

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>			1. CONTRACT ID CODE J	PAGE OF PAGES 1   18
2. AMENDMENT/MODIFICATION NO. 0001	3. EFFECTIVE DATE 28-Aug-2007	4. REQUISITION/PURCHASE REQ. NO.		5. PROJECT NO.(If applicable)
6. ISSUED BY AFGHANISTAN ENGINEER DISTRICT US ARMY CORPS OF ENGINEERS KABUL APO AE 09356	CODE W917PM	7. ADMINISTERED BY (If other than item 6) <b>See Item 6</b>		
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code)		X	9A. AMENDMENT OF SOLICITATION NO. W917PM-07-R-0092	
		X	9B. DATED (SEE ITEM 11) 20-Aug-2007	
			10A. MOD. OF CONTRACT/ORDER NO.	
			10B. DATED (SEE ITEM 13)	
CODE	FACILITY CODE			
<b>11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS</b>				
<input checked="" type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input checked="" type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning <u>1</u> copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.				
12. ACCOUNTING AND APPROPRIATION DATA (If required)				
<b>13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.</b>				
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.				
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).				
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:				
D. OTHER (Specify type of modification and authority)				
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.				
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)  The purpose of this amendment is to incorporate a revised Statement of Work "Section 01010" into the solicitation. Changes have been marked with a vertical bar on the left margin.				
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.				
15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)		
		TEL:	EMAIL:	
15B. CONTRACTOR/OFFEROR  _____ (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA  BY _____ (Signature of Contracting Officer)		16C. DATE SIGNED  28-Aug-2007

## SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

## SECTION 00010 - SOLICITATION CONTRACT FORM

The Issued By organization below has been added:

AFGHANISTAN ENGINEER DISTRICT  
U.S. ARMY CORPS OF ENGINEERS, CMR 410 BOX  
APO 09096

## SECTION 00800 - SPECIAL CONTRACT REQUIREMENTS

The following have been added by full text:

REVISED SECTION 01010

**REVISED  
SECTION 01010****SCOPE OF WORK****1. GENERAL**

The project consists of the design and construction of two (2) new Border Guard Posts to support bed-down and unit garrison functions for approximately sixty (60) soldiers and three (3) officers at remote sites in Sayod and Ribhoz, Tajikistan (an option in the contract exists for the construction of one (1) additional Border Guard Post at the remote site in Kokul, Tajikistan). Total dimensions of the Border Guard Post sites to be developed are approximately 95 meters by 70 meters. Proposed construction sites are located in the country of Tajikistan and along the existing southern border between Tajikistan and the Takhar province in Afghanistan. Refer to appendices for approximate site locations, approximate dimensions, and reference drawings for potential site layouts.

Site layouts provided in appendices only serve as a reference for the contractor's design. The plans provided herein do not necessarily accurately depict facility dimensions, building locations and orientation, pavements, utilities, etc. as reflected in the Scope of Work. The contractor is responsible for designing and constructing the project based on the requirements outlined in the Scope of Work below.

The project is defined as the design, material, labor, furniture, and equipment to construct buildings, utilities, roads and pavements, and other infrastructure necessary to provide a fully-functioning and operational Border Guard Post. The work within this contract shall meet and be constructed in accordance with current U.S. design and International Building Codes (IBC), Life Safety Codes (NFPA-101), Force Protection and security standards.

**1.1 ENGLISH LANGUAGE REQUIREMENT**

All information shall be presented in English. The Contractor shall have a minimum of one English-speaking representative to communicate with the COR at all times when work is in progress.

**1.2 SUBMITTALS**

Submittals and a Submittal Register are required as specified in Section 01335 of the Basic Contract.

### 1.3 COST ESTIMATE

The contractor shall prepare a parametric construction cost estimate for AED Engineering data collection purposes. The contractor shall prepare a thorough, well-supported, estimate reflecting the final design features, construction schedule and conditions, and any construction phasing requirements. The cost estimate shall be submitted as part of the 35%, 65% and Final design submittals are required for this contract.

### 1.4 CQM TRAINING REQUIREMENT

Before project design and construction begin, the Contractor's Quality Control Manager is required to have completed the U.S. Army Corps of Engineers CQM course, or equivalent. The Construction Trades Training Center (CTTC) in Jalalabad, Afghanistan provides a course that satisfies the requirement. Courses are offered at regular intervals. For enrollment and course information contact CTTC at the following:

Mhd. Haris  
e-mail: [mharis@afghanreconstruction.org](mailto:mharis@afghanreconstruction.org)  
Telephone: 0700 08 0602

Pervaiz  
e-mail: [adpzmuj@yahoo.com](mailto:adpzmuj@yahoo.com)  
Telephone: 0700 61 3133

## 2. LOCATION

The sites are located in Tajikistan, along the Tajikistan and Afghanistan border, as shown on attached drawings. Contractor must verify and coordinate with Tajikistan Border Guards and government of exact location for the site boundaries.

Sayod	442S	WG 46906 61274	New 95 x 70 meter Compound
Ribhoz	442S	WG 57088 61536	New 95 x 70 meter Compound
Kokul	442S	WG 36118 22296	New 95 x 70 meter Compound

Approximate Longitude and latitude coordinates for the sites are as follows -

Sayod < 69.53136 longitude, 37.59735 latitude >  
Ribhoz < 69.64672 longitude, 37.59913 latitude >  
Kokul < 69.40725 longitude, 37.24650 latitude >

### 3. UNEXPLODED ORDNANCE (UXO)

#### 3.1 UXO REMOVAL AND CLEARANCE

The contractor is not responsible for the clearance or removal of mines and unexploded ordnance (UXO) from the site prior to the commencement of construction.

