

**STATEMENT OF WORK/PERFORMANCE SPECIFICATION**

**LARGE SCALE NON INTRUSIVE INSPECTION  
(NII) SYSTEMS**

# CONTENTS

1.0	SCOPE.....	5
1.1	PROGRAM ORGANIZATION .....	5
1.1.1	GOVERNMENT MANAGEMENT ORGANIZATION .....	5
1.1.2	CONTRACTOR MANAGEMENT ORGANIZATION .....	5
1.2	PURPOSE.....	5
1.3	BACKGROUND.....	6
1.4	GOVERNMENT FURNISHED MATERIALS, PROPERTY AND INFORMATION .....	6
2.0	DOCUMENTS .....	6
2.1	APPLICABLE DOCUMENTS .....	6
3.0	REQUIREMENTS .....	7
3.1	GENERAL REQUIREMENTS - CLIN's 00010 to 00140 .....	7
3.1.1	PERFORMANCE REQUIREMENTS FOR CATEGORY 1 - LOW-DENSITY CARGOES...7	
3.1.2	SYSTEM CONFIGURATIONS AND OPERATIONAL SPECIFICATIONS FOR LOW DENSITY CARGOES- CLIN's 00010 - 00040.....	9
3.1.2.1	<i>Configuration 1 – Fixed System for Low Density Cargoes - CLIN 00010</i> .....	9
3.1.2.2	<i>Configuration 2 – Mobile System for Low Density Cargoes - CLIN 00020</i> .....	10
3.1.2.3	<i>Configuration 3 – Pallet System for Low Density Cargoes - CLIN 00030</i> .....	11
3.1.2.4	<i>Configuration 4 – Rail System for Low Density Cargoes – CLIN 00040</i> .....	12
3.1.3	PERFORMANCE REQUIREMENTS FOR CATEGORY 2 - HIGH-DENSITY CARGOES 13	
3.1.3.1	<i>Radioactive Material/ WMD</i> .....	14
3.1.4	SYSTEM CONFIGURATION AND OPERATIONAL SPECIFICATIONS FOR HIGH DENSITY CARGOES- CLIN's 00050 - 00080.....	14
3.1.4.1	<i>Configuration 5 – Fixed System for High Density Cargoes - CLIN 00050</i> .....	14
3.1.4.2	<i>Configuration 6 – Mobile System for High Density Cargoes – CLIN 00060</i> .....	15
3.1.4.3	<i>Configuration 7 – Pallet System for High Density Cargoes - CLIN 00070</i> .....	17
3.1.4.4	<i>Configuration 8 – Rail System for High Density Cargoes – CLIN 00080</i> .....	17
3.1.5	DETECTORS .....	19
3.1.6	SOURCES.....	19
3.1.7	IMAGING SYSTEM EQUIPMENT AND EQUIPMENT INSTALLATION .....	19
3.2	SYSTEMS INTEGRATION .....	20
3.2.1	COMMAND CENTER BOOTH (FIXED, PALLET, RAIL) .....	20
3.2.2	WORKSTATION INTEGRATION AND INTERFACE .....	20
3.2.2.1	(b) (7)(E) .....	20
3.2.2.2	.....	21
3.2.2.3	.....	21
3.3	SAFETY INTERLOCKS.....	21
3.4	TRANSPORT VEHICLE (MOBILE SYSTEMS).....	21
3.5	RELIABILITY, AVAILABILITY AND MAINTAINABILITY .....	21
3.5.1	BASIC RELIABILITY QUANTITATIVE REQUIREMENTS .....	21
3.5.1.1	<i>Reliability Predictions</i> .....	22
3.5.2	AVAILABILITY .....	23
3.5.3	MAINTAINABILITY.....	23
3.5.3.1	<i>Maintenance Plan</i> .....	23
3.5.3.2	<i>Mean Time to Repair (MTTR)</i> .....	23
3.5.3.3	<i>Maximum Corrective Maintenance (Unscheduled Maintenance) Time (MCMT)</i> .....	24
3.5.3.4	<i>Mean Preventive Maintenance Time (MPMT)</i> .....	24

3.5.3.5	<i>Maintenance Activity</i> .....	24
3.6	SITE PREPARATION - CLIN 00090 .....	25
3.7	SYSTEM SUPPORT REQUIREMENTS .....	29
3.7.1	SYSTEM TRAINING - CLIN 00100 .....	29
3.7.1.1	<i>Operator Training - CLIN 00110</i> .....	30
<b>RADIATION SAFETY:</b> .....		<b>30</b>
<b>CLASSROOM AND HANDS-ON</b> .....		<b>30</b>
3.7.1.2	<i>Train-the-Trainer CLINs 00120 - 00130</i> .....	32
3.7.1.3	<i>Technical Manuals - CLIN 00140</i> .....	32
3.7.2	TECHNICAL REVIEWS .....	33
3.7.2.1	<i>Other Reviews</i> .....	33
3.8	WARRANTY .....	33
3.8.1	<i>Reporting</i> .....	34
3.8.2	<i>Corrosion Control</i> .....	34
3.9	QUALITY ASSURANCE AND TESTING .....	34
3.9.1	QUALITY ASSURANCE .....	34
3.9.2	CONTRACTOR TESTING .....	35
3.9.3	ILS TESTING .....	35
3.10	RADIATION SAFETY DESIGN REVIEW .....	35
3.11	CALIBRATION .....	36
3.11.1	CALIBRATION MAINTENANCE REQUIREMENT REPORT .....	36
3.12	SAFETY .....	36
3.12.1	RADIOLOGICAL SURVEY AND REPORT .....	36
3.13	INFORMATION TECHNOLOGY SECURITY .....	36
3.13.1	BASIC REQUIREMENTS .....	36
3.13.3	HSAR 3052.204-71. CONTRACTOR EMPLOYEE ACCESS (JUN 2006) .....	39
3.13.4	52.204-9 PERSONAL IDENTITY VERIFICATION OF CONTRACTOR PERSONNEL .....	41
3.14	ENTERPRISE ARCHITECTURE .....	41
4.1	CONFIGURATION MANAGEMENT .....	44
4.1.1	TECHNICAL DOCUMENTATION CLIN - 00150 .....	44
4.1.1.1	<i>Configuration Baseline</i> .....	44
4.1.2	MANAGEMENT OF THE TECHNICAL DOCUMENTATION .....	45
4.1.3	ENGINEERING CHANGE PROPOSALS (ECPs) .....	45
4.1.4	INTERCHANGE ABILITY .....	45
4.1.5	ACCESSIBILITY .....	45
4.2	SPARES .....	45
5.0	<b>DOCUMENTATION DELIVERABLES</b> .....	<b>45</b>
<b>DATA ITEM DESCRIPTION</b> .....		<b>47</b>
<b>DATA ITEM DESCRIPTION</b> .....		<b>49</b>
<b>DATA ITEM DESCRIPTION</b> .....		<b>51</b>
<b>DATA ITEM DESCRIPTION</b> .....		<b>53</b>
<b>DATA ITEM DESCRIPTION</b> .....		<b>55</b>

DATA ITEM DESCRIPTION.....	57
RADIATION SAFETY:.....	62
CLASSROOM AND HANDS-ON.....	62
DATA ITEM DESCRIPTION.....	72

## STATEMENT OF WORK

### 1.0 SCOPE

Customs and Border Protection (CBP) has a need for improving its inspection of cargo conveyances arriving in the United States at various CBP Ports of Entry (POE). Due to recent world events it is imperative for security that incoming cargo conveyances are subjected to a high level of scrutiny. Therefore, CBP seeks to procure large-scale NII imaging systems for various POE, located throughout the United States or as designated by CBP. This Statement of Work (SOW) defines the tasks necessary to provide NII systems to include equipment, installation, testing, verification, documentation, and logistics requirements needed to satisfy the procurement.

### 1.1 Program Organization

This program is under the technical direction of the NII Contracting Officer Technical Representative (COTR) assigned to the CBP Laboratories and Scientific Services Division (LSS), Interdiction Technology Branch (ITB).

#### 1.1.1 Government Management Organization

CBP management of this program will be accomplished through the CBP Laboratories and Scientific Services Division (LSS). CBP will coordinate with the NII System contractor or contractors to ensure successful system integration and or handle problems associated with site related issues. The exchange of technical data and the resolution of any interface issues will be facilitated. Critical issues will be expeditiously handled either through conference calls or special meetings at a location mutually agreed upon by CBP and the parties involved.

#### 1.1.2 Contractor Management Organization

The contractor or contractors shall provide, for CBP review, a Project Management Plan, including all major points of contact and the overall management structure. The Project Management Plan shall be prepared in accordance with Data Item Description number A001.

### 1.2 Purpose

The purpose of NII Inspection Systems is to enable CPB to perform effective and efficient Non-Intrusive Inspection (NII) of conveyances, including trailer trucks, railcars, pallets, trailer-mounted cargo containers and other vehicles for contraband such as illicit drugs, terrorist weapons and currency. These systems may be used for inspection of smaller vehicles such as cars, pickup trucks, buses, RVs and towed vehicles (e.g., trailers and boats). The system shall be capable of detecting contraband and Weapons of Mass Destruction/ Weapons of Mass Effect (WMD/WME) secreted in vehicles, railcars, containers and pallets.

### **1.3 Background**

CBP officers, in the course of their work examine personnel and cargo seeking entry into the United States. These inspections take place at controlled border ports of entry, and are aimed at detecting items prohibited from import into or export from the U.S. Each day CBP officers use a myriad of NII equipment. NII systems in the mobile configuration will allow short notice relocation to different ports of entry, based on the threat.

### **1.4 Government Furnished Materials, Property and Information**

The NII systems contractor or contractors shall coordinate with CBP and selected ports of entry for information associated with any environmental operating limits. The government will provide phone lines, electrical power, and exterior lighting as required.

## **2.0 DOCUMENTS**

Documents cited shall be referenced and used as called for in this Statement of Work/ Performance Specification and the Data Item Descriptions (DIDs).

### **2.1 Applicable Documents**

- ANSI N42.46-2008 American National Standard for Determination of the Imaging Performance of X-Ray and Gamma-Ray Systems for Cargo and Vehicle Security Screening dated 19 August 2008.
- CBP Information Systems Security Policies and Procedures Handbook HB 1400-05C dated October 18, 2006.
- DHS-CBP N.25 Version 1.5 (will be provided GFI as requested)
- Department of Labor, Davis Bacon and Related Acts
- Code of Federal Regulations, 10CFR20, (Standards for Protection Against Radiation), 2002 (NRC)
- American National Standard for General Radiation Safety, ANSI N43.3 (Installations Using Non-Medical X-Ray and Sealed Gamma-Ray Sources, energies up to 10 MeV), 1993
- Code of Federal Regulations, 21CFR179 (Irradiation in the Production, Processing and Handling of Food), 1996 (FDA)
- Code of Federal Regulations, 14 CFR108.17 (e), Use of X-Ray Systems (Photographic Film Safety) (FAA)
- Code of Federal Regulations, 49CFR172 (Hazardous Materials Table, etc.), 2003 (DOT)
- Code of Federal Regulations, 10CFR71 (Packaging and Transportation of Radioactive Materials), 2002 (NRC)
- Occupational Safety and Health Standards (OSHA), 29 CFR 1910, 2004
- American National Standard, ANSI N42.35 (Evaluation and Performance of Radiation Detection Portal Monitors for Homeland Security), 2004
- American National Standard, ANSI N42.38 (Performance Criteria for Spectroscopy-Based Portal Monitors for Homeland Security), Draft

- American National Standard, ANSI N42.41 (Performance Criteria and Evaluation of Active Interrogation Systems for Homeland Security), in development.
- American Society of Testing and Materials (ASTM), (Performance Standards for CBRNE Sensors), in development
- American Society of Mechanical Engineers Standards
- NFPA 79, Electrical Standards for Industrial Machinery
- NFPA 70, Recommended Practice for Electrical Equipment Maintenance
- DHS and CBP IT security policies, including the guidelines and policies stated in the Department of Homeland Security (DHS) Management Directive (MD) Number 4300.1, titled Information Technology Systems Security; DHS Sensitive Systems Policy Directive 4300A, Information Technology Security Program and the DHS 4300A Sensitive Systems Handbook.
- DHS personal identity verification procedures identified in the contract that implement Homeland Security Presidential Directive-12 (HSPD-12), Office of Management and Budget (OMB) guidance M-05-24, and Federal Information Processing Standards Publication (FIPS PUB) Number 201, Personal Identity Verification (PIV) of Federal Employees and Contractors.
- Homeland Security and CBP Enterprise Architecture documents and reference models.
- Federal Information Processing Standards Publication (FIPS PUB) Number 140-2, Security Requirements for Cryptographic Modules.
- Federal Highway Administration Pamphlet FHWA-HOP-06-105 Bridge Formula Weights dated August 2006.
- Any future applicable ANSI standards.

