



NORTHERN CAPE DEPARTMENT OF HEALTH

ANNEXURE A

TECHNICAL SPECIFICATIONS AND CONDITIONS OF CONTRACT

RENDERING OF 24/7 AIR AMBULANCE AND OUTREACH SERVICE TO THE NORTHERN CAPE DEPARTMENT OF HEALTH.

1. AIRCRAFT

- a. **Two** twin turbine aircraft-, fully pressurized. One aircraft- fully equipped as Air Ambulance and second aircraft- equipped to take at least 5 pax and their equipment for Outreach.
- b. Able to land on unpaved landing strips during day and night operations.
- c. All aircraft- shall be equipped, in terms of flight instrumentation and equipment, so as to comply with the minimum equipment as specified in the regulations applicable to the Class and application of aircraft- as well as specified under Part 138 of the SACAR.
- d. Should one of the aircraft- not be available due to maintenance, one other aircraft- should be available as substitute to not compromise the service delivery.

2. AVIATION LEGISLATION REQUIREMENTS

- a. Operators must submit certified copies of valid certificates and license with the bid documents at the closing date and time of bid in accordance with the following Acts and Regulations:
 - i. The Operator must comply with the Air Licensing Act 115 of 1990 and Domestic Air Services Regulations of 1991.
 - ii. The Operator must comply with current South African Civil Aviation Authority revisions or implementation of all current South African Civil Aviation Authority regulations as applicable during the full contract period.
 - iii. The Operator shall, in provision of commercial air ambulance operation to Northern Cape Department of Health, be the holder of the following valid documents:
 - Class III, Type G7 license, issued in terms of the Air Services Licensing Act of 1990 (Act 115 of 1990).
 - iv. The Operator must comply with the provisions of the appropriate SACAA regulations in Part 135 and endorsed for Operations in terms of Part 138.

Noncompliance with the above-mentioned special conditions would automatically invalidate the applications.

4. OPERATION

- a. The operator shall comply with the relevant regulations pertaining to the provision of Commercial Air Ambulance Services to the Department of Health, under Part 138.

Non-compliance with the above-mentioned special conditions will automatically invalidate the contract for such services offered.

- b. It is imperative that the companies supplying the service be able to demonstrate their experience in the field of air ambulance work over the past 10 years.
- c. Applicants to prove that in the light of safety management, the CVs of all Key Post Holders to be provided so that it can be ascertained that all post holders are suitable, experienced and qualified.
- d. To ensure acceptable aviation auditing practice, applicants are to submit the internal auditing system according to CAA prescribed auditing system, used to keep track of Safety and Quality issues in their business. Preferably an electronic system.

5. PART 138 REQUIREMENTS

- a. This part applies to:
 - i. Aircraft- registered in the Republic of South Africa and engaged in commercial air ambulance operations.
 - ii. Foreign registered aircraft- operated by an air service operator licensed in terms of the Air Services Licensing Act, 1990 or the International Air Services Act 1993 and engaged in commercial air ambulance operations.
 - iii. Foreign registered aircraft- utilized in commercial air ambulance operations to transport one or more patients within or out of the of the Republic of South Africa and
 - iv. Persons acting as flight crew members, operations personnel and medical personnel in respect of any air ambulance operation carried out in terms of this part.
- b. The provisions of Part 135 shall apply with the necessary changes to any aircraft- operated in terms of this Part.

6. REQUIREMENTS FOR COMMERCIAL AIR AMBULANCE OPERATIONS

- a. The Operator of an aircraft- engaged in a commercial air ambulance operation, shall not operate the aircraft- unless such operator is the holder of the following valid documents:
 - i. Class III, Type G7 license in terms of the Air Services Licensing Act 1990.
 - ii. Operating Certificate issued in terms of Part 135 and endorsed for operations in terms of Part 138.
 - iii. An Operator, engaged in commercial air ambulance operations, who wishes to utilize an aircraft- that has not been certified for air ambulance operations

as a substitute for one certified aircraft, shall utilize such aircraft- for a maximum of 7 (seven) consecutive days only or during a period of maximum 14 (fourteen) days provided that such an aircraft- is essentially configured according to the provisions of this part.

