E, is performed by the Government for the purpose of verifying that the contractor is performing the work as required by the contract and that the contractor's quality control program is viable.

The contractor shall ensure that all services are provided in accordance with the terms of this contract. The contractor shall develop a Quality Control Plan which includes the following elements:

- An internal quality control, inspection, and feedback system consisting of customer satisfaction surveys (or equivalent) for all services required by the contract
- Job titles and organizational positions of contractor employees performing quality control
- A method to identify deficiencies in services
- Procedures to correct deficiencies in services when detected and to prevent their recurrence
- A record-keeping system that maintains and displays ins, . tion, quality history, corrective actions taken, and follow-up actions necessary to maintain effective quality control. Records shall be available for review by the COTR and appropriate Government personnel upon request
- An effective system to analyze quality data, to capture and report trends, and to initiate action in response to these trends

C.2.1.3 Maintenance Plan

The contractor shall provide a plan describing maintenance approaches and procedures. This plan shall identify the following:

- Specific type and quantity of maintenance personnel necessary to successfully implement the provisions of this contract
- Procedures for a maintenance activity, from initial observance of a malfunction, through reporting and repairing up to final return of the equipment to service
- Contractor's maintenance organization (including escalation of problems and chain-of-command)
- Contractor's design of an automated data processing equipment (ADPE) inventory database
- Preventive Maintenance Schedule (frequency, duration, and quality)
- Original Equipment Manufacturer (OEM) certification
- Use of remote diagnostic procedures
- Proposed reporting procedures, including types of reports available and procedures for generating both routine and ad hoc reports

C.2.1.4 Contingency Plan

The contractor shall develop and maintain implementation plans and guidance for its staff concerning

contingency operations during special and emergency situations such as fire, accidents, civil disturbances, national emergency, and other circumstances that could jeopardize INS data processing operations. The contractor shall develop and, at least annually, review, test, and update site-specific plans, at all supported INS sites. These plans shall ensure continuity of operations under special and emergency circumstances and be based upon and consistent with Government site plans at each supported location.

C.2.1.5 Personnel and Staffing Plan

The contractor shall provide a plan describing procedures to obtain and maintain a workforce capable of performing the work required under this contract. The plan shall address employee recruitment, clearance processing, placement retention, subcontracting, employee qualifications, and actions required to ensure compliance with the Service Contract Act where appropriate. The plan shall address any existing or proposed employee compensation incentives related to employee or contractor performance under the proposed FOS/HM program.

C.2.1.6 Contract Transition Plans

The transitions from incumbent facility operations support and hardware maintenance contractors may occur in two stages: facility operations support at contract award and hardware maintenance not earlier than 90 days after contract award. The contractor shall provide phase-in and phase-out transition plans that describe how the contractor will transition, with minimum disruption of the DSMC, operations, and maintenance support to the INS, from the incumbent operations and maintenance contractors. The plans shall also demonstrate how data from the incumbent contractor's databases will be converted into the incoming contractor's databases.

C.2.1.7 Phase-In

The Government will provide the contractor with phase-in periods not to exceed 90 calendar days for each of the transitions. At the completion of these periods, the contractor shall assume full responsibility for operations and maintenance as identified by orders issued under the contract. During the phase-in periods, the contractor shall become familiar with performance requirements, establish the management organization, and finalize required plans. The contractor shall begin transitions and assume duties in accordance with the Transition Plan. At a minimum, the contractor shall address the following areas in the Transition Plan:

- Interface and coordination with the Government
- Identification of key transition events and objectives including a transition schedule
- Identification of key persons participating in the transition including authority of contractor management during transition
- Specific actions that will be taken to ensure continuity of operations and maintenance coverage during the transition
- Proposed method and schedule for inspecting and accepting responsibility for Government furnished equipment to be repaired
- Employee staffing actions during transition
- Government and contractor furnished property inventory

- Method and schedule for maintaining/implementing OEM and third party agreements

The contractor shall be responsible for the phase-in of contractor personnel and the assumption of on-going maintenance and operations support in accordance with the phase-in schedule presented in the contractor's Transition Plan.

C.2.1.8 Phase-Out Plan

The contractor shall prepare a plan to ensure a smooth transition to a successor contractor. The plan shall address specific phase-out milestones, actions that implement cooperation with the successor contractor, procedures for meeting the requirements of the Service Contract Act regarding incumbent personnel, transfer of Government furnished property to the successor contractor, and procedures to ensure full continuity.

C.2.2 Management Reports

The contractor shall submit monthly management reports, including progress/status reports, and participate in management reviews as required by individual orders. In addition, using Government furnished software, the contractor shall maintain an electronic database of all help desk, operations and technical support, and maintenance activities performed under this contract and provide for the collection and reporting of statistical information. The contractor shall provide the COTR on-line access to the database and a method by which the Government may directly produce reports and statistics from the databases.

C.2.2.1 Contract Activity Data Base

The contract activity database shall include the data elements necessary to provide reports, including a Service Incident Report (SIR) and other reports described in the contractor's Maintenance Plan. The database shall include user-help calls, technical support requests, and maintenance calls. The contractor shall provide the COTR electronic access to the records with a print-on-demand capability. Information collected in the database shall contain, at a minimum, the following:

- Name of person requesting service
- Name of affected user
- Name of organization
- Location, including office, street address, city, and state
- Phone number of person requesting service
- System or server identification number
- INS property control number (if applicable)
- Type of equipment
- Serial number and inventory number
- Date and time of request for service
- Type of service
- Date and time of arrival of maintenance personnel
- Description of problem and resolution
- Date and time problem was resolved
- Parts replaced
- Serial numbers of replacement parts, if applicable
- Any required follow-up actions

- Call or ticket number (problem control number)
- Name of INS individual at affected site certifying the call was completed
- The time and resources spent on the task and the current progress of the task
- The names of the contractor's representatives working on problem

C.3 DSMC and User Support Requirements

The End User Computing Branch provides a centralized DSMC that supports three levels of problem analysis and resolution throughout the INS. All user requests for problem resolution and maintenance are coordinated through the DSMC. Using REMEDY, an automated trouble ticketing system, the DSMC opens a trouble ticket, determines the nature of the problem, and either helps the user resolve the problem on the telephone or dispatches the appropriate technical support. If the problem is related to office automation, E-mail, a DBMS, or Novell software, the first tier of support either resolves the problem or escalates the problem to the appropriate tier within the DSMC. If the problem is determined to be a communications problem, the DSMC notifies the Network Control Center (NCC) which is located in the Data Communications Branch. Problems are also referred to the appropriate maintenance personnel. The DSMC then tracks the trouble ticket through close-out or resolution of the problem.

Although the DSMC is currently located at the INS Headquarters, however, the Government may require the contractor to establish all, or a portion of the DSMC operations at the contractor's facilities or another INS site(s), as stated in individual orders. As specified in individual orders, the contractor shall provide a range of DSMC operations and staffing support as follows:

- Tier 1 DSMC Support - The contractor shall perform receipt of the initial trouble call, problem identification and resolution, or referral to the appropriate hardware maintenance personnel or the proper Tier 2 or Tier 3 personnel. Tier 1 support includes:
  - Responding to general questions regarding INS systems and end-user services.
  - Identifying and resolving commonly recurring problems relating to standard office automation type hardware and software in use within INS.
  - Providing information concerning the system status, user accounts, available publications, available classes, and end-user training.

- Tier 2 DSMC Support - The contractor shall provide expertise in INS networked systems, mainframe hardware and related operating systems/utilities, statistical and DBMS software applications, and real-time instruction on the use of INS standard COTS packages, and referral of problems beyond Tier 2 capabilities to the proper Tier 3 personnel. Tier 2 personnel also maintain the problem tracking system.

- Tier 3 DSMC Support - The contractor shall provide experts, and/or access to INS-designated experts outside of the contractor's staff having an in-depth knowledge of specific INS mission systems, or the hardware or software vendor providing support to these systems.

The DSMC also receives calls from the NCC concerning problems with LAN/WAN communications resources. The NCC monitors all network resources using Open View software. Network resources are equipped with Simple Network Management Protocol (SNMP) devices that monitor the status of the equipment. If a resource fails, the SNMP device alerts the NCC through the Open View system. The NCC then notifies the DSMC of the location of the problem.

Refer to Section J, Attachment 3 for an identification of the type (voice mail or trouble ticket) and number of calls typically received by the INS DSMC weekly. This information is contained in a spreadsheet file contained on the solicitation distribution disk. The volume of calls is expected to increase as more users are brought on-line and as the INS workforce population increases over time.