### **3.0 REQUIREMENTS**

The contractor shall perform all tasks within this SOW through issued delivery orders. The contractor shall abide by all applicable Code of Federal Regulations in performing all tasks. The contractor shall be held liable for adhering to such regulations. Requirements for this effort shall include the fabrication, integration, test, installation, training and logistics support of NII inspection systems. These systems will be located at various CBP POE along the southwest/northern borders, seaports, and airports within the United States or as designated by CBP. Specific sites and schedules shall be identified during contract negotiations.

#### **3.1 General Requirements - CLIN's 00010 to 00140**

The requirements of this contract will be divided into two categories; 1) Low Density Cargoes and 2) High Density Cargoes. Under both categories, the contractor shall perform the work necessary to fabricate, integrate, test, install and provide warranty and logistics services, including initial operator training for support of these NII inspection systems. Each NII inspection system shall include elements as defined in this Statement of Work /Performance Specification.

##### **3.1.1 Performance Requirements for Category 1 - Low-Density Cargoes**

1. **Spatial Resolution** – (b) (7)(E)  
[Redacted]
2. **Penetration** – (b) (7)(E)  
[Redacted]
3. **Contrast Sensitivity** – (b) (7)(E)  
[Redacted]
4. **Throughput** – (b) (7)(E)  
[Redacted]
5. **Image Quality** – In addition to achieving the required Penetration, Contrast Sensitivity, and Spatial Resolution, images are to appear clear, have sharp edges, and have an Aspect Ratio that is not compressed.
6. **A built-in capability** to passively detect (in a single pass) the presence of neutron and gamma radiation emissions is desired
7. (b) (7)(E)  
[Redacted]
8. **Scan Size** – Must be able to display the entire length of the conveyance scanned and its height from the wheel axle to the top.
9. **Real Time Imaging** – Real Time Imaging where the image is being displayed during the scan is required.
10. (b) (7)(E)  
[Redacted]
11. (b) (7)(E)  
[Redacted]
12. (b) (7)(E)  
[Redacted]
13. **Passive Detection** – The capability to passively detect gamma and neutron radiation emissions in a single pass is desired.
14. **Material Discrimination** – (b) (7)(E)  
[Redacted]

**3.1.1.1 Radioactive Material/ WMD**

Radioactive materials and WMD detection and identification performance shall be demonstrated using standard radioactive test sources as described in **table 3 of the ANSI Standard N42.35** as threat surrogates.

**3.1.2 System Configurations and Operational Specifications for Low Density Cargoes- CLIN's 00010 - 00040**

The System Configurations and Operational Specifications will differ slightly based on the system configuration (i.e. Fixed, Mobile, Pallet or Rail). The following system configurations may be required under this contract and will be restricted to the operational aspects as described.

**3.1.2.1 Configuration 1 – Fixed System for Low Density Cargoes - CLIN 00010**

The Fixed systems required under this CLIN shall meet or exceed the Technical/Performance requirements as described in paragraph 3.1.1 of this SOW and shall include the following:

- Detector and Source System
- Detector Equipment
- X-ray or Gamma-Ray Source Equipment
- Command Center and Equipment or other housing
- Work Station Integration and Interface
- On-Site Training
- System Support

In addition to the performance requirements for low density the imaging system shall meet these operational specifications.

1. **Maximum Controlled Operating Area** – (b) (7)(E)  
[Redacted]
2. **Operational Environment** – (b) (7)(E)  
(b) (7)(E)
3. **Radiation Dose Limit** – The Radiation Dose shall not exceed 0.05 mR in any one hour for System Operators and for personnel outside the boundary of the RCA.
4. **Power Requirement** – Shall be capable of operating on the following utility power: 220 VAC, 1 to 3 phase, 80 amps per phase, and 60 hertz. Shall have a surge protector to protect against surges in utility power.
5. **Operating Hours** – (b) (7)(E)
6. (b) (7)(E)
7. **Throughput** – (b) (7)(E)  
[Redacted]

(b) (7)(E)

- 8. **Drive Through Capability** – Portal systems shall operate as a drive through system that screens the cargo area only.

**3.1.2.2 Configuration 2 – Mobile System for Low Density Cargoes - CLIN 00020**

The Mobile systems required under this CLIN shall meet or exceed the Technical/Performance requirements as described in paragraph 3.1.1 of this SOW and shall include the following:

- Mobile platform or Truck
- Detector and Source Boom Assembly
- Imaging System Equipment (i.e. X-ray or Gamma Ray)
- Operator Controls and Displays
- Work Station Integration and Interface
- On-Site Training
- System Support

In addition to the performance requirements for low density the imaging system shall meet these operational specifications.

1. **Maximum Controlled Operating Area** – (b) (7)(E)
2. **Number of operators** – (b) (7)(E)
3. **Operational Environment** – (b) (7)(E)
4. **Travel Configuration** – Must be able to travel on highways with a maximum height of 13 ft 6 inches, a width of 8 ft 6 inches (lights, mirrors, and other required devices may extend an additional 10 inches on each side), and a length of 40 ft. Total weight shall not exceed 26,000 lbs or the vehicle's Gross Vehicle Weight Rating (GVWR) whichever is less.
5. **Radiation Dose Limit** – The Radiation Dose shall not exceed 0.05 mR in any one hour for System Operators and for personnel outside the boundary of the Radiation Control Area.
6. **Power Requirement** – Shall be capable of operating on the following external power: 220 VAC, 1 to 3 phase, 80 amps per phase, and 60 hertz. Shall have a surge protector to protect against surges in external power. A 50 ft (100 ft preferred) power cable shall be provided.
7. **Operating Hours** – (b) (7)(E)
8. **Maximum target vehicle Size** – (b) (7)(E)
9. **Power Requirements** – 220 VAC, 1 to 3-phase
10. (b) (7)(E)

(b) (7)(E)

- 11. **Mounting Station for a Panasonic Toughbook** (Model CF-29) that meets these operational specifications.
  - a. Equipment - Mounting Station for Panasonic Toughbook (Model CF-29)
  - b. Installation - Installed to allow easy access for Laptop Operation by CBP Officer
  - c. Security - Key Lockable Mounting station to prevent theft
  - d. Power Requirements - Power Supply for AC Adapter 100V-240V 50/60 Hz
- 12. **Throughput** (b) (7)(E)
- 13. **Continuous Scan Capability** – (b) (7)(E)
- 14. **Stationary Scan** – A stationary scan capability is desired.

**3.1.2.3 Configuration 3 – Pallet System for Low Density Cargoes - CLIN 00030**

The Pallet systems required under this CLIN shall meet or exceed the Technical/Performance requirements as described in paragraph 3.1.1 of this SOW and shall include the following:

- Detector and Source System
- Detector Equipment
- X-ray or Gamma-Ray Source Equipment
- Command Center and Equipment or other housing
- Work Station Integration and Interface
- On-Site Training
- System Support

In addition to the performance requirements for low density the imaging system shall meet these operational specifications.

- 1. **Maximum Controlled Operating Area** - (b) (7)(E)
- 2. **Number of operators** – (b) (7)(E)
- 3. **Operational Environment** – (b) (7)(E)
- 4. **Radiation Dose Limit for Non Radiation Workers** - .05 mR/hr. above background. (System operators, drivers and personnel outside a designated controlled area)
- 5. **Power Requirements**–220 VAC, 1 to 3-phase, 80 Amps per phase 60- hertz power, and a surge protector for maintenance of the unit.
- 6. **Maximum pallet Size** - (b) (7)(E)
- 7. **Maximum pallet weight** – (b) (7)(E)
- 8. **Operating Hours** – (b) (7)(E)
- 9. (b) (7)(E)

(b) (7)(E)

**3.1.2.4 Configuration 4 – Rail System for Low Density Cargoes – CLIN 00040**

The Rail systems required under this CLIN shall meet or exceed the Technical/Performance requirements as described in paragraph 3.1.1 of this SOW and shall include the following:

- Detector and Source System
- Detector Equipment
- X-ray or Gamma-Ray Source Equipment
- Command Center and Equipment or other housing
- Work Station Integration and Interface
- On-Site Training
- System Support

In addition to the performance requirements for low density the imaging system shall meet these operational specifications.

1. **Maximum Controlled Operating Area** – (b) (7)(E)  
(b) (7)(E)
2. **Scan Speed** – (b) (7)(E)
3. **Number of operators** – (b) (7)(E)
4. **Operational Environment** – (b) (7)(E)  
(b) (7)(E)
5. **Radiation Dose Limit** shall not exceed 0.05 mR in any one hour for Systems Operators and for personnel outside the boundary of the RCA.
6. **Power Requirements** – Shall be capable of operating on utility power that does not exceed 480 VAC, 1 to 3-phase, 200 amps per phase, and 60-hertz (220 VAC, 80 amps per phase preferred). Shall be equipped with a System Level Uninterruptible Power Supply (UPS) capable of conditioning incoming utility power. The System Level UPS must have sufficient power to allow the system to complete the scan of a 100 rail car train (20 minutes) and then conduct an orderly shutdown of the system.
7. **System Tunnel** – Must be large enough to scan rail cars compliant with the Association of American Railroads (AAR) Plate K (Doublestacks) and AAR Plate K (Autoracks).
8. **Operating Hours** – (b) (7)(E)
9. (b) (7)(E)
10. **Directional Capability** – Shall be capable of scanning trains traveling into

and out of the United States.

- 11. **Scan Images** – Shall be capable of scanning trains with (b) (7)(E) [redacted]  
Shall be capable of scanning rail cars that are up to (b) (7)(E) [redacted]  
[redacted]

12. (b) (7)(E) [redacted]

- 13. **Security Systems** – The Rail Facility must be capable of operating in a remote non-government controlled area. As a minimum, Security items shall include:
  - Lighting that illuminates all major components on both sides of the rail track and the Control Center Booth.
  - Fencing around the Detector Tower, Source, and Control Center Booth.
  - (b) (7)(E) [redacted]
  - A Control Center Booth that is of a solid metal construction and is equipped with a solid metal door with a double lock, exterior metal security shutters to cover all windows, and photoelectric lights mounted on the exterior of the Booth.

