



## **ATTACHMENT J-12**

### **Sample Task Order (STO) #3 – BASE COMMUNICATIONS NETWORK FOR OUARGLA, ALGERIA**

#### **1.0 Introduction**

The U.S. Government Organization (USGO) requires a complete solution for base communications in Ouargla, Algeria. The solution will be Government-owned contractor-operated. There are 42 buildings of concrete construction, of which 40 are located within a four (4) square mile area in the center of the base. Detailed architectural drawings are not available. The base is approximately (5 mi x 5 mi) 25 square miles. The base serves approximately 1,000 personnel stationed in the Sahara Desert and communications services are required for all buildings on the base. The buildings are one and two story buildings and there are no terrain features that will mask wireless transmissions within the base boundaries. Existing telecommunications infrastructure on the base installed by the Government provides Wide Area Network (WAN) and Local Area Network (LAN) connectivity for all buildings. All WAN and LAN networking components (e.g. wiring, switches, routers, etc.) have been installed and provide Power-over-Ethernet (PoE). The Central Office and demarcation is located in the Communications Center (Building G). The interface for all networks will be a fiber optic card with SC connection. The contractor can install equipment in wiring closets and the Government will provide space, power, and cooling for the equipment. All buildings have telco/network closets and are wired with 110VAC electrical outlets, Voice over Internet Protocol (VoIP) phones, and those with Internet access requirements are wired with at least one CAT 5 Ethernet cable jack per office or desk. All VoIP phones are connected to the Defense Switched Network (DSN) and NIPRNET (hereinafter referred to as NIPR).

#### **2.0 Objective**

The objective is to obtain a complex SATCOM solution that provides base communications meeting the objectives described in this STO. Included is engineering support, system design; hardware procurement, installation, integration, and testing; communications services; logistics support; and program management. The overall objective is for the Contractor to design, test, implement, operate and maintain a total solution that provides reliable communications for all personnel and units at the operating base at Ouargla, Algeria at the most affordable cost to the Government.

#### **3.0 Summary of Requirements**

The Contractor shall propose a solution compliant with all sample task order requirements that delivers the required quality of service and availability and articulates rationale for the choice of architecture and components, including life cycle cost considerations.



Services to be provided by the Contractor include:

- System design
- System Architecture and Documentation
- Integration
- Testing
- System Engineering
- On-going maintenance and operational support services
- Customer care and help desk support
- Wireless High-speed Internet service
- Wired CAT 5 Internet service
- Commercial encryption of the satellite link
- Cellular telephone service (base station 4G LTE (Long Term Evolution) and associated hardware) to provide voice and data transmission. Cellular phone service required for local (intra-base) and long distance (via DSN) calling
- Point of Sale (POS) Service for Government furnished POS terminals
- Satellite connectivity to the military base

### **3.1 Management Requirements**

3.1.1 The Contractor shall provide a detailed project schedule (e.g., Microsoft Project or equivalent) in PDF format for the entire Task Order lifecycle.

3.1.2 The Contractor shall discuss:

- 3.1.2.1 The roles and responsibilities of the Contractor and Subcontractors that will contribute to the solution, how work will be partitioned among subcontractors (if applicable) and how subcontractors will be managed.
- 3.1.2.2 Procedures to ensure establishment and maintenance of the logical and physical enclaves of Government encrypted traffic (NIPR, SIPRnet (hereinafter referred to as SIPR), secure voice) and contractor-provided services to avoid spillage. Red and black separation is already provided on the base and all current network cabling is already isolated for public internet, NIPR and SIPR.
- 3.1.2.3 An approach for the implementation of a web portal to present the health of the entire solution in a consolidated view.
- 3.1.2.4 Program management approach, procedures, and performance metrics and provide an explanation of how they will be used to ensure timely system development, installation and operation.



- 3.1.2.5 Processes and procedures to comply with all workforce and environmental regulations prior to and during installation of telecommunications infrastructure (e.g., satellite terminal installation).
- 3.1.2.6 Identification and assessment of risks and a mitigation strategy that minimizes cost, schedule, and performance risk.
- 3.1.2.7 Management procedures to ensure network quality of service is not diminished during peak usage of wired Internet, wireless hotspots, and cellular service.
- 3.1.2.8 Process and procedures required to develop and furnish the deliverables in Section 7.2.

