SBI*net*
Design Task Order (DTO) Extension Modification

Performance Work Statement

25 September 2009

Design and Deployment Task Order
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1 Purpose

The purpose of this Design Task Order (DTO) Statement of Work (SOW) is to describe the technical, engineering and management services to be performed by the Contractor for the deployment ("lay-down") of spec ific SBI *net* System components and sub-systems ("toolbox") within the three defined geographic/project areas listed below:

1. Tucson Border Patrol Sector Area of Operational Responsibility ("AOR")
    a. Tucson West Environmental Ass essment Area (EA Area) [c urrent projects are Tucson Border Patrol Station I (T US-1), a portion of the Ajo Border Patrol Station I (AJO-1) project, N ogales Border Pat rol Station Block 1 (NGL Block 1) and Sonoita Border Patrol Station (SON)]
    b. Tucson East EA Area (including Na co Border Patrol Station AOR and Douglas/Willcox Border Patrol Stations AORs)
    c. Organ Pipe EA Area [a majority porti on of t he Ajo Bor der Patrol Station I (AJO-1) project]
    d. Tohono O'odham Nation (TON) EA Area [including Casa Grande Border Patrol Station AOR and the Ajo Border Patrol Station 2 (AJO-2) AOR]
2. Yuma Border Patrol Sector AOR
    a. Barry M. Goldwater Range (BMGR) P hase III (including portions of Yuma Border Patrol Station AOR and Wellton Border Patrol Station AOR)
    b. Cabeza Prieta EA Area (including a portion of the Wellton Borde r Patrol Station AOR)
    c. Yuma EA Area (including a por tion of the Yuma Border Patrol Station AOR and the Blythe Border Patrol Station AOR)
3. El Paso Border Patrol Sector AOR
    a. "Texas Mobile" project area or El Paso Phase I
    b. El Paso Phase II, whic h includes El Paso Stat ion and the New Mex ico border area

2 Backgrou nd

Achieving effective control of the borders of the Un ited States is one of the k ey mission objectives of the Department of Homeland Security (DHS), and a primary responsib ility of three of its component agencies: U. S. Customs and Border Protection (CBP) , Immigrations and Customs Enforcement, and the U.S. Coast Guar d. CBP is the Nation's single unified border agency that protects our bor ders from terrorism, human and drug smugglin g, illeg al mi gration, and agricultu ral pests while simu ltaneously facilitating the flow of legitimate travel and trade.

Controlling the borders requires the employment of an optimal mix of personnel, technology, infrastructure, and response platforms to achieve maximum tactical and strategic advantage. Additionally, each of these must be integrated into a common data picture across DHS component agencies. DHS has worked to strengthen the management efforts necessary to achieve border security by developing and evaluating the Department-wide programs and policies needed to secure our Nation's borders and enforce our immigration laws. These efforts include the integration of intelligence, technology, infrastructure, communications, policies, and personnel.

Effective control is achieved whenever the right mix of resources – based upon threat potential, vulnerabilities, associated risk, and operational dynamics – has been deployed to reasonably ensure that BP is able to:

- Detect an illegal entry into the United States between the POEs;
- Identify and classify the threat level associated with that illegal entry;
- Respond to the area of the illegal entry; and
- Bring the situation to a law enforcement resolution (i.e. apprehension or seizure).

All four of the above elements must be accomplished to establish effective control of the borders. Effective control is achieved through the proper mix of the components of technology, personnel, tactical infrastructure, checkpoint operations, and rapid response capabilities that will allow CBP to confront illegal cross border activity. The mix of these five components will vary depending on the challenges of the focus area and a dynamic border environment. The technology component is the baseline requirement for any area of operations, and technology allows BP to detect the entries and identify and classify the threat

DHS's strategy to secure our Nation's borders between the POEs is described in the National Border Patrol Strategy. The primary goal of the National Border Patrol Strategy is effective control. This term is specific to CBP Border Patrol (BP) operations.

The strategy is to gain, maintain, and expand effective control: gain effective control by deploying resources based on known threats, vulnerability, and risk; maintain effective control once it is gained and seek efficiencies to allow us to hold the area with fewer resources; and expand control by adjusting deployment of resources to areas where illegal cross border activity shifts in reaction to our enforcement efforts.

In September 2006, CBP awarded an Indefinite Delivery/Indefinite Quantity (IDIQ) contract HSBP1006D01353 to the Contractor for development and implementation of the SBI *net* border security solution. Subsequent to this award, the government awarded a task order under the SBI *net* master contract to provide management and systems engineering services necessary to develop the SBI *net* "System-of-Systems" architecture, framework, and toolkit.

This SBInet Design Task Order requires SBI *net* engineering design and deployment planning services in accordance with the SBI *net* system A-level specification, under the SBI*net* master contract HSBP1006D01353 for the geographical project/areas listed above.

3 Objectives

The SBInet system is intended to serve as a critical system within the technology component of effective control of the border. The primary objective of this task order is

for the Contractor to apply SBI *net* System design solutions to meet the mission requirements of each geographical/project area through the application of rigorous systems engineering design processes. This objective will be met when the Contractor delivers a "lay-down" design solution for each area/project that enables effective control of the Border, conforming to the SBI *net* A-Level specification and performance criteria (individual project specifications).

4 Scope of Work

The work scope described in this task order includes the full range of technical, engineering and management services required to develop detailed plans and lay-down solutions compliant with SBInet A-level specification and performance criteria (individual project specifications) that comply with determined environmental and land use requirements, for the deployment of specific SBI *net* System components and sub-systems ("toolbox") within defined geographic/project areas.

The Period of Performance from August 1, 2007 through October 31, 2008 included the Barry M. Goldwater Range (BMGR) Phase III, Yuma, Texas Mobile, Tucson and El Paso geographic areas.

The Period of Performance from November 1, 2008, until October, 2009, was confined to these projects in the Tucson geographic area: TUS-1, AJO-1, NGL-1, SON-1, and TUS-2. The maturity level for each project is defined as:

a. TUS-1 – Design complete through Delta DRR
b. AJO-1 – Design complete through DRR
c. NGL-1 – Design complete through DDR
d. SON-1 – Design complete through DDR
e. TUS-2 – Design complete through DDR (this effort was de-scoped following site surveys during the PoP).