**3.1.3 Performance Requirements for Category 2 - High-Density Cargoes**

- 1. **Resolution** – (b) (7)(E) [redacted]
- 2. **Penetration** – (b) (7)(E) [redacted]
- 3. **Contrast Sensitivity** – (b) (7)(E) [redacted]
- 4. **Throughput** – (b) (7)(E) [redacted]
- 5. **Image Quality** – In addition to achieving the required Penetration, Contrast Sensitivity, and Spatial Resolution, images are to appear clear, have sharp edges, and have an Aspect Ratio that is not compressed.

6. **A built-in capability** - to passively detect (in a single pass) the presence of neutron and gamma radiation emissions is desired.
7. (b) (7)(E) [REDACTED]
8. **Scan Size** – For Fixed and Mobile systems, must be able to display the entire length of the conveyance scanned and its height from the wheel axle to the top. For Rail systems must be able to display the entire length of the rail car and its height from the top of the wheels to the top of its cargo.
9. **Real Time Imaging** – Real Time Imaging where the image is being displayed during the scan is required.
10. (b) (7) (E)
11. (b) (7) (E)
12. (b) (7) (E)
13. **Passive Detection** – The capability to passively detect gamma and neutron radiation emissions in a single pass is desired.
14. **Material Discrimination** – (b) (7)(E) [REDACTED]

**3.1.3.1 Radioactive Material/ WMD**

Radioactive materials and WMD detection and identification performance shall be demonstrated using standard radioactive test sources as described in **table 3 of the ANSI Standard N42.35** as threat surrogates.

**3.1.4 System Configuration and Operational Specifications for High Density Cargoes- CLIN's 00050 - 00080**

The System Configuration and Operational Specifications will differ slightly based on the system configuration (i.e. Fixed, Mobile, Pallet or Rail). The following configurations may be required under this contract and will be restricted to the operational aspects as described.

**3.1.4.1 Configuration 5 – Fixed System for High Density Cargoes - CLIN 00050**

The Fixed systems required under this CLIN shall meet or exceed the Technical/Performance requirements as described in paragraph 3.1.3 of this SOW and shall include the following:

- Detector and Source System
- Detector Equipment

- X-ray or Gamma-Ray Source Equipment
- Command Center and Equipment or other housing
- Work Station Integration and Interface
- On-Site Training
- System Support

In addition to the performance requirements for high density the imaging system shall meet these operational specification.

1. **Maximum Controlled Operating Area** – (b) (7)(E)  
(b) (7)(E)
2. **Number of operators** – (b) (7)(E)
3. **Operational Environment** – (b) (7)(E)  
(b) (7)(E)
4. **Radiation Dose Limit** – The Radiation Dose shall not exceed 0.05 mR in any one hour for System Operators and for personnel outside the boundary of the RCA.
5. **Power Requirement** – Shall be capable of operating on utility power that does not exceed 480 VAC, 1 to 3 phase, 200 amps per phase, and 60 hertz (220 VAC, 150 amps per phase preferred). Shall have a surge protector to protect against surges in utility power.
6. **Operating Hours** – capable of operating 24 hours a day, 7 days per week (24/7)
7. (b) (7)(E)
8. **Throughput** – (b) (7)(E)

**3.1.4.2 Configuration 6 – Mobile System for High Density Cargoes – CLIN 00060**

The Mobile systems required under this CLIN shall meet or exceed the Technical/Performance requirements as described in paragraph 3.1.3 of this SOW and shall include the following:

- Mobile platform or Truck
- Detector and Source Boom Assembly

- Imaging System Equipment (i.e. X-ray or Gamma Ray)
- Operator Controls and Displays
- Work Station Integration and Interface
- On-Site Training
- System Support

In addition to the performance requirements for high density the imaging system shall meet these operational specification.

1. **Maximum Controlled Operating Area** - (b) (7)(E)  
(b) (7)(E)
2. **Number of operators** - (b) (7)(E)
3. **Operational Environment** - (b) (7)(E)  
(b) (7)(E)
4. **Travel Configuration** - Must be able to travel on highways with a maximum height of 13 ft 6 inches, a width of 8 ft 6 inches (lights, mirrors, and other required devices may extend an additional 10 inches on each side), and a length of 40 ft. Total weight shall not exceed 80,000 lbs or the vehicle's Gross Vehicle Weight Rating (GVWR) whichever is less.
5. **Radiation Dose Limit** - The Radiation Dose shall not exceed 0.05 mR in any one hour for System Operators and for personnel outside the boundary of the Radiation Control Area.
6. **External Power Requirement** - Shall be capable of operating on external power that does not exceed 220 VAC, 1 to 3 phase, 150 amps per phase, and 60 hertz. Shall have a surge protector to protect against surges in external or utility power. A 50 ft (100 ft preferred) power cable shall be provided.
7. **Operating Hours** - (b) (7)(E)
8. **Maximum target vehicle Size** - (b) (7)(E)
9. (b) (7)(E)
10. **Throughput** - (b) (7)(E)
11. **Continuous Scan Capability** - (b) (7)(E)
12. **Stationary Scan** - A stationary scan capability is desired.
13. **Law Enforcement lights** - Each mobile unit will be equipped with a set of blue Law Enforcement lights that when activated, can be seen from both the

front and the rear of the unit when the unit is in the road mode, i.e., Boom not deployed. The installation may be fixed or temporary (provided that it can be easily installed and removed). The lights shall be capable of being controlled from the Driver's Cab.

14. **Level** - Each mobile unit shall be equipped with a level that shows the tilt (side to side) angle of the unit with the Boom stowed and with the Boom deployed.

**3.1.4.3 Configuration 7 – Pallet System for High Density Cargoes - CLIN 00070**

The Pallet systems required under this CLIN shall meet or exceed the Technical/Performance requirements as described in paragraph 3.1.3 of this SOW and shall include the following:

- Detector and Source System
- Detector Equipment
- X-ray or Gamma-Ray Source Equipment
- Command Center and Equipment or other housing
- Work Station Integration and Interface
- On-Site Training
- System Support

In addition to the performance requirements for high density the imaging system shall meet these operational specification.

1. Maximum Controlled Operating Area - (b) (7)(E)
2. Number of operators - (b) (7)(E)
3. Operational Environment - (b) (7)(E)
4. Radiation Dose Limit for Non Radiation Workers - .05 mR/hr. above background. (System operators, drivers and personnel outside a designated controlled area)
5. Power Requirements—220 VAC, 1 to 3-phase, 80 Amps per phase 60- hertz power, and a surge protector for maintenance of the unit.
6. Maximum pallet Size - (b) (7)(E)
7. Maximum pallet weight - (b) (7)(E)
8. Operating Hours - (b) (7)(E)
9. (b) (7)(E)

**3.1.4.4 Configuration 8 – Rail System for High Density Cargoes – CLIN 00080**

The Rail systems required under this CLIN shall meet or exceed the Technical/Performance requirements as described in paragraph 3.1.3 of this SOW and shall include the following:

- Detector and Source System
- Detector Equipment

- X-ray or Gamma-Ray Source Equipment
- Command Center and Equipment or other housing
- Work Station Integration and Interface
- On-Site Training
- System Support

In addition to the performance requirements for high density the imaging system shall meet these operational specification.

1. **Maximum Controlled Operating Area** – (b) (7)(E) [Redacted]
2. **Scan Speed** – (b) (7)(E) [Redacted]
3. **Number of operators** – (b) (7)(E) [Redacted]
4. **Operational Environment** – (b) (7)(E) [Redacted]
5. **Radiation Dose Limit for Non Radiation Workers** - The Radiation Dose shall not exceed 0.05 mR above background in any one hour for System Operators and for personnel outside the boundary of the RCA.
6. **Power Requirements** – Shall be capable of operating on utility power that does not exceed 240 VAC, single phase, 200 amps service, and 60 hertz . Shall be equipped with a System Level Uninterruptible Power Supply (UPS) capable of conditioning incoming utility power. The System Level UPS must have sufficient battery power to allow the system to complete the scan of a 100 rail car train (20 minutes) and then conduct an orderly shutdown of the system.
7. **System Tunnel** – Must be large enough to scan rail cars compliant with the Association of American Railroads (AAR) Plate K (Doublestacks) and AAR Plate K (Autoracks).
8. **Operating Hours** – (b) (7)(E) [Redacted]
9. (b) (7)(E) [Redacted]
10. **Directional Capability** – Shall be capable of scanning trains traveling into and out of the United States.
11. **Scan Images** – Shall be capable of scanning trains with (b) (7)(E) [Redacted]  
Shall be capable of scanning rail cars that are up to (b) (7)(E) [Redacted]
12. (b) (7)(E) [Redacted]

**(b) (7)(E)**

13. **Security Systems** – The Rail Facility must be capable of operating in a remote non-government controlled area. As a minimum, Security items shall include:

- Lighting that illuminates all major components on both sides of the rail track and the Control Center Booth.
- Fencing around the Detector Tower, Source, and Control Center Booth.
- **(b) (7)(E)**
- A Control Center Booth that is of a solid metal construction and is equipped with a solid metal door with a double lock, exterior metal security shutters to cover all windows, and photoelectric lights mounted on the exterior of the Booth.

**3.1.5 Detectors**

As part of the NII system, the contractor shall deliver an array of detectors that are capable of meeting the Performance Specifications as described in this SOW.

**3.1.6 Sources**

The contractor shall deliver an imaging source, which may incorporate standard transmission x-ray with or without backscatter measurement technology or gamma ray source or sources and the source housing designed to best commercial practice.

**3.1.7 Imaging System Equipment and Equipment Installation**

In accordance with this Statement of Work/ Performance Specification, the contractor shall deliver NII Systems incorporating radiographic measurement technology designed to best commercial practice. However, at no time, shall safety, quality, or performance of equipment be compromised or sacrificed.