## **3.2 Technical Requirements**

### **3.2.1 System Engineering**

- 3.2.1.1 The Contractor shall develop and document the requisite communications infrastructure to meet the requirements.
- 3.2.1.2 The Contractor shall discuss how the design of the network and network components incorporates physical and logical hardening to withstand the rigors of the Sahara Desert conditions (e.g., extreme temperatures, haboob, etc.).
- 3.2.1.3 The Contractor shall explain the rationale for the proposed network and components, including lifecycle cost considerations. The Contractor shall discuss how lessons learned from previous projects were incorporated.
- 3.2.1.4 The Contractor shall clearly explain their recommendation for bandwidth, stating assumptions, to ensure that only the necessary amount of bandwidth is leased to support their proposed aggregate throughput requirements; additionally, the Contractor shall state their assumptions for network device (e.g. VoIP phone, computer, etc.) utilization estimates on NIPR, SIPR, public internet, and Wi-Fi, when engineering their solution. The Contractor shall explain the rationale for their proposed throughput and utilization estimates based off of the requirements in Section 3.2.6 and the assumptions made by the Contractor. The Contractor shall implement configuration management, prepare engineering documents and reference manuals, and provide engineering and testing services.



3.2.1.5 The Contractor shall identify valid installation challenges and risks (excluding any items provided Government Furnished Equipment (GFE)), and provide realistic mitigation for each.

3.2.1.6 The Contractor shall discuss how their system incorporates reliability, availability, maintainability, security, network monitoring and interoperability.

3.2.1.7 The Contractor shall address system flexibility and optimization, accommodating potential future needs to support either new sites or higher per-site data transfer needs or spectral optimization to minimize bandwidth needs.

### 3.2.2 System Design

The Contractor shall design a system that:

3.2.2.1 Is a closed network with no connection to Algerian telecommunications infrastructure.

3.2.2.2 Provides connectivity to a U.S. Government Gateway that will deliver voice and data services (NIPR) and secure voice and data (SIPR). The Government will install NIPR, SIPR, and sensitive but unclassified voice capabilities (i.e. Defense Switched Network (DSN)) and encrypt this traffic prior to connection to the contractor services. The Contractor must provide transport of this black core network from the operating base in Ouargla to a commercial teleport. The traffic will be backhauled from the commercial teleport to a DoD Gateway for connection to the DoD Information Network (DoDIN). For the purpose of this STO, the Contractor may connect to one of the following DoD Gateways: Lago di Patria, Italy; Ramstein Air Base (AB), Germany; Fort Belvoir, VA, or Naval SATCOM Facility (NAVSATCOMFAC), Northwest, VA for DoDIN access. The Contractor shall identify their proposed DoD gateway based on the most efficient terrestrial connection between their proposed commercial teleport and the DoD Gateway. The Contractor shall provide commercial grade encryption for their proposed SATCOM link(s) feeding the base's communications infrastructure.



- 3.2.2.3 Meets the required quality of service for high-speed Internet service, Voice over Internet Protocol (VoIP), video teleconferencing, and PoS, and meets or exceeds a system availability of 99.5% given the environmental conditions in the Sahara Desert. The Contractor is not required to include the pre-existing Government installed infrastructure in calculating their system availability for Mean Time between Failure.
- 3.2.2.4 The satellite link and network architecture is scalable and allows for new technology insertion and network expansion.
- 3.2.2.5 Provides a level of security appropriate for the level of information that will be processed. Minimum requirement is commercial grade encryption (e.g., Advanced Encryption Standard (AES) 256 bit encryption) for unclassified traffic over the satellite link. All DoDIN networks will be encrypted by the Government prior to connection to the Contractor's proposed network via a NSA approved Type 1 encryption device.
- 3.2.2.6 Provides access to the public internet (provided by the Contractor) for facilities and services specified in Table 1; in addition to, NIPR, SIPR and DSN (provided by the DoD Gateway).
- 3.2.2.7 Provides a 4G LTE cellular network that allows for local (on-base) and long distance (via DSN) calling. The Contractor shall assume that the base has no major terrain or local spectrum interference that will restrict the cellular network. The cellular network will interconnect with the DSN utilizing a 729a codec via Ethernet or fiber SC connection. The Government will permit the Contractor to utilize the existing WAN and LAN infrastructure for connectivity to the Wi-Fi access points and cellular radio network(s).
- 3.2.2.8 Provides public internet access and Wi-Fi hotspots to the buildings specified in Table 1 for Morale, Welfare and Recreation (MWR) and commercial transactions (i.e. POS) services.