The contractor shall provide the necessary personnel to staff the DSMC which will operate 24 hours a day, 7 days a week. The DSMC staff shall provide verbal and written technical support to INS users who encounter problems. Problems that cannot be resolved over the telephone will be referred to the appropriate personnel for resolution.

The contractor shall provide personnel to provide telephone coverage around the clock (24 hours a day, 7 days a week, without exception). The contractor shall support the following INS shifts:

- Day shift hours: 8:00 am - 4:30 p.m. Eastern Time (ET)
- Evening shift hours: 4:00 p.m. - 12:30 am ET
- Midnight shift hours: 12:00 am - 8:30 am ET

Further requirements for DSMC and user support include:

- The response time for any call shall not exceed 20 seconds before the caller receives a response. Placing a caller on hold does not constitute a response.
- DSMC personnel shall make every reasonable attempt to solve the user's problem on the spot by asking questions that will diagnose the problem and talk the user through to a solution. The contractor shall document in a trouble ticket for statistical reporting purposes all problems resolved over the telephone.
- The contractor shall develop and implement escalation procedures, including, but not limited to, liaison with the NCC and other appropriate organizational entities for support of referrals to problems that cannot be resolved at the DSMC level and for management tracking of trouble tickets.
- DSMC involvement in maintenance-related functions shall include initial contact with the end user, initial problem determination, notification of the maintenance dispatch person(s), and subsequent problem follow-up and tracking.
- The contractor shall develop and operate a trouble-ticket tracking system using the automated system REMEDY, to be supplied by the Government. The system will include the capability of the users' opening up a trouble ticket through voice mail.
- The trouble ticketing and tracking system shall automatically document the problem-resolution history of each call for user help, technical support, and maintenance calls.
- Before a trouble ticket is closed, the DSMC shall verify with the person who initiated the call that the customer is satisfied with the resolution.
- Trouble tickets shall not be considered resolved until the DSMC has confirmed, as described above, that the customer is satisfied. Data to produce the trouble ticket shall be captured in the contract activity database described in Section C.2.2.1.
- The contractor shall provide, as requested by the COTR, statistical data regarding all problems that come to the DSMC.

C.4 Operations and Technical Support Requirements

The contractor shall provide operations support and technical support to INS Field Offices worldwide to assist INS in providing a secure, effective, responsive environment for development, implementation, processing, and maintenance of information systems. The contractor shall also support centralized systems at INS Headquarters.

INS Field Office support is deployed in geographic theaters – strategically located offices that allow Government and contractor ADP-support personnel to be placed in areas allowing for approximately a 1:75 ratio of support personnel to INS effective users for the base year only and 1:44 thereafter. These ratios are provided for information only. The Government may at its option, increase or decrease these ratios, at selected sites, by increasing or decreasing contract staffing levels and servers throughout the period of performance to ensure adequate levels of user support. Support theaters allow for more responsive service calls and effective follow-up. The contractor shall support implementation of support theaters and recommend how best to achieve its goals. The contractor may be tasked to deploy personnel to these or any new INS sites. The Government will try to give the contractor 90 days notice of where contractor support will be required. Current operational and technical support staffing is provided in Section J, Attachment 4. Section J, Attach. 6 contains a current list of IT resources at major field offices.

C.4.1 Systems Management Support

The contractor shall provide enterprise-wide systems management support. The contractor shall provide an enterprise-level, centralized, integrated approach to system management that maintains the operations, availability, and performance of hardware, software, and communications components of the INS WANs and LANs. Systems management support activities shall include network administration, system fault management, system performance management, system configuration management, and network security management.

C.4.1.2 Network Control Center Management

The contractor shall provide on-site support to monitor and evaluate the performance of the INS X.25 Router network and WAN components. The contractor shall:

- Monitor, analyze, track, and assess the performance of the CISCO routers and associated telecommunications components.
- Monitor, analyze, track, and assess communications problems related to the X.25 backbone and CISCO routers including proactive monitoring, configuration of routers, and the capability to download router configuration files.
- Monitor interfaces to the WAN, with respect to their performance and generate reports, as requested by the Government.
- Assess whether or not systems and facilities that constitute the X.25 router network are meeting established performance standards and generate reports, as requested by the Government.
- Measure WAN network bandwidth and usage and generate reports, as requested by the Government.
- Generate detailed, component-specific, and network-wide *ad-hoc* reports and queries concerning performance, as requested by the Government.

- Provide an interface to communications vendors such as Sprint, AT&T, and MCI, to assist in determining and resolving circuit problems
- Provide after hours support on an on-call basis if a hardware problem occurs.
- Participate in network disaster recovery backup exercises or planning as it relates to the X.25 router network.
- Provide support in utilizing network monitoring tools and products to include CISCO Works, HP Open View, Synoptic Optivity, UNIX Sybase QIP monitoring tools, and network sniffers.

C.4.1.3 Network Administration

The contractor shall provide on-site administration of the network's physical and logical resources: users, peripherals, and transmission media. Network administration shall include adding and removing users; assigning access rights to network resources; making application and peripheral resources available to users; providing periodic network backup; and monitoring network capacity and resource usage in order to plan and carry out expansion.

C.4.1.4 System Fault Management

The contractor shall provide on-site fault management including detection, isolation, and correction of irregularities in network and other system component operations. The contractor shall:

- Monitor, analyze, track, and assess the overall and detailed performance of hardware components in respect to fault management.
- Detect, diagnose, track, and correct major and minor alarms, faults, troubles, outages, and performance deterioration.
- Generate standardized and detailed network component and summary reports concerning fault management, as requested by the Government.
- Generate detailed, component-specific, and network-wide ad-hoc reports and queries concerning fault management, as requested by the Government.
- Generate standardized and ad-hoc graphs, charts, and network maps concerning fault management, as requested by the Government.

C.4.1.5 System Performance Management

The contractor shall provide on-site support to monitor and evaluate the performance of the system, network, and layer entities. The contractor shall:

- Monitor, analyze, track, and assess the overall and detailed performance of hardware components.
- Monitor, analyze, track, and assess communications facilities, interfaces of the LAN, WAN, voice, and VTCS in respect to their performance and generate reports, as requested by the Government.
- Assess whether or not systems and facilities that constitute the telecommunications network are meeting established performance standards and generate reports, as requested by the Government.

- Measure network bandwidth and usage and generate reports, as requested by the Government.
- Generate standardized and detailed network component and summary reports concerning performance, as requested by the Government.
- Generate detailed, component-specific, and network-wide ad-hoc reports and queries concerning performance, as requested by the Government.
- Generate standardized and ad-hoc graphs, charts, and network maps concerning performance as requested by the Government.

C.4.1.6 System Configuration Management

The contractor shall provide on-site support for configuration control of the network, system, or layer entities. The contractor shall:

- Monitor, analyze, track, and assess the overall and detailed performance of hardware components in respect to their configuration.
- Generate and conduct configuration management for various hardware, software, and service components which constitute the LAN and WAN and generate reports, as requested by the Government.
- Install, integrate, and test hardware and software components and upgrades to existing devices as directed by the Government.
- Track hardware and software components located at workstations, servers, bridges, routers, hubs, and data transport facilities and generate reports, as requested by the Government.
- Generate standardized and detailed network component and summary reports concerning configuration management, as requested by the Government.
- Generate detailed, component-specific, and network-wide ad-hoc reports and queries concerning configuration management, as requested by the Government.
- Generate standardized and ad-hoc graphs, charts, and network maps concerning configuration management, as requested by the Government.

C.4.1.7 Network Security Management

The contractor shall audit networks for compliance with established INS security policy. The contractor shall:

- Monitor, analyze, track, and assess the overall and detailed performance of hardware components in respect of their security management.
- Generate standardized and detailed network component and summary reports concerning security management.
- Generate detailed, component-specific, and network-wide ad-hoc reports and queries concerning security management.
- Generate standardized and ad-hoc graphs, charts and network maps concerning security management.

C.4.1.8 System Management Tools

The Government will furnish and the contractor shall use HP OpenView and CISCO Works software to monitor network resources. The contractor shall also recommend other tools to optimize network performance and to provide the necessary look-down capability and traffic analysis capability to support system performance and availability requirements. The contractor shall analyze all software updates and revisions as soon as they are made available and recommend to the INS why such updates and revisions should or should not be installed. The contractor shall not install any software without prior written approval of the COTR.

