



## **Annex 10**

# **Infrastructure Maintenance and Support Services**

## **STATEMENT OF WORK FOR INTEGRATED LOGISTIC SUPPORT AT KANDAHAR AIRFIELD AFGHANISTAN AIRPORT OF DEBARKATION**



**AMENDMENT RECORD**

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**APPROVAL RECORD**

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## **1. Scope**

- 1.1. This Annex to the Statement of Work (SOW) Main Body defines the Integrated Logistic Support (ILS) to be provided by the Contractor for Infrastructure Maintenance and Support Services for the North Atlantic Treaty Organization (NATO) at Kandahar Airfield (KAF) Airport of Debarkation (APOD), Afghanistan.
- 1.2. The Contractor shall provide the following services as part of the APOD Infrastructure Maintenance Services section of this contract:
  - 1.2.1. Base Camp Facilities Maintenance,
  - 1.2.2. Air Operations Infrastructure Maintenance,
  - 1.2.3. Force Protection Infrastructure Maintenance,
  - 1.2.4. Common Roads Maintenance, and
  - 1.2.5. Common Grounds Maintenance.
- 1.3. The Contractor shall provide the following services as part of the APOD Infrastructure Support Services section of this contract:
  - 1.3.1. Engineering Support,
  - 1.3.2. Work Order Management,
  - 1.3.3. Minor New Works, Construction and Renovation,
  - 1.3.4. Dust Control,
  - 1.3.5. Spill Remediation, and
  - 1.3.6. Bird Aircraft Strike Hazard Survey.
- 1.4. This Annex is applicable to all NATO-funded and Contractor-provided activities and services required to support Infrastructure Maintenance and Support Services operations at KAF.
- 1.5. These Infrastructure Maintenance and Support Services are required to cover the current and future configuration of KAF. The Contractor shall provide and sustain such specific services as prescribed within this schedule of requirements in order to maintain, to an acceptable standard, such services to all NATO and International Partner Forces operating at KAF.

## **2. Applicable Documents**

- 2.1. In addition to guidance in the SOW Main Body the Contractor shall provide services in accordance with applicable and relevant direction found in:

2.1.1. International Civil Aviation Organisation (ICAO) standards to include, but not limited to:

- 2.1.1.1. ICAO Annex 14, Aerodromes,
  - 2.1.1.1.1. Volume I, Aerodrome Design and Operations, and
  - 2.1.1.1.2. Volume II, Heliports.
- 2.1.1.2. ICAO Airport Services Manual (Doc 9137),
  - 2.1.1.2.1. Part 2, Pavement Surfaces Condition,
  - 2.1.1.2.2. Part 3, Bird Control and Reduction, and
  - 2.1.1.2.3. Part 9, Airport Maintenance Practices.

2.1.2. Standard NATO Agreements (STANAG) to include, but not limited to:

- 2.1.2.1. STANAG 2929 (Edition 4) - Airfield Damage Repair,
- 2.1.2.2. STANAG 3109 (Edition 5) - Symbol Marking of Aircraft Services and Safety Hazard Points,
- 2.1.2.3. STANAG 3158 (Edition 8) - Day Marking of Airfield Runways And Taxiways,
- 2.1.2.4. STANAG 3316 (Edition 10) - Airfield Lighting,
- 2.1.2.5. STANAG 3346 (Edition 6) - Marking and Lighting of Airfield Obstructions,
- 2.1.2.6. STANAG 3534 (Edition 6) - Airfield Lighting, Marking and Tone Down Systems for Non-Permanent / Deployed Operations,
- 2.1.2.7. STANAG 3634 (Edition 4) - Runway Friction and Braking Conditions,
- 2.1.2.8. STANAG 3711 (Edition 3) - Airfield Marking and Lighting Colour Standards,
- 2.1.2.9. STANAG 6001 NTG (Edition 3) - Language Proficiency Levels
- 2.1.2.10. STANAG 7131 - Aircraft Classification Number (CAN) / Pavement Classification (PCN) – AEP 46, and
- 2.1.2.11. STANAG 7181 - NATO Standard Methodology for Airfield Pavement Condition Index PCI Surveys AEP 56.

2.1.3. Military Standards (MIL-STD) to include, but not limited to:

2.1.3.1. MIL-STD-3007E Standard Practice for Unified Facilities Criteria and Unified Facilities Guide Specifications, Feb 2006.

2.1.4. Headquarters, Department of the Army, Department of the Air Force (USA) Technical Manuals (TM) and Air Force Manuals (AFM) to include, but not limited to:

2.1.4.1. TM5-620/NAVFAC Manual MO-111/AFP91-23 Facilities Engineering Maintenance and Repair of Architectural and Structural Elements of Buildings and Structures (May 1990), and

2.1.4.2. TM5-830-3/AFM 88-17, Chap. 3 Dust Control for Roads, Airfields and Adjacent Areas (30 September 1987).

2.1.5. United States Federal Aviation Authority (FAA) standards to include, but not limited to:

2.1.5.1. FAA (US) Circular Number 150/5320/2C Guidelines – Runway Friction Testing, and

2.1.5.2. FAA (US) Circular Number 150/5200/30A.

2.1.6. American Society for Testing and Materials (ASTM) Standards:

2.1.6.1. Standard E1551

2.1.7. HQ ISAF Standard Operating Procedures (SOP)

2.1.8. RC(S) SOPs

2.1.9. KAF SOPs

2.1.10. Material Safety Data Sheets (MSDS)

2.1.11. Islamic Republic of Afghanistan Legislation

2.1.12. Original Equipment Manufacturer (OEM) Technical and Service Manuals

2.2. Contracted support shall conform to guidance in the above-referenced standards but is not limited to these directives.

### **3. Command and Control**

3.1. As detailed in the SOW Main Body and, additionally, as identified within this Annex.

- 3.2. Overall Control Authority is delegated to the Military Commander of Kandahar Airfield (COMKAF).
- 3.3. The Contractor is responsible to COMKAF, through NAMSA, for all operational aspects while providing services at KAF.
- 3.4. NAMSA is the contracting authority and shall provide contract oversight and execution responsibility.
- 3.5. Daily operational control authority for Infrastructure Maintenance and Support Services resides with COMKAF CJ4 Engineering reporting to the COMKAF Deputy Commander for Support (DCOM SPT).
- 3.6. Engineering control and authority resides with the COMKAF Chief / Base Engineer.
- 3.7. All APOD Infrastructure Maintenance and Support Services are to be provided in coordination with and under the direction of COMKAF Chief / Base Engineer and NAMSA unless otherwise specified in this Annex to the SOW Main Body.
- 3.8. In the absence of the primary COMKAF POCs established within this Annex the command and control authority shall reside with alternative COMKAF-designated representatives as detailed in the Main Body SOW.
- 3.9. Operational Authority is exercised by the On-Scene-Commander during actual emergency response.
- 3.10. Situational control and authority shall reside with the Senior Contractor Engineering Authority on-scene prior to arrival of the military On-Scene-Commander.

#### **4. Planning Factors, Constraints**

- 4.1. Kandahar Airfield (International Code allocation OAKN) currently encompasses an area of approximately 16 square kilometres.
  - 4.1.1. The KAF perimeter fence-line encompasses a distance of approximately 19.5 km (Deep South included),
  - 4.1.2. The NATO Air Operating Surfaces area encompasses an area of approximately 1,100,000 m<sup>2</sup>, of both asphalt and concrete surfaces,
  - 4.1.3. The NATO Road Network encompasses a distance of approximately 11.5 km, of asphalt, 30 km of aggregate / gravel surfaces. The KAF road network is expected to increase with many surfaces being paved/asphalted,

- 4.1.4. For the total square meters of floor space for NATO Base Camp Facilities refer to attached 'NATO Infrastructure Register' for a comprehensive and detailed description of each facility.
- 4.2. Facilities and infrastructure may be of a military, civilian or mixed-use nature / type and purpose / function.
- 4.3. Significant multi-national military and civilian infrastructure construction and expansion projects are ongoing at KAF. In addition, the total real estate footprint of KAF is expanding.
- 4.4. The Contractor shall be prepared to alter maintenance routines and scheduling in order to prevent disruption of various events (e.g. Ramp Ceremonies).
- 4.5. The current KAF APOD Infrastructure Maintenance and Support Service facilities configuration is:
  - 4.5.1. One Engineering Support office located on Screaming Eagle Blvd across from the TLS / COMKAF HQ building,
  - 4.5.2. One Facilities Maintenance office and workshop compound located on All American Blvd adjacent to the Pooh Pond and Sewage Treatment Plant,
  - 4.5.3. One AOS Maintenance and Roads and Grounds office located within the Facilities Maintenance compound,
  - 4.5.4. One Roads and Grounds gravel laydown yard located on Motorpool Road adjacent to the Waste Yard, and
  - 4.5.5. One Airfield Lighting and Sweeping yard, office and storage lay-down area located behind India Ramp and beside Camp Roberts.
- 4.6. The Contractor shall establish emergency support services in such a manner as to provide a recall capability to extend support in response to crisis.
- 4.7. The Contractor shall define standard day-to-day capabilities in number of events supportable, teams dispatched, etc. and ability, conditions, and terms for expanding services in response to catastrophic events.
- 4.8. The Contractor should take into consideration the effects that the harsh climatic conditions at KAF have on the APOD Infrastructure Maintenance areas of responsibility. Additional and / or more frequent maintenance may be required to keep areas and equipment in a serviceable and fully operational state.
- 4.9. For new and future infrastructure which the Contractor will assume maintenance responsibility for of under the conditions of this Annex the Contractor shall partake in, and assist with, all handover / takeover



procedures and processes as directed by COMKAF Chief / Base Engineer and NAMSA. Such responsibilities within the handover / takeover process may include an informal walk-through of a facility or a subsequent and more detailed inspection. In all instances the Contractor shall work in close coordination with COMKAF Chief / Base Engineer, NAMSA, the construction contractor and other parties, as directed, in order to ensure a timely, efficient and well documented handover / takeover process and the subsequent implementation of a maintenance regime for the new infrastructure.

- 4.10. Unless otherwise specified all contracted services specified in this Annex to the Main Body SOW will be performed in coordination with and under the direction of COMKAF Chief / Base Engineer, NAMSA and other authorities as directed by NAMSA.