3.2.3. The Contractor should provide a description of the system and network diagrams of all Offer installed network components that demonstrate connectivity between all required structures on the base to include physical and wireless connections, and access points for Government review/approval.



3.2.4 The Contractor shall develop a test plan for the network and provide it to the Government for review/approval no later than 30 days after award. The Government reserves the right to attend all tests. The Contractor shall provide completed test reports to the Government within ten (10) days of test completion. This will be a post-award contract deliverable. See Section L.22.2 regarding submission of post-award contract deliverables.

3.2.5 All equipment delivered as part of the complex satellite solution shall be new equipment. The Contractor shall provide Original Equipment Manufacturer (OEM) documentation for all of the Contractor installed equipment. The Offer shall provide the following equipment documentation with the proposal:

- Original Equipment Manufacturer (OEM) cellular base station specifications
- OEM network equipment specifications to include Wi-Fi hot spots
- OEM Satellite Terminal/Equipment Technical Specifications

3.2.5.1 The Contractor shall provide a high-level network architecture diagram showing nodes and gateway locations and a base coverage map of cellular service, including in-building and overall coverage. The Contractor should provide assumptions concerning the cellular network components (e.g. repeaters) required to deliver the Wi-Fi requirements.

3.2.5.2 The Contractor shall provide as-built drawings for all equipment installations. This will be a post-award contract deliverable. See Section L.22.2 regarding submission of post-award contract deliverables.

3.2.5.3 The Contractor shall provide software configurations for all equipment. This will be a post-award contract deliverable. See Section L.22.2 regarding submission of post-award contract deliverables.

### 3.2.6 Infrastructure and Communication Services Requirements

The Contractor's proposed satellite solution shall supports an aggregate data throughput that meets or exceeds the minimum Quality of Service requirements specified for voice, data and video traffic. The total number of base connections required is specified in Table 1. The Contractor shall describe their technical approach in developing their technical design.

3.2.6.1 The high-speed Internet Quality of Service minimum requirement is 128 kbps per computer on the network.



- 3.2.6.2 The VoIP Quality of Service minimum requirement is 32 kbps per VoIP phone.
- 3.2.6.3 The video teleconferencing Quality of Service minimum requirement is 128 kbps per conference room.
- 3.2.6.4 The Point of Sale (POS) Quality of Service minimum requirement is a rapid (4-6 seconds) satellite transmission of data to and from POS locations on the base to a credit card network for authorization of a transaction. All POS terminals are connected to the public internet.
- 3.2.6.5 The cellular telephone service minimum requirement is measured by the grade of service (GoS), which measures the ratio of unsuccessful calls to total calls attempted. For the cellular circuit, the minimum requirement for the GoS is 0.02. This means that two users of the circuit group out of a hundred will encounter a call refusal during peak traffic periods. The Government DSN voice system will meet the 0.02 GoS requirement for VoIP. Peak cellular use is not expected to exceed 50 simultaneous users. The cellular base station should be sized to support 1000 users to allow for future expansion. Current cellular user population is 300 devices. Users will access the cellular system using Government issued devices (e.g., iPhone, Blackberry, Android).
- 3.2.6.6 The Contractor shall provide the satellite transport infrastructure and communications services to support all wired and wireless (public internet, NIPR and SIPR), VoIP service (DSN), Video Teleconferencing (VTC), and POS service as described in Table 1 below.
- 3.2.6.7 Buildings requiring NIPR, SIPR, and secure voice will be connected to a Government black core network. The contractor is not required to procure, install, or operate any equipment for the black core network; however, this encrypted traffic will require transport via the contractor's commercial satellite backhaul to the contractor's teleport and require connection from the contractor's network to a Government point of presence.
- 3.2.6.8 Traffic, excluding the black core network, is expected to be 90% web (HTTP/HTTPS) and 10% other. Of the web traffic, up to 20% may be used for high-bandwidth services including video. The vast majority of voice calls are expected to be to destinations in Europe and the United States.