C.4.2 Computer Operations Support

The contractor shall provide both remote and on-site computer operations support for the INS' MVS and UNIX development nodes at the HQ INS; Regional Service Centers; Regional Administrative Centers; and other INS-distributed database platforms. The contractor shall install and maintain system software, analyze and resolve problems, provide documentation of procedures and standards for the use of system software, and provide expert consulting on related technical issues.

Software technical support shall include troubleshooting; problem resolution; and installation of Government-provided, OEM-directed modifications, upgrades, and updates. The contractor shall provide a record of all software changes and/or modifications installed under this contract, as requested by the COTR.

The contractor shall provide support to computer operations, staffing, and management, as required by task order. In addition to site-specific requirements, the contractor shall be required to perform backup and archiving procedures and disaster recovery and prevention procedures. The contractor shall also be required to monitor and/or operate the following:

- Mini-computers
- Micro-computers
- LANs
- Associated hardware
- Current and future applications and system software
- Existing telecommunications networks

C.4.3 Production Control

The contractor shall provide production control support for the applications listed in Section J, Attachment 5. The contractor shall provide 24-hour production support from 7:00 a.m., Monday to 7:00 a.m., Saturday, at INS Headquarters. The contractor shall also support production operations at sites specified in individual orders. The hours of operation for providing this support may vary across sites and are subject to change depending upon support requirements. Production control shall include job scheduling, job submission, Job Control Language (JCL), production control, input support, output preparation, distribution and receipt control, processing, recovery/restart, and problem notification procedures for major operational systems.

C.4.4 Magnetic Media Library Management and Control

The contractor shall operate and maintain magnetic media libraries located at the INS Headquarters Operations Center, Washington, DC and at various field sites. The contractor shall manage and control storage, withdrawal, and return of magnetic media; respond to user requests to manage datasets resident on these volumes; operate and maintain an automated media library management system (Tape

Management System) and a magnetic media rehabilitation and disposal program; and prepare magnetic media for other locations for backup and disaster recovery. The contractor shall perform maintenance of magnetic media, including periodic inspection, cleaning, repairing, and labeling.

C.4.5 Direct Access Storage Device (DASD) Management and Control

The contractor shall manage the use of INS DASD resources located at the JDC Dallas using IBM product Data Facility Product (DFP). INS DASD units contain systems and applications software and data. The contractor shall maintain INS information residing on these storage devices and shall respond to user requests to manage datasets residing on those volumes allocated to INS.

C.4.6 Site Relocations, Installations, and Integration

As required by the Government, the contractor shall assist the INS in preparing and installing new sites, relocating sites, de-installing sites, and integrating systems at field sites. Support may include site surveys, site preparation, and equipment and software installation, de-installation, integration services, and inventory updating. This does not include architect and engineering (A&E) services.

C.4.6.1 Site Surveys

The contractor shall furnish site surveys of INS locations as required. The Government may order a site survey for a new site, relocation, or such other purposes as the Government may direct. A site survey may include, but is not limited to, the following:

- An on-site visit
- A complete implementation plan describing changes that may be required to accommodate changes to the site. A plan shall not be implemented without the approval of the Contracting Officer (CO).
- A complete listing of new and existing hardware, software, and communications equipment (for purposes of establishing an inventory or, as may be necessary, to bring a new site into operation).
- A listing of all physical plant modifications that are necessary to perform any new site installation

All travel under a site survey shall be approved in advance by the COTR and will be compensated based on the Federal Travel Regulations.

C.4.6.2 Site Preparation

The contractor shall provide site-preparation support including performing requirements analyses and developing recommendations concerning layout, cabling and cable installation requirements, electrical requirements, lighting, and environmental control.

C.4.6.3 Equipment and Software Installation, De-installation, and Integration

The contractor shall provide equipment installation, site-preparation support, de-installation, and system integration at selected INS facilities. These services shall include:

- Receipt and unpacking of hardware and software

- Placement of hardware and related equipment
- Application (or removal) of INS Property stickers in accordance with instructions provided by the Property Management Officer
- Connection and interconnection of equipment
- Set-up, installation, and configuration of hardware and software
- Test of installed systems and component hardware and software to ensure proper operation and integration within the INS computing environment
- De-installation, packing, and shipping of hardware and software designated for storage or relocation for maintenance or repair
- Inventory updating

For new sites, the contractor shall perform a site survey and install and integrate new equipment and associated cabling. The contractor shall provide all required items for reinstallation such as: cable, connectors, adapters, etc. Under individual orders, the contractor shall submit a plan for the new installation in accordance with information obtained from the site survey, including floor plans and LAN design, for COTR approval.

For relocation, the contractor shall deinstall and reinstall equipment at a different location within the same site or at another site on a time-and-materials basis, as directed by the COTR or CO. The contractor shall deinstall LANs from their current location and reinstall them at a new location. In accordance with the information obtained from a site survey, a LAN design for reinstallation of the LAN into the new site shall be submitted for Government approval, as directed in individual orders. LAN reinstallation shall consist of making the reinstalled LAN (to include any necessary new equipment and/or software acquired by the Government) operational, including the installation of cables, installation and placement of equipment, bringing the server on-line, etc. The contractor shall also provide services for reinstallation and testing, recabling, and reconfiguration of all components at the new location. The contractor shall perform test and acceptance procedures and submit results for Government approval, in accordance with individual orders. The contractor shall provide all required items for reinstallation such as cable, connectors, adapters, etc.

When required by task order to de-install a site, the contractor shall be responsible for dismantling designated equipment and for preparation of shipment or movement, including packaging and general supervision of the movement. The contractor shall follow any specific OEM standards for de-installation, packaging, and moving.

In the event any system and/or component being maintained under the terms and conditions of this contract is moved to another location, the terms and conditions of this contract shall continue to apply.

C.4.7 Inventory Management

The contractor shall, within 30 days of the Government's request, produce a report on the current state of INS' inventory of ADP resources, including hardware and software. The report shall, at a minimum, include a description and analysis of INS' existing inventory system: the ADP Equipment Inventory Management System (AIMS) component of the Asset Management Information System (AMIS). The report will conclude with an Inventory Plan to accomplish the following:

- Update the inventory maintenance data residing in AMIS
- Maintain the inventory maintenance data residing in AMIS
- Use the inventory system as a baseline tool to manage configuration control, including software updates, new equipment, equipment upgrades, repairs, and any other conditions affecting the baseline configuration
- Use the inventory database as a tool that will allow Government personnel to generate ad hoc management reports
- Insure that INS takes maximum advantage of existing warranties for the period of time that warranties are in effect, and that appropriate levels of maintenance service are initiated in order to assure that INS inventory is continuously covered

Upon approval of the Inventory Plan, the Government will issue an individual task order under this contract to implement an Inventory Plan.

C.4.8 Capacity Planning

The contractor shall provide capacity planning for networks, the mainframe at the JDC, minicomputers or mid-tier platforms at Headquarters and in field offices, and for distributed microcomputer LAN servers throughout the INS.

C.4.9 Contingency Planning

The contractor shall develop, update, administer, test, and maintain the Government's Contingency Plans for Disaster Operations and Continuity of Services at the INS Operations Center, Washington D.C. Current and newly developed plans shall be reviewed and updated on a continuing basis, as necessary, at least annually, and submitted to the COTR within fifteen (15) days of the completed update or, if annually, within fifteen (15) days of the date of the anniversary of the contract start date. Additionally, the contractor shall maintain implementation plans and guidance for its staff concerning contingency operations during special and emergency situations such as fire, accidents, civil disturbances, national emergency, and other circumstances which could jeopardize INS data processing operations. The contractor shall also develop and, at least annually, review, test, and update site-specific plans, at all supported INS sites. These plans shall ensure continuity of operations under these special and emergency circumstances and be based upon and consistent with Government site plans at each supported location.

C.4.10 Software Application Development

The contractor shall provide software application development services that conform to the INS Systems Development Life Cycle (SDLC) plan for installed software and original software development as the Government may require in accordance with individual orders. These services shall include, but not be limited to, requirements analysis, application design, application development, and test and acceptance.