#### Support Tiers

- 4.11. The Contractor shall provide a plan for tiered levels of Infrastructure Maintenance requirements based on square meters (m2) of specific infrastructure areas with the current requirements as well projected expansion and contraction of these requirements.
- 4.12. Each tier level shall be considered inclusive of all Infrastructure Maintenance requirements specified in this Annex.
- 4.13. Anticipated Support Tiers required for Infrastructure Maintenance are:

### **Tier A: Base Camp Facilities Maintenance**

#### **A-1: Facilities**

<b>Tier Level</b>	<b>Base Camp Facilities (m2)</b>	<b>Remarks</b>
<b>1</b>	<b>&lt; 40,000</b>	
<b>2</b>	<b>40,000 - 60,000</b>	
<b>3</b>	<b>60,000 - 80,000</b>	
<b>4</b>	<b>80,000 - 100,000</b>	
<b>5</b>	<b>&gt; 100,000</b>	

## Tier B: Air Operations Infrastructure Maintenance

### B-1: AOS

Tier Level	AOS (m2)	Remarks
1	< 750,000	
2	750,000 - 1,100,000	Current NATO Requirement
3	1,100,000 - 1,400,000	
4	1,400,000 - 1,700,000	
5	1,700,000 - 2,000,000	
6	> 2,000,000	

## Tier C: Roads Maintenance

### C-1: Asphalt Roads

Tier Level	Asphalt Roads Surfaces (m2)	Remarks
1	< 100,000	Current situation
2	100,000 - 130,000	
3	130,000 - 170,000	
4	170,000 - 210,000	CUR 400 fully executed with asphalt
5	210,000 - 250,000	+ Deep South roads
6	> 250,000	

### C-2: Gravel Roads

Tier Level	Gravel Roads Surfaces (m2)	Remarks
1	< 100,000	
2	100,000 - 160,000	Only APOD functions roads + perimeter
3	160,000 - 200,000	
4	200,000 - 240,000	
5	240,000 - 280,000	
6	280,000 - 320,000	
7	> 320,000	

### C-3: Bituminous Roads

Tier Level	Bituminous Roads Surfaces (m2)	Remarks
1	< 40,000	
2	40,000 - 80,000	
3	80,000 - 120,000	

4	120,000 - 160,000	
5	160,000 - 200,000	
6	200,000 - 240,000	
7	> 240,000	

**Notes:**

For bidding purposes the Contractor shall develop and provide number of personnel and equipment needed to support Tier levels. The Tiers above will be considered guidelines and are necessary to establish a level and equitable basis by which each Contractor will provide their Technical Proposals. However, Contractors are also expected to make improvements / recommendations of how to most effectively establish support Tiers for Infrastructure Maintenance.

## 5. Description of the Services Required

### 5.1. APOD Infrastructure Maintenance and Support Services

#### General

5.1.1. As detailed in the SOW Main Body and, additionally, as identified within this Annex.

5.1.2. The Contractor shall furnish all labour, management, supervision, tools, materials, equipment, incidental engineering, and transportation necessary for the maintenance, repair and performance of KAF APOD Infrastructure and related systems and equipment. The work includes the performance of Preventive Maintenance, Corrective / Response Maintenance, service call work, recurring work, and programmed and un-programmed maintenance services and minor new construction work.

5.1.3. The Contractor shall maintain the operational capability and prolong the useable life of all assigned infrastructure as well as related technical equipment, systems and other related assets. The Contractor shall provide adequate care of infrastructure in order to avoid expensive and untimely repair or replacement and to eliminate hazards to life and property. In doing this the Contractor shall maintain the highest standards of workmanship.

5.1.4. The Contractor shall accomplish infrastructure maintenance activities through cost-effective Preventive and Corrective / Response Maintenance in order to achieve the highest degree of availability and serviceability so that all assigned infrastructure maintenance areas can be effectively used for their intended purpose. At a minimum, this will be achieved through:

5.1.4.1. The development and implementation of a comprehensive KAF APOD Infrastructure Maintenance Plan and subsequent scheduling of maintenance

services for each area of infrastructure maintenance responsibility,

- 5.1.4.2. The provision of a Preventive Maintenance capability for each infrastructure maintenance area,
- 5.1.4.3. The provision of a Corrective / Response Maintenance capability for each infrastructure maintenance area,
- 5.1.4.4. The Contractor shall conduct routine and recurring scheduled inspections of infrastructure and equipment as per the Original Equipment Manufacturers' (OEM) recommendations and instructions and as directed by COMKAF Chief / Base Engineer and NAMSA.
  - 5.1.4.4.1. Where conditions or situations dictate a more stringent inspection procedure and frequency the Contractor shall adjust their maintenance plans and schedules accordingly in order to achieve a more suitable and proactive method of preventive maintenance.
- 5.1.4.5. The coordination of maintenance efforts with COMKAF Chief / Base Engineer, NAMSA and, as necessary, tenants / users who will be affected by maintenance works,
- 5.1.4.6. The continual inspection of assigned infrastructure in order to identify maintenance requirements and assess the condition of each area,
- 5.1.4.7. The provision of an adequate Work Order Reception and Dispatch services for KAF Core Hours and After Hours requirements,
- 5.1.4.8. The provision of an adequate work force capable of professionally fulfilling requirements specified in this Annex,
- 5.1.4.9. The management of Work Orders and the fulfilment of them in a timely manner as specified in the classification timeframes described in this Annex,
- 5.1.4.10. The maintenance, control, safe-keeping and stock-keeping of spare parts required for the effective maintenance of assigned infrastructure areas, and
- 5.1.4.11. The timely and accurate provisioning of invoices for services rendered.

- 5.1.5. The Contractor will not modify or otherwise change in configuration the assigned infrastructure or equipment to be serviced in the performance of this contract if not specifically authorized by COMKAF Chief / Base Engineer or NAMSA. The maintenance services are to be performed either in the Contractor's workshop facilities or at equipment location.
- 5.1.6. The Contractor shall support emergency repairs to infrastructure conducted by Military Engineers and Personnel under increased threat and adverse conditions through the provision of manpower, equipment and materials.

#### NATO APOD Infrastructure Maintenance Survey

- 5.1.7. The Contractor shall, prior to start of services, along with COMKAF Chief / Base Engineer, or designated representative, and NAMSA APOD Infrastructure Technical Officer provide an initial survey and inspection of all NATO KAF APOD Infrastructure in order to gain a full appreciation of the scope of work required and to identify current problems and potential Corrective and Response Maintenance requirements as well as recurring Preventive Maintenance requirements. It is intended that the survey and inspection will assist the Contractor in developing a comprehensive and effective Infrastructure Maintenance Plan for all areas of responsibility.

#### Preventive, Corrective and Response Maintenance

- 5.1.8. The Contractor shall perform Preventive, Corrective and Response Maintenance as per the agreed-upon plans and schedules.
  - 5.1.8.1. "Preventive Maintenance" (PM) will be performed in order to provide the care, servicing, maintenance and repair of equipment and facilities to satisfactory operating condition by providing for systematic and cyclic inspection, detection, and correction of incipient failures and minor deficiencies either before they occur or before they develop into major defects. PM also includes the reporting of deficiencies beyond the scope of PM. The Contractor shall also refer to maintenance intervals as specified or recommended in OEM technical and service manuals.
  - 5.1.8.2. "Corrective Maintenance" will be performed in response to a Work Order or other maintenance request in order to correct a failure or deficiency of equipment or facility.
  - 5.1.8.3. "Response Maintenance" will be performed for unscheduled / after-hours maintenance requests and

in response to a critical call-out request for maintenance or repair (e.g. "Emergency" or "Urgent" repair").

- 5.1.9. The Contractor shall perform Corrective / Response Maintenance, as necessary, for all areas of infrastructure maintenance in order to restore defective infrastructure, facilities, equipment or items to specified conditions for its designated purposes by repairing, reprocessing or replacing of parts and materials which are deteriorated by wear and tear or other miscellaneous influences.
- 5.1.10. The Contractor shall maintain an electronic Maintenance Log Book for each infrastructure area which will be updated every time a Preventive, Corrective or Response Maintenance action is performed in order to serve as a record for all actions performed over the life of the facilities, infrastructure and associated equipment and systems.
- 5.1.11. The Contractor shall provide an after-hours Emergency Corrective / Response Maintenance Reception and 'Call-Out' capability.
- 5.1.12. The Contractor shall post 24-hour Emergency Reception 'Call-Out' information in English in visible public areas (i.e. entrance areas and hallways) of all facilities as determined by COMKAF Chief / Base Engineer and NAMSA to ensure occupants have access to clear procedures for notifying the Contractor in instances where emergency maintenance and / or repairs are required.
- 5.1.13. The Contractor shall coordinate and receive pricing approval for all non-emergency repair actions through NAMSA prior to initiating repair actions.
- 5.1.14. The Contractor is responsible to develop a Preventive Maintenance Plan (PMP) for all areas of infrastructure maintenance. These PMPs are to be approved by COMKAF Chief / Base Engineer and NAMSA prior to Start of Services.
- 5.1.15. The PMPs will outline critical, required, and discretionary Preventive Maintenance and their associated frequencies, complete with annual labour and materials estimates.
- 5.1.16. The Contractor shall perform Preventive Maintenance inspection and services on a variety of equipment and systems according to the Preventive Maintenance Plans for each infrastructure area and to the Original Equipment Manufacturer's (OEM) recommendations as stipulated in the associated technical manuals or, if those are not available, according to good industry practice as applied to the same type or similar type of equipment or systems.
- 5.1.17. At a minimum, Preventive Maintenance will consist of inspection, cleaning, painting, weatherproofing, rust and corrosion treatment,

lubrication, oil changes, adjustment, calibration, and minor parts replacements (filters, belts, hoses, etc.) as required in order to minimize malfunction, breakdown, and deterioration of the equipment.

- 5.1.18. The Contractor will replace irreparable equipment with a common family of system / manufacturer in order to standardize future maintenance requirements.
- 5.1.19. All actual labour and material costs associated with Preventive, Corrective and Response Maintenance services will be recorded.