It is the responsibility of the Contractor to be aware of the risk of encountering UXO/mines and to take all actions necessary to assure a safe work area to perform the requirements of this contract. The Contractor assumes the risk of any and all personal injury, property damage or other liability arising out of or resulting from any Contractor action taken hereunder. The Contractor and its subcontractors may not handle, work with, move, transport, render safe, or disarm any UXO/mine, unless they have appropriate accreditations from the MAC.

If a UXO/mine is encountered during project construction, UXO/mine disposal shall be handled in accordance with Section 01015, Technical Requirements.

#### **4. SUMMARY OF WORK**

##### **4.1 CONTRACTOR REQUIREMENTS**

The contractor shall design and construct the facilities as a design-construct contract and shall be in accordance with the requirements stated in Section 01015: TECHNICAL REQUIREMENTS. Refer to attachment following this section for more specifics for required spaces. The design and construction work shall include but not be limited to that shown within attached table and described herein.

##### **4.1.1 GENERAL REQUIREMENTS FOR FACILITIES**

All requirements set forth in the Scope of Work, but not included in the Technical Requirements, shall be considered as set forth in both, and vice versa. Provide heating for all facilities unless otherwise stated in Section 01010 or 01015. Do not provide cooling for facilities unless otherwise stated in Section 01010 or 01015. All toilets shall be eastern style.

All standard construction amenities and details such as heating, lighting, site drainage, utility connections, etc. shall be implied as a design and construction requirement. Drawings referenced are contained in Section 01015 or Appendix A.

Concrete walkways are required to connect all buildings, facilities, and features such as parking lots, power plants, etc.

Due to the remote locations of these sites, contractor should consider the use of new pre-engineered, pre-fabricated, and/or modular structure for the primary and secondary operations as well as support functions as much as possible, unless otherwise stated herein. Contractor will not be allowed to setup overnight camps at the construction site and will be afforded limited staging areas.

The contractor shall also be required to acquire all permits and meet all registration requirements to perform design and construction activities in Tajikistan in accordance with local and national requirements. In addition, the contractor shall coordinate with the appropriate Tajikistan Border Guard representatives to ensure access to the secure sites, perform all necessary design and construction activities, etc.

The design and construction work shall include but not be limited to the following sub-paragraphs.

In general, this project consists of the following work activities (with references to the applicable paragraph sections):

##### **4.1.2 Base Bid**

- Design
- As-Built Drawings
- Mobilization and Demobilization
- Demolition, Grading, and Landscaping (4.5)
- Pavements (4.8)
  - Roads (Gravel)
  - Parking Areas (Gravel)
  - Walkways (Concrete)
  - Storm Drainage System
- Water System (4.3)

- Sanitary System (4.4)
- Electrical System (4.6)
  - Power Generation
  - Diesel Storage Tank
  - Electrical Distribution System
- Force Protection Measures (4.7)
  - Perimeter Wall
  - Exterior Lighting
  - Entry Control Points
  - Guard Towers
- Officer and Family Facilities
  - Officer Housing (4.12)
  - Officer Toilet/Latrine Building (4.13)
  - Officer Showers/Bathhouse Building (4.13)
  - Officer Laundry Building (4.13)
- Enlisted Facilities
  - Enlisted Barracks (4.10)
  - Enlisted Toilet/Latrine Building (4.11)
  - Enlisted Showers/Bathhouse Building (4.11)
  - Enlisted Laundry Building (4.11)
- Dining Facilities and Storage Areas
  - Dining Facility (DFAC) (4.14)
  - Summer Kitchen (4.14)
  - Food Storage Area (4.14)
  - Clothing Storage Area (4.17)
- Operations and Administration Building (4.15)
- Garage Bays and POL Storage
  - Vehicle Maintenance Facility (4.16)
  - POL Storage Area (4.16)
- Trash Collection Point (4.9)

#### **4.1.3 Option Items**

- 30 meter Observation Tower (4.7.5)
- Asphalt Roads and Parking (instead of Gravel) (4.8)
- Training Area
  - Parade Field with Bleachers (4.19)
- Recreation Area Facilities
  - Volleyball Court (4.18)
  - Fenced Obstacle and Outside Gym Area (4.18)
  - Officers' Children's Playground (4.18)
- Smoking Gazebos (4.20)

#### **4.2 MASTER PLANNING**

The Contractor shall prepare a site Master Plan based on information contained in the Request for Proposal. The development of the master plan will include participation in a design charrette that will be conducted at the Corps of Engineers Headquarters Office in Kabul. Concept drawings provided are only concepts; the Contractor must verify the space requirements and code compliance in accordance of section 1010 and section 1015 of this contract.

#### **4.3 WATER SYSTEM**

Design a potable water system, to include a ground well water source, water well pump, filtration and/or chlorination, hydro-pneumatic water storage tank, and underground pipe distribution system. Assume

that the well shall be constructed to deliver a minimum 345-414 kPa (50-60 psi) at a flow rate that is twice the required daily demand. The storage tanks shall provide capacity for a minimum of 100 percent of the required daily demand based on 155 L/capita/day (41 gal/capita/day). The storage tank and distribution system shall be designed to provide a minimum 276 kPa (40 psi) at ground level at all points in the systems. Minimum pressures of 207 kPa (30 psi), under peak domestic flow conditions, can be tolerated in small areas as long as all peak flow requirements can be satisfied. Maximum water pressures in distribution mains and service lines shall not exceed 517 kPa (75 psi) at ground elevation. Per customer, fire flow and irrigation systems shall not be included in design calculations. Provide an enclosed water well house. Provide water bibs outside of all building in this compound. Provide minimum 2 water bibs at barracks opposite sides of the barracks, 1 bib at each officer family housing unit, 2 bibs at vehicle maintenance garage, and 2 bibs at the DFAC.