C.4.11 Documentation

The contractor shall be responsible for providing, developing, maintaining, updating, storing, and distributing the following documentation:

- Existing procedures manuals and related documentation concerning functions performed and services provided under this contract

- New procedures manuals and related documentation, as directed by the Government, to provide comprehensive documentation for functions/services provided under this contract. The contractor shall identify and recommend for Government approval topics that require documentation

- Current editions of all documentation pertaining to COTS software applications and hardware in use within INS

- Bulletins, newsletters, and other written documentation to inform users about DSMC operations and other matters pertaining to ADP operations and related support

- SDLC documentation updates for custom software

C.4.12 Technical Support

The contractor shall provide technical assistance to support operating systems, DBMSs, and commercial software applications, including the following:

- Interact and perform liaison with both INS and contractor system program managers in support of operational INS application systems and developmental INS application systems.
- Enhance, update, and maintain system documentation, to include reproduction and distribution to INS users.
- Receive, validate, store, and retrieve processing data.
- Monitor and tune the INS' DBMS and operating systems, assist in the software development process, and provide state-of-the-art solutions to user requirements.
- Participate with INS system program managers in special studies, reviews, and assessments of system characteristics and future requirements for enhancement/revision.
- Install, maintain, support, and update operating system software, DBMS system products, and commercial software products.
- Perform "hand-holding" on-site support to users following new installations, upgrades, or modifications of their hardware or software systems, until users are fully operational under the new or modified systems.
- Provide imaging support.
- Develop and participate in the development of new or enhanced support services.
- Design and support databases and management reports.
- Improve the ADP interface between INS and other Federal agencies, e.g., reporting problems with shared information systems managed by INS or another agency.
- Provide audit analysis support for file record storage efficiencies, accuracy, and reconciliation with automated records to include management analyst and junior analyst support.
- Perform platform-to-platform or application-to-application data conversion.

C.5 Maintenance Requirements

The contractor shall provide three distinct levels of maintenance support under this contract: on-call (full

coverage), per-call, and depot maintenance. The contractor shall propose, in accordance with Section B, two flat, on-call rates: one for the Principal Period of Maintenance (PPM); and one for Outside Principal Period of Maintenance (OPPM); two per call (hourly) rates (PPM and OPPM); and one rate for depot maintenance.

The flat on call rates for full coverage shall include both preventive and remedial maintenance to INS domestic locations. On-call rates shall include all travel, transportation, labor, and parts required for return of a malfunctioning system or piece of equipment to full operating condition within four hours of a call for service. Per-call time and material rates shall include remedial maintenance only, at any INS location. The IT resources contained at the major field office sites are provided in Section J, Attachment 6. As shown in the following table, the PPM is from 6:00 a.m. to 6 p.m. (local time) Monday through Friday; all other times, including Saturday, Sunday, and holidays, are considered to be OPPM.

Maintenance Periods

	12 a.m.	6 a.m.	6 p.m.	12 a.m.
Monday - Friday	OPPM (1,2)	PPM (1,2,)	OPPM (1,2)	
Saturday	OPPM (1,2)	OPPM (1,2)	OPPM (1,2)	
Sunday	OPPM (1,2)	OPPM (1,2)	OPPM (1,2)	
Holidays	OPPM (1,2)	OPPM (1,2)	OPPM (1,2)	

Maintenance Types
1 = Per Call 2 =On-Call

C.5.1 Constraints

Subject to security policies, regulations, and procedures, the Government will permit contractor access to the equipment that is to be maintained.

C.5.2 General Maintenance Requirements

The contractor shall provide maintenance support including technical troubleshooting, problem resolution, and component repair in order to maintain and keep the equipment covered under the contract in full operating condition. In addition the contractor shall:

- Provide the Government with a designated POC and provide toll-free continuous telephone coverage 24 hour per day, 7 days per week, without exception.
- Provide all necessary personnel, materials, parts, tools, diagnostic and test equipment, technical manuals/publications, and other services.
- Provide data on all maintenance activities in accordance with the provisions of Section C.2.2.1. A SIR, as identified in Section C.2.2.1, shall be available to the Government at the time any maintenance is rendered by the contractor.

C.5.3 Periods of Maintenance

The following sections describe the time periods in which the contractor shall respond to calls for maintenance and the times allowed for completion of maintenance calls. The contractor shall propose PPM and OPPM CLINs that are comprehensive and mutually exclusive to cover the full 24 hours per

day, seven days per week, including holidays. Individual orders may list some equipment as requiring 24-hour per day coverage.

C.5.3.1 Principal Period Of Maintenance

The PPM for maintenance covered under this contract is 6:00 a.m. through 6:00 p.m., local time, Monday through Friday, excluding Federal Holidays.

C.5.3.2 Outside Principal Period Of Maintenance

The OPPM for maintenance covered under this contract includes all hours except those specifically covered by PPM, without exception.

C.5.4 Types of Maintenance

The following sections describe the maintenance support that shall be provided by the contractor under this contract.

C.5.4.1 Preventive Maintenance

Preventive maintenance is defined as regularly scheduled activities to keep software and IT hardware, including the stand-alone and networked environment, in full operating condition. Preventive maintenance includes such activities as cleaning, adjusting, lubricating, inspecting, and running diagnostic tests. Preventive maintenance shall be performed during remedial maintenance calls and/or during a mutually acceptable time agreed to by the contractor and the Government.

The individual task order will specify, as appropriate, the required frequency and duration of preventive maintenance for equipment maintained under this contract. Preventive maintenance shall be performed in accordance with standard OEM practices; that is, preventive maintenance shall only be performed on equipment for which preventive maintenance is recommended by the OEM. Scheduled preventive maintenance is expected to prevent some equipment failures and to extend useful equipment life.

Preventive maintenance shall include, at a minimum:

- Cleaning, lubricating, adjusting, and replacing all parts and components necessary to keep the equipment functioning within the specifications defined by the OEM. The contractor shall supply all parts and materials required unless provided by the Government in accordance with Section C.8, Government Furnished Supplies, Facilities, and Equipment.

- Running all diagnostics, repair, and replacement of all software and equipment parts determined to be defective.

The performance of preventive maintenance shall be conducted in such a manner as to avoid unreasonable and/or unplanned interference with the Government's normal operations. The frequency, duration, and quality of preventive maintenance, as well as the manner in which it is performed, shall be, at a minimum, equal to that prescribed by the OEM and provided for like equipment under the OEM's standard commercial maintenance contracts.

The contractor shall take every reasonable precaution to anticipate problems and take necessary

corrective action to prevent equipment failure prior to its occurrence.

C.5.4.2 Remedial Maintenance

Remedial maintenance applies to malfunctioning resources, including hardware and software, and is defined as determining why such malfunction occurred and either repairing or replacing it so that full functionality is restored. Remedial maintenance shall include all travel, transportation, labor, and parts required for return of a malfunctioning system or equipment to full operating condition. Remedial maintenance shall be completed within 4 hours of a call for service.

C.5.5 On-Call (Full Coverage) Maintenance

The contractor shall provide on-call (full coverage) maintenance. On-call (full coverage) maintenance is defined as the method of maintenance whereby the contractor's personnel perform **both** preventive and remedial maintenance on Government equipment at Government's location(s). The contractor shall complete on-call remedial maintenance within 4 hours of a call for service (i.e., 4 hour restore to service). The contractor shall also propose an 8-hour restore to service time for possible use. On-call maintenance shall include:

- All transportation, labor, and parts required for remedial maintenance
- Unlimited remedial maintenance calls
- Preventive maintenance

Each item under on-call maintenance shall have an operational use rate of 97 percent. The list in Section J.6 covers on-call, full coverage maintenance.

C.5.6 Per-Call Maintenance

The contractor shall provide per-call maintenance including diagnosis and correction of equipment malfunctions and failures as may be necessary to restore the equipment to good working condition. Per-call maintenance shall have the same 4-hour restore to service requirement as on-call maintenance. The contractor shall also propose an 8-hour restore to service time for possible use contractor shall be paid on a time-and-material, portal-to-portal basis for per-call maintenance services using Section B rates. The contractor shall combine multiple service calls, whenever feasible, to reduce the cost to the Government. Multiple repairs at the same location shall be charged only one minimum labor and portal-to-portal charge. These are for items not listed in Section J, Attachment J-6.

Parts and labor shall be warranted for a minimum of 90 days from the date the service is rendered. If additional calls are required during the warranty period for the warranted repair, they shall be made at no additional cost to the Government, and a new warranty period shall start from the date of last repair.

C.5.7 Depot Maintenance

Depot maintenance is a full repair service plan performed at the contractor's facility or at a facility of the contractor's agent. Under depot maintenance the INS will be responsible for shipping a failed item (at the Government's expense) to the contractor's designated maintenance depot. If the depot is nearby, the INS may carry the item to the depot or the contractor shall pick up the item at the INS site, as directed by the Government (excluding Saturday, Sunday, and Federal Holidays).