3.2.6.9 Existing telecommunications infrastructure provides WAN and LAN connectivity. The Contractor shall provide:

- Maintenance of the network including backhaul connections and equipment
- Maintenance and testing of all circuits
- Installation of all backhaul equipment
- Verifying operation of computer connections, VoIP phones, and Wi-Fi hotspots for all buildings





**Table 1. Infrastructure and Communications Services Requirements**

<b>Building</b>	<b>Description</b>	<b>Qty</b>	<b>Communication Service Requirement</b>
Offices (A)	Two-Story building; 100 desks per building; 10 conference rooms per building	5	<ul style="list-style-type: none"> <li>• 100 individual desks per building with Ethernet connection for VoIP phone (DSN) and NIPR</li> <li>• 10 conference rooms per building that provide 12 wired LAN ports; six (6) each for NIPR and SIPR access and one (1) video teleconferencing (VTC) unit connected to SIPR.</li> <li>• SIPR service required for 40 of the desks per building</li> </ul>
Junior Enlisted Barracks (B)	Two-Story building; 100 private rooms occupied by two persons; 20,000 sq ft (200 ft x 50 ft) for each story	5	<ul style="list-style-type: none"> <li>• Wi-Fi service for each building connected to public internet for Morale, Welfare and Recreation (MWR) supporting up to 200 connections per building</li> <li>• 10 VoIP phones (in common area) in each building</li> </ul>
Senior Enlisted Barracks (D)	Two-Story building; 50 private rooms occupied by one person; one phone per room; 20,000 sqft (200 ft x 50 ft) for each story	1	<ul style="list-style-type: none"> <li>• Wi-Fi service connected to public internet for Morale, Welfare and Recreation (MWR) supporting up to 100 connections.</li> <li>• 50 Ethernet connections (1 per room) for VoIP phone (DSN) and NIPR.</li> <li>• 15 Ethernet connections for SIPR</li> </ul>
Officers Billeting (E)	One-Story building; 30 private rooms occupied by one person; one phone per room; 12,000 sq ft (300 ft x 40 ft)	1	<ul style="list-style-type: none"> <li>• Wi-Fi service connected to public internet for Morale, Welfare and Recreation (MWR) supporting up to 60 connections.</li> <li>• 30 Ethernet connections (1 per room) for VoIP phone (DSN) and NIPR.</li> <li>• 20 Ethernet connections for SIPR</li> </ul>
Senior Officer Residences (F)	One-Story; 1600 sq ft each (40 ft x 40 ft)	10	<ul style="list-style-type: none"> <li>• Wi-Fi service connected to public internet for Morale, Welfare and Recreation (MWR) supporting up to 5 connections for each residence.</li> <li>• 1 Ethernet connections for each residence for VoIP phone (DSN) and NIPR.</li> <li>• 1 Ethernet connections for each private residence for SIPR</li> </ul>
Communications Center (G)	Two-Story building, Central Office on top story	1	<ul style="list-style-type: none"> <li>• 25 Ethernet connections for VoIP phone (DSN) and NIPR</li> <li>• 25 Ethernet connections for SIPR</li> <li>• 2 conference rooms that provide 10 wired LAN ports; five (5) each for NIPR and SIPR access and one video teleconferencing (VTC) unit. VTC will be connected to SIPR.</li> </ul>
Base Headquarters (H)	One-Story	1	<ul style="list-style-type: none"> <li>• 25 Ethernet connections for VoIP phone (DSN) and NIPR</li> <li>• 25 Ethernet connections for SIPR</li> <li>• 2 conference rooms that provide 20 wired LAN ports; ten (10) each for NIPR and SIPR access and one (1) video teleconferencing (VTC) unit connected to SIPR.</li> </ul>
Supply Warehouse (I)	One-Story	2	<ul style="list-style-type: none"> <li>• 5 Ethernet connections for VoIP phone (DSN) and NIPR per building</li> <li>• 2 Ethernet connections for SIPR per building</li> </ul>
Armory (J)	One-Story	1	<ul style="list-style-type: none"> <li>• 5 Ethernet connections for VoIP phone (DSN) and NIPR</li> <li>• 1 Ethernet connections for SIPR</li> </ul>