- iv. In the event that it is not possible to adhere to the conditions prescribed in sub regulations (iii) above, the Operator shall obtain approval from Director of EMS for the utilization of the aircraft- which is not certified for air ambulance operations.

7. AIRCRAFT CONFIGURATION

a. Air Ambulance

The cabin of the aircraft- shall be equipped with:

- i. ONE stretcher unit large enough to carry a 95-percentile patient full length in supine position (6-/1.8m).
- ii. Seats for TWO medical personnel with easy access to patient and 1 (one) extra seat for an escort.
- iii. Oxygen bracket for safe transport of medical oxygen on board.

b. Outreach aircraft

The cabin of the aircraft- shall be equipped with:

- i. 8 (eight) seats for 8 pax.
- ii. Provision for cargo hold for 10kg baggage per pax.
- iii. standby stretcher to serve as standby aircraft- for medical flights.

8. LIGHTING AND ELECTRICAL EQUIPMENT

- a. The owner or the operator of the aircraft- engaged in an air ambulance service shall ensure that:
 - i. Adequate lighting is provided in the patient area
 - ii. Portable lighting equipment is provided for use in the event of failure of or inability to use the main electrical system.
 - iii. The cockpit (flight deck) is screened from light in the patient care area during night operations, or alternatively, where such protection is not possible, shall ensure that sufficient light of low intensity is used in patient area provided that such lighting does not interfere with the operations of the flight crew.
 - iv. Without compromising the normal operation of any aircraft- equipment there shall be a power source available in the aircraft- for medical equipment.

9. DOCUMENTATION REQUIRED TO PROVE AIRCRAFT SAFETY

- a. Certificate of Airworthiness including Part 138 approval for each aircraft-.
- b. STC (Supplementary Type Certificate) for stretchers fitted to aircraft- by tail number.
- c. Full status report of each aircraft- to prover maintenance currency and age of all components, engines, propellers etc. from the Relevant Authorized Maintenance Organization.
- d. Proof of how flight following is done by satellite tracking onboard devices etc.

10. PATIENT RESTRAINTS, STRETCHERS AND INCUBATORS

The owner or operator of the aircraft- engaged in and air ambulance operations shall not operate the aircraft- unless the following is available:

- a. Approved restraining straps for each patient.
- b. An additional restraining device for child or small adult who will not be adequately restraining strap referred to in paragraph (a), if applicable
- c. an incubator, which is properly secured in position should an incubator be needed for the flight.
- d. a stretcher and mounting system which allows for rapid detachment from the base unit.
- e. The stretcher and incubator shall be positioned as such:
 - i. to allow medical personnel a clear view of and access to the patient to perform monitoring and therapeutic intervention as needed.
 - ii. not to block access to normal and emergency exits.
 - iii. not to interfere with any operation of any aircraft- controls.
 - iv. not to restrict access to any emergency equipment.
- f. The attachment of the stretcher or incubator to the aircraft- structure shall allow its rapid detachment for evacuation.
- g. The operator shall ensure that suitable measures are taken to protect the pilot, aircraft- controls, communication and navigation equipment from any interference by the patient, medical personnel or medical equipment on board the aircraft- during flight or during loading and unloading.

11. MEDICAL EQUIPMENT

- a. Minimum medical equipment to be provided by service provider with proof of services and maintenance. ALL equipment needs to be certified for aviation use.
 - (a) 1 x ECG/DEFIB and Sats monitor (12 lead)
 - (b) Ventilator (adults, peads and neonates) with circuits.

- (c) 4 x Infusions Pumps
- (d) 2 x syringe drivers
- (e) 1 x Suction
- (f) Scoop and head blocks
- (g) Vacuum mattress and Pump
- (h) Advance Airway Management equipment
- (i) Drugs, Drug bag and freezer drug bag
- (j) Incubator
- (k) Auto Clave
- (l) ALS, Peads and Neonate Jump Bags.
- (m) Spider Harness and traction splint.