#### **4.4 SANITARY SEWER SYSTEM**

Sanitary sewer collection and treatment system shall be designed and constructed by contractor. Sewer collection system shall consist of gravity sewer pipe and appurtenances such as manholes, cleanouts and building service connections. The gravity sewer collection system shall connect to the sewage treatment and effluent disposal system. Septic tank shall be underground and shall be located at proposed locations as shown. Sanitary sewer system shall be designed to accommodate future expansion. System capacity shall be calculated based on a hydraulic waste load that is equivalent to 80 percent of the Required Daily Demand for the water system as specified in these technical requirements, or as 33 gallons per capita per day (gpcd), whichever is greater. A geotechnical investigation of the proposed sewage treatment site is required and the contractor shall design the sewage treatment system to be compatible with site and soil conditions. Sewage treatment system shall be a traditional septic tank, absorption field, effluent disposal system, facultative pond system or other low maintenance, cost effective system. The sewage collection system and wastewater treatment system and effluent disposal shall be designed to accommodate the total facility compound population as specified in the Scope of Work *plus* 25% and verified by the contractor.

#### **4.5 DEMOLITION AND GRADING**

Minor site demolition is required prior to construction of new work. Overall site improvement activities at the site, including grading and landscaping, at the site is required and shall conform to requirements within references herein.

Native crushed stone 100 mm thick shall be placed around all buildings, from the building wall or building landscaping out 2m and all areas of anticipated foot or vehicle traffic to reduce erosion and to provide dust control.

Concrete walkways shall be installed between buildings and parking areas.

The Contractor shall design and provide landscaping for the compound. Provide bushes, outdoor benches, lighting, and gathering areas.

#### **4.6 SITE ELECTRICAL DISTRIBUTION SYSTEM**

**POWER SYSTEM:** The contractor shall design a power system for supply and distribution to all buildings to include a Generator Farm (Yard) including generators with fuel storage, and underground electrical distribution. All electrical design and installation shall meet NEC (NFPA 70) requirements. Electrical receptacles shall be provided as indicated in section in 01015, Technical Requirements. Conductors and circuits shall be sized for the specific loads. All wiring shall be run and pulled through conduits. The power plant shall include prime power generators, switchgear, and all appurtenances necessary to meet the electrical demand. Provide an enclosed a generator house.

**POWER:** Contractor shall connect to local power grid where available and use generators as backup system. If local power grid is not available, Contractor shall use generators as primary system. Transformers shall be size at 120% of demand load. Transformers shall be fully enclosed, out-door rated, dead-front type, complete from a single manufacturer. Contractor shall provide N+ 1 generators sized to provide backup power for 120% of the maximum calculated demand load. Single generator size shall not exceed 1 MW (1,000kW); in the event more than one generator is required to handle the entire load, the generators shall be provided with a synchronizer-switch, so that when total power demanded from one generator reaches 90% of the generators maximum, an additional generator shall automatically start and supplement the running generators, sharing the load between the generators equally.

**GENERATORS:** A minimum of two generators shall be sized to provide power for 120% of the maximum calculated demand load. Generators shall be provided with a synchronizer-switch, so that when total power demanded from one generator reaches 90% of the generators maximum, the second generator shall automatically start and supplement the first, sharing the load between the two generators equally. No backup beyond 120% of calculated load is required for this project.

**GENERATOR FUEL STORAGE:** The Contractor shall provide a design for low-profile fuel storage tanks that can accommodate a 30 day fuel supply based on the generators operating at 100% load but no less than 500 liters. The design will provide capability for fuel delivery from two locations – one from outside the wall surrounding the compound and one directly into the fuel tanks. The delivery point outside the compound wall shall be lockable and securable from tampering or sabotage. A road shall be provided leading to the outside fuel delivery point with a place for trucks to turn around.

Contractor shall design and all interior electrical systems as described in section 01015 Technical Requirements and shall design and install any required exterior lighting, as described in section 01015.

## **4.7 FORCE PROTECTION MEASURES**

The Contractor shall design and construct force protection measures to include masonry or stone walls, primary and secondary Entry Control Points (ECPs), observation tower, illumination system, and communication systems. The designer shall incorporate force protection setbacks for new facilities to maximum extent possible as permitted by size of the site and the requirements of the user. Force protection design shall be in accordance with Joint Security Directorate Antiterrorism/Force Protection Guide, March 2002.

### **4.7.1 Perimeter Wall**

Masonry or native stone walls shall be constructed around the perimeter of the site. The height of the walls shall measure at least 2.5 meters from the inside and outside grades. The wall shall be topped with barbed wire outriggers and single-coil concertina style razor wire. The ground grade shall slope away from the wall for at least 5 meters and shall be kept a minimum of 2.5 meters below the top of wall for a minimum distance of 10 meters. The wall shall be designed to keep all pedestrian and truck traffic outside the compound from having a visual line of site into the compound.