**3.1.8 Computer Security**

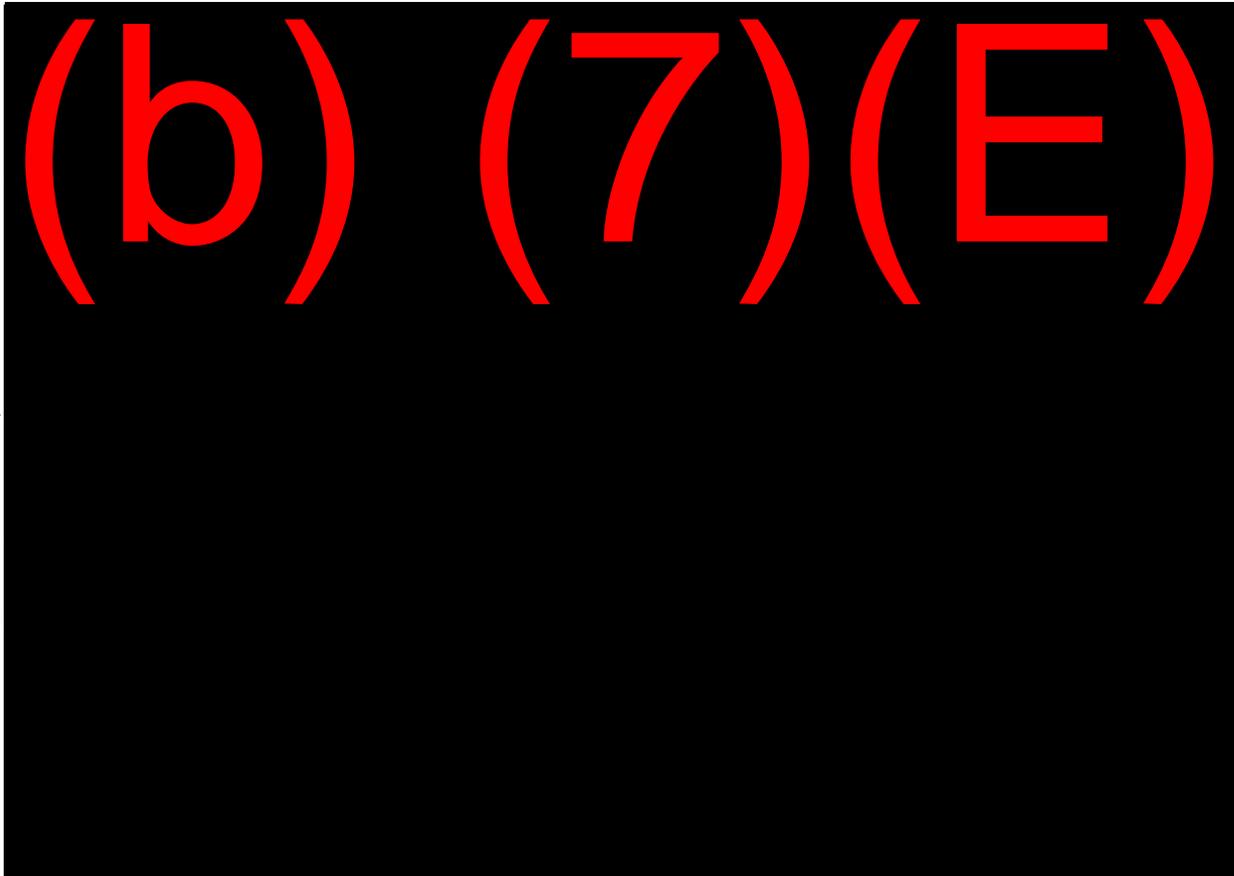
**(b) (7)(E)**

2. (b) (7) (E)

3.

4.

3.1.9



**3.2 Systems Integration**

Integration of NII inspection system equipment and its supporting Subsystems shall be the responsibility of the NII systems contractor.

**3.2.1 Command Center Booth (Fixed, Pallet, Rail)**

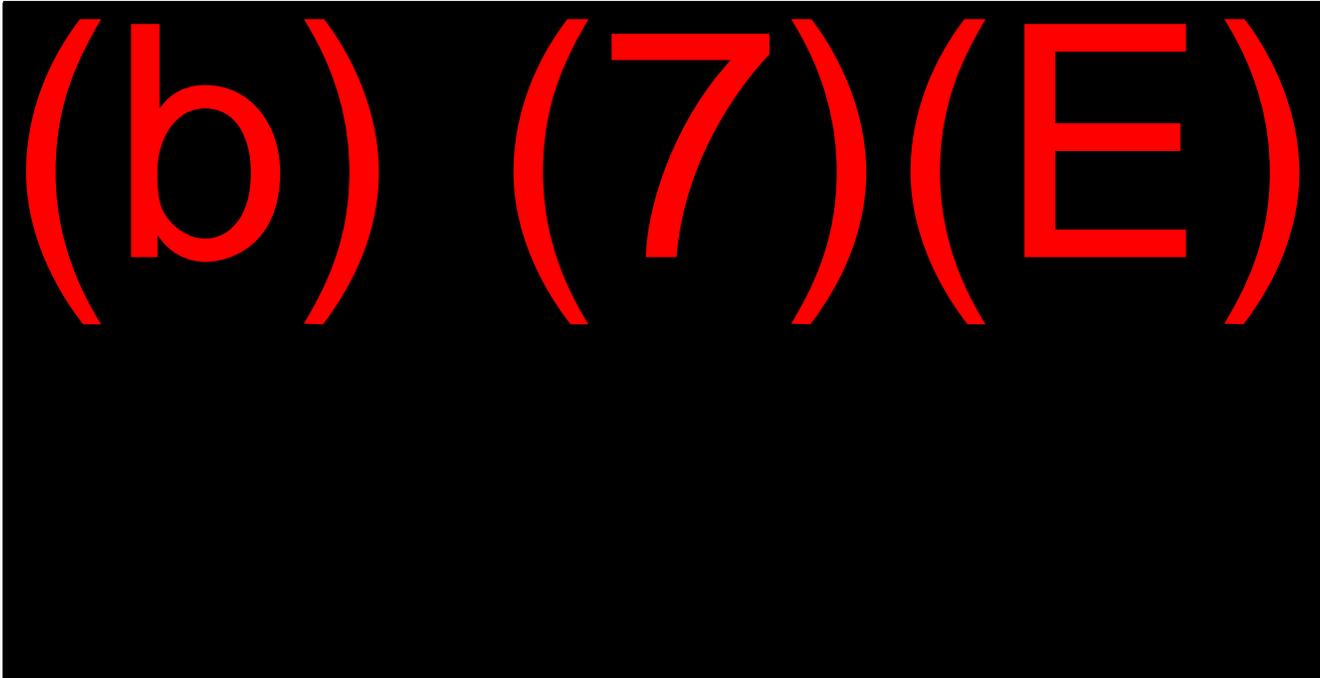
The contractor shall deliver a Command Center designed to best commercial practice for housing the systems workstation/operating equipment for the Fixed, Pallet and Rail II systems. The systems workstation/operating equipment for the mobile systems shall be housed inside the mobile unit.

**3.2.2 Workstation Integration and Interface**

The contractor shall deliver the Workstation and Interface system for Fixed, Pallet, Mobile and Rail NII systems to include operator console and all operating systems, software, cameras, controls and displays to depict a video and radiographic image of the target.

(b) (7) (E)





### **3.3 Safety Interlocks**

The NII system shall be designed to include safety interlocks which will allow an operator to interrupt the scanning process thereby closing the shutter in an emergency or when there is an unauthorized entry inside the systems given footprint.

### **3.4 Transport Vehicle (Mobile Systems)**

The contractor shall deliver NII Mobile Inspection Systems with a vehicle capable of meeting all federal highway gross weight and dimension requirements.

1. In addition to the requirements listed in Paragraphs 3.1.2.2 and 3.1.4.2 for Mobile Systems, all Transport Vehicles shall meet the following Department of Transportation Federal Highway Administration maximum weight limitations.
2. Gross Weight – the lesser of 80,000 lbs, the vehicle's GVWR, or that weight as determined by the Bridge Formula.
3. Single Axle – 20,000 lbs.
4. Tandem Axles – 34,000 lbs for axles closer than 96 inches apart.
5. Three or more Axles – As limited by the Bridge Formula.

### **3.5 Reliability, Availability and Maintainability**

Each NII system is expected to have the highest Reliability, Availability and Maintainability achievable for this type of technology. The following are our minimum expectations for these systems.

#### **3.5.1 Basic Reliability Quantitative Requirements**

(b) (7) (E)

### **3.5.1.1 Reliability Predictions**

The Contractor shall perform reliability predictions for the NII equipment. The prediction shall assume a constant failure rate for parts. For parts where no failure rate is available, a failure rate shall be estimated and the basis for the estimation shall be stated. Consideration of environmental factors for systems operated outside shall be for fixed, rail and mobile equipment. The external ambient temperatures utilized in the reliability prediction shall be based upon the upper and lower operating temperatures of the NII system. These Reliability Predictions will be matched to Measured Reliability during the Warranty Period.

#### **3.5.1.1.1 Reliability Predictions Report**

The Contractor shall submit a reliability prediction report as part of their proposal and shall be prepared in accordance with Data Item Description number A002. The Contractor shall identify reliability critical items.

#### **3.5.1.1.2 Classification of Reliability Critical Items**

A Critical Item is an identified weak link in a system, has an adverse impact on failures of the system performing its mission, creates potential safety problems, or contributes to other areas of high risk to overall system reliability. The Contractor shall classify all NII items as critical if one or more of the following conditions are satisfied:

- a. Item represents a significant new development or application.
- b. Item has critical failure modes.
- c. Item has history indicating need for improvement. A Preplanned Product Improvement Plan (PPIP) shall be developed and provided by the Contractor for any item with a history of needing improvement.
- d. Item has known operating life, limited shelf life, or environmental sensitivity (e.g., vibration, thermal, etc.) that warrants controlled surveillance.
- e. Item whose failure can result in the failure of the system and which is not compensated by redundancy or alternate operational procedures.

#### **3.5.1.1.3 Control of Reliability Critical Items**

The Contractor shall be responsible for the control of critical items, which shall include as a minimum:

- a. Procedures for the procurement of critical items.
- b. Criteria and procedures for the design and redesign of critical items
- c. Procedures for controlling and monitoring of critical items after manufacture (e.g., date coding, traceability, assembly techniques, test

requirements, acceptance test requirements, control of sub-contractors' and manufacturers' controls, in-process controls, special handling, and storage requirements).

**3.5.1.1.4 Reliability Review**

The Contractor shall identify and discuss all aspects of the prime item's reliability features and characteristics.

**3.5.2 Availability**

The Inherent Availability of the NII system shall be a minimum of 0.97.66 based on the model:

$$A_i = \frac{MTBF}{MTBF + MTTR}$$

Where:

A<sub>i</sub> = Inherent Availability

MTBF = Mean Time Between Failures

MTTR = Mean Time To Repair

Inherent Availability is defined as the probability that the NII system, in the ideal NII system environment (i.e., readily available tools, spares, maintenance personnel, etc.) will operate satisfactorily at any point in time when called upon for operation. It excludes scheduled maintenance actions, logistics delay time, and administrative delay time.

**3.5.3 Maintainability**

**3.5.3.1 Maintenance Plan**

The Contractor shall provide Maintenance Planning and Supply Support Plan sufficient to allow operation of the NII system throughout its planned life. The overall maintenance strategy is to provide NII system maintenance on three (3) levels: Organizational, Intermediate, and Depot. The Contractor shall provide a complete list of maintenance tasks and recommend the proper level of maintenance required, provide all documentation required, and identify parts required to complete each task.

**3.5.3.2 Mean Time to Repair (MTTR)**

Inherent to the vendors design the Mean Time to Repair (MTTR) for Large Scale NII systems shall not exceed 24 hours. MTTR is defined as the total time duration from

notification of the repair activity until the system is returned to service ready status. The MTTR shall include on-system analysis and diagnostics.

### **3.5.3.3 Maximum Corrective Maintenance (Unscheduled Maintenance) Time (MCMT)**

Inherent to the vendors design the Maximum Corrective Maintenance (Unscheduled Maintenance) Time (MCMT) for Large Scale NII systems shall not exceed 111 hours at the 98.5 percentile. The MCMT shall apply to on-system analysis and diagnostics. MCMT shall be defined as the time required for unscheduled maintenance, excluding administrative time. Administrative time shall include items such as test equipment assembly time, equipment-not-under-repair warm-up time, travel time to and from the job, reference material acquisition time, training time, quality inspection time, and workload control time.

### **3.5.3.4 Mean Preventive Maintenance Time (MPMT)**

Inherent to the vendors design the Mean Preventive Maintenance Time (MPMT) for Large Scale NII systems shall not exceed 1.0 hours per (b) (7)(E) operating day, cumulative, calculated quarterly. MPMT shall be defined as the time required for unscheduled maintenance, excluding administrative time. Administrative time shall include such items as test equipment assembly time, equipment-not-under-repair warm-up time, travel time to and from the job, reference material acquisition time, training time, quality inspection time, and workload control time.

