



U.S. Customs and Border Protection

Attachment 1

Secure Border Initiative (*SBI*net)

Command, Control, Communications, and Intelligence (C3I) System Development and Sustainment

Statement of Work (SOW) Version 2

Contract: HSBP1006D01353
Task Order: HSBP1208J19363

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1 Purpose

1.1 Engineering, Technical and Management Services

The purpose of this Statement of Work (SOW) effort is for the Contractor to provide **engineering, technical and management services** under the SBI*net* Indefinite Delivery Indefinite Quantity (IDIQ) SOW to:

- a. Develop and document the SBI*net* Command, Control, Communications and Intelligence (referred to as C3I) requirements in compliance with the SBI*net* System specification (A-Spec), the Department of Homeland Security (DHS) Enterprise Architecture, US Customs and Border Protection (CBP) Enterprise Architecture, SBI*net* Operational Requirements Document (ORD), SBI*net* Concept of Operations (CONOPS) and CBP System Life-Cycle (SLC) process framework (as tailored herein)
- b. Design, develop, and demonstrate a functional prototype of an SBI*net* (C3I) system, to include classified and unclassified segments
- c. Design, and develop the Command, Control, and Intelligence (C2I) system and support operational testing of the system to demonstrate operational capabilities in accordance with the requirements
- d. Establish the Integrated Logistics Support (ILS) program to support the C2I and communications components of the system in conjunction with SBI*net* system deployment to end users (note that at the completion of C2I development, C2I ILS may be performed under an overarching ILS task order)
- e. Provide *interim* COP functionality (herein referred to as "C2I Release 0.5") for all SBI*net* deployments (i.e., Tucson, Yuma, El Paso Task Orders) until the first release of the C2I system (paragraph 1.1.c.) is mission capable
- f. Maintain the *interim* C2I Release 0.5 system until the all instantiations of this system are replaced by the first release of the C2I system
- g. Provide software release support for the deployment of the interim C2I Release 0.5 system as necessary to support all SBI*net* deployments (i.e., Tucson, Yuma, El Paso Task Orders) until the first release of the C2I system is mission capable

1.2 C3I System to be Deployed

The **C3I system to be deployed** as a result of this SOW includes developmental software, commercial software, commercial hardware, and the supporting infrastructure to deploy and maintain C3I system. Specifically, the C3I system shall provide:

- a. A development and maintenance environment (including facilities as necessary) to develop, operate and sustain the C2I system (including commercial third party license agreements)--including personnel training, software maintenance, status reporting, and continuity of operations
- b. Training and logistics support necessary to transition the system to a CBP workforce capable of operating and maintaining the C2I system

- c. Software and software support for CBP training facilities to include online software training modules and simulations to be conducted as part of the overall user / operator training to be delivered under Integrated Logistics Support Task Order(s)
- d. Support for all participating enterprise organizations and stakeholders that will provide, request, and receive intelligence data and information
- e. Software and software support for existing and planned Command, Control, and Intelligence (C2I) facilities within the DHS command structure, CBP Border Patrol Sectors, Office of Field Operations (OFO) Port and field offices, and Air & Marine (A&M) facilities. The current facilities are depicted in (Figure 1) below:

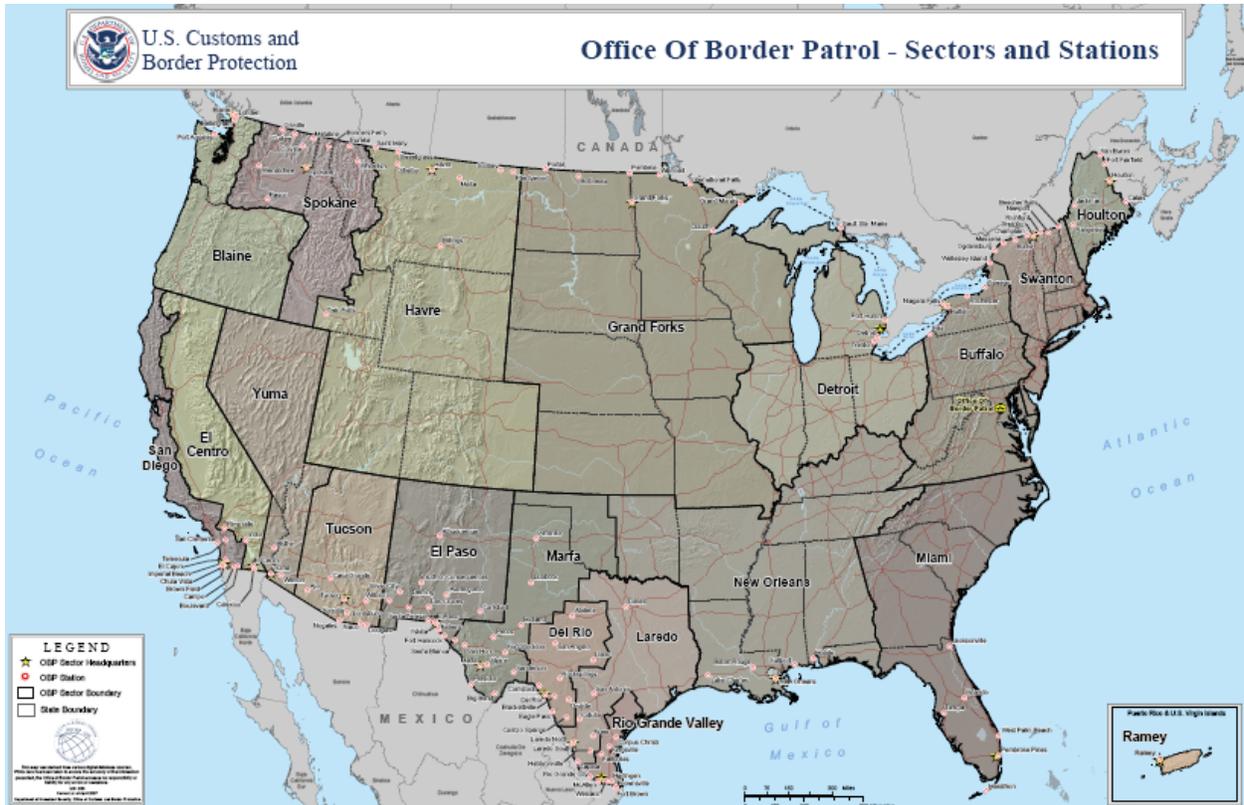


Figure 1. Current CBP Facilities

- f. C2I services for DHS users, allied Federal partners, and Tribal, Regional, State, and Local government organizations, plus other external users as appropriate
- g. Multi-layer security capabilities as necessary to support intelligence processing and operations within both unclassified and classified environments

1.3 Alignment with Deployment Task Orders

It is anticipated that the deployment of C3I hardware components within specified geographic areas, including the requisite supporting infrastructure will be procured under separate “deployment” task orders. The C3I system will take maximum advantage of DHS current and planned communications and facilities infrastructure. As part of the spiral development process, the contractor shall recommend improvements to the performance and value of the C3I system for each spiral.

2 Background

2.1 Associated Task Orders

Based on the Indefinite Delivery, Indefinite Quantity (IDIQ) contract, the Government awarded two task orders to Boeing, a task order to provide management and systems engineering services necessary to develop the SBI*net* "System." and a task order to provide an initial SBI*net* capability along the border near Tucson, AZ (referred to as Project 28). Boeing (from hereon referred to as the Contractor) has since developed a limited C3I capability under Project 28 and has delivered the SBI*net* System A-level Specification (A-Spec) to establish the requirements for the SBI*net* system. This system, once deployed, will be instrumental in assisting CBP in achieving control of the border.

2.2 Spiral Development Approach

The contractor shall incorporate a spiral development approach to develop the C2I system software and assist the Government in reaching a C3I capability. The spiral approach shall result in multiple releases where each subsequent release includes the incremental addition of functionality and/or an evolutionary improvement in system capability. This approach shall be based on two phases:

- a. Phase 1 (to be accomplished once at the beginning of the project):
 - A software plan and development environment to support requirements, design, and development of the C2I software
 - An initial software support environment to manage releases of the C2I software to the field (including bug fixes/patches, and retrofit to prior baselines)
 - An assessment of and a set of requirements for current and planned CBP and DHS supporting systems and infrastructure that require modifications and additional capacity in order for the C2I system to function once deployed (command center infrastructure, communications capabilities, data processing and information sharing/delivery services)
- b. Phase 2 (activities to be repeated for each software release):
 - Prototype, including a simulation
 - Collaborative C2I requirements and design (RAD/JAD)
 - Detailed C2I design, testing, and delivery of the system
 - Release, delivery, and installation support of the C2I system (including training software) into the target environment(s) (including retrofit for previous releases)
 - Software support/maintenance

At the Government's request, the contractor shall support the transition of the development and maintenance environment(s) to the Government.

Figure 2 below provides a notional timeline and ordering structure for the work to be performed under this task order; and the relationship between this task order (TO), the management (Mgt) TO, the Project 28 TO; and the BMGR TO:

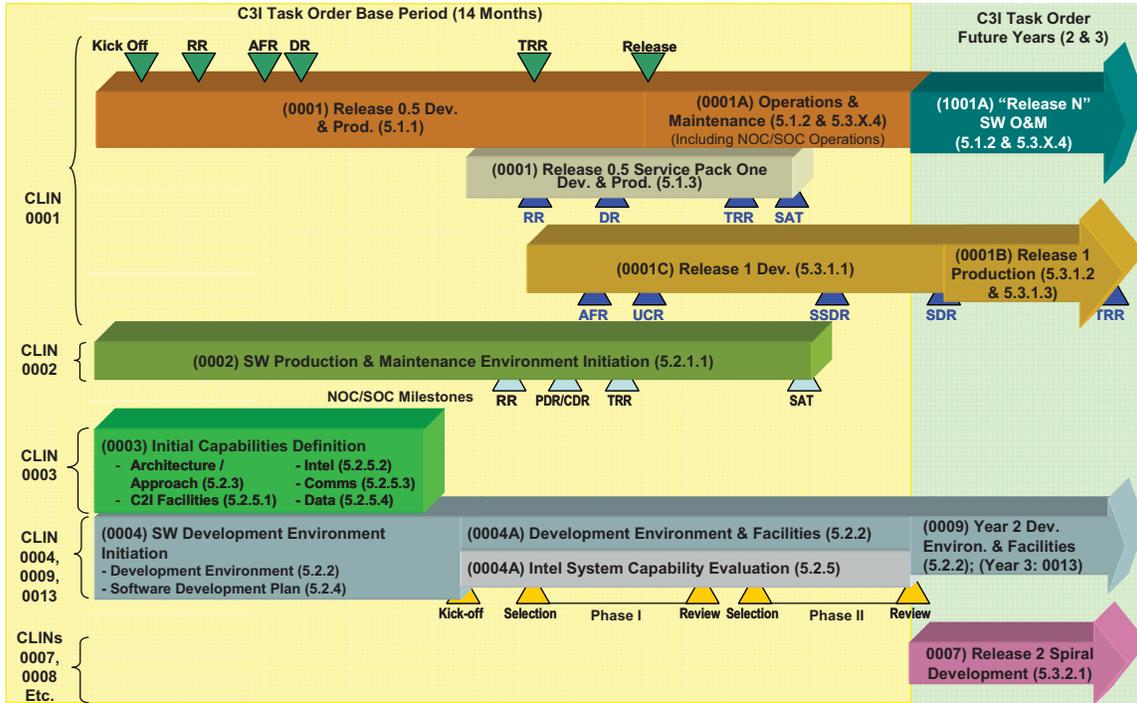


Figure 2. Notional Spiral Development Timeline

3 Objectives

3.1 Control of the US Land Borders

The six elements described below form the primary mission of the SBI^{net} program and are necessary for CBP to gain control of the US land borders. Border control means gaining full control of the US borders so illegal immigration as well as security breaches can be prevented. Border control is achieved in a given area when CBP, is able to consistently meet all of the elements listed below.

- 'Predict' element - Anticipating the actions of an Item of Interest (IoI) prior to illegal activity.
- 'Deter' element - To dissuade illegal cross border activity into and out of the US by impeding entry or creating and conveying the certainty of detection and apprehension.
- 'Detect' element - To discover a possible IoI.
- 'Identify' element - To determine whether an IoI is a conveyance, a human, an animal, or another entity.
- 'Classify' element - To determine the potential intent and/or level of threat of an IoI.
- 'Respond/Resolve' element - Employ an appropriate level of law enforcement resources to successfully address an IoI; Final CBP action taken, whether criminally, administratively, or otherwise, of an IoI.

3.2 Spiral Approach

The primary objective of this SOW is for the Contractor to develop and support deployment of an operational C2I system through the use of a collaborative environment suitable for rapid

application development (RAD) and joint application design (JAD). The RAD/JAD methodology shall incorporate a spiral model that results in requirements and design documentation that is fully vetted and reviewed by the C3I system stakeholders. The approach will include functional prototypes to successfully demonstrate system performance. This approach will result in multiple releases of the system where each subsequent release includes the incremental addition of functionality and/or an evolutionary improvement in system capability.

End users will be directly involved in the development of the C2I systems and graphical user interfaces to ensure solutions are tailored to each user class. This collaborative development approach shall also incorporate communications analysis and requirements to achieve full C3I system functionality and allow for the Government-Contractor team to continuously re-evaluate and update the strategy, Concept of Operations, and Deployment Plan for the SBI^{net} C3I system.

The initial “spiral” of the C3I system was developed by Boeing as part of the deployment of Project 28 .The contractor shall incorporate the lessons learned, requirements, and design documentation from Project 28 as an input to the future development of the SBI^{net} C3I system.

3.3 C2I System Objectives

The C2I system delivered by the contractor shall provide:

- a. Effective control and operation of SBI^{net} surveillance and detections systems
- b. The generation, maintenance and dissemination of detection and “blue force” tracks
- c. Situational awareness of activities within the area of interest to inform decision-making
- d. Integration and interoperability with existing and planned near-term DHS intelligence capabilities to include collection, processing and dissemination within a secure environment
- e. Integration and interoperability with existing and near-term planned tactical decision aids for optimal use of CBP assets, increased operational safety, and improved mission performance. Key integration targets for integration and fielding include, but are not limited to, (b) (7)(E)

- f. Control of communications systems
- g. Integration with apprehension, identification, license plate query/reader, and booking capabilities (e.g., Treasury Enforcement Communication System)
- h. Training and training support, including training simulation software
- i. Software maintenance/sustainment of the C2I system (including training/simulation software)

3.4 C3I Deployment Approach

The C3I deployment alternatives delivered by the Contractor shall include:

- a. Concept of Operations (including input on required CBP resources from existing operational CBP assets) for employment of C3I solution
- b. Bill-of-materials for information and communications technology
- c. Bill-of-materials for infrastructure (construction components for command center facilities, communications towers, power, and networking)
- d. Bill-of-materials for intelligence collection and processing technology, including deployed information gathering electronic suites (LETC and motion imagery gathering components)
- e. Additions to the SBI*net* system toolbox
- f. Set of locations for deploying and/or modifying C3I technology and infrastructure, including an inventory confirming the ability of these locations to carry the required infrastructure, and remediation and/or improvement plans for those locations unable to meet the infrastructure requirements without additional work
- g. Required upgrades to existing and planned communications network assets
- h. Required upgrades to existing and planned Data Center / Management assets
- i. Plan of action and milestones for deploying the system, including recommended milestones and deliverables in alignment with capital asset improvement and facilities management systems and contracts in place for chosen locations
- j. Logistics analysis and projections for sustaining the C3I system; including total life cycle cost profile, with training, staffing, capital costs allocated by standard reporting mechanisms in place for the DHS enterprise architecture and business management processes, including OMB reporting on major investments, and related systems

3.5 Compliance Objectives

In addition, the solution shall:

- a. Comply with the System A-Spec
- b. Leverage the lessons-learned, requirements, and design information from Project 28
- c. Comply with geographic area-specific Project Technical Requirements
- d. Comply with the DHS and CBP Enterprise Architecture(s), IT standards, and enterprise standards of practice, including data models, information sharing and communications protocols, as well as standard technologies and data warehousing programs
- e. Leverage the existing DHS Enterprise HSDN program and comply with the governance framework it has established to service requirements for accessing secret level information and hosting secret level systems
- f. Encompass the necessary technology, communications infrastructure, tactical infrastructure, transportation assets, training assets, necessary services, and recommendations for the optimum deployment of CBP personnel assets

- g. Minimize total ownership cost to the Government
- h. Comply with environmental and land use requirements.