#### **4.7.1.1 Gates**

The gates shall be swing type. Hinged gates shall be a pair of 3.65 m wide x 2.4 m high leaves, constructed of steel plates, steel tube frame, and steel tube intermediate posts and rails. The design of the gates shall insure that it is dimensionally stable, square, true and planar. Gate leaves shall not rack or deflect when install on its hinges. Gates shall have a sufficient number of hinges; anchor mounted to the exterior masonry walls, to support each gate leaf. Provide a locking mechanism that holds the gates together when in the closed position as well as a drop bolt that engages a steel sleeve embedded in the graveled ground.

#### **4.7.2 Primary Entry Control Point**

The Primary ECP shall include a compacted gravel entrance, manually operated, and hinged steel gate; vehicle drop arm barrier; and jersey barriers placed in serpentine pattern to prevent high speed vehicle entry into compound. Provide a rejection lane after vehicle inspection and before entering the compound. Provide weapons clearing point inside the compound walls. Provide a steel pedestrian door at one of the main gate doors. Provide a roof covered checkpoint at the gate.

For telephone communications, provide rigid metal conduit with pull strings at each ECP from centralized Communications Room. Wiring for telecommunications system is not in the contract.

For loudspeaker and alarm communication requirements, see paragraph 4.7.6.

#### **4.7.3 Secondary Entry Control Point**

The Secondary ECP shall include a compacted gravel entrance, manually operated, and hinged steel gate; vehicle drop arm barriers; and passive anti-ram barriers. Provide a rejection lane after vehicle inspection and before entering the compound. Provide weapons clearing point inside the compound walls. Provide a steel pedestrian door at one of the main gate doors. Provide a roof covered checkpoint at the gate.

For telephone communications, provide rigid metal conduit with pull strings at each ECP from centralized Communications Room. Wiring for telecommunications system is not in the contract.

For loudspeaker and alarm communication requirements, see paragraph 4.7.6.

#### **4.7.4 Guard Towers**

The Contractor shall design and construct two (2) guard towers at opposite inside corners of the force protection walls. Guard tower shall be a minimum of 3m x 3m in size. The floor height shall be elevated as to allow the window sill to be 0.5m above the top of the wall. The guard tower shall be constructed of reinforced CMU walls with a metal door and horizontal sliding windows with metal window frame, 800mm high x 1000mm wide. Glazing for the windows shall be an 8mm thick laminated glass. Windows shall be located on all 4 sides to provide a 360 degree viewing area. Windows shall not be screened. The guard tower must meet force protection requirements. The tower shall be supported on reinforced concrete footings. Footings shall be located below the frost line or a minimum of 800 mm, whichever is greater. The roof shall have a gutter and downspout system to evacuate rain accumulation. The down spout shall run the entire height of the tower and drain at the finished ground level to a splash block. The stairs and platforms shall be constructed per OSHA Standards, with entry to the tower through a lockable security door. Guard Tower shall have heating and unit shall be able to maintain a minimum of 20 degrees C. Guard towers shall be provided with general lighting and shall be fitted with one 360-degree omni-directional searchlight. One weather-resistant duplex receptacle shall be provided as required for general use. The area in the immediate exterior vicinity of the guard tower shall be provided with an all weather non-slip surface and shall be graded to sufficiently drain away from structure. Guard Towers shall have a 360 degree concrete walk around balcony with concrete short walls and metal guard rails.

Illuminate the exterior of the compound. Position lights to provide overlapping coverage and to avoid illuminating guard positions. Do not use white lights inside guard towers. Use red, blue, or black lenses in interior guard tower lighting.

Force Protection measures also include the requirements of UFC 4-010-01, Design: Minimum DoD Antiterrorism Standards for Buildings, 8 Oct 2003 and UFC 4-010-02, DoD Minimum Antiterrorism Standoff Distances for Buildings, 8 Oct 2003 and Joint Security Directorate Antiterrorism/Force Protection Guide, March 2002.

For telephone communications, provide rigid metal conduit with pull strings at each Guard Tower from centralized Communications Room. Wiring for telecommunications system is not in the contract.

For loudspeaker and alarm communication requirements, see paragraph 4.7.6.

#### **4.7.5 Observation Tower**

The Contractor shall design and construct one (1) 30 Meter Observation Tower to support Border Guard operations. Final location shall be coordinated with designated Border Police representative but shall be assumed to be no more than 100 meters from Border Guard Post (BGP) for bidding purposes.

The tower must be 30.48 meter (100 feet) tall to the bottom of the enclosed observation platform. The enclosed observation room must be at a minimum 2 meter by 2 meter (6 ft by 6 ft). All height measurements shall be from the top of the footer with the highest elevation. The tower must have rest platforms located at the 1/3 and 2/3 points of the total height the tower. The tower ladder shall include a protective cage. Windows shall be located on all 4 sides to provide a 360 degree viewing area. Windows shall not be screened. The tower shall be supported on reinforced concrete footings. Footings shall be located below the frost line or a minimum of 800 mm, whichever is greater. The structure must withstand high velocity winds. The structure must be electrically grounded.

The Observation Room must be big enough to comfortably fit 2 seated personnel with equipment and at least an additional 3 observers. The equipment will include at a minimum 2 kilogram (64 ounce) binoculars on a tri-pod, a light machine gun, and communications equipment. The tower observation room must offer 360 degree observation, and must contain a shelf to place the binocular tripod on. The Observation Room must have clear-tempered or laminated windows that can be flipped open outwardly. There must also be external shutters that can be closed to protect the windows from environmental elements.