#### Coordination of Work Efforts

- 5.1.20. The Contractor shall coordinate all infrastructure maintenance tasks with the appropriate offices as well affected tenants / users when conducting operations and / or maintenance that will require access to secured areas including living accommodations. Additionally, the Contractor is to minimize the disruptions to users when required to take utilities and / or services offline during scheduled maintenance and to provide affected users with estimated time of completion of non-scheduled work. The Contractor must ensure planned outages of utilities are approved by COMKAF Chief / Base Engineer and NAMSA prior to beginning work.
- 5.1.21. Due to the operational nature of KAF the Residents of Accommodation Buildings work varying schedules and shifts during 24 hours-a-day, 7 days-a-week period. It is imperative that maintenance of Accommodation Buildings preserves the safety, quality, habitability and comfort of the buildings with minimal disturbance to Residents who may be sleeping at irregular (e.g. daytime) hours due to the varying work schedules and shifts. Preventive and Corrective Maintenance will be initiated in order to minimize the reduction in bed space due to the unavailability of rooms for maintenance reasons. The Contractor will be required to obtain entry keys and coordinate / schedule maintenance tasks for individual rooms through the Billeting Office.
- 5.1.22. The Contractor shall coordinate with the Supply Manager to develop and execute an effective and efficient maintenance plan to support all APOD Infrastructure Maintenance tasks.
- 5.1.23. Use of contracted APOD Services for Supply, Equipment and Vehicle Maintenance does not relieve the Infrastructure Maintenance and Support Services Contractor of the responsibility to provide oversight and tracking of supply, equipment and vehicle maintenance issues. Failure of contractual obligations for supply, equipment and vehicle maintenance that impacts the Infrastructure Maintenance and Support Services capability

requirement within this SOW Annex must be properly and immediately addressed with NAMSA or service degradation shall reflect negatively upon this contract area. It is also imperative that the Infrastructure Maintenance and Support Services Contractor develop a positive and productive working relationship with other contractors providing support.

## **APOD Infrastructure Maintenance Services**

### **5.2. Base Camp Facilities Maintenance**

#### **Maintenance Areas and Responsibilities**

5.2.1. The Contractor shall provide Preventive and Corrective Maintenance for all areas of NATO Base Camp Facilities structures and associated hardware (less non-facility related contents) to include, but not limited to, all permanent and temporary facilities, structures and buildings, such as:

- 5.2.1.1. Accommodation facilities,
- 5.2.1.2. Headquarters and office buildings,
- 5.2.1.3. Miscellaneous operational facilities,
- 5.2.1.4. Airfield and supporting equipment (e.g. NAVAIDS) facilities,
- 5.2.1.5. Workshops,
- 5.2.1.6. Ablution units,
- 5.2.1.7. Medical facilities,

**Note:** The NATO Role 3 Medical Treatment Facility (MTF) is specifically excluded from the maintenance scope and responsibilities described within this Annex to the Main Body SOW.

- 5.2.1.8. Air Traffic Control Towers (ATCT),
- 5.2.1.9. Passenger Reception Terminals (PRT),
- 5.2.1.10. Aircraft hangers and related air operations facilities,
- 5.2.1.11. Reception Staging and Onward Movement and Integration (RSOM / RSOI) structures such as Re-locatable Buildings (RLB),
- 5.2.1.12. Tented structures of various purposes,



- 5.2.1.13. Warehousing and storage facilities, to include, ISO / sea-containers / refrigerated units (“reefers”),
- 5.2.1.14. Communication nodes,
- 5.2.1.15. Entry Control Point (ECP) facilities,
- 5.2.1.16. Any other buildings, structures and facilities as directed by COMKAF Chief / Base Engineer and NAMSA.
- 5.2.2. The facilities, structures and buildings may be composed of, or a mixture of, wood, metal, canvas / fabric (to include rubberized / thermally treated types) and masonry.
- 5.2.3. The age of the facilities varies but is generally between one and ten years in age.
- 5.2.4. Many facilities are “soft” in that they are not equipped or constructed with Force Protection protective features. Others are “hardened” with Force Protection counter-measures and protective features.
- 5.2.5. The associated areas of maintenance for all facilities, structures, systems, and equipment requiring routine maintenance and / or repair include, but are not limited to, the following:
  - 5.2.5.1. All aspects of electrical systems to include wiring, panels, fuses, breakers and earthing / grounding equipment and features to include Low Voltage (LV) connections from main transformer and main and secondary distribution panels regardless of voltage (110v / 220v) etc,  
**Note:** All LV electrical work requiring access to High Voltage (HV) prime power transformers and / or generators will need to be coordinated with the KAF prime power / generator contractor via NAMSA in order to gain access to secured access panels etc.
  - 5.2.5.2. All aspects of interior and exterior lighting systems to include replacement bulbs and fluorescent tubing, emergency lighting, grounds lighting, etc,
  - 5.2.5.3. All aspects of climatic features such as ceiling and exhaust fans, furnaces and heating, ventilation and air conditioning (HVAC) systems to include individual units and subordinate compressors, split units, remote controls, drainage lines as well as refrigeration systems, etc,

- 5.2.5.4. All aspects of plumbing and sewerage systems to include pumps, fittings, valves, seals, joints, piping, filters, etc,
- 5.2.5.5. All external plumbing and sewerage systems up to the connection point of the KAF water distribution and sewerage collection mains,
- 5.2.5.6. All aspects of water heaters, boilers and related control panels, etc,
- 5.2.5.7. All aspects of restroom facilities to include toilets, urinals, showers, sinks, ventilation, partition walls and tiling etc,
- 5.2.5.8. All aspects of interior and exterior facility structure to include doors, windows, walls, floors, trim and decorative features, ceilings (including drop / hanging ceilings), tiles, stairs, roofing, sheet metal and plywood surfaces, force protection features, drainage pipes, foundations, spill containment areas for generators etc,
- 5.2.5.9. All aspects of industrial hanging and rolling doors, such as those found in aircraft hangars and warehouses, and related systems associated with the operation of these doors, to include the regular cleaning of the door tracks and lubrication of runners to ensure smooth and unobstructed movement of the doors,
- 5.2.5.10. All aspects of fire and intrusion alarm control panels, sensors and fire suppression systems, etc,  
**Note:** All fire-system testing will need to be coordinated with the KAF Fire Department via NAMSA. Fire extinguishers shall be maintained by a separate contractor.
- 5.2.5.11. All aspects of miscellaneous fixed appliances and electro-mechanical devices (e.g. insectocutors, automatic door openers etc, pulleys and winches),
- 5.2.5.12. All aspects of fuel tanks and related spill containment features and bunding,
- 5.2.5.13. All aspects of associated flagpoles, railings, fencing, gates, barriers, signage and related features,
- 5.2.5.14. Any other miscellaneous areas / systems as specified by COMKAF Chief / Base Engineer and NAMSA.

#### Plans, Inspections and Reports

- 5.2.6. The Contractor shall develop and provide a Base Camp Facilities Preventive Maintenance Plan (FMP) containing a detailed schedule of recurring (e.g. daily, weekly, monthly, quarterly, annually etc.) Preventive Maintenance and required Corrective Maintenance and repairs as per OEM recommendations in order to provide a proactive method of keeping the NATO Base Camp Facilities useable, safe and operational at all times. The Contractor shall develop the PMP during mobilisation. A review of the FMP by COMKAF Chief / Base Engineer and NAMSA will take place prior to Start of Services.

### 5.3. **Air Operations Infrastructure Maintenance**

#### **Maintenance Areas and Responsibilities**

- 5.3.1. The Contractor shall provide maintenance for all areas of NATO Air Operations Infrastructure to include, but not limited to, the following:
- 5.3.1.1. Air Operating Surfaces (AOS) Maintenance,
  - 5.3.1.2. AOS Cleaning,
  - 5.3.1.3. Airfield Ground Lighting (AGL) Maintenance,
  - 5.3.1.4. Any other miscellaneous areas and systems as specified by COMKAF Chief / Base Engineer and NAMSA.
- 5.3.2. The Contractor shall, at a minimum, coordinate all Airfield Operations Infrastructure maintenance activities with COMKAF Chief / Base Engineer, COMKAF Flight Safety, Base Operations Center (BOC), Airfield Manager and NAMSA.

#### **General Plans, Inspections and Reports**

- 5.3.3. The Contractor shall develop and implement an Airfield Operations Infrastructure Preventive Maintenance Plan (PMP) which describes the procedures, methods and schedule for maintaining the KAF Airfield Operations Infrastructure in a fully operational and serviceable state.
- 5.3.4. The Contractor shall, in conjunction with Air Traffic Management (ATM), inspect the Airfield Lighting prior to the start of flying operations / schedule each day to certify that the Lighting is operational for all areas (in conjunction with the AOS O&M Contractor personnel).
- 5.3.5. The Contractor shall inspect and produce a report of the NATO Air Operations Infrastructure every six months in order to assess the overall condition of the airfield and make recommendations for

improvements and identify additional works required to maintain full operational capability and serviceability.

### 5.3.6. **Airfield Operating Surface (AOS) Maintenance**

#### Maintenance Areas and Responsibilities

##### AOS Maintenance

5.3.6.1. The Contractor shall maintain all permanent and temporary AOS and associated infrastructure to include, but not limited to:

- 5.3.6.1.1. Ramps and parking areas,
- 5.3.6.1.2. Throats,
- 5.3.6.1.3. Aprons,
- 5.3.6.1.4. Taxiways,
- 5.3.6.1.5. Runways,
- 5.3.6.1.6. Emergency Landing Strips (ELS),
- 5.3.6.1.7. Cargo and storage yards,
- 5.3.6.1.8. Internal airfield-specific roads, and
- 5.3.6.1.9. Any other miscellaneous areas as specified by COMKAF Chief / Base Engineer and NAMSA.

5.3.6.2. The Contractor shall repair and restore of all AOS surface types to include concrete, asphalt, metal, AM2 matting, gravel etc,

5.3.6.3. The Contractor shall repair all cracks, surface breaks, heaves, settlements, joint spalls, surface scaling, joint seals etc. for all surface types.

5.3.6.4. The Contractor shall maintain and ensure proper surface drainage for all surface types. Water-pooling shall be minimized in order to eliminate the risk of aquaplaning, and to eliminate the risk of water damage to the foundation levels of the AOS.

5.3.6.5. The Contractor shall maintain all airfield-specific equipment infrastructure such as NAVAID support pedestals and radar towers support structures to include the refurbishment and repainting of these structures.