4 Scope of Work

4.1 Technical, Engineering and Management services

The scope of this task order includes the full range of technical, engineering and management services required to provide C3I requirements; and design and develop an integrated C3I system that, when incorporated with the SBI*net* “lay-down” solutions deployed across the required geographic areas, complies with the requirements of the SBI*net* A-Spec.

4.2 Collaborative Development Environment

The Contractor shall develop an operational C2I system through the use of a collaborative environment suitable for RAD/JAD. The RAD/JAD approach provided by the contractor shall incorporate a spiral model that results in requirements and design documentation that is fully vetted and reviewed by the system stakeholders; and includes functional prototypes that demonstrate system performance, support contractor integration testing and evaluation, and involve end users in the development of the C2I graphical user interface tailored to each user class. This spiral development approach shall allow for the Government-Contractor team to continuously re-evaluate and update the strategy, Concept of Operations, and Deployment Plan for the SBI*net* C3I system.

4.3 Enterprise Architecture Compliance

The operational C2I system shall integrate information from, and be fully compliant and interoperable with current C3I and related DHS enterprise information systems. The systems shall use the common operating systems identified in the Department’s Geospatial Information Infrastructure, and centralize data storage to the Department’s data center(s). The solutions must be vetted through, and compliant with, the DHS Enterprise Architecture Review board and Investment Review Board (IRB) processes for Management Decision Point milestones, and adhere to DHS Management Directives 1400 and 0007.1. The program will ensure that the design conforms to the DHS and CBP enterprise architecture, the DHS and CBP technical reference models (TRM), and all DHS and CBP infrastructure policies and guidelines as promulgated by the DHS and CBP Chief Information Officers (CIO) and Chief Technology Officers (CTO). The program will conform to the federal enterprise architecture (FEA) model and the DHS and CBP versions of the FEA model as described in their respective RAs. Development solutions will also ensure compliance with the current version of the DHS target architecture standards profile. Where possible, the program should use DHS/CBP approved products, standards, services, and profiles as reflected by the hardware, software application, and infrastructure components of the DHS/CBP TRM/standards profile. If new hardware, software or infrastructure components are required to develop, test, or implement the program, these products will be coordinated through the DHS and CBP formal technology insertion process. The DHS/CBP TRM/standards profile will be updated as technology insertions are accomplished. The program will submit to the DHS and CBP system lifecycle methodology (SLC), seeking all established gate reviews and the architectural alignment assessments (AAA) associated with each gate.

4.4 Intelligence System

The C2I system shall include an operational system which integrates existing intelligence tools and creates new capabilities in alignment with stakeholder requirements. Deployment of this system shall result in a standardization of core SBI*net* intelligence functions, integrated within the existing DHS intelligence architecture, to include both classified and unclassified networks. Moreover, the Government anticipates separate networks with different instances of the COP software separated with a high assurance guard (HAG).

4.5 Training Support

The contractor shall develop and maintain C2I on-line (or computer-based (CBT)) training, training materials, and training simulation software. These training products shall be capable of supporting SBI*net* training programs to be provided under the Integrated Logistics Support (ILS) task order.

4.6 Production and Testing Environment

Finally, the contractor shall deliver development, production, and testing (including integration) environments capable of supporting C2I and training software deployment to specified geographic areas and DHS stakeholders, in accordance with the SBI*net* deployment schedule

The work to be accomplished by the contractor shall be in alignment with the CBP SLC and the SBI*net* Systems Engineering Management Plan (SEMP). At a minimum, the contractor shall perform (a) requirements capture and management, (b) trade studies, (c) software design (d) software development, (e) software configuration management (CM), (f) data configuration management, (g) software and hardware integration, (h) operations and maintenance planning, (i) architecture definition, (j) life cycle cost and supportability analysis, , (k) software test planning and testing, (l) software integrated logistics planning, and (m) C2I facilities requirements analysis.

4.7 Alignment with IDIQ SOW

The scope of this task order maps to Section 6 of the IDIQ SOW as outlined in Appendix A. The Contractor shall perform the work under this task order as necessary to achieve the objectives of this task order in accordance with the detailed tasks described in Section 5 below

4.8 Security

The Contractor shall comply with all CBP security policies and procedures as stated in the original contract (HSBP1006D01353) to include any and all modifications to the contract. Specifically, the contractor may begin work on the contract if the contractor has an active DoD clearance of secret or top secret. However, the contractor shall submit a completed DHS security package within 10 calendar days to be in full compliance with CBP's Security Programs Division.

5 Detailed Tasks

Detailed tasks to be performed under this SOW shall be in accordance with the activities required in the CBP SLC (project stages) as tailored below, and are mapped to the SBI*net* IDIQ SOW in Appendix A.

5.1 Phase 0: C2I Interim Capability

The contractor shall provide an *interim* C2I capability to support all SBI^{net} deployments (i.e., Tucson-1 and Ajo-1) until the first release of the C2I system (delivered under paragraph 5.3.1 of this task order) is mission capable.

5.1.1 Operational Archetype

The contractor shall provide the C2I functionality necessary to operate and interface with the SBI^{net} “toolbox” components (e.g., sensors, communications equipment, field agent systems) that have been deemed by the Government to be suitable for initial deployments prior to the completion (Initial Operating Capability) of Tucson, Yuma, and El Paso deployments.

5.1.1.1 C2I Release 0.5 Requirements

In coordination with the SBI^{net} program office and mission stakeholders, the contractor shall develop and document the C2I Interim Capability Archetype (ICA) requirements.

(Reference Deliverables (Release 0.5 Specific): C2I Software Requirements Specification and Related DOORS database, C2I Interface Control Document(s), Requirements Traceability Matrix, Architecture Description Document, , Security Architecture Design Document, C2I Development Lessons-Learned, Software Test Plan)

5.1.1.2 C2I Release 0.5 Design

In coordination with the SBI^{net} program office and mission stakeholders, the contractor shall develop and document the C2I ICA design.

(Reference Deliverables (Release 0.5 Specific): C2I Software Requirements Specification and Related DOORS database, C2I Interface Control Document, , Requirements Traceability Matrix, Architecture Description Document, Security Architecture Design Document, C2I Development Lessons-Learned, Software Test Plan, Intermediate Test Requirements, Intermediate Test Cases, Intermediate Test Procedures, C2I Software Design Document, Software Design Description, Database Design Document, Interface Design Description, Spiral Software Deliverable Version Description Document, Intermediate Test Results, Process Audit Checklists/Records, Installation Plan, Software Unit Test Results, C2I Code Library, C2I Performance Metrics Report, User Manual, Operator Manual, Training Materials)

5.1.1.3 C2I Release 0.5 Development

In coordination with the SBI^{net} program office and mission stakeholders, the contractor shall develop, demonstrate, and test the C2I ICA prior to deployment. This effort shall include integration testing to verify functionality with SBI^{net} components and interfacing systems. The contractor shall support Government review and testing activities required to receive DHS/CBP approval to operate the system once deployed.

(Reference Deliverables (Release 0.5 Specific): C2I Software Requirements Specification and Related DOORS database, C2I Interface Control Document, , Requirements Traceability Matrix, Architecture Description Document, Security Architecture Design Document, C2I Development Lessons-Learned, Software Test Plan, Intermediate Test Requirements, Intermediate Test Cases, Intermediate Test Procedures, C2I Software Design Document, Software Design Description, Database Design Document, Interface Design Description, Spiral Software Deliverable Version Description Document, Intermediate Test Results, Process Audit

Checklists/Records, Installation Plan, Software Unit Test Results, C2I Code Library, C2I Performance Metrics Report, User Manual, Operator Manual, Training Materials, Software Maintenance Procedures)

5.1.2 C2I Release 0.5 O&M Support

5.1.2.1 Project 28 Retrofit

Contractor O&M support for Release 0.5 shall include the retrofit/upgrade and subsequent operations, and maintenance of the improvements made to the Project 28 COP (“Released as part of the Tucson-1 deployment”).

5.1.2.2 ICA Deployment, Operations, and Maintenance

Following deployment of software to the production site, the Contractor shall support regression testing. The Contractor shall support site integration and System Acceptance Test, and shall maintain configuration management of the Spiral Software throughout this process. The Contractor shall support the SBI^{net} System Operational Readiness Review after successful installation, integration, and SAT.

The contractor shall support the deployment, operations, and maintenance of the interim C2I ICA system until the all instantiations of this system are replaced by the first release (Release 1) of the C2I system (delivered under paragraph 5.3.1 of this task order). This effort shall include system software to support Tucson-1, Ajo-1, and all other SBI^{net} deployments planned prior to subsequent C2I capabilities developed under this task order (“Releases 1-n”).

Contractor performance for the ICA O&M support shall include:

- a. System Performance monitoring and management feedback
- b. Tracking and reporting of system performance statistics, costs, and resource allocations
- c. Detecting and addressing defects in training, application, operation, and local systems
- d. Assessing the system’s efficiency and effectiveness to determine if the investment was cost beneficial and achieved the planned functionality
- e. Managing and addressing system and infrastructure problems
- f. Recovering from system and infrastructure problems
- g. Implementing system and infrastructure changes
- h. O&M support for C3I training system software, to include computer based training aids and training simulations.

(Reference Deliverables: C2I Implementation Plan, Software Support and Maintenance Plan, C2I Training Plan, Training Materials, User Manual, Operator Manual, C2I System Performance Metrics Report, Software Metrics Report, C2I Total Lifecycle Cost Analysis/Model)

5.1.3 Operational Archetype Service Pack One

5.1.3.1 Service Pack One Requirements

In coordination with the SBI^{net} program office and mission stakeholders, the contractor shall design, develop, test, deliver, and document the requirements for a “Service Pack” update to

the Release 0.5 Operational Archetype. The Release 0.5 “Service Pack One” shall include the following features as discussed and documented during previously conducted Release 0.5 RAD/JAD sessions, to include the following functionality/features:

- Integrated video recording and playback
- Customized large screen situational awareness display
- Additional HMI functions for field supervisors
- Integrated data management
- Data reporting
- Improved correlation, fusion, and radar tracks
- Improved camera management
- Sensor environmental presets
- Camera configuration presets
- Cut and drag marking support

5.1.3.2 Service Pack One Implementation

At the time of Service Pack One delivery, it is expected that the C3I Release 0.5 software and the associated program documentation will have been completed and baselined as identified in paragraph 6.2.12 CDRLs. The contractor shall incorporate Service Pack One features/functionality through the preparation and coordination of the necessary change requests through the Contractor’s and Government’s joint CCB processes. The Contractor shall prepare and submit a Service Pack One Implementation Plan describing all expected document changes, design changes, reviews required (including expected Government review comment timeline), review and delivery schedule, and project baseline (work package) changes.

When directed by the Government CCB, the Contractor shall implement the Service Pack One changes in the C3I COP software baseline. The Contractor shall perform testing as necessary, including regression testing, to demonstrate correct operation of the Service Pack One feature(s). Finally, the Contractor shall obtain approval from the C3I Information Systems Security Manager that the changes do not impact the security profile of the system.

(Reference Deliverables: Release 0.5 Archetype Service Pack One Implementation Plan)

5.2 Phase 1: C3I Architecture Requirements; Development and Support Framework

The contractor shall accomplish the following activities once:

5.2.1 Initial Support Environment

The contractor shall evaluate and recommend implementation alternatives to provide C2I operations and maintenance (O&M) capabilities within the CBP mission support structure (SBI^{net} and OIT). These alternatives shall consider mission needs; continuity of operations; current and planned facilities; technical support staffing, response times; and locations and numbers of deployed systems. Once approved by the Government, the contractor shall provide O&M of the C3I system using the support environment. At the Government’s request, the contractor shall transition this environment to the Government.

5.2.1.1 Initial Support Environment Development

In coordination with CBP operations and maintenance stakeholders, the contractor shall design and implement an environment capable of sustaining the SBI^{net} system once deployed. This environment shall have the capability of monitoring the C3I system status, trouble-shooting system problems, tracking and reporting problem resolution, providing tools for software and hardware repair and upgrades, managing software and hardware configuration changes, and managing and maintaining the systems security posture of the system.

(Reference Deliverables: Software Development Plan, Spiral Build Plan, C2I Implementation Plan, Software Support and Maintenance Plan)

5.2.1.1.1 Network Operations Center (NOC) Requirements

The contractor shall analyze the requirements for managing and operating the communications and computing networks and infrastructure specific to the C3I system. This analysis shall be in accordance with the CBP and DHS Enterprise Architecture and shall be conducted as a partnership with SBI^{net} Information Technology (IT) support stakeholders within CBP and DHS and leverage current and planned capabilities. As a minimum, the contractor shall specify the following requirements:

- a. CONOPS for the NOC
- b. Staffing estimates
- c. Heating, ventilating, and air conditioning (HVAC)
- d. Workspace, including common areas and dedicated (secure) areas for intelligence operations
- e. Software tools
- f. Physical and electronic security, including unique requirements for intelligence processing and planning
- g. Computer processing requirements
- h. Communications requirements
- i. Data storage requirements, including unique requirements for intelligence data (both unclassified and classified)
- j. Power, including backup
- k. Facility space requirements for data and computer processing

(Reference Deliverables: Network Operations Center Plan, Updates to Enterprise Data Management Plan)

5.2.1.1.2 Security Operations Center (SOC) Requirements

The contractor shall analyze the requirements for security management and monitoring of the communications and computing networks and infrastructure specific to the C3I system. This analysis shall be in accordance with the CBP and DHS Enterprise Architecture and shall be conducted as a partnership with SBI^{net} Information Technology (IT) support stakeholders

within CBP and DHS and leverage current and planned capabilities. As a minimum, the contractor shall specify the following requirements:

- a. CONOPS for the SOC
- b. Staffing estimates
- c. Heating, ventilating, and air conditioning (HVAC)
- d. Workspace, including common areas and dedicated (secure) areas for intelligence operations
- e. Software tools
- f. Physical and electronic security, including unique requirements for intelligence processing and planning
- g. Computer processing requirements
- h. Communications requirements
- i. Data storage requirements, including unique requirements for intelligence data (both unclassified and classified)
- j. Power, including backup
- k. Facility space requirements for data and computer processing

(Reference Deliverables: Security Operations Center Plan, Updates to Enterprise Data Management Plan)

5.2.1.1.3 NOC/SOC Functional Requirements

In coordination with the SBI^{net} program office and mission stakeholders, the contractor shall develop and document the functional requirements needed for the NOC/SOC. Should the NOC/SOC requirements or functions described by the requirements necessitate changes to a previously delivered C3I document, the contractor shall update the affected document and re-deliver via the CCB as described in the SBI^{net} Configuration Management Plan.