The Observation Room must have electrical power supplied and have subdued white and red lighting to facilitate night observation that can be switched on or off, and at least two standard 220V electrical outlets.

The Observation Room must be completely surrounded by an Observation Deck. This deck must contain a solid railing and screen assembly. This deck must be a minimum of three feet wide.

The Observation Tower Roof must cover both the Observation Room and the Observation Deck.

For telephone communications, provide rigid metal conduit with pull strings at each Observation Tower from centralized Communications Room. Wiring for telecommunications system is not in the contract.

For loudspeaker and alarm communication requirements, see paragraph 4.7.6.

#### **4.7.6 Loud Speaker and Alarm System**

Install Loud Speaker and Alarm System that can alert the entire compound via panic button from any guard tower or guard post station. Speaker and Alarm System shall be exterior grade components to withstand severe weather conditions of cold, heat, rain, sleet, and dust storms and to be completely understandable during these conditions from any point within the compound. All wires shall be installed in conduits.

### **4.8 ROAD NETWORK, SIDEWALK, AND PARKING**

The Contractor shall design and construct the entire road and parking network. The roads shall be designed to carry traffic of a 3 ton two-axle vehicle.

A complete site storm drainage system shall also be included.

The road layout shall provide access to entry control points, parking lots, vehicle maintenance facilities, fuel points, generator yard, sewage septic tank, and the trash collection point. Provide parking area for 6 vehicles inside the compound. Road design shall be designed per Section 01015, Technical Requirements.

Gravel roadways and concrete sidewalks are required and shall be designed and constructed based upon recommendations from geotechnical analysis as required herein. Design and provide a network of concrete sidewalks to connect the buildings. Sidewalks shall be wide enough to be used as fire-lane/ service roads.

The Contractor shall design and provide landscaping for the compound. Provide bushes, outdoor benches, lighting, and gathering areas.

#### **4.9 TRASH COLLECTION POINT**

The Contractor shall design, in a location convenient for easy removal, a trash collection point. It shall be located inside the compound walls. The trash point shall be a 1.8 m x 1.8 m concrete pad with a 1.8 meter tall chain link fence around the perimeter. One side shall have a 1.2 m wide gate entrance. Trash Point shall have a metal roof covering. The trash point should be located near the DFAC service area.

#### **4.10 ENLISTED BARRACKS**

The Contractor shall design, construct, and equip fully-furnished enlisted barracks facilities based on the total population and the areas shown below. Barracks for enlisted personnel shall be open bay and shall consist of bunk beds. Contractor shall also design and provide electrical room, janitor closet, storage room, mechanical room, stairways and common dayroom. Provide operable windows with laminated glazing and bug screen.

- Population: 60 enlisted personnel at minimum 6.7 NSM (net square meters) per person
- Day Room Area: 1 NSM per person

The Contractor shall incorporate the following special features into the barracks design and construction:

- 1) Commercial grade ceiling fans shall be designed for summer ventilation.
- 2) Clotheslines shall be installed behind each barracks, approximately 5m in length with 4 lines across spaced 410mm apart and of sufficient strength to prevent sagging when all of the lines are loaded.
- 3) Concrete stoops with boot scrapers shall be provided at all exterior doors.
- 4) Commercial grade electric heaters shall be utilized for heating purposes.
- 5) Each barracks shall have a dedicated storage area sized to 0.5 SM per person assigned to the barracks.
- 6) Fire protection is to be provided by fire extinguishers throughout the facility at easily accessible locations.
- 7.) The contractor's design shall include a Furnishings Schedule that shall include denote all items necessary to provide fully-furnished facilities as required herein. Quantities of furnishings to be provided by the Contractor shall ultimately be determined by the contractor's design to meet the above requirements. Furnishings provided shall be made of wood, not be constructed of plywood, and shall be in compliance with Corps of Engineering Guide Specifications.

Contractor-provided furnishings shall include, but not be limited to, the following items – (a) Bunk beds (1 per occupant), (b) Mattresses (1 per bed), (c) Personal lockers and/or Wardrobe cabinet (1 per occupant), (d) Office desks (as required), (e) Office chairs (as required), (f) Other (as determined by design).

For telephone communications, provide rigid metal conduit with pull strings to Day Room from centralized Communications Room. Wiring for telecommunications system is not in the contract.

#### **4.11 ENLISTED TOILET, SHOWER, AND LAUNDRY BUILDINGS**

The Contractor shall design and construct toilet/latrine, shower/bathhouse, and laundry buildings. Toilets, showers, and sinks shall be provided at a 1:15 ratio and based upon the entire male enlisted population. Latrines shall be eastern style units.

The Contractor shall incorporate the following special features into the buildings:

- 1) All sinks shall be trough type constructed of block and concrete with ceramic tile exterior and lining capable of withstanding abuse.
- 2) Shower stalls shall be no less than 2 m x 1.5 m and shall have a solid door on the outside.
- 3) Showers shall contain a commercial grade single mixing valve for hot and cold water mixing and a wall mounted shower head.
- 4) Electric hot water heaters shall be installed to provide hot water to the showers and sinks.
- 5) Electric cabinet heaters or electric unit heaters suitable for wet areas shall be utilized to provide heat in the facility.
- 6) The building shall be constructed with exhaust fans to ventilate steam to the outside environment and, where required, insulated piping to prevent freezing of water pipes in winter.
- 7) All water supply plumbing shall be exposed PVC pipes or galvanized metal.
- 8) Accessories shall be commercial grade to include but not limited to; toilet paper holders, soap dishes, curtains and curtain rods, robe hooks, mirrors, paper towel dispenser, metal shelf, and grab bars.
- 9) The laundry building should have washers, janitor/storage room and a folding table between the washers and dryers. Provide cloth line for drying outside the building.
- 10) Fire protection is to be provided by fire extinguishers throughout the facility at easily accessible locations.