The Period of Performance from October 1, 2009, through July, 2010, includes the following projects: TUS-1, AJO-1, NGL-1, SON, and the Tohono O'odham Nation (TON) EA area (Casa Grande Station and AJO Station 2). The maturity level for each project is defined as:

a. TUS-1 – Maintenance of TUS-1 drawings as required
b. AJO-1 – Design complete through DRR
c. NGL-1 – Design complete through DRR
d. SON-1 – Design complete through DRR
e. Tohono O'odham Nation (TON) EA Area [including Casa Grande Border Patrol Station AOR and the Ajo Border Patrol Station 2 (AJO-2) AOR] – Design complete through DDR.

4.1 Technical Approach

To accomplish this scope of work, the technical approach chosen by the Contractor is a Prime Contractor approach. This approach consists of the Contractor led Integrated

Product/Project Teams (IPTs) which lev erage expertise from its core engineering teams, partners, and teammates. The Contra ctor IPTs shall acc omplish overall system and sector lay-down designs , system integr ation, environment al planning and management responsibilities.

Each of the subsystem desi gn integration teams shall analyze r equirements, develop and integr ate subsystem design solutions. Specifications, design drawings and documents, and lay-downs will be managed under configuration control to provide necessary and sufficient as-designed configurations for follow-on system acceptance. In addition to allocating work to design int egration teams, the C ontractor will utiliz e systems engineering, analys is, and task management support from all SBInet teammates to provide functional expertise to the Integrated Product Teams.

5 Detailed Project Plan

Detailed tasks to be performed for each geographical/project area under this task order are mapped to the Statement of Work (SOW) of the Request for Proposal for SBI*net* FY2007 Design and Deployment Planning.

To ensure complete and consistent accomplishment of engineering and management tasks for each of the geographic areas/projects, the Contractor shall develop DTO plans and schedules. Refer to Section 5.7 for details.

In addition to integration design team support, the Contractor has also solicited systems engineering, analysis, and task management support from all SBI*net* teammates to provide functional expertise to the Integrated Product Teams in selected areas.

5.1 Trade Studies

The Contractor shall conduct trade studies to develop project design alternatives for each geographical area. These trades shall in clude a comparison of the alternatives against the formal program requirements and constraints for that area.

The results to be presented by the Contractor shall include, but not necessarily be limited to the following:

a. Trade study results;
b. System effectiveness implications;
c. Toolbox availability and compatibility;
d. Alignment with program requirements;
e. Producibility information;
f. Life-cycle cost information; and
g. Proposed design alternatives

The trade studies documentation will follow the Contractor trade study process and format, including description of alternatives, evaluation criteria, and weighting factors. Trade studies will be included in the read-ahead material for the Deployment Design

Review (section 5.5.2) and the Deployment Readiness Review (section 5.5.3) as appropriate.

5.1.1 Solution Sets for Deployment into a Geographical Area/Project

For each geographical/project area, the Contractor shall evaluate alternative composite solutions based on a mix of SBI*net* system component technologies, infrastructure elements, legacy equipment, legacy infrastructure, legacy facilities, and personnel. The Contractor may also recommend additional components be added to the SBI*net* system baseline when the use of these components is in the government's best interest and may be asked to incorporate government furnished designs for tool box elements. These alternatives shall address the performance, life-cycle cost, and environmental impacts of the solution set against the program requirements for the specified geographical area. Alternative design(s) shall describe the following "toolbox" items as required:

a. Prime Mission Products: Surveillance technology, command and control, communications, information technology, surveillance platforms, and field agent systems.
b. Infrastructure Elements: Personnel and vehicle barriers, roads (including improvements and maintenance) for response and transport, surveillance sites including access to sites, command center construction and improvement, and communications infrastructure (including sites and access to sites).
c. Legacy Equipment and Planned Upgrades: Use, retrofit, and/or replacement of current surveillance, communication, and command and control technology and equipment to include Underground Sensors (UGS); and legacy infrastructure construction.
d. External Interfaces: Stakeholder systems; state, local, federal and tribal law enforcement agencies.
e. Personnel: Numbers and capability/seniority levels of CBP operations and support personnel required to perform the mission. This includes personnel from the Office of Field Operations (OFO), Office of Border Patrol, Office of Air and Marine (AMO), and recommended levels of support contractor personnel.

5.1.2 Infrastructure Deployment within Each Geographical Area/Project

For infrastructure elements recommended from 5.1.1(b), Contractor shall develop deployment and/or site alternatives. These alternatives shall address contingency planning to aid the government in reducing risk related to future land acquisition and to minimize environmental impacts.

5.1.3 Beginning Environmental Planning Early During the Design Process

The Contractor shall provide the government at the earliest possible date, but no later than Deployment Planning Review (DPR), a list of proposed sites where construction and operations are expected to be conducted, to allow the government to conduct

environmental planning. The Contractor shall hold, at points during the design process the Contractor or the government shall deem necessary, meetings to exchange updated information about the environmental planning activities.

5.1.4 Staging Drawing Packages

The Contractor shall develop the staging drawing packages in support of the Deployment Design Review (DDR) and Deployment Readiness Review (DRR).

5.1.5 Geospatial Information Systems (GIS) Drawing

The Contractor shall provide the government GIS drawings reflecting 30% design maturity at Deployment Design Review (DDR), and 95% design maturity at Deployment Readiness Review (DRR). Contractor shall deliver GIS drawings in accordance with CDRL E053.

5.1.6 Construction Drawing Packages

The Contractor shall provide the government Construction Drawing Packages reflecting 30% design maturity at Deployment Design Review (DDR) and 95% design maturity at Deployment Readiness Review (DRR). Post DRR, the drawings will be updated to incorporate agreed to comments. Contractor shall deliver the Construction Drawing Packages in accordance with CDRL E025.

5.2 Preliminary Design

The Preliminary Design Process will include view sheds, tower and sensor locations, and proximity of roads for the sensor lay-down architecture. CBP personnel shall be consulted in this process to take advantage of first hand tactical knowledge of the area. Following the definition of sensor assets, the Contractor shall perform sufficient site visits to confirm the suitability of the proposed sites and to identify technically feasible alternate sites as directed by the government. The results of these activities shall be documented and provided as a part of the Deployment Planning Review described in section 5.5.1.