AOS Markings and Airfield Signs

5.3.6.6. The Contractor shall paint, re-touch and re-furbish all lines, markings, signs and surface indications for all surface types. AOS markings include, but are not limited to:

- 5.3.6.6.1. Runway centre line,
- 5.3.6.6.2. Runway and taxiway holding position marking,
- 5.3.6.6.3. Runway threshold marking,
- 5.3.6.6.4. Runway threshold bar,
- 5.3.6.6.5. Runway aiming point marking,
- 5.3.6.6.6. Runway designation marking (numbers),
- 5.3.6.6.7. Runway touchdown zone marking,
- 5.3.6.6.8. Taxiway centreline marking,
- 5.3.6.6.9. Geographical position marking,
- 5.3.6.6.10. Surface painted sign (including ramp/apron marking, Aircraft tie-downs, Aircraft earth points etc.),
- 5.3.6.6.11. Non-movement area boundary markings,
- 5.3.6.6.12. Military Aircraft Arrestor Gear markings,
- 5.3.6.6.13. Overrun markings/chevrons,
- 5.3.6.6.14. Helipad and Rotary Wing Markings,
- 5.3.6.6.15. Aircraft Ground (Earth) points,
- 5.3.6.6.16. Aircraft Tie-down points,
- 5.3.6.6.17. Runway Length Remaining Markers,
- 5.3.6.6.18. Any other AOS markings as applicable.

5.3.6.7. The Contractor shall remove completely, preferably by high pressure water-jet, any markings or residual markings which are no longer needed or have been replaced or re-applied. The Contractor shall ensure that previous markings which are replaced etc. are not covered or painted over but completely removed from the surface.

5.3.6.8. The Contractor shall maintain all marker boards, signs, traffic signals, windsocks and miscellaneous indicators, to include but not limited to:

- 5.3.6.8.1. All Airfield Mandatory signs,
- 5.3.6.8.2. All AOS Information signs,
- 5.3.6.8.3. Stop signs,
- 5.3.6.8.4. 'No Entry' signs,
- 5.3.6.8.5. Runway Distance To Go Markers,
- 5.3.6.8.6. General Stand Signs, and
- 5.3.6.8.7. Rotary Hydraulic Arrestor Gear (RHAG) Markers, and
- 5.3.6.8.8. Any other signs as applicable to airfield operations.
- 5.3.6.9. Signs and marker boards may be internally illuminated, externally illuminated, retro-reflective or non-illuminated.
- 5.3.6.10. The Contractor shall maintain and install, when necessary, all airfield signs and indicators and related support structures. The Contractor shall also be responsible for the replacement of these when necessary.

Airfield Damage Repair (ADR)

- 5.3.6.11. The Contractor shall make emergency repairs to AOS in the most expeditious manner possible in order to restore full operational capability of the airfield and to eliminate risk to aircraft due to damage caused by unforeseen events such as rocket attacks, accidents, chemical damage (i.e. fuel and lubricant spills), extreme weather conditions etc.
- 5.3.6.12. The Contractor shall have a Rapid Runway Repair (RRR) capability to include "quick-patching" capability, the installation of temporary metal plating and / or other methods of expeditious AOS restoration appropriate for all AOS surface types.

Friction Testing

- 5.3.6.13. The Contractor shall conduct periodic friction testing of all AOS as directed by COMKAF Chief / Base Engineer and NAMSA.
- 5.3.6.14. Standard vehicle mounted accelerometer / decelerometer equipment shall be used and fully compatible with the braking (ABS or standard) system of the vehicle to which fitted. This Continuous Friction

Measuring Equipment (CFME) shall be maintained and calibrated IAW OEM specifications.

- 5.3.6.15. The Contractor shall carry out friction testing using a standard industry accepted procedure whereby the friction test involves a vehicle mounted system equipped with a computer to record the results, a measuring device to accurately record distances travelled, a treadless tyre of a specific size and air-pressure and a spray of metered water in advance of the 'drag' wheel to simulate wet pavement, conditions under which friction readings would be the worst.

AOS Strength Testing

- 5.3.6.16. The Contractor shall conduct runway and pavement strength testing for all AOS as directed by COMKAF Chief / Base Engineer and NAMSA.

5.3.7. **AOS Cleaning**

Maintenance Areas and Responsibilities

AOS Sweeping

- 5.3.7.1. The Contractor shall conduct daily sweeping of the active runway and ELS prior to the start of flight operations or as otherwise directed by COMKAF Chief / Base Engineer, Airfield Manager and NAMSA.
- 5.3.7.2. The Contractor shall, at a minimum, sweep all other AOS every second day or as directed by COMKAF Chief / Base Engineer, COMKAF Flight Safety, BOC and NAMSA.
- 5.3.7.3. Airfield Sweeping equipment shall be equipped with suitable types of sweeping brushes which are appropriate for the type of surfaces which are to be swept.
- 5.3.7.4. Airfield Sweeping equipment shall be equipped with vacuum capabilities which shall be used during all appropriate times of Airfield Sweeping operations.
- 5.3.7.5. Airfield Sweeping equipment shall be equipped with vacuum capabilities and magnetic bars in order to collect large FOD and metallic fragments which may be deposited on the AOS. These features will be actively deployed and used at all times during sweeping operations.

- 5.3.7.6. The Contractor shall work with the Fire Department and Spill Response and Remediation teams in the event of incidents. The Contractor shall ensure that all Staff are knowledgeable of HAZMAT regulations and trained / equipped to operate in these cases.
- 5.3.7.7. The Contractor shall ensure that no residual material / FOD remain on swept AOS.

Rubber Removal

- 5.3.7.8. The Contractor shall perform rubber removal operations of the main active runway and ELS, at a minimum, on a monthly basis or as otherwise directed by the COMKAF Chief / Base Engineer, COMKAF Flight Safety, BOC and NAMSA.
- 5.3.7.9. The Contractor will maintain operational flexibility in the performance of rubber removal activities as time slots may be limited for uninterrupted access to the areas requiring rubber removal due to operational tempo and airfield activity,

Snow and Ice Clearance (SNIC)

- 5.3.7.10. The Contractor shall ensure the rapid clearance of snow and ice from AOS in the most expeditious manner possible in order to restore full operational capability of the airfield within the timeframes specified by COMKAF Flight Safety and BOC to eliminate risk to aircraft due to adverse weather conditions.

Foreign Object Debris (FOD) Prevention and Mitigation

- 5.3.7.11. The Contractor shall provide ongoing FOD reduction in conjunction with all AOS Maintenance activities by ensuring the shoulders, edges and surfaces of AOS are free of deterioration which might lead to increased FOD.
- 5.3.7.12. The Contractor shall, at a minimum, clean and empty all FOD grates on a weekly basis in order to ensure the effectiveness of their intended purpose and to eliminate the possibility of additional FOD being brought onto AOS from dirty grates and overfilled catch basins.
- 5.3.7.13. The Contractor shall repair and / or replace, as necessary, all FOD grates and associated equipment.
- 5.3.7.14. The Contractor shall the relocate these structures as directed by COMKAF Chief / Base Engineer, COMKAF Flight Safety, Airfield Manager and NAMSA.



Plans, Inspections and Reports

5.3.7.15. The Contractor shall produce and implement an AOS Cleaning Plan which specifies the schedule for AOS sweeping, rubber removal and FOD prevention activities. This plan will be coordinated with COMKAF Chief / Base Engineer, Flight Safety, BOC, and NAMSA as well as affected AOS tenants / users in order to minimize interruption of flight operations and activities and to ensure safe and efficient cleaning operations on the airfield and active runway.

5.3.8. **Airfield Ground Lighting Maintenance**

Maintenance Areas and Responsibilities

5.3.8.1. The Contractor shall maintain all Airfield Ground Lighting (AGL) and related features to include, but not limited to, lighting for the following areas:

5.3.8.1.1. Runway,

5.3.8.1.2. ELS,

5.3.8.1.3. Approach (including approach lighting systems outside of the exterior KAF perimeter),

**Note:** There are 6 Approach Lighting stands which are situated outside of the NE KAF perimeter fence-line at the 23 end of the main runway.

5.3.8.1.4. Taxiways and aprons,

5.3.8.1.5. Ramps and parking,

5.3.8.1.6. Hazard and obstruction lighting,

5.3.8.1.7. Lit directional indicators, marker boards, and miscellaneous signs,

5.3.8.1.8. ATCT lighting, and

5.3.8.1.9. All AGL controls, panels, hardware, cables, infrastructure and lighting vaults.

5.3.8.2. The Contractor shall coordinate works requiring access into airfield lighting vaults and other secure areas with the BOC, Air Traffic Management, COMKAF Chief / Base Engineer and NAMSA.

### Plans, Inspections and Reports

- 5.3.8.3. The Contractor shall produce and implement an AGL Maintenance Plan which specifies the schedule for AOS sweeping and cleaning operations. This plan will be coordinated with COMKAF Chief / Base Engineer, Airfield Management, NAMSA as well as affected AOS tenants / users in order to minimize interruption of flight operations and activities and to ensure safe and efficient sweeping and cleaning operations on the airfield and active runway.

## 5.4. **Force Protection (FP) Infrastructure Maintenance**

### Maintenance Areas and Responsibilities

- 5.4.1. The Contractor shall provide maintenance for all areas of NATO Force Protection (FP) Infrastructure to include, but not limited to, the following:
  - 5.4.1.1. All perimeter FP fences, barriers, gates, and related structures and features,
  - 5.4.1.2. All interior FP fences, barriers, gates and related structure and features,
  - 5.4.1.3. All guard towers and observations posts,
  - 5.4.1.4. All associated and installed equipment to include, but not limited to, spotlights and speakers such as the "Giant Voice" loudspeaker system,
  - 5.4.1.5. All weapons clearance infrastructure (bays and clearing barrels) and the relocation of these structures as directed by COMKAF Chief / Base Engineer, Safety, Force Protection and NAMSA.
  - 5.4.1.6. All Amnesty Boxes and the relocation of these depositories and structures as directed by COMKAF Chief / Base Engineer, Safety, Force Protection and NAMSA.
  - 5.4.1.7. All NATO bunkers, shelters and personnel protective structures,
  - 5.4.1.8. Installation, replacement and repair of concertina and razor wire,
  - 5.4.1.9. Installation, replacement and repair of all fences and gates to include the adjusting of hinges, locking mechanisms,

- 5.4.1.10. Installation, replacement and repair of fence coverings and security netting and other miscellaneous features,
- 5.4.1.11. All sandbag emplacements, structures and features to include the replacement and replenishment of sandbags, and
- 5.4.1.12. Any other miscellaneous areas / systems as specified by COMKAF Chief / Base Engineer and NAMSA.