#### **4.12 OFFICER QUARTERS AND HOUSING AREA FACILITIES**

The Contractor shall design, construct, and equip three (3) separate fully-furnished officer family quarters and two (2) shared covered garage spaces. The contractor's design shall include a Furnishings Schedule and an Equipment Schedule that shall include denote all items necessary to provide fully-furnished and fully-equipped facilities as required herein. Quantities of furnishings and equipment to be provided by the Contractor shall ultimately be determined by the contractor's design to meet the above requirements. Furnishings provided shall be made of wood, not be constructed of plywood, and shall be in compliance

with Corps of Engineering Guide Specifications. The design of each officer family quarters shall be based on the population and the areas shown in the following table.

- Population: One (1) O-5/O-6 Officer at 28.5 NSM (net square meters) per person
- Population: Three (3) additional officer family members at 9 NSM (net square meters) per person

The design of each officer family quarters shall include the following rooms at a minimum:

- Three (3) bedroom areas
- One (1) kitchen area
- One (1) common living area

The Contractor shall incorporate the following special features into the officer family quarters design and construction:

The Contractor shall incorporate the following special features into the barracks design and construction:

- 1) Split-pack Heating, Ventilation, and Air Conditioning (HVAC) units shall be provided within all officer family quarters. Commercial grade ceiling fans shall be designed and provided for additional general ventilation.
- 2) Clotheslines shall be installed behind family quarters, approximately 5m in length with 4 lines across spaced 410mm apart and of sufficient strength to prevent sagging when all of the lines are loaded.
- 3) Concrete stoops with boot scrapers shall be provided at all exterior doors.
- 4) Fire protection is to be provided by fire extinguishers throughout the facility at easily accessible locations.
- 5) Contractor shall furnish and install one (1) complete set of living room furniture, one (1) complete set of kitchen & dining room furniture, and three (3) complete sets of bedroom furniture per Officer Quarters. Contractor-provided bedroom furnishings shall include, but not be limited to, the following items – (a) Single double-occupant bed (Master Bedroom), (b) Single bed (1 per non-Master Bedroom), (c) Mattresses (1 per bed), (d) Wardrobe cabinet (1 per bedroom), (e) Desks (as required), (f) Chairs (as required), (g) Other (as determined by design).
- 6) Contractor shall furnish all kitchen appliances, but not limited to, the following items - (a) Electric Stove, (b) Oven, (c) Refrigerator, (d) Other (as determined by design).

For telephone communications, provide rigid metal conduit with pull strings and one (1) telephone outlet per officers' quarters from centralized Communications Room. Wiring for telecommunications system is not in the contract.

#### **4.13 OFFICERS TOILET, SHOWER, AND LAUNDRY BUILDINGS**

The Contractor shall design and construct toilet/latrine, shower/bathhouse, and laundry buildings. No less than four (4) toilets, four (4) showers, and four (4) sinks shall be provided based on accommodating a mixed population of females and males within the general officer family populations. Latrines shall be eastern style units.

The Contractor shall incorporate the following special features into the buildings:

- 1) All sinks shall be trough type constructed of block and concrete with ceramic tile exterior and lining capable of withstanding abuse.

- 2) Shower stalls shall be no less than 2 m x 1.5 m and shall have a solid door on the outside.
- 3) Showers shall contain a commercial grade single mixing valve for hot and cold water mixing and a wall mounted shower head.
- 4) Electric hot water heaters shall be installed to provide hot water to the showers and sinks.
- 5) Electric cabinet heaters or electric unit heaters suitable for wet areas shall be utilized to provide heat in the facility.
- 6) The building shall be constructed with exhaust fans to ventilate steam to the outside environment and, where required, insulated piping to prevent freezing of water pipes in winter.
- 7) All water supply plumbing shall be exposed PVC pipes or galvanized metal.
- 8) Accessories shall be commercial grade to include but not limited to; toilet paper holders, soap dishes, curtains and curtain rods, robe hooks, mirrors, paper towel dispenser, metal shelf, and grab bars.
- 9) The laundry building should have washers, janitor/storage room and a folding table between the washers and dryers. Provide cloth line for drying outside the building.
- 10) Fire protection is to be provided by fire extinguishers throughout the facility at easily accessible locations.

#### **4.14 DFAC, Dining Facility and Storage Yards**

The Contractor shall design, construct, and equip a fully-furnished Dining Facility (DFAC) suitable for serving 40 people at one seating. This facility shall provide cafeteria-style feeding of short order and regular style meals. Spaces include dining areas and kitchen facilities outfitted with propane-burning built-in cooking stoves in accordance with local practice. The kitchen shall be no less than 44 SM (480 SF) and dining area shall be no less than 60 SM (640 SF).

The contractor's design shall include a Furnishings Schedule and an Equipment Schedule that shall include denote all items necessary to provide fully-furnished and fully-equipped facilities as required herein. Quantities of furnishings and equipment to be provided by the Contractor shall ultimately be determined by the contractor's design to meet the above requirements. Dining room furnishings provided shall be made of wood, not be constructed of plywood, and shall be in compliance with Corps of Engineering Guide Specifications. Kitchen equipment shall be commercial grade and made of stainless steel.