(Reference Deliverables: NOC/SOC Requirements Specification and Related DOORS database, NOC/SOC Interface Control Document(s), Updates to Requirements Traceability Matrix, NOC/SOC Test Plan/Procedure/ Descriptions, System Test Plan, NOC/SOC Security Architecture Design Document, Security Accreditation Information (maintained in DHS RMS))

5.2.1.1.4 NOC/SOC Design

In coordination with the SBI^{net} program office and mission stakeholders, the contractor shall develop and document the NOC/SOC system design conforming to the requirements of paragraphs 5.2.1.1.1 and 5.2.1.1.2 above and meeting the functional requirements of paragraph 5.2.1.1.3. It is expected that this design will be implemented by selected COTS components. The design document shall describe how the COTS components are to be integrated to provide an integrated approach to security and network management.

During the design phase, the contractor shall coordinate with the SBI^{net} network architects and produce a detailed network architecture showing all network equipment (switches, routers, firewalls, etc.) and how the NOC/SOC design integrates network device and security monitors into the network architecture. This deliverable shall be called theThe design shall include the

Annotated Network Architecture and shall be subject to government approval and acceptance. This Annotated Network Architecture may be included as an appendix to the C3I Communications Plan.

(Reference Deliverables: Updates, if any, to previously delivered documents., NOC/SOC System Design Document Description (including, Annotated Network Architecture), Release 0.5 Database Design Document, NOC/SOC Security Architecture Design Document Security Information (maintained in DHS RMS), NOC/SOC Continuity of Operations (COOP) Plan, NOC/SOC Disaster Recovery/Contingency Plan)

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5.2.1.1.5 NOC/SOC Development and Testing

Based upon the requirements provided under paragraph 5,2,1,1,3 and the design created in paragraph 5.2.1.1.4, the contractor shall develop, demonstrate, and test the NOC/SOC prior to deployment. This effort shall include integration testing to verify functionality with SBlnet components and interfacing systems. The contractor shall support Government review and testing activities required to receive DHS/CBP approval to operate the system once deployed.

(Reference Deliverables: NOC/SOC Test Plan/Procedure/ Descriptions, System Acceptance Test Plan, System Test Procedures, NOC/SOC Design Description Version Description Document, NOC/SOC Test Report System Test Report, Installation Plan, User Manual, Operator Manual, Training Materials, NOC/SOC Security Architecture Design Document Security Information (maintained in DHS RMS)),

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5.2.1.1.6 NOC/SOC Production

The contractor shall support the deployment, operations, and maintenance of the NOC/SOC until operations are transitioned to the CBP Office of Information Technology. This effort shall include support for all SBlnet operational, maintenance, and test software deployed to or otherwise supporting to Tucson-1, Ajo-1, and all other SBlnet system deployments planned prior to transition. The software to be maintained by the NOC/SOC shall include, but not be limited to the following: Sensor Signal Conditioning Unit, Remote Terminal Unit, communications switching software (Iridium, (b) (7)(E) Microwave Backhaul), and power generation / management).

Contractor NOC/SOC support shall include:

- a. Full time monitoring of the SBlnet network and network assets.
- b. Near-real-time response to network outages or system discrepancies discovered during monitoring
- c. Maintenance of a call center at the NOC/SOC to receive security incident reports
- d. Patch management and patch distribution
- e. Maintenance of security audit trails
- f. Proactive maintenance resulting from vulnerability reports received from CBP and DHS security
- g. Recovery from system and infrastructure problems

(Reference Deliverables: NOC/SOC Implementation Plan, NOC Plan, SOC Plan, Software Support and Maintenance Plan, NOC/SOC Operations Plan, NOC/SOC Training Plan, NOC/SOC Training Materials, NOC/SOC User Manual, NOC/SOC Operator Manual, NOC/SOC Standard Operating Procedures)

5.2.1.2 Support Environment Transition

At the Government's request, the contractor shall support the installation and transition of the Initial C2I system O&M and development environments and the NOC/SOC to Government support. This transition shall include all necessary software licenses, hardware purchased as part of this task order, and documentation for operations and sustainment of the support and development environments. At the completion of each build within a spiral (or release), the contractor shall provide all updates of the code to IV&V personnel for independent assessment and evaluation.

(Reference Deliverables: C2I Transition Plan, NOC Plan, SOC Plan)

5.2.2 RAD/JAD Software and System Development Environment

The contractor shall establish a C3I development environment in concert with the Government. This environment shall be capable of supporting C3I requirements, architecture, data, communications, testing, implementation, and sustainment trade studies. Included will be sufficient software development tools for developing software and system interfaces, and the environment shall be capable of demonstrating the performance of alternative approaches (through the use of prototypes, demonstrations, and walk-throughs) to SBI^{net} C3I functionality.

(Reference Deliverables: Spiral Build Plan, Software Development Plan, C2I Implementation Plan, Coding Standard Documentation, Software Quality Assurance Plan)

5.2.3 Service Oriented Architecture

The contractor's development environment and resulting solution shall support and be based on an open architecture "Service Oriented Architecture" (SOA) Technical Framework compatible with ongoing DHS and CBP SOA focus activities. This environment shall provide the capability to include new functionality without major re-design, provides the ability to re-use/re-host service, mission, and database (including track data) applications. Applications to be hosted in this environment shall include both developed and off-the-shelf software. Furthermore, select major modules shall have the capability to be deployed as services on the CBP/DHS Enterprise Service Bus.

(Reference Deliverables: Enterprise Data Management Plan, Architecture Description Document)

5.2.4 Software Development Approach

5.2.4.1 Software Development Plan

The contractor shall produce, maintain, and follow a Software Development Plan (SDP) that reflects the RAD/JAD approach. This plan will schedule a succession of increasing functionality by build/spiral in alignment with SBI^{net} system deployment and schedule. The contractor's approach to develop each spiral of the C3I system shall be presented for approval to the Government during the task order kick-off meeting.

(Reference Deliverables: Task Order Kick-off)

5.2.4.2 Initial Architecture

In alignment with the systems engineering activities conducted under the System Task Order (STO), the contractor shall develop architecture alternatives and recommend an initial C3I architecture to include functional applications and key interfaces. In support of the Initial Architecture the contractor shall conduct trade studies of alternative Command and Control solution components and develop a trade study report.

(Reference Deliverables: Task Order Kick-off, Trade Study Report)

5.2.4.3 Architecture Recommendations for Subsequent Releases

In alignment with the systems engineering activities conducted under the STO, the contractor shall develop an architecture transition approach for the C3I system. This approach shall address all known and anticipated interfaces and functionality required to achieve the overall SBI^{net} mission "end state."

(Reference Deliverables: Task Order Kick-off)

5.2.5 C3I Infrastructure Requirements Development

The contractor shall develop requirements and recommendations for the supporting C3I infrastructure and computing capacity (including storage) necessary for performing the C2I mission for each C2I node within the SBI^{net} system architecture. At a minimum, the following requirements shall be documented within the appropriate B-Specs under the SBI^{net} system specification tree. (Top level requirements)

5.2.5.1 C2I Facility Requirements

The contractor shall analyze the human factors workload, computer processing, and data storage requirements for generic C2I facilities (stations, sectors, A&M, OFO, ports of entry, headquarters, and mobile) and specify the following requirements as a minimum:

- a. Heating, ventilating, and air conditioning (HVAC)
- b. Workspace, including common areas and dedicated (secure) areas for intelligence operations
- c. Physical and electronic security, including unique requirements for intelligence processing and planning
- d. Computer processing requirements
- e. Communications requirements
- f. Data storage requirements, including unique requirements for intelligence data
- g. Power, including backup
- h. Facility space requirements for data and computer processing
- i. redeployment of approximately 100 licenses for ObjectVideo, a video-based border surveillance system purchased by the government.

Facility requirements shall be scalable based on the mission, area of responsibility, and workload requirements for each class of C2I facility.

(Reference Deliverables: Infrastructure Plan—C2I Facilities, Disaster Recovery/Contingency Plan)

5.2.5.2 Intelligence

5.2.5.2.1 Intelligence Requirements

The contractor shall analyze intelligence system stakeholder needs and requirements and recommend intelligence system requirements consistent with SBInet A-Spec. Intelligence system requirements- in the form of a deliverable C3I Intelligence System/Segment Plan- will take into consideration adequate controls at the law enforcement sensitive level and above, existing infrastructure, classified and unclassified network services, current and planned facilities, analyst staffing, information sharing environments and information security directives.

Requirements shall be gathered from all participating enterprise organizations and stakeholders that will provide, request, and receive intelligence data and information. Formal maintenance of requirements will be in the SBInet DOORS database, from which review documents will be produced. Requirements shall address and align with current intelligence systems and data; including, but not limited to:

- a. Existing targeting processes and tools to include CBP's Targeting Framework; link analysis tool Analyst Notebook; Automated Targeting System L, N and P
- b. Web services and data model/schemas, to include integration with current capabilities such as the CBP SIGMA federated search capability
- c. Intelligence system interfaces, in coordination with CBP users, to include USCG, ICE, CIS and external stakeholders (e.g., DOJ, DEA, and state and local law enforcement)
- d. Support the flow of unclassified and classified data, to include email and intelligence products, through separate networks with different instances of the COP software separated by a one-way, high assurance guard (HAG)
- e. The creation and sustainment of new CONOPs and Tactics, Techniques, and Procedures to conduct Intelligence Driven Operations at Station, Sector, Regional, and National operations centers--this includes the development of mission processes, operational roles, and training to enhance CBP mission elements (e.g. Intelligence Analysis, Collection Management, and Operational Planning & Support)
- f. The creation and sustainment of new CONOPs and Tactics, Techniques, and Procedures to implement an Unmanned Aerial Systems (UAS) management program that leverages SBInet capabilities-- this includes the development of mission processes, operational roles, and training to enhance CBP mission elements and investment options for Pilot programs
- g. Law Enforcement Technical Collection (LETC) Integration-*in coordination with the SBInet engineering team, will create an integration design, documented in the Intelligence System Plan, that incorporates data outputs and collaboration tools into the overall C3I/CIP software and hardware solution. This includes incorporating the use of these capabilities within the overall intelligence CONOPS.* -
- h. Current standards and practices for intelligence gathering within the CBP workforce to reduce transition costs and retraining to a minimum, while leveraging the tools and

standards available through DHS. At a minimum the proposed system shall seamlessly integrate with (b) (7)(E), and the related (b) (7)(E) and (b) (7)(E) solutions to ensure cross-functional interoperability with operational assets.

Based on the intelligence requirements of the C3I system, the contractor shall prepare and evaluate alternative approaches for an integrated SBI^{net} intelligence system to support the CBP and DHS mission.

(Reference Deliverables: Intelligence System Plan, C2I CONOPS, C2I Software Requirements Specification and Related DOORS database, Infrastructure Plan—C2I Facilities)

5.2.5.2.2 Intelligence System/Segment Planning

Based on the intelligence requirements of the C3I system, the contractor shall prepare and evaluate alternative approaches for an integrated SBI^{net} intelligence system to support the CBP and DHS mission. At a minimum, the contractor shall conduct the following processes and activities as part of the intelligence system alternatives analysis:

- a. All-Source Analysis (ASA). ASA capabilities shall include the fusion of intelligence data within an operational context, including the required system sources, and interfaces; and include a suite of production tools that are capable of accessing and incorporating data within the enterprise.
- b. Intelligence Collection. An intelligence collection mechanism shall be incorporated in order to support the input of both manual and system generated data into the Intelligence System. The requirements gathering effort shall drive the definition of the reporting process (or processes) used by all parties involved in the proposed collection system, any data models or formats currently in use and the means by which intelligence information is currently entered into existing system(s).
- c. Indications and Warning (I&W) Capabilities. The intelligence system shall incorporate I&W capabilities consistent with SBI^{net} Concept of Operations (CONOPS), address the human factors capabilities of the intelligence system operators, and address necessary redundant communications in case of system outages.
- d. Intelligence Dissemination. The intelligence production and dissemination service/system shall be capable of providing (at a minimum) operational assessments, targeting, spot reports, intelligence preparation of the border, and force protection.
- e. The Intelligence System Plan (ISP). The contractor shall document the results of Intelligence System/Segment Planning activities in the ISP. The ISP shall provide sufficient detail to allow network stakeholders to determine that the design is consistent with the DHS Intelligence System Enterprise. This plan will include a description of the architectural framework, data access, applications, and presentation layers. The expectation is that this document will not exceed the Secret level in overall content in any section. The baseline ISP is expected at the completion of CLIN 3.
- f. The Intelligence System Integrated Product Team (I-IPT). The contractor shall provide an IPT charter consistent with the program format. Membership will be specifically identified in the charter and at a minimum include: government staff- CBP-OIT, HSDN PMO, CBP-OIOC, DHS IA- and contractor staff- Intelligence Lead(s) and Systems Engineering. The baseline ISP is expected at the completion of CLIN 3.

(Reference Deliverables (Intelligence System Plan per MIL-STD 963B as tailored by the program)

5.2.5.2.3 Intelligence System/Segment Software Development Environment

Based on analyses and site surveys conducted during the development of the Intelligence System/Segment Plan, the Government selected the (b) (7)(E)

(b) (7)(E)

as the locations for initial development and production of the C3I Intelligence System/Segment software and hardware. In coordination with the HSDN Program Office and its support contractor(s), the Contractor shall establish a capability within the HSDN Data Center to evaluate, integrate, and if necessary, develop intelligence collection and processing software.

The Government will facilitate access to (b) (7)(E)

This hardware and software environment shall be capable of supporting intelligence system market research, trade studies, architecture analysis, data analysis, communications analysis, implementation, testing, and sustainment.

Included will be sufficient software tools for developing intelligence software and system interfaces, and the environment shall be capable of demonstrating the performance of alternative approaches (through the use of prototypes, demonstrations, and walk-throughs) to SBinet C3I intelligence functionality.

(Reference Deliverables Intel C&A Package)

5.2.5.2.4 Intelligence System/Segment Evaluation Prototype

The contractor shall conduct market surveys and obtain, integrate, design, develop, and deploy a working intelligence system prototype capable of stakeholder evaluation. The contractor shall support two stakeholder evaluations of candidate intelligence system software resulting from market surveys and stakeholder feedback. Candidate software shall be configured to support evaluations in the following venues:

- a. Phase I: Northern Border Demonstration in concert with Space and Naval Warfare Systems Center (San Diego).
- b. Phase II: Southwest Border Concept Demonstration.

(Reference Deliverables: Intelligence System Phase I Trade Study Report, Intelligence System Phase II Trade Study Report, Intelligence System Plan per MIL-STD 963B as tailored by the program)

5.2.5.3 Communications Systems Planning

The contractor shall analyze SBinet communications (voice and data) bandwidth and latency requirements against current and planned DHS/CBP enterprise capacity, communications infrastructure, and mission requirements and develop alternatives and recommended requirements for future upgrades to the system. These recommendations shall consider DHS and CBP mission needs; continuity of operations; and current and planned facilities (including associated training), agent and officer staffing, response and transport vehicles (air, water, and land), and surveillance technology deployment.

The contractor's system shall utilize DHS OneNet. When necessary for SBinet to meet its operational requirements and in cases where justified by reduced life-cycle costs, the

contractor shall provide alternatives and recommend expansion of, or improvements to the existing communications and facility infrastructure.

The contractor shall develop a communications systems plan to ensure alignment between ongoing communications deployment activities internal and external to the SBI*net* system deployment. This plan shall include a methodology to track communications infrastructure deployment and provide a mechanism to monitor communications infrastructure status as part of the C3I system.