### **3.5.3.5 Maintenance Activity**

The Contractor shall conduct a Failure Mode Analysis (FMA) and a Level Of Repair Analysis (LORA), perform trade studies and optimize the total operation and maintenance concept and procedures for each configuration of the system. The Contractor shall develop diagnostic, preventive maintenance and repair procedures, and identify repair parts and special tools required to perform maintenance tasks. The contractor shall provide the information in a Maintenance Manual. For the purposes of the Specification, the following applies: a) Preventive Maintenance consists of those tasks performed at predetermined intervals in accordance with a maintenance schedule to ensure continuous satisfactory operation of the NII system. b) Corrective Maintenance consists of those repair tasks performed at the NII system by maintenance personnel to remedy malfunctions and return the NII system to a fully operable condition. Technicians shall perform all maintenance tasks. No Corrective or Preventive Maintenance shall be designed for performance by CBP Officers and Agents.

#### **3.5.3.5.1 Preventive Maintenance**

Preventive Maintenance (PM) tasks shall be identified and provided in the Maintenance Manual by the Contractor to include schedules, MTTR, parts, components, procedures, and systems.

### **3.5.3.5.2 Corrective Maintenance**

Corrective Maintenance (CM) by its nature cannot be scheduled in advance or accurately predicted. The Contractor shall identify all Corrective Maintenance tasks that have occurred in the history of the subject NII device, or a similar device, and maintain a list of such tasks. Corrective Maintenance tasks shall be identified by the Contractor to include MTTR, parts, components and systems and provide all Corrective Maintenance tasks in the Maintenance Manual.

### **3.5.3.5.3 Extreme Environmental Maintenance Considerations**

The Contractor shall identify all environmental conditions within the required operating environment considered extreme. The Contractor shall identify all extreme environmental maintenance tasks required for the operation of the NII systems in extreme environments. The list of tasks shall include MTTR, parts, components, procedures and systems, and they shall be provided in the Maintenance Manual. The environmental conditions list shall be prepared in accordance with Data Item Description number A003 and the list shall be maintained in the Technical Documentation Package for all NII devices throughout its life.

### **3.5.3.5.4 Hazardous Materials Considerations**

The Contractor shall identify all Hazardous Materials in all maintenance tasks in the Maintenance Manual. The list shall include the material description, quantity of the material, disposal instructions, exposure risks, symptoms and treatments. The list shall be prepared in accordance with Data Item Description number A004 and be maintained in the Technical Documentation Package throughout the life of the NII system. The list shall be derived for the Hazardous materials identified in the Code of Federal Regulations, 49CFR172 (Hazardous Materials Table, etc.), 2003 (DOT)

## **3.6 Site Preparation - CLIN 00090**

The contractor shall provide to CBP design criteria for surface grade and any other environmental operating limits. The design criteria shall be prepared in accordance with the attached Data Item Description number A005. The contractor shall identify to CBP their requirements for exterior lighting, phone lines and electrical power for the system. Within 45 days of notification of each site selected for NII system installation, the contractor shall identify all site-specific facility requirements to CBP. CBP will ensure the assigned site meets these requirements. Upon approval of the site documentation the contractor shall be responsible for installation of the system if required by the NII configuration.

### **3.6.1 Safety**

The contractor for NII Inspection Systems shall maintain a system safety program that continually identifies all hazards and provides a methodology to either eliminate or control these identified hazards.

All products, designs, and specifications provided and all construction and installation activities conducted shall comply with all OSHA, GSA and NRC regulations, as well as any other appropriate laws, regulations, standards, codes and health and safety guidelines.

### **3.6.2 Installation Services**

As a prerequisite for installation planning and coordination, CBP requires certain site-specific engineering and data analysis tasks be performed by the Contractor to evaluate potential locations for the acceptability of system deployment.

### **3.6.3 Engineering Assessment**

The Contractor shall complete an Engineering Assessment that shall be the Contractor's professional evaluation of the proposed installation site and may include other discretionary topics deemed appropriate by the evaluation team and/or CBP representatives. The areas that must be addressed include and are not limited to the following:

- 1) General suitability of available real estate.
- 2) Evaluation of existing structures/facilities that may be available for NII deployment
- 3) Ownership of the real estate required for site preparation.
- 4) System constraints posed by overhead, ground level, and underground obstructions.
- 5) General summary of geotechnical findings (It shall be the responsibility of the Contractor to obtain geotech services).
- 6) Site-specific facility/support requirements to include:
  - (a) Electrical power
  - (b) Operator's building/shelter
  - (c) Security
  - (d) Operator control considerations
  - (e) Human needs, etc.
- 7) Telecommunication access and availability.
- 8) Environmental constraints/limitations.
- 9) Agencies or activities that may require permits prior to site development.
- 10) Construction equipment access.
- 11) Radiation Safety.
- 12) Unusual system orientation or requirements.
- 13) Identification of any item that could delay estimated equipment installation date.
- 14) Alternative site recommendations with justification if the primary location is unavailable\unsuitable.
- 15) Lighting conditions to include:
  - (a) Ambient light conditions (i.e. existing lights).
- 16) Fire protection requirements.

**3.6.4 Construction Drawings**

The contractor shall complete construction drawings (Preliminary through Final) using AutoCad, in contractor format, in accordance with generally accepted engineering practices, and U.S national, and local host country codes. These drawings shall be used by either the Contractor or the Government to perform the civil portion of the installation. The construction drawings shall clearly indicate the following:

- Placement and installation methodology for each system component.
- Existing equipment or structures within the system footprint.
- Placement of lighting and cameras.
- All structures (occupied/unoccupied) within 110 feet of the system.
- Distance from system to site Radiation Portal Monitors
- If necessary, placement of RF link poles used for monitoring purposes.
- Contain all detail, measurements, dimensions, and notes to facilitate solicitation of bids from construction contractors. The final drawings must contain a valid PE stamp indicating registration in, and compliance with all applicable Federal, State and host country regulations in which each System is being installed.

**3.6.5 Design Deliverables**

The Contractor shall submit to CBP a preliminary engineering assessment no later than fifteen (15) working days after completion of the site survey. The Final Engineering Assessment and Final Construction Drawings shall incorporate CBP's comments and shall be submitted to CBP no later than sixty (60) working days after completion of each site survey. Drawing packages shall be prepared and developed using AutoCad, in contractor format, in accordance with generally accepted engineering practices; U. S. national, and local host country codes. Submission to CBP shall be in pdf format, with AutoCad dwg format available upon request. Reference Drawing Schedule in Table 1.

Table 1

Item	Date Due	Description
Preliminary Engineering Assessment and Preliminary Construction Drawings	COB (1600 EST) on the 15 <sup>th</sup> working day after completion of each site survey	<p><b>Preliminary Engineering Assessment</b> (includes survey info, participating personnel, required permits, site as-built, site photos, drainage, ambient radiation survey, construction equipment access, communications requirements, directory of approving authorities and host nation regulations)</p> <p><b>Preliminary Construction Drawings</b> (includes preliminary site layout and structures)</p>

CBP review of Preliminary Engineering Assessment and Preliminary Construction Drawings	Returned to Vendor by COB of 10 <sup>th</sup> working day after receipt of Preliminary Engineering Assessment	Review Preliminary Engineering Assessment and Preliminary Construction Drawings
Final Engineering Assessment and Final Construction Drawings	COB on the 60 <sup>th</sup> working day after completion of each site survey	<b>Final Engineering Assessment</b> (all necessary info to start construction power, geotechnical analysis, conduit, etc.) <b>Final Construction Drawings</b> (PE stamped)

**3.6.6 Site Preparation**

The Final Engineering Assessment and Final Construction Drawings (developed under Section 3.6.5) shall be used to perform all tasks necessary to install each System. Each site shall be prepared and developed for successful installation and operation of the system in accordance with the Contractor's specifications. Site preparation, including civil portion and system installation may be completed by the Contractor. Alternatively, CBP may choose to utilize the Government's construction services (civil portion only). If the Government's construction services are used, then the contractor will need to provide construction oversight to ensure installation tolerances are achieved and meet the Contractor's system installation requirements. Any portion of the Contractor's civil work may be monitored by Government or third party construction management personnel for compliance with health and safety regulation and implementation of construction best management practices. Any construction activities shall meet the following requirements:

- a) The Contractor shall comply with all applicable federal, state, local, host country and professional engineering codes, guidelines, and safety practices throughout the site preparation, delivery, installation and testing processes.
- b) Site preparation and system installation must strictly conform to all design specifications and approved engineering drawings. The construction drawings must be approved by CBP prior to release for construction. To accomplish this, the Contractor shall certify the construction drawings are final by signing in the signature block. CBP shall then approve the construction drawings.
- c) If during the construction period an engineering design change is required, the Contractor shall provide written notification to CBP within three (3) days of the change.
- d) Costs for damage(s) attributable to the Contractor, his agents or subcontractors, occurring during installation or construction shall be the sole responsibility of the Contractor.
- e) Government Furnished Information regarding existing site conditions may be available at the site survey; however, the development and implementation

of a plan to identify and maintain operability of utilities in the System work zone is the responsibility of the Contractor.

- f) All Contractor personnel shall follow safe working procedures and practices as established by OSHA, GSA and/or all federal, state or local codes. Significant injuries or incidents shall be reported to CBP and GSA within 4 hours of occurrence.
- g) The Contractor's operations shall not impede the flow of commerce.
- h) Vetting of Contractor and subcontractor personnel shall be required for access to the delivery sites.

### **3.6.7 System Installation**

Each system shall be installed at each specified location in accordance with the system installation specifications. Upon successful installation and integration of all equipment, the Contractor shall conduct a "burn-in" test of the system followed by the CBP Site Acceptance Testing. All applicable radiological measurements shall be accomplished to ensure that the system is safe and operational in accordance with the manufacturer's specifications.

### **3.6.8 Record Drawings**

The Contractor shall provide certified record drawings for each completed system installation to include the location of all components, structures, conduit runs and associated structures as referenced from a known survey and construction baseline. The certified record drawings shall be prepared in accordance with Data Item Description number A018; and shall be submitted as both AutoCad dwg file and Adobe pdf file.

### **3.6.9 Construction Manager Log**

The Contractor shall maintain a construction manager's log that shall provide an event tracking record that identifies completed site preparation and installation actions, inspection requirements and documentation. The construction manager's log shall be prepared in accordance with Data Item Description number A019.

## **3.7 System Support Requirements**

The following identify the programmatic and logistical requirements for NII Inspection Systems. The contractor shall prepare Monthly Progress Reports in accordance with the attached Data Item Description number A006.

### **3.7.1 System Training - CLIN 00100**

Training development and delivery is required for all NII systems and related items produced under this contract. The Training shall consist of procedures for installation, setup, image viewer software, operating and maintaining the NII systems developed or produced as appropriate. Documentation of the Training may include but is not limited to a Training Plan, Outline, Student Guide, Instructor Guide, handout materials and

other training aids, "hands on" exercises, a training report, and student evaluations of the training. All training shall be customized to CBP missions and requirements, and provided in accordance with CBP Office of Training and Development criteria. All training documentation shall be incorporated into the Technical Documentation package. The Government shall have full access to all data in the Technical Documentation file for the purposes of maintaining and upgrading the NII system, and training NII system operators and Maintenance Technicians.

In addition, a Train-the-Trainer program shall be delivered to CBP and its approved contract trainers that will certify them as qualified to instruct on the piece of equipment.

Any and all training materials will be used for initial training as well as for follow-on performance and future new operator (attrition) training.