Based on the finalized definition of sensor sites and communications towers, and alternates, the supporting communications, and IT/IM architectures shall be defined to support reliable data transport and availability. Tactical infrastructure (roads, etc) required to support the proposed sensor sites shall be defined.

An initial deployment analysis for the area shall be provided identifying a draft deployment schedule and identifying long lead items. The results of these activities shall

be documented and provided as a part of the Deployment Design Review described in section 5.5.2.

5.3 Detailed Design

The Contractor shall provide the detailed design for the project, which will include, as appropriate, updates to the following items:

a. Lay-down maps of proposed sites.
b. Results of view sheds and preliminary communication assessments.

The results of these activities shall be documented and provided as a part of the Deployment Readiness Review described in section 5.5.3.

5.4 Environmental Planning Support

Contractor shall submit information to support environmental planning per CDRL E060.

5.5 Technical Reviews

The Contractor shall conduct technical reviews to support the design effort for each geographical area. 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; and
c. Capturing meeting minutes and action items sufficient to document the government's decision making process.

The Contractor 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.

5.5.1 Deployment Planning Review (DPR)

After initiating a new geographic project, and performing initial viewshed laydown and initial field surveys, the Contractor shall perform a Deployment Planning Review. The purpose of the DPR is to (1) introduce a 10% design summary, (2) obtain early agreement on a project lay-down plan and (3) authorize the preliminary design. At a minimum, the DPR will address tower locations, tower types, and the high level

communications architecture. The contractor shall deliver the DPR read ahead package in accordance with CDRL E058.

5.5.2 Deployment Design Review (DDR)

The purpose of the Deployment Design Review (DDR) is to (1) present a 30% minimum level des ign maturity for a project lay-down and (2) establish Level 1 configuration control and (3) authorize the detail des ign. The DDR will in clude the basic desig n solution for a geographical/project area, along with optional site locations as required. In instances where the lay-down design proc ess has been interrupted by greater than 90 days after DDR has been performed, a delta review may be required to refres h government knowledge of the lay-down design status . The c ontractor shall deliv er the DDR read ahead package in accordance with CDRL E019.

5.5.3 Deployment Readiness Review (DRR)

The 95% detailed design approach for a geographical/project area shall be presented at the Deploy ment Readiness Revi ew (DRR). At the successf ul conclusion of the DRR, the government will approve t he final design. This appr oval will not constitute acceptance by the government or instru ction to proceed with deployment. The contractor shall deliver the DRR read ahead package in accordance with CDRL E020.

5.5.4 Technical Interchange Meetings

In addition, the Contractor may conduct a number of Technical Interchange Meetings (TIMs) as required. These TIMs can cover a wide range of technical topics, such as drawing reviews, trade study reviews, and other topics as mutually agreed upon with the government.

5.6 Stakeholder Briefings

The Contractor will de velop and present top-level briefings to gov ernment stakeholders on the results of the DDR an d DRR. The br iefings will be dev eloped using existing material from the DDRs and the DRRs. In in stances where the lay-down design process is anticipat ed to be interrupted by greater than 90 days within a given project area, a Lay-down review may be used to ensure that lay-down design stat us is u nderstood by the Government and the location and status of lay-down design artifacts disclosed.

5.7 Task Order Management

5.7.1 Cost and Schedule Management

The Contr actor shall participate in ac tivities relat ed to the development and maintenance of the SBInet Integrated Master Plan (IMP) which is delivered under STO CDRL H011.

The contractor shall deliver a resource loaded DTO Integrated Master Schedule (IMS) in accordance with CDRL E010, following guidance contained in the DoD IMP and IMS Preparation and Use Guide dated October 2005. The IMS shall be developed and submitted with the firm proposal for this Design Task Order, or with prior advance authorization commitment, and shall be revised to incorporate acceptable review comments received no later than 15 calendar days following the submittal. Following contract negotiations, the Contractor shall revise its IMP and IMS based on changes agreed to during negotiations.

The Contractor shall submit initial control account budgets with the IMS submittal. Following contract negotiations, the Contractor shall revise the control account budgets based on changes agreed to during negotiations. The Contractor shall submit monthly Cost Performance Reports (CPR's) in accordance CDRL E052 and the IDIQ Contract Earned Value Management Clauses H.9, H.10, H.11, and H. 12. The first month's CPR period end date shall reflect the close of the Contractor's first accounting cycle following the negotiations. CPR's 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. The Contractor shall present this information to the Government on a monthly basis following the formal submittal of the monthly deliverables and at least 3 business days in advance of the monthly Program Management Review.

The IMP, IMS, and control account budgets shall represent the Contractor's plan and baseline for implementation and management of this Design Task Order.

5.7.2 Risk Management

The contractor shall participate in risk management activities in accordance with the SBInet Program's Risk, Issue, and Opportunity Management Plan. (Delivered under STO CDRL H149)

5.7.3 Configuration Management

The contractor shall perform configuration management in accordance with the Configuration and Data Management Plan. (Delivered under STO CDRL H151)

5.7.4 Business Operations

The Contractor shall conduct operations in accordance with the Program Management Plan (PMP), including participation in monthly DTO Program Management Reviews (PMR) and Joint PMRs with the government.

5.7.5 Contracts Administration

The contracts administrator shall perform general contract administration support during the period of performance of the Task Order. 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.

5.7.6 Data Management

The Contractor shall provide Data Management support to include reviewing the contract and contract modifications for requirements, scheduling, monitoring, statusing, delivering, transmitting, and storing deliverable contract data, including data from customers, subcontractors, and/or suppliers.

5.8 COP Design

This section is cancelled as of the Task Order Modification of 01 November 2008.

5.9 Quality Assurance

The contractor shall maintain a quality program in accordance with the Quality Assurance Plan. (ADP Data Item H-MAA-38) The contract shall provide inputs to the System Acceptance Plan. (Delivered under ADTO CDRL J041)

5.10 Systems Analysis, Modeling, and Simulation

The contractor shall conduct system analysis, modeling and simulation to support the laydown design process and identify predicted laydown performance to include Viewsheds, Probability of Detection (Pd), Probability of Identification (Pid) and Miles of Border Covered by Technology (MBCT) and the associated threat and route information for the predicted performance analysis.