And any other equipment that the operator needs to perform the service safely and diligently.

- b. All medical equipment and supplies or any other items on board of the aircraft- shall be properly secured in accordance with good aviation practice.
- c. All medical equipment will be positioned that they are not likely to:
 - i. cause injury to any person on board in the aircraft-,
 - ii. obstruct access to any emergency equipment.
- d. All equipment to be appropriately certified by the manufacturer thereof for use in an aircraft-. (Aviation Approved).
- e. All oxygen cylinders shall be carried accordance with provision of Part 92.
 - i. All oxygen cylinders should be secured in an oxygen cylinder bracket with easy access.
- f. an adequate supply of conveniently placed hooks or hangers shall be available for intravenous fluids and will be secured as to prevent any trauma or injury to patient.
- b. DRUGS, CONSUMABLES ETC to be provided by the Service Provider with proof of safe storage as per the relevant legislation.

12. CONTROL OF OPERATIONS

- a. The owner or operator of the aircraft- engaged in an air ambulance operation shall ensure that he or she is aligned with a medical service provider who is compliant with the relevant legislation administered by the Northern Cape Department of Health to consult with on matters pertaining to:
 - i. the advisability of the transportation by air.
 - ii. the level of patient care required.
 - lii. Medical equipment needed on board

- iv. Precautions to be taken during the flight and during ground transportation.
- v. where the Operator is also the medical service provider, such operator shall ensure that the medical aspects of the operation comply with all the relevant requirements as contained in the relevant legislation administered by the NCDOH.
- vi. The medical personnel on board the aircraft- shall be responsible for patient care from the time of hand over by referring facility until the time of hand over to the receiving facility.
- v. The Pilot in Command (Captain) of the aircraft- shall at all times be responsible for the safety of the aircraft- operations.

12. DISPATCHING BASE

- a. The owner or operator of the aircraft- shall ensure that a person with a reasonable knowledge of aviation, air traffic service, safety and emergency procedures, navigation techniques and the influence of weather is assigned to the dispatching base.
- b. The owner or operator of the aircraft- shall have an established base, office, medical equipment room with storage space for drugs and consumables and hangar in Kimberley from which the air ambulance and outreach operations are controlled.
- c. The office would need to be fully equipped with WiFi and cellular reception to enable staff to communicate, gather and distribute information at high speed in order to get flight weather, airfield details and medical information.
- d. During the flight phases the communication between the service provider and the various hospitals, referring and receiving doctors and the transferring ground ambulances, needs to be a continuous flow of accurate information so as to ensure no time is lost with misunderstandings as to arrival times of aircraft- resulting in delays costing patient severe discomfort or in critical cases, their lives.
- e. The service provider will have to supply proof that all of the above can be supplied by having done this successfully in the past and having the necessary equipment and trained personnel in the employ of the applying company.

13. LANDINGS

- a. The Pilot in Command (Captain) of an aircraft- engaged in operations is exempted from prohibition to land on a public road in terms of regulation 91.06.1(b)
- b. Notwithstanding the provisions of sub regulation (1), the Pilot in Command (Captain) shall make use of these privileges only if no viable alternative landing place exists and while taking extreme care for the safety of the aircraft- and property and persons on the ground.
- c. The Manual of Procedures of the operator shall clearly state conditions under which landings on non-registered landing areas may be carried out.

14. LOADING AND OFF LOADING

- a. The loading and offloading shall only be undertaken when engines on the side of the exit is switched off.

- b. The owner or operator shall make provisions in the Manual of Procedures referred to in Regulation 138.04.2 concerning circumstances and procedures for rapid patient loading and unloading.
- c. Medical personnel shall inform the Pilot in Command regarding add-on equipment for calculation of the aircraft- mass and balance.