#### Plans, Inspections and Reports

5.4.2. The Contractor shall develop and provide a Force Protection Infrastructure Preventive Maintenance Plan (PMP) containing a detailed schedule of recurring (e.g. daily, weekly, monthly, quarterly, annually etc.) Preventive Maintenance and required Corrective Maintenance and repairs as per OEM recommendations in order to provide a proactive method of keeping the NATO Force Protection Infrastructure effective, serviceable and fully operational at all times. The Contractor shall develop the PMP during mobilisation. A review of the PMP by COMKAF Chief / Base Engineer and NAMSA will take place prior to Start of Services.

### 5.5. **Common Roads Maintenance**

#### Maintenance Areas and Responsibilities

- 5.5.1. The Contractor shall provide maintenance for all areas of Common Roads and related infrastructure to include, but not limited to, the following:
  - 5.5.1.1. Road Surfaces,
  - 5.5.1.2. Minor Road Works,
  - 5.5.1.3. Road Drainage,
  - 5.5.1.4. Roadway Markings, Signs and Lighting,
  - 5.5.1.5. Road Surface Cleaning, and
  - 5.5.1.6. Any other miscellaneous areas as specified by COMKAF Chief / Base Engineer and NAMSA.
- 5.5.2. The Contractor shall, at a minimum, coordinate all Common Roads Maintenance activities with COMKAF Chief / Base Engineer and NAMSA.

#### Road Surface Maintenance

5.5.3. The Contractor shall permanently maintain operability of the KAF Common Road Network to include, but not limited to, the following areas where applicable:

- 5.5.3.1. Main interior and perimeter roads,
- 5.5.3.2. Secondary interior and bisecting roads,
- 5.5.3.3. Intersections and traffic circles,
- 5.5.3.4. Alleys and back lots,
- 5.5.3.5. Parking lots, and
- 5.5.3.6. Supply yards and motor pools.

**Note:** All National, Military and Civilian compound roads and parking lots are excluded from the maintenance responsibilities specified in this Annex.

5.5.4. The Contractor shall maintain all surface types and compositions, including but not limited to:

- 5.5.4.1. Paved / asphalted,
- 5.5.4.2. Concrete,
- 5.5.4.3. Stone and gravel (to include those reinforced with emulsified bitumen),
- 5.5.4.4. Dirt and sand,
- 5.5.4.5. Wood, and
- 5.5.4.6. Metal.

5.5.5. The Contractor shall perform routine maintenance activities to include, but not limited to, the repair of all road degradation such as cracks, fractures, surface breaks, heaves, settlements, joint spalls, surface scaling, joint seals and pavement markings and obstructions.

5.5.6. The Contractor shall ensure that all road surfaces are kept free of standing water and snow by ensuring that all drainage gradients are properly maintained.

5.5.7. The Contractor shall maintain all roads to the whole depth of the road structure including the friction course, the wearing course, the base course, the base and sub-base layers and the sub-grade level. Joints, edges and shoulders shall be maintained in good order to minimise the risk of surface failure, deterioration and increased risk of FOD.

- 5.5.8. The Contractor shall ensure proper compaction of roads to eliminate sink-holes, pot-holes and miscellaneous deterioration and erosion.
- 5.5.9. Due to the increased risk of surface damage and degradation caused by extreme weather conditions gravelled roads shall be repaired or maintained, to include the replacement of aggregate and fines and the subsequent compaction of the road surface, in order to ensure continued operational capability.
- 5.5.10. The Contractor shall maintain all common road network related structures and features such as bridges / crossings, curbs, speed bumps and abutments.
- 5.5.11. The Contractor shall maintain all common pedestrian bridges, crossings and sidewalks.

#### Minor Road Works

- 5.5.12. The Contractor shall construct minor road works, such as temporary bypasses or detours, barriers and diversions and other temporary means of way / access and provide sufficient indicators, signs and lighting, as necessary, for these works.
- 5.5.13. Additionally, the Contractor shall ensure that all Roads Maintenance workers use appropriate PPE, traffic signage (e.g. Stop / Go) and flags (e.g. Red / Green), indicators etc in the performance of this work in order to ensure proper visibility for both day and night-time works and to minimize interruption and ensure the safe flow of traffic and pedestrians.

#### Road Drainage

- 5.5.14. The Contractor shall, regardless of composition, maintain all common roads and associated drainage features such as cambers, v-ditches and verges in order to achieve a smooth, even, stabilized surface with sufficient gradient to ensure proper drainage.
- 5.5.15. The Contractor shall maintain effective operation of all road drainage systems to include, but not limited to, swales, gutters, storm drains, ditches, catch basins, culverts, hydraulic structures, lift stations, manholes, sumps, gratings etc. Additionally, the Contractor shall ensure and maintain the free and unobstructed flow of water within these drainage systems and features.
- 5.5.15.1. The Contractor shall regularly and routinely clean all grates, pipes, channels, filters and other drainage-related features to ensure proper and unobstructed flow of water for both normal and exceptional downpours.

5.5.15.2. The Contractor shall repair or replace, as necessary, all drainage pipes damaged beyond repair to ensure proper drainage.

5.5.15.3. The Contractor shall ensure that critical drainage outlets are protected from damage by the appropriate emplacement of posts, barriers or other protective features.

#### Roadway Markings, Signs and Lighting

5.5.16. The Contractor shall maintain, make secure, produce and replace, as necessary, all roadway markings and road signs to include directional and traffic signs and supporting structures.

5.5.17. Road signs and markings will meet either North American / European Union standards.

5.5.18. The Contractor shall maintain all fixed and free-standing street, traffic and NATO-furnished mobile area lighting systems which are used to illuminate road areas, ECPs and pedestrian walking areas, crossings and other miscellaneous areas.

#### Road Surface Cleaning

5.5.19. The Contractor shall perform periodic sweeping of appropriate road surfaces in order to remove dust and debris that negatively affect the integrity and operational safety of the surface and cause undue wear and tear.

5.5.20. The Contractor shall remove snow and ice from the KAF road network, as required, in order to maintain serviceability and operational capability.

#### Plans, Inspections and Reports

5.5.21. The Contractor shall develop and implement a Preventive Maintenance program aimed at maintaining the KAF Common Road Network in a fully operational and serviceable state.

5.5.22. The Contractor shall inspect and produce a report of the KAF Common Road Network every six month in order to assess the overall condition of the roads network, make recommendations for improvements and identify additional works required to maintain serviceability.

5.5.23. In the event of extreme weather and unforeseen events (e.g. torrential downpours, strong winds, rocket attacks, accidents etc.) resulting in significant damage to KAF infrastructure the Contractor shall immediately inspect the KAF Common Road Network and initiate the necessary corrective maintenance and repairs needed

to return the roads to a safe, serviceable and operational capability.

## 5.6. **Common Grounds Maintenance**

### Maintenance Areas and Responsibilities

5.6.1. The Contractor shall provide maintenance for all areas of Common Grounds and related infrastructure to include, but not limited to, the following:

- 5.6.1.1. Physical Grounds,
- 5.6.1.2. Vegetation Control,
- 5.6.1.3. Signage and Miscellaneous Indications,
- 5.6.1.4. Drainage Network,
- 5.6.1.5. Any other miscellaneous areas as specified by COMKAF Chief / Base Engineer and NAMSA.

### Physical Grounds Maintenance

5.6.2. The Contractor shall maintain all NATO Common Grounds areas and general terrain of varying composition to include, but not limited to:

- 5.6.2.1. Natural features such as embankments, berms, ponds, wadis and terrain and landscape of varying type and composition,
- 5.6.2.2. Footpaths, sidewalks and associated features such as footbridges, crossings, railings, fencing, steps etc.
- 5.6.2.3. Earth-bunded features,
- 5.6.2.4. The structural maintenance of NATO Weapons Ranges, to include the replacement of signs and targets,
- 5.6.2.5. Fences and gates,
- 5.6.2.6. The KAF drainage canal network, wadis and other related features, and
- 5.6.2.7. All grounds and vehicular areas associated with NATO-provided and / or contracted services (e.g. water production facility grounds and candy cane fill-up points where erosion due to water overflow is common).

### Vegetation Control

- 5.6.3. The Contractor shall control vegetation in order to prevent interference with roads, parking areas, AOS and visibility of security fences, signs, buildings and living areas and to reduce fire hazards and habitats for pests / vectors. The minimum clearance distance is five meters from the edge of operating surfaces, fences or buildings.
- 5.6.4. The Contractor shall maintain all grounds features in order to minimize erosion and enable continuation of operational function.
- 5.6.5. The Contractor shall maintain all fences and gates to include the adjusting of hinges, locking mechanisms and the replacement of items damaged beyond repair.

Signage and Miscellaneous Indications

- 5.6.6. The Contractor shall maintain, make secure, produce and replace, as necessary, all signage and miscellaneous indications and supporting structures to include, but not limited to:
  - 5.6.6.1. Warning signs,
  - 5.6.6.2. Flags,
  - 5.6.6.3. Lights,
  - 5.6.6.4. Informational and/or instructional signage,
  - 5.6.6.5. Weapons Range targets and lane indicators, and
  - 5.6.6.6. Site equipment identification and safety hazard markings.

Drainage Network Maintenance

- 5.6.7. The Contractor shall maintain the KAF Drainage Network to include drainage canals, wadis and related features.
  - 5.6.7.1. The Contractor shall regularly and routinely clean all grates, pipes, channels, filters and other drainage-related features to ensure proper and unobstructed flow of water for both normal and exceptional downpours.
  - 5.6.7.2. The Contractor shall repair or replace, as necessary, all drainage pipes damaged beyond repair to ensure proper drainage.
  - 5.6.7.3. The Contractor shall ensure that critical drainage outlets are protected from damage by the appropriate emplacement of posts, barriers or other protective features.



- 5.6.8. The Contractor shall ensure that all grounds surfaces are kept free of standing water and snow by ensuring that all drainage gradients are maintained.