The contractor shall determine view sheds and conduct analyses for Pd, Pid, and MBCT performance predictions of the baseline sensor laydown defined for a DDR with results summarized for presentation at the DDR (Section 5.5.2).

The contractor shall determine view sheds and conduct analyses for Pd, Pid, and MBCT performance predictions of the baseline sensor laydown defined for a DRR with results summarized for presentation at the DRR (Section 5.5.3).

These analyses shall be delivered in accordance with CDRL E045.

5.11 Systems Engineering

The Contractor shall develop project integration specifications in accordance with CDRL E054. The contractor shall conduct verification planning and document the verification success criteria within Section 4.0 of the project integration specifications.

5.12 Specialty Engineering

The Specialty Engineering organization shall review DTO products for Parts, Material, and Processes (PM&P), Reliability, Maintainability, Availability (RMA), Human Factors Engineering (HFE), and System Safety. Specialty Engineering shall develop project based Integrated Hazard Analysis (IHA) to identify any unique deployment issues which may introduce an unmitigated hazard not already identified in the generic block 1 toolbox design. The IHA shall be submitted via CDRL E045.

5.13 Supplier Management and Procurement

The Contractor shall provide direction for suppliers working on the Task Order. The Contractor shall monitor, control, and report the plans, schedules, budgets, and variances associated with suppliers working on the Design Task Order. Upon completion of a negotiated subcontract, the Contractor shall provide the Government a copy of the negotiated subcontract.

5.14 Program Security

The Contractor shall maintain physical and personnel security programs that conform to the policies of CBP and DHS central security program and the SBInet system security plan. (Delivered under STO CDRL H021)

5.15 Program Environment, Health, and Safety (EHS)

The Contractor shall maintain an EHS program. The Contractor shall provide inputs to field personnel safety procedures for performing work at project site locations.

6 Contract Deliverables

Appendix A provides a description of the data requirements that shall be developed and submitted to the Government by the Contractor. Contract Data Requirements List (CDRL) items provided by the Contractor at DDR shall be developed as initial-draft where applicable. CDRL items provided at DRRs are in final form. Data Item Descriptions (DIDs) for each of these CDRL items are included in Appendix B.

APPENDIX A: CONTRACT DATA REQUIREMENTS LIST (CDRL) ITEMS

All CDRLs require Customer approval/disapproval.

CDRL due dates are calendar dates.

Delivery method for all CDRLs is electronic (PIMS).

CDRL No.	Title	SOW Paragraph	Data Item Description Number	Initial Delivery	Final or Frequency	Format
E052	Cost Performance Reports	5.7.1	SBI-DID-0016, Rev A	ATP + 30 days	Monthly	Contractor Format
E010	Integrated Master Schedule	5.7.1	SBI-DID-0057, Rev A	With Proposal	As Req	MS Project 2003 or newer.
E060	Environmental Planning Data	5.4	SBI-DID-0060, Rev New	DPR DDR,	DRR	Contractor Format
E045	Technical Reports (Integrated Hazard Analysis, Comm/Network Analysis, MA&A Analysis	5.10, 5.12	SBI-DID-0003, Rev New	As Required	As Required	Contractor Format
E053	GIS drawing	5.1.5	SBI-DID-0005	DDR	DRR	Contractor Format
E025	Site Construction Drawing Packages	5.1.6	SBI-DID-0012, Rev New	28 calendar days prior to DDR	28 calendar days prior to DRR	Contractor Format
E054	Project Integration Specification	5.11	SBI-DID-0002, Rev A	DPR DDR,	DRR	Contractor Format
E058	Deployment Planning Review (DPR) Read Ahead Package	5.5.1	SBI-DID-0058, Rev New	10 calendar days prior to DPR	DPR	Contractor Format
E019	DDR Read Ahead Package	5.5.2	SBI-DID-0007, Rev A	10 calendar days prior to DDR	DDR	Contractor Format
E020	DRR Review Read Ahead Package	5.5.3	SBI-DID-0008, Rev A	10 calendar days prior to DRR	DRR	Contractor Format

APPENDIX B: DATA ITEM DESCRIPTIONS (DID)

DATA ITEM DESCRIPTION

1. TITLE	2. IDENTIFICATION NUMBER
Project Integration Specification	SBI-DID-0002 (Revision A)

3. DESCRIPTION/PURPOSE

Specification that describes a defined lay-down project and identifies project unique performance requirements.

4. APPROVAL DATE (YYMMDD)	5. OFFICE OF PRIMARY RESPONSIBILITY (OPR)	6. DTC APPLICABLE
	System Engineering/Sector Design	

7. APPLICATION/INTERRELATIONSHIP

8. APPROVAL LIMITATION	9. REFERENCES
Yes	E054

10. PREPARATION INSTRUCTIONS

Specification will be prepared using Microsoft Word.

CONTENT:

1. Introduction
2. Reference Documents
3. Requiremen ts
    - 3.1. Performance Requirements
    - 3.2. System Functional Requirements
    - 3.3. System External Interface Requirements
    - 3.4. System Internal Interface Requirements
4. Verification provisions
    - 4.1. Introduction
    - 4.2. Verification Method Definitions
    - 4.3. Verification Cross Reference Matrix Definitions
    - 4.4. Verification Cross Reference
5. Requiremen ts Traceability
6. Project Integration

FORMAT/SUBMISSION:

Project Integration Specification will be delivered in Adobe PDF format.

CHANGE DOCUMENTATION:

Baseline Project Integration Specification and subsequent revisions will be managed via the Boeing CM process.

DATA ITEM DESCRIPTION

1. TITLE	2. IDENTIFICATION NUMBER
GIS drawing	SBI-DID-0005

3. DESCRIPTION/PURPOSE

This CDRL will provide a graphical depiction of the asset laydown for the subject task order. The intent is to convey a top level view of the asset laydown in a geographical context.