<b>Building</b>	<b>Description</b>	<b>Qty</b>	<b>Communication Service Requirement</b>
Maintenance Facilities (K)	One-Story	3	<ul style="list-style-type: none"> <li>• 3 Ethernet connections for VoIP phone (DSN) and NIPR per building</li> <li>• 1 Ethernet connections for SIPR per building</li> </ul>
Commissary (L)	One-Story	1	<ul style="list-style-type: none"> <li>• 3 Ethernet connections for VoIP phone (DSN) only</li> <li>• 12 Ethernet connections to public internet for point of sale (POS) terminals</li> </ul>
Gas Station (M)	One-Story	1	<ul style="list-style-type: none"> <li>• 1 Ethernet connection for VoIP phone (DSN) only</li> <li>• 6 Ethernet connections to public internet for point of sale (POS) terminals</li> </ul>
Base Exchange (N) 8000 sqf ft (80 ft x 100 ft)	One-Story	1	<ul style="list-style-type: none"> <li>• 3 Ethernet connections for VoIP phone (DSN) only</li> <li>• 12 Ethernet connections to public internet for point of sale (POS) terminals</li> <li>• Wi-Fi service connected to public internet supporting up to 200 connections</li> </ul>
MWR Facility (O) 6300 sqf ft (70 ft x 90 ft)	Two-Story	1	<ul style="list-style-type: none"> <li>• 15 Ethernet connections for VoIP phone (DSN) only</li> <li>• 15 Ethernet connection for public internet</li> <li>• 4 Ethernet connections to public internet for point of sale (POS) terminals</li> <li>• Wi-Fi service connected to public internet supporting up to 100 connections</li> </ul>
Base Dining Facility (P) 10,000 sqf ft (100 ft x 100 ft)	One-Story	1	<ul style="list-style-type: none"> <li>• 3 Ethernet connections for VoIP phone (DSN) only</li> <li>• 5 Ethernet connection for public internet</li> <li>• Wi-Fi service connected to public internet supporting up to 100 connections</li> </ul>
Base Library (Q) 6300 sqf ft (70 ft x 90 ft)	One-Story	1	<ul style="list-style-type: none"> <li>• 5 Ethernet connections for VoIP phone (DSN) only</li> <li>• 10 Ethernet connection for public internet</li> <li>• Wi-Fi service connected to public internet supporting up to 50 connections</li> </ul>
Base Security (R)	One-Story	1	<ul style="list-style-type: none"> <li>• 10 Ethernet connections for VoIP phone (DSN) and NIPR</li> <li>• 5 Ethernet connections for SIPR</li> </ul>
Base Fire Department (S)	One-Story	1	<ul style="list-style-type: none"> <li>• 5 Ethernet connections for VoIP phone (DSN) and NIPR</li> <li>• 2 Ethernet connections for SIPR</li> </ul>
Base Medical Facility (T)	One-Story	1	<ul style="list-style-type: none"> <li>• 20 Ethernet connections for VoIP phone (DSN) and NIPR</li> <li>• 5 Ethernet connections for SIPR</li> </ul>
Base Chapel (U)	One-Story	1	<ul style="list-style-type: none"> <li>• 4 Ethernet connections for VoIP phone (DSN) and NIPR</li> <li>•</li> </ul>
Base Entrance Facility (V)	One-Story	2	<ul style="list-style-type: none"> <li>• 2 Ethernet connections for VoIP phone (DSN) and NIPR per building</li> <li>• 1 Ethernet connection for SIPR per building</li> </ul>

### 3.2.7 Additional Infrastructure and Services Requirements

3.2.7.1 The Contractor shall provide all public Internet access through a U.S. based Internet Point of Presence (PoP).



3.2.7.2 The Contractor shall provide cellular telephone service with a service coverage area of the entire operating base in Ouargla, Algeria (5 mi x 5 mi) 25 square miles. The cellular network shall provide connectivity to the base DSN phone service and the Contractor provided public Internet.

3.2.7.3 Computers and laptops using the network will be Government owned. The Contractor is not required to provide any computers or laptops as part of the solution.