(Reference Deliverables: C3I Communications System Plan, Disaster Recovery/Contingency Plan)

5.2.5.4 Data Management

5.2.5.4.1 Data Management Planning and Alternatives

The contractor shall analyze SBI*net* C2I data storage requirements against current and planned DHS/CBP enterprise capacity, communications infrastructure, and mission requirements and develop alternatives and recommendations for future upgrades to the system. These alternatives shall consider mission needs, continuity of operations, current and planned facilities (including ILS and associated training), agent and officer staffing, response and transport vehicles (air, water, and land), and surveillance technology deployment.

The contractor's proposed data management system shall take maximum advantage of DHS/CBP current and planned infrastructure to include classified data storage facilities (i.e. HSDN, etc.). When necessary for SBI*net* to meet its operational requirements and in cases where justified by reduced life-cycle costs, the contractor shall provide alternatives and recommend improvements to data management facility infrastructure.

The contractor shall develop a data management systems plan to ensure alignment between ongoing CBP and DHS data management activities internal and external to the SBI*net* system deployment. This plan shall include a methodology to track data management infrastructure deployment and provide a mechanism to monitor infrastructure status as part of the C3I system.

(Reference Deliverables: Enterprise Data Management Plan)

5.2.5.4.2 Data Management Facility Requirements

The contractor shall analyze the human factors workload, computer processing, and data storage requirements for SBI*net* Data Management facilities (Data Centers). This analysis shall be in accordance with the CBP and DHS Enterprise Architecture and shall be conducted as a partnership with SBI*net* Information Technology (IT) support stakeholders within CBP and DHS and leverage current and planned capability and capacity to provide the best value to the Government. As a minimum, the contractor shall specify the following requirements:

- a. Heating, ventilating, and air conditioning (HVAC)
- b. Workspace, including common areas and dedicated (secure) areas for intelligence operations
- c. Physical and electronic security, including unique requirements for intelligence processing and planning
- d. Computer processing requirements

- e. Communications requirements
- f. Data storage requirements, including unique requirements for intelligence data (both unclassified and classified)
- g. Power, including backup
- h. Facility space requirements for data and computer processing

(Reference Deliverables: Infrastructure Plan—Data Centers, Disaster Recovery/Contingency Plan)

5.3 Phase 2: C2I Spiral Design

The contractor shall incorporate a spiral approach to design, develop, deploy, and support each release of the C2I system. This spiral approach shall result in up to five releases where each subsequent release includes the incremental addition of functionality and/or an evolutionary improvement in system capability.

5.3.1 Release 1

The contractor shall accomplish the following activities for the first release of the C2I system. Release 1 shall be integrated with, and available to support the SBI^{net} geographic area lay-down/deployment projects in FY 08.

5.3.1.1 Requirements and Design Activities (CBP SLC Stages 2 and 3)

Using the collaborative development environment, the contractor shall conduct the C3I requirements and design activities described by CBP SLC Stages 2 (Project Definition) and 3 (System Design) for each “spiral” of the C3I system to be deployed. The spiral approach proposed by the contractor shall include incremental stakeholder involvement and program office review and approval to include but not be limited to the following steps:

- Preparation, conduction, and documentation of collaborative design sessions
- Architecture Framework: development and review of the proposed architecture framework, to include interfaces, end-users, and the development environment
- Completion of any necessary updates to the CDMP (prior to prototype implementation)
- Rapid Development/Prototype:
 - Use-case development and “walk-throughs”
 - Interfaces, system services, data management “subsystems”
 - Graphic user interface development
 - Simulation capability, including support for a training simulator
 - Parametric analysis, including solutions scalable to the deployment environment
- Formal requirements and design review and approval by the Government at the conclusion of the spiral/iteration

(Reference Deliverables: Software Development Plan, Spiral Build Plan, Architecture Description Document, Software Quality Assurance Plan, Coding Standard Documentation,

Software Development Folder, Security Architecture Design Document, C2I Development Lessons-Learned)

5.3.1.1.1 Prototype Development

The contractor shall develop functional C3I prototypes to demonstrate the performance, user interface, and capability of the system. These prototypes shall:

- a. Include the necessary hardware, developmental software, commercial software, integrated Government Off-the-Shelf (GOTS) systems, and working interfaces to DHS systems
- b. Incorporate the ability to evaluate and leverage legacy DoD and DHS C3I systems, particularly those developed and supporting the Coast Guard COP. This may require contractor access to the Global Command and Control System (GCCS), and the Coast Guard Command and Control Engineering Center (C2CEN)
- c. Demonstrate all expected levels of command and control (SBI^{net} C2I nodes) within the DHS system architecture either using approved SBI^{net} components (toolbox) or a virtual facsimile
- d. Have the capability to simulate operational scenarios, including communications delays, data processing loads, and the expected operational pace of multiple border, port, intelligence, and A&M environments
- e. Support the development and maintenance of a training simulator to be incorporated as part of training delivered under the SBI^{net} ILS task order
- f. Include draft documentation in alignment with SLC Stage 4, with the expectation that some or all of the prototype software will become part of the operational system

(Reference Deliverables: TBD)

5.3.1.1.2 Requirements Development

In addition to the SBI^{net} A-Spec, CBP has developed an SBI^{net} Program Plan, SEMP, Operational Requirements Document (ORD), and Concept of Operations (CONOPS). These documents form the basis for Stage 1 of the SBI^{net} system life-cycle, described in the CBP SLC. For the development of C3I requirements, Stage 1 information shall be used by the contractor to develop a verifiable set of functional and technical requirements in alignment with the System A-Spec, the specification tree, and system requirements traceability matrix.

The contractor shall use the collaborative environment to capture the detailed C3I system requirements (Stage 2) as an iterative process along with the design of the system (Stage 3). In addition to user and use-case requirements, the C3I system requirements shall address hardware, software, data, physical infrastructure, and communications infrastructure requirements for all SBI^{net} system stakeholders. For the initial spiral, the contractor shall incorporate lessons-learned, requirements, design documents, and functional code (GOTS, COTS, and commercial) from Project 28 and other legacy systems (including DoD, Coast Guard, and DHS).

(Reference Deliverables: C2I CONOPS-Updates to PM TO, C2I Software Requirements Specification and Related DOORS database, C2I Total Lifecycle Cost Analysis/Model, C2I

Interface Control Document, Interface Requirements Specification, Requirements Traceability Matrix)

5.3.1.1.3 Test Planning

The contractor shall develop an approach for testing the C3I system. This approach shall verify system functionality against C3I requirements documentation (software, hardware, communications, and data), and the SBI^{net} A-Spec. The testing approach shall provide Government insight into contractor development test activities and shall involve stakeholders early in the process to reduce risk and support spiral development processes.

The contractor shall develop a C3I test plan to support the SLC Construction (Stage 4) and Acceptance and Readiness (Stage 5) requirements. This plan shall be integrated with the overall SBI^{net} test planning process and activities.

(Reference Deliverables: Software Unit Test Requirements Software Test Plan, Software Unit Test Cases, Intermediate Test Requirements, Intermediate Test Cases, Intermediate Test Procedures)

5.3.1.1.4 Preliminary Design

During preliminary design, subsystem and component descriptions are elaborated, and interfaces between all system components are defined. Processes defined by the SBI^{net} Systems Engineering Management Plan (SEMP) shall be used by the Contractor to develop the preliminary design for the C3I system.

Preliminary design activities include typical design synthesis processes as outlined in the SEMP. Alternative system architectures should typically be based on the SBI^{net} toolbox components and the TRM; however, the Contractor may recommend additional toolbox components be added to the SBI^{net} system baseline and the TRM when the use of these components is in the Government's best interest or the Government may provide additional components to the Contractor.

(Reference Documents: C2I Software Design Document, Software Design Description, Database Design Document, Interface Design Description, Spiral Software Deliverable Version Description Document, Intermediate Test Results, Process Audit Checklists/Records, Software Unit Test Procedures, Installation Plan)

5.3.1.1.5 Detailed Design

The Contractor shall conduct a detailed design of the C3I system, including subsystems, interfaces, training software, NOC, SOC, and the necessary support environment.

At the culmination of the detailed design effort for each design spiral, the contractor shall update or complete the following items:

- a. Development of architectural views including support for the alignment of the SBI^{net} C3I system within the DHS/CBP Enterprise Architecture and intelligence enterprise
- b. SBI^{net} CONOPS described as "use case" descriptions for system end users
- c. Facilities (including training facilities) requirements, including construction, to include the hardware and software "footprint" for SBI^{net} C3I components
- d. Software design and development standards, including recommended tailoring, in accordance with CBP SLC, IEEE, and the SBI^{net} SEMP

- e. Definition of C3I test requirements, testing environment, and test plan
- f. Operations and maintenance plan and facilities for the deployed system, including support for software provided to the training facility
- g. Requirements Traceability Matrix (RTM)
- h. Training requirements and plan for the operational software, O&M system, and training/simulation software
- i. Participation in and response to QA Audit(s)
- j. Evaluation, comparative analysis, and assessment of similar candidate systems (DHS and other stakeholders) that provide C3I capabilities
- k. Documents resulting from trade studies
- l. C3I System Design and Subsystem ID Assignments (Functional Analysis and Allocation)
- m. Software Design Document(s)
- n. Hardware and Software Configuration Item Document(s)
- o. Security Architecture Design Documents
- p. System and Software Tracking Metrics
- q. Data management plan for unclassified, Law Enforcement Sensitive and classified data sets including the segregation of data as required by Government regulations, statutes or directives
- r. Baseline project documents in project CM library
- s. Baseline C3I System Design (configuration control)
- t. Modeling and analysis results of system effectiveness
- u. Toolbox availability and compatibility with the CBP/DHS TRM
- v. Technology Insertions (TIs) into the CBP and DHS TRM
- w. Technical performance parameters and alignment with A-Spec
- x. Deployment alternatives to address contingency planning to aid the Government in reducing risk related to future land acquisition and to minimize environmental impacts
- y. Recommended updates to documentation provided in the Management Task Order:
 - Project Plan
 - Configuration and Data Management (CM) Plan
 - System security planning documentation
 - Privacy Impact Assessment (PIA)
 - Risk Management Database/Plan
 - Life-cycle costs analysis

- Logistics Supportability Analysis
- Lessons Learned
- Project documents in CM library.

(Reference Deliverables: C2I Software Requirements Specification and Related DOORS database, C2I Total Lifecycle Cost Analysis/Model, C2I Interface Control Document, Interface Requirements Specification, Requirements Traceability Matrix, Architecture Description Document, Enterprise Data Management Plan, Software Quality Assurance Plan, Coding Standard Documentation, Software Development Folder, Security Architecture Design Document, C2I Development Lessons-Learned, Software Test Plan, Intermediate Test Requirements, Intermediate Test Cases, Intermediate Test Procedures, C2I Software Design Document, Software Design Description, Database Design Document, Interface Design Description, Spiral Software Deliverable Version Description Document, Intermediate Test Results, Process Audit Checklists/Records, Software Unit Test Requirements, Software Unit Test Procedures, Installation Plan, Design Acceptance Document)

5.3.1.2 Construction (Stage 4)

During this stage, the requirements and design developed during the previous stages shall be translated by the contractor into operational work products (e.g., source code and databases). The contractor shall conduct unit and integration testing on these work products and code with the involvement of CBP supporting organizations until the system is ready for system acceptance testing (SAT). Also, the contractor shall be fully responsible for delivery and installation of the software to assure proper operation and integration.

Construction activities shall include but not be limited to:

- a. Development of the System Acceptance Test Plan
- b. Documentation of Work Products
- c. Unit/Integration Testing
- d. Draft User Documentation and Training Material Outlines
- e. Development of and updates to Deployment Plan(s)
- f. Development of Data Center Operations Manual(s)
- g. Development of Training Software and Simulation Operations Manuals
- h. Turnover Package Preparation
- i. Conduct of Test Readiness Review(s) (TRR)

(Reference Deliverables: C2I Software Requirements Specification and Related DOORS database, C2I Total Lifecycle Cost Analysis/Model, C2I Interface Control Document, Interface Requirements Specification, Requirements Traceability Matrix, Architecture Description Document, Software Development Folder, Security C&A Package, C2I Development Lessons-Learned, Software Test Plan, Intermediate Test Requirements, Intermediate Test Cases, Intermediate Test Procedures, C2I Software Design Document, Software Design Description, Database Design Document, Interface Design Description, Spiral Software Deliverable Version Description Document, Intermediate Test Results, Process Audit Checklists/Records, Software

Unit Test Requirements, Software Unit Test Procedures, Installation Plan, Software Unit Test Results, C2I Code Library, C2I Performance Metrics Report, User Manual, Operator Manual, Training Materials)

5.3.1.3 Acceptance and Readiness (Stage 5)

The purpose of this stage is to successfully complete system acceptance testing and user acceptance testing (SAT and UAT) and move the new system into the CBP and DHS enterprise production environment. SAT involves testing the system to assure that it interfaces properly with other automated systems within the CBP and DHS intelligence enterprise environment. During this stage, independent testers and the users test the system to assure that the developers have delivered a system that meets the needs stated in the functional and technical requirements. The final Security Architecture Design Document will be reviewed during this stage however, Certification and Accreditation for the C3I shall take place at the System level in conjunction with the first deployed system utilizing the C3I. After the Production Readiness Review (PRR), the new system is moved into the CBP Production environment in preparation for operational implementation. While the system is now in the Production environment, it has not yet been transitioned to full operation.

Contractor support for activities during this transition stage shall include:

- a. Deployment (including retrofit to previous baselines) of the C2I software to geographic area command center(s), data processing center(s), service center(s), and training center(s) as required by the Government
- b. Implementing the system, including site preparations, infrastructure installation/deployment, data conversions, and scheduling as necessary to make the new system available to the general users
- c. Database and system code installation into the Production environment
- d. Field testing and parallel operations as required
- e. Establishing CBP performance architecture baselines (includes project performance measures)
- f. Support for configuration audits
- g. Finalizing User Documentation and Training Materials
- h. Documenting project experiences and lessons learned

(Reference Deliverables: C2I Software Requirements Specification and Related DOORS database, C2I Total Lifecycle Cost Analysis/Model, C2I Interface Control Document, Interface Requirements Specification, Requirements Traceability Matrix, Architecture Description Document, Software Development Folder, Security Architecture Design Document, C2I Development Lessons-Learned, Software Test Plan, Intermediate Test Requirements, Intermediate Test Cases, Intermediate Test Procedures, C2I Software Design Document, Software Design Description, Database Design Document, Interface Design Description, Spiral Software Deliverable Version Description Document, Intermediate Test Results, Process Audit Checklists/Records, Software Unit Test Requirements, Software Unit Test Procedures, Installation Plan, Software Unit Test Results, C2I Code Library, C2I Performance Metrics

Report, User Manual, Operator Manual, Training Materials, Software Maintenance Procedures)

5.3.1.4 Operations (Stage 6)

During operations, the system is in general use throughout the DHS border security agencies. This stage consists of activating and rolling out the system plus the activities to monitor performance of the system in production and assure continuity of operations.

Contractor performance during this stage shall include:

- a. System Performance monitoring and management feedback
- b. Tracking and reporting of system performance statistics, costs, and resource allocations
- c. Managing and operating the communications and computing networks and infrastructure specific to the C3I system (NOC)
- d. Security management and monitoring of the communications and computing networks and infrastructure specific to the C3I system (SOC)
- e. Detecting and addressing defects in training, application, operation, and local systems
- f. Assessing the system's efficiency and effectiveness to determine if the investment was cost beneficial and achieved the planned functionality
- g. Managing and addressing system and infrastructure problems
- h. Recovering from system and infrastructure problems
- i. Implementing system and infrastructure changes

(Reference Deliverables: Software Support and Maintenance Plan, Software Maintenance Procedures, C2I System Performance Metrics Report, Software Metrics Report, C2I Total Lifecycle Cost Analysis/Model)

5.3.2 Release 2

The contractor shall accomplish all the activities required as stated for Release 1 (paragraph 5.2.1) for the second release of the C2I system. Release 2 shall be integrated with, and available to support the SBI^{net} geographic area lay-down/deployment projects scheduled to be deployed after the planned operational date of Release 2. The contractor shall also support the deployment/retrofit of Release 2 to prior deployment projects as part of the operations phase of the release.