4. APPROVAL DATE (YYMMDD)	5. OFFICE OF PRIMARY RESPONSIBILITY (OPR)	6. DTC APPLICABLE
System	Architecture/Design Engineering	

7. APPLICATION/INTERRELATIONSHIP

8. APPROVAL LIMITATION	9. REFERENCES
E053	

10. PREPARATION INSTRUCTIONS

CONTENT: This data item will provide a depiction of assets to be deployed for the subject Task Order. This data item will be a drawing showing asset locations in a Geographic Information System (GIS) context. Asset locations will be graphically related to terrain features, existing infrastructure (buildings, streets, bridges and roads), city, state and national boundaries, and other relevant features.

FORMAT/SUBMISSION: This data item will be delivered in digital format. Digital formats selected will follow conventions that will facilitate access and display of the information on end-user computing platforms. ESRI formats will be provided for the Design Task Order. If custom icon sets are developed to support the representations, then these icon sets and any other required ancillary files will be delivered. Hardcopy views of selected portions of the asset laydown will be captured and provided as a part of the Design Review (DPR, DRR, DDR) presentation package. The digital representations will be provided as a part of the read-ahead packages for the DDR and DRR.

DATA ITEM DESCRIPTION

1. TITLE	2. IDENTIFICATION NUMBER
DPR Review Read Ahead Package	SBI-DID-0058, Rev New

3. DESCRIPTION/PURPOSE

This CDRL will constitute the complete DPR review package.

4. APPROVAL DATE (YYMMDD)	5. OFFICE OF PRIMARY RESPONSIBILITY (OPR)	6. DTC APPLICABLE
System	Architecture/Design Engineering	

7. APPLICATION/INTERRELATIONSHIP

8. APPROVAL LIMITATION	9. REFERENCES
CDRL	E058

10. PREPARATION INSTRUCTIONS

CONTENT:
The Contractor shall provide presentation materials to support the DPR for each geographical area. The Contractor shall prepare and provide the necessary technical reports and supporting information for the 10% design. This includes items such as:
1. Initial Sensor Tower Laydown
2. Viewsheds for proposed sensor sights
3. Landowner & ROE Status (Govt Responsibility)
4. Initial Environmental Comments (Govt Responsibility)
5. Initial Comm Architecture
6. Initial COP Facility Design Concept
7. Initial Tower Site/Road observations

The Contractor should plan on forty (40) government r epresentatives attending the DPRs.

FORMAT/SUBMISSION: The data comprising the presentation material and supporting documents, as required, will be delivered via the Boeing Program Information Management System (PIMS). Digital formats selected will follow conventions that will facilitate access and display of the information on end-user computing platforms (i.e. PDF, MS-Word, MS-Excel etc). The read-ahead material will be available via PIMS, 10 calendar days prior to the review.

DATA ITEM DESCRIPTION

1. TITLE	2. IDENTIFICATION NUMBER
DDR Review Read Ahead Package	SBI-DID-0007, Rev A

3. DESCRIPTION/PURPOSE

This CDRL will constitute the complete DDR review package.

4. APPROVAL DATE (YYMMDD)	5. OFFICE OF PRIMARY RESPONSIBILITY (OPR)	6. DTC APPLICABLE
System	Architecture/Design Engineering	

7. APPLICATION/INTERRELATIONSHIP

8. APPROVAL LIMITATION	9. REFERENCES
CDRL	E019

10. PREPARATION INSTRUCTIONS

CONTENT: The DDR Review package will consist of presentation material and supporting documents that form the basis for the Deployment Readiness Review. The basic design approach of the selected alternative, with optional configurations to deploy SBI*net* components for each geographical/project area, shall be presented during the DDR meeting. The results to be presented by the contractor at the DDR shall include, but not be limited to the following:

a. Preliminary Construction Drawings (30% drawings) of the selected design including infrastructure footprint drawings, preliminary hydrology studies, and facility typical plans and sections. Reference CDRL E025.
b. Preliminary top-level Bill of Materials including toolbox availability and compatibility; both IT and Non-IT assets will have BOM lists.
c. Facility space requirements and proposed layouts including electrical requirements, HVAC requirements, etc. Preliminary Facility Construction Drawings
d. Communic ations architecture and associated back-haul capability.
e. Draft DTO Deployment Schedule.
f. Draft Project Integration Specification for the geographical area to include technical performance parameters. Reference CDRL E054
g. Long lead items and schedule including other elements which might pose schedule risk.
h. Trade study results, as required
i. Views heds, P-identification, P-detection, Miles of Border Covered by Technology, and A_o analysis for the DDR baseline laydown. Reference CDRL E045
j. Status of DTO Risk items

The Contractor will plan on forty (40) government representatives attending DDRs.

FORMAT/SUBMISSION: The data comprising the presentation material and supporting documents will be delivered via the Boeing Program Information Management System (PIMS). Digital formats selected will follow conventions that will facilitate access and display of the information on end-user computing platforms (i.e. PDF, MS-Word, MS-Excel etc). The read-ahead material will be available via PIMS, 10 calendar days prior to the review.

DATA ITEM DESCRIPTION

1. TITLE	2. IDENTIFICATION NUMBER
DRR Review Read Ahead Package	SBI-DID-0008, Rev A

3. DESCRIPTION/PURPOSE

This CDRL will constitute the complete DRR review package.

4. APPROVAL DATE (YYMMDD)	5. OFFICE OF PRIMARY RESPONSIBILITY (OPR)	6. DTC APPLICABLE
System	Architecture/Design Engineering	

7. APPLICATION/INTERRELATIONSHIP

8. APPROVAL LIMITATION	9. REFERENCES
CDRL	E020

10. PREPARATION INSTRUCTIONS

CONTENT: The DRR Review package will consist of presentation material and supporting documents that form the basis for the Deployment Readiness Review. The detailed design approach to deploy SBI*net* components for each geographical/project area shall be presented during the DRR meeting. The contractor shall develop and present the results of the design effort at the DRR, including, but not limited to the following:

a. 95% Construction Drawings. Reference CDRL E025.
b. Communications Design to include: Primary communication links, relay tower locations, rates, capacities, paths/topology, path analysis, link budgets, GFE or Contractor provided.
c. Specialty Engineering analysis updates as required for unique hardware configurations, i.e. Integrated Hazard Analysis. Reference CDRL E045
d. Status of EA work and FONSI (Government provided)
e. Status of construction permits.
f. Updated DTO deployment schedule
g. Current Bill of Materials (BOM) for the project. Final BOM is delivered post DRR.
h. Current status of DTO risk items
i. Project Integration Specification. Reference CDRL E054-1200
j. Updated View sheds, predicted P-identification, P-detection, Miles of Border Covered by Technology, and A_o performance for the DRR baseline laydown. Reference CDRL E045.