Provide a separate 14 SM (160 SF) Summer Kitchen including wood cooking stove building near the DFAC kitchen.

The Contractor shall incorporate the following special features into the design and construction of the Dining Facility (DFAC):

- 1) The top of the cooking stove shall be a durable metal surface, not ceramic or tile.
- 2) Install a canopy over the exterior area adjacent to the stoves to provide an area protected from the weather for storing propane tanks for the stoves. The canopy shall be sized to cover the area adjacent to all of the stoves.
- 3) The ventilation system shall be capable of preventing smoke generated by cooking stoves from migrating into the dining area.

- 4) Floor trench drains shall be incorporated into the dining area with the floor sloped to drain.
- 5) Trench type floor drains shall be installed in the kitchen cooking and dishwashing areas.
- 6) Hand wash stations in the entry vestibule shall be provided. Trough type sinks shall be used.
- 7) Install a large wash basin with a low rim height designed for washing very large pots.
- 8) The Contractor shall provide refrigerators and freezers.
  - (8a) Contractor-provided furnishings for the Dining Facility (DFAC) shall include, but not be limited to, the following items – (a) Dining room tables (as required by design); (b) Dining room chairs (as required by design); (c) Office desks (as required by design); (d) Office chairs (as required by design); (e) Other (as determined by design).
  - (8b) Contractor shall furnish all Dining Facility (DFAC) kitchen appliances including, but not limited to, the following items - (a) Boiler, Electric Stove, (b) Oven, (c) Baking Stove, (d) Refrigerator and Freezer, (e) Other (as determined by design). All food preparation areas shall have stainless-steel surfaces as required for food preparation. Furnishings shall include, but not be limited to, the following items - (a) Stainless Steel shelving, (b) Table (Bread-Cutting); (c) Table (Vegetables and Meat), (d) Other (as determined by design).
- 9) Fire protection is to be provided by fire extinguishers throughout the facility at easily accessible locations.
- 10) Install commercial grade electric heaters to provide heat throughout the dining area.
- 11) Commercial grade ceiling fans shall be designed for summer ventilation.
- 12) The Contractor shall design and construct a chain-link fenced storage yard for food and provide two (2) storage containers for the storage of both dry goods and refrigerated items.

The Contractor shall incorporate the following special features into the design and construction of the Summer Kitchen:

- 1) Install an exterior canopy over the facility.
- 2) Fire protection is to be provided by fire extinguishers throughout the facility at easily accessible locations.

#### **4.15 OPERATIONS, SUPPORT, AND ADMINISTRATION BUILDING**

The Contractor shall design, construct, and equip a fully-furnished administrative facility for Border Guard Post Operations, Support, and Administration functions. Contractor may design the consolidated Operations, Support, and Administration Building as a separate, stand alone facility or incorporate it as part of a two-story facility with the Enlisted Barracks facility.

Office space allocations shall be made according to the following population and area table:

- Population: One (1) Commander, Two (2) senior officers and 40 ordinary soldiers
- General Area: 40% of Additional Space based on Total Population

Net Office Area (NSM) per Soldier with Break Down by Rank					
	Commander	Senior	High	Middle	Ordinary
Office Type	Private	Private	Semi-Private	Open Bay	Open bay
NSM*/person	18.5	13.9	9.3	7	7

\*NSM = net square meters

- 1) Only one Commander Office per building. In cases where the High Officer is the Commander, then use the Commander Office for space calculations.
- 2) The figures above are guidelines and can be tailored as necessary to facilitate design efficiencies.
- 3) Open office space is required for the ordinary ranking personnel.
- 4) As part of General Area calculation, provide conference rooms, file rooms, storage areas, break areas, and other special spaces in the building in addition to the net area.
- 5) Near the Commander's office provide a conference room equipped with a large conference table and room for seating of 20 personnel. The contractor's design shall include a Furnishings Schedule that shall include denote all items necessary to provide fully-furnished facilities as required herein. Quantities of furnishings to be provided by the Contractor shall ultimately be determined by the contractor's design to meet the above requirements. Furnishings provided shall be made of wood, not be constructed of plywood, and shall be in compliance with Corps of Engineering Guide Specifications.  
  
Contractor-provided furnishings shall include, but not be limited to, the following items – (a) Office desks (as required), (b) Office chairs (as required), (c) Conference Room Table - 20 personnel (1 per conference room), (d) Conference Room Table Chairs (as required), (e) General (Open Bay Area) tables (as required); (f) General (Open Bay Area) chairs (as required); (g) Other (as required).
- 6) Holding Cells. Provide one windowless room, 9.3 SM (100 square feet) in size. Each holding cell shall have solid walls and a sliding steel door. The door shall have a pass-through slot for passing of food trays with a hinged cover lockable from the outside. Built into the bottom of the door shall be a 0.3m wide by 0.5m tall door for passing a bucket in and out with a hinged cover lockable from the outside. Next to the holding cell install a 2.4m long bench securely bolted to the floor. Above the bench, install a steel bar for securing detainees by handcuffing them to the bar.
- 7) Armory-Weapons Storage Area: Provide a weapons storage area in the rear of this building. The area shall have three separate spaces with walls and a lockable door to each. 8 RPGs, 8 Machine Guns, and all long-arm weapons for each person assigned. Provide storage within the facility for all ammunition and ordnance. Provide wooden racks for storing long-arm weapons vertically. Racks shall not be furnished with locking bars. Provide an additional 9.3 SM (100 SF) room inside the arms room for secure storage of evidence and confiscated money or narcotics. This room shall have its own separate key. The facility shall be of solid reinforced CMU with no windows, high security door, and explosion-proof lighting.
- 8) Operations, Support, and Administration Building shall include a Utilities Room and Janitors Closet and the Centralized Communications Room for the Border Guard Post.