The contractor shall repair and return the failed item within 48 hours under Time and Materials reimbursement. If the contractor cannot repair the equipment within the specified time frame, the contractor shall provide a replacement for the component within 2 additional working days if mutually agreed upon by the Government and the contractor. The 48-hour turn-around time for the completion of maintenance activities shall be measured from the time the item arrives at the contractor's facility to the time the item is operationally returned to the Government.

All normal shipping charges shall be at the expense of the Government. The Government agrees to pay additional shipping charges on a cost reimbursable basis for any equipment that is shipped priority per the COTR's direction.

C.5.8 Repair Times

Notification to the contractor of equipment failure may be made at any time, 24 hours per day, 7 days per week, without exception. Where the Government has equipment covered under both PPM and OPPM the maintenance repair time shall begin from the time of the first notification to the contractor by the Government that remedial maintenance is required and shall extend until the time that repairs are completed. The repair time will not include time during which the contractor is denied access to the equipment through no fault of the contractor. Where the equipment is only covered for PPM, the repair time shall begin from the first moment of covered time following notification (e.g., for problems reported after 6:00 p.m., local time, the repair time begins at 6:00 a.m., the next PPM-covered morning).

C.5.9 Responsibilities of the Contractor

All services under this contract shall be performed by trained and technically experienced personnel providing the required service in accordance with accepted commercial practice without unreasonable delays or interference with Government functions. All contractor maintenance personnel shall be OEM-certified prior to performing any maintenance activity that would otherwise void an OEM warranty. Use of trainee personnel for maintenance services on this contract shall not be allowed. The contractor shall comply with the security provisions of Section H, when performing maintenance services under the terms of this contract.

The contractor is responsible for recommending changes in the type of maintenance service to improve both cost effectiveness and level of support provided to the Government. Any such recommendations will be forwarded to the COTR and will not be implemented unless they receive a written COTR approval.

C.5.9.1 Parts Quality

The contractor shall maintain an inventory of software and spare and repair parts and all necessary tools and instruments, not separately priced, to properly and effectively maintain all equipment, including communications equipment for the life of the contract. The contractor shall use only new standard parts or parts that are of a quality and functionality equal to or exceeding that which was installed in the equipment by the OEM and warranted as new in effecting repairs.

C.5.9.2 Parts Replacement

If equipment cannot be repaired on site, a replacement unit of equal or superior performance must be

provided until equipment repair and return is effected. The replacement equipment must possess the same level of functionality and interoperability as the original equipment. All parts shall meet OEM specifications. If a part is not new, it shall be identified as used or reconditioned and warranted as new. The contractor shall update the AMIS database, as applicable, when any parts are replaced or swapped. Parts that have been replaced shall become the property of the contractor with the exception of hard disks, which may or may not be returned to the contractor. The Government may, at its discretion, elect to retain the replaced parts or direct their destruction, due to security reasons. In no case shall the contractor use any replacement parts or repair methods or techniques that would result in the OEM refusing to honor their warranty or otherwise support the equipment. No additional charge shall be made for replacement parts unless such parts are required due to the fault or negligence of the Government.

C.5.9.3 Protection of Information

The contractor shall prevent loss of information such as on a hard disk during all maintenance activities by taking steps to protect and, at the Government's direction, restore, as necessary, any information residing in the equipment being maintained. The contractor shall perform all maintenance and repair to data storage devices as may be required under the terms of this contract, using only those personnel who have been approved by the Government to work under this contract. Prior to removal of any storage device for repair or replacement, the contractor shall make a reasonable effort to ensure that user software has been backed up and shall electronically erase, beyond restoration, all data residing on the device. If the contractor needs or chooses to return a piece of equipment to a depot or other contractor site for repair, all data shall be removed from the piece of equipment, which may include removing the hard disk prior to removing the equipment from the site. The contractor shall be responsible for notifying the COTR if a hard disk containing information has been inadvertently shipped to a maintenance depot or contractor site.

C.5.9.4 Liability for Damage and Injury

The contractor shall be liable for all damages to Government property arising from the use of equipment maintained by the contractor when such injury or damage is due to the fault or negligence of the contractor. The contractor shall be responsible for all damages or injury to persons that occur as a result of the contractor's fault or negligence. The contractor shall take proper safety and health precautions to protect the work, the workers, the public, and the property of others. The contractor shall also be responsible for all materials delivered and work performed until completion and acceptance by the Government.

C.5.9.5 Contractor/Government Meetings

The contractor shall meet with the COTR on a mutually agreed-upon schedule to discuss and resolve any maintenance issues or problems associated with the contract.

C.5.9.6 Alterations to Government Property

The contractor shall not make or cause to be made any alterations to Government-owned or controlled real property facilities, buildings, structures, components, systems, or utilities at any time during the course of the contract, either temporarily or permanently, without the express, written authorization of the CO.

C.6 Personnel Requirements

The contractor shall provide personnel to perform the functions described in the contract and who have the required technical knowledge as described below. The Program Manager, Project Manager, and Technical Manager, are designated as key personnel. The contractor shall ensure that all personnel filling key personnel positions are retained in those positions for a minimum of 1 year following Government approval of their resumes. Substitution of key personnel either prior to, or after this year period, shall be accomplished only after Government approval. The contractor shall notify the COTR 30 days prior to performing any substitution of key personnel.

Personnel qualifications set forth herein are the minimum acceptable for performance under this contract. Verifiable job-related undergraduate study at an accredited college or university may be substituted for on-the-job experience using the formula of 1 full-time academic year of study for 1 year of work experience. A maximum of 4 full-time academic years may be substituted for 3 years of experience for the positions listed below. Related undergraduate study is in the academic disciplines of information systems management, mathematics, computer science, or a related data processing specialty which includes at least 60 semester hours of computer science. At the Government's request, the contractor shall provide documentation of job-rel. d undergraduate study to aid in qualifications assessment.

Progressively responsible experience in the various skill categories listed below may have been gained concurrently. The experience required for each duty of every position must have been acquired within the last 10 years. Personnel assigned to orders issued under this contract shall have experience on the specific hardware identified by the order. All experience and education must specify the month and year in which it was gained. All degrees must be from an accredited college or university. Related work experience may be substituted for formal education requirements at the rate of 1 year of work experience for each full-time academic year of college credit acquired.

In addition to these minimum qualifications, the contractor shall take responsibility for assuring that personnel in these skill categories shall be experienced in the specific functions and applications appropriate to the INS requirements as described in Section C and as described in the orders issued under this contract. At the Government's request, the contractor shall provide documentation of any applicable OEM certifications to aid in qualifications assessment.

C.6.1.1 Program Manager

The Program Manager shall serve as the senior technical and contract manager, and shall be the contractor's authorized POC with the Government Contracting Officer and the Contracting Officer Technical Representatives (COTRs). The Program Manager shall serve as liaison between Government management personnel and Contractor managers. The Program Manager shall be responsible for overall contract performance, formulating and enforcing work standards; assigning schedules; reviewing work performance, delivery, technical, or cost discrepancies; and communicating policies, purposes, priorities, and goals of the organization to subordinates. The Program Manager shall be available at all times to manage performance under this contract and shall not serve in any other capacity. The Program Manager must possess the following experience:

Experience: A minimum of 10 years supervision and management of large-scale IT user support, operations and technical support, and maintenance projects in a large-scale multi-platform processing environment. A minimum of 5 of the last 8 years experience shall include experience managing large, complex user support, operations and technical support, and maintenance projects, including at least 150

employees, in subordinate groups, assigned to various remote locations. At least 5 of the last 10 years experience shall include a combination of planning, designing, developing, implementing, and maintaining WAN/LAN infrastructure and maintenance.

Education: The Program Manager shall have a graduate degree in Computer Science, Electrical Engineering, or a field related to the requirements of this contract.

C.6.1.2 Project Manager

The Project Manager shall manage, coordinate, and monitor assigned user support, technical support, and maintenance tasks at worldwide remote sites; be capable of anticipating problems and initiating corrective actions to minimize their impact on task accomplishment; and provide technical direction for support activities described in the SOW.

Experience: A minimum of 8 years of progressive experience and responsibility working in IT user support, operations and technical support, or maintenance projects in a large-scale multi-platform processing environment. A minimum of 5 years experience in managing a large, technically diverse staff in a project of comparable size and scope, in geographically diverse sites, in a networked environment including LANs and WANs.

Education: The Project Manager shall have a Bachelor's degree in Computer Science, Electrical Engineering, or a field related to the requirements of this contract.