3.2.7.4 All off-base calling (including cellular) will be via DSN

### 3.2.8 Lifecycle Management

3.2.8.1 The Contractor shall present an approach for lifecycle management (on-going maintenance and operational support services, customer care and help desk support to include electromagnetic interference (EMI)/radio frequency interference (RFI) resolution support. The Contractor shall provide a logistics support plan that maximizes use of standard commercial off the shelf equipment, interoperable components, and minimizes numbers and types of spares. The plan shall address inventory management, and maintenance planning, to include the approach to minimize the mean time between failure and mean time to repair. This will be a post-award contract deliverable. See Section L.22.2 regarding submission of post-award contract deliverables.

3.2.8.2 The managed network services shall include space segment, teleport, and terrestrial components as necessary to ensure a complete end-to-end communications solution.

3.2.8.3 Space segment coverage is only required for Algeria.

3.2.8.4 The Contractor shall meet or exceed a 99.5% link availability for all required satellite links.

3.2.8.5 The Contractor shall develop and provide link budgets and shall provide maps with clearly depicted and labeled contour lines, demonstrating coverage across the required locations. Contour lines should clearly demonstrate satellite gain to noise temperature ratio (G/T), effective isotropic radiated power (EIRP), and elevation angle values for proposed satellite(s) and covered region. The Contractor shall develop and provide a detailed network architecture, configuration documentation, and transmission plans (these will be a post-award contract deliverable). See Section L.22.2 regarding submission of post-award contract deliverables.



- 3.2.8.6 The Contractor shall have a means of satellite communications electromagnetic interference (EMI) and radio frequency interference (RFI) identification, characterization, and geo-location. The Contractor will be required to analyze and report all EMI/RFI to the Government and may be asked to participate in exercises involving EMI/RFI.
  - 3.2.8.7 The Contractor will be required to meet Federal and DoD Information Assurance requirements for a Moderate Impact Information System. The Contractor's information assurance boundary is where the Contractor's services connect to the user terminals/equipment (i.e., includes satellite command encryption (ground and space); systems used in the Satellite Operations Centers (SOCs), Network Operations Centers (NOCs), and teleport).
- 3.2.9 Frequency Clearances and Approvals
- 3.2.9.1 The Contractor shall describe the frequency clearance requirements for satellite terminal(s) and explain how the requirements will be met to allow transmission in Host Nations. The Contractor shall support Host Nation Agreement (HNA) efforts in obtaining international approvals for radio spectrum operations under this contract in foreign nations. The Contractor shall ensure that international services provided under this contract may be provided as scheduled with the full approval of each affected host nation. Typical services may include, but are not limited to: host nation approvals, landing rights, operating agreements, site licenses, and frequency clearances.
  - 3.2.9.2 If additional host nation support becomes necessary during the life of the task order, contract line item numbers will be added to the order at the time they are required and shall be invoiced at pass-through rates. The Contractor may be required to provide HNAs for any nation covered within the limits defined in the coverage area, as needed by the user.
  - 3.2.9.3 Frequency Clearances shall be requested for the maximum time period allowed by the host nation, up to the life of the contract.
  - 3.2.9.4 The Contractor shall provide the Government with copies of regulatory licenses and approvals obtained to operate and use the spectrum for countries within the required service region.



3.2.9.5 Frequency clearance for the cellular system will be coordinated by the base spectrum manager. The Offer may assume that there is no local frequency interference that would impede the deployment of their proposed cellular network.

3.2.9.6 Wi-Fi hotspots are low power and typically not included in frequency approvals.

### 3.2.10 Network Monitoring

3.2.10.1 The Contractor shall staff a 24/7/365 Network Operations Center (NOC) as a focal point for network access, technical support, and troubleshooting. NOC staff shall be English-speaking and U.S. citizens.

3.2.10.2 The Contractor shall be required to coordinate with planners, managers and operators at U.S. Africa Command J-6 and the DoD Gateway where the Contractor connects to the network. The Contractor shall describe the processes and procedures for coordination with these organizations.

3.2.10.3 The Contractor shall provide status reporting on equipment status, network status, and network utilization. The Contractor shall create and manage trouble tickets. The Contractor shall produce monthly and annual resource utilization reports. These will be post-award contract deliverables. See Section L.22.2 regarding submission of post-award contract deliverables.