5.3.2.1 Requirements and Design Activities (CBP SLC Stages 2 and 3)

See Paragraph 5.3.1.1.

5.3.2.1.1 Prototype Development

See Paragraph 5.3.1.1.1.1.

5.3.2.1.2 Requirements Development

See Paragraph 5.3.1.1.2.

5.3.2.1.3 Test Planning

See Paragraph 5.3.1.1.3.

5.3.2.1.4 Preliminary Design

See Paragraph 5.3.1.1.4.

5.3.2.1.5 Detailed Design

See Paragraph 5.3.1.1.5.

5.3.2.2 Construction (Stage 4)

See Paragraph 5.3.1.2.

5.3.2.3 Acceptance and Readiness (Stage 5)

See Paragraph 5.3.1.3.

5.3.2.4 Operations (Stage 6)

See Paragraph 5.3.1.4.

5.3.3 Release 3

The contractor shall accomplish all the activities required as stated for Release 1 (paragraph 5.2.1) for the third release of the C2I system. Release 3 shall be integrated with, and available to support the SBI*net* geographic area lay-down/deployment projects scheduled to be deployed after the planned operational date of Release 3. The contractor shall also support the deployment/retrofit of Release 3 to prior deployment projects as part of the operations phase of the release.

5.3.3.1 Requirements and Design Activities (CBP SLC Stages 2 and 3)

5.3.3.1.1 See Paragraph 5.3.1.1. Prototype Development

See Paragraph 5.3.1.1.1.

5.3.3.1.2 Requirements Development

See Paragraph 5.3.1.1.2.

5.3.3.1.3 Test Planning

See Paragraph 5.3.1.1.3.

5.3.3.1.4 Preliminary Design

See Paragraph 5.3.1.1.4.

5.3.3.1.5 Detailed Design

See Paragraph 5.3.1.1.5.

5.3.3.2 Construction (Stage 4)

See Paragraph 5.3.1.2.

5.3.3.3 Acceptance and Readiness (Stage 5)

See Paragraph 5.3.1.3.

5.3.3.4 Operations (Stage 6)

See Paragraph 5.3.1.4.

5.3.4 Release 4

The contractor shall accomplish all the activities required as stated for Release 1 (paragraph 5.2.1) for the fourth release of the C2I system. Release 4 shall be integrated with, and available to support the SBI*net* geographic area lay-down/deployment projects scheduled to be deployed after the planned operational date of Release 4. The contractor shall also support the deployment/retrofit of Release 4 to prior deployment projects as part of the operations phase of the release.

5.3.4.1 Requirements and Design Activities (CBP SLC Stages 2 and 3)

5.3.4.1.1 See Paragraph 5.3.1.1. Prototype Development

See Paragraph 5.3.1.1.1.

5.3.4.1.2 Requirements Development

See Paragraph 5.3.1.1.2.

5.3.4.1.3 Test Planning

See Paragraph 5.3.1.1.3.

5.3.4.1.4 Preliminary Design

See Paragraph 5.2.1.1.4.

5.3.4.1.5 Detailed Design

See Paragraph 5.3.1.1.5.

5.3.4.2 Construction (Stage 4)

See Paragraph 5.3.1.2.

5.3.4.3 Acceptance and Readiness (Stage 5)

See Paragraph 5.3.1.3.

5.3.4.4 Operations (Stage 6)

See Paragraph 5.3.1.4.

5.3.5 Release 5

The contractor shall accomplish all the activities required as stated for Release 1 (paragraph 5.2.1) for the fourth release of the C2I system. Release 5 shall be integrated with, and available to support the SBI*net* geographic area lay-down/deployment projects scheduled to be deployed after the planned operational date of Release 5. The contractor shall also support the deployment/retrofit of Release 5 to prior deployment projects as part of the operations phase of the release.

5.3.5.1 Requirements and Design Activities (CBP SLC Stages 2 and 3)

5.3.5.1.1 See Paragraph 5.3.1.1. Prototype Development

See Paragraph 5.3.1.1.1.

5.3.5.1.2 Requirements Development

See Paragraph 5.3.1.1.2.

5.3.5.1.3 Test Planning

See Paragraph 5.3.1.1.3.

5.3.5.1.4 Preliminary Design

See Paragraph 5.3.1.1.4.

5.3.5.1.5 Detailed Design

See Paragraph 5.3.1.1.5.

5.3.5.2 Construction (Stage 4)

See Paragraph 5.3.1.2.

5.3.5.3 Acceptance and Readiness (Stage 5)

See Paragraph 5.3.1.3.

5.3.5.4 Operations (Stage 6)

See Paragraph 5.3.1.4.

5.4 Management of Technical Reviews

As a minimum, the Contractor shall host the following reviews (Table 1) to support the C3I development effort:

Table 1. C3I Reviews

Review	Schedule*
C3I Kick off Meeting	15
Release 0.5 Requirements Review	15
Architecture Framework Review	60
Investment Review Board	60
Release 0.5 Design/Development	
▪ Release 0.5 Design Review	74
▪ Release 0.5 Test Readiness Review	196
▪ Release 0.5 Production Readiness Review (SAT)	252
Release 0.5 Service Pack	
▪ Service Pack One Requirements Review	192
▪ Service Pack One Design Review	227
▪ Service Pack One TRR	307
▪ Service Pack Software Acceptance Test	329
NOC/SOC Development and Implementation	
▪ NOC/SOC Requirements Review	193
▪ NOC/SOC PDR/CDR	221
▪ NOC/SOC TRR	252
▪ NOC/SOC Initial Operational Capability	252
▪ NOC/SOC P/ORR	332
INTEL	
▪ Phase I/II Kick Off	154
▪ Phase I Evaluation "Selection"	175
▪ Phase I Trade Study Results Review/Phase II Kick-Off	283
▪ Phase II (Southwest Border) Concept Evaluation "Selection"	266
▪ Phase II Trade Study Results Review	405
Release 1 Design/Development	
▪ Release 1 Architecture Framework Review	222
▪ Use Case Review	258
▪ Sub-System Design Review	347
▪ Spiral Design Review	410
Release 1 Construction	
▪ Test Readiness Review	TBD
Release 1 Acceptance and Readiness	
▪ System Acceptance Test	TBD
▪ User Acceptance Test	TBD
▪ Production/Operational Readiness Review	TBD
* Calendar Days After Award	

In addition, Contractor shall perform a number of trade study reviews as mutually agreed upon with the Government. For each technical review, the Contractor shall be responsible for:

- a. Ensuring all non-Government participants hold the proper clearance for the meeting and the meeting location provides the appropriate security measures for the information to be discussed
- b. Providing computer, voice and video conference access with security measures appropriate for the information discussed during the meeting
- c. Providing the Government with copies of presentation materials at least 5 working days prior to the review
- d. Capturing meeting minutes and action items sufficient to document the Government's decision making process, and providing the minutes to the Government within 5 working days after the review.

The Contractor's key personnel shall be available for interim ad-hoc meetings and regularly scheduled meetings with Government representatives either by phone or at the Contractor's facility to resolve issues and action items and engage the Government in the development of the area-specific design and to assure proper project planning per DHS MD 5100.

(Reference Deliverables: Trade Study Report)

5.4.1 C3I Kick-Off Meeting

During the C3I Kick-Off Meeting, the contractor shall present a project schedule, project teams and key team members, and detailed plan for the development of the C3I system. In addition, the contractor shall present the trade-study plan and activities for Government review and approval.

(Reference Deliverables: Spiral Build Plan, Integrated Master Plan-Updates to Management TO, Integrated Master Schedule-Updates to Management TO)

5.4.2 Release 0.5 Requirements Review (R0.5 RR)

The detailed requirements for the Release 0.5 C2I ICA system shall be presented by the contractor during the Requirements Review. At the conclusion of the review, the Government may approve the requirements and authorize the contractor to proceed with the design effort. The information to be presented by the contractor during this review shall include, but not be limited to the following:

- a. Functional and Technical Requirements Documents
- b. Interface Control Document
- c. Requirements Certification Form
- d. Requirements Traceability Matrix (RTM)
- e. Security Design Information
- f. Interconnection Security Agreements, if applicable
- g. Inputs for Architecture Alignment and Assessment (AAA) design criteria
- h. Recommended updates to documentation provided in the STO as follows:

- Project plan
- QA Plan
- Work Breakdown Structure
- System security planning documentation
- Privacy Impact Assessment (PIA)
- Risk Management Database/Plan
- Action Item Database
- Logistics supportability analysis
- Training Requirements and Plan
- Lessons Learned
- CM and Data Management Plan
- Project documents in CM library

(Reference Deliverables (Release 0.5 Specific): C2I Software Requirements Specification and Related DOORS database, C2I Interface Control Document(s), Interface Requirements Specification, Requirements Traceability Matrix, Architecture Description Document, Software Development Folder, Security Architecture Design Document, C2I Development Lessons-Learned, Software Test Plan)

5.4.3 Release 0.5 Design Review (R0.5 DR)

The detailed design for the Release 0.5 C2I ICA system shall be presented by the contractor during the Design Review. At the conclusion of the review, the Government may approve the detailed design and authorize the contractor to proceed with integration and testing. The information to be presented by the contractor during this review shall include, but not be limited to the following:

- a. Functional and Technical Requirements Documents
- b. Interface Control Document
- c. Requirements Certification Form
- d. Requirements Traceability Matrix (RTM)
- e. Security Information (Maintained in DHS Risk Management System (RMS))
- f. Interconnection Security Agreements, if applicable
- g. System Test Plan
- h. Implementation Plan
- i. Deployment Plan
- j. C3I System Design and Subsystem ID Assignments (Functional Analysis and Allocation)
- k. Results of stakeholder Review(s)/ walkthroughs of System Design

- l. Data Management Plan (including Data Model and DDL)
- m. System Design Documents
- n. Training documents
- o. Inputs for Architecture Alignment and Assessment (AAA) design criteria
- p. Recommended updates to documentation provided in the STO as follows:
 - Project plan
 - QA Plan
 - Work Breakdown Structure
 - System security planning documentation
 - Privacy Impact Assessment (PIA)
 - Risk Management Database/Plan
 - Action Item Database
 - Life-cycle costs analysis
 - Logistics supportability analysis
 - Training Requirements and Plan
 - Lessons Learned
 - CM and Data Management Plan
 - Project documents in CM library

(Reference Deliverables (Release 0.5 Specific): C2I Software Requirements Specification and Related DOORS database, C2I Interface Control Document, Interface Requirements Specification, Requirements Traceability Matrix, Architecture Description Document, Software Development Folder, Security Architecture Design Document, C2I Development Lessons-Learned, Software Test Plan, Intermediate Test Requirements, Intermediate Test Cases, Intermediate Test Procedures, C2I Software Design Document, Software Design Description, Database Design Document, Interface Design Description, Spiral Software Deliverable Version Description Document, Intermediate Test Results, Process Audit Checklists/Records, Software Unit Test Requirements, Software Unit Test Procedures, Installation Plan, Software Unit Test Results, C2I Code Library, C2I Performance Metrics Report, User Manual, Operator Manual, Training Materials)

5.4.4 Release 0.5 Contractor Integration/Test Demonstration

The contractor shall demonstrate key user interfaces, operator CONOPs for use cases of interest, and other capabilities in development or under evaluation, as available. The Contractor shall plan at least one demonstration, and shall support additional informal demonstrations on a non-interference of schedule basis.

(Reference Deliverables: Presentation Materials)

5.4.5 Release 0.5 Test Readiness Review (R0.5 TRR)

The Contractor shall support Release 0.5 Test Readiness Review (TRR) prior to final acceptance testing.

(Reference Deliverables (Release 0.5 Specific): C2I Software Requirements Specification and Related DOORS database, C2I Interface Control Document, Interface Requirements Specification, Requirements Traceability Matrix, Architecture Description Document, Software Development Folder, Security Architecture Design Document, C2I Development Lessons-Learned, Software Test Plan, Intermediate Test Requirements, Intermediate Test Cases, Intermediate Test Procedures, C2I Software Design Document, Software Design Description, Database Design Document, Interface Design Description, Spiral Software Deliverable Version Description Document, Intermediate Test Results, Process Audit Checklists/Records, Software Unit Test Requirements, Software Unit Test Procedures, Installation Plan, Software Unit Test Results, C2I Code Library, C2I Performance Metrics Report, User Manual, Operator Manual, Training Materials, Software Maintenance Procedures)

5.4.6 Release 0.5 Production Readiness Review (R0.5 PRR)

Following successful completion of the Release 0.5 Software Acceptance Test (SAT), the baselined software will be released to the Support Environment for system integration testing. In the Support Environment, the Contractor shall configure the base-lined Release 0.5 release and its associated databases and configuration parameters into the Production Configuration. The Contractor shall perform a Production Readiness Review (PRR) prior to deployment of the software.

(Reference Deliverables (Release 0.5 Specific): Release 0.5 Software Test Report, Software Support and Maintenance Plan, Software Maintenance Procedures, C2I System Performance Metrics Report, Software Metrics Report)

5.4.7 Release 1 Architecture Framework Review (R1 AFR)

The contractor shall present the Operational, System, and Technical Views of the C3I This review shall address the expected use/mix of Commercial-off-the-Shelf (COTS), Government-off-the-Shelf (GOTS), and developmental hardware, software, and interfaces and the contractor's assumptions related to the Government's responsibilities in providing C3I and training facilities and capabilities.

(Reference Deliverables: Enterprise Data Management Plan, Architecture Description Document, Trade Study Report)

5.4.8 Use-Case Review (R1 UCR)

The contractor shall present the detailed design architecture of the SBI^{net} C3I system, including, but not limited to: interfaces, data processing, data storage, decision processes, pseudo-code, and system models.

(Reference Deliverables: Software Development Plan, Spiral Build Plan, Architecture Description Document, Software Quality Assurance Plan, Coding Standard Documentation, Software Development Folder, Security Architecture Design Document, C2I Development Lessons-Learned, C2I CONOPS-Updates to PM TO, C2I Software Requirements Specification and Related DOORS database, C2I Total Lifecycle Cost Analysis/Model, C2I Interface Control Document, Interface Requirements Specification, Requirements Traceability Matrix)

5.4.9 Sub-system Design Review (R1 SDDR)

The contractor shall present the detailed design, including code and unit test results (typically of sample data) of software and hardware configuration items to be used in the C3I systems.