C.6.1.3 Technical Manager

The Technical Manager shall monitor tasks and keep program management abreast of all accomplishments, problems, and other issues. The Technical Manager may serve as a project leader providing technical direction for help desk, technical support services, or maintenance efforts and may supervise the entire contractor staff at remote sites. The Technical Manager may serve as the technical authority in matters concerning technology integration and new support requirements. As a staff specialist, the Technical Manager shall evaluate and resolve technical problems. The Technical Manager may also direct analysts, programmers, help desk technicians and other technical specialists. At remote sites, the Technical Manager may serve as the Assistant Project Manager responsible for all the aforementioned duties as necessary to ensure that the required level of support is provided to the INS.

The Government estimates that the current FOS/HM requirement may require the following Technical Managers, for an estimated total of 20:

Field Operations (2)
Headquarters Computer Operations (1)
Administration Center, Eastern Region (Burlington, VT) (1)
Administration Center, Central Region (1)
Administration Center, Western Region (1)
San Diego BPS (1)
DSMC Help Desk (1)
WIN/AFIS (San Diego) (1)
New York District Office (1)
Nebraska Service Center (1)
California Service Center (1)
To Be Determined (8)

The Technical Manager must have the following experience:

Experience: A minimum of 7 years of user support, operations and technical support, or maintenance projects in a large-scale multi-platform processing environment. A minimum of 5 years of experience in

managing the technical effort associated with help desk operations, operational and technical support, or maintenance, encompassing geographically dispersed mainframe, minicomputer, and personal computer environments; LANs, WANs; Multiple Virtual Systems (MVS)/ESA and other environments; operating systems software (including MS-DOS, UNIX, Windows, Windows-95, Windows-NT); and common commercial applications such as database applications (including DA IDMS, SAS System 2000, ORACLE, and MS-Access); word processing (including MS Word and WordPerfect); spreadsheets (including MS Excel and LOTUS 1-2-3); graphics (including MS PowerPoint, Harvard Graphics, Form Maker Pro, and Adobe Illustrator); and miscellaneous utility programs. A demonstrated ability to communicate effectively, both orally and in writing.

Education: The Technical Manager shall have a Bachelor's degree in Computer Science, Electrical Engineering, or a field related to the requirements of this contract.

C.6.1.4 Telecommunications Specialist/LAN Manager

The Telecommunications Specialist/LAN Manager shall provide management for INS-wide telecommunications and LAN/WANs. The Telecommunications Specialist/LAN Manager shall also provide task activities technical advice and assistance in the administration, installation, relocation, and operation of data transmission/distribution systems. The Telecommunications Specialist/LAN Manager may serve as remote LAN manager operating from the INS Headquarters NCC. The Telecommunications Specialist/LAN Manager shall have the following experience:

Experience: A minimum of 8 years experience working in a multi-platform, distributed data processing environment. A minimum of 5 years of communications or related experience working in a distributed communications environment using the following platforms: Novell Netware, VINES, Ethernet, Token Ring, and AppleTalk. A demonstrated work experience in managing and operating the communications system in the following areas: disk maintenance; statistical reporting; defining and monitoring connectivity throughout the network; and ensuring acceptable network communications up-time. Protocol experience must include X.25, TCP/IP; IPX, SPX, and UDP.

Education: The Telecommunications Specialist/LAN Manager shall have a Bachelor's degree in Computer Science, Electrical Engineering, or a field related to the requirements of this contract. The Telecommunications Specialist/LAN Manager shall also possess Certified Network Administrator (CNA) and Certified Network Engineer (CNE) certificates.

C.6.1.5 Systems/Network Administrator

The Systems/Network Administrator shall provide support in overall administration of the LAN/WAN systems. The Systems/Network Administrator shall be responsible for the managerial and technical administration of the LAN/WAN to include security, communications, software applications, electronic mail, outside communication links, UPS service, license administration, file services, backup services, and initial troubleshooting at the system level. The Systems/Network Administrator shall provide recommendations regarding the maintenance and upgrade of networks and their related components; provide support for system fault management, system performance management, and system configuration management; and maintain such management records as required by the Government. The Systems/Network Administrator must have the following experience:

Experience: A minimum of 9 years of experience administering networks in a large-scale, multi-platform IT environment. Experience must include optimizing networks for performance and

configuration, and experience in connecting workstations to a network system. Skills must include a demonstrated ability to communicate effectively, both orally and in writing. A minimum of 4 years experience, within the last 6 years, of intensive and progressive experience in information technology infrastructure and experience with LAN/WAN systems.

Education: The Systems/Network Administrator shall have a Bachelor's degree in Computer Science, Information Technology or a field related to the requirements of this contract.

C.6.1.6 Database Administrator

The Database Administrator shall be responsible for data base support to all members of the project team requiring such support. The Database Administrator shall conduct pre-data base studies; develop database requirements; perform database analysis, design, development, conversions, loads, reorganizations, and verifications; provide application support during testing; perform data base implementations; and provide database support. In addition to providing both logical and physical design for initial databases, the Database Administrator shall review the logical and physical design of existing databases and make recommendations for modifications to ensure maximum operating efficiency. The Database Administrator must possess the following education and experience:

Experience: A minimum of 4 years directly related experience in logical and physical data base design, including experience with at least two of the following database systems: CA IDMS, FOCUS, ORACLE, and MS Access.

Education: The Database Administrator shall have a Bachelor's degree in Computer Science or a field related to the requirements of this contract.

C.6.1.7 ADP Hardware Engineer

The ADP Hardware Engineer shall provide direction, oversight, and assistance with scheduling for maintenance, installation/de-installation, relocation, testing, and reconfiguration of all maintained systems, and perform reliability and maintainability (R&M) analyses, availability analyses, and prepare recommendations for alternative maintenance for INS ADP equipment. The ADP Hardware Engineer shall prepare appropriate reports, studies, and documentation necessary to effectively implement recommended programs. The ADP Hardware Engineer shall have the following experience:

Experience: A minimum of 5 years of experience working in a large-scale, multi-platform, data processing environment with a minimum of 3 years of experience in maintenance of hardware and operating software for systems included in this contract. A minimum of 2 years experience performing evaluation and maintenance management of IBM and IBM-compatible and Apple communications and computer systems, and related peripherals, including installation, implementation, user interface technology, operations, maintenance, and tuning. Experience in R&M requirements analyses, including R&M characteristics of maintained hardware, as well as designing, recommending and establishing cost effective R&M activities tailored to hardware used at the INS, from individual component level to major, integrated systems platforms.

Education: The ADP Hardware Engineer shall have a Bachelor's degree in Computer Science, Information Technology, or a field related to the requirements of this contract.

C.6.1.8 Senior Systems Analyst

The Senior Systems Analyst shall analyze functional requirements and determine courses of action for applications of data processing techniques. The Senior Systems Analyst shall provide supervision, guidance, and direction to other Systems Analyst or Help Desk Analysts. The Senior Systems Analyst shall provide guidance in formulating responses to complex technical tasks, including capacity planning and contingency planning; recommend optimum approaches/solutions; and oversee completion of complex technical support projects. The Senior Systems Analyst shall monitor assigned tasks to determine their status and recommend/implement actions to ensure timely and accurate completion. The Senior Systems Analyst shall have the following experience:

Experience: A minimum of 9 years experience working in large-scale, multi-platform data processing environments. A demonstrated background in oversight and supervision of personnel engaged in ADP systems analysis and design. A minimum of 5 years of experience in software development, maintenance, testing, and documentation in a multi-platform environment consisting of mainframe, MVS, and other environments; micro and mini-computers; associated hardware; and LANs and/or WANs supporting administrative, mission, and developmental software applications which are geographically dispersed and diverse in nature.

Education: The Senior Systems Analyst shall have a Bachelor's degree in Computer Science, Information Technology, or a field related to the requirements of this contract.

C.6.1.9 Systems Analyst

The Systems Analyst shall exercise analytical techniques to gather information from users, define problems/requirements and develop solutions/applications to bring about their resolution. The Systems Analyst shall have the ability to analyze and evaluate problems reported to the help desk; the ability to analyze, evaluate, and help develop solutions to requirements for technical support; the ability to develop and assist in the development of courses of action to address problems independently or under the direction of the Senior Systems Analyst for complex assignments. The Systems Analyst analyzes methods of approach, reviews problems, gathers information, analyzes data, compares alternative solutions, prepares and updates help desk related documentation, coordinates work with other systems analysts, and assists the Senior Systems Analyst with the orientation and training of newly assigned help desk personnel. The Systems Analyst must have the following experience:

Experience: A minimum of 7 years experience working in a large-scale, multi-platform IT environment. A minimum 4 years experience in software development, maintenance, testing, and documentation in a multi-platform environment consisting of mainframe, MVS and other environments, micro and mini-computers, associated equipment, and LANs and WANs supporting administrative, mission, and developmental software applications. A demonstrated ability to communicate effectively, both orally and in writing.