15. INFECTION CONTROL AND FLUID CONTAMINATION

The owner or operator of the aircraft- shall ensure that:

- a. Every employee, before performing duty on or cleaning an aircraft- is:
 - i. familiar with any infection control procedures which may apply in respect of the aircraft- and
 - ii. has taken appropriate precautions before performing duty or cleaning such aircraft- as prescribed by the Occupational Safety and Health Act of 1993 (Act No. 85 of 1993) and other relevant legislation as set out in the Manual of Procedures referred to in Regulation 138.04.2.
 - iii. Such aircraft- shall not be operated unless it is equipped with measures to protect the aircraft- against bodily fluid contamination.
 - iv. The protection measures referred to in paragraph (b) above are set out in the Manual of Procedures and are compliant with the minimum standards as prescribed in the Regulations issued by the Department of Health and
 - v. the cleaning agents used for cleaning are non-corrosive or non-abrasive to the aircraft-.

16. FLIGHT CREW

a. Pilots

- i. The pilot of an aircraft- engaged in air ambulance operations shall –
 - (a) As a minimum be the holder of a valid CPL with night rating, multiple engine, instrument rating appropriate to the category and type of air ambulance aircraft- and the mission to be flown
 - (b) have received training and terrain demonstrated minimum competency for the relevant mission to be flown, as prescribed in the manual of procedures.
 - (c) have successfully completed the training referred to in subpart 3
 - (d) The manual of procedures of the operator shall set minimum criteria of qualifications of pilots to be used for the missions intended.
 - (e) Apart from being properly licensed and qualified, the aircrew will need to have been trained and approved for abnormal night operations into the Namaqua Area where limited ground lighting and navigational equipment exists in notoriously mountainous terrain. This includes, but not limited, to night operations into airfields like Springbok, Calvinia and Carnavon etc.

- (f) In order to provide a 24/7 service all year round, service providers need to provide proof of having enough crew available to operate within the prescribed flight and duty periods as per relevant Civil Aviation Regulations.
 - (g) no less than six (6) crew of which at least three (3) will be captains with more than 1000 hours total flight time and at least 500 hours on the type of aircraft- operated for Aeromedical evacuations and four (4) of which two (2) Captains with more than 1000 hours total flight time and at least 500 hours on the type of aircraft- used for Outreach program.
- ii. **Documentary proof to ensure safe experienced crew:**
- (a) Licenses of the six (6) pilots to be used.
 - (b) Summary of log books indicating recently performed night landings in unsupported airfields in the last year and training records of pilots indicating proficiency in night medevac flights into unpaved runways, in particular Namaqua and Karoo areas.
 - (c) Curriculum Vitae of each Pilot.
 - (d) A pro-forma rostering example needs to be supplied to illustrate that crew suffering from fatigue would not need to be deployed and that crew would have the required annual leave and off duty rest periods as stipulated by the relevant Civil Aviation Regulations and Labour relations act.

17. MEDICAL CREW

- a. Medical personnel and medical service providers involved with air ambulance operations shall comply with the relevant legislation and regulations administered by the Department of Health, Health Professional Council of South Africa and South African Nursing Council whichever the case may be.
- b. Medical crew need to be suitably trained to take care of intubated patients and be familiar with the medical equipment carried on board.
 - i. Two (3) Medical Officers (doctors) registered as independent practitioners with the following minimum qualifications:
 - (a). ITLS – International Trauma Life Support
 - (b). ACLS - Advanced Cardiovascular Life Support
 - (c). PALS – Paediatric Advance Life Support
 - (d). Aviation Health Care Providers Course.
 - ii. Two (3) Secondary Crew with minimum qualification as ECT with minimum of two years' experience with the following qualifications:
 - (a). ITLS – International Trauma Life Support
 - (b). ACLS - Advanced Cardiovascular Life Support
 - (c). PALS – Paediatric Advance Life Support

- (d). Aviation Health Care Providers Course.
- c. Proof of relevant qualifications and registrations with extensive Curriculum Vitae shall be submitted.