The Contractor should plan on forty (40) government representatives attending DRRs.

FORMAT/SUBMISSION: The data comprising the presentation material and supporting documents will be delivered via the Boeing Program Information Management System (PIMS). Digital formats selected will follow conventions that will facilitate access and display of the information on end-user computing platforms (i.e. PDF, MS-Word, MS-Excel etc). The read-ahead material will be available via PIMS, 10 calendar days prior to the review.

DATA ITEM DESCRIPTION

1. TITLE	2. IDENTIFICATION NUMBER
Contract Performance Report (CPR)	SBI-DID-0016, Rev A

3. DESCRIPTION/PURPOSE

The Contract Performance Report (CPR) provides summary level data used to assess current, cumulative, and projected contract performance. It should accurately reflect the work plan contractually authorized, work accomplished, and actual cost of work performed. It is used to facilitate informed, timely decisions internally and by the customer.

1. The reporting level for the Format 1 report shall be at level three of the WBS. Lower levels maybe required for CWBS elements at level 3 that are greater than 20% of the total Performance Measurement Baseline (PMB) budget.
2. The initial submission is due no later than (NLT) 15 working days after the end of the contractor's second accounting period after contract award. Subsequent submissions of Format 1-4 are due the 22nd of every month. If the 22nd falls on a holiday or weekend, the CPR shall be submitted on the next business day. The January submittal will be submitted on January 25th due the year end accounting close process.
3. All data being provided by the contractor shall be delivered in Electronic format as defined in the data item description DI-MGMT-81466 and formats 1-4 in MS Excel. Format 5 in MS Word and Format 1-4 in XML format.
4. For each task order, Format 5 Variance analysis shall be provided in MS Word. For each WBS element in Format 1 who's current, cumulative cost and/or schedule variances and variance at completion (VAC) exceeding $100K and +/- 10% will be explained in Format 5.

4. APPROVAL DATE (YYMMDD)	5. OFFICE OF PRIMARY RESPONSIBILITY (OPR)	6. DTC APPLICABLE
Business	Operations	

7. APPLICATION/INTERRELATIONSHIP

8. APPROVAL LIMITATION	9. REFERENCES
CDRL	E052

10. PREPARATION INSTRUCTIONS

CONTENT:

The CPR will have 5 formats and shall be prepared in accordance with Data Item Description (DID) DIMGMT-81466 dated March 30, 2005.

• **Format 1** – Provides a summary of cost and schedule performance by the product oriented Work Breakdown Structure (WBS).

• **Format 2** – Provides a summary of cost and schedule performance by organizational category

• **Format 3** – Provides the budget baseline plan against which performance is measured and

reflects baseline changes since the previous submittal.

• **Format 4** – Provides staffing forecasts.

• **Format 5** – Provides a narrative report used to explain overall program status, significant cost and schedule variances and analysis. Management Reserve (MR) and Undistributed Budget (UB).

All 5 formats shall be prepared for Task Order(s) with a total value greater than $50M and that are cost type and/or incentive type task orders. For task order(s) greater than $20M but less than $50M, only formats 1 and 5 shall be prepared, unless specified otherwise by the customer during task order execution. CPR's are not required for fixed priced task orders, unless specified otherwise in the contract.

DATA ITEM DESCRIPTION

1. TITLE	2. IDENTIFICATION NUMBER
Site Construction Drawing Packages	SBI-DID-0012, Rev New

3. DESCRIPTION/PURPOSE

4. APPROVAL DATE (YYMMDD)	5. OFFICE OF PRIMARY RESPONSIBILITY (OPR)	6. DTC APPLICABLE
System	Architecture/Design Engineering	

7. APPLICATION/INTERRELATIONSHIP

8. APPROVAL LIMITATION	9. REFERENCES
CDRL	E025

10. PREPARATION INSTRUCTIONS

CONTENT:

In support of the Deployment Planning Review (DPR), a 10% Design Summary will be provided. The 10% Design Summary will include the following:

Tower Sites:

1. Statement of Requirements (Comm or Sensor Site; New/Existing Tower, etc)
2. Initial Site Visit Observations (Sketches of proposed road centerlines, construction site observations, etc)
3. Site Location based on GPS coordinates
4. Availability of existing utility systems (fiber, grid power, etc) proposed to be utilized

Facility

1. Site Visit Report
2. Space Requirements (top level)
3. Power Requirements (top level)
4. HVAC Requirements (top level)
5. Availability of existing utility systems (fiber, power, etc) proposed to be utilized
6. Recommendation for use of existing facility space or a new modular building

In support of the Deployment Design Review (DDR) one of the tasks performed is the Topographic/Hydrological Field Surveys. Data obtained from these surveys will be used to create the 30% Site Construction Drawings. The 30% Site Construction Drawings will include the following:

Tower Site:

1. General Notes & Special Conditions
2. Survey Reference Sheet
3. Site Plan
4. Grading plan
5. Roadway typical sections
6. Drainage details & Erosion control plan

7. Site & road cross sections
8. Fence & compound plan with proposed details
9. Tower elevations
10. Power details (generator spec, fuel type, tank size, for commercial power show centerline of power distribution from commercial pole to site)
11. Electrical grounding
12. Shelter/equipment details
13. Tower foundation design (maturity to support environmental & permit requirements)

In addition to the site field surveys, a facility survey will be performed to obtain the information necessary to develop a 30% Facility Construction Drawing. The 30% Facility Construction Drawing will include the following:

Facility

Modular Solution (If required):

1. Site Plan
2. Utility Plan (HVAC/Mechanical, Water/Sanitary, Electrical/lighting)
3. Performance Spec for Modular bldg

Interior Solution

1. Architectural (layout/finishes)
2. Structural
3. Electrical-deta iling panel & outlets
4. HVAC & plumbing
5. Lighting
6. Communication/Data Plan (single line drawings)

In support of the Deployment Readiness Review (DRR) one of the tasks performed is the Geotech Field Surveys. Data obtained from these surveys will be used to create the 95% Site Construction Drawings. The 95% Site Construction Drawings will include earlier data from the 30% Site Construction Drawings, updated if appropriate, and the following:

1. Power (If commercial power is used, actual design to be done by the local power company)
2. Final Specific Tower foundation Design
3. Electrical Plan & details
4. HVAC/Mechanical Plans & details
5. Plumbing Plans & details
6. Architectural Plan & details for all structural elements
7. In addition, for each tower site a Site Drawing Tree & Site IPL will be provided along with the 95% Site Construction Drawing
8. Also, a Tower Analysis Report will be provided to document the calculations and summary reports for the tower sites.