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- 5.6.9. The Contractor shall develop and implement a Preventive Maintenance program aimed at maintaining the KAF Common Grounds in a fully operational and serviceable state.
- 5.6.10. The Contractor shall after extreme weather conditions or events which result in flooding or possible damage to the drainage network conduct a full inspection of the drainage system in order to assess actual damage or areas requiring reinforcement or other critical works to avoid imminent damage or degradation of structures.
- 5.6.11. The Contractor shall, at a minimum, conduct a twice yearly inspection of the KAF Common Grounds in order to assess condition and overall situation of these areas as well as provide recommendations for improvements to the KAF Common Grounds network.

**APOD Infrastructure Support Services**

5.7. **Engineering Support**

**Responsibilities**

- 5.7.1. The Contractor shall provide Engineering Support Services to augment COMKAF CJ-4 Engineering capabilities, projects, general day-to-day work flow and APOD Infrastructure Maintenance Services as described in this Annex. Services will include, but not be limited to, the following:

- 5.7.1.1. Engineering Design and Project Management,
- 5.7.1.2. Engineering Reference and Technical Library, and
- 5.7.1.3. Base Map Production and Distribution.

- 5.7.2. A reach-back capability will exist when the expertise required exceeds that in-theatre.

5.7.3. **Engineering Design and Project Management**

- 5.7.3.1. The Contractor shall provide a dedicated Design and Project Management capability to augment COMKAF Chief / Base Engineer design and works capabilities. This includes , but is not limited to, the following:

- 5.7.3.1.1. Provision of all required tools and equipment required to assist in the O&M of APOD Infrastructure,
- 5.7.3.1.2. Provision of project estimations and management,
- 5.7.3.1.3. Provision of technical advice and suggestion of options,
- 5.7.3.1.4. Attendance of required meetings, as stipulated by COMAF Chief / Base Engineer and NAMSA,
- 5.7.3.1.5. Provision of drafting and survey capabilities, and
- 5.7.3.1.6. Provision of an Automated Computer Assisted Design (AutoCAD) capability.
- 5.7.3.2. The Contractor shall provide sufficient staffing levels and maintain a comprehensive in-theatre Engineering Support Cell.
- 5.7.3.3. The Contractor shall prepare engineering content for projects, programs, approval submissions, and other Construction Engineer (CE) activities. This may involve drafting entire submissions to include, but not limited to, the preparation of technical specifications, design and detailed estimations.
- 5.7.3.4. The Contractor shall prepare all Construction Engineering estimating activities.
- 5.7.3.5. The Contractor shall provide drafting and drawing reproduction services in support of all CE activities to include the preparation and reproduction of Design Drawing and As-Built Drawings.
- 5.7.3.6. The Contractor shall advise COMKAF Chief / Base Engineer on the most suitable methods of project implementation as well as methods of energy conservation within infrastructure areas and ways of improving infrastructure through cost-effective means.
- 5.7.3.7. The Contractor shall provide technical advice, which also involves attending meetings and producing written records and minutes of discussions / decisions.
- 5.7.3.8. While producing design, estimates and specifications as part of the standing design team, the Contractor is

expected to comply with the engineering technical designs to the standards indicated, making interpretations where necessary to reflect the temporary nature of the operational camps. The design and estimate process will normally be iterative in nature, and as such the Contractor may be asked to produce an initial ROM cost estimate for prioritization and budgeting purposes, a preliminary (35%) design and cost estimate to seek financial approval, and a final design, specification, and estimate to allow for construction using the most appropriate means.

- 5.7.3.9. The Contractor shall plan, develop and prepare budgets and works programs.
- 5.7.3.10. The Contractor shall provide project management and/or contract supervision. The Contractor is to make recommendations of the most suitable methods of project implementation, assist in supervision and inspection of work by contract, and provide project management.

5.7.4. **Engineering Reference and Technical Library**

- 5.7.4.1. The Engineering Support Cell will maintain a technical library and information centre / database including, but not limited to, the following:
  - 5.7.4.1.1. Up-to-date register of all APOD Infrastructure,
  - 5.7.4.1.2. As-Built Drawings,
  - 5.7.4.1.3. Architectural plans and records,
  - 5.7.4.1.4. Engineering records,
  - 5.7.4.1.5. Equipment info,
  - 5.7.4.1.6. Real property records,
  - 5.7.4.1.7. NATO Facilities Handover Documentation,
  - 5.7.4.1.8. Engineering and real estate agreements and understandings, and
  - 5.7.4.1.9. Archives of associated infrastructure and engineering related meeting minutes.

- 5.7.4.2. The Contractor shall maintain and control engineering records, including real property records, site drawings and agreements;

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- 5.7.4.3. The Contractor shall conduct an annual inspection of all assigned infrastructure. The Contractor shall rate the infrastructure assets (interior and exterior) excluding the DFAC and National tenant areas, to assess the current physical condition and to determine predictions about the future condition. Following the inspection he shall rate the condition of the individual asset in accordance with Base Engineer direction.

5.7.5. **Base Map Production and Distribution**

- 5.7.5.1. The Engineering Support Cell will assemble, produce and distribute geo-referenced, layered base maps, which shall, at a minimum, accurately depict the following:

- 5.7.5.1.1. All Base Camp Facilities and Infrastructure regardless of owner / occupant,
- 5.7.5.1.2. All Airfield Operations Infrastructure,
- 5.7.5.1.3. All Force Protection Infrastructure,
- 5.7.5.1.4. All Drainage features, network and system,
- 5.7.5.1.5. All ducting features, manholes, access points etc,
- 5.7.5.1.6. All Roads and Grounds, and
- 5.7.5.1.7. All aspects of Utilities infrastructure, to include:
  - A. Sewage collection network and system,
  - B. Water distribution network and system,
  - C. Power distribution system and lines,
  - D. Drainage network and system, and

E. Communications system and lines.

- 5.7.5.1.8. Any other areas as specified by COMKAF Chief / Base Engineer.
- 5.7.5.2. The Contractor shall regularly update the Base Map to accurately depict all aspects of KAF Infrastructure in the most recent configuration.
- 5.7.5.3. All maps will bear version control markings such as date, version / series, type etc.
- 5.7.5.4. Maps will be available in varying sizes and dimensions of scale as per Customer request.
- 5.7.5.5. Maps will be made exclusively and immediately available upon request by COMKAF Chief / Base Engineer, NAMSA and other authorized requestors in the configuration and quantity specified.
- 5.7.5.6. The Contractor shall control the distribution of maps to non-authorized requestors.

**5.8. Work Order Management**

5.8.1. The Contractor shall provide Work Order Management to augment and support APOD Infrastructure Maintenance services and activities and provide a timely, streamlined process from receipt and processing of Work Orders to the subsequent dispatch of appropriate maintenance personnel and resources and follow-on closing of the fulfilled Work Order. This will be achieved with the following:

- 5.8.1.1. A Customer Service Centre and Dispatch Office,
- 5.8.1.2. A comprehensive Work Order Management System (WOMS),
- 5.8.1.3. Detailing Work Order Information,
- 5.8.1.4. Providing accessibility of the WOMS to COMKAF Engineering,
- 5.8.1.5. Responding to Work Orders in the classification and timeframe as established by COMKAF Engineering, and
- 5.8.1.6. Establishing Building Custodians.

**Customer Service Centre and Dispatch Office**

5.8.2. The Contractor shall institute a Customer Service Centre and Dispatch Office which fully supports the following requirements:

- 5.8.2.1. Manned 24 / 7 capability,
- 5.8.2.2. Support and reception of Customer telephonic, walk-in and email requests for maintenance,
- 5.8.2.3. Processing of Work Orders, and
- 5.8.2.4. Dispatch of appropriate personnel to service area.

5.8.3. The Contractor shall input Work Request information into Work Order Management System in order to generate Work Order for dispatch and action by the appropriate maintenance team.

Work Order Management System (WOMS)

5.8.4. The Contractor shall develop, establish, operate and maintain a Work Order Management System (WOMS). At a minimum the system will:

- 5.8.4.1. Receive, store, process, report and disseminate all Work Orders and related information through a single desk responsible to COMKAF Chief / Base Engineer,
- 5.8.4.2. Track assets,
- 5.8.4.3. Inspection and maintenance schedules and
- 5.8.4.4. Work Order history.

Required Work Order Information

5.8.5. As a minimum, the Work Order information will document and track the following information:

- 5.8.5.1. Prioritization category (Emergency, Urgent, Routine),
- 5.8.5.2. Detailed description of the maintenance or repair requirement,
- 5.8.5.3. Submission date,
- 5.8.5.4. Originator of the Work Order (e.g. authorized Building Custodian),
- 5.8.5.5. Approval of the COMKAF Chief / Base Engineer,
- 5.8.5.6. A unique Work Order identification and tracking number,
- 5.8.5.7. Skill category of workers / service provider required,

- 5.8.5.8. Parts / consumables required,
  - 5.8.5.9. Estimated completion date,
  - 5.8.5.10. Time spent on repair or maintenance task,
  - 5.8.5.11. A brief description of work performed,
  - 5.8.5.12. Work expenditure to include supporting costs, labour, time and supply / material consumption information, and
  - 5.8.5.13. Status of the request
- 5.8.6. When responding to emergency call-outs the Contractor shall ensure the requesting individual annotates their name, date and confirmation of completion of requested work on the Work Order.

Accessibility of WOMS

- 5.8.7. The WOMS will be accessible to COMKAF Chief / Base Engineer, NAMSA and subordinate service providers in order to enable real-time updates and visibility of the database.
- 5.8.8. The WOMS will have remote electronic desktop and real-time access installed within the COMKAF CJ-4 Engineering offices in order to allow COMKAF Chief / Base Engineer the capability to perform, access and have, at a minimum, visibility of the following:
- 5.8.8.1. Reprioritization and reclassification of Work Orders,
  - 5.8.8.2. Work Order status,
  - 5.8.8.3. Random inquiries and archival search functions, and
  - 5.8.8.4. Other areas and functions as requested by COMKAF Chief / Base Engineer and NAMSA.

Classification and Response Times for Work Orders

- 5.8.9. COMKAF Chief / Base Engineer will establish the priority classification for each Work Order and reserves the right to reclassify Work Orders, as necessary.
- 5.8.10. The Contractor shall submit all Work Orders to COMKAF Chief / Base Engineer for proper oversight and classification as detailed in Para 5.9.7.
- 5.8.11. The Contractor shall conduct and coordinate Work Orders for Response Maintenance for all APOD Infrastructure Maintenance Service areas in order of the classification and prioritization timeframe as prescribed by COMKAF Chief / Base Engineer or his delegated representatives.