Education: The Systems Analyst shall have a Bachelor's degree in Computer Science or a field related to the requirements of this contract.

C.6.1.10 Systems Programmer

The Systems Programmer shall develop and modify software associated with operating systems. The Systems Programmer shall develop logic, code, test, modify and debug software packages to suit the operating environment. The Systems Programmer shall assist in the design, coding, testing, and

implementation of systems related modifications. The Systems Programmer shall also monitor the operating system and correct any errors or inconsistencies. The Systems Programmer must have the following experience:

Experience: A minimum of 6 years software development experience in a large-scale, multi-platform IT environment. A minimum of 3 years experience in systems software development, as well as operating systems programming, maintenance, tuning, and troubleshooting experience in a multi-platform environment. The Systems Programmer must be able to work with MVS, UNIX, MS-DOS, and Windows operating systems.

Education: The Systems Programmer shall have a Bachelor's degree in Computer Science or a field related to the requirements of this contract.

C.6.1.11 Applications Programmer

The Applications Programmer shall work with specialized systems used to maintain and improve help desk services. These systems include the Ticket Tracking and the SYMON monitoring / visual communication systems. The Applications Programmer shall develop specifications and documentation for complex user, operations, and technical support programming activities.

The Applications Programmer shall work at the highest technical level on all phases of programming related to help desk management and support, with considerable freedom to make decisions on the methods and techniques to be used. The Applications Programmer shall prepare recommendations for improvement in the supported systems for review and consideration by the customer and contractor management staff, and shall serve as a high-level consultant to the technical staff and customer community. The Applications Programmer must have the following experience:

Experience: A minimum of 9 years experience application software design, development, and testing in a large-scale, multi-platform data processing environment. A minimum of 5 years of experience in three of the following four areas: software development, maintenance, testing, or documentation in a multi-platform environment consisting of mainframe, micro and mini-computers, associated hardware, and LANs and WANs, supporting administrative, mission, and developmental software applications.

Education: The Applications Programmer shall have a Bachelor's degree in Computer Science or a field related to the requirements of this contract.

C.6.1.12 LAN Integrator/LAN Technician

The LAN Integrator/LAN Technician shall be responsible for on-site component server, peripheral, and workstation connection, configuration, integration, and testing. This shall include custom applications software configurations loaded on this equipment. The LAN Integrator/LAN Technician must have the following experience:

Experience: A minimum of 2 years experience in on-site component server, peripheral, and workstation connection, configuration, integration, and testing, including loading custom applications software configurations on computer equipment.

Education: The LAN Integrator/LAN Technician shall have a high school diploma and possess a manufacturer's certificate in LAN and/or computer technology.

C.6.1.13 Network Specialist

The Network Specialist shall provide telephone support for PC-based LANs, using Ethernet2, FDDI, and Token Ring. The Network Specialist shall provide support for LANs running Apple Macintosh computers on Apple Talk. The Network Specialist must have the following experience:

Experience: A minimum of 5 years experience working with IT equipment and networks, including experience installing and maintaining LANs. A minimum of 3 years of the total experience should be help desk management or customer support management experience in a Novell Netware environment.

Education: The Network Specialist shall have an Associate's degree in Computer Science or a field related to the requirements of this contract.

C.6.1.14 Computer Systems Technician

The Computer Systems Technician shall provide general technical support in the conduct of equipment site surveys, equipment inventory, installation/de-installation/re-installation of equipment and network components, and software support in the form of installation and configuration on network components such as PCs and related peripherals. The Computer Systems Technician must have the following experience:

Experience: A minimum of 6 years experience working in a large-scale, multi-platform data processing environment. A minimum of 4 years experience in maintaining IT equipment and networked systems and associated components; tuning and troubleshooting in a multi-platform environment; experience with IBM and IBM-compatible personal computer systems and related office automation applications.

Education: The Computer Systems Technician shall be a graduate of an accredited technical trade, professional, or technical training institution or possess a diploma/certificate from a program in Computer Science, Information Technology or related curriculum(s) with at least 120 hours of classroom instruction.

C.6.1.15 Senior Computer Specialist

The Computer Specialist shall provide support to users who are developing and maintaining applications using ORACLE and other DBMS software on multiple platforms ranging from PCs through mainframes. The Senior Computer Specialist must have the following experience:

Experience: A minimum of 10 years experience developing and maintaining applications in a multi-platform ADP environment. A minimum of 4 years developing, maintaining, and fine-tuning ORACLE-based applications. The Computer Specialist shall also be experienced in supporting telecommunications, security, and device configuration.

Education: The Computer Specialist shall be a graduate of an accredited technical trade, professional, or technical training institution or possess a diploma/certificate from a program in Computer Science, Information Technology, or related curriculum(s) with at least 120 hours of classroom instruction.

C.6.1.16 Mid-Level Computer Specialist

The Computer Specialist shall provide support to users who are developing and maintaining applications

using ORACLE and other DBMS software on multiple platforms ranging from PCs through mainframes. The Mid-Level Computer Specialist must have the following experience:

Experience: A minimum of 5 years experience developing and maintaining applications in a multi-platform ADP environment. A minimum of 2 years developing, maintaining, and fine-tuning ORACLE-based applications. The Computer Specialist shall also be experienced in supporting telecommunications, security, and device configuration.

Education: The Computer Specialist shall be a graduate of an accredited technical trade, professional, or technical training institution or possess a diploma/certificate from a program in Computer Science, Information Technology, or related curriculum(s) with at least 120 hours of classroom instruction.

C.6.1.17 Junior Computer Specialist

The Computer Specialist shall provide support to users who are developing and maintaining applications using ORACLE and other DBMS software on multiple platforms ranging from PCs through mainframes. The Junior Computer Specialist must have the following experience:

Experience: A minimum of 2 years experience developing and maintaining applications in a multi-platform ADP environment. A minimum of 1 year developing, maintaining, and fine-tuning ORACLE-based applications. The Computer Specialist shall also be experienced in supporting telecommunications, security, and device configuration.

Education: The Computer Specialist shall be a graduate of an accredited technical trade, professional, or technical training institution or possess a diploma/certificate from a program in Computer Science, Information Technology, or related curriculum(s) with at least 120 hours of classroom instruction.

C.6.1.18 Software Applications Specialist

The Software Application Specialist shall provide support in maintaining and troubleshooting a variety of mainframe and microcomputer software applications used by the INS. The Software Application Specialist must have the following experience:

Experience: A minimum of 4 years experience in systems software maintenance and application software maintenance and development; tuning and troubleshooting in a multi-platform environment; experience with IBM and IBM-compatible personal computer systems and related office automation applications.

Education: The Software Application Specialist shall have an Associate's degree in Computer Science or a field related to the requirements of this contract.

C.6.1.19 Senior Logistics Specialist

The Senior Logistics Specialist shall provide support in fulfilling and/or planning the logistics requirements for site surveys, equipment deployment, and installation. The Senior Logistics Specialist shall assist in inventory and configuration control management. The Senior Logistics Specialist must have the following experience:

Experience: A minimum of 6 years of progressive logistics experience such as: logistics systems analysis, R&M analysis, configuration management, integrated logistics support, and operations research. A minimum of 3 years experience with logistics integration requirements and implementation techniques as applied to complex information technology environments. Two years of experience in an information technology environment at a team leader level including work in logistics support, project support, or management support.

Education: The Senior Logistics Specialist shall have a Bachelor's degree in Logistics, Operations Research, or a certified professional logistician certificate.

C.6.1.20 Logistics Specialist

The Logistics Specialist shall provide support in implementing the logistics requirements for site surveys, and equipment deployment and installation. The Logistics Specialist shall assist the Senior Logistics Specialist in inventory and configuration control management. The Logistics Specialist must have the following experience:

Experience: A minimum of 4 years of progressive logistics experience such as: logistics systems analysis, R&M analysis, configuration management, integrated logistics support, and operations research. A minimum of 2 years experience with logistics integration requirements and implementation techniques as applied to complex information technology environments. Two years of experience in an information technology environment at a team leader level including work in logistics support, project support, or management support.

Education: The Logistics Specialist shall have a Bachelor's degree in Logistics, Operations Research, or a certified professional logistician certificate.