In support of development of the 95% Facility Construction Drawing, a final facility survey will be performed to finalize facility data necessary to develop a 95% Facility Construction Drawing. The 95% Facility Construction Drawing will include earlier data

from the 30% Site Construction Drawings, updated if appropriate, and the following:

Facility

1. Communication/Data Plan (further details based on the C2 interconnects)
2. In addition, a Facility Drawing Tree & IPL will be provided along with the 95% Facility Construction Drawing

Post DRR, the Final (100%) Construction Drawings will be developed per the following: Agreed to comments from the Contractor & Government review of the 95% Site Construction Drawings & 95% Facility Construction Drawing will be incorporated into the 95% Drawing packages thus creating the Final (100%) Construction Drawings.

FORMAT/SUBMISSION:
Design submittals for DDR and DRR shall be single integrated packages submitted by the Contractor 28 calendar days prior to the applicable milestone review. The Government will return comments to the Contractor no later than 18 calendar days prior to the applicable milestone review. DDR and DRR drawings will be posted to PIMS. Final drawings to be electronically released in Boeing's eMatrix System.

DATA ITEM DESCRIPTION

1. TITLE	2. IDENTIFICATION NUMBER
Technical Reports	SBI-DID-0003, Rev New

3. DESCRIPTION/PURPOSE

Provide relevant technical data and information required by the program

4. APPROVAL DATE (YYMMDD)	5. OFFICE OF PRIMARY RESPONSIBILITY (OPR)	6. DTC APPLICABLE
System	Architecture/Design Engineering	

7. APPLICATION/INTERRELATIONSHIP

8. APPROVAL LIMITATION	9. REFERENCES
No CDRL	E045

10. PREPARATION INSTRUCTIONS

CONTENT:

Technical Reports that may be submitted via this CDRL include reports such as trade studies, Integrated Hazard Analysis, Communications/Network analyses, and Systems Analysis, Modeling, and Simulation. Required submittals will be mutually determined by the contractor and the government in support of the program.

FORMAT/SUBMISSION:
Data to be submitted electronically to PIMS. Contractor's format is acceptable.

DATA ITEM DESCRIPTION

1. TITLE	2. IDENTIFICATION NUMBER
Integrated Master Schedule and Supporting Documentation	SBI-DID-0057, Rev A

3. DESCRIPTION/PURPOSE

The Integrated Master Schedule (IMS) is a business tool used in conjunction with the Integrated Master Plan (IMP) to allow for on-going insight into the program status by both the Government and the Prime Contractor, helping to mitigate risks, improve day-to-day program management and execution, and increase the probability of program success.

The IMS is an integrated, networked program schedule containing all the detailed discrete work packages and planning packages (or lower level tasks/activities) necessary to support the entire program's events (PEs), significant accomplishments (SAs), and accomplishment criteria (ACs) as described in the IMP (SBI-DID-0015A).

4. APPROVAL DATE (YYMMDD)	5. OFFICE OF PRIMARY RESPONSIBILITY (OPR)	6. DTC APPLICABLE

7. APPLICATION/INTERRELATIONSHIP

The IMS shall be traceable to the program's contracts, Contract Work Breakdown Structure (CWBS), Statement of Works (SOWs), Earned Value Management Systems (EVMS), Risk Management System, and IMP.

The IMS shall be defined to the level of detail necessary for day-to-day management and execution of the entire program and its projects.

8. APPROVAL LIMITATION	9. REFERENCES
CDRL	E010

10. PREPARATION INSTRUCTIONS

CONTENT:

The development of the IMS shall be in accordance with the Government scheduling management processes and procedures. For additional guidance in developing the IMS, the contractor shall reference the latest versions of the Department of Defense (DoD) "Integrated Master Plan and Integrated Master Schedule Preparation and Use Guide," the SBInet Program Management Office (PMO) Scheduling Standards, and the DoD standard IMS Data Item Description (DID), DI-MGMT-81650.

The IMS shall maintain consistency with the IMP's PEs, SAs, and ACs, and include durations for each discrete work package and planning package (or lower level task or activity), along with predecessor and successor relationships, and any constraints that control the start or finish of each work package and planning package (or lower level task or activity). (Note: When Level of Effort (LOE) work packages, tasks, or activities are included in the IMS, they shall be clearly identified as such, and shall never drive the critical path(s)).

The IMS shall be an fully integrated, logical network-based program schedule that correlates to the CWBS, and is vertically and horizontally traceable to the cost/schedule reporting instrument used to address variances such as in the task orders' Contract Performance Reports (CPRs). It shall include fields and data as specified in the latest SBInet PMO Schedule Standards that enable the government to

access, filter and sort schedule information in multiple ways (e.g. Event, by IPT, by WBS, by Earned Value Management (EVM) Method, Statement of Work (SOW) or by CWBS.

The IMS shall include the lowest level of all program contract tasks/activities that form the network. The details shall contain horizontal and vertical integration, at the work package and planning package level, at a minimum. The detailed schedules shall include all tasks/activities, work packages, and planning packages identified in the contract Performance Measurement Baseline (PMB) and baselined at the DesignTask Order (DTO) ExecutabilityReview. Every discrete task/activity, work package, and planning package shall be clearly identified and directly related to a control account.

Work packages and planning packages shall be individually represented and summarize to or reconcile with the total budget for that control account. If Level of Effort (LOE) control accounts, work packages, or planning packages are included as tasks in the IMS, they shall be clearly identified as such. The detailed tasks/activities, work packages, and planning packages shall be traceable to only one CWBS, IMP, and performing organizational element, as applicable. The level of detail in the IMS (including number and duration of tasks/activities) shall follow the contractor's EVM process as documented in their SBInet Cost Management Plan. Shorter-term work packages (ideally equal in length to the statusing interval) are preferred because they provide more accurate and reliable measures of work accomplished.