5.8.12. The Contractor shall respond to Work Orders in the following categories and timeframes:

- 5.8.12.1. 'Emergency': Make safe immediately (no more than 15 minutes) in order to eliminate health or safety threat to personnel or mission critical equipment and repair completely within 24 hours of notification of ,
- 5.8.12.2. 'Urgent': Repair within 48 hours of receipt of Work Order,
- 5.8.12.3. 'Priority': Repair within 7 days of receipt of Work Request, and
- 5.8.12.4. 'Routine': Repair within 30 days of receipt of Work Order.

5.8.13. The Contractor shall maintain a 24 hour-a-day, 7 days-a-week Reception Dispatch and On-Call Response Maintenance capability for all APOD Infrastructure areas.

Establishment of Building Custodians

5.8.14. The Contractor shall work with COMKAF Chief / Base Engineer to establish primary and secondary Building Custodians who will act the official Points of Contact (POC) for maintenance requests for all NATO Facilities and Infrastructure in order to avoid the duplication or submission of unnecessary Work Request and to coordinate and verify Work Requests for validity prior to their submission.

5.8.15. The Building Custodians will be the sole persons authorized to submit Work Requests on behalf of their respective assigned NATO Infrastructure asset. The Contractor shall maintain an up-to-date listing of authorized signature holders for this duty and establish new Custodians in the event that the primary or secondary POC leave theatre or is unable to fulfil the duties.

Plans, Inspections and Reports

5.8.16. The Contractor shall provide a monthly Work Order Performance Breakdown Report which details time and material expenditures for the performance of all maintenance tasks regardless of the Customer for whom services were provided to.

5.9. **Minor New Works, Construction and Renovation (MNWCR)**

5.9.1. The Contractor shall provide the ability to implement and conduct Minor New Works, Construction and Renovation (MNWCR) in support of, and as directed by, COMKAF Chief / Base Engineer and



NAMSA to include, but not limited to, vertical and horizontal facilities and infrastructure.

5.9.1.1. Requests for MNWCR to NATO-furnished infrastructure will be considered on a case-by case basis by COMKAF Chief / Base Engineer.

5.9.2. MNWCR includes, but is not limited to, the construction and renovation of:

5.9.2.1. New and temporary facilities and infrastructure,

5.9.2.2. Pre-existing infrastructure, and

5.9.2.3. Miscellaneous structures.

5.9.3. The Contractor shall implement MNWCR in conjunction with the Engineering Support Services of this contract.

5.9.4. MNWCR projects can be executed with the Contractor's own resources, or through sub-contracting. However, the use of the Contractor's own resources will not be allowed to have a negative impact on the standards of APOD Infrastructure Maintenance Services associated with this contract.

5.9.5. The Contractor shall prepare and submit cost proposals for MNWCR projects as directed by COMKAF Chief / Base Engineer and NAMSA.

5.9.5.1. Upon COMKAF and NAMSA approval of the Contractor's cost estimate and once necessary funding is made available the Contractor will be authorized by NAMSA to commence work. The Contractor shall not perform MNWCR without prior approval by COMKAF Chief / Base Engineer or NAMSA.

5.9.6. MNWCR is considered to cost less than 20,000 EUR per project.

5.9.7. The Contractor shall submit price proposals for MNWCR as directed by NAMSA.

## 5.10. **Dust Control**

5.10.1. The Contractor shall provide Dust Control for all surface types (airfield, roads and grounds) as specified in the infrastructure maintenance areas of this Annex, and as directed by COMKAF Chief / Base Engineer and NAMSA, in order to minimize the dispersal of airborne dust particles caused by traffic, construction activities, aircraft activity, winds and storms or other circumstances.

5.10.2. The Contractor shall perform Dust Control through the application and spraying of water (or COMKAF Chief / Base Engineer and NAMSA approved compositions / chemicals) and rocks / stone (gravel etc) onto various surfaces.

5.10.3. The Contractor shall install or replace sheeting on fences and enclosed areas (such as living areas, aircraft parking / maintenance areas and cargo lay-down yards) in order to reduce the intrusion of dust which may pose a risk / damage to personnel and / or equipment.

#### Plans, Inspections and Reports

5.10.4. The Contractor shall inform COMKAF Chief / Base Engineer and NAMSA as to the planned schedule of Dust Control activities in order to minimize disruption to operational activities and traffic at KAF.

### 5.11. **Spill Remediation**

5.11.1. The Contractor shall provide a Spill Remediation capability in order to completely contain and remediate HAZMAT spills on any surface type.

5.11.1.1. The term 'HAZMAT' (Hazardous Material) applies to all material that, based on either chemical or physical characteristics, is capable of posing a risk to human health and safety, or the environment if improperly handled, stored, issued, transported, labeled, or disposed of.

5.11.2. Examples of HAZMAT which may require Spill Remediation activities include, but are not limited to;

5.11.2.1.1. Carcinogens,

5.11.2.1.2. Corrosive materials,

5.11.2.1.3. Irritants,

5.11.2.1.4. Toxic materials,

5.11.2.1.5. Combustible liquids and fuels,

5.11.2.1.6. Compressed gases,

5.11.2.1.7. Explosives,

5.11.2.1.8. Flammable materials,

5.11.2.1.9. Oxidizers,

- 5.11.2.1.10. Unstable (reactive) materials,
  - 5.11.2.1.11. Pesticides,
  - 5.11.2.1.12. Water-reactive materials,
  - 5.11.2.1.13. Batteries,
  - 5.11.2.1.14. Paints and
  - 5.11.2.1.15. Sewage such as blue, black and grey water.
- 5.11.3. The Contractor shall make an initial Spill Remediation response within 30 minutes of call-out notification / request for Spill Remediation services as directed by COMKAF Chief / Base Engineer.
- 5.11.3.1. The Contractor shall perform follow-on Spill Remediation activities within the timeframes stipulated in Para 5.8.12 as directed by COMKAF Chief / Base Engineer and NAMSA.
- 5.11.4. Spill Remediation will be performed in conjunction with the Fire Crash Rescue Services (FCRS) contractor. FCRS will, normally, act at the initial on-site response capability for HAZMAT spills in order to “make safe” the immediate affected area affected by the spill.
- 5.11.5. The Contractor shall ensure the complete remediation of the spilled material and the proper storage and disposal of all contaminants as directed by COMKAF Environmental Officer and NAMSA.
- 5.11.5.1. The Contractor shall package recovered spill material, contaminated adjacent materials and clean-up materials in appropriate hazardous waste containers and properly transfer the containers for ultimate disposal. All containers shall be properly labeled, marked and identified. These activities will be done in accordance with standard HAZMAT regulations and conventions.
- 5.11.6. The Contractor shall ensure that Staff attending to the spill are familiar with all safety requirements and use the necessary PPE in performance of spill remediation activities. Additionally, the Contractor shall ensure that the area affected by the spill is appropriately cordoned off during such time as the spilled material poses a threat to individuals. The Contractor shall prevent undue access to the contaminated area until the spill material has been completely remediated.

- 5.11.7. The Contractor shall ensure that the party responsible for the spill is accurately identified and billed accordingly for the remediation of the spilled material.

Plans, Inspections and Reports

- 5.11.8. The Contractor shall conduct an initial environmental impact assessment of the spill and provide a recommended course of action (COA) for the Spill Remediation team based upon this assessment. This assessment will also be provided to COMKAF Chief / Base Engineer for information on the immediate and long-term environmental impact resulting from the spill.

- 5.11.9. The Contractor shall provide COMKAF Chief / Base Engineer, COMKAF Environmental Officer and NAMSA with a detailed report of the spill incident identifying the party / originator responsible for the spill in order to effectively bill for spill remediation services.

5.12. **Bird Aircraft Strike Hazard (BASH) Survey**

- 5.12.1. The Contractor shall conduct a BASH Survey twice yearly during peak avian migration times in spring and autumn, as directed by COMKAF Flight Safety, BOC, COMKAF Chief / Base Engineer and NAMSA.

- 5.12.2. The BASH Survey will cover the entire airfield as well as surrounding geographical areas. The survey will also identify avian species and counts, seasonal expectations and variations, food supply, ground cover and nesting sites, bird-hangar interfaces and natural predators.

- 5.12.3. The BASH Survey outline the likelihood and risk of BASH occurrences and propose appropriate measures for preventing BASH incidents and recommend BASH mitigation strategies, and control measures.

- 5.12.4. The Contractor shall assist COMKAF Flight Safety for the inclusion of information and recommendations resulting from the BASH Survey into the KAF BASH Program.

<b>6. Schedules, Milestones and Operating Hours</b>
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- 6.1. As detailed in the SOW Main Body and, additionally, as identified within this Appendix.
- 6.2. The Contractor shall provide Preventive and Corrective Maintenance services during the KAF core operating hours of 08:00 – 20:00 Monday through Saturday and 13:30 – 20:00 on Sunday.

- 6.3. The Contractor shall provide an after-hours Emergency Corrective / Response Maintenance Reception and 'Call-Out' capability.
- 6.4. All Dispatch and On-Call Response Maintenance services shall be provided 24 / 7.
- 6.5. The Contractor shall establish a recall capability to expand basic support to an increased crisis support level.