3.2.10.4 The Contractor shall establish, and provide the U.S. Government access to a web portal to present the health of the entire solution in a consolidated view using data from multiple sources. Access procedures for the web portal will be established after award. The Government requires the Contractor to provide the fault/incident/outage reports to the Base Communications Center and the DoD Gateway that the Contractor connects to. The Contractor is responsible for storing/maintaining fault/incident/outage reports and current network operational status on the Web Portal. Storage/archival requirement is 12 months of this data.

### 3.2.11 Additional Requirements



- 3.2.11.1 The Contractor shall provide all required software and firmware for all contractor furnished equipment. This will be a post-award contract deliverable. See Section L.22.2 regarding submission of post-award contract deliverables. The Contractor shall be responsible for system administration, maintaining back-ups/restoral capability, firewall management, and system security to include maintaining IA compliance of all Contractor provided network equipment.
- 3.2.11.2 The Contractor will provide an unpriced Bill of Materials (BOM) in Microsoft Excel that will include services, equipment, and labor (Attachment J-13).
- 3.2.11.3 The Contractor shall specify all site preparation requirements for Contractor provided terminals and/or shelters. The Government will coordinate for all site preparation (e.g. antenna pads, anchor points, power, grounding) prior to the arrival of Contractor equipment. The southern side of the Communications Center (building G) is clear of obstructions to allow for antenna placement.

## **4 Performance**

### **4.1 Locations**

Work is to be performed at Government facilities. Equipment shall be shipped to the USGO location in Algeria by Government transport. The Contractor shall deliver the equipment to a USGO CONUS location (specified after award) for subsequent shipment by the Government to Algeria. The Contractor is not required to provide shipping costs or details and will not need to identify local duties or taxes, Import or export duty fees on equipment. Technical support for operations and maintenance will be required at the USGO location in Algeria.

### **4.2 Period of Performance**

The period of performance for this Task Order will be five (5) years.

In the first six (6) months after contract award, the Contractor shall acquire, integrate, test, and deliver the requested capability.

## **5 Government Support**

Contractor support will be provided in accordance with the US Africa Command Reporting Instructions (<http://www.africom.mil/newsroom/documents>). The Government will provide pre-deployment preparation, food, lodging, emergency medical treatment, and other life support for contractors assigned to support the USGO location in Algeria.



## 5.1 Government Furnished Equipment/Facilities

The Government will provide contractor workspace in Maintenance Facility, Building (K) and Communications Center, Building (G).

The Government will provide space to install, manage, and maintain equipment in the Communications Center, Building (G) and for equipment storage in one of the Supply Warehouses, Building (I).

The Government will provide the Communications Security (COMSEC) equipment (e.g., Secure Terminal Equipment (STE) or Viper) for voice services and High Assurance Internet Protocol Encryptor (HAIBE) for SIPR services.

The Government will provide Point of Sale (POS) terminals. The POS terminals require an Ethernet connection to the public Internet.

The Government will provide a ground mounting location for the satellite antenna and a structure to house the remainder of the satellite equipment.

The Government will provide 110 VAC and 220 VAC for primary power for satellite components, to include baseband equipment and other network components.

The Government will provide all local systems administration and network management of the NIPR, SIPR and VoIP (DSN) networks.

The Government will provide all VoIP devices (Cisco Unified IP Phone 7961g employing G.729a audio compression codec).

## 6 Security

The Contractor shall articulate processes and procedures to address the security requirements for personnel assigned to the task order.

6.1 Contractor personnel will be required to have Government authorization, a U.S. SECRET clearance, a U.S. Government-issued Common Access Card, an approved Visitor Authorization Request to access the USGO facility in Ouargla, Algeria, and meet the applicable U.S. Africa Command Reporting Instructions requirements prior to travelling.

6.2 All Contractor personnel with access to key operational security information (e.g., unit locations, troop movement information) and key personnel (e.g., Program Manager) and all Contractor personnel performing system administration functions shall possess United States SECRET security clearances.



6.3 The Contractor shall ensure that all sensitive and classified information is safeguarded in accordance with the guidance provided in the CS3 DD254. Although the Contractor may be provided access to SECRET information in order to accomplish tasks, documents generated shall not include classified information unless directed by the Government and in accordance with classification guidelines and standards for documentation.