The Contractor shall incorporate the following special features into the Operations, Support, and Administration Building:

- 1) Concrete stoops with boot scraper shall be provided at all exterior doors.
- 2) Fire protection is to be provided by fire extinguishers throughout the facility at easily accessible locations.
- 3) Split-pack Heating, Ventilation, and Air Conditioning (HVAC) units shall be provided within all officer offices.
- 4) Commercial grade ceiling fans shall be designed for general ventilation in all other areas.

For telephone communications, provide rigid metal conduit with pull strings and one (1) telephone outlet per office area from the centralized Communications Room. Wiring for telecommunications system is not in the contract.

#### **4.16 VEHICLE MAINTENANCE FACILITY**

The Contractor shall design and construct a two bay maintenance garage. Each bay shall be approximately 4m x 9m. One bay shall be constructed with a pit to allow personnel to perform maintenance on the undercarriage of the vehicles. Provide heat, a yard hydrant, electrical power, lighting, and one commercial grade air compressor with hose and accessories.

Provide one additional office space, parts storage, and equipment storage.

A separate 15 SM POL (Petroleum, Oil, and Lubricants) building storage building shall also be provided.

The Contractor shall incorporate the following special features into the barracks design and construction:

- 1) Commercial grade ceiling fans shall be designed for summer ventilation.
- 2) Concrete stoops with boot scrapers shall be provided at all exterior doors.
- 3) Commercial grade electric heaters shall be utilized for heating purposes.
- 4) Fire protection is to be provided by fire extinguishers throughout the facility at easily accessible locations.

#### **4.17 GENERAL CLOTHING STORAGE**

The Contractor shall provide (2) connex container of **15 SM** each to store supplies, uniforms, spare parts, and other materials. Provide electrical lighting for the storage containers.

#### **4.18 RECREATION AND TRAINING AREAS**

The Contractor shall design, construct, and equip a 9m x 18m volleyball court with sand pit.

The Contractor shall design, construct, and equip a 19m x 21m fenced obstacle and outside gym training area.

The Contractor shall design, construct, and equip a shared children playground in the Officers Quarters and Housing Area.

#### **4.19 PARADE FIELD WITH STANDS**

The Contractor shall design and construct a parade field 15m x 25m with seating stands for 60 people. Provide a roof cover for the stands.

#### **4.20 SMOKING GAZEBO**

The Contractor shall design and construct two (2) **9 SM** covered gazebo. Provide sitting benches, cigarette but holder, and shelter from rain. Provide lighting and loud speaker system for the stands.

#### **4.21 HVAC, Heating Ventilation Air-Conditioning**

Environmental control of the facilities shall be achieved by HVAC equipment proposed by the contractor and approved by the U.S. Government. Cooling will be provided by ceiling fans and operable windows unless otherwise stated in RFP. See section 01015 for Scope of Work required.

#### **4.22 LIFE SAFETY**

Design and Construct circulation pathways and exit stairs in accordance with building code references herein. Fire sprinkler is not required in this scope. The facility shall comply with all other safety requirements as required within references.

#### **4.23 LIGHTING**

General lighting shall be provided as indicated and shall meet recommendations from IESNA for each building type and function within each building. Design and installation shall meet NEC 70 requirements.

Exterior lighting shall be high intensity discharge luminaires on 10 meter high minimum spun aluminum or galvanized steel poles. If to be installed on an existing installation, type of luminaries shall match existing predominant type within installation.

Searchlights shall be provided as indicated and shall be equivalent to the following:

- prison grade
- nickel reflectors (bullet resistant)
- 65 million candlepower (1000 watts)
- manual operation from below with one hand
- xenon lamp
- weatherproof design

#### **4.24 ELECTRICAL**

Design and construct a power system for supply and distribution to all to include generation with fuel storage, and underground electrical distribution. All electrical design and installation shall meet NEC (NFPA 70) requirements. Electrical receptacles shall be provided as indicated. Conductors and circuits shall be sized for the specific loads. Secondary voltage shall be 220/380v 50Hz.

#### **4.25 FENCING AND BARRICADES**

Fencing shall consist of the types shown or described herein. Barricades shall consist of either Hesco Bastion Container barriers or concrete type. Barricades shall be as shown. Refer Drawings for required types and locations. Barricades are not intended to resist a certain horizontal load and are not required to be permanently anchored to ground.

#### **4.26 FOUNDATION DESIGN**

Foundations, including sub-grade, shall be designed and constructed based on recommendations from geotechnical investigation required herein.

## 5. COMPLETION OF WORK

All work required under this contract shall be completed within **three hundred (300) calendar days** including government review time from Notice to Proceed for site work. Site work construction will not be allowed to proceed until de-mining is complete.

The Government may exercise option(s) within **one-hundred twenty (120) calendar days** after Notice to Proceed (NTP).

All work under this contract shall be completed and buildings ready for beneficial occupancy in accordance with the following schedule:

- Base Work Items to be completed no later than **300** calendar days after Contract award.
- Option Work Items to be completed no later than **420** calendar days after exercise/award of OPTION items.

## 6. SPARE PARTS

Refer to other sections herein for requirements.

## 7. REFERENCES

Refer to Section 01015 for required references.

-- End of Section --

(End of Summary of Changes)