The IMS is a living document that is continuously updated to reflect the progress of the program and the projects executing within the program. The IMS should allow for the government to perform critical path analysis independently from the critical path analysis provided by the Prime Contractor. The IMS should also be validated to ensure that the data being submitted is reflective of the actual work the Prime Contractor has or is currently performing for the program especially in the case if other Commercial of the Shelf (COTS) scheduling software is being used outside of what is required by this DID.

For a list of IMS key elements and their definitions, please reference the DoD IMS Standard DID, DI-MGMT-81650.

In addition to the DoD IMS Standard DID, DI-MGMT-81650, the government reserves the right to request resource loaded schedules from the contractors approved schedule tool on an as needed basis.

FORMAT/SUBMISSION: The IMS submission shall be created using Microsoft Project 2003 or the latest version of this scheduling software application. If any other Commercial off the Shelf (COTS) scheduling software is used, the government requires that the IMS be converted, quality checked and properly formatted to Microsoft Project 2003 or newer for its submission for the IMS. The IMS shall, at a minimum, consist of all past, current and in some cases future projects/contracts for the SBInet Program. In referring to past projects/contracts, the government requires the retention of data for completed tasks and activities as outlined in DoD IMS Standard DI-MGMT-81650. This data will provide the government a complete Program IMS as outlined in the DTO Statement of Work (SOW).

The IMS shall be baselined upon successful completion of an Executability Review, and the Government acceptance of the program baseline. Any changes to the program baseline shall be approved by the SBInet Joint Change Control Board (JCCB).

The IMS shall be statused weekly and in accordance with the contractor's schedule management process and the SBInet Program Management Office Schedule Standards. It shall be submitted monthly accompanied by specific IMS supporting documentation. The government requests that the following supporting documentation be submitted;

- Program Critical Path – Path analysis based on the resourced loaded Program IMS. This analysis depicts a sequence of discrete work packages and planning packages (or lower level tasks or activities) in a network that has the longest total duration.
- Schedule Metrics – Report should be in accordance with the Boeing Integrated Defense System (IDS) Integrated Program Management (IPM) manual.
- Schedule Risk Analysis – Report should be directly coordinated with the Program Critical Path analysis and variance analysis as outlined in the Boeing IDS IPM manual.

In addition to the monthly submittal, the Government will require weekly progress updates to the IMS be communicated and presented through the joint weekly Schedule Working Group (SWG) or any pertinent schedule Integrated Product Team (IPT).

- If a Contract Performance Report (CPR) is required, the IMS shall be statused and submitted to the procuring activity prior to or concurrently with CPR Formats 1-5 (as applicable). The IMS may reflect data either as of the end of the calendar month or as of the contractor's accounting period cutoff date, provided it is consistent and traceable to the CPR (if applicable). When subcontractor schedule data reflects a different status date than the prime contractor's schedule status date, these status dates shall be described in the analysis section of the IMS.

DATA ITEM DESCRIPTION

1. TITLE	2. IDENTIFICATION NUMBER
Environmental Planning Data	SBI-DID-0060

3. DESCRIPTION/PURPOSE

Provide project design data to support of the development of the Environmental Assessment by the Government.

4. APPROVAL DATE (YYMMDD)	5. OFFICE OF PRIMARY RESPONSIBILITY (OPR)	6. DTC APPLICABLE
System	Architecture/Design Engineering	

7. APPLICATION/INTERRELATIONSHIP

8. APPROVAL LIMITATION	9. REFERENCES
CDRL	E060

10. PREPARATION INSTRUCTIONS

CONTENT: The project design data will be provided to support of the development of the Environmental Assessment by the Government. The project design data will include site selection data (as presented in Example 1); Tower Summary Information for EA Appendix D (as presented in Example 2) and Proposed Tower Description (as presented in Example 3). In addition, the shape file(s) for tower site access roads will be provided to support the Government EA development (Format Microsoft Killer 2.3 with file extensions .ght and .edc). This data will be obtained/created from the detailed site surveys (i.e. Topo/Hydro Survey) and provided to the Government no later than the Project DDR.

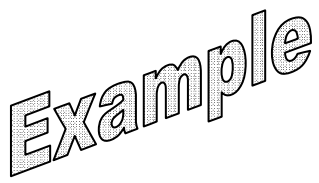
Example

Sector	Station	Sequence Number	Site Name	Site Location Latitude	Site Location Longitude

(b) (7)(E)

(b) (7)(E)

EA Support DID Example 1 – Site Selection Information



Tower Name	TCA-AJO-302	TCA-AJO-004	TCA-AJO-305	TCA-AJO-216	TCA-AJO-170	TCA-AJO-204	TCA-AJO-310
Tower Function	(b) (7)(E)						
Station							
BASIC SITE CONDITION							
Construction Footprint							
Site Footprint (Permanent)							
Length of Upgrade (Feet)							
Length of New Road (Feet)							
Drainage Structure Requirements							
Security Fence							
Landowner Category							
TOWER DESCRIPTION							
Existing Tower							
Existing Tower Changes							
Tower Type							
Tower Height (feet)							
Guy Wires Requirements							
Recommended Foundation for Site							
POWER DESCRIPTION							
Distance to Commercial Power or Type of Primary Power							
Generator Fuel Type							
Fuel Tank Capacity for Generator (If Required)							
Amount of energy Consumption							

EA Support DID Example 2 – Tower Summary for EA Appendix D

Tower ID	(b) (7)(E)
Primary Function	Sensor
Type of Foundation	(b) (7)(E)
Tower Height	(b) (7)(E)
Station Tucson	
Location	Santa Cruz County
Land Use	Federal
Location Description	The proposed tower site is approximately (b) (7)(E) (b) (7)(E)
Tower Access	Access to the site from (b) (7)(E) is via an existing unimproved jeep trail. Access road improvements would be necessary for tower installation and maintenance
Type of Primary Power	(b) (7)(E)

EA Support DID Example 3 – Proposed Tower Descriptions

FORMAT/SUBMISSION:
Data to be submitted electronically to PIMS. Contractor's format is acceptable.