(Reference Deliverables: C2I Software Requirements Specification and Related DOORS database, C2I Total Lifecycle Cost Analysis/Model, C2I Interface Control Document, Interface Requirements Specification, Requirements Traceability Matrix, Architecture Description Document, Enterprise Data Management Plan, Software Quality Assurance Plan, Coding Standard Documentation, Software Development Folder, Security Architecture Design Document, C2I Development Lessons-Learned, Software Test Plan, Intermediate Test Requirements, Intermediate Test Cases, Intermediate Test Procedures, C2I Software Design Document, Software Design Description, Database Design Document, Interface Design Description, Spiral Software Deliverable Version Description Document, Intermediate Test Results, Process Audit Checklists/Records, Software Unit Test Requirements, Software Unit Test Procedures, Installation Plan)

5.4.10 Spiral Design Review

The detailed requirements, and design for an integrated SBInet C3I capability shall be presented by the contractor during the Spiral Design Review. At the conclusion of the review, the Government may approve the detailed design and authorize the contractor to proceed with C3I construction and deployment (SLC Stages 5 and 6). The information to be presented by the contractor during this review shall include, but not be limited to the following:

- a. Functional and Technical Requirements Documents
- b. Interface Control Document
- c. Requirements Certification Form
- d. Requirements Traceability Matrix (RTM)
- e. *Security Architecture Design Document*
- f. Interconnection Security Agreements, if applicable
- g. System Test Plan
- h. Implementation Plan
- i. Deployment Plan
- j. Results of comparative analysis, and assessment of similar candidate systems (DHS and other stakeholders) that provide C3I capabilities
- k. C3I System Design and Subsystem ID Assignments (Functional Analysis and Allocation)
- l. Results of stakeholder Review(s)/ walkthroughs of System Design
- m. Data Management Plan (including Data Model and DDL)
- n. System Design Documents
- o. Training and training simulation software documents
- p. Inputs for Architecture Alignment and Assessment (AAA) design criteria
- q. Recommended updates to documentation provided in the STO as follows:

- Project plan
- QA Plan
- Work Breakdown Structure
- System security planning documentation
- Risk Management Database/Plan
- Action Item Database
- Life-cycle costs analysis
- Logistics supportability analysis
- Training Requirements and Plan
- Lessons Learned
- CM and Data Management Plan
- Project documents in CM library

(Reference Deliverables: C2I Software Requirements Specification and Related DOORS database, C2I Total Lifecycle Cost Analysis/Model, C2I Interface Control Document, Interface Requirements Specification, Requirements Traceability Matrix, Architecture Description Document, Software Development Folder, Security Architecture Design Document, C2I Development Lessons-Learned, Software Test Plan, Intermediate Test Requirements, Intermediate Test Cases, Intermediate Test Procedures, C2I Software Design Document, Software Design Description, Database Design Document, Interface Design Description, Spiral Software Deliverable Version Description Document, Intermediate Test Results, Process Audit Checklists/Records, Software Unit Test Requirements, Software Unit Test Procedures, Installation Plan, Software Unit Test Results, C2I Code Library, C2I Performance Metrics Report, User Manual, Operator Manual, Training Materials)

5.4.11 Prototype Demonstration

The contractor shall develop prototype demonstrations at the RAD/JAD facility for each planned Spiral. The prototype shall demonstrate key user interfaces, operator CONOPs for use cases of interest, and other capabilities in development or under evaluation, as available. The Contractor shall plan at least two scheduled demonstrations per spiral, and shall support additional informal demonstrations on a non-interference of schedule basis.

(Reference Deliverables: Presentation Materials)

5.4.12 Test Readiness Review (R1 TRR)

The Contractor shall support Test Readiness Reviews (TRR). The Contractor shall support a Spiral TRR prior to final certification testing of a spiral build in the RAD/JAD facility. Following the certification test, the baselined Spiral will be deployed to the Support Environment.

(Reference Deliverables: C2I Software Requirements Specification and Related DOORS database, C2I Total Lifecycle Cost Analysis/Model, C2I Interface Control Document, Interface Requirements Specification, Requirements Traceability Matrix, Architecture Description Document, Software Development Folder, Security Architecture Design Document, C2I

Development Lessons-Learned, Software Test Plan, Intermediate Test Requirements, Intermediate Test Cases, Intermediate Test Procedures, C2I Software Design Document, Software Design Description, Database Design Document, Interface Design Description, Spiral Software Deliverable Version Description Document, Intermediate Test Results, Process Audit Checklists/Records, Software Unit Test Requirements, Software Unit Test Procedures, Installation Plan, Software Unit Test Results, C2I Code Library, C2I Performance Metrics Report, User Manual, Operator Manual, Training Materials, Software Maintenance Procedures)

5.4.13 Production/Operational Readiness Review (R1 P/ORR)

In the Support Environment, the Contractor shall configure the base-lined Spiral and its associated databases and configuration parameters into the Production Configuration for a given deployment. The Contractor shall perform regression testing of the Spiral Build for the specific deployment. The Contractor shall perform a Production Readiness Review (PRR) prior to deployment of the software to the field site.

Following deployment of the Spiral to the production site, the Contractor shall perform regression testing of the Spiral. The Contractor shall support site integration and System Acceptance Test, and shall maintain configuration management of the Spiral Software throughout this process. The Contractor shall support an Operational Readiness Review after successful installation, integration, and SAT.

(Reference Deliverables: Software Support and Maintenance Plan, Software Maintenance Procedures, C2I System Performance Metrics Report, Software Metrics Report, C2I Total Lifecycle Cost Analysis/Model)

5.4.14 Release 0.5 Service Pack One Technical Reviews

5.4.14.1 Release 0.5 Service Pack One Requirements Review (SP1 RR)

As part of the SP1 implementation, the contractor shall conduct a requirements review for all features to be included in SP1. As a result of feedback received from the Government through the CCB, the contractor shall update all affected requirements documentation including, but not limited to the DOORS database, Release 0.5 Software Requirements Specification, and Interface Control Documents/Specifications.

5.4.14.2 Release 0.5 Service Pack One Design Review

The contractor shall conduct a design review for all features included in SP1. As a result of feedback received from the Government through the CCB, the contractor shall update all affected requirements and design documentation.

5.4.14.3 Release 0.5 Service Pack One Test Readiness Review (SP1 TRR)

The Contractor shall support Release 0.5 Service Pack One Test Readiness Review (SP1 TRR) prior to final software acceptance testing. The Software Test Plan developed for Release 0.5 shall be updated to identify existing tests that will be repeated (regression tests) and new tests for new or updated Service Pack One features. The scope of testing shall be presented at the TRR and will be reviewed by the Government for adequacy.

5.4.14.4 Release 0.5 Service Pack One Software Acceptance Test (SP1 SAT)

Upon successful completion of the TRR, the contractor shall perform SP1 testing and document the results in an update to the Release 0.5 Test Report. Following SAT, the baselined software will be released to the Support Environment for SBI^{net} system integration testing.

5.4.15 NOC/SOC Technical Reviews

5.4.15.1 NOC/SOC Requirements Review

The detailed requirements for the NOC/SOC shall be presented by the contractor during the NOC/SOC Requirements Review. At the conclusion of the review, the Government may approve the requirements and authorize the contractor to proceed with the NOC/SOC design effort. The information to be presented by the contractor during this review shall include, but not be limited to the following:

- a. Network Operations Center Plan
- b. Security Operations Center Plan
- c. NOC/SOC System Requirements Specification and related DOORS database
- d. Requirements Traceability Matrix (RTM)
- e. System Test Plan (Updates to the STO Test Plan)
- f. Interface Control Document(s)
- g. Security Design Information
- h. Interconnection Security Agreements, if applicable

(Reference Deliverables: NOC Plan, SOC Plan, NOC/SOC Requirements Specification and Related DOORS database, Requirements Traceability Matrix,)

5.4.15.2 NOC/SOC PDR/CDR

The detailed design for the NOC/SOC shall be presented by the contractor during the Critical Design Review. At the conclusion of the review, the Government may approve the detailed design and authorize the contractor to proceed with COTS procurement, integration and testing. The information to be presented by the contractor during this review shall include, but not be limited to the following:

- a. NOC/SOC System Design Document
- b. Annotated Network Architecture
- c. Database Design Document
- d. Interface Control Document
- e. Requirements Traceability Matrix (RTM)
- f. Security Information (Maintained in DHS Risk Management System (RMS))
- g. NOC/SOC Continuity of Operations (COOP) Plan
- h. NOC/SOC Disaster Recovery Plan
- i. Highlights of key document updates for previously delivered documentation

(Reference Deliverables: Updates, if any, to previously delivered documents. NOC/SOC Design Description (including Annotated Network Architecture), Release 0.5 Database Design Document, NOC/SOC Security Architecture Design Document, NOC/SOC Operations Plan, Disaster Recovery/Contingency Plan, NOC/SOC Test Plan/Procedure/ Descriptions)

5.4.15.3 NOC/SOC TRR

The Contractor shall support the NOC/SOC Test Readiness Review (TRR) prior to final acceptance testing. The information to be presented by the contractor during this review shall include, but not be limited to the following:

- a. System Acceptance Test Plan
- b. System Test Procedures
- c. Version Description Document
- d. NOC/SOC Installation Plan
- e. NOC/SOC User Manual
- f. NOC/SOC Operator Manual
- g. NOC/SOC Training Materials
- h. Security Information (Maintained in DHS Risk Management System (RMS))

(Reference Deliverables: NOC Plan, SOC Plan, NOC/SOC Interface Control Document, Enterprise Data Management Plan, NOC/SOC Requirements Specification, NOC/SOC Design Description, Release 0.5 Database Design Document, NOC/SOC Test Plan/Procedure/ Descriptions)

5.4.15.4 NOC/SOC Initial Operational Capability (IOC)

Software support/maintenance prior to the NOC/SOC (and SBI^{net} System) P/ORR will not be for the purpose of operating SBI^{net}; however, the NOC/SOC shall provide support for software updates to all SBI^{net} software after IOC. IOC shall begin with the formal release of C3I COP Release 0.5 (see paragraph 5.4.2.5).

5.4.15.5 NOC/SOC P/ORR

The contractor shall support testing activities in accordance with the approved NOC/SOC System Acceptance Test Plan. Following successful acceptance testing, the NOC/SOC initial operating capability will be released for SBI^{net} use.

(Reference Deliverables: NOC/SOC Test Report)

5.4.16 Intelligence System/Segment Technical Reviews

5.4.16.1 Phase I/Phase II Kick-Off Meeting

During the Intelligence System/Segment Kick-Off Meeting, the contractor shall present a project schedule, project teams and key team members, and detailed plan for the development of the Intelligence System/Segment. This kick off meeting shall address the activities to be accomplished during the Northern Border Demonstration (Phase I) and the Southwest Border Concept Evaluation (Phase II). In addition, the contractor shall present the trade-study approach and activities for Government review and approval.

(Reference Deliverables: Integrated Master Plan-Updates under the STO, Integrated Master Schedule-Updates under the STO, Presentation Materials)

5.4.16.2 Phase I Evaluation “Selection”

The Contractor shall provide the criteria to be used to evaluate the tools within the trade study as well as a description of those tools considered by the contractor for evaluation. The Contractor shall present and recommend the Phase I candidate intelligence collection, processing, and dissemination software to be used for the Northern Border Prototype. The Contractor shall capture and incorporate feedback from stakeholders on the capabilities and features to be included in support of the Northern Border Intelligence System/Segment Evaluation. The Contractor shall update the Intelligence System/Segment Phase I Trade Study Report based on the agreed-to approach.

(Reference Deliverables: Intelligence System/Segment Phase I Trade Study Report (Draft), Presentation Materials)

5.4.16.3 Phase I Trade Study Results Review/Phase II Kick-Off Meeting

The Contractor shall analyze, capture, and report the results of the Phase I Evaluation and present these results at the Phase I Trade Study Results Review. These results shall include the analysis of capabilities for common intelligence picture visualization tools, reporting tools and intelligence portal which incorporates the data derived from the Northern Border Prototype.

In addition to the presentation of the results for Phase I, the Contractor shall present an updated project schedule, project teams and key team members, and detailed plan for the Phase II Southwest Border Concept Evaluation. The contractor shall present the Phase II trade-study approach and activities for Government review and approval.

(Reference Deliverables: Intelligence System/Segment Phase I Trade Study Report (Final), Presentation Materials)

5.4.16.4 Phase II (Southwest Border) Concept Evaluation “Selection”

The Contractor shall provide the criteria to be used to evaluate the tools within the trade study as well as a description of those tools considered by the contractor for evaluation. The Contractor shall present and recommend the Phase I candidate intelligence collection, processing, and dissemination software to be used in for the Southwest Border Prototype. The Contractor shall capture and incorporate feedback from stakeholders on the capabilities and features to be included in support of the Southwest Border Intelligence System/Segment Evaluation. The Contractor shall update the Intelligence System/Segment Phase II Trade Study Report based on the agreed-to approach.

(Reference Deliverables: Intelligence System/Segment Phase II Trade Study Report (Draft), Presentation Materials)

5.4.16.5 Phase II Trade Study Results Review

The Contractor shall analyze, capture, and report the results of the Phase II Evaluation and present these results at the Phase II Trade Study Results Review. These results shall include the analysis of capabilities for common intelligence picture visualization tools, reporting tools

and intelligence portal which incorporates the data derived from the Southwest Border Prototype.

(Reference Deliverables: Intelligence System/Segment Phase II Trade Study Report (Final), Presentation Materials)

5.5 Stakeholder Briefings

The Contractor shall develop and present top-level briefings to Government stakeholders on the results of the Architecture Framework Review, Use-Case Review, and Spiral Design Review.

(Reference Deliverables: Presentation Materials)

5.6 Task Order Management

The contractor shall submit an initial Integrated Master Plan (IMP), CDRL ----), without narratives, as well as a resource loaded Integrated Master Schedule (IMS), CDRL ---, that follows guidance contained in the DoD IMP and IMS Preparation and Use Guide dated October 2005. The initial IMP and IMS shall be developed and submitted with the firm proposal for this task order, or with prior advance authorization commitment, and shall be revised to incorporate acceptable review comments received not later than 15 days following the submittal. The IMS shall be compliant with Data Item Description DI-MGMT-81650. The Contractor shall submit initial control account budgets with the IMP and IMS submittal. Following contract negotiations, the contractor shall revise its IMP, IMS, and control account budgets based on changes agreed to during negotiations. This and related baseline material shall be re-submitted to the PMO ten calendar days prior to the joint Integrated Baseline Review (IBR), which shall be hosted by the contractor not later than 60 calendar days after completion of contract negotiations. Upon successful completion of the IBR, this material shall represent the Contractor's plan and baseline for implementation and management of this Task Order.

The Contractor shall submit monthly Contract Performance Reports (CPRs), Formats 1 Thru 5, (CDRL F052) in accordance with Data Item Description DI-MGMT-81466A dated March 2005. The first month's CPR period end date shall reflect the close of the Contractor's first accounting cycle following Task Order award. CPRs shall reflect the cost and schedule performance for the Task Order and shall contain Variance Analysis Reports (VARs) for those control accounts that break the SBI^{net} cost and schedule variance thresholds, including narrative explanation of the cause and the corrective action plan ("get-well plan"). The Contractor shall present this information to the Government on a monthly basis following the submittal of the monthly CPR and at least 3 business days in advance of the monthly Program Management Review.

(Reference Deliverables: Integrated Master Plan—Updates to Management TO, Integrated Master Schedule—Updates to Management TO, Contract Performance Report)

5.6.1 Project Management

The Contractor shall provide on-site coordination and administrative support to execute this task order.

Weekly Project management meetings shall be held as required at a location mutually agreed upon between the Contractor and the Contracting Officer (CO) or his representative.

For meetings and reviews the contractor shall take notes, record and track action items and issues.

At the close of the meeting or review, the contractor and the senior Government representative present shall agree upon action items and issues. The contractor shall provide either electronic copies or online access within a common Government/Contractor database within 96 hours of the meeting. All action items are to be approved by the Contractor's Project Manager and the Government's Contracting Officer's Technical Representative or his designee.

The contractor shall ensure that COP C3I performance is rolled-up into the monthly program management reviews for the overall SBI*net* deployment.

The contractor shall provide a COP C3I System Deployment Plan.

5.6.2 Business Management

The contractor shall perform the following Business Management activities in support and performance of COP C3I.