C.6.1.21 Logistics Technician/Inventory Specialist

The Logistics Technician/Inventory Specialist shall be responsible for performing inventories, reconciling inventory results with on-hand data, maintaining inventory and configuration databases and other records, and producing such ad hoc inventory and configuration reports as may be required by the Government. The Logistics Technician/Inventory Specialist must have the following experience:

Experience: A minimum of 4 years of general and progressively more responsible experience in positions involving inventory management and configuration control. One year experience as a hands on inventory clerk. The Logistics Technician/Inventory Specialist shall have a demonstrated knowledge of logistics technology and the ability to apply this knowledge to complex logistic systems.

Education: The Logistics Technician/Inventory Specialist shall have high school diploma and additional logistics training or training in a field related to the requirements of the position.

C.6.1.22 Senior Help Desk Analyst

The Senior Help Desk Analyst shall serve as a lead technical individual for the help desk and act as the interface with the on-site Government Help Desk (DSMC) POC. The responsibilities of the Senior Help Desk Analyst shall also include those of the Help Desk analyst. The Senior Help Desk Analyst(s) must possess the following education and experience:

Experience: A minimum of 5 years experience in mainframe and distributed LAN/WAN systems environment supporting COTS software or custom applications and ADP/telecommunications equipment. A minimum of 3 years experience in help-desk management or customer-support management. Excellent oral communications skills, including the ability to listen well, and question effectively to analyze problems presented over the telephone.

Education: The Senior Help Desk Analyst shall have an Associate's degree in a field directly related to the requirements of this contract.

C.6.1.23 Help Desk Analyst

The Help Desk Analyst shall provide first-level response to user problems or questions related to ADP hardware, software, telecommunications, LANs, WANs, password access, and all other requests for assistance received at the help desk. The Help Desk Analyst shall resolve user problems with the telecommunication networks, hardware, and applications supported by the INS. The Help Desk Analyst shall also maintain trouble ticket status and monitor performance of the trouble ticket tracking system within the DSMC. The Help Desk Analyst shall possess the following experience and education.

Experience: A minimum of 3 years experience in mainframe and distributed LAN/WAN systems environment supporting COTS software or custom applications and ADP/telecommunications equipment. A minimum of 2 years of previous help desk experience in a multi-platform networked environment. Excellent oral communications skills, including the ability to listen well, and question effectively to analyze problems presented over the telephone.

Education: The Help Desk Analyst shall have an Associate's degree in a field directly related to the requirements of this contract.

C.6.1.24 Lead Computer Operator

The Lead Computer Operator shall provide supervision of computer operations and associated services for operation of ADP hardware, software, telecommunications, access, backup and restoration, and other on-line and batch data processing activities, including job scheduling and production control. The Lead Computer Operator may perform the duties of Computer Operator I when acting as the sole computer operator assigned to a site. The Lead Computer Operator shall serve as supervisor during assigned shifts and prepare and monitor both production and test jobs using IBM System/36, Pyramid, Sequent, HP9000, or Data General minicomputers, MVS, and other environments and computer platforms and associated peripherals. The Lead Computer Operator oversees job completion, and dissemination of output; supervises backups and restorations; oversees and verifies routine preventive maintenance conducted on equipment; and ensures proper storage of tapes and other media.

Experience: A least 5 years experience related to the operation of data processing equipment in a multi-platform environment, consisting of MVS and either System/36 or Data General minicomputers, and related peripherals. A minimum of 1 year of experience in a data processing center operating in an MVS and either System/36, Pyramid, Sequent, HP9000, or Data General minicomputer environment.

Education: The Lead Computer Operator shall have an Associate's degree in a field related to the requirements of this contract.

C.6.1.25 Computer Operator I

The Computer Operator I shall provide computer operations and associated services for operation of ADP hardware, software, telecommunications, access, backup and restoration, and other on-line and batch data processing activities, including job scheduling and production control. The Computer Operator I shall prepare and monitor both production and test jobs using IBM System/36, Pyramid, Sequent, HP9000, or Data General minicomputers, MVS, and other environments, and computer platforms and associated peripherals currently in use or placed into use by INS in the future. The Computer Operator I shall monitor job completion, prepare and disseminate output, perform backups and restorations, accomplish routine preventive maintenance on equipment, and ensure proper storage of tapes and other media.

Experience: A minimum of 3 years experience in the operation of data processing equipment in a multi-platform environment. A minimum of 1 year of experience in a data processing center operating in an MVS and either System/36, Pyramid, Sequent, HP9000, or Data General minicomputer environment.

Education: The Computer Operator I shall have an Associate's degree in a field related to the requirements of this contract.

C.6.1.26 Computer Operator II

The Computer Operator II shall perform computer operations and associated services for operation of ADP hardware, software, telecommunications, access, backup and restoration, and other on-line and batch data processing activities, including job scheduling and production control. The Computer Operator II shall provide input/output support for production and test jobs using IBM System/36, Pyramid, Sequent, HP9000, or Data General minicomputers, MVS, and other environments, and computer platforms and associated peripherals currently in use or placed into use by INS in the future. The Computer Operator II shall accomplish job completion, disseminate output, perform backups and restorations, accomplish routine preventive maintenance on equipment, and ensure proper storage of tapes and other media.

Experience: A minimum of 1 year of experience in the operation of data processing equipment in a multi-platform environment. Familiarity with data processing center operations in an MVS and either System/36, Pyramid, Sequent, HP9000, or Data General minicomputer environment.

Education: The Computer Operator II shall have a high school diploma.

C.6.1.27 Technical Writer

The Technical Writer shall be responsible for developing, outlining, writing, editing, maintaining, and revising documentation in support of the contract including procedures manuals, technical manuals, users' manuals, bulletins, newsletters, meeting reports, and memoranda for file. The Technical Writer shall be skilled in either MS Word or an MS Windows word-processing program of similar complexity and functionality.

Experience: A minimum of 5 years general and progressively more responsible experience as a general technical writer and/or editor, producing ADP-related documentation. A minimum of 1 year of experience writing manuals and/or on-line documentation for users of ADP software systems for U.S. Government clients.

Education: The Technical Writer shall have a Bachelor's degree in English, Journalism, or Communications.

C.6.1.28 Data Entry Operator

The Data Entry Operator shall be responsible for formatting and performing data entry into micro-, mini-, and/or mainframe computer systems.

Experience: A minimum of 2 years experience formatting and entering data into micro-, mini-, and/or mainframe computer systems.

Education: The Data Entry Operator shall have a high school diploma.

C.6.1.29 Secretary

The Secretary shall perform typing, filing, administrative, and clerical duties of both routine and complex natures; word-processing and assembling technical and administrative documents from rough draft through final production. The Secretary receives and distributes incoming correspondence and assists in preparing reports and other documents required under the contract.

Experience: A minimum of 5 years experience in the performance of office and administrative work. Proficient in the use of personal computers, printers, and common office software applications such as word-processing, spreadsheet, and database programs.

Education. The Secretary shall have a high school diploma.

C.6.1.30 Certified Network Engineer (CNE)

The Certified Network Engineer (CNE) shall provide management for INS LAN/WANs. The CNE shall also provide technical advice and assistance in the administration, installation, relocation, and operation of LAN/WANs. CNE shall have the following experience:

Experience: A minimum of 8 years experience working in a multi-platform, distributed data processing environment. A minimum of 5 years of LAN or related experience working in a distributed communications environment using the following platforms: Novell Netware, VINES, Ethernet, Token Ring, and AppleTalk.

Education: The CNE shall have a Bachelor's degree in Computer Science, Electrical Engineering, or a field related to the requirements of this contract. The CNE shall also possess Certified Network Engineer (CNE) certification.

C.7 Government Furnished Property

The contractor shall monitor and maintain the level of ADP materials including supplies and spare

parts necessary to ensure the continued and uninterrupted operation of INS facilities equipment and related systems. The contractor shall prepare requisitioning documents and provide them to the COTR or other designated INS officials in accordance with locally established procedures for approval and processing. Stock levels, storage locations, and supply re-order points will be established by the COTR. Materials will be obtained through the Government, in accordance with locally established procedures, unless otherwise directed by the CO.

C.7.1 Government Furnished Facilities And Equipment

The Government may make available, without cost to the contractor, those facilities necessary to provide services at all FOS/HM sites. The contractor shall use these facilities and equipment only to perform under the requirements of this contract. The contractor shall be liable for any damages, beyond reasonable wear and tear, to any Government furnished property or equipment which is assigned or otherwise made available for the contractor's use. When Government furnished facilities and equipment will be available, it will be identified in individual delivery orders.

C.7.2 Incidental Materials And Supplies

The contractor shall furnish materials and supplies incidental to the performance of this contract.