<b>7. Contractor Human Resources Required and Qualifications, Language Skills</b>
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- 7.1. As detailed in the SOW Main Body and additionally as identified within this Appendix.
- 7.2. The Contractor shall be responsible for continuing development training, evaluation and license endorsement, in all control disciplines for all employees.
- 7.3. The Contractor shall provide an adequate number of properly trained and qualified personnel for each area of maintenance and support responsibilities.
- 7.4. The associated skills required for of all APOD Infrastructure Maintenance and Support Service areas includes, but is not limited to:
  - 7.4.1. Carpentry and wood-working,
  - 7.4.2. Electrical,
  - 7.4.3. HVAC,
  - 7.4.4. Plumbing,
  - 7.4.5. Structural,
  - 7.4.6. Locksmith (and key cutting),
  - 7.4.7. Masonry and concreting,
  - 7.4.8. Mechanical,
  - 7.4.9. Hydraulic and pneumatic,
  - 7.4.10. Metal-working and welding,
  - 7.4.11. Painting and finishing,
  - 7.4.12. Supporting trades craftsmen and labour skills,
  - 7.4.13. Industrial,

- 7.4.14. Fire and intrusion alarm systems,
  - 7.4.15. Paving and asphaltting,
  - 7.4.16. Concreting and rough construction,
  - 7.4.17. AOS maintenance,
  - 7.4.18. Heavy equipment and runway sweeper operators,
  - 7.4.19. AGL and related systems,
  - 7.4.20. Miscellaneous appliances,
  - 7.4.21. Civil Engineering,
  - 7.4.22. Mechanical Engineering,
  - 7.4.23. Surveying,
  - 7.4.24. Customer service to include walk-in and telephonic / email services,
  - 7.4.25. Work Order management,
  - 7.4.26. Project management,
  - 7.4.27. Project estimation, and
  - 7.4.28. Other miscellaneous areas as defined by COMKAF Chief / Base Engineer and NAMSA.
- 7.5. The Contractor shall provide and maintain a comprehensive in-theatre Engineering Support Cell including, but not limited to, the following Subject Matter Expert (SME) capabilities at UK Incorporated Engineer, or equivalent, level,:
- 7.5.1.1. Civil,
  - 7.5.1.2. Drafting,
  - 7.5.1.3. Mechanical Services Designer,
  - 7.5.1.4. Electrical Designer,
  - 7.5.1.5. Vertical Construction Designer,
  - 7.5.1.6. Horizontal Construction Designer, and
  - 7.5.1.7. Environmental Technician.

- 7.6. An out-of-theatre support capability will exist when the personnel expertise required to fulfil a contractual obligation exceeds that available in-theatre.
- 7.7. All Contractor Staff must be mentally and physically fit and able to fulfil the maintenance and support requirements described in this Annex.
- 7.8. All personnel shall be fully familiar with the KAF and AOS layout as well as specific Operating Procedures (OP) in effect for each area.
- 7.9. The Contractor shall be responsible for obtaining all required security clearances for personnel and validating individual staff clearance status with NAMSA prior to personnel mobilization.
  - 7.9.1. Contractor personnel requiring access to and / or knowledgeable of contingency and crisis action plans shall have a minimum of 'NATO SECRET' Personal Security Clearance as issued by their National Security Authorities based on the duty position to which the individual will be assigned. No waiver to this requirement shall be granted.
  - 7.9.2. The Contractor shall provide advance written proof of the ability to assign fully cleared personnel prior to deployment to KAF. Failure to provide such a clearance for contracted personnel will result in non-allowance to commence work until that time when they can provide an appropriate security clearance. At no time is NATO to be held responsible for the provision of such a Personnel Security Clearance for Contractor personnel.
  - 7.9.3. All other personnel shall be cleared and vetted in accordance with KAF procedures.

#### Language Requirements

- 7.10. The Contractor shall ensure that, as an absolute minimum, all of its personnel assigned to the critical infrastructure maintenance and customer service areas are able to speak and understand English to the NATO 2221 standard IAW STANAG 6001.
- 7.11. Personnel working in a capacity that requires reading, dispatching personnel, communicating with other airfield agencies, data inputs, or writing shall be fluent in English to the NATO 3333 standard.
- 7.12. All Managerial and Supervisory staff shall be fluent in English to a minimum level of NATO 4444 standard.
- 7.13. Personnel that may serve as On-Scene-Authority or Supervisors shall be fluent in English to a minimum level of NATO 3321 standard.

## **8. NATO/NAMSA Furnished Infrastructure and Equipment, Tools and Provisioning of Supplies**

- 8.1. As detailed in Attachment A. "NATO-Furnished Equipment (NFE)" of this Annex.
- 8.2. Any chemicals used in the performance of the contracted services specified in this Annex to the Main Body SOW will be coordinated and approved by COMKAF Chief / Base Engineer, NAMSA and other authorities as directed.

## **9. Contractor Furnished Infrastructure and Equipment, Tools and Provisioning of Supplies**

- 9.1. As detailed in the SOW Main Body and additionally as identified within this Annex.
- 9.2. The Contractor shall provide and maintain all tools, test and support equipment and the technical documentation, as required, for all services specified in this Annex. All hand and power tools, climbing and lifting equipment, Personal Protective Equipment (PPE) and clothing and equipment as well as measurement and test equipment will be kept in a safe and serviceable condition, calibrated and technically inspected, as recommended by the OEM.
- 9.3. The Contractor shall maintain all medical supplies, items required for administrative support and items required for user-level maintenance of facilities.
- 9.4. The Contractor shall assume the existing NATO-Furnished Fleet, equipment, tools and supplies listed in Attachment A to this Annex. Comply with procedures listed in the SOW main body.
- 9.5. The Contractor shall assume the existing NATO-Furnished Infrastructure listed in Attachment B to this Annex. Furthermore, the Contractor shall comply with the procedures listed in the SOW Main Body.
- 9.6. The Contractor shall establish and maintain a robust infrastructure supply account to provide all infrastructure supplies and support required for performance of this contract.
- 9.7. The Contractor shall be responsible for the maintenance and provision of spare parts / consumable items for all APOD Infrastructure Maintenance areas and requirements. The Contractor shall maintain 30 days of supply of expendable items, as well as a supply of other components / items for which the attrition rate dictates. The Contractor shall identify all OEMs of installed equipment and ensure that pertinent technical manuals and supporting documentation is on-hand. The Contractor shall also identify suppliers of replacement parts / consumables, etc.



## **10. CIS Requirements**

- 10.1. As detailed in the SOW Main Body and additionally as identified within this Annex.
- 10.2. The Contractor shall, as a minimum equip and maintain the following:
  - 10.2.1. A Work Order Management System at the Work Order Reception and Dispatch Centre.
  - 10.2.2. A remote desktop access into the WOMS for COMKAF Chief / Base Engineer.
  - 10.2.3. Mobile radios, as required, for AOS Infrastructure Maintenance crews to communicate with ATM Authorities, Flightline Security and COMKAF agencies. These radios must be crash net compatible and operating on approved KAF frequencies.
- 10.3. NAMSA / NATO shall provide the Engineering Support Office with lines to connect to the Mission Secret network.

## **11. Security and Safety Requirements**

- 11.1. As detailed in the SOW Main Body.

## **12. Environmental Requirements**

- 12.1. As detailed in the SOW Main Body and additionally as identified within this Annex.
- 12.2. Additionally, the Contractor shall ensure that any chemicals used in the performance of the contracted services specified in this Annex to the Main Body SOW will be coordinated and approved by COMKAF Chief / Base Engineer, NAMSA and other authorities as directed prior to their use.

## **13. Data and Reports**

- 13.1. As detailed in the SOW Main Body and additionally as identified within this Annex.
- 13.2. A list of reports and schedules is detailed in Attachment D. "Consolidated Contractor Plans, Inspections and Reports Requirements and Schedule".
- 13.3. The Contractor shall provide NAMSA and COMKAF Chief / Base Engineer with weekly, monthly and annual activity reports and statistics to depict performance, actions taken, trouble areas, issues requiring command guidance and trends in infrastructure maintenance.
- 13.4. Provide COMKAF Staff with immediate feedback on detected health and safety issues and accident response.

- 13.5. Provide COMKAF Staff and NAMSA with all data required to develop post accident / incident reporting, lessons learned, problems identified, and Spill Response billing.

#### **14. Quality Assurance and Performance Measurement**

- 14.1. As detailed in the SOW Main Body and this Annex.
- 14.2. The Contractor shall warrant his services against bad workmanship and materials in accordance with the contract schedule and requirements.
- 14.3. The Contractor shall provide a testing capability to accurately measure various components of APOD Infrastructure materials (e.g. AOS) to ensure quality and or suitability for intended purpose and use.

#### **15. Mobilisation / Demobilisation**

- 15.1. As detailed in the SOW Main Body and additionally as detailed below.
- 15.2. Planning factors for mobilisation milestone development include but are not limited to:
- 15.2.1. Management deployment and delivery of required plans.
  - 15.2.2. Facilities development and or construction requirements completed.
  - 15.2.3. Phase I. Interim Operating Capability (IOC): Personnel in place providing Infrastructure Maintenance capability through use of NFE.
  - 15.2.4. Phase II. IOC: Delivery of additional Infrastructure Maintenance equipment to fully support all contracted requirements.
  - 15.2.5. Phase III. IOC: Full deployment of Infrastructure Maintenance personnel and equipment to adequately support the contracted tier support level.
  - 15.2.6. Full Operation Capability (FOC): Declaration of all services fully deployed and operational to support full contracted capability.
  - 15.2.7. Additional milestones may be established for Support Tier expansion as additional facilities are constructed.
- 15.3. The above planning factors are not listed in a direct order of precedence. The Contractor shall include these planning factors in the mobility plan and provide projected minimum timelines for successful implementation of these mobilisation stages.

## **16. Templates and Forms**

16.1 As detailed in the SOW Main Body and this Annex.

### **Priced Options**

#### **Outside the Wire Infrastructure Maintenance**

- Provide APOD Infrastructure Maintenance and Support Services up to 200 meters from the exterior edge of the KAF perimeter fence. Specifically:
  - Maintain the 6 approach lights situated outside of the KAF perimeter fence-line at the 23 end of the active runway.
  - Maintain the external roads and related infrastructure leading from Observation Point 01 (OP-01) to the various Entry Control Points (ECPs) of KAF.
  - Maintain external KAF FP Infra structures and features.

#### **Grounds Maintenance**

- As a priced-option the Contractor will be required to perform related grounds maintenance works to include horticultural activities such as the landscaping, cutting of grass, maintenance of flower beds, watering, fertilizing, weed control etc.
- As a priced-option the Contractor will be required to de-lead the backstop berms of NATO Weapons Ranges.

### **KAF APOD Infrastructure Maintenance & Support Services Attachments**

#### **Attachment A. NATO-Furnished Equipment (NFE) List**

Posted in Section 08 RFP Exhibit I Part 3 – NFE & NFI APOD FR – v29APR10

#### **Attachment B. NATO-Furnished Infrastructure (NFI) List**

Posted in Section 08 RFP Exhibit I Part 3 – NFE & NFI APOD FR – v29APR10

#### **Attachment C. NATO KAF APOD Infrastructure Register**

Posted in Section 08 RFP Exhibit I Part 3 – NFE & NFI APOD FR – v29APR10