The Contractor COP C3I Business Management representative shall coordinate and report COP C3I information, including C3I Earned Value Management, utilizing the same electronic reporting system and business team meetings as used and approved under the SBI*net* STO. The results of these meetings shall be reviewed by the SBI*net* System Program Office (SPO) and the contractor, and reported as part of the contract-level Monthly Program Reviews. The contractor shall designate a Contracts Administrator as the single point of contact for contractual matters. The Contract administrator shall have the responsibility and authority to represent and commit the contractor's organization on contract-related program issues. Business Management will report task order information utilizing reports from Boeing IDS Cost-Schedule Reporting Tool (CSPR).

Contracts administrator manager shall perform general contract administration support during the period of performance of the program. The administrator shall serve as the customer focal point for contractual matters. The administrator shall support program reviews. The administrator shall issue and track correspondence items (incoming and outgoing) and submit any additional proposals and/or Engineering Change Proposals. The administrator shall perform obligation analysis to assess the impact of change activity with regard to scope, change board activities, funding requirements, and export compliance activities.

5.6.3 Supplier Management and Procurement

The contractor shall provide direction for suppliers working on-site. The contractor shall monitor, control, and report the plans, schedules, budgets, and variances associated with suppliers working on BMGR P37BC in support of contract-level performance reviews. The contractor shall report on supplier performance and achievements against the relevant BMGR P37BC schedule and cost metrics.

5.6.4 Risk Management

The Contractor shall implement proactive risk management in accordance with an approved update to the contract-level Risk Management Plan (RMP), tailored to the SBI*net* program objectives. The Contractor shall ensure that project risks are actively managed and coordinated with the SBI*net* SPO risk manager, and also reviewed at the contract-level Risk

Management Board for overall SBI*net* impacts and lessons learned. The Contractor shall link risks into the contract level risk database to provide CBP with both a standalone C3I risk assessment as well as an overall SBI*net* risk assessment. The Contractor shall provide an overview of the management of C3I risks, issues, and mitigation plans, status of mitigation efforts, and results of mitigation at each Monthly Program Review and the monthly Risk Management Board meetings and include them as part of the monthly Program Report.

5.6.5 System Engineering

The Contractor shall provide the resources and skills necessary to assure that the implementation, inspection, and acceptance of deliverables are in accordance with the detailed design and acceptance plan.

The contractor shall maintain configuration identification, configuration/change control, configuration status accounting, and configuration audits of deliverables for the COP C3I in accordance with the SBI*net* SPO Configuration and Data Management Plan, and enter this data into its SBI*net* database.

The contractor shall provide Software Design documentation package; as required.

6 Schedule and Deliverables

6.1 Period of Performance

The period of performance for this task order is from the date of award for a base period of fourteen months, with two one-year options periods.

6.2 Description of Deliverables

6.2.1 RAD/JAD Facility

This deliverable shall provide the facility requirements and approach for to establish and operate the software development environment during SBI*net* development. Sustainment requirement

6.2.2 Intelligence System/Segment Plan

This deliverable shall document the requirements and plan resulting from the effort conducted under paragraph 5.2.5.2.2

6.2.3 C3I Communications System Plan

This deliverable shall document the requirements and plan resulting from the effort conducted under paragraph 5.2.5.3.

6.2.4 C2I Total Lifecycle Cost Analysis / Model

This deliverable shall provide a model (within a tool such as Microsoft™ Excel™) and the supporting documentation as necessary to provide the Government a basis of estimate to support costs associated with developing, deploying, maintaining, and retiring the C2I system delivered as a result of this task order.

6.2.5 Software Support & Maintenance Plan

This deliverable shall document the plan for releasing, deploying, installing, maintaining, upgrading, and transitioning the software delivered as a result of this task order.

6.2.6 Trade Study Report

This deliverable shall document the results of any trade studies conducted by the contractor in support of developing and delivering the system.

6.2.7 C2I Interface Control Document

This deliverable shall document the responsible parties, associated specifications, and processes for developing and maintaining each external interface to the system.

6.2.8 Software Maintenance Procedures

At minimum, this deliverable shall document the processes and procedures for maintaining software releases, including the steps necessary for repairing/patching software, regression testing, associated configuration control (check-in, check-out) procedures, deployment, installation, and checkout.

6.2.9 Training Materials

This deliverable shall provide the training materials necessary for system administrators (data centers, command centers) to support the actions necessary for installing releases, patches; and troubleshooting the system.

6.2.10 C2I Code Library (Including License Documentation)

This deliverable shall provide the code library and associated hosting/configuration management environment resulting from the effort under this task order. This library shall also include license/warranty documentation associated with software and hardware purchased (COTS) under this task order.

6.2.11 C2I System Performance Metrics Report

At minimum, this deliverable shall include periodic reports on the performance of software development, operational status, repairs/patches, and storage capacity used/available.

6.2.12 C2I Software Requirements Specifications and DOORS

This deliverable shall consist of the DOORS requirement management system database. The contractor shall maintain the C3I COP DOORS database under configuration control as the authoritative requirements repository and deliver SRS documentation from DOORS at the life cycle design reviews.

6.2.13 NOC/SOC Operations Plan

The NOC/SOC Operations Plan will describe the operating practices, processes and procedures for the SBI*net* NOC/SOC in accordance with DHS & CBP Enterprise Architecture, Network Operations and Security policy.

The plan will provide detail on NOC responsibilities and actions (i.e. network monitoring, maintenance, software/firmware distribution, management of servers and network devices, etc).

The plan will also describe the responsibilities and actions of the SOC (i.e. security monitoring, intrusion detection, anti-virus protection, user account management and access control, event reporting and escalation in accordance with the DHS SOC CONOPS, security log analysis, etc).

6.2.14 Service Pack One Implementation Plan

The Service Pack One Implementation Plan will describe all expected document changes, design changes, reviews required (including expected Government review comment timeline), review and delivery schedule, and project baseline (work package) changes required to successfully implement Service Pack One.

6.2.15 Contract Data Requirements List (CDRL)

The contractor shall deliver CDRL items in accordance with the instructions listed in Table 2 below:

Table 2. Contract Data Requirements List

CDRL#	Title	Freq.	Initial	Update(s)	Final	Approval Required	Preparation / Delivery Instructions	DID/SOW	SLC	Boeing
F004	Software Quality Assurance Plan	Initial+1	At Kick Off Meeting	N/A	15 DPT R1 RR	Yes	Contractor format acceptable following content outline in BPI-3319. Delivery will be electronically.			BPI-3319
F010	Network Operations Center Plan	Initial+2	At NOC/SOC RR	At NOC/SOC PDR/CDR	At NOC/SOC TRR	Yes	Contractor format acceptable. Delivery will be electronically.			5.2.5.4.3
F011	Security Operations Center Plan	Initial+2	At NOC/SOC RR	At NOC/SOC PDR/CDR	At NOC/SOC TRR	Yes	Contractor format acceptable. Delivery will be electronically.			5.2.5.4.4
F012	C2I System Administrator Training Plan	Initial+2	15 DPT R0.5 DR	N/A	15 DPT R1 PDR	No	Contractor format acceptable. Delivery will be electronically.		X	
F014	C2I Training Plan	Initial+3	15 DPT R0.5 DR	15 DPT R0.5 TRR R1 SDR	15 DPT R1 TRR	Yes	Contractor format acceptable following content outline in SLC. Delivery will be electronically.		X	
F028	C2I CONOPS	Initial+1	15 DPT R1 AFR	N/A	15 DPT R1 UCR	Yes	Contractor format acceptable. Delivery will be electronically.			Contractor Defined
F052	Contract Performance Report (Formats 1 thru 5)	MTHLY	N/A	N/A	15 th of each month	No	Delivery will be electronically.	DI-MGMT-81466A		
F055	Release 0.5 C2I Interface Control Document	1-Time	At R0.5 PRR	N/A	N/A	No	Contractor format acceptable. Delivery will be electronically.	6.2.7		
F055	NOC/SOC Interface Control Document	Initial+1	At NOC/SOC PDR/CDR	N/A	At NOC/SOC TRR	No	Contractor format acceptable. Delivery will be electronically.	6.2.7		
F055	Release 1.0 C2I Interface Control Document	Initial+1	At R1 UCR	N/A	At R1 TRR	No	Contractor format acceptable. Delivery will be electronically.	6.2.7		
F061	Release 0.5 Spiral Build Plan	1-Time	At Kick Off Meeting	N/A	N/A	No	Contractor format acceptable. Delivery will be electronically.			Contractor Defined

CDRL#	Title	Freq.	Initial	Update(s)	Final	Approval Required	Preparation / Delivery Instructions	DID/SOW	SLC	Boeing
F061	Release 1.0 Spiral Build Plan	1-Time	At R1 UCR	N/A	N/A	No	Contractor format acceptable. Delivery will be electronically.			Contractor Defined
F062	Software Development Plan (SDP)	Initial+1	At Kick Off Meeting	N/A	15 DPT R1 UCR	Yes	Contractor format acceptable following content outline in ART-423. Delivery will be electronically.	DI-IPSC-81427		ART-423
F063	Coding Standard Documentation	1	N/A	N/A	15 DPT R1 RR	No	Contractor format acceptable following content outline in ART-413. Delivery will be electronically.			ART-413
F064	Enterprise Data Management Plan Version 1	Initial+2	15 DPT R0.5 DR	15 DPT NOC/SOC TRR	N/A	No	Contractor format acceptable following content outline in SLC. Delivery will be electronically.		X	
F064	Enterprise Data Management Plan Version 2	Initial+1	At R1 SDR	N/A	15 DPT R1 P/ORR	No	Contractor format acceptable following content outline in SLC. Delivery will be electronically.		X	
F065	Intelligence System/Segment Plan Version 1	Initial+1	15 DPT R0.5 DR	N/A	15 DPT R0.5 PRR	Yes	Contractor format acceptable. Delivery will be electronically.	6.2.2		
F065	Intelligence System/Segment Plan Version 2	Initial+1	At R1 SDR	N/A	15 DPT R1 PRR	Yes	Contractor format acceptable. Delivery will be electronically.	6.2.2		
F066	C3I Communications System Plan Version 1	Initial+1	15 DPT R0.5 DR	N/A	15 DPT R0.5 PRR	No	Contractor format acceptable. Delivery will be electronically.	6.2.3		
F066	C3I Communications System Plan Version 2	Initial+1	At R1 SDR	N/A	15 DPT R1 P/ORR	No	Contractor format acceptable. Delivery will be electronically.	6.2.3		
F067	Release 0.5 Architecture Description Document (ADD)	1-Time	At R0.5 RR	N/A	N/A	Yes	Contractor format acceptable following content outline in SEMP 3.3.2.		Briefing	
F067	Release 1.0 Architecture Description Document (ADD)	Initial+3	15 DPT R1 AFR	15 DPT R1 SDR	15 DPT R1 TRR	Yes	Contractor format acceptable following content outline in SEMP 3.3.2. Delivery will be electronically.			SEMP 3.3.2
F068	Release 1.0 C2I Implementation Plan	1-Time	At R1 AFR	N/A	N/A	No	Contractor format acceptable. Delivery will be electronically.		X	

CDRL#	Title	Freq.	Initial	Update(s)	Final	Approval Required	Preparation / Delivery Instructions	DID/ SOW	SLC	Boeing
F069	C2I Total Lifecycle Cost Analysis / Model	Initial+4	At R0.5 RR	At R1 AFR R1 SDR R1 TRR	At R1 P/ORR	Yes	Contractor format acceptable following content outline in SLC. Delivery will be electronically.		X	
F070	Software Support & Maintenance Plan	Initial+1	15 DPT R 0.5 P/ORR	N/A	15 DPT R1 P/ORR	Yes	Contractor format acceptable. Delivery will be electronically.	6.2.5		
F071	Disaster Recovery/Contingency Plan	1	N/A	N/A	10 DPT NOC/SOC PDR/CDR	Yes	Contractor format acceptable following content outline in SLC. Delivery will be electronically.		X	
F073	Release 0.5 Infrastructure Plan—C2I Facilities	Initial+1	At R0.5 RR	N/A	At R0.5 DR	No	Contractor format acceptable. Delivery will be electronically.		X	
F073	Release 1.0 Infrastructure Plan—C2I Facilities	Initial+1	15 DPT R1 AFR	N/A	15 DPT R1 SDR	No	Contractor format acceptable. Delivery will be electronically.		X	
F074	Infrastructure Plan—Data Centers	Initial+2 4	15 DPT R0.5 DR	15 DPT R0.5 TRR	15 DPT R1 AFR	Yes	Contractor format acceptable following content outline in SLC. Delivery will be electronically.		X	
F075	Trade Study Report	AS REQ	AS REQ	AS REQ	AS REQ	Yes	Contractor format acceptable. Delivery will be electronically.	6.2.6		
F075	Intelligence System/Segment Phase I Trade Study Report	Initial +1	10 DPT Phase I Selection	N/A	10 DPT Phase I Results Review	No	Contractor format acceptable, delivery will be electronically	6.2.6		
F075	Intelligence System/Segment Phase II Trade Study Report	Initial +1	10 DPT Phase II Selection	N/A	10 DPT Phase II Results Review	No	Contractor format acceptable, delivery will be electronically	6.2.6		
F076	Presentation Materials	ASREQ	5 DPT Review	N/A	At Review	No	Contractor format acceptable. Delivery will be electronically.			Contractor Defined
F077	Release 0.5 Software Metrics Report	Initial+1	At R0.5 TRR	N/A	At R0.5 PRR	No	Contractor format acceptable following content outline in BPI-3322. Delivery will be electronically.			BPI-3322
F077	Release 1.0 Software Metrics Report	Initial+1	At R1 TRR	N/A	At R1 P/ORR	No	Contractor format acceptable following content outline in BPI-3322. Delivery will be electronically.			BPI-3322

CDRL#	Title	Freq.	Initial	Update(s)	Final	Approval Required	Preparation / Delivery Instructions	DID/SOW	SLC	Boeing
F078	Release 0.5 Security Architecture Design Document	Initial+1	15 DPT R0.5 DR	N/A	60 DPT R0.5 PRR	Yes	According to SLC DID		X	
F078	NOC/SOC Security Architecture Design Document	1-Time	N/A	N/A	10 DPT NOC/SOC PDR/CDR	Yes	According to SLC DID		X	
F078	Release 1.0 Security Architecture Design Document	Initial+3	At R1 UCR	15 DPT R1 SDR R1 SDR	6015 DPT R1	Yes			X	
F079	Release 0.5 C2I Software Requirements Specification (DOORS Database)	Initial+2	At R0.5 RR	At R0.5 DR	At R0.5 TRR	Yes	Contractor format acceptable following content outline in ART-402. Delivery will be electronically.			ART-402
F079	NOC/SOC Requirements Specification	Initial+2	5 DPT NOC/SOC RR	10 DPT NOC/SOC PDR/CDR	10 DPT NOC/SOC TRR	Yes	Contractor format acceptable following content outline in ART-402. Delivery will be electronically.			ART-402
F079	Release 1.0 C2I Software Requirements Specification (DOORS Database)...	Initial+3	At R1 AFR	At R1 SDR R1 SDR	At R1 TRR	Yes	Contractor format acceptable following content outline in ART-402. Delivery will be electronically.			ART-402
F081	Release 0.5 Interface Requirements Spec	Initial+1	At R0.5 RR	N/A	At R0.5 TRR	No	Contractor format acceptable following content outline in ART-403. Delivery will be electronically.			ART-403
F081	Release 1.0 Interface Requirements Spec	Initial+3	15 DPT R1 UCR	At R1 SDR R1 SDR	At R1 TRR	No	Contractor format acceptable following content outline in ART-403. Delivery will be electronically.			ART-403
F082	Release 0.5 Interface Design Descriptions	Initial +1	At R0.5 DR	N/A	At R0.5 TRR	No	Contractor format acceptable following content outline in ART-411. Delivery will be electronically.			ART-411
F082	Release 1.0 Interface Design Descriptions	Initial+2	At R1 SDR	15 DPT R1 SDR	At R1 TRR	No	Contractor format acceptable following content outline in ART-411. Delivery will be electronically.			ART-411