18. SERVICE COMPLIANCE

a. END USER REQUIREMENTS

- i. Proof of adequate insurance and indemnity cover will be required.
- ii. Proof of Registration with Northern Cape Department of Health as Ambulance service provider.
- iii. All aircraft- contracted and secured under this contract will be under the complete sole use and authority of Northern Cape Emergency Services and may NOT be made available to any other person/organisation/institution prior to written approval from the Accounting Officer/or Provincial Head of Emergency Medical Services or a designated official.
- iv. All aircraft- contracted and secured under this contract will be considered permanent for the contract period provided that (excluding an accident) any aircraft is to be replaced or substituted, a minimum advance warning period of 15 days is mandatory. This warning shall be provided in writing to the Accounting Officer and Provincial Head of Emergency Medical Services with the reasons for such a requirement. This submission shall contain details of replacement aircraft- and when it will be operational for this contract. In the event of an accident, immediate written notification is required. This should be followed by details of repair schedule/replacement aircraft- and when it will be operational for the contract.
- v. In case of compulsory flight crew training and aircraft- scheduled maintenance of less than 24 hours, the Department should be notified 24 hours before the time. Should the aircraft- be unavailable for a period exceeding 24 hours due to scheduled or unscheduled maintenance, the service provider must provide a contingency plan to provide the relevant service.
- vi. All invoices will be submitted at the start of the new month and will be accompanied by supporting documents.
 - (a) Patient Report Form for each patient.
 - (b) Monthly Flight Summary and Flight Statistics.

19. AIRCRAFT MAINTENANCE REQUIREMENTS

- a. **Aircraft contracted to this service may be unavailable in cases of unscheduled line maintenance which can be rectified in less than 4 hours at the Kimberley base or 1 day per month at an AMO (Aircraft Maintenance Organisation) base which is no further than 200 km from Kimberley once per month.**
- b. **Scheduled Maintenance (Phase Checks) provision must be made by the bidder arranging a substitute aircraft to be**

available for a period of 7 days per every 200 flight hours flown by each aircraft which can be done at the AMO base.

- c. All documentation for the AMO must be submitted with the tender and must include as a minimum:
 - i. The AMO Certificates and Ops specs
 - ii. The Licenses of the Accountable manager as well as CV's and Licenses of all the AME (Aircraft Maintenance Engineers) likely to be maintaining the aircraft.

20. AVAILABILITY OF FLIGHT SUPPORT ROAD VEHICLES AND SUPPLEMENTAL HELICOPTER SERVICE

20.1 ROAD AMBULANCES

- a. The Bidder must submit evidence of being Licensed to operate a road Ambulance Flight Support service in the Northern Cape Province.
- b. The license in a. above must be obtained and be made available to the NCDOH with the tender documents.
- c. Districts of Kimberley De Aar Kuruman Upington and Springbok
- d. This is an important supplemental service as these districts regularly have high volume of calls as a result their ambulances are not always available to support the air ambulance. This link is vital in the support chain for the quick transfer of criticality ill or injured patients.

20.2 Helicopter Supplemental service

- a. Purpose: To be inviting tenders for the supply of EMS / Long- rope helicopter services as a backup to this fixed wing contract.
- b. The helicopter - is to be utilised at short notice in the event of natural or manmade disasters for instance floods fires earthquakes or mining or other disasters with multiple injuries or damage to assets
- c. Requirements:
 - (i)- Helicopter must be capable of flying a distance of 600 km (300 km out and 300 km back).
 - (ii)- Must be able to carry 7 people
 - (iii)- Must be able to assist in emergency medical situations.
 - (iv)- Must Comply with all relevant aviation and safety regulations.

d. Submission of Information:

- 1. Lease agreement bidder with the owner of the helicopter.**
- 2. AOC and Ops Specs of the Operator.**
- 3. AMO documentation of the organisation to perform maintenance on the helicopter.**
- 4. CV's Licenses and all relevant documentation relating to the crews that will be flying the helicopter.**