**3.7.1.1 Operator Training - CLIN 00110**

The contractor shall provide on-site training for CBP operator personnel at each site using materials to include classroom instruction, video, and on-the-job training aids. The training shall cover the imaging equipment, transport system operation, normal and emergency systems operations, image interpretation, and operator console operations. Training shall also include all items contained in the System User's Manual. The number of personnel to be trained at each site is variable, but efforts shall be made to limit each training class to 12 operators.

Training Model:

<b>Day 1</b> Radiation Safety	<b>Day 2</b> Classroom and Hands-On	<b>Day 3</b> Classroom and Hands-On	<b>Day 4</b> Classroom and Hands-On	<b>Day 5</b> Classroom and Hands-On
<b>Day 6</b> Reinforcement / Live Stream of Commerce	<b>Day 7</b> Reinforcement / Live Stream of Commerce	<b>Day 8</b> Reinforcement / Live Stream of Commerce	<b>Day 9</b> Reinforcement / Live Stream of Commerce	<b>Day 10</b> Reinforcement / Live Stream of Commerce

**Radiation Safety:**

To be conducted by CBP or its approved contractor personnel

**Classroom and Hands-On**

2 instructors and 12 students

Includes the following in addition to the DID requirements.

- Sixteen (16) hours of image analysis, including 1 hour focused on Weapons of Mass Effect (WME)
  - This material shall **not** be available as a leave-behind for student

- participants
- This material shall **not** be retained or used by the contractor for any purpose whatsoever
- One (1) hour Core Messages delivered by CBP or its approved contract personnel
- One (1) hour of NII Reporting delivered by CBP or its approved contract personnel

Reinforcement and Live Stream of Commerce:

2 instructors and 6 students (2, 5-day sessions)

- While not the norm, it may be required for the contractor trainers to conduct both reinforcement sessions over the course of one week using double shifts. In addition, every attempt will be made to schedule the two weeks of reinforcement training using back-to-back weeks, however, the contractor should be prepared to support two weeks of reinforcement training that are not serial in nature.

Includes:

- Personal Qualification Standard (PQS) checklist designed for instructor sign-off that students have successfully demonstrated image analysis and mechanics skills

The contractor shall develop and provide training materials using the Instructional Systems Development (ISD) methodology which includes (1) Training Plan Outline, (2) Course Syllabus, (3) Instructors Guide, (4) NII System description, (5) Student Guide, (6) Operator and Maintainer Manuals, (7) Operation Procedures Handouts, (8) operator's video, and (9) other materials. This shall be prepared in accordance with Data Item Description number A007.

Products developed under prior contract with the United States Customs Service shall be used to the maximum extent possible and be written to conform to the requirements of the CBP Office of Training and Development standards. All deliverables shall be conveyed free of trademark and proprietary claim by the Contractor, and with the unlimited right of alteration, reproduction and/or distribution within the Government.

Deliverables shall be created through the use of Microsoft Office word processing and graphics software.

Legitimate copies of the system viewer tool in quantities sufficient to support the training mode. The image viewer software shall present the operator with responses to inputs identical to the responses provided by the operational system. Image viewer software shall operate when loaded on workstation or laptops presently in use by CBP.

Training for CBP designated Acceptance Team personnel shall be completed seven days before system acceptance testing. Details of the training and training schedule shall be included in the Training Plan (TP). The TP, associated documentation and

operator's video shall be prepared in accordance with the attached Data Item Description numbers A009. A copy of the operator's training Video shall be left at each site at the conclusion of testing. Operator training shall be completed within 15 working days after system acceptance.

#### **3.7.1.2 Train-the-Trainer CLINs 00120 - 00130**

The contractor shall develop and provide Train-the-Trainer courses to include classroom, video and on-the-job training aids. As a minimum, the training shall cover all the topics contained in the Student Guide including, but not limited to the imaging equipment and transport system operation, normal and emergency systems operations, target interpretation, and operator console operations. Training shall also include all items contained in the System Users' Manual.

The Train-the-Trainer course shall be presented to all instructors designated by CBP. It shall encompass 40 hours of classroom instruction plus a minimum of 2 days of reinforcement training providing instructors with every opportunity to ask detailed and specific equipment questions, to participate in hands-on training on the equipment and conduct teach backs. These CBP instructors are located in various parts of the U.S, but they must all be afforded the opportunity to work in a hands-on environment with the equipment. The contractor shall deliver at least two train-the-trainer sessions per system. The contractor shall be required to present this training to the CBP instructors at the Federal Law Enforcement Training Center (FLETC) in Brunswick, GA on dates established by mutual agreement between CBP's Office of Training Development representatives and the contractor.

#### **3.7.1.3 Technical Manuals - CLIN 00140**

The contractor shall provide a System's User Manual and Maintenance/Service Manual and Vendor Technical Documentation prepared in accordance with the attached Data Item Descriptions numbers A008, A009 and A010. Use commercial-off-the-shelf manuals when feasible. Make all manuals in the interactive electronic format.

##### **3.7.1.3.1 Operator's Manual**

An Operator's Manual is required for each unit developed or produced under this contract. The Operator's Manual shall contain a description of the NII device and its operation. System limitations, safety information, and other important information shall be highlighted. The Operator's Manual shall contain a detailed explanation of every task required during the operation of the NII system. Any operator-level maintenance tasks shall be fully explained in the Operator's Manual.

##### **3.7.1.3.2 Operational/Storage Checklist**

A laminated Operators Checklist shall be provided on a single sheet, listing each step in the procedure required: (1) for operating the NII system, (2) for preparing an operational system for short or long-term storage, and (3) for preparing a stored NII

system for operation. The checklist shall only list the sequential steps. Each step shall be described in detail in the Operator's Manual and each step shall reference an Operator's Manual page number. The checklist shall be attached to the NII system near the operator's station.

### **3.7.1.3.3 Maintenance Manual**

Corrective and Preventive Maintenance actions and procedures shall be documented in a Maintenance Manual. A Maintenance Manual is required for each production lot of NII systems developed or produced under this contract. A single Maintenance Manual may apply to more than one (1) NII system provided the systems are similar or a revision of an existing system. Identification of NII model number and/or revision number shall be clearly explained in the Maintenance Manual. The Maintenance Manual shall contain a description of the NII device and its operation. System limitations, safety information, and other important information shall be highlighted.

#### **3.7.1.3.3.1 Preventive Maintenance**

The Maintenance Manual shall contain a detailed explanation of every task required on the Preventive Maintenance Schedule. All components with a service life less than the NII system shall be identified and addressed in the preventive maintenance schedule.

#### **3.7.1.3.3.2 Corrective Maintenance**

The Maintenance Manual shall contain a detailed explanation of every foreseeable task from the Level of Repair Analysis required to repair the NII system in case of failure. The Maintenance Manual shall be continuously updated during the service life of the NII system to incorporate unforeseen corrective maintenance tasks.

### **3.7.2 Technical Reviews**

The contractor shall host, at his facility, a contract kick-off meeting, System Review (SR), a Final Configuration Review (FCR) and a Factory Acceptance Test meeting. Quarterly reviews will be held at a government site or the contractor's facility and may be combined with major program reviews. The contractor shall document and prepare for CBP approval all meeting and review minutes. The contract kick-off meeting shall be within 30 days after contract award. The SR shall be 60 days and the FCR 120 days after contract award. All meeting dates shall be mutually agreed upon.

#### **3.7.2.1 Other Reviews**

The contractor shall hold additional reviews as deemed necessary by CBP not to exceed four (4) per year.

### **3.8 Warranty**

The contractor shall provide a minimum of one-year Failure Free total system warranty

for all NII systems, to include the transporter, detectors, imaging source, signal processors and operator console equipment. All repair actions during the warranty shall be included in a Failure and Error Report prepared in accordance with the attached Data Item Description number A011.

At the end of the warranty period, the CBP Enforcement Technology Program (ETP) organization will perform all maintenance. The Contractor shall involve and integrate ETP into the maintenance process during the Warranty Period to ensure a smooth transition. All warranty and post-warranty requests for service and support from the field will be conveyed to the service provider with an assigned Job Control Number (JCN) by the 24/7 ETP helpdesk at 1-866-NEEMRAID.

### **3.8.1 Reporting**

During the warranty, the Contractor shall maintain a log of all maintenance actions. The log shall include the description of operational activities prior to a failure with a description of the failure, shut down causes, corrective actions taken, serial number of the item repaired, hour meter reading, list of the items repaired/replaced, date repair was completed and item's home port. The Contractor shall establish, define, and report logistics figures of merit based on the log. These figures shall include (at a minimum), Mean Time Between Failure (MTBF), Mean Time to Repair (MTTR), Mean Cost to Repair (MCTR) and Mean Customer Wait Time (MCWT). At the expiration of warranty period, the contractor shall submit reports reflecting figures of merit that span the entire warranty period.

### **3.8.2 Corrosion Control**

The Contractor shall design and manufacture the NII system to prevent corrosion induced by weather, airborne pollution, salt-water spray, ice inhibiting road chemicals, geographic operating environments, and galvanic reaction.

During the period of warranty, the Contractor shall perform a corrosion control program that shall include inspection, cleaning, washing, scaling, corrosion inhibitor application, priming, painting, and waxing surfaces exposed to the elements. The Contractor shall document in the NII system logbook the actions taken, the treatment site, and the contact information of the service provider.

### **3.9 Quality Assurance and Testing**

The contractor shall perform inspections and tests necessary to ensure that NII Inspection Systems conforms to CBP approved technical documentation and configuration.

#### **3.9.1 Quality Assurance**

The contractor shall provide for government review a quality assurance plan prepared in accordance with Data Item Description number A012 as it pertains to the production and manufacturing of NII Inspection Systems. The Contractor shall provide for

Government review a plan for measuring performance during the warranty period. CBP technical team members shall observe and evaluate the contractor's Factory Acceptance Test program on an "as required" basis.

### 3.9.2 Contractor Testing

The contractor shall be responsible for the preparation of and submission to CBP for approval, an Acceptance Test Plan (ATP), in accordance with the attached Data Item Description number A013. The contractor shall perform the tests necessary to ensure that NII system components can be operated as specified in the ATP and the system's User Manual. The vendor shall utilize the following standard, ANSI N42.46-2008 American National Standard for Determination of the Imaging Performance of X-Ray and Gamma-Ray Systems for Cargo and Vehicle Security Screening for the evaluation and testing of image and system performance requirements. In addition, the contractor's tests shall include a 40-hour "burn-in" period of the entire integrated system to ensure infant mortality failures are discovered and corrected prior to any CBP tests.

For Fixed Portal, Mobile, and Pallet systems, CBP officials, or their representatives, shall witness the first Contractor Factory Acceptance Test of a fully assembled and integrated system at the contractor's site. The vendor shall prepare and submit all materials necessary for FDA review in accordance with regulations and apply for waivers as necessary. The FDA submission and any exception to this certification must be clearly identified and copied to the CBP COTR.

For this procurement the systems shall be N25 (DHS-CBP N.25 Version 1.5) compliant and the contractor shall demonstrate functionality during the FAT.

#### 3.9.2.1 CBP Acceptance Testing

A CBP SAT shall be conducted for each unit at its designated location. The CBP SAT shall be conducted in accordance with a CBP SAT Plan (SATP) for that system. The CBP SAT shall consist of a review of the CSAT documentation, system documentation, and the contractor's Radiation Survey Report, plus an inventory and physical inspection of the system, system component operations, and tests of the total integrated system against actual targets.

### 3.9.3 ILS Testing

During the warranty period the Contractor shall develop and execute a Quality Assurance Surveillance Program (QASP) to verify that the ILS requirements of the Statement of Work are met. The QASP shall define and measure figures of merit, including, MTBF, MTTR and actual Availability.