CDRL#	Title	Freq.	Initial	Update(s)	Final	Approval Required	Preparation / Delivery Instructions	DID/SOW	SLC	Boeing
F083	Release 0.5 Spiral Software Deliverable / Version Description Document	Initial +1	15 DPT R0.5 DR	N/A	15 DPT R0.5 TRR	No	Contractor format acceptable following content outline in ART-414. Delivery will be electronically.			ART-414
F083	Release 1.0 Spiral Software Deliverable / Version Description Document	Initial+2	15 DPT R1 SDDR	15 DPT R1 SDR	15 DPT R1 TRR	No	Contractor format acceptable following content outline in ART-414. Delivery will be electronically.			ART-414
F084	Release 0.5 Software Design Description	1-Time	At R0.5 DR	N/A	N/A	No	PowerPoint briefing		Briefing	
F084	NOC/SOC Design Description	Initial+1	10 DPT NOC/SOC PDR/CDR	N/A	10 DPT NOC/SOC TRR	Yes	Contractor format acceptable following content outline in ART-406. Delivery will be electronically.			ART-406
F084	Release 1.0 Software Design Description	Initial+2	15 DPT R1 SDDR	15 DPT R1 SDR	15 DPT R1 TRR	No	Contractor format acceptable following content outline in ART-406. Delivery will be electronically.		X	ART-406
F085	Release 0.5 Database Design Document	Initial +2	15 DPT R0.5 SDR	15 DPT R0.5 TRR	10 DPT NOC/SOC TRR	No	Contractor format acceptable following content outline in ART-435. Delivery will be electronically.		ERWIN diagram	
F085	Release 1.0 Database Design Document	Initial+2	15 DPT R1 SDDR	15 DPT R1 SDR	15 DPT R1 TRR	No	Contractor format acceptable following content outline in ART-435. Delivery will be electronically.			ART-435
F086	Release 0.5 Software Test Plan/Procedure/ Descriptions	Initial+1	15 DPT R0.5 DR	N/A	15 DPT R0.5 TRR	Yes	Contractor format acceptable following content outline in ART-404. Delivery will be electronically.			ART-404
F086	NOC/SOC Test Plan/Procedure/ Descriptions	Initial+1	10 DPT PDR/CDR	N/A	10 DPT NOC/SOC TRR	Yes	Contractor format acceptable following content outline in ART-404. Delivery will be electronically.			ART-404
F086	Release 1.0 Software Test Plan	Initial+2	15 DPT R1 SDDR	15 DPT R1 SDR	15 DPT R1 TRR	Yes	Contractor format acceptable following content outline in ART-404. Delivery will be electronically.			ART-404

CDRL#	Title	Freq.	Initial	Update(s)	Final	Approval Required	Preparation / Delivery Instructions	DID/SOW	SLC	Boeing
F092	Release 0.5 Software Test Report	1-Time per test activity	30 DA R0.5 Test Event(s)	N/A	N/A	No	Contractor format acceptable following content outline in ART-425. Delivery will be electronically.			ART-425
F092	NOC/SOC Test Report	1-Time per test activity	30 DA NOC/SOC Test Event(s)	N/A	N/A	No	Contractor format acceptable following content outline in ART-425. Delivery will be electronically.			ART-425
F092	Release 1.0 Software Test Report	1-Time per test activity	30 DA R1 Test Event(s)	N/A	N/A	No	Contractor format acceptable following content outline in ART-425. Delivery will be electronically.			ART-425
F093	Release 0.5 Process audit checklists/ records	Initial+1	15 DP R0.5 DR	N/A	15 DPT R0.5 TRR	No	Contractor format acceptable following content outline in BPI-3319. Delivery will be electronically.			BPI-3319
F093	Release 1.0 Process audit checklists/ records	Initial+2	15 DP R1 SDR	15 DP R1 SDR	15 DPT R1 TRR	No	Contractor format acceptable following content outline in BPI-3319. Delivery will be electronically.			BPI-3319
F095	Release 0.5 Requirements Traceability Matrix	Initial+2	At R0.5 RR	At R0.5 SDR	At R0.5 TRR	No	Contractor format acceptable following content outline in SLC. Delivery will be electronically.		X	
F095	Release 1.0 Requirements Traceability Matrix	Initial+3	At R1 UCR	At R1 SDR R1 SDR	At R1 TRR	No	Contractor format acceptable following content outline in SLC. Delivery will be electronically.		X	
F096	Software Development Folder	ASREQ	Establish 30 DA R0.5 RR	ASREQ	N/A	No	Contractor format acceptable following content outline in ART-424. Delivery will be electronically.			ART-424
F101	Release 0.5 System Administrator Training Materials	Initial+1	30 DA R0.5 DR	N/A	15 DPT R0.5 TRR	Yes	Contractor format acceptable. Delivery will be electronically.	6.2.9		
F101	Release 1.0 System Administrator Training Materials	Initial+1	15 DPT R1 SDR	N/A	15 DPT R1 TRR	Yes	Contractor format acceptable. Delivery will be electronically.	6.2.9		

CDRL#	Title	Freq.	Initial	Update(s)	Final	Approval Required	Preparation / Delivery Instructions	DID/SOW	SLC	Boeing
F102	Release 0.5 C2I Code Library (Including License Documentation)	Initial+1	At R0.5 DR	N/A	At R0.5 TRR	No	Contractor format acceptable. Delivery will be electronically.	6.2.10		
F102	Release 1.0 C2I Code Library (Including License Documentation)	Initial+1	At R1 SDR	N/A	At R1 TRR	No	Contractor format acceptable. Delivery will be electronically.	6.2.40		
F103	C2I Development Lessons-Learned	ASREQ	30 DA R0.5 RR	ASREQ	N/A	No	Contractor format acceptable. Delivery will be electronically.			Contractor Defined
F104	C2I System Performance Metrics Report	Initial+5	30 DA R0.5 DR	At R1 AFR R1 SDR R1 SDR R1 TRR	30 DA R1 P/ORRORR	No	Contractor format acceptable. Delivery will be electronically.	6.2.11		
F105	Release 0.5 System Administrator User Manual	Initial+1	15 DPT R0.5 DR	N/A	15 DPT R0.5 TRR	No	Contractor format acceptable following content outline in ART-408. Delivery will be electronically.			ART-408
F105	Release 1.0 System Administrator User Manual	1	15 DPT R1 SDR	N/A	15 DPT R1 TRR	No	Contractor format acceptable following content outline in ART-408. Delivery will be electronically.			ART-408
F106	Release 1.0 Operator Manual	Initial+1	15 DPT R1 SDR	N/A	15 DPT R1 TRR	No	Contractor format acceptable following content outline in ART-416. Delivery will be electronically.			ART-416
F107	Release 0.5 Installation Plan	Initial+1	15 DPT R0.5 DR	N/A	15 DPT R0.5 TRR	Yes	Contractor format acceptable following content outline in ART-409. Delivery will be electronically.			ART-409
F107	Release 1.0 Installation Plan	Initial+2	15 DPT R1 SDR	15 DPT R1 SDR	15 DPT R1 TRR	Yes	Contractor format acceptable following content outline in ART-409. Delivery will be electronically.			ART-409
F108	Action Items	ASREQ	ASREQ	ASREQ	N/A	Yes	Contractor format acceptable using the Management Emphasis System (MET). Delivery will be electronically.			Contractor Defined
F109	Meeting Notes	ASREQ	ASREQ	ASREQ	N/A	No	Contractor format acceptable. Delivery will be electronically.			Contractor Defined

CDRL#	Title	Freq.	Initial	Update(s)	Final	Approval Required	Preparation / Delivery Instructions	DID/SOW	SLC	Boeing
F110	Service Pack One Implementation Plan	ASREQ	ASREQ	ASREQ		Yes	Contractor format acceptable. Delivery will be electronically.	6.2.14		
F111	NOC/SOC Operations Plan	Initial+1	At NOC/SOC PDR/CDR	N/A	At NOC/SOC TRR	Yes	Contractor format acceptable. Delivery will be electronically.	6.2.13		

Acronym	Description
AFR	Architecture Framework Review
ASREQ	As Required
DA	Days After (Calendar Days)
DARP	Days After Report Period (Calendar Days)
DATO	Days After Task Order (Calendar Days)
DPT	Days Prior To (Calendar Days)
DR	Design Review
NOC/SOC	Network/System Operations Center
PRR	Production Readiness Review
R0.5	Release 0.5
R1	Release 1
RR	Requirements Review
SAT	System Acceptance Test
SDR	Spiral Design Review
SSDR	Sub-System Design Review
TRR	Test Readiness Review
UAT	Unit Acceptance Test
UCR	Use Case Review

7 Travel

Long distance travel is required for the performance of this Task Order (TBS). All travel shall be conducted in accordance with the IDIQ Contract HSBP1006D01353.

Appendix A

SBI^{net} Indefinite Delivery Indefinite Quantity (IDIQ) Reference

The following table provides a reference between the detailed tasks listed in the SOW and the SBI^{net} IDIQ SOW requirements provided under Contract No. HSBP1006D01353.

* Section references include sub-sections described in the associated document

C3I SOW Reference		IDIQ SOW Reference	
Section	Title	Section	Title
5.1	Phase 0: C2I Interim Capability	6.3.3.1	Common Operating Picture
5.1.1	Operational Archetype	6.2	Technology Development Task Area
5.1.1.1	C2I Release 0.5 Requirements	6.5.5	Requirements Management
5.1.1.2	C2I Release 0.5 Design	6.5.7	Product Design
5.1.1.3	C2I Release 0.5 Development	6.3.3.1.1	C2 Software
5.1.2	C2I Release 0.5 O&M Support	6.10.1	Operations Support
5.1.2.1	Project 28 Retrofit	6.8.3	Software Maintenance
5.1.2.2	ICA Deployment, Operations, and Maintenance	6.9	Deployment and Installation Task Area
5.2	Phase 1: C3I Architecture Requirements; Development and Support Framework	6.5.2	Architecture
5.2.1	Initial Support Environment	6.10.1	Operations Support
5.2.1.1	Initial Support Environment Development	6.10	Operations Support Task Area
5.2.1.2	Support Environment Transition	6.3.3.5	Information Technology (IT) Infrastructure
5.2.2	RAD/JAD Software and System Development Environment	6.2	Technology Development Task Area
5.2.3	Service Oriented Architecture	6.5.2	Architecture
5.2.4	Software Development Approach	6.3.3.1.1	C2 Software
5.2.4.1	Software Development Plan	6.3.3.1.1	C2 Software
5.2.4.2	Initial Architecture	6.5.2	Architecture
5.2.4.3	Architecture Recommendations for Subsequent Releases	6.5.7	Product Design
5.2.5	C3I Infrastructure Requirements Development	6.3.3.5	Information Technology (IT) Infrastructure
5.2.5.1	C2I Facility Requirements	6.4	Facilities and Infrastructure Task Area

Appendix A
SBinet Indefinite Delivery Indefinite Quantity (IDIQ) Reference

C3I SOW Reference		IDIQ SOW Reference	
Section	Title	Section	Title
5.2.5.2	Intelligence	6.3.3.3	Intelligence Systems and Applications
5.2.5.3	Communications Systems Planning	6.3.3.4	Wireless Communications
5.2.5.4	Data Management	6.5.4	Configuration and Data Management
5.3	Phase 2: C2I Spiral Design	6.5.7	Product Design
5.3.1	Release 1	6.5.2	Architecture
5.3.1.1	Requirements and Design Activities (CBP SLC Stages 2 and 3)	6.1.1.3	Trade Studies
5.3.1.2	Construction (Stage 4)	6.3.3.1.1	C2 Software
5.3.1.3	Acceptance and Readiness (Stage 5)	6.6.1	ITV Planning
5.3.1.4	Operations (Stage 6)	6.10.1	Operations Support
5.3.2	Release 2	6.5.2	Architecture
5.3.2.1	Requirements and Design Activities (CBP SLC Stages 2 and 3)	6.1.1.3	Trade Studies
5.3.2.2	Construction (Stage 4)	6.3.3.1.1	C2 Software
5.3.2.3	Acceptance and Readiness (Stage 5)	6.6.1	ITV Planning
5.3.2.4	Operations (Stage 6)	6.10.1	Operations Support
5.3.3	Release 3	6.5.2	Architecture
5.3.3.1	Requirements and Design Activities (CBP SLC Stages 2 and 3)	6.1.1.3	Trade Studies
5.3.3.2	Construction (Stage 4)	6.3.3.1.1	C2 Software
5.3.3.3	Acceptance and Readiness (Stage 5)	6.6.1	ITV Planning
5.3.3.4	Operations (Stage 6)	6.10.1	Operations Support
5.3.4	Release 4	6.5.2	Architecture
5.3.4.1	Requirements and Design Activities (CBP SLC Stages 2 and 3)	6.1.1.3	Trade Studies
5.3.4.2	Construction (Stage 4)	6.3.3.1.1	C2 Software
5.3.4.3	Acceptance and Readiness (Stage 5)	6.6.1	ITV Planning
5.3.4.4	Operations (Stage 6)	6.10.1	Operations Support
5.3.5	Release 5	6.5.2	Architecture
5.3.5.1	Requirements and Design Activities (CBP SLC Stages 2 and 3)	6.1.1.3	Trade Studies

Appendix A
SBI net Indefinite Delivery Indefinite Quantity (IDIQ) Reference

C3I SOW Reference		IDIQ SOW Reference	
Section	Title	Section	Title
5.3.5.2	Construction (Stage 4)	6.3.3.1.1	C2 Software
5.3.5.3	Acceptance and Readiness (Stage 5)	6.6.1	ITV Planning
5.3.5.4	Operations (Stage 6)	6.10.1	Operations Support
5.4	Management of Technical Reviews	6.11.2.1	Project Manager
5.4.1	C3I Kick-Off Meeting	6.11.1.2	Program Coordination and Administrative Support
5.4.2	Release 0.5 Requirements Review (R0.5 RR)	6.5.1	Engineering Management
5.4.3	Release 0.5 Design Review (R0.5 DR)	6.5.1	Engineering Management
5.4.4	Release 0.5 Contractor Integration/Test Demonstration	6.6	Test and Evaluation Task Area
5.4.5	Release 0.5 Test Readiness Review (R0.5 TRR)	6.6	Test and Evaluation Task Area
5.4.6	Release 0.5 Production/Operational Readiness Review (R0.5 PRR)	6.9	Deployment and Installation
5.4.7	Architecture Framework Review (R1 AFR)	6.5.2	Architecture
5.4.8	Use-Case Review/Design "Walk-thru" (R1 UCR)	6.2	Technology Development Task Area
5.4.9	Sub-system Design Review (R1 SDDR)	6.5.2	Architecture
5.4.10	Spiral Design Review	6.5.7	Product Design
5.4.11	Prototype Demonstration	6.1.1.2	Concept of Operations
5.4.12	Test Readiness Review (R1 TRR)	6.6.1	ITV Planning
5.4.13	Production Readiness Review (R1 PRR)	6.9	Deployment and Installation
5.5	Stakeholder Briefings		
5.6	Task Order Management	6.11.3.2	Contracts Management
5.6.1	Project management	6.11	Program Management Task Area
5.6.2	Business Management	6.11.3	Business Management
5.6.3	Supplier Management and Procurement	6.11.4	Supplier Management and Procurement
5.6.4	Risk Management	6.5.9	Risk Management
5.6.5	System Engineering	6.5	Systems Engineering Task Area