## **7 Deliverables**

### **7.1 Pre-Award Deliverables (Submitted with Contractor's Proposal)**

The following deliverables will be used to document the comprehensiveness of the Contractor's complex satellite solution for the Base Communications Network for Ouargla, Algeria.

- Satellite Link Budget
- Original Equipment Manufacturer (OEM) cellular base station specifications
- OEM Satellite Terminal/Equipment Technical Specifications
- OEM network equipment specifications to include Wi-Fi hot spot
- Base coverage map of cellular service, including in-building and overall coverage
- High-level Network Architecture diagram showing nodes and gateway locations
- Maps with clearly depicted and labeled contour lines, demonstrating coverage across the required locations. Contour lines should clearly demonstrate satellite gain to noise temperature ratio (G/T), effective isotropic radiated power (EIRP), and elevation angle values for proposed satellite(s) and covered region
- Bill of Materials
- Schedule

### **7.2 Post-Award Deliverables**

- Test Plan
- Logistics Support Plan
- HNA Frequency Clearances, Regulatory Licenses and Approvals
- As-built Drawings
- Software Configurations
- Status Reports
- All required software and firmware for Contractor furnished equipment
- Original Equipment Manufacturer (OEM) documentation for all of the Contractor installed equipment, reference manuals and engineering documents

## **8 Pricing**

The Contractor is not required to provide any pricing for this Task Order at this time.

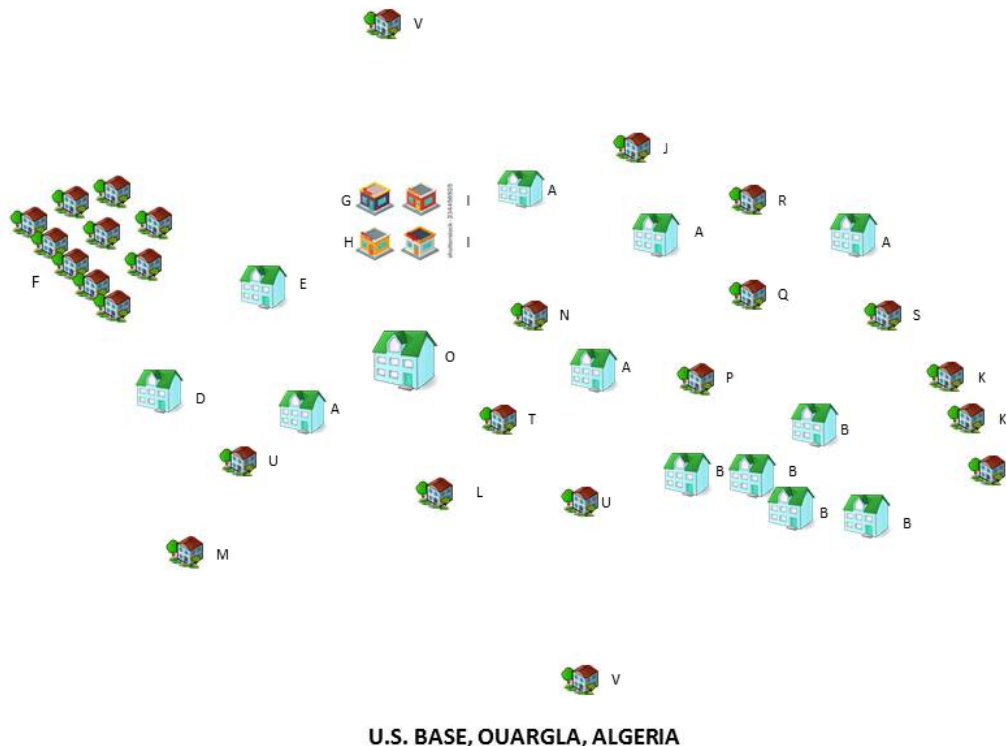




### 9 U.S, Base Ouargla, Algeria Diagram

The below diagram depicts the structures requiring services. There are 42 buildings, of which 40 are located within a 4 square mile area in the center of the base. The base is approximately (5 mi x 5 mi) 25 square miles. The base entrances are approximately 1.5 miles from the center of the base.

**Note: The diagram is not drawn to scale.**



(END OF SECTION J, ATTACHMENT J-12)