### 3.10 Radiation Safety Design Review

The contractor is required to demonstrate the construction techniques, practices and design of the protective shielding/cabinet interfaces (corner joints, collimator joints, imaging source housing, etc.) **and shall be in compliance with ANSI N 43.3 standard for their system.** The contractor shall ensure that any movement or shifting that may

be associated with a mobile system can not produce or lead to emission leaks from cracks, stress or misalignment of the structures and shielding devices that are either associated with the primary beam containment or scatter containment scheme.

### **3.11 Calibration**

The contractor shall provide to CBP all requirements associated with calibration of the NII system. The contractor shall identify in the maintenance manuals the calibration procedures and any special test equipment. The contractor shall identify all systems, subsystems, equipment, and support equipment, which requires calibration.

#### **3.11.1 Calibration Maintenance Requirement Report**

The contractor shall provide to CBP a Calibration Maintenance Requirement Report (CMRR) for all operational and support equipment. The CMRR Report shall be prepared in accordance with the attached Data Item Description number A014.

### **3.12 Safety**

The contractor for NII Inspection Systems shall maintain a system safety program that continually identifies all hazards and provides a methodology to either eliminate or control these identified hazards.

All products, designs, and specifications provided and all construction and installation activities conducted shall comply with all OSHA and NRC regulations, as well as any other appropriate laws, regulations, standards, codes and health and safety guidelines.

#### **3.12.1 Radiological Survey and Report**

The contractor for NII Inspection Systems shall be required to conduct a radiological survey to ensure that radiation emissions are within specified limits. Each system delivered shall be accompanied with a report of the radiological survey performed on the LS-NII unit, signed by the Radiation Safety Officer of the company. This survey will address both the radiation levels that NII Inspection System operators will be exposed to while at their workstations, and the level of radiation that is transmitted to the environment as a result of system leakage. The report shall show that by means of an outline drawing the levels of emission/scatter radiation measured, the operating conditions (worst case) and the measurement equipment used. The contractor shall provide a radiological survey report in accordance with the attached Data Item Description number A015 for each system delivered.

### **3.13 Information Technology Security**

#### **3.13.1 Basic Requirements**

The Contractor shall adhere to all DHS and CBP IT security policies, including the guidelines and policies stated in the Department of Homeland Security (DHS) Management Directive (MD) Number 4300.1, issued 3/1/2003, titled *Information Technology Systems Security*. This policy mandates DHS organizational elements,

including contractors, follow guidelines outlined in the DHS Sensitive Systems Policy Directive 4300A, *Information Technology Security Program*, version 5.5, 10/30/07, and the DHS MD 4300A, DHS Sensitive Systems Handbook, *Information Technology Security Program*, version 5.5, 10/30/07 with attachments.

DHS Directive 4300A outlines the management, operational, and technical baseline security requirements (BLSR) for DHS Components to ensure confidentiality, integrity, availability, authenticity, and non-repudiation of sensitive information systems. The directive was developed in accordance with various Executive orders, public laws, and national policy, including the Federal Information Security Management Act (FISMA) of 2002, various National Institute of Standards and Technology (NIST) publications, and the Office of Management and Budget (OMB) Circular A-130, *Management of Federal Information Resources*. The 4300A Handbook provides greater detail of the BLSRs, including the roles and responsibilities associated with each.

CBP shall provide personnel with the appropriate clearance levels to support the security certification/accreditation processes under this Agreement in accordance with DHS MD 4300A, DHS Sensitive Systems Policy and Handbook. During all SDLC phases of CBP systems, CBP personnel shall develop documentation and provide any required information for all levels of classification in support of the certification/accreditation process. In addition, all security certification/accreditation will be performed using the DHS certification/accreditation process, methodology and tools.

#### Security Certification/Accreditation

CBP shall provide personnel with the appropriate clearance levels to support the security certification/accreditation processes under this Agreement in accordance with DHS MD 4300A, DHS Sensitive Systems Policy and Handbook. During all SDLC phases of CBP systems, CBP personnel shall develop documentation and provide any required information for all levels of classification in support of the certification/accreditation process. Upon request, the Contractor shall provide any documentation required to support the CBP security certification and accreditation effort. In addition, all security certification/accreditation will be performed using the DHS certification/accreditation process, methodology and tools.

#### Security Review and Reporting

(a) The Contractor shall include security as an integral element in the management of this contract. The Contractor shall conduct reviews and report the status of the implementation and enforcement of the security requirements contained in this contract and identified references.

(b) The Government may elect to conduct periodic reviews to ensure that the security requirements contained in this contract are being implemented and enforced. The Contractor shall afford DHS including the Office of Inspector General, CBP ISSM, and other government oversight organizations, access to the Contractor's and subcontractors' facilities, installations, operations, documentation, databases, and personnel used in the performance of this contract. Access shall be provided to the

extent necessary for the government to carry out a program of inspection, investigation, and audit to safeguard against threats and hazards to the integrity, availability, and confidentiality of DHS/CBP data or the function of computer systems operated on behalf of DHS/CBP, and to preserve evidence of computer crime.

### 3.13.2 HSAR 3052.204-70. SECURITY REQUIREMENTS FOR UNCLASSIFIED INFORMATION TECHNOLOGY RESOURCES (JUN 2006)

(a) The Contractor shall be responsible for Information Technology (IT) security for all systems connected to a DHS network or operated by the Contractor for DHS, regardless of location. This clause applies to all or any part of the contract that includes information technology resources or services for which the Contractor must have physical or electronic access to sensitive information contained in DHS unclassified systems that directly support the agency's mission.

(b) The Contractor shall provide, implement, and maintain an IT Security Plan. This plan shall describe the processes and procedures that will be followed to ensure appropriate security of IT resources that are developed, processed, or used under this contract.

(1) Within 60 days after contract award, the contractor shall submit for approval its IT Security Plan, which shall be consistent with and further detail the approach contained in the offeror's proposal. The plan, as approved by the Contracting Officer, shall be incorporated into the contract as a compliance document.

(2) The Contractor's IT Security Plan shall comply with Federal laws that include, but are not limited to, the Computer Security Act of 1987 (40 U.S.C. 1441 et seq.); the Government Information Security Reform Act of 2000; and the Federal Information Security Management Act of 2002; and with Federal policies and procedures that include, but are not limited to, OMB Circular A-130.

(3) The security plan shall specifically include instructions regarding handling and protecting sensitive information at the Contractor's site (including any information stored, processed, or transmitted using the Contractor's computer systems), and the secure management, operation, maintenance, programming, and system administration of computer systems, networks, and telecommunications systems.

(c) Examples of tasks that require security provisions include:

(1) Acquisition, transmission or analysis of data owned by DHS with significant replacement cost should the contractor's copy be corrupted; and

(2) Access to DHS networks or computers at a level beyond that granted the general public (e.g., such as bypassing a firewall).

(d) At the expiration of the contract, the contractor shall return all sensitive DHS information and IT resources provided to the contractor during the contract, and certify that all non-public DHS information has been purged from any contractor-owned system. Components shall conduct reviews to ensure that the security requirements in the contract are implemented and enforced.

(e) Within 6 months after contract award, the contractor shall submit written proof of IT Security accreditation to DHS for approval by the DHS Contracting Officer. Accreditation will proceed according to the criteria of the DHS Sensitive System Policy Publication, 4300A (Version 2.1, July 26, 2004) or any replacement publication, which the Contracting Officer will provide upon request. This accreditation will include a final security plan, risk assessment, security test and evaluation, and disaster recovery plan/continuity of operations plan. This accreditation, when accepted by the Contracting Officer, shall be incorporated into the contract as a compliance document. The contractor shall comply with the approved accreditation documentation.

### **3.13.3 HSAR 3052.204-71. CONTRACTOR EMPLOYEE ACCESS (JUN 2006)**

(a) *Sensitive Information*, as used in this Chapter, means any information, the loss, misuse, disclosure, or unauthorized access to or modification of which could adversely affect the national or homeland security interest, or the conduct of Federal programs, or the privacy to which individuals are entitled under section 552a of title 5, United States Code (the Privacy Act), but which has not been specifically authorized under criteria established by an Executive Order or an Act of Congress to be kept secret in the interest of national defense, homeland security or foreign policy. This definition includes the following categories of information:

- (1) Protected Critical Infrastructure Information (PCII) as set out in the Critical Infrastructure Information Act of 2002 (Title II, Subtitle B, of the Homeland Security Act, Public Law 107-296, 196 Stat. 2135), as amended, the implementing regulations thereto (Title 6, Code of Federal Regulations, Part 29) as amended, the applicable PCII Procedures Manual, as amended, and any supplementary guidance officially communicated by an authorized official of the Department of Homeland Security (including the PCII Program Manager or his/her designee);
- (2) Sensitive Security Information (SSI), as defined in Title 49, Code of Federal Regulations, Part 1520, as amended, "Policies and Procedures of Safeguarding and Control of SSI," as amended, and any supplementary guidance officially communicated by an authorized official of the Department of Homeland Security (including the Assistant Secretary for the Transportation Security Administration or his/her designee);
- (3) Information designated as "For Official Use Only," which is unclassified information of a sensitive nature and the unauthorized disclosure of which could adversely impact a person's privacy or welfare, the conduct of Federal programs, or other programs or operations essential to the national or homeland security interest; and
- (4) Any information that is designated "sensitive" or subject to other controls, safeguards or protections in accordance with subsequently adopted homeland security information handling procedures.

(b) "Information Technology Resources" include, but are not limited to, computer equipment, networking equipment, telecommunications equipment, cabling, network drives, computer drives, network software, computer software, software programs, intranet sites, and internet sites.

(c) Contractor employees working on this contract must complete such forms as may be necessary for security or other reasons, including the conduct of background investigations to determine suitability. Completed forms shall be submitted as directed by the Contracting Officer. Upon the Contracting Officer's request, the Contractor's employees shall be fingerprinted, or subject to other investigations as required. All contractor employees requiring recurring access to Government facilities or access to sensitive information or IT resources are required to have a favorably adjudicated background investigation prior to commencing work on this contract unless this requirement is waived under Departmental procedures.

(d) The Contracting Officer may require the contractor to prohibit individuals from working on the contract if the government deems their initial or continued employment contrary to the public interest for any reason, including, but not limited to, carelessness, insubordination, incompetence, or security concerns.

(e) Work under this contract may involve access to sensitive information. Therefore, the Contractor shall not disclose, orally or in writing, any sensitive information to any person unless authorized in writing by the Contracting Officer. For those contractor employees authorized access to sensitive information, the contractor shall ensure that these persons receive training concerning the protection and disclosure of sensitive information both during and after contract performance.

(f) The Contractor shall include the substance of this clause in all subcontracts at any tier where the subcontractor may have access to Government facilities, sensitive information, or resources.

(g) Before receiving access to IT resources under this contract the individual must receive a security briefing, which the Contracting Officer's Technical Representative (COTR) will arrange, and complete any nondisclosure agreement furnished by DHS.

(h) The contractor shall have access only to those areas of DHS information technology resources explicitly stated in this contract or approved by the COTR in writing as necessary for performance of the work under this contract. Any attempts by contractor personnel to gain access to any information technology resources not expressly authorized by the statement of work, other terms and conditions in this contract, or as approved in writing by the COTR, is strictly prohibited. In the event of violation of this provision, DHS will take appropriate actions with regard to the contract and the individual(s) involved.

(i) Contractor access to DHS networks from a remote location is a temporary privilege for mutual convenience while the contractor performs business for the DHS Component. It is not a right, a guarantee of access, a condition of the contract, or Government Furnished Equipment (GFE).

(j) Contractor access will be terminated for unauthorized use. The contractor agrees to hold and save DHS harmless from any unauthorized use and agrees not to request additional time or money under the contract for any delays resulting from unauthorized use or access.

(k) Non-U.S. citizens shall not be authorized to access or assist in the development, operation, management or maintenance of Department IT systems under the contract, unless a waiver has been granted by the Head of the Component or designee, with the concurrence of both the Department's Chief Security Officer (CSO) and the Chief Information Officer (CIO) or their designees. Within DHS Headquarters, the waiver may be granted only with the approval of both the CSO and the CIO or their designees. In order for a waiver to be granted:

- (1) The individual must be a legal permanent resident of the U. S. or a citizen of Ireland, Israel, the Republic of the Philippines, or any nation on the Allied Nations List maintained by the Department of State;
  - (2) There must be a compelling reason for using this individual as opposed to a U. S. citizen; and
  - (3) The waiver must be in the best interest of the Government.
- (l) Contractors shall identify in their proposals the names and citizenship of all non-U.S. citizens proposed to work under the contract. Any additions or deletions of non-U.S. citizens after contract award shall also be reported to the contracting officer.

#### **3.13.4 52.204-9 Personal Identity Verification of Contractor Personnel**

(a) The Contractor shall comply with agency personal identity verification procedures identified in the contract that implement Homeland Security Presidential Directive-12 (HSPD-12), Office of Management and Budget (OMB) guidance M-05-24 and Federal Information Processing Standards Publication (FIPS PUB) Number 201.

(b) The Contractor shall insert this clause in all subcontracts when the subcontractor is required to have routine physical access to a Federally-controlled facility and/or routine access to a Federally-controlled information system.

#### **3.13.5 Interconnection Security Agreements**

Interconnections between DHS and non-DHS IT systems shall be established through controlled interfaces and via approved service providers. The controlled interfaces shall be accredited at the highest security level of information on the network. Connections with other Federal agencies shall be documented based on interagency agreements; memoranda of understanding, service level agreements or interconnect service agreements. Components shall document interconnections with other external networks with an Interconnection Security Agreement (ISA). Interconnections between DHS Components shall require an ISA when there is a difference in the security categorizations for confidentiality, integrity, and availability for the two networks. ISAs shall be signed by both Designated Approval Authority (DAAs) or by the official designated by the DAA to have signatory authority.

#### **3.14 Enterprise Architecture**

The contractor shall ensure that the design of its LS NII hardware, systems' software

applications and infrastructure components conform to the Homeland Security (HLS) and Customs and Border Protection (CBP) enterprise architecture (EA), the HLS and CBP technical reference models (TRM), and all HLS and CBP policies and guidelines as promulgated by the Department of Homeland Security (DHS) and CBP Chief Information Officers (CIO), Chief Technology Officers (CTO) and Chief Architects (CA) such as the CBP Information Technology Enterprise Principles and the DHS Service Oriented Architecture - Technical Framework.

The contractor's LS NII systems shall conform to the federal enterprise architecture (FEA) model and the HLS and CBP versions of the FEA model as described in their respective EAs. Models will be submitted using Business Process Modeling Notation (BPMN) for all models. Universal Modeling Language (UML2) may be used for infrastructure only. Data semantics shall be in conformance with the National Information Exchange Model (NIEM). Development solutions will also ensure compliance with the current version of the HLS and CBP target architectures.

Where possible, the contractor shall use HLS/CBP approved products, standards, services, and profiles as reflected by the hardware software, application, and infrastructure components of the HLS/CBP TRM/standards profile. If new hardware, software and infrastructure components are required to develop, test, or implement the program, these products will be coordinated through the HLS and CBP formal technology insertion process which includes a trade study with no less than four alternatives, one of which shall reflect the status quo and one shall reflect multi-agency collaboration. The HLS/CBP TRM/standards profile will be updated as technology insertions are accomplished.

All data assets, information exchanges and data standards, whether adopted or developed, shall be submitted to the DHS Enterprise Data Management Office (EDMO) for review and insertion into the DHS Data Reference Model.

The Contracting Officer (KO), Contracting Officer's Technical Representative (COTR) or Program Manager (PM) will determine the contractor's "need to know" regarding access to CBP HLS EA information and sponsor vendor personnel for a DHS Interactive account to access the HLS EA. The HLS EA is available to all DHS Interactive account holders.

### **3.15 IPv6**

In compliance with OMB mandates, all network hardware provided under the scope of this Statement of Work and associated Task Orders shall be IPv6 compatible without modification, upgrade, or replacement.

### **3.16 DHS Information Technology Portfolio Alignment**

The NII technologies align with the DHS IT Portfolio below:

**Screening/Watchlist/Credentialing** - Includes all activities that support the tracking and monitoring of travelers, conveyances and cargo crossing U.S. borders, and traffic pattern analysis, database (Federal, State, and Local) linking and querying, and managing status verification and tracking systems. Different investments and systems

may support distinct screening and watchlist activities for people, cargo, and tangible goods. Credentialing encompasses all activities that determine a person's eligibility for a particular license, privilege, or status, from application for the credential through issuance, use, and potential revocation of the issued credential.

### **3.17 Accessibility Requirements (Section 508 Compliance)**

Section 508 of the Rehabilitation Act (29 U.S.C. 794d), as amended by the Workforce Investment Act of 1998 (P.L. 105-220), August 7, 1998, requires that when Federal agencies develop, procure, maintain, or use electronic and information technology, they must ensure that it is accessible to people with disabilities. Federal employees and members of the public who have disabilities must have access to and use of information and services that is comparable to the access and use available to non-disabled Federal employees and members of the public.

No Applicable Technical Standards were determined for this work statement. This acquisition has exceptions to Section 508 that will be applied.

Exceptions for this work statement have been determined by DHS and only the exceptions described herein shall be applied. Any request for additional exceptions shall be sent to the COTR and determination will be made in accordance with DHS MD 4010.2. DHS has identified the following exceptions that may be applied:

36 CFR 1194.3(e) - Fundamental Alteration, applies to the portions of this work statement where the item requires changes to comply with Section 508 and would render the acquired item useless for its intended purpose. After reviewing the business needs for this work statement, the acquired or developed product is meant to provide information through sight, sound and text concurrently in order for a user to interpret collectively. In order to comply with Section 508, supporting the functional performance criteria would render this product useless and thereby fail to support business requirements. DHS has authorized this exception for the imaging system within this work statement. In addition, the training provided was determined to be a simulated effort to the imaging system with the same requirements and is thereby authorized to apply this exception.

36 CFR 1194.3(b) – Incidental to Contract, all EIT that is exclusively owned and used by the contractor to fulfill this work statement does not require compliance with Section 508. This exception does not apply to any EIT deliverable, service or item that will be used by any Federal employee(s) or member(s) of the public. This exception only applies to those contractors assigned to fulfill the obligations of this work statement and for the purposes of this requirement, are not considered members of the public.

36 CFR 1194.3(f) – Back Office, applies to any EIT item that will be located in spaces frequented only by service personnel for maintenance, repair, or occasional monitoring of equipment. This exception does not include remote user interfaces that are accessible outside the enclosed "space".

#### **4.0 INTEGRATED LOGISTICS SUPPORT FOR LARGE SCALE NII SYSTEMS**

The CBP Enforcement Technology Program (ETP) will manage the life-cycle requirements (i.e., maintenance, training, property management, etc.) after the NII unit is accepted.

#### **4.1 Configuration Management**

The contractor shall implement the Configuration Management Plan with the establishment of a Configuration Control Board (CCB). The contractor shall provide an as-built Configuration Baseline as identified in the attached Data Item Description number A016 with the delivery of each NII configuration. All configuration changes require prior approval of TSB's CCB. Hardware changes beyond Final Configuration Review (FCR) will require prior CBP approval. The contractor shall establish software CCB to review software changes until the delivery of the first NII system. CCB approval shall be required for changes to the software baseline and after the first delivery of a NII system.

##### **4.1.1 Technical Documentation CLIN - 00150**

The Technical Documentation shall consist of all documentation used by the Contractor and all Sub-Contractor's in the production of the NII system and any follow-on production or modification. This shall include the Configuration List and any background or supporting documentation used to make design or production decisions. The Technical Documentation Package shall be prepared in accordance with Data Item Description number A017. The manufacturer shall maintain this documentation past the planned life of the NII system. The Government shall have unlimited data rights (FAR 52.227-14) to all data in the Technical Documentation file for the purposes of maintaining the NII system and training NII system operators and Maintenance Technicians. Data initially produced under this contract shall be conveyed to Government free of proprietary claim. Data produced prior to this contract shall be conveyed assigning to the Government and its agent the right to use and copy the material solely for the purpose of repair maintenance and training.

##### **4.1.1.1 Configuration Baseline**

The Configuration Baseline is: (1) An agreed-to description of the attributes of a product, at a point in time, which serves as a basis for defining change. (2) An approved and released document, or a set of documents, each of a specific revision; the purpose of which is to provide a defined basis for managing change. (3) The currently approved and released configuration documentation. (4) A released set of files comprising a software version and associated configuration documentation. A Configuration Baseline shall be established and maintained for the NII system by the Contractor. All NII units delivered within a production lot shall be identical and conform to the Configuration Baseline. The Configuration Baseline shall be incorporated into the Technical Documentation and maintained by the Contractor during the term of the contract. The Government shall have unlimited data rights (FAR 52.227-14) to all Configuration Baseline documentation for the purposes of maintaining the NII system.

Data initially produced under this contract shall be conveyed to Government free of proprietary claim. Data produced prior to this contract shall be conveyed assigning to the Government and its agent the right to use and copy the material solely for the purpose of repair maintenance and training.

#### **4.1.2 Management of the Technical Documentation**

The Contractor shall maintain a Technical Documentation file at the contractor's point of manufacture, which contains all relevant data for the design and production of the NII system produced under this contract. Management of this data shall be in accordance with the CBP Configuration Management Plan.

#### **4.1.3 Engineering Change Proposals (ECPs)**

The Contractor is encouraged to pursue continuous improvements to the delivered product, particularly in the areas of enhancements, cost and reliability. Engineering Change Proposals (ECPs) are provided for within this contract and their use is strongly supported. ECPs are proposals to enhance the value of the finished goods or services to the Government or reduce the cost of the good or services. All ECPs submitted shall be incorporated into the Technical Documentation package. ECPs that are approved shall be incorporated into the Configuration Baseline. All ECPs shall be submitted in accordance with the Engineering Changes clause of this contract. ECPs will be processed in accordance with CBP's Configuration Management Plan.

#### **4.1.4 Interchange ability**

Components with identical functions shall be interchangeable to the greatest extent practical. Components with identical functions in existing CBP systems are desired to be interchangeable. Components with non-identical functions shall not be, or appear to be, interchangeable.

#### **4.1.5 Accessibility**

All systems or components that are serviced as part of periodic maintenance shall be readily accessible for service and inspection. To the greatest extent practicable, the removal or the physical movement of components unrelated to the specific maintenance and/or repair tasks involved shall be minimized. The measured time that is required to gain access to a component shall be inversely proportional to the frequency of the maintenance and repair of that component.

#### **4.2 Spares**

Spares, repair parts and supplies for the ongoing operational and maintenance support will be provided under separate maintenance contract.

### **5.0 DOCUMENTATION DELIVERABLES**